LONGHORN ARMY AMMUNITION PLANT KARNACK, TEXAS

ADMINISTRATIVE RECORD

Volume 13

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LONGHORN ARMY AMMUNITION PLANT
KARNACK, TEXAS
ADMINISTRATIVE RECORD – CHRONOLOGICAL INDEX

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A. Title: (cont'd) Report – Quarterly Evaluation Report, 4th Quarter (October-December) 2018, Groundwater Treatment Plant, Longhorn Army Ammunition Plant, Karnack, Texas, June 2019
Author(s): Bhate Environmental Associates, Inc.
Recipient: U.S. Army Corps of Engineers, Tulsa District
Date: June 20, 2019
Bate Stamp: 00930470 – 00932033

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	ICB
Data File Name	027_ICB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T12:13:25-06:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	017CALB.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	442.7	193	7.9	1	
Na	23	1	nogas	1.201	192.2	408732	1.0	100	
Mg	24	1	nogas	1.019	39.2	26389	10.4	100	
Al	27	1	nogas	0.552	35.8	36997	2.5	5	
K	39	1	nogas	6.244	621.4	9150573	0.5	100	
Ti	47	1	nogas	-0.046	-35.9	353	12.8	2.5	
V	51	1	nogas	-4.668	-34.6	638595	3.2	2.5	
Cr	52	1	nogas	-0.179	-99.8	56991	2.9	2.5	
Mn	55	1	nogas	0.104	78.7	18563	3.1	2.5	
Co	59	1	nogas	0.004	56.9	887	10.2	2.5	
Ni	60	1	nogas	0.471	2.9	643	3.2	2.5	
Cu	63	1	nogas	0.022	33.5	3077	7.0	1	
Zn	66	1	nogas	-0.152	-31.8	1843	3.5	2.5	
As	75	1	nogas	-0.695	-113.6	87335	3.7	2.5	
Sr	88	1	nogas	0.015	26.5	1380	4.4	2.5	
Ag	107	1	nogas	0.005	72.1	163	18.7	2.5	
Cd	111	1	nogas	0.016	89.5	53	57.3	1	
Sb	121	1	nogas	0.033	40.7	873	15.6	2.5	
Tl	205	1	nogas	0.074	52.9	1400	26.8	1	
Pb	208	1	nogas	0.003	150.0	600	18.3	2.5	
U	238	1	nogas	0.012	54.2	393	19.4	2.5	
[Pb]	206	1	nogas	0.001	1021.5	150	35.3	2.5	
[Pb]	207	1	nogas	-0.001	-2437.9	140	31.1	2.5	
Na	23	2	He	-0.330	-46.6	49130	1.1	100	
Mg	24	2	He	0.637	46.9	1807	19.1	100	
Al	27	2	He	0.047	334.2	1210	8.9	5	
K	39	2	He	2.050	74.5	218781	0.8	100	
Ca	43	2	He	-1.110	-176.7	43	13.3	100	
Ca	44	2	He	5.075	62.5	3110	5.9	100	
V	51	2	He	-0.006	-928.9	11971	2.3	2.5	
Cr	52	2	He	-0.042	-54.4	4941	2.7	2.5	
Mn	55	2	He	0.098	22.9	1987	7.9	2.5	
Fe	56	2	He	0.608	20.0	23322	4.6	100	
Co	59	2	He	0.002	150.2	213	17.7	2.5	
Ni	60	2	He	-0.086	-24.9	267	20.7	2.5	
Cu	63	2	He	-0.020	-101.6	1343	9.1	1	
Zn	66	2	He	0.061	29.1	797	3.8	2.5	
As	75	2	He	-0.012	-85.2	399	2.6	2.5	
Se	78	2	He	0.180	13.4	133	2.3	1	
B	11	1	nogas	3.440	23.2	36412	1.2	10	
Si	28	1	nogas	93.134	294.9	3440835	0.2	5	ICB Main CR1 Failed
Ca	43	1	nogas	2.265	317.1	1107	12.5	100	
Ca	44	1	nogas	-96.058	-49.5	348012	0.9	100	
Fe	56	1	nogas	1.282	1069.8	3038665	1.7	100	

Initial Calibration Blank (ICB) Report

Se	77	1	nogas	-6.613	-192.7	28750	0.6	2.5	
Se	82	1	nogas	0.144	92.3	230	7.5	1	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Mo	95	1	nogas	0.033	18.5	350	7.6	2.5	
Sn	118	1	nogas	0.024	52.0	1333	12.2	5	
Ba	137	1	nogas	0.021	101.0	300	10.0	2.5	
Sb	121	2	He	0.021	132.8	453	37.0	2.5	
P	31	1	nogas	0.309	1466.3	100076	1.4	10	
La	139	1	nogas	37.059	65.4	187	48.0	2.5	ICB Main CR1 Failed
Au	197	1	nogas	145.355	605.6	27	78.1	2.5	ICB Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1203664	7.05	1267062	95.00	70	125	
Ge	72	1	nogas	2865773	7.30	2907309	98.57	70	125	
In	115	1	nogas	2538431	12.98	2598912	97.67	70	125	
Bi	209	1	nogas	1749131	11.12	1908675	91.64	70	125	
Ge	72	2	He	1068926	1.28	1062701	100.59	70	125	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	ICV
Data File Name	028_ICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T12:15:26-06:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	017CALB.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	107.456	9.212	721308	3.60	100	107.5	90	110	
Na	23	1	nogas	9336.373	4.923	226365847	1.22	10000	93.4	90	110	
Mg	24	1	nogas	9535.292	3.426	144364487	2.86	10000	95.4	90	110	
Al	27	1	nogas	96.690	9.926	1638039	3.54	100	96.7	90	110	
K	39	1	nogas	10325.826	4.527	192415771	2.15	10000	103.3	90	110	
Ti	47	1	nogas	101.332	7.548	155848	1.24	100	101.3	90	110	
V	51	1	nogas	103.600	8.826	2882026	0.74	100	103.6	90	110	
Cr	52	1	nogas	112.488	9.516	2176673	8.03	100	112.5	90	110	ICV Main CR1 Failed
Mn	55	1	nogas	107.271	4.029	2486278	7.16	100	107.3	90	110	
Co	59	1	nogas	99.897	0.941	1977445	7.39	100	99.9	90	110	
Ni	60	1	nogas	102.211	8.346	453924	4.57	100	102.2	90	110	
Cu	63	1	nogas	103.461	6.994	1056067	2.23	100	103.5	90	110	
Zn	66	1	nogas	103.663	5.100	345912	1.90	100	103.7	90	110	
As	75	1	nogas	99.279	7.003	545872	1.19	100	99.3	90	110	
Sr	88	1	nogas	96.694	2.814	2283768	7.16	100	96.7	90	110	
Ag	107	1	nogas	102.390	6.946	1145252	0.72	100	102.4	90	110	
Cd	111	1	nogas	101.693	5.585	247176	2.85	100	101.7	90	110	
Sb	121	1	nogas	98.206	7.125	1067871	2.01	100	98.2	90	110	
Tl	205	1	nogas	99.521	6.436	1674291	8.14	100	99.5	90	110	
Pb	208	1	nogas	99.439	1.142	2094531	1.14	100	99.4	90	110	
U	238	1	nogas	100.292	6.392	2195626	7.12	100	100.3	90	110	
[Pb]	206	1	nogas	92.566	1.257	515792	0.81	100	92.6	90	110	
[Pb]	207	1	nogas	93.618	0.713	459069	1.85	100	93.6	90	110	
Na	23	2	He	10216.592	0.821	19504676	0.19	10000	102.2	90	110	
Mg	24	2	He	10244.397	0.838	10894927	0.71	10000	102.4	90	110	
Al	27	2	He	100.362	1.712	62402	0.99	100	100.4	90	110	
K	39	2	He	10207.821	1.400	11848464	1.37	10000	102.1	90	110	
Ca	43	2	He	9892.007	3.739	31464	3.35	10000	98.9	90	110	
Ca	44	2	He	10042.847	2.180	541372	1.49	10000	100.4	90	110	
V	51	2	He	100.559	2.062	726756	1.75	100	100.6	90	110	
Cr	52	2	He	97.863	0.815	795438	1.47	100	97.9	90	110	
Mn	55	2	He	101.241	1.146	587377	0.52	100	101.2	90	110	
Fe	56	2	He	10191.912	2.364	69918542	1.69	10000	101.9	90	110	
Co	59	2	He	100.513	2.910	1038018	2.33	100	100.5	90	110	
Ni	60	2	He	101.065	2.094	263205	1.52	100	101.1	90	110	
Cu	63	2	He	100.399	1.389	663812	0.71	100	100.4	90	110	
Zn	66	2	He	101.051	1.560	158419	0.91	100	101.1	90	110	
As	75	2	He	100.566	1.930	150682	1.54	100	100.6	90	110	
Se	78	2	He	100.196	2.515	12734	2.05	100	100.2	90	110	
B	11	1	nogas	516.550	6.670	1997507	2.12	500	103.3	90	110	
Si	28	1	nogas	4906.615	12.589	8348413	1.28	5000	98.1	90	110	
Ca	43	1	nogas	9993.614	6.232	323312	0.64	10000	99.9	90	110	
Ca	44	1	nogas	10061.783	9.187	5457448	2.39	10000	100.6	90	110	
Fe	56	1	nogas	10368.860	5.145	200043038	1.67	10000	103.7	90	110	
Se	77	1	nogas	86.921	22.064	46476	1.19	100	86.9	90	110	ICV Main CR1 Failed
Se	82	1	nogas	99.342	6.766	23833	0.86	100	99.3	90	110	
Mo	95	1	nogas	100.423	4.241	473854	4.07	100	100.4	90	110	
Sn	118	1	nogas	99.132	6.368	620422	2.69	100	99.1	90	110	
Ba	137	1	nogas	99.961	6.912	347412	2.40	100	100.0	90	110	
Sb	121	2	He	99.384	0.280	587061	0.56	100	99.4	90	110	
Li	7	1	nogas	103.464	0.517	1542193	9.26	100	103.5	90	110	
P	31	1	nogas	493.326	6.333	926316	1.24	500	98.7	90	110	
La	139	1	nogas	103.990	18.720	393	7.34	100	104.0	90	110	
Au	197	1	nogas	-170.826	-259.749	23	65.47	100	-170.8	90	110	ICV Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1191007	8.98	1267062	94.00	70	125	
Ge	72	1	nogas	2946601	6.56	2907309	101.35	70	125	
In	115	1	nogas	2690095	8.30	2598912	103.51	70	125	
Bi	209	1	nogas	2076069	1.86	1908675	108.77	70	125	

Initial Calibration Verification (ICV) Report

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	2	He	1053859	0.68	1062701	99.17	70	125	

Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	ICSA
Data File Name	029ICSA.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T12:17:24-06:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	017CALB.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	0.009	141.8	233	32.2	0	ICSA Main CR1 Failed
Na	23	1	nogas	108755.864	8.2	2228807916	2.3	0	
Mg	24	1	nogas	112175.931	8.8	1436329365	0.1	0	
Al	27	1	nogas	100286.944	5.0	1639173256	1.3	0	
K	39	1	nogas	105954.747	5.1	1849863841	1.4	0	
Ti	47	1	nogas	2263.513	6.0	3406188	3.2	0	
V	51	1	nogas	-12.703	-5.8	481846	1.0	0	ICSA Main CR1 Failed
Cr	52	1	nogas	0.784	38.2	75152	3.8	0	ICSA Main CR1 Failed
Mn	55	1	nogas	0.344	12.3	24153	2.1	0	ICSA Main CR1 Failed
Co	59	1	nogas	0.516	8.0	10783	3.7	0	ICSA Main CR1 Failed
Ni	60	1	nogas	1.603	3.9	5604	5.8	0	ICSA Main CR1 Failed
Cu	63	1	nogas	1.362	9.6	16528	11.6	0	ICSA Main CR1 Failed
Zn	66	1	nogas	1.382	12.0	6838	4.2	0	ICSA Main CR1 Failed
As	75	1	nogas	0.230	268.7	92165	0.9	0	ICSA Main CR1 Failed
Sr	88	1	nogas	0.933	2.9	22608	1.2	0	ICSA Main CR1 Failed
Ag	107	1	nogas	0.043	31.1	580	21.2	0	ICSA Main CR1 Failed
Cd	111	1	nogas	1.666	8.0	3800	11.6	0	ICSA Main CR1 Failed
Sb	121	1	nogas	0.552	13.9	6405	8.9	0	ICSA Main CR1 Failed
Tl	205	1	nogas	0.310	51.7	4631	44.2	0	ICSA Main CR1 Failed
Pb	208	1	nogas	0.093	11.5	2480	9.1	0	ICSA Main CR1 Failed
[Pb]	206	1	nogas	0.101	41.0	603	30.1	0	ICSA Main CR1 Failed
[Pb]	207	1	nogas	0.086	38.9	490	26.7	0	ICSA Main CR1 Failed
Na	23	2	He	106055.946	1.0	190350837	0.3	0	
Mg	24	2	He	104492.517	1.2	104703022	1.0	0	
Al	27	2	He	97585.015	0.5	56114292	1.1	0	
K	39	2	He	101456.944	0.3	115828688	0.3	0	
Ca	43	2	He	101679.810	1.6	304360	1.3	0	
Ca	44	2	He	101322.075	0.5	5123310	1.1	0	
V	51	2	He	-0.402	-5.5	8467	1.2	0	ICSA Main CR1 Failed
Cr	52	2	He	0.254	25.0	6845	7.3	0	ICSA Main CR1 Failed
Mn	55	2	He	0.306	11.0	2980	5.5	0	ICSA Main CR1 Failed
Fe	56	2	He	106096.337	1.0	685765750	1.7	0	
Co	59	2	He	0.317	2.4	3260	2.9	0	ICSA Main CR1 Failed
Ni	60	2	He	0.214	4.3	983	2.6	0	ICSA Main CR1 Failed
Cu	63	2	He	0.349	12.1	3544	7.5	0	ICSA Main CR1 Failed
Zn	66	2	He	0.236	23.1	997	8.1	0	ICSA Main CR1 Failed
As	75	2	He	0.126	31.0	564	9.6	0	ICSA Main CR1 Failed
Se	78	2	He	0.518	24.0	164	8.5	0	ICSA Main CR1 Failed
B	11	1	nogas	8.806	31.7	53373	15.2	0	ICSA Main CR1 Failed
Si	28	1	nogas	474.265	35.8	3847105	1.3	0	
Ca	43	1	nogas	104310.650	4.0	3300266	2.0	0	
Ca	44	1	nogas	103300.480	4.3	51330468	3.6	0	
Fe	56	1	nogas	107550.966	5.3	2004844911	1.6	0	
Se	77	1	nogas	1.428	251.6	30466	2.1	0	ICSA Main CR1 Failed
Se	82	1	nogas	0.528	30.4	323	14.6	0	ICSA Main CR1 Failed
Mo	95	1	nogas	2126.847	4.3	9825829	0.5	0	
Sn	118	1	nogas	0.260	32.1	2674	13.0	0	ICSA Main CR1 Failed
Ba	137	1	nogas	0.244	17.1	1020	11.0	0	ICSA Main CR1 Failed
Sb	121	2	He	0.428	11.2	2684	9.2	0	ICSA Main CR1 Failed

Interference Check Solution A (ICS-A) Report

P	31	1	nogas	98962.007	4.2	162138181	1.4	0	
La	139	1	nogas	45.749	45.8	203	24.8	0	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1124826	4.46	1267062	88.77	70	125	
Ge	72	1	nogas	2885116	3.81	2907309	99.24	70	125	
In	115	1	nogas	2501944	5.70	2598912	96.27	70	125	
Bi	209	1	nogas	1709165	3.29	1908675	89.55	70	125	
Ge	72	2	He	993030	0.68	1062701	93.44	70	125	

Interference Check Solution AB (ICS-AB) Report

Sample Table

Sample Name	ICSAB
Data File Name	030ICSB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T12:19:25-06:00
Sample Type	ICSB
Dilution	1
Comment	
ISTD Ref File Name	017CALB.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	134.339	4.719	807533	1.39	100	134.3	80	120	ICSB Main CR1 Failed
Na	23	1	nogas	118532.511	6.820	2526710256	1.59	100	118532.5	80	120	
Mg	24	1	nogas	122613.795	5.396	1634701770	0.69	100	122613.8	80	120	
Al	27	1	nogas	102502.331	3.323	1659433842	1.34	100	102502.3	80	120	ICSB Main CR1 Failed
K	39	1	nogas	122704.648	0.819	2121624514	2.67	100	122704.6	80	120	ICSB Main CR1 Failed
Ti	47	1	nogas	2426.506	2.058	3618911	3.21	100	2426.5	80	120	ICSB Main CR1 Failed
V	51	1	nogas	125.208	1.056	3233593	4.06	100	125.2	80	120	ICSB Main CR1 Failed
Cr	52	1	nogas	118.326	0.877	2220112	2.70	100	118.3	80	120	
Mn	55	1	nogas	117.685	2.851	2641384	1.63	100	117.7	80	120	
Co	59	1	nogas	117.674	3.300	2255472	2.15	100	117.7	80	120	
Ni	60	1	nogas	116.147	3.641	501263	1.29	100	116.1	80	120	
Cu	63	1	nogas	120.086	4.333	1189877	0.99	100	120.1	80	120	
Zn	66	1	nogas	122.033	3.622	394815	0.74	100	122.0	80	120	ICSB Main CR1 Failed
As	75	1	nogas	127.088	3.084	653337	1.38	100	127.1	80	120	ICSB Main CR1 Failed
Sr	88	1	nogas	120.909	4.877	2764665	2.05	100	120.9	80	120	
Ag	107	1	nogas	115.725	3.079	1257557	0.43	100	115.7	80	120	
Cd	111	1	nogas	126.019	5.671	281489	1.53	100	126.0	80	120	ICSB Main CR1 Failed
Sb	121	1	nogas	118.026	2.426	1246867	1.07	100	118.0	80	120	
Tl	205	1	nogas	119.595	4.600	1653933	2.63	100	119.6	80	120	
Pb	208	1	nogas	110.160	2.565	2320302	2.56	100	110.2	80	120	
U	238	1	nogas	131.219	6.895	2360269	0.73	100	131.2	80	120	ICSB Main CR1 Failed
[Pb]	206	1	nogas	125.064	5.040	573178	1.32	100	125.1	80	120	ICSB Main CR1 Failed
[Pb]	207	1	nogas	125.754	2.878	507562	3.26	100	125.8	80	120	ICSB Main CR1 Failed
Na	23	2	He	117208.862	0.742	214815683	0.78	100	117208.9	80	120	
Mg	24	2	He	115645.382	1.386	118323305	0.72	100	115645.4	80	120	
Al	27	2	He	99253.852	0.676	58277444	0.49	100	99253.9	80	120	ICSB Main CR1 Failed
K	39	2	He	116247.908	2.182	132683291	2.18	100	116247.9	80	120	ICSB Main CR1 Failed
Ca	43	2	He	115514.238	1.684	353064	1.12	100	115514.2	80	120	ICSB Main CR1 Failed
Ca	44	2	He	113319.150	1.445	5850221	0.85	100	113319.2	80	120	
V	51	2	He	118.031	0.703	818827	0.63	100	118.0	80	120	
Cr	52	2	He	115.304	1.083	900829	1.11	100	115.3	80	120	
Mn	55	2	He	116.417	0.292	649730	0.93	100	116.4	80	120	
Fe	56	2	He	119576.892	1.201	789165082	0.87	100	119576.9	80	120	ICSB Main CR1 Failed
Co	59	2	He	117.105	0.225	1163745	0.73	100	117.1	80	120	
Ni	60	2	He	117.031	1.101	293210	1.09	100	117.0	80	120	
Cu	63	2	He	115.783	1.245	736373	0.47	100	115.8	80	120	
Zn	66	2	He	116.040	1.236	174944	0.70	100	116.0	80	120	
As	75	2	He	119.601	1.031	172355	0.38	100	119.6	80	120	
Se	78	2	He	121.551	0.403	14843	0.89	100	121.6	80	120	ICSB Main CR1 Failed
B	11	1	nogas	680.302	7.357	2345148	2.84	100	680.3	80	120	ICSB Main CR1 Failed
Si	28	1	nogas	6373.412	5.699	9535092	1.27	100	6373.4	80	120	ICSB Main CR1 Failed
Ca	43	1	nogas	116091.366	5.017	3634941	1.57	100	116091.4	80	120	
Ca	44	1	nogas	117730.402	3.775	57847422	0.47	100	117730.4	80	120	ICSB Main CR1 Failed
Fe	56	1	nogas	121426.550	2.450	2242160850	1.61	100	121426.5	80	120	ICSB Main CR1 Failed
Se	77	1	nogas	178.613	5.035	61270	0.93	100	178.6	80	120	ICSB Main CR1 Failed
Se	82	1	nogas	116.665	3.696	27154	2.03	100	116.7	80	120	
Mo	95	1	nogas	2285.315	2.270	10457615	1.34	100	2285.3	80	120	ICSB Main CR1 Failed
Sn	118	1	nogas	122.980	6.015	707169	0.44	100	123.0	80	120	ICSB Main CR1 Failed
Ba	137	1	nogas	123.669	6.088	395102	0.59	100	123.7	80	120	ICSB Main CR1 Failed
Sb	121	2	He	117.432	1.468	667349	0.92	100	117.4	80	120	
La	139	1	nogas	197.302	19.371	627	21.67	100	197.3	80	120	ICSB Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1062780	4.60	1267062	83.88	70	125	
Ge	72	1	nogas	2856088	3.49	2907309	98.24	70	125	
In	115	1	nogas	2469610	5.41	2598912	95.02	70	125	
Bi	209	1	nogas	1710911	6.06	1908675	89.64	70	125	
Ge	72	2	He	1014018	0.77	1062701	95.42	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	042_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T12:43:06-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	017CALB.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	114.036	4.533	696997	1.48	100	114.0	90	110	CCV Main CR1-2 Failed
Na	23	1	nogas	10189.414	12.322	237554730	3.63	10000	101.9	90	110	
Mg	24	1	nogas	10304.164	11.286	150022228	1.74	10000	103.0	90	110	
Al	27	1	nogas	101.044	5.704	1870795	2.53	100	101.0	90	110	
K	39	1	nogas	10269.691	4.332	208916217	0.85	10000	102.7	90	110	
Ti	47	1	nogas	102.380	6.884	171974	3.06	100	102.4	90	110	
V	51	1	nogas	89.108	10.037	2821268	3.91	100	89.1	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	100.816	5.146	2135980	1.96	100	100.8	90	110	
Mn	55	1	nogas	103.455	4.732	2613241	2.10	100	103.5	90	110	
Co	59	1	nogas	98.190	4.956	2116634	2.98	100	98.2	90	110	
Ni	60	1	nogas	97.973	3.065	475468	1.11	100	98.0	90	110	
Cu	63	1	nogas	101.081	3.584	1127411	0.56	100	101.1	90	110	
Zn	66	1	nogas	104.805	4.781	381703	1.25	100	104.8	90	110	
As	75	1	nogas	97.046	5.147	585001	1.18	100	97.0	90	110	
Sr	88	1	nogas	104.607	7.294	2689019	3.42	100	104.6	90	110	
Ag	107	1	nogas	101.046	3.991	1234986	0.66	100	101.0	90	110	
Cd	111	1	nogas	106.128	7.571	267540	1.72	100	106.1	90	110	
Sb	121	1	nogas	100.587	5.199	1194700	1.52	100	100.6	90	110	
Tl	205	1	nogas	103.398	1.154	1608725	3.22	100	103.4	90	110	
Pb	208	1	nogas	104.140	0.492	2193530	0.49	100	104.1	90	110	
U	238	1	nogas	107.701	8.390	2177242	4.08	100	107.7	90	110	
[Pb]	206	1	nogas	105.704	2.641	544946	1.71	100	105.7	90	110	
[Pb]	207	1	nogas	105.825	3.702	479908	0.55	100	105.8	90	110	
Na	23	2	He	9956.132	1.426	20546781	1.33	10000	99.6	90	110	
Mg	24	2	He	9712.781	1.846	11164586	1.13	10000	97.1	90	110	
Al	27	2	He	96.337	2.244	64794	1.45	100	96.3	90	110	
K	39	2	He	10970.318	1.049	12717344	1.03	10000	109.7	90	110	
Ca	43	2	He	10102.690	2.229	34733	1.55	10000	101.0	90	110	
Ca	44	2	He	9873.160	2.093	575347	1.61	10000	98.7	90	110	
V	51	2	He	99.031	0.157	773859	0.96	100	99.0	90	110	
Cr	52	2	He	96.798	1.396	850411	0.51	100	96.8	90	110	
Mn	55	2	He	96.729	2.031	606634	1.14	100	96.7	90	110	
Fe	56	2	He	9835.915	0.887	72941047	0.36	10000	98.4	90	110	
Co	59	2	He	99.402	1.660	1109629	0.90	100	99.4	90	110	
Ni	60	2	He	101.720	0.141	286371	1.09	100	101.7	90	110	
Cu	63	2	He	101.312	0.356	724100	1.28	100	101.3	90	110	
Zn	66	2	He	100.880	1.376	170976	2.32	100	100.9	90	110	
As	75	2	He	99.002	1.566	160347	1.18	100	99.0	90	110	
Se	78	2	He	98.120	0.546	13482	0.90	100	98.1	90	110	
B	11	1	nogas	602.943	4.379	2118314	3.73	500	120.6	90	110	CCV Main CR1-2 Failed
Si	28	1	nogas	4324.831	9.058	8486721	1.62	5000	86.5	90	110	CCV Main CR1-2 Failed
Ca	43	1	nogas	9931.299	3.097	351072	1.76	10000	99.3	90	110	
Ca	44	1	nogas	9910.558	4.410	5884738	2.10	10000	99.1	90	110	
Fe	56	1	nogas	10275.139	2.089	216599488	3.01	10000	102.8	90	110	
Se	77	1	nogas	69.774	7.117	47435	2.30	100	69.8	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	100.338	4.653	26293	0.80	100	100.3	90	110	
Mo	95	1	nogas	101.142	4.236	520624	0.88	100	101.1	90	110	
Sn	118	1	nogas	103.879	6.006	675022	2.76	100	103.9	90	110	
Ba	137	1	nogas	103.791	5.440	374649	0.79	100	103.8	90	110	
Sb	121	2	He	98.245	1.274	627252	0.49	100	98.2	90	110	
Li	7	1	nogas	114.373	5.087	1534766	2.34	100	114.4	90	110	CCV Main CR1-2 Failed
P	31	1	nogas	473.621	4.065	975711	0.35	500	94.7	90	110	
La	139	1	nogas	84.499	32.809	347	18.32	100	84.5	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	102.565	296.393	30	33.33	100	102.6	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	nogas	1080128	3.33	1267062	85.25	70	125	
Ge	72	1	nogas	3213163	3.78	2907309	110.52	70	125	
In	115	1	nogas	2789924	6.01	2598912	107.35	70	125	
Bi	209	1	nogas	1922002	4.21	1908675	100.70	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1139134	0.95	1062701	107.19	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	043_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T12:45:04-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	017CALB.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	0.071	10.2	687	10.5	1	
Na	23	1	nogas	60.189	8.1	1964764	3.6	100	
Mg	24	1	nogas	8.630	20.4	150328	15.5	100	
Al	27	1	nogas	0.378	15.4	39178	3.3	5	
K	39	1	nogas	-40.473	-17.3	9557476	0.7	100	
Ti	47	1	nogas	0.118	49.4	683	14.7	2.5	
V	51	1	nogas	-21.679	-1.6	341228	2.8	2.5	
Cr	52	1	nogas	-1.067	-6.0	46635	2.2	2.5	
Mn	55	1	nogas	0.593	5.4	33774	1.7	2.5	
Co	59	1	nogas	0.062	26.6	2290	15.6	2.5	
Ni	60	1	nogas	0.673	5.3	1740	9.4	2.5	
Cu	63	1	nogas	0.192	20.6	5448	8.1	2	
Zn	66	1	nogas	-0.175	-29.0	2027	8.6	2.5	
As	75	1	nogas	-6.538	-5.9	70195	3.1	2.5	
Sr	88	1	nogas	0.126	9.4	4487	6.7	2.5	
Ag	107	1	nogas	0.065	35.6	927	30.6	2.5	
Cd	111	1	nogas	0.063	20.0	190	19.0	1	
Sb	121	1	nogas	0.836	13.7	10710	12.5	2.5	
Tl	205	1	nogas	0.622	56.6	11222	55.2	1	
Pb	208	1	nogas	0.080	42.2	2203	32.1	2.5	
U	238	1	nogas	0.147	46.3	3527	44.6	2.5	
[Pb]	206	1	nogas	0.084	46.4	657	34.9	2.5	
[Pb]	207	1	nogas	0.054	59.9	450	37.4	2.5	
Na	23	2	He	47.443	2.6	153612	2.5	100	
Mg	24	2	He	6.822	1.7	9206	1.5	100	
Al	27	2	He	-0.131	-83.4	1193	5.1	5	
K	39	2	He	12.682	29.9	230897	1.9	100	
Ca	43	2	He	6.399	138.5	73	41.7	100	
Ca	44	2	He	6.048	52.0	3434	3.7	100	
V	51	2	He	-0.843	-3.4	6446	3.7	2.5	
Cr	52	2	He	-0.023	-170.2	5534	5.4	2.5	
Mn	55	2	He	0.182	10.5	2690	2.8	2.5	
Fe	56	2	He	6.971	1.3	73409	1.8	100	
Co	59	2	He	0.047	19.4	740	15.3	2.5	
Ni	60	2	He	-0.059	-20.0	367	8.3	2.5	
Cu	63	2	He	0.067	27.1	2097	5.5	2	
Zn	66	2	He	-0.028	-277.4	710	17.6	2.5	
As	75	2	He	0.015	275.7	478	14.0	2.5	
Se	78	2	He	0.595	26.0	203	11.9	2	
B	11	1	nogas	12.947	10.3	74925	8.9	10	CCB Main CR1 Failed
Si	28	1	nogas	-659.686	-4.6	3103897	0.8	5	
Ca	43	1	nogas	10.844	39.0	1583	10.0	100	
Ca	44	1	nogas	-242.120	-2.5	316724	0.5	100	
Fe	56	1	nogas	-0.363	-2228.3	3446172	4.6	100	
Se	77	1	nogas	-58.483	-4.4	22494	1.7	2.5	
Se	82	1	nogas	0.255	29.7	293	7.1	2	
Mo	95	1	nogas	0.453	38.7	2597	34.9	2.5	
Sn	118	1	nogas	0.427	42.0	4321	27.2	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.216	33.1	1100	23.6	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.817	9.1	5668	7.0	2.5	
P	31	1	nogas	-8.028	-16.2	99108	2.0	10	
La	139	1	nogas	13.044	64.8	133	21.7	2.5	CCB Main CR1 Failed
Au	197	1	nogas	-281.838	-100.5	20	50.0	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	nogas	1227550	3.67	1267062	96.88	70	125	
Ge	72	1	nogas	3270250	0.77	2907309	112.48	70	125	
In	115	1	nogas	2955980	1.82	2598912	113.74	70	125	
Bi	209	1	nogas	2122741	2.17	1908675	111.22	70	125	
Ge	72	2	He	1161151	1.77	1062701	109.26	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	054_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T13:07:56-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	017CALB.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	115.401	5.714	697291	0.28	100	115.4	90	110	CCV Main CR1-2 Failed
Na	23	1	nogas	9748.090	3.231	246162714	0.97	10000	97.5	90	110	
Mg	24	1	nogas	9922.999	1.111	156440295	1.56	10000	99.2	90	110	
Al	27	1	nogas	96.785	2.390	1907202	4.49	100	96.8	90	110	
K	39	1	nogas	9964.169	0.882	215750788	1.68	10000	99.6	90	110	
Ti	47	1	nogas	97.503	2.499	174169	1.17	100	97.5	90	110	
V	51	1	nogas	89.851	2.793	3018461	3.30	100	89.9	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	94.628	3.986	2134715	2.46	100	94.6	90	110	
Mn	55	1	nogas	97.763	4.517	2624143	2.10	100	97.8	90	110	
Co	59	1	nogas	94.824	4.947	2171273	3.22	100	94.8	90	110	
Ni	60	1	nogas	94.845	3.124	488819	0.77	100	94.8	90	110	
Cu	63	1	nogas	98.132	1.167	1163132	1.41	100	98.1	90	110	
Zn	66	1	nogas	101.982	1.480	394925	2.77	100	102.0	90	110	
As	75	1	nogas	97.821	3.175	625674	0.96	100	97.8	90	110	
Sr	88	1	nogas	97.448	4.111	2663067	1.66	100	97.4	90	110	
Ag	107	1	nogas	97.790	1.801	1270007	0.69	100	97.8	90	110	
Cd	111	1	nogas	103.150	2.196	274528	0.53	100	103.1	90	110	
Sb	121	1	nogas	95.370	2.393	1203960	1.11	100	95.4	90	110	
Tl	205	1	nogas	98.103	8.497	1603087	4.55	100	98.1	90	110	
Pb	208	1	nogas	103.720	0.583	2184684	0.58	100	103.7	90	110	
U	238	1	nogas	101.195	2.014	2157655	4.18	100	101.2	90	110	
[Pb]	206	1	nogas	100.283	6.656	543434	2.18	100	100.3	90	110	
[Pb]	207	1	nogas	99.646	5.958	475258	1.86	100	99.6	90	110	
Na	23	2	He	10002.520	2.327	21285952	0.95	10000	100.0	90	110	
Mg	24	2	He	9810.133	2.074	11629044	0.64	10000	98.1	90	110	
Al	27	2	He	97.746	1.439	67785	0.46	100	97.7	90	110	
K	39	2	He	11212.557	1.068	12993381	1.05	10000	112.1	90	110	CCV Main CR1-2 Failed
Ca	43	2	He	9964.709	0.861	35337	1.54	10000	99.6	90	110	
Ca	44	2	He	9706.836	1.241	583438	0.55	10000	97.1	90	110	
V	51	2	He	99.208	2.497	799340	0.90	100	99.2	90	110	
Cr	52	2	He	97.119	1.803	879899	0.18	100	97.1	90	110	
Mn	55	2	He	97.121	1.968	628153	0.55	100	97.1	90	110	
Fe	56	2	He	9882.783	2.632	75571897	1.15	10000	98.8	90	110	
Co	59	2	He	99.196	3.713	1141768	2.29	100	99.2	90	110	
Ni	60	2	He	101.444	1.655	294505	0.05	100	101.4	90	110	
Cu	63	2	He	101.428	0.789	747675	1.96	100	101.4	90	110	
Zn	66	2	He	100.795	0.830	176172	1.46	100	100.8	90	110	
As	75	2	He	100.597	1.156	168027	0.53	100	100.6	90	110	
Se	78	2	He	98.479	2.689	13953	1.58	100	98.5	90	110	
B	11	1	nogas	613.525	4.844	2130279	0.66	500	122.7	90	110	CCV Main CR1-2 Failed
Si	28	1	nogas	4013.635	3.989	8658522	0.45	5000	80.3	90	110	CCV Main CR1-2 Failed
Ca	43	1	nogas	9483.037	2.611	356143	1.63	10000	94.8	90	110	
Ca	44	1	nogas	9387.748	1.671	5947809	1.06	10000	93.9	90	110	
Fe	56	1	nogas	9901.563	4.142	221688755	1.65	10000	99.0	90	110	
Se	77	1	nogas	103.943	7.078	57541	1.21	100	103.9	90	110	
Se	82	1	nogas	97.877	1.789	27264	0.99	100	97.9	90	110	
Mo	95	1	nogas	95.478	1.681	522295	1.06	100	95.5	90	110	
Sn	118	1	nogas	100.592	2.601	689807	3.52	100	100.6	90	110	
Ba	137	1	nogas	100.967	3.830	384401	2.11	100	101.0	90	110	
Sb	121	2	He	96.946	3.047	638243	1.63	100	96.9	90	110	
Li	7	1	nogas	113.464	7.155	1505336	1.34	100	113.5	90	110	CCV Main CR1-2 Failed
P	31	1	nogas	473.432	2.231	1036297	0.56	500	94.7	90	110	
La	139	1	nogas	99.847	23.361	420	19.49	100	99.8	90	110	
Au	197	1	nogas	-149.945	-232.810	23	49.49	100	-149.9	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	nogas	1068940	5.34	1267062	84.36	70	125	
Ge	72	1	nogas	3411913	2.50	2907309	117.36	70	125	
In	115	1	nogas	2937401	1.74	2598912	113.02	70	125	
Bi	209	1	nogas	2022928	4.65	1908675	105.99	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1174886	1.61	1062701	110.56	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	055_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T13:09:55-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	017CALB.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	0.040	60.8	460	37.1	1	
Na	23	1	nogas	55.145	4.6	1865889	3.3	100	
Mg	24	1	nogas	4.720	33.0	90975	26.5	100	
Al	27	1	nogas	-0.407	-11.3	25277	3.4	5	
K	39	1	nogas	-12.266	-48.1	10387861	0.4	100	
Ti	47	1	nogas	0.051	13.6	583	2.6	2.5	
V	51	1	nogas	-17.542	-2.4	447718	2.8	2.5	
Cr	52	1	nogas	-0.867	-4.4	52194	0.9	2.5	
Mn	55	1	nogas	0.571	7.1	34108	2.6	2.5	
Co	59	1	nogas	0.040	24.8	1860	11.4	2.5	
Ni	60	1	nogas	0.681	5.0	1830	10.1	2.5	
Cu	63	1	nogas	0.171	10.5	5344	3.6	2	
Zn	66	1	nogas	-0.423	-3.7	1143	4.5	2.5	
As	75	1	nogas	-3.617	-4.9	87318	0.4	2.5	
Sr	88	1	nogas	0.077	13.3	3307	8.2	2.5	
Ag	107	1	nogas	0.038	35.0	610	27.1	2.5	
Cd	111	1	nogas	0.068	8.5	220	4.5	1	
Sb	121	1	nogas	0.380	24.8	5338	21.3	2.5	
Tl	205	1	nogas	0.487	58.3	8703	53.6	1	
Pb	208	1	nogas	0.063	29.5	1850	21.1	2.5	
U	238	1	nogas	0.100	52.6	2407	46.3	2.5	
[Pb]	206	1	nogas	0.059	11.2	507	6.0	2.5	
[Pb]	207	1	nogas	0.045	49.0	400	26.3	2.5	
Na	23	2	He	46.992	1.6	155618	1.2	100	
Mg	24	2	He	3.548	5.8	5474	4.6	100	
Al	27	2	He	91.145	174.4	63740	170.8	5	CCB Main CR1 Failed
K	39	2	He	28.217	4.4	248599	0.6	100	
Ca	43	2	He	-0.562	-494.4	50	20.0	100	
Ca	44	2	He	-5.253	-95.0	2822	10.8	100	
V	51	2	He	-0.663	-2.1	8007	1.2	2.5	
Cr	52	2	He	0.014	400.7	5984	8.6	2.5	
Mn	55	2	He	0.096	15.7	2190	4.4	2.5	
Fe	56	2	He	3.560	7.5	48557	4.4	100	
Co	59	2	He	0.025	39.0	503	23.0	2.5	
Ni	60	2	He	-0.093	-8.5	277	8.3	2.5	
Cu	63	2	He	0.006	176.1	1687	5.0	2	
Zn	66	2	He	-0.183	-26.6	453	18.8	2.5	
As	75	2	He	0.003	52.4	467	0.7	2.5	
Se	78	2	He	0.338	39.8	170	11.2	2	
B	11	1	nogas	5.811	17.2	45832	9.1	10	
Si	28	1	nogas	-744.384	-5.3	3091330	1.5	5	
Ca	43	1	nogas	5.087	148.9	1413	19.7	100	
Ca	44	1	nogas	-273.427	-0.9	307333	0.3	100	
Fe	56	1	nogas	8.173	54.6	3724827	1.9	100	
Se	77	1	nogas	-32.578	-2.5	28459	1.1	2.5	
Se	82	1	nogas	0.152	145.9	273	22.4	2	
Mo	95	1	nogas	0.254	50.1	1597	42.1	2.5	
Sn	118	1	nogas	0.190	56.5	2884	24.1	5	
Ba	137	1	nogas	0.053	71.3	513	27.3	2.5	

Continuing Calibration Blank (CCB) Report

Sb	121	2	He	0.272	21.3	2167	17.9	2.5	
P	31	1	nogas	0.597	49.7	118260	1.1	10	
La	139	1	nogas	4.826	167.0	113	22.2	2.5	CCB Main CR1 Failed
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Au	197	1	nogas	-70.858	-502.2	27	43.3	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	nogas	1206025	3.90	1267062	95.18	70	125	
Ge	72	1	nogas	3358863	0.70	2907309	115.53	70	125	
In	115	1	nogas	3180305	3.04	2598912	122.37	70	125	
Bi	209	1	nogas	2096794	1.86	1908675	109.86	70	125	
Ge	72	2	He	1183602	0.17	1062701	111.38	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	064_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T13:27:44-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	017CALB.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
Be	9	1	nogas	118.954	0.880	808760	1.16	100	119.0	90	110	CCV Main CR1-2 Failed
Na	23	1	nogas	10478.573	6.206	288430548	2.22	10000	104.8	90	110	
Mg	24	1	nogas	10664.562	7.993	183050646	0.93	10000	106.6	90	110	
Al	27	1	nogas	96.634	2.427	2147620	2.76	100	96.6	90	110	
K	39	1	nogas	10069.903	2.695	245840422	2.07	10000	100.7	90	110	
Ti	47	1	nogas	101.265	1.993	204080	1.02	100	101.3	90	110	
V	51	1	nogas	96.614	1.844	3587143	1.94	100	96.6	90	110	
Cr	52	1	nogas	103.172	2.467	2619149	1.52	100	103.2	90	110	
Mn	55	1	nogas	103.506	3.244	3134559	2.43	100	103.5	90	110	
Co	59	1	nogas	99.518	3.481	2571674	2.55	100	99.5	90	110	
Ni	60	1	nogas	97.982	1.887	570003	1.97	100	98.0	90	110	
Cu	63	1	nogas	100.660	1.096	1345951	0.18	100	100.7	90	110	
Zn	66	1	nogas	118.192	3.068	515724	2.16	100	118.2	90	110	CCV Main CR1-2 Failed
As	75	1	nogas	99.513	1.220	716163	0.65	100	99.5	90	110	
Sr	88	1	nogas	102.674	1.504	3166993	0.61	100	102.7	90	110	
Ag	107	1	nogas	102.707	5.616	1504580	4.65	100	102.7	90	110	
Cd	111	1	nogas	103.886	2.988	315838	0.80	100	103.9	90	110	
Sb	121	1	nogas	103.298	5.338	1471005	4.36	100	103.3	90	110	
Tl	205	1	nogas	97.585	10.636	1938360	6.39	100	97.6	90	110	
Pb	208	1	nogas	130.492	5.378	2748450	5.38	100	130.5	90	110	CCV Main CR1-2 Failed
U	238	1	nogas	104.547	1.957	2711159	3.76	100	104.5	90	110	
[Pb]	206	1	nogas	100.098	5.183	660147	1.45	100	100.1	90	110	
[Pb]	207	1	nogas	102.584	3.110	595669	1.91	100	102.6	90	110	
Na	23	2	He	10032.393	4.321	23911679	1.06	10000	100.3	90	110	
Mg	24	2	He	9755.214	3.549	12956237	2.46	10000	97.6	90	110	
Al	27	2	He	99.620	7.568	77370	7.14	100	99.6	90	110	
K	39	2	He	12416.727	1.898	14365557	1.87	10000	124.2	90	110	CCV Main CR1-2 Failed
Ca	43	2	He	9973.428	8.187	39556	3.30	10000	99.7	90	110	
Ca	44	2	He	9755.502	4.541	656593	0.36	10000	97.6	90	110	
V	51	2	He	99.401	4.645	896921	0.36	100	99.4	90	110	
Cr	52	2	He	98.281	3.932	997340	1.73	100	98.3	90	110	
Mn	55	2	He	99.504	4.579	720703	1.46	100	99.5	90	110	
Fe	56	2	He	10147.913	4.593	86916345	2.05	10000	101.5	90	110	
Co	59	2	He	105.542	2.439	1361943	3.77	100	105.5	90	110	
Ni	60	2	He	103.892	5.605	337635	0.83	100	103.9	90	110	
Cu	63	2	He	102.311	3.050	844808	1.91	100	102.3	90	110	
Zn	66	2	He	111.322	2.760	217894	2.07	100	111.3	90	110	CCV Main CR1-2 Failed
As	75	2	He	100.158	4.478	187344	0.98	100	100.2	90	110	
Se	78	2	He	99.046	4.914	15713	0.08	100	99.0	90	110	
B	11	1	nogas	638.420	0.837	2492662	1.60	500	127.7	90	110	CCV Main CR1-2 Failed
Si	28	1	nogas	3649.368	0.428	9294002	1.05	5000	73.0	90	110	CCV Main CR1-2 Failed
Ca	43	1	nogas	9696.631	0.581	410914	1.25	10000	97.0	90	110	
Ca	44	1	nogas	9486.880	1.040	6776510	1.51	10000	94.9	90	110	
Fe	56	1	nogas	10368.868	2.979	261824581	2.19	10000	103.7	90	110	
Se	77	1	nogas	105.377	2.180	65273	0.92	100	105.4	90	110	
Se	82	1	nogas	99.989	0.924	31421	0.77	100	100.0	90	110	
Mo	95	1	nogas	100.455	0.532	620021	0.48	100	100.5	90	110	
Sn	118	1	nogas	103.454	2.035	810274	1.83	100	103.5	90	110	
Ba	137	1	nogas	103.396	3.704	449691	1.24	100	103.4	90	110	
Sb	121	2	He	98.080	4.173	723280	1.13	100	98.1	90	110	
Li	7	1	nogas	118.656	4.407	1767676	4.87	100	118.7	90	110	CCV Main CR1-2 Failed
P	31	1	nogas	471.210	1.065	1164463	0.30	500	94.2	90	110	
La	139	1	nogas	165.537	62.909	733	56.51	100	165.5	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	138.117	147.062	40	25.00	100	138.1	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	nogas	1200357	0.83	1267062	94.74	70	125	
Ge	72	1	nogas	3848848	0.97	2907309	132.39	70	125	ISTD Failed
In	115	1	nogas	3357044	3.66	2598912	129.17	70	125	ISTD Failed
Bi	209	1	nogas	2461000	5.09	1908675	128.94	70	125	ISTD Failed

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1317344	4.73	1062701	123.96	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	065_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T13:29:43-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	017CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	0.044	9.6	533	3.9	1	
Na	23	1	nogas	58.037	11.6	2193242	8.2	100	
Mg	24	1	nogas	6.323	14.3	131520	10.8	100	
Al	27	1	nogas	0.022	689.3	40086	7.7	5	
K	39	1	nogas	-43.646	-58.3	11684609	0.8	100	
Ti	47	1	nogas	0.065	25.2	730	1.4	2.5	
V	51	1	nogas	-16.811	-3.5	557341	2.3	2.5	
Cr	52	1	nogas	-0.799	-13.3	64315	2.5	2.5	
Mn	55	1	nogas	0.409	22.3	35748	3.7	2.5	
Co	59	1	nogas	0.039	17.4	2200	7.5	2.5	
Ni	60	1	nogas	0.711	1.8	2377	3.1	2.5	
Cu	63	1	nogas	0.145	5.1	6048	2.8	2	
Zn	66	1	nogas	0.676	19.4	6345	5.0	2.5	
As	75	1	nogas	-4.039	-12.0	102067	2.8	2.5	
Sr	88	1	nogas	0.151	35.2	6348	27.0	2.5	
Ag	107	1	nogas	0.040	29.4	760	22.1	2.5	
Cd	111	1	nogas	0.044	63.1	160	43.8	1	
Sb	121	1	nogas	0.391	19.9	6535	12.9	2.5	
Tl	205	1	nogas	0.452	53.7	9173	45.1	1	
Pb	208	1	nogas	0.068	18.3	1963	13.4	2.5	
U	238	1	nogas	0.111	51.2	3017	41.1	2.5	
[Pb]	206	1	nogas	0.043	31.1	473	12.2	2.5	
[Pb]	207	1	nogas	0.043	42.0	440	17.2	2.5	
Na	23	2	He	39.000	5.1	163957	0.9	100	
Mg	24	2	He	4.002	8.0	7118	4.2	100	
Al	27	2	He	-0.400	-72.2	1220	17.2	5	
K	39	2	He	41.631	10.3	263885	1.8	100	
Ca	43	2	He	2.813	136.6	73	20.8	100	
Ca	44	2	He	-9.555	-13.1	3034	2.4	100	
V	51	2	He	-0.665	-3.3	9465	0.7	2.5	
Cr	52	2	He	-0.037	-112.1	6538	8.6	2.5	
Mn	55	2	He	0.073	51.0	2410	10.1	2.5	
Fe	56	2	He	4.240	2.9	63706	3.1	100	
Co	59	2	He	0.022	27.2	553	13.3	2.5	
Ni	60	2	He	-0.092	-23.2	330	24.8	2.5	
Cu	63	2	He	0.015	147.3	2070	7.8	2	
Zn	66	2	He	0.702	6.0	2374	2.8	2.5	
As	75	2	He	-0.008	-141.9	531	6.3	2.5	
Se	78	2	He	-0.038	-325.7	139	17.2	2	
B	11	1	nogas	5.658	29.6	49562	11.3	10	
Si	28	1	nogas	-1254.766	-8.2	3005654	0.5	5	
Ca	43	1	nogas	2.372	144.0	1573	7.8	100	

Continuing Calibration Blank (CCB) Report

Ca	44	1	nogas	-370.138	-5.4	301724	0.5	100	
Fe	56	1	nogas	-0.092	-11409.7	4247062	2.1	100	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Se	77	1	nogas	-35.010	-7.1	33528	2.7	2.5	
Se	82	1	nogas	-0.097	-169.4	247	23.1	2	
Mo	95	1	nogas	0.273	37.9	2027	28.0	2.5	
Sn	118	1	nogas	0.262	45.3	3747	18.3	5	
Ba	137	1	nogas	0.094	3.3	757	10.3	2.5	
Sb	121	2	He	0.256	19.2	2444	18.0	2.5	
P	31	1	nogas	4.857	63.2	151450	0.5	10	
La	139	1	nogas	-0.960	-1267.8	100	36.1	2.5	
Au	197	1	nogas	-195.571	-248.6	27	78.1	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	nogas	1324835	2.96	1267062	104.56	70	125	
Ge	72	1	nogas	4030436	4.45	2907309	138.63	70	125	ISTD Failed
In	115	1	nogas	3515432	9.73	2598912	135.27	70	125	ISTD Failed
Bi	209	1	nogas	2408875	6.06	1908675	126.21	70	125	ISTD Failed
Ge	72	2	He	1401573	2.23	1062701	131.89	70	125	ISTD Failed

Calibration Blank Report

Sample Table

Sample Name	CAL BLK
Data File Name	070CALB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T13:41:25-06:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	103	5.41
Na	23	1	nogas	773667	0.00
Mg	24	1	nogas	17578	0.05
Al	27	1	nogas	33063	0.01
K	39	1	nogas	11181447	0.00
Ti	47	1	nogas	497	1.53
V	51	1	nogas	617618	0.00
Cr	52	1	nogas	63455	0.01
Mn	55	1	nogas	31330	0.01
Co	59	1	nogas	800	2.46
Ni	60	1	nogas	920	0.52
Cu	63	1	nogas	3517	0.15
Zn	66	1	nogas	1690	0.40
As	75	1	nogas	99889	0.00
Sr	88	1	nogas	1667	1.97
Ag	107	1	nogas	140	28.41
Cd	111	1	nogas	27	214.81
Sb	121	1	nogas	1130	0.28
Tl	205	1	nogas	620	3.83
Pb	208	1	nogas	607	1.55
[Pb]	206	1	nogas	213	9.15
[Pb]	207	1	nogas	143	7.44
Na	23	2	He	80114	0.00
Mg	24	2	He	1777	0.80
Al	27	2	He	1187	1.29
K	39	2	He	259703	0.00
Ca	43	2	He	70	53.99
Ca	44	2	He	2474	0.23
V	51	2	He	10334	0.01
Cr	52	2	He	6325	0.08
Mn	55	2	He	1763	0.27
Fe	56	2	He	27264	0.01
Co	59	2	He	187	14.16
Ni	60	2	He	260	5.92
Cu	63	2	He	1390	0.14
Zn	66	2	He	647	2.22
As	75	2	He	400	0.91
Se	78	2	He	161	13.95
B	11	1	nogas	19227	0.02
Si	28	1	nogas	3029603	0.00
Ca	43	1	nogas	1060	0.31
Ca	44	1	nogas	268025	0.00

Calibration Blank Report

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	4466502	0.00
Se	77	1	nogas	32129	0.01
Se	82	1	nogas	207	9.46
Mo	95	1	nogas	210	12.00
Sn	118	1	nogas	1420	0.05
Ba	137	1	nogas	343	4.67
Sb	121	2	He	690	1.11
Li	7	1	nogas	107910	0.00
P	31	1	nogas	130239	0.00
La	139	1	nogas	70	35.35

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	6	1	nogas	1282255	3.64
Ge	72	1	nogas	3894467	1.03
In	115	1	nogas	3488791	5.94
Bi	209	1	nogas	2439864	3.82
Ge	72	2	He	1316692	1.83

Calibration Standard Report

Sample Table

Sample Name	2/10/200
Data File Name	071CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T13:43:25-06:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	070CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	15363	0.04
Na	23	1	nogas	6712318	0.00
Mg	24	1	nogas	3739705	0.00
Al	27	1	nogas	88164	0.01
K	39	1	nogas	15790873	0.00
Ti	47	1	nogas	4154	0.02
V	51	1	nogas	638111	0.00
Cr	52	1	nogas	109264	0.00
Mn	55	1	nogas	93469	0.00
Co	59	1	nogas	54217	0.00
Ni	60	1	nogas	12628	0.01
Cu	63	1	nogas	29671	0.00
Zn	66	1	nogas	11410	0.04
As	75	1	nogas	105516	0.00
Sr	88	1	nogas	64407	0.00
Ag	107	1	nogas	30704	0.01
Cd	111	1	nogas	6648	0.03
Sb	121	1	nogas	27989	0.00
Tl	205	1	nogas	38426	0.00
Pb	208	1	nogas	52905	0.00
[Pb]	206	1	nogas	13142	0.01
[Pb]	207	1	nogas	11521	0.05
Na	23	2	He	589154	0.00
Mg	24	2	He	264700	0.00
Al	27	2	He	2890	0.25
K	39	2	He	533829	0.00
Ca	43	2	He	843	0.53
Ca	44	2	He	15513	0.03
V	51	2	He	26648	0.01
Cr	52	2	He	25268	0.01
Mn	55	2	He	15887	0.02
Fe	56	2	He	1785924	0.00
Co	59	2	He	26279	0.01
Ni	60	2	He	7068	0.07
Cu	63	2	He	17862	0.03
Zn	66	2	He	4967	0.02
As	75	2	He	4114	0.07
Se	78	2	He	435	3.17
B	11	1	nogas	63398	0.00
Si	28	1	nogas	3161212	0.00

Calibration Standard Report

Ca	43	1	nogas	9779	0.01
Ca	44	1	nogas	395977	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	9914939	0.00
Se	77	1	nogas	31331	0.01
Se	82	1	nogas	823	0.43
Mo	95	1	nogas	12248	0.01
Sn	118	1	nogas	17219	0.01
Ba	137	1	nogas	9646	0.03
Sb	121	2	He	14650	0.02
P	31	1	nogas	149479	0.00
La	139	1	nogas	120	18.37

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1280490	2.45	1282255	99.86	70	125	
Ge	72	1	nogas	3752144	5.37	3894467	96.35	70	125	
In	115	1	nogas	3388629	5.71	3488791	97.13	70	125	
Bi	209	1	nogas	2397681	2.05	2439864	98.27	70	125	
Ge	72	2	He	1333437	1.99	1316692	101.27	70	125	

Calibration Standard Report

Sample Table

Sample Name	5/25/500
Data File Name	072CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T13:45:22-06:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	
ISTD Ref File Name	070CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	37894	0.00
Na	23	1	nogas	14934756	0.00
Mg	24	1	nogas	9272722	0.00
Al	27	1	nogas	156311	0.00
K	39	1	nogas	23486986	0.00
Ti	47	1	nogas	10303	0.03
V	51	1	nogas	844416	0.00
Cr	52	1	nogas	193263	0.00
Mn	55	1	nogas	190277	0.00
Co	59	1	nogas	134298	0.00
Ni	60	1	nogas	31320	0.00
Cu	63	1	nogas	72696	0.00
Zn	66	1	nogas	24764	0.01
As	75	1	nogas	140913	0.00
Sr	88	1	nogas	156751	0.00
Ag	107	1	nogas	76881	0.00
Cd	111	1	nogas	16168	0.02
Sb	121	1	nogas	70637	0.00
Tl	205	1	nogas	94351	0.00
Pb	208	1	nogas	131495	0.00
[Pb]	206	1	nogas	32403	0.01
[Pb]	207	1	nogas	28656	0.02
Na	23	2	He	1305963	0.00
Mg	24	2	He	671604	0.00
Al	27	2	He	5097	0.03
K	39	2	He	970162	0.00
Ca	43	2	He	2110	0.37
Ca	44	2	He	35264	0.01
V	51	2	He	55400	0.00
Cr	52	2	He	56473	0.01
Mn	55	2	He	38721	0.01
Fe	56	2	He	4415974	0.00
Co	59	2	He	67377	0.00
Ni	60	2	He	17479	0.02
Cu	63	2	He	46563	0.00
Zn	66	2	He	10903	0.03
As	75	2	He	9593	0.01
Se	78	2	He	927	1.11
B	11	1	nogas	134753	0.00
Si	28	1	nogas	3328856	0.00

Calibration Standard Report

Ca	43	1	nogas	21803	0.01
Ca	44	1	nogas	589261	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	17879960	0.00
Se	77	1	nogas	36497	0.01
Se	82	1	nogas	1667	0.73
Mo	95	1	nogas	29919	0.00
Sn	118	1	nogas	42115	0.01
Ba	137	1	nogas	23276	0.01
Sb	121	2	He	36161	0.01
P	31	1	nogas	192523	0.00
La	139	1	nogas	163	21.96

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1302121	1.72	1282255	101.55	70	125	
Ge	72	1	nogas	3897282	4.14	3894467	100.07	70	125	
In	115	1	nogas	3645642	3.29	3488791	104.50	70	125	
Bi	209	1	nogas	2499074	4.90	2439864	102.43	70	125	
Ge	72	2	He	1298118	1.38	1316692	98.59	70	125	

Calibration Standard Report

Sample Table

Sample Name	10/50/1000
Data File Name	073CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T13:47:20-06:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	
ISTD Ref File Name	070CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	75121	0.00
Na	23	1	nogas	28015169	0.00
Mg	24	1	nogas	17926517	0.00
Al	27	1	nogas	257708	0.00
K	39	1	nogas	33477731	0.00
Ti	47	1	nogas	19724	0.01
V	51	1	nogas	955757	0.00
Cr	52	1	nogas	294214	0.00
Mn	55	1	nogas	325361	0.00
Co	59	1	nogas	249051	0.00
Ni	60	1	nogas	56119	0.00
Cu	63	1	nogas	134733	0.00
Zn	66	1	nogas	44899	0.01
As	75	1	nogas	165910	0.00
Sr	88	1	nogas	295819	0.00
Ag	107	1	nogas	142197	0.00
Cd	111	1	nogas	30129	0.01
Sb	121	1	nogas	132759	0.00
Tl	205	1	nogas	181730	0.00
Pb	208	1	nogas	251043	0.00
[Pb]	206	1	nogas	64284	0.00
[Pb]	207	1	nogas	54679	0.00
Na	23	2	He	2392101	0.00
Mg	24	2	He	1314597	0.00
Al	27	2	He	8879	0.05
K	39	2	He	1653198	0.00
Ca	43	2	He	3567	0.26
Ca	44	2	He	64244	0.00
V	51	2	He	94660	0.00
Cr	52	2	He	101316	0.00
Mn	55	2	He	71371	0.00
Fe	56	2	He	8390843	0.00
Co	59	2	He	125015	0.00
Ni	60	2	He	32977	0.01
Cu	63	2	He	85971	0.00
Zn	66	2	He	20048	0.00
As	75	2	He	17929	0.01
Se	78	2	He	1666	0.28
B	11	1	nogas	249616	0.00
Si	28	1	nogas	3594031	0.00

Calibration Standard Report

Ca	43	1	nogas	40876	0.01
Ca	44	1	nogas	895463	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	28815545	0.00
Se	77	1	nogas	37793	0.01
Se	82	1	nogas	3117	0.10
Mo	95	1	nogas	57433	0.01
Sn	118	1	nogas	78386	0.00
Ba	137	1	nogas	43452	0.00
Sb	121	2	He	68561	0.00
P	31	1	nogas	231234	0.00
La	139	1	nogas	200	2.50

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1255823	2.61	1282255	97.94	70	125	
Ge	72	1	nogas	3692188	3.69	3894467	94.81	70	125	
In	115	1	nogas	3361504	4.30	3488791	96.35	70	125	
Bi	209	1	nogas	2348629	1.83	2439864	96.26	70	125	
Ge	72	2	He	1264456	1.42	1316692	96.03	70	125	

Calibration Standard Report

Sample Table

Sample Name	100/500/10K
Data File Name	074CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T13:49:18-06:00
Sample Type	CalStd
Level	5
Dilution	1
Comment	
ISTD Ref File Name	070CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	759168	0.00
Na	23	1	nogas	274654589	0.00
Mg	24	1	nogas	173502891	0.00
Al	27	1	nogas	2112404	0.00
K	39	1	nogas	237275705	0.00
Ti	47	1	nogas	187025	0.00
V	51	1	nogas	3253842	0.00
Cr	52	1	nogas	2345027	0.00
Mn	55	1	nogas	2874382	0.00
Co	59	1	nogas	2445519	0.00
Ni	60	1	nogas	542523	0.00
Cu	63	1	nogas	1232661	0.00
Zn	66	1	nogas	419829	0.00
As	75	1	nogas	661230	0.00
Sr	88	1	nogas	2830311	0.00
Ag	107	1	nogas	1439921	0.00
Cd	111	1	nogas	305990	0.00
Sb	121	1	nogas	1292481	0.00
Tl	205	1	nogas	1817948	0.00
Pb	208	1	nogas	2516640	0.00
[Pb]	206	1	nogas	621379	0.00
[Pb]	207	1	nogas	540139	0.00
Na	23	2	He	22733625	0.00
Mg	24	2	He	12446128	0.00
Al	27	2	He	71736	0.00
K	39	2	He	13933214	0.00
Ca	43	2	He	37391	0.01
Ca	44	2	He	615611	0.00
V	51	2	He	841917	0.00
Cr	52	2	He	920904	0.00
Mn	55	2	He	663859	0.00
Fe	56	2	He	81910415	0.00
Co	59	2	He	1215962	0.00
Ni	60	2	He	314310	0.00
Cu	63	2	He	794866	0.00
Zn	66	2	He	186831	0.00
As	75	2	He	174293	0.00
Se	78	2	He	14471	0.02
B	11	1	nogas	2374733	0.00
Si	28	1	nogas	8895870	0.00

Calibration Standard Report

Ca	43	1	nogas	397002	0.00
Ca	44	1	nogas	6438344	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	247743931	0.00
Se	77	1	nogas	53994	0.00
Se	82	1	nogas	29044	0.00
Mo	95	1	nogas	548550	0.00
Sn	118	1	nogas	758165	0.00
Ba	137	1	nogas	423808	0.00
Sb	121	2	He	665673	0.00
P	31	1	nogas	1094218	0.00
La	139	1	nogas	710	2.49

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1149486	4.16	1282255	89.65	70	125	
Ge	72	1	nogas	3613377	5.09	3894467	92.78	70	125	
In	115	1	nogas	3127839	6.94	3488791	89.65	70	125	
Bi	209	1	nogas	2331005	2.01	2439864	95.54	70	125	
Ge	72	2	He	1223834	0.67	1316692	92.95	70	125	

Calibration Standard Report

Sample Table

Sample Name	200/1000/20K
Data File Name	075CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T13:51:19-06:00
Sample Type	CalStd
Level	6
Dilution	1
Comment	
ISTD Ref File Name	070CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	1495626	0.00
Na	23	1	nogas	505797145	0.00
Mg	24	1	nogas	329468066	0.00
Al	27	1	nogas	3851404	0.00
K	39	1	nogas	448562160	0.00
Ti	47	1	nogas	369920	0.00
V	51	1	nogas	5759199	0.00
Cr	52	1	nogas	4493024	0.00
Mn	55	1	nogas	5522972	0.00
Co	59	1	nogas	4636870	0.00
Ni	60	1	nogas	1029513	0.00
Cu	63	1	nogas	2421020	0.00
Zn	66	1	nogas	815278	0.00
As	75	1	nogas	1210987	0.00
Sr	88	1	nogas	5672429	0.00
Ag	107	1	nogas	2740583	0.00
Cd	111	1	nogas	587524	0.00
Sb	121	1	nogas	2615018	0.00
Tl	205	1	nogas	3570214	0.00
Pb	208	1	nogas	4916479	0.00
[Pb]	206	1	nogas	1216365	0.00
[Pb]	207	1	nogas	1071283	0.00
Na	23	2	He	42820309	0.00
Mg	24	2	He	23846852	0.00
Al	27	2	He	135645	0.00
K	39	2	He	26056640	0.00
Ca	43	2	He	71038	0.00
Ca	44	2	He	1172323	0.00
V	51	2	He	1651182	0.00
Cr	52	2	He	1824950	0.00
Mn	55	2	He	1301799	0.00
Fe	56	2	He	158366634	0.00
Co	59	2	He	2454301	0.00
Ni	60	2	He	604889	0.00
Cu	63	2	He	1552361	0.00
Zn	66	2	He	357024	0.00
As	75	2	He	344225	0.00
Se	78	2	He	28791	0.01
B	11	1	nogas	4576882	0.00
Si	28	1	nogas	14440967	0.00

Calibration Standard Report

Ca	43	1	nogas	747072	0.00
Ca	44	1	nogas	12181591	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	474237111	0.00
Se	77	1	nogas	82125	0.00
Se	82	1	nogas	57505	0.01
Mo	95	1	nogas	1149009	0.00
Sn	118	1	nogas	1528739	0.00
Ba	137	1	nogas	831971	0.00
Sb	121	2	He	1362318	0.00
P	31	1	nogas	2042379	0.00
La	139	1	nogas	707	0.50

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1007705	5.62	1282255	78.59	70	125	
Ge	72	1	nogas	3521869	2.85	3894467	90.43	70	125	
In	115	1	nogas	2994726	4.34	3488791	85.84	70	125	
Bi	209	1	nogas	2142229	4.73	2439864	87.80	70	125	
Ge	72	2	He	1192351	0.55	1316692	90.56	70	125	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	ICCV
Data File Name	077_ICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T13:55:17-06:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	070CALB.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	96.859	9.309	711637	1.36	100	96.9	90	110	
Na	23	1	nogas	10152.861	9.545	251025114	3.10	10000	101.5	90	110	
Mg	24	1	nogas	10033.193	8.081	160360841	2.86	10000	100.3	90	110	
Al	27	1	nogas	107.183	14.222	2001698	8.69	100	107.2	90	110	
K	39	1	nogas	10238.644	4.624	224473538	1.69	10000	102.4	90	110	
Ti	47	1	nogas	98.345	3.344	173434	2.92	100	98.3	90	110	
V	51	1	nogas	94.739	4.675	2896547	7.00	100	94.7	90	110	
Cr	52	1	nogas	99.826	6.816	2179396	11.21	100	99.8	90	110	
Mn	55	1	nogas	99.012	3.664	2637741	8.67	100	99.0	90	110	
Co	59	1	nogas	99.751	2.087	2225468	4.21	100	99.8	90	110	
Ni	60	1	nogas	101.535	6.643	502752	1.23	100	101.5	90	110	
Cu	63	1	nogas	97.487	9.388	1127647	9.77	100	97.5	90	110	
Zn	66	1	nogas	101.515	5.170	396184	1.92	100	101.5	90	110	
As	75	1	nogas	99.172	6.098	617398	1.01	100	99.2	90	110	
Sr	88	1	nogas	98.681	2.035	2660645	4.10	100	98.7	90	110	
Ag	107	1	nogas	96.579	7.031	1273014	10.54	100	96.6	90	110	
Cd	111	1	nogas	100.428	6.903	280463	0.98	100	100.4	90	110	
Sb	121	1	nogas	100.720	7.370	1249819	6.84	100	100.7	90	110	
Tl	205	1	nogas	102.259	6.164	1714080	7.24	100	102.3	90	110	
Pb	208	1	nogas	96.300	2.401	2378935	2.40	100	96.3	90	110	
U	238	1	nogas	98.673	6.435	2164791	6.05	100	98.7	90	110	
[Pb]	206	1	nogas	105.349	5.044	601325	1.35	100	105.3	90	110	
[Pb]	207	1	nogas	102.275	7.021	512546	3.06	100	102.3	90	110	
Na	23	2	He	10310.670	0.923	21519081	0.62	10000	103.1	90	110	
Mg	24	2	He	10158.446	1.469	11751535	1.17	10000	101.6	90	110	
Al	27	2	He	101.824	1.931	67725	1.69	100	101.8	90	110	
K	39	2	He	9913.009	1.443	13201993	1.41	10000	99.1	90	110	
Ca	43	2	He	10229.973	0.838	35331	0.99	10000	102.3	90	110	
Ca	44	2	He	10266.902	2.246	585410	2.50	10000	102.7	90	110	
V	51	2	He	98.683	0.356	789670	0.12	100	98.7	90	110	
Cr	52	2	He	98.043	0.715	864375	0.41	100	98.0	90	110	
Mn	55	2	He	101.359	0.960	637717	1.05	100	101.4	90	110	
Fe	56	2	He	10143.624	0.847	77789276	0.91	10000	101.4	90	110	
Co	59	2	He	98.867	0.674	1164871	0.43	100	98.9	90	110	
Ni	60	2	He	100.497	0.979	294966	1.26	100	100.5	90	110	
Cu	63	2	He	98.663	1.036	740911	1.04	100	98.7	90	110	
Zn	66	2	He	101.537	1.944	176398	2.17	100	101.5	90	110	
As	75	2	He	102.038	0.955	169466	1.27	100	102.0	90	110	
Se	78	2	He	102.099	0.325	14190	0.63	100	102.1	90	110	
B	11	1	nogas	488.438	13.148	2210271	9.26	500	97.7	90	110	
Si	28	1	nogas	5190.878	9.720	8429948	0.97	5000	103.8	90	110	
Ca	43	1	nogas	10393.633	8.337	373234	2.94	10000	103.9	90	110	
Ca	44	1	nogas	10432.843	8.459	6182452	2.46	10000	104.3	90	110	
Fe	56	1	nogas	10152.590	6.151	232260947	2.58	10000	101.5	90	110	
Se	77	1	nogas	86.771	14.049	49313	0.71	100	86.8	90	110	ICV Main CR1 Failed
Se	82	1	nogas	104.293	5.996	28596	1.69	100	104.3	90	110	
Mo	95	1	nogas	96.736	4.926	523295	0.97	100	96.7	90	110	
Sn	118	1	nogas	100.537	7.398	723774	1.06	100	100.5	90	110	
Ba	137	1	nogas	101.147	6.961	398419	2.11	100	101.1	90	110	
Sb	121	2	He	97.838	0.732	638380	1.05	100	97.8	90	110	
Li	7	1	nogas	93.710	8.589	1468418	6.34	100	93.7	90	110	
P	31	1	nogas	501.983	6.629	1032717	0.75	500	100.4	90	110	
La	139	1	nogas	158.873	26.130	633	18.16	100	158.9	90	110	ICV Main CR1 Failed
Au	197	1	nogas	2652.142	19.111	77	7.53	100	2652.1	90	110	ICV Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1015418	7.69	1282255	79.19	70	125	
Ge	72	1	nogas	3367443	6.04	3894467	86.47	70	125	
In	115	1	nogas	2855722	8.15	3488791	81.85	70	125	
Bi	209	1	nogas	2036073	3.85	2439864	83.45	70	125	

Initial Calibration Verification (ICV) Report

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	2	He	1152790	0.32	1316692	87.55	70	125	

Low Level Initial Calibration Verification (LLICV) Report

Sample Table

Sample Name	LLCCV5
Data File Name	078LICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T13:57:20-06:00
Sample Type	LLICV
Dilution	1
Comment	
ISTD Ref File Name	070CALB.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	4.637	2.787	35273	2.17	5	92.7	70	130	
Na	23	1	nogas	505.524	9.864	12468224	1.77	500	101.1	70	130	
Mg	24	1	nogas	519.324	9.409	7887976	1.37	500	103.9	70	130	
Al	27	1	nogas	5.749	9.770	130986	2.08	5	115.0	70	130	
K	39	1	nogas	533.888	13.780	20268785	0.70	500	106.8	70	130	
Ti	47	1	nogas	4.922	2.697	8849	4.74	5	98.4	70	130	
V	51	1	nogas	1.585	61.775	557310	3.09	5	31.7	70	130	LLICV Main CR1 Failed
Cr	52	1	nogas	4.777	8.186	151883	2.84	5	95.5	70	130	
Mn	55	1	nogas	5.237	10.406	160042	1.28	5	104.7	70	130	
Co	59	1	nogas	5.100	7.150	111120	0.62	5	102.0	70	130	
Ni	60	1	nogas	4.808	9.389	25849	1.18	5	96.2	70	130	
Cu	63	1	nogas	5.324	6.918	62621	2.79	5	106.5	70	130	
Zn	66	1	nogas	5.289	13.318	21920	4.68	5	105.8	70	130	
As	75	1	nogas	4.095	36.104	108597	0.41	5	81.9	70	130	
Sr	88	1	nogas	5.105	7.421	134976	0.53	5	102.1	70	130	
Ag	107	1	nogas	5.101	7.835	65278	1.12	5	102.0	70	130	
Cd	111	1	nogas	5.033	11.920	13902	2.49	5	100.7	70	130	
Sb	121	1	nogas	5.103	6.585	62446	1.53	5	102.1	70	130	
Tl	205	1	nogas	5.297	6.030	88206	2.12	5	105.9	70	130	
Pb	208	1	nogas	4.619	3.510	114675	3.49	5	92.4	70	130	
U	238	1	nogas	5.130	6.301	111347	1.93	5	102.6	70	130	
[Pb]	206	1	nogas	4.979	3.668	28312	3.27	5	99.6	70	130	
[Pb]	207	1	nogas	4.972	2.924	24803	3.62	5	99.4	70	130	
Na	23	2	He	489.716	0.873	1114820	0.52	500	97.9	70	130	
Mg	24	2	He	492.510	0.258	584860	0.88	500	98.5	70	130	
Al	27	2	He	4.357	10.341	4341	7.20	5	87.1	70	130	
K	39	2	He	461.404	0.884	862106	0.62	500	92.3	70	130	
Ca	43	2	He	537.525	3.397	1960	3.99	500	107.5	70	130	
Ca	44	2	He	492.246	1.486	30846	1.09	500	98.4	70	130	
V	51	2	He	4.862	2.004	46952	1.65	5	97.2	70	130	
Cr	52	2	He	4.899	4.342	49600	3.14	5	98.0	70	130	
Mn	55	2	He	4.858	0.821	32799	1.24	5	97.2	70	130	
Fe	56	2	He	491.641	0.821	3883242	0.24	500	98.3	70	130	
Co	59	2	He	4.824	0.559	58356	1.27	5	96.5	70	130	
Ni	60	2	He	4.854	1.093	15433	1.39	5	97.1	70	130	
Cu	63	2	He	4.923	0.504	39777	0.71	5	98.5	70	130	
Zn	66	2	He	4.851	4.740	9756	4.19	5	97.0	70	130	
As	75	2	He	4.993	1.328	8831	1.87	5	99.9	70	130	
Se	78	2	He	4.876	4.485	785	4.31	5	97.5	70	130	
B	11	1	nogas	29.754	2.348	153794	1.41	25	119.0	70	130	
Si	28	1	nogas	688.863	34.573	3292077	0.51	25	2755.5	70	130	LLICV Main CR1 Failed
Ca	43	1	nogas	533.695	9.045	19487	1.26	500	106.7	70	130	
Ca	44	1	nogas	544.802	13.509	527276	0.45	500	109.0	70	130	
Fe	56	1	nogas	478.369	10.723	14208240	0.58	500	95.7	70	130	
Se	77	1	nogas	2.794	141.340	27681	3.86	5	55.9	70	130	LLICV Main CR1 Failed
Se	82	1	nogas	5.591	12.344	1653	5.97	5	111.8	70	130	
Mo	95	1	nogas	5.197	6.846	27508	1.93	5	103.9	70	130	
Sn	118	1	nogas	5.093	13.952	37260	2.39	5	101.9	70	130	
Ba	137	1	nogas	5.067	9.951	20002	2.14	5	101.3	70	130	
Sb	121	2	He	4.920	0.622	33456	0.33	5	98.4	70	130	
Li	7	1	nogas	5.164	1.530	166458	0.41	5	103.3	70	130	
P	31	1	nogas	28.125	24.133	159392	0.20	25	112.5	70	130	
La	139	1	nogas	27.555	33.627	157	24.17	5	551.1	70	130	LLICV Main CR1 Failed
Au	197	1	nogas	667.093	231.422	47	53.93	5	13341.9	70	130	LLICV Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1043969	1.06	1282255	81.42	70	125	
Ge	72	1	nogas	3278794	7.23	3894467	84.19	70	125	
In	115	1	nogas	2832818	10.46	3488791	81.20	70	125	
Bi	209	1	nogas	2015193	4.83	2439864	82.59	70	125	

Low Level Initial Calibration Verification (LLICV) Report

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	2	He	1180261	0.71	1316692	89.64	70	125	

Sample Report

Sample Table

Sample Name	LLCCV2
Data File Name	079SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T13:59:19-06:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	070CALB.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	1.789	1.789	3.98	15253	0.01	2000	
Na	23	1	nogas	193.643	193.643	6.33	5689034	0.00	200000	
Mg	24	1	nogas	203.279	203.279	5.28	3410143	0.01	200000	
Al	27	1	nogas	2.515	2.515	16.24	78317	0.00	2000	
K	39	1	nogas	224.965	224.965	12.80	15024903	0.00	200000	
Ti	47	1	nogas	2.024	2.024	4.37	4171	0.05	2000	
V	51	1	nogas	-2.063	-2.063	-27.23	503897	0.00	2000	
Cr	52	1	nogas	1.766	1.766	6.41	96450	0.00	2000	
Mn	55	1	nogas	2.090	2.090	5.31	85745	0.00	2000	
Co	59	1	nogas	2.079	2.079	4.03	49156	0.00	2000	
Ni	60	1	nogas	1.638	1.638	5.12	11494	0.01	2000	
Cu	63	1	nogas	2.013	2.013	5.14	27431	0.01	2000	
Zn	66	1	nogas	1.741	1.741	4.70	9232	0.02	2000	
As	75	1	nogas	-0.532	-0.532	-13.27	91146	0.00	2000	
Sr	88	1	nogas	2.075	2.075	2.97	59934	0.00	2000	
Ag	107	1	nogas	2.046	2.046	5.92	28237	0.01	2000	
Cd	111	1	nogas	1.824	1.824	4.09	5871	0.03	2000	
Sb	121	1	nogas	2.008	2.008	4.48	27031	0.01	2000	
Tl	205	1	nogas	1.915	1.915	4.82	37627	0.01	2000	
Pb	208	1	nogas	1.990	1.990	0.92	49748	0.00	2000	
U	238	1	nogas	1.866	1.866	5.38	47382	0.00	2000	
[Pb]	206	1	nogas	1.778	1.778	3.01	11931	0.01	2000	
[Pb]	207	1	nogas	1.895	1.895	6.06	11111	0.02	2000	
Na	23	2	He	190.265	190.265	1.98	496008	0.04	200000	
Mg	24	2	He	197.385	197.385	2.35	244699	0.08	200000	
Al	27	2	He	1.834	1.834	36.20	2764	0.07	2000	
K	39	2	He	185.182	185.182	1.14	501474	0.04	200000	
Ca	43	2	He	191.245	191.245	10.40	767	24.94	200000	
Ca	44	2	He	197.796	197.796	3.29	14269	1.39	200000	
V	51	2	He	1.888	1.888	2.45	23728	0.01	2000	
Cr	52	2	He	1.978	1.978	3.46	24340	0.01	2000	
Mn	55	2	He	1.948	1.948	1.46	14659	0.01	2000	
Fe	56	2	He	202.338	202.338	0.80	1676715	0.01	200000	
Co	59	2	He	1.913	1.913	2.86	24163	0.01	2000	
Ni	60	2	He	1.742	1.742	4.43	6351	0.03	2000	
Cu	63	2	He	1.867	1.867	5.15	16995	0.01	2000	
Zn	66	2	He	1.671	1.671	8.51	4304	0.04	2000	
As	75	2	He	1.987	1.987	2.18	3878	0.05	2000	
Se	78	2	He	2.274	2.274	2.60	434	0.52	2000	
B	11	1	nogas	12.463	12.463	4.02	82022	0.02	2000	
Si	28	1	nogas	374.187	374.187	38.07	3172086	0.01	2000	
Ca	43	1	nogas	206.077	206.077	4.86	8685	2.37	200000	
Ca	44	1	nogas	198.527	198.527	11.08	360481	0.06	200000	
Fe	56	1	nogas	180.984	180.984	8.60	8289914	0.00	200000	

Sample Report

Se	77	1	nogas	-9.708	-9.708	-22.03	26476	-0.04	2000	
Se	82	1	nogas	2.301	2.301	9.46	843	0.27	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Mo	95	1	nogas	2.001	2.001	4.34	11504	0.02	2000	
Sn	118	1	nogas	1.850	1.850	3.11	16605	0.01	2000	
Ba	137	1	nogas	1.804	1.804	6.72	8469	0.02	2000	
Sb	121	2	He	1.859	1.859	1.58	13546	0.01	2000	
La	139	1	nogas	11.529	11.529	31.39	113	10.17	2000	
Au	197	1	nogas	-289.283	-289.283	-416.47	37	-788.95	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1165078	2.67	1282255	90.86	70	125	
Ge	72	1	nogas	3517994	3.91	3894467	90.33	70	125	
In	115	1	nogas	3269289	3.52	3488791	93.71	70	125	
Bi	209	1	nogas	2352887	5.33	2439864	96.44	70	125	
Ge	72	2	He	1227185	0.36	1316692	93.20	70	125	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	ICCB
Data File Name	080_ICB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T14:01:17-06:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	070CALB.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	0.007	59.0	143	21.3	1	
Na	23	1	nogas	-4.661	-19.5	557341	2.9	100	
Mg	24	1	nogas	1.156	38.1	33903	19.3	100	
Al	27	1	nogas	0.549	9.8	40380	1.5	5	
K	39	1	nogas	7.334	164.0	10231598	0.7	100	
Ti	47	1	nogas	0.002	1699.3	450	8.9	2.5	
V	51	1	nogas	-0.843	-21.4	534550	2.8	2.5	
Cr	52	1	nogas	-0.124	-14.9	54413	2.1	2.5	
Mn	55	1	nogas	0.125	25.6	31657	0.9	2.5	
Co	59	1	nogas	0.006	86.9	867	16.2	2.5	
Ni	60	1	nogas	-0.437	-5.1	797	13.4	2.5	
Cu	63	1	nogas	0.003	1128.3	3194	8.9	1	
Zn	66	1	nogas	0.121	94.7	2640	15.7	2.5	
As	75	1	nogas	-0.468	-106.7	91230	1.3	2.5	
Sr	88	1	nogas	0.004	78.6	1610	6.2	2.5	
Ag	107	1	nogas	0.007	51.1	227	24.3	2.5	
Cd	111	1	nogas	0.009	53.1	53	28.6	1	
Sb	121	1	nogas	-0.002	-221.2	993	7.3	2.5	
Tl	205	1	nogas	0.048	51.0	1450	32.5	1	
Pb	208	1	nogas	0.002	38.5	667	3.5	2.5	
U	238	1	nogas	0.009	49.0	337	34.3	2.5	
[Pb]	206	1	nogas	-0.001	-277.9	187	12.4	2.5	
[Pb]	207	1	nogas	0.000	2191.5	133	34.6	2.5	
Na	23	2	He	-7.571	-2.6	56383	1.1	100	
Mg	24	2	He	0.421	33.4	2117	8.1	100	
Al	27	2	He	-0.325	-40.2	1233	7.7	5	
K	39	2	He	-20.431	-18.8	233029	2.2	100	
Ca	43	2	He	0.946	445.6	67	22.9	100	
Ca	44	2	He	0.812	332.3	2294	6.4	100	
V	51	2	He	0.143	23.0	8764	2.7	2.5	
Cr	52	2	He	0.028	61.1	5994	2.9	2.5	
Mn	55	2	He	0.074	11.1	2080	2.2	2.5	
Fe	56	2	He	0.347	26.9	27504	2.1	100	
Co	59	2	He	0.001	201.4	187	18.8	2.5	
Ni	60	2	He	-0.228	-9.1	210	29.7	2.5	
Cu	63	2	He	-0.088	-12.7	1367	6.8	1	
Zn	66	2	He	-0.138	-17.0	953	4.2	2.5	
As	75	2	He	0.033	90.3	419	11.7	2.5	
Se	78	2	He	0.425	20.7	158	8.3	1	
B	11	1	nogas	2.857	9.9	30942	3.4	10	
Si	28	1	nogas	228.138	17.2	2996186	0.5	5	ICB Main CR1 Failed
Ca	43	1	nogas	5.805	94.5	1170	15.6	100	
Ca	44	1	nogas	-6.297	-113.0	237660	0.1	100	
Fe	56	1	nogas	-18.723	-20.9	3583504	1.7	100	
Se	77	1	nogas	2.984	142.6	29718	4.0	2.5	ICB Main CR1 Failed
Se	82	1	nogas	0.130	16.9	223	2.6	1	
Mo	95	1	nogas	0.036	19.2	393	10.3	2.5	
Sn	118	1	nogas	0.024	79.8	1497	8.8	5	

Initial Calibration Blank (ICB) Report

Ba	137	1	nogas	0.019	63.2	400	10.9	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	-0.014	-18.3	533	2.9	2.5	
P	31	1	nogas	-2.383	-69.1	112727	0.9	10	
La	139	1	nogas	24.307	31.6	163	18.7	2.5	ICB Main CR1 Failed
Au	197	1	nogas	-985.322	-71.2	23	49.5	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	nogas	1158152	0.95	1282255	90.32	70	125	
Ge	72	1	nogas	3508500	1.90	3894467	90.09	70	125	
In	115	1	nogas	3191457	3.04	3488791	91.48	70	125	
Bi	209	1	nogas	2230516	2.12	2439864	91.42	70	125	
Ge	72	2	He	1194902	0.59	1316692	90.75	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	090_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T14:21:01-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	070CALB.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	101.090	2.623	715181	3.58	100	101.1	90	110	
Na	23	1	nogas	10303.886	1.299	250718431	1.17	10000	103.0	90	110	
Mg	24	1	nogas	10135.441	2.181	159304391	1.97	10000	101.4	90	110	
Al	27	1	nogas	105.346	4.476	1949504	3.00	100	105.3	90	110	
K	39	1	nogas	10289.458	4.929	222519988	1.16	10000	102.9	90	110	
Ti	47	1	nogas	100.105	1.810	174214	2.25	100	100.1	90	110	
V	51	1	nogas	98.785	3.455	2953594	1.20	100	98.8	90	110	
Cr	52	1	nogas	102.484	4.033	2199245	0.10	100	102.5	90	110	
Mn	55	1	nogas	102.253	3.391	2680880	1.64	100	102.3	90	110	
Co	59	1	nogas	102.271	4.686	2248839	1.14	100	102.3	90	110	
Ni	60	1	nogas	101.268	4.460	495176	0.41	100	101.3	90	110	
Cu	63	1	nogas	101.927	2.745	1162509	1.54	100	101.9	90	110	
Zn	66	1	nogas	103.135	0.810	397570	3.25	100	103.1	90	110	
As	75	1	nogas	98.546	3.922	606261	1.25	100	98.5	90	110	
Sr	88	1	nogas	100.617	2.521	2675525	2.08	100	100.6	90	110	
Ag	107	1	nogas	101.009	4.205	1310223	0.26	100	101.0	90	110	
Cd	111	1	nogas	99.349	3.169	289080	1.20	100	99.3	90	110	
Sb	121	1	nogas	98.609	0.928	1208095	3.59	100	98.6	90	110	
Tl	205	1	nogas	103.622	7.146	1761948	3.69	100	103.6	90	110	
Pb	208	1	nogas	93.278	1.727	2304307	1.73	100	93.3	90	110	
U	238	1	nogas	105.670	5.306	2354076	1.78	100	105.7	90	110	
[Pb]	206	1	nogas	100.401	5.859	582152	1.73	100	100.4	90	110	
[Pb]	207	1	nogas	96.761	5.948	492825	1.86	100	96.8	90	110	
Na	23	2	He	10426.397	1.627	21268615	2.12	10000	104.3	90	110	
Mg	24	2	He	10430.643	1.955	11793301	1.89	10000	104.3	90	110	
Al	27	2	He	104.409	0.871	67841	1.41	100	104.4	90	110	
K	39	2	He	9704.498	0.841	12929764	0.82	10000	97.0	90	110	
Ca	43	2	He	10261.536	0.167	34639	1.50	10000	102.6	90	110	
Ca	44	2	He	10459.499	0.845	582838	1.26	10000	104.6	90	110	
V	51	2	He	101.295	2.454	791945	1.66	100	101.3	90	110	
Cr	52	2	He	100.982	0.073	870035	1.54	100	101.0	90	110	
Mn	55	2	He	104.221	1.107	640856	1.58	100	104.2	90	110	
Fe	56	2	He	10383.202	0.799	77829169	1.81	10000	103.8	90	110	
Co	59	2	He	100.562	0.335	1158066	1.25	100	100.6	90	110	
Ni	60	2	He	102.757	2.951	294728	2.65	100	102.8	90	110	
Cu	63	2	He	100.511	2.932	737696	3.18	100	100.5	90	110	
Zn	66	2	He	104.234	1.139	176963	2.07	100	104.2	90	110	
As	75	2	He	100.957	1.318	163870	1.12	100	101.0	90	110	
Se	78	2	He	98.599	1.266	13398	2.43	100	98.6	90	110	
B	11	1	nogas	479.938	4.039	2124448	2.74	500	96.0	90	110	
Si	28	1	nogas	5256.349	5.694	8398987	0.87	5000	105.1	90	110	
Ca	43	1	nogas	10442.212	3.109	370703	2.03	10000	104.4	90	110	
Ca	44	1	nogas	10289.247	4.074	6029071	0.30	10000	102.9	90	110	
Fe	56	1	nogas	10191.741	3.825	230182797	1.30	10000	101.9	90	110	
Se	77	1	nogas	85.764	9.980	48445	1.03	100	85.8	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	98.119	3.074	26580	1.44	100	98.1	90	110	
Mo	95	1	nogas	97.078	1.400	518677	2.64	100	97.1	90	110	
Sn	118	1	nogas	94.387	2.113	708537	3.00	100	94.4	90	110	
Ba	137	1	nogas	96.555	3.859	396160	0.48	100	96.6	90	110	
Sb	121	2	He	100.696	1.924	642170	2.46	100	100.7	90	110	
Li	7	1	nogas	101.273	5.917	1543498	5.75	100	101.3	90	110	
P	31	1	nogas	485.540	4.019	990029	0.91	500	97.1	90	110	
La	139	1	nogas	143.002	25.792	603	22.50	100	143.0	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	-1306.757	-57.928	17	69.28	100	-1306.8	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	nogas	1072050	2.59	1282255	83.61	70	125	
Ge	72	1	nogas	3320630	4.05	3894467	85.27	70	125	
In	115	1	nogas	2966861	4.17	3488791	85.04	70	125	
Bi	209	1	nogas	2069010	4.22	2439864	84.80	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1126760	1.49	1316692	85.58	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	091_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T14:23:03-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	070CALB.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	0.053	31.1	497	23.9	1	
Na	23	1	nogas	23.069	9.7	1211946	2.1	100	
Mg	24	1	nogas	5.635	21.8	103037	17.1	100	
Al	27	1	nogas	-0.140	-42.5	25418	3.1	5	
K	39	1	nogas	6.253	201.2	9577927	0.9	100	
Ti	47	1	nogas	0.089	62.4	573	17.2	2.5	
V	51	1	nogas	-5.604	-4.0	385461	2.7	2.5	
Cr	52	1	nogas	-0.267	-38.7	48066	3.6	2.5	
Mn	55	1	nogas	0.179	27.6	31086	2.8	2.5	
Co	59	1	nogas	0.062	31.0	2017	18.8	2.5	
Ni	60	1	nogas	-0.288	-3.7	1467	4.2	2.5	
Cu	63	1	nogas	0.072	21.4	3777	2.8	2	
Zn	66	1	nogas	0.523	6.8	4010	2.2	2.5	
As	75	1	nogas	-2.402	-2.9	75556	2.4	2.5	
Sr	88	1	nogas	0.057	26.4	2920	11.9	2.5	
Ag	107	1	nogas	0.042	9.8	657	6.2	2.5	
Cd	111	1	nogas	0.041	35.6	143	34.4	1	
Sb	121	1	nogas	0.291	24.5	4481	17.5	2.5	
Tl	205	1	nogas	0.643	65.8	11929	65.6	1	
Pb	208	1	nogas	0.052	22.6	1897	15.4	2.5	
U	238	1	nogas	0.152	53.7	3617	55.1	2.5	
[Pb]	206	1	nogas	0.050	19.1	487	12.4	2.5	
[Pb]	207	1	nogas	0.049	24.1	383	17.0	2.5	
Na	23	2	He	15.129	8.1	100948	3.1	100	
Mg	24	2	He	3.640	3.1	5728	3.2	100	
Al	27	2	He	-0.961	-4.5	770	2.2	5	
K	39	2	He	-21.439	-7.2	231713	0.9	100	
Ca	43	2	He	3.717	388.8	73	67.3	100	
Ca	44	2	He	4.022	22.3	2380	3.4	100	
V	51	2	He	-0.014	-39.2	7159	1.9	2.5	
Cr	52	2	He	0.053	127.3	5954	8.7	2.5	
Mn	55	2	He	0.061	23.7	1913	4.4	2.5	
Fe	56	2	He	4.688	5.8	59429	4.6	100	
Co	59	2	He	0.029	14.7	497	10.1	2.5	
Ni	60	2	He	-0.179	-9.2	343	13.1	2.5	
Cu	63	2	He	-0.043	-55.1	1650	12.1	2	
Zn	66	2	He	0.238	46.2	1560	13.5	2.5	
As	75	2	He	0.065	34.2	454	6.9	2.5	
Se	78	2	He	0.563	39.9	171	19.3	2	
B	11	1	nogas	7.588	18.0	53215	10.5	10	
Si	28	1	nogas	405.209	19.5	3005349	1.4	5	CCB Main CR1 Failed
Ca	43	1	nogas	3.177	125.3	1007	12.6	100	
Ca	44	1	nogas	-18.759	-34.9	216030	0.7	100	
Fe	56	1	nogas	-14.070	-62.9	3463700	4.1	100	
Se	77	1	nogas	-8.582	-25.1	25064	2.9	2.5	
Se	82	1	nogas	0.119	41.6	207	5.6	2	
Mo	95	1	nogas	0.401	50.7	2287	45.2	2.5	
Sn	118	1	nogas	0.343	38.7	3751	24.5	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.058	53.6	527	21.0	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.259	14.0	2277	9.0	2.5	
P	31	1	nogas	-1.593	-107.5	107195	1.6	10	
La	139	1	nogas	9.277	118.9	93	43.3	2.5	CCB Main CR1 Failed
Au	197	1	nogas	-298.434	-430.1	33	62.4	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	nogas	1155377	1.74	1282255	90.11	70	125	
Ge	72	1	nogas	3292046	1.99	3894467	84.53	70	125	
In	115	1	nogas	2953646	4.68	3488791	84.66	70	125	
Bi	209	1	nogas	2124593	3.03	2439864	87.08	70	125	
Ge	72	2	He	1145141	1.47	1316692	86.97	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	102_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T14:44:49-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	070CALB.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	112.020	11.904	725204	0.69	100	112.0	90	110	CCV Main CR1-2 Failed
Na	23	1	nogas	11728.643	16.197	257456731	1.49	10000	117.3	90	110	CCV Main CR1-2 Failed
Mg	24	1	nogas	11485.226	16.093	162914487	1.65	10000	114.9	90	110	CCV Main CR1-2 Failed
Al	27	1	nogas	116.791	10.555	1998979	2.86	100	116.8	90	110	CCV Main CR1-2 Failed
K	39	1	nogas	11127.141	7.132	222629238	1.60	10000	111.3	90	110	CCV Main CR1-2 Failed
Ti	47	1	nogas	109.459	7.957	176540	1.07	100	109.5	90	110	
V	51	1	nogas	111.521	10.559	3027448	1.72	100	111.5	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	113.502	9.691	2252149	2.65	100	113.5	90	110	CCV Main CR1-2 Failed
Mn	55	1	nogas	113.688	10.280	2758240	3.01	100	113.7	90	110	CCV Main CR1-2 Failed
Co	59	1	nogas	114.495	7.816	2335558	1.17	100	114.5	90	110	CCV Main CR1-2 Failed
Ni	60	1	nogas	114.362	8.214	518304	0.80	100	114.4	90	110	CCV Main CR1-2 Failed
Cu	63	1	nogas	114.232	5.870	1208812	1.70	100	114.2	90	110	CCV Main CR1-2 Failed
Zn	66	1	nogas	111.246	7.579	397349	1.65	100	111.2	90	110	CCV Main CR1-2 Failed
As	75	1	nogas	109.671	8.941	616408	0.53	100	109.7	90	110	
Sr	88	1	nogas	109.375	6.948	2697441	0.95	100	109.4	90	110	
Ag	107	1	nogas	111.017	10.762	1333863	3.22	100	111.0	90	110	CCV Main CR1-2 Failed
Cd	111	1	nogas	111.602	15.098	288988	0.90	100	111.6	90	110	CCV Main CR1-2 Failed
Sb	121	1	nogas	111.349	6.419	1264881	1.25	100	111.3	90	110	CCV Main CR1-2 Failed
Tl	205	1	nogas	118.095	11.485	1841688	1.20	100	118.1	90	110	CCV Main CR1-2 Failed
Pb	208	1	nogas	97.749	1.510	2414716	1.51	100	97.7	90	110	
U	238	1	nogas	115.542	10.730	2361146	0.82	100	115.5	90	110	CCV Main CR1-2 Failed
[Pb]	206	1	nogas	116.620	11.090	620210	0.56	100	116.6	90	110	CCV Main CR1-2 Failed
[Pb]	207	1	nogas	112.350	10.132	525227	1.58	100	112.3	90	110	CCV Main CR1-2 Failed
Na	23	2	He	10378.779	0.582	20919843	2.05	10000	103.8	90	110	
Mg	24	2	He	10416.445	1.146	11636533	1.30	10000	104.2	90	110	
Al	27	2	He	102.223	1.917	65654	2.14	100	102.2	90	110	
K	39	2	He	9537.676	2.114	12711963	2.07	10000	95.4	90	110	
Ca	43	2	He	10268.770	2.464	34245	2.27	10000	102.7	90	110	
Ca	44	2	He	10571.067	0.932	581988	1.42	10000	105.7	90	110	
V	51	2	He	101.404	0.482	783579	2.78	100	101.4	90	110	
Cr	52	2	He	100.066	2.481	851658	0.82	100	100.1	90	110	
Mn	55	2	He	102.179	3.252	620616	1.52	100	102.2	90	110	
Fe	56	2	He	10349.620	1.894	76634692	0.79	10000	103.5	90	110	
Co	59	2	He	101.200	1.378	1151486	1.98	100	101.2	90	110	
Ni	60	2	He	104.273	1.165	295528	2.02	100	104.3	90	110	
Cu	63	2	He	102.341	0.099	742203	2.38	100	102.3	90	110	
Zn	66	2	He	103.910	1.160	174311	2.32	100	103.9	90	110	
As	75	2	He	100.328	0.686	160927	2.14	100	100.3	90	110	
Se	78	2	He	99.390	1.219	13344	2.46	100	99.4	90	110	
B	11	1	nogas	540.174	12.088	2187268	1.06	500	108.0	90	110	
Si	28	1	nogas	5859.002	13.101	8402637	2.05	5000	117.2	90	110	CCV Main CR1-2 Failed
Ca	43	1	nogas	11635.389	6.744	383110	1.35	10000	116.4	90	110	CCV Main CR1-2 Failed
Ca	44	1	nogas	11418.046	8.531	6183035	3.47	10000	114.2	90	110	CCV Main CR1-2 Failed
Fe	56	1	nogas	11273.803	9.497	235596447	1.96	10000	112.7	90	110	CCV Main CR1-2 Failed
Se	77	1	nogas	111.029	18.463	50664	1.82	100	111.0	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	109.097	4.115	27434	3.24	100	109.1	90	110	
Mo	95	1	nogas	106.273	7.829	526299	1.46	100	106.3	90	110	
Sn	118	1	nogas	110.103	14.480	735426	0.88	100	110.1	90	110	CCV Main CR1-2 Failed
Ba	137	1	nogas	110.246	14.225	402892	0.79	100	110.2	90	110	CCV Main CR1-2 Failed
Sb	121	2	He	100.625	2.181	633898	0.70	100	100.6	90	110	
Li	7	1	nogas	110.195	8.310	1534955	4.87	100	110.2	90	110	CCV Main CR1-2 Failed
P	31	1	nogas	545.849	8.744	1019401	0.53	500	109.2	90	110	
La	139	1	nogas	165.855	4.908	623	13.64	100	165.9	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	-766.665	-126.540	23	65.47	100	-766.7	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	nogas	990519	12.12	1282255	77.25	70	125	
Ge	72	1	nogas	3088146	7.15	3894467	79.30	70	125	
In	115	1	nogas	2675231	13.91	3488791	76.68	70	125	
Bi	209	1	nogas	1908786	10.00	2439864	78.23	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1113395	2.33	1316692	84.56	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	103_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T14:46:50-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	070CALB.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	0.052	34.2	497	25.9	1	
Na	23	1	nogas	4.227	56.9	748809	4.1	100	
Mg	24	1	nogas	6.325	29.3	112358	21.4	100	
Al	27	1	nogas	-0.124	-76.6	26248	3.4	5	
K	39	1	nogas	5.949	297.2	9782568	0.6	100	
Ti	47	1	nogas	0.049	72.0	517	15.5	2.5	
V	51	1	nogas	-4.249	-11.8	427752	3.1	2.5	
Cr	52	1	nogas	-0.176	-36.4	51087	2.3	2.5	
Mn	55	1	nogas	0.110	39.8	29971	1.6	2.5	
Co	59	1	nogas	0.057	32.8	1960	18.0	2.5	
Ni	60	1	nogas	-0.380	-12.3	1040	19.3	2.5	
Cu	63	1	nogas	0.033	120.7	3407	10.1	2	
Zn	66	1	nogas	-0.042	-99.0	1900	5.2	2.5	
As	75	1	nogas	-1.283	-28.0	83243	4.9	2.5	
Sr	88	1	nogas	0.065	21.4	3197	8.4	2.5	
Ag	107	1	nogas	0.042	22.8	673	15.5	2.5	
Cd	111	1	nogas	0.048	52.8	163	46.0	1	
Sb	121	1	nogas	0.289	24.5	4547	16.0	2.5	
Tl	205	1	nogas	0.650	68.0	12220	66.2	1	
Pb	208	1	nogas	0.054	25.3	1930	17.4	2.5	
U	238	1	nogas	0.160	62.1	3871	61.7	2.5	
[Pb]	206	1	nogas	0.036	34.9	413	19.4	2.5	
[Pb]	207	1	nogas	0.058	6.1	440	3.9	2.5	
Na	23	2	He	0.509	102.0	68801	0.5	100	
Mg	24	2	He	4.406	10.2	6425	6.9	100	
Al	27	2	He	-0.744	-22.1	887	12.7	5	
K	39	2	He	-30.843	-7.8	219435	1.4	100	
Ca	43	2	He	-4.668	-208.7	43	74.2	100	
Ca	44	2	He	-3.603	-29.7	1897	4.0	100	
V	51	2	He	0.025	79.5	7261	3.0	2.5	
Cr	52	2	He	0.055	57.4	5814	4.4	2.5	
Mn	55	2	He	0.012	169.9	1563	8.7	2.5	
Fe	56	2	He	5.038	9.1	60379	5.0	100	
Co	59	2	He	0.039	20.6	600	14.5	2.5	
Ni	60	2	He	-0.181	-18.9	327	29.7	2.5	
Cu	63	2	He	-0.090	-7.8	1260	4.2	2	
Zn	66	2	He	-0.281	-15.0	650	11.6	2.5	
As	75	2	He	0.066	42.9	444	9.5	2.5	
Se	78	2	He	0.590	32.2	169	15.2	2	
B	11	1	nogas	7.276	19.8	52586	11.6	10	
Si	28	1	nogas	320.359	32.1	2976243	0.4	5	CCB Main CR1 Failed
Ca	43	1	nogas	9.209	76.7	1243	17.8	100	
Ca	44	1	nogas	-62.667	-20.9	195657	0.4	100	
Fe	56	1	nogas	-13.487	-79.0	3551535	3.3	100	
Se	77	1	nogas	-1.844	-210.9	27318	5.6	2.5	
Se	82	1	nogas	0.167	121.9	223	22.5	2	
Mo	95	1	nogas	0.393	49.4	2287	42.5	2.5	
Sn	118	1	nogas	0.317	37.8	3594	21.6	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.248	131.9	1289	99.3	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.283	6.5	2367	4.0	2.5	
P	31	1	nogas	3.914	224.1	119443	10.4	10	
La	139	1	nogas	13.145	53.6	110	24.1	2.5	CCB Main CR1 Failed
Au	197	1	nogas	-955.608	-97.9	23	65.5	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	nogas	1174372	2.29	1282255	91.59	70	125	
Ge	72	1	nogas	3366412	3.57	3894467	86.44	70	125	
In	115	1	nogas	2990085	3.50	3488791	85.71	70	125	
Bi	209	1	nogas	2171653	1.46	2439864	89.01	70	125	
Ge	72	2	He	1113970	1.01	1316692	84.60	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	105_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T14:51:45-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	070CALB.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	102.672	6.561	740690	2.00	100	102.7	90	110	
Na	23	1	nogas	11463.225	8.329	257648031	3.79	10000	114.6	90	110	CCV Main CR1-2 Failed
Mg	24	1	nogas	11110.950	9.046	161203737	0.85	10000	111.1	90	110	CCV Main CR1-2 Failed
Al	27	1	nogas	110.049	9.478	2005041	4.38	100	110.0	90	110	CCV Main CR1-2 Failed
K	39	1	nogas	10592.210	4.218	225907897	2.54	10000	105.9	90	110	
Ti	47	1	nogas	104.998	7.507	180010	1.13	100	105.0	90	110	
V	51	1	nogas	102.060	6.722	2992509	0.92	100	102.1	90	110	
Cr	52	1	nogas	105.724	5.474	2236878	1.12	100	105.7	90	110	
Mn	55	1	nogas	106.230	5.679	2746265	1.91	100	106.2	90	110	
Co	59	1	nogas	108.275	5.455	2349413	0.91	100	108.3	90	110	
Ni	60	1	nogas	107.125	7.939	516198	1.54	100	107.1	90	110	
Cu	63	1	nogas	105.732	7.943	1188168	2.56	100	105.7	90	110	
Zn	66	1	nogas	105.573	5.838	401156	2.64	100	105.6	90	110	
As	75	1	nogas	102.251	7.597	616969	0.82	100	102.3	90	110	
Sr	88	1	nogas	105.543	3.982	2769426	2.48	100	105.5	90	110	
Ag	107	1	nogas	103.332	5.602	1322430	0.72	100	103.3	90	110	
Cd	111	1	nogas	107.290	10.048	291765	0.53	100	107.3	90	110	
Sb	121	1	nogas	103.973	7.138	1254737	1.41	100	104.0	90	110	
Tl	205	1	nogas	112.573	10.677	1793622	3.75	100	112.6	90	110	CCV Main CR1-2 Failed
Pb	208	1	nogas	96.261	1.845	2377977	1.84	100	96.3	90	110	
U	238	1	nogas	115.321	10.660	2405433	2.81	100	115.3	90	110	CCV Main CR1-2 Failed
[Pb]	206	1	nogas	112.605	9.773	611749	1.12	100	112.6	90	110	CCV Main CR1-2 Failed
[Pb]	207	1	nogas	108.878	9.261	519772	1.34	100	108.9	90	110	
Na	23	2	He	10507.816	1.659	21406676	1.05	10000	105.1	90	110	
Mg	24	2	He	10434.217	1.329	11783366	1.00	10000	104.3	90	110	
Al	27	2	He	104.913	0.731	68079	0.57	100	104.9	90	110	
K	39	2	He	9805.563	0.792	13061714	0.78	10000	98.1	90	110	
Ca	43	2	He	10630.808	1.040	35838	0.42	10000	106.3	90	110	
Ca	44	2	He	10688.766	1.240	594850	1.15	10000	106.9	90	110	
V	51	2	He	101.666	0.523	793968	0.25	100	101.7	90	110	
Cr	52	2	He	103.097	0.442	887048	0.79	100	103.1	90	110	
Mn	55	2	He	104.495	0.415	641762	0.67	100	104.5	90	110	
Fe	56	2	He	10547.594	0.884	78961440	0.82	10000	105.5	90	110	
Co	59	2	He	101.018	0.958	1161924	1.20	100	101.0	90	110	
Ni	60	2	He	103.751	1.802	297238	1.74	100	103.8	90	110	
Cu	63	2	He	102.939	0.400	754560	0.78	100	102.9	90	110	
Zn	66	2	He	104.058	0.614	176445	0.80	100	104.1	90	110	
As	75	2	He	101.453	0.346	164485	0.57	100	101.5	90	110	
Se	78	2	He	100.630	1.711	13654	1.24	100	100.6	90	110	
B	11	1	nogas	501.427	4.075	2268320	6.32	500	100.3	90	110	
Si	28	1	nogas	5509.491	10.377	8556476	1.03	5000	110.2	90	110	CCV Main CR1-2 Failed
Ca	43	1	nogas	10858.714	7.638	379875	2.15	10000	108.6	90	110	
Ca	44	1	nogas	10688.747	8.779	6164252	3.19	10000	106.9	90	110	
Fe	56	1	nogas	10643.695	6.320	236977147	3.12	10000	106.4	90	110	
Se	77	1	nogas	95.893	13.622	50243	1.55	100	95.9	90	110	
Se	82	1	nogas	102.332	6.254	27328	1.04	100	102.3	90	110	
Mo	95	1	nogas	100.745	4.761	530860	1.67	100	100.7	90	110	
Sn	118	1	nogas	104.346	10.592	731355	0.39	100	104.3	90	110	
Ba	137	1	nogas	106.872	9.000	410174	1.67	100	106.9	90	110	
Sb	121	2	He	101.263	2.207	644995	2.38	100	101.3	90	110	
Li	7	1	nogas	104.898	7.540	1626814	2.05	100	104.9	90	110	
P	31	1	nogas	513.916	6.886	1027074	0.57	500	102.8	90	110	
La	139	1	nogas	163.159	17.114	637	12.79	100	163.2	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	-20.607	-7378.798	33	62.45	100	-20.6	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	nogas	1095989	6.19	1282255	85.47	70	125	
Ge	72	1	nogas	3280062	6.15	3894467	84.22	70	125	
In	115	1	nogas	2789604	10.30	3488791	79.96	70	125	
Bi	209	1	nogas	1948394	10.29	2439864	79.86	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1125377	0.63	1316692	85.47	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	115_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T15:12:10-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	070CALB.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	101.583	15.487	700377	2.22	100	101.6	90	110	
Na	23	1	nogas	10273.964	6.868	241202472	2.15	10000	102.7	90	110	
Mg	24	1	nogas	10387.349	3.423	157728254	2.98	10000	103.9	90	110	
Al	27	1	nogas	105.401	8.666	1880580	0.93	100	105.4	90	110	
K	39	1	nogas	10239.775	9.957	213499988	0.92	10000	102.4	90	110	
Ti	47	1	nogas	100.302	10.444	168056	2.11	100	100.3	90	110	
V	51	1	nogas	104.886	14.443	2986010	3.13	100	104.9	90	110	
Cr	52	1	nogas	107.047	12.521	2208249	3.39	100	107.0	90	110	
Mn	55	1	nogas	104.232	9.066	2633738	2.21	100	104.2	90	110	
Co	59	1	nogas	106.347	7.462	2256744	1.64	100	106.3	90	110	
Ni	60	1	nogas	103.712	8.023	489159	0.73	100	103.7	90	110	
Cu	63	1	nogas	103.040	9.605	1132173	1.25	100	103.0	90	110	
Zn	66	1	nogas	101.724	9.910	377559	1.38	100	101.7	90	110	
As	75	1	nogas	98.894	8.613	586664	1.78	100	98.9	90	110	
Sr	88	1	nogas	103.601	10.091	2652985	1.42	100	103.6	90	110	
Ag	107	1	nogas	101.041	9.076	1263529	0.37	100	101.0	90	110	
Cd	111	1	nogas	98.138	11.529	274641	1.89	100	98.1	90	110	
Sb	121	1	nogas	101.268	9.823	1194394	1.28	100	101.3	90	110	
Tl	205	1	nogas	106.559	6.617	1756712	1.41	100	106.6	90	110	
Pb	208	1	nogas	92.844	1.107	2293575	1.11	100	92.8	90	110	
U	238	1	nogas	106.866	9.079	2305198	3.19	100	106.9	90	110	
[Pb]	206	1	nogas	104.328	7.615	586076	0.27	100	104.3	90	110	
[Pb]	207	1	nogas	100.220	7.373	494689	1.75	100	100.2	90	110	
Na	23	2	He	10204.331	1.338	20016438	0.65	10000	102.0	90	110	
Mg	24	2	He	10242.226	1.231	11136196	1.25	10000	102.4	90	110	
Al	27	2	He	103.889	4.018	64898	2.45	100	103.9	90	110	
K	39	2	He	9209.655	1.588	12283704	1.55	10000	92.1	90	110	
Ca	43	2	He	10110.273	2.303	32813	0.69	10000	101.1	90	110	
Ca	44	2	He	10210.482	0.731	547176	0.93	10000	102.1	90	110	
V	51	2	He	100.036	1.691	752196	0.20	100	100.0	90	110	
Cr	52	2	He	100.084	1.273	829172	0.56	100	100.1	90	110	
Mn	55	2	He	100.462	1.087	594058	0.54	100	100.5	90	110	
Fe	56	2	He	10152.970	1.650	73171807	0.33	10000	101.5	90	110	
Co	59	2	He	98.483	3.062	1090323	1.54	100	98.5	90	110	
Ni	60	2	He	101.738	1.710	280616	1.00	100	101.7	90	110	
Cu	63	2	He	100.281	1.767	707676	0.43	100	100.3	90	110	
Zn	66	2	He	101.635	0.828	165945	1.01	100	101.6	90	110	
As	75	2	He	98.319	1.924	153461	0.69	100	98.3	90	110	
Se	78	2	He	96.899	1.642	12661	0.80	100	96.9	90	110	
B	11	1	nogas	472.385	13.597	2042523	0.50	500	94.5	90	110	
Si	28	1	nogas	5305.747	12.307	8151613	0.80	5000	106.1	90	110	
Ca	43	1	nogas	10529.401	9.429	360144	0.68	10000	105.3	90	110	
Ca	44	1	nogas	10286.728	10.975	5805725	1.75	10000	102.9	90	110	
Fe	56	1	nogas	10244.847	8.607	223086622	0.56	10000	102.4	90	110	
Se	77	1	nogas	91.206	17.403	48027	0.96	100	91.2	90	110	
Se	82	1	nogas	98.774	8.294	25799	1.39	100	98.8	90	110	
Mo	95	1	nogas	97.050	8.471	499746	2.13	100	97.0	90	110	
Sn	118	1	nogas	96.816	11.613	698687	2.82	100	96.8	90	110	
Ba	137	1	nogas	97.616	12.143	385084	0.89	100	97.6	90	110	
Sb	121	2	He	98.200	1.207	602187	1.05	100	98.2	90	110	
Li	7	1	nogas	105.855	13.475	1572132	1.14	100	105.9	90	110	
P	31	1	nogas	487.742	9.065	958666	0.93	500	97.5	90	110	
La	139	1	nogas	158.407	14.071	643	17.19	100	158.4	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	-1018.320	-75.000	20	50.00	100	-1018.3	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	nogas	1058388	12.51	1282255	82.54	70	125	
Ge	72	1	nogas	3213815	8.32	3894467	82.52	70	125	
In	115	1	nogas	2878319	12.38	3488791	82.50	70	125	
Bi	209	1	nogas	2009487	8.03	2439864	82.36	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1083554	1.61	1316692	82.29	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	116_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T15:14:12-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	070CALB.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	0.058	33.3	527	26.6	1	
Na	23	1	nogas	1.884	104.9	676192	4.2	100	
Mg	24	1	nogas	5.468	25.9	96975	19.4	100	
Al	27	1	nogas	-0.124	-71.5	24626	6.3	5	
K	39	1	nogas	12.255	76.7	9296411	0.4	100	
Ti	47	1	nogas	0.035	119.3	460	15.2	2.5	
V	51	1	nogas	-3.507	-2.6	418279	1.5	2.5	
Cr	52	1	nogas	-0.178	-21.9	47845	3.2	2.5	
Mn	55	1	nogas	0.145	15.3	28970	2.8	2.5	
Co	59	1	nogas	0.049	17.1	1663	8.7	2.5	
Ni	60	1	nogas	-0.408	-3.8	850	8.2	2.5	
Cu	63	1	nogas	-0.003	-347.0	2810	2.8	2	
Zn	66	1	nogas	-0.148	-59.4	1393	21.3	2.5	
As	75	1	nogas	-0.444	-101.0	82154	2.3	2.5	
Sr	88	1	nogas	0.066	25.3	3010	13.2	2.5	
Ag	107	1	nogas	0.036	27.1	553	19.9	2.5	
Cd	111	1	nogas	0.059	25.8	190	21.1	1	
Sb	121	1	nogas	0.191	21.9	3137	15.1	2.5	
Tl	205	1	nogas	0.584	65.6	10758	64.1	1	
Pb	208	1	nogas	0.050	44.5	1840	29.8	2.5	
U	238	1	nogas	0.160	48.2	3764	48.8	2.5	
[Pb]	206	1	nogas	0.043	28.1	440	18.0	2.5	
[Pb]	207	1	nogas	0.050	80.0	387	55.6	2.5	
Na	23	2	He	-1.647	-34.2	62910	1.6	100	
Mg	24	2	He	5.147	25.2	7081	20.1	100	
Al	27	2	He	-0.800	-29.9	830	17.8	5	
K	39	2	He	-34.791	-8.3	214280	1.8	100	
Ca	43	2	He	5.883	30.6	77	7.5	100	
Ca	44	2	He	-1.185	-250.5	1980	8.1	100	
V	51	2	He	0.045	50.9	7235	2.5	2.5	
Cr	52	2	He	0.034	135.6	5504	6.8	2.5	
Mn	55	2	He	-0.005	-254.4	1423	5.9	2.5	
Fe	56	2	He	4.999	7.7	58643	4.7	100	
Co	59	2	He	0.035	18.6	547	13.5	2.5	
Ni	60	2	He	-0.168	-16.7	357	21.8	2.5	
Cu	63	2	He	-0.084	-13.7	1273	6.4	2	
Zn	66	2	He	-0.296	-5.4	610	4.3	2.5	
As	75	2	He	0.076	33.4	449	9.0	2.5	
Se	78	2	He	0.376	61.7	137	21.9	2	
B	11	1	nogas	6.888	23.4	49204	11.4	10	
Si	28	1	nogas	482.068	10.3	2960897	0.4	5	CCB Main CR1 Failed
Ca	43	1	nogas	4.102	12.8	997	1.5	100	
Ca	44	1	nogas	-73.287	-8.8	177764	0.7	100	
Fe	56	1	nogas	-10.964	-95.1	3384551	5.3	100	
Se	77	1	nogas	2.743	146.6	26653	2.2	2.5	CCB Main CR1 Failed
Se	82	1	nogas	0.529	30.7	303	14.9	2	

Continuing Calibration Blank (CCB) Report

Mo	95	1	nogas	0.381	56.9	2094	50.8	2.5	
Sn	118	1	nogas	0.312	38.4	3480	23.6	5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Ba	137	1	nogas	0.065	21.2	550	8.3	2.5	
Sb	121	2	He	0.154	4.2	1517	2.5	2.5	
P	31	1	nogas	0.736	222.2	106722	1.4	10	
La	139	1	nogas	11.027	57.0	100	26.5	2.5	CCB Main CR1 Failed
Au	197	1	nogas	-42.630	-5259.7	37	95.8	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	nogas	1141888	3.74	1282255	89.05	70	125	
Ge	72	1	nogas	3154284	1.73	3894467	80.99	70	125	
In	115	1	nogas	2918242	2.58	3488791	83.65	70	125	
Bi	209	1	nogas	2108802	1.78	2439864	86.43	70	125	
Ge	72	2	He	1086993	0.13	1316692	82.55	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	127_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T15:35:56-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	070CALB.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	103.359	0.577	696780	1.04	100	103.4	90	110	
Na	23	1	nogas	10623.840	5.096	245421030	2.43	10000	106.2	90	110	
Mg	24	1	nogas	10548.063	2.655	157519537	2.71	10000	105.5	90	110	
Al	27	1	nogas	107.265	3.171	1921923	1.04	100	107.3	90	110	
K	39	1	nogas	10317.326	5.824	216027071	2.66	10000	103.2	90	110	
Ti	47	1	nogas	100.173	3.270	168767	1.50	100	100.2	90	110	
V	51	1	nogas	98.702	6.802	2857118	3.40	100	98.7	90	110	
Cr	52	1	nogas	104.216	5.866	2164809	3.92	100	104.2	90	110	
Mn	55	1	nogas	107.235	3.663	2721638	2.64	100	107.2	90	110	
Co	59	1	nogas	104.313	5.046	2222116	3.95	100	104.3	90	110	
Ni	60	1	nogas	104.756	3.806	496043	0.70	100	104.8	90	110	
Cu	63	1	nogas	104.816	3.544	1157399	1.47	100	104.8	90	110	
Zn	66	1	nogas	102.710	3.574	383144	0.52	100	102.7	90	110	
As	75	1	nogas	98.055	4.125	584562	0.17	100	98.1	90	110	
Sr	88	1	nogas	102.912	5.505	2648325	2.82	100	102.9	90	110	
Ag	107	1	nogas	101.173	3.020	1271473	2.34	100	101.2	90	110	
Cd	111	1	nogas	100.048	3.549	274385	1.50	100	100.0	90	110	
Sb	121	1	nogas	103.154	0.173	1223788	3.39	100	103.2	90	110	
Tl	205	1	nogas	105.014	3.080	1712688	2.79	100	105.0	90	110	
Pb	208	1	nogas	94.622	1.272	2337487	1.27	100	94.6	90	110	
U	238	1	nogas	108.471	3.060	2316719	2.27	100	108.5	90	110	
[Pb]	206	1	nogas	104.798	2.392	582770	2.57	100	104.8	90	110	
[Pb]	207	1	nogas	103.645	1.185	506280	1.30	100	103.6	90	110	
Na	23	2	He	10128.735	1.409	19980403	0.79	10000	101.3	90	110	
Mg	24	2	He	10365.725	1.819	11333127	1.19	10000	103.7	90	110	
Al	27	2	He	102.991	1.813	64727	1.31	100	103.0	90	110	
K	39	2	He	9262.504	2.423	12352702	2.37	10000	92.6	90	110	
Ca	43	2	He	10491.564	1.359	34245	1.43	10000	104.9	90	110	
Ca	44	2	He	10476.531	0.921	564545	1.24	10000	104.8	90	110	
V	51	2	He	100.177	1.748	757527	1.45	100	100.2	90	110	
Cr	52	2	He	100.737	1.055	839249	0.37	100	100.7	90	110	
Mn	55	2	He	103.266	1.197	614028	0.73	100	103.3	90	110	
Fe	56	2	He	10398.603	1.978	75364122	1.31	10000	104.0	90	110	
Co	59	2	He	100.112	3.340	1114717	2.82	100	100.1	90	110	
Ni	60	2	He	103.539	2.494	287176	2.04	100	103.5	90	110	
Cu	63	2	He	101.784	1.819	722315	1.17	100	101.8	90	110	
Zn	66	2	He	102.608	0.418	168463	0.28	100	102.6	90	110	
As	75	2	He	99.763	1.790	156596	1.36	100	99.8	90	110	
Se	78	2	He	97.290	3.233	12782	2.52	100	97.3	90	110	
B	11	1	nogas	487.425	1.746	2056530	1.00	500	97.5	90	110	
Si	28	1	nogas	5493.633	5.856	8388122	1.65	5000	109.9	90	110	
Ca	43	1	nogas	10581.544	4.458	363614	1.17	10000	105.8	90	110	
Ca	44	1	nogas	10242.715	5.316	5811591	1.69	10000	102.4	90	110	
Fe	56	1	nogas	10536.370	3.161	230352863	0.90	10000	105.4	90	110	
Se	77	1	nogas	83.967	9.077	46526	4.74	100	84.0	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	102.517	4.959	26874	1.70	100	102.5	90	110	
Mo	95	1	nogas	96.911	6.840	500879	4.26	100	96.9	90	110	
Sn	118	1	nogas	98.206	1.903	694716	1.69	100	98.2	90	110	
Ba	137	1	nogas	100.953	4.884	390415	3.03	100	101.0	90	110	
Sb	121	2	He	100.958	1.391	622546	0.72	100	101.0	90	110	
Li	7	1	nogas	103.718	1.779	1504238	0.31	100	103.7	90	110	
P	31	1	nogas	501.639	5.695	986623	1.74	500	100.3	90	110	
La	139	1	nogas	156.261	14.353	617	11.51	100	156.3	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	-812.561	-49.202	23	24.74	100	-812.6	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	nogas	1021571	1.51	1282255	79.67	70	125	
Ge	72	1	nogas	3215245	3.47	3894467	82.56	70	125	
In	115	1	nogas	2795315	2.12	3488791	80.12	70	125	
Bi	209	1	nogas	1981102	1.06	2439864	81.20	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1089571	0.69	1316692	82.75	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	128_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T15:37:56-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	070CALB.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	0.071	19.9	613	19.7	1	
Na	23	1	nogas	2.053	147.1	692988	6.8	100	
Mg	24	1	nogas	6.510	26.2	114808	19.2	100	
Al	27	1	nogas	-0.088	-64.3	26189	0.5	5	
K	39	1	nogas	-1.837	-885.1	9350668	1.0	100	
Ti	47	1	nogas	0.063	176.0	523	35.6	2.5	
V	51	1	nogas	-3.996	-7.9	421934	2.3	2.5	
Cr	52	1	nogas	-0.226	-17.0	48644	4.2	2.5	
Mn	55	1	nogas	0.106	37.3	29033	3.2	2.5	
Co	59	1	nogas	0.063	12.4	2043	9.4	2.5	
Ni	60	1	nogas	-0.352	-5.4	1150	8.6	2.5	
Cu	63	1	nogas	0.015	137.3	3114	3.5	2	
Zn	66	1	nogas	-0.175	-34.7	1343	15.7	2.5	
As	75	1	nogas	-1.514	-44.4	79637	2.8	2.5	
Sr	88	1	nogas	0.075	23.1	3374	12.6	2.5	
Ag	107	1	nogas	0.042	13.9	653	8.7	2.5	
Cd	111	1	nogas	0.062	10.2	200	8.7	1	
Sb	121	1	nogas	0.212	31.0	3504	21.8	2.5	
Tl	205	1	nogas	0.598	66.7	10775	62.5	1	
Pb	208	1	nogas	0.060	34.0	2090	24.2	2.5	
U	238	1	nogas	0.164	53.0	3804	50.6	2.5	
[Pb]	206	1	nogas	0.054	44.7	500	28.0	2.5	
[Pb]	207	1	nogas	0.083	51.4	550	38.7	2.5	
Na	23	2	He	-0.593	-109.4	65529	2.0	100	
Mg	24	2	He	5.048	5.9	7031	4.8	100	
Al	27	2	He	-0.757	-17.2	863	9.3	5	
K	39	2	He	-35.017	-1.1	213986	0.2	100	
Ca	43	2	He	-5.507	-146.3	40	66.1	100	
Ca	44	2	He	-1.127	-184.8	2000	5.9	100	
V	51	2	He	0.093	37.0	7659	3.6	2.5	
Cr	52	2	He	0.085	16.7	5971	2.0	2.5	
Mn	55	2	He	0.032	19.1	1657	2.4	2.5	
Fe	56	2	He	6.553	2.0	70474	1.1	100	
Co	59	2	He	0.045	21.1	660	16.4	2.5	
Ni	60	2	He	-0.131	-6.9	460	5.8	2.5	
Cu	63	2	He	-0.082	-18.5	1300	8.5	2	
Zn	66	2	He	-0.326	-12.3	567	11.7	2.5	
As	75	2	He	0.054	52.5	419	10.5	2.5	
Se	78	2	He	0.383	45.0	139	16.0	2	
B	11	1	nogas	8.287	19.6	54245	12.3	10	
Si	28	1	nogas	453.231	30.7	3037013	1.2	5	CCB Main CR1 Failed
Ca	43	1	nogas	8.080	27.8	1173	8.3	100	
Ca	44	1	nogas	-88.986	-14.2	175551	0.5	100	
Fe	56	1	nogas	-4.463	-155.9	3652537	2.7	100	
Se	77	1	nogas	-4.599	-111.1	25849	0.7	2.5	
Se	82	1	nogas	0.126	92.6	207	12.2	2	
Mo	95	1	nogas	0.386	47.6	2207	44.2	2.5	
Sn	118	1	nogas	0.308	30.8	3460	18.2	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.071	47.3	573	21.8	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.132	15.7	1393	9.4	2.5	
P	31	1	nogas	-1.415	-81.9	106867	2.6	10	
La	139	1	nogas	8.325	109.2	90	40.1	2.5	CCB Main CR1 Failed
Au	197	1	nogas	-461.611	-484.4	30	115.5	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	nogas	1109761	4.65	1282255	86.55	70	125	
Ge	72	1	nogas	3272594	4.04	3894467	84.03	70	125	
In	115	1	nogas	2924332	2.11	3488791	83.82	70	125	
Bi	209	1	nogas	2094853	1.99	2439864	85.86	70	125	
Ge	72	2	He	1096191	0.28	1316692	83.25	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	139_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T15:59:49-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	070CALB.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	102.288	5.040	838896	1.71	100	102.3	90	110	
Na	23	1	nogas	10772.460	4.223	304614982	2.49	10000	107.7	90	110	
Mg	24	1	nogas	10302.740	1.737	188288279	1.96	10000	103.0	90	110	
Al	27	1	nogas	103.717	2.108	2286895	0.51	100	103.7	90	110	
K	39	1	nogas	9992.751	3.494	257836422	2.57	10000	99.9	90	110	
Ti	47	1	nogas	98.260	2.825	203604	0.83	100	98.3	90	110	
V	51	1	nogas	98.761	6.320	3515902	3.46	100	98.8	90	110	
Cr	52	1	nogas	100.004	5.961	2557959	4.95	100	100.0	90	110	
Mn	55	1	nogas	99.499	4.027	3107318	2.04	100	99.5	90	110	
Co	59	1	nogas	101.823	2.960	2668751	3.55	100	101.8	90	110	
Ni	60	1	nogas	99.154	2.479	577796	1.50	100	99.2	90	110	
Cu	63	1	nogas	100.916	2.653	1370736	0.75	100	100.9	90	110	
Zn	66	1	nogas	101.124	2.002	464172	2.32	100	101.1	90	110	
As	75	1	nogas	97.437	3.928	715120	1.62	100	97.4	90	110	
Sr	88	1	nogas	101.976	1.511	3229905	2.07	100	102.0	90	110	
Ag	107	1	nogas	97.202	0.869	1502582	1.59	100	97.2	90	110	
Cd	111	1	nogas	99.252	3.259	332323	2.28	100	99.3	90	110	
Sb	121	1	nogas	102.159	3.048	1489559	1.24	100	102.2	90	110	
Tl	205	1	nogas	100.728	2.601	2022677	1.47	100	100.7	90	110	
Pb	208	1	nogas	111.586	2.283	2756461	2.28	100	111.6	90	110	CCV Main CR1-2 Failed
U	238	1	nogas	99.905	6.861	2625262	4.18	100	99.9	90	110	
[Pb]	206	1	nogas	100.403	4.056	687402	3.47	100	100.4	90	110	
[Pb]	207	1	nogas	97.999	4.725	589164	2.76	100	98.0	90	110	
Na	23	2	He	10279.956	0.753	25178104	1.03	10000	102.8	90	110	
Mg	24	2	He	10113.223	0.780	13728983	0.35	10000	101.1	90	110	
Al	27	2	He	103.851	9.301	81007	8.71	100	103.9	90	110	
K	39	2	He	11376.952	0.419	15113297	0.41	10000	113.8	90	110	CCV Main CR1-2 Failed
Ca	43	2	He	10117.767	3.153	41002	2.69	10000	101.2	90	110	
Ca	44	2	He	10307.000	2.017	689581	1.61	10000	103.1	90	110	
V	51	2	He	98.416	0.677	924200	0.98	100	98.4	90	110	
Cr	52	2	He	98.913	1.521	1023254	1.23	100	98.9	90	110	
Mn	55	2	He	100.552	1.753	742378	1.39	100	100.6	90	110	
Fe	56	2	He	10072.440	0.681	90642645	0.34	10000	100.7	90	110	
Co	59	2	He	100.585	1.486	1390790	1.93	100	100.6	90	110	
Ni	60	2	He	100.466	0.617	346025	0.59	100	100.5	90	110	
Cu	63	2	He	99.436	0.932	876246	1.01	100	99.4	90	110	
Zn	66	2	He	101.382	1.022	206687	1.47	100	101.4	90	110	
As	75	2	He	99.318	0.736	193571	0.84	100	99.3	90	110	
Se	78	2	He	100.097	1.215	16327	1.15	100	100.1	90	110	
B	11	1	nogas	496.325	5.337	2547122	1.00	500	99.3	90	110	
Si	28	1	nogas	4811.137	2.110	9420233	0.93	5000	96.2	90	110	
Ca	43	1	nogas	10112.800	2.223	427606	0.26	10000	101.1	90	110	
Ca	44	1	nogas	9778.321	1.893	6840026	0.24	10000	97.8	90	110	
Fe	56	1	nogas	9975.916	3.110	268465906	1.04	10000	99.8	90	110	
Se	77	1	nogas	93.417	3.208	59972	1.48	100	93.4	90	110	
Se	82	1	nogas	100.438	4.147	32393	2.11	100	100.4	90	110	
Mo	95	1	nogas	95.084	3.487	604759	1.93	100	95.1	90	110	
Sn	118	1	nogas	97.236	4.990	839033	1.40	100	97.2	90	110	
Ba	137	1	nogas	97.834	6.122	461563	2.21	100	97.8	90	110	
Sb	121	2	He	100.571	0.962	770012	0.79	100	100.6	90	110	
Li	7	1	nogas	100.429	3.440	1776770	3.00	100	100.4	90	110	
P	31	1	nogas	491.448	2.594	1192467	3.10	500	98.3	90	110	
La	139	1	nogas	178.045	14.208	847	8.71	100	178.0	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	-926.487	-92.104	27	57.28	100	-926.5	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	nogas	1245314	6.24	1282255	97.12	70	125	
Ge	72	1	nogas	3953111	2.06	3894467	101.51	70	125	
In	115	1	nogas	3414984	5.48	3488791	97.88	70	125	
Bi	209	1	nogas	2440379	3.56	2439864	100.02	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1352786	0.45	1316692	102.74	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	140_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T16:01:51-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	070CALB.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	0.058	24.7	597	20.0	1	
Na	23	1	nogas	80.669	30.2	2731682	8.9	100	
Mg	24	1	nogas	6.488	17.5	123223	7.4	100	
Al	27	1	nogas	-0.085	-158.0	28238	4.6	5	
K	39	1	nogas	15.747	401.9	10412308	1.0	100	
Ti	47	1	nogas	0.078	65.5	590	4.5	2.5	
V	51	1	nogas	-4.717	-41.6	434232	2.1	2.5	
Cr	52	1	nogas	-0.197	-163.7	52762	0.8	2.5	
Mn	55	1	nogas	0.096	161.7	30832	2.0	2.5	
Co	59	1	nogas	0.054	21.4	1990	12.6	2.5	
Ni	60	1	nogas	-0.151	-32.3	2274	3.1	2.5	
Cu	63	1	nogas	0.137	40.2	4817	3.2	2	
Zn	66	1	nogas	-0.103	-64.6	1737	7.2	2.5	
As	75	1	nogas	-1.025	-210.2	88102	2.0	2.5	
Sr	88	1	nogas	0.368	13.9	11861	2.3	2.5	
Ag	107	1	nogas	0.048	20.5	783	6.3	2.5	
Cd	111	1	nogas	0.050	25.0	177	14.2	1	
Sb	121	1	nogas	0.233	14.3	4054	10.4	2.5	
Tl	205	1	nogas	0.497	56.9	9854	48.7	1	
Pb	208	1	nogas	0.060	20.1	2083	14.3	2.5	
U	238	1	nogas	0.117	39.2	2980	34.2	2.5	
[Pb]	206	1	nogas	0.051	27.9	517	2.2	2.5	
[Pb]	207	1	nogas	0.072	32.3	527	12.2	2.5	
Na	23	2	He	45.736	14.7	177413	3.1	100	
Mg	24	2	He	4.574	8.6	7355	3.0	100	
Al	27	2	He	-0.810	-18.6	940	11.7	5	
K	39	2	He	-14.224	-2.1	241132	0.2	100	
Ca	43	2	He	6.118	202.5	90	57.7	100	
Ca	44	2	He	-1.095	-184.0	2264	4.5	100	
V	51	2	He	-0.049	-53.1	7454	3.2	2.5	
Cr	52	2	He	0.035	149.3	6298	10.8	2.5	
Mn	55	2	He	0.024	122.3	1817	7.3	2.5	
Fe	56	2	He	4.502	14.1	62688	4.4	100	
Co	59	2	He	0.032	12.9	583	14.6	2.5	
Ni	60	2	He	-0.205	-6.1	287	10.7	2.5	
Cu	63	2	He	-0.034	-91.0	1843	8.4	2	
Zn	66	2	He	-0.244	-45.3	787	21.4	2.5	
As	75	2	He	0.016	113.4	406	4.5	2.5	
Se	78	2	He	0.389	11.1	159	4.4	2	
B	11	1	nogas	5.700	26.1	49472	12.3	10	
Si	28	1	nogas	230.801	158.6	2995195	1.4	5	CCB Main CR1 Failed
Ca	43	1	nogas	8.668	59.3	1277	2.0	100	
Ca	44	1	nogas	-83.849	-50.1	191383	0.5	100	
Fe	56	1	nogas	-17.076	-119.8	3622405	3.6	100	
Se	77	1	nogas	-3.701	-359.7	27988	1.5	2.5	
Se	82	1	nogas	0.160	85.4	233	16.2	2	
Mo	95	1	nogas	0.310	31.9	1960	28.8	2.5	
Sn	118	1	nogas	0.258	37.1	3330	17.9	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.070	11.8	623	17.2	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.130	23.5	1557	8.5	2.5	
P	31	1	nogas	5.065	184.0	126858	1.1	10	
La	139	1	nogas	7.888	219.1	93	65.5	2.5	CCB Main CR1 Failed
Au	197	1	nogas	-61.212	-2611.2	37	63.0	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	nogas	1295944	8.88	1282255	101.07	70	125	
Ge	72	1	nogas	3551982	14.56	3894467	91.21	70	125	
In	115	1	nogas	3199514	21.25	3488791	91.71	70	125	
Bi	209	1	nogas	2294587	18.03	2439864	94.05	70	125	
Ge	72	2	He	1241188	5.52	1316692	94.27	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	152_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T16:25:41-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	070CALB.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	0.073	30.3	743	23.2	1	
Na	23	1	nogas	85.274	20.1	3108309	6.5	100	
Mg	24	1	nogas	7.659	20.2	154218	10.8	100	
Al	27	1	nogas	-0.178	-24.7	29056	3.4	5	
K	39	1	nogas	-11.804	-166.7	10814451	0.8	100	
Ti	47	1	nogas	0.081	51.0	657	9.2	2.5	
V	51	1	nogas	-4.294	-7.6	490405	2.3	2.5	
Cr	52	1	nogas	-0.187	-52.6	58422	0.8	2.5	
Mn	55	1	nogas	0.067	105.9	33106	2.8	2.5	
Co	59	1	nogas	0.055	31.2	2210	17.6	2.5	
Ni	60	1	nogas	-0.101	-26.4	2784	6.7	2.5	
Cu	63	1	nogas	0.146	20.5	5418	3.8	2	
Zn	66	1	nogas	-0.098	-37.8	1937	5.7	2.5	
As	75	1	nogas	-1.284	-8.4	95647	3.3	2.5	
Sr	88	1	nogas	0.129	14.8	5658	6.9	2.5	
Ag	107	1	nogas	0.051	23.0	913	16.6	2.5	
Cd	111	1	nogas	0.053	20.5	203	15.0	1	
Sb	121	1	nogas	0.540	13.1	8809	8.5	2.5	
Tl	205	1	nogas	0.428	42.8	9143	34.9	1	
Pb	208	1	nogas	0.070	10.8	2337	8.0	2.5	
U	238	1	nogas	0.107	38.8	2907	32.0	2.5	
[Pb]	206	1	nogas	0.061	30.9	630	16.7	2.5	
[Pb]	207	1	nogas	0.057	3.2	490	5.4	2.5	
Na	23	2	He	54.438	8.4	213996	3.5	100	
Mg	24	2	He	5.781	7.0	9619	5.1	100	
Al	27	2	He	-0.955	-3.5	910	4.4	5	
K	39	2	He	-8.645	-15.1	248416	0.7	100	
Ca	43	2	He	3.817	28.3	87	6.7	100	
Ca	44	2	He	-6.269	-38.2	2113	6.7	100	
V	51	2	He	-0.062	-13.4	7972	1.6	2.5	
Cr	52	2	He	0.015	227.1	6615	4.2	2.5	
Mn	55	2	He	-0.008	-122.1	1740	4.1	2.5	
Fe	56	2	He	4.905	3.8	71756	0.6	100	
Co	59	2	He	0.041	21.0	757	15.0	2.5	
Ni	60	2	He	-0.183	-20.1	390	33.5	2.5	
Cu	63	2	He	-0.038	-28.5	1977	5.7	2	
Zn	66	2	He	-0.290	-22.5	767	17.2	2.5	
As	75	2	He	0.040	33.8	487	3.8	2.5	
Se	78	2	He	0.321	28.7	161	10.7	2	
B	11	1	nogas	5.908	26.9	51614	13.2	10	
Si	28	1	nogas	-35.286	-289.3	2961846	0.9	5	
Ca	43	1	nogas	9.216	49.1	1430	9.8	100	
Ca	44	1	nogas	-112.080	-8.1	192462	0.6	100	
Fe	56	1	nogas	-20.287	-41.1	3907501	1.8	100	
Se	77	1	nogas	-0.985	-315.9	31618	0.8	2.5	
Se	82	1	nogas	0.399	36.0	330	10.9	2	
Mo	95	1	nogas	0.287	22.5	1990	17.3	2.5	
Sn	118	1	nogas	0.264	31.5	3694	14.6	5	
Ba	137	1	nogas	0.068	9.9	663	1.7	2.5	

Continuing Calibration Blank (CCB) Report

Sb	121	2	He	0.412	6.8	3840	6.0	2.5	
P	31	1	nogas	1.659	133.6	132796	0.6	10	
La	139	1	nogas	5.855	153.1	97	46.6	2.5	CCB Main CR1 Failed
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Au	197	1	nogas	-1484.582	-105.3	17	173.2	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	nogas	1321262	4.32	1282255	103.04	70	125	
Ge	72	1	nogas	3869467	3.56	3894467	99.36	70	125	
In	115	1	nogas	3458789	6.37	3488791	99.14	70	125	
Bi	209	1	nogas	2452585	5.21	2439864	100.52	70	125	
Ge	72	2	He	1345941	1.73	1316692	102.22	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	154_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T16:29:41-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	070CALB.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	103.684	5.038	850086	2.33	100	103.7	90	110	
Na	23	1	nogas	10436.162	10.369	295258315	3.39	10000	104.4	90	110	
Mg	24	1	nogas	10464.724	9.588	191314921	2.52	10000	104.6	90	110	
Al	27	1	nogas	110.438	7.290	2327262	2.30	100	110.4	90	110	CCV Main CR1-2 Failed
K	39	1	nogas	10483.343	4.669	258471606	2.07	10000	104.8	90	110	
Ti	47	1	nogas	103.747	6.901	205652	1.95	100	103.7	90	110	
V	51	1	nogas	101.731	5.747	3450274	0.59	100	101.7	90	110	
Cr	52	1	nogas	101.161	4.780	2476869	0.79	100	101.2	90	110	
Mn	55	1	nogas	104.378	6.184	3118725	2.06	100	104.4	90	110	
Co	59	1	nogas	108.536	7.368	2720205	2.46	100	108.5	90	110	
Ni	60	1	nogas	107.116	5.530	597127	0.58	100	107.1	90	110	
Cu	63	1	nogas	110.870	5.047	1441401	1.51	100	110.9	90	110	CCV Main CR1-2 Failed
Zn	66	1	nogas	105.018	4.929	461274	0.68	100	105.0	90	110	
As	75	1	nogas	100.617	7.227	703415	1.27	100	100.6	90	110	
Sr	88	1	nogas	107.073	5.440	3245115	0.68	100	107.1	90	110	
Ag	107	1	nogas	104.912	4.125	1552540	0.98	100	104.9	90	110	
Cd	111	1	nogas	101.814	7.753	340902	1.58	100	101.8	90	110	
Sb	121	1	nogas	105.323	6.271	1469601	1.66	100	105.3	90	110	
Tl	205	1	nogas	107.540	6.443	2082262	0.87	100	107.5	90	110	
Pb	208	1	nogas	113.251	1.687	2797574	1.69	100	113.3	90	110	CCV Main CR1-2 Failed
U	238	1	nogas	108.738	6.473	2757477	0.94	100	108.7	90	110	
[Pb]	206	1	nogas	107.201	7.258	707478	1.69	100	107.2	90	110	
[Pb]	207	1	nogas	104.602	7.062	606456	1.62	100	104.6	90	110	
Na	23	2	He	10004.697	1.338	24550530	1.31	10000	100.0	90	110	
Mg	24	2	He	10083.329	1.938	13713366	1.76	10000	100.8	90	110	
Al	27	2	He	100.271	2.394	78419	0.63	100	100.3	90	110	
K	39	2	He	11436.996	0.630	15191689	0.62	10000	114.4	90	110	CCV Main CR1-2 Failed
Ca	43	2	He	10016.144	0.695	40678	2.70	10000	100.2	90	110	
Ca	44	2	He	10157.609	0.538	680944	1.51	10000	101.6	90	110	
V	51	2	He	98.555	1.752	927143	1.46	100	98.6	90	110	
Cr	52	2	He	98.293	1.819	1018675	0.57	100	98.3	90	110	
Mn	55	2	He	99.216	3.799	733626	1.75	100	99.2	90	110	
Fe	56	2	He	9956.145	3.169	89735919	1.21	10000	99.6	90	110	
Co	59	2	He	98.439	0.311	1363726	2.08	100	98.4	90	110	
Ni	60	2	He	100.160	2.009	345561	0.35	100	100.2	90	110	
Cu	63	2	He	98.338	0.755	868212	1.34	100	98.3	90	110	
Zn	66	2	He	99.957	0.223	204193	2.04	100	100.0	90	110	
As	75	2	He	97.713	2.209	190768	0.39	100	97.7	90	110	
Se	78	2	He	98.741	1.976	16135	0.17	100	98.7	90	110	
B	11	1	nogas	503.239	8.445	2577821	1.09	500	100.6	90	110	
Si	28	1	nogas	5115.401	8.699	9397614	1.05	5000	102.3	90	110	
Ca	43	1	nogas	10945.184	5.082	442928	0.48	10000	109.5	90	110	
Ca	44	1	nogas	10651.003	6.445	7106238	2.09	10000	106.5	90	110	
Fe	56	1	nogas	10496.759	3.980	270328323	1.88	10000	105.0	90	110	
Se	77	1	nogas	98.590	11.210	58845	0.76	100	98.6	90	110	
Se	82	1	nogas	105.220	5.094	32483	0.16	100	105.2	90	110	
Mo	95	1	nogas	100.457	7.449	611231	2.67	100	100.5	90	110	
Sn	118	1	nogas	97.408	10.343	839776	1.57	100	97.4	90	110	
Ba	137	1	nogas	99.698	8.301	470697	1.89	100	99.7	90	110	
Sb	121	2	He	98.081	0.843	752381	1.44	100	98.1	90	110	
Li	7	1	nogas	105.034	5.361	1851523	2.30	100	105.0	90	110	
P	31	1	nogas	506.830	6.330	1172665	0.79	500	101.4	90	110	
La	139	1	nogas	199.304	7.858	943	4.78	100	199.3	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	-1269.046	-41.530	20	50.00	100	-1269.0	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	nogas	1245359	7.17	1282255	97.12	70	125	
Ge	72	1	nogas	3789019	4.77	3894467	97.29	70	125	
In	115	1	nogas	3426666	8.86	3488791	98.22	70	125	
Bi	209	1	nogas	2357286	5.41	2439864	96.62	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1355439	2.03	1316692	102.94	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	164_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T16:50:09-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	070CALB.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	100.838	3.379	703310	0.95	100	100.8	90	110	
Na	23	1	nogas	10168.551	1.064	250581739	1.95	10000	101.7	90	110	
Mg	24	1	nogas	9900.038	1.156	157582137	1.73	10000	99.0	90	110	
Al	27	1	nogas	102.126	0.219	1904828	1.75	100	102.1	90	110	
K	39	1	nogas	9864.149	2.681	215310846	0.79	10000	98.6	90	110	
Ti	47	1	nogas	98.186	1.878	172121	3.71	100	98.2	90	110	
V	51	1	nogas	123.507	9.420	3590782	10.01	100	123.5	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	99.055	1.872	2143310	1.35	100	99.1	90	110	
Mn	55	1	nogas	99.188	4.087	2619154	2.17	100	99.2	90	110	
Co	59	1	nogas	98.749	3.135	2187477	1.29	100	98.7	90	110	
Ni	60	1	nogas	98.306	1.826	484390	0.22	100	98.3	90	110	
Cu	63	1	nogas	100.508	2.389	1154424	1.46	100	100.5	90	110	
Zn	66	1	nogas	97.084	1.960	376826	1.38	100	97.1	90	110	
As	75	1	nogas	105.721	0.441	648744	2.22	100	105.7	90	110	
Sr	88	1	nogas	98.208	0.851	2630257	2.24	100	98.2	90	110	
Ag	107	1	nogas	95.181	1.753	1243868	0.80	100	95.2	90	110	
Cd	111	1	nogas	94.878	1.833	273646	0.95	100	94.9	90	110	
Sb	121	1	nogas	97.412	2.541	1201062	1.05	100	97.4	90	110	
Tl	205	1	nogas	101.395	2.541	1725064	0.40	100	101.4	90	110	
Pb	208	1	nogas	93.612	0.762	2312563	0.76	100	93.6	90	110	
U	238	1	nogas	97.741	0.587	2178505	1.74	100	97.7	90	110	
[Pb]	206	1	nogas	100.357	3.155	582083	1.24	100	100.4	90	110	
[Pb]	207	1	nogas	99.581	2.559	507398	0.56	100	99.6	90	110	
Na	23	2	He	10246.542	2.541	20872464	1.11	10000	102.5	90	110	
Mg	24	2	He	9932.043	3.091	11213447	1.67	10000	99.3	90	110	
Al	27	2	He	101.598	2.876	65958	1.84	100	101.6	90	110	
K	39	2	He	9356.604	1.484	12475558	1.45	10000	93.6	90	110	
Ca	43	2	He	9964.873	1.346	33594	0.27	10000	99.6	90	110	
Ca	44	2	He	10250.253	1.656	570475	1.06	10000	102.5	90	110	
V	51	2	He	100.053	2.541	781311	1.12	100	100.1	90	110	
Cr	52	2	He	97.628	3.253	840026	1.87	100	97.6	90	110	
Mn	55	2	He	99.245	1.325	609533	0.73	100	99.2	90	110	
Fe	56	2	He	9807.710	1.412	73425421	2.00	10000	98.1	90	110	
Co	59	2	He	96.968	0.113	1115334	1.35	100	97.0	90	110	
Ni	60	2	He	98.893	1.791	283317	0.48	100	98.9	90	110	
Cu	63	2	He	98.320	2.273	720638	1.02	100	98.3	90	110	
Zn	66	2	He	98.675	1.742	167358	1.33	100	98.7	90	110	
As	75	2	He	97.436	1.412	157971	1.00	100	97.4	90	110	
Se	78	2	He	96.445	0.955	13090	1.28	100	96.4	90	110	
B	11	1	nogas	482.500	5.535	2105715	2.81	500	96.5	90	110	
Si	28	1	nogas	5082.735	1.123	8268521	1.43	5000	101.7	90	110	
Ca	43	1	nogas	10093.904	2.189	360882	0.79	10000	100.9	90	110	
Ca	44	1	nogas	9918.439	1.536	5863497	1.36	10000	99.2	90	110	
Fe	56	1	nogas	9891.078	4.905	225048055	3.00	10000	98.9	90	110	
Se	77	1	nogas	163.700	11.808	68175	8.76	100	163.7	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	95.881	2.421	26163	1.79	100	95.9	90	110	
Mo	95	1	nogas	93.523	1.584	503047	0.38	100	93.5	90	110	
Sn	118	1	nogas	93.277	2.247	693729	1.00	100	93.3	90	110	
Ba	137	1	nogas	95.781	2.766	389595	2.00	100	95.8	90	110	
Sb	121	2	He	99.234	1.018	632033	1.06	100	99.2	90	110	
Li	7	1	nogas	99.299	3.817	1493957	1.57	100	99.3	90	110	
P	31	1	nogas	464.481	1.817	958898	1.39	500	92.9	90	110	
La	139	1	nogas	168.869	8.247	697	6.78	100	168.9	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	414.476	242.234	43	35.25	100	414.5	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	nogas	1057489	2.69	1282255	82.47	70	125	
Ge	72	1	nogas	3342371	1.96	3894467	85.82	70	125	
In	115	1	nogas	2938687	1.53	3488791	84.23	70	125	
Bi	209	1	nogas	2067199	2.21	2439864	84.73	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1125378	1.44	1316692	85.47	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	165_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T16:52:08-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	070CALB.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	0.059	36.9	520	28.3	1	
Na	23	1	nogas	153.119	23.7	4262362	5.7	100	CCB Main CR1 Failed
Mg	24	1	nogas	9.667	26.8	164299	25.3	100	
Al	27	1	nogas	-0.064	-264.7	25458	0.5	5	
K	39	1	nogas	22.896	249.3	9426530	0.1	100	
Ti	47	1	nogas	0.048	149.7	473	12.9	2.5	
V	51	1	nogas	1.234	161.1	525860	4.2	2.5	
Cr	52	1	nogas	0.031	968.2	51589	3.3	2.5	
Mn	55	1	nogas	0.226	73.6	30662	1.5	2.5	
Co	59	1	nogas	0.059	34.5	1857	10.4	2.5	
Ni	60	1	nogas	-0.071	-72.8	2390	1.9	2.5	
Cu	63	1	nogas	0.153	48.2	4441	6.4	2	
Zn	66	1	nogas	-0.054	-138.3	1723	8.5	2.5	
As	75	1	nogas	2.854	65.0	97982	3.1	2.5	CCB Main CR1 Failed
Sr	88	1	nogas	0.100	35.3	3804	11.0	2.5	
Ag	107	1	nogas	0.052	27.0	740	10.7	2.5	
Cd	111	1	nogas	0.051	55.3	160	34.8	1	
Sb	121	1	nogas	0.207	20.1	3284	3.3	2.5	
Tl	205	1	nogas	0.523	61.6	8713	49.1	1	
Pb	208	1	nogas	0.046	11.4	1753	7.4	2.5	
U	238	1	nogas	0.123	40.1	2674	28.8	2.5	
[Pb]	206	1	nogas	0.048	46.4	433	20.8	2.5	
[Pb]	207	1	nogas	0.060	37.4	403	16.9	2.5	
Na	23	2	He	108.831	3.2	298471	2.8	100	CCB Main CR1 Failed
Mg	24	2	He	18.825	117.1	23509	109.4	100	
Al	27	2	He	9.357	189.0	7558	153.7	5	CCB Main CR1 Failed
K	39	2	He	-30.974	-9.3	219265	1.7	100	
Ca	43	2	He	7.291	127.9	87	37.1	100	
Ca	44	2	He	-2.590	-106.2	2033	8.1	100	
V	51	2	He	0.098	22.3	8144	2.0	2.5	
Cr	52	2	He	0.017	181.3	5721	4.4	2.5	
Mn	55	2	He	-0.011	-209.8	1487	9.4	2.5	
Fe	56	2	He	5.168	20.2	63916	12.9	100	
Co	59	2	He	0.041	1.1	653	0.9	2.5	
Ni	60	2	He	-0.181	-6.9	340	10.6	2.5	
Cu	63	2	He	-0.025	-37.7	1807	4.3	2	
Zn	66	2	He	-0.272	-15.6	693	11.0	2.5	
As	75	2	He	0.044	37.5	426	6.1	2.5	
Se	78	2	He	0.708	11.0	193	5.2	2	
B	11	1	nogas	7.916	22.2	52252	9.9	10	
Si	28	1	nogas	533.877	65.1	2989479	0.3	5	CCB Main CR1 Failed
Ca	43	1	nogas	9.847	56.8	1177	4.3	100	
Ca	44	1	nogas	-95.075	-38.4	164703	0.5	100	
Fe	56	1	nogas	9.594	245.6	3784457	1.2	100	
Se	77	1	nogas	24.059	52.0	31441	3.4	2.5	CCB Main CR1 Failed
Se	82	1	nogas	0.335	56.5	250	8.0	2	
Mo	95	1	nogas	0.288	45.2	1583	27.8	2.5	
Sn	118	1	nogas	0.235	47.2	2810	14.3	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.065	75.6	527	24.0	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.135	26.2	1497	15.6	2.5	
P	31	1	nogas	-0.489	-1412.8	103790	1.4	10	
La	139	1	nogas	2.937	207.2	67	22.9	2.5	CCB Main CR1 Failed
Au	197	1	nogas	-1709.654	-3.9	10	0.0	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	nogas	1106923	6.55	1282255	86.33	70	125	
Ge	72	1	nogas	3154791	11.08	3894467	81.01	70	125	
In	115	1	nogas	2873466	12.73	3488791	82.36	70	125	
Bi	209	1	nogas	1983456	9.69	2439864	81.29	70	125	
Ge	72	2	He	1160200	0.45	1316692	88.11	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	176_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T17:14:03-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	070CALB.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	103.972	9.738	759622	1.33	100	104.0	90	110	
Na	23	1	nogas	11062.807	12.931	268029506	1.43	10000	110.6	90	110	CCV Main CR1-2 Failed
Mg	24	1	nogas	10614.219	13.302	166104304	1.24	10000	106.1	90	110	
Al	27	1	nogas	106.890	8.217	2037619	2.75	100	106.9	90	110	
K	39	1	nogas	10261.958	5.604	228970180	0.09	10000	102.6	90	110	
Ti	47	1	nogas	101.687	6.699	182397	3.55	100	101.7	90	110	
V	51	1	nogas	133.920	10.274	3931131	3.50	100	133.9	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	104.840	6.991	2318364	2.38	100	104.8	90	110	
Mn	55	1	nogas	101.962	6.882	2755426	1.65	100	102.0	90	110	
Co	59	1	nogas	105.268	3.520	2389597	2.18	100	105.3	90	110	
Ni	60	1	nogas	101.851	4.349	513974	2.05	100	101.9	90	110	
Cu	63	1	nogas	106.092	3.403	1248461	2.47	100	106.1	90	110	
Zn	66	1	nogas	103.299	5.618	410350	1.01	100	103.3	90	110	
As	75	1	nogas	109.921	8.041	686425	1.55	100	109.9	90	110	
Sr	88	1	nogas	106.490	5.977	2918736	0.63	100	106.5	90	110	
Ag	107	1	nogas	103.592	1.662	1388296	4.73	100	103.6	90	110	
Cd	111	1	nogas	100.226	9.794	296863	1.53	100	100.2	90	110	
Sb	121	1	nogas	103.760	5.100	1310139	1.56	100	103.8	90	110	
Tl	205	1	nogas	107.808	7.331	1918523	1.91	100	107.8	90	110	
Pb	208	1	nogas	103.350	1.948	2553051	1.95	100	103.3	90	110	
U	238	1	nogas	110.597	7.073	2578241	2.62	100	110.6	90	110	CCV Main CR1-2 Failed
[Pb]	206	1	nogas	106.158	12.423	642154	3.01	100	106.2	90	110	
[Pb]	207	1	nogas	102.581	10.960	545565	1.77	100	102.6	90	110	
Na	23	2	He	9661.529	3.170	20481524	1.70	10000	96.6	90	110	
Mg	24	2	He	9540.336	2.956	11208114	1.49	10000	95.4	90	110	
Al	27	2	He	97.506	0.944	65935	0.64	100	97.5	90	110	
K	39	2	He	9451.608	0.909	12599594	0.89	10000	94.5	90	110	
Ca	43	2	He	9756.209	4.585	34215	3.22	10000	97.6	90	110	
Ca	44	2	He	10022.023	2.834	580350	1.37	10000	100.2	90	110	
V	51	2	He	99.089	2.093	805271	0.87	100	99.1	90	110	
Cr	52	2	He	96.976	2.588	868339	1.16	100	97.0	90	110	
Mn	55	2	He	98.903	1.805	632030	0.56	100	98.9	90	110	
Fe	56	2	He	9791.807	1.886	76265224	0.52	10000	97.9	90	110	
Co	59	2	He	96.412	1.467	1153755	0.23	100	96.4	90	110	
Ni	60	2	He	98.542	0.729	293817	1.81	100	98.5	90	110	
Cu	63	2	He	97.089	2.673	740478	1.51	100	97.1	90	110	
Zn	66	2	He	98.815	2.167	174395	2.09	100	98.8	90	110	
As	75	2	He	97.502	2.356	164467	0.91	100	97.5	90	110	
Se	78	2	He	97.060	3.250	13704	2.07	100	97.1	90	110	
B	11	1	nogas	512.690	8.835	2346230	3.97	500	102.5	90	110	
Si	28	1	nogas	5173.665	7.984	8568595	1.38	5000	103.5	90	110	
Ca	43	1	nogas	10439.965	3.589	382390	1.77	10000	104.4	90	110	
Ca	44	1	nogas	10272.190	3.730	6212862	2.16	10000	102.7	90	110	
Fe	56	1	nogas	10161.073	5.614	236682947	0.12	10000	101.6	90	110	
Se	77	1	nogas	177.380	8.542	73210	1.35	100	177.4	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	99.568	2.752	27838	3.07	100	99.6	90	110	
Mo	95	1	nogas	98.150	6.659	540298	1.67	100	98.2	90	110	
Sn	118	1	nogas	98.241	11.212	749648	1.73	100	98.2	90	110	
Ba	137	1	nogas	100.668	10.314	420364	1.05	100	100.7	90	110	
Sb	121	2	He	101.007	2.577	669287	1.26	100	101.0	90	110	
Li	7	1	nogas	105.768	11.401	1660020	2.66	100	105.8	90	110	
P	31	1	nogas	484.046	5.844	1018319	0.33	500	96.8	90	110	
La	139	1	nogas	163.842	35.635	687	22.62	100	163.8	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	-107.919	-458.011	37	15.75	100	-107.9	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	nogas	1113379	8.83	1282255	86.83	70	125	
Ge	72	1	nogas	3427843	5.25	3894467	88.02	70	125	
In	115	1	nogas	3035013	8.97	3488791	86.99	70	125	
Bi	209	1	nogas	2170811	8.80	2439864	88.97	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1171015	1.48	1316692	88.94	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	177_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T17:16:04-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	070CALB.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	0.060	11.4	567	9.1	1	
Na	23	1	nogas	73.996	23.0	2434616	6.4	100	
Mg	24	1	nogas	7.157	20.7	126380	7.8	100	
Al	27	1	nogas	6.814	175.8	156779	143.8	5	CCB Main CR1 Failed
K	39	1	nogas	6.774	344.8	9849950	1.0	100	
Ti	47	1	nogas	0.081	55.8	573	11.2	2.5	
V	51	1	nogas	20.951	6.9	1062899	7.3	2.5	CCB Main CR1 Failed
Cr	52	1	nogas	0.652	30.5	68948	1.2	2.5	
Mn	55	1	nogas	0.218	28.5	32973	2.6	2.5	
Co	59	1	nogas	0.057	19.4	1973	9.0	2.5	
Ni	60	1	nogas	-0.241	-23.8	1733	12.8	2.5	
Cu	63	1	nogas	0.143	36.6	4697	9.5	2	
Zn	66	1	nogas	-0.137	-5.1	1543	5.2	2.5	
As	75	1	nogas	8.844	7.3	137870	2.4	2.5	CCB Main CR1 Failed
Sr	88	1	nogas	0.160	5.5	5774	2.4	2.5	
Ag	107	1	nogas	0.047	7.6	737	2.1	2.5	
Cd	111	1	nogas	0.058	19.4	197	17.9	1	
Sb	121	1	nogas	0.157	17.0	2937	6.8	2.5	
Tl	205	1	nogas	0.426	58.1	8143	50.4	1	
Pb	208	1	nogas	0.054	22.9	1950	15.8	2.5	
U	238	1	nogas	0.139	40.9	3367	35.7	2.5	
[Pb]	206	1	nogas	0.052	41.7	510	22.1	2.5	
[Pb]	207	1	nogas	0.057	53.3	437	36.7	2.5	
Na	23	2	He	49.172	6.0	176504	3.3	100	
Mg	24	2	He	5.323	6.0	7895	4.9	100	
Al	27	2	He	-0.907	-28.5	830	21.4	5	
K	39	2	He	-30.968	-9.0	219271	1.7	100	
Ca	43	2	He	1.229	937.1	67	60.6	100	
Ca	44	2	He	-2.427	-82.9	2077	5.0	100	
V	51	2	He	0.947	4.9	15173	1.8	2.5	
Cr	52	2	He	0.110	161.2	6665	24.5	2.5	
Mn	55	2	He	0.006	655.4	1620	16.3	2.5	
Fe	56	2	He	5.567	16.7	68149	11.2	100	
Co	59	2	He	0.044	21.6	700	16.5	2.5	
Ni	60	2	He	-0.156	-19.8	420	21.4	2.5	
Cu	63	2	He	-0.006	-148.6	1980	3.5	2	
Zn	66	2	He	-0.354	-19.7	560	22.3	2.5	
As	75	2	He	0.124	36.3	569	13.6	2.5	
Se	78	2	He	0.627	9.2	185	5.1	2	
B	11	1	nogas	12.854	11.2	80500	5.7	10	CCB Main CR1 Failed
Si	28	1	nogas	255.826	68.4	2917268	2.4	5	CCB Main CR1 Failed
Ca	43	1	nogas	12.129	24.2	1357	3.1	100	
Ca	44	1	nogas	-133.895	-7.3	155806	1.7	100	
Fe	56	1	nogas	0.755	1520.3	3892481	2.0	100	
Se	77	1	nogas	68.851	8.6	45163	1.9	2.5	CCB Main CR1 Failed
Se	82	1	nogas	0.206	108.8	237	26.8	2	
Mo	95	1	nogas	0.256	29.5	1563	20.9	2.5	
Sn	118	1	nogas	0.243	39.0	3094	16.5	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.110	39.8	760	18.1	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.117	17.3	1397	10.0	2.5	
P	31	1	nogas	0.576	543.5	114112	1.0	10	
La	139	1	nogas	12.249	76.0	110	36.4	2.5	CCB Main CR1 Failed
Au	197	1	nogas	486.884	286.2	47	44.6	2.5	CCB Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1191128	3.28	1282255	92.89	70	125	
Ge	72	1	nogas	3385953	4.87	3894467	86.94	70	125	
In	115	1	nogas	3056719	6.50	3488791	87.62	70	125	
Bi	209	1	nogas	2195685	3.93	2439864	89.99	70	125	
Ge	72	2	He	1180062	0.70	1316692	89.62	70	125	

Sample Report

Sample Table

Sample Name	MBLK-136233
Data File Name	181SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T17:24:02-06:00
Sample Type	Sample
Dilution	1
Comment	TW B136233 AlBaCdPb
ISTD Ref FileName	070CALB.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	-0.005	-0.005	-17.04	70	-0.01	2000	
Na	23	1	nogas	62.954	62.954	17.39	2558854	0.00	200000	
Mg	24	1	nogas	12.611	12.611	11.62	249860	0.01	200000	
Al	27	1	nogas	4.831	4.831	4.04	132507	0.00	2000	
K	39	1	nogas	-22.597	-22.597	-68.74	10319076	0.00	200000	
Ti	47	1	nogas	-0.052	-0.052	-54.47	380	-0.01	2000	
V	51	1	nogas	37.125	37.125	5.53	1638733	0.00	2000	
Cr	52	1	nogas	0.759	0.759	14.34	79667	0.00	2000	
Mn	55	1	nogas	0.822	0.822	12.22	54705	0.00	2000	
Co	59	1	nogas	-0.007	-0.007	-29.18	603	0.00	2000	
Ni	60	1	nogas	-0.333	-0.333	-10.95	1437	-0.02	2000	
Cu	63	1	nogas	-0.019	-0.019	-181.24	3164	0.00	2000	
Zn	66	1	nogas	0.276	0.276	37.94	3520	0.01	2000	
As	75	1	nogas	11.164	11.164	6.35	167936	0.01	2000	
Sr	88	1	nogas	0.135	0.135	19.28	5708	0.00	2000	
Ag	107	1	nogas	-0.002	-0.002	-161.11	100	0.00	2000	
Cd	111	1	nogas	-0.002	-0.002	-386.52	20	-0.01	2000	
Sb	121	1	nogas	-0.042	-0.042	-17.73	507	-0.01	2000	
Tl	205	1	nogas	-0.018	-0.018	-32.24	250	-0.01	2000	
Pb	208	1	nogas	-0.009	-0.009	-17.21	387	0.00	2000	
U	238	1	nogas	-0.001	-0.001	-248.76	103	0.00	2000	
[Pb]	206	1	nogas	-0.014	-0.014	-32.17	120	-0.01	2000	
[Pb]	207	1	nogas	-0.007	-0.007	-69.10	100	-0.01	2000	
Na	23	2	He	44.619	44.619	4.61	179916	0.02	200000	
Mg	24	2	He	13.292	13.292	5.85	18693	0.07	200000	
Al	27	2	He	3.559	3.559	16.37	4104	0.09	2000	
K	39	2	He	-22.755	-22.755	-1.03	229995	-0.01	200000	
Ca	43	2	He	15.643	15.643	77.13	127	12.35	200000	
Ca	44	2	He	2.707	2.707	257.40	2564	0.11	200000	
V	51	2	He	1.698	1.698	11.43	22934	0.01	2000	
Cr	52	2	He	-0.152	-0.152	-13.69	4647	0.00	2000	
Mn	55	2	He	1.006	1.006	0.43	8675	0.01	2000	
Fe	56	2	He	16.664	16.664	124.46	168357	0.01	200000	
Co	59	2	He	-0.006	-0.006	-25.16	100	-0.01	2000	
Ni	60	2	He	-0.230	-0.230	-11.34	217	-0.11	2000	
Cu	63	2	He	-0.099	-0.099	-8.14	1370	-0.01	2000	
Zn	66	2	He	0.067	0.067	67.04	1407	0.00	2000	
As	75	2	He	0.115	0.115	4.93	598	0.02	2000	
Se	78	2	He	0.380	0.380	13.36	161	0.24	2000	
B	11	1	nogas	2.880	2.880	20.16	37681	0.01	2000	
Si	28	1	nogas	948.419	948.419	11.09	4136780	0.02	2000	
Ca	43	1	nogas	11.108	11.108	14.59	1477	0.75	200000	
Ca	44	1	nogas	-167.633	-167.633	-3.54	152472	-0.11	200000	
Fe	56	1	nogas	8.458	8.458	69.38	4549333	0.00	200000	

Sample Report

Se	77	1	nogas	81.195	81.195	11.97	53907	0.15	2000	
Se	82	1	nogas	0.172	0.172	40.98	253	0.07	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Mo	95	1	nogas	0.016	0.016	31.28	303	0.01	2000	
Sn	118	1	nogas	-0.032	-0.032	-26.04	1123	0.00	2000	
Ba	137	1	nogas	0.055	0.055	38.26	597	0.01	2000	
Sb	121	2	He	-0.044	-0.044	-19.74	350	-0.01	2000	
La	139	1	nogas	45.406	45.406	44.27	270	16.82	2000	
Au	197	1	nogas	-0.622	-0.622	-135079.10	43	-1.44	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1408251	4.07	1282255	109.83	70	125	
Ge	72	1	nogas	3782384	3.39	3894467	97.12	70	125	
In	115	1	nogas	3426751	3.79	3488791	98.22	70	125	
Bi	209	1	nogas	2424702	0.28	2439864	99.38	70	125	
Ge	72	2	He	1272527	0.84	1316692	96.65	70	125	

Sample Report

Sample Table

Sample Name	LCS-136233
Data File Name	182SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T17:25:59-06:00
Sample Type	Sample
Dilution	1
Comment	TW B136233 AlBaCdPb
ISTD Ref FileName	070CALB.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	54.697	54.697	3.81	449704	0.01	2000	
Na	23	1	nogas	5417.310	5417.310	2.02	151241041	0.00	200000	
Mg	24	1	nogas	5400.807	5400.807	2.85	97162246	0.01	200000	
Al	27	1	nogas	114.683	114.683	3.13	2348244	0.00	2000	
K	39	1	nogas	5523.529	5523.529	4.22	137252220	0.00	200000	
Ti	47	1	nogas	168.240	168.240	2.73	324025	0.05	2000	
V	51	1	nogas	99.305	99.305	1.73	3287081	0.00	2000	
Cr	52	1	nogas	56.409	56.409	4.40	1368558	0.00	2000	
Mn	55	1	nogas	55.766	55.766	2.14	1633471	0.00	2000	
Co	59	1	nogas	52.637	52.637	3.06	1282998	0.00	2000	
Ni	60	1	nogas	54.282	54.282	0.08	295690	0.02	2000	
Cu	63	1	nogas	56.378	56.378	1.37	713783	0.01	2000	
Zn	66	1	nogas	55.282	55.282	2.12	236996	0.02	2000	
As	75	1	nogas	67.245	67.245	0.57	489671	0.01	2000	
Sr	88	1	nogas	115.400	115.400	0.75	3398948	0.00	2000	
Ag	107	1	nogas	55.412	55.412	0.80	796667	0.01	2000	
Cd	111	1	nogas	52.236	52.236	1.35	170527	0.03	2000	
Sb	121	1	nogas	55.952	55.952	2.08	759332	0.01	2000	
Tl	205	1	nogas	50.201	50.201	5.93	1030277	0.00	2000	
Pb	208	1	nogas	59.886	59.886	1.76	1479612	0.00	2000	
U	238	1	nogas	104.789	104.789	4.33	2817043	0.00	2000	
[Pb]	206	1	nogas	52.103	52.103	5.16	364614	0.01	2000	
[Pb]	207	1	nogas	52.526	52.526	4.98	322882	0.02	2000	
Na	23	2	He	5268.070	5268.070	1.03	11733328	0.04	200000	
Mg	24	2	He	5285.208	5285.208	2.42	6504688	0.08	200000	
Al	27	2	He	106.952	106.952	1.53	75600	0.14	2000	
K	39	2	He	5441.671	5441.671	1.61	7364275	0.07	200000	
Ca	43	2	He	5520.634	5520.634	0.75	20314	27.18	200000	
Ca	44	2	He	5509.068	5509.068	0.31	335247	1.64	200000	
V	51	2	He	54.564	54.564	1.55	467965	0.01	2000	
Cr	52	2	He	53.571	53.571	1.12	505125	0.01	2000	
Mn	55	2	He	55.444	55.444	1.00	371892	0.01	2000	
Fe	56	2	He	5479.537	5479.537	0.58	44719553	0.01	200000	
Co	59	2	He	53.432	53.432	0.63	669871	0.01	2000	
Ni	60	2	He	54.061	54.061	0.30	169233	0.03	2000	
Cu	63	2	He	53.744	53.744	0.56	430353	0.01	2000	
Zn	66	2	He	54.709	54.709	0.34	101684	0.05	2000	
As	75	2	He	52.782	52.782	1.07	93435	0.06	2000	
Se	78	2	He	53.753	53.753	1.00	7995	0.67	2000	
B	11	1	nogas	523.700	523.700	2.41	2693856	0.02	2000	
Si	28	1	nogas	51857.976	51857.976	1.38	66468697	0.08	2000	>LDR
Ca	43	1	nogas	5702.818	5702.818	1.18	224735	2.54	200000	
Ca	44	1	nogas	5527.006	5527.006	2.22	3706687	0.15	200000	
Fe	56	1	nogas	5394.110	5394.110	0.37	136991116	0.00	200000	
Se	77	1	nogas	151.228	151.228	2.56	71537	0.21	2000	
Se	82	1	nogas	54.942	54.942	4.90	16575	0.33	2000	

Sample Report

Mo	95	1	nogas	53.877	53.877	1.57	318851	0.02	2000	
Sn	118	1	nogas	106.956	106.956	2.20	900045	0.01	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Ba	137	1	nogas	52.241	52.241	2.95	240592	0.02	2000	
Sb	121	2	He	55.472	55.472	1.99	385302	0.01	2000	
La	139	1	nogas	27.376	27.376	64.35	183	14.93	2000	
Au	197	1	nogas	-1150.251	-1150.251	-51.38	23	-4929.65	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1246137	1.41	1282255	97.18	70	125	
Ge	72	1	nogas	3676384	1.71	3894467	94.40	70	125	
In	115	1	nogas	3326387	3.00	3488791	95.34	70	125	
Bi	209	1	nogas	2495216	3.42	2439864	102.27	70	125	
Ge	72	2	He	1226456	1.07	1316692	93.15	70	125	

Sample Report

Sample Table

Sample Name	HS18121325-04SD
Data File Name	184SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T17:29:54-06:00
Sample Type	Sample
Dilution	100
Comment	TW B136233 CaMgMnNa
ISTD Ref FileName	070CALB.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	0.000	-0.031	-723.69	97	0.00	2000	
Na	23	1	nogas	8860.473	886047.286	7.67	226521563	0.00	200000	
Mg	24	1	nogas	2347.225	234722.455	4.21	38804445	0.01	200000	
Al	27	1	nogas	1.015	101.479	52.73	51113	0.00	2000	
K	39	1	nogas	23.443	2344.287	90.78	11004653	0.00	200000	
Ti	47	1	nogas	-0.020	-2.016	-72.10	427	0.00	2000	
V	51	1	nogas	44.245	4424.478	7.12	1773003	0.00	2000	
Cr	52	1	nogas	1.420	141.963	8.07	92114	0.00	2000	
Mn	55	1	nogas	25.880	2587.950	4.27	767734	0.00	2000	
Co	59	1	nogas	0.173	17.332	1.05	4944	0.00	2000	
Ni	60	1	nogas	-0.158	-15.761	-9.70	2327	-0.01	2000	
Cu	63	1	nogas	0.050	5.000	12.03	3920	0.00	2000	
Zn	66	1	nogas	0.060	6.045	113.95	2490	0.00	2000	
As	75	1	nogas	14.118	1411.810	6.80	179138	0.01	2000	
Sr	88	1	nogas	89.525	8952.452	5.34	2615860	0.00	2000	
Ag	107	1	nogas	-0.004	-0.385	-24.68	77	-0.01	2000	
Cd	111	1	nogas	0.004	0.385	35.81	37	0.01	2000	
Sb	121	1	nogas	-0.033	-3.279	-26.33	620	-0.01	2000	
Tl	205	1	nogas	0.023	2.318	35.93	990	0.00	2000	
Pb	208	1	nogas	-0.009	-0.850	-5.50	397	0.00	2000	
U	238	1	nogas	0.132	13.196	7.48	3280	0.00	2000	
[Pb]	206	1	nogas	-0.014	-1.376	-7.24	110	-0.01	2000	
[Pb]	207	1	nogas	-0.009	-0.888	-43.69	83	-0.01	2000	
Na	23	2	He	8201.285	820128.526	3.94	18235236	0.04	200000	
Mg	24	2	He	2217.363	221736.256	2.71	2732207	0.08	200000	
Al	27	2	He	-0.002	-0.233	-9611.83	1490	0.00	2000	
K	39	2	He	15.855	1585.488	6.19	280403	0.01	200000	
Ca	43	2	He	3559.197	355919.698	1.41	13135	27.10	200000	
Ca	44	2	He	3418.740	341873.961	1.19	209103	1.63	200000	
V	51	2	He	1.842	184.179	5.32	23334	0.01	2000	
Cr	52	2	He	0.119	11.940	7.99	7011	0.00	2000	
Mn	55	2	He	25.466	2546.573	2.38	171813	0.01	2000	
Fe	56	2	He	11.575	1157.524	4.82	119873	0.01	200000	
Co	59	2	He	0.177	17.698	5.47	2394	0.01	2000	
Ni	60	2	He	0.005	0.484	2080.28	940	0.00	2000	
Cu	63	2	He	-0.087	-8.737	-17.48	1410	-0.01	2000	
Zn	66	2	He	-0.142	-14.232	-46.68	970	-0.01	2000	
As	75	2	He	0.121	12.108	17.83	587	0.02	2000	
Se	78	2	He	0.455	45.524	12.60	167	0.27	2000	
B	11	1	nogas	4.332	433.236	8.53	40139	0.01	2000	
Si	28	1	nogas	1842.518	184251.805	10.19	5079091	0.04	2000	>LDR
Ca	43	1	nogas	3312.636	331263.649	4.70	129914	2.55	200000	
Ca	44	1	nogas	3214.842	321484.171	4.88	2243520	0.14	200000	
Fe	56	1	nogas	48.008	4800.816	18.08	5355480	0.00	200000	
Se	77	1	nogas	103.131	10313.068	9.02	57969	0.18	2000	
Se	82	1	nogas	0.364	36.363	60.92	303	0.12	2000	

Sample Report

Mo	95	1	nogas	0.033	3.340	11.05	393	0.01	2000	
Sn	118	1	nogas	0.051	5.132	43.83	1730	0.00	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Ba	137	1	nogas	7.130	712.971	6.08	32121	0.02	2000	
Sb	121	2	He	-0.057	-5.668	-12.05	250	-0.02	2000	
La	139	1	nogas	21.489	2148.940	18.61	153	14.01	2000	
Au	197	1	nogas	-779.287	-77928.735	-94.96	27	-2922.33	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1225527	2.89	1282255	95.58	70	125	
Ge	72	1	nogas	3650787	3.85	3894467	93.74	70	125	
In	115	1	nogas	3226604	4.32	3488791	92.48	70	125	
Bi	209	1	nogas	2233204	4.69	2439864	91.53	70	125	
Ge	72	2	He	1227719	2.02	1316692	93.24	70	125	

Sample Report

Sample Table

Sample Name	HS18121325-04PDS
Data File Name	185SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T17:31:53-06:00
Sample Type	Sample
Dilution	20
Comment	TW B136233 CaMgMnNa
ISTD Ref FileName	070CALB.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	107.691	2153.822	3.95	845777	0.01	2000	
Na	23	1	nogas	52681.239	1053624.782	4.30	1277919362	0.00	200000	
Mg	24	1	nogas	22249.593	444991.851	6.04	349084216	0.01	200000	
Al	27	1	nogas	116.746	2334.924	10.28	2190853	0.01	2000	
K	39	1	nogas	11418.919	228378.377	5.09	250227406	0.00	200000	
Ti	47	1	nogas	119.147	2382.947	10.36	210380	0.06	2000	
V	51	1	nogas	143.788	2875.760	8.97	4124995	0.00	2000	
Cr	52	1	nogas	115.274	2305.483	7.91	2507960	0.00	2000	
Mn	55	1	nogas	235.387	4707.742	5.09	6242101	0.00	2000	
Co	59	1	nogas	116.100	2321.995	7.76	2595451	0.00	2000	
Ni	60	1	nogas	114.814	2296.272	5.47	570790	0.02	2000	
Cu	63	1	nogas	117.489	2349.778	5.46	1362373	0.01	2000	
Zn	66	1	nogas	115.114	2302.289	4.80	450895	0.03	2000	
As	75	1	nogas	125.518	2510.360	6.89	760531	0.02	2000	
Sr	88	1	nogas	430.486	8609.723	8.75	11621719	0.00	2000	
Ag	107	1	nogas	108.310	2166.200	5.29	1430651	0.01	2000	
Cd	111	1	nogas	112.722	2254.431	7.34	326676	0.03	2000	
Sb	121	1	nogas	112.770	2255.391	4.78	1404427	0.01	2000	
Tl	205	1	nogas	118.617	2372.347	11.55	2065461	0.01	2000	
Pb	208	1	nogas	114.152	2283.050	0.39	2819843	0.00	2000	
U	238	1	nogas	0.556	11.116	7.54	12809	0.00	2000	
[Pb]	206	1	nogas	115.770	2315.409	9.84	687951	0.02	2000	
[Pb]	207	1	nogas	114.916	2298.314	7.85	600542	0.02	2000	
Na	23	2	He	47314.457	946289.139	1.37	100119202	0.05	200000	
Mg	24	2	He	20245.647	404912.937	0.98	23804337	0.09	200000	
Al	27	2	He	105.110	2102.191	0.94	71016	0.15	2000	
K	39	2	He	10651.547	213030.940	0.19	14166218	0.08	200000	
Ca	43	2	He	26496.478	529929.551	0.36	92920	28.52	200000	
Ca	44	2	He	27075.150	541502.994	1.80	1565435	1.73	200000	
V	51	2	He	109.573	2191.456	1.00	890389	0.01	2000	
Cr	52	2	He	106.364	2127.289	1.26	952639	0.01	2000	
Mn	55	2	He	227.618	4552.351	2.19	1453598	0.02	2000	
Fe	56	2	He	10821.240	216424.808	2.17	84340064	0.01	200000	
Co	59	2	He	105.660	2113.203	1.47	1265394	0.01	2000	
Ni	60	2	He	107.812	2156.244	0.45	321591	0.03	2000	
Cu	63	2	He	106.274	2125.473	1.40	811057	0.01	2000	
Zn	66	2	He	110.063	2201.263	2.02	194264	0.06	2000	
As	75	2	He	107.491	2149.823	1.11	181435	0.06	2000	
Se	78	2	He	109.738	2194.760	1.72	15496	0.71	2000	
B	11	1	nogas	3.909	78.172	9.94	36926	0.01	2000	
Si	28	1	nogas	8801.508	176030.155	10.49	12524020	0.07	2000	>LDR
Ca	43	1	nogas	27734.136	554682.721	8.79	998614	2.78	200000	
Ca	44	1	nogas	27589.264	551785.271	10.18	16029884	0.17	200000	
Fe	56	1	nogas	11592.916	231858.327	4.10	265989814	0.00	200000	
Se	77	1	nogas	208.322	4166.438	8.11	79938	0.26	2000	
Se	82	1	nogas	113.837	2276.732	7.20	31314	0.36	2000	
Mo	95	1	nogas	113.930	2278.609	9.33	618020	0.02	2000	
Sn	118	1	nogas	0.065	1.308	19.52	1703	0.00	2000	

Sample Report

Ba	137	1	nogas	147.542	2950.838	9.71	602149	0.02	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Sb	121	2	He	107.926	2158.516	1.63	715718	0.02	2000	
La	139	1	nogas	208.053	4161.070	33.87	840	24.77	2000	
Au	197	1	nogas	-733.135	-14662.696	-84.01	27	-2749.26	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1191142	3.50	1282255	92.89	70	125	
Ge	72	1	nogas	3380414	5.01	3894467	86.80	70	125	
In	115	1	nogas	2963126	7.59	3488791	84.93	70	125	
Bi	209	1	nogas	2128923	8.51	2439864	87.26	70	125	
Ge	72	2	He	1171792	1.29	1316692	89.00	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	187_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T17:35:53-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	070CALB.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	101.764	2.583	822137	1.79	100	101.8	90	110	
Na	23	1	nogas	10285.583	7.018	282154848	2.32	10000	102.9	90	110	
Mg	24	1	nogas	10088.449	4.519	178973617	3.54	10000	100.9	90	110	
Al	27	1	nogas	104.821	1.875	2195362	3.44	100	104.8	90	110	
K	39	1	nogas	9899.892	5.999	242457930	1.28	10000	99.0	90	110	
Ti	47	1	nogas	99.465	3.812	195691	2.03	100	99.5	90	110	
V	51	1	nogas	114.421	6.476	3772206	1.48	100	114.4	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	102.964	7.173	2496219	2.00	100	103.0	90	110	
Mn	55	1	nogas	101.981	3.812	3023979	2.42	100	102.0	90	110	
Co	59	1	nogas	99.533	4.127	2475724	1.26	100	99.5	90	110	
Ni	60	1	nogas	100.208	5.770	554049	2.27	100	100.2	90	110	
Cu	63	1	nogas	101.174	4.107	1304630	1.30	100	101.2	90	110	
Zn	66	1	nogas	100.819	3.249	439349	2.07	100	100.8	90	110	
As	75	1	nogas	103.015	6.623	711712	1.32	100	103.0	90	110	
Sr	88	1	nogas	102.907	7.319	3089879	2.03	100	102.9	90	110	
Ag	107	1	nogas	100.427	5.461	1472882	1.97	100	100.4	90	110	
Cd	111	1	nogas	97.377	3.822	317189	0.40	100	97.4	90	110	
Sb	121	1	nogas	103.034	4.289	1426189	1.22	100	103.0	90	110	
Tl	205	1	nogas	106.360	4.235	2099581	1.24	100	106.4	90	110	
Pb	208	1	nogas	113.598	0.293	2806144	0.29	100	113.6	90	110	CCV Main CR1-2 Failed
U	238	1	nogas	104.729	6.570	2705933	2.71	100	104.7	90	110	
[Pb]	206	1	nogas	102.796	3.038	692057	1.41	100	102.8	90	110	
[Pb]	207	1	nogas	99.603	2.251	589246	2.88	100	99.6	90	110	
Na	23	2	He	9365.115	1.236	21439405	1.72	10000	93.7	90	110	
Mg	24	2	He	9507.859	0.911	12061203	1.77	10000	95.1	90	110	
Al	27	2	He	95.633	1.406	69845	2.22	100	95.6	90	110	
K	39	2	He	10282.540	3.038	13684447	2.98	10000	102.8	90	110	
Ca	43	2	He	9731.520	2.367	36860	3.24	10000	97.3	90	110	
Ca	44	2	He	9928.402	1.752	620723	0.94	10000	99.3	90	110	
V	51	2	He	97.256	1.368	853528	2.23	100	97.3	90	110	
Cr	52	2	He	95.098	0.851	919517	1.44	100	95.1	90	110	
Mn	55	2	He	98.695	0.736	680885	0.36	100	98.7	90	110	
Fe	56	2	He	9862.499	1.427	82927649	1.19	10000	98.6	90	110	
Co	59	2	He	96.201	1.008	1242765	0.49	100	96.2	90	110	
Ni	60	2	He	97.701	0.567	314437	0.35	100	97.7	90	110	
Cu	63	2	He	96.106	0.494	791382	0.43	100	96.1	90	110	
Zn	66	2	He	98.721	1.751	188065	0.96	100	98.7	90	110	
As	75	2	He	97.528	0.667	177624	1.54	100	97.5	90	110	
Se	78	2	He	97.546	0.330	14870	1.04	100	97.5	90	110	
B	11	1	nogas	477.435	3.083	2414326	1.44	500	95.5	90	110	
Si	28	1	nogas	4858.930	8.263	8996519	0.34	5000	97.2	90	110	
Ca	43	1	nogas	10122.982	6.678	405969	1.43	10000	101.2	90	110	
Ca	44	1	nogas	9984.792	7.091	6618989	2.73	10000	99.8	90	110	
Fe	56	1	nogas	9999.599	6.199	255341881	2.30	10000	100.0	90	110	
Se	77	1	nogas	143.152	11.852	70687	1.79	100	143.2	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	98.428	5.166	30139	1.97	100	98.4	90	110	
Mo	95	1	nogas	97.808	6.395	590202	2.44	100	97.8	90	110	
Sn	118	1	nogas	97.759	5.733	820675	1.46	100	97.8	90	110	
Ba	137	1	nogas	98.679	5.642	453094	1.40	100	98.7	90	110	
Sb	121	2	He	102.284	0.925	731716	0.70	100	102.3	90	110	
Li	7	1	nogas	100.620	6.713	1752642	6.68	100	100.6	90	110	
P	31	1	nogas	468.581	6.244	1084305	0.63	500	93.7	90	110	
La	139	1	nogas	171.191	8.022	797	5.66	100	171.2	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	-340.457	-107.750	37	15.75	100	-340.5	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	nogas	1225042	4.18	1282255	95.54	70	125	
Ge	72	1	nogas	3756868	5.24	3894467	96.47	70	125	
In	115	1	nogas	3321849	4.13	3488791	95.21	70	125	
Bi	209	1	nogas	2400134	3.79	2439864	98.37	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1264016	0.88	1316692	96.00	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	188_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T17:37:52-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	070CALB.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	0.061	29.2	620	17.4	1	
Na	23	1	nogas	34.587	30.8	1519927	4.9	100	
Mg	24	1	nogas	6.666	34.2	120482	17.0	100	
Al	27	1	nogas	-0.061	-268.9	27981	2.2	5	
K	39	1	nogas	9.972	407.9	10080521	0.5	100	
Ti	47	1	nogas	0.021	345.2	473	23.7	2.5	
V	51	1	nogas	8.096	25.7	751652	2.2	2.5	CCB Main CR1 Failed
Cr	52	1	nogas	0.469	44.5	66211	2.2	2.5	
Mn	55	1	nogas	0.126	78.3	31050	2.2	2.5	
Co	59	1	nogas	0.061	24.7	2077	7.3	2.5	
Ni	60	1	nogas	-0.342	-6.0	1263	9.8	2.5	
Cu	63	1	nogas	0.062	54.8	3824	1.7	2	
Zn	66	1	nogas	-0.090	-97.5	1743	11.8	2.5	
As	75	1	nogas	5.704	28.7	123066	2.7	2.5	CCB Main CR1 Failed
Sr	88	1	nogas	0.122	72.5	4711	40.7	2.5	
Ag	107	1	nogas	0.052	30.2	817	16.7	2.5	
Cd	111	1	nogas	0.057	21.4	200	8.7	1	
Sb	121	1	nogas	0.377	13.0	5764	1.8	2.5	
Tl	205	1	nogas	0.519	55.4	10348	49.0	1	
Pb	208	1	nogas	0.059	22.2	2070	15.7	2.5	
U	238	1	nogas	0.125	42.8	3190	38.2	2.5	
[Pb]	206	1	nogas	0.053	18.9	543	10.5	2.5	
[Pb]	207	1	nogas	0.057	16.5	460	15.2	2.5	
Na	23	2	He	14.843	1.5	110605	2.0	100	
Mg	24	2	He	4.782	6.8	7755	4.5	100	
Al	27	2	He	-0.946	-8.6	860	7.3	5	
K	39	2	He	-26.735	-5.6	224798	0.9	100	
Ca	43	2	He	-0.974	-375.1	63	24.1	100	
Ca	44	2	He	-6.969	-26.2	1940	7.1	100	
V	51	2	He	0.297	13.7	10582	1.2	2.5	
Cr	52	2	He	0.000	-31541.9	6061	0.6	2.5	
Mn	55	2	He	-0.020	-97.6	1553	6.2	2.5	
Fe	56	2	He	4.728	1.5	65834	3.1	100	
Co	59	2	He	0.045	5.7	757	2.8	2.5	
Ni	60	2	He	-0.195	-4.7	327	9.8	2.5	
Cu	63	2	He	-0.020	-121.5	2000	9.0	2	
Zn	66	2	He	-0.308	-7.0	687	8.0	2.5	
As	75	2	He	0.107	14.5	578	3.8	2.5	
Se	78	2	He	0.622	14.9	197	7.4	2	
B	11	1	nogas	7.338	30.2	58096	10.7	10	
Si	28	1	nogas	198.732	121.5	2899797	0.6	5	CCB Main CR1 Failed
Ca	43	1	nogas	6.635	81.1	1173	7.7	100	
Ca	44	1	nogas	-144.025	-14.7	152428	0.8	100	
Fe	56	1	nogas	-5.382	-276.9	3816707	0.3	100	
Se	77	1	nogas	41.355	28.1	38905	2.3	2.5	CCB Main CR1 Failed
Se	82	1	nogas	0.182	150.9	233	32.7	2	
Mo	95	1	nogas	0.321	38.1	1933	26.2	2.5	
Sn	118	1	nogas	0.255	44.2	3290	16.8	5	
Ba	137	1	nogas	0.054	59.2	543	12.5	2.5	

Continuing Calibration Blank (CCB) Report

Sb	121	2	He	0.322	14.9	2964	12.5	2.5	
P	31	1	nogas	5.795	91.2	125835	1.0	10	
La	139	1	nogas	0.970	992.3	70	65.5	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Au	197	1	nogas	-1802.184	-33.3	10	100.0	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	nogas	1303896	9.48	1282255	101.69	70	125	
Ge	72	1	nogas	3453187	8.54	3894467	88.67	70	125	
In	115	1	nogas	3189815	11.84	3488791	91.43	70	125	
Bi	209	1	nogas	2307547	4.04	2439864	94.58	70	125	
Ge	72	2	He	1262213	2.41	1316692	95.86	70	125	

Sample Report

Sample Table

Sample Name	HS18121520-01
Data File Name	189SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T17:39:51-06:00
Sample Type	Sample
Dilution	100
Comment	TW B136233 BaCaMgNa
ISTD Ref FileName	070CALB.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	0.012	1.199	25.04	217	0.01	2000	
Na	23	1	nogas	9704.448	970444.821	4.58	259593156	0.00	200000	
Mg	24	1	nogas	2841.096	284109.650	4.26	49100083	0.01	200000	
Al	27	1	nogas	0.672	67.180	5.44	45161	0.00	2000	
K	39	1	nogas	7.203	720.332	32.49	10809096	0.00	200000	
Ti	47	1	nogas	-0.034	-3.424	-75.90	407	-0.01	2000	
V	51	1	nogas	12.757	1275.656	6.15	937978	0.00	2000	
Cr	52	1	nogas	0.580	58.020	9.62	73954	0.00	2000	
Mn	55	1	nogas	1.502	150.221	4.75	73379	0.00	2000	
Co	59	1	nogas	0.106	10.560	6.68	3357	0.00	2000	
Ni	60	1	nogas	-0.182	-18.161	-7.99	2230	-0.01	2000	
Cu	63	1	nogas	0.028	2.812	26.27	3704	0.00	2000	
Zn	66	1	nogas	0.253	25.323	10.19	3360	0.01	2000	
As	75	1	nogas	7.796	779.576	9.32	144901	0.01	2000	
Sr	88	1	nogas	88.249	8824.950	1.38	2621162	0.00	2000	
Ag	107	1	nogas	0.001	0.114	214.71	150	0.00	2000	
Cd	111	1	nogas	0.007	0.653	102.62	47	0.01	2000	
Sb	121	1	nogas	0.138	13.818	1.58	2964	0.00	2000	
Tl	205	1	nogas	0.026	2.599	41.32	1177	0.00	2000	
Pb	208	1	nogas	0.002	0.202	192.21	657	0.00	2000	
U	238	1	nogas	0.042	4.169	26.30	1250	0.00	2000	
[Pb]	206	1	nogas	-0.007	-0.662	-40.44	173	0.00	2000	
[Pb]	207	1	nogas	-0.003	-0.284	-321.76	130	0.00	2000	
Na	23	2	He	9271.854	927185.405	1.71	21316160	0.04	200000	
Mg	24	2	He	2660.774	266077.448	1.74	3390598	0.08	200000	
Al	27	2	He	-0.206	-20.620	-94.29	1393	-0.01	2000	
K	39	2	He	3.926	392.599	55.80	264829	0.00	200000	
Ca	43	2	He	3599.761	359976.121	2.85	13735	26.21	200000	
Ca	44	2	He	3615.395	361539.525	1.09	228551	1.58	200000	
V	51	2	He	0.665	66.465	11.40	13855	0.00	2000	
Cr	52	2	He	0.040	4.035	131.54	6481	0.00	2000	
Mn	55	2	He	1.334	133.412	3.92	10920	0.01	2000	
Fe	56	2	He	29.890	2988.964	2.21	278591	0.01	200000	
Co	59	2	He	0.097	9.741	7.46	1443	0.01	2000	
Ni	60	2	He	-0.068	-6.803	-29.86	737	-0.01	2000	
Cu	63	2	He	-0.106	-10.581	-8.50	1307	-0.01	2000	
Zn	66	2	He	0.152	15.167	2.05	1563	0.01	2000	
As	75	2	He	0.120	12.003	19.06	606	0.02	2000	
Se	78	2	He	0.459	45.948	44.00	173	0.27	2000	
B	11	1	nogas	2.561	256.083	19.23	34451	0.01	2000	
Si	28	1	nogas	2294.088	229408.781	3.15	5720828	0.04	2000	>LDR
Ca	43	1	nogas	3625.476	362547.568	0.70	144424	2.51	200000	
Ca	44	1	nogas	3438.658	343865.842	0.78	2421209	0.14	200000	
Fe	56	1	nogas	22.687	2268.672	12.91	4814017	0.00	200000	
Se	77	1	nogas	60.033	6003.281	3.73	47068	0.13	2000	
Se	82	1	nogas	0.143	14.319	80.46	240	0.06	2000	

Sample Report

Mo	95	1	nogas	0.038	3.800	55.47	427	0.01	2000	
Sn	118	1	nogas	0.033	3.282	58.66	1650	0.00	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Ba	137	1	nogas	111.318	11131.835	3.32	518287	0.02	2000	
Sb	121	2	He	0.112	11.250	26.69	1477	0.01	2000	
La	139	1	nogas	47.482	4748.183	16.18	273	17.37	2000	
Au	197	1	nogas	-954.810	-95480.957	-36.98	27	-3580.54	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1353351	4.09	1282255	105.54	70	125	
Ge	72	1	nogas	3706407	0.40	3894467	95.17	70	125	
In	115	1	nogas	3365591	3.01	3488791	96.47	70	125	
Bi	209	1	nogas	2501384	3.73	2439864	102.52	70	125	
Ge	72	2	He	1269691	2.40	1316692	96.43	70	125	

Sample Report

Sample Table

Sample Name	HS18121520-02
Data File Name	190SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T17:41:49-06:00
Sample Type	Sample
Dilution	100
Comment	TW B136233 MnNa
ISTD Ref FileName	070CALB.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	0.018	1.780	182.14	267	0.01	2000	
Na	23	1	nogas	7953.463	795346.279	9.29	210381730	0.00	200000	
Mg	24	1	nogas	502.453	50245.325	11.34	8581904	0.01	200000	
Al	27	1	nogas	3.057	305.697	51.14	91479	0.00	2000	
K	39	1	nogas	19.863	1986.313	114.05	10946409	0.00	200000	
Ti	47	1	nogas	0.010	0.975	367.46	483	0.00	2000	
V	51	1	nogas	23.310	2330.988	9.32	1211094	0.00	2000	
Cr	52	1	nogas	2.061	206.147	10.56	107074	0.00	2000	
Mn	55	1	nogas	24.232	2423.157	7.32	721587	0.00	2000	
Co	59	1	nogas	0.211	21.115	8.53	5864	0.00	2000	
Ni	60	1	nogas	0.349	34.942	23.01	5037	0.01	2000	
Cu	63	1	nogas	0.035	3.484	76.18	3730	0.00	2000	
Zn	66	1	nogas	-0.053	-5.253	-101.20	2027	0.00	2000	
As	75	1	nogas	10.242	1024.155	11.01	157044	0.01	2000	
Sr	88	1	nogas	13.823	1382.328	5.76	405992	0.00	2000	
Ag	107	1	nogas	0.001	0.082	123.86	143	0.00	2000	
Cd	111	1	nogas	0.016	1.588	31.88	77	0.02	2000	
Sb	121	1	nogas	0.056	5.639	26.61	1823	0.00	2000	
Tl	205	1	nogas	0.001	0.146	108.44	623	0.00	2000	
Pb	208	1	nogas	0.000	0.027	879.80	613	0.00	2000	
U	238	1	nogas	0.004	0.399	34.04	217	0.00	2000	
[Pb]	206	1	nogas	-0.009	-0.897	-46.55	147	-0.01	2000	
[Pb]	207	1	nogas	-0.001	-0.084	-623.63	133	0.00	2000	
Na	23	2	He	7411.056	741105.650	0.40	16936183	0.04	200000	
Mg	24	2	He	461.196	46119.632	1.14	585104	0.08	200000	
Al	27	2	He	1.317	131.749	7.33	2470	0.05	2000	
K	39	2	He	12.202	1220.195	43.60	275634	0.00	200000	
Ca	43	2	He	768.344	76834.354	4.07	2964	25.93	200000	
Ca	44	2	He	824.338	82433.753	1.23	53580	1.54	200000	
V	51	2	He	0.824	82.449	1.63	15150	0.01	2000	
Cr	52	2	He	1.172	117.219	3.71	17285	0.01	2000	
Mn	55	2	He	23.865	2386.494	0.34	165478	0.01	2000	
Fe	56	2	He	662.220	66221.990	0.28	5577689	0.01	200000	
Co	59	2	He	0.198	19.796	8.97	2730	0.01	2000	
Ni	60	2	He	0.525	52.472	18.70	2627	0.02	2000	
Cu	63	2	He	-0.059	-5.899	-48.85	1680	0.00	2000	
Zn	66	2	He	-0.207	-20.699	-41.15	877	-0.02	2000	
As	75	2	He	0.150	14.997	18.25	654	0.02	2000	
Se	78	2	He	0.642	64.240	33.33	199	0.32	2000	
B	11	1	nogas	1.688	168.820	21.82	29323	0.01	2000	
Si	28	1	nogas	1409.405	140940.506	13.30	4561562	0.03	2000	
Ca	43	1	nogas	878.046	87804.650	9.82	35180	2.50	200000	
Ca	44	1	nogas	705.944	70594.426	8.97	689791	0.10	200000	
Fe	56	1	nogas	663.443	66344.305	8.65	20409048	0.00	200000	
Se	77	1	nogas	77.627	7762.701	3.50	51232	0.15	2000	
Se	82	1	nogas	0.322	32.198	34.43	290	0.11	2000	
Mo	95	1	nogas	0.028	2.755	4.72	360	0.01	2000	
Sn	118	1	nogas	-0.012	-1.208	-153.42	1237	0.00	2000	

Sample Report

Ba	137	1	nogas	5.635	563.485	7.80	25880	0.02	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Sb	121	2	He	0.035	3.488	39.23	910	0.00	2000	
La	139	1	nogas	150.783	15078.280	9.86	703	21.44	2000	
Au	197	1	nogas	-1432.906	-143290.630	-23.71	17	-8597.44	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1340996	6.76	1282255	104.58	70	125	
Ge	72	1	nogas	3660643	5.40	3894467	94.00	70	125	
In	115	1	nogas	3291722	7.87	3488791	94.35	70	125	
Bi	209	1	nogas	2339849	3.21	2439864	95.90	70	125	
Ge	72	2	He	1260595	1.18	1316692	95.74	70	125	

Sample Report

Sample Table

Sample Name	HS18121520-07
Data File Name	191SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T17:43:48-06:00
Sample Type	Sample
Dilution	100
Comment	TW B136233 Na
ISTD Ref FileName	070CALB.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	0.007	0.672	158.08	153	0.00	2000	
Na	23	1	nogas	10308.639	1030863.899	13.95	248806014	0.00	200000	
Mg	24	1	nogas	633.968	63396.834	17.60	9868541	0.01	200000	
Al	27	1	nogas	1.643	164.295	22.79	58839	0.00	2000	
K	39	1	nogas	12.846	1284.578	394.94	9916320	0.00	200000	
Ti	47	1	nogas	0.007	0.664	637.51	440	0.00	2000	
V	51	1	nogas	28.154	2815.439	13.94	1235594	0.00	2000	
Cr	52	1	nogas	1.161	116.095	24.53	79513	0.00	2000	
Mn	55	1	nogas	5.572	557.159	11.79	173617	0.00	2000	
Co	59	1	nogas	0.045	4.541	26.69	1697	0.00	2000	
Ni	60	1	nogas	0.181	18.072	67.34	3794	0.00	2000	
Cu	63	1	nogas	0.063	6.281	69.15	3754	0.00	2000	
Zn	66	1	nogas	0.272	27.218	48.68	3114	0.01	2000	
As	75	1	nogas	12.932	1293.180	20.58	158853	0.01	2000	
Sr	88	1	nogas	15.082	1508.225	11.12	407163	0.00	2000	
Ag	107	1	nogas	-0.004	-0.396	-28.24	70	-0.01	2000	
Cd	111	1	nogas	-0.003	-0.259	-340.24	13	-0.02	2000	
Sb	121	1	nogas	0.023	2.288	55.98	1257	0.00	2000	
Tl	205	1	nogas	-0.010	-1.022	-30.58	390	0.00	2000	
Pb	208	1	nogas	-0.008	-0.837	-33.87	400	0.00	2000	
U	238	1	nogas	0.000	0.013	860.22	113	0.00	2000	
[Pb]	206	1	nogas	-0.012	-1.154	-65.29	123	-0.01	2000	
[Pb]	207	1	nogas	-0.008	-0.805	-38.68	90	-0.01	2000	
Na	23	2	He	8741.697	874169.678	1.01	19907366	0.04	200000	
Mg	24	2	He	513.005	51300.485	1.86	648759	0.08	200000	
Al	27	2	He	0.547	54.661	64.34	1917	0.03	2000	
K	39	2	He	-26.155	-2615.469	-6.64	225556	-0.01	200000	
Ca	43	2	He	589.163	58916.260	10.72	2280	25.84	200000	
Ca	44	2	He	588.293	58829.343	3.97	38811	1.52	200000	
V	51	2	He	0.926	92.610	4.02	15986	0.01	2000	
Cr	52	2	He	0.006	0.649	497.56	6101	0.00	2000	
Mn	55	2	He	4.741	474.128	1.47	34138	0.01	2000	
Fe	56	2	He	1.448	144.768	10.83	38133	0.00	200000	
Co	59	2	He	0.041	4.095	18.81	703	0.01	2000	
Ni	60	2	He	0.167	16.722	22.00	1480	0.01	2000	
Cu	63	2	He	-0.117	-11.728	-4.86	1200	-0.01	2000	
Zn	66	2	He	0.015	1.498	472.17	1290	0.00	2000	
As	75	2	He	0.078	7.801	43.77	523	0.01	2000	
Se	78	2	He	0.429	42.882	36.40	167	0.26	2000	
B	11	1	nogas	1.370	137.026	44.13	25821	0.01	2000	
Si	28	1	nogas	4363.488	436348.802	17.04	7503795	0.06	2000	>LDR
Ca	43	1	nogas	684.940	68494.014	12.06	25461	2.69	200000	
Ca	44	1	nogas	523.785	52378.493	20.34	530052	0.10	200000	
Fe	56	1	nogas	25.461	2546.084	82.15	4426497	0.00	200000	
Se	77	1	nogas	93.270	9327.033	14.15	51092	0.18	2000	
Se	82	1	nogas	0.309	30.853	143.62	257	0.12	2000	
Mo	95	1	nogas	-0.001	-0.130	-233.96	177	0.00	2000	
Sn	118	1	nogas	-0.004	-0.382	-804.61	1223	0.00	2000	

Sample Report

Ba	137	1	nogas	0.459	45.865	25.47	2247	0.02	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Sb	121	2	He	0.031	3.146	44.93	883	0.00	2000	
La	139	1	nogas	208.599	20859.936	23.74	883	23.61	2000	
Au	197	1	nogas	-434.403	-43440.262	-46.41	33	-1303.21	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1259146	7.42	1282255	98.20	70	125	
Ge	72	1	nogas	3382785	9.56	3894467	86.86	70	125	
In	115	1	nogas	3122555	12.74	3488791	89.50	70	125	
Bi	209	1	nogas	2275342	10.69	2439864	93.26	70	125	
Ge	72	2	He	1257182	0.98	1316692	95.48	70	125	

Sample Report

Sample Table

Sample Name	HS18121520-08
Data File Name	192SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T17:45:51-06:00
Sample Type	Sample
Dilution	100
Comment	TW B136233 BaCaMgNa
ISTD Ref FileName	070CALB.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	-0.003	-0.260	-154.75	77	0.00	2000	
Na	23	1	nogas	12514.272	1251427.229	5.45	314849499	0.00	200000	
Mg	24	1	nogas	2560.110	256011.006	5.68	41626638	0.01	200000	
Al	27	1	nogas	0.276	27.593	21.33	35290	0.00	2000	
K	39	1	nogas	-2.318	-231.798	-912.29	10068897	0.00	200000	
Ti	47	1	nogas	-0.006	-0.569	-628.93	440	0.00	2000	
V	51	1	nogas	29.667	2966.662	9.14	1333203	0.00	2000	
Cr	52	1	nogas	1.154	115.392	11.89	83102	0.00	2000	
Mn	55	1	nogas	0.506	50.579	14.44	42302	0.00	2000	
Co	59	1	nogas	0.011	1.095	49.02	983	0.00	2000	
Ni	60	1	nogas	0.100	9.988	6.29	3580	0.00	2000	
Cu	63	1	nogas	0.043	4.267	30.56	3704	0.00	2000	
Zn	66	1	nogas	0.116	11.568	46.18	2634	0.00	2000	
As	75	1	nogas	11.749	1174.868	2.54	159996	0.01	2000	
Sr	88	1	nogas	72.180	7217.972	5.11	2038476	0.00	2000	
Ag	107	1	nogas	-0.002	-0.245	-119.21	93	0.00	2000	
Cd	111	1	nogas	0.007	0.734	85.59	47	0.02	2000	
Sb	121	1	nogas	-0.010	-0.999	-119.40	890	0.00	2000	
Tl	205	1	nogas	-0.014	-1.423	-40.09	307	0.00	2000	
Pb	208	1	nogas	-0.014	-1.390	-16.04	263	-0.01	2000	
U	238	1	nogas	0.369	36.854	3.25	9023	0.00	2000	
[Pb]	206	1	nogas	-0.025	-2.485	-20.42	40	-0.06	2000	
[Pb]	207	1	nogas	-0.011	-1.082	-47.17	73	-0.01	2000	
Na	23	2	He	10996.530	1099652.957	2.73	24703791	0.04	200000	
Mg	24	2	He	2355.374	235537.404	0.84	2934880	0.08	200000	
Al	27	2	He	-0.559	-55.895	-16.59	1117	-0.05	2000	
K	39	2	He	-14.666	-1466.569	-23.78	240556	-0.01	200000	
Ca	43	2	He	3755.662	375566.178	3.29	14006	26.82	200000	
Ca	44	2	He	3639.540	363954.019	1.99	224930	1.62	200000	
V	51	2	He	1.074	107.431	2.61	17048	0.01	2000	
Cr	52	2	He	0.172	17.202	9.95	7585	0.00	2000	
Mn	55	2	He	0.296	29.572	1.11	3660	0.01	2000	
Fe	56	2	He	1.471	147.109	2.18	37846	0.00	200000	
Co	59	2	He	0.000	-0.017	-1443.54	173	0.00	2000	
Ni	60	2	He	0.225	22.496	38.22	1643	0.01	2000	
Cu	63	2	He	-0.097	-9.678	-19.39	1350	-0.01	2000	
Zn	66	2	He	-0.004	-0.357	-2723.69	1240	0.00	2000	
As	75	2	He	0.099	9.880	41.72	553	0.02	2000	
Se	78	2	He	0.474	47.364	11.56	171	0.28	2000	
B	11	1	nogas	1.211	121.057	15.81	24322	0.00	2000	
Si	28	1	nogas	2454.427	245442.680	9.73	5627852	0.04	2000	>LDR
Ca	43	1	nogas	3745.489	374548.885	2.59	141929	2.64	200000	
Ca	44	1	nogas	3734.232	373423.165	6.01	2478737	0.15	200000	
Fe	56	1	nogas	15.913	1591.258	31.00	4420553	0.00	200000	
Se	77	1	nogas	88.910	8890.962	1.12	52362	0.17	2000	
Se	82	1	nogas	0.403	40.334	100.85	303	0.13	2000	
Mo	95	1	nogas	-0.009	-0.890	-39.37	140	-0.01	2000	
Sn	118	1	nogas	-0.008	-0.832	-276.50	1213	0.00	2000	

Sample Report

Ba	137	1	nogas	37.846	3784.559	5.02	165091	0.02	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Sb	121	2	He	-0.015	-1.485	-66.46	547	0.00	2000	
La	139	1	nogas	16.123	1612.319	118.83	127	12.73	2000	
Au	197	1	nogas	-408.569	-40856.912	-296.25	33	-1225.71	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1218875	3.75	1282255	95.06	70	125	
Ge	72	1	nogas	3529227	4.50	3894467	90.62	70	125	
In	115	1	nogas	3153114	5.89	3488791	90.38	70	125	
Bi	209	1	nogas	2245149	5.02	2439864	92.02	70	125	
Ge	72	2	He	1241124	0.24	1316692	94.26	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	196_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T17:53:45-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	070CALB.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	100.385	5.187	804393	1.32	100	100.4	90	110	
Na	23	1	nogas	10728.841	6.562	275697789	1.93	10000	107.3	90	110	
Mg	24	1	nogas	10660.439	10.872	176566691	2.71	10000	106.6	90	110	
Al	27	1	nogas	102.718	5.758	2133353	1.10	100	102.7	90	110	
K	39	1	nogas	9812.289	5.986	238649264	1.92	10000	98.1	90	110	
Ti	47	1	nogas	98.281	6.683	191756	2.11	100	98.3	90	110	
V	51	1	nogas	116.181	6.769	3793067	2.44	100	116.2	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	101.175	4.342	2438017	0.54	100	101.2	90	110	
Mn	55	1	nogas	100.174	5.502	2947053	0.81	100	100.2	90	110	
Co	59	1	nogas	101.134	8.870	2493294	4.22	100	101.1	90	110	
Ni	60	1	nogas	98.225	7.558	538797	3.08	100	98.2	90	110	
Cu	63	1	nogas	99.808	5.047	1277178	0.98	100	99.8	90	110	
Zn	66	1	nogas	100.817	4.064	435969	0.62	100	100.8	90	110	
As	75	1	nogas	103.599	6.311	709951	0.80	100	103.6	90	110	
Sr	88	1	nogas	103.212	9.253	3074715	4.60	100	103.2	90	110	
Ag	107	1	nogas	100.318	6.310	1459934	1.78	100	100.3	90	110	
Cd	111	1	nogas	100.478	3.799	312976	0.47	100	100.5	90	110	
Sb	121	1	nogas	100.543	7.653	1380292	4.10	100	100.5	90	110	
Tl	205	1	nogas	104.160	2.974	1983450	2.83	100	104.2	90	110	
Pb	208	1	nogas	110.778	2.601	2736500	2.60	100	110.8	90	110	CCV Main CR1-2 Failed
U	238	1	nogas	107.095	4.968	2670509	4.41	100	107.1	90	110	
[Pb]	206	1	nogas	104.656	0.731	679484	0.91	100	104.7	90	110	
[Pb]	207	1	nogas	102.173	1.722	582700	1.50	100	102.2	90	110	
Na	23	2	He	9705.659	0.719	21415171	1.02	10000	97.1	90	110	
Mg	24	2	He	9879.341	1.666	12079742	1.49	10000	98.8	90	110	
Al	27	2	He	99.997	0.192	70328	0.71	100	100.0	90	110	
K	39	2	He	9993.036	0.934	13306476	0.92	10000	99.9	90	110	
Ca	43	2	He	9906.353	0.694	36165	1.39	10000	99.1	90	110	
Ca	44	2	He	10044.847	1.114	605437	1.81	10000	100.4	90	110	
V	51	2	He	98.917	1.592	836571	0.97	100	98.9	90	110	
Cr	52	2	He	97.104	1.732	904855	0.96	100	97.1	90	110	
Mn	55	2	He	99.834	0.301	663921	0.49	100	99.8	90	110	
Fe	56	2	He	10054.786	1.428	81504627	1.95	10000	100.5	90	110	
Co	59	2	He	98.116	1.281	1221823	0.59	100	98.1	90	110	
Ni	60	2	He	99.611	1.508	309005	0.86	100	99.6	90	110	
Cu	63	2	He	96.556	2.171	766364	1.41	100	96.6	90	110	
Zn	66	2	He	98.228	2.065	180389	1.44	100	98.2	90	110	
As	75	2	He	98.830	0.997	173495	1.03	100	98.8	90	110	
Se	78	2	He	96.679	2.776	14206	2.00	100	96.7	90	110	
B	11	1	nogas	471.321	4.129	2365242	0.29	500	94.3	90	110	
Si	28	1	nogas	4777.480	7.160	8831602	0.70	5000	95.5	90	110	
Ca	43	1	nogas	10035.484	6.378	399594	2.08	10000	100.4	90	110	
Ca	44	1	nogas	9841.129	6.887	6479651	2.02	10000	98.4	90	110	
Fe	56	1	nogas	10049.763	4.613	254808889	0.77	10000	100.5	90	110	
Se	77	1	nogas	149.018	10.717	71801	1.76	100	149.0	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	94.746	7.112	28790	3.14	100	94.7	90	110	
Mo	95	1	nogas	95.937	7.210	574493	2.80	100	95.9	90	110	
Sn	118	1	nogas	99.177	6.150	796123	2.64	100	99.2	90	110	
Ba	137	1	nogas	102.371	4.203	449659	0.63	100	102.4	90	110	
Sb	121	2	He	103.184	0.823	711553	0.60	100	103.2	90	110	
Li	7	1	nogas	99.628	3.027	1724125	4.85	100	99.6	90	110	
P	31	1	nogas	462.400	5.404	1064026	0.39	500	92.5	90	110	
La	139	1	nogas	175.938	12.345	780	7.69	100	175.9	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	-650.008	-156.472	30	57.74	100	-650.0	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	nogas	1215936	4.09	1282255	94.83	70	125	
Ge	72	1	nogas	3728420	4.58	3894467	95.74	70	125	
In	115	1	nogas	3176162	3.66	3488791	91.04	70	125	
Bi	209	1	nogas	2313005	0.73	2439864	94.80	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1218471	0.79	1316692	92.54	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	197_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T17:55:45-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	070CALB.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	0.057	47.9	563	32.7	1	
Na	23	1	nogas	17.096	51.4	1043759	7.6	100	
Mg	24	1	nogas	7.078	26.2	122725	10.9	100	
Al	27	1	nogas	-0.103	-143.5	26789	3.1	5	
K	39	1	nogas	6.451	565.3	9853289	0.6	100	
Ti	47	1	nogas	0.051	28.2	523	2.2	2.5	
V	51	1	nogas	9.990	19.4	787701	2.0	2.5	CCB Main CR1 Failed
Cr	52	1	nogas	0.501	40.1	65867	1.8	2.5	
Mn	55	1	nogas	0.122	99.7	30415	3.3	2.5	
Co	59	1	nogas	0.059	12.9	2017	2.0	2.5	
Ni	60	1	nogas	-0.388	-5.8	1013	9.4	2.5	
Cu	63	1	nogas	0.041	17.4	3547	7.1	2	
Zn	66	1	nogas	-0.142	-25.3	1523	3.0	2.5	
As	75	1	nogas	6.711	13.2	126758	4.6	2.5	CCB Main CR1 Failed
Sr	88	1	nogas	0.074	27.1	3450	8.3	2.5	
Ag	107	1	nogas	0.054	9.1	837	1.8	2.5	
Cd	111	1	nogas	0.048	39.3	163	25.5	1	
Sb	121	1	nogas	0.176	11.9	3174	1.0	2.5	
Tl	205	1	nogas	0.479	66.3	9204	56.8	1	
Pb	208	1	nogas	0.061	30.5	2110	21.8	2.5	
U	238	1	nogas	0.134	41.6	3304	34.2	2.5	
[Pb]	206	1	nogas	0.055	48.9	537	25.4	2.5	
[Pb]	207	1	nogas	0.067	63.4	493	41.0	2.5	
Na	23	2	He	2.593	63.9	81503	2.9	100	
Mg	24	2	He	6.774	56.4	10238	50.5	100	
Al	27	2	He	0.083	2108.6	1599	81.8	5	
K	39	2	He	-31.315	-6.5	218819	1.2	100	
Ca	43	2	He	0.341	1221.3	67	17.3	100	
Ca	44	2	He	-10.167	-16.5	1720	10.5	100	
V	51	2	He	0.377	28.9	11103	3.0	2.5	
Cr	52	2	He	0.017	234.3	6134	6.2	2.5	
Mn	55	2	He	-0.036	-15.5	1423	2.7	2.5	
Fe	56	2	He	4.931	8.2	66556	4.2	100	
Co	59	2	He	0.041	10.4	690	3.8	2.5	
Ni	60	2	He	-0.195	-4.3	323	9.9	2.5	
Cu	63	2	He	-0.067	-50.8	1603	22.0	2	
Zn	66	2	He	-0.317	-4.9	660	9.5	2.5	
As	75	2	He	0.110	30.8	573	5.2	2.5	
Se	78	2	He	0.667	28.5	200	10.4	2	
B	11	1	nogas	6.252	27.6	50320	9.2	10	
Si	28	1	nogas	236.291	72.7	2901203	0.6	5	CCB Main CR1 Failed
Ca	43	1	nogas	5.624	61.0	1123	5.7	100	
Ca	44	1	nogas	-145.209	-11.9	149471	1.1	100	
Fe	56	1	nogas	-9.108	-123.9	3676579	0.4	100	
Se	77	1	nogas	49.518	12.3	40412	3.3	2.5	CCB Main CR1 Failed
Se	82	1	nogas	0.116	164.0	210	17.2	2	
Mo	95	1	nogas	0.271	27.8	1647	17.1	2.5	
Sn	118	1	nogas	0.250	33.9	3114	11.4	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.079	59.5	620	23.3	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.089	17.9	1273	5.0	2.5	
P	31	1	nogas	5.437	85.1	123262	0.4	10	
La	139	1	nogas	10.316	70.6	100	26.5	2.5	CCB Main CR1 Failed
Au	197	1	nogas	31.291	3797.9	40	43.3	2.5	CCB Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1249703	8.20	1282255	97.46	70	125	
Ge	72	1	nogas	3396272	6.90	3894467	87.21	70	125	
In	115	1	nogas	3034418	9.11	3488791	86.98	70	125	
Bi	209	1	nogas	2248391	6.53	2439864	92.15	70	125	
Ge	72	2	He	1245471	5.23	1316692	94.59	70	125	

Sample Report

Sample Table

Sample Name	HS18121520-01
Data File Name	203SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T18:07:37-06:00
Sample Type	Sample
Dilution	2
Comment	TW B136233 AlCdK
ISTD Ref FileName	070CALB.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	0.039	0.077	38.03	387	0.01	2000	
Na	23	1	nogas	OR	OR	#VALUE!	OR	#VALUE!	200000	
Mg	24	1	nogas	142158.203	284316.406	12.46	2094204447	0.01	200000	
Al	27	1	nogas	16.114	32.229	9.75	302306	0.01	2000	
K	39	1	nogas	1793.633	3587.266	13.66	43749440	0.00	200000	
Ti	47	1	nogas	1.613	3.226	20.02	3010	0.05	2000	
V	51	1	nogas	22.522	45.044	30.43	1026014	0.00	2000	
Cr	52	1	nogas	1.177	2.354	11.10	74287	0.00	2000	
Mn	55	1	nogas	77.081	154.162	8.34	1903884	0.00	2000	
Co	59	1	nogas	5.510	11.020	9.61	114325	0.00	2000	
Ni	60	1	nogas	10.719	21.438	12.05	51546	0.02	2000	
Cu	63	1	nogas	4.221	8.443	17.69	47646	0.01	2000	
Zn	66	1	nogas	19.654	39.308	12.48	72464	0.03	2000	
As	75	1	nogas	21.260	42.520	6.23	189202	0.01	2000	
Sr	88	1	nogas	4519.906	9039.811	10.67	112596442	0.00	2000	>LDR
Ag	107	1	nogas	0.012	0.024	25.50	260	0.00	2000	
Cd	111	1	nogas	0.248	0.497	12.46	693	0.04	2000	
Sb	121	1	nogas	0.056	0.112	31.61	1543	0.00	2000	
Tl	205	1	nogas	-0.002	-0.004	-451.77	433	0.00	2000	
Pb	208	1	nogas	0.141	0.282	6.39	4094	0.00	2000	
U	238	1	nogas	1.873	3.747	9.28	37809	0.00	2000	
[Pb]	206	1	nogas	0.167	0.335	14.11	1040	0.02	2000	
[Pb]	207	1	nogas	0.159	0.317	7.88	843	0.02	2000	
Na	23	2	He	446135.284	892270.569	1.69	900462840	0.05	200000	>LDR
Mg	24	2	He	127291.469	254582.939	0.84	142840711	0.09	200000	
Al	27	2	He	12.849	25.698	4.31	9483	0.14	2000	
K	39	2	He	1537.056	3074.111	2.43	2266462	0.07	200000	
Ca	43	2	He	177259.709	354519.418	1.26	592867	29.90	200000	
Ca	44	2	He	175094.805	350189.610	2.28	9649258	1.81	200000	
V	51	2	He	2.105	4.211	3.19	23294	0.01	2000	
Cr	52	2	He	-0.002	-0.005	-901.63	5351	0.00	2000	
Mn	55	2	He	68.896	137.793	0.96	420995	0.02	2000	
Fe	56	2	He	1471.954	2943.908	0.52	10970359	0.01	200000	
Co	59	2	He	4.513	9.026	2.60	51726	0.01	2000	
Ni	60	2	He	7.334	14.668	3.97	21663	0.03	2000	
Cu	63	2	He	0.436	0.873	12.66	5091	0.01	2000	
Zn	66	2	He	18.605	37.210	1.72	32275	0.06	2000	
As	75	2	He	1.893	3.786	4.18	3384	0.06	2000	
Se	78	2	He	0.755	1.511	17.63	192	0.39	2000	
B	11	1	nogas	10.815	21.630	8.71	69005	0.02	2000	
Si	28	1	nogas	121054.521	242109.043	11.69	128005548	0.09	2000	>LDR
Ca	43	1	nogas	187210.012	374420.024	12.86	6207317	3.02	200000	>LDR
Ca	44	1	nogas	187058.230	374116.461	10.88	99092462	0.19	200000	>LDR
Fe	56	1	nogas	1707.702	3415.404	11.60	39137513	0.00	200000	
Se	77	1	nogas	140.071	280.142	7.63	58445	0.24	2000	
Se	82	1	nogas	8.926	17.851	1.00	2434	0.37	2000	

Sample Report

Mo	95	1	nogas	0.155	0.310	23.49	940	0.02	2000	
Sn	118	1	nogas	-0.015	-0.030	-254.22	1007	0.00	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Ba	137	1	nogas	5913.096	11826.193	16.79	22402071	0.03	2000	>LDR
Sb	121	2	He	0.019	0.038	69.38	707	0.00	2000	
La	139	1	nogas	2410.922	4821.845	19.16	8529	28.27	2000	>LDR
Au	197	1	nogas	-1712.455	-3424.909	-39.40	10	-17124.55	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1166001	6.78	1282255	90.93	70	125	
Ge	72	1	nogas	3131466	9.39	3894467	80.41	70	125	
In	115	1	nogas	2782937	14.31	3488791	79.77	70	125	
Bi	209	1	nogas	1877338	9.37	2439864	76.94	70	125	
Ge	72	2	He	1118363	1.55	1316692	84.94	70	125	

Sample Report

Sample Table

Sample Name	HS18121520-02
Data File Name	204SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T18:09:34-06:00
Sample Type	Sample
Dilution	2
Comment	TW B136233 AlBaBeCdK
ISTD Ref FileName	070CALB.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	0.045	0.090	26.28	430	0.01	2000	
Na	23	1	nogas	OR	OR	#VALUE!	OR	#VALUE!	200000	
Mg	24	1	nogas	25526.233	51052.466	5.90	389255775	0.01	200000	
Al	27	1	nogas	105.080	210.161	3.34	1895998	0.01	2000	
K	39	1	nogas	2288.267	4576.535	2.24	55510170	0.00	200000	
Ti	47	1	nogas	2.424	4.848	7.51	4524	0.05	2000	
V	51	1	nogas	3.543	7.087	95.77	596189	0.00	2000	
Cr	52	1	nogas	59.401	118.802	1.34	1266109	0.00	2000	
Mn	55	1	nogas	1229.411	2458.822	2.23	31148966	0.00	2000	
Co	59	1	nogas	10.529	21.058	0.79	226575	0.00	2000	
Ni	60	1	nogas	41.258	82.516	1.27	198548	0.02	2000	
Cu	63	1	nogas	10.238	20.477	8.87	116825	0.01	2000	
Zn	66	1	nogas	6.988	13.977	3.27	28102	0.02	2000	
As	75	1	nogas	13.623	27.246	13.74	156165	0.01	2000	
Sr	88	1	nogas	693.306	1386.612	3.01	17963291	0.00	2000	
Ag	107	1	nogas	0.005	0.010	82.32	180	0.00	2000	
Cd	111	1	nogas	0.306	0.613	22.88	857	0.04	2000	
Sb	121	1	nogas	0.023	0.047	54.48	1220	0.00	2000	
Tl	205	1	nogas	-0.018	-0.036	-7.32	210	-0.01	2000	
Pb	208	1	nogas	0.276	0.552	6.02	7424	0.00	2000	
U	238	1	nogas	0.062	0.123	17.52	1403	0.00	2000	
[Pb]	206	1	nogas	0.329	0.658	3.83	1997	0.02	2000	
[Pb]	207	1	nogas	0.298	0.596	4.13	1567	0.02	2000	
Na	23	2	He	375616.411	751232.822	0.78	790877188	0.05	200000	>LDR
Mg	24	2	He	23295.147	46590.294	1.32	27271727	0.09	200000	
Al	27	2	He	97.189	194.378	1.11	65486	0.15	2000	
K	39	2	He	2174.964	4349.928	1.48	3099307	0.07	200000	
Ca	43	2	He	44022.004	88044.007	0.72	153667	28.65	200000	
Ca	44	2	He	44050.948	88101.896	2.29	2534852	1.74	200000	
V	51	2	He	0.699	1.398	3.15	13013	0.01	2000	
Cr	52	2	He	56.993	113.986	1.03	510870	0.01	2000	
Mn	55	2	He	1192.585	2385.170	0.94	7577068	0.02	2000	
Fe	56	2	He	32506.409	65012.818	1.60	252248636	0.01	200000	
Co	59	2	He	9.842	19.684	2.88	117513	0.01	2000	
Ni	60	2	He	37.552	75.104	1.43	112096	0.03	2000	
Cu	63	2	He	1.980	3.959	0.84	17008	0.01	2000	
Zn	66	2	He	6.556	13.112	3.53	12621	0.05	2000	
As	75	2	He	3.832	7.665	0.76	6782	0.06	2000	
Se	78	2	He	0.776	1.552	8.56	203	0.38	2000	
B	11	1	nogas	15.014	30.027	5.76	86637	0.02	2000	
Si	28	1	nogas	72268.967	144537.934	3.16	80534842	0.09	2000	>LDR
Ca	43	1	nogas	45410.361	90820.722	3.60	1568424	2.90	200000	
Ca	44	1	nogas	44396.268	88792.535	2.54	24634554	0.18	200000	
Fe	56	1	nogas	34148.576	68297.152	2.90	743372967	0.00	200000	
Se	77	1	nogas	72.535	145.069	19.94	44020	0.16	2000	
Se	82	1	nogas	3.913	7.825	17.09	1200	0.33	2000	

Sample Report

Mo	95	1	nogas	0.539	1.077	5.51	2977	0.02	2000	
Sn	118	1	nogas	-0.020	-0.040	-87.54	1003	0.00	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Ba	137	1	nogas	302.784	605.569	9.17	1172808	0.03	2000	
Sb	121	2	He	-0.001	-0.002	-1402.30	607	0.00	2000	
La	139	1	nogas	7458.072	14916.144	7.87	26938	27.69	2000	>LDR
Au	197	1	nogas	-323.861	-647.722	-420.34	30	-1079.54	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1133353	5.80	1282255	88.39	70	125	
Ge	72	1	nogas	3237466	4.01	3894467	83.13	70	125	
In	115	1	nogas	2817105	10.35	3488791	80.75	70	125	
Bi	209	1	nogas	1971322	7.50	2439864	80.80	70	125	
Ge	72	2	He	1166691	0.47	1316692	88.61	70	125	

Sample Report

Sample Table

Sample Name	HS18121520-07
Data File Name	205SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T18:11:33-06:00
Sample Type	Sample
Dilution	2
Comment	TW B136233 AlBaBeCdK
ISTD Ref FileName	070CALB.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	0.441	0.882	8.61	3240	0.01	2000	
Na	23	1	nogas	OR	OR	#VALUE!	OR	#VALUE!	200000	
Mg	24	1	nogas	26022.450	52044.901	5.98	419784609	0.01	200000	
Al	27	1	nogas	51.824	103.648	6.77	989939	0.01	2000	
K	39	1	nogas	326.667	653.334	14.25	16574105	0.00	200000	
Ti	47	1	nogas	2.476	4.953	5.47	4807	0.05	2000	
V	51	1	nogas	8.217	16.433	35.31	747333	0.00	2000	
Cr	52	1	nogas	0.468	0.935	8.33	65151	0.00	2000	
Mn	55	1	nogas	240.797	481.593	5.94	6385801	0.00	2000	
Co	59	1	nogas	1.882	3.764	4.27	42840	0.00	2000	
Ni	60	1	nogas	24.638	49.275	6.75	124772	0.02	2000	
Cu	63	1	nogas	6.012	12.023	17.59	72155	0.01	2000	
Zn	66	1	nogas	17.942	35.884	9.18	71908	0.02	2000	
As	75	1	nogas	7.514	15.029	8.07	130712	0.01	2000	
Sr	88	1	nogas	678.692	1357.385	6.94	18336915	0.00	2000	
Ag	107	1	nogas	0.005	0.011	74.33	193	0.00	2000	
Cd	111	1	nogas	0.052	0.103	18.56	173	0.03	2000	
Sb	121	1	nogas	0.012	0.023	114.75	1127	0.00	2000	
Tl	205	1	nogas	-0.012	-0.025	-29.53	310	0.00	2000	
Pb	208	1	nogas	0.045	0.090	15.35	1717	0.00	2000	
U	238	1	nogas	0.022	0.044	26.04	573	0.00	2000	
[Pb]	206	1	nogas	0.038	0.075	47.44	387	0.01	2000	
[Pb]	207	1	nogas	0.055	0.109	17.54	387	0.01	2000	
Na	23	2	He	423899.322	847798.644	2.10	943909959	0.04	200000	>LDR
Mg	24	2	He	24682.723	49365.445	2.32	30560588	0.08	200000	
Al	27	2	He	48.345	96.691	1.61	35213	0.14	2000	
K	39	2	He	332.385	664.770	0.12	693661	0.05	200000	
Ca	43	2	He	30757.438	61514.876	3.76	113533	27.09	200000	
Ca	44	2	He	31153.355	62306.710	5.71	1895768	1.64	200000	
V	51	2	He	1.357	2.713	9.76	19361	0.01	2000	
Cr	52	2	He	0.211	0.421	6.25	7905	0.00	2000	
Mn	55	2	He	245.297	490.594	5.49	1649399	0.01	2000	
Fe	56	2	He	97.474	194.948	3.37	825202	0.01	200000	
Co	59	2	He	1.830	3.661	2.91	23258	0.01	2000	
Ni	60	2	He	21.651	43.303	3.84	68725	0.03	2000	
Cu	63	2	He	0.498	0.996	10.65	6114	0.01	2000	
Zn	66	2	He	16.919	33.839	2.96	32502	0.05	2000	
As	75	2	He	0.431	0.863	10.75	1140	0.04	2000	
Se	78	2	He	0.720	1.440	9.44	207	0.35	2000	
B	11	1	nogas	4.538	9.077	12.19	36465	0.01	2000	
Si	28	1	nogas	188248.073	376496.147	6.57	214607363	0.09	2000	>LDR
Ca	43	1	nogas	30621.667	61243.334	6.30	1103798	2.77	200000	
Ca	44	1	nogas	30051.314	60102.628	7.02	17462229	0.17	200000	
Fe	56	1	nogas	99.005	198.010	15.99	6109209	0.00	200000	
Se	77	1	nogas	51.136	102.271	2.92	40796	0.13	2000	
Se	82	1	nogas	4.449	8.898	5.57	1403	0.32	2000	

Sample Report

Mo	95	1	nogas	0.068	0.136	39.69	547	0.01	2000	
Sn	118	1	nogas	0.025	0.051	34.36	1410	0.00	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Ba	137	1	nogas	23.002	46.003	9.37	95028	0.02	2000	
Sb	121	2	He	-0.018	-0.035	-104.77	523	0.00	2000	
La	139	1	nogas	9404.392	18808.785	10.28	36065	26.08	2000	>LDR
Au	197	1	nogas	-1483.210	-2966.419	-67.98	13	-11124.07	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1087831	6.47	1282255	84.84	70	125	
Ge	72	1	nogas	3386822	8.59	3894467	86.96	70	125	
In	115	1	nogas	2995056	9.59	3488791	85.85	70	125	
Bi	209	1	nogas	2010280	7.78	2439864	82.39	70	125	
Ge	72	2	He	1234163	2.15	1316692	93.73	70	125	

Sample Report

Sample Table

Sample Name	HS18121520-08
Data File Name	206SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T18:13:32-06:00
Sample Type	Sample
Dilution	2
Comment	TW B136233 AlBeCdK
ISTD Ref FileName	070CALB.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	0.002	0.003	348.81	93	0.00	2000	
Na	23	1	nogas	OR	OR	#VALUE!	OR	#VALUE!	200000	
Mg	24	1	nogas	120497.542	240995.084	6.08	1965392711	0.01	200000	
Al	27	1	nogas	5.532	11.064	7.63	129764	0.00	2000	
K	39	1	nogas	913.363	1826.727	7.44	28556427	0.00	200000	
Ti	47	1	nogas	1.439	2.878	9.11	2930	0.05	2000	
V	51	1	nogas	45.597	91.195	0.65	1654949	0.00	2000	
Cr	52	1	nogas	8.724	17.448	6.44	237654	0.00	2000	
Mn	55	1	nogas	19.618	39.236	5.38	538052	0.00	2000	
Co	59	1	nogas	0.708	1.415	1.50	16324	0.00	2000	
Ni	60	1	nogas	27.141	54.281	3.81	135446	0.02	2000	
Cu	63	1	nogas	5.796	11.592	3.69	69234	0.01	2000	
Zn	66	1	nogas	15.271	30.542	6.36	60818	0.03	2000	
As	75	1	nogas	27.339	54.677	3.34	233551	0.01	2000	
Sr	88	1	nogas	3537.970	7075.941	6.31	94358939	0.00	2000	>LDR
Ag	107	1	nogas	0.015	0.031	32.16	323	0.00	2000	
Cd	111	1	nogas	0.213	0.426	7.62	617	0.03	2000	
Sb	121	1	nogas	-0.020	-0.039	-66.55	730	0.00	2000	
Tl	205	1	nogas	-0.013	-0.026	-4.06	273	0.00	2000	
Pb	208	1	nogas	-0.003	-0.006	-59.07	527	0.00	2000	
U	238	1	nogas	20.233	40.466	4.77	410343	0.00	2000	
[Pb]	206	1	nogas	-0.005	-0.010	-100.36	140	0.00	2000	
[Pb]	207	1	nogas	0.009	0.018	115.90	153	0.01	2000	
Na	23	2	He	604227.606	1208455.212	0.64	1307266301	0.05	200000	>LDR
Mg	24	2	He	123993.500	247987.000	1.18	149152798	0.08	200000	
Al	27	2	He	4.476	8.952	4.75	4491	0.10	2000	
K	39	2	He	944.722	1889.445	1.72	1493120	0.06	200000	
Ca	43	2	He	199258.298	398516.595	1.22	714432	27.89	200000	>LDR
Ca	44	2	He	196932.274	393864.548	1.65	11634905	1.69	200000	>LDR
V	51	2	He	2.666	5.333	1.90	29598	0.01	2000	
Cr	52	2	He	7.022	14.043	1.23	69721	0.01	2000	
Mn	55	2	He	19.268	38.537	0.62	127387	0.02	2000	
Fe	56	2	He	113.602	227.203	1.63	930453	0.01	200000	
Co	59	2	He	0.288	0.577	3.70	3700	0.01	2000	
Ni	60	2	He	22.778	45.556	0.78	70221	0.03	2000	
Cu	63	2	He	2.090	4.181	2.78	18339	0.01	2000	
Zn	66	2	He	15.064	30.128	0.77	28242	0.05	2000	
As	75	2	He	0.494	0.987	6.75	1216	0.04	2000	
Se	78	2	He	2.116	4.231	5.09	401	0.53	2000	
B	11	1	nogas	4.735	9.470	12.02	35620	0.01	2000	
Si	28	1	nogas	121083.723	242167.446	1.21	137303691	0.09	2000	>LDR
Ca	43	1	nogas	197985.935	395971.869	4.29	7040832	2.81	200000	>LDR
Ca	44	1	nogas	198945.269	397890.538	4.16	112887122	0.18	200000	>LDR
Fe	56	1	nogas	151.445	302.891	8.24	7200434	0.00	200000	
Se	77	1	nogas	195.787	391.573	5.14	75908	0.26	2000	
Se	82	1	nogas	11.075	22.149	6.47	3174	0.35	2000	
Mo	95	1	nogas	0.649	1.298	8.21	3657	0.02	2000	
Sn	118	1	nogas	-0.003	-0.007	-626.55	1137	0.00	2000	

Sample Report

Ba	137	1	nogas	1964.486	3928.973	9.37	7703614	0.03	2000	>LDR
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Sb	121	2	He	-0.049	-0.097	-12.71	300	-0.02	2000	
La	139	1	nogas	670.966	1341.931	8.33	2510	26.73	2000	
Au	197	1	nogas	-1206.277	-2412.555	-67.39	17	-7237.66	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1038128	7.24	1282255	80.96	70	125	
Ge	72	1	nogas	3334958	3.45	3894467	85.63	70	125	
In	115	1	nogas	2846394	6.70	3488791	81.59	70	125	
Bi	209	1	nogas	1881913	2.60	2439864	77.13	70	125	
Ge	72	2	He	1198895	1.50	1316692	91.05	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	208_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T18:17:27-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	070CALB.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	98.037	5.381	838446	3.46	100	98.0	90	110	
Na	23	1	nogas	10880.408	7.348	307196899	1.87	10000	108.8	90	110	
Mg	24	1	nogas	10527.198	9.673	191831438	3.59	10000	105.3	90	110	
Al	27	1	nogas	105.602	6.508	2330140	3.65	100	105.6	90	110	
K	39	1	nogas	9877.857	5.006	255317914	1.50	10000	98.8	90	110	
Ti	47	1	nogas	97.907	4.917	203159	2.42	100	97.9	90	110	
V	51	1	nogas	126.907	9.511	4343235	4.86	100	126.9	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	102.711	4.062	2629576	0.82	100	102.7	90	110	
Mn	55	1	nogas	104.516	5.567	3266806	2.40	100	104.5	90	110	
Co	59	1	nogas	101.668	6.888	2666062	3.61	100	101.7	90	110	
Ni	60	1	nogas	100.070	5.312	583798	2.60	100	100.1	90	110	
Cu	63	1	nogas	101.845	7.053	1384481	3.79	100	101.8	90	110	
Zn	66	1	nogas	98.680	5.651	453404	2.32	100	98.7	90	110	
As	75	1	nogas	111.094	6.011	801641	2.62	100	111.1	90	110	CCV Main CR1-2 Failed
Sr	88	1	nogas	102.091	4.370	3237198	1.33	100	102.1	90	110	
Ag	107	1	nogas	98.957	5.390	1531554	3.76	100	99.0	90	110	
Cd	111	1	nogas	98.446	5.181	325935	0.79	100	98.4	90	110	
Sb	121	1	nogas	103.932	2.922	1518152	1.52	100	103.9	90	110	
Tl	205	1	nogas	98.445	3.412	2028629	0.90	100	98.4	90	110	
Pb	208	1	nogas	114.974	1.014	2840142	1.01	100	115.0	90	110	CCV Main CR1-2 Failed
U	238	1	nogas	105.985	4.754	2860067	3.00	100	106.0	90	110	
[Pb]	206	1	nogas	99.480	3.840	698816	0.18	100	99.5	90	110	
[Pb]	207	1	nogas	99.523	3.848	614119	0.38	100	99.5	90	110	
Na	23	2	He	9397.619	0.863	23336094	1.15	10000	94.0	90	110	
Mg	24	2	He	9335.668	0.168	12845536	0.45	10000	93.4	90	110	
Al	27	2	He	95.931	1.294	75989	1.49	100	95.9	90	110	
K	39	2	He	10952.987	2.644	14559774	2.60	10000	109.5	90	110	
Ca	43	2	He	9637.710	3.734	39595	4.00	10000	96.4	90	110	
Ca	44	2	He	9823.715	0.599	666303	0.57	10000	98.2	90	110	
V	51	2	He	95.588	1.385	910052	1.53	100	95.6	90	110	
Cr	52	2	He	92.815	1.028	973619	1.13	100	92.8	90	110	
Mn	55	2	He	96.696	0.433	723682	0.58	100	96.7	90	110	
Fe	56	2	He	9570.953	0.983	87300422	1.22	10000	95.7	90	110	
Co	59	2	He	94.917	2.947	1330182	3.14	100	94.9	90	110	
Ni	60	2	He	95.247	1.613	332557	1.88	100	95.2	90	110	
Cu	63	2	He	93.817	0.634	838069	0.78	100	93.8	90	110	
Zn	66	2	He	95.759	0.740	197941	1.00	100	95.8	90	110	
As	75	2	He	94.853	0.551	187394	0.69	100	94.9	90	110	
Se	78	2	He	93.526	1.248	15470	1.43	100	93.5	90	110	
B	11	1	nogas	462.074	7.368	2474037	5.51	500	92.4	90	110	
Si	28	1	nogas	4822.998	4.928	9450017	1.35	5000	96.5	90	110	
Ca	43	1	nogas	10198.852	6.236	431645	2.93	10000	102.0	90	110	
Ca	44	1	nogas	9921.436	5.415	6944019	2.11	10000	99.2	90	110	
Fe	56	1	nogas	10180.914	5.950	274202214	2.55	10000	101.8	90	110	
Se	77	1	nogas	178.339	12.929	84891	4.98	100	178.3	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	100.645	5.800	32503	2.82	100	100.6	90	110	
Mo	95	1	nogas	95.043	5.072	605302	1.81	100	95.0	90	110	
Sn	118	1	nogas	99.202	5.215	847034	2.66	100	99.2	90	110	
Ba	137	1	nogas	103.727	6.405	484133	1.73	100	103.7	90	110	
Sb	121	2	He	97.294	0.856	755041	0.72	100	97.3	90	110	
Li	7	1	nogas	98.537	4.913	1819643	4.62	100	98.5	90	110	
P	31	1	nogas	463.673	5.387	1133745	2.40	500	92.7	90	110	
La	139	1	nogas	185.573	17.988	870	13.06	100	185.6	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	-97.673	-1072.327	43	48.04	100	-97.7	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	nogas	1296953	2.59	1282255	101.15	70	125	
Ge	72	1	nogas	3960913	3.20	3894467	101.71	70	125	
In	115	1	nogas	3378141	4.59	3488791	96.83	70	125	
Bi	209	1	nogas	2504953	3.80	2439864	102.67	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1371106	0.31	1316692	104.13	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	209_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T18:19:25-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	070CALB.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	0.065	18.6	640	5.6	1	
Na	23	1	nogas	182.661	18.2	5341927	3.8	100	CCB Main CR1 Failed
Mg	24	1	nogas	15.477	19.7	270395	6.6	100	
Al	27	1	nogas	-0.120	-119.1	28178	2.0	5	
K	39	1	nogas	-4.019	-1373.0	10227416	1.4	100	
Ti	47	1	nogas	0.109	48.0	663	7.6	2.5	
V	51	1	nogas	7.201	26.3	764322	3.9	2.5	CCB Main CR1 Failed
Cr	52	1	nogas	0.333	75.8	66251	2.2	2.5	
Mn	55	1	nogas	0.103	115.7	31844	1.8	2.5	
Co	59	1	nogas	0.070	12.5	2424	3.7	2.5	
Ni	60	1	nogas	-0.006	-542.8	3107	7.6	2.5	
Cu	63	1	nogas	0.711	30.2	11921	11.8	2	
Zn	66	1	nogas	-0.069	-53.0	1927	2.7	2.5	
As	75	1	nogas	5.362	35.5	126935	2.5	2.5	CCB Main CR1 Failed
Sr	88	1	nogas	0.336	10.6	11230	1.8	2.5	
Ag	107	1	nogas	0.054	11.5	897	7.2	2.5	
Cd	111	1	nogas	0.064	20.3	227	17.8	1	
Sb	121	1	nogas	0.166	20.9	3244	3.4	2.5	
Tl	205	1	nogas	0.517	54.2	10004	41.9	1	
Pb	208	1	nogas	0.066	20.9	2237	15.2	2.5	
U	238	1	nogas	0.144	33.0	3604	23.5	2.5	
[Pb]	206	1	nogas	0.058	28.5	570	9.8	2.5	
[Pb]	207	1	nogas	0.064	34.4	490	16.7	2.5	
Na	23	2	He	128.052	1.6	367704	0.6	100	CCB Main CR1 Failed
Mg	24	2	He	11.715	1.1	16507	1.8	100	
Al	27	2	He	-0.948	-11.0	857	8.6	5	
K	39	2	He	-29.722	-1.0	220899	0.2	100	
Ca	43	2	He	18.614	42.7	137	21.1	100	
Ca	44	2	He	3.726	107.9	2600	10.2	100	
V	51	2	He	0.302	9.5	10611	2.6	2.5	
Cr	52	2	He	0.025	119.1	6288	4.3	2.5	
Mn	55	2	He	0.010	389.1	1753	14.7	2.5	
Fe	56	2	He	6.383	4.6	79547	2.5	100	
Co	59	2	He	0.048	13.9	790	10.0	2.5	
Ni	60	2	He	-0.160	-4.0	437	5.3	2.5	
Cu	63	2	He	0.259	17.8	4281	8.0	2	
Zn	66	2	He	-0.267	-26.6	760	16.8	2.5	
As	75	2	He	0.099	19.8	561	5.5	2.5	
Se	78	2	He	0.726	15.6	212	8.4	2	
B	11	1	nogas	6.262	35.3	51103	12.1	10	
Si	28	1	nogas	156.707	200.1	2982687	2.2	5	CCB Main CR1 Failed
Ca	43	1	nogas	15.250	5.4	1577	10.9	100	
Ca	44	1	nogas	-20.507	-1022.1	237312	57.0	100	
Fe	56	1	nogas	6.230	331.5	4272779	2.1	100	
Se	77	1	nogas	40.092	26.4	40479	5.1	2.5	CCB Main CR1 Failed
Se	82	1	nogas	0.180	123.3	243	25.1	2	
Mo	95	1	nogas	0.285	40.7	1810	25.2	2.5	
Sn	118	1	nogas	0.278	39.8	3547	16.6	5	
Ba	137	1	nogas	0.302	10.0	1667	2.4	2.5	

Continuing Calibration Blank (CCB) Report

Sb	121	2	He	0.086	4.5	1273	1.8	2.5	
P	31	1	nogas	1.675	462.6	123430	1.7	10	
La	139	1	nogas	17.102	29.3	137	22.4	2.5	CCB Main CR1 Failed
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Au	197	1	nogas	-1066.767	-73.1	23	65.5	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	nogas	1273668	9.68	1282255	99.33	70	125	
Ge	72	1	nogas	3623117	10.25	3894467	93.03	70	125	
In	115	1	nogas	3241182	10.03	3488791	92.90	70	125	
Bi	209	1	nogas	2287895	8.92	2439864	93.77	70	125	
Ge	72	2	He	1259650	0.90	1316692	95.67	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	213_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T18:27:19-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	070CALB.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	99.208	4.300	783290	1.63	100	99.2	90	110	
Na	23	1	nogas	9956.954	0.832	268644298	1.55	10000	99.6	90	110	
Mg	24	1	nogas	9985.212	3.382	173984100	2.89	10000	99.9	90	110	
Al	27	1	nogas	103.310	3.708	2125480	3.96	100	103.3	90	110	
K	39	1	nogas	9835.636	2.768	236922205	2.22	10000	98.4	90	110	
Ti	47	1	nogas	99.207	3.430	191758	2.14	100	99.2	90	110	
V	51	1	nogas	114.690	4.221	3715574	2.50	100	114.7	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	103.345	1.026	2464543	0.56	100	103.3	90	110	
Mn	55	1	nogas	101.960	2.480	2970768	2.52	100	102.0	90	110	
Co	59	1	nogas	103.228	1.026	2523550	1.24	100	103.2	90	110	
Ni	60	1	nogas	101.598	0.662	552269	0.91	100	101.6	90	110	
Cu	63	1	nogas	101.748	3.653	1289804	4.62	100	101.7	90	110	
Zn	66	1	nogas	98.265	0.861	420815	1.40	100	98.3	90	110	
As	75	1	nogas	103.954	1.301	705303	0.85	100	104.0	90	110	
Sr	88	1	nogas	103.350	1.364	3053460	1.76	100	103.4	90	110	
Ag	107	1	nogas	100.355	2.735	1446757	1.31	100	100.4	90	110	
Cd	111	1	nogas	95.369	1.287	313802	1.03	100	95.4	90	110	
Sb	121	1	nogas	102.796	2.462	1398349	1.41	100	102.8	90	110	
Tl	205	1	nogas	99.063	2.193	1923118	2.08	100	99.1	90	110	
Pb	208	1	nogas	107.143	1.535	2646722	1.53	100	107.1	90	110	
U	238	1	nogas	102.861	4.220	2613945	1.81	100	102.9	90	110	
[Pb]	206	1	nogas	100.005	4.772	661493	2.11	100	100.0	90	110	
[Pb]	207	1	nogas	97.580	4.373	567020	1.51	100	97.6	90	110	
Na	23	2	He	9378.091	1.567	21525486	0.64	10000	93.8	90	110	
Mg	24	2	He	9422.415	1.266	11984608	1.13	10000	94.2	90	110	
Al	27	2	He	95.962	1.162	70263	0.60	100	96.0	90	110	
K	39	2	He	10330.926	1.858	13747620	1.82	10000	103.3	90	110	
Ca	43	2	He	9685.007	1.951	36780	2.11	10000	96.9	90	110	
Ca	44	2	He	9972.782	0.538	625322	1.99	10000	99.7	90	110	
V	51	2	He	97.804	2.065	860441	0.40	100	97.8	90	110	
Cr	52	2	He	93.716	1.949	908618	1.16	100	93.7	90	110	
Mn	55	2	He	98.047	1.670	678259	1.14	100	98.0	90	110	
Fe	56	2	He	9870.355	1.062	83224274	1.22	10000	98.7	90	110	
Co	59	2	He	97.565	3.492	1263512	1.80	100	97.6	90	110	
Ni	60	2	He	98.417	1.659	317585	0.78	100	98.4	90	110	
Cu	63	2	He	96.476	1.197	796577	0.73	100	96.5	90	110	
Zn	66	2	He	99.094	0.850	189330	2.25	100	99.1	90	110	
As	75	2	He	97.743	1.443	178481	0.38	100	97.7	90	110	
Se	78	2	He	96.576	0.830	14763	1.03	100	96.6	90	110	
B	11	1	nogas	451.711	3.784	2234009	1.85	500	90.3	90	110	
Si	28	1	nogas	4912.676	1.576	8912951	1.28	5000	98.3	90	110	
Ca	43	1	nogas	10423.744	2.790	411160	2.41	10000	104.2	90	110	
Ca	44	1	nogas	10047.484	2.553	6549189	1.54	10000	100.5	90	110	
Fe	56	1	nogas	10165.844	1.359	255210897	1.96	10000	101.7	90	110	
Se	77	1	nogas	139.638	2.712	68572	1.16	100	139.6	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	99.032	0.619	29812	1.54	100	99.0	90	110	
Mo	95	1	nogas	96.496	1.054	572726	1.88	100	96.5	90	110	
Sn	118	1	nogas	93.788	1.117	795923	2.29	100	93.8	90	110	
Ba	137	1	nogas	96.679	1.274	448647	1.02	100	96.7	90	110	
Sb	121	2	He	99.553	0.898	714191	1.44	100	99.6	90	110	
Li	7	1	nogas	100.557	7.768	1709943	3.73	100	100.6	90	110	
P	31	1	nogas	459.621	1.780	1048173	1.58	500	91.9	90	110	
La	139	1	nogas	207.299	8.428	960	6.34	100	207.3	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	-1616.505	-55.998	13	114.56	100	-1616.5	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	nogas	1198015	4.94	1282255	93.43	70	125	
Ge	72	1	nogas	3687390	1.56	3894467	94.68	70	125	
In	115	1	nogas	3352680	2.27	3488791	96.10	70	125	
Bi	209	1	nogas	2359125	3.91	2439864	96.69	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1267581	1.73	1316692	96.27	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	214_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T18:29:19-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	070CALB.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	0.071	38.0	707	28.9	1	
Na	23	1	nogas	80.765	18.1	2909590	8.7	100	
Mg	24	1	nogas	8.408	21.5	163284	14.5	100	
Al	27	1	nogas	-0.156	-16.3	28802	2.1	5	
K	39	1	nogas	-44.026	-6.4	9795311	0.7	100	
Ti	47	1	nogas	0.072	102.0	623	22.5	2.5	
V	51	1	nogas	4.879	23.3	734625	4.7	2.5	CCB Main CR1 Failed
Cr	52	1	nogas	0.109	22.7	64044	1.9	2.5	
Mn	55	1	nogas	0.010	572.7	30642	5.0	2.5	
Co	59	1	nogas	0.068	6.3	2484	3.8	2.5	
Ni	60	1	nogas	-0.283	-10.9	1710	10.1	2.5	
Cu	63	1	nogas	0.174	12.0	5651	4.0	2	
Zn	66	1	nogas	-0.107	-33.4	1850	8.6	2.5	
As	75	1	nogas	3.495	29.3	121794	5.2	2.5	CCB Main CR1 Failed
Sr	88	1	nogas	0.103	10.9	4724	6.6	2.5	
Ag	107	1	nogas	0.059	10.4	1000	8.2	2.5	
Cd	111	1	nogas	0.069	9.7	257	2.2	1	
Sb	121	1	nogas	0.150	23.9	3180	15.4	2.5	
Tl	205	1	nogas	0.632	64.3	13661	65.9	1	
Pb	208	1	nogas	0.082	24.6	2637	18.9	2.5	
U	238	1	nogas	0.153	43.7	4227	46.8	2.5	
[Pb]	206	1	nogas	0.060	35.5	637	28.5	2.5	
[Pb]	207	1	nogas	0.074	16.2	597	13.5	2.5	
Na	23	2	He	50.767	5.9	197975	2.6	100	
Mg	24	2	He	6.064	7.2	9649	4.1	100	
Al	27	2	He	-0.971	-5.9	867	5.8	5	
K	39	2	He	-27.625	-5.6	223637	0.9	100	
Ca	43	2	He	-2.213	-243.4	60	33.3	100	
Ca	44	2	He	-6.334	-65.4	2040	15.1	100	
V	51	2	He	0.290	3.8	10835	2.5	2.5	
Cr	52	2	He	-0.031	-126.4	5941	8.6	2.5	
Mn	55	2	He	-0.025	-15.5	1560	1.3	2.5	
Fe	56	2	He	6.329	5.3	81532	1.5	100	
Co	59	2	He	0.051	8.4	857	7.9	2.5	
Ni	60	2	He	-0.187	-13.6	360	22.0	2.5	
Cu	63	2	He	0.049	63.9	2647	10.8	2	
Zn	66	2	He	-0.295	-9.8	730	6.0	2.5	
As	75	2	He	0.111	30.9	602	10.4	2.5	
Se	78	2	He	0.623	40.4	203	19.6	2	
B	11	1	nogas	6.200	20.8	52309	10.1	10	
Si	28	1	nogas	30.784	186.2	2973304	1.4	5	CCB Main CR1 Failed
Ca	43	1	nogas	4.549	11.5	1210	0.8	100	
Ca	44	1	nogas	-178.323	-1.9	145288	0.6	100	
Fe	56	1	nogas	-16.006	-45.0	3921997	4.1	100	
Se	77	1	nogas	28.069	11.8	38969	2.5	2.5	CCB Main CR1 Failed
Se	82	1	nogas	0.162	38.1	250	6.9	2	
Mo	95	1	nogas	0.388	46.7	2560	42.5	2.5	
Sn	118	1	nogas	0.316	49.2	4067	25.9	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.101	15.1	813	8.7	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.121	16.2	1570	8.1	2.5	
P	31	1	nogas	-5.978	-7.6	113843	0.3	10	
La	139	1	nogas	14.473	50.7	133	31.2	2.5	CCB Main CR1 Failed
Au	197	1	nogas	241.215	1088.0	50	103.9	2.5	CCB Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1297118	3.19	1282255	101.16	70	125	
Ge	72	1	nogas	3772455	1.01	3894467	96.87	70	125	
In	115	1	nogas	3421466	6.78	3488791	98.07	70	125	
Bi	209	1	nogas	2465753	5.10	2439864	101.06	70	125	
Ge	72	2	He	1298978	2.11	1316692	98.65	70	125	

Calibration Blank Report

Sample Table

Sample Name	CAL BLK
Data File Name	221CALB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T19:12:49-06:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	230	6.82
Na	23	1	nogas	568425	0.00
Mg	24	1	nogas	34771	0.01
Al	27	1	nogas	28582	0.01
K	39	1	nogas	9206419	0.00
Ti	47	1	nogas	407	9.39
V	51	1	nogas	605010	0.00
Cr	52	1	nogas	61174	0.00
Mn	55	1	nogas	31848	0.01
Co	59	1	nogas	850	0.28
Ni	60	1	nogas	877	2.15
Cu	63	1	nogas	2634	0.19
Zn	66	1	nogas	2587	0.22
As	75	1	nogas	104709	0.00
Sr	88	1	nogas	1570	0.31
Ag	107	1	nogas	200	5.00
Cd	111	1	nogas	57	47.57
Sb	121	1	nogas	437	2.69
Tl	205	1	nogas	753	0.57
Pb	208	1	nogas	510	0.77
[Pb]	206	1	nogas	143	19.67
[Pb]	207	1	nogas	123	10.04
Na	23	2	He	56681	0.00
Mg	24	2	He	2590	0.03
Al	27	2	He	1027	0.47
K	39	2	He	222827	0.00
Ca	43	2	He	73	42.94
Ca	44	2	He	1717	0.20
V	51	2	He	9695	0.03
Cr	52	2	He	7562	0.06
Mn	55	2	He	2274	0.04
Fe	56	2	He	34035	0.00
Co	59	2	He	200	19.53
Ni	60	2	He	237	10.91
Cu	63	2	He	1467	0.26
Zn	66	2	He	897	1.58
As	75	2	He	469	3.15
Se	78	2	He	213	3.14
B	11	1	nogas	42865	0.01
Si	28	1	nogas	3213274	0.00
Ca	43	1	nogas	1040	0.37
Ca	44	1	nogas	120199	0.00

Calibration Blank Report

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	3548189	0.00
Se	77	1	nogas	33758	0.01
Se	82	1	nogas	200	7.50
Mo	95	1	nogas	440	5.96
Sn	118	1	nogas	1440	0.86
Ba	137	1	nogas	473	5.81
Sb	121	2	He	250	7.33
Li	7	1	nogas	96916	0.00
P	31	1	nogas	96780	0.00
La	139	1	nogas	100	26.46

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	6	1	nogas	1118108	2.38
Ge	72	1	nogas	3396393	1.78
In	115	1	nogas	3166421	2.68
Bi	209	1	nogas	2159119	4.45
Ge	72	2	He	1189986	1.34

Calibration Standard Report

Sample Table

Sample Name	2/10/200
Data File Name	222CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T19:14:47-06:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	221CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	12951	0.07
Na	23	1	nogas	5161579	0.00
Mg	24	1	nogas	3062203	0.00
Al	27	1	nogas	70137	0.00
K	39	1	nogas	13234496	0.00
Ti	47	1	nogas	3724	0.31
V	51	1	nogas	627480	0.00
Cr	52	1	nogas	99013	0.00
Mn	55	1	nogas	81311	0.00
Co	59	1	nogas	45032	0.00
Ni	60	1	nogas	10400	0.06
Cu	63	1	nogas	26676	0.00
Zn	66	1	nogas	9149	0.04
As	75	1	nogas	107918	0.00
Sr	88	1	nogas	55908	0.01
Ag	107	1	nogas	26724	0.01
Cd	111	1	nogas	5634	0.03
Sb	121	1	nogas	25092	0.01
Tl	205	1	nogas	33285	0.01
Pb	208	1	nogas	45619	0.01
[Pb]	206	1	nogas	11584	0.05
[Pb]	207	1	nogas	9826	0.04
Na	23	2	He	454872	0.00
Mg	24	2	He	227154	0.00
Al	27	2	He	2407	0.18
K	39	2	He	474435	0.00
Ca	43	2	He	740	2.11
Ca	44	2	He	13395	0.05
V	51	2	He	24526	0.00
Cr	52	2	He	25151	0.00
Mn	55	2	He	14352	0.01
Fe	56	2	He	1568240	0.00
Co	59	2	He	23368	0.01
Ni	60	2	He	6081	0.09
Cu	63	2	He	17085	0.02
Zn	66	2	He	4127	0.14
As	75	2	He	3740	0.06
Se	78	2	He	450	2.77
B	11	1	nogas	77493	0.00
Si	28	1	nogas	3296194	0.00

Calibration Standard Report

Ca	43	1	nogas	8029	0.05
Ca	44	1	nogas	231918	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	8030861	0.00
Se	77	1	nogas	32509	0.01
Se	82	1	nogas	757	1.75
Mo	95	1	nogas	10967	0.04
Sn	118	1	nogas	14800	0.00
Ba	137	1	nogas	8232	0.03
Sb	121	2	He	13512	0.01
P	31	1	nogas	116175	0.00
La	139	1	nogas	77	54.69

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1132003	3.61	1118108	101.24	70	125	
Ge	72	1	nogas	3451423	1.51	3396393	101.62	70	125	
In	115	1	nogas	3060260	1.77	3166421	96.65	70	125	
Bi	209	1	nogas	2087428	3.76	2159119	96.68	70	125	
Ge	72	2	He	1209005	1.03	1189986	101.60	70	125	

Calibration Standard Report

Sample Table

Sample Name	5/25/500
Data File Name	223CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T19:16:46-06:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	
ISTD Ref File Name	221CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	32415	0.00
Na	23	1	nogas	12048279	0.00
Mg	24	1	nogas	7538756	0.00
Al	27	1	nogas	129951	0.00
K	39	1	nogas	19150063	0.00
Ti	47	1	nogas	9079	0.09
V	51	1	nogas	774817	0.00
Cr	52	1	nogas	163294	0.00
Mn	55	1	nogas	157221	0.00
Co	59	1	nogas	110361	0.00
Ni	60	1	nogas	25755	0.01
Cu	63	1	nogas	63233	0.00
Zn	66	1	nogas	23025	0.00
As	75	1	nogas	136419	0.00
Sr	88	1	nogas	135701	0.00
Ag	107	1	nogas	64756	0.00
Cd	111	1	nogas	13065	0.00
Sb	121	1	nogas	62619	0.00
Tl	205	1	nogas	85235	0.00
Pb	208	1	nogas	115890	0.00
[Pb]	206	1	nogas	29133	0.01
[Pb]	207	1	nogas	25657	0.02
Na	23	2	He	1064301	0.00
Mg	24	2	He	574077	0.00
Al	27	2	He	4561	0.22
K	39	2	He	847539	0.00
Ca	43	2	He	1867	0.33
Ca	44	2	He	30806	0.01
V	51	2	He	49152	0.00
Cr	52	2	He	51963	0.01
Mn	55	2	He	33404	0.00
Fe	56	2	He	3833080	0.00
Co	59	2	He	58698	0.00
Ni	60	2	He	15510	0.02
Cu	63	2	He	38852	0.00
Zn	66	2	He	10486	0.08
As	75	2	He	8887	0.03
Se	78	2	He	883	0.84
B	11	1	nogas	134650	0.00
Si	28	1	nogas	3513153	0.00

Calibration Standard Report

Ca	43	1	nogas	19040	0.01
Ca	44	1	nogas	407153	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	14208575	0.00
Se	77	1	nogas	36924	0.00
Se	82	1	nogas	1447	0.91
Mo	95	1	nogas	26767	0.01
Sn	118	1	nogas	37952	0.00
Ba	137	1	nogas	20960	0.01
Sb	121	2	He	33205	0.02
P	31	1	nogas	144588	0.00
La	139	1	nogas	177	8.06

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1088809	0.87	1118108	97.38	70	125	
Ge	72	1	nogas	3446697	0.22	3396393	101.48	70	125	
In	115	1	nogas	3119463	2.58	3166421	98.52	70	125	
Bi	209	1	nogas	2080980	2.61	2159119	96.38	70	125	
Ge	72	2	He	1200718	1.49	1189986	100.90	70	125	

Calibration Standard Report

Sample Table

Sample Name	10/50/1000
Data File Name	224CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T19:18:43-06:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	
ISTD Ref File Name	221CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	64064	0.00
Na	23	1	nogas	22966981	0.00
Mg	24	1	nogas	14609242	0.00
Al	27	1	nogas	217774	0.00
K	39	1	nogas	29317766	0.00
Ti	47	1	nogas	17619	0.01
V	51	1	nogas	988004	0.00
Cr	52	1	nogas	264416	0.00
Mn	55	1	nogas	290107	0.00
Co	59	1	nogas	218865	0.00
Ni	60	1	nogas	49601	0.01
Cu	63	1	nogas	115482	0.00
Zn	66	1	nogas	39760	0.00
As	75	1	nogas	168100	0.00
Sr	88	1	nogas	269474	0.00
Ag	107	1	nogas	125792	0.00
Cd	111	1	nogas	27121	0.01
Sb	121	1	nogas	116824	0.00
Tl	205	1	nogas	163093	0.00
Pb	208	1	nogas	224998	0.00
[Pb]	206	1	nogas	55980	0.00
[Pb]	207	1	nogas	48654	0.00
Na	23	2	He	2003126	0.00
Mg	24	2	He	1086799	0.00
Al	27	2	He	7378	0.03
K	39	2	He	1484694	0.00
Ca	43	2	He	3454	0.16
Ca	44	2	He	59395	0.00
V	51	2	He	87588	0.00
Cr	52	2	He	91312	0.00
Mn	55	2	He	64449	0.00
Fe	56	2	He	7537682	0.00
Co	59	2	He	115807	0.00
Ni	60	2	He	29447	0.00
Cu	63	2	He	75174	0.00
Zn	66	2	He	17826	0.01
As	75	2	He	16823	0.02
Se	78	2	He	1632	0.27
B	11	1	nogas	230916	0.00
Si	28	1	nogas	3700907	0.00

Calibration Standard Report

Ca	43	1	nogas	35781	0.01
Ca	44	1	nogas	677820	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	25443533	0.00
Se	77	1	nogas	39139	0.00
Se	82	1	nogas	2597	0.18
Mo	95	1	nogas	52174	0.00
Sn	118	1	nogas	68111	0.01
Ba	137	1	nogas	40040	0.01
Sb	121	2	He	64181	0.00
P	31	1	nogas	190748	0.00
La	139	1	nogas	207	4.87

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1025689	5.07	1118108	91.73	70	125	
Ge	72	1	nogas	3365060	1.54	3396393	99.08	70	125	
In	115	1	nogas	3075127	0.90	3166421	97.12	70	125	
Bi	209	1	nogas	2059322	0.85	2159119	95.38	70	125	
Ge	72	2	He	1174177	0.70	1189986	98.67	70	125	

Calibration Standard Report

Sample Table

Sample Name	200/1000/20K
Data File Name	226CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T19:22:39-06:00
Sample Type	CalStd
Level	6
Dilution	1
Comment	
ISTD Ref File Name	221CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	1403213	0.00
Na	23	1	nogas	466021727	0.00
Mg	24	1	nogas	289321281	0.00
Al	27	1	nogas	3519046	0.00
K	39	1	nogas	405749434	0.00
Ti	47	1	nogas	338297	0.00
V	51	1	nogas	5299412	0.00
Cr	52	1	nogas	4015508	0.00
Mn	55	1	nogas	4899044	0.00
Co	59	1	nogas	4171223	0.00
Ni	60	1	nogas	943418	0.00
Cu	63	1	nogas	2238244	0.00
Zn	66	1	nogas	758318	0.00
As	75	1	nogas	1137029	0.00
Sr	88	1	nogas	5293077	0.00
Ag	107	1	nogas	2546001	0.00
Cd	111	1	nogas	545440	0.00
Sb	121	1	nogas	2451601	0.00
Tl	205	1	nogas	3325558	0.00
Pb	208	1	nogas	4545095	0.00
[Pb]	206	1	nogas	1132147	0.00
[Pb]	207	1	nogas	993724	0.00
Na	23	2	He	37186881	0.00
Mg	24	2	He	20972273	0.00
Al	27	2	He	124094	0.00
K	39	2	He	24275927	0.00
Ca	43	2	He	67699	0.00
Ca	44	2	He	1117615	0.00
V	51	2	He	1561301	0.00
Cr	52	2	He	1671405	0.00
Mn	55	2	He	1209500	0.00
Fe	56	2	He	145423011	0.00
Co	59	2	He	2259984	0.00
Ni	60	2	He	560479	0.00
Cu	63	2	He	1399280	0.00
Zn	66	2	He	335067	0.00
As	75	2	He	325081	0.00
Se	78	2	He	26766	0.01
B	11	1	nogas	4165631	0.00
Si	28	1	nogas	13931647	0.00

Calibration Standard Report

Ca	43	1	nogas	697231	0.00
Ca	44	1	nogas	11421221	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	426678526	0.00
Se	77	1	nogas	85051	0.00
Se	82	1	nogas	52235	0.00
Mo	95	1	nogas	1059180	0.00
Sn	118	1	nogas	1433929	0.00
Ba	137	1	nogas	777656	0.00
Sb	121	2	He	1302570	0.00
P	31	1	nogas	1828985	0.00
La	139	1	nogas	647	1.54

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1035061	3.92	1118108	92.57	70	125	
Ge	72	1	nogas	3352290	2.22	3396393	98.70	70	125	
In	115	1	nogas	3007420	2.98	3166421	94.98	70	125	
Bi	209	1	nogas	2135783	6.85	2159119	98.92	70	125	
Ge	72	2	He	1149474	1.01	1189986	96.60	70	125	

Calibration Standard Report

Sample Table

Sample Name	100/500/10K
Data File Name	227CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T19:24:37-06:00
Sample Type	CalStd
Level	5
Dilution	1
Comment	
ISTD Ref File Name	221CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	687771	0.00
Na	23	1	nogas	238148872	0.00
Mg	24	1	nogas	154345108	0.00
Al	27	1	nogas	1929165	0.00
K	39	1	nogas	214283563	0.00
Ti	47	1	nogas	170135	0.00
V	51	1	nogas	2848398	0.00
Cr	52	1	nogas	2116404	0.00
Mn	55	1	nogas	2592009	0.00
Co	59	1	nogas	2173099	0.00
Ni	60	1	nogas	482613	0.00
Cu	63	1	nogas	1135762	0.00
Zn	66	1	nogas	380747	0.00
As	75	1	nogas	607323	0.00
Sr	88	1	nogas	2626097	0.00
Ag	107	1	nogas	1273754	0.00
Cd	111	1	nogas	284735	0.00
Sb	121	1	nogas	1240755	0.00
Tl	205	1	nogas	1761426	0.00
Pb	208	1	nogas	2326179	0.00
[Pb]	206	1	nogas	597041	0.00
[Pb]	207	1	nogas	506127	0.00
Na	23	2	He	19792256	0.00
Mg	24	2	He	10911672	0.00
Al	27	2	He	66092	0.00
K	39	2	He	12947291	0.00
Ca	43	2	He	34225	0.00
Ca	44	2	He	571757	0.00
V	51	2	He	800664	0.00
Cr	52	2	He	860413	0.00
Mn	55	2	He	631536	0.00
Fe	56	2	He	77250812	0.00
Co	59	2	He	1150183	0.00
Ni	60	2	He	290728	0.00
Cu	63	2	He	721751	0.00
Zn	66	2	He	171341	0.00
As	75	2	He	166409	0.00
Se	78	2	He	13753	0.01
B	11	1	nogas	2104503	0.00
Si	28	1	nogas	8728680	0.00

Calibration Standard Report

Ca	43	1	nogas	358579	0.00
Ca	44	1	nogas	5900135	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	228214013	0.00
Se	77	1	nogas	50306	0.00
Se	82	1	nogas	26990	0.01
Mo	95	1	nogas	514330	0.00
Sn	118	1	nogas	717658	0.00
Ba	137	1	nogas	397998	0.00
Sb	121	2	He	661303	0.00
P	31	1	nogas	968399	0.00
La	139	1	nogas	703	2.07

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1045107	2.00	1118108	93.47	70	125	
Ge	72	1	nogas	3349000	0.99	3396393	98.60	70	125	
In	115	1	nogas	3072753	2.02	3166421	97.04	70	125	
Bi	209	1	nogas	2095007	3.46	2159119	97.03	70	125	
Ge	72	2	He	1172038	0.59	1189986	98.49	70	125	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	ICCV
Data File Name	229_ICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T19:28:33-06:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	92.729	4.528	676655	2.61	100	92.7	90	110	
Na	23	1	nogas	10541.582	6.868	233990530	0.79	10000	105.4	90	110	
Mg	24	1	nogas	10895.691	7.181	151487349	1.01	10000	109.0	90	110	
Al	27	1	nogas	102.785	6.013	1899734	3.92	100	102.8	90	110	
K	39	1	nogas	9986.797	4.610	213617055	2.20	10000	99.9	90	110	
Ti	47	1	nogas	97.195	5.172	168727	2.00	100	97.2	90	110	
V	51	1	nogas	91.642	9.410	2802429	5.50	100	91.6	90	110	
Cr	52	1	nogas	101.742	5.520	2139847	4.50	100	101.7	90	110	
Mn	55	1	nogas	104.133	4.710	2656696	2.22	100	104.1	90	110	
Co	59	1	nogas	102.981	3.061	2219971	2.38	100	103.0	90	110	
Ni	60	1	nogas	100.250	5.363	487473	1.44	100	100.3	90	110	
Cu	63	1	nogas	98.736	5.138	1136420	1.99	100	98.7	90	110	
Zn	66	1	nogas	98.861	2.740	385403	1.54	100	98.9	90	110	
As	75	1	nogas	94.566	3.150	604789	2.24	100	94.6	90	110	
Sr	88	1	nogas	99.857	3.269	2705056	2.10	100	99.9	90	110	
Ag	107	1	nogas	101.880	1.481	1330006	2.83	100	101.9	90	110	
Cd	111	1	nogas	98.816	1.818	282030	1.23	100	98.8	90	110	
Sb	121	1	nogas	99.039	4.238	1246659	0.19	100	99.0	90	110	
Tl	205	1	nogas	103.503	6.858	1728249	5.96	100	103.5	90	110	
Pb	208	1	nogas	101.569	2.043	2319223	2.04	100	101.6	90	110	
U	238	1	nogas	110.997	2.706	2308936	3.30	100	111.0	90	110	ICV Main CR1 Failed
[Pb]	206	1	nogas	104.350	3.362	592748	2.60	100	104.4	90	110	
[Pb]	207	1	nogas	102.103	3.410	505312	2.56	100	102.1	90	110	
Na	23	2	He	10278.577	2.048	19793995	0.92	10000	102.8	90	110	
Mg	24	2	He	10280.681	2.424	11100969	1.21	10000	102.8	90	110	
Al	27	2	He	101.984	2.305	65985	1.41	100	102.0	90	110	
K	39	2	He	10426.376	0.775	12908841	0.76	10000	104.3	90	110	
Ca	43	2	He	9963.214	3.865	34556	3.60	10000	99.6	90	110	
Ca	44	2	He	10228.149	1.382	587248	0.82	10000	102.3	90	110	
V	51	2	He	100.624	1.725	809883	0.58	100	100.6	90	110	
Cr	52	2	He	101.630	2.237	875627	1.08	100	101.6	90	110	
Mn	55	2	He	100.801	1.725	629074	0.53	100	100.8	90	110	
Fe	56	2	He	10178.561	0.698	76556302	0.59	10000	101.8	90	110	
Co	59	2	He	97.927	1.547	1134520	0.49	100	97.9	90	110	
Ni	60	2	He	99.594	1.668	287618	0.57	100	99.6	90	110	
Cu	63	2	He	102.069	1.305	735378	0.75	100	102.1	90	110	
Zn	66	2	He	101.265	0.779	174480	0.47	100	101.3	90	110	
As	75	2	He	99.768	1.840	166615	0.85	100	99.8	90	110	
Se	78	2	He	100.050	2.433	13837	1.24	100	100.0	90	110	
B	11	1	nogas	479.142	3.203	2109948	7.74	500	95.8	90	110	
Si	28	1	nogas	4805.341	5.955	8580173	0.45	5000	96.1	90	110	
Ca	43	1	nogas	9970.126	4.413	358619	2.71	10000	99.7	90	110	
Ca	44	1	nogas	9700.981	4.956	5762692	1.96	10000	97.0	90	110	
Fe	56	1	nogas	10257.669	5.444	228646038	1.33	10000	102.6	90	110	
Se	77	1	nogas	67.903	13.541	50935	1.56	100	67.9	90	110	ICV Main CR1 Failed
Se	82	1	nogas	100.527	6.855	27134	2.83	100	100.5	90	110	
Mo	95	1	nogas	94.529	2.762	510332	1.34	100	94.5	90	110	
Sn	118	1	nogas	95.511	1.631	711077	0.96	100	95.5	90	110	
Ba	137	1	nogas	98.366	2.277	399020	1.77	100	98.4	90	110	
Sb	121	2	He	100.143	0.949	668339	0.30	100	100.1	90	110	
Li	7	1	nogas	102.449	3.826	1591252	8.64	100	102.4	90	110	
P	31	1	nogas	486.998	3.481	964125	0.94	500	97.4	90	110	
La	139	1	nogas	134.302	7.785	577	6.09	100	134.3	90	110	ICV Main CR1 Failed
Au	197	1	nogas	285.887	82.326	33	34.64	100	285.9	90	110	ICV Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1083938	5.62	1118108	96.94	70	125	
Ge	72	1	nogas	3436493	4.11	3396393	101.18	70	125	
In	115	1	nogas	3133575	1.59	3166421	98.96	70	125	
Bi	209	1	nogas	2104399	1.45	2159119	97.47	70	125	

Initial Calibration Verification (ICV) Report

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	2	He	1178892	1.23	1189986	99.07	70	125	

Low Level Initial Calibration Verification (LLICV) Report

Sample Table

Sample Name	LLCCV5
Data File Name	230LICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T19:30:31-06:00
Sample Type	LLICV
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	4.424	2.711	33740	3.79	5	88.5	70	130	
Na	23	1	nogas	480.985	3.264	12117002	1.65	500	96.2	70	130	
Mg	24	1	nogas	501.130	1.873	7587281	1.15	500	100.2	70	130	
Al	27	1	nogas	5.700	2.953	132051	2.22	5	114.0	70	130	
K	39	1	nogas	500.224	9.541	19435982	2.18	500	100.0	70	130	
Ti	47	1	nogas	4.940	8.117	8922	7.12	5	98.8	70	130	
V	51	1	nogas	-0.927	-45.948	586888	2.13	5	-18.5	70	130	LLICV Main CR1 Failed
Cr	52	1	nogas	4.347	3.616	149944	3.63	5	86.9	70	130	
Mn	55	1	nogas	5.042	1.079	158550	2.09	5	100.8	70	130	
Co	59	1	nogas	5.141	2.266	111068	1.10	5	102.8	70	130	
Ni	60	1	nogas	5.026	2.979	26549	1.14	5	100.5	70	130	
Cu	63	1	nogas	5.291	4.736	63099	1.62	5	105.8	70	130	
Zn	66	1	nogas	5.050	4.717	21867	2.20	5	101.0	70	130	
As	75	1	nogas	2.026	40.369	116358	0.82	5	40.5	70	130	LLICV Main CR1 Failed
Sr	88	1	nogas	5.110	3.085	139213	1.08	5	102.2	70	130	
Ag	107	1	nogas	5.006	3.200	65177	0.29	5	100.1	70	130	
Cd	111	1	nogas	4.758	3.689	13732	1.21	5	95.2	70	130	
Sb	121	1	nogas	5.080	1.844	64068	1.29	5	101.6	70	130	
Tl	205	1	nogas	5.496	7.158	95029	6.73	5	109.9	70	130	
Pb	208	1	nogas	5.156	2.670	118225	2.66	5	103.1	70	130	
U	238	1	nogas	5.346	2.886	114379	1.94	5	106.9	70	130	
[Pb]	206	1	nogas	4.914	5.374	28816	4.56	5	98.3	70	130	
[Pb]	207	1	nogas	5.085	4.466	25971	3.43	5	101.7	70	130	
Na	23	2	He	516.678	3.131	1052127	0.82	500	103.3	70	130	
Mg	24	2	He	513.430	2.087	558958	0.61	500	102.7	70	130	
Al	27	2	He	4.929	12.138	4477	7.31	5	98.6	70	130	
K	39	2	He	498.107	0.817	828885	0.60	500	99.6	70	130	
Ca	43	2	He	491.482	9.293	1780	8.65	500	98.3	70	130	
Ca	44	2	He	502.234	3.694	30559	0.95	500	100.4	70	130	
V	51	2	He	4.696	2.064	46197	0.96	5	93.9	70	130	
Cr	52	2	He	4.939	4.802	49858	2.42	5	98.8	70	130	
Mn	55	2	He	5.039	2.227	33711	0.61	5	100.8	70	130	
Fe	56	2	He	505.976	1.714	3852005	1.00	500	101.2	70	130	
Co	59	2	He	4.980	3.395	58089	1.00	5	99.6	70	130	
Ni	60	2	He	4.871	2.470	15046	3.36	5	97.4	70	130	
Cu	63	2	He	5.056	4.193	39523	1.56	5	101.1	70	130	
Zn	66	2	He	5.241	6.033	10010	4.87	5	104.8	70	130	
As	75	2	He	4.919	3.131	8689	0.64	5	98.4	70	130	
Se	78	2	He	5.056	10.347	902	8.78	5	101.1	70	130	
B	11	1	nogas	28.299	6.670	169662	4.63	25	113.2	70	130	
Si	28	1	nogas	202.569	54.380	3455527	1.08	25	810.3	70	130	LLICV Main CR1 Failed
Ca	43	1	nogas	512.401	8.092	19314	4.73	500	102.5	70	130	
Ca	44	1	nogas	500.535	3.257	410661	1.02	500	100.1	70	130	
Fe	56	1	nogas	490.756	0.969	14294640	2.43	500	98.2	70	130	
Se	77	1	nogas	-13.834	-43.226	30546	2.43	5	-276.7	70	130	LLICV Main CR1 Failed
Se	82	1	nogas	4.921	7.472	1517	9.36	5	98.4	70	130	
Mo	95	1	nogas	5.229	1.990	28517	3.41	5	104.6	70	130	
Sn	118	1	nogas	5.134	1.759	39876	1.31	5	102.7	70	130	
Ba	137	1	nogas	5.166	7.113	21554	5.95	5	103.3	70	130	
Sb	121	2	He	5.052	3.083	34070	1.52	5	101.0	70	130	
Li	7	1	nogas	4.734	3.753	169048	1.42	5	94.7	70	130	
P	31	1	nogas	26.660	5.898	144558	1.07	25	106.6	70	130	
La	139	1	nogas	24.377	30.793	187	13.48	5	487.5	70	130	LLICV Main CR1 Failed
Au	197	1	nogas	203.177	176.906	30	57.74	5	4063.5	70	130	LLICV Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1123701	1.52	1118108	100.50	70	125	
Ge	72	1	nogas	3417921	2.91	3396393	100.63	70	125	
In	115	1	nogas	3157998	2.63	3166421	99.73	70	125	
Bi	209	1	nogas	2162178	1.02	2159119	100.14	70	125	

Low Level Initial Calibration Verification (LLICV) Report

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	2	He	1183578	2.61	1189986	99.46	70	125	

Sample Report

Sample Table

Sample Name	LLCCV2
Data File Name	231SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T19:32:29-06:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	221CALB.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	1.730	1.730	5.49	13568	0.01	2000	
Na	23	1	nogas	183.674	183.674	3.31	5080891	0.00	200000	
Mg	24	1	nogas	203.660	203.660	1.93	3167524	0.01	200000	
Al	27	1	nogas	2.249	2.249	3.95	69766	0.00	2000	
K	39	1	nogas	186.288	186.288	7.51	13102989	0.00	200000	
Ti	47	1	nogas	2.036	2.036	3.17	3934	0.05	2000	
V	51	1	nogas	-5.515	-5.515	-3.88	479498	0.00	2000	
Cr	52	1	nogas	1.288	1.288	7.62	88069	0.00	2000	
Mn	55	1	nogas	1.833	1.833	6.47	78292	0.00	2000	
Co	59	1	nogas	2.039	2.039	2.86	44725	0.00	2000	
Ni	60	1	nogas	1.726	1.726	4.15	10690	0.02	2000	
Cu	63	1	nogas	1.998	1.998	2.10	25592	0.01	2000	
Zn	66	1	nogas	1.740	1.740	3.60	9152	0.02	2000	
As	75	1	nogas	-2.639	-2.639	-6.40	92299	0.00	2000	
Sr	88	1	nogas	1.969	1.969	2.36	54834	0.00	2000	
Ag	107	1	nogas	2.037	2.037	1.75	26744	0.01	2000	
Cd	111	1	nogas	1.901	1.901	4.11	5468	0.03	2000	
Sb	121	1	nogas	2.004	2.004	2.11	25639	0.01	2000	
Tl	205	1	nogas	2.062	2.062	4.02	36501	0.01	2000	
Pb	208	1	nogas	2.045	2.045	2.68	47188	0.00	2000	
U	238	1	nogas	2.068	2.068	0.77	44827	0.00	2000	
[Pb]	206	1	nogas	1.959	1.959	7.65	11688	0.02	2000	
[Pb]	207	1	nogas	2.028	2.028	9.97	10527	0.02	2000	
Na	23	2	He	198.032	198.032	1.70	443078	0.04	200000	
Mg	24	2	He	201.677	201.677	1.12	223664	0.09	200000	
Al	27	2	He	1.371	1.371	14.38	2240	0.06	2000	
K	39	2	He	194.109	194.109	0.15	459004	0.04	200000	
Ca	43	2	He	192.739	192.739	13.59	750	25.70	200000	
Ca	44	2	He	193.992	193.992	2.15	13001	1.49	200000	
V	51	2	He	1.684	1.684	1.10	22379	0.01	2000	
Cr	52	2	He	1.775	1.775	7.05	22995	0.01	2000	
Mn	55	2	He	1.831	1.831	1.87	13845	0.01	2000	
Fe	56	2	He	201.847	201.847	0.63	1575047	0.01	200000	
Co	59	2	He	1.978	1.978	1.72	23462	0.01	2000	
Ni	60	2	He	1.747	1.747	5.53	6081	0.03	2000	
Cu	63	2	He	1.723	1.723	2.64	15717	0.01	2000	
Zn	66	2	He	1.795	1.795	12.63	4134	0.04	2000	
As	75	2	He	1.829	1.829	6.99	3563	0.05	2000	
Se	78	2	He	1.606	1.606	12.10	435	0.37	2000	
B	11	1	nogas	10.219	10.219	10.02	90383	0.01	2000	
Si	28	1	nogas	67.879	67.879	39.38	3320765	0.00	2000	
Ca	43	1	nogas	195.947	195.947	5.64	8072	2.43	200000	

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Ca	44	1	nogas	196.446	196.446	2.62	235576	0.08	200000	
Fe	56	1	nogas	173.428	173.428	9.48	7383343	0.00	200000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Se	77	1	nogas	-27.971	-27.971	-6.62	27181	-0.10	2000	
Se	82	1	nogas	1.811	1.811	13.05	687	0.26	2000	
Mo	95	1	nogas	1.980	1.980	3.57	11114	0.02	2000	
Sn	118	1	nogas	1.948	1.948	0.90	15868	0.01	2000	
Ba	137	1	nogas	1.996	1.996	3.61	8529	0.02	2000	
Sb	121	2	He	2.034	2.034	1.02	14029	0.01	2000	
La	139	1	nogas	2.248	2.248	559.36	107	2.11	2000	
Au	197	1	nogas	808.616	808.616	29.94	60	1347.69	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1145286	5.17	1118108	102.43	70	125	
Ge	72	1	nogas	3429968	1.61	3396393	100.99	70	125	
In	115	1	nogas	3126326	2.61	3166421	98.73	70	125	
Bi	209	1	nogas	2185811	3.15	2159119	101.24	70	125	
Ge	72	2	He	1196870	1.62	1189986	100.58	70	125	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	ICCB
Data File Name	232_ICB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T19:34:26-06:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	0.007	118.4	293	26.0	1	
Na	23	1	nogas	-2.204	-6.7	517542	1.0	100	
Mg	24	1	nogas	-0.102	-153.8	33334	6.4	100	
Al	27	1	nogas	1.740	4.4	59217	3.6	5	
K	39	1	nogas	0.798	1337.2	9109182	0.2	100	
Ti	47	1	nogas	-0.020	-289.2	367	25.3	2.5	
V	51	1	nogas	-2.754	-35.8	533287	2.5	2.5	
Cr	52	1	nogas	-0.354	-24.2	53377	2.3	2.5	
Mn	55	1	nogas	-0.074	-51.9	29627	1.1	2.5	
Co	59	1	nogas	0.008	70.1	1007	12.8	2.5	
Ni	60	1	nogas	-0.329	-8.3	737	19.5	2.5	
Cu	63	1	nogas	0.011	76.5	2730	2.4	1	
Zn	66	1	nogas	0.006	1189.0	2387	9.9	2.5	
As	75	1	nogas	-1.424	-47.6	96494	1.4	2.5	
Sr	88	1	nogas	0.005	75.7	1673	4.5	2.5	
Ag	107	1	nogas	0.004	101.8	247	18.3	2.5	
Cd	111	1	nogas	-0.006	-170.1	40	75.0	1	
Sb	121	1	nogas	0.030	10.2	807	5.9	2.5	
Tl	205	1	nogas	0.027	54.1	1223	20.3	1	
Pb	208	1	nogas	0.004	34.4	603	5.3	2.5	
U	238	1	nogas	0.013	12.7	420	8.2	2.5	
[Pb]	206	1	nogas	0.001	884.7	150	26.7	2.5	
[Pb]	207	1	nogas	0.005	81.7	150	13.3	2.5	
Na	23	2	He	-3.168	-8.6	50384	0.3	100	
Mg	24	2	He	-0.080	-151.6	2497	6.0	100	
Al	27	2	He	1.202	11.2	2113	3.2	5	
K	39	2	He	-8.326	-38.0	212696	1.8	100	
Ca	43	2	He	2.932	488.9	83	60.4	100	
Ca	44	2	He	1.843	230.0	1817	12.6	100	
V	51	2	He	-0.054	-23.1	8253	1.2	2.5	
Cr	52	2	He	-0.183	-23.4	5971	5.2	2.5	
Mn	55	2	He	-0.042	-46.6	2003	7.1	2.5	
Fe	56	2	He	-0.402	-11.3	30899	0.2	100	
Co	59	2	He	0.008	51.6	293	16.8	2.5	
Ni	60	2	He	-0.243	-4.0	267	11.5	2.5	
Cu	63	2	He	-0.225	-8.4	1510	9.4	1	
Zn	66	2	He	-0.057	-129.4	903	13.8	2.5	
As	75	2	He	-0.021	-158.2	433	11.9	2.5	
Se	78	2	He	-0.099	-160.0	197	11.4	1	
B	11	1	nogas	-0.261	-233.7	43069	1.9	10	
Si	28	1	nogas	-40.607	-136.0	3130058	0.3	5	
Ca	43	1	nogas	0.510	257.0	1047	6.5	100	
Ca	44	1	nogas	2.821	215.4	120333	1.0	100	
Fe	56	1	nogas	-11.795	-37.8	3251363	0.8	100	

Initial Calibration Blank (ICB) Report

Se	77	1	nogas	-7.214	-67.4	31601	2.2	2.5	
Se	82	1	nogas	0.038	530.1	207	22.9	1	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Mo	95	1	nogas	-0.011	-148.2	377	23.8	2.5	
Sn	118	1	nogas	0.004	595.3	1503	12.5	5	
Ba	137	1	nogas	-0.001	-1099.4	477	8.5	2.5	
Sb	121	2	He	0.019	53.2	377	18.1	2.5	
P	31	1	nogas	1.170	167.0	97610	1.5	10	
La	139	1	nogas	22.278	50.2	183	22.0	2.5	ICB Main CR1 Failed
Au	197	1	nogas	127.924	331.9	27	78.1	2.5	ICB Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1155604	4.68	1118108	103.35	70	125	
Ge	72	1	nogas	3355498	2.19	3396393	98.80	70	125	
In	115	1	nogas	3230501	0.68	3166421	102.02	70	125	
Bi	209	1	nogas	2179116	0.84	2159119	100.93	70	125	
Ge	72	2	He	1186499	0.95	1189986	99.71	70	125	

Sample Report

Sample Table

Sample Name	HS18121325-04SD
Data File Name	234SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T19:38:21-06:00
Sample Type	Sample
Dilution	10
Comment	TW B136233 AlBaCdPb
ISTD Ref FileName	221CALB.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	0.010	0.099	29.40	290	0.00	2000	
Na	23	1	nogas	82670.342	826703.417	3.75	1916811510	0.00	200000	
Mg	24	1	nogas	22900.601	229006.009	5.67	333081299	0.01	200000	
Al	27	1	nogas	4.109	41.093	8.55	100159	0.00	2000	
K	39	1	nogas	504.753	5047.527	11.79	18958835	0.00	200000	
Ti	47	1	nogas	0.227	2.273	3.45	777	0.03	2000	
V	51	1	nogas	56.790	567.903	7.36	1902979	0.00	2000	
Cr	52	1	nogas	2.195	21.949	9.89	103068	0.00	2000	
Mn	55	1	nogas	257.789	2577.892	0.99	6317371	0.00	2000	
Co	59	1	nogas	1.859	18.586	6.18	39493	0.00	2000	
Ni	60	1	nogas	1.973	19.728	8.99	11487	0.02	2000	
Cu	63	1	nogas	0.662	6.621	15.84	9903	0.01	2000	
Zn	66	1	nogas	2.075	20.753	11.28	10093	0.02	2000	
As	75	1	nogas	19.007	190.066	15.85	199230	0.01	2000	
Sr	88	1	nogas	836.913	8369.127	4.24	21889122	0.00	2000	
Ag	107	1	nogas	0.000	-0.001	-4063.74	193	0.00	2000	
Cd	111	1	nogas	0.020	0.201	36.13	103	0.02	2000	
Sb	121	1	nogas	0.026	0.258	17.91	740	0.00	2000	
Tl	205	1	nogas	0.000	-0.001	-1507.35	717	0.00	2000	
Pb	208	1	nogas	0.011	0.107	52.36	753	0.00	2000	
U	238	1	nogas	1.179	11.793	4.61	24055	0.00	2000	
[Pb]	206	1	nogas	0.009	0.088	66.42	187	0.00	2000	
[Pb]	207	1	nogas	0.008	0.083	149.58	157	0.01	2000	
Na	23	2	He	89849.695	898496.946	0.23	168565991	0.05	200000	
Mg	24	2	He	23225.932	232259.315	1.37	24489947	0.09	200000	
Al	27	2	He	3.590	35.902	5.26	3530	0.10	2000	
K	39	2	He	485.250	4852.500	1.72	813242	0.06	200000	
Ca	43	2	He	36133.943	361339.430	1.17	122197	29.57	200000	
Ca	44	2	He	36224.569	362245.695	1.52	2026821	1.79	200000	
V	51	2	He	2.669	26.692	4.14	29185	0.01	2000	
Cr	52	2	He	0.843	8.434	4.23	14352	0.01	2000	
Mn	55	2	He	263.028	2630.277	1.46	1599595	0.02	2000	
Fe	56	2	He	117.698	1176.975	2.25	896897	0.01	200000	
Co	59	2	He	1.709	17.091	2.44	19524	0.01	2000	
Ni	60	2	He	1.261	12.615	2.77	4487	0.03	2000	
Cu	63	2	He	-0.083	-0.831	-7.19	2457	0.00	2000	
Zn	66	2	He	2.179	21.789	13.66	4614	0.05	2000	
As	75	2	He	0.330	3.303	4.85	991	0.03	2000	
Se	78	2	He	0.081	0.812	46.29	215	0.04	2000	
B	11	1	nogas	1.784	17.838	38.58	48438	0.00	2000	
Si	28	1	nogas	18481.751	184817.513	5.88	22946452	0.08	2000	>LDR
Ca	43	1	nogas	33671.097	336710.972	6.18	1167219	2.88	200000	
Ca	44	1	nogas	33265.726	332657.255	5.96	18805580	0.18	200000	
Fe	56	1	nogas	211.439	2114.388	3.07	7957997	0.00	200000	

Sample Report

Se	77	1	nogas	130.453	1304.534	19.15	64079	0.20	2000	
Se	82	1	nogas	1.362	13.624	20.93	547	0.25	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Mo	95	1	nogas	0.005	0.047	398.20	453	0.00	2000	
Sn	118	1	nogas	0.014	0.137	93.73	1403	0.00	2000	
Ba	137	1	nogas	72.637	726.372	4.48	269902	0.03	2000	
Sb	121	2	He	0.021	0.206	89.76	377	0.01	2000	
La	139	1	nogas	269.908	2699.084	12.22	973	27.73	2000	
Au	197	1	nogas	91.650	916.495	361.53	23	392.78	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1065938	2.38	1118108	95.33	70	125	
Ge	72	1	nogas	3321634	4.88	3396393	97.80	70	125	
In	115	1	nogas	2871602	3.68	3166421	90.69	70	125	
Bi	209	1	nogas	2053437	2.93	2159119	95.11	70	125	
Ge	72	2	He	1151178	1.10	1189986	96.74	70	125	

Sample Report

Sample Table

Sample Name	HS18121325-04MS
Data File Name	235SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T19:40:21-06:00
Sample Type	Sample
Dilution	2
Comment	TW B136233 AlBaCdPb
ISTD Ref FileName	221CALB.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	27.341	54.683	1.53	184041	0.01	2000	
Na	23	1	nogas	OR	OR	#VALUE!	OR	#VALUE!	200000	
Mg	24	1	nogas	106568.323	213136.647	0.69	1616305303	0.01	200000	
Al	27	1	nogas	70.523	141.047	1.00	1252194	0.01	2000	
K	39	1	nogas	5043.860	10087.721	1.81	107301807	0.00	200000	
Ti	47	1	nogas	85.306	170.612	3.36	141327	0.06	2000	
V	51	1	nogas	92.779	185.559	1.93	2700051	0.00	2000	
Cr	52	1	nogas	32.101	64.202	0.26	684296	0.00	2000	
Mn	55	1	nogas	1248.961	2497.923	1.74	30064260	0.00	2000	
Co	59	1	nogas	35.464	70.928	1.62	729592	0.00	2000	
Ni	60	1	nogas	36.182	72.364	1.17	169324	0.02	2000	
Cu	63	1	nogas	29.376	58.751	2.89	324375	0.01	2000	
Zn	66	1	nogas	34.295	68.589	3.98	128997	0.03	2000	
As	75	1	nogas	56.223	112.447	2.79	383953	0.01	2000	
Sr	88	1	nogas	4166.611	8333.221	1.18	107575812	0.00	2000	>LDR
Ag	107	1	nogas	26.231	52.463	2.66	326549	0.01	2000	
Cd	111	1	nogas	27.132	54.263	1.42	70023	0.04	2000	
Sb	121	1	nogas	26.455	52.910	3.39	317985	0.01	2000	
Tl	205	1	nogas	26.302	52.605	5.83	409000	0.01	2000	
Pb	208	1	nogas	25.457	50.915	2.80	581676	0.00	2000	
U	238	1	nogas	63.962	127.924	2.01	1237520	0.01	2000	
[Pb]	206	1	nogas	27.471	54.942	6.38	145195	0.02	2000	
[Pb]	207	1	nogas	27.660	55.320	4.95	127388	0.02	2000	
Na	23	2	He	440119.028	880238.056	0.32	800230175	0.05	200000	>LDR
Mg	24	2	He	115318.643	230637.287	0.78	117876655	0.10	200000	
Al	27	2	He	70.154	140.308	1.53	43373	0.16	2000	
K	39	2	He	4986.887	9973.774	1.16	6290488	0.08	200000	
Ca	43	2	He	177020.116	354040.231	1.13	580091	30.52	200000	
Ca	44	2	He	174949.107	349898.215	1.26	9483578	1.84	200000	
V	51	2	He	30.019	60.039	0.75	234492	0.01	2000	
Cr	52	2	He	31.368	62.735	1.60	260768	0.01	2000	
Mn	55	2	He	1259.390	2518.781	1.36	7416470	0.02	2000	
Fe	56	2	He	3272.210	6544.421	0.95	23320180	0.01	200000	
Co	59	2	He	34.291	68.581	1.00	376225	0.01	2000	
Ni	60	2	He	33.406	66.812	0.73	91942	0.04	2000	
Cu	63	2	He	26.697	53.394	2.74	184261	0.01	2000	
Zn	66	2	He	34.064	68.127	0.34	56190	0.06	2000	
As	75	2	He	28.044	56.089	0.89	44658	0.06	2000	
Se	78	2	He	27.064	54.127	4.38	3689	0.73	2000	
B	11	1	nogas	280.817	561.634	3.43	1152896	0.02	2000	
Si	28	1	nogas	116430.618	232861.235	2.45	126315795	0.09	2000	>LDR
Ca	43	1	nogas	165474.918	330949.836	0.43	5661822	2.92	200000	
Ca	44	1	nogas	164942.084	329884.169	1.19	91628465	0.18	200000	
Fe	56	1	nogas	3316.124	6632.248	2.31	72866929	0.00	200000	
Se	77	1	nogas	226.306	452.613	6.88	85992	0.26	2000	
Se	82	1	nogas	33.971	67.943	5.83	8879	0.38	2000	

Sample Report

Mo	95	1	nogas	26.506	53.012	1.24	136776	0.02	2000	
Sn	118	1	nogas	55.789	111.578	3.38	375883	0.01	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Ba	137	1	nogas	388.997	777.994	1.79	1425177	0.03	2000	
Sb	121	2	He	26.753	53.506	1.74	169199	0.02	2000	
La	139	1	nogas	1384.815	2769.631	5.81	4544	30.48	2000	
Au	197	1	nogas	420.851	841.703	165.67	37	1147.78	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	997829	2.72	1118108	89.24	70	125	
Ge	72	1	nogas	3274810	0.98	3396393	96.42	70	125	
In	115	1	nogas	2831928	0.93	3166421	89.44	70	125	
Bi	209	1	nogas	1957778	1.84	2159119	90.67	70	125	
Ge	72	2	He	1115985	0.63	1189986	93.78	70	125	

Sample Report

Sample Table

Sample Name	HS18121325-04MSD
Data File Name	236SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T19:42:17-06:00
Sample Type	Sample
Dilution	2
Comment	TW B136233 AlBaCdPb
ISTD Ref FileName	221CALB.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	26.191	52.382	2.06	188085	0.01	2000	
Na	23	1	nogas	OR	OR	#VALUE!	OR	#VALUE!	200000	
Mg	24	1	nogas	109936.869	219873.739	2.07	1651467470	0.01	200000	
Al	27	1	nogas	69.521	139.042	3.54	1262130	0.01	2000	
K	39	1	nogas	4882.738	9765.476	1.15	106506852	0.00	200000	
Ti	47	1	nogas	85.154	170.308	1.18	144276	0.06	2000	
V	51	1	nogas	94.160	188.320	0.72	2793362	0.00	2000	
Cr	52	1	nogas	33.099	66.199	3.64	719318	0.00	2000	
Mn	55	1	nogas	1266.528	2533.057	3.25	31158491	0.00	2000	
Co	59	1	nogas	35.135	70.269	0.84	739052	0.00	2000	
Ni	60	1	nogas	35.944	71.888	0.22	172037	0.02	2000	
Cu	63	1	nogas	28.814	57.629	0.87	325421	0.01	2000	
Zn	66	1	nogas	33.181	66.361	1.00	127715	0.03	2000	
As	75	1	nogas	57.435	114.871	0.89	398844	0.01	2000	
Sr	88	1	nogas	4171.177	8342.354	1.07	110136892	0.00	2000	>LDR
Ag	107	1	nogas	25.774	51.549	2.18	328061	0.01	2000	
Cd	111	1	nogas	26.657	53.313	2.43	70257	0.04	2000	
Sb	121	1	nogas	26.363	52.726	1.67	324016	0.01	2000	
Tl	205	1	nogas	26.436	52.872	0.42	420899	0.01	2000	
Pb	208	1	nogas	26.291	52.581	2.91	600697	0.00	2000	
U	238	1	nogas	63.997	127.993	2.91	1267152	0.01	2000	
[Pb]	206	1	nogas	27.580	55.160	0.54	149254	0.02	2000	
[Pb]	207	1	nogas	28.296	56.591	1.23	133426	0.02	2000	
Na	23	2	He	422021.843	844043.686	0.47	784215855	0.05	200000	>LDR
Mg	24	2	He	111874.421	223748.842	0.83	116867308	0.10	200000	
Al	27	2	He	71.271	142.541	2.70	45007	0.16	2000	
K	39	2	He	4957.248	9914.496	0.61	6254426	0.08	200000	
Ca	43	2	He	170341.891	340683.782	0.56	570509	29.86	200000	
Ca	44	2	He	167996.046	335992.092	1.04	9306936	1.81	200000	
V	51	2	He	29.411	58.822	0.85	234953	0.01	2000	
Cr	52	2	He	30.551	61.102	0.88	259773	0.01	2000	
Mn	55	2	He	1210.707	2421.413	0.87	7286813	0.02	2000	
Fe	56	2	He	3240.872	6481.744	1.36	23605625	0.01	200000	
Co	59	2	He	33.930	67.861	1.61	380466	0.01	2000	
Ni	60	2	He	32.410	64.820	2.40	91189	0.04	2000	
Cu	63	2	He	26.170	52.339	0.86	184662	0.01	2000	
Zn	66	2	He	33.837	67.674	0.35	57049	0.06	2000	
As	75	2	He	27.777	55.553	1.31	45208	0.06	2000	
Se	78	2	He	26.203	52.407	1.92	3656	0.72	2000	
B	11	1	nogas	279.691	559.383	9.47	1223918	0.02	2000	
Si	28	1	nogas	115302.161	230604.321	4.01	127899538	0.09	2000	>LDR
Ca	43	1	nogas	158075.461	316150.922	1.14	5531687	2.86	200000	
Ca	44	1	nogas	159741.687	319483.375	2.72	90750369	0.18	200000	
Fe	56	1	nogas	3345.225	6690.450	4.21	75084885	0.00	200000	
Se	77	1	nogas	230.153	460.306	0.41	88872	0.26	2000	
Se	82	1	nogas	33.033	66.067	1.35	8836	0.37	2000	

Sample Report

Mo	95	1	nogas	26.511	53.022	0.88	139875	0.02	2000	
Sn	118	1	nogas	55.593	111.186	3.57	382428	0.01	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Ba	137	1	nogas	373.208	746.416	2.36	1397291	0.03	2000	
Sb	121	2	He	26.068	52.136	1.26	168501	0.02	2000	
La	139	1	nogas	1372.482	2744.965	0.94	4604	29.81	2000	
Au	197	1	nogas	471.814	943.629	93.31	40	1179.54	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1064596	2.76	1118108	95.21	70	125	
Ge	72	1	nogas	3348801	2.14	3396393	98.60	70	125	
In	115	1	nogas	2893494	4.06	3166421	91.38	70	125	
Bi	209	1	nogas	2003188	1.54	2159119	92.78	70	125	
Ge	72	2	He	1140540	0.36	1189986	95.84	70	125	

Sample Report

Sample Table

Sample Name	HS18121325-04PDS
Data File Name	237SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T19:44:14-06:00
Sample Type	Sample
Dilution	2
Comment	TW B136233 AlBaCdPb
ISTD Ref FileName	221CALB.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	110.248	220.496	1.82	801785	0.01	2000	
Na	23	1	nogas	OR	OR	#VALUE!	OR	#VALUE!	200000	
Mg	24	1	nogas	116974.381	233948.763	0.80	1766383373	0.01	200000	
Al	27	1	nogas	129.748	259.497	2.62	2298183	0.01	2000	
K	39	1	nogas	13895.057	27790.114	1.41	282172390	0.00	200000	
Ti	47	1	nogas	120.980	241.959	0.60	201824	0.06	2000	
V	51	1	nogas	176.542	353.085	0.63	4646153	0.00	2000	
Cr	52	1	nogas	124.381	248.761	2.04	2500648	0.00	2000	
Mn	55	1	nogas	1362.631	2725.262	0.59	33043795	0.00	2000	
Co	59	1	nogas	124.118	248.236	3.02	2570781	0.00	2000	
Ni	60	1	nogas	124.390	248.779	2.09	581098	0.02	2000	
Cu	63	1	nogas	115.729	231.459	1.14	1280210	0.01	2000	
Zn	66	1	nogas	122.175	244.351	2.66	457112	0.03	2000	
As	75	1	nogas	145.953	291.905	1.35	841332	0.02	2000	
Sr	88	1	nogas	4250.105	8500.210	0.21	110570848	0.00	2000	>LDR
Ag	107	1	nogas	105.976	211.953	1.78	1328940	0.01	2000	
Cd	111	1	nogas	116.116	232.232	4.13	305422	0.04	2000	
Sb	121	1	nogas	109.594	219.188	0.96	1326086	0.01	2000	
Tl	205	1	nogas	121.388	242.775	3.32	1929358	0.01	2000	
Pb	208	1	nogas	111.988	223.976	1.66	2557086	0.00	2000	
U	238	1	nogas	5.995	11.990	5.31	118730	0.01	2000	
[Pb]	206	1	nogas	118.644	237.289	3.12	641401	0.02	2000	
[Pb]	207	1	nogas	118.382	236.765	3.20	557584	0.02	2000	
Na	23	2	He	428871.267	857742.533	1.51	805253961	0.05	200000	>LDR
Mg	24	2	He	118484.929	236969.858	2.43	125056805	0.09	200000	
Al	27	2	He	127.925	255.850	1.50	80591	0.16	2000	
K	39	2	He	13843.319	27686.637	0.58	17066314	0.08	200000	
Ca	43	2	He	178256.231	356512.463	1.37	603256	29.55	200000	
Ca	44	2	He	176713.173	353426.346	1.64	9892704	1.79	200000	
V	51	2	He	116.457	232.914	1.62	915070	0.01	2000	
Cr	52	2	He	116.625	233.251	0.98	981405	0.01	2000	
Mn	55	2	He	1281.598	2563.196	1.00	7795828	0.02	2000	
Fe	56	2	He	11811.081	23622.162	1.35	86841375	0.01	200000	
Co	59	2	He	117.730	235.461	0.55	1333608	0.01	2000	
Ni	60	2	He	117.616	235.232	1.43	331915	0.04	2000	
Cu	63	2	He	112.900	225.801	1.46	794902	0.01	2000	
Zn	66	2	He	122.174	244.348	1.43	205597	0.06	2000	
As	75	2	He	114.695	229.390	2.20	187188	0.06	2000	
Se	78	2	He	113.179	226.358	1.59	15278	0.74	2000	
B	11	1	nogas	13.055	26.110	3.65	97445	0.01	2000	
Si	28	1	nogas	91094.656	182189.313	1.11	100274845	0.09	2000	>LDR
Ca	43	1	nogas	174424.883	348849.765	0.85	6013265	2.90	200000	
Ca	44	1	nogas	171788.305	343576.610	0.35	96154325	0.18	200000	
Fe	56	1	nogas	12387.310	24774.619	0.59	264802289	0.00	200000	
Se	77	1	nogas	325.490	650.981	1.58	110255	0.30	2000	
Se	82	1	nogas	124.952	249.904	3.56	32399	0.39	2000	

Sample Report

Mo	95	1	nogas	115.855	231.710	0.98	600940	0.02	2000	
Sn	118	1	nogas	0.364	0.728	13.81	3804	0.01	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Ba	137	1	nogas	473.289	946.579	6.13	1766376	0.03	2000	
Sb	121	2	He	106.937	213.873	0.82	697778	0.02	2000	
La	139	1	nogas	1483.580	2967.161	5.97	4961	29.91	2000	
Au	197	1	nogas	254.474	508.948	93.34	30	848.25	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1078668	0.91	1118108	96.47	70	125	
Ge	72	1	nogas	3299709	0.29	3396393	97.15	70	125	
In	115	1	nogas	2891313	5.29	3166421	91.31	70	125	
Bi	209	1	nogas	2004050	4.09	2159119	92.82	70	125	
Ge	72	2	He	1152599	1.52	1189986	96.86	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	238_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T19:46:13-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	94.652	3.331	735650	2.14	100	94.7	90	110	
Na	23	1	nogas	10208.475	0.389	255319539	1.35	10000	102.1	90	110	
Mg	24	1	nogas	10442.036	2.130	163635116	3.67	10000	104.4	90	110	
Al	27	1	nogas	111.617	6.209	2057688	5.75	100	111.6	90	110	CCV Main CR1-2 Failed
K	39	1	nogas	10467.954	1.234	223163572	1.17	10000	104.7	90	110	
Ti	47	1	nogas	101.615	1.881	176197	2.04	100	101.6	90	110	
V	51	1	nogas	115.340	2.349	3365509	1.66	100	115.3	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	101.227	3.844	2125256	1.55	100	101.2	90	110	
Mn	55	1	nogas	103.403	2.782	2634620	1.74	100	103.4	90	110	
Co	59	1	nogas	104.545	3.856	2249298	2.74	100	104.5	90	110	
Ni	60	1	nogas	104.443	4.889	507029	2.77	100	104.4	90	110	
Cu	63	1	nogas	103.953	3.256	1194695	0.93	100	104.0	90	110	
Zn	66	1	nogas	100.320	1.628	390391	0.75	100	100.3	90	110	
As	75	1	nogas	106.865	2.714	668335	0.38	100	106.9	90	110	
Sr	88	1	nogas	103.489	1.460	2799018	1.87	100	103.5	90	110	
Ag	107	1	nogas	98.488	2.213	1283066	1.63	100	98.5	90	110	
Cd	111	1	nogas	101.376	2.072	288732	1.23	100	101.4	90	110	
Sb	121	1	nogas	103.979	2.758	1306923	0.54	100	104.0	90	110	
Tl	205	1	nogas	105.357	1.343	1828832	1.46	100	105.4	90	110	
Pb	208	1	nogas	108.063	2.560	2467484	2.56	100	108.1	90	110	
U	238	1	nogas	109.886	3.267	2374269	0.62	100	109.9	90	110	
[Pb]	206	1	nogas	105.440	3.888	622204	1.13	100	105.4	90	110	
[Pb]	207	1	nogas	104.018	5.464	534638	2.71	100	104.0	90	110	
Na	23	2	He	10315.060	2.796	20495661	0.50	10000	103.2	90	110	
Mg	24	2	He	10275.773	2.435	11449612	0.56	10000	102.8	90	110	
Al	27	2	He	99.628	1.946	66553	1.16	100	99.6	90	110	
K	39	2	He	10588.129	2.068	13105649	2.03	10000	105.9	90	110	
Ca	43	2	He	9847.064	3.062	35240	1.96	10000	98.5	90	110	
Ca	44	2	He	10127.280	3.552	599846	1.10	10000	101.3	90	110	
V	51	2	He	97.583	2.019	810730	0.46	100	97.6	90	110	
Cr	52	2	He	99.086	1.922	881193	0.86	100	99.1	90	110	
Mn	55	2	He	100.897	1.834	649785	0.77	100	100.9	90	110	
Fe	56	2	He	9958.596	2.214	77284236	0.79	10000	99.6	90	110	
Co	59	2	He	96.771	2.872	1156727	0.74	100	96.8	90	110	
Ni	60	2	He	99.543	4.152	296565	2.37	100	99.5	90	110	
Cu	63	2	He	101.872	3.263	757185	0.82	100	101.9	90	110	
Zn	66	2	He	100.207	1.964	178163	0.48	100	100.2	90	110	
As	75	2	He	98.521	1.697	169795	0.76	100	98.5	90	110	
Se	78	2	He	99.147	3.810	14149	1.94	100	99.1	90	110	
B	11	1	nogas	459.328	3.486	2152130	3.58	500	91.9	90	110	
Si	28	1	nogas	5106.281	4.664	8899868	1.23	5000	102.1	90	110	
Ca	43	1	nogas	10595.018	1.601	380475	0.91	10000	106.0	90	110	
Ca	44	1	nogas	10533.076	1.632	6239089	0.84	10000	105.3	90	110	
Fe	56	1	nogas	10439.225	3.669	232355789	2.13	10000	104.4	90	110	
Se	77	1	nogas	142.768	1.089	69389	1.77	100	142.8	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	100.870	1.520	27214	2.16	100	100.9	90	110	
Mo	95	1	nogas	98.646	3.233	531526	1.22	100	98.6	90	110	
Sn	118	1	nogas	99.274	0.453	737594	1.12	100	99.3	90	110	
Ba	137	1	nogas	102.288	1.366	414073	0.94	100	102.3	90	110	
Sb	121	2	He	100.759	2.604	693791	0.35	100	100.8	90	110	
Li	7	1	nogas	97.384	1.608	1612301	2.00	100	97.4	90	110	
P	31	1	nogas	499.152	3.212	984022	1.04	500	99.8	90	110	
La	139	1	nogas	162.759	18.292	677	15.52	100	162.8	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	127.221	186.904	27	43.30	100	127.2	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	nogas	1153405	3.31	1118108	103.16	70	125	
Ge	72	1	nogas	3428974	2.28	3396393	100.96	70	125	
In	115	1	nogas	3127035	1.21	3166421	98.76	70	125	
Bi	209	1	nogas	2187241	2.80	2159119	101.30	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1216718	2.40	1189986	102.25	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	239_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T19:48:13-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	0.098	31.6	1030	22.4	1	
Na	23	1	nogas	138.195	8.1	4047730	7.6	100	CCB Main CR1 Failed
Mg	24	1	nogas	22.309	7.1	386287	7.2	100	
Al	27	1	nogas	-0.209	-23.5	26309	1.6	5	
K	39	1	nogas	-5.436	-201.0	9639916	0.7	100	
Ti	47	1	nogas	0.085	76.0	583	20.7	2.5	
V	51	1	nogas	-1.664	-68.8	599575	3.7	2.5	
Cr	52	1	nogas	-0.300	-35.0	58422	2.8	2.5	
Mn	55	1	nogas	-0.019	-154.3	33263	0.8	2.5	
Co	59	1	nogas	0.082	11.5	2764	8.9	2.5	
Ni	60	1	nogas	0.055	85.6	2740	8.0	2.5	
Cu	63	1	nogas	0.792	9.2	12328	6.3	2	
Zn	66	1	nogas	-0.188	-22.3	1777	10.5	2.5	
As	75	1	nogas	-0.119	-683.2	110762	3.2	2.5	
Sr	88	1	nogas	0.531	7.7	16721	4.7	2.5	
Ag	107	1	nogas	0.074	5.0	1230	5.1	2.5	
Cd	111	1	nogas	0.092	19.7	333	18.1	1	
Sb	121	1	nogas	0.598	12.0	8349	11.2	2.5	
Tl	205	1	nogas	0.646	58.9	12460	57.3	1	
Pb	208	1	nogas	0.112	15.9	3064	13.2	2.5	
U	238	1	nogas	0.194	41.5	4504	42.2	2.5	
[Pb]	206	1	nogas	0.096	22.3	737	19.8	2.5	
[Pb]	207	1	nogas	0.102	25.8	673	21.0	2.5	
Na	23	2	He	112.861	4.7	282389	2.9	100	CCB Main CR1 Failed
Mg	24	2	He	19.484	5.5	24419	3.5	100	
Al	27	2	He	-0.703	-56.0	923	27.2	5	
K	39	2	He	3.215	98.9	226739	1.7	100	
Ca	43	2	He	16.285	23.1	133	8.7	100	
Ca	44	2	He	19.195	15.6	2897	5.2	100	
V	51	2	He	0.021	169.4	9104	2.3	2.5	
Cr	52	2	He	-0.122	-13.0	6678	3.0	2.5	
Mn	55	2	He	0.015	90.9	2427	4.5	2.5	
Fe	56	2	He	8.140	5.6	98210	2.2	100	
Co	59	2	He	0.066	8.5	997	8.4	2.5	
Ni	60	2	He	-0.193	-5.4	423	8.3	2.5	
Cu	63	2	He	0.252	15.0	5094	4.2	2	
Zn	66	2	He	-0.229	-21.0	623	13.0	2.5	
As	75	2	He	0.073	17.7	607	4.1	2.5	
Se	78	2	He	0.026	359.0	221	7.6	2	
B	11	1	nogas	3.783	48.9	63713	9.7	10	
Si	28	1	nogas	-263.182	-20.5	3099425	0.6	5	
Ca	43	1	nogas	18.042	21.9	1780	6.9	100	
Ca	44	1	nogas	14.260	48.9	136084	1.5	100	
Fe	56	1	nogas	7.823	41.0	3941620	2.9	100	
Se	77	1	nogas	-4.068	-123.0	34730	3.5	2.5	
Se	82	1	nogas	0.280	64.3	290	15.0	2	
Mo	95	1	nogas	0.417	36.8	2827	31.5	2.5	
Sn	118	1	nogas	0.313	28.5	3931	19.0	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.106	36.7	937	19.2	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.509	5.1	3770	3.7	2.5	
P	31	1	nogas	3.697	26.8	109468	0.6	10	
La	139	1	nogas	-5.258	-109.6	83	25.0	2.5	
Au	197	1	nogas	44.743	272.8	23	24.7	2.5	CCB Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1196659	4.17	1118108	107.03	70	125	
Ge	72	1	nogas	3600273	2.25	3396393	106.00	70	125	
In	115	1	nogas	3275886	2.42	3166421	103.46	70	125	
Bi	209	1	nogas	2259851	2.21	2159119	104.67	70	125	
Ge	72	2	He	1220192	1.62	1189986	102.54	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	246_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T20:02:21-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	99.917	4.209	706690	3.82	100	99.9	90	110	
Na	23	1	nogas	10593.080	1.583	252514347	1.49	10000	105.9	90	110	
Mg	24	1	nogas	10587.152	1.252	158106241	1.32	10000	105.9	90	110	
Al	27	1	nogas	106.960	3.883	1984379	3.57	100	107.0	90	110	
K	39	1	nogas	10236.100	0.655	219671980	1.60	10000	102.4	90	110	
Ti	47	1	nogas	99.882	1.385	174179	1.79	100	99.9	90	110	
V	51	1	nogas	127.120	6.631	3667580	5.55	100	127.1	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	101.483	5.604	2143673	5.92	100	101.5	90	110	
Mn	55	1	nogas	104.487	3.477	2677054	3.00	100	104.5	90	110	
Co	59	1	nogas	103.742	2.859	2244727	1.56	100	103.7	90	110	
Ni	60	1	nogas	103.841	2.396	507152	1.14	100	103.8	90	110	
Cu	63	1	nogas	102.505	0.848	1185128	1.17	100	102.5	90	110	
Zn	66	1	nogas	100.911	1.104	394920	1.36	100	100.9	90	110	
As	75	1	nogas	110.268	1.004	690211	0.62	100	110.3	90	110	CCV Main CR1-2 Failed
Sr	88	1	nogas	99.789	2.722	2713595	1.42	100	99.8	90	110	
Ag	107	1	nogas	99.131	0.875	1298791	0.47	100	99.1	90	110	
Cd	111	1	nogas	101.474	1.665	279034	1.45	100	101.5	90	110	
Sb	121	1	nogas	101.095	0.364	1278229	1.36	100	101.1	90	110	
Tl	205	1	nogas	101.430	2.602	1690234	3.14	100	101.4	90	110	
Pb	208	1	nogas	100.542	3.195	2295780	3.19	100	100.5	90	110	
U	238	1	nogas	107.882	3.257	2237655	1.66	100	107.9	90	110	
[Pb]	206	1	nogas	103.076	4.287	583799	1.32	100	103.1	90	110	
[Pb]	207	1	nogas	102.881	2.796	507843	0.79	100	102.9	90	110	
Na	23	2	He	10540.021	3.280	20651744	2.14	10000	105.4	90	110	
Mg	24	2	He	10407.417	3.182	11435130	1.99	10000	104.1	90	110	
Al	27	2	He	103.255	3.755	67962	2.84	100	103.3	90	110	
K	39	2	He	10720.535	1.076	13266751	1.06	10000	107.2	90	110	
Ca	43	2	He	10166.824	2.076	35881	1.48	10000	101.7	90	110	
Ca	44	2	He	10259.221	1.416	599404	0.90	10000	102.6	90	110	
V	51	2	He	99.629	2.566	816029	1.36	100	99.6	90	110	
Cr	52	2	He	100.024	1.489	877143	0.65	100	100.0	90	110	
Mn	55	2	He	101.852	1.038	646873	1.15	100	101.9	90	110	
Fe	56	2	He	10233.399	1.789	78318219	0.82	10000	102.3	90	110	
Co	59	2	He	98.425	0.877	1160496	1.36	100	98.4	90	110	
Ni	60	2	He	99.302	1.947	291827	0.99	100	99.3	90	110	
Cu	63	2	He	100.321	1.773	735548	1.06	100	100.3	90	110	
Zn	66	2	He	99.717	1.861	174853	1.64	100	99.7	90	110	
As	75	2	He	99.069	2.086	168361	0.89	100	99.1	90	110	
Se	78	2	He	98.405	1.714	13853	0.68	100	98.4	90	110	
B	11	1	nogas	534.380	5.299	2272329	6.13	500	106.9	90	110	
Si	28	1	nogas	4913.260	3.771	8735726	1.04	5000	98.3	90	110	
Ca	43	1	nogas	10402.272	1.502	375711	1.82	10000	104.0	90	110	
Ca	44	1	nogas	10159.118	1.020	6056514	1.66	10000	101.6	90	110	
Fe	56	1	nogas	10469.533	0.470	234402214	0.90	10000	104.7	90	110	
Se	77	1	nogas	164.591	3.704	75195	1.64	100	164.6	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	101.812	5.653	27615	5.18	100	101.8	90	110	
Mo	95	1	nogas	95.487	1.944	517545	1.50	100	95.5	90	110	
Sn	118	1	nogas	102.037	0.782	731823	0.48	100	102.0	90	110	
Ba	137	1	nogas	103.636	1.982	405011	1.60	100	103.6	90	110	
Sb	121	2	He	97.931	2.211	665050	1.41	100	97.9	90	110	
Li	7	1	nogas	100.178	2.004	1506911	3.63	100	100.2	90	110	
P	31	1	nogas	491.601	2.179	976255	1.42	500	98.3	90	110	
La	139	1	nogas	159.831	12.938	643	11.25	100	159.8	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	294.783	88.299	33	34.64	100	294.8	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	nogas	1049407	2.88	1118108	93.86	70	125	
Ge	72	1	nogas	3447881	1.35	3396393	101.52	70	125	
In	115	1	nogas	3018746	0.38	3166421	95.34	70	125	
Bi	209	1	nogas	2099593	3.04	2159119	97.24	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1199655	1.18	1189986	100.81	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	247_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T20:04:22-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	0.082	7.9	880	5.2	1	
Na	23	1	nogas	190.857	3.5	5366463	4.5	100	CCB Main CR1 Failed
Mg	24	1	nogas	9.941	5.6	192583	7.7	100	
Al	27	1	nogas	-0.176	-9.0	26175	1.5	5	
K	39	1	nogas	-2.925	-379.5	9413407	0.4	100	
Ti	47	1	nogas	0.040	54.5	487	6.3	2.5	
V	51	1	nogas	4.084	26.9	722390	3.7	2.5	CCB Main CR1 Failed
Cr	52	1	nogas	-0.197	-30.5	58863	1.0	2.5	
Mn	55	1	nogas	-0.071	-48.2	30946	0.9	2.5	
Co	59	1	nogas	0.076	0.4	2550	2.4	2.5	
Ni	60	1	nogas	-0.015	-202.4	2314	6.8	2.5	
Cu	63	1	nogas	0.352	16.7	6825	9.8	2	
Zn	66	1	nogas	-0.072	-101.8	2177	11.4	2.5	
As	75	1	nogas	2.337	43.3	120720	3.2	2.5	
Sr	88	1	nogas	0.221	5.6	7708	3.1	2.5	
Ag	107	1	nogas	0.072	22.4	1163	17.9	2.5	
Cd	111	1	nogas	0.063	18.8	243	17.1	1	
Sb	121	1	nogas	0.201	8.3	3027	7.2	2.5	
Tl	205	1	nogas	0.518	59.7	10121	57.0	1	
Pb	208	1	nogas	0.106	24.3	2920	20.1	2.5	
U	238	1	nogas	0.167	27.8	3881	28.9	2.5	
[Pb]	206	1	nogas	0.094	21.3	723	19.2	2.5	
[Pb]	207	1	nogas	0.100	15.3	657	13.8	2.5	
Na	23	2	He	193.051	3.3	431356	1.8	100	CCB Main CR1 Failed
Mg	24	2	He	9.786	4.0	13271	3.1	100	
Al	27	2	He	-0.733	-14.4	883	7.5	5	
K	39	2	He	1.813	120.5	225033	1.2	100	
Ca	43	2	He	1.982	510.3	80	43.3	100	
Ca	44	2	He	4.683	50.4	1990	7.0	100	
V	51	2	He	0.289	3.2	11054	1.6	2.5	
Cr	52	2	He	-0.121	-18.0	6531	3.5	2.5	
Mn	55	2	He	-0.102	-19.6	1633	6.7	2.5	
Fe	56	2	He	6.421	5.9	82848	2.6	100	
Co	59	2	He	0.059	4.7	890	3.0	2.5	
Ni	60	2	He	-0.201	-2.2	390	4.4	2.5	
Cu	63	2	He	-0.010	-248.9	3070	4.6	2	
Zn	66	2	He	-0.177	-48.9	700	22.5	2.5	
As	75	2	He	0.109	48.9	653	12.4	2.5	
Se	78	2	He	0.153	105.0	233	8.8	2	
B	11	1	nogas	27.114	4.1	170239	4.1	10	CCB Main CR1 Failed
Si	28	1	nogas	-148.260	-54.2	3139247	0.8	5	
Ca	43	1	nogas	7.934	52.4	1360	10.3	100	
Ca	44	1	nogas	2.749	215.4	125336	0.7	100	
Fe	56	1	nogas	10.976	43.7	3897080	2.0	100	
Se	77	1	nogas	12.356	44.2	37863	2.9	2.5	CCB Main CR1 Failed
Se	82	1	nogas	0.137	119.5	243	19.0	2	
Mo	95	1	nogas	0.296	43.7	2077	33.3	2.5	
Sn	118	1	nogas	0.235	20.1	3254	8.2	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.072	23.9	780	9.2	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.159	4.5	1323	4.2	2.5	
P	31	1	nogas	2.024	97.3	103250	1.5	10	
La	139	1	nogas	-2.891	-356.5	90	38.5	2.5	
Au	197	1	nogas	188.116	376.1	30	115.5	2.5	CCB Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1163440	1.31	1118108	104.05	70	125	
Ge	72	1	nogas	3496133	2.09	3396393	102.94	70	125	
In	115	1	nogas	3218222	2.95	3166421	101.64	70	125	
Bi	209	1	nogas	2250216	2.49	2159119	104.22	70	125	
Ge	72	2	He	1191431	1.46	1189986	100.12	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	258_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T20:25:53-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	99.648	1.767	676172	0.58	100	99.6	90	110	
Na	23	1	nogas	10356.154	6.539	237940397	2.12	10000	103.6	90	110	
Mg	24	1	nogas	10676.284	5.550	153719808	2.30	10000	106.8	90	110	
Al	27	1	nogas	105.347	3.508	1862793	1.36	100	105.3	90	110	
K	39	1	nogas	10499.409	2.872	214471188	0.63	10000	105.0	90	110	
Ti	47	1	nogas	103.361	2.751	171864	4.75	100	103.4	90	110	
V	51	1	nogas	108.131	1.375	3061942	3.27	100	108.1	90	110	
Cr	52	1	nogas	106.329	0.213	2137956	2.24	100	106.3	90	110	
Mn	55	1	nogas	105.837	2.458	2584866	3.24	100	105.8	90	110	
Co	59	1	nogas	105.096	4.327	2166958	2.34	100	105.1	90	110	
Ni	60	1	nogas	102.808	3.917	478564	2.81	100	102.8	90	110	
Cu	63	1	nogas	103.755	1.675	1143343	1.78	100	103.8	90	110	
Zn	66	1	nogas	101.466	1.129	378467	1.02	100	101.5	90	110	
As	75	1	nogas	101.191	1.983	612052	0.57	100	101.2	90	110	
Sr	88	1	nogas	102.542	1.195	2658332	1.49	100	102.5	90	110	
Ag	107	1	nogas	106.727	3.265	1332409	1.34	100	106.7	90	110	
Cd	111	1	nogas	103.384	3.237	277022	0.85	100	103.4	90	110	
Sb	121	1	nogas	104.494	3.072	1258879	1.14	100	104.5	90	110	
Tl	205	1	nogas	102.321	3.960	1708194	1.39	100	102.3	90	110	
Pb	208	1	nogas	104.106	1.232	2377154	1.23	100	104.1	90	110	
U	238	1	nogas	112.060	6.799	2327415	2.79	100	112.1	90	110	CCV Main CR1-2 Failed
[Pb]	206	1	nogas	102.553	5.924	581900	1.25	100	102.6	90	110	
[Pb]	207	1	nogas	103.741	3.984	513197	1.19	100	103.7	90	110	
Na	23	2	He	10351.401	0.528	19372984	1.35	10000	103.5	90	110	
Mg	24	2	He	10318.546	0.701	10828367	0.98	10000	103.2	90	110	
Al	27	2	He	100.008	2.419	62911	2.69	100	100.0	90	110	
K	39	2	He	10087.386	0.712	12496384	0.70	10000	100.9	90	110	
Ca	43	2	He	10020.185	3.501	33771	3.38	10000	100.2	90	110	
Ca	44	2	He	10157.713	1.336	566721	0.95	10000	101.6	90	110	
V	51	2	He	98.883	0.762	773561	0.75	100	98.9	90	110	
Cr	52	2	He	99.165	0.606	830503	0.84	100	99.2	90	110	
Mn	55	2	He	100.508	0.214	609573	0.73	100	100.5	90	110	
Fe	56	2	He	10091.526	0.327	73755922	0.77	10000	100.9	90	110	
Co	59	2	He	99.654	0.115	1121957	0.72	100	99.7	90	110	
Ni	60	2	He	101.690	0.315	285372	0.85	100	101.7	90	110	
Cu	63	2	He	102.145	0.656	715118	0.29	100	102.1	90	110	
Zn	66	2	He	100.158	1.459	167700	1.29	100	100.2	90	110	
As	75	2	He	99.323	0.680	161194	0.49	100	99.3	90	110	
Se	78	2	He	99.208	1.543	13335	0.79	100	99.2	90	110	
B	11	1	nogas	509.907	2.898	2080982	2.01	500	102.0	90	110	
Si	28	1	nogas	5236.491	3.246	8669852	0.40	5000	104.7	90	110	
Ca	43	1	nogas	10457.184	3.790	359856	1.99	10000	104.6	90	110	
Ca	44	1	nogas	10336.334	1.871	5870482	0.34	10000	103.4	90	110	
Fe	56	1	nogas	10547.435	0.639	225072288	1.68	10000	105.5	90	110	
Se	77	1	nogas	98.319	4.269	55966	0.75	100	98.3	90	110	
Se	82	1	nogas	102.492	3.268	26496	2.59	100	102.5	90	110	
Mo	95	1	nogas	96.915	1.133	500745	2.08	100	96.9	90	110	
Sn	118	1	nogas	102.086	3.294	713573	2.31	100	102.1	90	110	
Ba	137	1	nogas	104.257	4.589	396921	1.69	100	104.3	90	110	
Sb	121	2	He	101.192	2.493	656316	3.02	100	101.2	90	110	
Li	7	1	nogas	100.116	1.361	1444368	0.48	100	100.1	90	110	
P	31	1	nogas	493.206	1.708	933269	1.03	500	98.6	90	110	
La	139	1	nogas	159.773	11.246	627	9.21	100	159.8	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	799.033	107.581	57	66.81	100	799.0	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	nogas	1006618	1.69	1118108	90.03	70	125	
Ge	72	1	nogas	3286668	2.15	3396393	96.77	70	125	
In	115	1	nogas	2943483	3.17	3166421	92.96	70	125	
Bi	209	1	nogas	2105666	4.89	2159119	97.52	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1145505	0.83	1189986	96.26	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	259_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T20:27:50-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	0.090	23.2	940	16.7	1	
Na	23	1	nogas	69.729	4.6	2242653	3.2	100	
Mg	24	1	nogas	11.126	14.8	202383	12.4	100	
Al	27	1	nogas	-0.052	-184.7	27641	5.8	5	
K	39	1	nogas	9.201	34.8	9389066	0.6	100	
Ti	47	1	nogas	0.153	51.1	667	20.4	2.5	
V	51	1	nogas	-1.479	-84.7	570106	5.7	2.5	
Cr	52	1	nogas	-0.336	-23.4	54370	3.2	2.5	
Mn	55	1	nogas	-0.087	-29.2	29661	2.0	2.5	
Co	59	1	nogas	0.094	5.2	2844	3.1	2.5	
Ni	60	1	nogas	-0.171	-18.1	1503	10.2	2.5	
Cu	63	1	nogas	0.385	23.2	7001	13.9	2	
Zn	66	1	nogas	-0.163	-7.2	1770	2.0	2.5	
As	75	1	nogas	-0.499	-127.1	102510	3.7	2.5	
Sr	88	1	nogas	0.204	1.2	7041	0.4	2.5	
Ag	107	1	nogas	0.090	13.4	1360	10.9	2.5	
Cd	111	1	nogas	0.057	17.9	217	9.6	1	
Sb	121	1	nogas	0.235	16.5	3360	13.8	2.5	
Tl	205	1	nogas	0.626	59.4	11485	56.4	1	
Pb	208	1	nogas	0.112	13.5	3067	11.3	2.5	
U	238	1	nogas	0.193	34.0	4264	33.6	2.5	
[Pb]	206	1	nogas	0.126	17.5	877	11.2	2.5	
[Pb]	207	1	nogas	0.090	18.0	580	14.1	2.5	
Na	23	2	He	59.701	1.0	170692	1.5	100	
Mg	24	2	He	8.690	1.9	11941	0.8	100	
Al	27	2	He	-0.681	-7.9	907	5.4	5	
K	39	2	He	-5.179	-15.5	216525	0.5	100	
Ca	43	2	He	5.109	155.4	90	29.4	100	
Ca	44	2	He	5.273	102.4	2000	14.9	100	
V	51	2	He	0.052	59.5	9041	1.0	2.5	
Cr	52	2	He	-0.137	-15.6	6321	4.0	2.5	
Mn	55	2	He	-0.113	-14.5	1547	7.9	2.5	
Fe	56	2	He	7.346	3.1	88903	3.0	100	
Co	59	2	He	0.071	10.7	1023	8.9	2.5	
Ni	60	2	He	-0.200	-18.7	387	25.9	2.5	
Cu	63	2	He	0.012	265.8	3194	7.1	2	
Zn	66	2	He	-0.157	-26.0	727	11.0	2.5	
As	75	2	He	0.032	45.8	518	6.1	2.5	
Se	78	2	He	0.158	116.1	231	9.5	2	
B	11	1	nogas	14.308	16.0	109970	6.7	10	CCB Main CR1 Failed
Si	28	1	nogas	-78.025	-51.4	3126748	1.9	5	
Ca	43	1	nogas	10.349	55.8	1407	14.2	100	
Ca	44	1	nogas	3.621	60.1	122253	1.1	100	
Fe	56	1	nogas	7.478	50.1	3708975	1.6	100	
Se	77	1	nogas	-4.943	-92.8	32546	4.0	2.5	
Se	82	1	nogas	0.177	90.4	247	16.9	2	
Mo	95	1	nogas	0.360	42.0	2357	33.6	2.5	
Sn	118	1	nogas	0.404	36.2	4404	21.0	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.096	27.4	850	8.9	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.178	4.5	1437	5.4	2.5	
P	31	1	nogas	2.753	11.0	101588	0.6	10	
La	139	1	nogas	3.166	155.0	110	18.2	2.5	CCB Main CR1 Failed
Au	197	1	nogas	-212.757	-95.4	10	100.0	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	nogas	1156022	4.35	1118108	103.39	70	125	
Ge	72	1	nogas	3394857	0.55	3396393	99.95	70	125	
In	115	1	nogas	3129690	3.49	3166421	98.84	70	125	
Bi	209	1	nogas	2160310	3.23	2159119	100.06	70	125	
Ge	72	2	He	1178134	1.74	1189986	99.00	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	267_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T20:43:40-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	97.132	1.476	675697	2.40	100	97.1	90	110	
Na	23	1	nogas	10025.169	0.918	237562555	0.44	10000	100.3	90	110	
Mg	24	1	nogas	10185.742	1.214	151187803	0.35	10000	101.9	90	110	
Al	27	1	nogas	109.389	2.858	1939926	2.46	100	109.4	90	110	
K	39	1	nogas	10147.861	0.698	208328417	2.01	10000	101.5	90	110	
Ti	47	1	nogas	100.572	4.419	167618	2.50	100	100.6	90	110	
V	51	1	nogas	109.875	1.261	3110919	1.35	100	109.9	90	110	
Cr	52	1	nogas	104.096	1.244	2101087	2.71	100	104.1	90	110	
Mn	55	1	nogas	104.810	1.613	2568685	3.46	100	104.8	90	110	
Co	59	1	nogas	100.919	3.252	2087858	1.40	100	100.9	90	110	
Ni	60	1	nogas	101.223	2.444	472767	1.05	100	101.2	90	110	
Cu	63	1	nogas	102.059	2.157	1128192	1.54	100	102.1	90	110	
Zn	66	1	nogas	101.377	0.501	379413	2.21	100	101.4	90	110	
As	75	1	nogas	99.350	1.628	604808	2.19	100	99.4	90	110	
Sr	88	1	nogas	99.913	3.208	2597743	1.47	100	99.9	90	110	
Ag	107	1	nogas	100.539	1.489	1259761	2.58	100	100.5	90	110	
Cd	111	1	nogas	101.516	2.980	276645	2.08	100	101.5	90	110	
Sb	121	1	nogas	100.369	1.294	1213369	0.81	100	100.4	90	110	
Tl	205	1	nogas	103.269	10.451	1749616	6.38	100	103.3	90	110	
Pb	208	1	nogas	102.612	0.976	2343044	0.98	100	102.6	90	110	
U	238	1	nogas	108.827	4.051	2299693	0.23	100	108.8	90	110	
[Pb]	206	1	nogas	102.938	7.101	593659	2.94	100	102.9	90	110	
[Pb]	207	1	nogas	100.663	5.971	505966	1.88	100	100.7	90	110	
Na	23	2	He	10045.106	1.367	18895103	1.21	10000	100.5	90	110	
Mg	24	2	He	9990.473	1.434	10536822	1.29	10000	99.9	90	110	
Al	27	2	He	98.107	1.071	62048	1.08	100	98.1	90	110	
K	39	2	He	9726.480	2.002	12057261	1.96	10000	97.3	90	110	
Ca	43	2	He	9828.264	0.898	33293	0.79	10000	98.3	90	110	
Ca	44	2	He	9861.936	1.572	553071	1.70	10000	98.6	90	110	
V	51	2	He	97.196	1.232	764342	1.08	100	97.2	90	110	
Cr	52	2	He	99.103	0.823	834175	0.85	100	99.1	90	110	
Mn	55	2	He	98.924	1.095	603016	0.96	100	98.9	90	110	
Fe	56	2	He	9957.163	2.428	73139074	2.28	10000	99.6	90	110	
Co	59	2	He	97.036	1.993	1097962	1.84	100	97.0	90	110	
Ni	60	2	He	97.856	1.556	276027	1.42	100	97.9	90	110	
Cu	63	2	He	98.606	1.463	693941	1.51	100	98.6	90	110	
Zn	66	2	He	100.162	1.553	168554	1.43	100	100.2	90	110	
As	75	2	He	97.758	2.017	159461	1.87	100	97.8	90	110	
Se	78	2	He	95.633	1.432	12927	1.40	100	95.6	90	110	
B	11	1	nogas	483.195	3.421	2022916	1.39	500	96.6	90	110	
Si	28	1	nogas	5071.221	2.754	8522085	0.85	5000	101.4	90	110	
Ca	43	1	nogas	10326.702	1.490	356618	0.50	10000	103.3	90	110	
Ca	44	1	nogas	10177.069	4.136	5798728	2.15	10000	101.8	90	110	
Fe	56	1	nogas	10536.171	3.039	225564038	3.56	10000	105.4	90	110	
Se	77	1	nogas	94.251	5.585	55197	3.58	100	94.3	90	110	
Se	82	1	nogas	100.542	3.433	26076	2.05	100	100.5	90	110	
Mo	95	1	nogas	97.603	1.397	505839	0.84	100	97.6	90	110	
Sn	118	1	nogas	98.875	1.005	702921	0.90	100	98.9	90	110	
Ba	137	1	nogas	102.724	2.932	397862	2.06	100	102.7	90	110	
Sb	121	2	He	100.452	1.403	654729	1.25	100	100.5	90	110	
Li	7	1	nogas	96.688	3.893	1432505	2.39	100	96.7	90	110	
P	31	1	nogas	497.225	0.683	943222	1.50	500	99.4	90	110	
La	139	1	nogas	188.898	27.309	737	23.91	100	188.9	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	556.734	60.593	47	32.73	100	556.7	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	nogas	1031893	2.64	1118108	92.29	70	125	
Ge	72	1	nogas	3297088	1.89	3396393	97.08	70	125	
In	115	1	nogas	2992173	1.15	3166421	94.50	70	125	
Bi	209	1	nogas	2140292	4.20	2159119	99.13	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1151266	0.16	1189986	96.75	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	268_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T20:45:39-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	0.079	16.1	863	8.7	1	
Na	23	1	nogas	37.360	5.7	1428686	4.6	100	
Mg	24	1	nogas	9.413	8.1	172045	7.4	100	
Al	27	1	nogas	-0.061	-163.7	26924	7.0	5	
K	39	1	nogas	13.779	40.9	9282423	0.3	100	
Ti	47	1	nogas	0.109	63.2	580	21.0	2.5	
V	51	1	nogas	-0.376	-395.1	583572	5.9	2.5	
Cr	52	1	nogas	-0.317	-28.8	53624	3.8	2.5	
Mn	55	1	nogas	-0.061	-15.6	29684	0.9	2.5	
Co	59	1	nogas	0.083	10.5	2574	7.8	2.5	
Ni	60	1	nogas	-0.210	-14.1	1287	11.9	2.5	
Cu	63	1	nogas	0.226	31.7	5091	16.0	2	
Zn	66	1	nogas	-0.108	-51.4	1937	10.3	2.5	
As	75	1	nogas	-0.307	-365.5	101314	5.3	2.5	
Sr	88	1	nogas	0.159	4.2	5714	3.2	2.5	
Ag	107	1	nogas	0.187	104.0	2566	96.7	2.5	
Cd	111	1	nogas	0.079	4.9	277	2.1	1	
Sb	121	1	nogas	0.290	14.8	3964	12.9	2.5	
Tl	205	1	nogas	0.562	57.7	10568	54.6	1	
Pb	208	1	nogas	0.107	7.4	2963	6.1	2.5	
U	238	1	nogas	0.154	26.6	3484	26.4	2.5	
[Pb]	206	1	nogas	0.083	15.8	640	13.6	2.5	
[Pb]	207	1	nogas	0.103	22.1	657	16.8	2.5	
Na	23	2	He	27.784	5.0	106301	3.3	100	
Mg	24	2	He	7.531	2.6	10383	2.2	100	
Al	27	2	He	-0.639	-22.8	907	10.6	5	
K	39	2	He	-7.333	-50.0	213904	2.1	100	
Ca	43	2	He	-0.094	-17791.0	70	79.5	100	
Ca	44	2	He	6.105	21.8	1990	3.5	100	
V	51	2	He	0.074	11.4	8947	0.8	2.5	
Cr	52	2	He	-0.128	-24.7	6214	3.6	2.5	
Mn	55	2	He	-0.088	-36.1	1657	11.4	2.5	
Fe	56	2	He	7.030	4.0	84041	3.3	100	
Co	59	2	He	0.069	17.4	973	14.2	2.5	
Ni	60	2	He	-0.183	-5.0	423	5.5	2.5	
Cu	63	2	He	-0.063	-36.8	2584	7.0	2	
Zn	66	2	He	-0.056	-16.1	873	2.4	2.5	
As	75	2	He	0.059	69.7	547	13.0	2.5	
Se	78	2	He	-0.041	-431.5	198	12.2	2	
B	11	1	nogas	6.154	14.4	73498	4.7	10	
Si	28	1	nogas	-88.730	-35.6	3049377	0.2	5	
Ca	43	1	nogas	10.041	13.3	1367	2.2	100	
Ca	44	1	nogas	-4.753	-82.3	114974	2.0	100	
Fe	56	1	nogas	7.310	38.0	3627654	1.0	100	
Se	77	1	nogas	-4.188	-228.0	32032	6.6	2.5	
Se	82	1	nogas	0.123	374.0	227	51.1	2	

Continuing Calibration Blank (CCB) Report

Mo	95	1	nogas	0.260	42.0	1790	32.2	2.5	
Sn	118	1	nogas	0.240	18.4	3150	11.4	5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Ba	137	1	nogas	0.092	0.8	823	2.5	2.5	
Sb	121	2	He	0.220	15.6	1667	14.1	2.5	
P	31	1	nogas	4.520	17.4	102496	1.0	10	
La	139	1	nogas	0.861	818.9	100	26.5	2.5	
Au	197	1	nogas	333.816	133.1	37	56.8	2.5	CCB Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1169668	3.38	1118108	104.61	70	125	
Ge	72	1	nogas	3323785	1.20	3396393	97.86	70	125	
In	115	1	nogas	3073916	2.19	3166421	97.08	70	125	
Bi	209	1	nogas	2194286	2.41	2159119	101.63	70	125	
Ge	72	2	He	1144195	0.85	1189986	96.15	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	276_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T21:01:30-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	97.341	3.307	678450	2.01	100	97.3	90	110	
Na	23	1	nogas	9914.967	2.048	234715330	0.70	10000	99.1	90	110	
Mg	24	1	nogas	10151.362	4.783	150457095	2.40	10000	101.5	90	110	
Al	27	1	nogas	105.572	3.035	1901029	0.32	100	105.6	90	110	
K	39	1	nogas	10179.711	2.022	212067380	1.38	10000	101.8	90	110	
Ti	47	1	nogas	100.155	3.180	169464	0.81	100	100.2	90	110	
V	51	1	nogas	96.833	1.694	2853916	1.94	100	96.8	90	110	
Cr	52	1	nogas	101.813	3.614	2086132	1.19	100	101.8	90	110	
Mn	55	1	nogas	105.017	1.419	2611898	2.07	100	105.0	90	110	
Co	59	1	nogas	106.064	5.150	2226288	2.03	100	106.1	90	110	
Ni	60	1	nogas	103.277	4.221	489400	1.23	100	103.3	90	110	
Cu	63	1	nogas	101.077	3.529	1133856	0.76	100	101.1	90	110	
Zn	66	1	nogas	99.365	2.514	377442	1.84	100	99.4	90	110	
As	75	1	nogas	96.386	1.809	598683	2.05	100	96.4	90	110	
Sr	88	1	nogas	98.542	4.459	2600145	2.16	100	98.5	90	110	
Ag	107	1	nogas	101.128	2.226	1285891	1.04	100	101.1	90	110	
Cd	111	1	nogas	100.923	0.948	276908	2.81	100	100.9	90	110	
Sb	121	1	nogas	104.809	5.975	1284978	2.88	100	104.8	90	110	
Tl	205	1	nogas	104.426	3.417	1752107	2.56	100	104.4	90	110	
Pb	208	1	nogas	105.215	2.387	2402457	2.39	100	105.2	90	110	
U	238	1	nogas	111.336	0.449	2326875	2.40	100	111.3	90	110	CCV Main CR1-2 Failed
[Pb]	206	1	nogas	106.652	4.329	608433	2.20	100	106.7	90	110	
[Pb]	207	1	nogas	104.159	4.918	517631	2.25	100	104.2	90	110	
Na	23	2	He	10058.463	0.858	18956786	0.57	10000	100.6	90	110	
Mg	24	2	He	9971.526	0.747	10537148	0.10	10000	99.7	90	110	
Al	27	2	He	100.767	0.707	63817	0.17	100	100.8	90	110	
K	39	2	He	9959.561	1.315	12340856	1.29	10000	99.6	90	110	
Ca	43	2	He	9924.528	3.134	33681	2.62	10000	99.2	90	110	
Ca	44	2	He	9864.749	2.873	554221	2.09	10000	98.6	90	110	
V	51	2	He	97.433	0.319	767678	0.48	100	97.4	90	110	
Cr	52	2	He	98.974	1.045	834716	1.20	100	99.0	90	110	
Mn	55	2	He	99.143	0.929	605502	0.21	100	99.1	90	110	
Fe	56	2	He	9982.886	2.133	73465362	1.42	10000	99.8	90	110	
Co	59	2	He	98.078	2.068	1111841	1.37	100	98.1	90	110	
Ni	60	2	He	100.388	1.715	283681	1.16	100	100.4	90	110	
Cu	63	2	He	101.048	1.543	712386	0.76	100	101.0	90	110	
Zn	66	2	He	100.701	1.640	169779	1.16	100	100.7	90	110	
As	75	2	He	98.290	1.094	160633	0.31	100	98.3	90	110	
Se	78	2	He	97.681	2.176	13224	1.38	100	97.7	90	110	
B	11	1	nogas	479.555	4.535	2012145	2.14	500	95.9	90	110	
Si	28	1	nogas	5094.853	6.788	8671812	1.21	5000	101.9	90	110	
Ca	43	1	nogas	10167.768	3.559	356315	0.38	10000	101.7	90	110	
Ca	44	1	nogas	9966.350	4.029	5766141	0.94	10000	99.7	90	110	
Fe	56	1	nogas	10347.555	2.145	224879272	1.12	10000	103.5	90	110	
Se	77	1	nogas	79.456	7.154	52439	1.84	100	79.5	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	102.058	2.540	26870	2.13	100	102.1	90	110	
Mo	95	1	nogas	96.652	3.588	508281	0.77	100	96.7	90	110	
Sn	118	1	nogas	99.820	2.871	714040	1.14	100	99.8	90	110	
Ba	137	1	nogas	101.556	0.977	396015	2.69	100	101.6	90	110	
Sb	121	2	He	102.564	0.558	669788	0.28	100	102.6	90	110	
Li	7	1	nogas	95.747	3.631	1422571	1.62	100	95.7	90	110	
P	31	1	nogas	488.312	3.780	941572	0.28	500	97.7	90	110	
La	139	1	nogas	153.625	7.227	620	4.27	100	153.6	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	219.918	198.577	30	66.67	100	219.9	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	nogas	1034848	5.02	1118108	92.55	70	125	
Ge	72	1	nogas	3347572	3.24	3396393	98.56	70	125	
In	115	1	nogas	3011679	1.93	3166421	95.11	70	125	
Bi	209	1	nogas	2114562	2.82	2159119	97.94	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1153517	0.78	1189986	96.94	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	277_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T21:03:32-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	0.113	2.3	1103	5.2	1	
Na	23	1	nogas	19.891	14.7	1016459	2.8	100	
Mg	24	1	nogas	9.912	7.9	178601	2.4	100	
Al	27	1	nogas	-0.119	-90.5	26636	6.2	5	
K	39	1	nogas	-2.516	-357.8	9222153	0.3	100	
Ti	47	1	nogas	0.079	75.8	543	17.5	2.5	
V	51	1	nogas	-5.200	-17.6	485592	3.3	2.5	
Cr	52	1	nogas	-0.505	-11.7	51355	0.9	2.5	
Mn	55	1	nogas	-0.118	-60.2	29106	4.3	2.5	
Co	59	1	nogas	0.092	17.6	2820	11.9	2.5	
Ni	60	1	nogas	-0.222	-11.2	1267	9.7	2.5	
Cu	63	1	nogas	0.173	12.6	4631	3.4	2	
Zn	66	1	nogas	-0.150	-18.4	1837	7.8	2.5	
As	75	1	nogas	-2.645	-21.5	92035	3.6	2.5	
Sr	88	1	nogas	0.118	4.5	4761	1.7	2.5	
Ag	107	1	nogas	0.089	28.8	1360	24.5	2.5	
Cd	111	1	nogas	0.098	12.9	330	8.0	1	
Sb	121	1	nogas	0.677	11.7	8922	10.5	2.5	
Tl	205	1	nogas	0.619	40.0	11632	42.1	1	
Pb	208	1	nogas	0.112	9.5	3070	7.9	2.5	
U	238	1	nogas	0.176	30.5	3994	34.5	2.5	
[Pb]	206	1	nogas	0.111	12.1	800	7.8	2.5	
[Pb]	207	1	nogas	0.111	6.1	697	2.2	2.5	
Na	23	2	He	15.996	6.2	84148	1.4	100	
Mg	24	2	He	8.751	6.0	11637	3.8	100	
Al	27	2	He	-0.726	-22.6	850	10.5	5	
K	39	2	He	-9.377	-10.6	211418	0.6	100	
Ca	43	2	He	-1.202	-975.9	67	60.6	100	
Ca	44	2	He	6.576	43.8	2013	8.7	100	
V	51	2	He	-0.088	-42.1	7680	2.3	2.5	
Cr	52	2	He	-0.103	-21.4	6405	1.6	2.5	
Mn	55	2	He	-0.087	-16.9	1660	5.5	2.5	
Fe	56	2	He	8.303	7.8	93113	3.9	100	
Co	59	2	He	0.074	15.5	1017	12.3	2.5	
Ni	60	2	He	-0.181	-9.8	430	10.1	2.5	
Cu	63	2	He	-0.118	-25.2	2194	8.5	2	
Zn	66	2	He	-0.157	-55.7	703	19.9	2.5	
As	75	2	He	0.030	90.2	500	9.9	2.5	
Se	78	2	He	0.139	128.3	221	10.9	2	
B	11	1	nogas	6.570	31.8	73475	7.5	10	
Si	28	1	nogas	-101.452	-29.9	3125024	1.1	5	
Ca	43	1	nogas	3.592	23.5	1177	2.6	100	
Ca	44	1	nogas	-12.199	-34.6	114021	1.0	100	
Fe	56	1	nogas	-2.852	-198.9	3511218	2.2	100	
Se	77	1	nogas	-18.159	-30.6	29524	3.2	2.5	
Se	82	1	nogas	0.294	7.4	280	0.0	2	
Mo	95	1	nogas	0.331	31.8	2224	25.3	2.5	
Sn	118	1	nogas	0.326	24.3	3790	12.0	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.117	9.1	927	1.6	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.562	7.8	3870	6.2	2.5	
P	31	1	nogas	1.365	119.6	99899	1.6	10	
La	139	1	nogas	-9.646	-36.7	63	18.2	2.5	
Au	197	1	nogas	124.647	85.9	27	21.7	2.5	CCB Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1143537	5.14	1118108	102.27	70	125	
Ge	72	1	nogas	3421762	2.07	3396393	100.75	70	125	
In	115	1	nogas	3095910	3.27	3166421	97.77	70	125	
Bi	209	1	nogas	2188409	4.77	2159119	101.36	70	125	
Ge	72	2	He	1142138	1.44	1189986	95.98	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	288_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T21:25:12-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	105.039	2.889	676915	2.63	100	105.0	90	110	
Na	23	1	nogas	9923.560	3.089	233046922	3.45	10000	99.2	90	110	
Mg	24	1	nogas	10344.017	2.621	152118712	1.14	10000	103.4	90	110	
Al	27	1	nogas	105.947	3.481	1924446	2.20	100	105.9	90	110	
K	39	1	nogas	10220.885	1.757	214739505	0.40	10000	102.2	90	110	
Ti	47	1	nogas	99.461	2.362	169834	3.05	100	99.5	90	110	
V	51	1	nogas	103.160	4.783	3028251	4.79	100	103.2	90	110	
Cr	52	1	nogas	101.493	3.154	2099279	4.22	100	101.5	90	110	
Mn	55	1	nogas	103.190	3.698	2590124	4.93	100	103.2	90	110	
Co	59	1	nogas	100.415	1.207	2127851	1.64	100	100.4	90	110	
Ni	60	1	nogas	99.434	0.836	475684	1.81	100	99.4	90	110	
Cu	63	1	nogas	99.805	2.328	1129687	1.19	100	99.8	90	110	
Zn	66	1	nogas	99.777	2.132	382315	1.55	100	99.8	90	110	
As	75	1	nogas	95.795	1.881	600854	2.18	100	95.8	90	110	
Sr	88	1	nogas	99.775	0.665	2656996	0.78	100	99.8	90	110	
Ag	107	1	nogas	99.617	3.590	1277680	2.79	100	99.6	90	110	
Cd	111	1	nogas	99.370	1.651	275101	0.96	100	99.4	90	110	
Sb	121	1	nogas	100.849	0.804	1248462	1.51	100	100.8	90	110	
Tl	205	1	nogas	103.208	3.078	1743242	3.22	100	103.2	90	110	
Pb	208	1	nogas	102.614	1.962	2343086	1.96	100	102.6	90	110	
U	238	1	nogas	107.207	7.295	2252593	5.21	100	107.2	90	110	
[Pb]	206	1	nogas	102.688	3.198	589695	0.55	100	102.7	90	110	
[Pb]	207	1	nogas	101.147	3.758	506043	1.53	100	101.1	90	110	
Na	23	2	He	10106.073	1.151	18805815	0.86	10000	101.1	90	110	
Mg	24	2	He	10131.170	2.127	10569694	1.04	10000	101.3	90	110	
Al	27	2	He	101.323	1.597	63367	2.95	100	101.3	90	110	
K	39	2	He	9906.095	0.389	12275803	0.38	10000	99.1	90	110	
Ca	43	2	He	9916.612	2.013	33230	1.26	10000	99.2	90	110	
Ca	44	2	He	10053.895	1.220	557741	0.71	10000	100.5	90	110	
V	51	2	He	98.617	2.289	766990	0.91	100	98.6	90	110	
Cr	52	2	He	99.784	0.494	830901	1.37	100	99.8	90	110	
Mn	55	2	He	100.188	1.186	604152	1.04	100	100.2	90	110	
Fe	56	2	He	10152.078	1.623	73768219	0.71	10000	101.5	90	110	
Co	59	2	He	99.884	2.744	1117870	1.14	100	99.9	90	110	
Ni	60	2	He	100.217	3.409	279559	1.71	100	100.2	90	110	
Cu	63	2	He	101.665	1.554	707661	0.53	100	101.7	90	110	
Zn	66	2	He	102.594	1.659	170775	1.52	100	102.6	90	110	
As	75	2	He	99.908	2.094	161194	0.42	100	99.9	90	110	
Se	78	2	He	98.214	2.026	13129	2.02	100	98.2	90	110	
B	11	1	nogas	519.856	1.232	2014710	2.45	500	104.0	90	110	
Si	28	1	nogas	4908.468	2.243	8548625	0.07	5000	98.2	90	110	
Ca	43	1	nogas	10178.338	1.711	359937	1.43	10000	101.8	90	110	
Ca	44	1	nogas	10020.153	0.924	5850183	1.14	10000	100.2	90	110	
Fe	56	1	nogas	10201.190	1.238	223710713	1.45	10000	102.0	90	110	
Se	77	1	nogas	73.463	3.064	51443	0.84	100	73.5	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	102.660	1.261	27264	0.76	100	102.7	90	110	
Mo	95	1	nogas	96.379	0.244	511512	1.36	100	96.4	90	110	
Sn	118	1	nogas	98.361	0.151	710346	0.91	100	98.4	90	110	
Ba	137	1	nogas	100.112	1.981	393916	1.55	100	100.1	90	110	
Sb	121	2	He	100.710	2.343	649309	1.28	100	100.7	90	110	
Li	7	1	nogas	103.575	4.448	1416448	4.52	100	103.6	90	110	
P	31	1	nogas	482.088	1.650	939242	1.16	500	96.4	90	110	
La	139	1	nogas	165.375	9.064	667	7.55	100	165.4	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	544.790	138.459	47	81.13	100	544.8	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	nogas	956088	2.53	1118108	85.51	70	125	
Ge	72	1	nogas	3375815	1.37	3396393	99.39	70	125	
In	115	1	nogas	3039351	0.80	3166421	95.99	70	125	
Bi	209	1	nogas	2128241	2.85	2159119	98.57	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1139069	1.86	1189986	95.72	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	289_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T21:27:12-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	0.100	28.7	970	22.5	1	
Na	23	1	nogas	23.345	12.8	1109265	7.3	100	
Mg	24	1	nogas	12.518	10.9	219040	9.5	100	
Al	27	1	nogas	0.348	28.4	35084	7.0	5	
K	39	1	nogas	4.209	233.1	9343065	0.6	100	
Ti	47	1	nogas	0.067	100.8	523	22.4	2.5	
V	51	1	nogas	-4.679	-15.1	497164	1.4	2.5	
Cr	52	1	nogas	-0.503	-6.1	51311	0.8	2.5	
Mn	55	1	nogas	-0.086	-10.1	29868	1.6	2.5	
Co	59	1	nogas	0.111	4.0	3227	2.9	2.5	
Ni	60	1	nogas	-0.187	-14.1	1437	10.3	2.5	
Cu	63	1	nogas	0.161	9.2	4494	5.5	2	
Zn	66	1	nogas	-0.112	-53.1	1973	10.3	2.5	
As	75	1	nogas	-2.300	-36.1	93639	3.1	2.5	
Sr	88	1	nogas	0.148	15.3	5554	9.7	2.5	
Ag	107	1	nogas	0.095	4.7	1440	5.9	2.5	
Cd	111	1	nogas	0.099	25.7	337	22.3	1	
Sb	121	1	nogas	0.262	20.9	3724	20.2	2.5	
Tl	205	1	nogas	0.585	54.7	10898	54.7	1	
Pb	208	1	nogas	0.133	19.0	3537	16.2	2.5	
U	238	1	nogas	0.182	26.9	4051	29.8	2.5	
[Pb]	206	1	nogas	0.123	11.9	863	12.8	2.5	
[Pb]	207	1	nogas	0.121	22.7	740	22.7	2.5	
Na	23	2	He	16.402	5.2	85404	3.0	100	
Mg	24	2	He	9.511	6.4	12508	5.8	100	
Al	27	2	He	-0.380	-77.6	1070	17.8	5	
K	39	2	He	-6.971	-22.8	214345	0.9	100	
Ca	43	2	He	9.594	122.4	103	39.1	100	
Ca	44	2	He	10.153	11.3	2224	3.0	100	
V	51	2	He	-0.023	-27.5	8231	1.4	2.5	
Cr	52	2	He	-0.166	-16.6	5918	3.6	2.5	
Mn	55	2	He	-0.092	-36.2	1637	13.2	2.5	
Fe	56	2	He	9.623	7.8	103383	6.5	100	
Co	59	2	He	0.090	12.4	1210	10.7	2.5	
Ni	60	2	He	-0.149	-6.2	520	3.8	2.5	
Cu	63	2	He	-0.113	-18.9	2240	5.4	2	
Zn	66	2	He	-0.118	-48.7	773	12.4	2.5	
As	75	2	He	0.037	70.4	513	8.7	2.5	
Se	78	2	He	-0.046	-137.8	198	5.3	2	
B	11	1	nogas	2.263	42.6	52433	8.9	10	
Si	28	1	nogas	-119.035	-31.6	3100191	1.1	5	
Ca	43	1	nogas	11.707	41.2	1463	11.0	100	
Ca	44	1	nogas	-15.477	-9.3	111949	1.5	100	
Fe	56	1	nogas	0.028	6515.3	3569323	2.0	100	
Se	77	1	nogas	-15.916	-17.4	30032	0.7	2.5	
Se	82	1	nogas	-0.031	-421.4	193	19.6	2	
Mo	95	1	nogas	0.303	43.3	2070	34.7	2.5	
Sn	118	1	nogas	0.257	35.0	3330	21.3	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.128	17.6	980	10.6	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.203	13.8	1560	12.2	2.5	
P	31	1	nogas	1.271	109.4	99561	0.5	10	
La	139	1	nogas	12.712	54.5	143	17.6	2.5	CCB Main CR1 Failed
Au	197	1	nogas	421.858	133.7	40	66.1	2.5	CCB Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1106025	1.71	1118108	98.92	70	125	
Ge	72	1	nogas	3415815	1.93	3396393	100.57	70	125	
In	115	1	nogas	3120508	1.51	3166421	98.55	70	125	
Bi	209	1	nogas	2157146	3.70	2159119	99.91	70	125	
Ge	72	2	He	1148523	1.19	1189986	96.52	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	298_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T21:44:59-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	97.137	7.435	688737	0.91	100	97.1	90	110	
Na	23	1	nogas	9979.681	0.618	236170780	1.77	10000	99.8	90	110	
Mg	24	1	nogas	10091.735	1.952	149563528	0.19	10000	100.9	90	110	
Al	27	1	nogas	104.055	5.185	1941578	3.62	100	104.1	90	110	
K	39	1	nogas	9996.165	2.851	215912146	1.45	10000	100.0	90	110	
Ti	47	1	nogas	95.708	2.826	167858	2.74	100	95.7	90	110	
V	51	1	nogas	91.487	1.715	2827578	0.79	100	91.5	90	110	
Cr	52	1	nogas	97.273	1.768	2069187	3.22	100	97.3	90	110	
Mn	55	1	nogas	98.552	3.092	2542299	4.40	100	98.6	90	110	
Co	59	1	nogas	99.647	5.342	2169608	6.27	100	99.6	90	110	
Ni	60	1	nogas	98.247	1.038	482803	1.87	100	98.2	90	110	
Cu	63	1	nogas	99.411	0.544	1156114	2.06	100	99.4	90	110	
Zn	66	1	nogas	99.106	1.129	390129	1.85	100	99.1	90	110	
As	75	1	nogas	95.259	3.034	614173	1.08	100	95.3	90	110	
Sr	88	1	nogas	99.071	3.731	2710896	5.01	100	99.1	90	110	
Ag	107	1	nogas	99.231	3.095	1307477	2.90	100	99.2	90	110	
Cd	111	1	nogas	100.384	2.564	283137	0.45	100	100.4	90	110	
Sb	121	1	nogas	102.098	3.840	1298724	5.23	100	102.1	90	110	
Tl	205	1	nogas	102.087	4.697	1738327	4.30	100	102.1	90	110	
Pb	208	1	nogas	104.202	0.927	2379330	0.93	100	104.2	90	110	
U	238	1	nogas	110.505	2.611	2342953	1.80	100	110.5	90	110	CCV Main CR1-2 Failed
[Pb]	206	1	nogas	103.337	2.397	598487	1.89	100	103.3	90	110	
[Pb]	207	1	nogas	101.420	2.172	511758	1.37	100	101.4	90	110	
Na	23	2	He	10081.074	1.451	19037937	0.57	10000	100.8	90	110	
Mg	24	2	He	9851.863	1.884	10431819	1.17	10000	98.5	90	110	
Al	27	2	He	99.584	2.036	63222	2.62	100	99.6	90	110	
K	39	2	He	10066.119	0.514	12470508	0.50	10000	100.7	90	110	
Ca	43	2	He	9872.997	2.019	33577	1.52	10000	98.7	90	110	
Ca	44	2	He	10080.228	2.396	567507	1.99	10000	100.8	90	110	
V	51	2	He	99.987	1.298	789189	0.80	100	100.0	90	110	
Cr	52	2	He	100.243	1.329	847029	0.47	100	100.2	90	110	
Mn	55	2	He	101.296	0.858	619893	0.04	100	101.3	90	110	
Fe	56	2	He	10225.236	1.360	75409177	1.07	10000	102.3	90	110	
Co	59	2	He	100.557	1.457	1142358	1.07	100	100.6	90	110	
Ni	60	2	He	101.902	1.185	288554	0.80	100	101.9	90	110	
Cu	63	2	He	101.715	1.316	718562	0.44	100	101.7	90	110	
Zn	66	2	He	101.879	0.208	172122	0.74	100	101.9	90	110	
As	75	2	He	100.698	0.715	164904	0.61	100	100.7	90	110	
Se	78	2	He	99.385	1.611	13480	0.74	100	99.4	90	110	
B	11	1	nogas	484.296	6.709	2068945	3.36	500	96.9	90	110	
Si	28	1	nogas	4694.455	5.079	8539584	1.61	5000	93.9	90	110	
Ca	43	1	nogas	10181.486	1.341	369833	1.08	10000	101.8	90	110	
Ca	44	1	nogas	9906.968	1.323	5942288	0.63	10000	99.1	90	110	
Fe	56	1	nogas	9943.565	2.523	224045672	1.59	10000	99.4	90	110	
Se	77	1	nogas	67.672	5.138	51396	2.15	100	67.7	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	99.336	1.745	27104	1.01	100	99.3	90	110	
Mo	95	1	nogas	95.901	1.697	522744	1.11	100	95.9	90	110	
Sn	118	1	nogas	97.370	3.470	716474	3.08	100	97.4	90	110	
Ba	137	1	nogas	100.080	2.336	401238	1.41	100	100.1	90	110	
Sb	121	2	He	103.561	0.795	677746	1.47	100	103.6	90	110	
Li	7	1	nogas	100.133	5.414	1511363	3.27	100	100.1	90	110	
P	31	1	nogas	474.868	3.668	951581	1.81	500	95.0	90	110	
La	139	1	nogas	139.353	26.435	587	20.83	100	139.4	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	619.406	100.599	50	60.00	100	619.4	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	nogas	1055890	8.21	1118108	94.44	70	125	
Ge	72	1	nogas	3467583	1.52	3396393	102.10	70	125	
In	115	1	nogas	3097507	2.30	3166421	97.82	70	125	
Bi	209	1	nogas	2145313	0.83	2159119	99.36	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1155922	0.87	1189986	97.14	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	299_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T21:46:59-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	0.124	21.6	1150	14.0	1	
Na	23	1	nogas	15.817	8.6	943674	3.5	100	
Mg	24	1	nogas	9.979	15.3	183629	10.8	100	
Al	27	1	nogas	-0.064	-99.6	27654	2.9	5	
K	39	1	nogas	2.050	305.3	9318032	0.3	100	
Ti	47	1	nogas	0.179	18.8	717	8.9	2.5	
V	51	1	nogas	-5.489	-4.8	478977	1.4	2.5	
Cr	52	1	nogas	-0.517	-6.2	51134	1.8	2.5	
Mn	55	1	nogas	-0.121	-9.9	29067	2.3	2.5	
Co	59	1	nogas	0.095	19.9	2904	12.8	2.5	
Ni	60	1	nogas	-0.233	-17.3	1213	15.2	2.5	
Cu	63	1	nogas	0.137	33.7	4221	11.3	2	
Zn	66	1	nogas	-0.184	-19.6	1703	9.1	2.5	
As	75	1	nogas	-3.228	-10.9	89006	3.3	2.5	
Sr	88	1	nogas	0.128	14.7	5037	9.6	2.5	
Ag	107	1	nogas	0.088	10.9	1343	8.6	2.5	
Cd	111	1	nogas	0.062	37.1	237	25.5	1	
Sb	121	1	nogas	0.664	13.3	8766	11.3	2.5	
Tl	205	1	nogas	0.666	52.0	12593	47.8	1	
Pb	208	1	nogas	0.121	27.3	3270	23.0	2.5	
U	238	1	nogas	0.178	34.9	4084	32.6	2.5	
[Pb]	206	1	nogas	0.117	41.4	860	33.4	2.5	
[Pb]	207	1	nogas	0.123	29.8	777	23.9	2.5	
Na	23	2	He	11.575	5.8	77433	2.5	100	
Mg	24	2	He	8.036	4.7	11103	2.0	100	
Al	27	2	He	-0.705	-15.3	880	6.3	5	
K	39	2	He	-6.846	-18.1	214498	0.7	100	
Ca	43	2	He	2.413	320.5	80	33.1	100	
Ca	44	2	He	3.167	19.3	1860	3.8	100	
V	51	2	He	-0.110	-25.2	7661	1.8	2.5	
Cr	52	2	He	-0.151	-30.8	6128	4.7	2.5	
Mn	55	2	He	-0.098	-13.4	1623	3.6	2.5	
Fe	56	2	He	7.718	2.9	90635	2.2	100	
Co	59	2	He	0.072	13.4	1020	12.2	2.5	
Ni	60	2	He	-0.160	-26.2	497	22.3	2.5	
Cu	63	2	He	-0.114	-21.4	2267	8.6	2	
Zn	66	2	He	-0.227	-18.6	600	13.2	2.5	
As	75	2	He	0.016	75.5	486	5.5	2.5	
Se	78	2	He	0.019	751.8	209	7.8	2	
B	11	1	nogas	4.059	36.7	60163	7.5	10	
Si	28	1	nogas	-82.336	-59.2	3146625	0.6	5	
Ca	43	1	nogas	4.624	47.2	1213	5.4	100	
Ca	44	1	nogas	-18.439	-7.1	110443	0.6	100	
Fe	56	1	nogas	-0.822	-732.6	3556492	2.5	100	
Se	77	1	nogas	-24.721	-3.1	27925	1.9	2.5	
Se	82	1	nogas	0.382	26.4	303	7.6	2	

Continuing Calibration Blank (CCB) Report

Mo	95	1	nogas	0.391	45.0	2540	35.9	2.5	
Sn	118	1	nogas	0.318	24.3	3847	11.9	5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Ba	137	1	nogas	0.108	29.0	917	10.9	2.5	
Sb	121	2	He	0.516	9.1	3650	10.0	2.5	
P	31	1	nogas	2.170	14.9	101370	0.7	10	
La	139	1	nogas	0.655	1165.4	103	29.6	2.5	
Au	197	1	nogas	244.429	48.9	33	17.3	2.5	CCB Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1105831	3.53	1118108	98.90	70	125	
Ge	72	1	nogas	3422241	1.24	3396393	100.76	70	125	
In	115	1	nogas	3190685	3.07	3166421	100.77	70	125	
Bi	209	1	nogas	2247073	3.49	2159119	104.07	70	125	
Ge	72	2	He	1164676	1.89	1189986	97.87	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	309_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T22:06:54-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	96.812	9.299	686240	1.86	100	96.8	90	110	
Na	23	1	nogas	9730.935	4.491	237579239	1.50	10000	97.3	90	110	
Mg	24	1	nogas	10008.832	6.297	152961574	1.89	10000	100.1	90	110	
Al	27	1	nogas	101.513	13.919	1841873	7.27	100	101.5	90	110	
K	39	1	nogas	10122.589	7.424	212999884	2.69	10000	101.2	90	110	
Ti	47	1	nogas	98.508	6.209	168400	1.37	100	98.5	90	110	
V	51	1	nogas	109.698	9.531	3183278	2.34	100	109.7	90	110	
Cr	52	1	nogas	105.537	4.740	2184914	4.15	100	105.5	90	110	
Mn	55	1	nogas	104.174	3.016	2622954	6.57	100	104.2	90	110	
Co	59	1	nogas	101.542	1.826	2162545	8.88	100	101.5	90	110	
Ni	60	1	nogas	100.698	10.654	481255	3.17	100	100.7	90	110	
Cu	63	1	nogas	100.433	9.589	1136632	2.82	100	100.4	90	110	
Zn	66	1	nogas	99.789	6.856	382765	1.32	100	99.8	90	110	
As	75	1	nogas	97.557	8.262	610507	0.89	100	97.6	90	110	
Sr	88	1	nogas	102.154	2.136	2732624	8.12	100	102.2	90	110	
Ag	107	1	nogas	97.083	2.783	1249384	5.50	100	97.1	90	110	
Cd	111	1	nogas	97.394	5.632	278445	3.82	100	97.4	90	110	
Sb	121	1	nogas	100.688	7.996	1246876	0.59	100	100.7	90	110	
Tl	205	1	nogas	102.580	1.545	1822321	7.63	100	102.6	90	110	
Pb	208	1	nogas	106.776	5.003	2438107	5.00	100	106.8	90	110	
U	238	1	nogas	104.990	1.019	2324615	9.14	100	105.0	90	110	
[Pb]	206	1	nogas	99.496	9.214	598425	1.47	100	99.5	90	110	
[Pb]	207	1	nogas	98.091	8.681	514229	2.20	100	98.1	90	110	
Na	23	2	He	9993.583	3.808	18517911	2.05	10000	99.9	90	110	
Mg	24	2	He	9962.643	2.411	10352254	0.49	10000	99.6	90	110	
Al	27	2	He	98.056	2.209	61102	0.50	100	98.1	90	110	
K	39	2	He	9827.826	2.474	12180571	2.43	10000	98.3	90	110	
Ca	43	2	He	9707.852	2.987	32398	1.24	10000	97.1	90	110	
Ca	44	2	He	9939.622	2.419	549161	0.20	10000	99.4	90	110	
V	51	2	He	98.800	2.389	765361	0.97	100	98.8	90	110	
Cr	52	2	He	98.764	1.223	819215	1.36	100	98.8	90	110	
Mn	55	2	He	99.976	1.538	600484	1.02	100	100.0	90	110	
Fe	56	2	He	10159.367	1.571	73533726	1.27	10000	101.6	90	110	
Co	59	2	He	99.503	1.321	1109438	1.14	100	99.5	90	110	
Ni	60	2	He	101.629	1.539	282440	1.04	100	101.6	90	110	
Cu	63	2	He	101.734	2.752	705237	0.67	100	101.7	90	110	
Zn	66	2	He	99.936	0.786	165736	1.68	100	99.9	90	110	
As	75	2	He	99.153	1.776	159365	1.40	100	99.2	90	110	
Se	78	2	He	96.824	4.233	12890	2.47	100	96.8	90	110	
B	11	1	nogas	473.502	9.289	2021495	0.99	500	94.7	90	110	
Si	28	1	nogas	4821.182	13.926	8454652	1.57	5000	96.4	90	110	
Ca	43	1	nogas	10110.793	9.760	357417	2.43	10000	101.1	90	110	
Ca	44	1	nogas	9988.479	12.832	5822387	5.44	10000	99.9	90	110	
Fe	56	1	nogas	10158.262	9.370	222750488	2.30	10000	101.6	90	110	
Se	77	1	nogas	85.770	23.841	54461	4.67	100	85.8	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	100.120	7.205	26620	2.29	100	100.1	90	110	
Mo	95	1	nogas	96.739	7.226	513780	0.68	100	96.7	90	110	
Sn	118	1	nogas	96.312	7.909	717226	1.26	100	96.3	90	110	
Ba	137	1	nogas	98.295	9.699	398433	0.87	100	98.3	90	110	
Sb	121	2	He	101.667	3.425	652774	1.53	100	101.7	90	110	
Li	7	1	nogas	92.161	4.975	1400456	5.79	100	92.2	90	110	
P	31	1	nogas	486.397	8.581	947299	0.70	500	97.3	90	110	
La	139	1	nogas	155.760	10.912	653	5.38	100	155.8	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	255.715	69.629	33	17.32	100	255.7	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	nogas	1056734	8.51	1118108	94.51	70	125	
Ge	72	1	nogas	3389787	7.14	3396393	99.81	70	125	
In	115	1	nogas	3147909	8.44	3166421	99.42	70	125	
Bi	209	1	nogas	2238956	8.32	2159119	103.70	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1134661	2.34	1189986	95.35	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	310_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T22:08:54-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	0.100	26.4	1000	19.7	1	
Na	23	1	nogas	30.764	4.5	1289399	3.7	100	
Mg	24	1	nogas	11.072	6.7	198666	6.8	100	
Al	27	1	nogas	-0.062	-34.3	27140	2.4	5	
K	39	1	nogas	19.461	35.7	9479028	0.5	100	
Ti	47	1	nogas	0.194	39.9	730	19.2	2.5	
V	51	1	nogas	-0.329	-564.2	589645	6.4	2.5	
Cr	52	1	nogas	-0.352	-38.2	53380	3.8	2.5	
Mn	55	1	nogas	-0.114	-37.3	28629	2.8	2.5	
Co	59	1	nogas	0.100	15.6	2937	11.3	2.5	
Ni	60	1	nogas	-0.194	-20.6	1377	14.9	2.5	
Cu	63	1	nogas	0.162	24.6	4417	8.7	2	
Zn	66	1	nogas	-0.155	-4.7	1780	1.9	2.5	
As	75	1	nogas	-0.733	-155.0	100007	4.7	2.5	
Sr	88	1	nogas	0.151	11.4	5534	7.6	2.5	
Ag	107	1	nogas	0.079	13.4	1200	12.4	2.5	
Cd	111	1	nogas	0.098	6.3	330	6.1	1	
Sb	121	1	nogas	0.251	7.1	3514	7.4	2.5	
Tl	205	1	nogas	0.672	54.5	12656	53.3	1	
Pb	208	1	nogas	0.121	11.6	3274	9.8	2.5	
U	238	1	nogas	0.189	32.9	4291	34.1	2.5	
[Pb]	206	1	nogas	0.114	1.4	827	2.5	2.5	
[Pb]	207	1	nogas	0.117	12.9	737	11.7	2.5	
Na	23	2	He	22.456	1.5	95143	2.4	100	
Mg	24	2	He	8.675	2.6	11437	3.4	100	
Al	27	2	He	-0.685	-10.1	867	4.8	5	
K	39	2	He	-7.461	-32.5	213749	1.4	100	
Ca	43	2	He	2.248	634.5	77	60.2	100	
Ca	44	2	He	4.547	46.5	1880	7.0	100	
V	51	2	He	0.052	92.0	8667	2.4	2.5	
Cr	52	2	He	-0.154	-25.5	5914	3.7	2.5	
Mn	55	2	He	-0.101	-25.8	1560	11.9	2.5	
Fe	56	2	He	8.137	1.8	90956	3.0	100	
Co	59	2	He	0.070	9.8	970	9.8	2.5	
Ni	60	2	He	-0.182	-13.0	423	15.7	2.5	
Cu	63	2	He	-0.110	-7.1	2224	1.6	2	
Zn	66	2	He	-0.147	-24.9	713	8.5	2.5	
As	75	2	He	0.063	50.0	547	9.1	2.5	
Se	78	2	He	0.193	62.6	226	7.2	2	
B	11	1	nogas	2.131	52.8	53255	9.1	10	
Si	28	1	nogas	-82.255	-105.4	3083233	1.8	5	
Ca	43	1	nogas	9.200	5.8	1350	2.7	100	
Ca	44	1	nogas	-20.309	-24.7	107151	1.7	100	
Fe	56	1	nogas	9.549	55.9	3708993	3.8	100	
Se	77	1	nogas	-3.437	-229.7	32499	5.0	2.5	
Se	82	1	nogas	0.279	65.0	270	16.1	2	

Continuing Calibration Blank (CCB) Report

Mo	95	1	nogas	0.305	41.8	2047	33.5	2.5	
Sn	118	1	nogas	0.255	30.9	3270	18.6	5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Ba	137	1	nogas	0.112	33.3	903	16.7	2.5	
Sb	121	2	He	0.169	1.5	1320	0.8	2.5	
P	31	1	nogas	5.251	26.6	104678	1.6	10	
La	139	1	nogas	9.409	101.0	130	26.6	2.5	CCB Main CR1 Failed
Au	197	1	nogas	-10.580	-3780.4	20	100.0	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	nogas	1136659	0.61	1118108	101.66	70	125	
Ge	72	1	nogas	3353618	1.31	3396393	98.74	70	125	
In	115	1	nogas	3078991	0.93	3166421	97.24	70	125	
Bi	209	1	nogas	2209346	2.59	2159119	102.33	70	125	
Ge	72	2	He	1129734	1.87	1189986	94.94	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	316_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T22:20:48-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	100.213	1.797	690086	2.73	100	100.2	90	110	
Na	23	1	nogas	9990.652	3.857	240538755	2.57	10000	99.9	90	110	
Mg	24	1	nogas	10312.386	3.286	155584162	3.80	10000	103.1	90	110	
Al	27	1	nogas	106.793	5.885	1947739	4.35	100	106.8	90	110	
K	39	1	nogas	10076.388	3.446	212750480	2.19	10000	100.8	90	110	
Ti	47	1	nogas	99.231	1.079	170216	2.91	100	99.2	90	110	
V	51	1	nogas	103.176	1.386	3041892	2.77	100	103.2	90	110	
Cr	52	1	nogas	100.604	2.249	2089776	0.42	100	100.6	90	110	
Mn	55	1	nogas	102.223	1.909	2576536	1.49	100	102.2	90	110	
Co	59	1	nogas	100.741	1.765	2143960	0.30	100	100.7	90	110	
Ni	60	1	nogas	100.138	3.311	480995	1.65	100	100.1	90	110	
Cu	63	1	nogas	101.868	4.379	1157772	2.52	100	101.9	90	110	
Zn	66	1	nogas	100.597	2.461	387125	1.39	100	100.6	90	110	
As	75	1	nogas	95.603	2.361	602425	1.06	100	95.6	90	110	
Sr	88	1	nogas	98.831	1.609	2643438	1.06	100	98.8	90	110	
Ag	107	1	nogas	100.994	2.350	1301792	4.07	100	101.0	90	110	
Cd	111	1	nogas	100.494	3.411	275948	1.64	100	100.5	90	110	
Sb	121	1	nogas	101.229	4.500	1258114	2.67	100	101.2	90	110	
Tl	205	1	nogas	101.273	4.753	1750249	2.81	100	101.3	90	110	
Pb	208	1	nogas	104.433	1.979	2384602	1.98	100	104.4	90	110	
U	238	1	nogas	106.582	1.549	2294568	0.74	100	106.6	90	110	
[Pb]	206	1	nogas	101.800	4.110	598512	2.99	100	101.8	90	110	
[Pb]	207	1	nogas	100.324	2.807	514002	2.42	100	100.3	90	110	
Na	23	2	He	9924.536	0.894	18569955	0.44	10000	99.2	90	110	
Mg	24	2	He	9893.091	0.906	10378731	0.21	10000	98.9	90	110	
Al	27	2	He	97.594	1.601	61403	1.37	100	97.6	90	110	
K	39	2	He	9574.033	1.809	11871776	1.77	10000	95.7	90	110	
Ca	43	2	He	9416.240	1.735	31734	2.27	10000	94.2	90	110	
Ca	44	2	He	9881.678	2.135	551261	2.47	10000	98.8	90	110	
V	51	2	He	96.622	1.578	755842	1.32	100	96.6	90	110	
Cr	52	2	He	98.377	1.218	823753	1.59	100	98.4	90	110	
Mn	55	2	He	99.099	0.879	600899	1.29	100	99.1	90	110	
Fe	56	2	He	10037.055	1.412	73333172	0.72	10000	100.4	90	110	
Co	59	2	He	98.481	3.498	1108293	2.90	100	98.5	90	110	
Ni	60	2	He	99.672	3.958	279614	3.46	100	99.7	90	110	
Cu	63	2	He	100.369	1.721	702511	1.10	100	100.4	90	110	
Zn	66	2	He	99.167	1.420	166013	1.75	100	99.2	90	110	
As	75	2	He	98.493	1.787	159804	1.53	100	98.5	90	110	
Se	78	2	He	95.886	1.838	12893	1.91	100	95.9	90	110	
B	11	1	nogas	493.126	1.180	2043622	2.00	500	98.6	90	110	
Si	28	1	nogas	4769.024	3.865	8433348	1.37	5000	95.4	90	110	
Ca	43	1	nogas	10153.873	2.571	360647	1.93	10000	101.5	90	110	
Ca	44	1	nogas	9963.711	1.066	5845108	2.90	10000	99.6	90	110	
Fe	56	1	nogas	10217.729	3.412	225014488	2.25	10000	102.2	90	110	
Se	77	1	nogas	89.480	9.671	55572	2.28	100	89.5	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	98.213	1.234	26213	2.48	100	98.2	90	110	
Mo	95	1	nogas	95.730	1.330	510293	1.19	100	95.7	90	110	
Sn	118	1	nogas	98.071	1.449	702699	2.22	100	98.1	90	110	
Ba	137	1	nogas	103.642	5.918	404242	3.01	100	103.6	90	110	
Sb	121	2	He	98.891	1.414	641175	1.72	100	98.9	90	110	
Li	7	1	nogas	100.490	2.710	1470662	2.51	100	100.5	90	110	
P	31	1	nogas	485.191	2.886	948722	1.04	500	97.0	90	110	
La	139	1	nogas	150.750	20.119	613	19.72	100	150.8	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	466.074	65.252	43	35.25	100	466.1	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	nogas	1021243	0.93	1118108	91.34	70	125	
Ge	72	1	nogas	3391016	1.86	3396393	99.84	70	125	
In	115	1	nogas	3016115	2.90	3166421	95.25	70	125	
Bi	209	1	nogas	2178522	2.22	2159119	100.90	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1145187	0.73	1189986	96.24	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	317_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T22:22:48-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	0.053	33.0	637	20.9	1	
Na	23	1	nogas	7.588	21.4	751217	3.7	100	
Mg	24	1	nogas	5.122	24.7	111620	15.4	100	
Al	27	1	nogas	-0.630	-5.5	16995	2.0	5	
K	39	1	nogas	11.731	81.0	9308573	0.4	100	
Ti	47	1	nogas	0.076	37.1	527	7.9	2.5	
V	51	1	nogas	-1.397	-66.1	563973	3.4	2.5	
Cr	52	1	nogas	-0.356	-15.7	53216	0.6	2.5	
Mn	55	1	nogas	-0.205	-2.8	26356	1.8	2.5	
Co	59	1	nogas	0.053	19.2	1957	12.0	2.5	
Ni	60	1	nogas	-0.286	-5.7	940	9.7	2.5	
Cu	63	1	nogas	0.047	72.4	3127	12.3	2	
Zn	66	1	nogas	-0.354	-5.5	1023	7.6	2.5	
As	75	1	nogas	-0.701	-101.5	100043	3.6	2.5	
Sr	88	1	nogas	0.031	14.5	2367	4.1	2.5	
Ag	107	1	nogas	0.042	8.1	733	7.5	2.5	
Cd	111	1	nogas	0.061	71.8	227	55.5	1	
Sb	121	1	nogas	0.173	26.1	2550	21.0	2.5	
Tl	205	1	nogas	0.605	66.9	11422	60.9	1	
Pb	208	1	nogas	0.071	34.1	2140	25.9	2.5	
U	238	1	nogas	0.150	48.9	3444	45.2	2.5	
[Pb]	206	1	nogas	0.064	47.9	530	33.2	2.5	
[Pb]	207	1	nogas	0.075	44.9	517	31.9	2.5	
Na	23	2	He	2.678	59.8	59032	4.3	100	
Mg	24	2	He	2.429	16.8	4997	7.9	100	
Al	27	2	He	-1.325	-8.7	480	14.6	5	
K	39	2	He	-14.956	-7.2	204629	0.6	100	
Ca	43	2	He	-8.934	-59.3	40	43.3	100	
Ca	44	2	He	-6.132	-26.7	1300	6.2	100	
V	51	2	He	-0.026	-87.3	8115	0.9	2.5	
Cr	52	2	He	-0.204	-32.7	5541	8.8	2.5	
Mn	55	2	He	-0.207	-7.7	930	9.7	2.5	
Fe	56	2	He	3.020	19.3	54340	7.0	100	
Co	59	2	He	0.033	20.1	557	13.2	2.5	
Ni	60	2	He	-0.252	-19.0	230	57.5	2.5	
Cu	63	2	He	-0.230	-5.8	1407	7.8	2	
Zn	66	2	He	-0.356	-17.0	370	25.8	2.5	
As	75	2	He	0.017	93.6	476	5.1	2.5	
Se	78	2	He	-0.084	-112.4	191	5.3	2	
B	11	1	nogas	0.169	673.7	44115	10.5	10	
Si	28	1	nogas	-90.753	-45.6	3069462	0.9	5	
Ca	43	1	nogas	-4.272	-48.3	877	8.7	100	
Ca	44	1	nogas	-32.448	-3.0	100110	1.4	100	
Fe	56	1	nogas	1.495	329.2	3529618	2.6	100	
Se	77	1	nogas	-1.329	-337.9	32964	3.2	2.5	
Se	82	1	nogas	0.112	87.6	227	12.7	2	

Continuing Calibration Blank (CCB) Report

Mo	95	1	nogas	0.227	56.8	1630	41.6	2.5	
Sn	118	1	nogas	0.257	51.8	3277	25.5	5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Ba	137	1	nogas	-0.016	-189.0	393	27.2	2.5	
Sb	121	2	He	0.119	10.1	1003	7.1	2.5	
P	31	1	nogas	4.797	28.3	103713	0.7	10	
La	139	1	nogas	-11.618	-9.3	57	10.2	2.5	
Au	197	1	nogas	651.402	79.7	53	47.2	2.5	CCB Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1130560	2.74	1118108	101.11	70	125	
Ge	72	1	nogas	3348205	1.64	3396393	98.58	70	125	
In	115	1	nogas	3098047	3.66	3166421	97.84	70	125	
Bi	209	1	nogas	2226338	3.30	2159119	103.11	70	125	
Ge	72	2	He	1135739	1.25	1189986	95.44	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	327_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T22:42:44-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	0.089	16.1	857	14.7	1	
Na	23	1	nogas	35.394	16.4	1295654	5.2	100	
Mg	24	1	nogas	7.655	19.9	136998	12.2	100	
Al	27	1	nogas	0.995	252.7	42195	96.1	5	
K	39	1	nogas	63.032	25.0	9591475	1.3	100	
Ti	47	1	nogas	0.159	144.8	617	56.7	2.5	
V	51	1	nogas	-2.422	-46.4	501556	5.3	2.5	
Cr	52	1	nogas	-0.300	-20.5	50442	0.5	2.5	
Mn	55	1	nogas	-0.109	-23.7	26666	1.2	2.5	
Co	59	1	nogas	0.078	3.1	2304	2.5	2.5	
Ni	60	1	nogas	-0.199	-9.2	1253	5.6	2.5	
Cu	63	1	nogas	0.300	29.2	5524	15.2	2	
Zn	66	1	nogas	-0.344	-15.2	983	16.9	2.5	
As	75	1	nogas	-0.619	-132.9	93271	4.1	2.5	
Sr	88	1	nogas	0.101	8.8	3917	7.3	2.5	
Ag	107	1	nogas	0.064	31.8	937	24.3	2.5	
Cd	111	1	nogas	0.064	26.0	217	17.5	1	
Sb	121	1	nogas	0.550	5.1	6675	6.3	2.5	
Tl	205	1	nogas	0.695	41.8	11692	40.8	1	
Pb	208	1	nogas	0.079	26.6	2323	20.8	2.5	
U	238	1	nogas	0.160	18.5	3287	19.2	2.5	
[Pb]	206	1	nogas	0.095	30.4	640	24.6	2.5	
[Pb]	207	1	nogas	0.080	24.3	490	20.1	2.5	
Na	23	2	He	22.585	9.5	96801	4.6	100	
Mg	24	2	He	4.406	11.4	7125	8.1	100	
Al	27	2	He	-0.654	-134.5	901	60.8	5	
K	39	2	He	6.924	29.2	231251	1.1	100	
Ca	43	2	He	-5.118	-35.8	53	10.8	100	
Ca	44	2	He	-4.273	-31.3	1417	5.9	100	
V	51	2	He	-0.131	-14.3	7379	1.8	2.5	
Cr	52	2	He	-0.194	-4.7	5678	1.2	2.5	
Mn	55	2	He	-0.183	-8.4	1083	9.2	2.5	
Fe	56	2	He	4.380	5.5	64827	3.4	100	
Co	59	2	He	0.099	90.2	1301	76.2	2.5	
Ni	60	2	He	-0.241	-9.0	263	22.9	2.5	
Cu	63	2	He	-0.104	-46.7	2304	14.6	2	
Zn	66	2	He	-0.399	-10.4	303	21.9	2.5	
As	75	2	He	0.009	98.5	467	3.7	2.5	
Se	78	2	He	-0.159	-77.6	183	8.8	2	
B	11	1	nogas	4.618	44.4	59999	11.2	10	
Si	28	1	nogas	319.892	39.4	3261441	2.3	5	CCB Main CR1 Failed
Ca	43	1	nogas	4.422	160.3	1093	19.3	100	
Ca	44	1	nogas	-12.185	-51.3	103585	1.4	100	
Fe	56	1	nogas	12.480	23.1	3495780	2.0	100	
Se	77	1	nogas	-5.478	-131.1	29675	5.3	2.5	
Se	82	1	nogas	0.470	53.2	297	19.2	2	

Continuing Calibration Blank (CCB) Report

Mo	95	1	nogas	0.340	29.1	2063	22.5	2.5	
Sn	118	1	nogas	0.322	14.6	3480	7.1	5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Ba	137	1	nogas	0.027	18.0	523	1.1	2.5	
Sb	121	2	He	0.430	7.4	3034	7.0	2.5	
P	31	1	nogas	9.017	12.7	103093	0.8	10	
La	139	1	nogas	-6.133	-85.4	70	24.7	2.5	
Au	197	1	nogas	555.922	103.1	43	58.1	2.5	CCB Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1060079	3.39	1118108	94.81	70	125	
Ge	72	1	nogas	3108690	1.81	3396393	91.53	70	125	
In	115	1	nogas	2855647	2.97	3166421	90.19	70	125	
Bi	209	1	nogas	1985683	1.50	2159119	91.97	70	125	
Ge	72	2	He	1146487	0.71	1189986	96.34	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	329_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T22:47:49-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	96.973	1.909	681280	2.43	100	97.0	90	110	
Na	23	1	nogas	10232.894	4.055	228941513	0.85	10000	102.3	90	110	
Mg	24	1	nogas	10680.283	3.513	149701958	0.70	10000	106.8	90	110	
Al	27	1	nogas	103.687	2.972	1870117	0.33	100	103.7	90	110	
K	39	1	nogas	10203.661	3.512	212784205	1.71	10000	102.0	90	110	
Ti	47	1	nogas	99.499	2.469	168626	2.09	100	99.5	90	110	
V	51	1	nogas	99.787	3.872	2925601	0.45	100	99.8	90	110	
Cr	52	1	nogas	101.752	4.464	2087282	1.25	100	101.8	90	110	
Mn	55	1	nogas	102.263	3.379	2546512	0.55	100	102.3	90	110	
Co	59	1	nogas	103.183	2.317	2170241	1.76	100	103.2	90	110	
Ni	60	1	nogas	101.499	3.522	481738	0.91	100	101.5	90	110	
Cu	63	1	nogas	101.392	2.634	1139135	1.04	100	101.4	90	110	
Zn	66	1	nogas	101.039	1.986	384298	1.61	100	101.0	90	110	
As	75	1	nogas	99.849	3.096	617146	0.99	100	99.8	90	110	
Sr	88	1	nogas	100.220	3.544	2648231	0.66	100	100.2	90	110	
Ag	107	1	nogas	104.406	1.972	1329447	1.47	100	104.4	90	110	
Cd	111	1	nogas	104.303	2.074	283538	0.99	100	104.3	90	110	
Sb	121	1	nogas	101.752	3.979	1249716	0.86	100	101.8	90	110	
Tl	205	1	nogas	101.427	8.319	1702340	3.20	100	101.4	90	110	
Pb	208	1	nogas	104.149	1.287	2378128	1.29	100	104.1	90	110	
U	238	1	nogas	111.041	3.914	2325190	4.24	100	111.0	90	110	CCV Main CR1-2 Failed
[Pb]	206	1	nogas	102.819	7.620	586991	1.88	100	102.8	90	110	
[Pb]	207	1	nogas	103.914	7.768	516845	2.18	100	103.9	90	110	
Na	23	2	He	9886.342	0.552	18301841	0.58	10000	98.9	90	110	
Mg	24	2	He	9983.728	0.530	10362768	1.18	10000	99.8	90	110	
Al	27	2	He	101.077	1.103	62874	1.61	100	101.1	90	110	
K	39	2	He	9929.403	0.544	12304162	0.53	10000	99.3	90	110	
Ca	43	2	He	10004.720	1.187	33353	1.86	10000	100.0	90	110	
Ca	44	2	He	10120.019	0.636	558485	1.14	10000	101.2	90	110	
V	51	2	He	100.968	1.000	781073	1.17	100	101.0	90	110	
Cr	52	2	He	100.417	2.059	831648	1.57	100	100.4	90	110	
Mn	55	2	He	101.650	2.994	609681	2.64	100	101.6	90	110	
Fe	56	2	He	10123.778	2.304	73177429	1.92	10000	101.2	90	110	
Co	59	2	He	102.173	1.268	1137690	0.85	100	102.2	90	110	
Ni	60	2	He	103.963	0.779	288539	0.94	100	104.0	90	110	
Cu	63	2	He	104.419	0.876	722980	0.73	100	104.4	90	110	
Zn	66	2	He	102.635	0.854	169956	1.38	100	102.6	90	110	
As	75	2	He	102.213	1.063	164053	0.50	100	102.2	90	110	
Se	78	2	He	101.380	1.498	13474	1.06	100	101.4	90	110	
B	11	1	nogas	477.850	3.503	2020817	1.03	500	95.6	90	110	
Si	28	1	nogas	5047.704	5.718	8633740	0.50	5000	101.0	90	110	
Ca	43	1	nogas	10202.026	2.578	358108	1.89	10000	102.0	90	110	
Ca	44	1	nogas	9808.907	2.387	5686925	1.74	10000	98.1	90	110	
Fe	56	1	nogas	10320.344	3.675	224526280	0.52	10000	103.2	90	110	
Se	77	1	nogas	85.550	8.290	53984	2.74	100	85.5	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	101.904	2.642	26864	1.41	100	101.9	90	110	
Mo	95	1	nogas	98.644	3.630	519480	1.62	100	98.6	90	110	
Sn	118	1	nogas	100.116	1.969	709862	0.64	100	100.1	90	110	
Ba	137	1	nogas	105.249	1.773	406737	2.89	100	105.2	90	110	
Sb	121	2	He	105.513	1.322	676798	1.56	100	105.5	90	110	
Li	7	1	nogas	100.001	3.965	1493508	3.39	100	100.0	90	110	
P	31	1	nogas	492.105	3.760	949514	1.68	500	98.4	90	110	
La	139	1	nogas	137.386	2.033	560	3.57	100	137.4	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	294.149	123.589	33	45.83	100	294.1	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	nogas	1042462	3.94	1118108	93.23	70	125	
Ge	72	1	nogas	3352046	3.18	3396393	98.69	70	125	
In	115	1	nogas	2984897	1.95	3166421	94.27	70	125	
Bi	209	1	nogas	2120533	5.59	2159119	98.21	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1132975	0.71	1189986	95.21	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	339_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T23:07:32-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	106.777	12.612	807001	1.50	100	106.8	90	110	
Na	23	1	nogas	11097.102	12.256	291707040	1.17	10000	111.0	90	110	CCV Main CR1-2 Failed
Mg	24	1	nogas	11052.733	13.641	181826987	2.34	10000	110.5	90	110	CCV Main CR1-2 Failed
Al	27	1	nogas	111.836	12.563	2308108	2.61	100	111.8	90	110	CCV Main CR1-2 Failed
K	39	1	nogas	10770.566	8.707	257389797	2.50	10000	107.7	90	110	
Ti	47	1	nogas	105.936	11.219	205722	0.89	100	105.9	90	110	
V	51	1	nogas	118.689	14.102	3858634	1.89	100	118.7	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	107.002	12.459	2511724	1.81	100	107.0	90	110	
Mn	55	1	nogas	109.444	12.112	3120142	1.67	100	109.4	90	110	
Co	59	1	nogas	112.285	11.197	2706559	1.37	100	112.3	90	110	CCV Main CR1-2 Failed
Ni	60	1	nogas	110.801	10.735	602842	0.63	100	110.8	90	110	CCV Main CR1-2 Failed
Cu	63	1	nogas	110.034	10.901	1417020	1.32	100	110.0	90	110	CCV Main CR1-2 Failed
Zn	66	1	nogas	108.047	11.710	470650	2.12	100	108.0	90	110	
As	75	1	nogas	110.358	12.784	769550	2.02	100	110.4	90	110	CCV Main CR1-2 Failed
Sr	88	1	nogas	110.021	11.683	3331717	1.30	100	110.0	90	110	CCV Main CR1-2 Failed
Ag	107	1	nogas	108.918	14.160	1586387	4.14	100	108.9	90	110	
Cd	111	1	nogas	110.405	14.805	352527	3.04	100	110.4	90	110	CCV Main CR1-2 Failed
Sb	121	1	nogas	109.189	10.550	1538327	1.41	100	109.2	90	110	
Tl	205	1	nogas	114.833	16.566	2128710	3.55	100	114.8	90	110	CCV Main CR1-2 Failed
Pb	208	1	nogas	128.012	1.601	2922887	1.60	100	128.0	90	110	CCV Main CR1-2 Failed
U	238	1	nogas	119.683	14.343	2768723	0.49	100	119.7	90	110	CCV Main CR1-2 Failed
[Pb]	206	1	nogas	115.252	16.141	726936	2.80	100	115.3	90	110	CCV Main CR1-2 Failed
[Pb]	207	1	nogas	114.398	14.500	629674	0.71	100	114.4	90	110	CCV Main CR1-2 Failed
Na	23	2	He	10147.585	2.272	22396617	1.87	10000	101.5	90	110	
Mg	24	2	He	9808.598	1.356	12138869	0.86	10000	98.1	90	110	
Al	27	2	He	97.813	2.414	72595	2.34	100	97.8	90	110	
K	39	2	He	11556.491	1.200	14283878	1.18	10000	115.6	90	110	CCV Main CR1-2 Failed
Ca	43	2	He	9851.025	2.059	39155	1.35	10000	98.5	90	110	
Ca	44	2	He	9929.514	2.006	653389	1.70	10000	99.3	90	110	
V	51	2	He	100.971	0.968	931341	0.50	100	101.0	90	110	
Cr	52	2	He	101.102	2.453	998347	1.99	100	101.1	90	110	
Mn	55	2	He	100.931	2.571	721911	2.59	100	100.9	90	110	
Fe	56	2	He	10154.344	3.081	87522175	2.96	10000	101.5	90	110	
Co	59	2	He	101.797	2.038	1351716	2.55	100	101.8	90	110	
Ni	60	2	He	103.581	0.647	342783	0.10	100	103.6	90	110	
Cu	63	2	He	105.184	2.057	868304	1.33	100	105.2	90	110	
Zn	66	2	He	103.940	1.950	205194	1.40	100	103.9	90	110	
As	75	2	He	102.454	0.875	196078	0.28	100	102.5	90	110	
Se	78	2	He	103.971	2.307	16471	2.49	100	104.0	90	110	
B	11	1	nogas	545.165	11.570	2477654	2.23	500	109.0	90	110	
Si	28	1	nogas	6053.276	44.752	11008871	19.18	5000	121.1	90	110	CCV Main CR1-2 Failed
Ca	43	1	nogas	11031.305	13.297	443086	3.06	10000	110.3	90	110	CCV Main CR1-2 Failed
Ca	44	1	nogas	10769.038	13.183	7133973	2.53	10000	107.7	90	110	
Fe	56	1	nogas	10693.060	10.987	266629014	1.07	10000	106.9	90	110	
Se	77	1	nogas	126.644	22.369	73284	2.79	100	126.6	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	108.530	9.165	32823	1.88	100	108.5	90	110	
Mo	95	1	nogas	110.031	9.385	665009	1.15	100	110.0	90	110	CCV Main CR1-2 Failed
Sn	118	1	nogas	106.786	12.826	890834	1.07	100	106.8	90	110	
Ba	137	1	nogas	108.091	14.592	490604	3.16	100	108.1	90	110	
Sb	121	2	He	104.505	1.137	799250	0.42	100	104.5	90	110	
Li	7	1	nogas	110.536	14.154	1765439	2.93	100	110.5	90	110	CCV Main CR1-2 Failed
P	31	1	nogas	535.963	11.770	1176078	0.77	500	107.2	90	110	
La	139	1	nogas	178.509	20.102	837	26.48	100	178.5	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	387.947	53.216	43	35.25	100	387.9	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	nogas	1131622	11.23	1118108	101.21	70	125	
Ge	72	1	nogas	3868365	9.82	3396393	113.90	70	125	
In	115	1	nogas	3548100	12.23	3166421	112.05	70	125	
Bi	209	1	nogas	2372635	14.27	2159119	109.89	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1350949	0.72	1189986	113.53	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	340_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T23:09:31-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	0.077	23.6	877	19.4	1	
Na	23	1	nogas	91.294	5.9	3203718	4.0	100	
Mg	24	1	nogas	22.853	116.0	440011	105.4	100	
Al	27	1	nogas	-0.273	-215.1	27869	42.7	5	
K	39	1	nogas	29.893	45.8	11605451	0.9	100	
Ti	47	1	nogas	0.091	77.5	663	20.5	2.5	
V	51	1	nogas	4.144	13.9	832326	3.8	2.5	CCB Main CR1 Failed
Cr	52	1	nogas	-0.077	-18.3	70554	1.5	2.5	
Mn	55	1	nogas	-0.284	-5.1	29310	1.6	2.5	
Co	59	1	nogas	0.047	26.4	2193	12.6	2.5	
Ni	60	1	nogas	-0.035	-145.4	2547	9.3	2.5	
Cu	63	1	nogas	0.979	25.4	16238	18.6	2	
Zn	66	1	nogas	-0.231	-16.3	1790	10.9	2.5	
As	75	1	nogas	0.446	42.0	127164	2.3	2.5	
Sr	88	1	nogas	0.181	4.3	7595	4.4	2.5	
Ag	107	1	nogas	0.046	18.5	940	11.8	2.5	
Cd	111	1	nogas	0.059	38.9	270	30.3	1	
Sb	121	1	nogas	0.196	13.1	3397	10.2	2.5	
Tl	205	1	nogas	0.642	54.8	14358	52.9	1	
Pb	208	1	nogas	0.091	9.6	2583	7.7	2.5	
U	238	1	nogas	0.132	38.5	3607	38.1	2.5	
[Pb]	206	1	nogas	0.069	5.1	663	5.7	2.5	
[Pb]	207	1	nogas	0.069	23.5	573	15.6	2.5	
Na	23	2	He	66.788	4.8	218288	2.6	100	
Mg	24	2	He	4.623	10.3	8942	5.4	100	
Al	27	2	He	-1.241	-10.6	653	15.3	5	
K	39	2	He	28.897	1.0	257986	0.1	100	
Ca	43	2	He	4.303	126.3	103	20.1	100	
Ca	44	2	He	7.496	43.9	2520	7.8	100	
V	51	2	He	0.210	11.2	12195	0.4	2.5	
Cr	52	2	He	-0.212	-3.0	6725	1.5	2.5	
Mn	55	2	He	-0.196	-12.8	1227	16.5	2.5	
Fe	56	2	He	3.650	14.2	72388	5.7	100	
Co	59	2	He	0.036	7.3	727	3.5	2.5	
Ni	60	2	He	-0.219	-5.9	397	12.7	2.5	
Cu	63	2	He	0.179	6.9	5208	3.1	2	
Zn	66	2	He	-0.338	-13.8	493	19.5	2.5	
As	75	2	He	-0.013	-96.8	526	3.8	2.5	
Se	78	2	He	-0.005	-6047.9	247	20.1	2	
B	11	1	nogas	1.192	26.6	52099	4.0	10	
Si	28	1	nogas	-503.908	-14.5	3146659	1.1	5	
Ca	43	1	nogas	12.489	37.2	1753	9.4	100	
Ca	44	1	nogas	-35.021	-15.3	118368	2.0	100	
Fe	56	1	nogas	13.630	39.2	4547106	1.4	100	
Se	77	1	nogas	0.451	1056.6	40095	4.8	2.5	
Se	82	1	nogas	0.001	14925.4	237	12.9	2	
Mo	95	1	nogas	0.901	21.5	6195	17.8	2.5	
Sn	118	1	nogas	0.213	44.5	3594	21.8	5	
Ba	137	1	nogas	0.038	48.8	740	10.7	2.5	

Continuing Calibration Blank (CCB) Report

Sb	121	2	He	0.125	14.7	1283	11.9	2.5	
P	31	1	nogas	8.867	14.7	132947	0.5	10	
La	139	1	nogas	-14.386	-46.9	57	50.9	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Au	197	1	nogas	90.963	317.6	30	57.7	2.5	CCB Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1208004	2.88	1118108	108.04	70	125	
Ge	72	1	nogas	4018562	1.95	3396393	118.32	70	125	
In	115	1	nogas	3746906	1.54	3166421	118.33	70	125	
Bi	209	1	nogas	2627176	2.33	2159119	121.68	70	125	
Ge	72	2	He	1395681	1.56	1189986	117.29	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	350_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T23:29:04-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	99.570	2.088	796412	1.30	100	99.6	90	110	
Na	23	1	nogas	9591.486	2.827	273205998	1.72	10000	95.9	90	110	
Mg	24	1	nogas	9711.585	0.972	173290433	0.99	10000	97.1	90	110	
Al	27	1	nogas	101.501	3.067	2173427	3.80	100	101.5	90	110	
K	39	1	nogas	10251.203	2.435	253575689	0.85	10000	102.5	90	110	
Ti	47	1	nogas	100.295	2.455	201646	2.52	100	100.3	90	110	
V	51	1	nogas	103.521	5.057	3574261	3.16	100	103.5	90	110	
Cr	52	1	nogas	101.507	7.010	2470077	5.19	100	101.5	90	110	
Mn	55	1	nogas	104.384	6.242	3082355	4.86	100	104.4	90	110	
Co	59	1	nogas	101.589	3.320	2534080	1.10	100	101.6	90	110	
Ni	60	1	nogas	102.871	4.568	579086	2.37	100	102.9	90	110	
Cu	63	1	nogas	105.000	2.982	1399190	0.88	100	105.0	90	110	
Zn	66	1	nogas	101.294	2.185	456987	1.06	100	101.3	90	110	
As	75	1	nogas	101.050	3.664	739384	1.42	100	101.1	90	110	
Sr	88	1	nogas	102.191	1.223	3204509	1.10	100	102.2	90	110	
Ag	107	1	nogas	103.479	3.836	1562577	1.87	100	103.5	90	110	
Cd	111	1	nogas	104.482	2.208	339184	1.85	100	104.5	90	110	
Sb	121	1	nogas	107.518	1.370	1567402	2.09	100	107.5	90	110	
Tl	205	1	nogas	104.118	3.231	2077019	2.72	100	104.1	90	110	
Pb	208	1	nogas	124.083	0.248	2833208	0.25	100	124.1	90	110	CCV Main CR1-2 Failed
U	238	1	nogas	111.798	3.324	2776870	2.55	100	111.8	90	110	CCV Main CR1-2 Failed
[Pb]	206	1	nogas	104.647	0.952	710060	0.17	100	104.6	90	110	
[Pb]	207	1	nogas	102.976	1.865	608752	1.21	100	103.0	90	110	
Na	23	2	He	9315.504	1.645	21618214	0.43	10000	93.2	90	110	
Mg	24	2	He	9243.573	0.658	12026642	1.25	10000	92.4	90	110	
Al	27	2	He	93.327	4.167	72863	2.53	100	93.3	90	110	
K	39	2	He	11531.417	1.121	14253370	1.10	10000	115.3	90	110	CCV Main CR1-2 Failed
Ca	43	2	He	9219.603	2.799	38527	2.16	10000	92.2	90	110	
Ca	44	2	He	9421.036	1.729	651752	0.45	10000	94.2	90	110	
V	51	2	He	94.239	2.156	914387	1.20	100	94.2	90	110	
Cr	52	2	He	93.955	2.027	975882	0.74	100	94.0	90	110	
Mn	55	2	He	95.064	2.632	714795	1.18	100	95.1	90	110	
Fe	56	2	He	9523.691	2.117	86283399	0.53	10000	95.2	90	110	
Co	59	2	He	94.746	1.526	1322548	2.18	100	94.7	90	110	
Ni	60	2	He	96.683	2.887	336413	2.68	100	96.7	90	110	
Cu	63	2	He	98.128	2.181	851803	1.57	100	98.1	90	110	
Zn	66	2	He	98.396	0.673	204298	1.94	100	98.4	90	110	
As	75	2	He	97.672	2.409	196498	0.89	100	97.7	90	110	
Se	78	2	He	97.290	2.600	16215	0.98	100	97.3	90	110	
B	11	1	nogas	490.973	4.374	2362823	2.18	500	98.2	90	110	
Si	28	1	nogas	4668.054	4.217	9757269	1.65	5000	93.4	90	110	
Ca	43	1	nogas	10297.046	3.151	428769	2.75	10000	103.0	90	110	
Ca	44	1	nogas	10111.583	2.220	6950257	1.81	10000	101.1	90	110	
Fe	56	1	nogas	10390.836	5.841	268123673	4.32	10000	103.9	90	110	
Se	77	1	nogas	90.094	11.977	65310	2.46	100	90.1	90	110	
Se	82	1	nogas	106.457	2.472	33281	1.22	100	106.5	90	110	
Mo	95	1	nogas	99.000	1.965	618624	1.00	100	99.0	90	110	
Sn	118	1	nogas	99.775	1.278	844914	1.56	100	99.8	90	110	
Ba	137	1	nogas	105.870	1.243	488464	0.93	100	105.9	90	110	
Sb	121	2	He	101.330	2.487	814557	1.02	100	101.3	90	110	
Li	7	1	nogas	103.294	2.234	1753292	1.56	100	103.3	90	110	
P	31	1	nogas	508.793	5.217	1161034	4.57	500	101.8	90	110	
La	139	1	nogas	127.049	2.563	627	2.44	100	127.0	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	-179.073	-151.630	13	114.56	100	-179.1	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	nogas	1186832	3.15	1118108	106.15	70	125	
Ge	72	1	nogas	3975796	2.34	3396393	117.06	70	125	
In	115	1	nogas	3563934	0.36	3166421	112.55	70	125	
Bi	209	1	nogas	2513303	0.82	2159119	116.40	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1420244	1.60	1189986	119.35	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	351_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T23:31:02-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	0.100	31.6	1100	23.7	1	
Na	23	1	nogas	66.171	8.5	2476278	5.2	100	
Mg	24	1	nogas	10.204	29.6	215904	22.7	100	
Al	27	1	nogas	-0.561	-7.2	21854	3.5	5	
K	39	1	nogas	-0.364	-3283.4	10868386	1.1	100	
Ti	47	1	nogas	0.095	50.7	670	13.3	2.5	
V	51	1	nogas	-1.676	-35.5	668368	2.9	2.5	
Cr	52	1	nogas	-0.359	-26.6	63706	2.4	2.5	
Mn	55	1	nogas	-0.231	-28.0	30809	4.8	2.5	
Co	59	1	nogas	0.076	34.2	2910	21.1	2.5	
Ni	60	1	nogas	-0.059	-62.5	2407	7.7	2.5	
Cu	63	1	nogas	0.438	31.5	8989	19.5	2	
Zn	66	1	nogas	-0.329	-18.4	1340	19.4	2.5	
As	75	1	nogas	-2.345	-22.1	109788	2.5	2.5	
Sr	88	1	nogas	0.074	29.8	4194	15.4	2.5	
Ag	107	1	nogas	0.064	21.9	1213	16.2	2.5	
Cd	111	1	nogas	0.090	17.0	373	12.1	1	
Sb	121	1	nogas	0.630	12.0	9773	10.3	2.5	
Tl	205	1	nogas	0.754	52.4	16283	51.8	1	
Pb	208	1	nogas	0.108	31.3	2980	25.9	2.5	
U	238	1	nogas	0.147	44.6	3911	44.7	2.5	
[Pb]	206	1	nogas	0.077	20.3	700	17.6	2.5	
[Pb]	207	1	nogas	0.107	36.2	790	31.8	2.5	
Na	23	2	He	44.423	8.1	165874	2.9	100	
Mg	24	2	He	4.109	7.2	8215	4.5	100	
Al	27	2	He	-1.051	-7.7	790	10.8	5	
K	39	2	He	14.045	16.8	239915	1.2	100	
Ca	43	2	He	4.450	112.8	103	20.1	100	
Ca	44	2	He	1.027	92.1	2067	6.6	100	
V	51	2	He	-0.026	-90.6	9886	2.7	2.5	
Cr	52	2	He	-0.268	-2.5	6111	2.7	2.5	
Mn	55	2	He	-0.164	-20.0	1447	14.8	2.5	
Fe	56	2	He	4.369	14.5	78045	5.5	100	
Co	59	2	He	0.049	18.1	897	11.0	2.5	
Ni	60	2	He	-0.216	-10.1	400	17.5	2.5	
Cu	63	2	He	-0.068	-23.3	3084	4.6	2	
Zn	66	2	He	-0.317	-16.1	530	16.8	2.5	
As	75	2	He	-0.018	-106.6	511	9.7	2.5	
Se	78	2	He	-0.234	-47.7	208	5.8	2	
B	11	1	nogas	1.287	66.4	54382	6.8	10	
Si	28	1	nogas	-464.509	-12.6	3194539	1.9	5	
Ca	43	1	nogas	118.205	151.9	6259	122.8	100	CCB Main CR1 Failed
Ca	44	1	nogas	-43.144	-14.5	112687	2.2	100	
Fe	56	1	nogas	-7.105	-106.0	4008925	3.3	100	
Se	77	1	nogas	-15.013	-35.8	35552	4.1	2.5	
Se	82	1	nogas	-0.137	-73.9	193	15.8	2	
Mo	95	1	nogas	0.382	31.2	2927	24.5	2.5	
Sn	118	1	nogas	0.283	33.2	4214	18.1	5	
Ba	137	1	nogas	0.003	1142.6	570	26.0	2.5	

Continuing Calibration Blank (CCB) Report

Sb	121	2	He	0.546	8.8	4561	7.8	2.5	
P	31	1	nogas	6.374	15.1	127608	0.1	10	
La	139	1	nogas	-5.024	-103.3	97	23.9	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Au	197	1	nogas	158.571	242.0	33	69.3	2.5	CCB Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1250742	2.19	1118108	111.86	70	125	
Ge	72	1	nogas	4013510	1.66	3396393	118.17	70	125	
In	115	1	nogas	3746751	2.14	3166421	118.33	70	125	
Bi	209	1	nogas	2554870	2.33	2159119	118.33	70	125	
Ge	72	2	He	1383631	3.76	1189986	116.27	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	362_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T23:52:46-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	99.164	3.211	812200	1.92	100	99.2	90	110	
Na	23	1	nogas	10267.875	3.027	277980990	2.46	10000	102.7	90	110	
Mg	24	1	nogas	10394.068	0.619	176302646	1.45	10000	103.9	90	110	
Al	27	1	nogas	105.472	1.931	2176232	2.43	100	105.5	90	110	
K	39	1	nogas	10117.880	2.233	241509047	2.23	10000	101.2	90	110	
Ti	47	1	nogas	103.192	2.057	200031	1.80	100	103.2	90	110	
V	51	1	nogas	114.413	3.231	3737998	2.52	100	114.4	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	102.280	2.441	2400938	2.23	100	102.3	90	110	
Mn	55	1	nogas	102.174	2.191	2911441	2.15	100	102.2	90	110	
Co	59	1	nogas	102.466	1.287	2465313	0.73	100	102.5	90	110	
Ni	60	1	nogas	103.358	1.306	561304	1.30	100	103.4	90	110	
Cu	63	1	nogas	103.687	1.297	1332690	1.17	100	103.7	90	110	
Zn	66	1	nogas	102.286	1.579	444975	0.99	100	102.3	90	110	
As	75	1	nogas	102.840	1.678	723693	1.82	100	102.8	90	110	
Sr	88	1	nogas	102.636	2.709	3103199	2.20	100	102.6	90	110	
Ag	107	1	nogas	100.632	1.447	1465940	2.05	100	100.6	90	110	
Cd	111	1	nogas	102.952	2.251	322850	0.06	100	103.0	90	110	
Sb	121	1	nogas	104.000	0.761	1461881	1.34	100	104.0	90	110	
Tl	205	1	nogas	103.233	3.217	2018237	1.04	100	103.2	90	110	
Pb	208	1	nogas	120.568	1.583	2752966	1.58	100	120.6	90	110	CCV Main CR1-2 Failed
U	238	1	nogas	108.853	4.497	2649137	1.73	100	108.9	90	110	
[Pb]	206	1	nogas	103.885	2.874	690795	0.47	100	103.9	90	110	
[Pb]	207	1	nogas	103.256	4.066	598075	1.12	100	103.3	90	110	
Na	23	2	He	9763.152	0.727	20528010	0.68	10000	97.6	90	110	
Mg	24	2	He	9676.989	0.494	11407557	0.44	10000	96.8	90	110	
Al	27	2	He	97.816	1.179	69149	1.14	100	97.8	90	110	
K	39	2	He	11022.359	2.203	13633988	2.17	10000	110.2	90	110	CCV Main CR1-2 Failed
Ca	43	2	He	9719.431	3.248	36800	3.13	10000	97.2	90	110	
Ca	44	2	He	9934.975	0.897	622717	0.92	10000	99.3	90	110	
V	51	2	He	99.495	0.886	874287	0.96	100	99.5	90	110	
Cr	52	2	He	99.036	1.252	931720	1.25	100	99.0	90	110	
Mn	55	2	He	101.389	0.735	690721	0.69	100	101.4	90	110	
Fe	56	2	He	10075.935	1.937	82722370	1.85	10000	100.8	90	110	
Co	59	2	He	102.486	3.252	1296133	3.28	100	102.5	90	110	
Ni	60	2	He	101.702	1.060	320597	0.97	100	101.7	90	110	
Cu	63	2	He	102.974	0.888	809810	0.77	100	103.0	90	110	
Zn	66	2	He	101.593	0.731	191069	0.67	100	101.6	90	110	
As	75	2	He	101.181	0.785	184453	0.68	100	101.2	90	110	
Se	78	2	He	102.124	0.814	15414	0.80	100	102.1	90	110	
B	11	1	nogas	494.233	3.419	2435903	1.27	500	98.8	90	110	
Si	28	1	nogas	4808.788	0.755	9584087	0.34	5000	96.2	90	110	
Ca	43	1	nogas	10290.364	2.359	413246	2.91	10000	102.9	90	110	
Ca	44	1	nogas	10049.989	3.761	6663164	4.27	10000	100.5	90	110	
Fe	56	1	nogas	10212.984	2.111	254301931	1.91	10000	102.1	90	110	
Se	77	1	nogas	112.371	8.487	69174	4.12	100	112.4	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	103.043	2.571	31074	2.47	100	103.0	90	110	
Mo	95	1	nogas	100.594	1.818	606127	1.26	100	100.6	90	110	
Sn	118	1	nogas	99.885	2.434	817181	2.70	100	99.9	90	110	
Ba	137	1	nogas	104.916	1.878	467733	2.82	100	104.9	90	110	
Sb	121	2	He	103.958	0.627	757322	0.51	100	104.0	90	110	
Li	7	1	nogas	101.395	3.411	1764448	2.62	100	101.4	90	110	
P	31	1	nogas	518.693	0.887	1139205	0.21	500	103.7	90	110	
La	139	1	nogas	124.688	6.909	597	7.56	100	124.7	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	-237.187	-73.407	10	100.00	100	-237.2	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	nogas	1215471	3.20	1118108	108.71	70	125	
Ge	72	1	nogas	3833046	0.60	3396393	112.86	70	125	
In	115	1	nogas	3443670	2.21	3166421	108.76	70	125	
Bi	209	1	nogas	2464423	3.23	2159119	114.14	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1286756	0.11	1189986	108.13	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	363_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T23:54:46-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	0.075	15.2	920	10.0	1	
Na	23	1	nogas	59.257	11.1	2251309	5.9	100	
Mg	24	1	nogas	6.143	20.8	143814	12.9	100	
Al	27	1	nogas	-0.590	-12.4	20318	4.5	5	
K	39	1	nogas	15.409	90.2	10769915	0.2	100	
Ti	47	1	nogas	0.090	64.8	633	18.2	2.5	
V	51	1	nogas	1.615	67.6	728193	3.8	2.5	
Cr	52	1	nogas	-0.102	-78.1	66890	0.6	2.5	
Mn	55	1	nogas	-0.204	-17.3	30272	0.9	2.5	
Co	59	1	nogas	0.057	28.3	2334	16.6	2.5	
Ni	60	1	nogas	-0.052	-19.9	2347	4.7	2.5	
Cu	63	1	nogas	0.350	30.5	7462	15.9	2	
Zn	66	1	nogas	-0.316	-8.4	1340	6.4	2.5	
As	75	1	nogas	0.611	151.7	122580	3.7	2.5	
Sr	88	1	nogas	0.060	21.8	3584	8.9	2.5	
Ag	107	1	nogas	0.048	29.2	930	19.9	2.5	
Cd	111	1	nogas	0.039	54.2	190	36.8	1	
Sb	121	1	nogas	0.190	24.3	3167	18.5	2.5	
Tl	205	1	nogas	0.724	59.5	15413	57.7	1	
Pb	208	1	nogas	0.095	18.3	2670	14.8	2.5	
U	238	1	nogas	0.138	38.0	3627	37.8	2.5	
[Pb]	206	1	nogas	0.071	22.5	653	17.9	2.5	
[Pb]	207	1	nogas	0.071	5.9	567	5.7	2.5	
Na	23	2	He	49.073	2.3	165067	0.9	100	
Mg	24	2	He	3.200	5.5	6608	2.4	100	
Al	27	2	He	-1.117	-30.2	693	34.7	5	
K	39	2	He	7.531	52.5	231990	2.1	100	
Ca	43	2	He	-3.421	-44.7	67	8.7	100	
Ca	44	2	He	-2.910	-105.8	1683	11.0	100	
V	51	2	He	0.066	69.0	10051	4.0	2.5	
Cr	52	2	He	-0.236	-10.9	6011	4.7	2.5	
Mn	55	2	He	-0.138	-4.4	1533	2.9	2.5	
Fe	56	2	He	3.361	10.3	64750	4.6	100	
Co	59	2	He	0.036	14.7	677	9.8	2.5	
Ni	60	2	He	-0.243	-5.7	290	15.0	2.5	
Cu	63	2	He	-0.128	-12.9	2410	4.7	2	
Zn	66	2	He	-0.293	-22.4	543	23.5	2.5	
As	75	2	He	0.009	249.2	527	7.8	2.5	
Se	78	2	He	-0.079	-243.6	218	12.3	2	
B	11	1	nogas	-0.593	-148.5	46507	8.7	10	
Si	28	1	nogas	-395.443	-28.8	3143986	2.0	5	
Ca	43	1	nogas	2.905	90.9	1297	11.1	100	
Ca	44	1	nogas	-47.502	-12.1	105087	0.8	100	
Fe	56	1	nogas	4.153	167.0	4116333	2.1	100	
Se	77	1	nogas	3.776	241.5	39259	6.2	2.5	CCB Main CR1 Failed
Se	82	1	nogas	-0.022	-1430.7	220	43.4	2	
Mo	95	1	nogas	0.255	51.9	2033	37.1	2.5	
Sn	118	1	nogas	0.181	45.0	3150	21.4	5	
Ba	137	1	nogas	0.010	98.7	577	6.6	2.5	

Continuing Calibration Blank (CCB) Report

Sb	121	2	He	0.153	8.5	1390	6.9	2.5	
P	31	1	nogas	11.684	13.1	132802	2.0	10	CCB Main CR1 Failed
La	139	1	nogas	-11.198	-34.7	67	22.9	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Au	197	1	nogas	584.523	34.7	57	20.4	2.5	CCB Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1291863	1.99	1118108	115.54	70	125	
Ge	72	1	nogas	3845084	3.16	3396393	113.21	70	125	
In	115	1	nogas	3560316	2.86	3166421	112.44	70	125	
Bi	209	1	nogas	2516914	1.82	2159119	116.57	70	125	
Ge	72	2	He	1293958	0.87	1189986	108.74	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	374_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-10T00:16:31-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	96.531	3.865	800431	0.98	100	96.5	90	110	
Na	23	1	nogas	10097.510	0.723	267885756	2.28	10000	101.0	90	110	
Mg	24	1	nogas	10251.142	1.206	170325937	0.72	10000	102.5	90	110	
Al	27	1	nogas	102.180	5.095	2103016	3.82	100	102.2	90	110	
K	39	1	nogas	10116.051	1.777	240829530	0.92	10000	101.2	90	110	
Ti	47	1	nogas	99.843	2.210	193037	0.73	100	99.8	90	110	
V	51	1	nogas	109.866	3.532	3606659	1.44	100	109.9	90	110	
Cr	52	1	nogas	102.134	0.890	2391665	1.56	100	102.1	90	110	
Mn	55	1	nogas	101.166	0.823	2875841	1.55	100	101.2	90	110	
Co	59	1	nogas	100.698	3.269	2416323	2.52	100	100.7	90	110	
Ni	60	1	nogas	101.500	4.155	549744	3.35	100	101.5	90	110	
Cu	63	1	nogas	100.370	3.018	1286701	2.26	100	100.4	90	110	
Zn	66	1	nogas	99.834	1.957	433256	1.38	100	99.8	90	110	
As	75	1	nogas	102.220	1.885	718159	1.40	100	102.2	90	110	
Sr	88	1	nogas	100.843	3.097	3040723	1.51	100	100.8	90	110	
Ag	107	1	nogas	101.330	2.193	1472169	1.92	100	101.3	90	110	
Cd	111	1	nogas	99.188	0.350	315190	1.45	100	99.2	90	110	
Sb	121	1	nogas	103.386	2.238	1449257	0.69	100	103.4	90	110	
Tl	205	1	nogas	101.673	2.144	2011365	2.12	100	101.7	90	110	
Pb	208	1	nogas	122.167	2.838	2789474	2.84	100	122.2	90	110	CCV Main CR1-2 Failed
U	238	1	nogas	108.017	1.718	2660707	1.65	100	108.0	90	110	
[Pb]	206	1	nogas	103.617	2.642	697107	2.13	100	103.6	90	110	
[Pb]	207	1	nogas	104.006	3.775	609624	3.26	100	104.0	90	110	
Na	23	2	He	9415.681	0.823	19930945	0.89	10000	94.2	90	110	
Mg	24	2	He	9515.161	1.287	11291279	1.37	10000	95.2	90	110	
Al	27	2	He	93.676	1.016	66724	0.96	100	93.7	90	110	
K	39	2	He	10550.869	2.077	13060315	2.04	10000	105.5	90	110	
Ca	43	2	He	9462.835	1.638	36068	1.59	10000	94.6	90	110	
Ca	44	2	He	9576.692	1.397	604301	1.32	10000	95.8	90	110	
V	51	2	He	96.948	0.608	857794	0.52	100	96.9	90	110	
Cr	52	2	He	96.933	1.571	918156	1.57	100	96.9	90	110	
Mn	55	2	He	97.967	1.165	671911	1.09	100	98.0	90	110	
Fe	56	2	He	9777.644	1.658	80807135	1.63	10000	97.8	90	110	
Co	59	2	He	97.868	0.844	1245928	0.78	100	97.9	90	110	
Ni	60	2	He	98.523	0.984	312670	0.94	100	98.5	90	110	
Cu	63	2	He	99.631	0.910	788829	0.89	100	99.6	90	110	
Zn	66	2	He	98.585	0.995	186673	0.95	100	98.6	90	110	
As	75	2	He	98.001	0.282	179856	0.33	100	98.0	90	110	
Se	78	2	He	99.298	2.107	15093	2.00	100	99.3	90	110	
B	11	1	nogas	479.484	3.862	2394268	1.39	500	95.9	90	110	
Si	28	1	nogas	4597.885	3.275	9297839	0.56	5000	92.0	90	110	
Ca	43	1	nogas	10077.340	2.530	403566	0.94	10000	100.8	90	110	
Ca	44	1	nogas	9795.146	3.867	6478131	2.39	10000	98.0	90	110	
Fe	56	1	nogas	10314.699	0.944	256144014	0.99	10000	103.1	90	110	
Se	77	1	nogas	110.736	9.481	68542	4.27	100	110.7	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	99.776	1.362	30019	1.14	100	99.8	90	110	
Mo	95	1	nogas	100.142	2.244	601821	1.04	100	100.1	90	110	
Sn	118	1	nogas	100.183	1.928	830247	1.38	100	100.2	90	110	
Ba	137	1	nogas	100.141	0.598	452245	0.63	100	100.1	90	110	
Sb	121	2	He	102.725	0.562	753305	0.51	100	102.7	90	110	
Li	7	1	nogas	96.686	4.802	1707868	1.57	100	96.7	90	110	
P	31	1	nogas	504.114	2.107	1107311	0.48	500	100.8	90	110	
La	139	1	nogas	112.733	22.655	557	18.44	100	112.7	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	178.559	56.329	33	17.32	100	178.6	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	nogas	1230797	3.04	1118108	110.08	70	125	
Ge	72	1	nogas	3823584	1.76	3396393	112.58	70	125	
In	115	1	nogas	3488291	1.13	3166421	110.17	70	125	
Bi	209	1	nogas	2492069	0.52	2159119	115.42	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1295284	0.08	1189986	108.85	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	375_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-10T00:18:29-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	0.071	39.5	957	29.8	1	
Na	23	1	nogas	57.186	5.9	2215212	4.1	100	
Mg	24	1	nogas	7.044	34.0	160743	25.7	100	
Al	27	1	nogas	-0.574	-10.6	21459	4.2	5	
K	39	1	nogas	2.124	459.0	10875165	0.6	100	
Ti	47	1	nogas	0.070	84.3	617	17.3	2.5	
V	51	1	nogas	2.034	39.6	768686	5.0	2.5	
Cr	52	1	nogas	-0.124	-34.0	69015	1.9	2.5	
Mn	55	1	nogas	-0.248	-22.4	30162	3.3	2.5	
Co	59	1	nogas	0.062	34.6	2537	19.3	2.5	
Ni	60	1	nogas	-0.121	-19.4	2050	7.0	2.5	
Cu	63	1	nogas	0.409	37.0	8542	21.7	2	
Zn	66	1	nogas	-0.335	-1.7	1307	4.2	2.5	
As	75	1	nogas	-0.011	-2493.5	123601	3.2	2.5	
Sr	88	1	nogas	0.060	40.5	3720	18.5	2.5	
Ag	107	1	nogas	0.059	29.4	1123	21.4	2.5	
Cd	111	1	nogas	0.052	56.6	240	39.7	1	
Sb	121	1	nogas	0.185	16.6	3224	12.1	2.5	
Tl	205	1	nogas	0.754	60.3	16564	58.0	1	
Pb	208	1	nogas	0.105	29.7	2900	24.5	2.5	
U	238	1	nogas	0.177	48.2	4751	47.5	2.5	
[Pb]	206	1	nogas	0.081	46.6	743	36.9	2.5	
[Pb]	207	1	nogas	0.080	26.8	643	21.0	2.5	
Na	23	2	He	40.470	7.7	153484	1.3	100	
Mg	24	2	He	3.540	12.5	7322	5.0	100	
Al	27	2	He	-0.688	-115.4	1031	54.7	5	
K	39	2	He	5.610	70.1	229652	2.1	100	
Ca	43	2	He	-4.232	-239.3	67	60.6	100	
Ca	44	2	He	-5.843	-31.4	1567	6.4	100	
V	51	2	He	0.040	103.0	10267	0.8	2.5	
Cr	52	2	He	-0.092	-269.2	7648	27.9	2.5	
Mn	55	2	He	0.050	658.8	3002	83.5	2.5	
Fe	56	2	He	4.383	22.4	76768	15.4	100	
Co	59	2	He	0.045	8.4	823	3.1	2.5	
Ni	60	2	He	-0.234	-4.6	333	11.4	2.5	
Cu	63	2	He	-0.133	-20.6	2484	11.7	2	
Zn	66	2	He	-0.321	-14.8	510	16.1	2.5	
As	75	2	He	0.021	186.6	571	8.9	2.5	
Se	78	2	He	-0.172	-29.7	213	0.5	2	
B	11	1	nogas	-1.457	-41.9	45281	9.8	10	
Si	28	1	nogas	-512.477	-10.4	3116810	0.7	5	
Ca	43	1	nogas	-2.923	-157.2	1100	15.9	100	
Ca	44	1	nogas	-63.774	-9.6	98169	2.0	100	
Fe	56	1	nogas	3.821	165.1	4268363	1.6	100	
Se	77	1	nogas	1.593	374.1	40188	6.0	2.5	
Se	82	1	nogas	0.049	303.8	250	17.4	2	
Mo	95	1	nogas	0.289	51.5	2320	38.2	2.5	
Sn	118	1	nogas	0.201	34.4	3450	16.5	5	
Ba	137	1	nogas	0.007	330.9	583	18.2	2.5	

Continuing Calibration Blank (CCB) Report

Sb	121	2	He	0.128	14.1	1263	7.1	2.5	
P	31	1	nogas	11.552	15.8	137677	0.6	10	CCB Main CR1 Failed
La	139	1	nogas	-9.471	-39.2	77	19.9	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Au	197	1	nogas	547.375	62.9	57	36.7	2.5	CCB Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1388223	3.75	1118108	124.16	70	125	
Ge	72	1	nogas	3994259	2.24	3396393	117.60	70	125	
In	115	1	nogas	3706785	1.20	3166421	117.07	70	125	
Bi	209	1	nogas	2609786	1.76	2159119	120.87	70	125	
Ge	72	2	He	1353196	4.18	1189986	113.72	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	383_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-10T00:34:19-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	93.688	2.173	769239	2.67	100	93.7	90	110	
Na	23	1	nogas	9961.182	5.916	261454564	1.98	10000	99.6	90	110	
Mg	24	1	nogas	10085.439	1.420	166060475	3.86	10000	100.9	90	110	
Al	27	1	nogas	101.979	1.285	2087976	2.55	100	102.0	90	110	
K	39	1	nogas	10031.458	3.641	237479072	1.85	10000	100.3	90	110	
Ti	47	1	nogas	99.264	1.420	190895	3.09	100	99.3	90	110	
V	51	1	nogas	102.093	1.928	3381091	2.03	100	102.1	90	110	
Cr	52	1	nogas	98.472	0.170	2295232	1.71	100	98.5	90	110	
Mn	55	1	nogas	102.036	3.112	2882763	1.42	100	102.0	90	110	
Co	59	1	nogas	97.988	1.657	2337984	0.35	100	98.0	90	110	
Ni	60	1	nogas	98.529	2.927	530680	1.85	100	98.5	90	110	
Cu	63	1	nogas	98.134	5.031	1250565	3.73	100	98.1	90	110	
Zn	66	1	nogas	98.043	1.511	423088	0.35	100	98.0	90	110	
As	75	1	nogas	97.961	0.823	689280	1.98	100	98.0	90	110	
Sr	88	1	nogas	101.839	1.792	3054345	2.80	100	101.8	90	110	
Ag	107	1	nogas	101.014	2.451	1459010	1.37	100	101.0	90	110	
Cd	111	1	nogas	100.339	3.110	319696	0.35	100	100.3	90	110	
Sb	121	1	nogas	103.598	1.654	1444120	1.65	100	103.6	90	110	
Tl	205	1	nogas	102.424	3.719	1982499	1.63	100	102.4	90	110	
Pb	208	1	nogas	117.829	0.759	2690423	0.76	100	117.8	90	110	CCV Main CR1-2 Failed
U	238	1	nogas	106.277	2.076	2561968	0.35	100	106.3	90	110	
[Pb]	206	1	nogas	103.243	4.125	679611	1.96	100	103.2	90	110	
[Pb]	207	1	nogas	101.778	4.092	583729	1.97	100	101.8	90	110	
Na	23	2	He	9210.560	0.445	19246415	0.77	10000	92.1	90	110	
Mg	24	2	He	9122.884	1.873	10685964	1.86	10000	91.2	90	110	
Al	27	2	He	91.467	0.579	64342	0.12	100	91.5	90	110	
K	39	2	He	10379.387	1.716	12851669	1.69	10000	103.8	90	110	
Ca	43	2	He	9196.918	3.673	34602	3.40	10000	92.0	90	110	
Ca	44	2	He	9544.392	1.242	594494	1.24	10000	95.4	90	110	
V	51	2	He	94.335	1.014	824172	1.35	100	94.3	90	110	
Cr	52	2	He	94.917	1.502	887652	1.91	100	94.9	90	110	
Mn	55	2	He	97.629	0.934	660972	1.24	100	97.6	90	110	
Fe	56	2	He	9669.032	1.313	78879230	1.48	10000	96.7	90	110	
Co	59	2	He	96.864	2.217	1217194	2.07	100	96.9	90	110	
Ni	60	2	He	97.627	1.007	305831	0.79	100	97.6	90	110	
Cu	63	2	He	99.058	1.169	774209	1.58	100	99.1	90	110	
Zn	66	2	He	96.972	1.324	181274	1.76	100	97.0	90	110	
As	75	2	He	96.542	0.939	174903	1.36	100	96.5	90	110	
Se	78	2	He	98.094	0.931	14721	1.29	100	98.1	90	110	
B	11	1	nogas	463.372	1.293	2292391	1.47	500	92.7	90	110	
Si	28	1	nogas	4705.135	2.957	9377162	1.56	5000	94.1	90	110	
Ca	43	1	nogas	10009.533	1.755	398627	1.60	10000	100.1	90	110	
Ca	44	1	nogas	9868.402	0.416	6490694	1.77	10000	98.7	90	110	
Fe	56	1	nogas	10220.557	3.154	252322664	1.48	10000	102.2	90	110	
Se	77	1	nogas	91.539	6.770	62889	2.94	100	91.5	90	110	
Se	82	1	nogas	101.998	1.096	30506	0.78	100	102.0	90	110	
Mo	95	1	nogas	97.959	0.727	585512	2.40	100	98.0	90	110	
Sn	118	1	nogas	96.570	3.858	802555	1.89	100	96.6	90	110	
Ba	137	1	nogas	98.973	1.237	448378	2.03	100	99.0	90	110	
Sb	121	2	He	102.942	1.225	745157	1.39	100	102.9	90	110	
Li	7	1	nogas	99.146	4.040	1731136	2.78	100	99.1	90	110	
P	31	1	nogas	490.130	2.867	1073357	1.17	500	98.0	90	110	
La	139	1	nogas	115.384	11.399	570	12.28	100	115.4	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	73.052	303.396	27	43.30	100	73.1	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	nogas	1217901	2.39	1118108	108.93	70	125	
Ge	72	1	nogas	3801632	1.69	3396393	111.93	70	125	
In	115	1	nogas	3499841	3.04	3166421	110.53	70	125	
Bi	209	1	nogas	2439559	2.17	2159119	112.99	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1278561	0.46	1189986	107.44	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	384_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-10T00:36:18-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	0.111	13.9	1180	14.4	1	
Na	23	1	nogas	54.767	14.0	2074385	7.6	100	
Mg	24	1	nogas	8.454	29.8	178328	22.0	100	
Al	27	1	nogas	-0.487	-16.6	22334	5.2	5	
K	39	1	nogas	-12.110	-90.7	10101036	0.3	100	
Ti	47	1	nogas	0.107	7.8	663	3.1	2.5	
V	51	1	nogas	-1.803	-70.4	633932	3.8	2.5	
Cr	52	1	nogas	-0.296	-37.8	62217	2.1	2.5	
Mn	55	1	nogas	-0.292	-10.4	27694	2.1	2.5	
Co	59	1	nogas	0.075	30.5	2770	19.8	2.5	
Ni	60	1	nogas	-0.132	-6.0	1907	3.5	2.5	
Cu	63	1	nogas	0.259	38.4	6298	20.9	2	
Zn	66	1	nogas	-0.314	-11.9	1343	9.6	2.5	
As	75	1	nogas	-2.066	-42.5	106355	3.4	2.5	
Sr	88	1	nogas	0.097	23.6	4717	15.5	2.5	
Ag	107	1	nogas	0.051	23.9	973	19.0	2.5	
Cd	111	1	nogas	0.065	30.7	270	23.1	1	
Sb	121	1	nogas	0.625	8.2	9266	8.7	2.5	
Tl	205	1	nogas	0.783	57.8	16514	53.5	1	
Pb	208	1	nogas	0.099	33.4	2767	27.3	2.5	
U	238	1	nogas	0.161	43.4	4181	40.4	2.5	
[Pb]	206	1	nogas	0.090	25.8	783	19.2	2.5	
[Pb]	207	1	nogas	0.084	34.1	643	25.2	2.5	
Na	23	2	He	39.582	4.2	144328	1.3	100	
Mg	24	2	He	4.617	1.4	8249	2.1	100	
Al	27	2	He	-1.198	-19.4	633	26.2	5	
K	39	2	He	-2.189	-163.7	220164	2.0	100	
Ca	43	2	He	-5.072	-190.0	60	60.1	100	
Ca	44	2	He	-8.821	-11.2	1307	5.7	100	
V	51	2	He	-0.028	-99.5	9188	1.7	2.5	
Cr	52	2	He	-0.247	-15.5	5881	7.2	2.5	
Mn	55	2	He	-0.166	-8.2	1330	6.0	2.5	
Fe	56	2	He	4.259	5.7	71813	3.7	100	
Co	59	2	He	0.052	13.6	877	9.7	2.5	
Ni	60	2	He	-0.209	-21.0	397	35.0	2.5	
Cu	63	2	He	-0.145	-8.3	2264	4.1	2	
Zn	66	2	He	-0.332	-14.2	467	19.3	2.5	
As	75	2	He	-0.028	-55.4	457	5.1	2.5	
Se	78	2	He	-0.213	-102.5	197	17.2	2	
B	11	1	nogas	2.113	15.0	57620	5.5	10	
Si	28	1	nogas	-343.431	-28.7	3196873	2.3	5	
Ca	43	1	nogas	2.858	54.9	1287	2.4	100	
Ca	44	1	nogas	-72.143	-7.7	88703	2.6	100	
Fe	56	1	nogas	-0.452	-762.8	3989701	2.8	100	
Se	77	1	nogas	-14.252	-44.3	34126	4.5	2.5	
Se	82	1	nogas	-0.008	-1006.7	223	12.9	2	
Mo	95	1	nogas	0.334	33.0	2510	26.8	2.5	
Sn	118	1	nogas	0.244	40.0	3617	21.1	5	
Ba	137	1	nogas	0.020	96.6	613	14.6	2.5	

Continuing Calibration Blank (CCB) Report

Sb	121	2	He	0.534	4.6	4164	5.5	2.5	
P	31	1	nogas	5.255	19.0	119528	0.9	10	
La	139	1	nogas	-17.621	-14.9	40	25.0	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Au	197	1	nogas	117.992	658.2	30	145.3	2.5	CCB Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1230863	3.57	1118108	110.08	70	125	
Ge	72	1	nogas	3829630	2.55	3396393	112.76	70	125	
In	115	1	nogas	3501645	1.77	3166421	110.59	70	125	
Bi	209	1	nogas	2526667	1.14	2159119	117.02	70	125	
Ge	72	2	He	1287566	1.20	1189986	108.20	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	395_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-10T00:58:06-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	99.873	0.747	743836	2.72	100	99.9	90	110	
Na	23	1	nogas	9694.940	1.436	249922389	0.38	10000	96.9	90	110	
Mg	24	1	nogas	9838.528	4.049	158806958	2.29	10000	98.4	90	110	
Al	27	1	nogas	101.835	4.566	2021439	3.65	100	101.8	90	110	
K	39	1	nogas	9819.289	4.119	225652255	2.30	10000	98.2	90	110	
Ti	47	1	nogas	98.607	2.450	183874	2.45	100	98.6	90	110	
V	51	1	nogas	105.614	5.985	3367406	2.37	100	105.6	90	110	
Cr	52	1	nogas	96.404	2.749	2180323	2.17	100	96.4	90	110	
Mn	55	1	nogas	95.435	5.851	2615448	2.35	100	95.4	90	110	
Co	59	1	nogas	97.297	4.805	2250877	3.49	100	97.3	90	110	
Ni	60	1	nogas	97.536	5.796	509075	1.13	100	97.5	90	110	
Cu	63	1	nogas	98.426	4.017	1216323	0.70	100	98.4	90	110	
Zn	66	1	nogas	98.382	1.915	411868	3.23	100	98.4	90	110	
As	75	1	nogas	98.595	4.508	671754	1.49	100	98.6	90	110	
Sr	88	1	nogas	97.542	5.773	2834078	1.47	100	97.5	90	110	
Ag	107	1	nogas	98.698	5.766	1382504	5.29	100	98.7	90	110	
Cd	111	1	nogas	99.488	0.473	299056	1.29	100	99.5	90	110	
Sb	121	1	nogas	98.698	5.433	1333177	1.67	100	98.7	90	110	
Tl	205	1	nogas	96.613	5.817	1843799	1.83	100	96.6	90	110	
Pb	208	1	nogas	114.031	1.987	2603734	1.99	100	114.0	90	110	CCV Main CR1-2 Failed
U	238	1	nogas	108.078	7.496	2568284	5.16	100	108.1	90	110	
[Pb]	206	1	nogas	100.187	8.089	649663	2.41	100	100.2	90	110	
[Pb]	207	1	nogas	100.840	5.799	570238	1.49	100	100.8	90	110	
Na	23	2	He	8995.108	1.484	18034046	0.73	10000	90.0	90	110	CCV Main CR1-2 Failed
Mg	24	2	He	8898.645	2.191	10000021	1.69	10000	89.0	90	110	CCV Main CR1-2 Failed
Al	27	2	He	91.923	1.301	62032	0.62	100	91.9	90	110	
K	39	2	He	9631.473	2.866	11941664	2.81	10000	96.3	90	110	
Ca	43	2	He	9249.971	1.499	33390	0.71	10000	92.5	90	110	
Ca	44	2	He	9313.558	1.282	556606	0.49	10000	93.1	90	110	
V	51	2	He	94.043	1.763	788269	1.31	100	94.0	90	110	
Cr	52	2	He	94.175	2.198	844945	1.47	100	94.2	90	110	
Mn	55	2	He	95.250	1.575	618718	0.90	100	95.2	90	110	
Fe	56	2	He	9454.776	2.554	73994434	1.77	10000	94.5	90	110	
Co	59	2	He	95.155	1.319	1147216	0.75	100	95.2	90	110	
Ni	60	2	He	96.509	1.702	290072	1.35	100	96.5	90	110	
Cu	63	2	He	97.945	0.265	734480	0.55	100	97.9	90	110	
Zn	66	2	He	96.719	0.192	173467	0.78	100	96.7	90	110	
As	75	2	He	95.443	1.242	165895	0.85	100	95.4	90	110	
Se	78	2	He	96.128	2.279	13845	2.28	100	96.1	90	110	
B	11	1	nogas	497.534	2.608	2229693	3.49	500	99.5	90	110	
Si	28	1	nogas	4585.382	8.658	8944611	1.48	5000	91.7	90	110	
Ca	43	1	nogas	10086.355	5.762	389192	1.84	10000	100.9	90	110	
Ca	44	1	nogas	9730.553	7.403	6199013	2.59	10000	97.3	90	110	
Fe	56	1	nogas	9825.808	3.467	235397689	1.31	10000	98.3	90	110	
Se	77	1	nogas	98.467	8.188	62815	1.86	100	98.5	90	110	
Se	82	1	nogas	99.294	6.032	28777	1.32	100	99.3	90	110	
Mo	95	1	nogas	96.920	2.202	561777	2.44	100	96.9	90	110	
Sn	118	1	nogas	99.060	1.688	776618	1.37	100	99.1	90	110	
Ba	137	1	nogas	103.875	2.704	443738	2.65	100	103.9	90	110	
Sb	121	2	He	101.257	1.200	703258	1.62	100	101.3	90	110	
Li	7	1	nogas	104.515	3.463	1651204	5.16	100	104.5	90	110	
P	31	1	nogas	481.683	4.640	1024515	1.19	500	96.3	90	110	
La	139	1	nogas	145.091	19.548	647	14.70	100	145.1	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	20.053	673.284	23	24.74	100	20.1	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	nogas	1104559	2.05	1118108	98.79	70	125	
Ge	72	1	nogas	3689339	4.60	3396393	108.63	70	125	
In	115	1	nogas	3300004	1.76	3166421	104.22	70	125	
Bi	209	1	nogas	2409369	6.05	2159119	111.59	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1226726	0.80	1189986	103.09	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	396_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-10T01:00:06-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	0.074	24.9	867	21.3	1	
Na	23	1	nogas	31.812	19.7	1446649	8.7	100	
Mg	24	1	nogas	7.133	35.2	153933	24.0	100	
Al	27	1	nogas	-0.603	-4.6	19534	4.6	5	
K	39	1	nogas	-0.256	-2007.5	10128145	0.8	100	
Ti	47	1	nogas	0.067	55.1	573	13.3	2.5	
V	51	1	nogas	2.513	48.5	731353	2.8	2.5	CCB Main CR1 Failed
Cr	52	1	nogas	-0.274	-34.7	61231	2.0	2.5	
Mn	55	1	nogas	-0.274	-5.9	27544	2.6	2.5	
Co	59	1	nogas	0.068	39.7	2534	26.9	2.5	
Ni	60	1	nogas	-0.274	-2.6	1110	3.9	2.5	
Cu	63	1	nogas	0.544	38.1	9736	28.4	2	
Zn	66	1	nogas	-0.321	-16.5	1287	18.7	2.5	
As	75	1	nogas	-0.982	-108.2	110037	3.9	2.5	
Sr	88	1	nogas	0.075	21.1	3957	13.3	2.5	
Ag	107	1	nogas	0.061	13.7	1083	11.5	2.5	
Cd	111	1	nogas	0.074	47.8	297	37.1	1	
Sb	121	1	nogas	0.186	24.9	3040	22.6	2.5	
Tl	205	1	nogas	0.726	54.8	15363	53.9	1	
Pb	208	1	nogas	0.096	14.6	2710	11.9	2.5	
U	238	1	nogas	0.153	47.7	3961	48.0	2.5	
[Pb]	206	1	nogas	0.088	32.0	763	27.2	2.5	
[Pb]	207	1	nogas	0.079	8.4	607	8.5	2.5	
Na	23	2	He	18.947	1.6	97206	1.3	100	
Mg	24	2	He	5.433	47.6	8871	33.9	100	
Al	27	2	He	-1.186	-11.5	617	15.1	5	
K	39	2	He	-8.426	-15.1	212574	0.7	100	
Ca	43	2	He	-5.369	-208.5	57	71.3	100	
Ca	44	2	He	-10.372	-23.7	1163	13.0	100	
V	51	2	He	0.119	12.1	10059	1.1	2.5	
Cr	52	2	He	-0.273	-14.3	5421	5.8	2.5	
Mn	55	2	He	-0.182	-9.9	1177	9.4	2.5	
Fe	56	2	He	3.771	9.4	65215	4.7	100	
Co	59	2	He	0.043	29.0	737	21.3	2.5	
Ni	60	2	He	-0.250	-7.7	257	22.8	2.5	
Cu	63	2	He	-0.102	-6.2	2504	2.2	2	
Zn	66	2	He	-0.296	-11.5	513	11.4	2.5	
As	75	2	He	-0.002	-1599.5	486	9.3	2.5	
Se	78	2	He	-0.172	-176.1	195	21.6	2	
B	11	1	nogas	-0.238	-155.5	45912	7.4	10	
Si	28	1	nogas	-337.529	-16.8	3128917	0.7	5	
Ca	43	1	nogas	-3.902	-43.6	993	7.3	100	
Ca	44	1	nogas	-82.896	-1.8	79826	1.3	100	
Fe	56	1	nogas	7.838	28.5	4093623	2.3	100	
Se	77	1	nogas	-6.114	-123.6	35502	4.3	2.5	
Se	82	1	nogas	0.009	2104.6	223	26.2	2	
Mo	95	1	nogas	0.280	58.5	2137	46.7	2.5	
Sn	118	1	nogas	0.197	45.6	3220	22.4	5	
Ba	137	1	nogas	0.008	477.2	553	29.0	2.5	

Continuing Calibration Blank (CCB) Report

Sb	121	2	He	0.158	15.5	1367	12.3	2.5	
P	31	1	nogas	6.668	17.8	119434	0.6	10	
La	139	1	nogas	-16.769	-23.1	43	35.3	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Au	197	1	nogas	178.689	64.1	33	17.3	2.5	CCB Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1225555	4.68	1118108	109.61	70	125	
Ge	72	1	nogas	3738676	1.72	3396393	110.08	70	125	
In	115	1	nogas	3492581	1.29	3166421	110.30	70	125	
Bi	209	1	nogas	2498589	2.37	2159119	115.72	70	125	
Ge	72	2	He	1238329	0.69	1189986	104.06	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	397_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-10T01:02:05-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	94.814	3.270	738444	2.63	100	94.8	90	110	
Na	23	1	nogas	9829.590	1.329	249609206	1.84	10000	98.3	90	110	
Mg	24	1	nogas	10151.150	1.421	161450241	1.27	10000	101.5	90	110	
Al	27	1	nogas	101.032	2.616	1994329	2.39	100	101.0	90	110	
K	39	1	nogas	9948.937	0.922	227233222	1.01	10000	99.5	90	110	
Ti	47	1	nogas	97.638	0.902	181003	1.10	100	97.6	90	110	
V	51	1	nogas	102.335	3.403	3265981	2.89	100	102.3	90	110	
Cr	52	1	nogas	97.355	2.126	2188445	2.23	100	97.4	90	110	
Mn	55	1	nogas	99.658	2.488	2716169	2.56	100	99.7	90	110	
Co	59	1	nogas	98.663	2.041	2269913	2.13	100	98.7	90	110	
Ni	60	1	nogas	98.746	0.266	512867	0.04	100	98.7	90	110	
Cu	63	1	nogas	98.538	2.217	1211168	2.29	100	98.5	90	110	
Zn	66	1	nogas	97.812	3.097	406996	3.11	100	97.8	90	110	
As	75	1	nogas	97.630	1.193	662639	1.01	100	97.6	90	110	
Sr	88	1	nogas	101.197	0.383	2925891	0.61	100	101.2	90	110	
Ag	107	1	nogas	101.846	1.677	1418469	1.50	100	101.8	90	110	
Cd	111	1	nogas	99.382	2.797	301433	1.77	100	99.4	90	110	
Sb	121	1	nogas	100.920	0.615	1356389	0.81	100	100.9	90	110	
Tl	205	1	nogas	99.279	4.674	1892328	2.12	100	99.3	90	110	
Pb	208	1	nogas	113.797	2.054	2598377	2.05	100	113.8	90	110	CCV Main CR1-2 Failed
U	238	1	nogas	108.518	2.706	2576726	2.21	100	108.5	90	110	
[Pb]	206	1	nogas	100.195	2.718	649754	0.63	100	100.2	90	110	
[Pb]	207	1	nogas	100.148	2.881	565834	0.96	100	100.1	90	110	
Na	23	2	He	8935.714	0.792	18046205	1.06	10000	89.4	90	110	CCV Main CR1-2 Failed
Mg	24	2	He	8872.234	2.462	10046110	3.88	10000	88.7	90	110	CCV Main CR1-2 Failed
Al	27	2	He	91.653	3.179	62289	1.68	100	91.7	90	110	
K	39	2	He	9629.782	1.378	11939606	1.35	10000	96.3	90	110	
Ca	43	2	He	9232.172	2.395	33564	0.96	10000	92.3	90	110	
Ca	44	2	He	9567.336	6.636	575569	5.19	10000	95.7	90	110	
V	51	2	He	93.542	1.114	789801	0.59	100	93.5	90	110	
Cr	52	2	He	93.515	1.614	845181	1.08	100	93.5	90	110	
Mn	55	2	He	94.643	1.034	619272	1.00	100	94.6	90	110	
Fe	56	2	He	9415.832	1.073	74233237	1.41	10000	94.2	90	110	
Co	59	2	He	95.402	1.462	1158543	1.35	100	95.4	90	110	
Ni	60	2	He	96.517	2.032	292180	1.24	100	96.5	90	110	
Cu	63	2	He	97.484	2.193	736221	0.86	100	97.5	90	110	
Zn	66	2	He	95.854	2.425	173141	1.28	100	95.9	90	110	
As	75	2	He	95.693	0.954	167532	0.53	100	95.7	90	110	
Se	78	2	He	95.105	0.940	13799	1.45	100	95.1	90	110	
B	11	1	nogas	467.081	4.500	2190669	1.19	500	93.4	90	110	
Si	28	1	nogas	4603.558	0.161	8920981	0.19	5000	92.1	90	110	
Ca	43	1	nogas	9800.471	0.704	376344	0.88	10000	98.0	90	110	
Ca	44	1	nogas	9661.553	0.515	6129037	0.74	10000	96.6	90	110	
Fe	56	1	nogas	9791.171	2.028	233277655	2.01	10000	97.9	90	110	
Se	77	1	nogas	95.101	9.376	61571	3.68	100	95.1	90	110	
Se	82	1	nogas	99.912	2.885	28817	2.98	100	99.9	90	110	
Mo	95	1	nogas	96.863	2.611	558096	2.37	100	96.9	90	110	
Sn	118	1	nogas	96.381	1.201	762896	3.30	100	96.4	90	110	
Ba	137	1	nogas	102.056	5.091	439749	2.99	100	102.1	90	110	
Sb	121	2	He	101.530	1.914	710145	0.52	100	101.5	90	110	
Li	7	1	nogas	96.560	4.069	1601919	1.36	100	96.6	90	110	
P	31	1	nogas	484.537	0.483	1024447	0.48	500	96.9	90	110	
La	139	1	nogas	117.604	5.224	550	5.45	100	117.6	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	144.883	233.888	30	57.74	100	144.9	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	nogas	1156058	4.45	1118108	103.39	70	125	
Ge	72	1	nogas	3665019	0.24	3396393	107.91	70	125	
In	115	1	nogas	3331011	2.81	3166421	105.20	70	125	
Bi	209	1	nogas	2402943	2.50	2159119	111.29	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1235655	1.43	1189986	103.84	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	398_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-10T01:04:05-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	0.089	23.9	1037	13.9	1	
Na	23	1	nogas	26.031	8.7	1306350	5.2	100	
Mg	24	1	nogas	6.840	20.6	150764	16.0	100	
Al	27	1	nogas	-0.569	-5.7	20028	2.2	5	
K	39	1	nogas	0.812	730.5	10069029	0.4	100	
Ti	47	1	nogas	0.052	56.3	540	9.3	2.5	
V	51	1	nogas	-0.446	-156.2	649385	3.8	2.5	
Cr	52	1	nogas	-0.342	-19.0	59261	2.2	2.5	
Mn	55	1	nogas	-0.301	-1.2	26569	0.6	2.5	
Co	59	1	nogas	0.074	21.1	2657	12.9	2.5	
Ni	60	1	nogas	-0.230	-7.2	1330	6.0	2.5	
Cu	63	1	nogas	0.164	46.7	4901	18.3	2	
Zn	66	1	nogas	-0.366	-8.7	1083	11.6	2.5	
As	75	1	nogas	-1.245	-21.5	107716	2.4	2.5	
Sr	88	1	nogas	0.073	26.8	3850	13.9	2.5	
Ag	107	1	nogas	0.065	18.3	1127	13.8	2.5	
Cd	111	1	nogas	0.060	28.4	253	19.9	1	
Sb	121	1	nogas	0.203	19.8	3227	16.0	2.5	
Tl	205	1	nogas	0.684	50.1	14742	52.2	1	
Pb	208	1	nogas	0.101	17.4	2817	14.3	2.5	
U	238	1	nogas	0.153	43.7	4037	47.3	2.5	
[Pb]	206	1	nogas	0.081	22.0	717	19.6	2.5	
[Pb]	207	1	nogas	0.092	26.4	693	26.0	2.5	
Na	23	2	He	16.832	5.5	93166	1.9	100	
Mg	24	2	He	3.811	8.8	7038	6.1	100	
Al	27	2	He	-1.279	-13.0	557	21.3	5	
K	39	2	He	-9.469	-16.9	211306	0.9	100	
Ca	43	2	He	-5.457	-101.2	57	36.7	100	
Ca	44	2	He	-10.687	-5.7	1147	2.2	100	
V	51	2	He	-0.003	-1236.6	9064	2.0	2.5	
Cr	52	2	He	-0.256	-14.7	5591	7.6	2.5	
Mn	55	2	He	-0.181	-14.8	1190	16.2	2.5	
Fe	56	2	He	4.028	8.0	67436	5.4	100	
Co	59	2	He	0.051	7.7	830	4.3	2.5	
Ni	60	2	He	-0.228	-16.3	323	33.1	2.5	
Cu	63	2	He	-0.184	-7.4	1890	6.9	2	
Zn	66	2	He	-0.330	-10.3	453	14.7	2.5	
As	75	2	He	-0.020	-87.6	456	8.2	2.5	
Se	78	2	He	-0.014	-2327.3	219	20.8	2	
B	11	1	nogas	-0.382	-392.6	47453	10.3	10	
Si	28	1	nogas	-317.130	-17.1	3128020	1.1	5	
Ca	43	1	nogas	-3.134	-187.8	1013	21.4	100	
Ca	44	1	nogas	-82.732	-2.3	79274	0.6	100	
Fe	56	1	nogas	-3.275	-208.8	3795403	3.3	100	
Se	77	1	nogas	-8.714	-72.0	34547	5.8	2.5	
Se	82	1	nogas	0.006	1010.5	220	7.9	2	
Mo	95	1	nogas	0.251	53.1	1937	39.0	2.5	
Sn	118	1	nogas	0.230	42.7	3517	22.2	5	
Ba	137	1	nogas	0.017	128.8	600	15.3	2.5	

Continuing Calibration Blank (CCB) Report

Sb	121	2	He	0.156	20.4	1353	15.0	2.5	
P	31	1	nogas	7.901	14.4	120833	0.8	10	
La	139	1	nogas	-11.036	-23.2	67	17.3	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Au	197	1	nogas	351.276	57.7	43	26.6	2.5	CCB Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1294828	5.55	1118108	115.81	70	125	
Ge	72	1	nogas	3708002	0.99	3396393	109.17	70	125	
In	115	1	nogas	3516489	1.83	3166421	111.06	70	125	
Bi	209	1	nogas	2510267	5.23	2159119	116.26	70	125	
Ge	72	2	He	1241509	1.60	1189986	104.33	70	125	

Low Level Initial Calibration Verification (LLICV) Report

Sample Table

Sample Name	LLCCV5
Data File Name	399LICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-10T01:06:03-06:00
Sample Type	LLICV
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	4.174	6.282	36004	3.38	5	83.5	70	130	
Na	23	1	nogas	480.603	4.755	13163745	0.25	500	96.1	70	130	
Mg	24	1	nogas	488.426	3.786	8042383	2.07	500	97.7	70	130	
Al	27	1	nogas	6.121	20.483	153387	14.47	5	122.4	70	130	
K	39	1	nogas	466.024	7.625	20621796	2.66	500	93.2	70	130	
Ti	47	1	nogas	4.931	2.715	9799	2.01	5	98.6	70	130	
V	51	1	nogas	5.712	14.050	819363	2.78	5	114.2	70	130	
Cr	52	1	nogas	4.392	4.729	165879	2.38	5	87.8	70	130	
Mn	55	1	nogas	4.845	1.583	168960	1.30	5	96.9	70	130	
Co	59	1	nogas	5.060	1.997	120270	1.21	5	101.2	70	130	
Ni	60	1	nogas	4.714	4.329	27544	1.87	5	94.3	70	130	
Cu	63	1	nogas	5.039	3.639	66264	1.65	5	100.8	70	130	
Zn	66	1	nogas	4.918	4.070	23499	2.11	5	98.4	70	130	
As	75	1	nogas	3.214	17.185	134881	1.31	5	64.3	70	130	LLICV Main CR1 Failed
Sr	88	1	nogas	5.076	3.865	152105	1.99	5	101.5	70	130	
Ag	107	1	nogas	5.028	3.788	72011	2.53	5	100.6	70	130	
Cd	111	1	nogas	4.716	5.009	15210	4.94	5	94.3	70	130	
Sb	121	1	nogas	4.837	5.559	67119	4.79	5	96.7	70	130	
Tl	205	1	nogas	4.824	2.897	93990	2.01	5	96.5	70	130	
Pb	208	1	nogas	5.731	2.153	131345	2.15	5	114.6	70	130	
U	238	1	nogas	5.183	1.671	124829	0.66	5	103.7	70	130	
[Pb]	206	1	nogas	5.012	3.174	33081	2.60	5	100.2	70	130	
[Pb]	207	1	nogas	5.052	2.880	29050	1.90	5	101.0	70	130	
Na	23	2	He	471.264	0.261	1014247	0.82	500	94.3	70	130	
Mg	24	2	He	465.144	0.385	532650	1.30	500	93.0	70	130	
Al	27	2	He	4.268	1.856	4267	0.98	5	85.4	70	130	
K	39	2	He	472.159	1.195	797314	0.86	500	94.4	70	130	
Ca	43	2	He	456.270	5.850	1743	6.32	500	91.3	70	130	
Ca	44	2	He	458.949	3.525	29517	2.92	500	91.8	70	130	
V	51	2	He	4.587	1.311	47652	0.51	5	91.7	70	130	
Cr	52	2	He	4.363	1.238	47237	0.27	5	87.3	70	130	
Mn	55	2	He	4.710	1.380	33290	2.19	5	94.2	70	130	
Fe	56	2	He	469.787	1.597	3762733	2.51	500	94.0	70	130	
Co	59	2	He	4.773	0.990	58550	1.40	5	95.5	70	130	
Ni	60	2	He	4.692	2.564	15267	1.48	5	93.8	70	130	
Cu	63	2	He	4.844	4.020	39944	2.85	5	96.9	70	130	
Zn	66	2	He	5.023	2.002	10130	0.85	5	100.5	70	130	
As	75	2	He	4.498	3.708	8395	2.99	5	90.0	70	130	
Se	78	2	He	4.464	4.697	863	3.59	5	89.3	70	130	
B	11	1	nogas	17.332	9.445	136404	2.99	25	69.3	70	130	LLICV Main CR1 Failed
Si	28	1	nogas	-49.732	-171.332	3495080	1.31	25	-198.9	70	130	LLICV Main CR1 Failed
Ca	43	1	nogas	468.726	4.723	19547	2.75	500	93.7	70	130	
Ca	44	1	nogas	396.289	1.490	385397	1.10	500	79.3	70	130	
Fe	56	1	nogas	490.209	2.997	15705144	0.64	500	98.0	70	130	
Se	77	1	nogas	-3.042	-70.450	36540	0.49	5	-60.8	70	130	LLICV Main CR1 Failed
Se	82	1	nogas	4.755	14.959	1617	12.52	5	95.1	70	130	
Mo	95	1	nogas	4.733	2.353	28440	3.72	5	94.7	70	130	
Sn	118	1	nogas	4.806	0.110	41797	0.49	5	96.1	70	130	
Ba	137	1	nogas	5.152	4.520	24021	4.10	5	103.0	70	130	
Sb	121	2	He	5.019	3.488	35590	2.64	5	100.4	70	130	
Li	7	1	nogas	4.813	5.328	192669	1.76	5	96.3	70	130	
P	31	1	nogas	28.416	10.550	162386	1.73	25	113.7	70	130	
La	139	1	nogas	21.416	48.084	197	20.55	5	428.3	70	130	LLICV Main CR1 Failed
Au	197	1	nogas	255.307	85.606	37	31.49	5	5106.1	70	130	LLICV Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1272160	3.45	1118108	113.78	70	125	
Ge	72	1	nogas	3759055	2.08	3396393	110.68	70	125	
In	115	1	nogas	3526537	0.44	3166421	111.37	70	125	
Bi	209	1	nogas	2433603	1.02	2159119	112.71	70	125	

Low Level Initial Calibration Verification (LLICV) Report

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	2	He	1243887	0.94	1189986	104.53	70	125	

Sample Report

Sample Table

Sample Name	LLCCV2
Data File Name	400SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-10T01:08:01-06:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	221CALB.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	1.793	1.793	4.69	15059	0.01	2000	
Na	23	1	nogas	201.251	201.251	4.83	5820482	0.00	200000	
Mg	24	1	nogas	194.261	194.261	5.61	3190878	0.01	200000	
Al	27	1	nogas	2.054	2.054	3.91	73086	0.00	2000	
K	39	1	nogas	172.522	172.522	3.99	14148749	0.00	200000	
Ti	47	1	nogas	1.838	1.838	14.11	3960	0.05	2000	
V	51	1	nogas	0.354	0.354	170.55	683669	0.00	2000	
Cr	52	1	nogas	1.373	1.373	7.33	99064	0.00	2000	
Mn	55	1	nogas	1.661	1.661	3.13	81633	0.00	2000	
Co	59	1	nogas	4.932	4.932	104.05	118167	0.00	2000	
Ni	60	1	nogas	1.782	1.782	11.98	12098	0.01	2000	
Cu	63	1	nogas	1.928	1.928	4.03	27351	0.01	2000	
Zn	66	1	nogas	1.773	1.773	0.51	10236	0.02	2000	
As	75	1	nogas	-1.474	-1.474	-47.47	108585	0.00	2000	
Sr	88	1	nogas	1.998	1.998	1.26	61362	0.00	2000	
Ag	107	1	nogas	2.013	2.013	3.48	29171	0.01	2000	
Cd	111	1	nogas	1.864	1.864	5.61	5861	0.03	2000	
Sb	121	1	nogas	1.949	1.949	2.30	27525	0.01	2000	
Tl	205	1	nogas	2.026	2.026	2.32	39505	0.01	2000	
Pb	208	1	nogas	2.314	2.314	3.27	53339	0.00	2000	
U	238	1	nogas	2.058	2.058	1.68	49093	0.00	2000	
[Pb]	206	1	nogas	2.059	2.059	2.91	13526	0.02	2000	
[Pb]	207	1	nogas	2.013	2.013	6.42	11531	0.02	2000	
Na	23	2	He	194.223	194.223	3.13	452627	0.04	200000	
Mg	24	2	He	186.117	186.117	2.09	214645	0.09	200000	
Al	27	2	He	1.353	1.353	20.89	2314	0.06	2000	
K	39	2	He	182.712	182.712	0.58	445137	0.04	200000	
Ca	43	2	He	170.415	170.415	9.75	700	24.34	200000	
Ca	44	2	He	172.236	172.236	5.27	12191	1.41	200000	
V	51	2	He	1.731	1.731	4.52	23636	0.01	2000	
Cr	52	2	He	1.555	1.555	12.62	21890	0.01	2000	
Mn	55	2	He	1.712	1.712	4.68	13602	0.01	2000	
Fe	56	2	He	193.627	193.627	3.58	1570444	0.01	200000	
Co	59	2	He	1.971	1.971	1.88	24296	0.01	2000	
Ni	60	2	He	1.731	1.731	11.87	6264	0.03	2000	
Cu	63	2	He	1.766	1.766	5.27	16641	0.01	2000	
Zn	66	2	He	1.730	1.730	6.33	4174	0.04	2000	
As	75	2	He	1.848	1.848	10.02	3733	0.05	2000	
Se	78	2	He	1.697	1.697	6.92	465	0.37	2000	
B	11	1	nogas	4.966	4.966	10.25	71287	0.01	2000	
Si	28	1	nogas	-300.186	-300.186	-11.45	3213379	-0.01	2000	
Ca	43	1	nogas	188.775	188.775	1.72	8622	2.19	200000	
Ca	44	1	nogas	106.372	106.372	3.86	202152	0.05	200000	
Fe	56	1	nogas	187.453	187.453	3.26	8489433	0.00	200000	

Sample Report

Se	77	1	nogas	-19.416	-19.416	-26.32	32322	-0.06	2000	
Se	82	1	nogas	1.716	1.716	20.69	730	0.24	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Mo	95	1	nogas	1.981	1.981	2.22	12268	0.02	2000	
Sn	118	1	nogas	1.945	1.945	2.38	17336	0.01	2000	
Ba	137	1	nogas	2.105	2.105	4.57	9816	0.02	2000	
Sb	121	2	He	1.996	1.996	4.70	14299	0.01	2000	
La	139	1	nogas	1.454	1.454	542.99	113	1.28	2000	
Au	197	1	nogas	136.003	136.003	227.90	30	453.34	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1227017	3.83	1118108	109.74	70	125	
Ge	72	1	nogas	3784180	0.29	3396393	111.42	70	125	
In	115	1	nogas	3421235	3.37	3166421	108.05	70	125	
Bi	209	1	nogas	2405558	2.50	2159119	111.41	70	125	
Ge	72	2	He	1243762	2.80	1189986	104.52	70	125	

Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	ICSA
Data File Name	401ICSA.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-10T01:10:00-06:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	-0.012	-38.5	140	25.8	0	ICSA Main CR1 Failed
Na	23	1	nogas	100489.350	4.4	2511571189	2.0	0	
Mg	24	1	nogas	101904.760	3.3	1598832002	1.5	0	
Al	27	1	nogas	98077.453	2.8	1885985412	1.7	0	
K	39	1	nogas	103628.580	1.1	2249893117	2.2	0	
Ti	47	1	nogas	2208.152	1.2	4041507	1.2	0	
V	51	1	nogas	5.300	6.2	780387	2.7	0	
Cr	52	1	nogas	0.998	2.2	86863	1.3	0	ICSA Main CR1 Failed
Mn	55	1	nogas	0.079	65.5	36112	3.2	0	ICSA Main CR1 Failed
Co	59	1	nogas	0.485	1.9	11947	3.5	0	ICSA Main CR1 Failed
Ni	60	1	nogas	0.916	4.3	7165	4.1	0	ICSA Main CR1 Failed
Cu	63	1	nogas	1.816	9.5	24867	9.8	0	ICSA Main CR1 Failed
Zn	66	1	nogas	1.346	3.1	8065	0.5	0	ICSA Main CR1 Failed
As	75	1	nogas	2.852	5.9	128160	1.3	0	ICSA Main CR1 Failed
Sr	88	1	nogas	7.768	133.4	227090	133.2	0	
Ag	107	1	nogas	0.013	50.9	400	25.4	0	ICSA Main CR1 Failed
Cd	111	1	nogas	2.027	2.4	5984	2.3	0	
Sb	121	1	nogas	0.182	11.6	2890	11.4	0	ICSA Main CR1 Failed
Tl	205	1	nogas	0.014	136.2	1027	32.5	0	ICSA Main CR1 Failed
Pb	208	1	nogas	0.076	12.2	2240	9.4	0	ICSA Main CR1 Failed
[Pb]	206	1	nogas	0.068	16.0	563	11.3	0	ICSA Main CR1 Failed
[Pb]	207	1	nogas	0.071	11.6	500	9.2	0	ICSA Main CR1 Failed
Na	23	2	He	96516.591	0.8	189425544	0.7	0	
Mg	24	2	He	94552.800	1.6	104297625	1.5	0	
Al	27	2	He	90569.867	2.5	58661654	2.6	0	
K	39	2	He	101950.212	1.1	124268018	1.1	0	
Ca	43	2	He	93906.066	1.0	332137	1.1	0	
Ca	44	2	He	95718.098	0.5	5600152	0.1	0	
V	51	2	He	0.263	14.8	10960	2.5	0	ICSA Main CR1 Failed
Cr	52	2	He	-0.017	-378.9	7508	7.1	0	ICSA Main CR1 Failed
Mn	55	2	He	0.070	7.5	2744	1.1	0	ICSA Main CR1 Failed
Fe	56	2	He	101523.895	0.5	779806362	0.7	0	
Co	59	2	He	0.282	7.1	3540	7.0	0	ICSA Main CR1 Failed
Ni	60	2	He	0.028	41.6	1067	3.0	0	ICSA Main CR1 Failed
Cu	63	2	He	0.270	18.4	5161	6.7	0	ICSA Main CR1 Failed
Zn	66	2	He	0.127	31.1	1240	5.8	0	ICSA Main CR1 Failed
As	75	2	He	0.066	25.6	588	4.9	0	ICSA Main CR1 Failed
Se	78	2	He	0.201	68.0	242	7.6	0	ICSA Main CR1 Failed
B	11	1	nogas	-3.550	-5.6	27574	2.2	0	ICSA Main CR1 Failed
Si	28	1	nogas	225.948	11.9	3696596	0.9	0	
Ca	43	1	nogas	98943.545	2.6	3750650	3.7	0	
Ca	44	1	nogas	99289.900	3.3	61162547	4.7	0	
Fe	56	1	nogas	106113.896	2.2	2464789322	2.7	0	
Se	77	1	nogas	19.103	4.0	41060	2.0	0	
Se	82	1	nogas	-0.002	-6236.6	213	17.7	0	ICSA Main CR1 Failed
Mo	95	1	nogas	2109.646	3.6	12015571	1.9	0	
Sn	118	1	nogas	0.048	22.5	1827	4.4	0	ICSA Main CR1 Failed
Ba	137	1	nogas	0.156	22.0	1127	13.0	0	ICSA Main CR1 Failed
Sb	121	2	He	0.199	7.6	1607	6.3	0	ICSA Main CR1 Failed

Interference Check Solution A (ICS-A) Report

P	31	1	nogas	96201.637	2.0	180845531	1.1	0	
La	139	1	nogas	41.790	42.8	253	25.4	0	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1136970	1.17	1118108	101.69	70	125	
Ge	72	1	nogas	3627214	1.72	3396393	106.80	70	125	
In	115	1	nogas	3211330	0.45	3166421	101.42	70	125	
Bi	209	1	nogas	2240668	0.83	2159119	103.78	70	125	
Ge	72	2	He	1204330	0.37	1189986	101.21	70	125	

Interference Check Solution AB (ICS-AB) Report

Sample Table

Sample Name	ICSAB
Data File Name	402ICSB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-10T01:12:04-06:00
Sample Type	ICSB
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	115.467	2.386	808297	1.35	100	115.5	80	120	
Na	23	1	nogas	111243.922	1.821	2822944263	1.60	100	111243.9	80	120	
Mg	24	1	nogas	113444.526	5.447	1805471307	2.61	100	113444.5	80	120	
Al	27	1	nogas	97556.589	0.713	1896704985	1.77	100	97556.6	80	120	ICSB Main CR1 Failed
K	39	1	nogas	115218.523	1.018	2527124723	1.01	100	115218.5	80	120	
Ti	47	1	nogas	2385.589	1.168	4413249	0.87	100	2385.6	80	120	ICSB Main CR1 Failed
V	51	1	nogas	128.410	1.937	3932410	0.62	100	128.4	80	120	ICSB Main CR1 Failed
Cr	52	1	nogas	117.428	2.201	2626324	0.44	100	117.4	80	120	
Mn	55	1	nogas	116.616	2.877	3172755	1.62	100	116.6	80	120	
Co	59	1	nogas	116.619	1.551	2683699	1.99	100	116.6	80	120	
Ni	60	1	nogas	114.576	2.726	594719	0.95	100	114.6	80	120	
Cu	63	1	nogas	114.269	0.283	1404606	1.90	100	114.3	80	120	
Zn	66	1	nogas	115.499	1.074	480307	2.12	100	115.5	80	120	
As	75	1	nogas	119.246	0.983	784519	1.89	100	119.2	80	120	
Sr	88	1	nogas	115.028	2.072	3326319	1.86	100	115.0	80	120	
Ag	107	1	nogas	113.854	2.375	1586209	2.61	100	113.9	80	120	
Cd	111	1	nogas	118.253	2.948	351458	0.94	100	118.3	80	120	
Sb	121	1	nogas	118.110	3.745	1587186	1.78	100	118.1	80	120	
Tl	205	1	nogas	116.860	3.329	2091082	2.28	100	116.9	80	120	
Pb	208	1	nogas	127.731	0.610	2916478	0.61	100	127.7	80	120	ICSB Main CR1 Failed
U	238	1	nogas	130.147	1.034	2900391	0.43	100	130.1	80	120	ICSB Main CR1 Failed
[Pb]	206	1	nogas	118.058	1.237	718621	0.71	100	118.1	80	120	
[Pb]	207	1	nogas	119.552	2.382	633957	1.03	100	119.6	80	120	
Na	23	2	He	105934.603	0.945	211759004	2.76	100	105934.6	80	120	
Mg	24	2	He	103869.316	0.610	116692162	2.28	100	103869.3	80	120	
Al	27	2	He	88339.673	0.901	58269912	2.03	100	88339.7	80	120	ICSB Main CR1 Failed
K	39	2	He	113250.265	0.723	138017055	0.72	100	113250.3	80	120	
Ca	43	2	He	104401.214	1.629	375978	0.27	100	104401.2	80	120	
Ca	44	2	He	107639.714	3.016	6411179	1.26	100	107639.7	80	120	
V	51	2	He	111.421	1.331	932086	1.53	100	111.4	80	120	
Cr	52	2	He	109.776	1.445	983393	0.44	100	109.8	80	120	
Mn	55	2	He	108.636	0.324	705304	2.16	100	108.6	80	120	
Fe	56	2	He	109119.037	0.585	853527374	1.35	100	109119.0	80	120	ICSB Main CR1 Failed
Co	59	2	He	111.889	0.899	1348873	2.50	100	111.9	80	120	
Ni	60	2	He	110.554	4.400	332025	3.94	100	110.6	80	120	
Cu	63	2	He	115.072	3.030	861930	1.65	100	115.1	80	120	
Zn	66	2	He	114.768	1.839	205567	0.74	100	114.8	80	120	
As	75	2	He	113.390	0.956	196955	1.14	100	113.4	80	120	
Se	78	2	He	115.017	2.287	16516	1.44	100	115.0	80	120	
B	11	1	nogas	574.328	4.707	2412098	1.97	100	574.3	80	120	
Si	28	1	nogas	5950.627	2.678	10518442	0.42	100	5950.6	80	120	ICSB Main CR1 Failed
Ca	43	1	nogas	111096.631	2.591	4254893	1.09	100	111096.6	80	120	ICSB Main CR1 Failed
Ca	44	1	nogas	113432.259	1.990	70575976	0.87	100	113432.3	80	120	ICSB Main CR1 Failed
Fe	56	1	nogas	118212.531	1.983	2774440062	0.28	100	118212.5	80	120	ICSB Main CR1 Failed
Se	77	1	nogas	149.517	3.613	75991	3.10	100	149.5	80	120	ICSB Main CR1 Failed
Se	82	1	nogas	121.709	1.295	35065	1.14	100	121.7	80	120	ICSB Main CR1 Failed
Mo	95	1	nogas	2228.594	1.811	12832846	0.73	100	2228.6	80	120	
Sn	118	1	nogas	114.743	1.897	889704	3.03	100	114.7	80	120	
Ba	137	1	nogas	119.087	4.904	502762	2.04	100	119.1	80	120	
Sb	121	2	He	117.359	1.443	814773	0.95	100	117.4	80	120	
La	139	1	nogas	183.816	17.393	787	17.86	100	183.8	80	120	ICSB Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1038910	3.66	1118108	92.92	70	125	
Ge	72	1	nogas	3666483	1.97	3396393	107.95	70	125	
In	115	1	nogas	3265183	3.84	3166421	103.12	70	125	
Bi	209	1	nogas	2254821	1.34	2159119	104.43	70	125	
Ge	72	2	He	1226516	1.83	1189986	103.07	70	125	

Tune Report

Batch Folder C:\Agilent\ICPMH\1\DATA\010919B.b
Report Comment
Instrument Name G3281A JP11080910

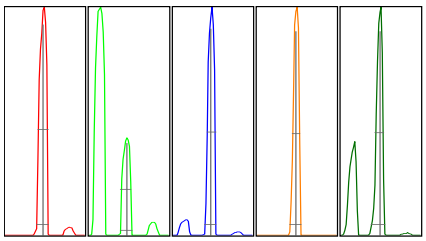
[nogas]

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		20613				NaN	-	
24		43768				NaN	-	
59		43814				NaN	-	
115		45963				NaN	-	
208		22219				NaN	-	

Mass	RSD% (Actual)	RSD% (Required)	RSD% (Flag)	Background (Actual)	Background (Required)	Background (Flag)
9	1.71	5.00				
24	1.63	5.00				
59	0.95	5.00				
115	1.80	5.00				
208	1.62	5.00				

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	20032	20766	20736	20576	20955
24	42525	44209	43795	44150	44161
59	43227	43917	44210	43563	44154
115	44616	46127	46820	45901	46351
208	21838	22109	22719	21979	22452

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	5934.71	8.95	8.9 - 9.1		0.35	0.444	0.750	
24	12416.60	23.95	23.9 - 24.1		0.37	0.443	0.750	
59	13588.52	58.95	58.9 - 59.1		0.32	0.432	0.750	
115	15304.89	115.00	114.9 - 115.1		0.28	0.433	0.750	
208	7019.43	208.00	207.9 - 208.1		0.30	0.507	0.750	

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	0.40 L/min	S/C Temp	2 ℃
RF Matching	1.70 V	Option Gas	0.0 %	Makeup/Dilution Gas	0.40 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	15.0 V
Extract 2	-200.0 V	Cell Entrance	-30 V	Plate Bias	-50 V
Omega Bias	-100 V	Cell Exit	-58 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	true	3rd Gas Flow	0 %		

[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		461				NaN	-	
24		3449				NaN	-	
59		23338				NaN	-	

Tune Report

Mass	RSD% (Actual)	RSD% (Required)	RSD% (Flag)	Background (Actual)	Background (Required)	Background (Flag)
9	5.24	5.00	[F]			
24	6.59	5.00	[F]			
59	0.76	5.00				

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	493	464	441	434	474
24	3385	3310	3448	3266	3836
59	23502	23391	23090	23226	23483

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	131.53	8.95	8.9 - 9.1		0.36	0.452	0.750	
24	952.59	23.95	23.9 - 24.1		0.38	0.443	0.750	
59	7429.48	58.95	58.9 - 59.1		0.31	0.422	0.750	

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	0.40 L/min	S/C Temp	2 ℃
RF Matching	1.70 V	Option Gas	0.0 %	Makeup/Dilution Gas	0.45 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	-32 V	Plate Bias	-60 V
Omega Bias	-100 V	Cell Exit	-70 V		

Cell Parameters

OctP Bias	-18.0 V	He Flow	4.0 mL/min	Energy Discrimination	5.0 V
OctP RF	190 V	H2 Flow	0.0 mL/min		
Use Gas	true	3rd Gas Flow	0 %		

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

Work Order: HS18121523

LHAAP 18 / 24

BHATE Environmental

Marcia Olive
445 Union Blvd Ste 129
Lakewood CO 80228

10450 Stancliff Rd. Suite 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887

January 10, 2019

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

Work Order: **HS18121523**

Laboratory Results for: **LHAAP 18/24**

Dear Marcia,

ALS Environmental received 7 sample(s) on Dec 28, 2018 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: 10-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
Work Order: HS18121523

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS18121523-01	109_122718	Groundwater		27-Dec-2018 09:55	28-Dec-2018 09:15	☐
HS18121523-02	18CPTMW24_122718	Groundwater		27-Dec-2018 10:50	28-Dec-2018 09:15	☐
HS18121523-03	18WW06_122718	Groundwater		27-Dec-2018 12:20	28-Dec-2018 09:15	☐
HS18121523-04	18WW06_122718_a	Groundwater		27-Dec-2018 12:20	28-Dec-2018 09:15	☐
HS18121523-05	18WW02_122718	Groundwater		27-Dec-2018 13:25	28-Dec-2018 09:15	☐
HS18121523-06	125_122718	Groundwater		27-Dec-2018 13:50	28-Dec-2018 09:15	☐
HS18121523-07	Trip Blank	Groundwater	ALS 112818-54	27-Dec-2018 00:00	28-Dec-2018 09:15	☐

ALS Houston, US Date: 10-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
Work Order: HS18121523

CASE NARRATIVE

Work Order Comments

- The analysis for Perchlorate was subcontracted to ALS in Salt Lake City, UT. Final report attached.

GCMS Volatiles by Method SW8260

Batch ID: R330692

Sample ID: 125_122718 (HS18121523-06)

- Lowest practical dilution due to high concentration of non-target analyte(s).

Sample ID: HS18121520-09MS

- MS and MSD are for an unrelated sample.

Metals by Method SW7470

Batch ID: 136401

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

Metals by Method SW6020

Batch ID: 136233

Sample ID: HS18121325-04MS

- MS/MSD and DUPs are for an unrelated sample.

ALS Houston, US Date: 10-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
Sample ID: 109_122718
Collection Date: 27-Dec-2018 09:55

ANALYTICAL REPORT
WorkOrder:HS18121523
Lab ID:HS18121523-01
Matrix:Groundwater

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	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 02:07
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	09-Jan-2019 02:07
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	UG/L	1	09-Jan-2019 02:07
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 02:07
1,1-Dichloroethane	**0.84**	J	**0.20**	**0.50**	**1.0**	**UG/L**	1	09-Jan-2019 02:07
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	09-Jan-2019 02:07
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 02:07
1,2,3-Trichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	09-Jan-2019 02:07
1,2,3-Trichloropropane	0.50	U	0.50	0.50	1.0	UG/L	1	09-Jan-2019 02:07
1,2,4-Trichlorobenzene	0.50	U	0.50	0.50	1.0	UG/L	1	09-Jan-2019 02:07
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 02:07
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	09-Jan-2019 02:07
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	09-Jan-2019 02:07
1,2-Dichlorobenzene	0.50	U	0.50	0.50	1.0	UG/L	1	09-Jan-2019 02:07
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	09-Jan-2019 02:07
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	UG/L	1	09-Jan-2019 02:07
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 02:07
1,3-Dichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	09-Jan-2019 02:07
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 02:07
1,4-Dichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	09-Jan-2019 02:07
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	09-Jan-2019 02:07
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	09-Jan-2019 02:07
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 02:07
2-Hexanone	1.0	U	1.0	1.0	2.0	UG/L	1	09-Jan-2019 02:07
4-Chlorotoluene	0.50	U	0.40	0.50	1.0	UG/L	1	09-Jan-2019 02:07
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 02:07
4-Methyl-2-pentanone	1.0	U	0.70	1.0	2.0	UG/L	1	09-Jan-2019 02:07
Acetone	2.0	U	0.40	2.0	2.0	UG/L	1	09-Jan-2019 02:07
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	09-Jan-2019 02:07
Bromobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	09-Jan-2019 02:07
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	09-Jan-2019 02:07
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	09-Jan-2019 02:07
Bromoform	0.50	U	0.40	0.50	1.0	UG/L	1	09-Jan-2019 02:07
Bromomethane	0.50	U	0.40	0.50	1.0	UG/L	1	09-Jan-2019 02:07
Carbon disulfide	1.0	U	0.60	1.0	2.0	UG/L	1	09-Jan-2019 02:07
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	UG/L	1	09-Jan-2019 02:07
Chlorobenzene	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 02:07
Chloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 02:07
Chloroform	**1.4**		**0.20**	**0.50**	**1.0**	**UG/L**	1	09-Jan-2019 02:07

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

ALS Houston, US Date: 10-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
Sample ID: 109_122718
Collection Date: 27-Dec-2018 09:55

ANALYTICAL REPORT
WorkOrder:HS18121523
Lab ID:HS18121523-01
Matrix:Groundwater

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	09-Jan-2019 02:07
cis-1,2-Dichloroethene	**130**		**0.20**	**0.50**	**1.0**	**UG/L**	1	09-Jan-2019 02:07
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	09-Jan-2019 02:07
Dibromochloromethane	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 02:07
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	09-Jan-2019 02:07
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 02:07
Ethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 02:07
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	09-Jan-2019 02:07
Isopropylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 02:07
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	09-Jan-2019 02:07
Methylene chloride	0.50	U	0.40	0.50	2.0	UG/L	1	09-Jan-2019 02:07
n-Butylbenzene	0.50	U	0.40	0.50	1.0	UG/L	1	09-Jan-2019 02:07
n-Propylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 02:07
Naphthalene	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 02:07
o-Xylene	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 02:07
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 02:07
Styrene	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 02:07
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 02:07
Tetrachloroethene	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 02:07
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	09-Jan-2019 02:07
trans-1,2-Dichloroethene	**1.4**		**0.20**	**0.50**	**1.0**	**UG/L**	1	09-Jan-2019 02:07
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	09-Jan-2019 02:07
Trichloroethene	**420**		**1.0**	**2.5**	**5.0**	**UG/L**	5	09-Jan-2019 02:31
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 02:07
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	09-Jan-2019 02:07
Surr: 1,2-Dichloroethane-d4	*96.5*			**0**	*81-118*	*%REC*	*5*	*09-Jan-2019 02:31*
Surr: 1,2-Dichloroethane-d4	*95.4*			**0**	*81-118*	*%REC*	*1*	*09-Jan-2019 02:07*
Surr: 4-Bromofluorobenzene	*99.4*			**0**	*85-114*	*%REC*	*1*	*09-Jan-2019 02:07*
Surr: 4-Bromofluorobenzene	*98.7*			**0**	*85-114*	*%REC*	*5*	*09-Jan-2019 02:31*
Surr: Dibromofluoromethane	*91.2*			**0**	*80-119*	*%REC*	*5*	*09-Jan-2019 02:31*
Surr: Dibromofluoromethane	*90.8*			**0**	*80-119*	*%REC*	*1*	*09-Jan-2019 02:07*
Surr: Toluene-d8	*105*			**0**	*89-112*	*%REC*	*1*	*09-Jan-2019 02:07*
Surr: Toluene-d8	*105*			**0**	*89-112*	*%REC*	*5*	*09-Jan-2019 02:31*
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: SUB
Subcontract Analysis	**See Attached**		**0**	**0**	**0**	**NA**	1	08-Jan-2019 14:57

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

ALS Houston, US Date: 10-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
Sample ID: 18CPTMW24_122718
Collection Date: 27-Dec-2018 10:50

ANALYTICAL REPORT
WorkOrder:HS18121523
Lab ID:HS18121523-02
Matrix:Groundwater

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	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 01:17
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	09-Jan-2019 01:17
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	UG/L	1	09-Jan-2019 01:17
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 01:17
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	09-Jan-2019 01:17
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	09-Jan-2019 01:17
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 01:17
1,2,3-Trichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	09-Jan-2019 01:17
1,2,3-Trichloropropane	0.50	U	0.50	0.50	1.0	UG/L	1	09-Jan-2019 01:17
1,2,4-Trichlorobenzene	0.50	U	0.50	0.50	1.0	UG/L	1	09-Jan-2019 01:17
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 01:17
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	09-Jan-2019 01:17
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	09-Jan-2019 01:17
1,2-Dichlorobenzene	0.50	U	0.50	0.50	1.0	UG/L	1	09-Jan-2019 01:17
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	09-Jan-2019 01:17
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	UG/L	1	09-Jan-2019 01:17
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 01:17
1,3-Dichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	09-Jan-2019 01:17
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 01:17
1,4-Dichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	09-Jan-2019 01:17
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	09-Jan-2019 01:17
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	09-Jan-2019 01:17
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 01:17
2-Hexanone	1.0	U	1.0	1.0	2.0	UG/L	1	09-Jan-2019 01:17
4-Chlorotoluene	0.50	U	0.40	0.50	1.0	UG/L	1	09-Jan-2019 01:17
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 01:17
4-Methyl-2-pentanone	1.0	U	0.70	1.0	2.0	UG/L	1	09-Jan-2019 01:17
Acetone	2.0	U	0.40	2.0	2.0	UG/L	1	09-Jan-2019 01:17
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	09-Jan-2019 01:17
Bromobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	09-Jan-2019 01:17
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	09-Jan-2019 01:17
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	09-Jan-2019 01:17
Bromoform	0.50	U	0.40	0.50	1.0	UG/L	1	09-Jan-2019 01:17
Bromomethane	0.50	U	0.40	0.50	1.0	UG/L	1	09-Jan-2019 01:17
Carbon disulfide	1.0	U	0.60	1.0	2.0	UG/L	1	09-Jan-2019 01:17
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	UG/L	1	09-Jan-2019 01:17
Chlorobenzene	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 01:17
Chloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 01:17
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	09-Jan-2019 01:17

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

ALS Houston, US Date: 10-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
Sample ID: 18CPTMW24_122718
Collection Date: 27-Dec-2018 10:50

ANALYTICAL REPORT
WorkOrder:HS18121523
Lab ID:HS18121523-02
Matrix:Groundwater

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	09-Jan-2019 01:17
cis-1,2-Dichloroethene	**29**		**0.20**	**0.50**	**1.0**	**UG/L**	1	09-Jan-2019 01:17
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	09-Jan-2019 01:17
Dibromochloromethane	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 01:17
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	09-Jan-2019 01:17
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 01:17
Ethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 01:17
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	09-Jan-2019 01:17
Isopropylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 01:17
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	09-Jan-2019 01:17
Methylene chloride	0.50	U	0.40	0.50	2.0	UG/L	1	09-Jan-2019 01:17
n-Butylbenzene	0.50	U	0.40	0.50	1.0	UG/L	1	09-Jan-2019 01:17
n-Propylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 01:17
Naphthalene	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 01:17
o-Xylene	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 01:17
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 01:17
Styrene	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 01:17
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 01:17
Tetrachloroethene	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 01:17
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	09-Jan-2019 01:17
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	09-Jan-2019 01:17
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	09-Jan-2019 01:17
Trichloroethene	**18**		**0.20**	**0.50**	**1.0**	**UG/L**	1	09-Jan-2019 01:17
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 01:17
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	09-Jan-2019 01:17
Surr: 1,2-Dichloroethane-d4	*97.4*			**0**	*81-118*	*%REC*	*1*	*09-Jan-2019 01:17*
Surr: 4-Bromofluorobenzene	*99.5*			**0**	*85-114*	*%REC*	*1*	*09-Jan-2019 01:17*
Surr: Dibromofluoromethane	*93.0*			**0**	*80-119*	*%REC*	*1*	*09-Jan-2019 01:17*
Surr: Toluene-d8	*105*			**0**	*89-112*	*%REC*	*1*	*09-Jan-2019 01:17*

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

ALS Houston, US Date: 10-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
Sample ID: 18CPTMW24_122718
Collection Date: 27-Dec-2018 10:50

ANALYTICAL REPORT
WorkOrder:HS18121523
Lab ID:HS18121523-02
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		**Method:SW6020**				Prep:SW3010A / 02-Jan-2019		Analyst: RPM
Aluminum	**0.0428**		**0.00360**	**0.0100**	**0.0200**	**mg/L**	2	09-Jan-2019 18:15
Antimony	**0.000426**	J	**0.000400**	**0.00100**	**0.00200**	**mg/L**	1	09-Jan-2019 00:10
Arsenic	**0.0116**		**0.000400**	**0.00100**	**0.00200**	**mg/L**	1	09-Jan-2019 00:10
Barium	**9.17**		**0.190**	**0.250**	**0.400**	**mg/L**	100	09-Jan-2019 17:47
Beryllium	0.00200	U	0.000400	0.00200	0.00400	mg/L	2	09-Jan-2019 18:15
Cadmium	**0.000431**	J	**0.000400**	**0.00200**	**0.00400**	**mg/L**	2	09-Jan-2019 18:15
Calcium	**447**		**3.40**	**10.0**	**50.0**	**mg/L**	100	09-Jan-2019 17:47
Chromium	**0.00233**	J	**0.000400**	**0.00100**	**0.00400**	**mg/L**	1	09-Jan-2019 00:10
Cobalt	**0.00579**		**0.000200**	**0.00100**	**0.00500**	**mg/L**	1	09-Jan-2019 00:10
Copper	**0.00133**	J	**0.00100**	**0.00100**	**0.00200**	**mg/L**	1	09-Jan-2019 00:10
Iron	**11.9**		**0.0120**	**0.100**	**0.200**	**mg/L**	1	09-Jan-2019 00:10
Lead	0.00100	U	0.000600	0.00100	0.00200	mg/L	1	09-Jan-2019 00:10
Magnesium	**245**		**1.00**	**10.0**	**20.0**	**mg/L**	100	09-Jan-2019 17:47
Manganese	**0.635**		**0.000700**	**0.00100**	**0.00500**	**mg/L**	1	09-Jan-2019 00:10
Nickel	**0.00770**		**0.000600**	**0.00100**	**0.00200**	**mg/L**	1	09-Jan-2019 00:10
Potassium	**5.88**		**0.0360**	**0.200**	**0.400**	**mg/L**	2	09-Jan-2019 18:15
Selenium	0.00100	U	0.00110	0.00100	0.00200	mg/L	1	09-Jan-2019 00:10
Silver	0.00100	U	0.000200	0.00100	0.00200	mg/L	1	09-Jan-2019 00:10
Sodium	**990**		**1.40**	**10.0**	**20.0**	**mg/L**	100	09-Jan-2019 17:47
Thallium	0.00100	U	0.000200	0.00100	0.00200	mg/L	1	09-Jan-2019 00:10
Vanadium	**0.00307**	J	**0.000600**	**0.00100**	**0.00500**	**mg/L**	1	09-Jan-2019 00:10
Zinc	**0.00646**		**0.00200**	**0.00250**	**0.00400**	**mg/L**	1	09-Jan-2019 00:10
MERCURY BY SW7470A		**Method:SW7470**				Prep:SW7470 / 08-Jan-2019		Analyst: OFO
Mercury	0.000100	U	0.0000300	0.000100	0.000200	mg/L	1	08-Jan-2019 15:53
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: SUB
Subcontract Analysis	**See Attached**		**0**	**0**	**0**	**NA**	1	08-Jan-2019 14:57

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

ALS Houston, US Date: 10-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
Sample ID: 18WW06_122718
Collection Date: 27-Dec-2018 12:20

ANALYTICAL REPORT
WorkOrder:HS18121523
Lab ID:HS18121523-03
Matrix:Groundwater

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	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 00:03
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	09-Jan-2019 00:03
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	UG/L	1	09-Jan-2019 00:03
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 00:03
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	09-Jan-2019 00:03
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	09-Jan-2019 00:03
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 00:03
1,2,3-Trichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	09-Jan-2019 00:03
1,2,3-Trichloropropane	0.50	U	0.50	0.50	1.0	UG/L	1	09-Jan-2019 00:03
1,2,4-Trichlorobenzene	0.50	U	0.50	0.50	1.0	UG/L	1	09-Jan-2019 00:03
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 00:03
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	09-Jan-2019 00:03
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	09-Jan-2019 00:03
1,2-Dichlorobenzene	0.50	U	0.50	0.50	1.0	UG/L	1	09-Jan-2019 00:03
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	09-Jan-2019 00:03
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	UG/L	1	09-Jan-2019 00:03
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 00:03
1,3-Dichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	09-Jan-2019 00:03
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 00:03
1,4-Dichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	09-Jan-2019 00:03
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	09-Jan-2019 00:03
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	09-Jan-2019 00:03
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 00:03
2-Hexanone	1.0	U	1.0	1.0	2.0	UG/L	1	09-Jan-2019 00:03
4-Chlorotoluene	0.50	U	0.40	0.50	1.0	UG/L	1	09-Jan-2019 00:03
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 00:03
4-Methyl-2-pentanone	1.0	U	0.70	1.0	2.0	UG/L	1	09-Jan-2019 00:03
Acetone	2.0	U	0.40	2.0	2.0	UG/L	1	09-Jan-2019 00:03
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	09-Jan-2019 00:03
Bromobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	09-Jan-2019 00:03
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	09-Jan-2019 00:03
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	09-Jan-2019 00:03
Bromoform	0.50	U	0.40	0.50	1.0	UG/L	1	09-Jan-2019 00:03
Bromomethane	0.50	U	0.40	0.50	1.0	UG/L	1	09-Jan-2019 00:03
Carbon disulfide	**1.1**	J	**0.60**	**1.0**	**2.0**	**UG/L**	1	09-Jan-2019 00:03
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	UG/L	1	09-Jan-2019 00:03
Chlorobenzene	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 00:03
Chloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 00:03
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	09-Jan-2019 00:03

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

ALS Houston, US Date: 10-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
Sample ID: 18WW06_122718
Collection Date: 27-Dec-2018 12:20

ANALYTICAL REPORT
WorkOrder:HS18121523
Lab ID:HS18121523-03
Matrix:Groundwater

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	09-Jan-2019 00:03
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	09-Jan-2019 00:03
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	09-Jan-2019 00:03
Dibromochloromethane	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 00:03
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	09-Jan-2019 00:03
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 00:03
Ethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 00:03
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	09-Jan-2019 00:03
Isopropylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 00:03
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	09-Jan-2019 00:03
Methylene chloride	0.50	U	0.40	0.50	2.0	UG/L	1	09-Jan-2019 00:03
n-Butylbenzene	0.50	U	0.40	0.50	1.0	UG/L	1	09-Jan-2019 00:03
n-Propylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 00:03
Naphthalene	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 00:03
o-Xylene	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 00:03
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 00:03
Styrene	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 00:03
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 00:03
Tetrachloroethene	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 00:03
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	09-Jan-2019 00:03
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	09-Jan-2019 00:03
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	09-Jan-2019 00:03
Trichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	09-Jan-2019 00:03
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 00:03
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	09-Jan-2019 00:03
Surr: 1,2-Dichloroethane-d4	*95.9*			**0**	*81-118*	*%REC*	*1*	*09-Jan-2019 00:03*
Surr: 4-Bromofluorobenzene	*100.0*			**0**	*85-114*	*%REC*	*1*	*09-Jan-2019 00:03*
Surr: Dibromofluoromethane	*91.8*			**0**	*80-119*	*%REC*	*1*	*09-Jan-2019 00:03*
Surr: Toluene-d8	*106*			**0**	*89-112*	*%REC*	*1*	*09-Jan-2019 00:03*
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: SUB
Subcontract Analysis	**See Attached**		**0**	**0**	**0**	**NA**	1	08-Jan-2019 14:57

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

ALS Houston, US Date: 10-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
Sample ID: 18WW06_122718_a
Collection Date: 27-Dec-2018 12:20

ANALYTICAL REPORT
WorkOrder:HS18121523
Lab ID:HS18121523-04
Matrix:Groundwater

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	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 00:28
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	09-Jan-2019 00:28
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	UG/L	1	09-Jan-2019 00:28
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 00:28
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	09-Jan-2019 00:28
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	09-Jan-2019 00:28
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 00:28
1,2,3-Trichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	09-Jan-2019 00:28
1,2,3-Trichloropropane	0.50	U	0.50	0.50	1.0	UG/L	1	09-Jan-2019 00:28
1,2,4-Trichlorobenzene	0.50	U	0.50	0.50	1.0	UG/L	1	09-Jan-2019 00:28
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 00:28
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	09-Jan-2019 00:28
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	09-Jan-2019 00:28
1,2-Dichlorobenzene	0.50	U	0.50	0.50	1.0	UG/L	1	09-Jan-2019 00:28
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	09-Jan-2019 00:28
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	UG/L	1	09-Jan-2019 00:28
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 00:28
1,3-Dichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	09-Jan-2019 00:28
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 00:28
1,4-Dichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	09-Jan-2019 00:28
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	09-Jan-2019 00:28
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	09-Jan-2019 00:28
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 00:28
2-Hexanone	1.0	U	1.0	1.0	2.0	UG/L	1	09-Jan-2019 00:28
4-Chlorotoluene	0.50	U	0.40	0.50	1.0	UG/L	1	09-Jan-2019 00:28
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 00:28
4-Methyl-2-pentanone	1.0	U	0.70	1.0	2.0	UG/L	1	09-Jan-2019 00:28
Acetone	2.0	U	0.40	2.0	2.0	UG/L	1	09-Jan-2019 00:28
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	09-Jan-2019 00:28
Bromobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	09-Jan-2019 00:28
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	09-Jan-2019 00:28
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	09-Jan-2019 00:28
Bromoform	0.50	U	0.40	0.50	1.0	UG/L	1	09-Jan-2019 00:28
Bromomethane	0.50	U	0.40	0.50	1.0	UG/L	1	09-Jan-2019 00:28
Carbon disulfide	1.0	U	0.60	1.0	2.0	UG/L	1	09-Jan-2019 00:28
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	UG/L	1	09-Jan-2019 00:28
Chlorobenzene	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 00:28
Chloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 00:28
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	09-Jan-2019 00:28

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

ALS Houston, US Date: 10-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
Sample ID: 18WW06_122718_a
Collection Date: 27-Dec-2018 12:20

ANALYTICAL REPORT
WorkOrder:HS18121523
Lab ID:HS18121523-04
Matrix:Groundwater

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	09-Jan-2019 00:28
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	09-Jan-2019 00:28
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	09-Jan-2019 00:28
Dibromochloromethane	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 00:28
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	09-Jan-2019 00:28
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 00:28
Ethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 00:28
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	09-Jan-2019 00:28
Isopropylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 00:28
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	09-Jan-2019 00:28
Methylene chloride	0.50	U	0.40	0.50	2.0	UG/L	1	09-Jan-2019 00:28
n-Butylbenzene	0.50	U	0.40	0.50	1.0	UG/L	1	09-Jan-2019 00:28
n-Propylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 00:28
Naphthalene	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 00:28
o-Xylene	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 00:28
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 00:28
Styrene	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 00:28
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 00:28
Tetrachloroethene	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 00:28
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	09-Jan-2019 00:28
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	09-Jan-2019 00:28
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	09-Jan-2019 00:28
Trichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	09-Jan-2019 00:28
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 00:28
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	09-Jan-2019 00:28
Surr: 1,2-Dichloroethane-d4	*97.4*			**0**	*81-118*	*%REC*	*1*	*09-Jan-2019 00:28*
Surr: 4-Bromofluorobenzene	*100*			**0**	*85-114*	*%REC*	*1*	*09-Jan-2019 00:28*
Surr: Dibromofluoromethane	*92.4*			**0**	*80-119*	*%REC*	*1*	*09-Jan-2019 00:28*
Surr: Toluene-d8	*104*			**0**	*89-112*	*%REC*	*1*	*09-Jan-2019 00:28*
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: SUB
Subcontract Analysis	**See Attached**		**0**	**0**	**0**	**NA**	1	08-Jan-2019 14:57

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

ALS Houston, US Date: 10-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
Sample ID: 18WW02_122718
Collection Date: 27-Dec-2018 13:25

ANALYTICAL REPORT
WorkOrder:HS18121523
Lab ID:HS18121523-05
Matrix:Groundwater

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	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 00:53
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	09-Jan-2019 00:53
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	UG/L	1	09-Jan-2019 00:53
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 00:53
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	09-Jan-2019 00:53
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	09-Jan-2019 00:53
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 00:53
1,2,3-Trichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	09-Jan-2019 00:53
1,2,3-Trichloropropane	0.50	U	0.50	0.50	1.0	UG/L	1	09-Jan-2019 00:53
1,2,4-Trichlorobenzene	0.50	U	0.50	0.50	1.0	UG/L	1	09-Jan-2019 00:53
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 00:53
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	09-Jan-2019 00:53
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	09-Jan-2019 00:53
1,2-Dichlorobenzene	0.50	U	0.50	0.50	1.0	UG/L	1	09-Jan-2019 00:53
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	09-Jan-2019 00:53
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	UG/L	1	09-Jan-2019 00:53
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 00:53
1,3-Dichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	09-Jan-2019 00:53
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 00:53
1,4-Dichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	09-Jan-2019 00:53
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	09-Jan-2019 00:53
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	09-Jan-2019 00:53
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 00:53
2-Hexanone	1.0	U	1.0	1.0	2.0	UG/L	1	09-Jan-2019 00:53
4-Chlorotoluene	0.50	U	0.40	0.50	1.0	UG/L	1	09-Jan-2019 00:53
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 00:53
4-Methyl-2-pentanone	1.0	U	0.70	1.0	2.0	UG/L	1	09-Jan-2019 00:53
Acetone	2.0	U	0.40	2.0	2.0	UG/L	1	09-Jan-2019 00:53
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	09-Jan-2019 00:53
Bromobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	09-Jan-2019 00:53
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	09-Jan-2019 00:53
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	09-Jan-2019 00:53
Bromoform	0.50	U	0.40	0.50	1.0	UG/L	1	09-Jan-2019 00:53
Bromomethane	0.50	U	0.40	0.50	1.0	UG/L	1	09-Jan-2019 00:53
Carbon disulfide	1.0	U	0.60	1.0	2.0	UG/L	1	09-Jan-2019 00:53
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	UG/L	1	09-Jan-2019 00:53
Chlorobenzene	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 00:53
Chloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 00:53
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	09-Jan-2019 00:53

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

ALS Houston, US Date: 10-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
Sample ID: 18WW02_122718
Collection Date: 27-Dec-2018 13:25

ANALYTICAL REPORT
WorkOrder:HS18121523
Lab ID:HS18121523-05
Matrix:Groundwater

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	09-Jan-2019 00:53
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	09-Jan-2019 00:53
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	09-Jan-2019 00:53
Dibromochloromethane	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 00:53
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	09-Jan-2019 00:53
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 00:53
Ethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 00:53
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	09-Jan-2019 00:53
Isopropylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 00:53
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	09-Jan-2019 00:53
Methylene chloride	0.50	U	0.40	0.50	2.0	UG/L	1	09-Jan-2019 00:53
n-Butylbenzene	0.50	U	0.40	0.50	1.0	UG/L	1	09-Jan-2019 00:53
n-Propylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 00:53
Naphthalene	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 00:53
o-Xylene	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 00:53
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 00:53
Styrene	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 00:53
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 00:53
Tetrachloroethene	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 00:53
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	09-Jan-2019 00:53
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	09-Jan-2019 00:53
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	09-Jan-2019 00:53
Trichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	09-Jan-2019 00:53
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	09-Jan-2019 00:53
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	09-Jan-2019 00:53
Surr: 1,2-Dichloroethane-d4	*95.6*			**0**	*81-118*	*%REC*	*1*	*09-Jan-2019 00:53*
Surr: 4-Bromofluorobenzene	*98.1*			**0**	*85-114*	*%REC*	*1*	*09-Jan-2019 00:53*
Surr: Dibromofluoromethane	*92.7*			**0**	*80-119*	*%REC*	*1*	*09-Jan-2019 00:53*
Surr: Toluene-d8	*105*			**0**	*89-112*	*%REC*	*1*	*09-Jan-2019 00:53*

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

ALS Houston, US Date: 10-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
Sample ID: 18WW02_122718
Collection Date: 27-Dec-2018 13:25

ANALYTICAL REPORT
WorkOrder:HS18121523
Lab ID:HS18121523-05
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		**Method:SW6020**				Prep:SW3010A / 02-Jan-2019		Analyst: RPM
Aluminum	**0.499**		**0.00180**	**0.00500**	**0.0100**	**mg/L**	1	09-Jan-2019 18:21
Antimony	0.00100	U	0.000400	0.00100	0.00200	mg/L	1	09-Jan-2019 00:12
Arsenic	**0.000962**	J	**0.000400**	**0.00100**	**0.00200**	**mg/L**	1	09-Jan-2019 00:12
Barium	**0.0530**		**0.00190**	**0.00250**	**0.00400**	**mg/L**	1	09-Jan-2019 18:21
Beryllium	0.00100	U	0.000200	0.00100	0.00200	mg/L	1	09-Jan-2019 18:21
Cadmium	0.00100	U	0.000200	0.00100	0.00200	mg/L	1	09-Jan-2019 18:21
Calcium	**8.80**		**0.0340**	**0.100**	**0.500**	**mg/L**	1	09-Jan-2019 00:12
Chromium	**0.00726**		**0.000400**	**0.00100**	**0.00400**	**mg/L**	1	09-Jan-2019 00:12
Cobalt	**0.000306**	J	**0.000200**	**0.00100**	**0.00500**	**mg/L**	1	09-Jan-2019 00:12
Copper	**0.00755**		**0.00100**	**0.00100**	**0.00200**	**mg/L**	1	09-Jan-2019 00:12
Iron	**2.51**		**0.0120**	**0.100**	**0.200**	**mg/L**	1	09-Jan-2019 00:12
Lead	**0.00130**	J	**0.000600**	**0.00100**	**0.00200**	**mg/L**	1	09-Jan-2019 00:12
Magnesium	**1.69**		**0.0100**	**0.100**	**0.200**	**mg/L**	1	09-Jan-2019 00:12
Manganese	**0.106**		**0.000700**	**0.00100**	**0.00500**	**mg/L**	1	09-Jan-2019 00:12
Nickel	**0.00420**		**0.000600**	**0.00100**	**0.00200**	**mg/L**	1	09-Jan-2019 00:12
Potassium	**2.04**		**0.0180**	**0.100**	**0.200**	**mg/L**	1	09-Jan-2019 18:21
Selenium	0.00100	U	0.00110	0.00100	0.00200	mg/L	1	09-Jan-2019 00:12
Silver	0.00100	U	0.000200	0.00100	0.00200	mg/L	1	09-Jan-2019 00:12
Sodium	**22.3**		**0.0140**	**0.100**	**0.200**	**mg/L**	1	09-Jan-2019 18:21
Thallium	0.00100	U	0.000200	0.00100	0.00200	mg/L	1	09-Jan-2019 00:12
Vanadium	**0.00499**	J	**0.000600**	**0.00100**	**0.00500**	**mg/L**	1	09-Jan-2019 00:12
Zinc	**0.00483**		**0.00200**	**0.00250**	**0.00400**	**mg/L**	1	09-Jan-2019 00:12
MERCURY BY SW7470A		**Method:SW7470**				Prep:SW7470 / 08-Jan-2019		Analyst: OFO
Mercury	0.000100	U	0.0000300	0.000100	0.000200	mg/L	1	08-Jan-2019 16:15
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: SUB
Subcontract Analysis	**See Attached**		**0**	**0**	**0**	**NA**	1	08-Jan-2019 14:57

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

ALS Houston, US Date: 10-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
Sample ID: 125_122718
Collection Date: 27-Dec-2018 13:50

ANALYTICAL REPORT
WorkOrder:HS18121523
Lab ID:HS18121523-06
Matrix:Groundwater

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	2.5	U	1.5	2.5	5.0	UG/L	5	09-Jan-2019 01:42
1,1,1-Trichloroethane	2.5	U	1.0	2.5	5.0	UG/L	5	09-Jan-2019 01:42
1,1,2,2-Tetrachloroethane	2.5	U	2.5	2.5	5.0	UG/L	5	09-Jan-2019 01:42
1,1,2-Trichloroethane	2.5	U	1.5	2.5	5.0	UG/L	5	09-Jan-2019 01:42
1,1-Dichloroethane	2.5	U	1.0	2.5	5.0	UG/L	5	09-Jan-2019 01:42
1,1-Dichloroethene	2.5	U	1.0	2.5	5.0	UG/L	5	09-Jan-2019 01:42
1,1-Dichloropropene	2.5	U	1.5	2.5	5.0	UG/L	5	09-Jan-2019 01:42
1,2,3-Trichlorobenzene	2.5	U	2.0	2.5	5.0	UG/L	5	09-Jan-2019 01:42
1,2,3-Trichloropropane	2.5	U	2.5	2.5	5.0	UG/L	5	09-Jan-2019 01:42
1,2,4-Trichlorobenzene	2.5	U	2.5	2.5	5.0	UG/L	5	09-Jan-2019 01:42
1,2,4-Trimethylbenzene	2.5	U	1.5	2.5	5.0	UG/L	5	09-Jan-2019 01:42
1,2-Dibromo-3-chloropropane	2.5	U	1.0	2.5	5.0	UG/L	5	09-Jan-2019 01:42
1,2-Dibromoethane	2.5	U	1.0	2.5	5.0	UG/L	5	09-Jan-2019 01:42
1,2-Dichlorobenzene	2.5	U	2.5	2.5	5.0	UG/L	5	09-Jan-2019 01:42
1,2-Dichloroethane	2.5	U	1.0	2.5	5.0	UG/L	5	09-Jan-2019 01:42
1,2-Dichloropropane	2.5	U	2.5	2.5	5.0	UG/L	5	09-Jan-2019 01:42
1,3,5-Trimethylbenzene	2.5	U	1.5	2.5	5.0	UG/L	5	09-Jan-2019 01:42
1,3-Dichlorobenzene	2.5	U	2.0	2.5	5.0	UG/L	5	09-Jan-2019 01:42
1,3-Dichloropropane	2.5	U	1.5	2.5	5.0	UG/L	5	09-Jan-2019 01:42
1,4-Dichlorobenzene	2.5	U	2.0	2.5	5.0	UG/L	5	09-Jan-2019 01:42
2,2-Dichloropropane	2.5	U	1.0	2.5	5.0	UG/L	5	09-Jan-2019 01:42
2-Butanone	5.0	U	2.5	5.0	10	UG/L	5	09-Jan-2019 01:42
2-Chlorotoluene	2.5	U	1.5	2.5	5.0	UG/L	5	09-Jan-2019 01:42
2-Hexanone	5.0	U	5.0	5.0	10	UG/L	5	09-Jan-2019 01:42
4-Chlorotoluene	2.5	U	2.0	2.5	5.0	UG/L	5	09-Jan-2019 01:42
4-Isopropyltoluene	2.5	U	1.5	2.5	5.0	UG/L	5	09-Jan-2019 01:42
4-Methyl-2-pentanone	5.0	U	3.5	5.0	10	UG/L	5	09-Jan-2019 01:42
Acetone	10	U	2.0	10	10	UG/L	5	09-Jan-2019 01:42
Benzene	2.5	U	1.0	2.5	5.0	UG/L	5	09-Jan-2019 01:42
Bromobenzene	2.5	U	2.0	2.5	5.0	UG/L	5	09-Jan-2019 01:42
Bromochloromethane	2.5	U	1.0	2.5	5.0	UG/L	5	09-Jan-2019 01:42
Bromodichloromethane	2.5	U	1.0	2.5	5.0	UG/L	5	09-Jan-2019 01:42
Bromoform	2.5	U	2.0	2.5	5.0	UG/L	5	09-Jan-2019 01:42
Bromomethane	2.5	U	2.0	2.5	5.0	UG/L	5	09-Jan-2019 01:42
Carbon disulfide	5.0	U	3.0	5.0	10	UG/L	5	09-Jan-2019 01:42
Carbon tetrachloride	2.5	U	2.5	2.5	5.0	UG/L	5	09-Jan-2019 01:42
Chlorobenzene	2.5	U	1.5	2.5	5.0	UG/L	5	09-Jan-2019 01:42
Chloroethane	2.5	U	1.5	2.5	5.0	UG/L	5	09-Jan-2019 01:42
Chloroform	2.5	U	1.0	2.5	5.0	UG/L	5	09-Jan-2019 01:42

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

ALS Houston, US Date: 10-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
Sample ID: 125_122718
Collection Date: 27-Dec-2018 13:50

ANALYTICAL REPORT
WorkOrder:HS18121523
Lab ID:HS18121523-06
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloromethane	2.5	U	1.0	2.5	5.0	UG/L	5	09-Jan-2019 01:42
cis-1,2-Dichloroethene	**3.3**	J	**1.0**	**2.5**	**5.0**	**UG/L**	5	09-Jan-2019 01:42
cis-1,3-Dichloropropene	2.5	U	0.50	2.5	5.0	UG/L	5	09-Jan-2019 01:42
Dibromochloromethane	2.5	U	1.5	2.5	5.0	UG/L	5	09-Jan-2019 01:42
Dibromomethane	2.5	U	1.0	2.5	5.0	UG/L	5	09-Jan-2019 01:42
Dichlorodifluoromethane	2.5	U	1.5	2.5	5.0	UG/L	5	09-Jan-2019 01:42
Ethylbenzene	2.5	U	1.5	2.5	5.0	UG/L	5	09-Jan-2019 01:42
Hexachlorobutadiene	5.0	U	5.0	5.0	5.0	UG/L	5	09-Jan-2019 01:42
Isopropylbenzene	2.5	U	1.5	2.5	5.0	UG/L	5	09-Jan-2019 01:42
m,p-Xylene	5.0	U	2.5	5.0	10	UG/L	5	09-Jan-2019 01:42
Methylene chloride	2.5	U	2.0	2.5	10	UG/L	5	09-Jan-2019 01:42
n-Butylbenzene	2.5	U	2.0	2.5	5.0	UG/L	5	09-Jan-2019 01:42
n-Propylbenzene	2.5	U	1.5	2.5	5.0	UG/L	5	09-Jan-2019 01:42
Naphthalene	2.5	U	1.5	2.5	5.0	UG/L	5	09-Jan-2019 01:42
o-Xylene	2.5	U	1.5	2.5	5.0	UG/L	5	09-Jan-2019 01:42
sec-Butylbenzene	2.5	U	1.5	2.5	5.0	UG/L	5	09-Jan-2019 01:42
Styrene	2.5	U	1.5	2.5	5.0	UG/L	5	09-Jan-2019 01:42
tert-Butylbenzene	2.5	U	1.5	2.5	5.0	UG/L	5	09-Jan-2019 01:42
Tetrachloroethene	2.5	U	1.5	2.5	5.0	UG/L	5	09-Jan-2019 01:42
Toluene	2.5	U	1.0	2.5	5.0	UG/L	5	09-Jan-2019 01:42
trans-1,2-Dichloroethene	2.5	U	1.0	2.5	5.0	UG/L	5	09-Jan-2019 01:42
trans-1,3-Dichloropropene	2.5	U	1.0	2.5	5.0	UG/L	5	09-Jan-2019 01:42
Trichloroethene	**11**		**1.0**	**2.5**	**5.0**	**UG/L**	5	09-Jan-2019 01:42
Trichlorofluoromethane	2.5	U	1.5	2.5	5.0	UG/L	5	09-Jan-2019 01:42
Vinyl chloride	2.5	U	1.0	2.5	5.0	UG/L	5	09-Jan-2019 01:42
Surr: 1,2-Dichloroethane-d4	*98.4*			**0**	*81-118*	*%REC*	*5*	*09-Jan-2019 01:42*
Surr: 4-Bromofluorobenzene	*99.2*			**0**	*85-114*	*%REC*	*5*	*09-Jan-2019 01:42*
Surr: Dibromofluoromethane	*93.5*			**0**	*80-119*	*%REC*	*5*	*09-Jan-2019 01:42*
Surr: Toluene-d8	*106*			**0**	*89-112*	*%REC*	*5*	*09-Jan-2019 01:42*

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

ALS Houston, US Date: 10-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
Sample ID: 125_122718
Collection Date: 27-Dec-2018 13:50

ANALYTICAL REPORT
WorkOrder:HS18121523
Lab ID:HS18121523-06
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		**Method:SW6020**				Prep:SW3010A / 02-Jan-2019		Analyst: RPM
Aluminum	**4.20**		**0.0900**	**0.250**	**0.500**	**mg/L**	50	09-Jan-2019 17:49
Antimony	0.00100	U	0.000400	0.00100	0.00200	mg/L	1	09-Jan-2019 00:14
Arsenic	**0.00382**		**0.000400**	**0.00100**	**0.00200**	**mg/L**	1	09-Jan-2019 00:14
Barium	**0.170**		**0.00190**	**0.00250**	**0.00400**	**mg/L**	1	09-Jan-2019 18:23
Beryllium	**0.000305**	J	**0.000200**	**0.00100**	**0.00200**	**mg/L**	1	09-Jan-2019 18:23
Cadmium	0.00100	U	0.000200	0.00100	0.00200	mg/L	1	09-Jan-2019 18:23
Calcium	**3.32**		**0.0340**	**0.100**	**0.500**	**mg/L**	1	09-Jan-2019 00:14
Chromium	**0.00752**		**0.000400**	**0.00100**	**0.00400**	**mg/L**	1	09-Jan-2019 00:14
Cobalt	**0.00233**	J	**0.000200**	**0.00100**	**0.00500**	**mg/L**	1	09-Jan-2019 00:14
Copper	**0.00462**		**0.00100**	**0.00100**	**0.00200**	**mg/L**	1	09-Jan-2019 00:14
Iron	**6.02**		**0.0120**	**0.100**	**0.200**	**mg/L**	1	09-Jan-2019 00:14
Lead	**0.00385**		**0.000600**	**0.00100**	**0.00200**	**mg/L**	1	09-Jan-2019 00:14
Magnesium	**2.85**		**0.0100**	**0.100**	**0.200**	**mg/L**	1	09-Jan-2019 00:14
Manganese	**0.0430**		**0.000700**	**0.00100**	**0.00500**	**mg/L**	1	09-Jan-2019 00:14
Nickel	**0.00749**		**0.000600**	**0.00100**	**0.00200**	**mg/L**	1	09-Jan-2019 00:14
Potassium	**1.24**		**0.0180**	**0.100**	**0.200**	**mg/L**	1	09-Jan-2019 18:23
Selenium	0.00100	U	0.00110	0.00100	0.00200	mg/L	1	09-Jan-2019 00:14
Silver	0.00100	U	0.000200	0.00100	0.00200	mg/L	1	09-Jan-2019 00:14
Sodium	**57.8**		**0.0140**	**0.100**	**0.200**	**mg/L**	1	09-Jan-2019 18:23
Thallium	0.00100	U	0.000200	0.00100	0.00200	mg/L	1	09-Jan-2019 00:14
Vanadium	**0.00987**		**0.000600**	**0.00100**	**0.00500**	**mg/L**	1	09-Jan-2019 00:14
Zinc	**0.0201**		**0.00200**	**0.00250**	**0.00400**	**mg/L**	1	09-Jan-2019 00:14
MERCURY BY SW7470A		**Method:SW7470**				Prep:SW7470 / 08-Jan-2019		Analyst: OFO
Mercury	**0.0000770**	J	**0.0000300**	**0.000100**	**0.000200**	**mg/L**	1	08-Jan-2019 16:17
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: SUB
Subcontract Analysis	**See Attached**		**0**	**0**	**0**	**NA**	1	08-Jan-2019 14:57

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

ALS Houston, US Date: 10-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
Sample ID: Trip Blank
Collection Date: 27-Dec-2018 00:00

ANALYTICAL REPORT
WorkOrder:HS18121523
Lab ID:HS18121523-07
Matrix:Groundwater

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	0.50	U	0.30	0.50	1.0	UG/L	1	08-Jan-2019 19:31
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jan-2019 19:31
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	UG/L	1	08-Jan-2019 19:31
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	08-Jan-2019 19:31
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jan-2019 19:31
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jan-2019 19:31
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	UG/L	1	08-Jan-2019 19:31
1,2,3-Trichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	08-Jan-2019 19:31
1,2,3-Trichloropropane	0.50	U	0.50	0.50	1.0	UG/L	1	08-Jan-2019 19:31
1,2,4-Trichlorobenzene	0.50	U	0.50	0.50	1.0	UG/L	1	08-Jan-2019 19:31
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	08-Jan-2019 19:31
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jan-2019 19:31
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jan-2019 19:31
1,2-Dichlorobenzene	0.50	U	0.50	0.50	1.0	UG/L	1	08-Jan-2019 19:31
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jan-2019 19:31
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	UG/L	1	08-Jan-2019 19:31
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	08-Jan-2019 19:31
1,3-Dichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	08-Jan-2019 19:31
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	UG/L	1	08-Jan-2019 19:31
1,4-Dichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	08-Jan-2019 19:31
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jan-2019 19:31
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	08-Jan-2019 19:31
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	UG/L	1	08-Jan-2019 19:31
2-Hexanone	1.0	U	1.0	1.0	2.0	UG/L	1	08-Jan-2019 19:31
4-Chlorotoluene	0.50	U	0.40	0.50	1.0	UG/L	1	08-Jan-2019 19:31
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	UG/L	1	08-Jan-2019 19:31
4-Methyl-2-pentanone	1.0	U	0.70	1.0	2.0	UG/L	1	08-Jan-2019 19:31
Acetone	2.0	U	0.40	2.0	2.0	UG/L	1	08-Jan-2019 19:31
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jan-2019 19:31
Bromobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	08-Jan-2019 19:31
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jan-2019 19:31
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jan-2019 19:31
Bromoform	0.50	U	0.40	0.50	1.0	UG/L	1	08-Jan-2019 19:31
Bromomethane	0.50	U	0.40	0.50	1.0	UG/L	1	08-Jan-2019 19:31
Carbon disulfide	1.0	U	0.60	1.0	2.0	UG/L	1	08-Jan-2019 19:31
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	UG/L	1	08-Jan-2019 19:31
Chlorobenzene	0.50	U	0.30	0.50	1.0	UG/L	1	08-Jan-2019 19:31
Chloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	08-Jan-2019 19:31
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jan-2019 19:31

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

ALS Houston, US Date: 10-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
Sample ID: Trip Blank
Collection Date: 27-Dec-2018 00:00

ANALYTICAL REPORT
WorkOrder:HS18121523
Lab ID:HS18121523-07
Matrix:Groundwater

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	08-Jan-2019 19:31
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jan-2019 19:31
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	08-Jan-2019 19:31
Dibromochloromethane	0.50	U	0.30	0.50	1.0	UG/L	1	08-Jan-2019 19:31
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jan-2019 19:31
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	08-Jan-2019 19:31
Ethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	08-Jan-2019 19:31
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	08-Jan-2019 19:31
Isopropylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	08-Jan-2019 19:31
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	08-Jan-2019 19:31
Methylene chloride	0.50	U	0.40	0.50	2.0	UG/L	1	08-Jan-2019 19:31
n-Butylbenzene	0.50	U	0.40	0.50	1.0	UG/L	1	08-Jan-2019 19:31
n-Propylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	08-Jan-2019 19:31
Naphthalene	0.50	U	0.30	0.50	1.0	UG/L	1	08-Jan-2019 19:31
o-Xylene	0.50	U	0.30	0.50	1.0	UG/L	1	08-Jan-2019 19:31
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	08-Jan-2019 19:31
Styrene	0.50	U	0.30	0.50	1.0	UG/L	1	08-Jan-2019 19:31
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	08-Jan-2019 19:31
Tetrachloroethene	0.50	U	0.30	0.50	1.0	UG/L	1	08-Jan-2019 19:31
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jan-2019 19:31
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jan-2019 19:31
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jan-2019 19:31
Trichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jan-2019 19:31
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	08-Jan-2019 19:31
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jan-2019 19:31
Surr: 1,2-Dichloroethane-d4	*92.0*			**0**	*81-118*	*%REC*	*1*	*08-Jan-2019 19:31*
Surr: 4-Bromofluorobenzene	*99.0*			**0**	*85-114*	*%REC*	*1*	*08-Jan-2019 19:31*
Surr: Dibromofluoromethane	*89.3*			**0**	*80-119*	*%REC*	*1*	*08-Jan-2019 19:31*
Surr: Toluene-d8	*105*			**0**	*89-112*	*%REC*	*1*	*08-Jan-2019 19:31*

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

ALS Houston, US Date: 10-Jan-19

WEIGHT LOG

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121523

Batch ID: 136233 **Method:** ICP-MS METALS BY SW6020A **Prep:** 3010A

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS18121523-02	1	10	10 (mL)	1
HS18121523-05	1	10	10 (mL)	1
HS18121523-06	1	10	10 (mL)	1

Batch ID: 136401 **Method:** MERCURY BY SW7470A **Prep:** HG_WPR

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS18121523-02	1	10 (mL)	10 (mL)	1
HS18121523-05	1	10 (mL)	10 (mL)	1
HS18121523-06	1	10 (mL)	10 (mL)	1

ALS Houston, US Date: 10-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121523

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID 136233	**Test Name :** ICP-MS METALS BY SW6020A			**Matrix:** Groundwater		
HS18121523-02	18CPTMW24_122718	27 Dec 2018 10:50		02 Jan 2019 13:00	09 Jan 2019 18:15	2
HS18121523-02	18CPTMW24_122718	27 Dec 2018 10:50		02 Jan 2019 13:00	09 Jan 2019 17:47	100
HS18121523-02	18CPTMW24_122718	27 Dec 2018 10:50		02 Jan 2019 13:00	09 Jan 2019 00:10	1
HS18121523-05	18WW02_122718	27 Dec 2018 13:25		02 Jan 2019 13:00	09 Jan 2019 18:21	1
HS18121523-05	18WW02_122718	27 Dec 2018 13:25		02 Jan 2019 13:00	09 Jan 2019 00:12	1
HS18121523-06	125_122718	27 Dec 2018 13:50		02 Jan 2019 13:00	09 Jan 2019 18:23	1
HS18121523-06	125_122718	27 Dec 2018 13:50		02 Jan 2019 13:00	09 Jan 2019 17:49	50
HS18121523-06	125_122718	27 Dec 2018 13:50		02 Jan 2019 13:00	09 Jan 2019 00:14	1
Batch ID 136401	**Test Name :** MERCURY BY SW7470A			**Matrix:** Groundwater		
HS18121523-02	18CPTMW24_122718	27 Dec 2018 10:50		08 Jan 2019 10:30	08 Jan 2019 15:53	1
HS18121523-05	18WW02_122718	27 Dec 2018 13:25		08 Jan 2019 10:30	08 Jan 2019 16:15	1
HS18121523-06	125_122718	27 Dec 2018 13:50		08 Jan 2019 10:30	08 Jan 2019 16:17	1
Batch ID R330651	**Test Name :** SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)				**Matrix:** Groundwater	
HS18121523-01	109_122718	27 Dec 2018 09:55			08 Jan 2019 14:57	1
HS18121523-02	18CPTMW24_122718	27 Dec 2018 10:50			08 Jan 2019 14:57	1
HS18121523-03	18WW06_122718	27 Dec 2018 12:20			08 Jan 2019 14:57	1
HS18121523-04	18WW06_122718_a	27 Dec 2018 12:20			08 Jan 2019 14:57	1
HS18121523-05	18WW02_122718	27 Dec 2018 13:25			08 Jan 2019 14:57	1
HS18121523-06	125_122718	27 Dec 2018 13:50			08 Jan 2019 14:57	1
Batch ID R330692	**Test Name :** VOLATILES ORGANICS BY METHOD 8260C				**Matrix:** Groundwater	
HS18121523-01	109_122718	27 Dec 2018 09:55			09 Jan 2019 02:31	5
HS18121523-01	109_122718	27 Dec 2018 09:55			09 Jan 2019 02:07	1
HS18121523-02	18CPTMW24_122718	27 Dec 2018 10:50			09 Jan 2019 01:17	1
HS18121523-03	18WW06_122718	27 Dec 2018 12:20			09 Jan 2019 00:03	1
HS18121523-04	18WW06_122718_a	27 Dec 2018 12:20			09 Jan 2019 00:28	1
HS18121523-05	18WW02_122718	27 Dec 2018 13:25			09 Jan 2019 00:53	1
HS18121523-06	125_122718	27 Dec 2018 13:50			09 Jan 2019 01:42	5
HS18121523-07	Trip Blank	27 Dec 2018 00:00			08 Jan 2019 19:31	1

ALS Houston, US Date: 10-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121523

QC BATCH REPORT

Batch ID: 136233 **Instrument: ICPMS05** **Method: SW6020**

MBLK Sample ID: **MBLK-136233** Units: **mg/L** Analysis Date: **09-Jan-2019 17:24**
Client ID: Run ID: **ICPMS05_330716** SeqNo: **4901789** PrepDate: **02-Jan-2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.003559	0.0100								J
Barium	0.00250	0.00400								U
Cadmium	0.00100	0.00200								U
Lead	0.00100	0.00200								U

MBLK Sample ID: **MBLK-136233** Units: **mg/L** Analysis Date: **08-Jan-2019 23:22**
Client ID: Run ID: **ICPMS05_330637** SeqNo: **4900328** PrepDate: **02-Jan-2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.00100	0.00200								U
Arsenic	0.00100	0.00200								U
Beryllium	0.00100	0.00200								U
Calcium	0.100	0.500								U
Chromium	0.00100	0.00400								U
Cobalt	0.00100	0.00500								U
Copper	0.00100	0.00200								U
Iron	0.100	0.200								U
Magnesium	0.01072	0.200								J
Manganese	0.001085	0.00500								J
Nickel	0.00100	0.00200								U
Potassium	0.100	0.200								U
Selenium	0.00100	0.00200								U
Silver	0.00100	0.00200								U
Sodium	0.100	0.200								U
Thallium	0.00100	0.00200								U
Vanadium	0.00100	0.00500								U
Zinc	0.00250	0.00400								U

ALS Houston, US Date: 10-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121523

QC BATCH REPORT

Batch ID: 136233 **Instrument: ICPMS05** **Method: SW6020**

LCS Sample ID: **LCS-136233** Units: **mg/L** Analysis Date: **09-Jan-2019 17:25**
Client ID: Run ID: **ICPMS05_330716** SeqNo: **4901790** PrepDate: **02-Jan-2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.107	0.0100	0.1	0	107	80 - 120				
Barium	0.05224	0.00400	0.05	0	104	80 - 120				
Cadmium	0.05224	0.00200	0.05	0	104	80 - 120				
Lead	0.05989	0.00200	0.05	0	120	80 - 120				

LCS Sample ID: **LCS-136233** Units: **mg/L** Analysis Date: **08-Jan-2019 23:24**
Client ID: Run ID: **ICPMS05_330637** SeqNo: **4900329** PrepDate: **02-Jan-2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.05682	0.00200	0.05	0	114	80 - 120				
Arsenic	0.05435	0.00200	0.05	0	109	80 - 120				
Beryllium	0.05195	0.00200	0.05	0	104	80 - 120				
Calcium	5.595	0.500	5	0	112	80 - 120				
Chromium	0.05653	0.00400	0.05	0	113	80 - 120				
Cobalt	0.05594	0.00500	0.05	0	112	80 - 120				
Copper	0.05785	0.00200	0.05	0	116	80 - 120				
Iron	5.733	0.200	5	0	115	80 - 120				
Magnesium	5.686	0.200	5	0	114	80 - 120				
Manganese	0.05625	0.00500	0.05	0	112	80 - 120				
Nickel	0.05709	0.00200	0.05	0	114	80 - 120				
Potassium	5.528	0.200	5	0	111	80 - 120				
Selenium	0.05536	0.00200	0.05	0	111	80 - 120				
Silver	0.0557	0.00200	0.05	0	111	80 - 120				
Sodium	5.563	0.200	5	0	111	80 - 120				
Thallium	0.05181	0.00200	0.05	0	104	80 - 120				
Vanadium	0.05439	0.00500	0.05	0	109	80 - 120				
Zinc	0.05675	0.00400	0.05	0	113	80 - 120				

ALS Houston, US Date: 10-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121523

QC BATCH REPORT

Batch ID: 136233 **Instrument: ICPMS05** **Method: SW6020**

MS Sample ID: **HS18121325-04MS** Units: **mg/L** Analysis Date: **09-Jan-2019 19:40**
Client ID: Run ID: **ICPMS05_330716** SeqNo: **4902118** PrepDate: **02-Jan-2019** DF: **2**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.1403	0.0200	0.1	0.03595	104	80 - 120				
Barium	0.778	0.00800	0.05	0.7118	132	80 - 120				SO
Cadmium	0.05426	0.00400	0.05	0.000189	108	80 - 120				
Lead	0.05092	0.00400	0.05	0.000165	102	80 - 120				

MS Sample ID: **HS18121325-04MS** Units: **mg/L** Analysis Date: **08-Jan-2019 23:30**
Client ID: Run ID: **ICPMS05_330637** SeqNo: **4900332** PrepDate: **02-Jan-2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.05357	0.00200	0.05	0.000199	107	80 - 120				
Arsenic	0.05662	0.00200	0.05	0.002104	109	80 - 120				
Beryllium	0.05418	0.00200	0.05	0.000134	108	80 - 120				
Calcium	356.3	0.500	5	360.1	-77.6	80 - 120				SEO
Chromium	0.06435	0.00400	0.05	0.009366	110	80 - 120				
Cobalt	0.07003	0.00500	0.05	0.01743	105	80 - 120				
Copper	0.05424	0.00200	0.05	0.000717	107	80 - 120				
Iron	6.679	0.200	5	1.213	109	80 - 120				
Magnesium	234.7	0.200	5	235	-6.96	80 - 120				SEO
Manganese	2.536	0.00500	0.05	2.577	-82.2	80 - 120				SEO
Nickel	0.06843	0.00200	0.05	0.01543	106	80 - 120				
Potassium	10.05	0.200	5	4.976	101	80 - 120				
Selenium	0.05328	0.00200	0.05	0.000123	106	80 - 120				
Silver	0.0499	0.00200	0.05	0.00006	99.7	80 - 120				
Sodium	885.4	0.200	5	890.1	-94.3	80 - 120				SEO
Thallium	0.04789	0.00200	0.05	0.000985	93.8	80 - 120				
Vanadium	0.05856	0.00500	0.05	0.00118	115	80 - 120				
Zinc	0.0662	0.00400	0.05	0.01626	99.9	80 - 120				

ALS Houston, US Date: 10-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121523

QC BATCH REPORT

Batch ID: 136233 **Instrument: ICPMS05** **Method: SW6020**

MSD Sample ID: **HS18121325-04MSD** Units: **mg/L** Analysis Date: **09-Jan-2019 19:42**
Client ID: Run ID: **ICPMS05_330716** SeqNo: **4902119** PrepDate: **02-Jan-2019** DF: **2**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.1425	0.0200	0.1	0.03595	107	80 - 120	0.1403	1.58	20	
Barium	0.7464	0.00800	0.05	0.7118	69.3	80 - 120	0.778	4.14	20	SO
Cadmium	0.05331	0.00400	0.05	0.000189	106	80 - 120	0.05426	1.77	20	
Lead	0.05258	0.00400	0.05	0.000165	105	80 - 120	0.05092	3.22	20	

MSD Sample ID: **HS18121325-04MSD** Units: **mg/L** Analysis Date: **08-Jan-2019 23:32**
Client ID: Run ID: **ICPMS05_330637** SeqNo: **4900333** PrepDate: **02-Jan-2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.0541	0.00200	0.05	0.000199	108	80 - 120	0.05357	0.983	20	
Arsenic	0.05679	0.00200	0.05	0.002104	109	80 - 120	0.05662	0.293	20	
Beryllium	0.0573	0.00200	0.05	0.000134	114	80 - 120	0.05418	5.6	20	
Calcium	360.5	0.500	5	360.1	8.14	80 - 120	356.3	1.2	20	SEO
Chromium	0.06517	0.00400	0.05	0.009366	112	80 - 120	0.06435	1.27	20	
Cobalt	0.06987	0.00500	0.05	0.01743	105	80 - 120	0.07003	0.23	20	
Copper	0.05443	0.00200	0.05	0.000717	107	80 - 120	0.05424	0.344	20	
Iron	6.768	0.200	5	1.213	111	80 - 120	6.679	1.33	20	
Magnesium	234.9	0.200	5	235	-1.10	80 - 120	234.7	0.125	20	SEO
Manganese	2.532	0.00500	0.05	2.577	-90.5	80 - 120	2.536	0.164	20	SEO
Nickel	0.06931	0.00200	0.05	0.01543	108	80 - 120	0.06843	1.28	20	
Potassium	10.53	0.200	5	4.976	111	80 - 120	10.05	4.71	20	
Selenium	0.05459	0.00200	0.05	0.000123	109	80 - 120	0.05328	2.44	20	
Silver	0.05204	0.00200	0.05	0.00006	104	80 - 120	0.0499	4.18	20	
Sodium	886.6	0.200	5	890.1	-70.1	80 - 120	885.4	0.137	20	SEO
Thallium	0.05464	0.00200	0.05	0.000985	107	80 - 120	0.04789	13.2	20	
Vanadium	0.0589	0.00500	0.05	0.00118	115	80 - 120	0.05856	0.589	20	
Zinc	0.06974	0.00400	0.05	0.01626	107	80 - 120	0.0662	5.2	20	

ALS Houston, US Date: 10-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121523

QC BATCH REPORT

Batch ID: 136233 **Instrument: ICPMS05** **Method: SW6020**

PDS Sample ID: **HS18121325-04PDS** Units: **mg/L** Analysis Date: **09-Jan-2019 19:44**
Client ID: Run ID: **ICPMS05_330716** SeqNo: **4902120** PrepDate: **02-Jan-2019** DF: **2**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.2558	0.0200	0.2	0.03595	110	75 - 125				
Barium	0.9466	0.00800	0.2	0.7118	117	75 - 125				
Cadmium	0.2322	0.00400	0.2	0	116	75 - 125				
Lead	0.224	0.00400	0.2	0	112	75 - 125				

PDS Sample ID: **HS18121325-04PDS** Units: **mg/L** Analysis Date: **08-Jan-2019 23:34**
Client ID: Run ID: **ICPMS05_330637** SeqNo: **4900334** PrepDate: **02-Jan-2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.1066	0.00200	0.1	0.000199	106	75 - 125				
Arsenic	0.1131	0.00200	0.1	0.002104	111	75 - 125				
Beryllium	0.109	0.00200	0.1	0.000134	109	75 - 125				
Chromium	0.125	0.00400	0.1	0.009366	116	75 - 125				
Cobalt	0.1275	0.00500	0.1	0.01743	110	75 - 125				
Copper	0.1107	0.00200	0.1	0.000717	110	75 - 125				
Iron	12.7	0.200	10	1.213	115	75 - 125				
Nickel	0.1245	0.00200	0.1	0.01543	109	75 - 125				
Potassium	16.39	0.200	10	4.976	114	75 - 125				
Selenium	0.1077	0.00200	0.1	0.000123	108	75 - 125				
Silver	0.1019	0.00200	0.1	0.00006	102	75 - 125				
Thallium	0.114	0.00200	0.1	0.000985	113	75 - 125				
Vanadium	0.1191	0.00500	0.1	0.00118	118	75 - 125				
Zinc	0.126	0.00400	0.1	0.01626	110	75 - 125				

PDS Sample ID: **HS18121325-04PDS** Units: **mg/L** Analysis Date: **09-Jan-2019 17:31**
Client ID: Run ID: **ICPMS05_330716** SeqNo: **4901793** PrepDate: **02-Jan-2019** DF: **20**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	529.9	10.0	200	341.5	94.2	75 - 125				
Magnesium	404.9	4.00	200	213.3	95.8	75 - 125				
Manganese	4.552	0.100	2	2.495	103	75 - 125				
Sodium	946.3	4.00	200	803	71.6	75 - 125				SO

ALS Houston, US Date: 10-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121523

QC BATCH REPORT

Batch ID: 136233 **Instrument: ICPMS05** **Method: SW6020**

SD Sample ID: **HS18121325-04SD** Units: **mg/L** Analysis Date: **09-Jan-2019 19:38**
Client ID: Run ID: **ICPMS05_330716** SeqNo: **4902117** PrepDate: **02-Jan-2019** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual
Aluminum	0.0359	0.100					0.03595	0	10	J
Barium	0.7264	0.0400					0.7118	2.05	10	
Cadmium	0.0100	0.0200					0.000189	0	10	U
Lead	0.0100	0.0200					0.000165	0	10	U

SD Sample ID: **HS18121325-04SD** Units: **mg/L** Analysis Date: **08-Jan-2019 23:28**
Client ID: Run ID: **ICPMS05_330637** SeqNo: **4900331** PrepDate: **02-Jan-2019** DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual
Antimony	0.00500	0.0100					0.000199	0	10	U
Arsenic	0.002387	0.0100					0.002104	0	10	J
Beryllium	0.00500	0.0100					0.000134	0	10	U
Chromium	0.009393	0.0200					0.009366	0	10	J
Cobalt	0.01758	0.0250					0.01743	0	10	J
Copper	0.00500	0.0100					0.000717	0	10	U
Iron	1.246	1.00					1.213	2.76	10	
Nickel	0.01587	0.0100					0.01543	2.86	10	
Potassium	4.832	1.00					4.976	2.89	10	
Selenium	0.00500	0.0100					0.000123	0	10	U
Silver	0.00500	0.0100					0.00006	0	10	U
Thallium	0.00500	0.0100					0.000985	0	10	U
Vanadium	0.007768	0.0250					0.00118	0	10	J
Zinc	0.01552	0.0200					0.01626	0	10	J

SD Sample ID: **HS18121325-04SD** Units: **mg/L** Analysis Date: **09-Jan-2019 17:29**
Client ID: Run ID: **ICPMS05_330716** SeqNo: **4901792** PrepDate: **02-Jan-2019** DF: **100**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual
Calcium	355.9	50.0					341.5	4.23	10	
Magnesium	221.7	20.0					213.3	3.94	10	
Manganese	2.547	0.500					2.495	2.06	10	
Sodium	820.1	20.0					803	2.13	10	

The following samples were analyzed in this batch: HS18121523-02 HS18121523-05 HS18121523-06

ALS Houston, US Date: 10-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121523

QC BATCH REPORT

Batch ID: 136401 **Instrument: HG03** **Method: SW7470**

MBLK Sample ID: **MBLK-136401** Units: **mg/L** Analysis Date: **08-Jan-2019 15:50**
Client ID: Run ID: **HG03_330677** SeqNo: **4899933** PrepDate: **08-Jan-2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.000100	0.000200								U

LCS Sample ID: **LCS-136401** Units: **mg/L** Analysis Date: **08-Jan-2019 15:51**
Client ID: Run ID: **HG03_330677** SeqNo: **4899934** PrepDate: **08-Jan-2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00498	0.000200	0.005	0	99.6	80 - 120				

MS Sample ID: **HS18121523-02MS** Units: **mg/L** Analysis Date: **08-Jan-2019 15:55**
Client ID: **18CPTMW24_122718** Run ID: **HG03_330677** SeqNo: **4899936** PrepDate: **08-Jan-2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00484	0.000200	0.005	0.000014	96.5	75 - 125				

MSD Sample ID: **HS18121523-02MSD** Units: **mg/L** Analysis Date: **08-Jan-2019 15:56**
Client ID: **18CPTMW24_122718** Run ID: **HG03_330677** SeqNo: **4899937** PrepDate: **08-Jan-2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00485	0.000200	0.005	0.000014	96.7	75 - 125	0.00484	0.206	20	

The following samples were analyzed in this batch: HS18121523-02 HS18121523-05 HS18121523-06

ALS Houston, US Date: 10-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121523

QC BATCH REPORT

Batch ID: R330692 **Instrument: VOA9** **Method: SW8260**

MBLK Sample ID: **VBLKW-190108** Units: **UG/L** Analysis Date: **08-Jan-2019 19:06**
Client ID: Run ID: **VOA9_330692** SeqNo: **4900614** 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	0.50	1.0								U
1,1,1-Trichloroethane	0.50	1.0								U
1,1,2,2-Tetrachloroethane	0.50	1.0								U
1,1,2-Trichloroethane	0.50	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	0.50	1.0								U
1,2,3-Trichloropropane	0.50	1.0								U
1,2,4-Trichlorobenzene	0.50	1.0								U
1,2,4-Trimethylbenzene	0.50	1.0								U
1,2-Dibromo-3-chloropropane	0.50	1.0								U
1,2-Dibromoethane	0.50	1.0								U
1,2-Dichlorobenzene	0.50	1.0								U
1,2-Dichloroethane	0.50	1.0								U
1,2-Dichloropropane	0.50	1.0								U
1,3,5-Trimethylbenzene	0.50	1.0								U
1,3-Dichlorobenzene	0.50	1.0								U
1,3-Dichloropropane	0.50	1.0								U
1,4-Dichlorobenzene	0.50	1.0								U
2,2-Dichloropropane	0.50	1.0								U
2-Butanone	1.0	2.0								U
2-Chlorotoluene	0.50	1.0								U
2-Hexanone	1.0	2.0								U
4-Chlorotoluene	0.50	1.0								U
4-Isopropyltoluene	0.50	1.0								U
4-Methyl-2-pentanone	1.0	2.0								U
Acetone	2.0	2.0								U
Benzene	0.50	1.0								U
Bromobenzene	0.50	1.0								U
Bromochloromethane	0.50	1.0								U
Bromodichloromethane	0.50	1.0								U
Bromoform	0.50	1.0								U
Bromomethane	0.50	1.0								U

ALS Houston, US Date: 10-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121523

QC BATCH REPORT

Batch ID: R330692 **Instrument: VOA9** **Method: SW8260**

MBLK Sample ID: **VBLKW-190108** Units: **UG/L** Analysis Date: **08-Jan-2019 19:06**
Client ID: Run ID: **VOA9_330692** SeqNo: **4900614** 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	0.50	1.0								U
Chlorobenzene	0.50	1.0								U
Chloroethane	0.50	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	0.50	1.0								U
Dibromomethane	0.50	1.0								U
Dichlorodifluoromethane	0.50	1.0								U
Ethylbenzene	0.50	1.0								U
Hexachlorobutadiene	1.0	1.0								U
Isopropylbenzene	0.50	1.0								U
m,p-Xylene	1.0	2.0								U
Methylene chloride	0.50	2.0								U
Naphthalene	0.50	1.0								U
n-Butylbenzene	0.50	1.0								U
n-Propylbenzene	0.50	1.0								U
o-Xylene	0.50	1.0								U
sec-Butylbenzene	0.50	1.0								U
Styrene	0.50	1.0								U
tert-Butylbenzene	0.50	1.0								U
Tetrachloroethene	0.50	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	0.50	1.0								U
Vinyl chloride	0.50	1.0								U
Surr: 1,2-Dichloroethane-d4	*46.49*	*1.0*	*50*	*0*	*93.0*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*50.23*	*1.0*	*50*	*0*	*100*	*85 - 114*				
Surr: Dibromofluoromethane	*44.78*	*1.0*	*50*	*0*	*89.6*	*80 - 119*				
Surr: Toluene-d8	*52.23*	*1.0*	*50*	*0*	*104*	*89 - 112*				

ALS Houston, US Date: 10-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121523

QC BATCH REPORT

Batch ID: R330692 **Instrument: VOA9** **Method: SW8260**

LCS Sample ID: **VLCSW-190108** Units: **UG/L** Analysis Date: **08-Jan-2019 17:52**
Client ID: Run ID: **VOA9_330692** SeqNo: **4900613** 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	20.85	1.0	20	0	104	78 - 124				
1,1,1-Trichloroethane	20.28	1.0	20	0	101	74 - 131				
1,1,2,2-Tetrachloroethane	20.94	1.0	20	0	105	71 - 121				
1,1,2-Trichloroethane	20.23	1.0	20	0	101	80 - 119				
1,1-Dichloroethane	19.95	1.0	20	0	99.8	77 - 125				
1,1-Dichloroethene	19.85	1.0	20	0	99.2	71 - 131				
1,1-Dichloropropene	19.75	1.0	20	0	98.7	78 - 125				
1,2,3-Trichlorobenzene	19.78	1.0	20	0	98.9	69 - 129				
1,2,3-Trichloropropane	20.79	1.0	20	0	104	73 - 122				
1,2,4-Trichlorobenzene	20.18	1.0	20	0	101	69 - 130				
1,2,4-Trimethylbenzene	20	1.0	20	0	100.0	76 - 124				
1,2-Dibromo-3-chloropropane	20.05	1.0	20	0	100	62 - 128				
1,2-Dibromoethane	21.1	1.0	20	0	105	77 - 121				
1,2-Dichlorobenzene	19.16	1.0	20	0	95.8	80 - 119				
1,2-Dichloroethane	20.16	1.0	20	0	101	73 - 128				
1,2-Dichloropropane	20.29	1.0	20	0	101	78 - 122				
1,3,5-Trimethylbenzene	19.55	1.0	20	0	97.7	75 - 124				
1,3-Dichlorobenzene	19.38	1.0	20	0	96.9	80 - 119				
1,3-Dichloropropane	20.42	1.0	20	0	102	80 - 119				
1,4-Dichlorobenzene	18.73	1.0	20	0	93.6	79 - 118				
2,2-Dichloropropane	21.61	1.0	20	0	108	60 - 139				
2-Butanone	42.72	2.0	40	0	107	56 - 143				
2-Chlorotoluene	19.53	1.0	20	0	97.6	79 - 122				
2-Hexanone	44.6	2.0	40	0	111	57 - 139				
4-Chlorotoluene	19.81	1.0	20	0	99.0	78 - 122				
4-Isopropyltoluene	19.21	1.0	20	0	96.0	77 - 127				
4-Methyl-2-pentanone	44.32	2.0	40	0	111	67 - 130				
Acetone	42.45	2.0	40	0	106	39 - 160				
Benzene	20.08	1.0	20	0	100	79 - 120				
Bromobenzene	20.32	1.0	20	0	102	80 - 120				
Bromochloromethane	22.35	1.0	20	0	112	78 - 123				
Bromodichloromethane	20.56	1.0	20	0	103	79 - 125				
Bromoform	19.49	1.0	20	0	97.5	66 - 130				
Bromomethane	21	1.0	20	0	105	53 - 141				

ALS Houston, US Date: 10-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121523

QC BATCH REPORT

Batch ID: R330692 **Instrument: VOA9** **Method: SW8260**

LCS Sample ID: **VLCSW-190108** Units: **UG/L** Analysis Date: **08-Jan-2019 17:52**
Client ID: Run ID: **VOA9_330692** SeqNo: **4900613** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	41.52	2.0	40	0	104	64 - 133				
Carbon tetrachloride	19.61	1.0	20	0	98.1	72 - 136				
Chlorobenzene	19.85	1.0	20	0	99.3	82 - 118				
Chloroethane	19.23	1.0	20	0	96.1	60 - 138				
Chloroform	20.02	1.0	20	0	100	79 - 124				
Chloromethane	22.21	1.0	20	0	111	50 - 139				
cis-1,2-Dichloroethene	19.88	1.0	20	0	99.4	78 - 123				
cis-1,3-Dichloropropene	20.03	1.0	20	0	100	75 - 124				
Dibromochloromethane	19.9	1.0	20	0	99.5	74 - 126				
Dibromomethane	20.31	1.0	20	0	102	79 - 123				
Dichlorodifluoromethane	18.96	1.0	20	0	94.8	32 - 152				
Ethylbenzene	19.77	1.0	20	0	98.8	79 - 121				
Hexachlorobutadiene	19.45	1.0	20	0	97.3	66 - 134				
Isopropylbenzene	19.32	1.0	20	0	96.6	72 - 131				
m,p-Xylene	40.27	2.0	40	0	101	80 - 121				
Methylene chloride	20.29	2.0	20	0	101	74 - 124				
Naphthalene	20	1.0	20	0	100	61 - 128				
n-Butylbenzene	18.44	1.0	20	0	92.2	75 - 128				
n-Propylbenzene	19.03	1.0	20	0	95.2	76 - 126				
o-Xylene	20	1.0	20	0	100	78 - 122				
sec-Butylbenzene	18.48	1.0	20	0	92.4	77 - 126				
Styrene	21.04	1.0	20	0	105	78 - 123				
tert-Butylbenzene	18.65	1.0	20	0	93.3	78 - 124				
Tetrachloroethene	18.54	1.0	20	0	92.7	74 - 129				
Toluene	20.56	1.0	20	0	103	80 - 121				
trans-1,2-Dichloroethene	20.04	1.0	20	0	100	75 - 124				
trans-1,3-Dichloropropene	19.73	1.0	20	0	98.6	73 - 127				
Trichloroethene	20.5	1.0	20	0	102	79 - 123				
Trichlorofluoromethane	19.12	1.0	20	0	95.6	65 - 141				
Vinyl chloride	19.03	1.0	20	0	95.1	58 - 137				
Surr: 1,2-Dichloroethane-d4	*51.25*	*1.0*	*50*	*0*	*102*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*52.75*	*1.0*	*50*	*0*	*105*	*85 - 114*				
Surr: Dibromofluoromethane	*49.98*	*1.0*	*50*	*0*	*100.0*	*80 - 119*				
Surr: Toluene-d8	*52.61*	*1.0*	*50*	*0*	*105*	*89 - 112*				

ALS Houston, US Date: 10-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121523

QC BATCH REPORT

Batch ID: R330692 **Instrument: VOA9** **Method: SW8260**

MS Sample ID: **HS18121520-09MS** Units: **UG/L** Analysis Date: **08-Jan-2019 20:46**
Client ID: Run ID: **VOA9_330692** SeqNo: **4900618** PrepDate: DF: **50**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
1,1,1,2-Tetrachloroethane	1385	50	1000	0	138	78 - 124			S
1,1,1-Trichloroethane	1327	50	1000	0	133	74 - 131			S
1,1,2,2-Tetrachloroethane	1336	50	1000	0	134	71 - 121			S
1,1,2-Trichloroethane	1382	50	1000	0	138	80 - 119			S
1,1-Dichloroethane	1269	50	1000	0	127	77 - 125			S
1,1-Dichloroethene	1287	50	1000	0	129	71 - 131			
1,1-Dichloropropene	1419	50	1000	0	142	78 - 125			S
1,2,3-Trichlorobenzene	1299	50	1000	0	130	69 - 129			S
1,2,3-Trichloropropane	1298	50	1000	0	130	73 - 122			S
1,2,4-Trichlorobenzene	1337	50	1000	0	134	69 - 130			S
1,2,4-Trimethylbenzene	1412	50	1000	0	141	76 - 124			S
1,2-Dibromo-3-chloropropane	1204	50	1000	0	120	62 - 128			
1,2-Dibromoethane	1386	50	1000	0	139	77 - 121			S
1,2-Dichlorobenzene	1293	50	1000	0	129	80 - 119			S
1,2-Dichloroethane	1472	50	1000	112.7	136	73 - 128			S
1,2-Dichloropropane	1376	50	1000	0	138	78 - 122			S
1,3,5-Trimethylbenzene	1402	50	1000	0	140	75 - 124			S
1,3-Dichlorobenzene	1288	50	1000	0	129	80 - 119			S
1,3-Dichloropropane	1374	50	1000	0	137	80 - 119			S
1,4-Dichlorobenzene	1264	50	1000	0	126	79 - 118			S
2,2-Dichloropropane	1256	50	1000	0	126	60 - 139			
2-Butanone	2455	100	2000	0	123	56 - 143			
2-Chlorotoluene	1365	50	1000	0	136	79 - 122			S
2-Hexanone	2794	100	2000	0	140	57 - 139			S
4-Chlorotoluene	1364	50	1000	0	136	78 - 122			S
4-Isopropyltoluene	1415	50	1000	0	142	77 - 127			S
4-Methyl-2-pentanone	2766	100	2000	0	138	67 - 130			S
Acetone	2603	100	2000	0	130	39 - 160			
Benzene	1393	50	1000	0	139	79 - 120			S
Bromobenzene	1345	50	1000	0	134	80 - 120			S
Bromochloromethane	1396	50	1000	0	140	78 - 123			S
Bromodichloromethane	1373	50	1000	0	137	79 - 125			S
Bromoform	1206	50	1000	0	121	66 - 130			
Bromomethane	1377	50	1000	0	138	53 - 141			

ALS Houston, US Date: 10-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121523

QC BATCH REPORT

Batch ID: R330692 **Instrument: VOA9** **Method: SW8260**

MS Sample ID: **HS18121520-09MS** Units: **UG/L** Analysis Date: **08-Jan-2019 20:46**
Client ID: Run ID: **VOA9_330692** SeqNo: **4900618** PrepDate: DF: **50**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Carbon disulfide	2607	100	2000	0	130	64 - 133			
Carbon tetrachloride	1459	50	1000	0	146	72 - 136			S
Chlorobenzene	1335	50	1000	0	133	82 - 118			S
Chloroethane	1213	50	1000	0	121	60 - 138			
Chloroform	1279	50	1000	0	128	79 - 124			S
Chloromethane	1164	50	1000	0	116	50 - 139			
cis-1,2-Dichloroethene	1295	50	1000	0	130	78 - 123			S
cis-1,3-Dichloropropene	1264	50	1000	0	126	75 - 124			S
Dibromochloromethane	1265	50	1000	0	126	74 - 126			S
Dibromomethane	1355	50	1000	0	136	79 - 123			S
Dichlorodifluoromethane	942.6	50	1000	0	94.3	32 - 152			
Ethylbenzene	1409	50	1000	0	141	79 - 121			S
Hexachlorobutadiene	1345	50	1000	0	134	66 - 134			S
Isopropylbenzene	1463	50	1000	0	146	72 - 131			S
m,p-Xylene	2887	100	2000	0	144	80 - 121			S
Methylene chloride	1306	100	1000	0	131	74 - 124			S
Naphthalene	1265	50	1000	0	127	61 - 128			
n-Butylbenzene	1385	50	1000	0	138	75 - 128			S
n-Propylbenzene	1405	50	1000	0	141	76 - 126			S
o-Xylene	1414	50	1000	0	141	78 - 122			S
sec-Butylbenzene	1421	50	1000	0	142	77 - 126			S
Styrene	1448	50	1000	0	145	78 - 123			S
tert-Butylbenzene	1408	50	1000	0	141	78 - 124			S
Tetrachloroethene	1356	50	1000	0	136	74 - 129			S
Toluene	1419	50	1000	0	142	80 - 121			S
trans-1,2-Dichloroethene	1261	50	1000	0	126	75 - 124			S
trans-1,3-Dichloropropene	1236	50	1000	0	124	73 - 127			
Trichloroethene	6120	50	1000	4766	135	79 - 123			SO
Trichlorofluoromethane	1233	50	1000	0	123	65 - 141			
Vinyl chloride	1173	50	1000	0	117	58 - 137			
Surr: 1,2-Dichloroethane-d4	*2252*	*50*	*2500*	*0*	*90.1*	*81 - 118*			
Surr: 4-Bromofluorobenzene	*2628*	*50*	*2500*	*0*	*105*	*85 - 114*			
Surr: Dibromofluoromethane	*2251*	*50*	*2500*	*0*	*90.0*	*80 - 119*			
Surr: Toluene-d8	*2664*	*50*	*2500*	*0*	*107*	*89 - 112*			

ALS Houston, US Date: 10-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121523

QC BATCH REPORT

Batch ID: R330692 **Instrument: VOA9** **Method: SW8260**

MSD Sample ID: **HS18121520-09MSD** Units: **UG/L** Analysis Date: **08-Jan-2019 21:10**
Client ID: Run ID: **VOA9_330692** SeqNo: **4900619** PrepDate: DF: **50**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	1356	50	1000	0	136	78 - 124	1385	2.1	20	S
1,1,1-Trichloroethane	1333	50	1000	0	133	74 - 131	1327	0.496	20	S
1,1,2,2-Tetrachloroethane	1356	50	1000	0	136	71 - 121	1336	1.5	20	S
1,1,2-Trichloroethane	1359	50	1000	0	136	80 - 119	1382	1.64	20	S
1,1-Dichloroethane	1252	50	1000	0	125	77 - 125	1269	1.36	20	S
1,1-Dichloroethene	1245	50	1000	0	125	71 - 131	1287	3.31	20	
1,1-Dichloropropene	1368	50	1000	0	137	78 - 125	1419	3.71	20	S
1,2,3-Trichlorobenzene	1336	50	1000	0	134	69 - 129	1299	2.79	20	S
1,2,3-Trichloropropane	1341	50	1000	0	134	73 - 122	1298	3.28	20	S
1,2,4-Trichlorobenzene	1361	50	1000	0	136	69 - 130	1337	1.78	20	S
1,2,4-Trimethylbenzene	1401	50	1000	0	140	76 - 124	1412	0.787	20	S
1,2-Dibromo-3-chloropropane	1184	50	1000	0	118	62 - 128	1204	1.72	20	
1,2-Dibromoethane	1370	50	1000	0	137	77 - 121	1386	1.18	20	S
1,2-Dichlorobenzene	1291	50	1000	0	129	80 - 119	1293	0.198	20	S
1,2-Dichloroethane	1450	50	1000	112.7	134	73 - 128	1472	1.49	20	S
1,2-Dichloropropane	1362	50	1000	0	136	78 - 122	1376	1.02	20	S
1,3,5-Trimethylbenzene	1398	50	1000	0	140	75 - 124	1402	0.317	20	S
1,3-Dichlorobenzene	1304	50	1000	0	130	80 - 119	1288	1.21	20	S
1,3-Dichloropropane	1360	50	1000	0	136	80 - 119	1374	0.975	20	S
1,4-Dichlorobenzene	1261	50	1000	0	126	79 - 118	1264	0.27	20	S
2,2-Dichloropropane	1224	50	1000	0	122	60 - 139	1256	2.54	20	
2-Butanone	2558	100	2000	0	128	56 - 143	2455	4.1	20	
2-Chlorotoluene	1351	50	1000	0	135	79 - 122	1365	0.986	20	S
2-Hexanone	2789	100	2000	0	139	57 - 139	2794	0.177	20	S
4-Chlorotoluene	1357	50	1000	0	136	78 - 122	1364	0.565	20	S
4-Isopropyltoluene	1419	50	1000	0	142	77 - 127	1415	0.258	20	S
4-Methyl-2-pentanone	2777	100	2000	0	139	67 - 130	2766	0.413	20	S
Acetone	2332	100	2000	0	117	39 - 160	2603	11	20	
Benzene	1360	50	1000	0	136	79 - 120	1393	2.37	20	S
Bromobenzene	1333	50	1000	0	133	80 - 120	1345	0.868	20	S
Bromochloromethane	1402	50	1000	0	140	78 - 123	1396	0.47	20	S
Bromodichloromethane	1356	50	1000	0	136	79 - 125	1373	1.21	20	S
Bromoform	1203	50	1000	0	120	66 - 130	1206	0.259	20	
Bromomethane	1261	50	1000	0	126	53 - 141	1377	8.83	20	

ALS Houston, US Date: 10-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121523

QC BATCH REPORT

Batch ID: R330692 **Instrument: VOA9** **Method: SW8260**

MSD Sample ID: **HS18121520-09MSD** Units: **UG/L** Analysis Date: **08-Jan-2019 21:10**
Client ID: Run ID: **VOA9_330692** SeqNo: **4900619** PrepDate: DF: **50**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Carbon disulfide	2561	100	2000	0	128	64 - 133	2607	1.8	20	
Carbon tetrachloride	1406	50	1000	0	141	72 - 136	1459	3.73	20	S
Chlorobenzene	1320	50	1000	0	132	82 - 118	1335	1.11	20	S
Chloroethane	1172	50	1000	0	117	60 - 138	1213	3.42	20	
Chloroform	1276	50	1000	0	128	79 - 124	1279	0.195	20	S
Chloromethane	1149	50	1000	0	115	50 - 139	1164	1.26	20	
cis-1,2-Dichloroethene	1290	50	1000	0	129	78 - 123	1295	0.378	20	S
cis-1,3-Dichloropropene	1256	50	1000	0	126	75 - 124	1264	0.662	20	S
Dibromochloromethane	1267	50	1000	0	127	74 - 126	1265	0.174	20	S
Dibromomethane	1352	50	1000	0	135	79 - 123	1355	0.253	20	S
Dichlorodifluoromethane	926.5	50	1000	0	92.7	32 - 152	942.6	1.73	20	
Ethylbenzene	1380	50	1000	0	138	79 - 121	1409	2.07	20	S
Hexachlorobutadiene	1365	50	1000	0	137	66 - 134	1345	1.52	20	S
Isopropylbenzene	1431	50	1000	0	143	72 - 131	1463	2.24	20	S
m,p-Xylene	2791	100	2000	0	140	80 - 121	2887	3.38	20	S
Methylene chloride	1300	100	1000	0	130	74 - 124	1306	0.522	20	S
Naphthalene	1290	50	1000	0	129	61 - 128	1265	1.95	20	S
n-Butylbenzene	1368	50	1000	0	137	75 - 128	1385	1.24	20	S
n-Propylbenzene	1393	50	1000	0	139	76 - 126	1405	0.84	20	S
o-Xylene	1373	50	1000	0	137	78 - 122	1414	2.9	20	S
sec-Butylbenzene	1414	50	1000	0	141	77 - 126	1421	0.494	20	S
Styrene	1411	50	1000	0	141	78 - 123	1448	2.55	20	S
tert-Butylbenzene	1398	50	1000	0	140	78 - 124	1408	0.768	20	S
Tetrachloroethene	1322	50	1000	0	132	74 - 129	1356	2.53	20	S
Toluene	1367	50	1000	0	137	80 - 121	1419	3.7	20	S
trans-1,2-Dichloroethene	1275	50	1000	0	127	75 - 124	1261	1.11	20	S
trans-1,3-Dichloropropene	1231	50	1000	0	123	73 - 127	1236	0.414	20	
Trichloroethene	5936	50	1000	4766	117	79 - 123	6120	3.05	20	O
Trichlorofluoromethane	1229	50	1000	0	123	65 - 141	1233	0.306	20	
Vinyl chloride	1148	50	1000	0	115	58 - 137	1173	2.19	20	
Surr: 1,2-Dichloroethane-d4	*2269*	*50*	*2500*	*0*	*90.8*	*81 - 118*	*2252*	*0.771*	*20*	
Surr: 4-Bromofluorobenzene	*2597*	*50*	*2500*	*0*	*104*	*85 - 114*	*2628*	*1.19*	*20*	
Surr: Dibromofluoromethane	*2287*	*50*	*2500*	*0*	*91.5*	*80 - 119*	*2251*	*1.6*	*20*	
Surr: Toluene-d8	*2621*	*50*	*2500*	*0*	*105*	*89 - 112*	*2664*	*1.65*	*20*	

ALS Houston, US Date: 10-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121523

QC BATCH REPORT

Batch ID: R330692 **Instrument: VOA9** **Method: SW8260**

The following samples were analyzed in this batch:

HS18121523-01	HS18121523-02	HS18121523-03	HS18121523-04
HS18121523-05	HS18121523-06	HS18121523-07	

ALS Houston, US Date: 10-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: **HS18121523**

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
Arkansas	88-0356	27-Mar-2019
Texas	T10470231-18-21	30-Apr-2019
North Dakota	R193 2018-2019	30-Apr-2019
Illinois	004438	29-Jun-2019
Louisiana	03087	30-Jun-2019
Kentucky	123043 - 2018	30-Apr-2019
Kansas	E-10352 2018-2019	31-Jul-2019
Oklahoma	2018-156	31-Aug-2019

ALS Houston, US Date: 10-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
Work Order: HS18121523

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS18121523-01	109_122718	Login	12/28/2018 3:41:14 PM	JRM	Sub
HS18121523-01	109_122718	Login	12/28/2018 3:41:14 PM	JRM	MET018
HS18121523-01	109_122718	Login	12/28/2018 3:41:14 PM	JRM	VOA044

ALS Houston, US Date: 10-Jan-19

Sample Receipt Checklist

Client Name: Bhate Environmental
Work Order: HS18121523
Date/Time Received: **28-Dec-2018 09:15**
Received by: **JRM**

Checklist completed by: *Jared R. Makan* eSignature 28-Dec-2018 Date
Reviewed by: *Corey Grandits* eSignature 31-Dec-2018 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 ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
TX1005 solids received in hermetically sealed vials?	Yes ☐	No ☐	N/A ☑
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/2.1c UC/C	IR11	
Cooler(s)/Kit(s):	44052		
Date/Time sample(s) sent to storage:	12/18/2018 15:46		
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:

bhate

1608 13th Avenue South, Suite 300
Birmingham Alabama 35205
Tel: 205-918-4000
Fax: 205-918-4050

Chain of Custody and Analytical Request

Page: ____ of ____

Project/Phase No: NWO1312.0150

COC Number(1): ____

LIMS Number: ____

Facility/Base I.D.: LHAAP

Project/Site Name: LHAAP / Site 18/24

Client Name:

Collected by: Scott Beesinger

Sample Analysis Requested (5) / Quality Assurance Samples (6)

Field Sample ID (30 Characters Max)	ERPIMS LOCID (15 Characters Max)	Date Collected (dd-mmm-yyyy)	Time Collected (Military) (hhmm)	Sample Depth (beginning - ending)	SA Code (2)	Sample Number (3)	Sample Matrix (4)	Number of containers	VOC	PERCHLORATE	TOTAL METALS	Ambient Blank Lot Control Number	Equipment Blank Lot Control Number	Trip Blank Lot Control Number	Cooler ID
109_122718		27DEC2018	0955	-	N		WG	4	X	X					
18CPTMW24_122718		27DEC2018	1050	-	N		WG	5	X	X	X				
18WW06_122718		27DEC2018	1220	-	N		WG	4	X	X					
18WW06_122718_a		27DEC2018	1220		FD		WG	4	X	X					
18WW02_122718		27DEC2018	1325		N		WG	5	X	X	X				
125_122718		27DEC2018	1350	-	N		WG	5	X	X	X				
TRip BLANK		27DEC2018		-	TB		W	2	X						
				-											
				-											
				-											
				-											

HS18121523
Bhate Environmental Associates, Inc.
LHAAP 18/24

COMMENTS:

Cooler 44052 Temp 1.7°C 1211 CFO.4

Custody Transfers Prior to Receipt by Laboratory

Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1. Scott Beesinger	12/27/18	1430	1. J. [illegible]	12/29/18	09:15
2.			2.		
3.			3.		

Sample Delivery Details / Laboratory Receipt

Delivered Directly to Lab: ____ Shipped ____ No.:

Method of Shipment: ____

Fed ____ Ex ____ Airbill ____ Number:

Analytical Lab: ALS 10450 Stancliff Rd. Suite 210 Houston, TX 77099 (281) 530-5656

ATTN: SONIA WEST Lab Recipient: Delivery Date/Time:

1.) Chain of Custody Number = date collected + custody number (e.g. 09-02-1999-01)
2.) Sample Type (SA) Codes: N = Normal Sample, TB = Trip Blank (-c) Sample, FD = Field Duplicate (-a) Samples, FR = Field Replicate (-b) Samples, EB = Equipment Blank (-d) Samples, MS = Matrix Spike, SD = Matrix Spike Duplicate, AB = Ambient Blank (-e)
3.) Sample Number: Unique sample number collected from a particular location per day. (e.g. Groundwater sample collected from MW-1 on 10/10/99 = 01, if sampled again on 10/10/99 = 02, etc.)
4.) Matrix Codes: GS = Soil Gas, WG = Groundwater, WS = Surface Water, SO = Soil, SE = Sediment, SL = Sludge, SS = Surface Soil Samples, WQ = Aqueous Blank Samples (trip, equipment, ambient, etc), SQ = Soil Blanks
5.) Sample Analysis Requested: Analytical method requested and number of containers provided for each.
6.) Quality assurance samples are assigned by date (ddmmyy) and the sample number associated with the sample (01, 02, etc) (e.g. Equipment blank collected in association with MW-1 on 10/10/99 will be designated 10109901 in the Equipment Blank Lot Control

ALS

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

44052

CUSTODY SEAL

Date: 12/27/18 Time: 1430
Name: SCOTT BEESINGER
Company: BHATE

Seal Broken By: GM
Date: 12/28/18

44052 DEC 2 8 2018



Must Deliver Next Business Day
Time and Tempature Sensitive!

44052

ORIGIN ID:SGRA (903) 930-8193
SCOTT BEESINER
BHATE ENVIRONMENTAL ASSOCIATES
1203-B EAST GRAND AVE. PMB202

MARSHALL, TX 75670
UNITED STATES US

SHIP DATE: 19JUL18
ACTWGT: 1.00 LB MAN
CAD: 3001307CAFE3111
DIMS: 26x14x14 IN

TO CLIENT SERVICES
ALS LABORATORY GROUP
10450 STANCLIFF ROAD
SUITE 210
HOUSTON TX 77099
(281) 530-6666
REF: LHAAP 58 - RJ

RMA:

FedEx Express

FedEx.
TRK# 0221 4380 9530 9445

FRI - 28 DEC 10:30A
PRIORITY OVERNIGHT

AB SGRA

77099
TX-US
IAH

Case Narrative

Method: 6850
Analysis: Perchlorate
Analysis SOP: LC-MS-CLO4
ALS WO ID(s): 1836126; 1836127; 1836507

Client: ALS Laboratories (Houston, TX)
Matrix: Water
ELMS Batch (HBN): 2192 (230463)

General Set Information: There were fourteen field samples in these Work Orders. The samples were analyzed for perchlorate.

Method Summary: Each sample was prepared as noted below and analyzed using an Agilent 1100 LC/MSD system in select ion monitoring (SIM) mode at m/z 83 and 85, which corresponds to the loss of one oxygen atom from the perchlorate molecule. ChemStation software was used for instrument control and data analysis. The ion ratio of m/z 83 to 85 was used to positively identify the response peak as perchlorate. Quantitation was performed using the m/z 83 peak area. An internal standard (ISTD) of ^{18}O labeled perchlorate was added to each sample to establish the perchlorate peak retention time and used in quantitation.

Sample Preparation: A 10.0mL aliquot of each sample was transferred into a 15-mL centrifuge tube. 50µL of an ^{18}O labeled perchlorate solution was added to each sample as an internal standard. The samples were then capped, vortexed, and filtered into autosampler vial using Phenex PES membrane 0.45µm Syringe filters.

Holding Times: Holding times were met for all analyses.

Dilutions: Samples 1836126004/05/06 and 1836507002 failed the 50-150% method requirement for ISTD recovery. These samples were re-analyzed and reported from a 1:5 dilutions. Field sample 1836507001 was analyzed and reported from a 1:100 dilution. Field sample 1836507006 was analyzed and reported from a 1:1,000 dilution. The reporting limits have been adjusted accordingly.

Method QC data: The method blank (LMB 634999) was less than 1/2 the CRDL. The recovery for the LCS (635000) was within acceptable parameters.

MS/MSD Analysis: MS/MSD was performed on samples 1836126005/06 and 1836126008/09 (Client ID's: HS18121325-04/HS18121325-05). 5.0µl of Working Standard Solution Horizon ID 43701 was added to 10.0mL of sample preparation. The spike target was 5.µg/L. The parent sample and the MS/MSD for samples 1836126004/05/06 were analyzed and reported from 1:5 dilutions. The effective spike target was 25.µg/L. The MS/MSD percent recoveries and relative percent difference (RPD) were within the performance limits, except for the following. The Matrix Spike and duplicate (MS/MSD – 1836126008/09) failed QC acceptance criteria for percent recoveries. The Matrix Spike and Matrix Spike duplicate is reported for the clients' information only. The sample matrix may be inappropriate for the method selected.

Instrument QC: Instrument initial and continuing calibrations were performed in accordance with published procedures.

NC/CAR(s): NA

Sample Calculation: Samples were reported in µg/L. Results were calculated in µg/L by the equation (A)x(B),

where: A = Analyte concentration from the standard curve (µg/L)
B = Dilution performed at time of analysis

Miscellaneous Comments: These samples were analyzed in accordance with the requirements found in the DOD QSM Version 5.1.1.

Thomas Bosch January 07, 2019
Analyst Date

ANALYTICAL REPORT

Report Date: January 08, 2019

RJ Modashia
ALS Environmental (Houston)
10450 Stancliff Road
Suite 210
Houston, TX 77099

Phone: 281 530-5656

E-mail: RJ.Modashia@ALSGlobal.com

Workorder: **34-1836507**
Project ID: HS18121523 122718
Purchase Order: HS18121523
Project Manager Kevin W. Griffiths

Client Sample ID	Lab ID	Collect Date	Receive Date	Sampling Site
HS18121523-01	1836507001	12/27/18	12/29/18	
HS18121523-02	1836507002	12/27/18	12/29/18	
HS18121523-03	1836507003	12/27/18	12/29/18	
HS18121523-04	1836507004	12/27/18	12/29/18	
HS18121523-05	1836507005	12/27/18	12/29/18	
HS18121523-06	1836507006	12/27/18	12/29/18	

ANALYTICAL REPORT

Workorder: 34-1836507
Client: ALS Environmental (Houston)
Project Manager: Kevin W. Griffiths

Analytical Results

Sample ID: **HS18121523-01** | Sampling Site: NA | Collected: 12/27/2018
Lab ID: 1836507001 | Media: 125 mL Nalgene | Received: 12/29/2018
Matrix: Water | Sampling Parameter: NA

Analysis Method - EPA 6850, DoD QSM

Preparation: Not Applicable
Analysis: EPA 6850, DoD QSM Water | **Instrument ID:** LCMS04
Batch: ELMS/2192 (HBN: 230463) | **Percent Solid:** NA
Analyzed: 01/03/2019 14:14 | **Report Basis:** Wet

Analyte	Result (ug/L)	DL (ug/L)	LOD (ug/L)	LOQ (ug/L)	Dilution	Qual
Perchlorate	**3200**	100	200	400	100	

Sample ID: **HS18121523-02** | Sampling Site: NA | Collected: 12/27/2018
Lab ID: 1836507002 | Media: 125 mL Nalgene | Received: 12/29/2018
Matrix: Water | Sampling Parameter: NA

Analysis Method - EPA 6850, DoD QSM

Preparation: Not Applicable
Analysis: EPA 6850, DoD QSM Water | **Instrument ID:** LCMS04
Batch: ELMS/2192 (HBN: 230463) | **Percent Solid:** NA
Analyzed: 01/03/2019 15:37 | **Report Basis:** Wet

Analyte	Result (ug/L)	DL (ug/L)	LOD (ug/L)	LOQ (ug/L)	Dilution	Qual
Perchlorate	13	5.0	10	20	5	J

Sample ID: **HS18121523-03** | Sampling Site: NA | Collected: 12/27/2018
Lab ID: 1836507003 | Media: 125 mL Nalgene | Received: 12/29/2018
Matrix: Water | Sampling Parameter: NA

Analysis Method - EPA 6850, DoD QSM

Preparation: Not Applicable
Analysis: EPA 6850, DoD QSM Water | **Instrument ID:** LCMS04
Batch: ELMS/2192 (HBN: 230463) | **Percent Solid:** NA
Analyzed: 01/03/2019 14:42 | **Report Basis:** Wet

Analyte	Result (ug/L)	DL (ug/L)	LOD (ug/L)	LOQ (ug/L)	Dilution	Qual
Perchlorate	ND	1.0	2.0	4.0	1	U

Sample ID: **HS18121523-04** | Sampling Site: NA | Collected: 12/27/2018
Lab ID: 1836507004 | Media: 125 mL Nalgene | Received: 12/29/2018
Matrix: Water | Sampling Parameter: NA

Analysis Method - EPA 6850, DoD QSM

Preparation: Not Applicable
Analysis: EPA 6850, DoD QSM Water | **Instrument ID:** LCMS04
Batch: ELMS/2192 (HBN: 230463) | **Percent Solid:** NA
Analyzed: 01/03/2019 14:56 | **Report Basis:** Wet

Analyte	Result (ug/L)	DL (ug/L)	LOD (ug/L)	LOQ (ug/L)	Dilution	Qual
Perchlorate	ND	1.0	2.0	4.0	1	U

ANALYTICAL REPORT

Workorder: 34-1836507
Client: ALS Environmental (Houston)
Project Manager: Kevin W. Griffiths

Analytical Results

Sample ID: **HS18121523-05** | Sampling Site: NA | Collected: 12/27/2018
Lab ID: 1836507005 | Media: 125 mL Nalgene | Received: 12/29/2018
Matrix: Water | Sampling Parameter: NA

Analysis Method - EPA 6850, DoD QSM

Preparation: Not Applicable
Analysis: EPA 6850, DoD QSM Water | **Instrument ID:** LCMS04
Batch: ELMS/2192 (HBN: 230463) | **Percent Solid:** NA
Analyzed: 01/03/2019 15:10 | **Report Basis:** Wet

Analyte	Result (ug/L)	DL (ug/L)	LOD (ug/L)	LOQ (ug/L)	Dilution	Qual
Perchlorate	ND	1.0	2.0	4.0	1	U

Sample ID: **HS18121523-06** | Sampling Site: NA | Collected: 12/27/2018
Lab ID: 1836507006 | Media: 125 mL Nalgene | Received: 12/29/2018
Matrix: Water | Sampling Parameter: NA

Analysis Method - EPA 6850, DoD QSM

Preparation: Not Applicable
Analysis: EPA 6850, DoD QSM Water | **Instrument ID:** LCMS04
Batch: ELMS/2192 (HBN: 230463) | **Percent Solid:** NA
Analyzed: 01/03/2019 15:24 | **Report Basis:** Wet

Analyte	Result (ug/L)	DL (ug/L)	LOD (ug/L)	LOQ (ug/L)	Dilution	Qual
Perchlorate	**8000**	1000	2000	4000	1000	

Comments

Quality Control: **EPA 6850, DoD QSM - (HBN: 230463)**

Samples 1836126004/05/06 and 1836507002 failed the 50-150% method requirement for ISTD recovery. These samples were re-analyzed and reported from a 1:5 dilutions. Field sample 1836507001 was analyzed and reported from a 1:100 dilution. Field sample 1836507006 was analyzed and reported from a 1:1,000 dilution. The reporting limits have been adjusted accordingly.

Report Authorization (/S/ is an electronic signature that complies with 21 CFR Part 11)

Method	Analyst	Peer Review
EPA 6850, DoD QSM	/S/ Thomas Bosch 01/07/2019 09:12	/S/ Stephen Brose 01/08/2019 09:12

Laboratory Contact Information

ALS Environmental
960 W Levoy Drive
Salt Lake City, Utah 84123

Phone: (801) 266-7700
Email: alslt.lab@ALSGlobal.com
Web: www.alsslc.com

ANALYTICAL REPORT

Workorder: 34-1836507
Client: ALS Environmental (Houston)
Project Manager: Kevin W. Griffiths

General Lab Comments

The results provided in this report relate only to the items tested.
Samples were received in acceptable condition unless otherwise noted.
Samples have not been blank corrected unless otherwise noted.
This test report shall not be reproduced, except in full, without written approval of ALS.

ALS provides professional analytical services for all samples submitted. ALS is not in a position to interpret the data and assumes no responsibility for the quality of the samples submitted.

All quality control samples processed with the samples in this report yielded acceptable results unless otherwise noted.

ALS is accredited for specific fields of testing (scopes) in the following testing sectors. The quality system implemented at ALS conforms to accreditation requirements and is applied to all analytical testing performed by ALS. The following table lists testing sector, accreditation body, accreditation number and website. Please contact these accrediting bodies or your ALS project manager for the current scope of accreditation that applies to your analytical testing.

Testing Sector	Accreditation Body	Certificate Number	Website
Environmental	PJLA (DoD ELAP)		
	Utah (TNI)		
	Nevada		
	Oklahoma		
	Iowa		

Result Symbol Definitions

MDL = Method Detection Limit, a statistical estimate of method/media/instrument sensitivity.
RL = Reporting Limit, a verified value of method/media/instrument sensitivity.
CRDL = Contract Required Detection Limit
Reg. Limit = Regulatory Limit.
ND = Not Detected, testing result not detected above the MDL or RL.
< This testing result is less than the numerical value.
** No result could be reported, see sample comments for details.

Qualifier Symbol Definitions

U = Qualifier indicates that the analyte was not detected above the MDL.
J = Qualifier Indicates that the analyte value is between the MDL and the RL. It is also used to indicate an estimated value for tentatively identified compounds in mass spectrometry where a 1:1 response is assumed.
B = Qualifier indicates that the analyte was detected in the blank.
E = Qualifier indicates that the analyte result exceeds calibration range.
P = Qualifier indicates that the RPD between the two columns is greater than 40%.

Quality Control Sample
Batch Report

Analysis Information

Workorder: 1836507

Limits:	Client SOW/Contract Specified	**Preparation:**	NA	**Analysis:**	EPA 6850, DoD QSM
Basis:	DoD QSM	**Batch:**	NA	**Batch:**	ELMS/2192 (HBN: 230463)
		Prepared By:	NA	**Analyzed By:**	Thomas Bosch

Blank

LMB: 634999
Analyzed: 01/03/2019 09:50
Units: ug/L

Analyte	Result	MDL	RL
Perchlorate	ND	1	2.00

Laboratory Control Sample

LCS: 635000
Analyzed: 01/03/2019 10:04
Dilution: 1
Units: ug/L

Analyte	Result	Target	% Rec	QC Limits	
Perchlorate	4.80	5.00	95.9	78.8	123.8

Matrix Spike - Matrix Spike Duplicate

	Sample: 1836126007	MS: 1836126008	MSD: 1836126009
	Analyzed: 01/03/2019 11:41	Analyzed: 01/03/2019 11:56	Analyzed: 01/03/2019 12:10
	Dilution: 1	Dilution: 1	Dilution: 1
	Units: ug/L	Units: ug/L	Units: ug/L

Analyte	Result	Result	Target	% Rec	QC Limits		Result	% Rec	RPD	QC Limits	
Perchlorate	15.0	20.9	5	# 128	78.8	123.8	22.7	# 162	7.88	0.0	20.0

	Sample: 1836126004	MS: 1836126005	MSD: 1836126006
	Analyzed: 01/03/2019 13:05	Analyzed: 01/03/2019 13:19	Analyzed: 01/03/2019 13:33
	Dilution: 5	Dilution: 5	Dilution: 5
	Units: ug/L	Units: ug/L	Units: ug/L

Analyte	Result	Result	Target	% Rec	QC Limits		Result	% Rec	RPD	QC Limits	
Perchlorate	ND	23.2	25	92.8	78.8	123.8	23.4	93.5	0.756	0.0	20.0

Continuing Calibration Verification

	CCV: 634996	CCV: 635001	CCV: 635055
	Analyzed: 01/03/2019 09:01	Analyzed: 01/03/2019 13:47	Analyzed: 01/03/2019 15:51
	Units: ug/L	Units: ug/L	Units: ug/L
	Criteria: ± 15%	Criteria: ± 15%	Criteria: ± 15%

Analyte	Result	Target	% Rec.	Result	Target	% Rec.	Result	Target	% Rec.
Perchlorate	25.9	25.0	104	25.9	25.0	104	25.9	25.0	104

Interference Check Sample

ICSA: 634998
Analyzed: 01/03/2019 09:36
Units: ug/L
Criteria: ± 30%

Analyte	Result	Target	% Rec.
Perchlorate	1.08	1.00	108

Quality Control Sample Batch Report

Analysis Information

Workorder: 1836507

Limits:	Client SOW/Contract Specified	**Preparation:**	NA	**Analysis:**	EPA 6850, DoD QSM
Basis:	DoD QSM	**Batch:**	NA	**Batch:**	ELMS/2192 (HBN: 230463)
		Prepared By:	NA	**Analyzed By:**	Thomas Bosch

Limit of Detection Verification

LODV:	634997			**LODV:**	635002			**LODV:**	635056		
Analyzed:	01/03/2019 09:22			**Analyzed:**	01/03/2019 14:01			**Analyzed:**	01/03/2019 16:05		
Units:	ug/L			**Units:**	ug/L			**Units:**	ug/L		
Criteria:	± 50%			**Criteria:**	± 50%			**Criteria:**	± 50%		
Analyte	**Result**	**Target**	**% Rec.**	**Result**	**Target**	**% Rec.**		**Result**	**Target**	**% Rec.**
Perchlorate	1.04	1.00	104	1.09	1.00	109		1.11	1.00	111

Comments

Samples 1836126004/05/06 and 1836507002 failed the 50-150% method requirement for ISTD recovery. These samples were re-analyzed and reported from a 1:5 dilutions. Field sample 1836507001 was analyzed and reported from a 1:100 dilution. Field sample 1836507006 was analyzed and reported from a 1:1,000 dilution. The reporting limits have been adjusted accordingly.

QC Report Authorization (/S/ is an electronic signature that complies with 21 CFR Part 11)

Analyst	Peer Review
/S/ Thomas Bosch	/S/ Stephen Brose
01/07/2019 09:12	01/08/2019 09:12

Symbols and Definitions

- * - Analyte above reporting limit or outside of control limits
- ▲ - Sample result is greater than 4 times the spike added
- ◓ - Sample and Matrix Duplicate less than 5 times the reporting limit
- ● - Result is above the calibration range
- # - The Matrix Spike, Matrix Spike duplicate or Matrix Duplicate is reported for your information only. The sample matrix may be inappropriate for the method selected.

RPD - Relative % Difference (Spike / Spike Duplicate)
ND - Not Detected (U - Qualifier also flags analyte as not detected)
NA - Not Applicable
QC results are not adjusted for moisture correction, where applicable

18698/#2

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

1836507

W

Subcontract Chain of Custody

1836507

COC ID: 10530

SUBCONTRACT TO:

ALS Laboratory Group
960 LeVoy Dr
Salt Lake City, UT 84123

Phone: +1 801 266 7700

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:	HS18121523
TSR:	Danielle Winnings

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS18121523-01**	**109_122718**	**Groundwater**	**27 Dec 2018 09:55**
	SUB_Perch-6850			14 Jan 2019
2.	**HS18121523-02**	**18CPTMW24_122718**	**Groundwater**	**27 Dec 2018 10:50**
	SUB_Perch-6850			14 Jan 2019
3.	**HS18121523-03**	**18WW06_122718**	**Groundwater**	**27 Dec 2018 12:20**
	SUB_Perch-6850			14 Jan 2019
4.	**HS18121523-04**	**18WW06_122718_a**	**Groundwater**	**27 Dec 2018 12:20**
	SUB_Perch-6850			14 Jan 2019
5.	**HS18121523-05**	**18WW02_122718**	**Groundwater**	**27 Dec 2018 13:25**
	SUB_Perch-6850			14 Jan 2019
6.	**HS18121523-06**	**125_122718**	**Groundwater**	**27 Dec 2018 13:50**
	SUB_Perch-6850			14 Jan 2019

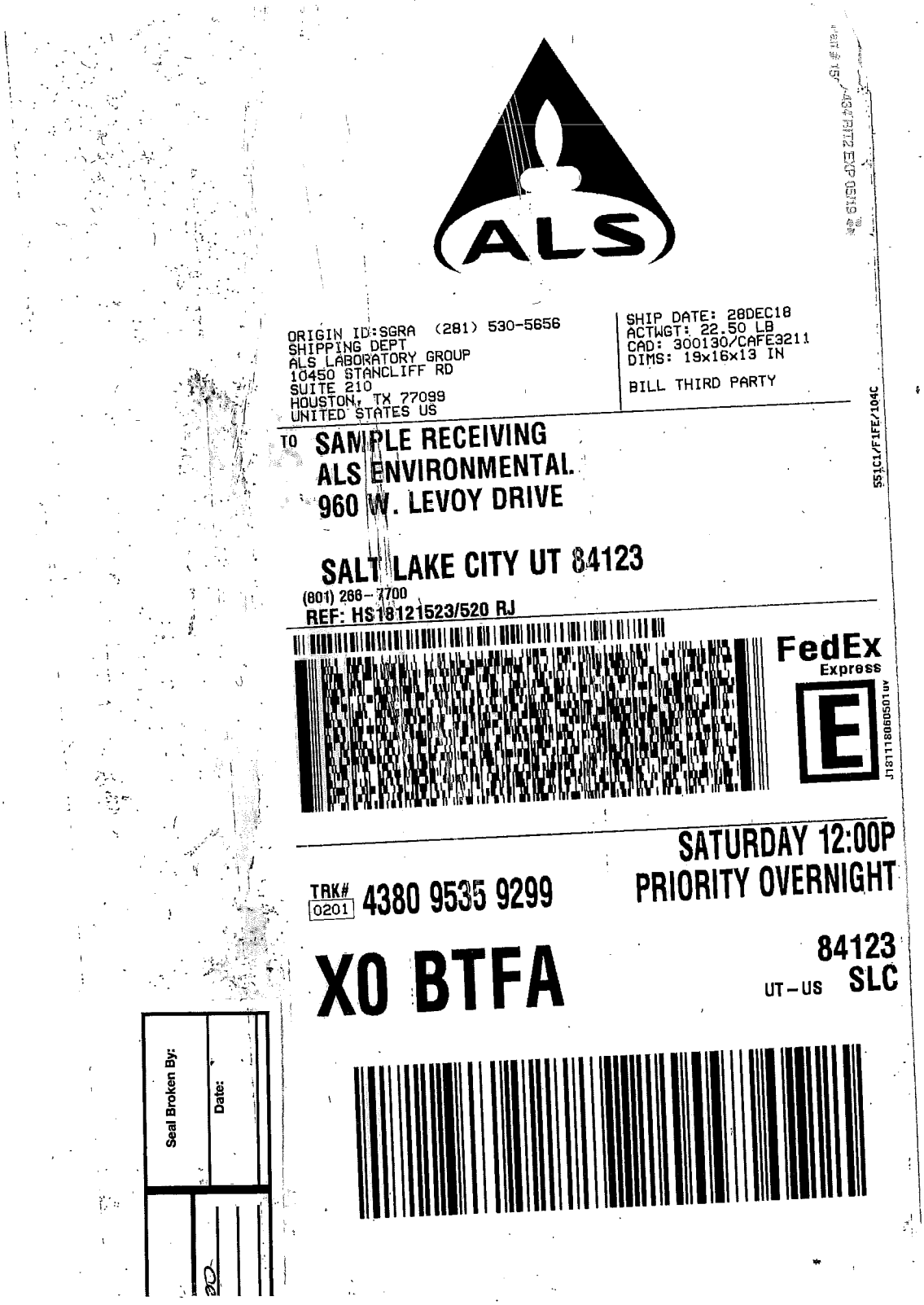
Comments: Please analyze for the analysis listed above.
Send report to the emails shown above.

QC Level: DOD IV (DoD Data Package)

Subcontract Chain of Custody

COC ID: 10530

Relinquished By:	J. [illegible]	Date/Time:	12/28/18 18:20
Received By:	[illegible]	Date/Time:	12/29/18 1030
Cooler ID(s):	9002	Temperature(s):	2°



ORIGIN ID:SGRA (281) 530-5656
SHIPPING DEPT
ALS LABORATORY GROUP
10450 STANCLIFF RD
SUITE 210
HOUSTON, TX 77099
UNITED STATES US

SHIP DATE: 28DEC18
ACTWGT: 22.50 LB
CAD: 300130/CAFE3211
DIMS: 19x16x13 IN

BILL THIRD PARTY

TO SAMPLE RECEIVING
ALS ENVIRONMENTAL
960 W. LEVOY DRIVE

SALT LAKE CITY UT 84123
(801) 266-7700
REF: HS18121523/520 RJ

FedEx Express

SATURDAY 12:00P
PRIORITY OVERNIGHT

TRK# 0201 4380 9535 9299

XO BTFA

84123
UT-US SLC

Seal Broken By:
Date:

ALS-SALT LAKE CITY-RELATED INFORMATION REPORT (CRIR)

COOLER OR CONTAINER INFORMATION CHECKLIST (Fill In or Circle)

Client Name: ALS Houston

Project/Task/Site: 1636507

Date/Time of Receipt: 12/29/18 1630

Number of Coolers Received: 1

Condition of Coolers:	Acceptable/Unacceptable	Temperature Control:	Present/Not Included
Cooler Custody Seals:	Present/Absent/NA Intact/Broken/NA	Location Temp Taken:	Control/Between Samples
Container Custody Seals:	Present/Absent/NA Intact/Broken/NA	Are all temperatures within project specific guidelines?	Yes/No/NA
Ice Present:	Yes/No/NA Frozen/Melted/NA	VOA Headspace Present?	Yes/No/NA

pH Check Performed:							
	Metals	Yes/No/NA	Total Phenolics	Yes/No/NA	NO3/NO2	Yes/No/NA
	Cyanide	Yes/No/NA	TPH – 418.1	Yes/No/NA	Oil & Grease	Yes/No/NA
	Sulfide	Yes/No/NA	COD	Yes/No/NA	Total Phosphorous	Yes/No/NA
	Ammonia	Yes/No/NA	TKN	Yes/No/NA	Gross A.B, Gamma Spec	Yes/No/NA

Cooler Received	DCL Cooler No.	Temp.	Cooler Received	DCL Cooler No.	Temp.	Cooler Received	DCL Cooler No.	Temp.
1	C18 9862	2 °C	4	C18	°C	7	C18	°C
2	C18	°C	5	C18	°C	8	C18	°C
3	C18	°C	6	C18	°C	9	C18	°C

Taken By: Meredith Edens (Signature) Meredith Edens (Printed Name) 12/29/18 (Date)

CLIENT-RELATED INFORMATION

☐ Missing Cooler	☐ Missing Samples/Bottles	☐ Incorrect Preservation	☐ Insufficient Sample Volume
☐ Cooler Conditions	☐ Broken/Leaking Samples	☐ pH Criteria Not Met	☐ Chain of Custody Problems
☐ Missing Paperwork	☐ Incorrect Bottle Type	☐ Residual Chlorine Present	☐ Other:
☐ Missing/Incorrect Bottle Labels	☐ Cooler Temperatures Out of Range	☐ Head Space in Bottles	

BRIEFLY DESCRIBE THE PROBLEM AND THE ACTION TAKEN:

Client Notified? YES ☐ NO ☐

Response Required Within 24 Hours

PROJECT MANAGEMENT

PROJECT MANAGER COMMENTS:

ALS Project Manager: _____ (Printed Name) Returned to Sample Receipt by: _____ (Signature) Date: _____

ALS Environmental

CHAIN-OF-CUSTODY

Project / Job / Task: HS18121523	Split:	Workorder ID: 1836507	Level: ENV_LVL4	Requested Analysis
Client: ALS Environmental (Houston)		Account: 8101	Type: 125Poly	
Comments:			Preservatives: COOL	

Item	Collect Date/Time	Sample ID	Lab ID	QC	Matrix	Containers ID(s)	Containers Count	EPA 6850, DoD QSM
1	12/27/2018 09:55	HS18121523-01	1836507001		Water	A	1	A
2	12/27/2018 10:50	HS18121523-02	1836507002		Water	A	1	A
3	12/27/2018 12:20	HS18121523-03	1836507003		Water	A	1	A
4	12/27/2018 12:20	HS18121523-04	1836507004		Water	A	1	A
5	12/27/2018 13:25	HS18121523-05	1836507005		Water	A	1	A
6	12/27/2018 13:50	HS18121523-06	1836507006		Water	A	1	A
7								
8								
9								
10								

57 of 163

ORIGINAL FIELD SAMPLE CHAIN-OF-CUSTODY

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Reason for Transfer / Storage Location
Schmith, Marianne	12/29/2018 10:30	ALS Sample Receiving	Sample Login
R.33-1	01.03.18/08:05	T. Bush	Storage 6850
	12/31/2018 8:29	R.33-1 15C	

SAMPLE PREPARATION / ANALYSIS CHAIN-OF-CUSTODY

Sample Prep / Analysis for: _____ Lab Notebook No.: _____

Prepared / Analyzed by: _____ Date / Time: _____

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Reason for Transfer / Storage Location

00930745

Batch Worklist

Batch: ELMS/ 2192 **Created:** 1/3/2019 08:10 **Instrument:** **HBN:** 230463
Rule: EPA 6850, DoD QSM Water **Analyst:** T. Bosch **Status:** WP

Workorder: 1836126 [ENV_LVL4]
Workorder: 1836127 [ENV_LVL4]
Workorder: 1836507 [ENV_LVL4]

Pos	Lab ID	Sample ID	Prep Initial	Prep Final	Dust Weight	Type	Mx	Container	Procedure	Mgr	Expire Date	Due Date	Run Date
1	634996	CCV for HBN 230463 [ELMS/2192]				CCV	3		E685041C3Q	5311		1/10/2019	
2	634997	LODV for HBN 230463 [ELMS/2192				LODV	3		E6850..D3Q	5311		1/10/2019	
3	634998	ICS for HBN 230463 [ELMS/2192]				ICS	3		E6850..D3Q	5311		1/10/2019	
4	634999	LMB for HBN 230463 [ELMS/2192]				LMB	3		E6850Q413Q	5311		1/10/2019	
5	635000	LCS for HBN 230463 [ELMS/2192]				LCS	3		E6850Q413Q	5311		1/10/2019	
6	1836126001	HS18121325 -01				SAMPLE	3	1836126001-A	E6850Q41.3	5480	1/18/2019	1/10/2019	
7	1836126002	HS18121325 -02				SAMPLE	3	1836126002-A	E6850Q41.3	5480	1/18/2019	1/10/2019	
8	1836126003	HS18121325 -03				SAMPLE	3	1836126003-A	E6850Q41.3	5480	1/18/2019	1/10/2019	
9	1836126004	HS18121325 -04				SAMPLE	3	1836126004-A	E6850Q41.3	5480	1/18/2019	1/10/2019	
10	1836126005	HS18121325 -04MS				MS	3	1836126005-A	E6850Q413Q	5480		1/10/2019	
11	1836126006	HS18121325 -04MSD				MSD	3	1836126006-A	E6850Q413Q	5480		1/10/2019	
12	1836126007	HS18121325 -05				SAMPLE	3	1836126007-A	E6850Q41.3	5480	1/18/2019	1/10/2019	
13	1836126008	HS18121325 -05MS				MS	3	1836126008-A	E6850Q413Q	5480		1/10/2019	
14	1836126009	HS18121325 -05MSD				MSD	3	1836126009-A	E6850Q413Q	5480		1/10/2019	
15	1836127001	HS18121324-01				SAMPLE	3	1836127001-A	E6850Q41.3	5480	1/18/2019	1/10/2019	
16	1836127002	HS18121324-02				SAMPLE	3	1836127002-A	E6850Q41.3	5480	1/18/2019	1/10/2019	
17	1836127003	HS18121324-03				SAMPLE	3	1836127003-A	E6850Q41.3	5480	1/18/2019	1/10/2019	
18	635001	CCV for HBN 230463 [ELMS/2192]				CCV	3		E685041C3Q	5311		1/10/2019	
19	635002	LODV for HBN 230463 [ELMS/2192				LODV	3		E6850..D3Q	5311		1/10/2019	
20	1836507001	HS18121523-01				SAMPLE	3	1836507001-A	E6850Q41.3	5480	1/24/2019	1/11/2019	
21	1836507002	HS18121523-02				SAMPLE	3	1836507002-A	E6850Q41.3	5480	1/24/2019	1/11/2019	
22	1836507003	HS18121523-03				SAMPLE	3	1836507003-A	E6850Q41.3	5480	1/24/2019	1/11/2019	
23	1836507004	HS18121523-04				SAMPLE	3	1836507004-A	E6850Q41.3	5480	1/24/2019	1/11/2019	
24	1836507005	HS18121523-05				SAMPLE	3	1836507005-A	E6850Q41.3	5480	1/24/2019	1/11/2019	
25	1836507006	HS18121523-06				SAMPLE	3	1836507006-A	E6850Q41.3	5480	1/24/2019	1/11/2019	
26	635055	CCV for HBN 230463 [ELMS/2192]				CCV	3		E685041C3Q	5311		1/10/2019	
27	635056	LODV for HBN 230463 [ELMS/2192				LODV	3		E6850..D3Q	5311		1/10/2019	

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

Analytical Documentation

ALS Work Order #'s & Sample #( )'s: 1836126 (001-09); 1836127 (001-03); 1836507 (001-06)
ELMS Batch/HBN ID: 2192 (230463)
Prep Date: 01/02,03/2019 Analysis Date: 01/03/2019 Analyst: T. Bosch
Analyte: **Perchlorate** Matrix: **Water** Method: **6850**
Sequence: \\HPCHEM\1\SEQUENCE\CLO4\2019\JAN\03JAN19D.s
Reported DL: **1.0µg/L** Reported LOD: **2.0µg/L** Reported LOQ: **4.0µg/L**

SAMPLE PREPARATION/ANALYSIS:
Water: Samples were prepared by TNB. 10.0mL of each sample was pipetted into a 15-mL centrifuge tube, and 50µL of an oxygen-18 labeled perchlorate solution was added as an internal standard. The samples were capped, vortexed, and filtered with Phenex PES membrane 0.45µm Syringe filters prior to analysis.

REAGENTS: Eluent A1: 95% ASTM Type II water (ALS)/ 5% ACN (B&J Lot AH015-4)/0.1% glacial acetic acid (JT-Baker Lot 04802).
Eluent B1: 95% ACN (B&J Lot AH015-4)/ 5% ASTM Type II water (ALS)/0.1% glacial acetic acid (JT-Baker Lot 04802).

STANDARDS: Internal Standard Spiking Solution Horizon# 43730. Dilutions of Working Standard Solution ID 43702 used for CCV's, LODV's, RLVS and IPC.

CALIBRATION CURVE: Used curve from 10/08/2018, sequence 08OCT18D.s Offline Quantitation Method: CLO4-DPR.M

INSTRUMENT CONDITIONS: Samples were analyzed with an Agilent 1100 LC/MSD system, in negative SIM mode, monitoring m/z 83, 85, and 89.
Instrument ID: LCMS04 Online Acquisition Method: CLO4-AQN.M Fragmentor: 160 Output Gain: 3 Injection Volume: 30µL
Column: KP-RPPX C8 separator, 250mm Mobile Phase: 70% Eluent A1; 30% Eluent B1

FLOW GRADIENT:

Time (min.)	Flow (mL/min)
0	0.50
5.0	0.50
5.3	0.25
10.0	0.25
10.5	0.50
12.0	0.50

QC DATA: 5.0µL of QC Solution Horizon ID 41830 was used for LCS 635000; Target = 5.0µg/L. ASTM type II water was used for LMB 634999.

MS/MSD: MS/MSD were performed on samples 1836126005/06/08/09 (Client ID's: HS18121325-04/ HS18121325-05). 5.0µl of Working Standard Solution Horizon ID 43701 was added to 10.0mL of sample preparation. Spike target = 5.0µg/L. The parent sample and the MS/MSD for samples 1836126004/05/06 were analyzed and reported from 1:5 dilutions. The effective spike target was 25.µg/L.

COMMENTS:
1) Results reported in µg/L. Samples 1836126004/05/06 and 1836507002 failed the 50-150% method requirement for ISTD recovery. These samples were re-analyzed and reported from a 1:5 dilutions. Field sample 1836507001 was analyzed and reported from a 1:100 dilution. Field sample 1836507006 was analyzed and reported from a 1:1,000 dilution. The reporting limits have been adjusted accordingly.
2) All QC, Blank, CCV, and MS/MSD results were within method parameters, except for the following. The Matrix Spike and duplicate (MS/MSD – 1836126008/09) failed QC acceptance criteria for percent recoveries. The Matrix Spike and Matrix Spike duplicate is reported for the clients' information only. The sample matrix may be inappropriate for the method selected.
3) Sample data can be viewed at two directories within the ALS system: \\ALSLTWS013\LCMS\LCMS04\2018\JAN\HBN# or through NuGenesis\Tree\PrintData\LCMS\DefaultView.
4) Notebook: \\alsltws013\ORGANIC\BOSCH\LCMS\Perchlorates\Waters\2019\230463-DoD-ALS-Hstn LCMS4 or through \\ALSLTWS013\DATAREVIEW\HBN#

5.5 Chromatography (GC, HPLC and LC/MS) Technical Review

Note: It is the peer reviewer's responsibility to ensure that appropriate criteria are used as defined in the HORIZON PROFILE. The evaluation criteria are prioritized as per Section 2.2 of this SOP. These items must be checked for all projects. The following checklist will be completed by both the analyst and the peer reviewer and scanned into the HBN folder with the raw data.

Chromatography (GC, HPLC, LC/MS) Technical Review Criteria Batch(es)/SDG: ELMS: 2192 HBN: 230463 Sample Set IDs if Applicable: 1836126/1836127/1836507	Analyst Initials	Reviewer Initials
Calibration standards analyzed and meets criteria	TB	SR
Standards traceability checked and meets criteria	TB	SR
Standard curve coefficients evaluated and meet criteria	TB	SR
ICVs analyzed and meet acceptance criteria	TB	SR
CCVs analyzed and meet acceptance criteria	TB	SR
Method Blanks analyzed and meet acceptance criteria	TB	SR
Retention Time Windows checked	TB	SR
For method 8081A, Endrin/DDT Breakdown is checked for compliance	—	—
Surrogate recoveries checked and appropriately addressed	—	—
Method Preparation Blanks analyzed and meet acceptance criteria	TB	SR
MSs, MSDs, and/or MDs analyzed and calculations checked; applicable flags applied on QC reports; LCSs analyzed and meet acceptance criteria when performed	TB	SR
RLVS analyzed	TB	SR
Preparation and analysis hold times met	TB	SR
Preparation deviations and re-preparations noted when performed	TB	SR
Analysis deviations and re-analyses noted when performed	TB	SR
Sample dilution factors noted on reports	TB	SR
Electronic records in HBN transcription accuracy and completeness checked	TB	SR
Preparation and analysis calculations checked	TB	SR
NCRs are completed as necessary NC/CAR# _____	—	
Report forms are complete and accurate	TB	SR
Manual integrations checked	TB	SR

STANDARD REPORT

Working Standard - CLO4 WRK

CLO4 WRK — **Description - 6850 WKG Std 100.ug/L**

Standard: 43702
MFG: ALS/SLC
MFG Lot: TNB: 09/18/2018
Pipette ID: Not Provided

Created By: Thomas Bosch
Create Date: 09/18/2018 02:09PM

Amount: 10 mL
Expires: 09/18/2019
Usable: Yes
Lab Lot: CLO4 WRK

Pos.	Analyte	Name	Concentration
1	14797-73-0	Perchlorate	0.1 ug/mL

Composition

Standard	Standard ID	Description	Lab Lot ID	Volume	Expires
109	ASTM H2O	ASTM Type II Water	LAB 109	9.9 mL	11/07/2025
43701	CLO4 INT	6850 Intermdt AccStd 10.ug/mL	CLO4 INT	0.1 mL	09/18/2019

STANDARD REPORT

Constituent

Stock Standard - CLO4 STOCK

CLO4 STOCK	Description - 6850 Stock AccStd 1,000ug/mL

Standard: 43659
MFG: AccuStandard
MFG Lot: 218065075
Part ID: IC-PER-10X-1

Created By: Thomas Bosch
Create Date: 09/17/2018 09:09AM

Amount: 100 mL
Expires: 07/25/2020
Usable: No
Lab Lot: CLO4 STOCK

Pos.	Analyte	Name	Concentration
1	14797-73-0	Perchlorate	1000 ug/mL

STANDARD REPORT

Constituent

Solvent Standard - ASTM H2O

ASTM H2O		Description - ASTM Type II Water
Standard: 109	**Created By:** ALS Support (Lims)	**Amount:** 1000 L
MFG: DCL In House	**Create Date:** 10/06/2005 09:10AM	**Expires:** 11/07/2025
MFG Lot: Not Provided		**Usable:** Yes
Part ID: Not Provided		**Lab Lot:** LAB 109

Pos.	Analyte	Name	Concentration
Solvent - Analyte(s) not applicable			

STANDARD REPORT

Constituent

Working Standard - CLO4 INT

CLO4 INT — **Description - 6850 Intermdt AccStd 10.ug/mL**

Standard: 43701
MFG: ALS/SLC
MFG Lot: TNB: 09/18/2018
Pipette ID: Not Provided

Created By: Thomas Bosch
Create Date: 09/18/2018 02:09PM

Amount: 10 mL
Expires: 09/18/2019
Usable: Yes
Lab Lot: CLO4 INT

Pos.	Analyte	Name	Concentration
1	14797-73-0	Perchlorate	10 ug/mL

Composition

Standard	Standard ID	Description	Lab Lot ID	Volume	Expires
109	ASTM H2O	ASTM Type II Water	LAB 109	9.9 mL	11/07/2025
43659	CLO4 STOCK	6850 Stock AccStd 1,000ug/mL	CLO4 STOCK	0.1 mL	07/25/2020

STANDARD REPORT

Working Standard - CLO4 QC WRK

CLO4 QC WRK — **Description - 6850 QC WKG STD 100ug/L**

Standard: 41831
MFG: ALS/SLC
MFG Lot: TNB: 05/09/2018
Pipette ID: Not Provided

Created By: Thomas Bosch
Create Date: 05/09/2018 10:05AM

Amount: 10 mL
Expires: 05/09/2019
Usable: Yes
Lab Lot: CLO4 QC WRK 100.ug/L

Pos.	Analyte	Name	Concentration
1	14797-73-0	Perchlorate	100 ug/L

Composition

Standard	Standard ID	Description	Lab Lot ID	Volume	Expires
109	ASTM H2O	ASTM Type II Water	LAB 109	9.9 mL	11/07/2025
41830	CLO4 QC INT	6850 QC Intrmdt Std-QC 10ug/mL	CLO4 QC INT 10.ug/mL	0.1 mL	05/09/2019

STANDARD REPORT

Constituent

Working Standard - CLO4 QC INT

CLO4 QC INT — **Description** - 6850 QC Intrmdt Std-QC 10ug/mL

Standard: 41830
MFG: ALS/SLC
MFG Lot: TNB: 05/09/2018
Pipette ID: Not Provided

Created By: Thomas Bosch
Create Date: 05/09/2018 10:05AM

Amount: 10 mL
Expires: 05/09/2019
Usable: Yes
Lab Lot: CLO4 QC INT 10.ug/mL

Pos.	Analyte	Name	Concentration
1	14797-73-0	Perchlorate	10 ug/mL

Composition

Standard	Standard ID	Description	Lab Lot ID	Volume	Expires
109	ASTM H2O	ASTM Type II Water	LAB 109	9.9 mL	11/07/2025
36748	CLO4 QCSTOCK	6850 QC Stock STD 1,000ug/mL	CLO4 QC STOCK	0.1 mL	03/31/2020

STANDARD REPORT

Constituent

Solvent Standard - ASTM H2O

ASTM H2O		Description - ASTM Type II Water
Standard: 109	Created By: ALS Support (Lims)	Amount: 1000 L
MFG: DCL In House	Create Date: 10/06/2005 09:10AM	Expires: 11/07/2025
MFG Lot: Not Provided		Usable: Yes
Part ID: Not Provided		Lab Lot: LAB 109

Pos.	Analyte	Name	Concentration
Solvent - Analyte(s) not applicable			

STANDARD REPORT

Constituent

Stock Standard - CLO4 QCSTOCK

CLO4 QCSTOCK — **Description** - 6850 QC Stock STD 1,000ug/mL

Standard: 36748
MFG: Ultra Scientific
MFG Lot: CP-0860
Part ID: ICC-013

Created By: Thomas Bosch
Create Date: 05/11/2017 01:05PM

Amount: 100 mL
Expires: 03/31/2020
Usable: Yes
Lab Lot: CLO4 QC STOCK

Pos.	Analyte	Name	Concentration
1	14797-73-0	Perchlorate	1000 ug/mL

STANDARD REPORT

Working Standard - CLO4ISTDWRK

CLO4ISTDWRK		Description - Perchlorate ISTD Wrk 1,000ug/L
Standard: 43730	**Created By:** Thomas Bosch	**Amount:** 25 mL
MFG: ALS/SLC	**Create Date:** 09/20/2018 09:09AM	**Expires:** 09/20/2019
MFG Lot: TNB: 05/09/2018	**Verified By:** Thomas Bosch	**Usable:** Yes
Pipette ID: Not Provided	**Verify Date:**	**Lab Lot:** CLO4ISTDWRK

Pos.	Analyte	Name	Concentration
1	14797-73-0-8385	Perchlorate 83:85 Ratio	1000 ug/L
2	14797-73-0-89	Perchlorate 89	1000 ug/L

Composition

Standard	Standard ID	Description	Lab Lot ID	Volume	Expires
43729	CLO4ISTDSTK	Perchlorate ISTD Stock	CLO4ISTDSTK	0.25 mL	04/28/2026

STANDARD REPORT

Constituent

Stock Standard - CLO4ISTDSTK

CLO4ISTDSTK		Description - Perchlorate ISTD Stock
Standard: 43729	**Created By:** Thomas Bosch	**Amount:** 1 mL
MFG: Cambridge Isotope	**Create Date:** 09/20/2018 09:09AM	**Expires:** 04/28/2026
MFG Lot: SDFF-012A	**Verified By:** Thomas Bosch	**Usable:** Yes
Part ID: OLM-7310-S	**Verify Date:**	**Lab Lot:** CLO4ISTDSTK

Pos.	Analyte	Name	Concentration
1	14797-73-0-8385	Perchlorate 83:85 Ratio	100 ug/mL
2	14797-73-0-89	Perchlorate 89	100 ug/mL

ULTRA SCIENTIFIC
Analytical Solutions

Certificate of Analysis

ISO Guide 34 Reference Material

Lot Issue Date: 29-Feb 2016
Expiration Date: 31-Mar 2020

Product Number: ICC-013
Lot Number: CP-0860

Product Name: Perchlorate IC Standard

Description:
This Reference Material (RM) was gravimetrically prepared in accordance with ISO Guide 34 and under ULTRA Scientific's ISO 9001 registered quality system. The neat materials used for this product have been verified by ULTRA's ISO 17025 laboratory and under ULTRA's ISO Guide 34 accreditation. The analyte concentrations were verified by ULTRA's ISO 17025 accredited laboratory. For each analyte, the true value, with its uncertainty value calculated at the 95% confidence level, is reported below.

Analyte	Starting Material	Lot Number	Purity (%)	Calculated Value	True Value	Traceability & Method
perchlorate	potassium perchlorate	RM07987	100	1001 ± 5 µg/mL	976 ± 6 µg/mL	NIST SRM 3141A; ICP-OES

Solvent: water (low TOC, < 50 ppb)

Storage: Store at Room Temperature (15° to 30°C).

Traceability:
Traceability has been established through an unbroken chain of comparisons, each having stated uncertainties. Comparisons are based on appropriate physical or chemical measurements, including gravimetric or volumetric dilution, where the mass or volume of a solution before and after dilution is measured. The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z-540-1, ISO 9001, ISO 17025, and ISO Guide 34. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 819.

Estimation of Uncertainties:
The true value is reported, with its uncertainty value calculated at the 95% confidence level.

Homogeneity:
This RM was formulated and unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

Intended Use:
This RM is intended for the preparation of working reference samples for use in routine laboratory analyses, calibration of instruments, validation of analytical methods, assessments of measurement methods and continuing calibration verification.

Instructions for Use:
Sample aliquots for analysis should be withdrawn at 20°C to 25°C immediately after opening and should be processed without delay for the true value to be valid within the stated uncertainties. Do not pipet from the bottle. Do not return any material removed for pipetting to the bottle. Tightly cap the bottle after removing any material and store according to the instructions noted above.

Hazards:
Refer to the Safety Data Sheet for information regarding this RM.

Expiration of Certification:
The certification of this RM is valid, within the measurement uncertainty specified, until the expiration date specified above, provided the RM is handled and stored in accordance with the instructions given in this certificate. This certification is nullified if the RM is damaged, contaminated, or otherwise modified.

ULTRA SCIENTIFIC
Analytical Solutions

Certificate of Analysis

ISO Guide 34 Reference Material

Product Number: ICC-013
Lot Number: CP-0860

Lot Issue Date: 29-Feb 2016
Expiration Date: 31-Mar 2020

Maintenance of Certification:
The real-time, long term stability of the RM may be monitored over the lifetime of the certification. If substantive changes occur that affect the certification before the expiration of this certificate, ULTRA Scientific will notify the purchaser.

Peter A. King, Ph.D.
VP, Technical Operations

Daniel J. Lamendola
Director of QA/RA

125 Market Street
New Haven, CT 06513
USA

AccuStandard®

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

CERTIFICATE OF ANALYSIS

S 43659

AccuTrace™ Reference Standard

Catalog No: IC-PER-10X-1
Description: Perchlorate Standard
Element: Perchlorate (ClO_4)
SRM: Ind. Std.
Lot: 218065075
Matrix: Water
Hazards: *Refer to SDS for complete safety information*

Signal Word: None

Date Certified: Jun 25, 2018
Expiration: Jul 25, 2020
Sample Size: 100 mL
Components: 1
Storage Condition: Ambient (>5 °C)

Included on ISO/IEC 17025 Scope of Accreditation: Yes

Included on ISO 17034 Scope of Accreditation: Yes

Component		SRM #	Prepared Concentration (µg/mL)
ClO_4	Perchlorate	Ind. Std.	1000

AccuStandard

The gravimetric uncertainty for this product is ±0.24%.

The final solution was checked against an independent standard to verify its concentration.

We use the highest purity raw materials available to minimize impurity levels in the final solution. Typically 99.999%+ pure starting materials are used as well as ASTM Type I 18 megohm deionized water.

All solutions are filtered through a 0.2 µm filter prior to being bottled.

All glassware used in preparation is Class A and calibrated regularly.

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

All bottles are triple rinsed with deionized water prior to use.

Shake bottle prior to use and do not pipette directly out of the bottle. Use only cleaned Class A volumetric glassware.

We certify the accuracy of this standard to be ±0.5% of the stated value until its expiration date provided it is kept tightly capped and stored under the conditions stated above.

Certified By: Meigan O'Leary

Meigan O'Leary, Inorganic QC Manager

For use in routine laboratory analysis.

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

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

Cambridge Isotope Laboratories, Inc.

Certificate of Analysis

Quality Standards:
ISO Guide 34 • ISO/IEC 17025 • ISO 13485 • cGMP

23118

Product Name: (Isotopic Label & Enrichment Specification)	PERCHLORIC ACID, SODIUM SALT (1804, 90%+) 100 UG/ML IN WATER
Lot Number:	SDDG-013
Catalog Number:	OLM-7310-S

Product Information

Chemical Purity Specification:	≥98%
Labeled CAS Number:	NA
Unlabeled CAS Number:	7601-89-0
MW*:	130.4
Chemical Formula:	NaCl*O4
Storage:	Store at room temperature away from light and moisture.
Stability:	See storage and expiration date.

Certification

Cambridge Isotope Laboratories, Inc. guarantees that this material meets or exceeds the specifications stated. Absolute identity as well as chemical and isotopic purities are assured by the use of unambiguous synthetic routes and multiple chemical analyses whenever possible. Results are representative of QC testing at time of release from Quality Control unless otherwise stated.

Volumetric measurements were made with Class A glassware. Gravimetry is traceable to the NIST through calibrated balances and certified, calibrated, standard weights. The calibrations are traceable to the NIST under Test No. 822/270236-04. The calibrations also meet specifications outlined in ISO 9001, ISO/IEC 17025, ANSI/NSCL Z540-1-1994, NCR Document 10CFR50 Appendix B, and applicable subdocuments.

This COA references the bulk catalog number before packaging. The COA also applies to the CIL finished good catalog number. Some possible packaging sizes and their corresponding suffix are -1.2, -1, -0.5, -10, or -0.1.

* *For isotopically labeled compounds, MW listed is for the fully enriched product.*

Approved by: T. J. Eckersley

Timothy J. Eckersley, Ph.D., Quality Assurance

Quality Control Tests and Results

QC Release Date	2/27/2014
Expiration Date	2/27/2024
Concentration Based on Gravimetry	102 µg/mL
Chemical Purity of Neat Material(s)	98%
LC/MS for Concentration	109.4 ± 2.8 µg/mL (k=2)

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

Raw Data

Batch Report: C:\HPCHEM\1\DATA\03JAN19D\03JAN19S.B

Batch Review Method:
C:\HPCHEM\1\METHODS\CLO4-DPR.M

['#' ==> Run has not been reprocessed with Batch Review Method
'*' ==> Run has been saved with batch file]

#	Sample	Location	Inj	SampleType	Run	Perchlorate Area	Perchlorate RT	Perchlorate Amount
#*	634996 C	Vial 71	1	Control	1	3.02980e6	8.817	25.89025
#*	634997 L	Vial 72	1	Control	2	1.02542e5	8.818	1.04350
#*	634998 I	Vial 73	1	Control	3	9.88188e4	8.822	1.08333
#*	634999 L	Vial 74	1	Control	4	0.00000	0.000	0.00000
#*	635000 Q	Vial 75	1	Control	5	6.10577e5	8.868	4.79729
#*	1836126001	Vial 76	1	Sample	6	4.82528e5	8.738	4.45116
#*	1836126002	Vial 77	1	Sample	7	6.01253e5	8.751	4.96452
#*	1836126003	Vial 78	1	Sample	8	0.00000	0.000	0.00000
#*	1836126004	Vial 79	1	Sample	9	0.00000	0.000	0.00000
#*	1836126005	Vial 80	1	Sample	10	6.24096e4	8.643	2.29967
#*	1836126006	Vial 81	1	Sample	11	6.87767e4	8.628	2.36177
#*	1836126007	Vial 82	1	Sample	12	1.03181e6	8.733	14.55016
#*	1836126008	Vial 83	1	Sample	13	1.54854e6	8.724	20.93302
#*	1836126009	Vial 84	1	Sample	14	1.72729e6	8.732	22.65098
#*	1836127001	Vial 85	1	Sample	15	1.39326e4	8.753	3.62818e-1
#*	1836127002	Vial 86	1	Sample	16	0.00000	0.000	0.00000
#*	1836127003	Vial 87	1	Sample	17	0.00000	0.000	0.00000
#*	1836126004	Vial 61	1	Sample	18	0.00000	0.000	0.00000
#*	1836126005	Vial 62	1	Sample	19	5.30648e5	8.923	23.19809
#*	1836126006	Vial 63	1	Sample	20	5.06527e5	8.938	23.37427
#*	635001 C	Vial 71	1	Control	21	2.35775e6	8.859	25.94134
#*	635002 L	Vial 72	1	Control	22	8.56221e4	8.874	1.09410
#*	1836507001	Vial 88	1	Sample	23	3.12102e6	8.895	3200.55038
#*	1836507002	Vial 89	1	Sample	24	1.69890e5	8.621	6.86292
#*	1836507003	Vial 90	1	Sample	25	0.00000	0.000	0.00000
#*	1836507004	Vial 91	1	Sample	26	0.00000	0.000	0.00000
#*	1836507005	Vial 92	1	Sample	27	0.00000	0.000	0.00000
#*	1836507006	Vial 93	1	Sample	28	1.01055e6	8.892	8017.99599
#*	1836507002	Vial 94	1	Sample	29	2.43496e5	8.721	12.97542
#*	635055 C	Vial 71	1	Control	30	3.24503e6	8.841	25.93790
*	635056 L	Vial 72	1	Control	31	1.03548e5	8.884	1.10593

#	Sample	Location	Inj	SampleType	Run	CLO4-85 Area	CLO4-85 RT	CLO4-85 Amount
#*	634996 C	Vial 71	1	Control	1	8.84834e5	8.834	25.08039
#*	634997 L	Vial 72	1	Control	2	3.68596e4	8.833	1.10094
#*	634998 I	Vial 73	1	Control	3	4.15740e4	8.852	1.33002
#*	634999 L	Vial 74	1	Control	4	0.00000	0.000	0.00000
#*	635000 Q	Vial 75	1	Control	5	1.86798e5	8.885	4.82240
#*	1836126001	Vial 76	1	Sample	6	1.53566e5	8.757	4.64066
#*	1836126002	Vial 77	1	Sample	7	1.89678e5	8.765	5.14546
#*	1836126003	Vial 78	1	Sample	8	0.00000	0.000	0.00000
#*	1836126004	Vial 79	1	Sample	9	0.00000	0.000	0.00000
#*	1836126005	Vial 80	1	Sample	10	3.07175e4	8.665	3.55391
#*	1836126006	Vial 81	1	Sample	11	3.21523e4	8.648	3.47866
#*	1836126007	Vial 82	1	Sample	12	3.59367e5	8.748	16.73734
#*	1836126008	Vial 83	1	Sample	13	5.09941e5	8.742	22.76031
#*	1836126009	Vial 84	1	Sample	14	5.56186e5	8.748	24.09042
#*	1836127001	Vial 85	1	Sample	15	7053.06104	8.745	3.50034e-1
#*	1836127002	Vial 86	1	Sample	16	0.00000	0.000	0.00000
#*	1836127003	Vial 87	1	Sample	17	0.00000	0.000	0.00000
#*	1836126004	Vial 61	1	Sample	18	0.00000	0.000	0.00000
#*	1836126005	Vial 62	1	Sample	19	1.61964e5	8.939	23.24804
#*	1836126006	Vial 63	1	Sample	20	1.59127e5	8.951	24.09422
#*	635001 C	Vial 71	1	Control	21	6.74917e5	8.876	24.66030
#*	635002 L	Vial 72	1	Control	22	2.82440e4	8.888	1.07398
#*	1836507001	Vial 88	1	Sample	23	8.94322e5	8.909	3038.69537
#*	1836507002	Vial 89	1	Sample	24	8.48224e4	8.644	11.16172
#*	1836507003	Vial 90	1	Sample	25	0.00000	0.000	0.00000
*	1836507004	Vial 91	1	Sample	26	0.00000	0.000	0.00000

Batch Report: C:\HPCHEM\1\DATA\03JAN19D\03JAN19S.B

#*	Sample	Location	Inj	SampleType	Run	CLO4-85 Area	CLO4-85 RT	CLO4-85 Amount
#*	1836507005	Vial 92	1	Sample	27	0.00000	0.000	0.00000
#*	1836507006	Vial 93	1	Sample	28	3.00645e5	8.907	7909.62046
#*	1836507002	Vial 94	1	Sample	29	9.47043e4	8.738	16.08873
#*	635055 C	Vial 71	1	Control	30	9.35888e5	8.857	24.83155
*	635056 L	Vial 72	1	Control	31	3.54270e4	8.908	1.12432

#*	Sample	Location	Inj	SampleType	Run	CLO4-89-ISTD Area	CLO4-89-ISTD RT	CLO4-89-ISTD Amount
#*	634996 C	Vial 71	1	Control	1	3.48658e5	8.844	5.00000
#*	634997 L	Vial 72	1	Control	2	3.79123e5	8.845	5.00000
#*	634998 I	Vial 73	1	Control	3	3.48700e5	8.858	5.00000
#*	634999 L	Vial 74	1	Control	4	3.93949e5	8.869	5.00000
#*	635000 Q	Vial 75	1	Control	5	4.08036e5	8.895	5.00000
#*	1836126001	Vial 76	1	Sample	6	3.48986e5	8.769	5.00000
#*	1836126002	Vial 77	1	Sample	7	3.87561e5	8.780	5.00000
#*	1836126003	Vial 78	1	Sample	8	3.67271e5	8.838	5.00000
#*	1836126004	Vial 79	1	Sample	9	8.33545e4	8.659	5.00000
#*	1836126005	Vial 80	1	Sample	10	9.19294e4	8.673	5.00000
#*	1836126006	Vial 81	1	Sample	11	9.83756e4	8.663	5.00000
#*	1836126007	Vial 82	1	Sample	12	2.16851e5	8.760	5.00000
#*	1836126008	Vial 83	1	Sample	13	2.22724e5	8.752	5.00000
#*	1836126009	Vial 84	1	Sample	14	2.28734e5	8.758	5.00000
#*	1836127001	Vial 85	1	Sample	15	2.79028e5	8.779	5.00000
#*	1836127002	Vial 86	1	Sample	16	2.69537e5	8.744	5.00000
#*	1836127003	Vial 87	1	Sample	17	2.48717e5	8.777	5.00000
#*	1836126004	Vial 61	1	Sample	18	4.18583e5	8.917	25.00000
#*	1836126005	Vial 62	1	Sample	19	3.67342e5	8.948	25.00000
#*	1836126006	Vial 63	1	Sample	20	3.47856e5	8.963	25.00000
#*	635001 C	Vial 71	1	Control	21	2.70759e5	8.885	5.00000
#*	635002 L	Vial 72	1	Control	22	2.98452e5	8.903	5.00000
#*	1836507001	Vial 88	1	Sample	23	2.87063e5	8.921	500.00000
#*	1836507002	Vial 89	1	Sample	24	7.80040e4	8.658	5.00000
#*	1836507003	Vial 90	1	Sample	25	2.13295e5	8.764	5.00000
#*	1836507004	Vial 91	1	Sample	26	2.21191e5	8.766	5.00000
#*	1836507005	Vial 92	1	Sample	27	3.76299e5	8.884	5.00000
#*	1836507006	Vial 93	1	Sample	28	3.94550e5	8.918	5000.00000
#*	1836507002	Vial 94	1	Sample	29	3.14107e5	8.751	25.00000
#*	635055 C	Vial 71	1	Control	30	3.72704e5	8.864	5.00000
*	635056 L	Vial 72	1	Control	31	3.56169e5	8.911	5.00000

*** End of Report ***

Sequence: C:\HPCHEM\1\SEQUENCE\CLO4\2019\JAN\03JAN19D.S

Sequence Table:

Method and Injection Info Part:

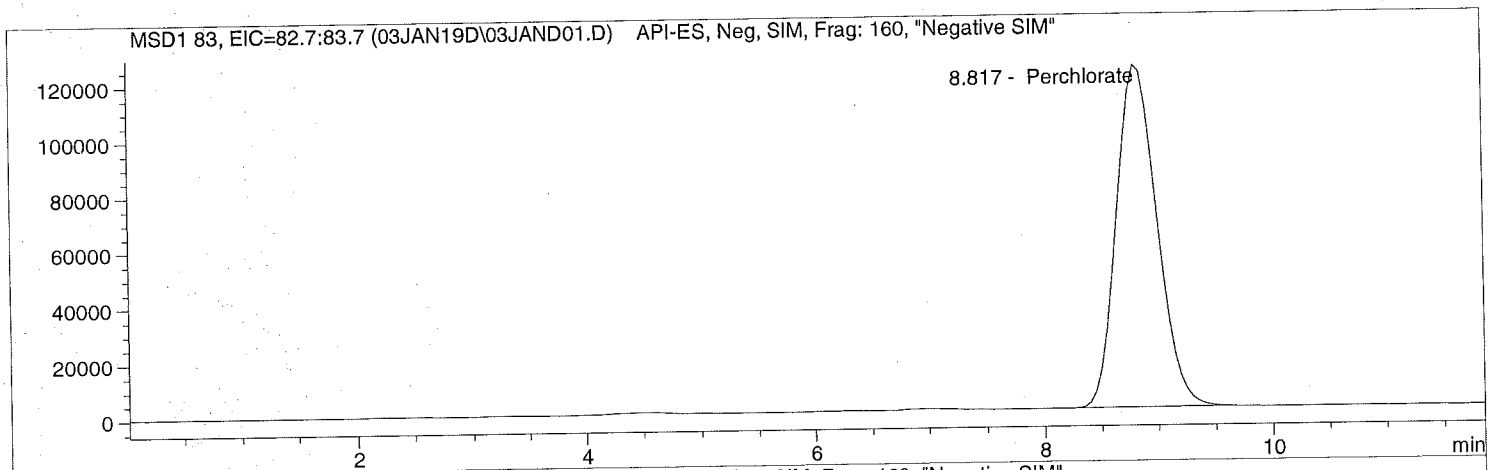
Line	Location	SampleName		Method	Inj	SampleType	InjVolume	DataFile
1	Vial 71	634996	CCV@25	CLO4-AQN	1	Ctrl Samp		
2	Vial 72	634997	LODV@1.	CLO4-AQN	1	Ctrl Samp		
3	Vial 73	634998	ICS@1.0	CLO4-AQN	1	Ctrl Samp		
4	Vial 74	634999	LMB	CLO4-AQN	1	Ctrl Samp		
5	Vial 75	635000	QC@5.0	CLO4-AQN	1	Ctrl Samp		
6	Vial 76	1836126001		CLO4-AQN	1	Sample		
7	Vial 77	1836126002		CLO4-AQN	1	Sample		
8	Vial 78	1836126003		CLO4-AQN	1	Sample		
9	Vial 79	1836126004		CLO4-AQN	1	Sample		
10	Vial 80	1836126005	MS	CLO4-AQN	1	Sample		
11	Vial 81	1836126006	MSD	CLO4-AQN	1	Sample		
12	Vial 82	1836126007		CLO4-AQN	1	Sample		
13	Vial 83	1836126008	MS	CLO4-AQN	1	Sample		
14	Vial 84	1836126009	MSD	CLO4-AQN	1	Sample		
15	Vial 85	1836127001		CLO4-AQN	1	Sample		
16	Vial 86	1836127002		CLO4-AQN	1	Sample		
17	Vial 87	1836127003		CLO4-AQN	1	Sample		
18	Vial 61	1836126004	5X	CLO4-AQN	1	Sample		
19	Vial 62	1836126005	MS	CLO4-AQN	1	Sample		
20	Vial 63	1836126006	MSD	CLO4-AQN	1	Sample		
21	Vial 71	635001	CCV@25	CLO4-AQN	1	Ctrl Samp		
22	Vial 72	635002	LODV@1.	CLO4-AQN	1	Ctrl Samp		
23	Vial 88	1836507001	100	CLO4-AQN	1	Sample		
24	Vial 89	1836507002		CLO4-AQN	1	Sample		
25	Vial 90	1836507003		CLO4-AQN	1	Sample		
26	Vial 91	1836507004		CLO4-AQN	1	Sample		
27	Vial 92	1836507005		CLO4-AQN	1	Sample		
28	Vial 93	1836507006	1K	CLO4-AQN	1	Sample		
29	Vial 94	1836507002	5X	CLO4-AQN	1	Sample		
30	Vial 71	635055	CCV@25	CLO4-AQN	1	Ctrl Samp		
31	Vial 72	635056	LODV@1.	CLO4-AQN	1	Ctrl Samp		

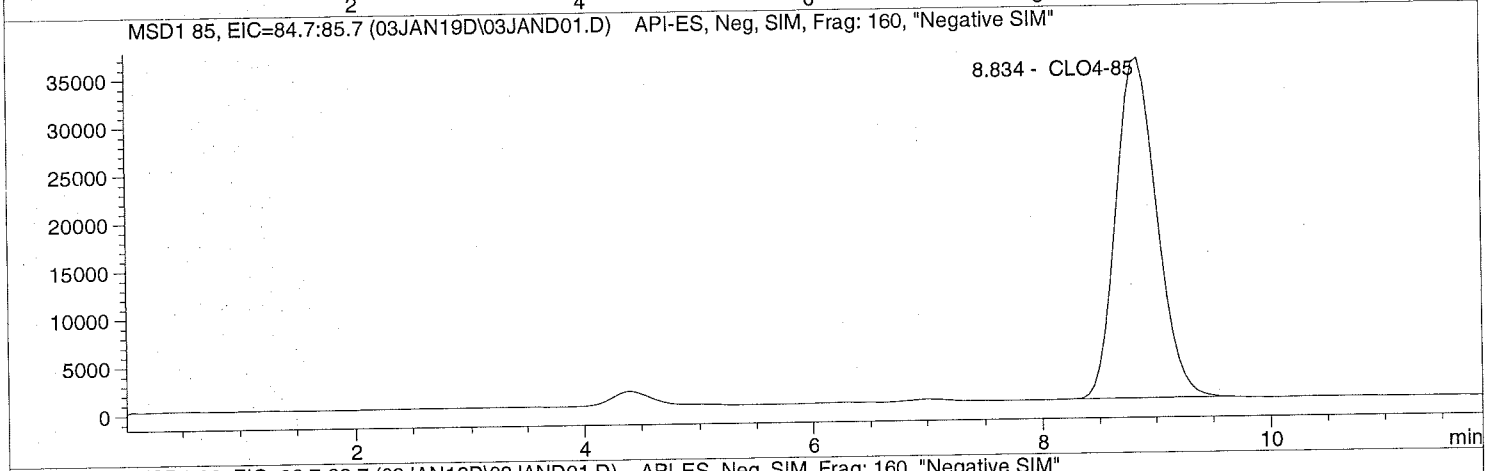
Data file: C:\HPCHEM\1\DATA\03JAN19D\03JAND01.D Sample Name: 634996 CCV@25

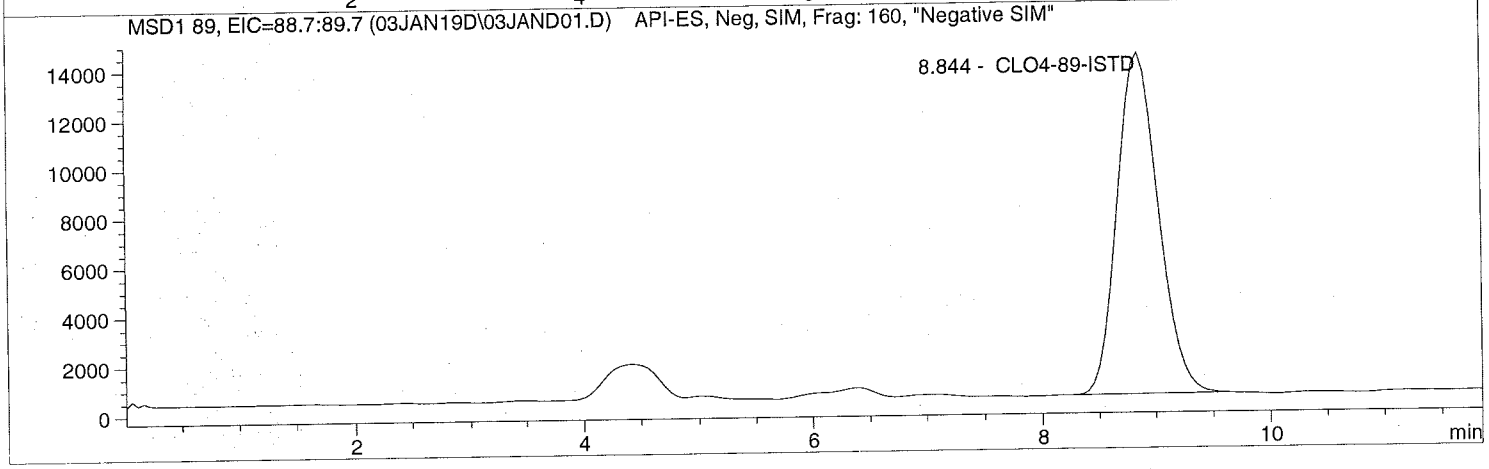
Injection Date:	1/03/2019 09:01:36	Seq Line:	1
Sample Name:	634996 CCV@25	Location:	Vial 71
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis







Data file: C:\HPCHEM\1\DATA\03JAN19D\03JAND01.D Sample Name: 634996 CCV@25

Injection Date:	1/03/2019 09:01:36	Seq Line:	1
Sample Name:	634996 CCV@25	Location:	Vial 71
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 3. Dec. 2018, 00:29:27 pm
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	25.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.817	PBA	3029797.8	25.8902	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.834	BBA	884834.1	25.0804	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.844	PBA	348658.0	5.0000	CLO4-89-ISTD

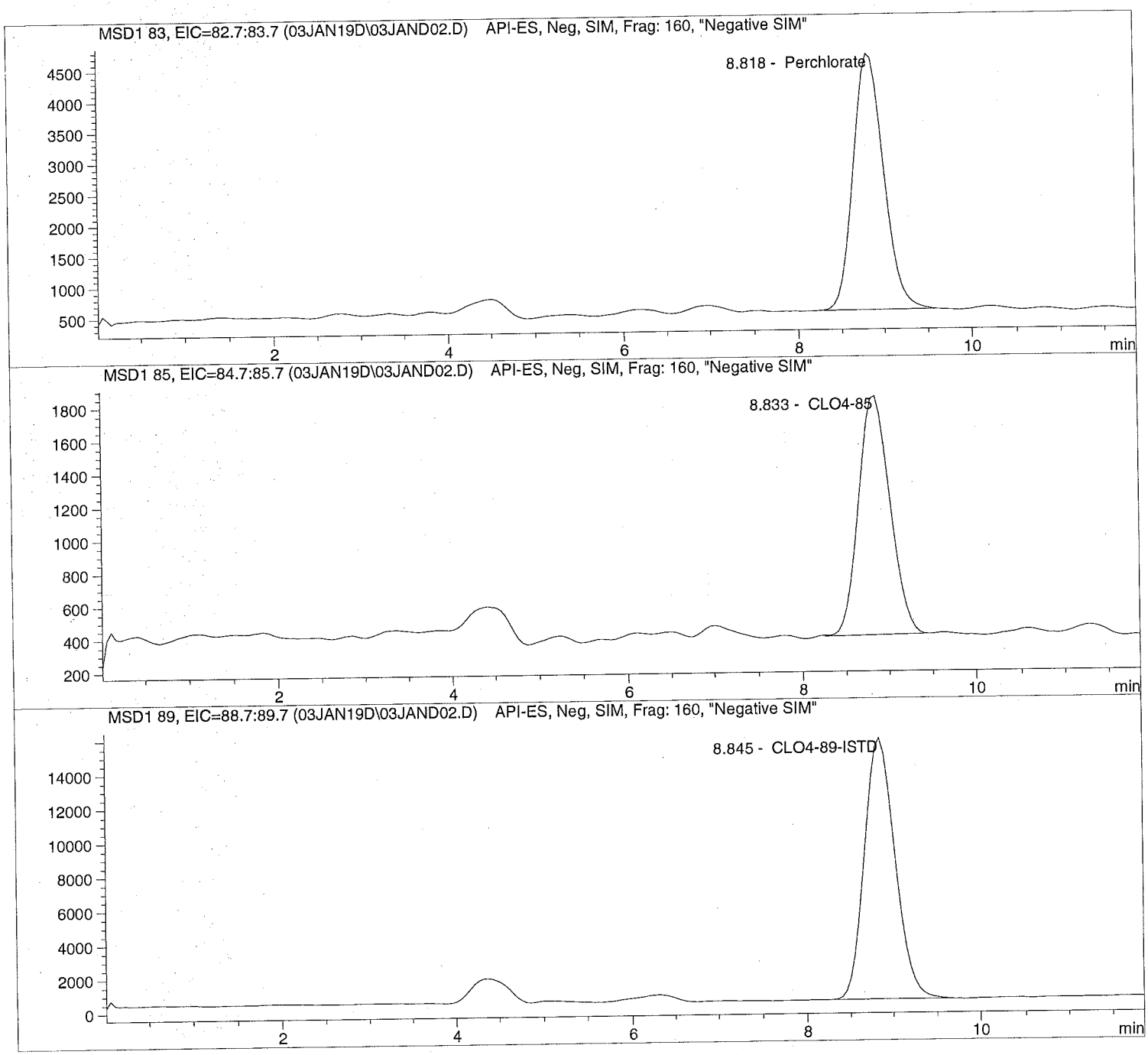
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\03JAN19D\03JAND02.D Sample Name: 634997 LODV@1.

Injection Date:	1/03/2019 09:22:43	Seq Line:	2
Sample Name:	634997 LODV@1.	Location:	Vial 72
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\03JAN19D\03JAND02.D Sample Name: 634997 LODV@1.

Injection Date:	1/03/2019 09:22:43	Seq Line:	2
Sample Name:	634997 LODV@1.	Location:	Vial 72
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 3. Dec. 2018, 00:29:27 pm
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	1.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.818	BBA	102542.1	1.0435	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.833	BBA	36859.6	1.1009	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.845	BBA	379123.3	5.0000	CLO4-89-ISTD

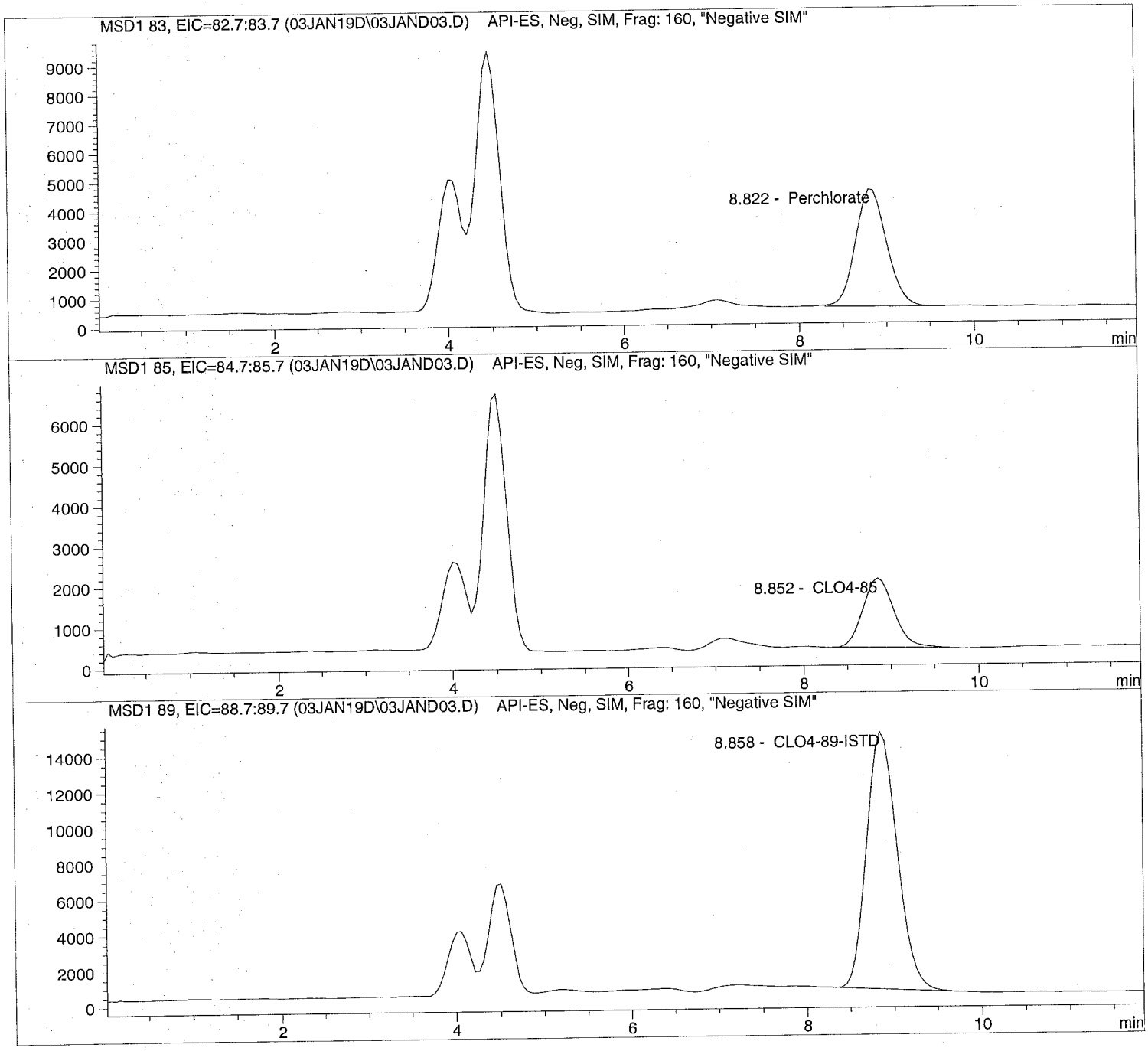
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\03JAN19D\03JAND03.D Sample Name: 634998 ICS@1.0

Injection Date:	1/03/2019 09:36:32	Seq Line:	3
Sample Name:	634998 ICS@1.0	Location:	Vial 73
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\03JAN19D\03JAND03.D Sample Name: 634998 ICS@1.0

Injection Date:	1/03/2019 09:36:32	Seq Line:	3
Sample Name:	634998 ICS@1.0	Location:	Vial 73
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 3. Dec. 2018, 00:29:27 pm
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	1.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.822	BBA	98818.8	1.0833	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.852	PBA	41574.0	1.3300	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.858	BBA	348699.7	5.0000	CLO4-89-ISTD

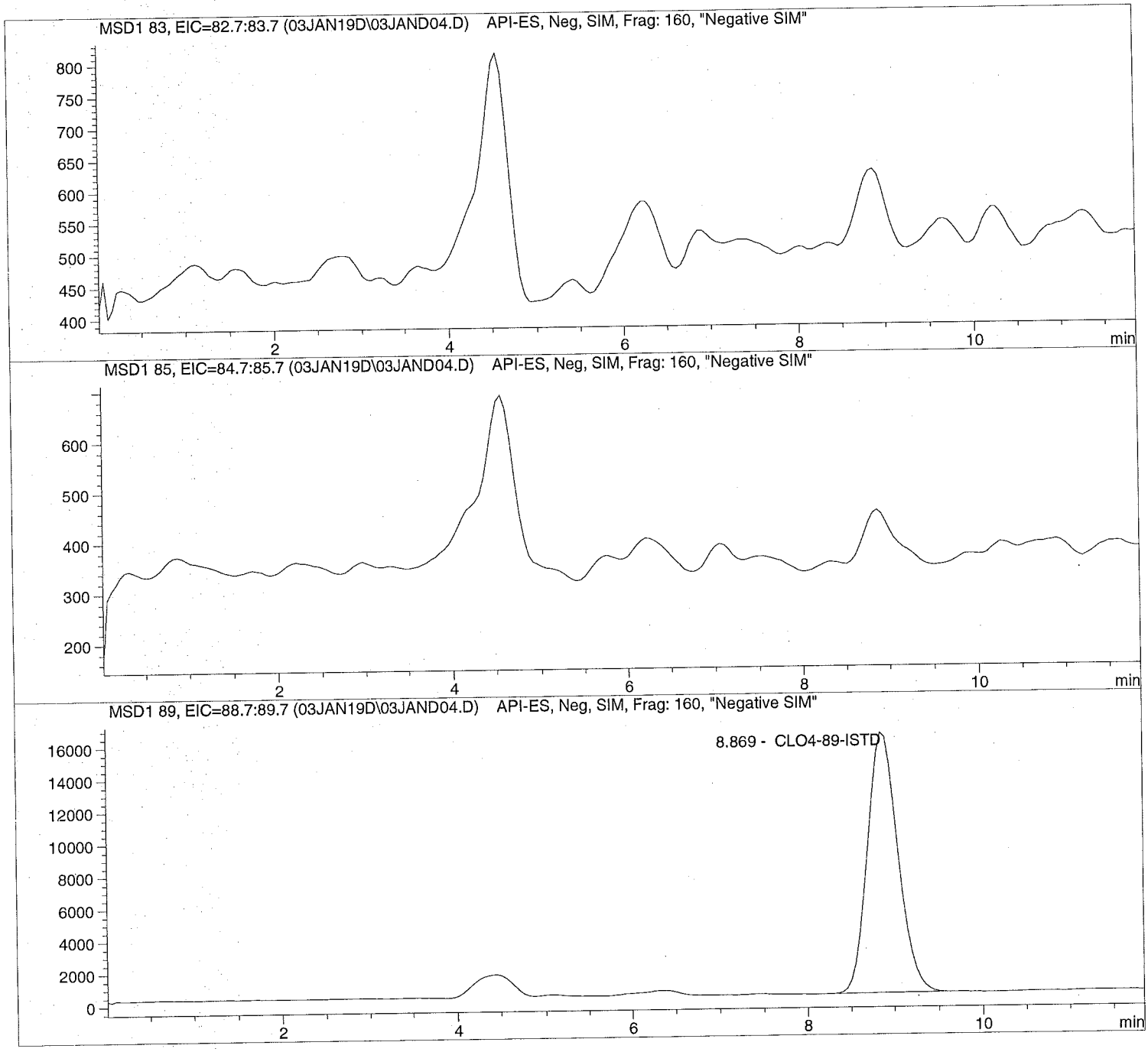
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\03JAN19D\03JAND04.D Sample Name: 634999 LMB

Injection Date:	1/03/2019 09:50:23	Seq Line:	4
Sample Name:	634999 LMB	Location:	Vial 74
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\03JAN19D\03JAND04.D Sample Name: 634999 LMB

Injection Date:	1/03/2019 09:50:23	Seq Line:	4
Sample Name:	634999 LMB	Location:	Vial 74
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 3. Dec. 2018, 00:29:27 pm
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	0.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
0.000		0.0	0.0000	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
0.000		0.0	0.0000	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.869	PBA	393948.9	5.0000	CLO4-89-ISTD

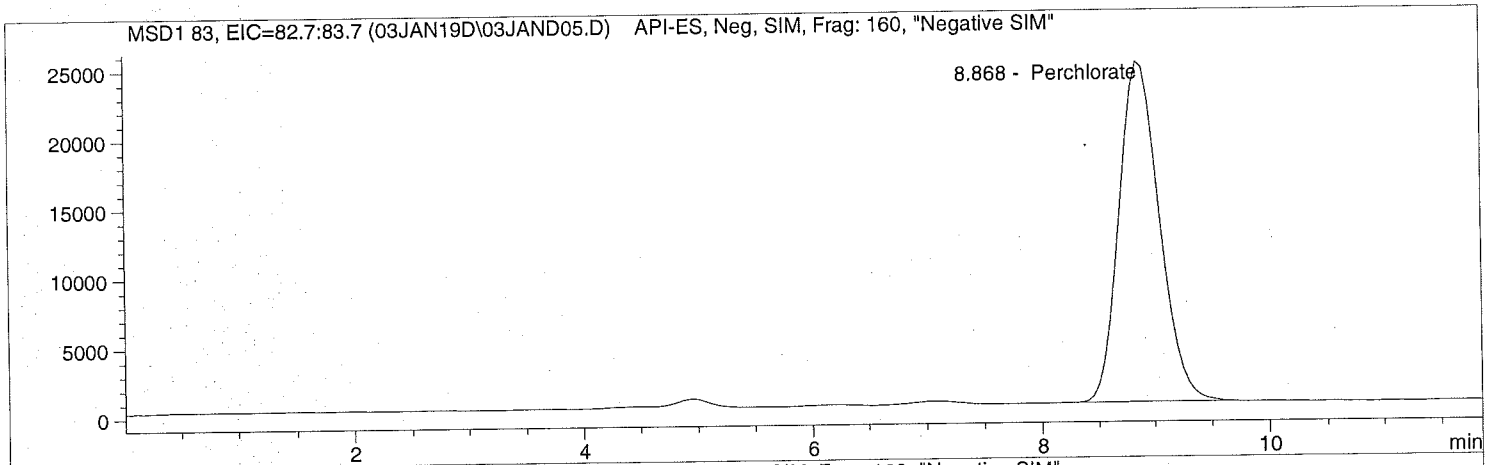
*** End of Report ***

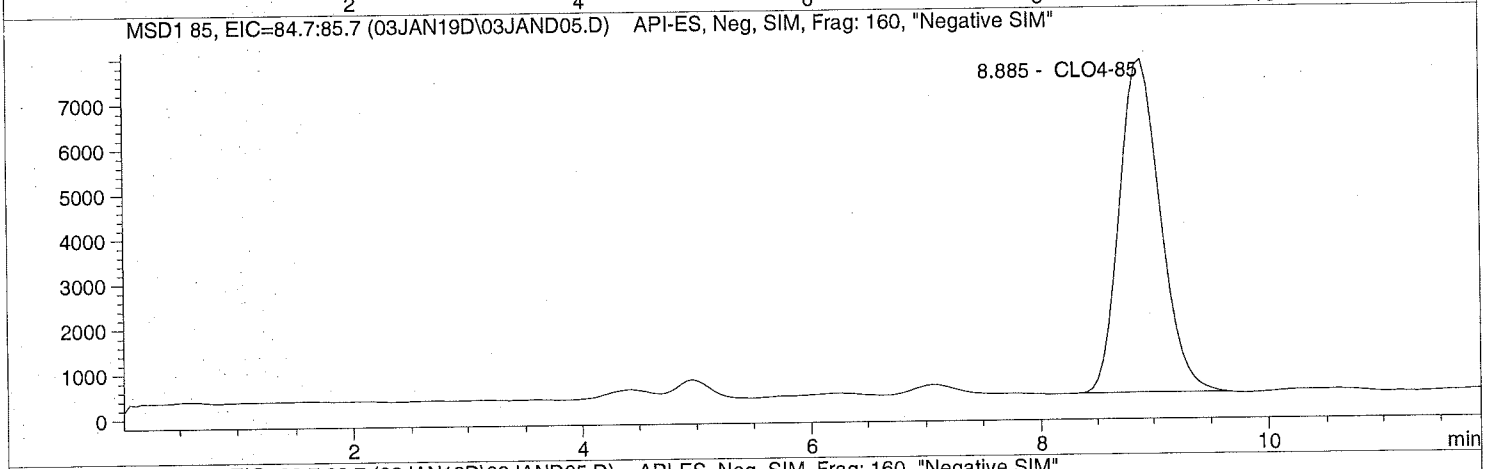
Data file: C:\HPCHEM\1\DATA\03JAN19D\03JAND05.D Sample Name: 635000 QC@5.0

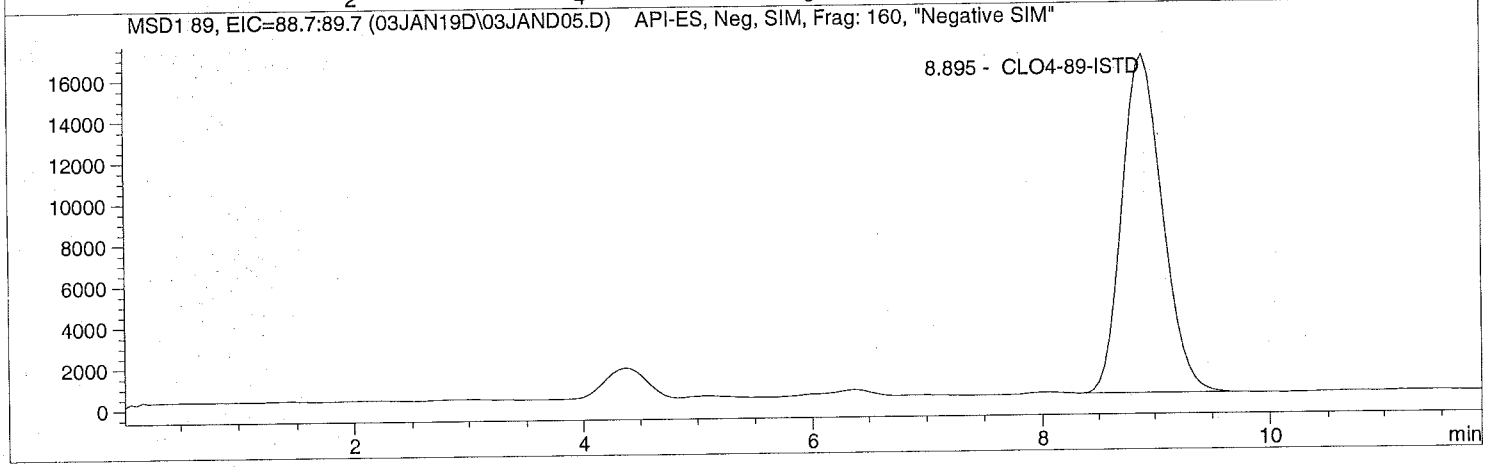
Injection Date:	1/03/2019 10:04:11	Seq Line:	5
Sample Name:	635000 QC@5.0	Location:	Vial 75
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis







Data file: C:\HPCHEM\1\DATA\03JAN19D\03JAND05.D Sample Name: 635000 QC@5.0

Injection Date:	1/03/2019 10:04:11	Seq Line:	5
Sample Name:	635000 QC@5.0	Location:	Vial 75
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 3. Dec. 2018, 00:29:27 pm
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	5.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.868	BBA	610577.4	4.7973	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.885	BBA	186798.2	4.8224	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.895	PBA	408035.8	5.0000	CLO4-89-ISTD

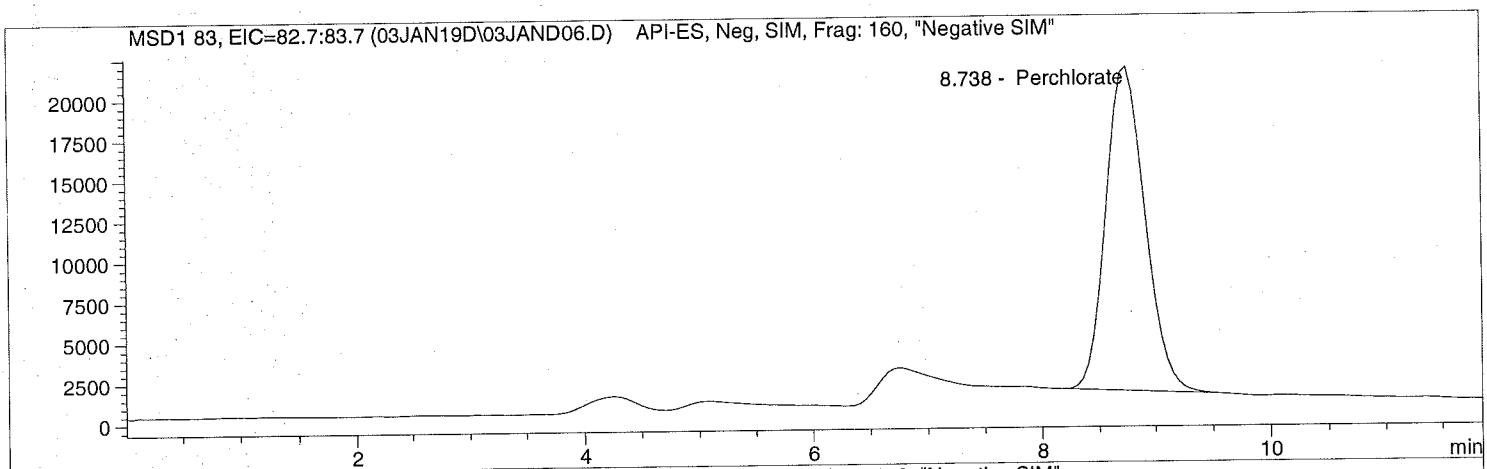
*** End of Report ***

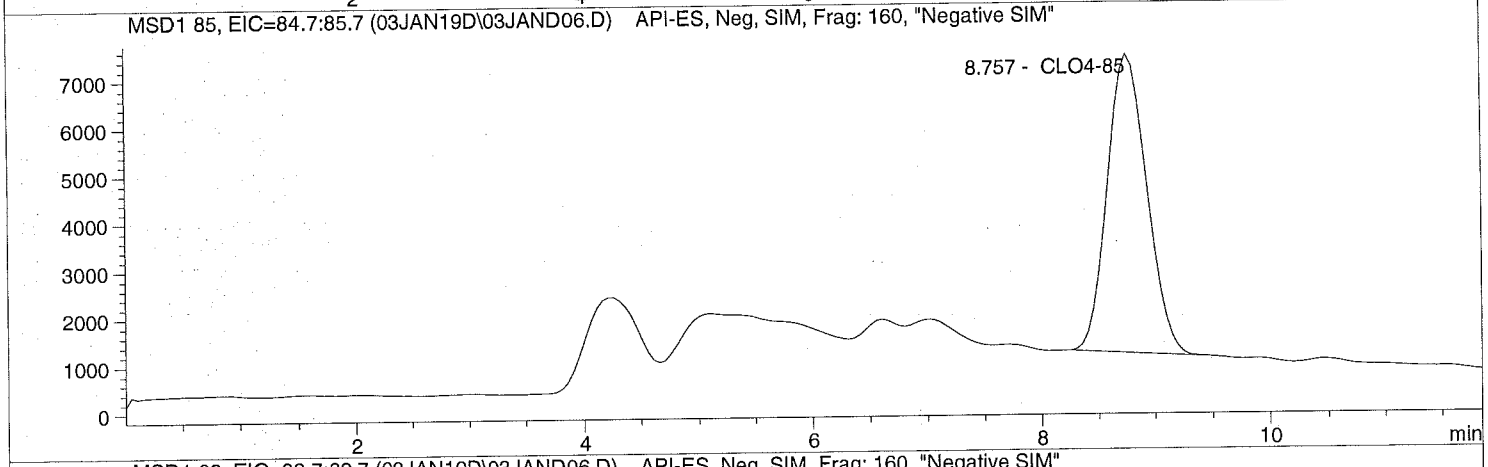
Data file: C:\HPCHEM\1\DATA\03JAN19D\03JAND06.D Sample Name: 1836126001

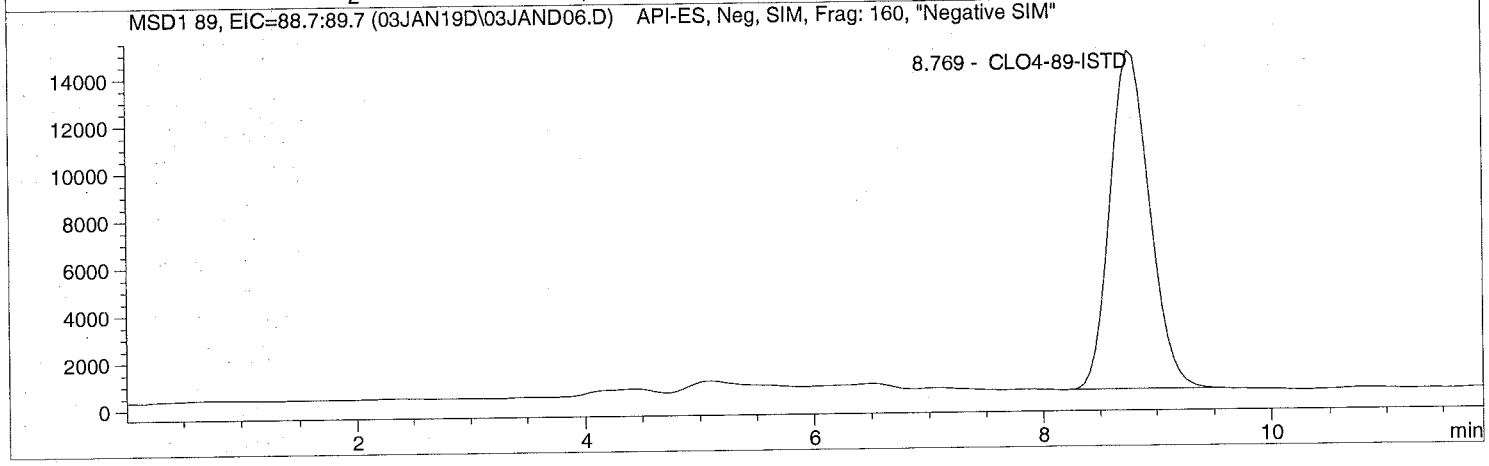
Injection Date:	1/03/2019 10:17:59	Seq Line:	6
Sample Name:	1836126001	Location:	Vial 76
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis







Data file: C:\HPCHEM\1\DATA\03JAN19D\03JAND06.D Sample Name: 1836126001

Injection Date:	1/03/2019 10:17:59	Seq Line:	6
Sample Name:	1836126001	Location:	Vial 76
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 3. Dec. 2018, 00:29:27 pm
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	0.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.738	PBA	482528.2	4.4512	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.757	PBA	153566.1	4.6407	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.769	PBA	348986.1	5.0000	CLO4-89-ISTD

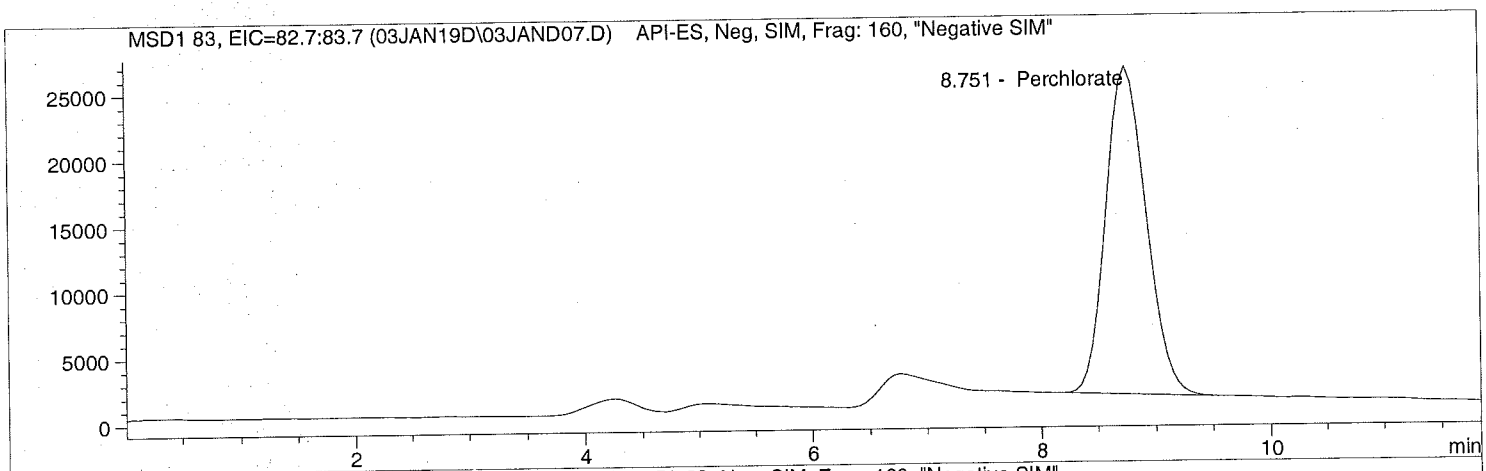
*** End of Report ***

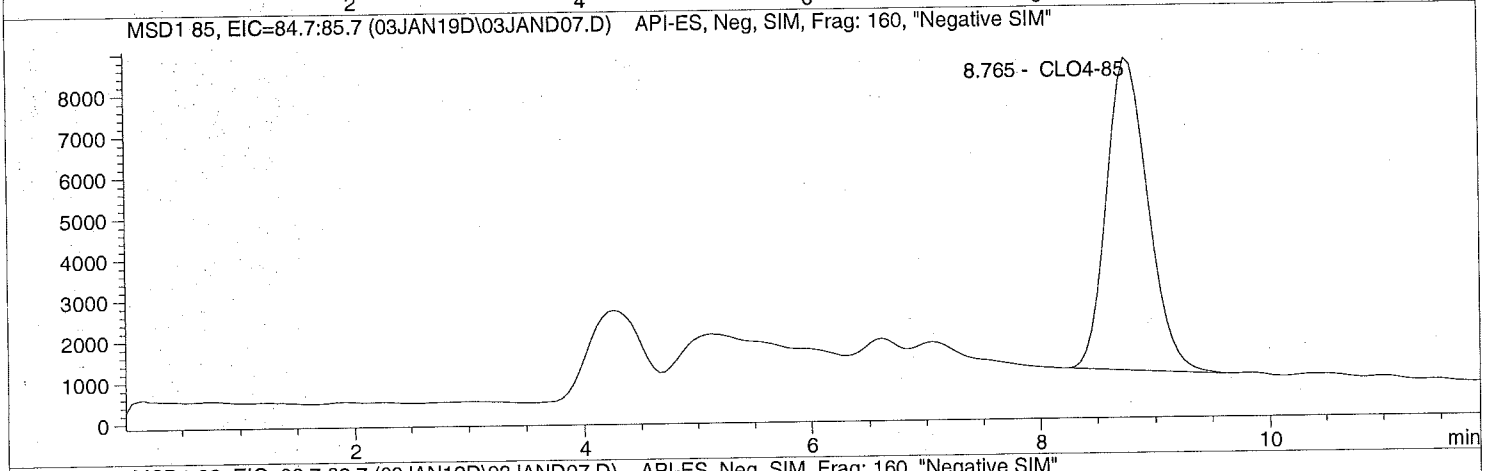
Data file: C:\HPCHEM\1\DATA\03JAN19D\03JAND07.D Sample Name: 1836126002

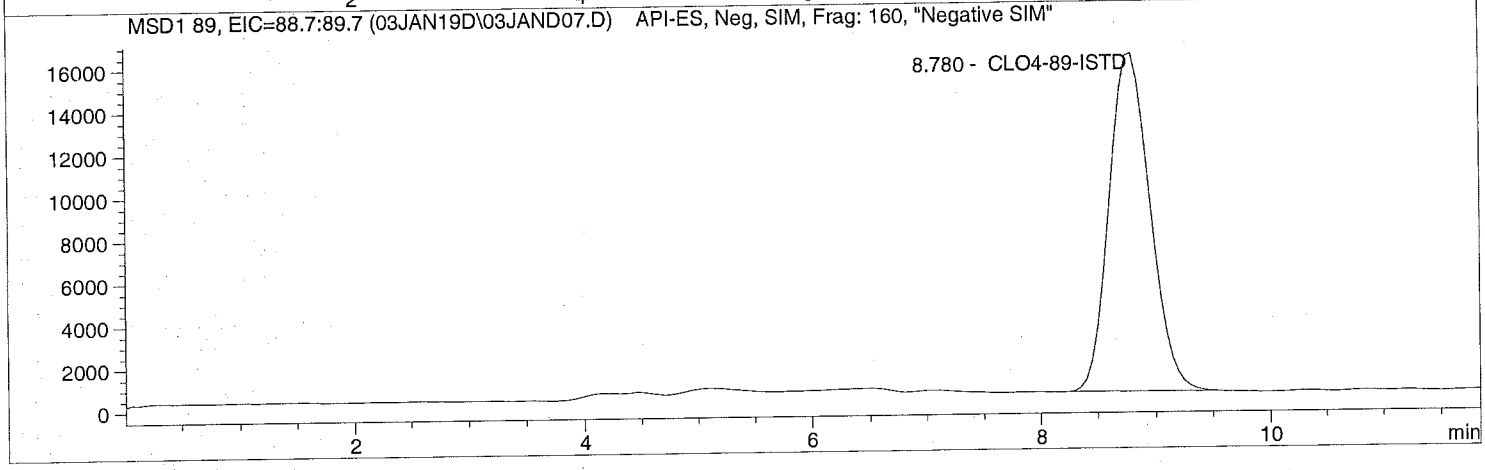
Injection Date:	1/03/2019 10:32:27	Seq Line:	7
Sample Name:	1836126002	Location:	Vial 77
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis







Data file: C:\HPCHEM\1\DATA\03JAN19D\03JAND07.D Sample Name: 1836126002

Injection Date:	1/03/2019 10:32:27	Seq Line:	7
Sample Name:	1836126002	Location:	Vial 77
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 3. Dec. 2018, 00:29:27 pm
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	0.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.751	PBA	601252.6	4.9645	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.765	PBA	189678.3	5.1455	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.780	BBA	387560.8	5.0000	CLO4-89-ISTD

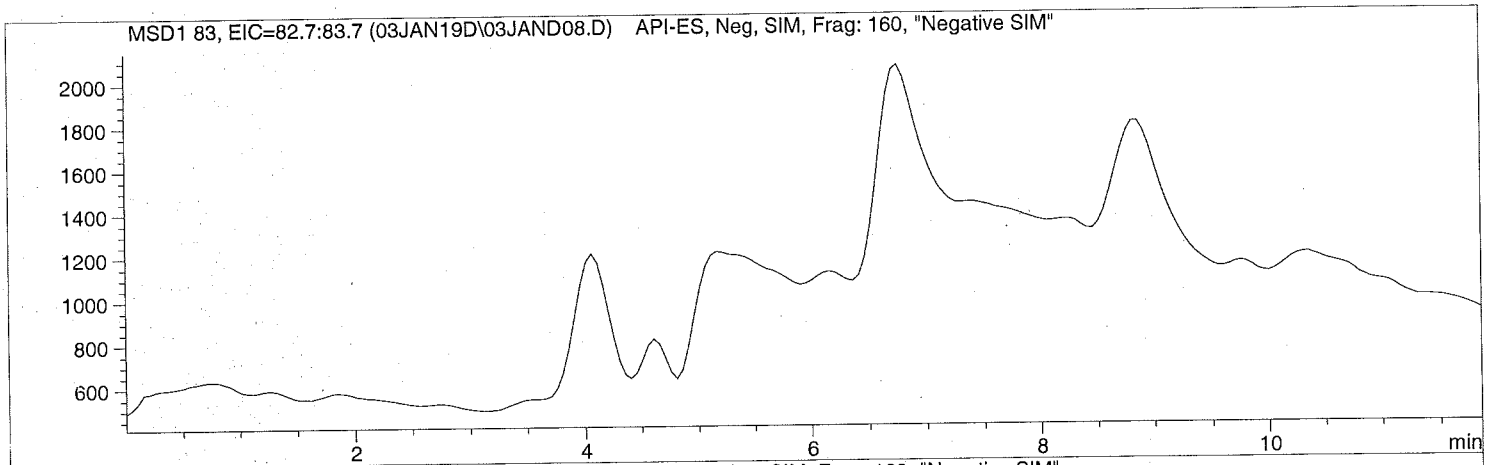
*** End of Report ***

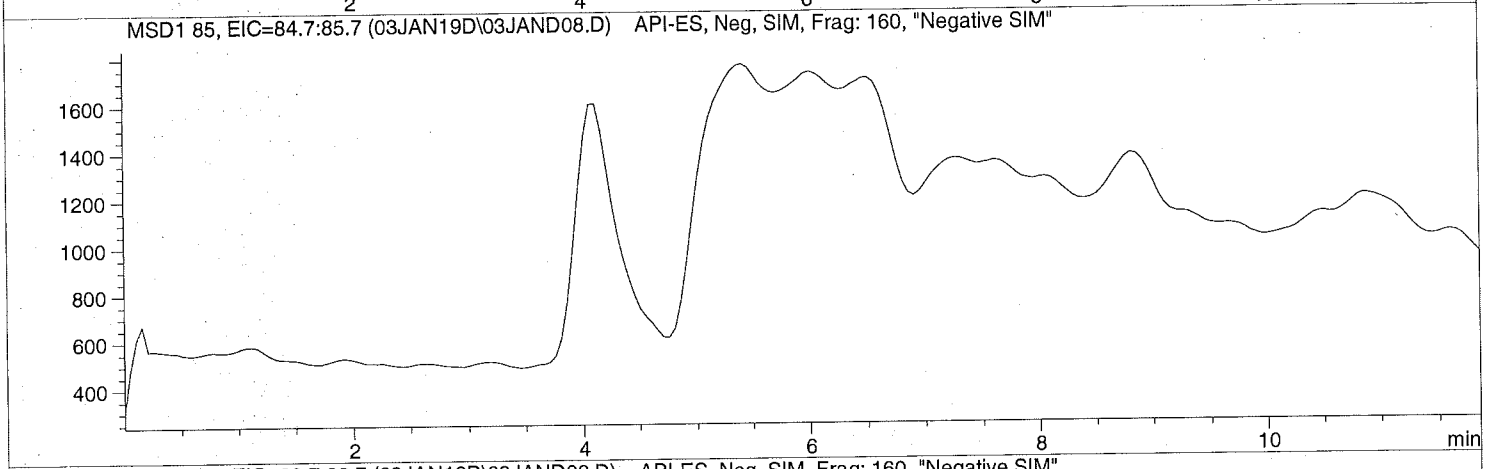
Data file: C:\HPCHEM\1\DATA\03JAN19D\03JAND08.D Sample Name: 1836126003

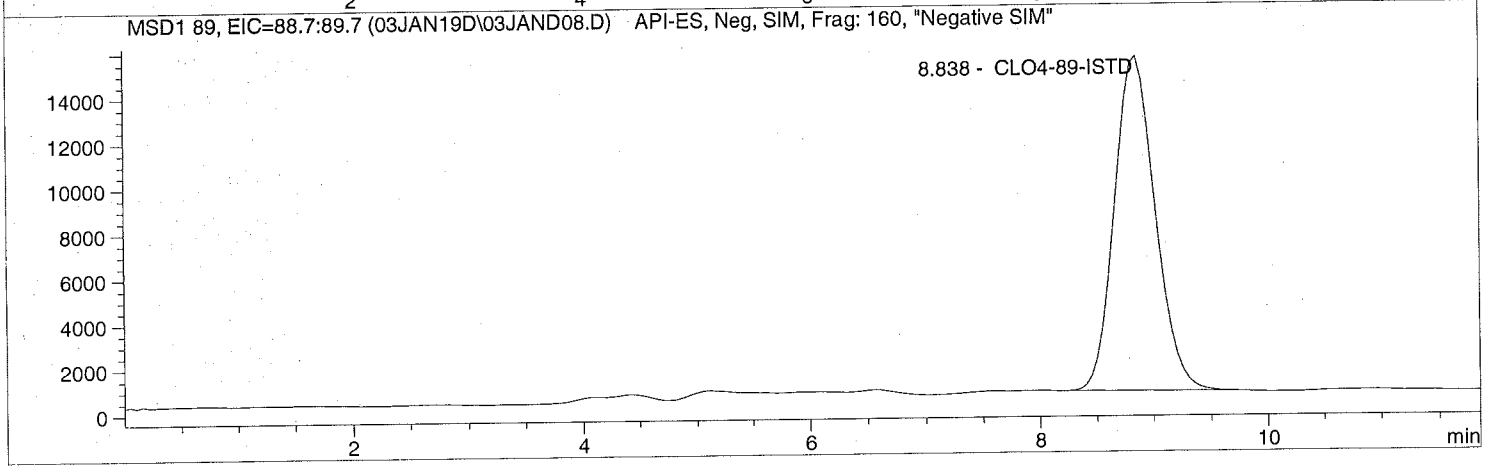
Injection Date:	1/03/2019 10:46:13	Seq Line:	8
Sample Name:	1836126003	Location:	Vial 78
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis







Data file: C:\HPCHEM\1\DATA\03JAN19D\03JAND08.D Sample Name: 1836126003

Injection Date:	1/03/2019 10:46:13	Seq Line:	8
Sample Name:	1836126003	Location:	Vial 78
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method:	CLO4-AQN.M
Analysis Method:	C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed:	12/3/2018 12:46:06

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 3. Dec. 2018, 00:29:27 pm
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	0.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
0.000		0.0	0.0000	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
0.000		0.0	0.0000	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.838	PBA	367270.5	5.0000	CLO4-89-ISTD

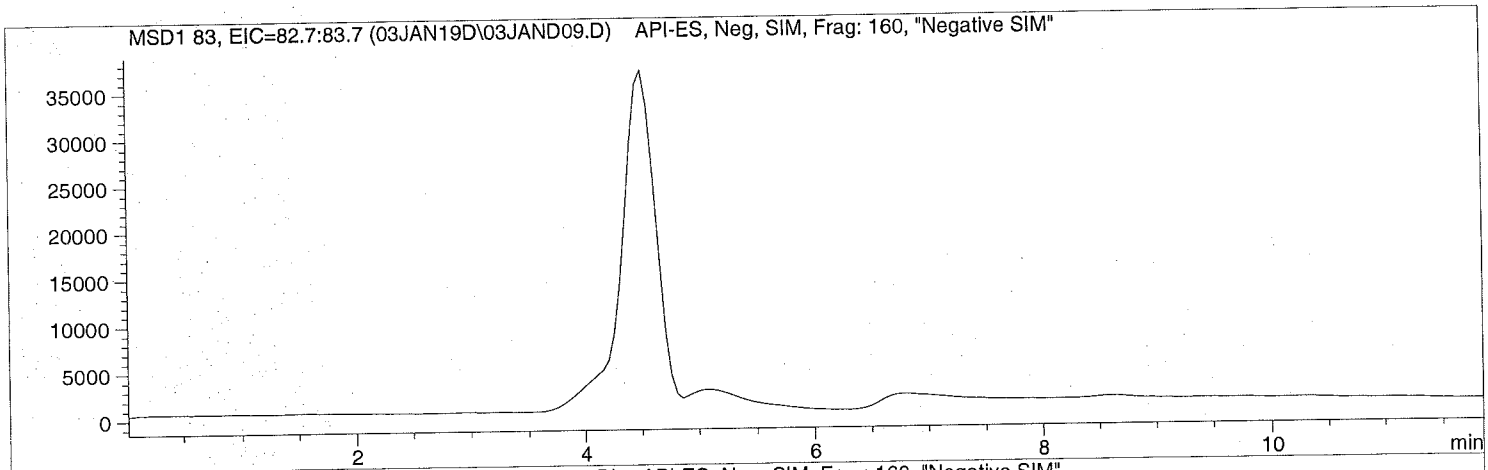
*** End of Report ***

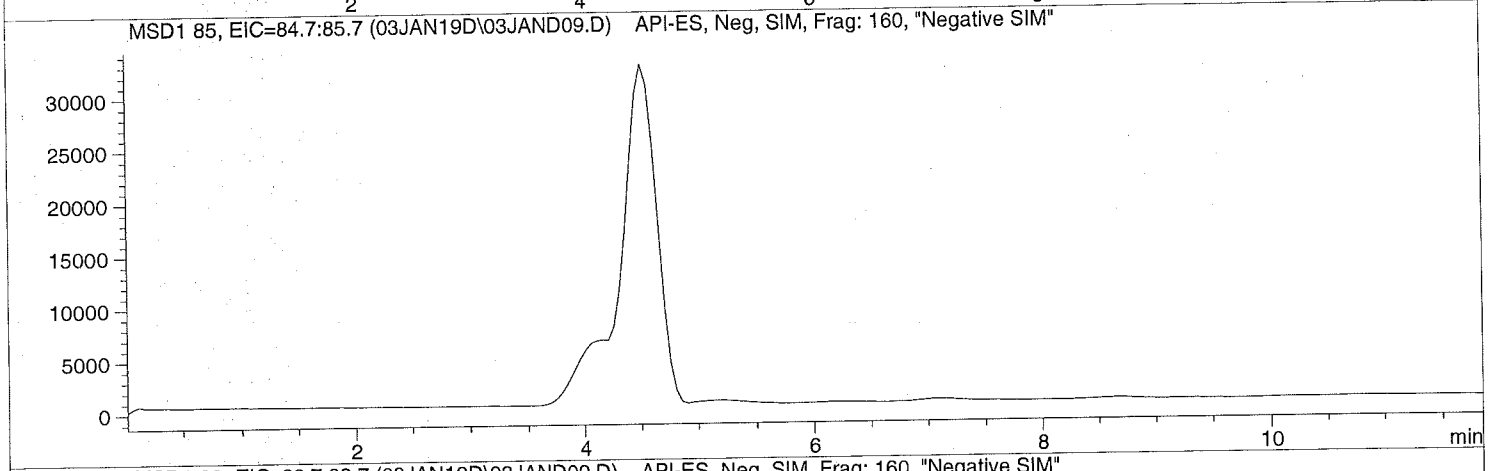
Data file: C:\HPCHEM\1\DATA\03JAN19D\03JAND09.D Sample Name: 1836126004

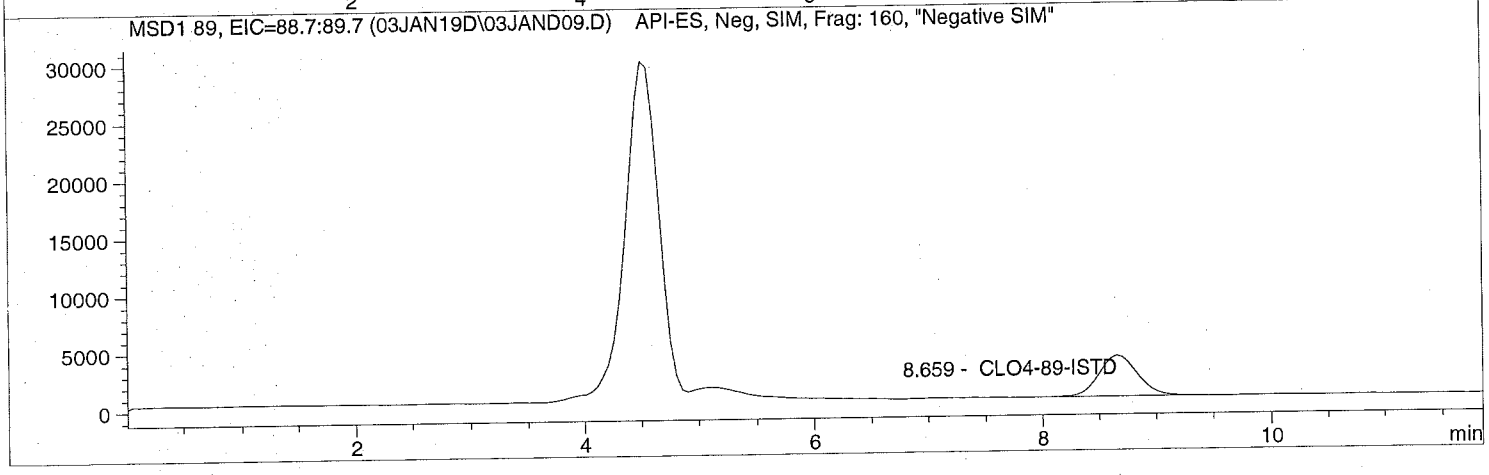
Injection Date:	1/03/2019 10:59:58	Seq Line:	9
Sample Name:	1836126004	Location:	Vial 79
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis







Data file: C:\HPCHEM\1\DATA\03JAN19D\03JAND09.D Sample Name: 1836126004

Injection Date:	1/03/2019 10:59:58	Seq Line:	9
Sample Name:	1836126004	Location:	Vial 79
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 3. Dec. 2018, 00:29:27 pm
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	0.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
0.000		0.0	0.0000	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
0.000		0.0	0.0000	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.659	BBA	83354.5	5.0000	CLO4-89-ISTD

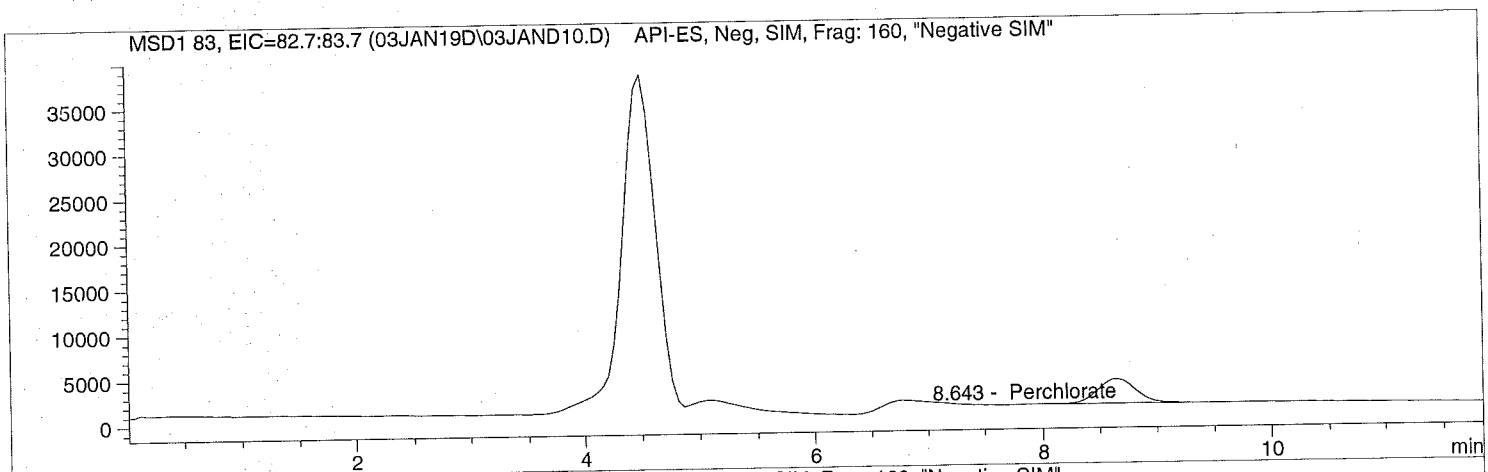
*** End of Report ***

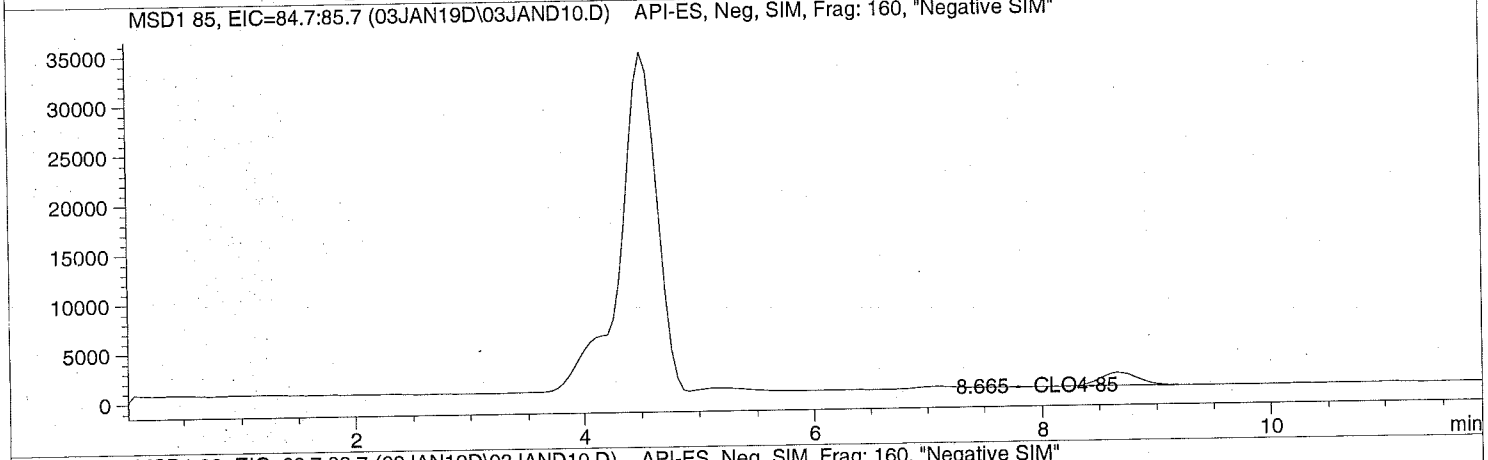
Data file: C:\HPCHEM\1\DATA\03JAN19D\03JAND10.D Sample Name: 1836126005 MS

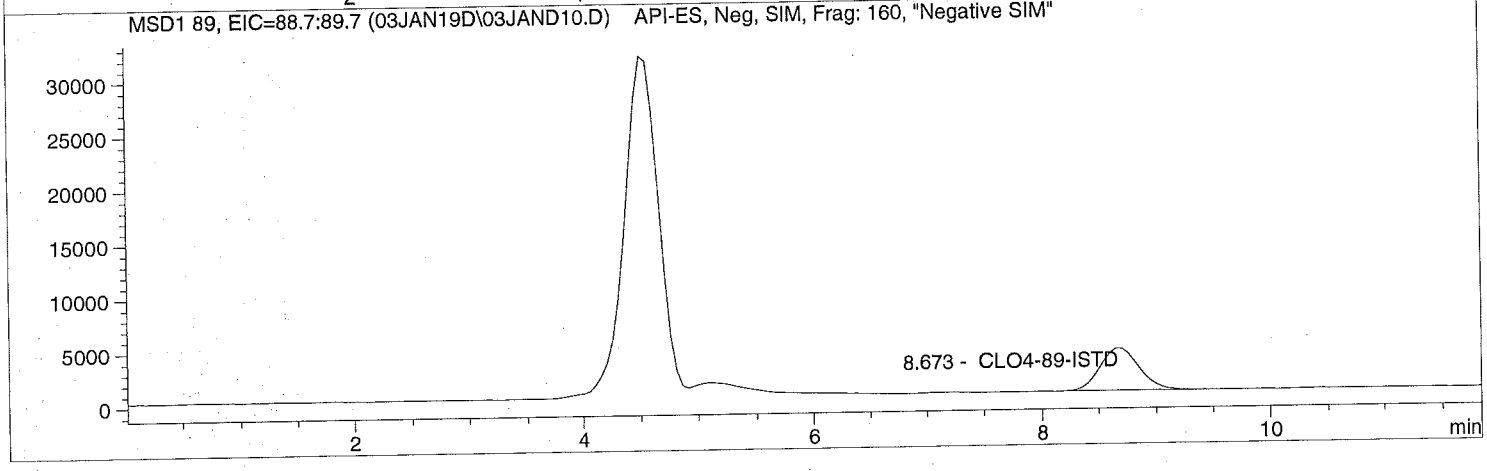
Injection Date:	1/03/2019 11:13:49	Seq Line:	10
Sample Name:	1836126005 MS	Location:	Vial 80
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis







Data file: C:\HPCHEM\1\DATA\03JAN19D\03JAND10.D Sample Name: 1836126005 MS

Injection Date:	1/03/2019 11:13:49	Seq Line:	10
Sample Name:	1836126005 MS	Location:	Vial 80
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 3. Dec. 2018, 00:29:27 pm
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	0.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.643	BBA	62409.6	2.2997	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.665	PBA	30717.5	3.5539	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.673	PBA	91929.4	5.0000	CLO4-89-ISTD

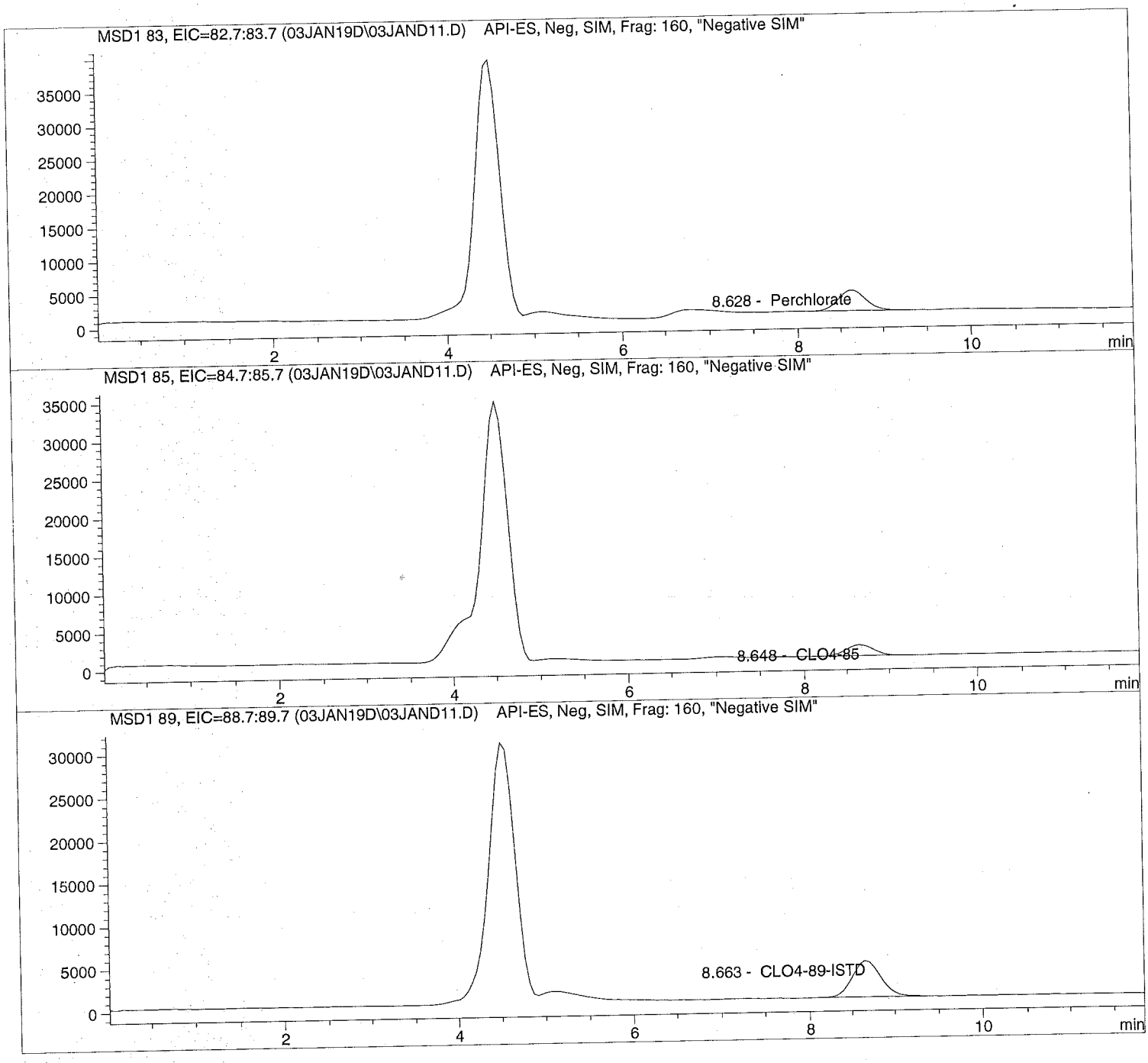
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\03JAN19D\03JAND11.D Sample Name: 1836126006 MSD

Injection Date:	1/03/2019 11:27:36	Seq Line:	11
Sample Name:	1836126006 MSD	Location:	Vial 81
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\03JAN19D\03JAND11.D Sample Name: 1836126006 MSD

Injection Date:	1/03/2019 11:27:36	Seq Line:	11
Sample Name:	1836126006 MSD	Location:	Vial 81
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 3. Dec. 2018, 00:29:27 pm
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	0.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.628	BBA	68776.7	2.3618	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.648	PBA	32152.3	3.4787	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.663	BBA	98375.6	5.0000	CLO4-89-ISTD

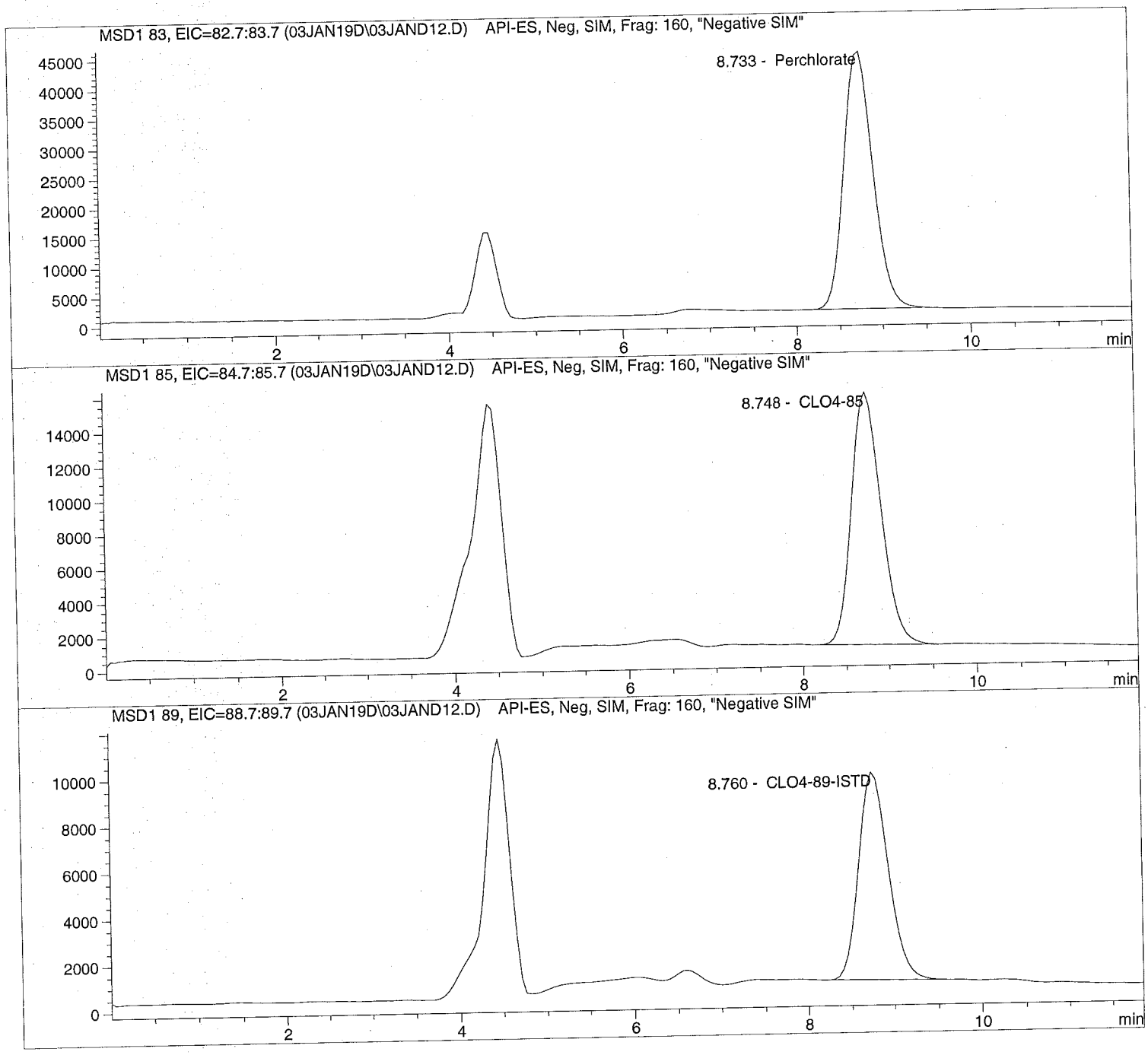
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\03JAN19D\03JAND12.D Sample Name: 1836126007

Injection Date:	1/03/2019 11:41:22	Seq Line:	12
Sample Name:	1836126007	Location:	Vial 82
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\03JAN19D\03JAND12.D Sample Name: 1836126007

Injection Date:	1/03/2019 11:41:22	Seq Line:	12
Sample Name:	1836126007	Location:	Vial 82
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method:	CLO4-AQN.M
Analysis Method:	C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed:	12/3/2018 12:46:06

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 3. Dec. 2018, 00:29:27 pm
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	0.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.733	PBA	1031805.6	14.5502	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.748	PBA	359366.8	16.7373	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.760	PBA	216851.4	5.0000	CLO4-89-ISTD

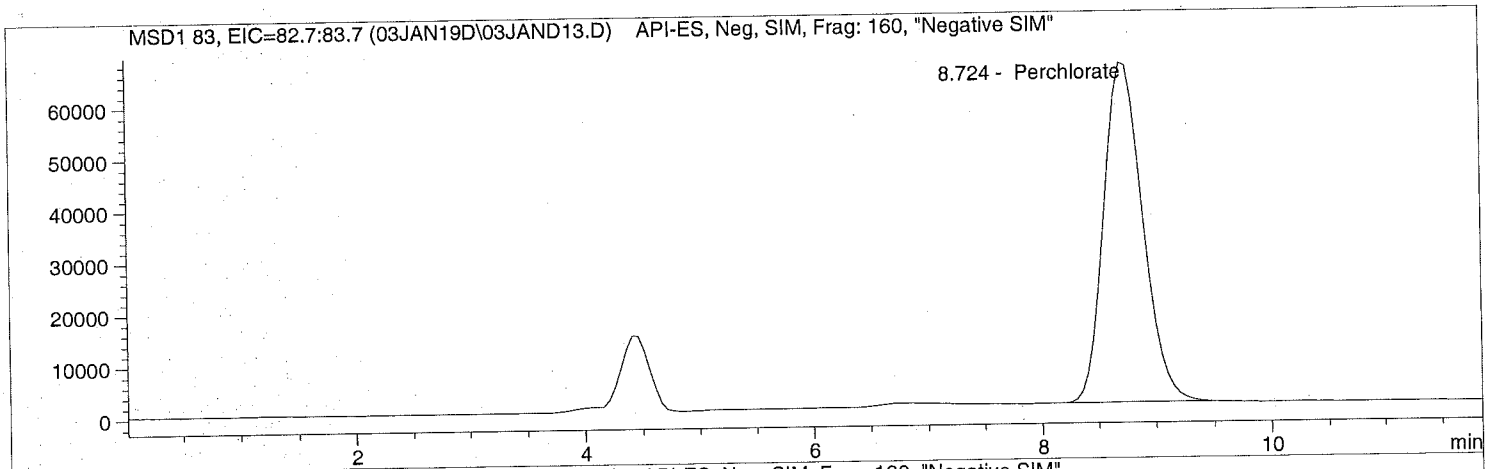
*** End of Report ***

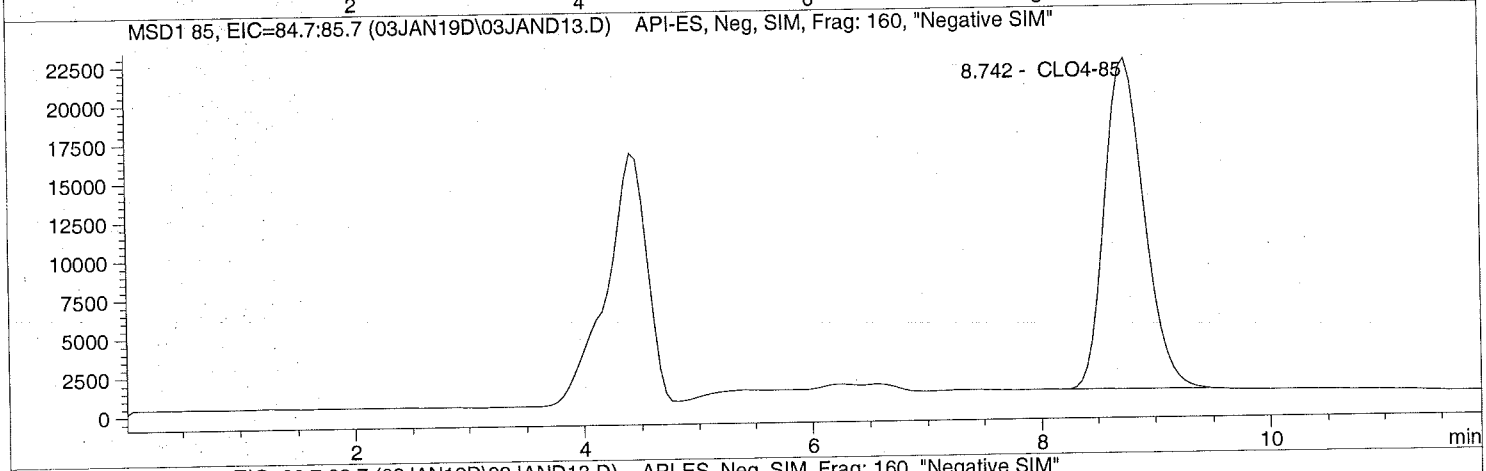
Data file: C:\HPCHEM\1\DATA\03JAN19D\03JAND13.D Sample Name: 1836126008 MS

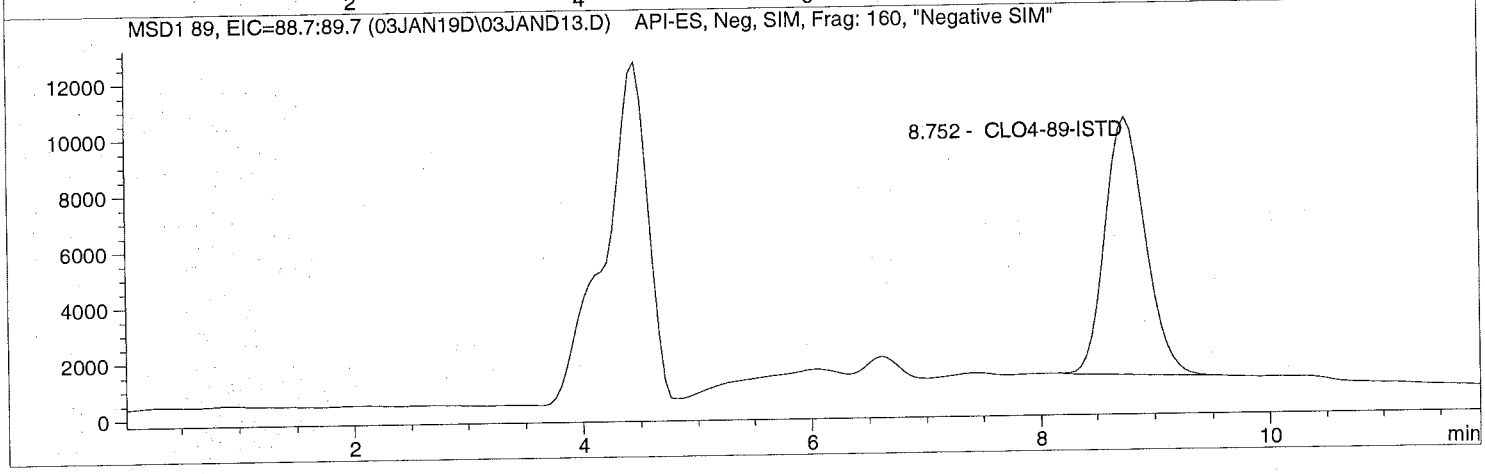
Injection Date:	1/03/2019 11:56:46	Seq Line:	13
Sample Name:	1836126008 MS	Location:	Vial 83
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis







Data file: C:\HPCHEM\1\DATA\03JAN19D\03JAND13.D Sample Name: 1836126008 MS

Injection Date:	1/03/2019 11:56:46	Seq Line:	13
Sample Name:	1836126008 MS	Location:	Vial 83
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 3. Dec. 2018, 00:29:27 pm
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	0.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.724	PBA	1548537.6	20.9330	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.742	PBA	509940.7	22.7603	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.752	BBA	222723.6	5.0000	CLO4-89-ISTD

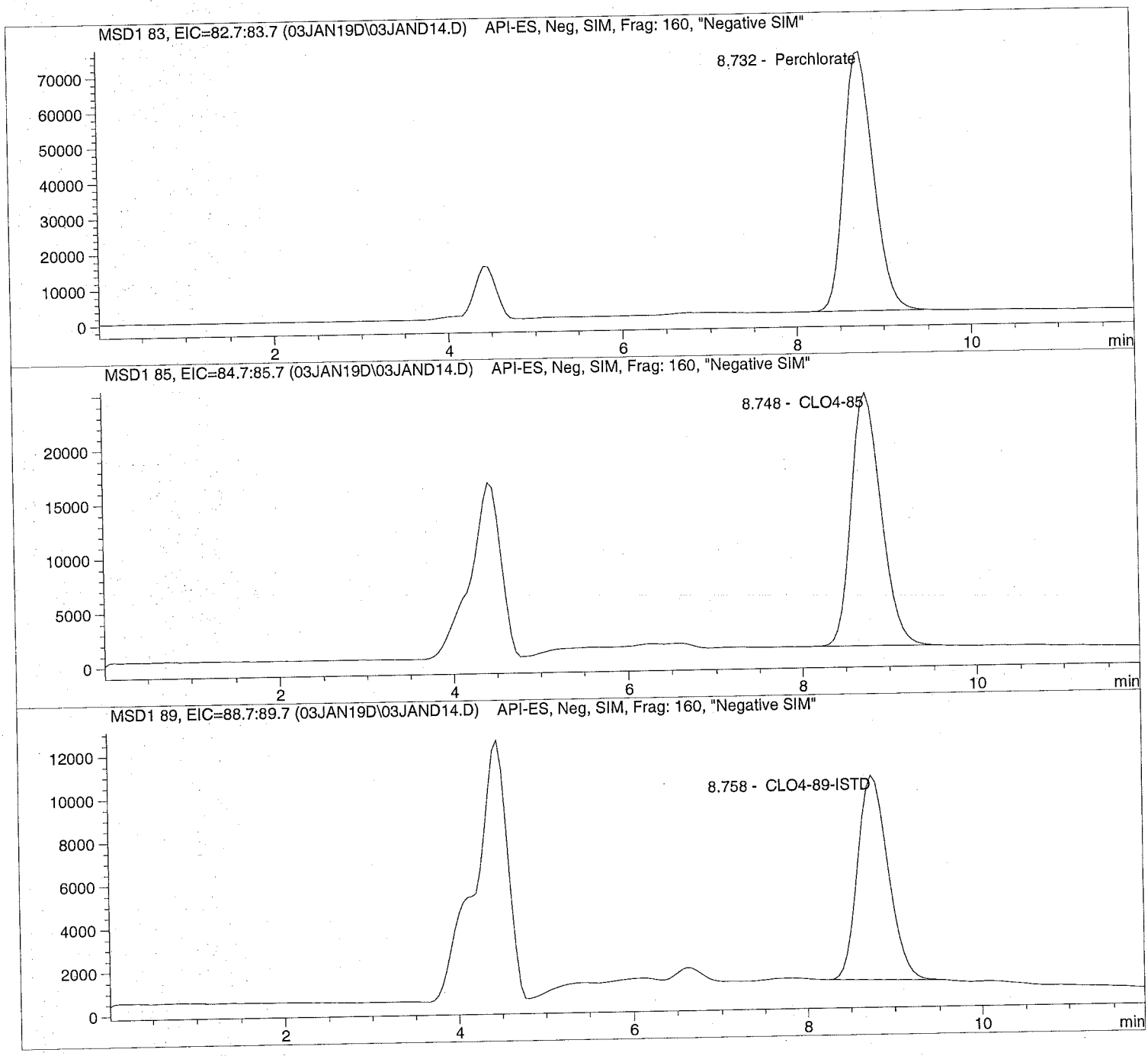
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\03JAN19D\03JAND14.D Sample Name: 1836126009 MSD

Injection Date:	1/03/2019 12:10:35	Seq Line:	14
Sample Name:	1836126009 MSD	Location:	Vial 84
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\03JAN19D\03JAND14.D Sample Name: 1836126009 MSD

Injection Date:	1/03/2019 12:10:35	Seq Line:	14
Sample Name:	1836126009 MSD	Location:	Vial 84
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 3. Dec. 2018, 00:29:27 pm
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	0.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.732	PBA	1727291.4	22.6510	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.748	BBA	556185.6	24.0904	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.758	PBA	228734.4	5.0000	CLO4-89-ISTD

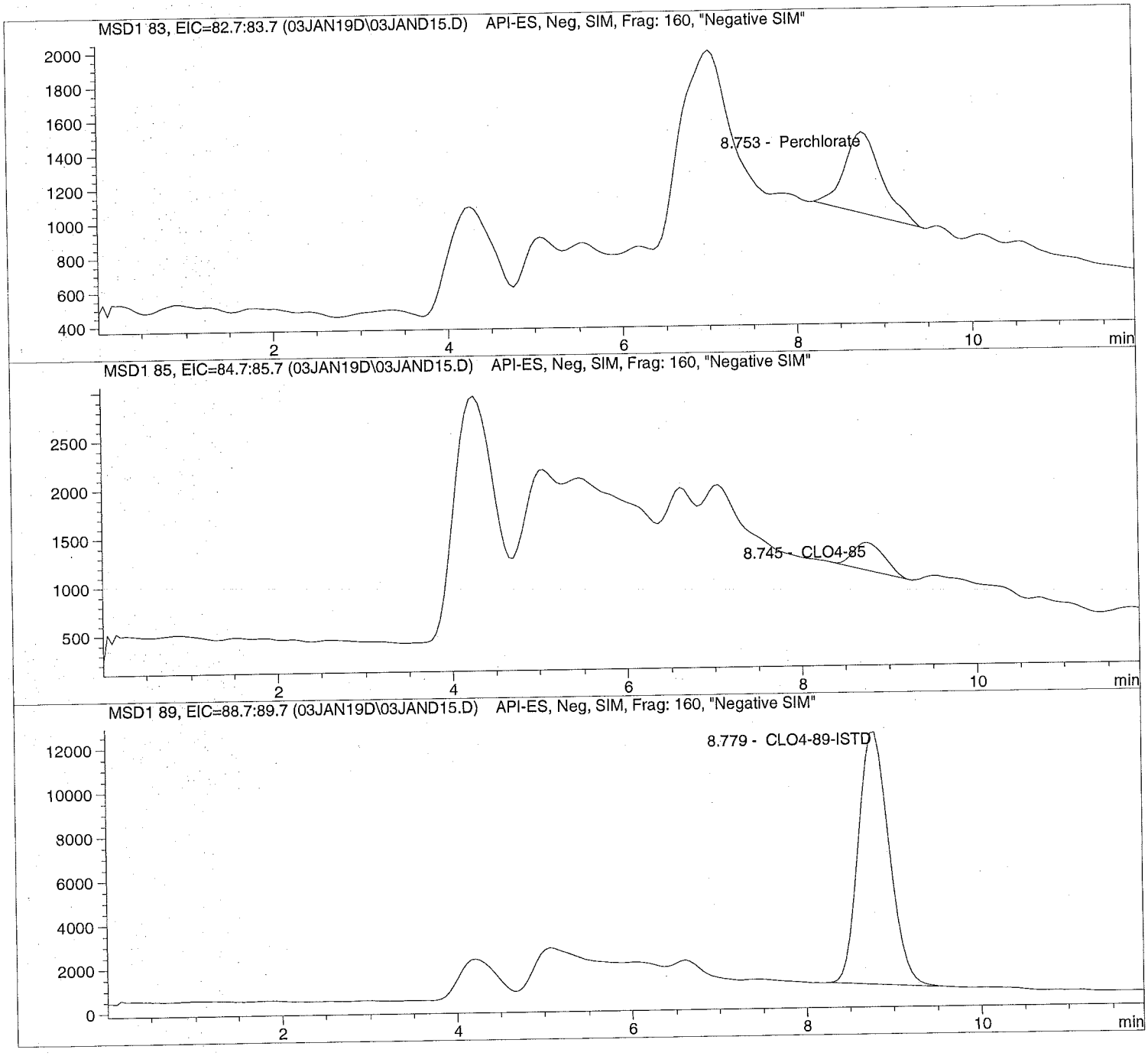
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\03JAN19D\03JAND15.D Sample Name: 1836127001

Injection Date:	1/03/2019 12:24:20	Seq Line:	15
Sample Name:	1836127001	Location:	Vial 85
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\03JAN19D\03JAND15.D Sample Name: 1836127001

Injection Date:	1/03/2019 12:24:20	Seq Line:	15
Sample Name:	1836127001	Location:	Vial 85
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis

Sample Information

Sorted By: Signal
Calib. Data Modified: Mon, 3. Dec. 2018, 00:29:27 pm
Multiplier: 1.000000
Dilution: 1.000000
Sample Amount: 0.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.753	PBA	13932.6	0.3628	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.745	PBA	7053.1	0.3500	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.779	BBA	279027.8	5.0000	CLO4-89-ISTD

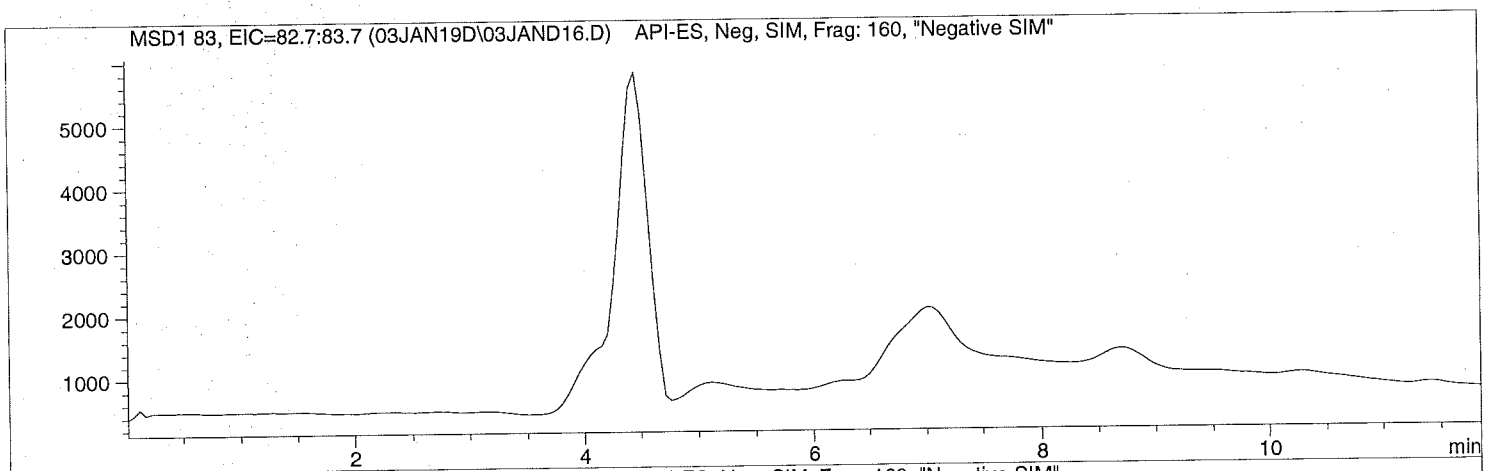
*** End of Report ***

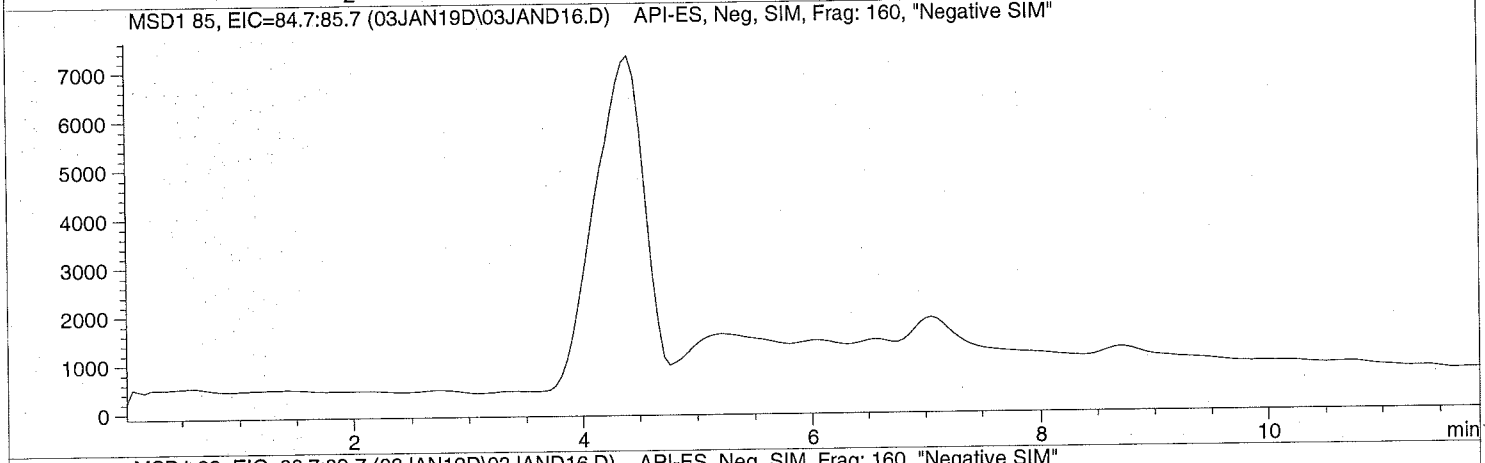
Data file: C:\HPCHEM\1\DATA\03JAN19D\03JAND16.D Sample Name: 1836127002

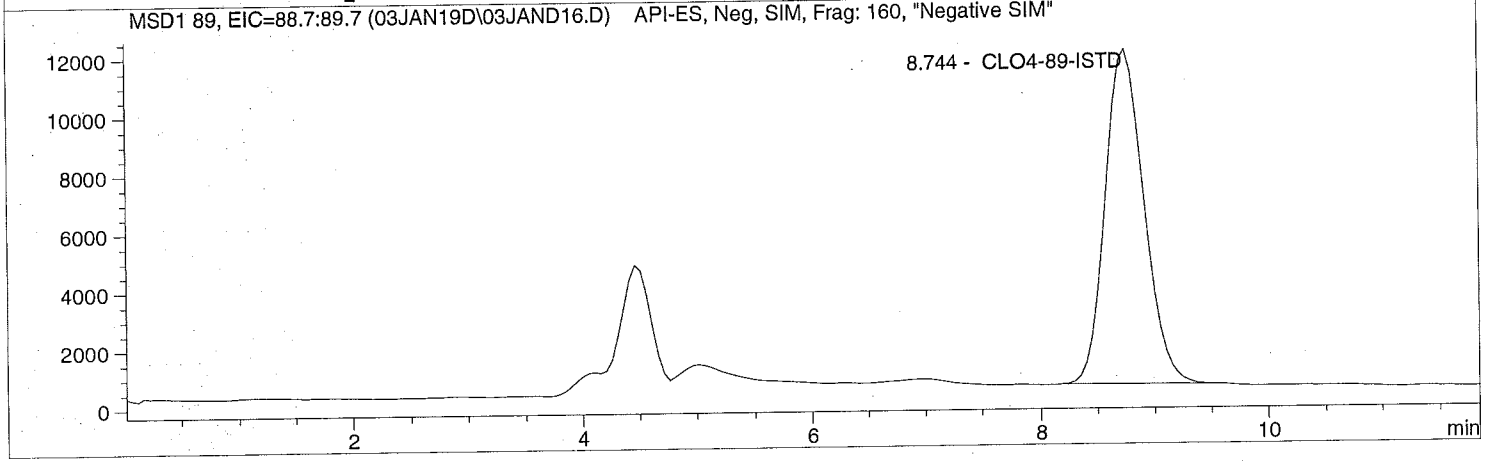
Injection Date:	1/03/2019 12:38:07	Seq Line:	16
Sample Name:	1836127002	Location:	Vial 86
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis







Data file: C:\HPCHEM\1\DATA\03JAN19D\03JAND16.D Sample Name: 1836127002

Injection Date:	1/03/2019 12:38:07	Seq Line:	16
Sample Name:	1836127002	Location:	Vial 86
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 3. Dec. 2018, 00:29:27 pm
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	0.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
0.000		0.0	0.0000	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
0.000		0.0	0.0000	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.744	BBA	269536.7	5.0000	CLO4-89-ISTD

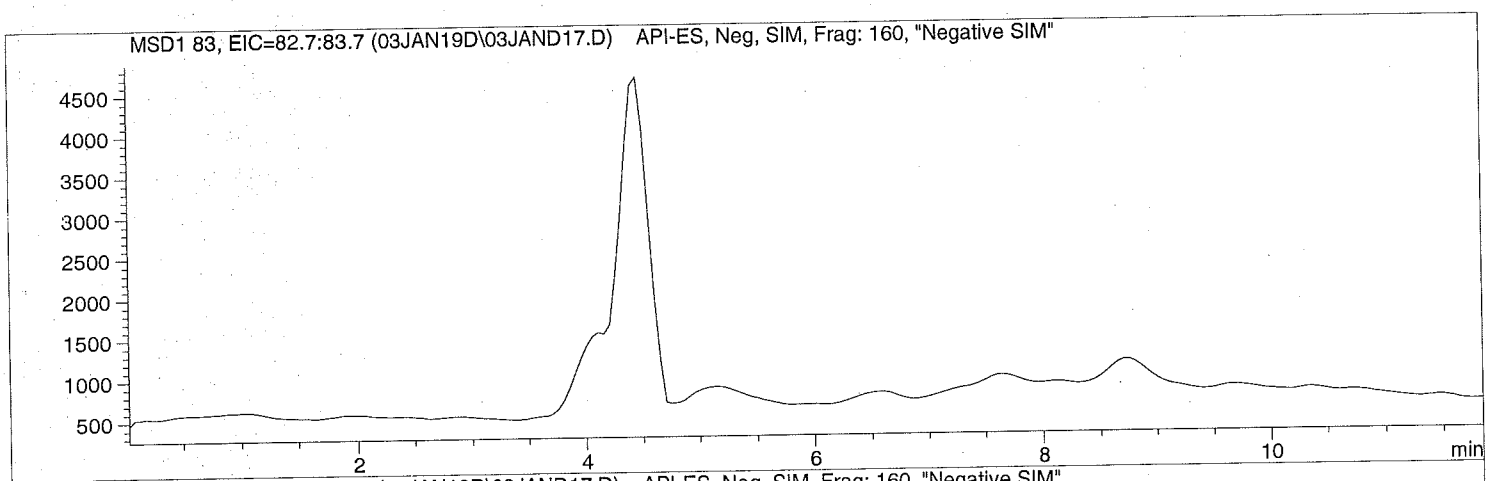
*** End of Report ***

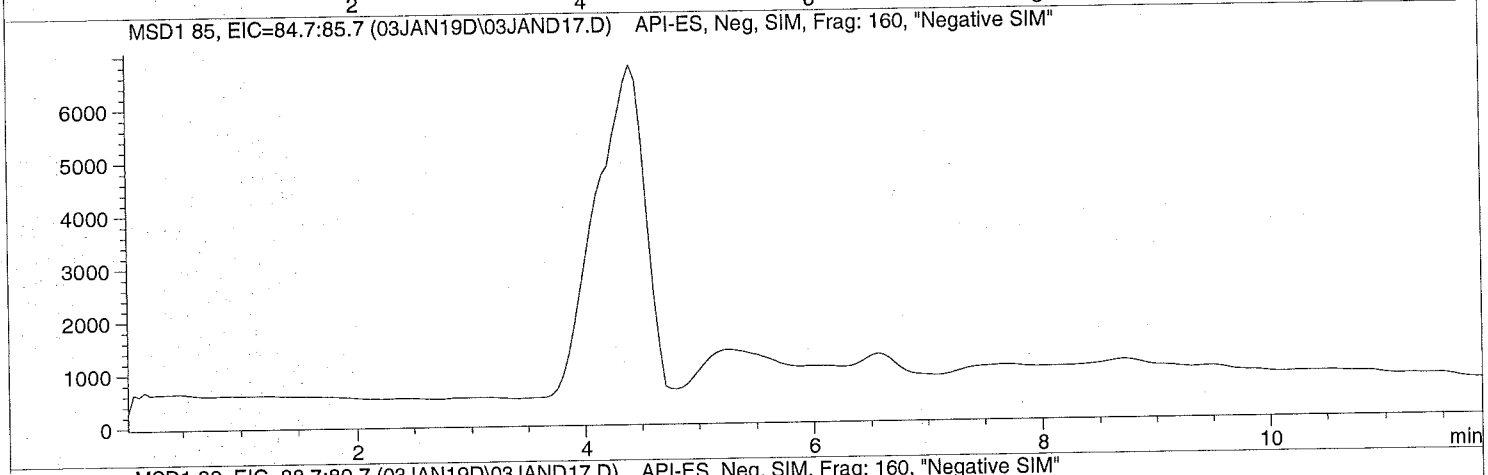
Data file: C:\HPCHEM\1\DATA\03JAN19D\03JAND17.D Sample Name: 1836127003

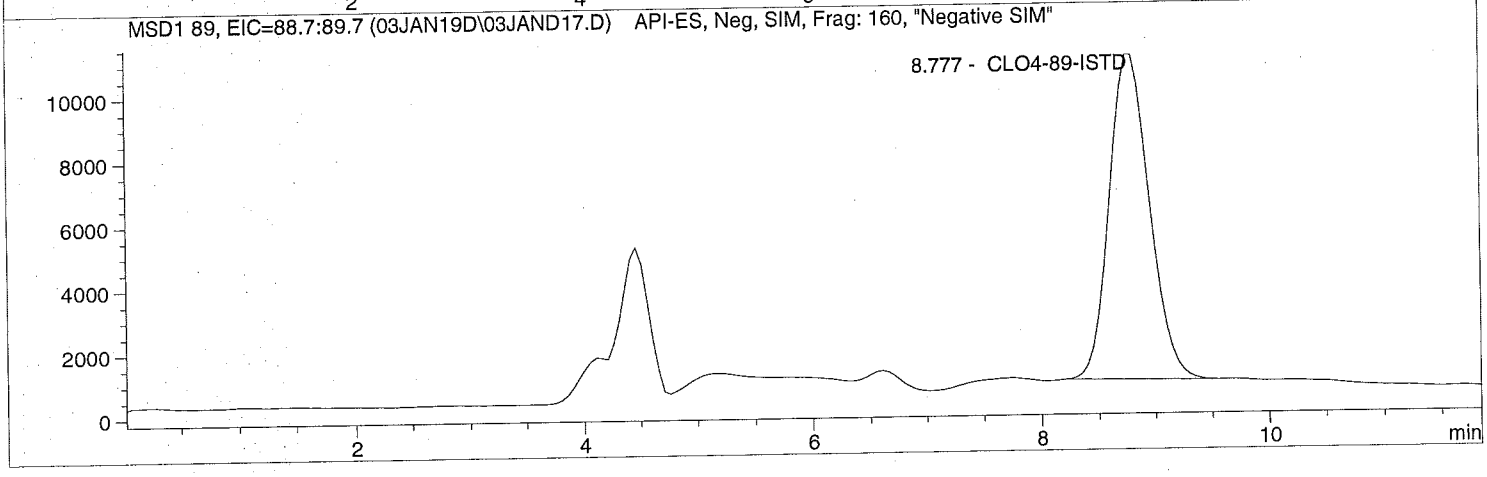
Injection Date:	1/03/2019 12:51:53	Seq Line:	17
Sample Name:	1836127003	Location:	Vial 87
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis







Data file: C:\HPCHEM\1\DATA\03JAN19D\03JAND17.D Sample Name: 1836127003

Injection Date:	1/03/2019 12:51:53	Seq Line:	17
Sample Name:	1836127003	Location:	Vial 87
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 3. Dec. 2018, 00:29:27 pm
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	0.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
0.000		0.0	0.0000	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
0.000		0.0	0.0000	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.777	PBA	248716.7	5.0000	CLO4-89-ISTD

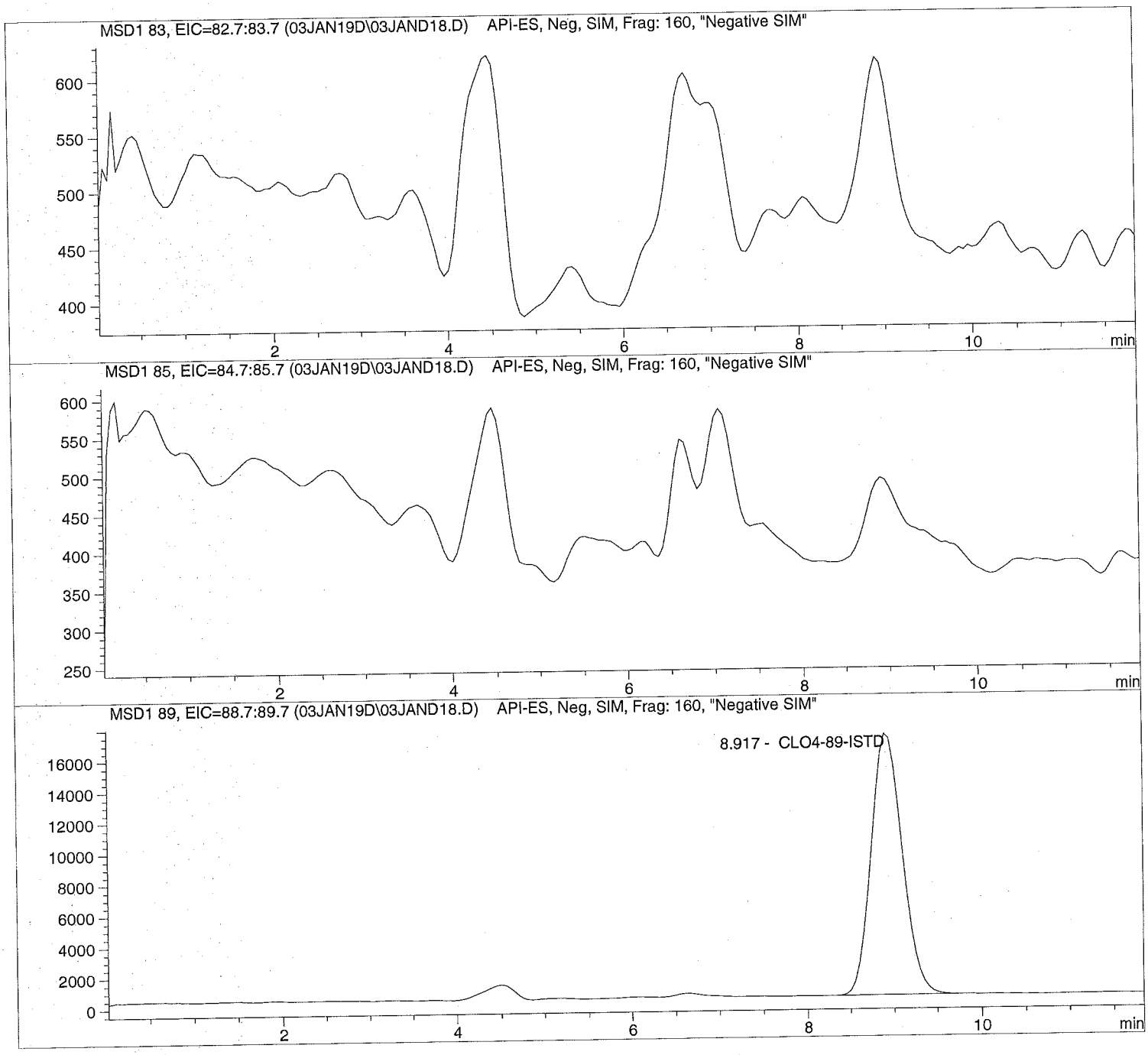
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\03JAN19D\03JAND18.D Sample Name: 1836126004 5X

Injection Date:	1/03/2019 13:05:45	Seq Line:	18
Sample Name:	1836126004 5X	Location:	Vial 61
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\03JAN19D\03JAND18.D Sample Name: 1836126004 5X

Injection Date:	1/03/2019 13:05:45	Seq Line:	18
Sample Name:	1836126004 5X	Location:	Vial 61
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method:	CLO4-AQN.M
Analysis Method:	C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed:	12/3/2018 12:46:06

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 3. Dec. 2018, 00:29:27 pm
Multiplier:	1.000000
Dilution:	5.000000
Sample Amount:	0.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
0.000		0.0	0.0000	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
0.000		0.0	0.0000	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.917	PBA	418582.5	25.0000	CLO4-89-ISTD

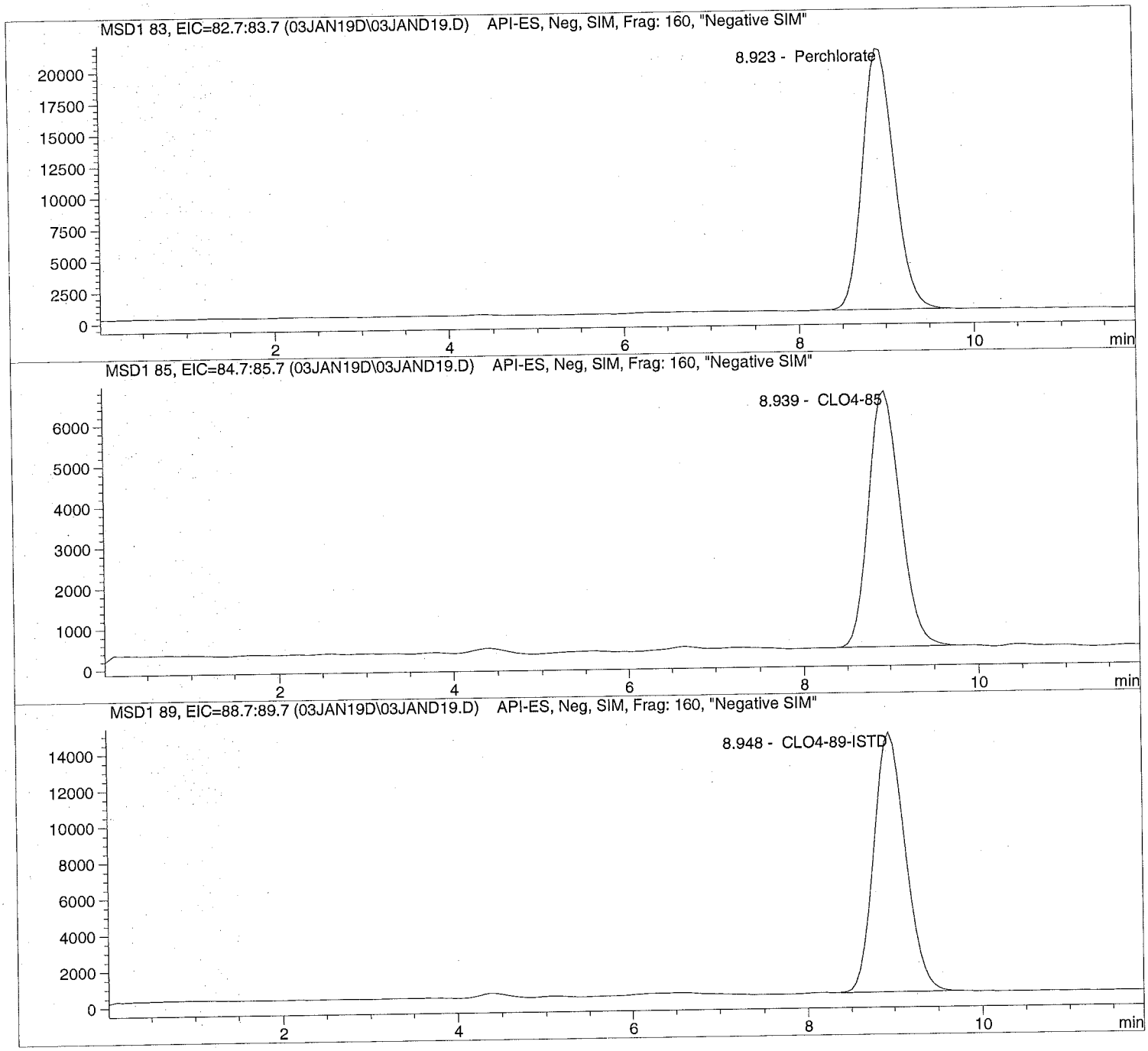
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\03JAN19D\03JAND19.D Sample Name: 1836126005 MS

Injection Date:	1/03/2019 13:19:34	Seq Line:	19
Sample Name:	1836126005 MS	Location:	Vial 62
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\03JAN19D\03JAND19.D Sample Name: 1836126005 MS

Injection Date:	1/03/2019 13:19:34	Seq Line:	19
Sample Name:	1836126005 MS	Location:	Vial 62
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 3. Dec. 2018, 00:29:27 pm
Multiplier:	1.000000
Dilution:	5.000000
Sample Amount:	0.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.923	BBA	530647.7	23.1981	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.939	BBA	161964.5	23.2480	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.948	BBA	367342.2	25.0000	CLO4-89-ISTD

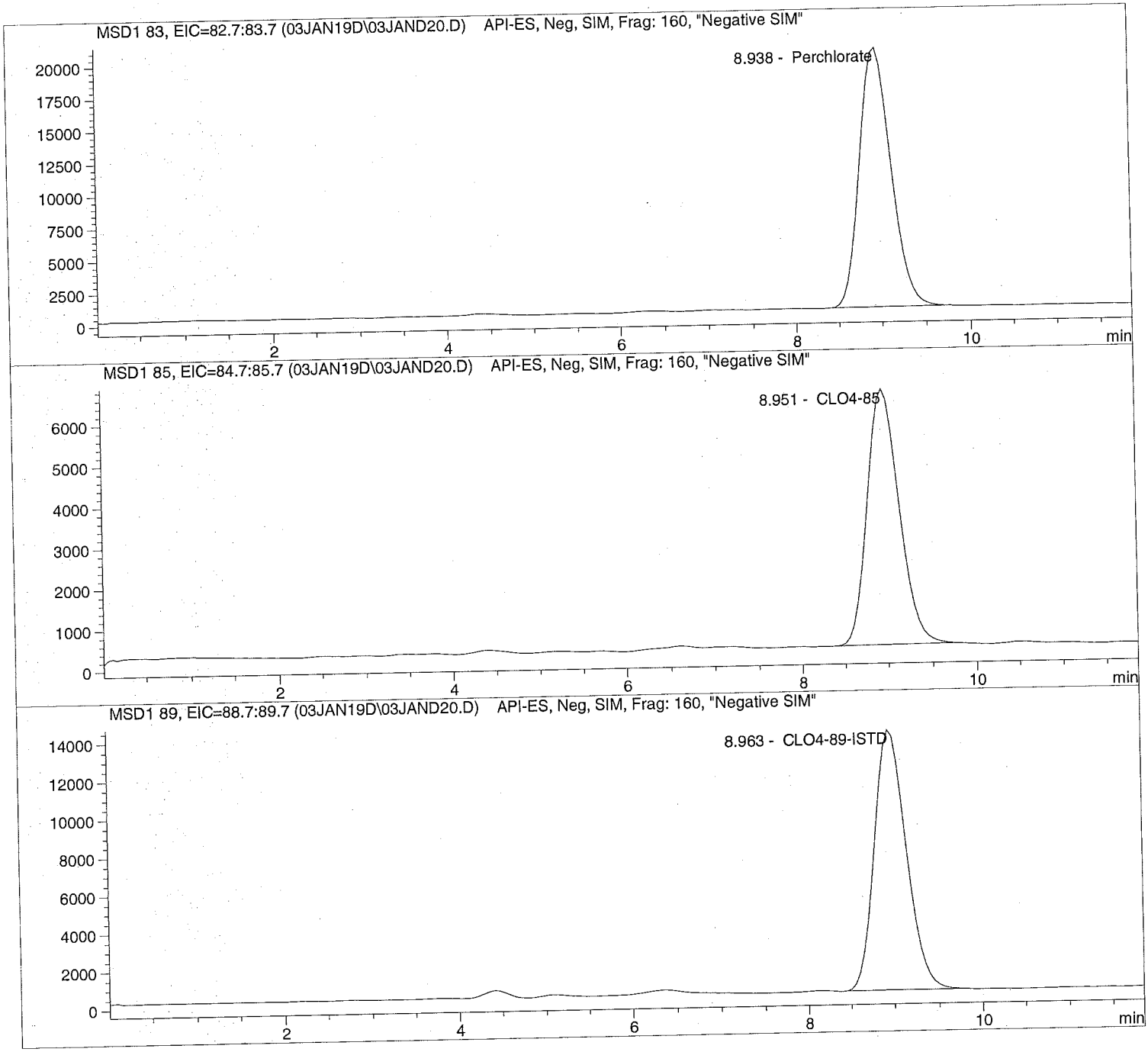
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\03JAN19D\03JAND20.D Sample Name: 1836126006 MSD

Injection Date:	1/03/2019 13:33:22	Seq Line:	20
Sample Name:	1836126006 MSD	Location:	Vial 63
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\03JAN19D\03JAND20.D Sample Name: 1836126006 MSD

Injection Date:	1/03/2019 13:33:22	Seq Line:	20
Sample Name:	1836126006 MSD	Location:	Vial 63
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 3. Dec. 2018, 00:29:27 pm
Multiplier:	1.000000
Dilution:	5.000000
Sample Amount:	0.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.938	PBA	506526.9	23.3743	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.951	PBA	159127.3	24.0942	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.963	PBA	347856.3	25.0000	CLO4-89-ISTD

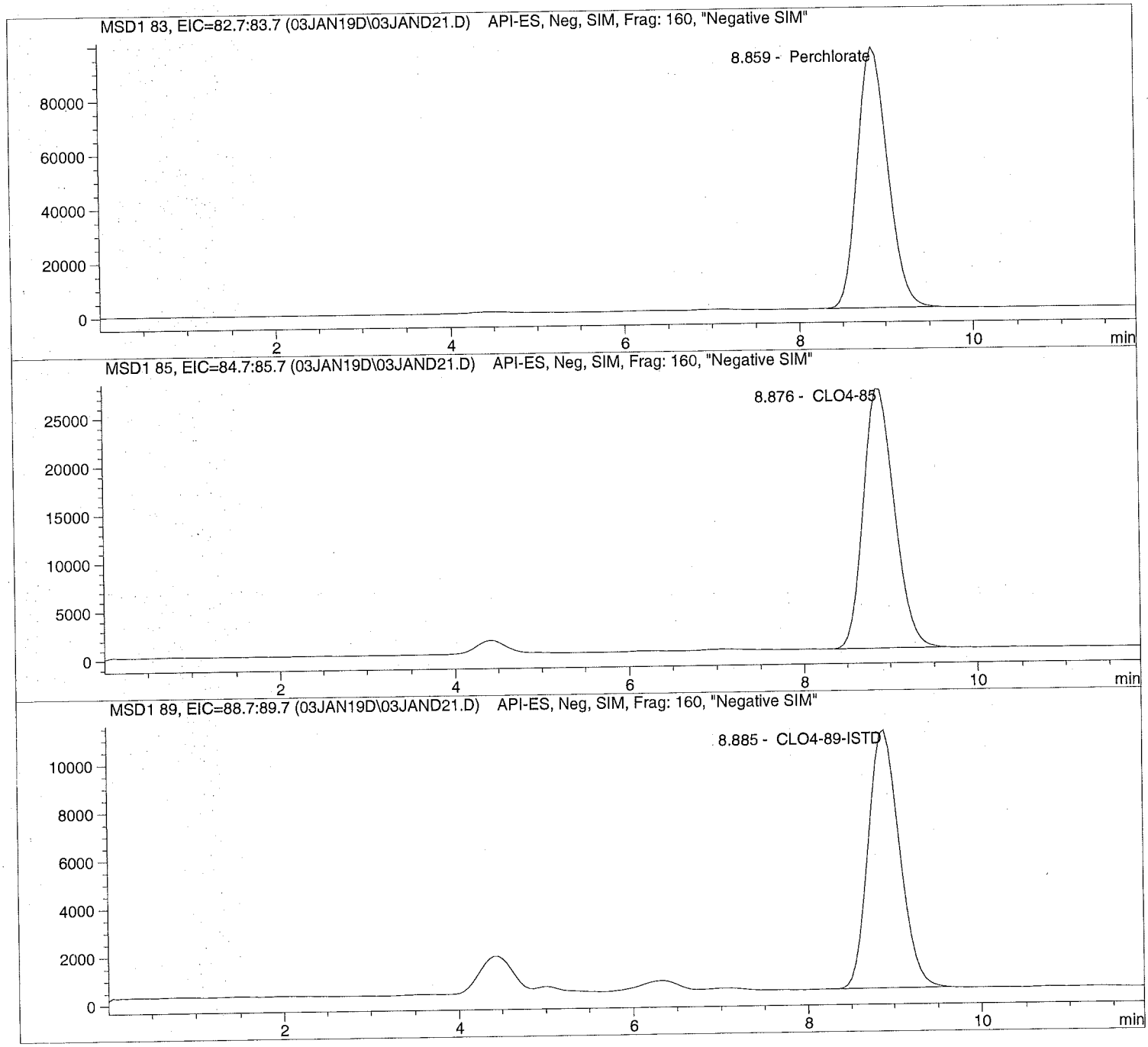
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\03JAN19D\03JAND21.D Sample Name: 635001 CCV@25

Injection Date:	1/03/2019 13:47:14	Seq Line:	21
Sample Name:	635001 CCV@25	Location:	Vial 71
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\03JAN19D\03JAND21.D Sample Name: 635001 CCV@25

Injection Date:	1/03/2019 13:47:14	Seq Line:	21
Sample Name:	635001 CCV@25	Location:	Vial 71
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 3. Dec. 2018, 00:29:27 pm
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	25.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.859	PBA	2357754.2	25.9413	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.876	PBA	674916.8	24.6603	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.885	BBA	270759.2	5.0000	CLO4-89-ISTD

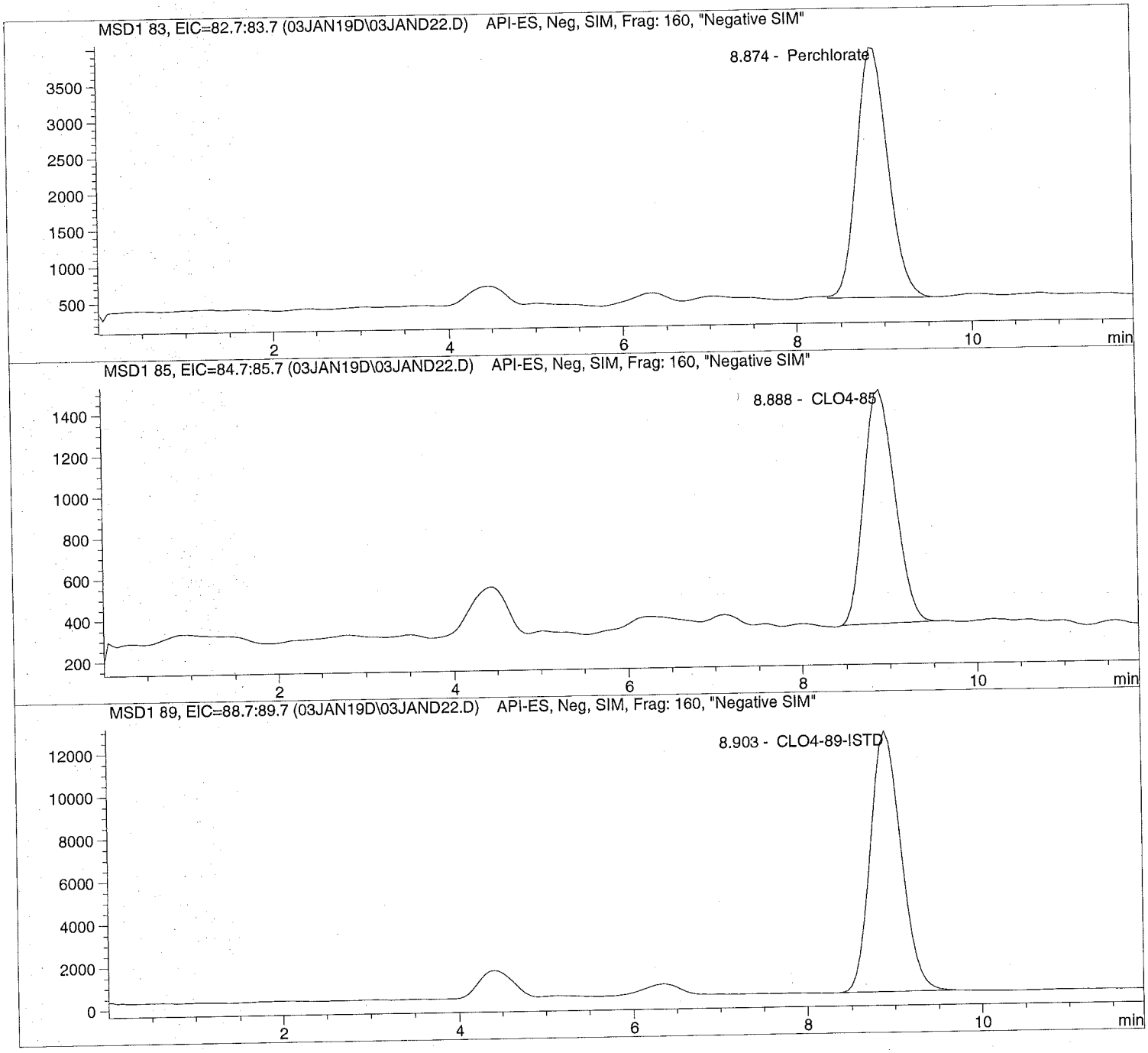
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\03JAN19D\03JAND22.D Sample Name: 635002 LODV@1.

Injection Date:	1/03/2019 14:01:02	Seq Line:	22
Sample Name:	635002 LODV@1.	Location:	Vial 72
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\03JAN19D\03JAND22.D Sample Name: 635002 LODV@1.

Injection Date:	1/03/2019 14:01:02	Seq Line:	22
Sample Name:	635002 LODV@1.	Location:	Vial 72
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 3. Dec. 2018, 00:29:27 pm
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	1.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.874	BBA	85622.1	1.0941	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.888	PBA	28244.0	1.0740	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.903	PBA	298451.9	5.0000	CLO4-89-ISTD

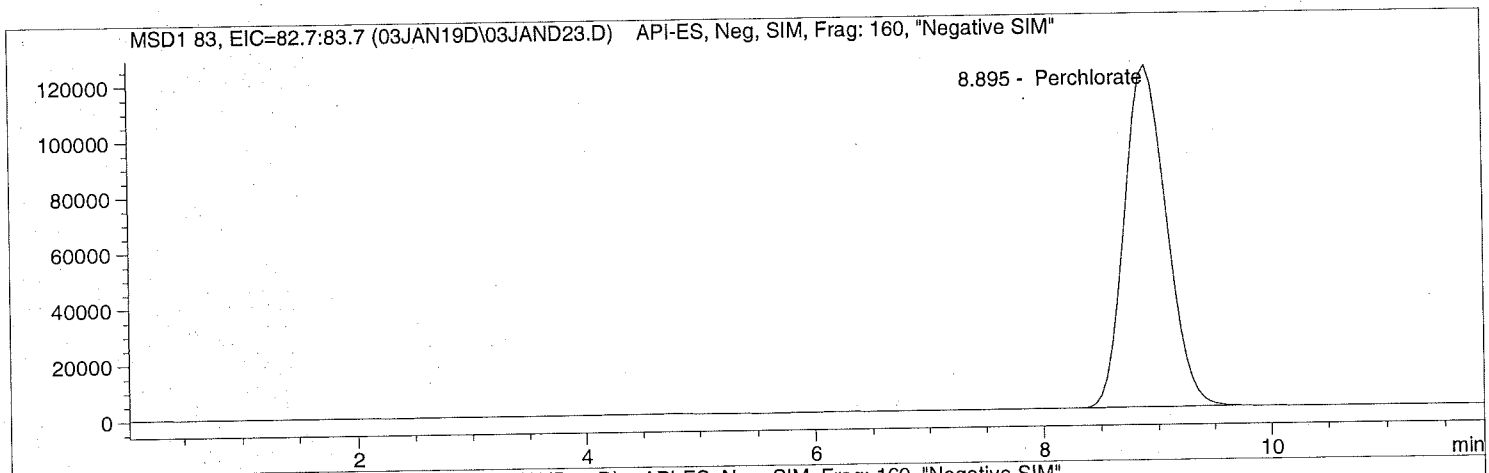
*** End of Report ***

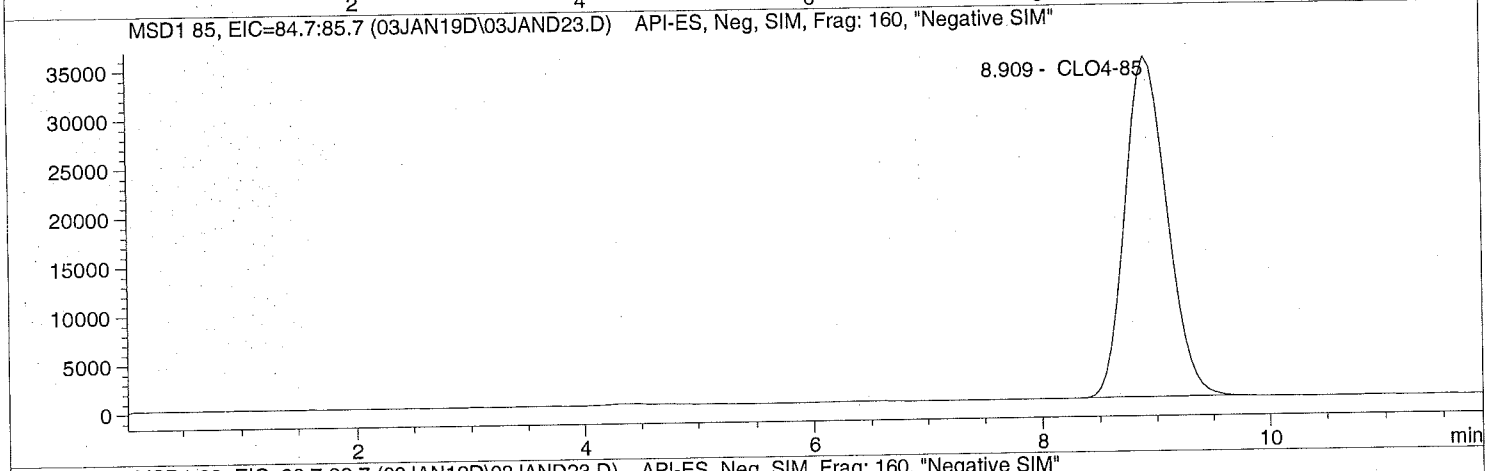
Data file: C:\HPCHEM\1\DATA\03JAN19D\03JAND23.D Sample Name: 1836507001 100

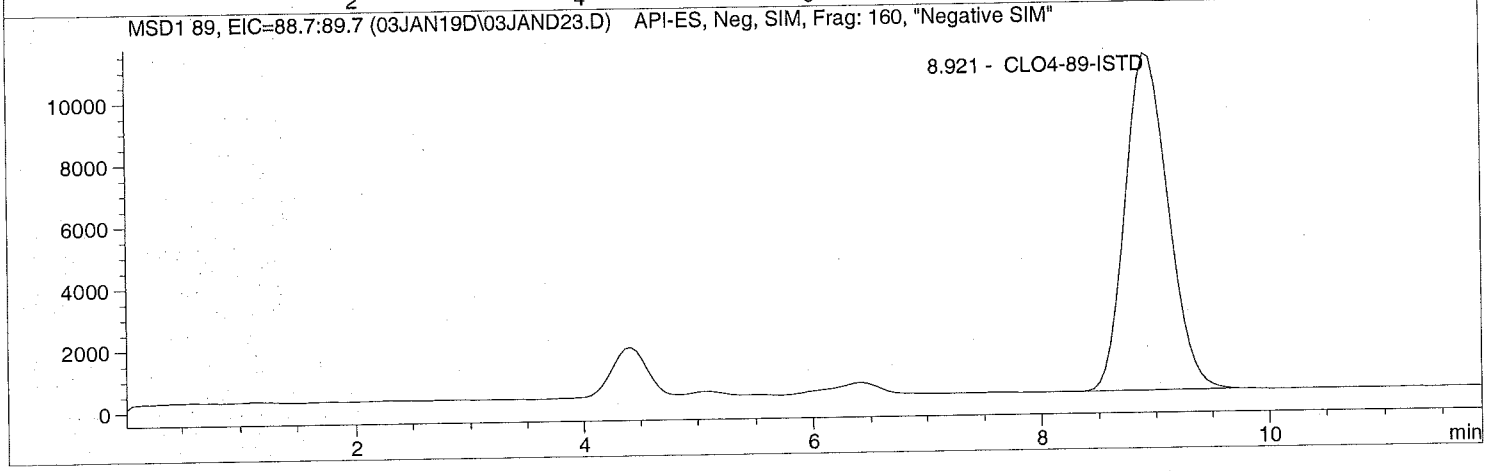
Injection Date:	1/03/2019 14:14:53	Seq Line:	23
Sample Name:	1836507001 100	Location:	Vial 88
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis







Data file: C:\HPCHEM\1\DATA\03JAN19D\03JAND23.D Sample Name: 1836507001 100

Injection Date:	1/03/2019 14:14:53	Seq Line:	23
Sample Name:	1836507001 100	Location:	Vial 88
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 3. Dec. 2018, 00:29:27 pm
Multiplier:	1.000000
Dilution:	100.000000
Sample Amount:	0.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.895	PBA	3121015.8	3200.5504	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.909	PBA	894321.7	3038.6954	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.921	PBA	287062.7	500.0000	CLO4-89-ISTD

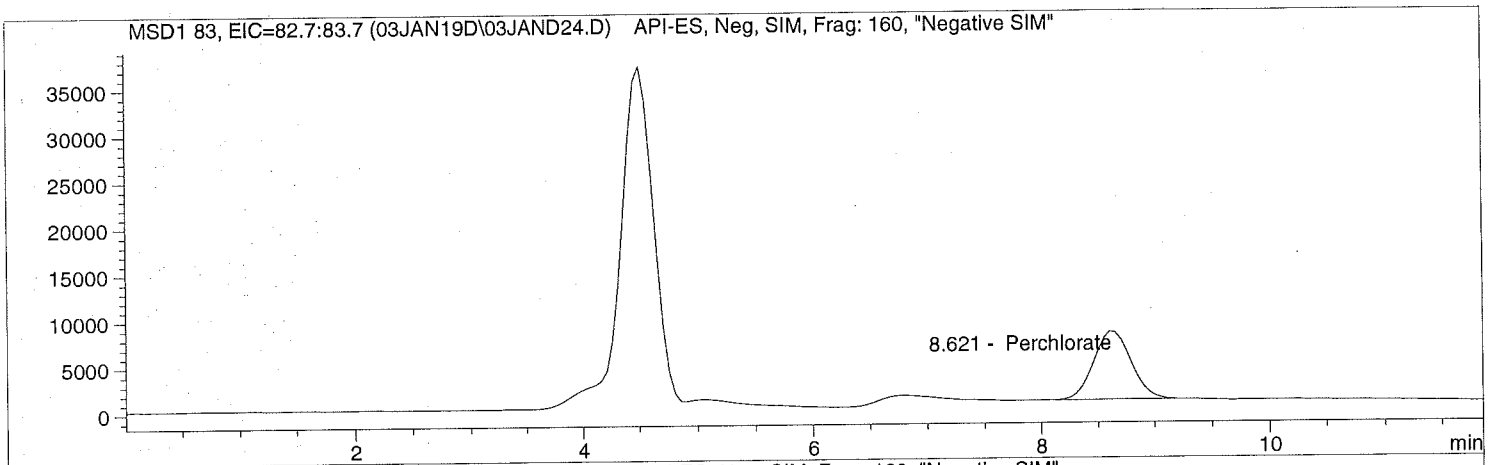
*** End of Report ***

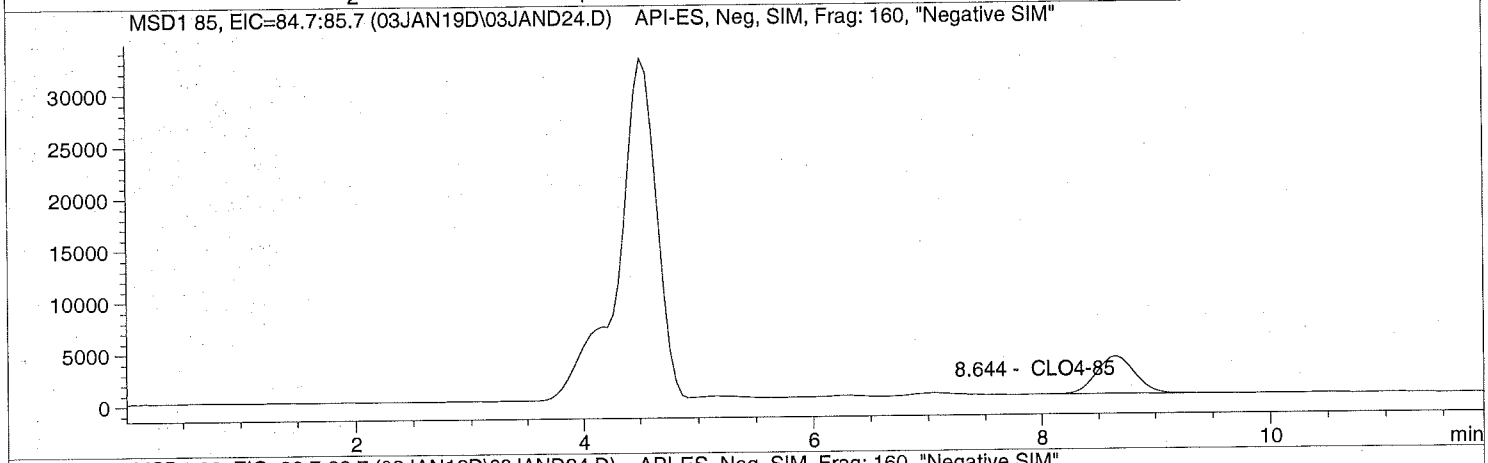
Data file: C:\HPCHEM\1\DATA\03JAN19D\03JAND24.D Sample Name: 1836507002

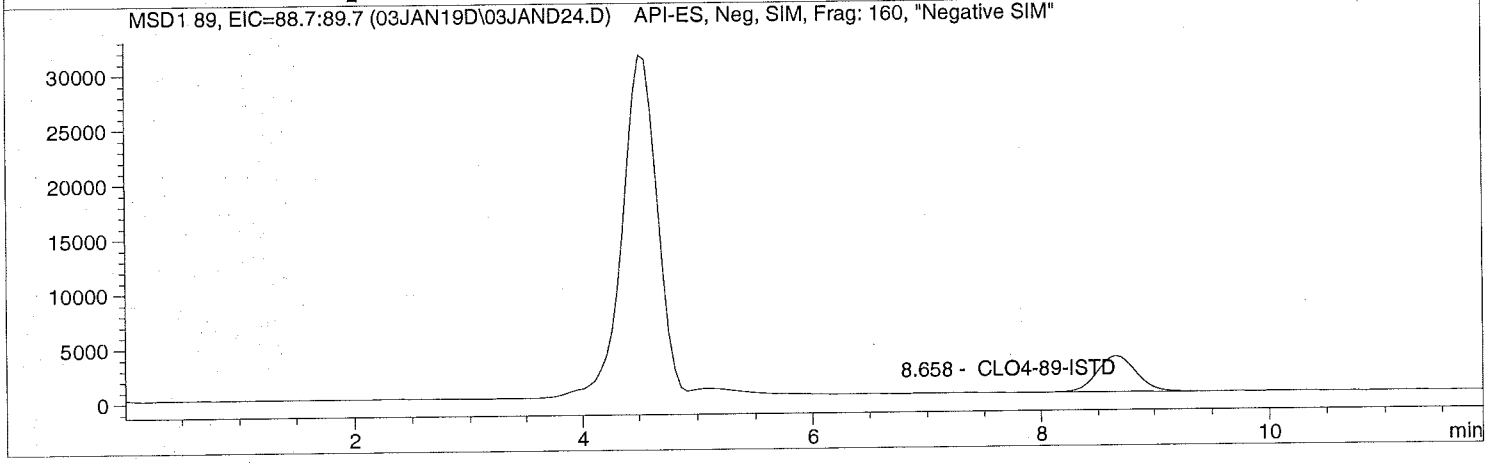
Injection Date:	1/03/2019 14:28:44	Seq Line:	24
Sample Name:	1836507002	Location:	Vial 89
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis







Data file: C:\HPCHEM\1\DATA\03JAN19D\03JAND24.D Sample Name: 1836507002

Injection Date:	1/03/2019 14:28:44	Seq Line:	24
Sample Name:	1836507002	Location:	Vial 89
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 3. Dec. 2018, 00:29:27 pm
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	0.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.621	PBA	169890.3	6.8629	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.644	BBA	84822.4	11.1617	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.658	PBA	78004.0	5.0000	CLO4-89-ISTD

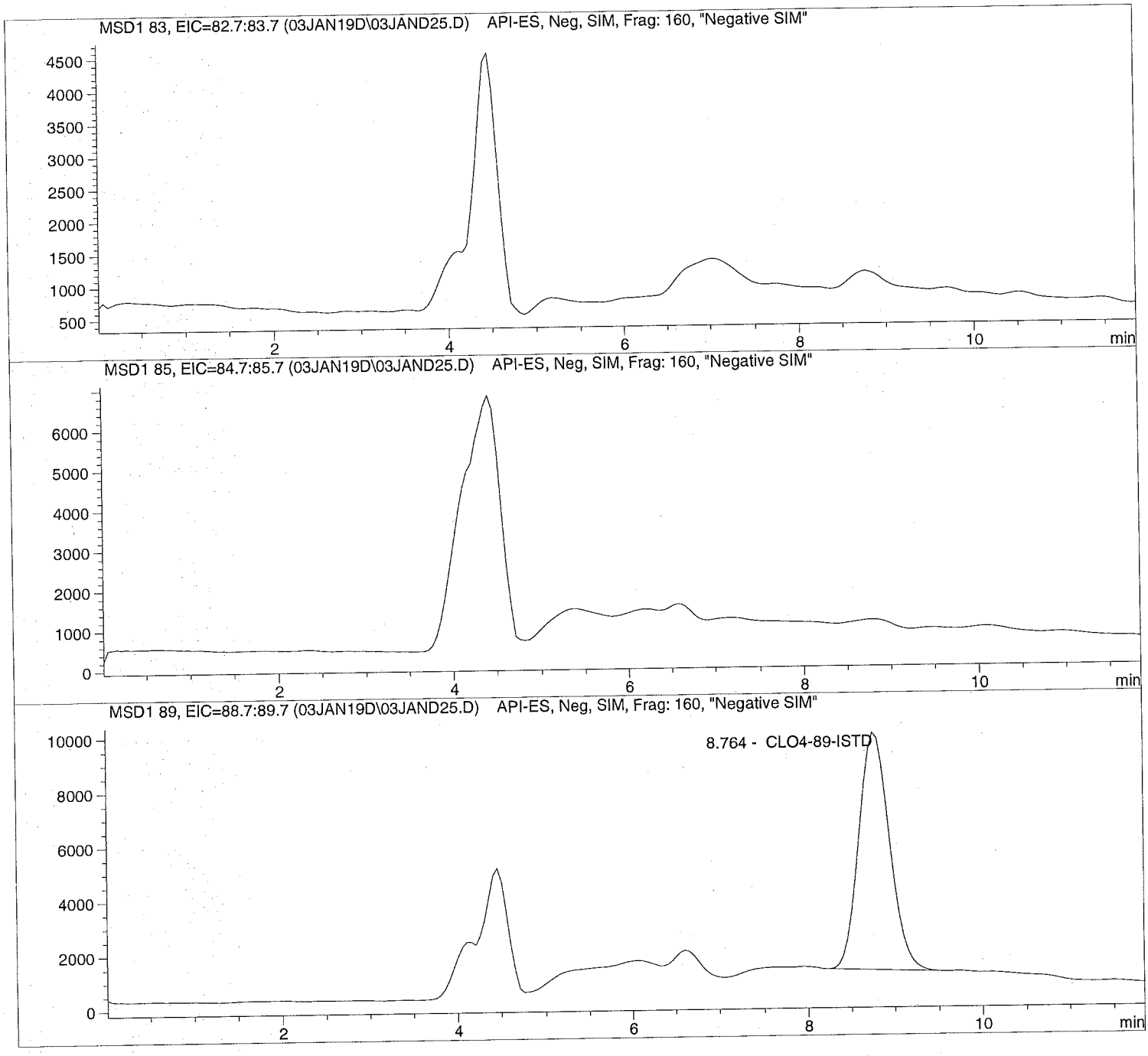
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\03JAN19D\03JAND25.D Sample Name: 1836507003

Injection Date:	1/03/2019 14:42:35	Seq Line:	25
Sample Name:	1836507003	Location:	Vial 90
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\03JAN19D\03JAND25.D Sample Name: 1836507003

Injection Date:	1/03/2019 14:42:35	Seq Line:	25
Sample Name:	1836507003	Location:	Vial 90
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 3. Dec. 2018, 00:29:27 pm
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	0.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
0.000		0.0	0.0000	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
0.000		0.0	0.0000	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.764	PBA	213295.2	5.0000	CLO4-89-ISTD

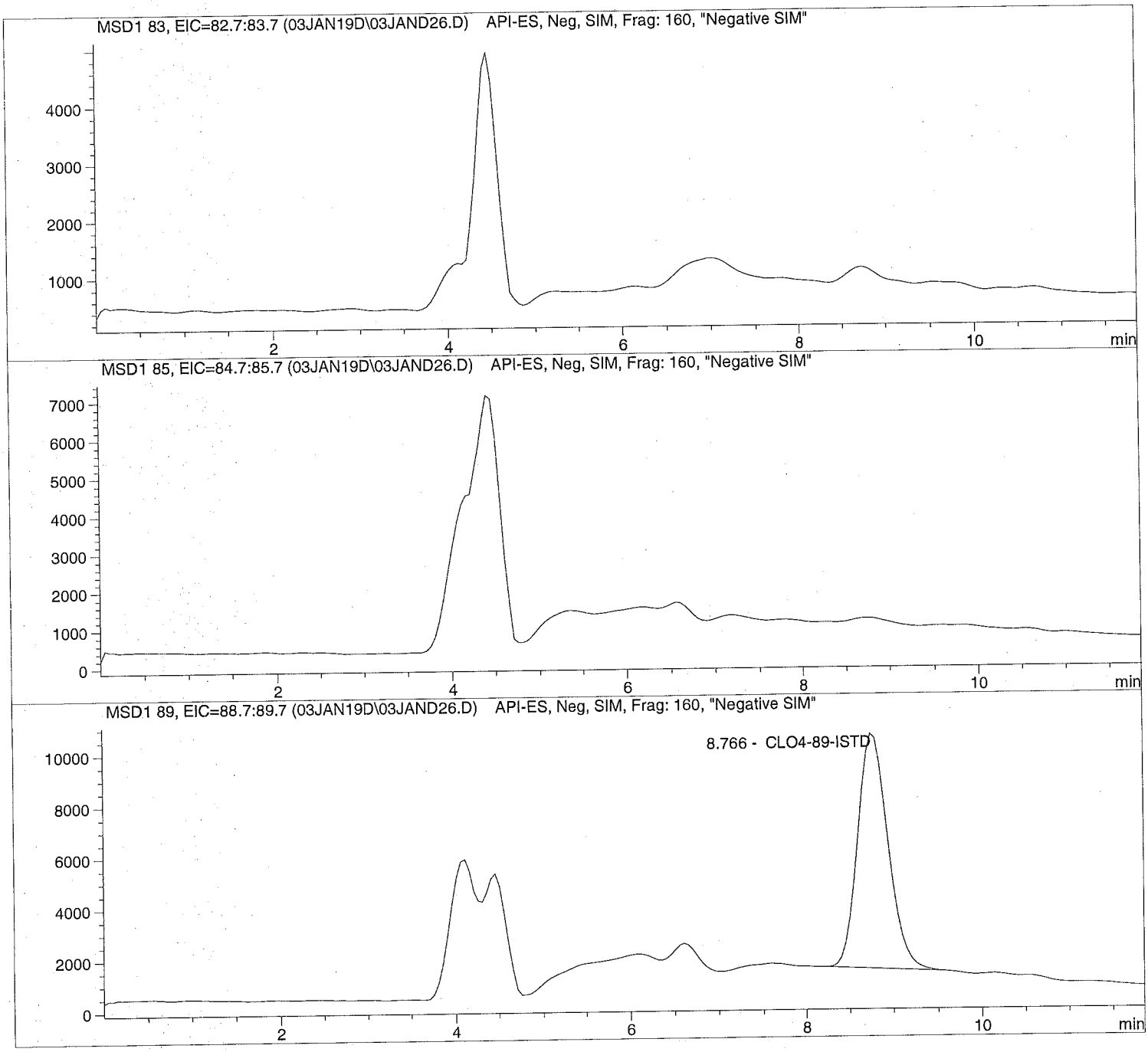
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\03JAN19D\03JAND26.D Sample Name: 1836507004

Injection Date:	1/03/2019 14:56:26	Seq Line:	26
Sample Name:	1836507004	Location:	Vial 91
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\03JAN19D\03JAND26.D Sample Name: 1836507004

Injection Date:	1/03/2019 14:56:26	Seq Line:	26
Sample Name:	1836507004	Location:	Vial 91
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 3. Dec. 2018, 00:29:27 pm
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	0.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
0.000		0.0	0.0000	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
0.000		0.0	0.0000	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.766	PBA	221191.3	5.0000	CLO4-89-ISTD

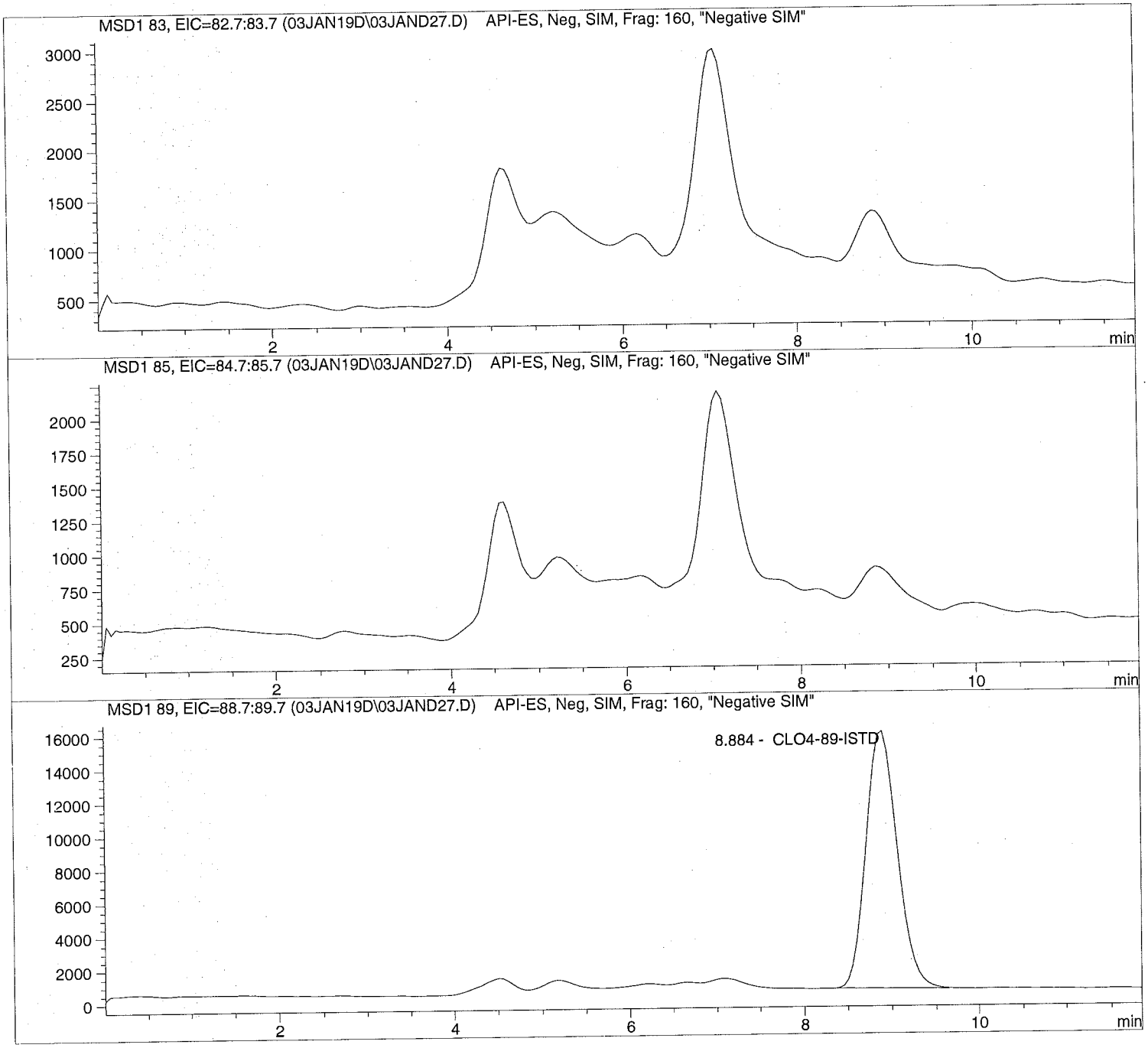
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\03JAN19D\03JAND27.D Sample Name: 1836507005

Injection Date:	1/03/2019 15:10:15	Seq Line:	27
Sample Name:	1836507005	Location:	Vial 92
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\03JAN19D\03JAND27.D Sample Name: 1836507005

Injection Date:	1/03/2019 15:10:15	Seq Line:	27
Sample Name:	1836507005	Location:	Vial 92
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 3. Dec. 2018, 00:29:27 pm
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	0.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
0.000		0.0	0.0000	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
0.000		0.0	0.0000	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.884	BBA	376298.7	5.0000	CLO4-89-ISTD

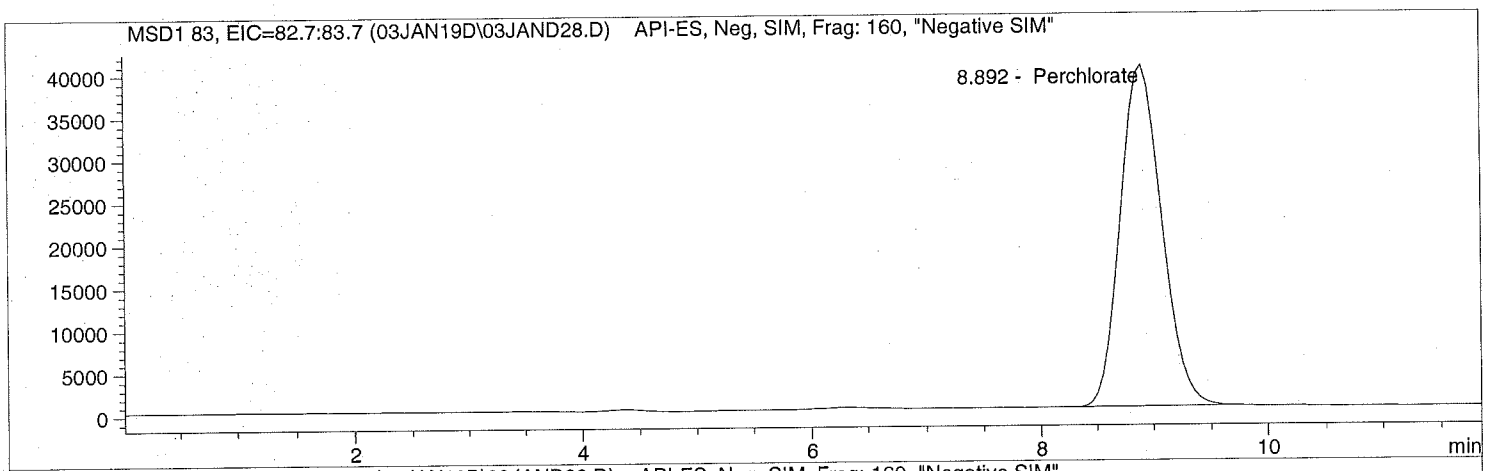
*** End of Report ***

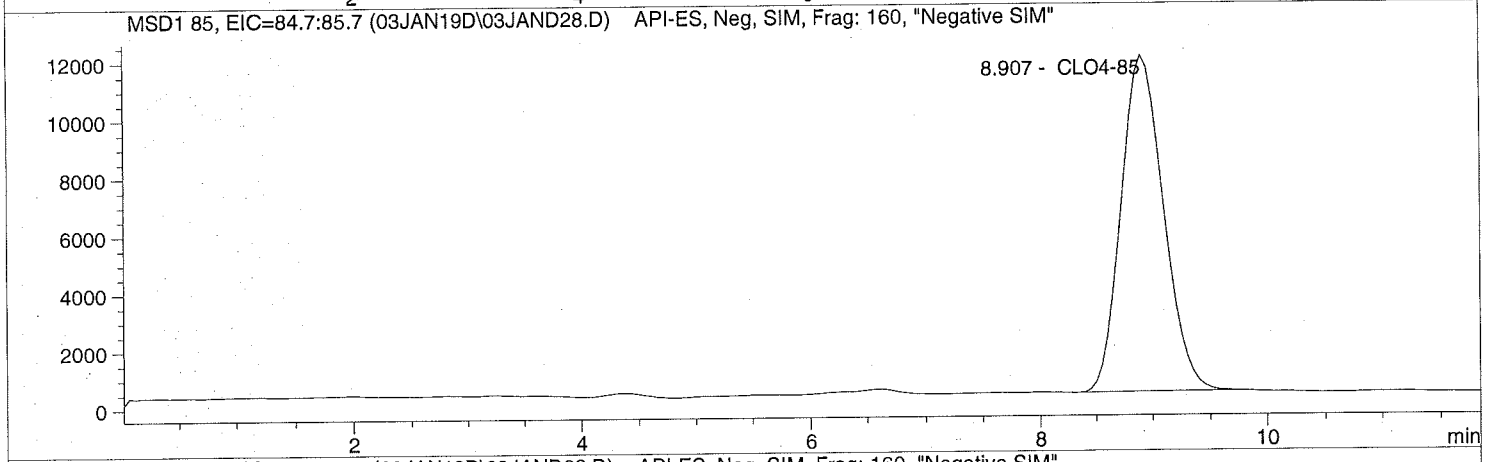
Data file: C:\HPCHEM\1\DATA\03JAN19D\03JAND28.D Sample Name: 1836507006 1K

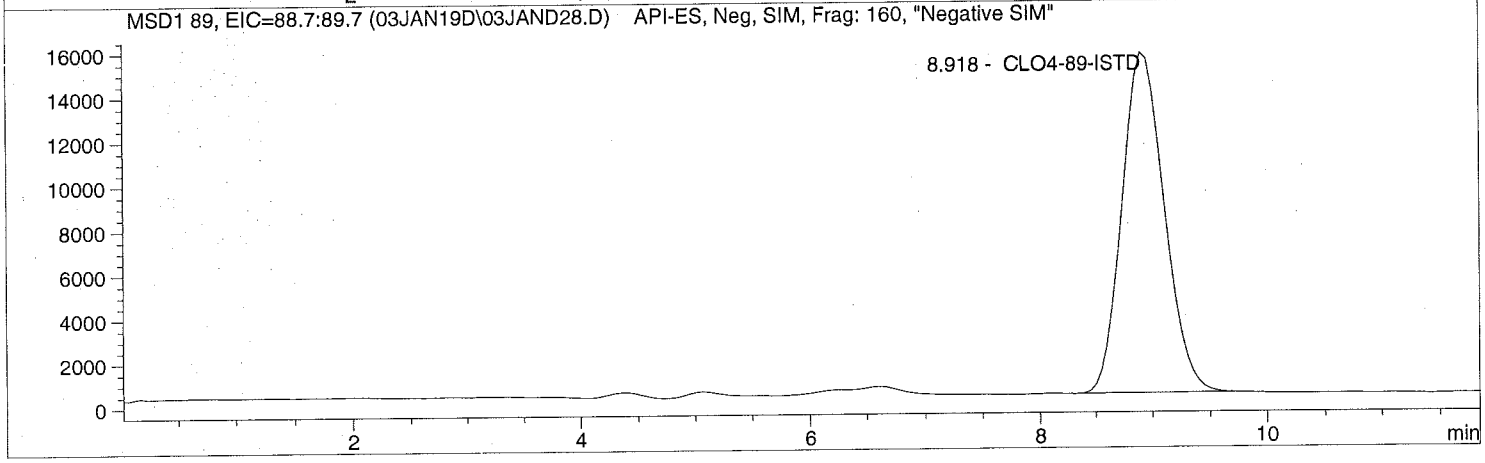
Injection Date:	1/03/2019 15:24:02	Seq Line:	28
Sample Name:	1836507006 1K	Location:	Vial 93
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis







Data file: C:\HPCHEM\1\DATA\03JAN19D\03JAND28.D Sample Name: 1836507006 1K

Injection Date:	1/03/2019 15:24:02	Seq Line:	28
Sample Name:	1836507006 1K	Location:	Vial 93
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 3. Dec. 2018, 00:29:27 pm
Multiplier:	1.000000
Dilution:	1000.000000
Sample Amount:	0.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.892	PBA	1010548.1	8017.9960	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.907	PBA	300644.9	7909.6205	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.918	PBA	394549.8	5000.0000	CLO4-89-ISTD

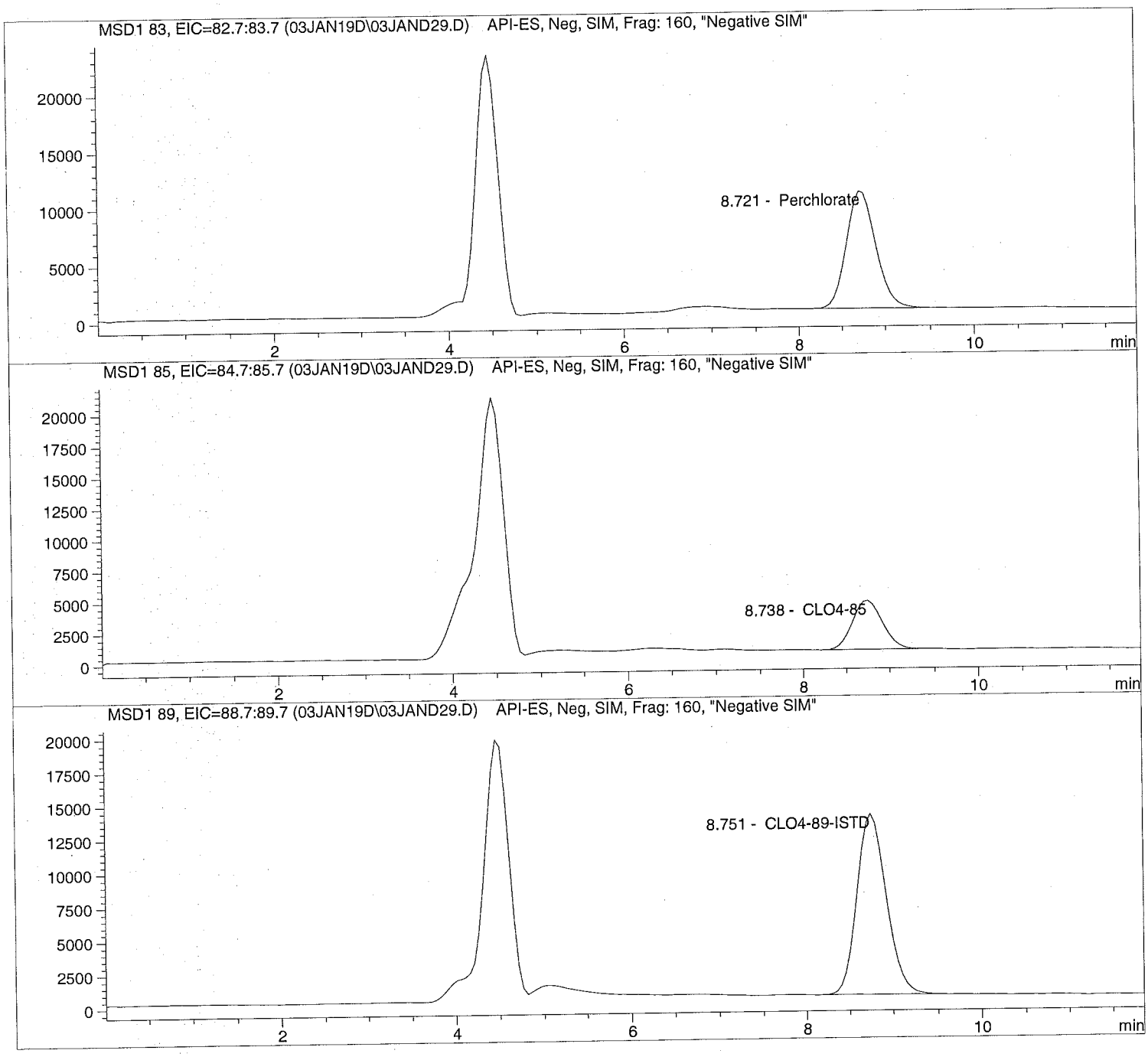
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\03JAN19D\03JAND29.D Sample Name: 1836507002 5X

Injection Date:	1/03/2019 15:37:49	Seq Line:	29
Sample Name:	1836507002 5X	Location:	Vial 94
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\03JAN19D\03JAND29.D Sample Name: 1836507002 5X

Injection Date:	1/03/2019 15:37:49	Seq Line:	29
Sample Name:	1836507002 5X	Location:	Vial 94
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 3. Dec. 2018, 00:29:27 pm
Multiplier:	1.000000
Dilution:	5.000000
Sample Amount:	0.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.721	PBA	243495.7	12.9754	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.738	PBA	94704.3	16.0887	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.751	PBA	314107.5	25.0000	CLO4-89-ISTD

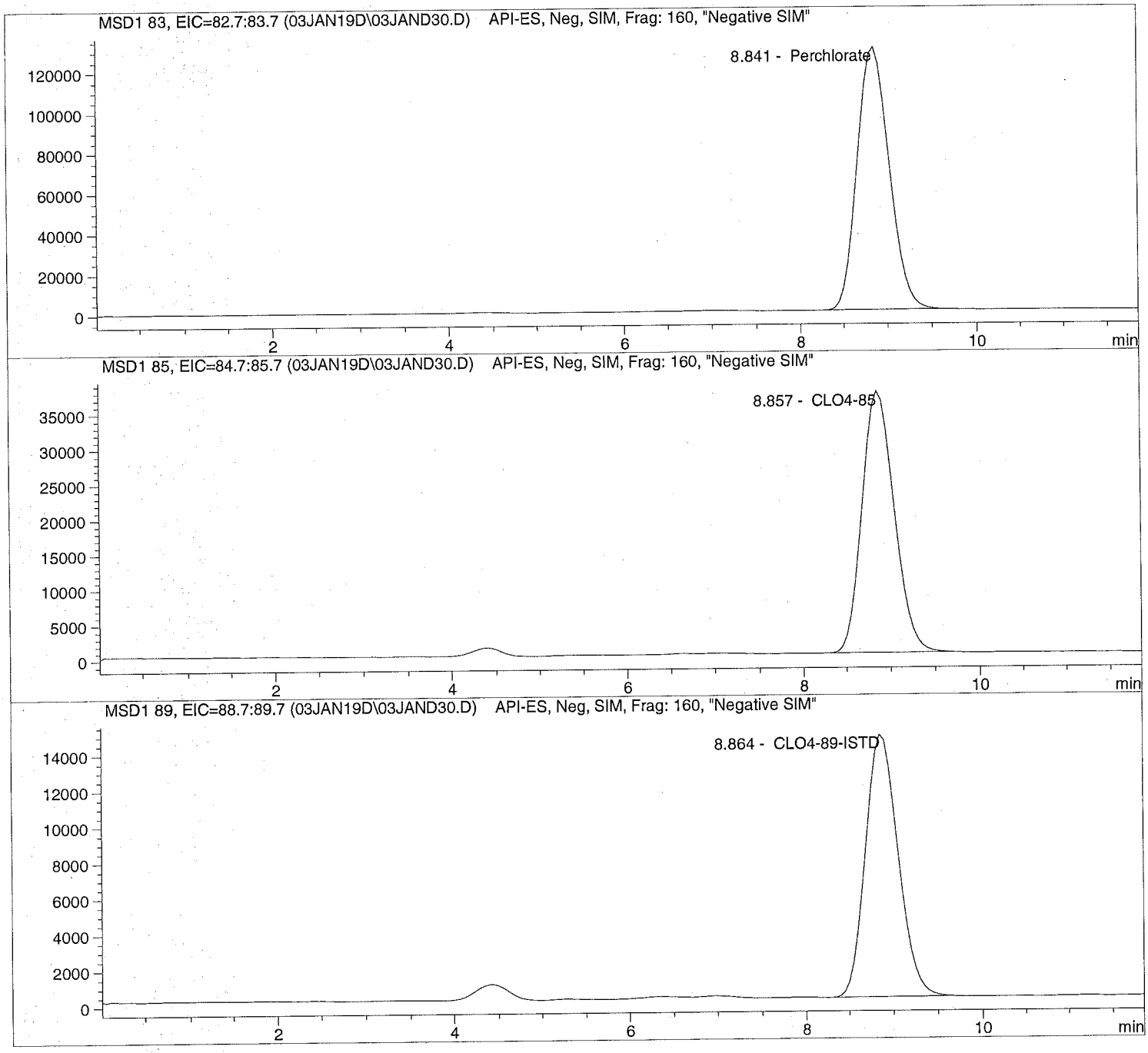
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\03JAN19D\03JAND30.D Sample Name: 635055 CCV@25

Injection Date:	1/03/2019 15:51:37	Seq Line:	30
Sample Name:	635055 CCV@25	Location:	Vial 71
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\03JAN19D\03JAND30.D Sample Name: 635055 CCV@25

Injection Date:	1/03/2019 15:51:37	Seq Line:	30
Sample Name:	635055 CCV@25	Location:	Vial 71
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 3. Dec. 2018, 00:29:27 pm
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	25.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.841	PBA	3245030.8	25.9379	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.857	PBA	935888.1	24.8315	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.864	PBA	372704.0	5.0000	CLO4-89-ISTD

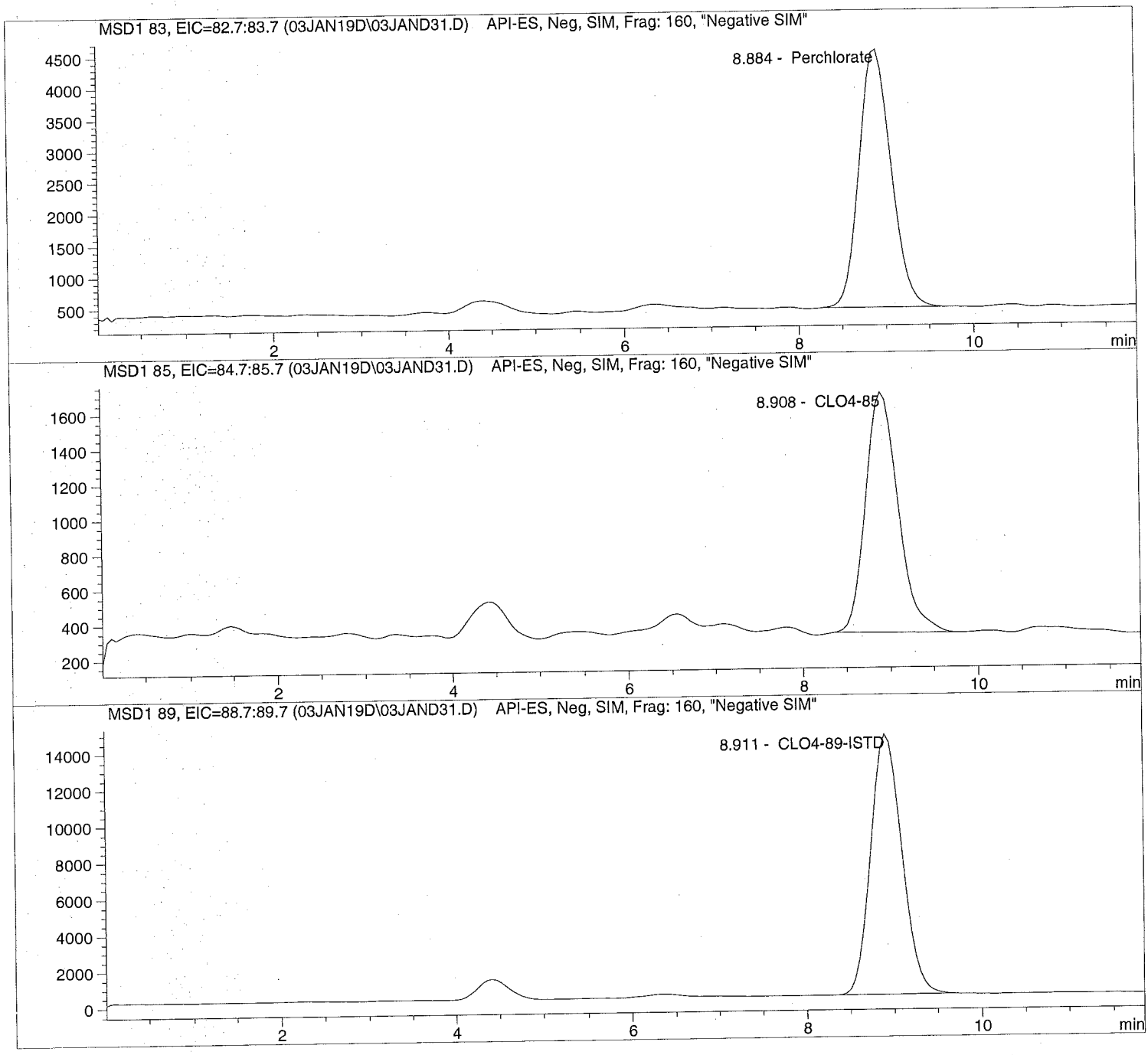
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\03JAN19D\03JAND31.D Sample Name: 635056 LODV@1.

Injection Date:	1/03/2019 16:05:21	Seq Line:	31
Sample Name:	635056 LODV@1.	Location:	Vial 72
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\03JAN19D\03JAND31.D Sample Name: 635056 LODV@1.

Injection Date:	1/03/2019 16:05:21	Seq Line:	31
Sample Name:	635056 LODV@1.	Location:	Vial 72
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 3. Dec. 2018, 00:29:27 pm
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	1.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.884	BBA	103547.9	1.1059	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.908	PBA	35427.0	1.1243	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.911	PBA	356168.7	5.0000	CLO4-89-ISTD

*** End of Report ***

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

Raw Data

Initial Calibration

Batch Report: C:\HPCHEM\1\DATA\08OCT18I\08OCT18D.B

Batch Review Method:
C:\HPCHEM\1\METHODS\CLO4-DPR.M

['#' ==> Run has not been reprocessed with Batch Review Method
'*' ==> Run has been saved with batch file]

#*	Sample	Location	Inj	SampleType	Run	Perchlorate Area	Perchlorate RT	Perchlorate Amount
#*	CLO4@ 1.0u	Vial 74	1	Control	4	9.40790e4	9.287	9.73826e-1
#*	CLO4@ 2.0u	Vial 75	1	Control	5	2.26957e5	9.259	2.19167
#*	CLO4@ 5.0u	Vial 76	1	Control	6	5.50307e5	9.208	4.80912
#*	CLO4@ 10.u	Vial 77	1	Control	7	1.07623e6	9.246	9.38291
#*	CLO4@ 25.u	Vial 78	1	Control	8	2.88097e6	9.175	25.83039
#*	CLO4@ 50.u	Vial 79	1	Control	9	6.29507e6	9.261	49.91981
#*	CLO4@ 75.u	Vial 80	1	Control	10	9.45737e6	9.236	74.88523
*	ICAL Verf@	Vial 81	1	Control	11	1.10069e6	9.244	9.38952

#*	Sample	Location	Inj	SampleType	Run	CLO4-89-ISTD Area	CLO4-89-ISTD RT	CLO4-89-ISTD Amount
#*	CLO4@ 1.0u	Vial 74	1	Control	4	3.79545e5	9.314	5.00000
#*	CLO4@ 2.0u	Vial 75	1	Control	5	3.52582e5	9.297	5.00000
#*	CLO4@ 5.0u	Vial 76	1	Control	6	3.66805e5	9.223	5.00000
#*	CLO4@ 10.u	Vial 77	1	Control	7	3.56815e5	9.266	5.00000
#*	CLO4@ 25.u	Vial 78	1	Control	8	3.32340e5	9.196	5.00000
#*	CLO4@ 50.u	Vial 79	1	Control	9	3.59393e5	9.277	5.00000
#*	CLO4@ 75.u	Vial 80	1	Control	10	3.45193e5	9.253	5.00000
*	ICAL Verf@	Vial 81	1	Control	11	3.64657e5	9.264	5.00000

#*	Sample	Location	Inj	SampleType	Run	CLO4-85 Area	CLO4-85 RT	CLO4-85 Amount
#*	CLO4@ 1.0u	Vial 74	1	Control	4	3.17987e4	9.316	9.60861e-1
#*	CLO4@ 2.0u	Vial 75	1	Control	5	7.05436e4	9.273	2.16955
#*	CLO4@ 5.0u	Vial 76	1	Control	6	1.69833e5	9.217	4.87565
#*	CLO4@ 10.u	Vial 77	1	Control	7	3.31565e5	9.259	9.58732
#*	CLO4@ 25.u	Vial 78	1	Control	8	8.62978e5	9.187	25.62680
#*	CLO4@ 50.u	Vial 79	1	Control	9	1.91847e6	9.278	49.74848
#*	CLO4@ 75.u	Vial 80	1	Control	10	2.93835e6	9.251	75.02646
*	ICAL Verf@	Vial 81	1	Control	11	3.27974e5	9.261	9.28908

*** End of Report ***

Method C:\HPCHEM\1\METHODS\CLO4-DPR.M

Calibration Table

Perchlorate

Calib. Data Modified : 10/9/2018 8:01:57 AM

Calculate : Internal Standard
Based on : Peak Area

Rel. Reference Window : 20.000 %
Abs. Reference Window : 0.000 min
Rel. Non-ref. Window : 20.000 %
Abs. Non-ref. Window : 0.000 min
Use Multiplier & Dilution Factor with ISTDs
Uncalibrated Peaks : not reported
Partial Calibration : No recalibration if peaks missing

Curve Type : Quadratic (some peaks differ, see below)
Origin : Ignored (some peaks differ, see below)
Weight : Linear (Amnt) (some peaks differ, see below)

Recalibration Settings:
Average Response : Average all calibrations
Average Retention Time: Floating Average New 75%

Calibration Report Options :
Printout of recalibrations within a sequence:
Calibration Table after Recalibration
Normal Report after Recalibration
If the sequence is done with bracketing:
Results of first cycle (ending previous bracket)

Default Sample ISTD Information (if not set in sample table):

ISTD #	ISTD Amount	Name
1	5.00000	CLO4-89-ISTD

Signal 1: MSD1 83, EIC=82.7:83.7
Signal 2: MSD1 85, EIC=84.7:85.7
Signal 3: MSD1 89, EIC=88.7:89.7

RetTime [min]	Sig	Lvl	Amount	Area	Amt/Area	Ref	Grp	Name
9.287	1	1	1.00000	9.40790e4	1.06294e-5		1	Perchlorate
		2	2.00000	2.26957e5	8.81224e-6			
		3	5.00000	5.50307e5	9.08584e-6			
		4	10.00000	1.07623e6	9.29172e-6			
		5	25.00000	2.88097e6	8.67764e-6			
		6	50.00000	6.29507e6	7.94272e-6			
		7	75.00000	9.45737e6	7.93033e-6			
9.314	3	1	5.00000	3.79545e5	1.31737e-5	+I1		CLO4-89-ISTD
		2	5.00000	3.52582e5	1.41811e-5			
		3	5.00000	3.66805e5	1.36312e-5			
		4	5.00000	3.56815e5	1.40129e-5			
		5	5.00000	3.32340e5	1.50448e-5			
		6	5.00000	3.59393e5	1.39124e-5			
		7	5.00000	3.45193e5	1.44847e-5			
9.316	2	1	1.00000	3.17987e4	3.14479e-5		1	CLO4-85
		2	2.00000	7.05436e4	2.83513e-5			
		3	5.00000	1.69833e5	2.94406e-5			
		4	10.00000	3.31565e5	3.01600e-5			
		5	25.00000	8.62978e5	2.89695e-5			
		6	50.00000	1.91847e6	2.60625e-5			

Method C:\HPCHEM\1\METHODS\CLO4-DPR.M

RetTime [min]	Sig	Lvl	Amount	Area	Amt/Area	Ref	Grp	Name
		7	75.00000	2.93835e6	2.55246e-5			

More compound-specific settings:

Compound: Perchlorate
- Time Window : From 7.196 min To 11.196 min
- Curve Type : Quadratic
- Origin : Ignored
- Calibration Level Weights:/
  - Level 1 : 1
  - Level 2 : 0.5
  - Level 3 : 0.2
  - Level 4 : 0.1
  - Level 5 : 0.04
  - Level 6 : 0.02
  - Level 7 : 0.013333

Compound: CLO4-89-ISTD
- Time Window : From 7.207 min To 11.192 min
- Curve Type : Linear
- Origin : Included
- Calibration Level Weights:/
  - Level 1 : 1
  - Level 2 : 1
  - Level 3 : 1
  - Level 4 : 1
  - Level 5 : 1
  - Level 6 : 1
  - Level 7 : 1

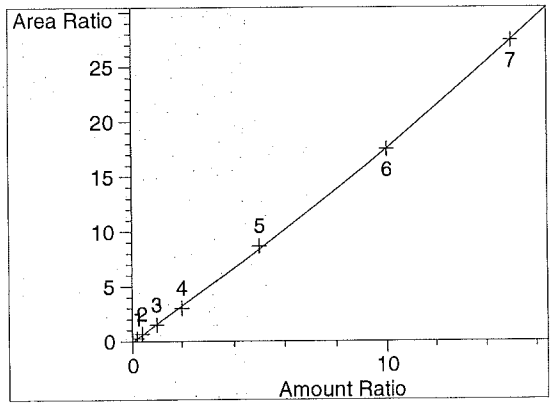
Compound: CLO4-85
- Time Window : From 7.211 min To 11.211 min
- Curve Type : Quadratic
- Origin : Ignored
- Calibration Level Weights:/
  - Level 1 : 1
  - Level 2 : 0.5
  - Level 3 : 0.2
  - Level 4 : 0.1
  - Level 5 : 0.04
  - Level 6 : 0.02
  - Level 7 : 0.013333

Peak Sum Table

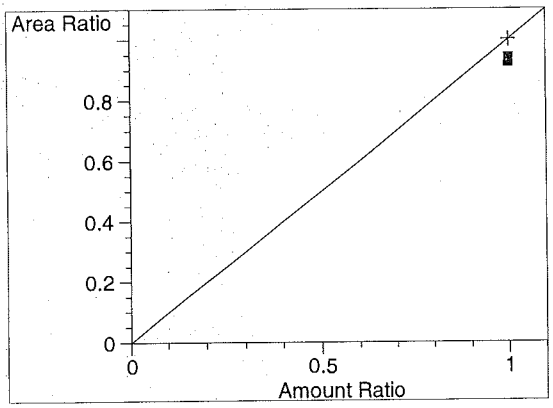
No Entries in table

Method C:\HPCHEM\1\METHODS\CLO4-DPR.M

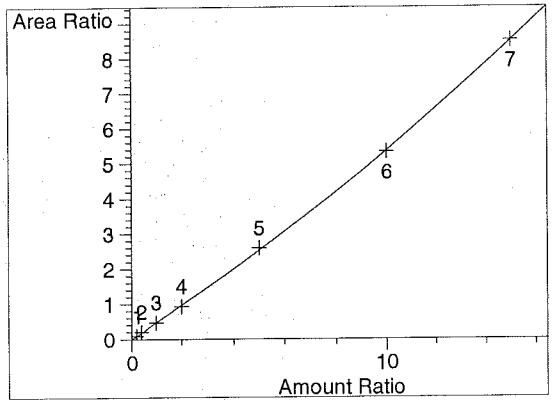
Calibration Curves



Perchlorate at exp. RT: 9.287
MSD1 83, EIC=82.7:83.7
Correlation: 0.99971
Residual Std. Dev.: 0.16701
Formula: $y = ax^2 + bx + c$
a: 1.45482e-2
b: 1.61590
c: -6.73998e-2
x: Amount Ratio
y: Area Ratio
Calibration Level Weights:
Level 1 : 1
Level 2 : 0.5
Level 3 : 0.2
Level 4 : 0.1
Level 5 : 0.04
Level 6 : 0.02
Level 7 : 0.013333



CLO4-89-ISTD at exp. RT: 9.314
MSD1 89, EIC=88.7:89.7
Correlation: 1.00000
Residual Std. Dev.: 0.00000
Formula: $y = mx + b$
m: 1.00000
b: 0.00000
x: Amount Ratio
y: Area Ratio
Calibration Level Weights:
Level 1 : 1
Level 2 : 1
Level 3 : 1
Level 4 : 1
Level 5 : 1
Level 6 : 1
Level 7 : 1



CLO4-85 at exp. RT: 9.316
MSD1 85, EIC=84.7:85.7
Correlation: 0.99984
Residual Std. Dev.: 0.03901
Formula: $y = ax^2 + bx + c$
a: 6.03220e-3
b: 4.77309e-1
c: -8.16718e-3
x: Amount Ratio
y: Area Ratio
Calibration Level Weights:
Level 1 : 1
Level 2 : 0.5
Level 3 : 0.2
Level 4 : 0.1
Level 5 : 0.04
Level 6 : 0.02
Level 7 : 0.013333

Sequence: C:\HPCHEM\1\SEQUENCE\CLO4\2018\OCT\08OCT18I.S

Sequence Table:

Method and Injection Info Part:

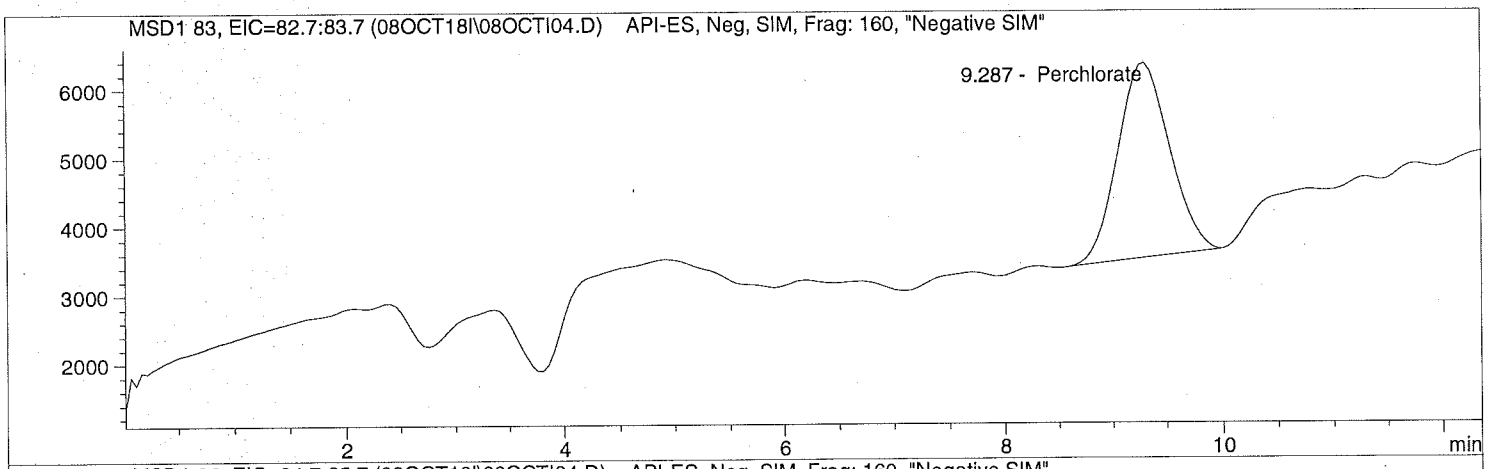
Line	Location	SampleName	Method	Inj	SampleType	InjVolume	DataFile
1	Vial 71	CLO4@ .10ug/L	CLO4-AQN	1	Ctrl Samp		
2	Vial 72	CLO4@ .20ug/L	CLO4-AQN	1	Ctrl Samp		
3	Vial 73	CLO4@ 0.5ug/L	CLO4-AQN	1	Ctrl Samp		
4	Vial 74	CLO4@ 1.0ug/L	CLO4-AQN	1	Ctrl Samp		
5	Vial 75	CLO4@ 2.0ug/L	CLO4-AQN	1	Ctrl Samp		
6	Vial 76	CLO4@ 5.0ug/L	CLO4-AQN	1	Ctrl Samp		
7	Vial 77	CLO4@ 10.ug/L	CLO4-AQN	1	Ctrl Samp		
8	Vial 78	CLO4@ 25.ug/L	CLO4-AQN	1	Ctrl Samp		
9	Vial 79	CLO4@ 50.ug/L	CLO4-AQN	1	Ctrl Samp		
10	Vial 80	CLO4@ 75.ug/L	CLO4-AQN	1	Ctrl Samp		
11	Vial 81	ICAL Verf@10ug/L	CLO4-AQN	1	Ctrl Samp		

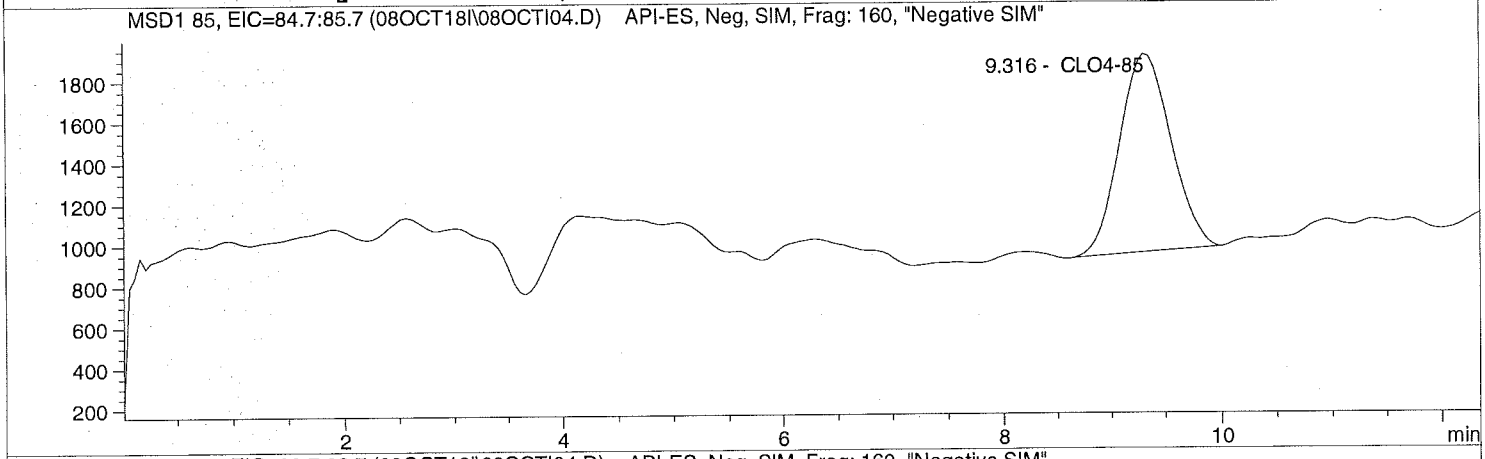
Data file: C:\HPCHEM\1\DATA\08OCT18I\08OCTI04.D Sample Name: CLO4@ 1.0ug/L

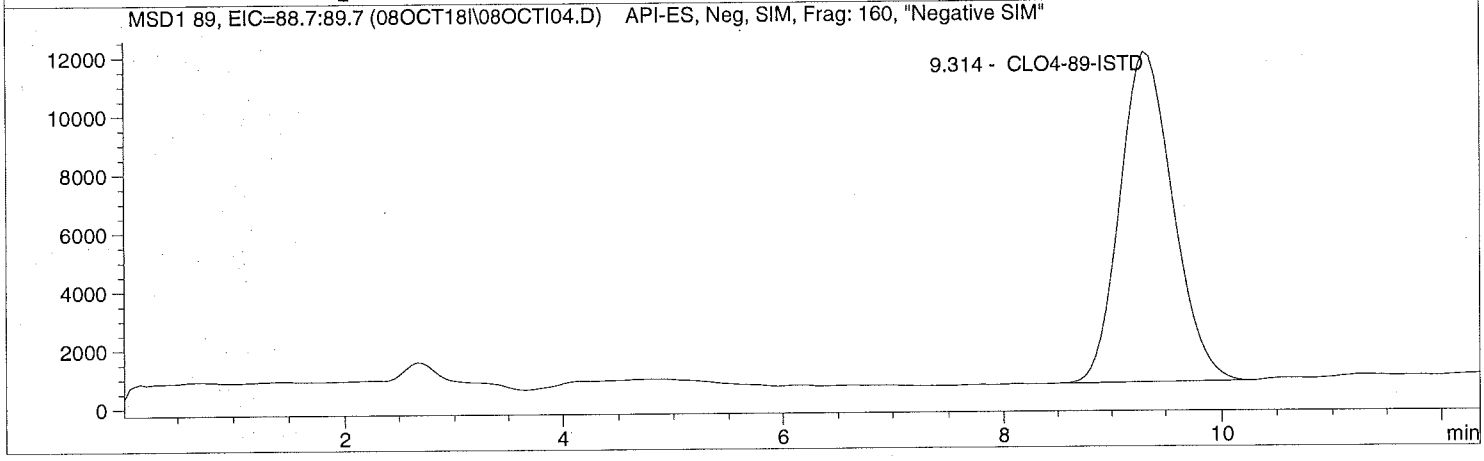
Injection Date:	10/08/2018 11:37:35	Seq Line:	4
Sample Name:	CLO4@ 1.0ug/L	Location:	Vial 74
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 10/9/2018 08:22:51

Perchlorate analysis







Data file: C:\HPCHEM\1\DATA\08OCT18I\08OCTI04.D Sample Name: CLO4@ 1.0ug/L

Injection Date:	10/08/2018 11:37:35	Seq Line:	4
Sample Name:	CLO4@ 1.0ug/L	Location:	Vial 74
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 10/9/2018 08:22:51

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Tue, 9. Oct. 2018, 08:01:57 am
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	1.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
9.287	PBA	94079.0	0.9738	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
9.316	PBA	31798.7	0.9609	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
9.314	PBA	379544.7	5.0000	CLO4-89-ISTD

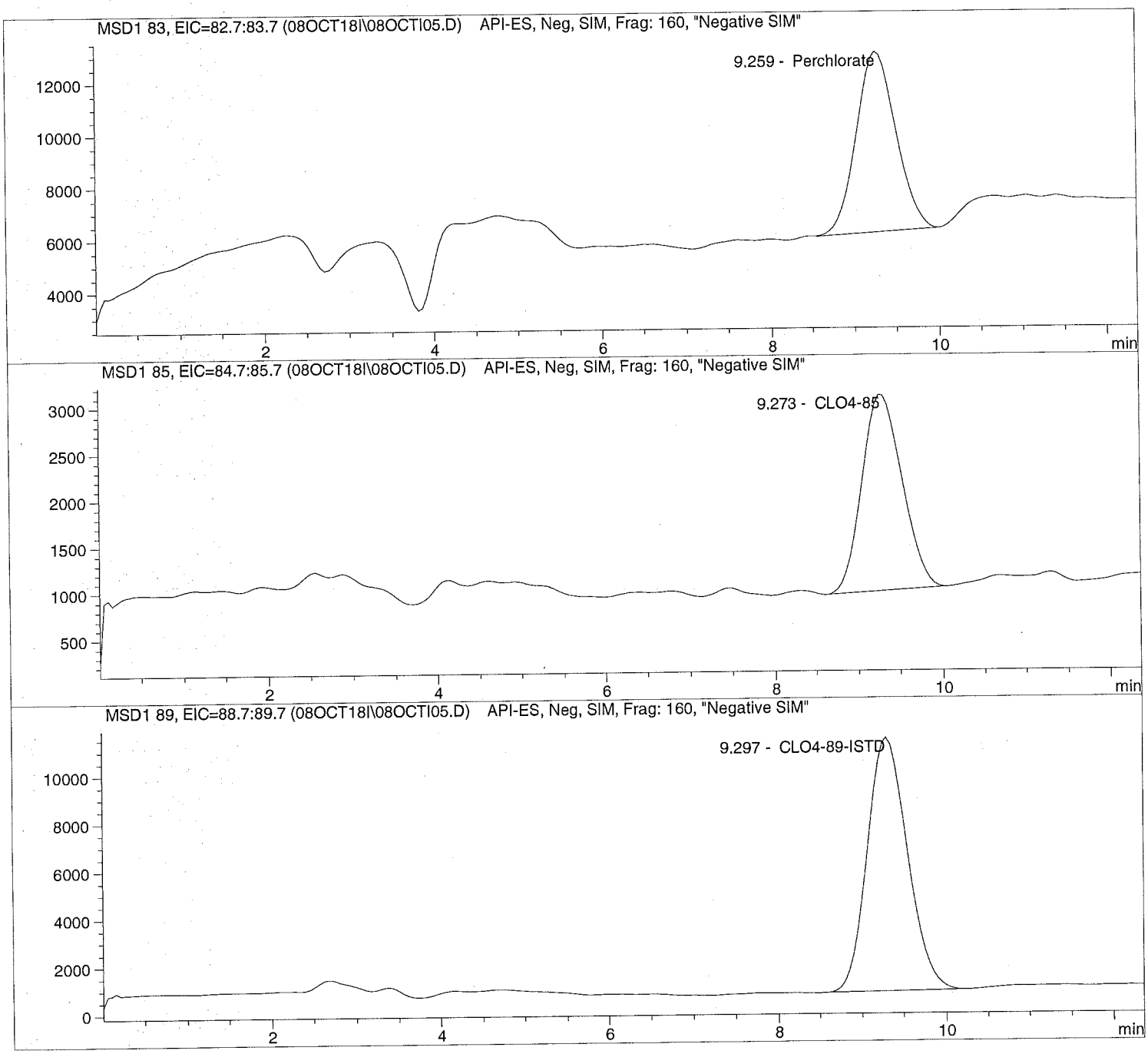
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\08OCT18I\08OCTI05.D Sample Name: CLO4@ 2.0ug/L

Injection Date:	10/08/2018 11:51:45	Seq Line:	5
Sample Name:	CLO4@ 2.0ug/L	Location:	Vial 75
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 10/9/2018 08:22:51

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\08OCT18I\08OCTI05.D Sample Name: CLO4@ 2.0ug/L

Injection Date:	10/08/2018 11:51:45	Seq Line:	5
Sample Name:	CLO4@ 2.0ug/L	Location:	Vial 75
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 10/9/2018 08:22:51

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Tue, 9. Oct. 2018, 08:01:57 am
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	2.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
9.259	BBA	226957.1	2.1917	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
9.273	PBA	70543.6	2.1695	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
9.297	PBA	352581.8	5.0000	CLO4-89-ISTD

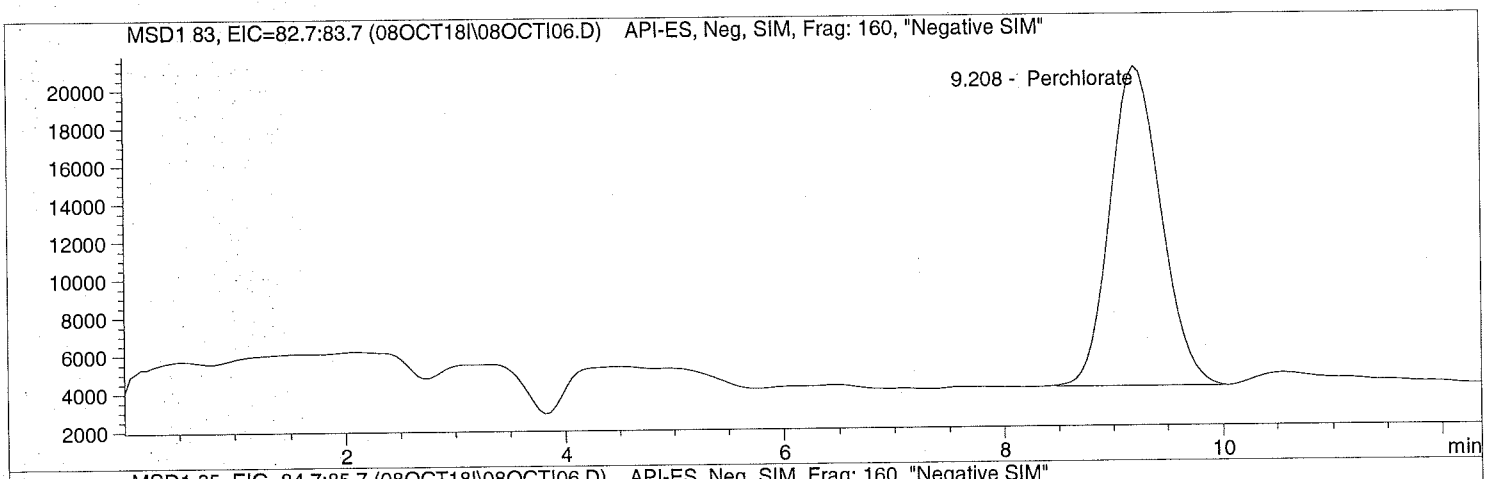
*** End of Report ***

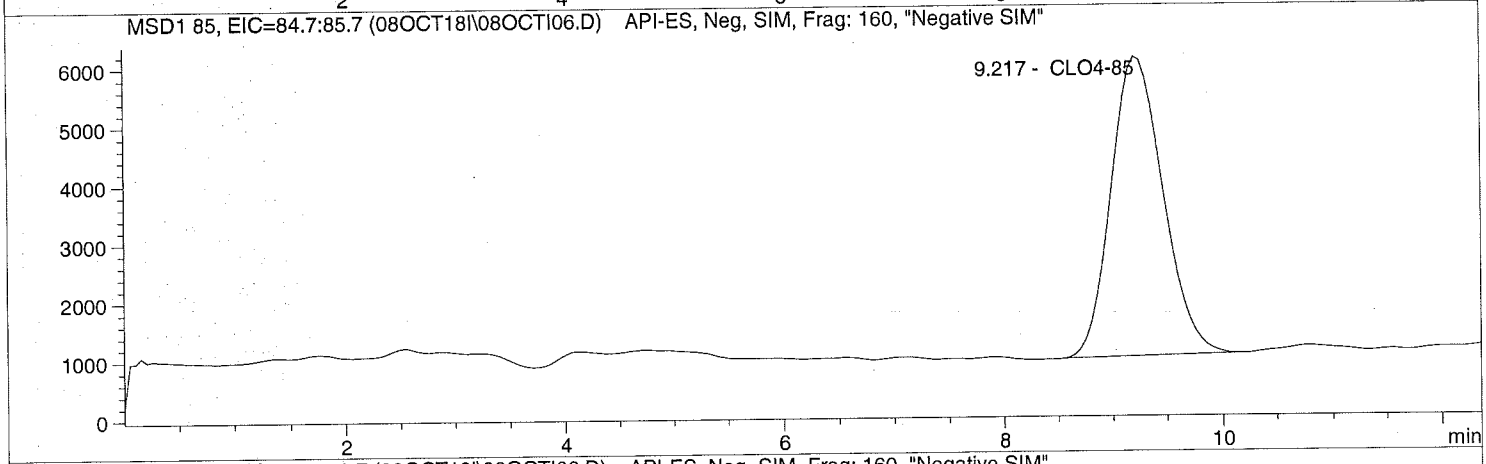
Data file: C:\HPCHEM\1\DATA\08OCT18I\08OCTI06.D Sample Name: CLO4@ 5.0ug/L

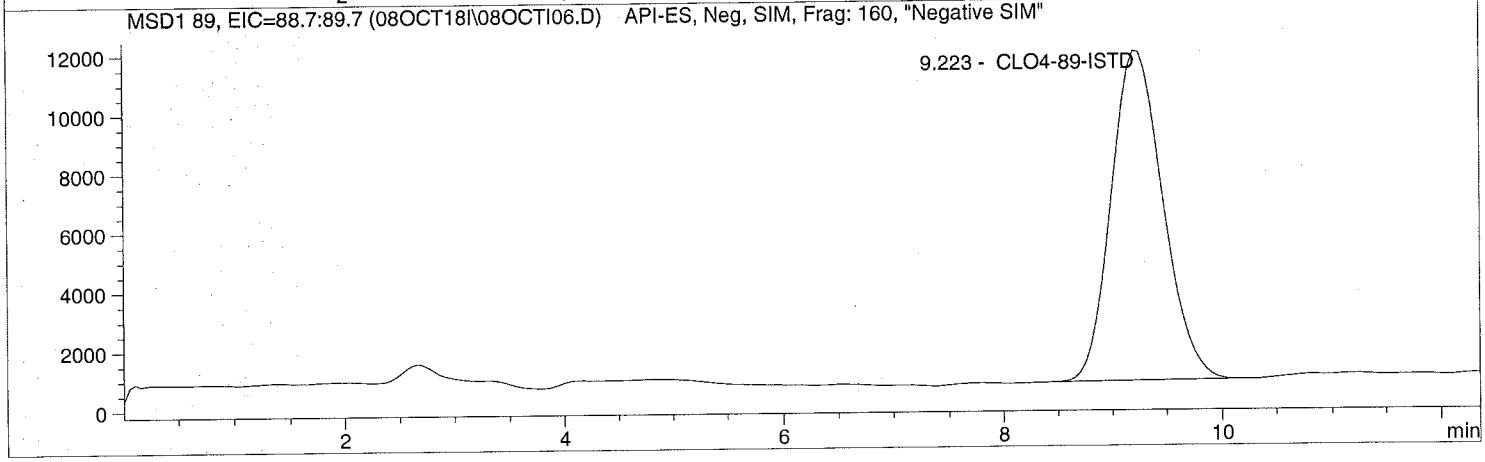
Injection Date:	10/08/2018 12:05:59	Seq Line:	6
Sample Name:	CLO4@ 5.0ug/L	Location:	Vial 76
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 10/9/2018 08:22:51

Perchlorate analysis







Data file: C:\HPCHEM\1\DATA\08OCT18I\08OCTI06.D Sample Name: CLO4@ 5.0ug/L

Injection Date:	10/08/2018 12:05:59	Seq Line:	6
Sample Name:	CLO4@ 5.0ug/L	Location:	Vial 76
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method:	CLO4-AQN.M
Analysis Method:	C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed:	10/9/2018 08:22:51

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Tue, 9. Oct. 2018, 08:01:57 am
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	5.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
9.208	BBA	550306.9	4.8091	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
9.217	PBA	169833.3	4.8757	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
9.223	PBA	366804.8	5.0000	CLO4-89-ISTD

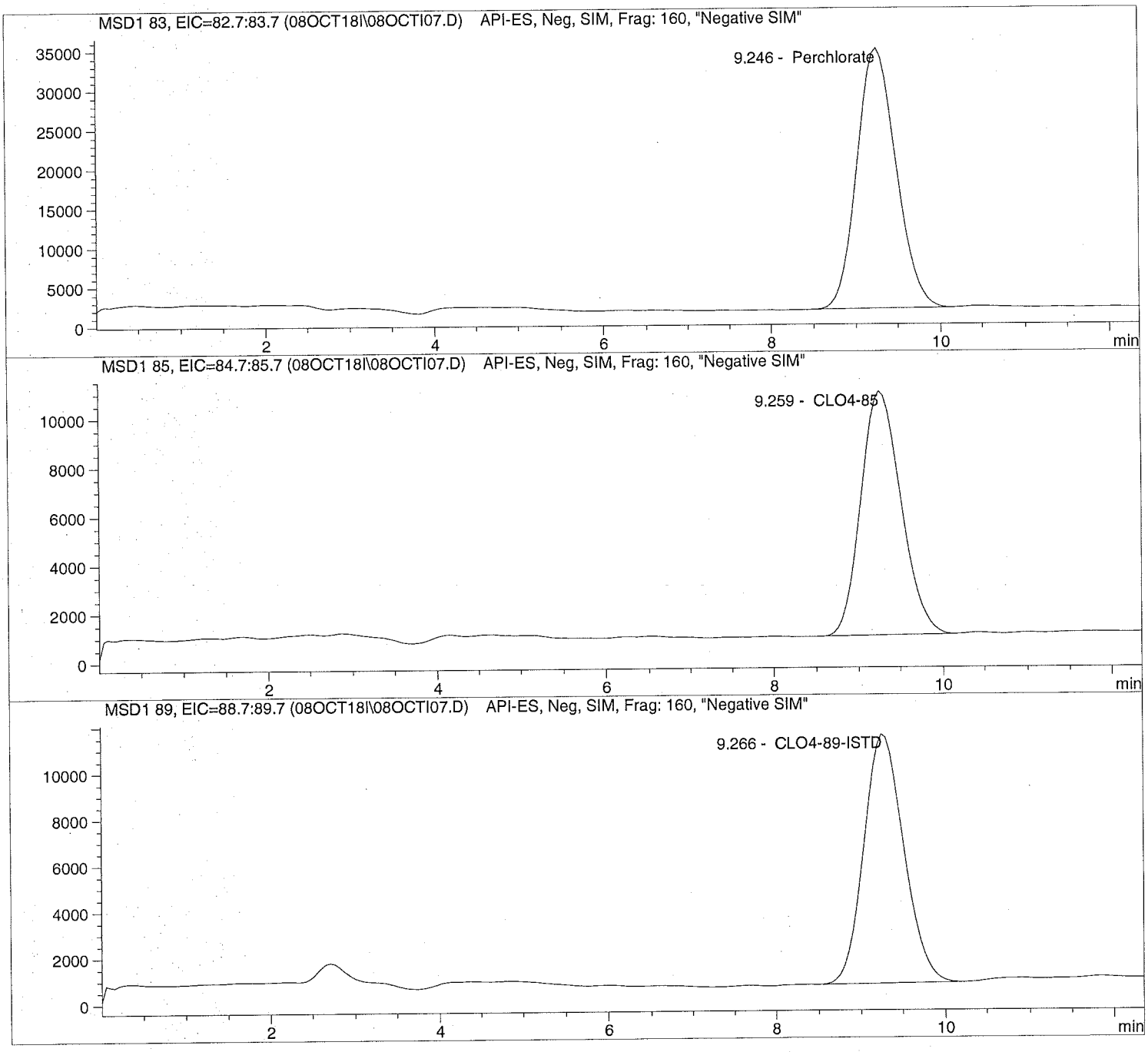
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\08OCT18I\08OCTI07.D Sample Name: CLO4@ 10.ug/L

Injection Date:	10/08/2018 12:20:10	Seq Line:	7
Sample Name:	CLO4@ 10.ug/L	Location:	Vial 77
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 10/9/2018 08:22:51

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\08OCT18I\08OCTI07.D Sample Name: CLO4@ 10.ug/L

Injection Date:	10/08/2018 12:20:10	Seq Line:	7
Sample Name:	CLO4@ 10.ug/L	Location:	Vial 77
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 10/9/2018 08:22:51

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Tue, 9. Oct. 2018, 08:01:57 am
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	10.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
9.246	PBA	1076227.4	9.3829	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
9.259	PBA	331564.9	9.5873	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
9.266	PBA	356815.3	5.0000	CLO4-89-ISTD

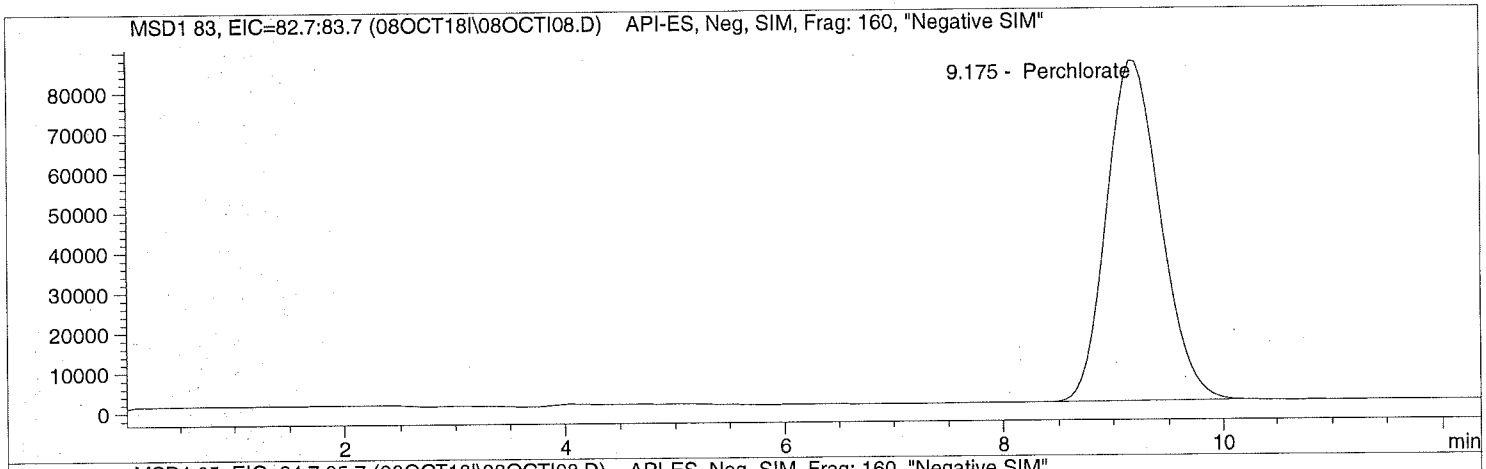
*** End of Report ***

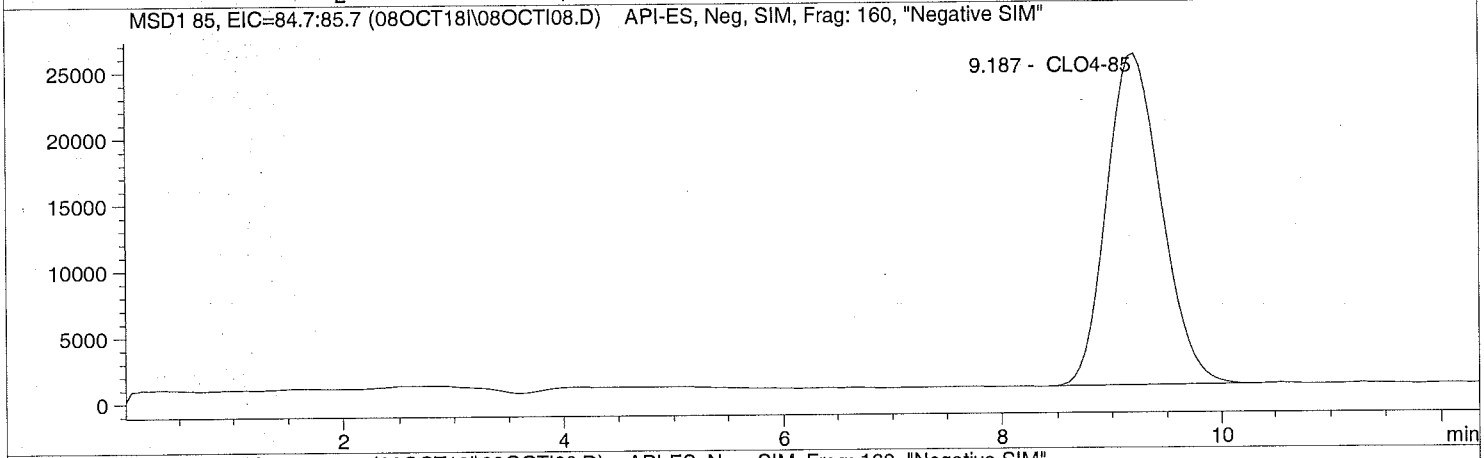
Data file: C:\HPCHEM\1\DATA\08OCT18I\08OCTI08.D Sample Name: CLO4@ 25.ug/L

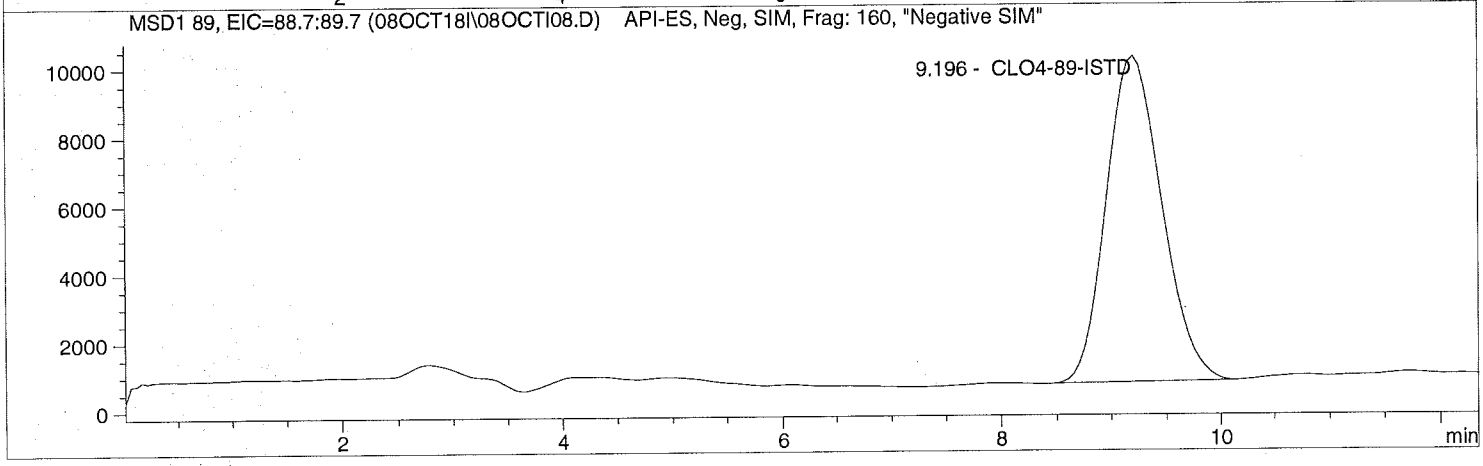
Injection Date:	10/08/2018 12:34:24	Seq Line:	8
Sample Name:	CLO4@ 25.ug/L	Location:	Vial 78
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 10/9/2018 08:22:51

Perchlorate analysis







Data file: C:\HPCHEM\1\DATA\08OCT18I\08OCTI08.D Sample Name: CLO4@ 25.ug/L

Injection Date:	10/08/2018 12:34:24	Seq Line:	8
Sample Name:	CLO4@ 25.ug/L	Location:	Vial 78
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 10/9/2018 08:22:51

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Tue, 9. Oct. 2018, 08:01:57 am
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	25.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
9.175	PBA	2880966.0	25.8304	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
9.187	PBA	862978.0	25.6268	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
9.196	PBA	332339.7	5.0000	CLO4-89-ISTD

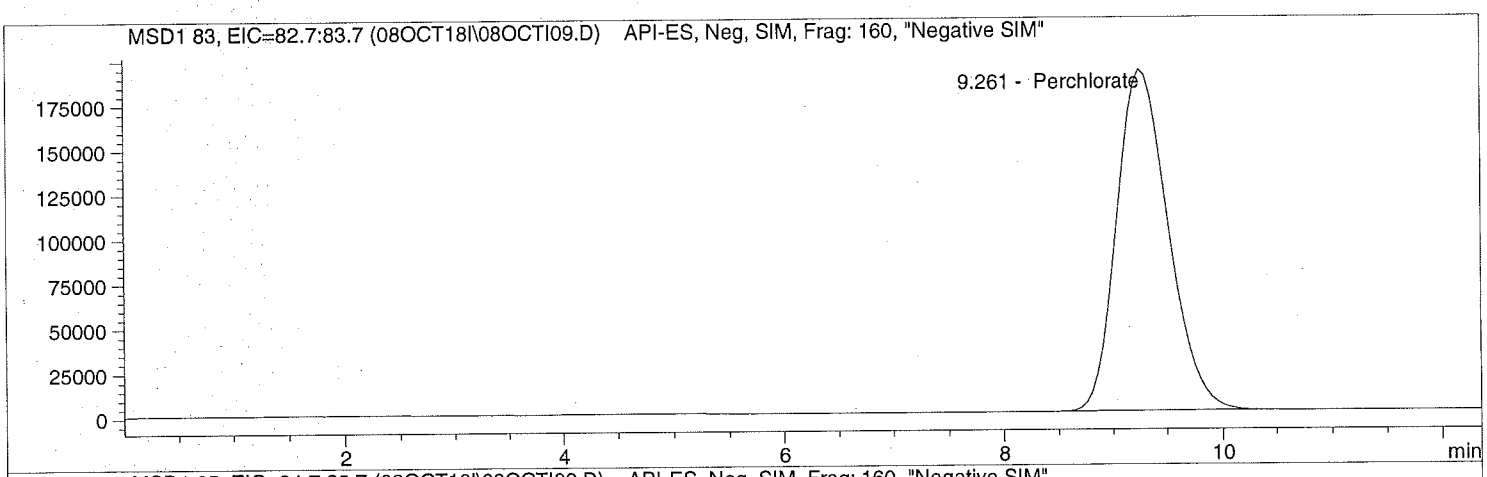
*** End of Report ***

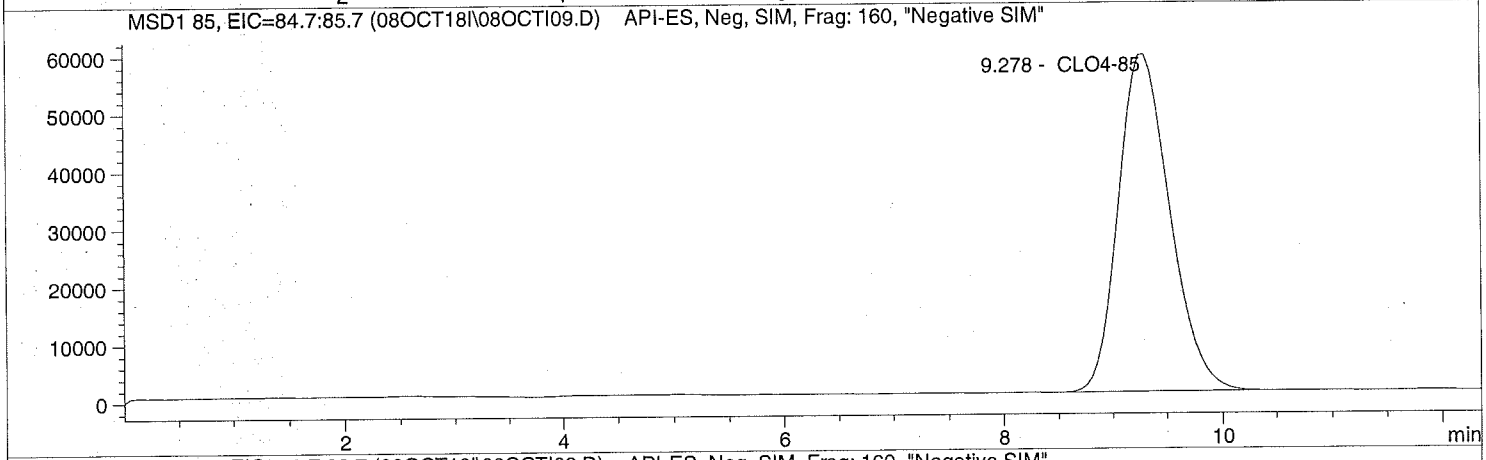
Data file: C:\HPCHEM\1\DATA\08OCT18I\08OCTI09.D Sample Name: CLO4@ 50.ug/L

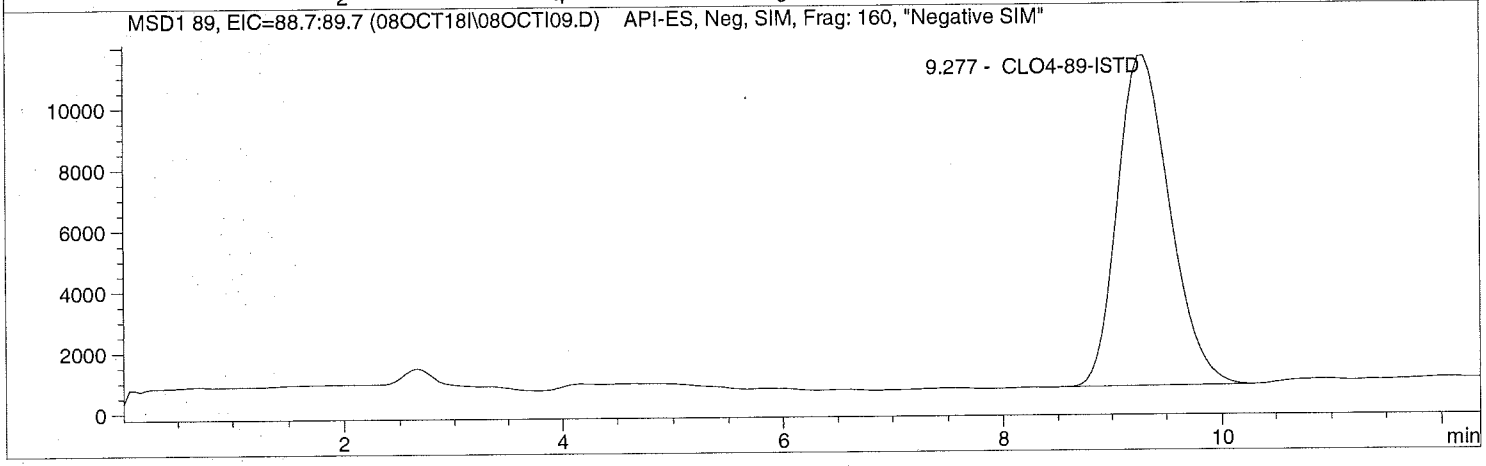
Injection Date:	10/08/2018 12:48:34	Seq Line:	9
Sample Name:	CLO4@ 50.ug/L	Location:	Vial 79
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 10/9/2018 08:22:51

Perchlorate analysis







Data file: C:\HPCHEM\1\DATA\08OCT18I\08OCTI09.D Sample Name: CLO4@ 50.ug/L

Injection Date:	10/08/2018 12:48:34	Seq Line:	9
Sample Name:	CLO4@ 50.ug/L	Location:	Vial 79
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 10/9/2018 08:22:51

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Tue, 9. Oct. 2018, 08:01:57 am
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	50.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
9.261	PBA	6295070.5	49.9198	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
9.278	PBA	1918466.9	49.7485	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
9.277	PBA	359392.8	5.0000	CLO4-89-ISTD

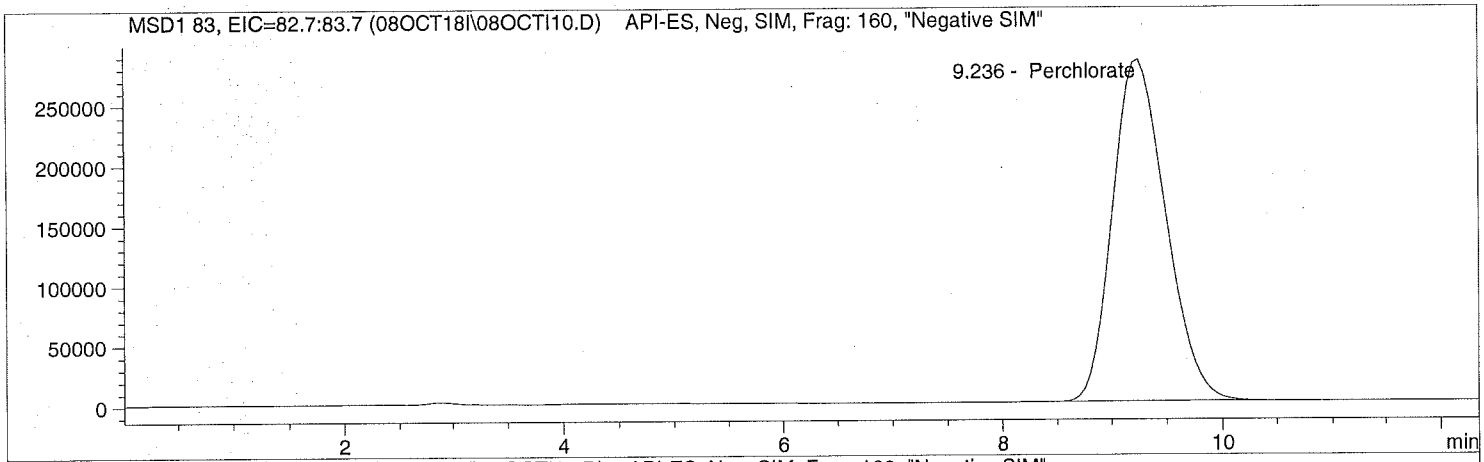
*** End of Report ***

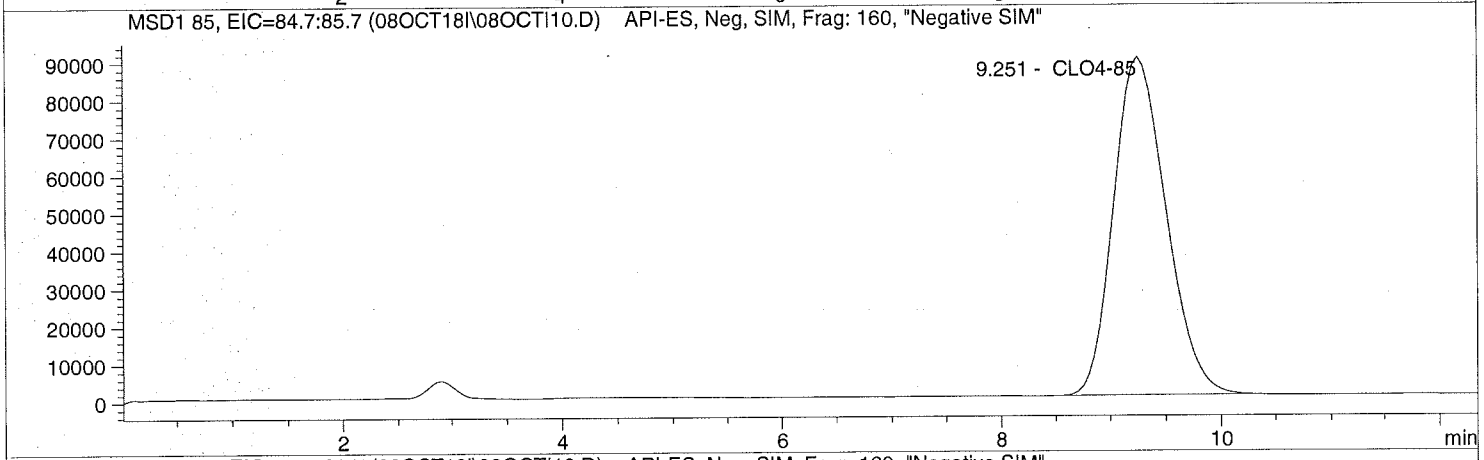
Data file: C:\HPCHEM\1\DATA\08OCT18I\08OCTI10.D Sample Name: CLO4@ 75.ug/L

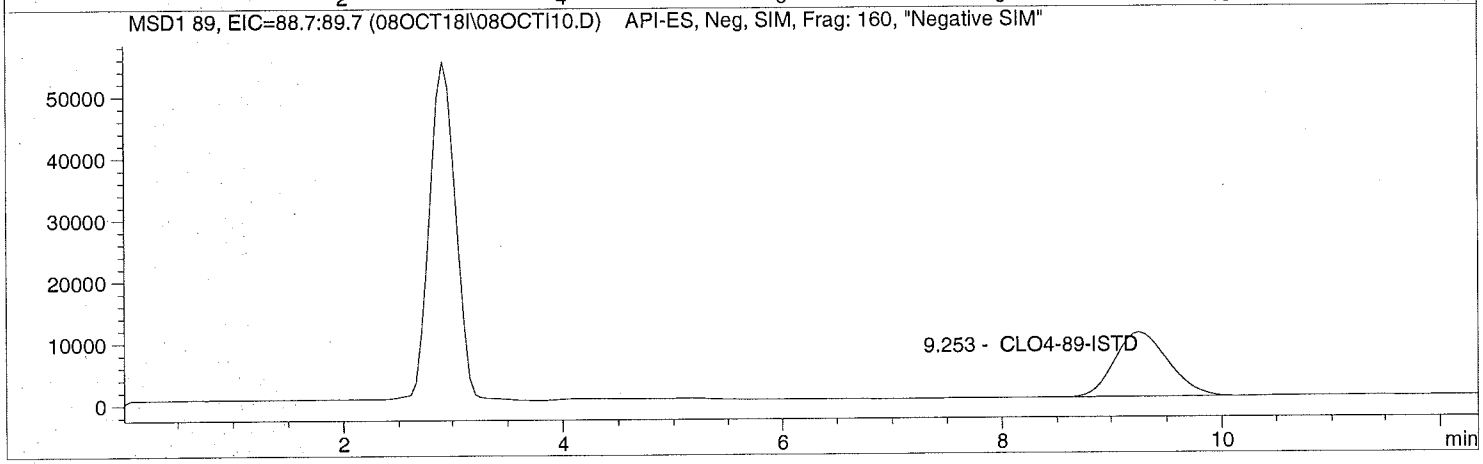
Injection Date:	10/08/2018 13:02:48	Seq Line:	10
Sample Name:	CLO4@ 75.ug/L	Location:	Vial 80
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 10/9/2018 08:22:51

Perchlorate analysis







Data file: C:\HPCHEM\1\DATA\08OCT18I\08OCTI10.D Sample Name: CLO4@ 75.ug/L

Injection Date:	10/08/2018 13:02:48	Seq Line:	10
Sample Name:	CLO4@ 75.ug/L	Location:	Vial 80
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 10/9/2018 08:22:51

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Tue, 9. Oct. 2018, 08:01:57 am
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	75.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
9.236	PBA	9457367.0	74.8852	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
9.251	PBA	2938347.5	75.0265	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
9.253	PBA	345192.7	5.0000	CLO4-89-ISTD

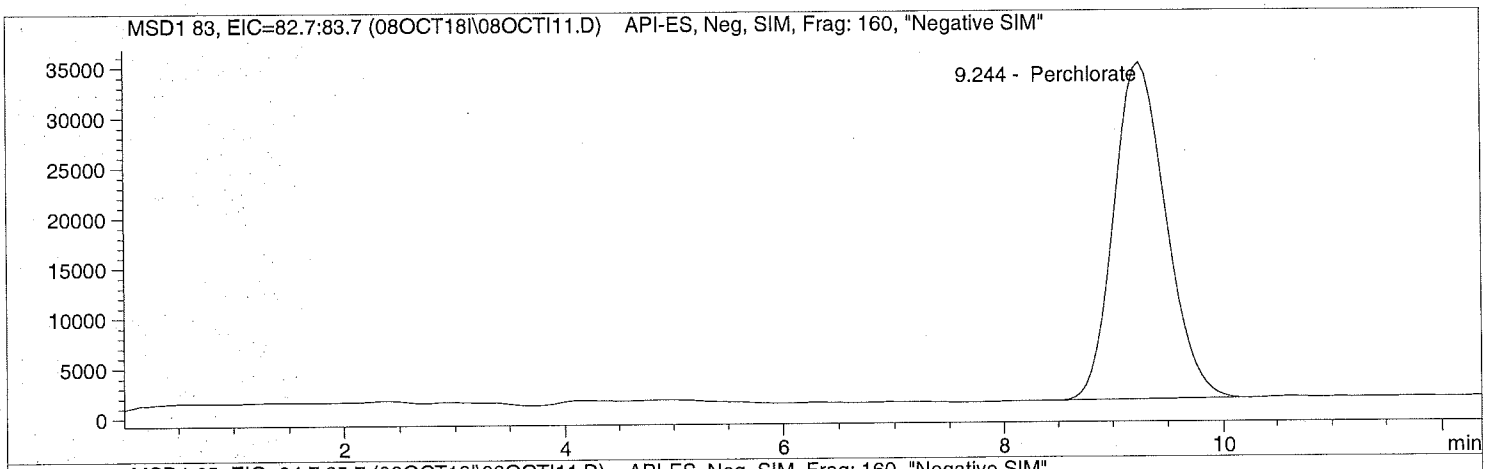
*** End of Report ***

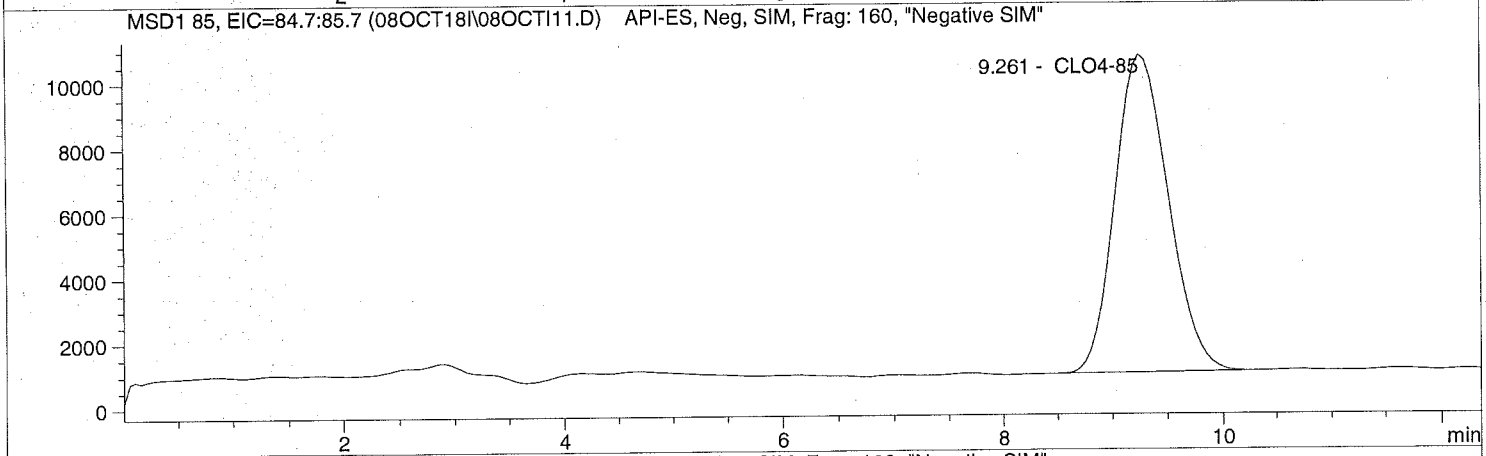
Data file: C:\HPCHEM\1\DATA\08OCT18I\08OCTI11.D Sample Name: ICAL Verf@10ug/L

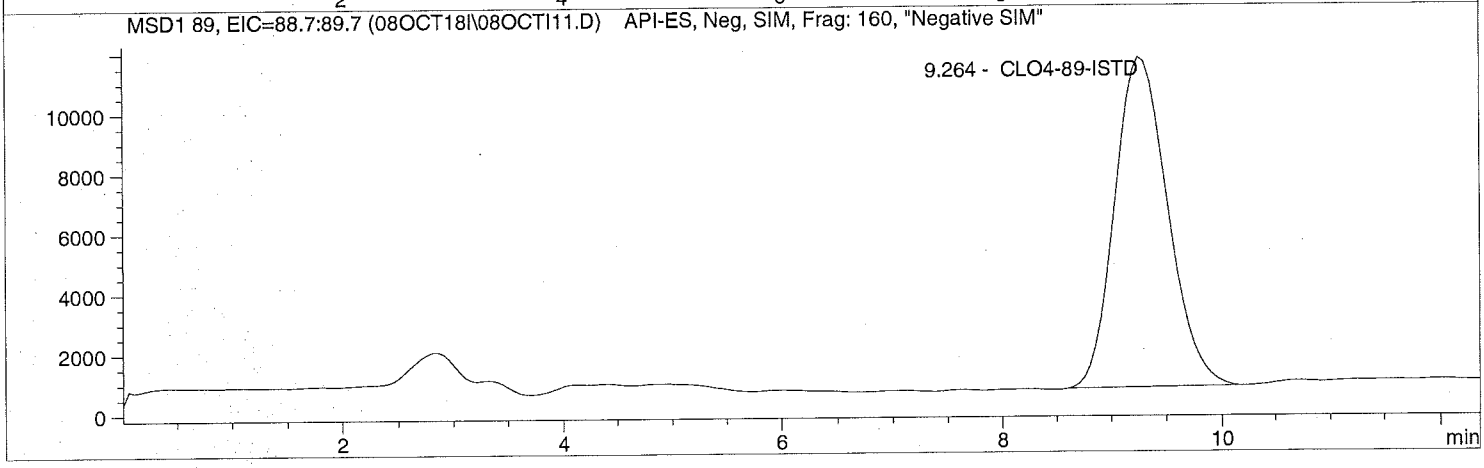
Injection Date:	10/08/2018 13:17:00	Seq Line:	11
Sample Name:	ICAL Verf@10ug/L	Location:	Vial 81
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 10/9/2018 08:22:51

Perchlorate analysis







Data file: C:\HPCHEM\1\DATA\08OCT18I\08OCTI11.D Sample Name: ICAL Verf@10ug/L

Injection Date:	10/08/2018 13:17:00	Seq Line:	11
Sample Name:	ICAL Verf@10ug/L	Location:	Vial 81
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 10/9/2018 08:22:51

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Tue, 9. Oct. 2018, 08:01:57 am
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	10.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
9.244	PBA	1100685.7	9.3895	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
9.261	PBA	327974.4	9.2891	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
9.264	PBA	364657.2	5.0000	CLO4-89-ISTD

*** End of Report ***

HS18121523 Volatiles Raw Data

ALS WO# HS18121523

MSVOA09 -Logbook

Batch: 34078
Date: 01-08-2019
Method: 8260
Comments:

Analyst: Presenta Cabascango
Reviewer:
Laboratory: Houston

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	g
1	BFB	TUNE	01-08-2019 10:29 am	1.00	50 mL	50 mL	U010801.D	Liquid	Y	N
2	*Auto find/ purged* VSTD000.25	ICAL1	01-08-2019 10:54 am	1.00	50 mL	50 mL	U010802.D	Liquid	Y	N
3	*0.1 uL cal std/100 mL DI* VSTD000.5	ICAL2	01-08-2019 11:18 am	1.00	50 mL	50 mL	U010803.D	Liquid	Y	N
4	*0.1 uL cal std/50 mL DI* VSTD001	ICAL3	01-08-2019 12:07 pm	1.00	50 mL	50 mL	U010804.D	Liquid	Y	N
5	*0.2 uL cal std/50 mL DI* VSTD002	ICAL4	01-08-2019 12:32 pm	1.00	50 mL	50 mL	U010805.D	Liquid	Y	N
6	*0.4 uL cal std/50 mL DI* VSTD005	ICAL5	01-08-2019 12:56 pm	1.00	50 mL	50 mL	U010806.D	Liquid	Y	N
7	*1.0 uL cal std/50 mL DI* VSTD020	ICAL6	01-08-2019 01:21 pm	1.00	50 mL	50 mL	U010807.D	Liquid	Y	N
8	*4.0 uL cal std/50 mL DI* VSTD050	ICAL7	01-08-2019 01:45 pm	1.00	50 mL	50 mL	U010808.D	Liquid	Y	N
9	*10 uL cal std/50 mL DI* VSTD100	ICAL8	01-08-2019 02:10 pm	1.00	50 mL	50 mL	U010809.D	Liquid	Y	N
10	*20 uL cal std/50 mL DI* VSTD150	ICAL9	01-08-2019 02:34 pm	1.00	50 mL	50 mL	U010810.D	Liquid	Y	N
11	*30 uL cal std/50 mL DI* VSTD200	ICAL	01-08-2019 02:59 pm	1.00	50 mL	50 mL	U010811.D	Liquid	Y	N
12	*40 uL cal std/50 mL DI* BLANK	SAMP	01-08-2019 03:24 pm	1.00	50 mL	50 mL	U010812.D	Liquid	Y	N
13	*clean up blank* VSTD050	ICV	01-08-2019 03:48 pm	1.00	50 mL	50 mL	U010813.D	Liquid	Y	N
14	*10 uL ical std/50 mL DI* Blank	SAMP	01-08-2019 04:13 pm	1.00	50 mL	50 mL	U010814.D	Liquid	Y	N
15	BFB	TUNE	01-08-2019 04:38 pm	1.00	50 mL	50 mL	V010801.D	Liquid	Y	N
16	*Auto find/ purged* VSTD050	CCV	01-08-2019 05:03 pm	1.00	50 mL	50 mL	V010802.D	Liquid	Y	r
17	*10 uL cal std/50 mL DI* VSTD050	CCV	01-08-2019 05:27 pm	1.00	50 mL	50 mL	V010803.D	Liquid	Y	r
18	*10 uL cal std/50 mL DI* VLCSW-190108	LCS	01-08-2019 05:52 pm	1.00	50 mL	50 mL	V010804.D	Liquid	Y	r
19	*4.0 uL cal std/50 mL DI* BLANK	SAMP	01-08-2019 06:17 pm	1.00	50 mL	50 mL	V010805.D	Liquid	Y	r
20	BLANK	SAMP	01-08-2019 06:42 pm	1.00	50 mL	50 mL	V010806.D	Liquid	Y	r
21	VBLKW-190108	MBLK	01-08-2019 07:06 pm	1.00	50 mL	50 mL	V010807.D	Liquid	Y	r
22	HS18121523-07	SAMP	01-08-2019 07:31 pm	1.00	50 mL	50 mL	V010808.D	Liquid	Y	>
23	HS18121520-09	SAMP	01-08-2019 07:56 pm	5.00	10 mL	50 mL	V010809.D	Liquid	Y	>
24	HS18121520-09DL	SAMP	01-08-2019 08:21 pm	50.00	1 mL	50 mL	V010810.D	Liquid	Y	>
25	HS18121520-09MS	MS	01-08-2019 08:46 pm	1.00	50 mL	50 mL	V010811.D	Liquid	Y	>
26	*305 uL cal std/43 mL samp* HS18121520-09MSD	MSD	01-08-2019 09:10 pm	1.00	50 mL	50 mL	V010812.D	Liquid	Y	>
27	*305 uL cal std/43 mL samp* HS18121520-06DL	SAMP	01-08-2019 09:35 pm	25.00	2 mL	50 mL	V010813.D	Liquid	Y	>
28	BLANK	SAMP	01-08-2019 10:00 pm	1.00	50 mL	50 mL	V010814.D	Liquid	Y	r
29	BLANK	SAMP	01-08-2019 10:24 pm	1.00	50 mL	50 mL	V010815.D	Liquid	Y	r
30	HS18121520-05	SAMP	01-08-2019 10:49 pm	1.00	50 mL	50 mL	V010816.D	Liquid	Y	>
31	HS18121520-07	SAMP	01-08-2019 11:14 pm	1.00	50 mL	50 mL	V010817.D	Liquid	Y	>

MSVOA09 -Logbook

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	p
32	HS18121520-08	SAMP	01-08-2019 11:39 pm	1.00	50 mL	50 mL	V010818.D	Liquid	Y	>
33	HS18121523-03	SAMP	01-09-2019 12:03 am	1.00	50 mL	50 mL	V010819.D	Liquid	Y	>
34	HS18121523-04	SAMP	01-09-2019 12:28 am	1.00	50 mL	50 mL	V010820.D	Liquid	Y	>
35	HS18121523-05	SAMP	01-09-2019 12:53 am	1.00	50 mL	50 mL	V010821.D	Liquid	Y	>
36	HS18121523-02	SAMP	01-09-2019 01:17 am	1.00	50 mL	50 mL	V010822.D	Liquid	Y	>
37	HS18121523-06	SAMP	01-09-2019 01:42 am	5.00	10 mL	50 mL	V010823.D	Liquid	Y	>
38	HS18121523-01	SAMP	01-09-2019 02:07 am	1.00	50 mL	50 mL	V010824.D	Liquid	Y	>
39	HS18121523-01DL	SAMP	01-09-2019 02:31 am	5.00	10 mL	50 mL	V010825.D	Liquid	Y	>
40	VSTD050-END	CCV	01-09-2019 02:56 am	1.00	50 mL	50 mL	V010826.D	Liquid	Y	>
41	VSTD050-END	CCV	01-09-2019 03:20 am	1.00	50 mL	50 mL	V010827.D	Liquid	Y	r
42	*10 uL cal std/50 mL DI* BLANK	SAMP	01-09-2019 03:45 am	1.00	50 mL	50 mL	V010828.D	Liquid	Y	>

Chemical	Value
SURR SPK ID	30502-57-03
IS ID	30502-57-04
ICV STD ID	30603-49-01
LCS/MS ID	30603-49-01
CAL STD ID	30502-59-01/02
BFB ID	30502-57-03
pH Paper	634-40-13

FORM 3
WATER VOLATILE METHOD SPIKE RECOVERY

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS18121523

Matrix Spike - Sample No.: VSTD050

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE AMOUNT ()	% REC #	QC. LIMITS REC.
cis-1,3-Dichloropropene	50.00	48.85	98	80-120
trans-1,3-Dichloroprope	50.00	48.64	97	80-120
1,3-Dichlorobenzene	50.00	48.15	96	80-120
2,2-Dichloropropane	50.00	52.14	104	80-120
1,1-Dichloropropene	50.00	45.73	91	80-120
Dibromomethane	50.00	49.36	99	80-120
1,2-Dibromoethane	50.00	51.06	102	80-120
trans-1,2-Dichloroethen	50.00	45.90	92	80-120
1,1,1,2-Tetrachloroetha	50.00	50.80	102	80-120
1,1,1-Trichloroethane	50.00	47.80	96	80-120
1,1,2,2-Tetrachloroetha	50.00	51.77	104	80-120
1,1,2-Trichloroethane	50.00	49.48	99	80-120
1,1-Dichloroethane	50.00	46.80	94	80-120
1,1-Dichloroethene	50.00	45.10	90	80-120
Trichloroethene	50.00	48.66	97	80-120
1,2,3-Trichlorobenzene	50.00	50.15	100	80-120
Trichlorofluoromethane	50.00	43.08	86	80-120
1,2,4-Trichlorobenzene	50.00	51.40	103	80-120
1,2,4-Trimethylbenzene	50.00	50.60	101	80-120
Tetrachloroethene	50.00	44.07	88	80-120
1,2-Dichlorobenzene	50.00	47.83	96	80-120
1,2-Dichloroethane	50.00	47.94	96	80-120
1,2-Dichloropropane	50.00	49.18	98	80-120
1,3,5-Trimethylbenzene	50.00	49.19	98	80-120
1,3-Dichloropropane	50.00	49.47	99	80-120
1,4-Dichlorobenzene	50.00	46.68	93	80-120
Toluene	50.00	48.36	97	80-120
2-Butanone	100.00	105.08	105	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 LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS18121523

Matrix Spike - Sample No.: VSTD050

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE AMOUNT ()	% REC #	QC. LIMITS REC.
2-Chlorotoluene	50.00	48.79	98	80-120
2-Hexanone	100.00	111.71	112	80-120
4-Chlorotoluene	50.00	48.74	97	80-120
tert-Butylbenzene	50.00	47.06	94	80-120
4-Methyl-2-Pentanone	100.00	109.48	109	80-120
Acetone	100.00	100.19	100	80-120
Benzene	50.00	47.48	95	80-120
Bromobenzene	50.00	49.99	100	80-120
Bromochloromethane	50.00	52.99	106	80-120
Bromodichloromethane	50.00	50.72	101	80-120
Bromoform	50.00	47.88	96	80-120
Bromomethane	50.00	51.16	102	80-120
Carbon Disulfide	100.00	94.41	94	80-120
Carbon Tetrachloride	50.00	48.74	97	80-120
Chlorobenzene	50.00	47.26	94	80-120
Chloroethane	50.00	44.17	88	80-120
Chloroform	50.00	47.20	94	80-120
Chloromethane	50.00	46.70	93	80-120
cis-1,2-Dichloroethene	50.00	47.17	94	80-120
Dibromochloromethane	50.00	48.38	97	80-120
Dichlorodifluoromethane	50.00	44.03	88	80-120
Ethylbenzene	50.00	47.26	94	80-120
Hexachlorobutadiene	50.00	47.27	94	80-120
Isopropylbenzene	50.00	48.47	97	80-120
m,p-Xylenes	100.00	98.32	98	80-120
Methylene Chloride	50.00	48.39	97	80-120
n-Butylbenzene	50.00	45.95	92	80-120
n-Propylbenzene	50.00	48.01	96	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 LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS18121523

Matrix Spike - Sample No.: VSTD050

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE AMOUNT ()	% REC #	QC. LIMITS REC.
Naphthalene	50.00	50.80	102	80-120
o-Xylene	50.00	49.04	98	80-120
sec-Butylbenzene	50.00	46.44	93	80-120
Styrene	50.00	51.17	102	80-120
Vinyl Chloride	50.00	44.45	89	80-120
1,2,3-Trichloropropane	50.00	53.93	108	80-120
p-Isopropyltoluene	50.00	48.38	97	80-120
1,2-Dibromo-3-Chloropro	50.00	50.11	100	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 LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS18121523

Lab File ID: U012301 BFB Injection Date: 01/23/19

Instrument ID: VOA9 BFB Injection Time: 1043

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	21.7
75	30.0 - 60.0% of mass 95	52.2
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.0
173	Less than 2.0% of mass 174	0.6 (0.9)1
174	Greater than 50.0% of mass 95	62.0
175	5.0 - 9.0% of mass 174	4.6 (7.5)1
176	95.0 - 101.0% of mass 174	58.9 (95.1)1
177	5.0 - 9.0% of mass 176	4.0 (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	VSTD000.25	VSTD000.25	U010802	01/08/19	1054
02	VSTD000.5	VSTD000.5	U010803	01/08/19	1118
03	VSTD001	VSTD001	U010804	01/08/19	1207
04	VSTD002	VSTD002	U010805	01/08/19	1232
05	VSTD005	VSTD005	U010806	01/08/19	1256
06	VSTD020	VSTD020	U010807	01/08/19	1321
07	VSTD050	VSTD050	U010808	01/08/19	1345
08	VSTD100	VSTD100	U010809	01/08/19	1410
09	VSTD150	VSTD150	U010810	01/08/19	1434
10	VSTD200	VSTD200	U010811	01/08/19	1459
11	VSTD050	VSTD050	U010813	01/08/19	1548
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.: HS18121523

Instrument ID: VOA9 Calibration Date(s): 01/08/19 01/08/19

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1054 1459

LAB FILE ID: RF0.25: U010802 RF0.5: U010803 RF1: U010804
RF2: U010805 RF5: U010806 RF20: U010807

COMPOUND	RF0.25	RF0.5	RF1	RF2	RF5	RF20
cis-1,3-Dichloropropene		2839	7156	13084	36876	160416
trans-1,3-Dichloropropene		2396	5824	10454	29527	135765
1,3-Dichlorobenzene		1.485	1.765	1.463	1.506	1.470
2,2-Dichloropropane		0.630	0.745	0.645	0.630	0.652
1,1-Dichloropropene		0.465	0.547	0.450	0.447	0.448
Dibromomethane		0.194	0.236	0.195	0.218	0.211
1,2-Dibromoethane		0.308	0.377	0.342	0.349	0.358
trans-1,2-Dichloroethene		0.618	0.718	0.580	0.617	0.595
1,1,1,2-Tetrachloroethane		0.254	0.315	0.286	0.279	0.304
1,1,1-Trichloroethane		0.669	0.912	0.753	0.801	0.808
1,1,2,2-Tetrachloroethane		3672	8453	15238	38499	157201
1,1,2-Trichloroethane		0.281	0.353	0.304	0.316	0.309
1,1-Dichloroethane		1.123	1.292	1.102	1.150	1.120
1,1-Dichloroethene		0.463	0.588	0.492	0.484	0.447
Trichloroethene		0.240	0.397	0.319	0.323	0.316
1,2,3-Trichlorobenzene		0.830	0.876	0.847	0.856	0.897
Trichlorofluoromethane		0.904	0.976	0.813	0.799	0.796
1,2,4-Trichlorobenzene		0.692	0.939	0.825	0.901	0.912
1,2,4-Trimethylbenzene		2.218	2.812	2.468	2.657	2.745
Tetrachloroethene		0.288	0.316	0.269	0.258	0.244
1,2-Dichlorobenzene		1.582	1.739	1.523	1.511	1.482
1,2-Dichloroethane		0.472	0.566	0.490	0.490	0.486
1,2-Dichloropropane		0.327	0.409	0.350	0.359	0.362
1,3,5-Trimethylbenzene		2.249	2.729	2.376	2.553	2.649
1,3-Dichloropropane		0.611	0.761	0.647	0.679	0.670
1,4-Dichlorobenzene		1.748	1.936	1.587	1.570	1.533
Toluene		1.519	1.744	1.509	1.547	1.548
2-Butanone		0.320	0.369	0.324	0.341	0.355
2-Chlorotoluene		2.260	2.752	2.294	2.388	2.385
2-Hexanone		0.233	0.261	0.258	0.275	0.314
4-Chlorotoluene		2.613	3.163	2.676	2.793	2.805
tert-Butylbenzene		2.045	2.428	2.162	2.181	2.254
4-Methyl-2-Pentanone		0.337	0.405	0.381	0.406	0.446
Acetone		3350	5926	8715	20388	79871
Benzene		1.297	1.632	1.365	1.387	1.365
Bromobenzene		0.727	0.836	0.760	0.775	0.772
Bromochloromethane		0.218	0.252	0.291	0.315	0.298
Bromodichloromethane		0.330	0.403	0.356	0.368	0.387
Bromoform		1047	2493	4283	11809	53545
Bromomethane		2378	5371	8201	18180	59235
Carbon Disulfide		1.730	2.003	1.667	1.660	1.690
Carbon Tetrachloride		0.287	0.345	0.298	0.308	0.335
Chlorobenzene		0.999	1.207	0.997	1.001	0.974
Chloroethane		0.445	0.508	0.511	0.429	0.432

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS1812152

Instrument ID: VOA9 Calibration Date(s): 01/08/19 01/08/19

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1054 1459

LAB FILE ID: RF0.25: U010802 RF0.5: U010803 RF1: U010804
RF2: U010805 RF5: U010806 RF20: U010807

COMPOUND	RF0.25	RF0.5	RF1	RF2	RF5	RF20
Chloroform		1.007	1.256	1.064	1.108	1.082
Chloromethane		3056	6743	11251	26856	106870
cis-1,2-Dichloroethene		0.660	0.797	0.657	0.679	0.678
Dibromochloromethane		1574	3605	6755	19557	85941
Dichlorodifluoromethane		0.643	0.820	0.668	0.621	0.622
Ethylbenzene		0.477	0.571	0.476	0.501	0.496
Hexachlorobutadiene		1632	2244	4288	10485	43278
Isopropylbenzene		1.262	1.534	1.375	1.455	1.498
m,p-Xylenes		0.548	0.688	0.580	0.612	0.629
Methylene Chloride		3706	7653	11877	29083	108486
n-Butylbenzene		2.580	2.776	2.511	2.570	2.608
n-Propylbenzene		3.605	4.306	3.698	3.837	3.950
Naphthalene		5534	13707	27018	81349	393536
o-Xylene		0.597	0.676	0.600	0.621	0.640
sec-Butylbenzene		2.751	3.371	3.064	3.143	3.239
Styrene		0.892	1.099	0.954	1.038	1.088
Vinyl Chloride		0.753	0.880	0.712	0.708	0.711
1,2,3-Trichloropropane		1.074	1.253	1.071	1.144	1.220
p-Isopropyltoluene		2.346	2.770	2.478	2.573	2.782
1,2-Dibromo-3-Chloropropane		320	881	1607	4313	21582
1,2-Dichloroethane-d4		14011	17198	22691	40286	129430
Dibromofluoromethane		9792	12087	16204	29602	96372
Toluene-d8		40255	48097	65875	119933	399583
4-Bromofluorobenzene		13542	17004	23062	43652	148618

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS1812152

Instrument ID: VOA9 Calibration Date(s): 01/08/19 01/08/19

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1054 1459

LAB FILE ID: RF50: U010808 RF100: U010809 RF150: U010810
RF200: U010811

COMPOUND	RF50	RF100	RF150	RF200
cis-1,3-Dichloropropene	428865	926076	1431850	1921305
trans-1,3-Dichloropropene	367494	801236	1237749	1672981
1,3-Dichlorobenzene	1.437	1.480	1.492	1.476
2,2-Dichloropropane	0.658	0.716	0.733	0.717
1,1-Dichloropropene	0.430	0.459	0.461	0.453
Dibromomethane	0.208	0.210	0.211	0.208
1,2-Dibromoethane	0.353	0.351	0.352	0.346
trans-1,2-Dichloroethene	0.573	0.597	0.604	0.588
1,1,1,2-Tetrachloroethane	0.310	0.321	0.328	0.323
1,1,1-Trichloroethane	0.801	0.861	0.889	0.875
1,1,2,2-Tetrachloroethane	386140	791393	1181566	1597058
1,1,2-Trichloroethane	0.301	0.298	0.298	0.294
1,1-Dichloroethane	1.089	1.119	1.136	1.099
1,1-Dichloroethene	0.440	0.468	0.479	0.479
Trichloroethene	0.308	0.309	0.327	0.326
1,2,3-Trichlorobenzene	0.890	0.931	0.945	0.948
Trichlorofluoromethane	0.761	0.821	0.830	0.827
1,2,4-Trichlorobenzene	0.908	0.964	0.983	0.982
1,2,4-Trimethylbenzene	2.648	2.685	2.728	2.671
Tetrachloroethene	0.233	0.251	0.254	0.251
1,2-Dichlorobenzene	1.447	1.464	1.468	1.448
1,2-Dichloroethane	0.468	0.465	0.462	0.454
1,2-Dichloropropane	0.355	0.361	0.363	0.355
1,3,5-Trimethylbenzene	2.533	2.676	2.684	2.633
1,3-Dichloropropane	0.649	0.647	0.645	0.631
1,4-Dichlorobenzene	1.474	1.511	1.523	1.505
Toluene	1.506	1.515	1.502	1.444
2-Butanone	0.352	0.354	0.346	0.354
2-Chlorotoluene	2.301	2.345	2.351	2.317
2-Hexanone	0.307	0.316	0.313	0.318
4-Chlorotoluene	2.673	2.736	2.736	2.689
tert-Butylbenzene	2.115	2.198	2.267	2.224
4-Methyl-2-Pentanone	0.437	0.446	0.440	0.444
Acetone	179800	376346	504121	752770
Benzene	1.326	1.348	1.350	1.313
Bromobenzene	0.769	0.787	0.798	0.793
Bromochloromethane	0.296	0.278	0.270	0.256
Bromodichloromethane	0.395	0.411	0.420	0.417
Bromoform	144409	321354	502752	687286
Bromomethane	136129	307120	488763	
Carbon Disulfide	1.663	1.737	1.576	1.670
Carbon Tetrachloride	0.326	0.367	0.374	0.372
Chlorobenzene	0.950	0.955	0.957	0.932
Chloroethane	0.413	0.434	0.445	0.438

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS1812152

Instrument ID: VOA9 Calibration Date(s): 01/08/19 01/08/19

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1054 1459

LAB FILE ID: RF50: U010808 RF100: U010809 RF150: U010810
RF200: U010811

COMPOUND	RF50	RF100	RF150	RF200
Chloroform	1.040	1.058	1.069	1.032
Chloromethane	245400	515965	861673	1231855
cis-1,2-Dichloroethene	0.661	0.674	0.684	0.666
Dibromochloromethane	229139	491650	772060	1039615
Dichlorodifluoromethane	0.604	0.648	0.660	0.660
Ethylbenzene	0.486	0.508	0.508	0.502
Hexachlorobutadiene	101106	235659	361569	491406
Isopropylbenzene	1.406	1.486	1.474	1.434
m,p-Xylenes	0.605	0.628	0.624	0.609
Methylene Chloride	264627	540514	814401	1093304
n-Butylbenzene	2.448	2.619	2.606	2.569
n-Propylbenzene	3.747	3.942	3.893	3.804
Naphthalene	1013970	2158340	3241704	4364184
o-Xylene	0.616	0.632	0.634	0.620
sec-Butylbenzene	3.066	3.311	3.282	3.222
Styrene	1.074	1.092	1.088	1.058
Vinyl Chloride	0.676	0.738	0.755	0.744
1,2,3-Trichloropropane	1.248	1.264	1.289	1.314
p-Isopropyltoluene	2.630	2.828	2.807	2.754
1,2-Dibromo-3-Chloropropane	55985	123999	188865	267735
1,2-Dichloroethane-d4	310401	607717	910863	1222427
Dibromofluoromethane	233946	464059	699083	938870
Toluene-d8	963061	1896057	2828636	3786858
4-Bromofluorobenzene	358290	714768	1067232	1452643

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS1812152

Instrument ID: VOA9 Calibration Date(s): 01/08/19 01/08/19

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1054 1459

COMPOUND	CURVE	COEFFICENTS A0	COEFFICENTS A1	COEFFICENTS A2	%RSD OR R^2	MAX %RSD OR R^2
cis-1,3-Dichloropropene	LINR	2.618e-002	1.67366707		0.9997199	0.9900000
trans-1,3-Dichloropropene	LINR	3.204e-002	1.92505347		0.9996270	0.9900000
1,3-Dichlorobenzene	AVRG		1.50827962		6.499	20.000
2,2-Dichloropropane	AVRG		0.68064032		6.802	20.000
1,1-Dichloropropene	AVRG		0.46230796		7.217	20.000
Dibromomethane	AVRG		0.21003901		5.832	20.000
1,2-Dibromoethane	AVRG		0.34854004		5.196	20.000
trans-1,2-Dichloroethene	AVRG		0.60995415		7.097	20.000
1,1,1,2-Tetrachloroethane	AVRG		0.30208673		8.145	20.000
1,1,1-Trichloroethane	AVRG		0.81887889		9.270	20.000
1,1,2,2-Tetrachloroethane	LINR	-7.28e-003	0.89245816		0.9999625	0.9900000
1,1,2-Trichloroethane	AVRG		0.30600009		6.601	20.000
1,1-Dichloroethane	AVRG		1.13654996		5.390	20.000
1,1-Dichloroethene	AVRG		0.48231156		8.974	20.000
Trichloroethene	AVRG		0.31833521		12.546	20.000
1,2,3-Trichlorobenzene	AVRG		0.89097608		4.832	20.000
Trichlorofluoromethane	AVRG		0.83648482		7.776	20.000
1,2,4-Trichlorobenzene	AVRG		0.90081437		10.269	20.000
1,2,4-Trimethylbenzene	AVRG		2.62584086		6.832	20.000
Tetrachloroethene	AVRG		0.26264510		9.628	20.000
1,2-Dichlorobenzene	AVRG		1.51815666		6.146	20.000
1,2-Dichloroethane	AVRG		0.48381139		6.925	20.000
1,2-Dichloropropane	AVRG		0.35996009		5.952	20.000
1,3,5-Trimethylbenzene	AVRG		2.56461066		6.180	20.000
1,3-Dichloropropane	AVRG		0.66011231		6.457	20.000
1,4-Dichlorobenzene	AVRG		1.59871556		9.361	20.000
Toluene	AVRG		1.53711184		5.415	20.000
2-Butanone	AVRG		0.34599533		4.487	20.000
2-Chlorotoluene	AVRG		2.37703625		6.178	20.000
2-Hexanone	AVRG		0.28836532		11.101	20.000
4-Chlorotoluene	AVRG		2.76503221		5.822	20.000
tert-Butylbenzene	AVRG		2.20853232		4.867	20.000
4-Methyl-2-Pentanone	AVRG		0.41583873		8.982	20.000
Acetone	LINR	-3.28e-002	4.69723658		0.9965084	0.9900000
Benzene	AVRG		1.37594921		7.265	20.000
Bromobenzene	AVRG		0.77966353		3.820	20.000
Bromochloromethane	AVRG		0.27483919		10.753	20.000
Bromodichloromethane	AVRG		0.38760640		7.866	20.000
Bromoform	LINR	3.586e-002	4.42000955		0.9994245	0.9900000
Bromomethane	LINR	1.517e-002	2.63724913		0.9970358	0.9900000
Carbon Disulfide	AVRG		1.71083309		6.962	20.000
Carbon Tetrachloride	AVRG		0.33479382		9.693	20.000
Chlorobenzene	AVRG		0.99683220		8.270	20.000
Chloroethane	AVRG		0.45067377		7.732	20.000

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS1812152

Instrument ID: VOA9 Calibration Date(s): 01/08/19 01/08/19

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1054 1459

COMPOUND	CURVE	COEFFICENTS A0	A1	A2	%RSD OR R^2	MAX %RSD OR R^2
Chloroform	AVRG		1.07966958		6.700	20.000
Chloromethane	LINR	4.919e-002	1.42548161		0.9953511	0.9900000
cis-1,2-Dichloroethene	AVRG		0.68388027		6.359	20.000
Dibromochloromethane	LINR	2.459e-002	2.91148315		0.9997087	0.9900000
Dichlorodifluoromethane	AVRG		0.66073584		9.597	20.000
Ethylbenzene	AVRG		0.50282436		5.670	20.000
Hexachlorobutadiene	2ORDR	6.967e-003	3.11700195	-0.1728941	0.9995370	0.9900000
Isopropylbenzene	AVRG		1.43626598		5.658	20.000
m,p-Xylenes	AVRG		0.61382645		6.203	20.000
Methylene Chloride	LINR	-1.01e-002	1.57011846		0.9999481	0.9900000
n-Butylbenzene	AVRG		2.58768821		3.438	20.000
n-Propylbenzene	AVRG		3.86471690		5.193	20.000
Naphthalene	2ORDR	1.418e-002	0.32320338	1.226e-004	0.9999571	0.9900000
o-Xylene	AVRG		0.62619866		3.785	20.000
sec-Butylbenzene	AVRG		3.16121754		5.894	20.000
Styrene	AVRG		1.04267437		6.920	20.000
Vinyl Chloride	AVRG		0.74200768		7.796	20.000
1,2,3-Trichloropropane	AVRG		1.20856468		7.494	20.000
p-Isopropyltoluene	AVRG		2.66323199		6.305	20.000
1,2-Dibromo-3-Chloropropane	LINR	4.165e-002	5.38034837		0.9986325	0.9900000
1,2-Dichloroethane-d4	LINR	-4.46e-002	1.41695556		0.9999507	0.9900000
Dibromofluoromethane	2ORDR	-3.27e-002	1.82520597	8.571e-003	0.9999773	0.9900000
Toluene-d8	LINR	-4.91e-002	0.80738118		0.9997380	0.9900000
4-Bromofluorobenzene	LINR	-3.73e-002	2.11447014		0.9999203	0.9900000

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010801.D

Date : 08-JAN-2019 10:29

Client ID: BFB

Instrument: VOA9.i

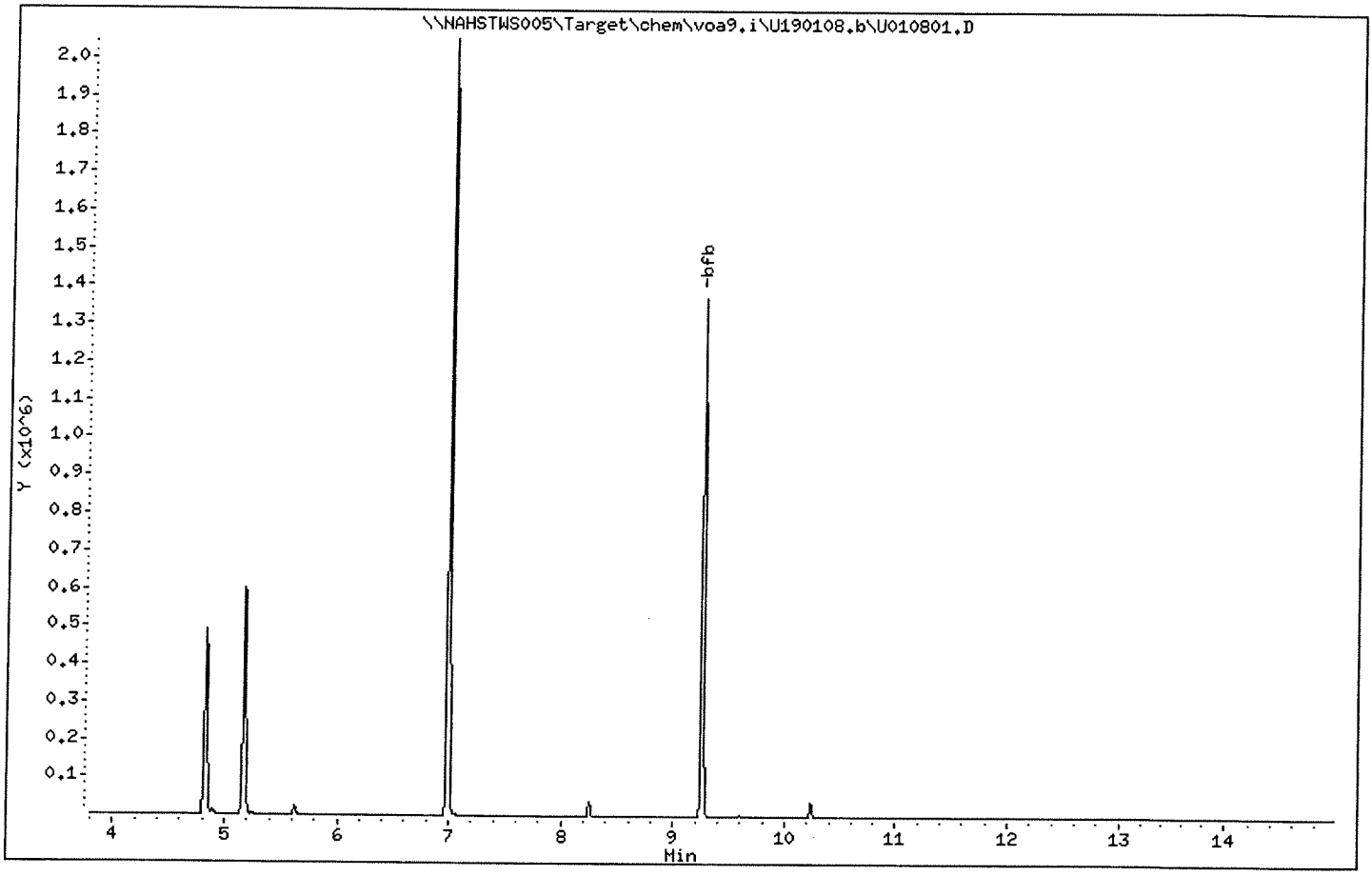
Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25



Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010801.D

Date : 08-JAN-2019 10:29

Client ID: BFB

Instrument: VOA9.i

Sample Info: BFB;BFB;3;;BFB

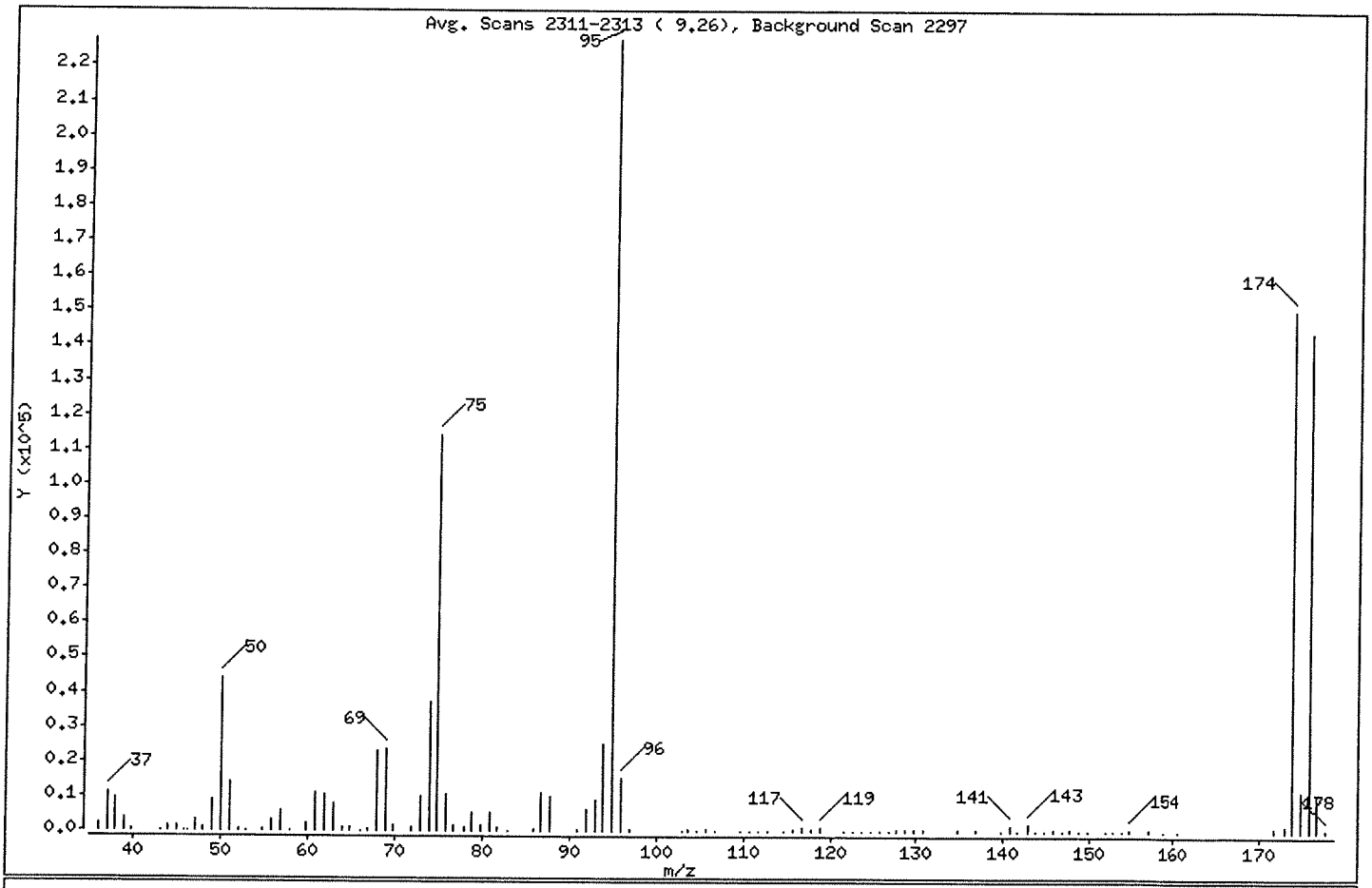
Volume Injected (uL): 2.0

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	19.39
75	30.00 - 60.00% of mass 95	50.13
96	5.00 - 9.00% of mass 95	6.68
173	Less than 2.00% of mass 174	0.60 (0.92)
174	Greater than 50.00% of mass 95	65.89
175	5.00 - 9.00% of mass 174	4.99 (7.58)
176	95.00 - 101.00% of mass 174	63.30 (96.07)
177	5.00 - 9.00% of mass 176	4.50 (7.11)

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010801.D

Date : 08-JAN-2019 10:29

Client ID: BFB

Instrument: VOA9.i

Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25

Data File: U010801.D

Spectrum: Avg. Scans 2311-2313 (9.26), Background Scan 2297

Location of Maximum: 94.90

Number of points: 105

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1986	66.00	138	103.00	68	140.70	1551
37.00	10801	66.90	527	103.70	735	141.60	240
38.00	9538	67.90	22840	104.70	257	142.80	1891
39.00	3843	68.90	23312	105.70	768	143.70	108
39.90	449	69.90	1766	106.80	205	144.70	247
43.10	127	71.90	1182	109.60	57	145.70	284
43.90	1449	72.90	10041	110.80	122	146.70	122
45.00	1813	73.90	36984	111.70	120	147.70	349
45.80	151	74.90	114080	112.70	98	148.60	105
46.20	155	75.90	10414	114.70	153	149.70	200
47.00	2935	76.80	1428	115.70	663	151.70	84
47.90	1253	77.90	1020	116.80	1034	152.60	159
49.00	9128	78.80	5133	117.70	610	153.70	83
50.00	44128	79.90	1706	118.80	1033	154.60	412
51.00	14080	80.80	4985	121.60	57	156.70	332
52.00	563	81.80	1126	122.60	101	158.70	186
52.90	96	82.90	83	123.70	95	160.60	183
54.90	552	85.90	288	124.70	60	171.70	931
55.90	3174	86.80	10773	125.70	88	172.80	1375
57.00	5880	87.80	10129	126.80	56	173.70	149952
57.90	256	90.80	703	127.70	648	174.70	11366
59.90	2096	91.90	6061	128.70	324	175.70	144064
60.90	10835	92.90	9060	129.70	662	176.70	10245
61.90	10429	93.90	24920	130.70	275	177.70	362
63.00	7875	94.90	227584	134.70	277		
63.90	878	95.90	15199	136.70	280		
64.90	939	96.90	450	139.70	138		

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010802.D
Lab Smp Id: VSTD000.25 Client Smp ID: VSTD000.25
Inj Date : 08-JAN-2019 10:54
Operator : PC Inst ID: VOA9.i
Smp Info : VSTD000.25;VSTD000.25;1;1;
Misc Info : 180315V9;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa9.i\U190108.b\8260C.m
Meth Date : 01-Feb-2019 15:44 VOA9.i Quant Type: ISTD
Cal Date : 08-JAN-2019 10:54 Cal File: U010802.D
Als bottle: 2 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAPb.sub
Target Version: 4.14

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	4.894	4.898	(1.000)	424745	50.0000	
* 36 1,4-Difluorobenzene	114	5.624	5.629	(1.000)	798067	50.0000	
* 47 Chlorobenzene-d5	117	8.249	8.249	(1.000)	719919	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.235	10.236	(1.000)	320219	50.0000	
$ 30 Dibromofluoromethane	113	4.830	4.830	(0.987)	9655	0.25000	0.43(a)
$ 35 1,2-Dichloroethane-d4	65	5.175	5.175	(1.057)	13907	0.25000	0.09(a)
$ 48 Toluene-d8	98	6.989	6.989	(0.847)	38067	0.25000	(a)
$ 69 4-Bromofluorobenzene	95	9.257	9.257	(1.122)	14081	0.25000	0.20(a)
31 1,1,1-Trichloroethane	97	4.826	4.830	(0.986)	1231	0.25000	0.17(a)
53 1,1,2-Trichloroethane	83	7.424	7.421	(0.900)	788	0.25000	0.17(a)
22 1,1-Dichloroethane	63	3.604	3.608	(0.737)	1975	0.25000	0.20(Ta)
32 1,1-Dichloropropene	75	5.002	5.006	(0.889)	1755	0.25000	0.23(a)
71 1,2,3-Trichloropropane	75	9.426	9.426	(0.921)	1231	0.25000	0.15(a)
79 1,2,4-Trimethylbenzene	105	9.943	9.943	(0.971)	3167	0.25000	0.18(a)
57 1,2-Dibromoethane	107	7.851	7.852	(0.952)	1065	0.25000	0.21(a)
88 1,2-Dichlorobenzene	146	10.569	10.569	(1.033)	2083	0.25000	0.21(a)
33 1,2-Dichloroethane	62	5.253	5.254	(0.934)	1729	0.25000	0.22(a)
42 1,2-Dichloropropane	63	6.078	6.082	(1.081)	1106	0.25000	0.19(a)
75 1,3,5-Trimethylbenzene	105	9.624	9.625	(0.940)	3077	0.25000	0.18(a)
83 1,3-Dichlorobenzene	146	10.179	10.180	(0.995)	2239	0.25000	0.23(a)
54 1,3-Dichloropropane	76	7.563	7.563	(0.917)	1921	0.25000	0.20(a)
84 1,4-Dichlorobenzene	146	10.254	10.255	(1.002)	2639	0.25000	0.25(a)
76 2-Chlorotoluene	91	9.546	9.546	(0.933)	3069	0.25000	0.20(a)

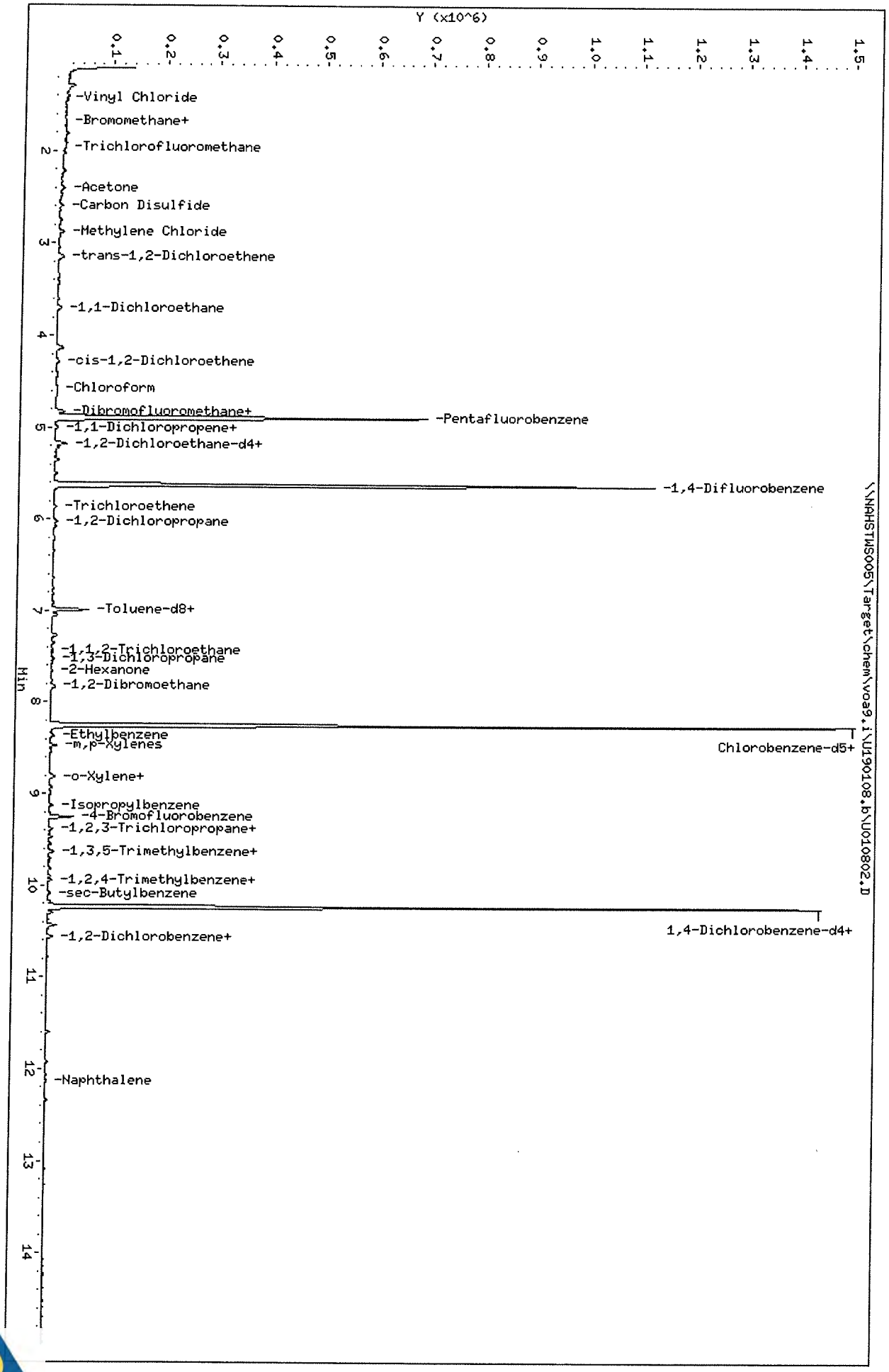
Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010802.D Page 2
Report Date: 01-Feb-2019 16:05

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
52 2-Hexanone	43	7.653	7.649	(0.928)	1351	0.50000	0.32(a)
77 4-Chlorotoluene	91	9.639	9.640	(0.942)	3693	0.25000	0.20(a)
82 p-Isopropyltoluene	119	10.209	10.210	(0.997)	3183	0.25000	0.18(a)
45 4-Methyl-2-Pentanone	43	6.914	6.914	(0.838)	1899	0.50000	0.31(a)
10 Acetone	43	2.479	2.483	(0.507)	2084	0.50000	(a)
37 Benzene	78	5.216	5.220	(0.927)	4558	0.25000	0.20(a)
6 Bromomethane	94	1.673	1.670	(0.342)	1077	0.25000	1.09(a)
19 Carbon Disulfide	76	2.588	2.596	(0.529)	7148	0.50000	0.49(a)
34 Carbon Tetrachloride	117	4.995	4.999	(0.888)	888	0.25000	0.16(a)
59 Chlorobenzene	112	8.275	8.275	(1.003)	3240	0.25000	0.22(a)
7 Chloroethane	64	1.756	1.756	(0.359)	1803	0.25000	0.47(a)
28 Chloroform	83	4.657	4.661	(0.952)	1851	0.25000	0.20(a)
27 cis-1,2-Dichloroethene	96	4.286	4.290	(0.876)	1161	0.25000	0.19(a)
61 Ethylbenzene	106	8.372	8.369	(1.015)	1453	0.25000	0.20(a)
67 Isopropylbenzene	105	9.126	9.126	(1.106)	3728	0.25000	0.18(a)
62 m,p-Xylenes	106	8.470	8.474	(1.027)	3376	0.50000	0.38(a)
17 Methylene Chloride	84	2.873	2.877	(0.587)	2013	0.25000	(a)
87 n-Butylbenzene	91	10.554	10.554	(1.031)	3517	0.25000	0.21(a)
73 n-Propylbenzene	91	9.474	9.475	(0.926)	4941	0.25000	0.19(a)
92 Naphthalene	128	12.132	12.133	(1.185)	1922	0.25000	0.80(a)
63 o-Xylene	106	8.811	8.811	(1.068)	1707	0.25000	0.18(a)
81 sec-Butylbenzene	105	10.085	10.086	(0.985)	3564	0.25000	0.17(a)
64 Styrene	104	8.826	8.826	(1.070)	2965	0.25000	0.19(a)
78 tert-Butylbenzene	119	9.902	9.902	(0.967)	2365	0.25000	0.16(a)
50 Toluene	91	7.049	7.049	(0.855)	4622	0.25000	0.20(a)
20 trans-1,2-Dichloroethene	96	3.143	3.147	(0.642)	977	0.25000	0.18(a)
38 Trichloroethene	130	5.861	5.865	(1.042)	931	0.25000	0.18(a)
8 Trichlorofluoromethane	101	1.955	1.959	(0.399)	1385	0.25000	0.19(a)
5 Vinyl Chloride	62	1.422	1.423	(0.291)	1416	0.25000	0.22(a)

QC Flag Legend

T - Target compound detected outside RT window.
a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).

00930870



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Date : 08-JAN-2019 10:54
Client ID: VSTD000.25
Sample Info: VSTD000.25;VSTD000.25;1;1;
Purge Volume: 5.0
Column phase: DB624

Instrument: VOA9,i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010803.D Page 1
Report Date: 01-Feb-2019 15:43

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010803.D
Lab Smp Id: VSTD000.5 Client Smp ID: VSTD000.5
Inj Date : 08-JAN-2019 11:18
Operator : PC Inst ID: VOA9.i
Smp Info : VSTD000.5;VSTD000.5;1;2;
Misc Info : 180315V9;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa9.i\U190108.b\8260C.m
Meth Date : 01-Feb-2019 15:43 VOA9.i Quant Type: ISTD
Cal Date : 08-JAN-2019 10:54 Cal File: U010802.D
Als bottle: 3 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAPb.sub
Target Version: 4.14
Processing Host: NAHSTW7087

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

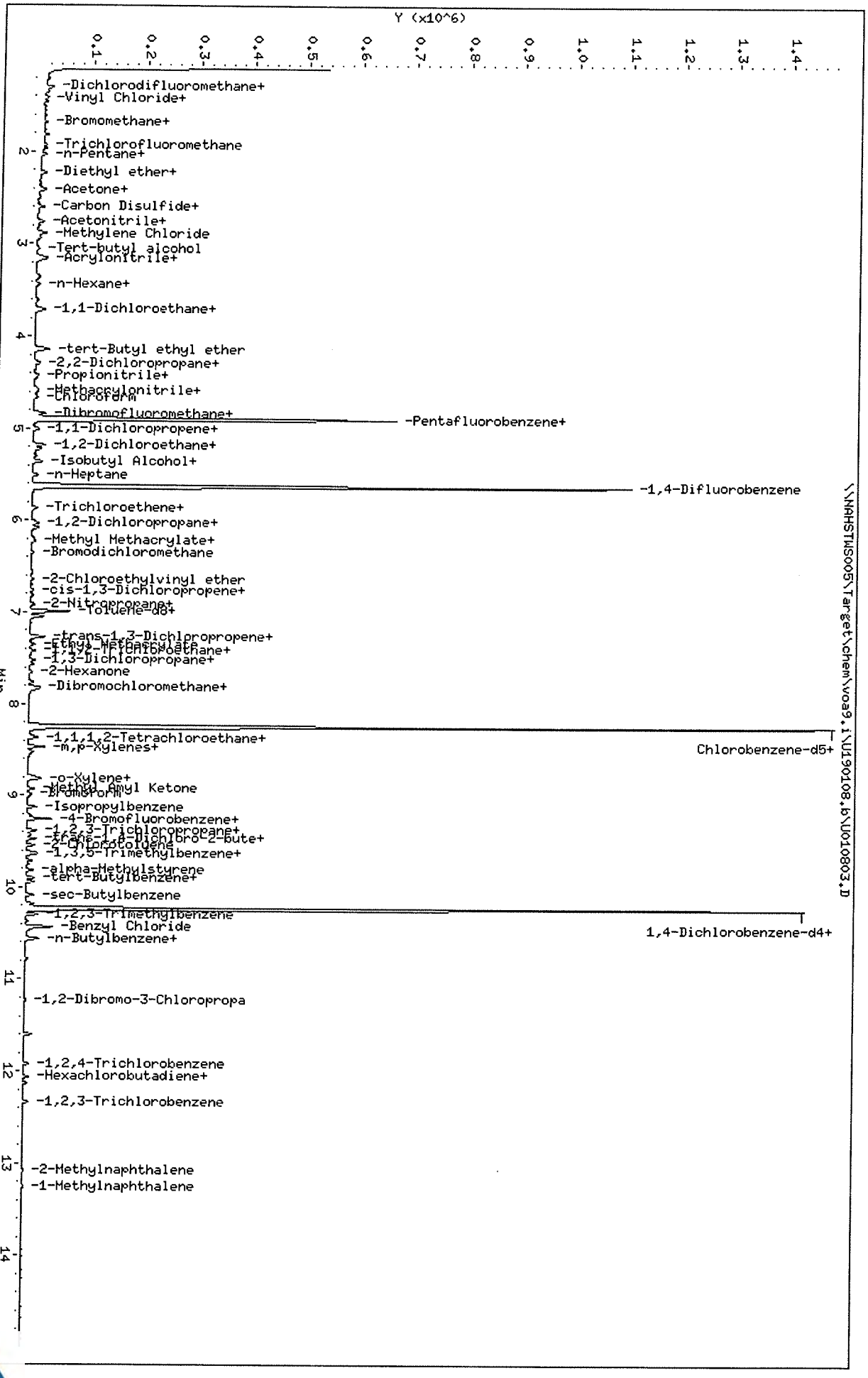
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.898	4.898	(1.000)	406983	50.0000	
* 36 1,4-Difluorobenzene	114	5.629	5.629	(1.000)	776981	50.0000	
* 47 Chlorobenzene-d5	117	8.249	8.249	(1.000)	707085	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	318699	50.0000	
$ 30 Dibromofluoromethane	113	4.834	4.834	(0.987)	9792	0.50000	0.56(a)
$ 35 1,2-Dichloroethane-d4	65	5.179	5.179	(1.057)	14011	0.50000	0.20(a)
$ 48 Toluene-d8	98	6.989	6.989	(0.847)	40255	0.50000	(a)
$ 69 4-Bromofluorobenzene	95	9.257	9.257	(1.122)	13542	0.50000	0.15(a)
60 1,1,1,2-Tetrachloroethane	131	8.350	8.350	(1.012)	1793	0.50000	0.41(a)
31 1,1,1-Trichloroethane	97	4.830	4.830	(0.986)	2722	0.50000	0.40(a)
68 1,1,2,2-Tetrachloroethane	83	9.392	9.392	(0.918)	3672	0.50000	0.15(aM)
53 1,1,2-Trichloroethane	83	7.421	7.421	(0.900)	1988	0.50000	0.45(a)
22 1,1-Dichloroethane	63	3.612	3.612	(0.737)	4569	0.50000	0.49(Ta)
11 1,1-Dichloroethene	96	2.412	2.412	(0.493)	1886	0.50000	0.48(a)
32 1,1-Dichloropropene	75	5.010	5.010	(0.890)	3611	0.50000	0.50(a)
93 1,2,3-Trichlorobenzene	180	12.339	12.339	(1.205)	2646	0.50000	0.46(a)
71 1,2,3-Trichloropropane	75	9.426	9.426	(0.921)	3423	0.50000	0.44(a)
90 1,2,4-Trichlorobenzene	180	11.923	11.923	(1.165)	2205	0.50000	0.38(aM)
79 1,2,4-Trimethylbenzene	105	9.940	9.940	(0.971)	7070	0.50000	0.42(a)
89 1,2-Dibromo-3-Chloropropane	155	11.233	11.233	(1.097)	320	0.50000	2.35(aM)
57 1,2-Dibromoethane	107	7.852	7.852	(0.952)	2180	0.50000	0.44(a)
88 1,2-Dichlorobenzene	146	10.573	10.573	(1.033)	5041	0.50000	0.52(a)

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010803.D Page 2
Report Date: 01-Feb-2019 15:43

	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	5.258	5.258	(0.934)	3672	0.50000	0.48(a)
42	1,2-Dichloropropane	63	6.082	6.082	(1.081)	2540	0.50000	0.45(a)
75	1,3,5-Trimethylbenzene	105	9.625	9.625	(0.940)	7169	0.50000	0.43(a)
83	1,3-Dichlorobenzene	146	10.180	10.180	(0.995)	4734	0.50000	0.49(a)
54	1,3-Dichloropropane	76	7.563	7.563	(0.917)	4321	0.50000	0.46(a)
84	1,4-Dichlorobenzene	146	10.255	10.255	(1.002)	5570	0.50000	0.54(a)
26	2,2-Dichloropropane	77	4.283	4.283	(0.874)	2565	0.50000	0.46(a)
24	2-Butanone	43	4.358	4.358	(0.890)	2603	1.00000	0.92(a)
76	2-Chlorotoluene	91	9.546	9.546	(0.933)	7203	0.50000	0.47(a)
52	2-Hexanone	43	7.653	7.653	(0.928)	3297	1.00000	0.80(a)
77	4-Chlorotoluene	91	9.640	9.640	(0.942)	8328	0.50000	0.47(a)
82	p-Isopropyltoluene	119	10.210	10.210	(0.997)	7478	0.50000	0.44(a)
45	4-Methyl-2-Pentanone	43	6.915	6.915	(0.838)	4770	1.00000	0.81(a)
10	Acetone	43	2.491	2.491	(0.509)	3350	1.00000	0.29(a)
37	Benzene	78	5.224	5.224	(0.928)	10081	0.50000	0.47(a)
74	Bromobenzene	156	9.381	9.381	(0.917)	2317	0.50000	0.46(a)
29	Bromochloromethane	128	4.557	4.557	(0.930)	887	0.50000	0.39(a)
39	Bromodichloromethane	83	6.348	6.348	(1.128)	2566	0.50000	0.42(aM)
66	Bromoform	173	8.984	8.984	(1.089)	1047	0.50000	2.12(TaM)
6	Bromomethane	94	1.681	1.681	(0.343)	2378	0.50000	1.52(a)
19	Carbon Disulfide	76	2.600	2.600	(0.531)	14084	1.00000	1.01(a)
34	Carbon Tetrachloride	117	4.999	4.999	(0.888)	2233	0.50000	0.42(a)
59	Chlorobenzene	112	8.275	8.275	(1.003)	7063	0.50000	0.50(a)
7	Chloroethane	64	1.764	1.764	(0.360)	1812	0.50000	0.49(aM)
28	Chloroform	83	4.662	4.662	(0.952)	4099	0.50000	0.46(a)
3	Chloromethane	50	1.351	1.351	(0.276)	3056	0.50000	2.99(a)
27	cis-1,2-Dichloroethene	96	4.294	4.294	(0.877)	2685	0.50000	0.48(a)
46	cis-1,3-Dichloropropene	75	6.761	6.761	(1.201)	2839	0.50000	1.61(a)
55	Dibromochloromethane	129	7.758	7.758	(0.940)	1574	0.50000	1.55(a)
44	Dibromomethane	93	6.195	6.195	(1.101)	1505	0.50000	0.46(aM)
2	Dichlorodifluoromethane	85	1.217	1.217	(0.248)	2617	0.50000	0.48(a)
61	Ethylbenzene	106	8.369	8.369	(1.015)	3370	0.50000	0.47(a)
91	Hexachlorobutadiene	225	12.065	12.065	(1.179)	1632	0.50000	1.14(a)
67	Isopropylbenzene	105	9.126	9.126	(1.106)	8923	0.50000	0.43(a)
62	m,p-Xylenes	106	8.474	8.474	(1.027)	7756	1.00000	0.89(a)
17	Methylene Chloride	84	2.881	2.881	(0.588)	3706	0.50000	0.21(a)
87	n-Butylbenzene	91	10.554	10.554	(1.031)	8223	0.50000	0.49(a)
73	n-Propylbenzene	91	9.475	9.475	(0.926)	11489	0.50000	0.46(a)
92	Naphthalene	128	12.133	12.133	(1.185)	5534	0.50000	0.98(a)
63	o-Xylene	106	8.811	8.811	(1.068)	4219	0.50000	0.47(a)
81	sec-Butylbenzene	105	10.086	10.086	(0.985)	8769	0.50000	0.43(a)
64	Styrene	104	8.826	8.826	(1.070)	6305	0.50000	0.42(a)
78	tert-Butylbenzene	119	9.898	9.898	(0.967)	6518	0.50000	0.46(a)
56	Tetrachloroethene	164	7.526	7.526	(0.912)	2039	0.50000	0.54(a)
50	Toluene	91	7.049	7.049	(0.855)	10739	0.50000	0.49(a)
20	trans-1,2-Dichloroethene	96	3.151	3.151	(0.643)	2514	0.50000	0.50(a)
51	trans-1,3-Dichloropropene	75	7.263	7.263	(1.290)	2396	0.50000	1.89(a)
38	Trichloroethene	130	5.865	5.865	(1.042)	1862	0.50000	0.37(aM)
8	Trichlorofluoromethane	101	1.966	1.966	(0.402)	3681	0.50000	0.54(a)
5	Vinyl Chloride	62	1.430	1.430	(0.292)	3065	0.50000	0.50(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.



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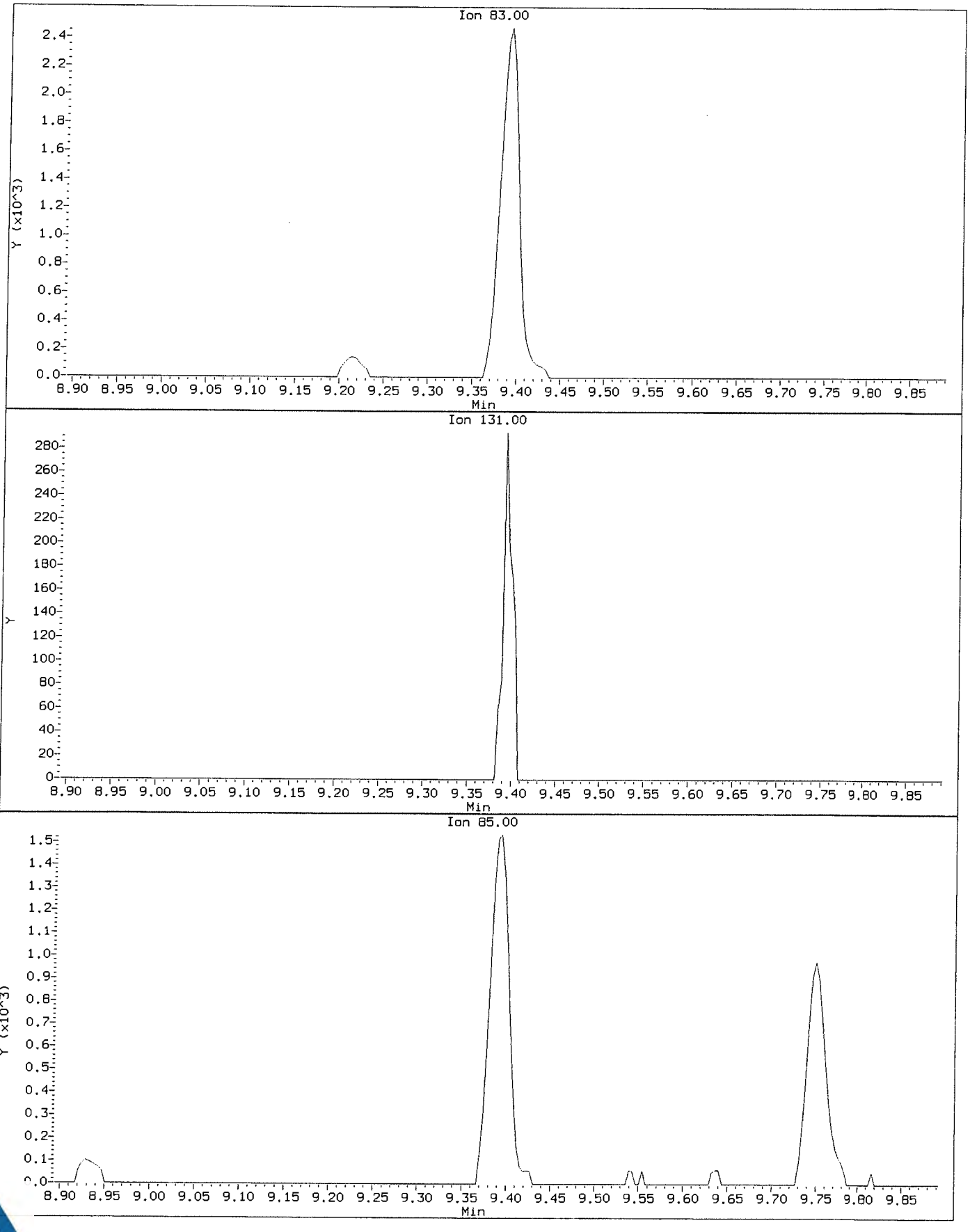
Sample Info: VSTD000.5;VSTD000.5;1;2;
Purge Volume: 5.0
Column phase: DB624

\\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010803.D

Instrument: VOA9.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\Before\U010803.D
Injection Date: 08-JAN-2019 11:18
Instrument: VOA9.i
Client Sample ID: VSTD000.5

Compound: 1,1,2,2-Tetrachloroethane
CAS Number: 79-34-5



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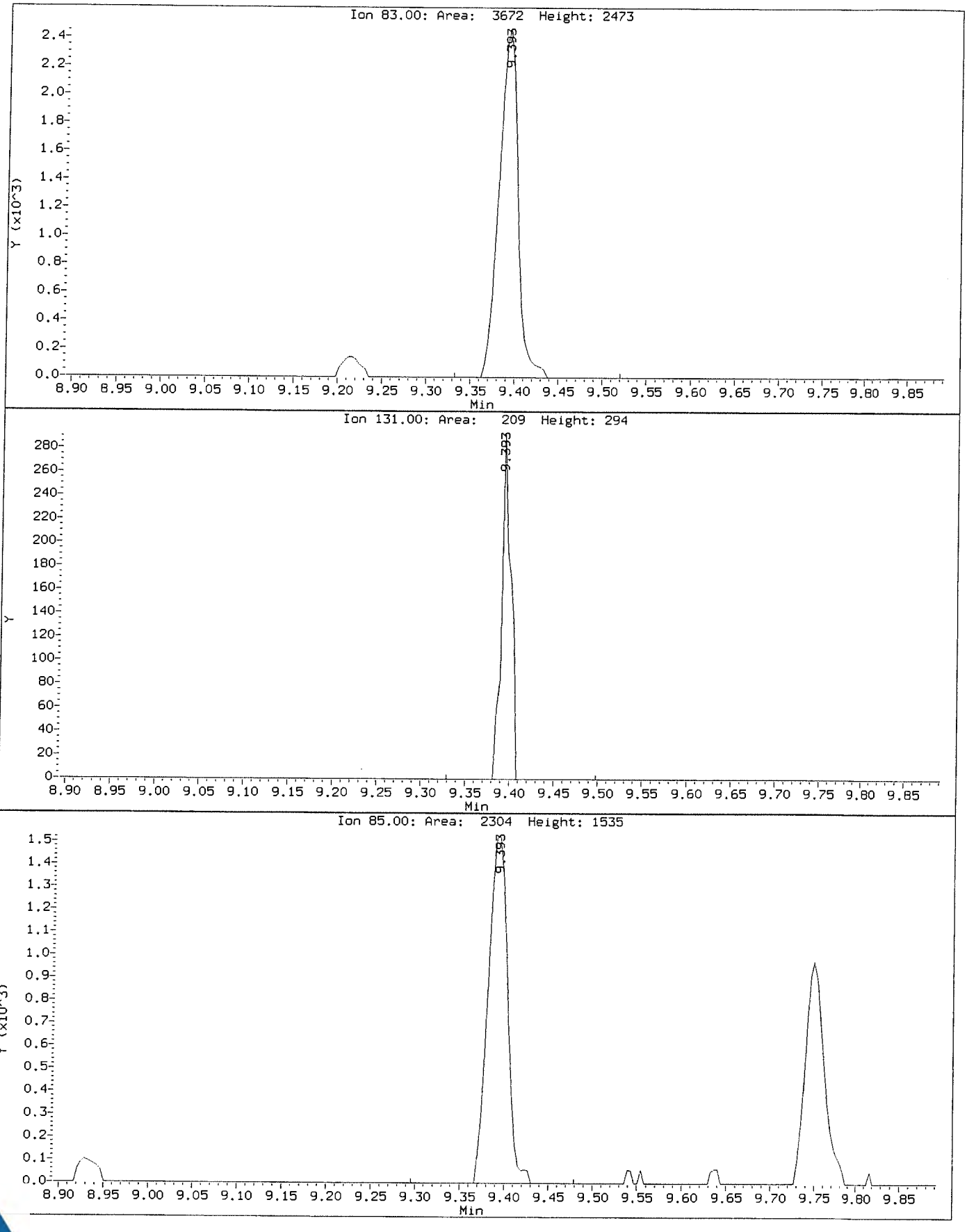
Injection Date: 08-JAN-2019 11:18
Instrument: VOA9.i
Client Sample ID: VSTD000.5

Compound: 1,1,2,2-Tetrachloroethane
CAS Number: 79-34-5



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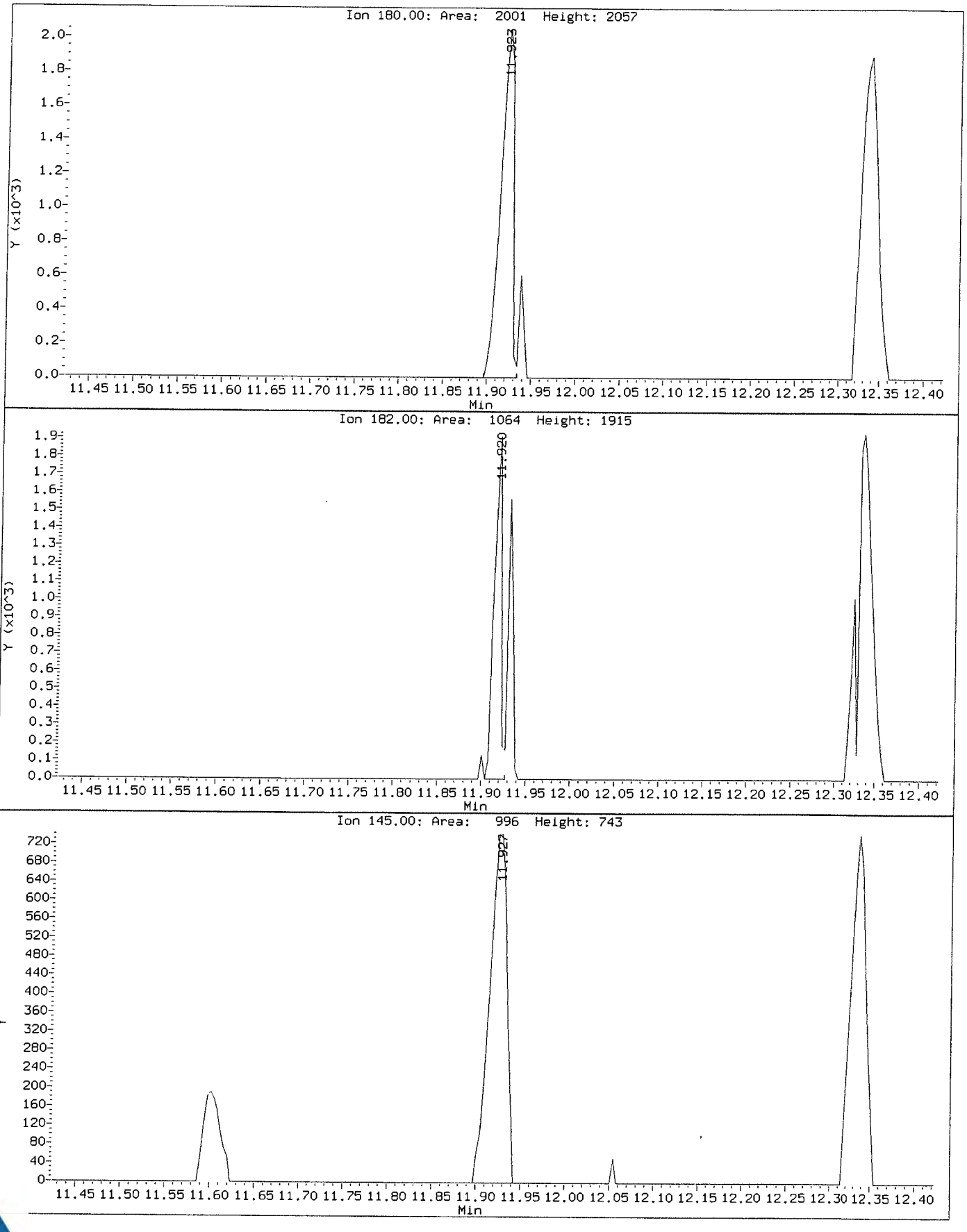
Injection Date: 08-JAN-2019 11:18
Instrument: VOA9.i
Client Sample ID: VSTD000.5

Compound: 1,2,4-Trichlorobenzene
CAS Number: 120-82-1



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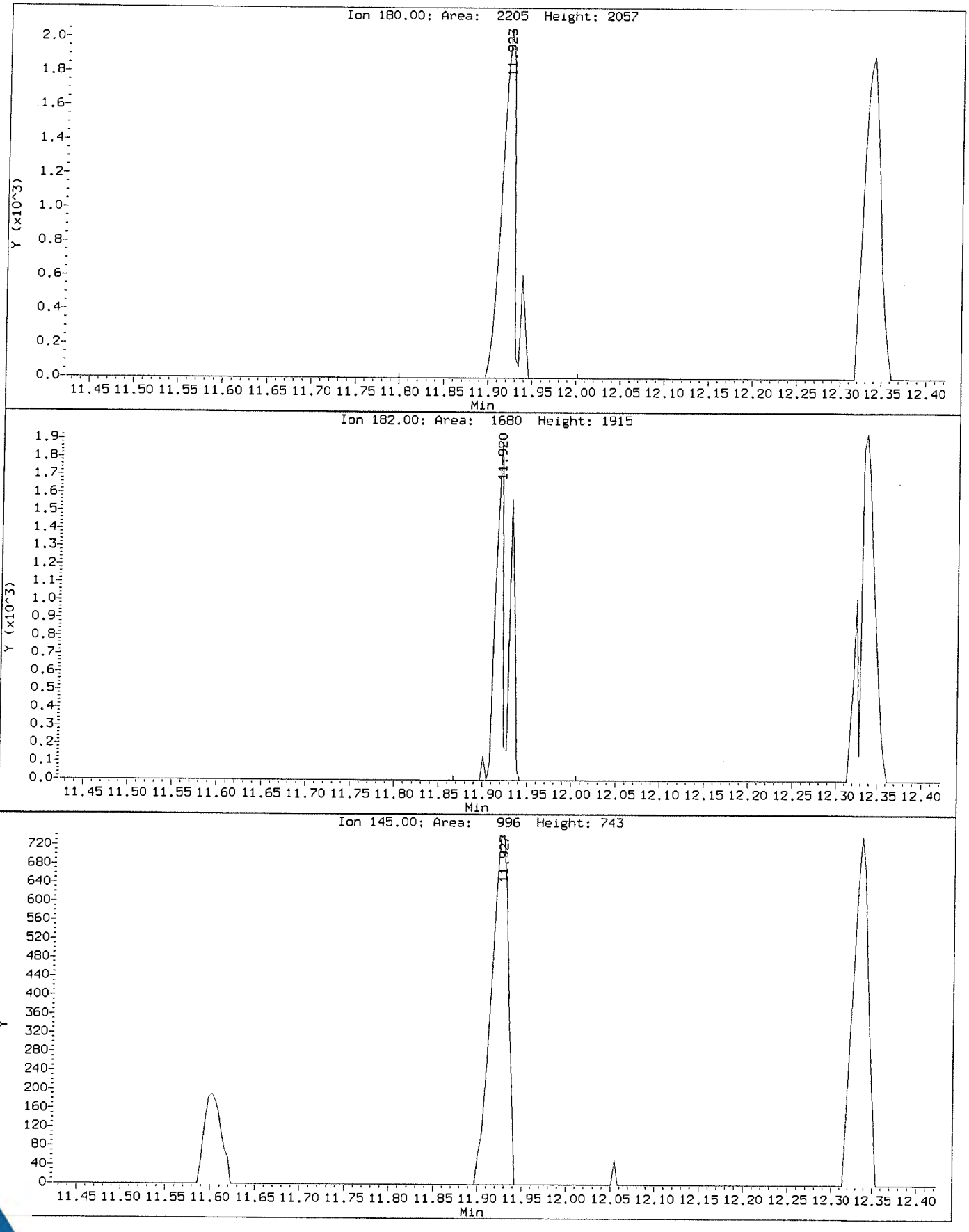
Instrument: VOA9.i
Client Sample ID: VSTD000.5

Compound: 1,2,4-Trichlorobenzene
CAS Number: 120-82-1



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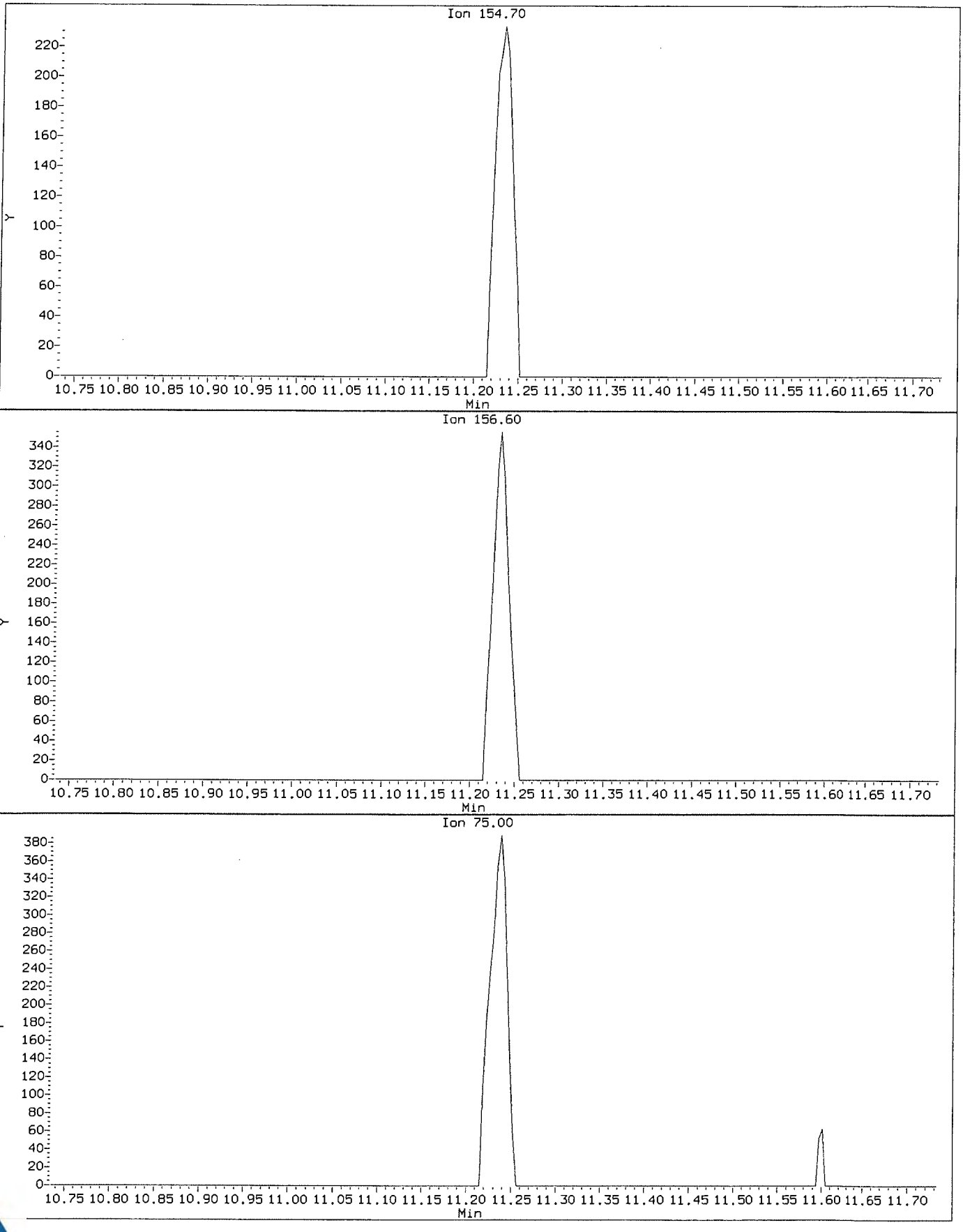
Injection Date: 08-JAN-2019 11:18
Instrument: VOA9.i
Client Sample ID: VSTD000.5

Compound: 1,2-Dibromo-3-Chloropropane
CAS Number: 96-12-8



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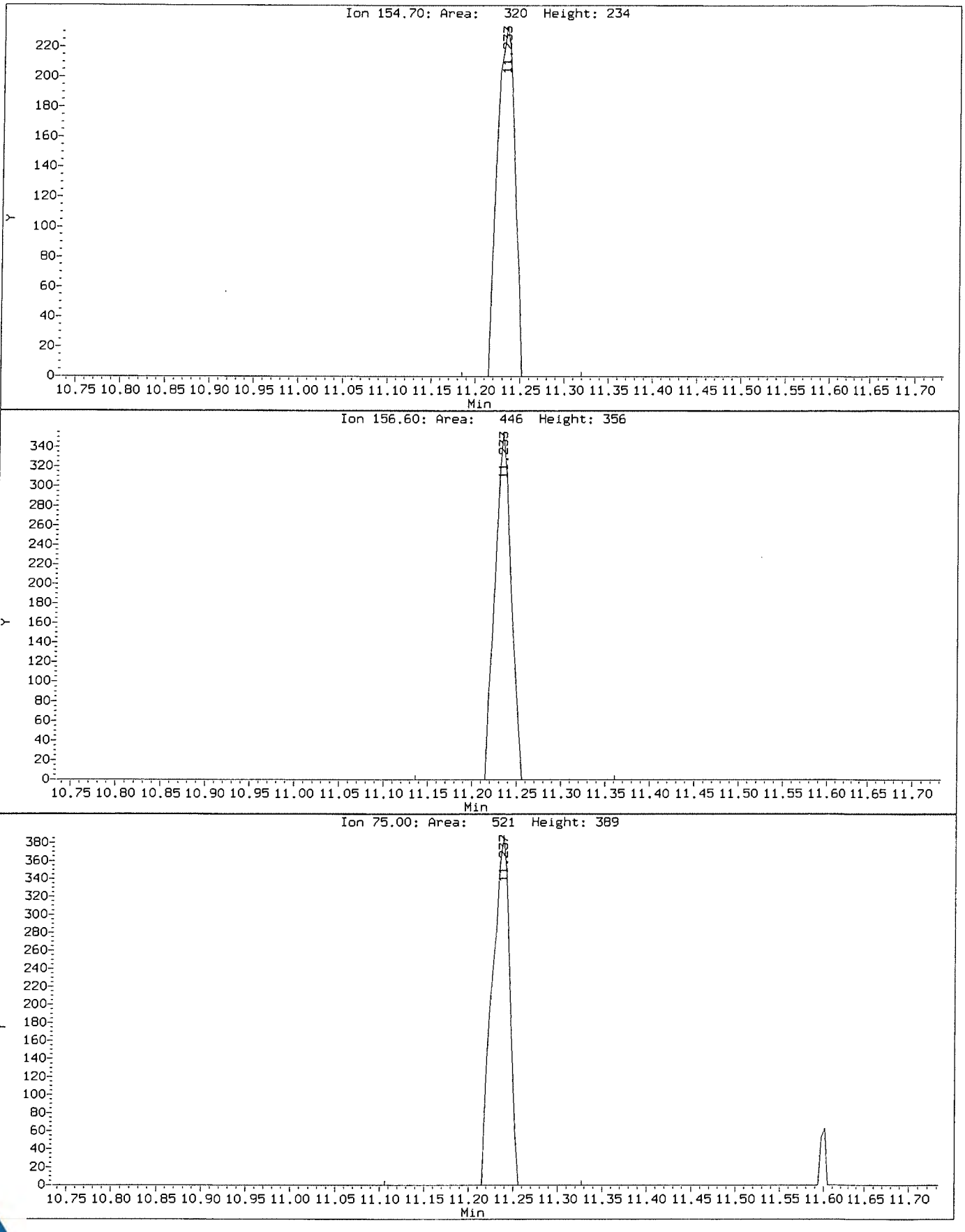
Injection Date: 08-JAN-2019 11:18
Instrument: VOA9.i
Client Sample ID: VSTD000.5

Compound: 1,2-Dibromo-3-Chloropropane
CAS Number: 96-12-8



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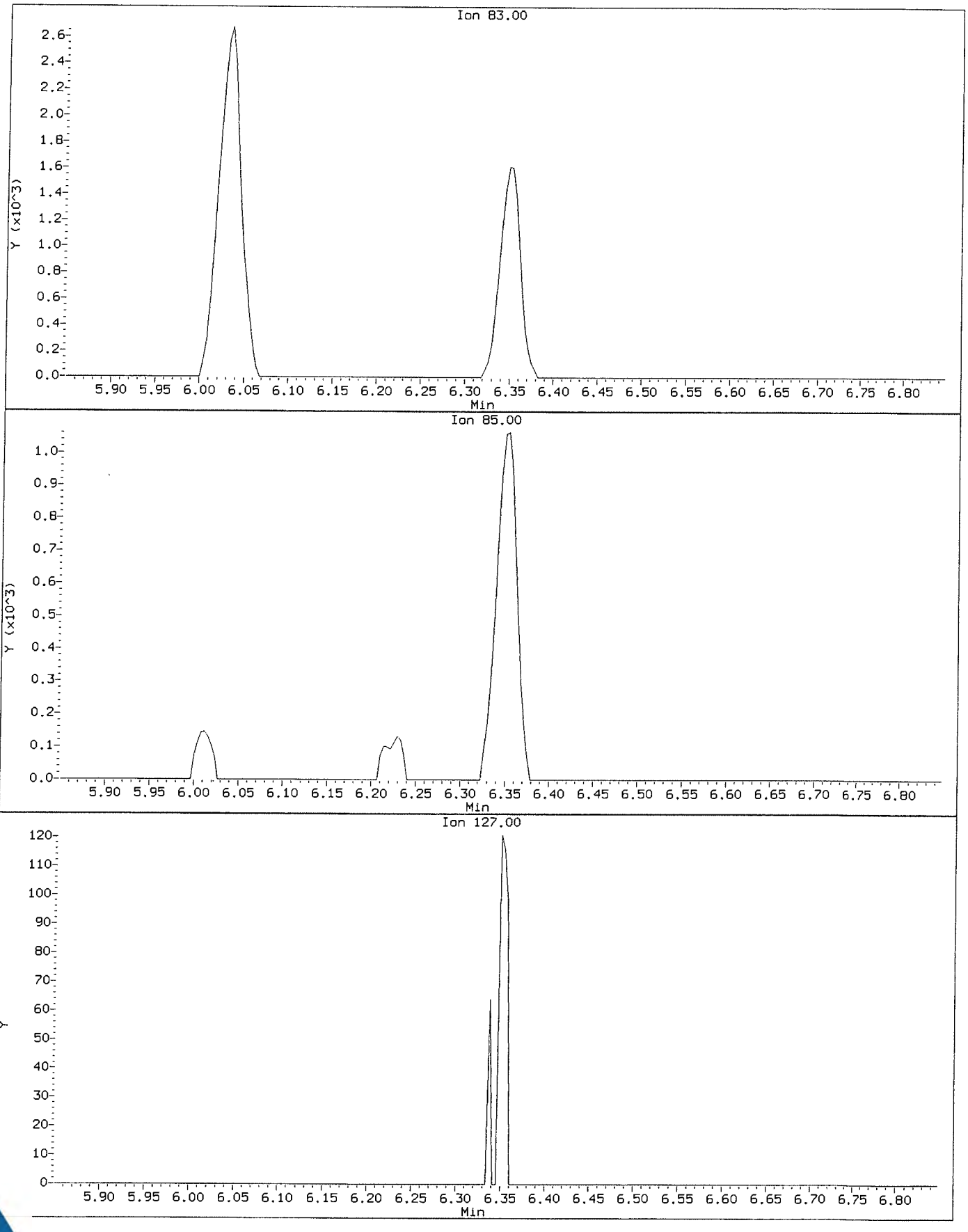
Injection Date: 08-JAN-2019 11:18
Instrument: VOA9.i
Client Sample ID: VSTD000.5

Compound: Bromodichloromethane
CAS Number: 75-27-4



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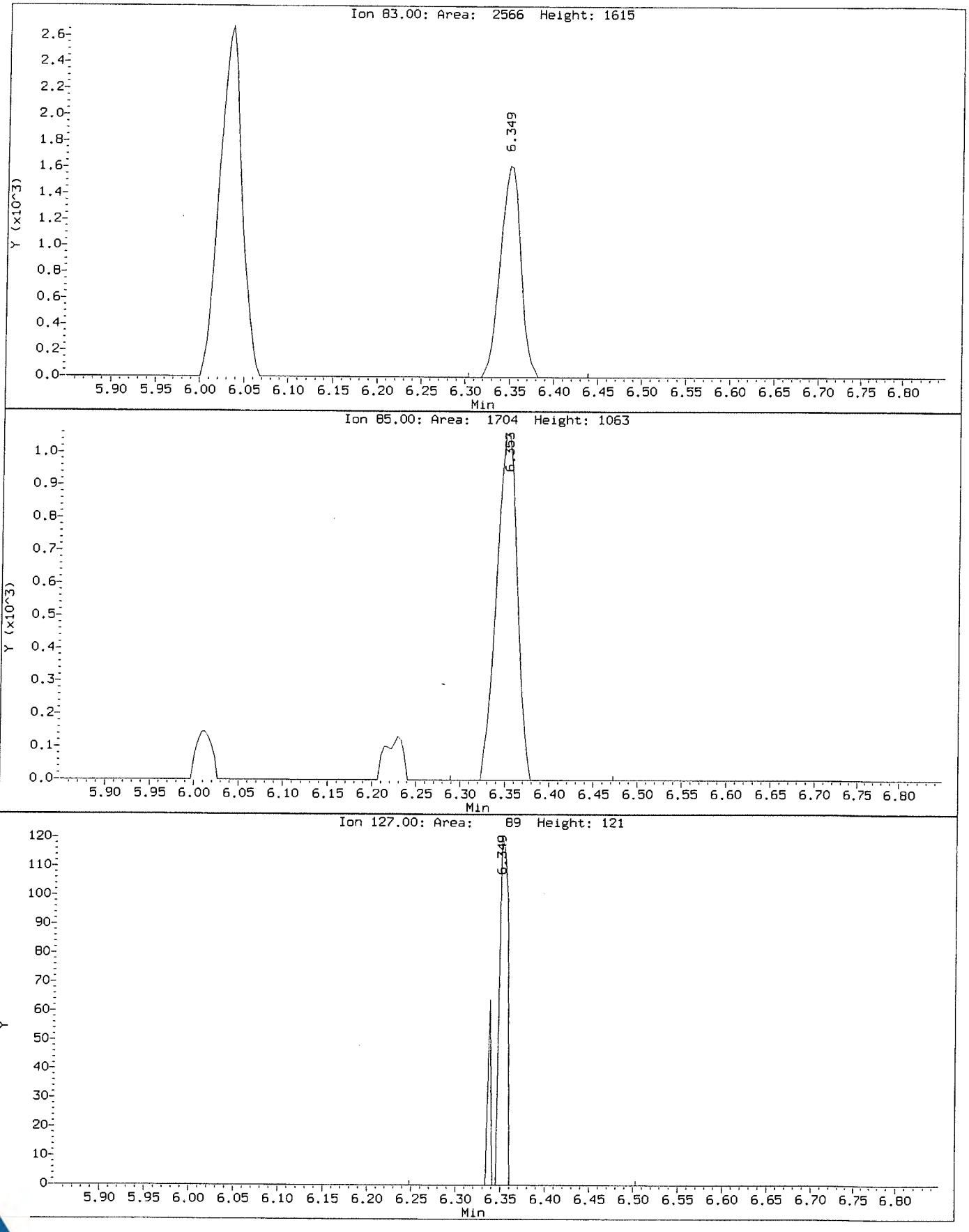
Instrument: VOA9.i
Client Sample ID: VSTD000.5

Compound: Bromodichloromethane
CAS Number: 75-27-4



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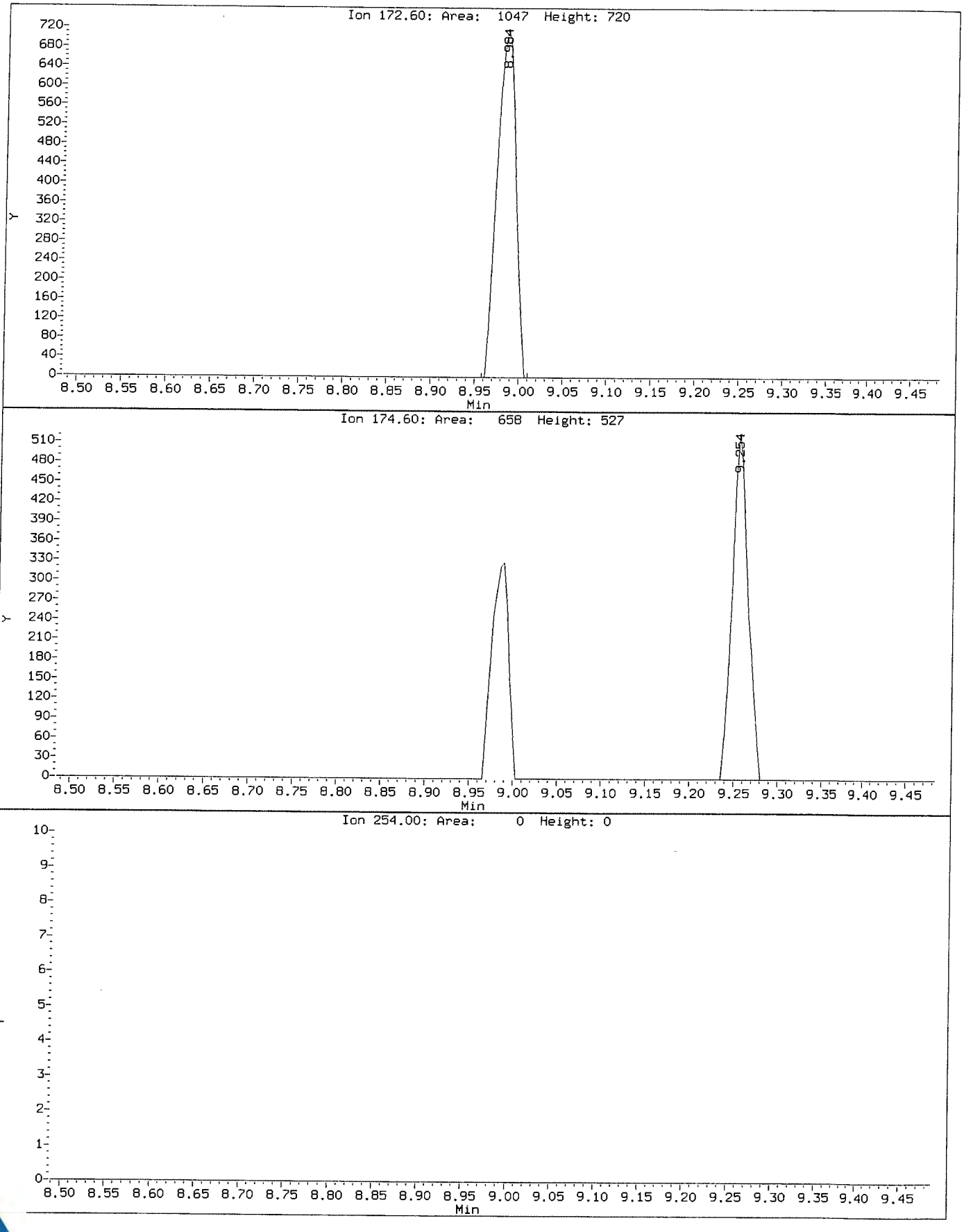
Injection Date: 08-JAN-2019 11:18
Instrument: VOA9.i
Client Sample ID: VSTD000.5

Compound: Bromoform
CAS Number: 75-25-2



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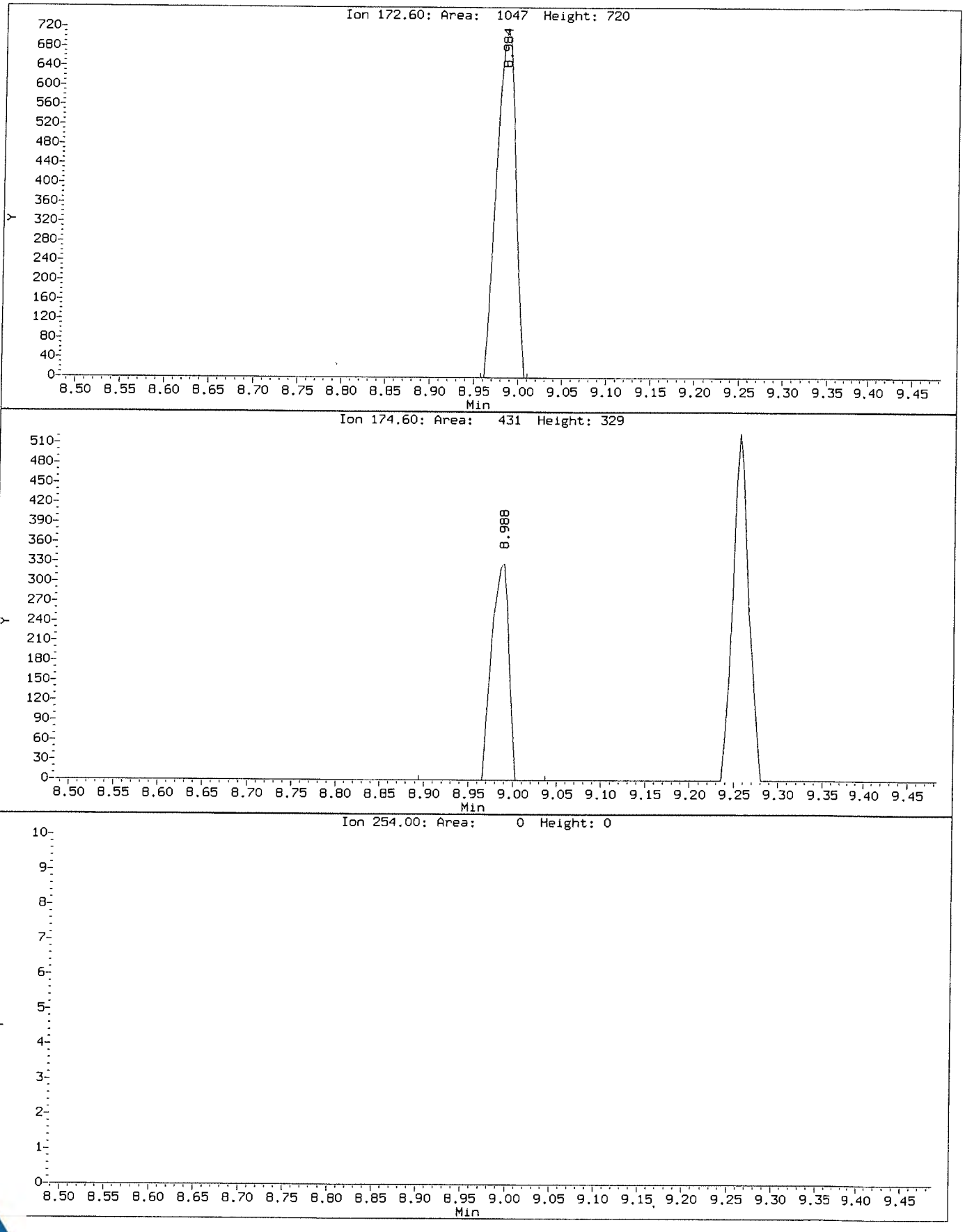
Instrument: VOA9.i
Client Sample ID: VSTD000.5

Compound: Bromoform
CAS Number: 75-25-2



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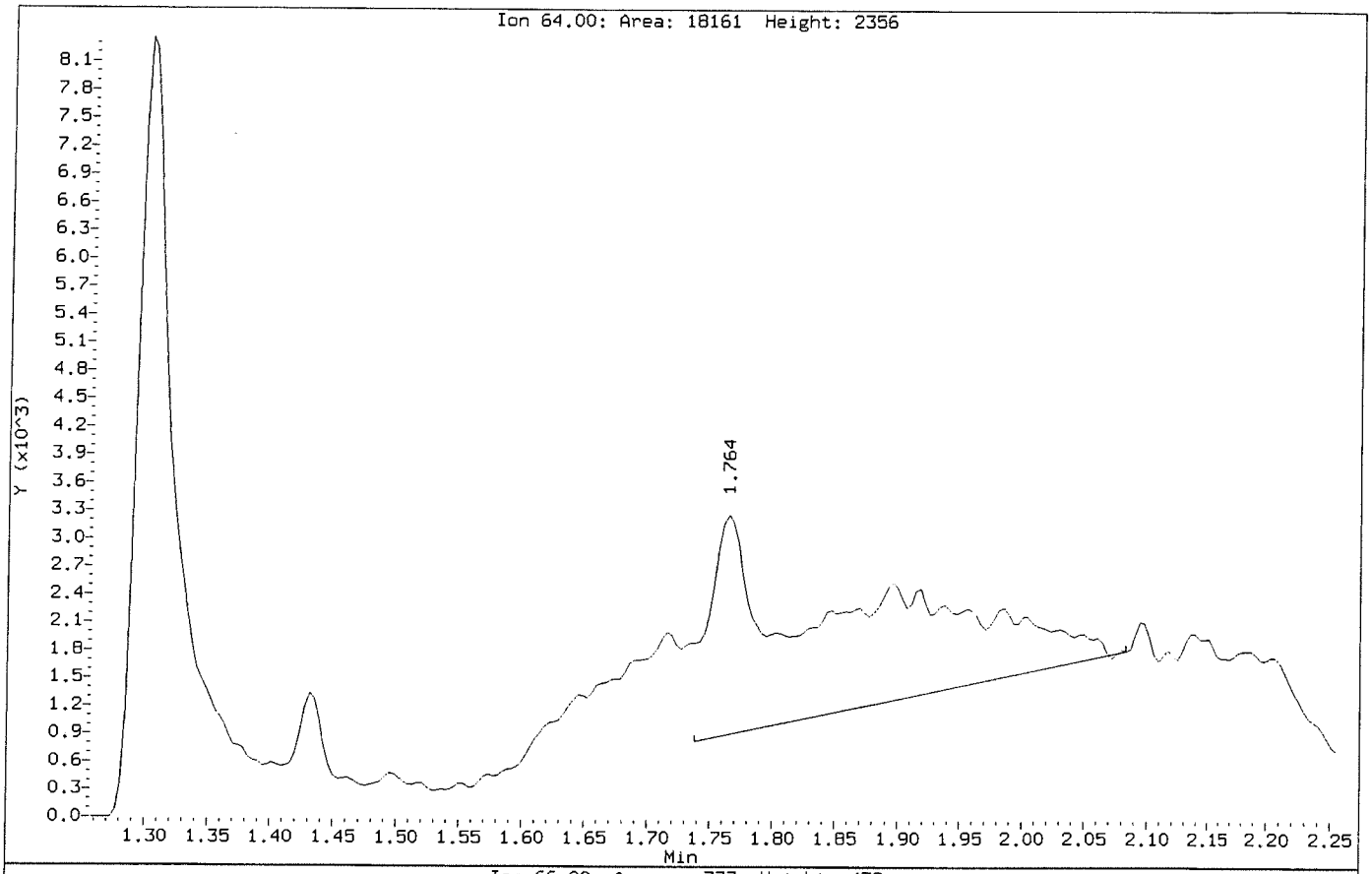
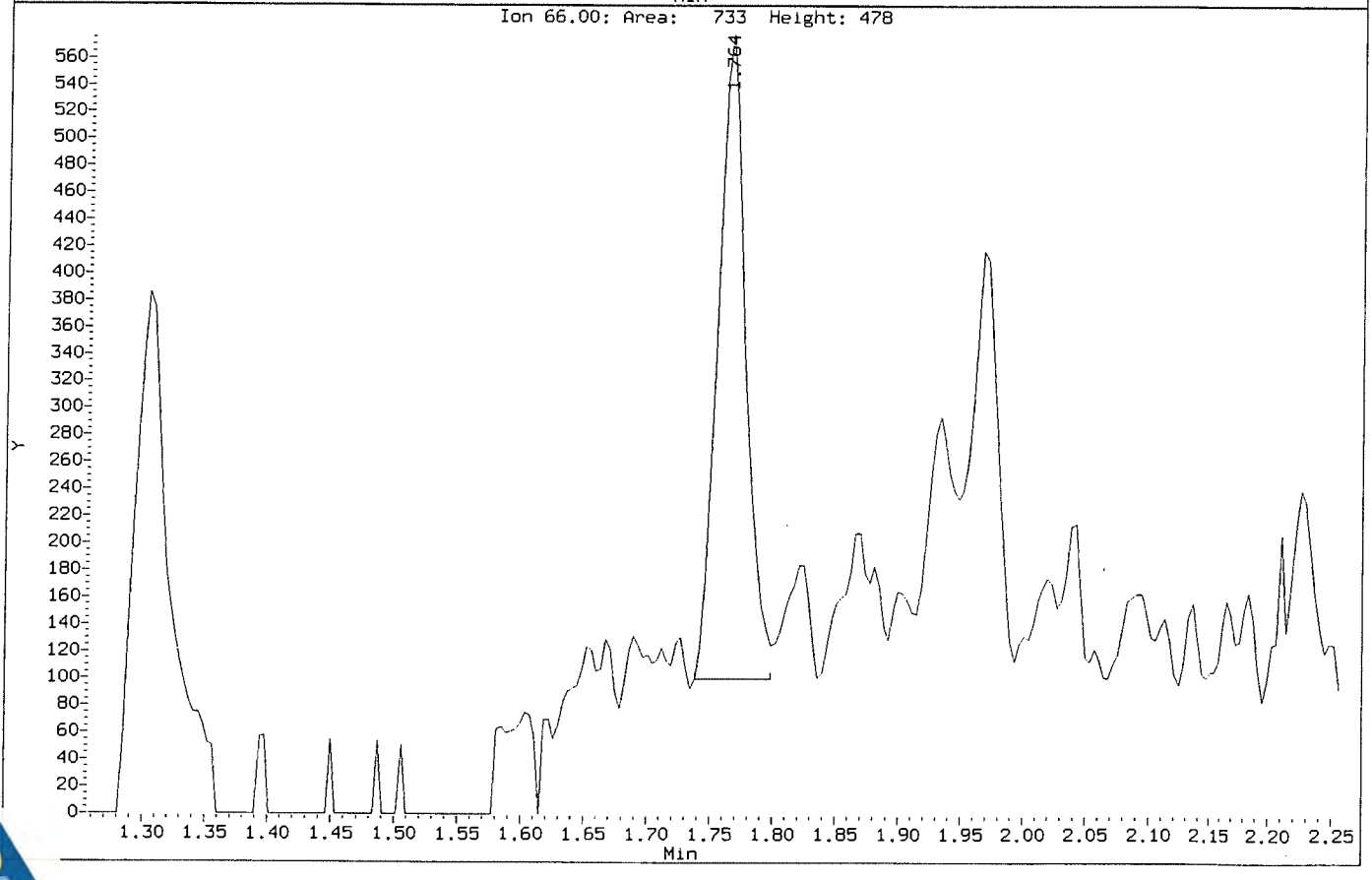
Injection Date: 08-JAN-2019 11:18
Instrument: VOA9.i
Client Sample ID: VSTD000.5

Compound: Chloroethane
CAS Number: 75-00-3





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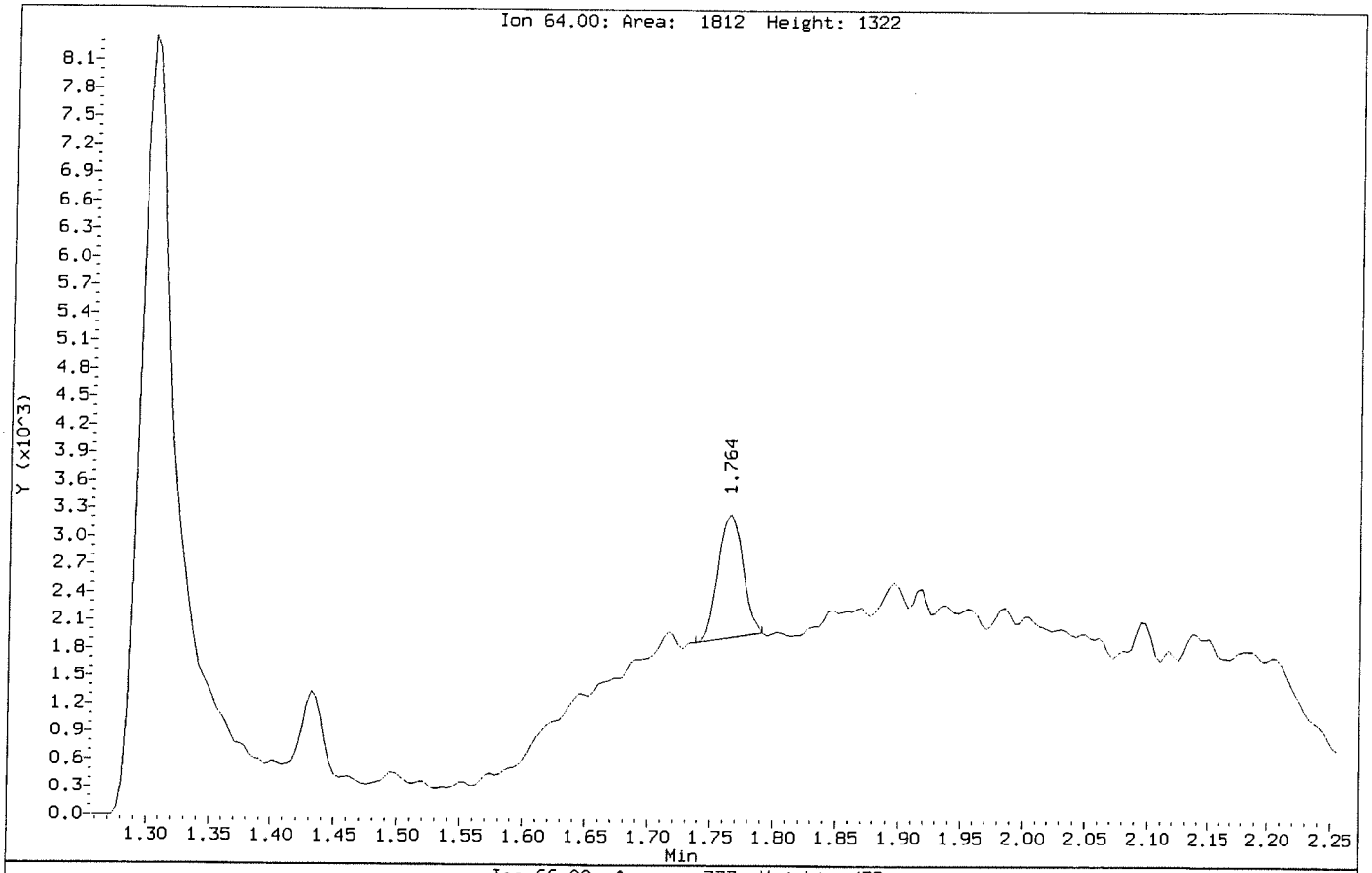
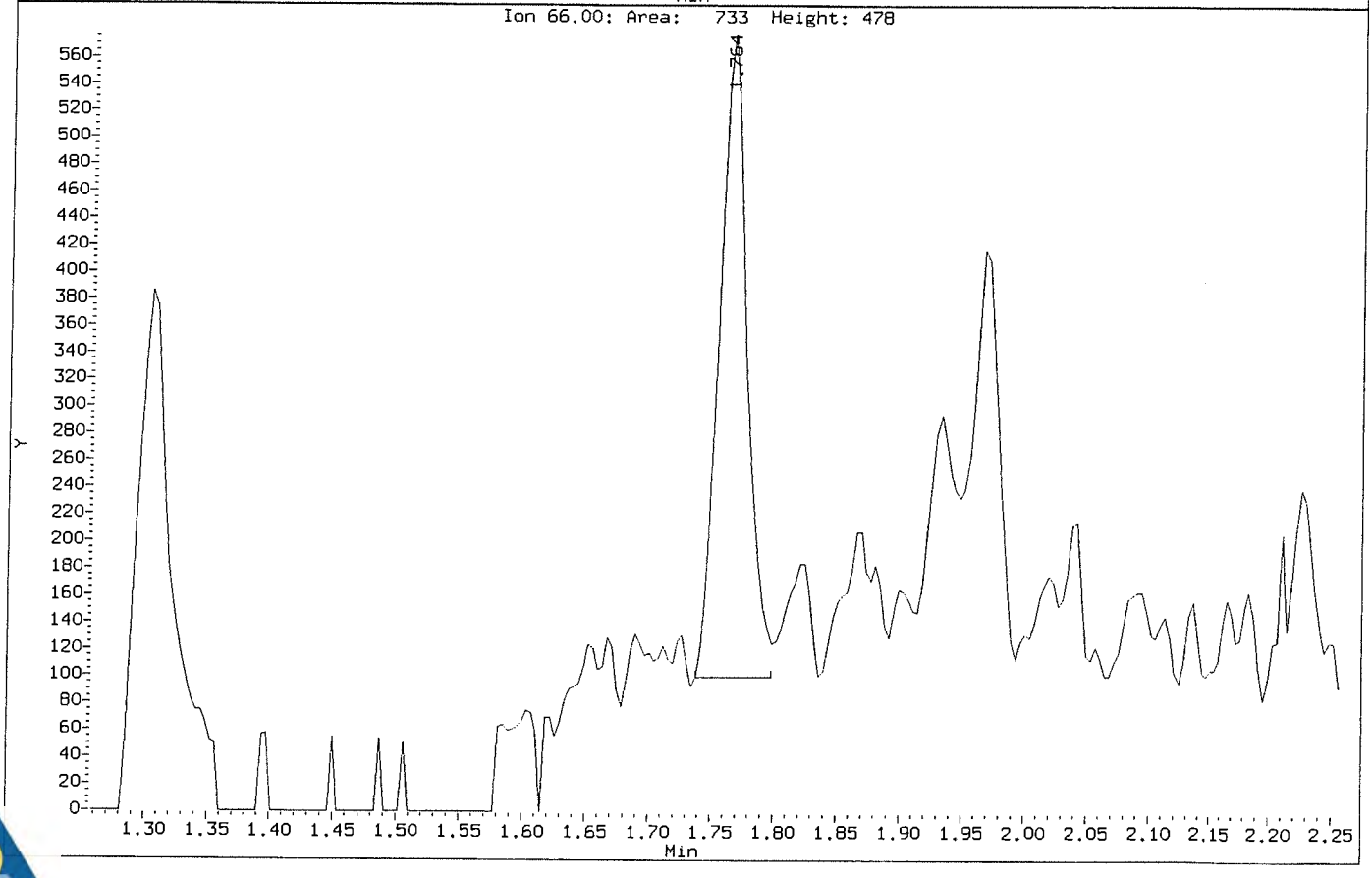
Injection Date: 08-JAN-2019 11:18
Instrument: VOA9.i
Client Sample ID: VSTD000.5

Compound: Chloroethane
CAS Number: 75-00-3





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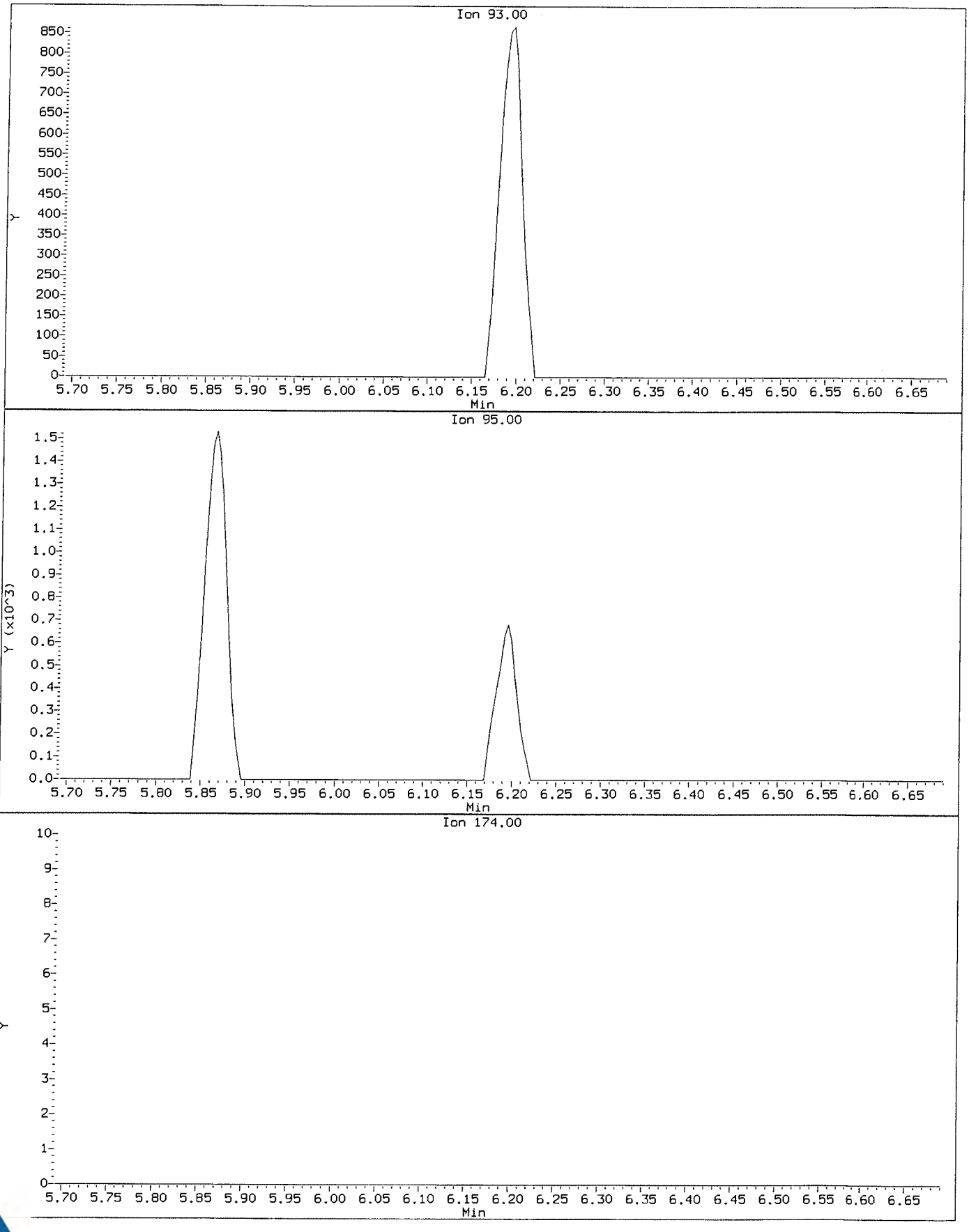
Injection Date: 08-JAN-2019 11:18
Instrument: VOA9.i
Client Sample ID: VSTD000.5

Compound: Dibromomethane
CAS Number: 74-95-3



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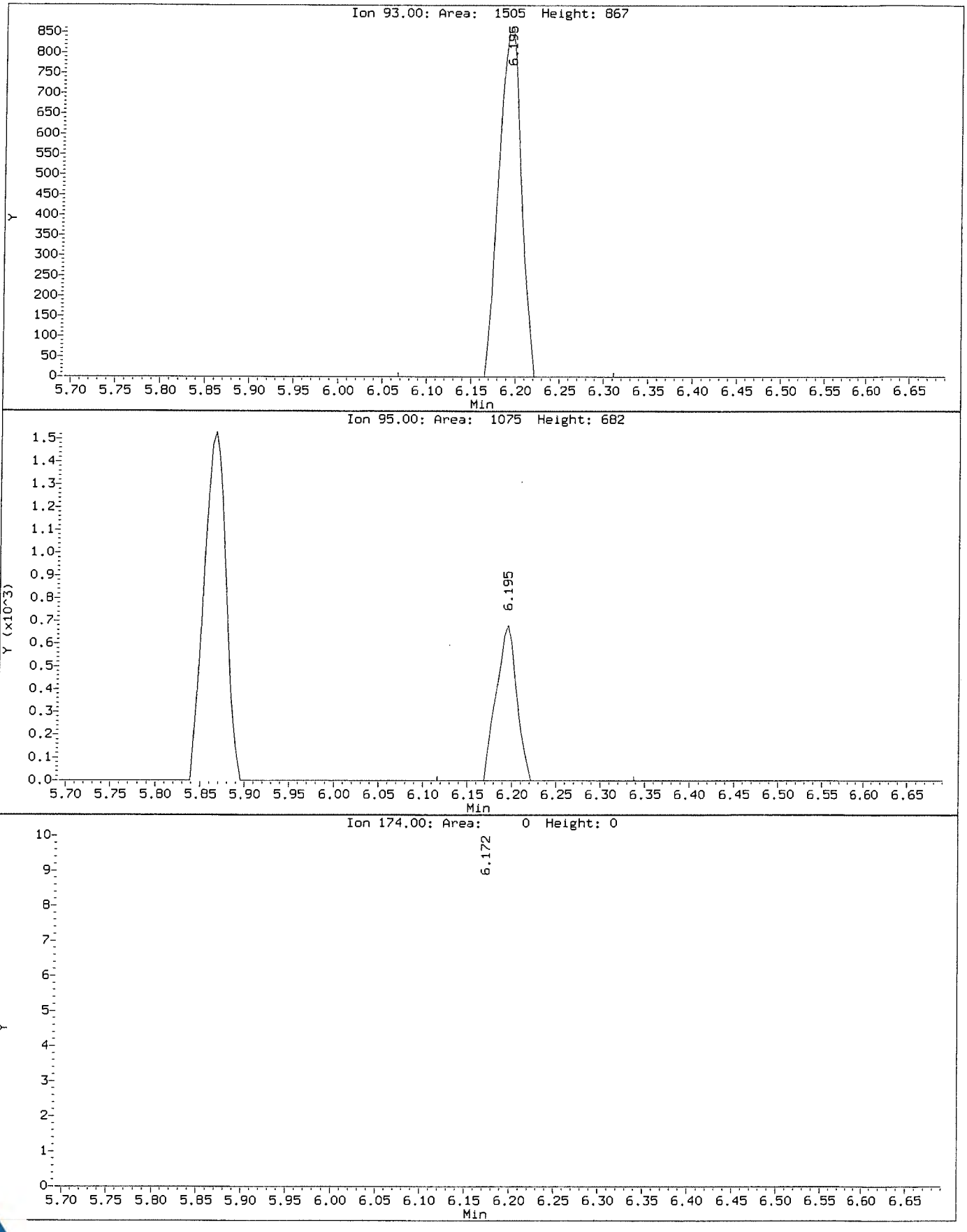
Injection Date: 08-JAN-2019 11:18
Instrument: VOA9.i
Client Sample ID: VSTD000.5

Compound: Dibromomethane
CAS Number: 74-95-3



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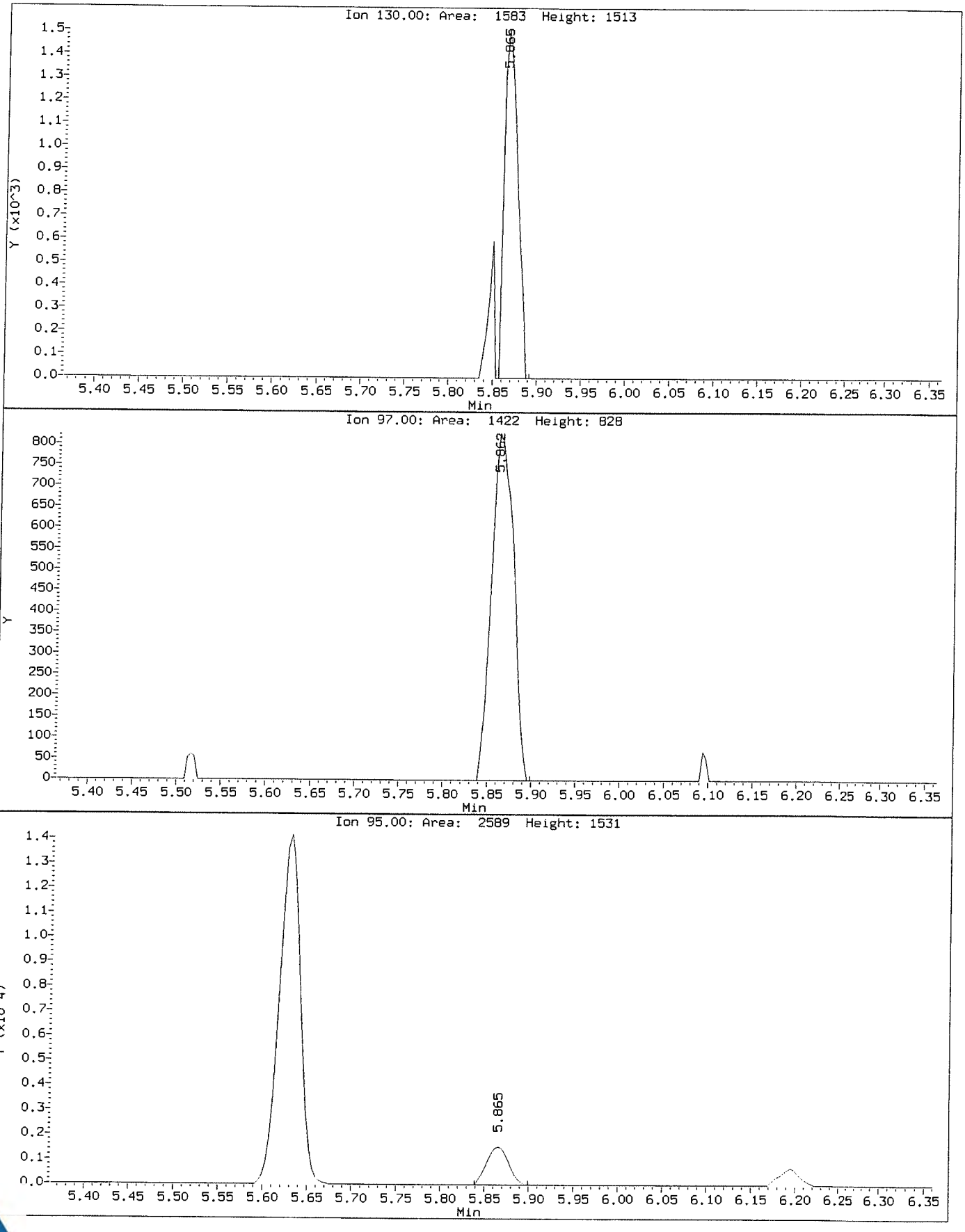
Injection Date: 08-JAN-2019 11:18
Instrument: VOA9.i
Client Sample ID: VSTD000.5

Compound: Trichloroethene
CAS Number: 79-01-6



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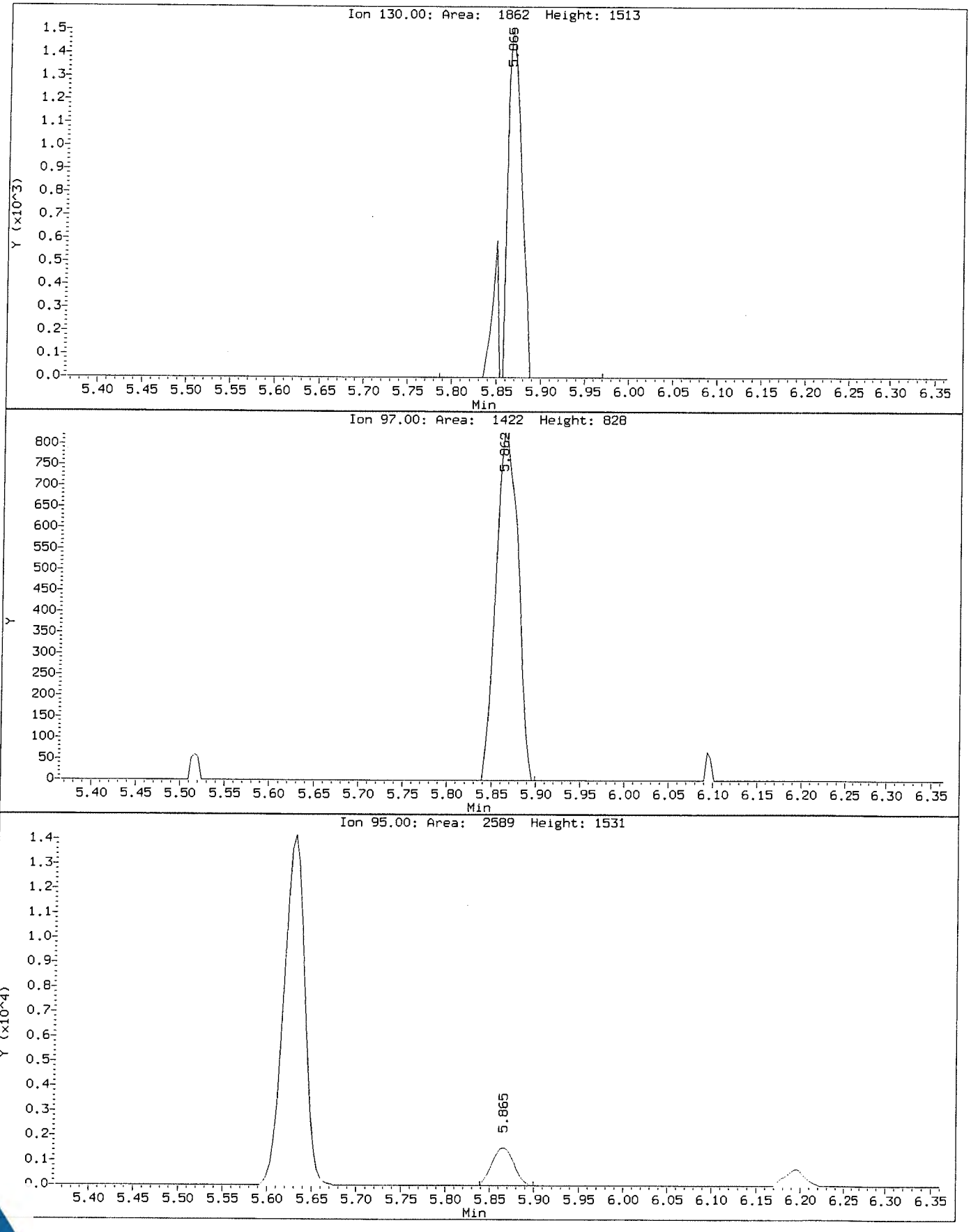
Injection Date: 08-JAN-2019 11:18
Instrument: VOA9.i
Client Sample ID: VSTD000.5

Compound: Trichloroethene
CAS Number: 79-01-6



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Data file : \\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010804.D
Lab Smp Id: VSTD001 Client Smp ID: VSTD001
Inj Date : 08-JAN-2019 12:07
Operator : PC Inst ID: VOA9.i
Smp Info : VSTD001;VSTD001;1;3;
Misc Info : 180315V9;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa9.i\U190108.b\8260C.m
Meth Date : 01-Feb-2019 15:43 VOA9.i Quant Type: ISTD
Cal Date : 08-JAN-2019 11:18 Cal File: U010803.D
Als bottle: 5 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAPb.sub
Target Version: 4.14
Processing Host: NAHSTW7087

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

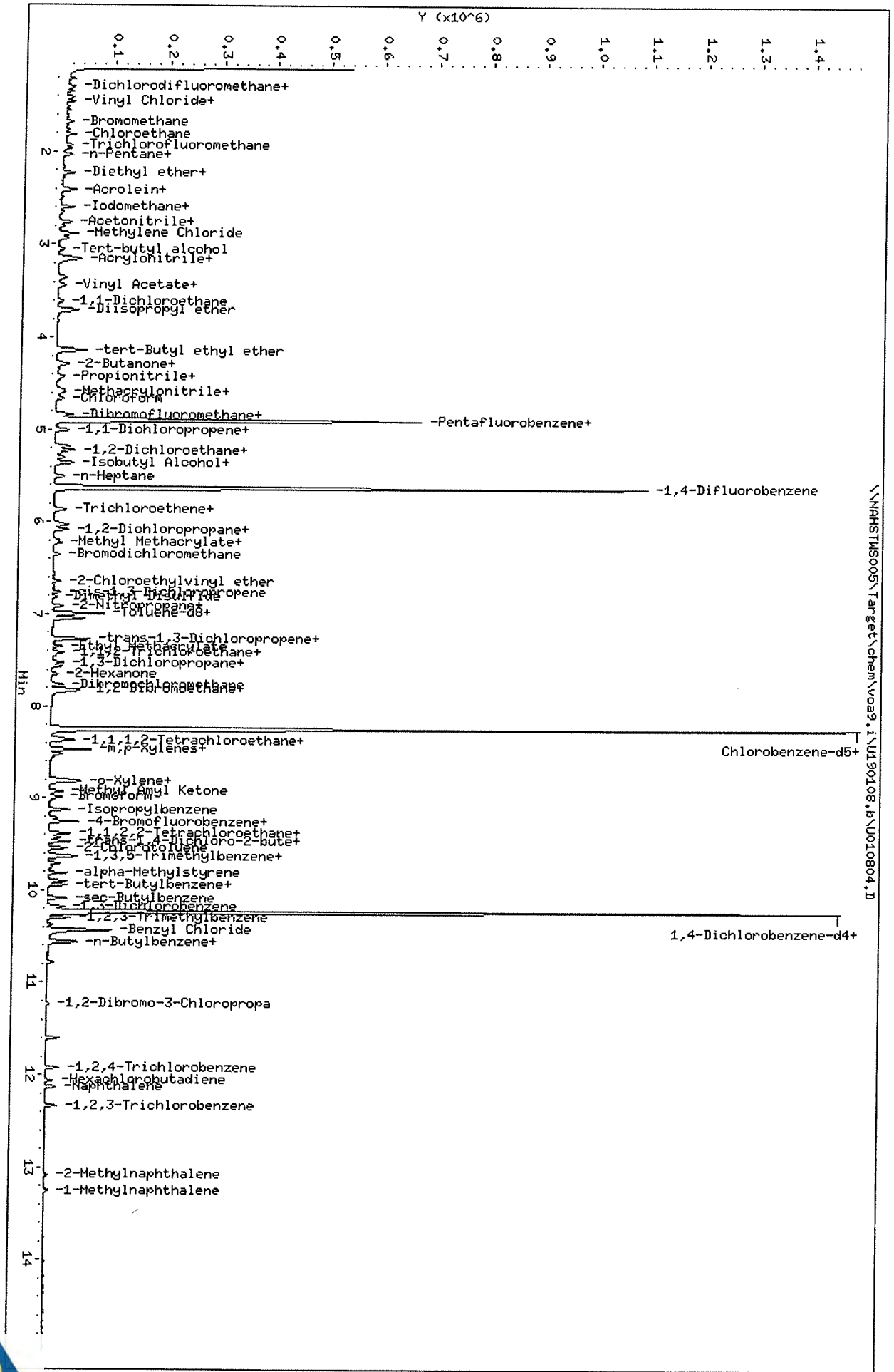
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.898	4.898	(1.000)	404016	50.0000	
* 36 1,4-Difluorobenzene	114	5.629	5.629	(1.000)	770704	50.0000	
* 47 Chlorobenzene-d5	117	8.249	8.249	(1.000)	704578	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	321134	50.0000	
$ 30 Dibromofluoromethane	113	4.834	4.834	(0.987)	12087	1.00000	1.09(a)
$ 35 1,2-Dichloroethane-d4	65	5.179	5.179	(1.057)	17198	1.00000	0.78(a)
$ 48 Toluene-d8	98	6.989	6.989	(0.847)	48097	1.00000	0.29(a)
$ 69 4-Bromofluorobenzene	95	9.257	9.257	(1.122)	17004	1.00000	0.68(a)
60 1,1,1,2-Tetrachloroethane	131	8.350	8.350	(1.012)	4435	1.00000	1.04(a)
31 1,1,1-Trichloroethane	97	4.834	4.834	(0.987)	7366	1.00000	1.11(a)
68 1,1,2,2-Tetrachloroethane	83	9.389	9.389	(0.917)	8453	1.00000	0.81(a)
53 1,1,2-Trichloroethane	83	7.421	7.421	(0.900)	4979	1.00000	1.15(a)
22 1,1-Dichloroethane	63	3.612	3.612	(0.737)	10439	1.00000	1.13(a)
11 1,1-Dichloroethene	96	2.412	2.412	(0.493)	4754	1.00000	1.21(a)
32 1,1-Dichloropropene	75	5.010	5.010	(0.890)	8431	1.00000	1.18(a)
93 1,2,3-Trichlorobenzene	180	12.335	12.335	(1.205)	5627	1.00000	0.98(a)
71 1,2,3-Trichloropropane	75	9.426	9.426	(0.921)	8049	1.00000	1.03(a)
90 1,2,4-Trichlorobenzene	180	11.923	11.923	(1.165)	6029	1.00000	1.04(a)
79 1,2,4-Trimethylbenzene	105	9.940	9.940	(0.971)	18064	1.00000	1.07(a)
89 1,2-Dibromo-3-Chloropropane	155	11.233	11.233	(1.097)	881	1.00000	2.82(a)
57 1,2-Dibromoethane	107	7.852	7.852	(0.952)	5312	1.00000	1.08(a)
88 1,2-Dichlorobenzene	146	10.569	10.569	(1.033)	11168	1.00000	1.14(a)

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010804.D Page 2
Report Date: 01-Feb-2019 15:43

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	5.258	5.258	(0.934)	8732	1.00000	1.17(a)
42 1,2-Dichloropropane	63	6.082	6.082	(1.081)	6305	1.00000	1.13(a)
75 1,3,5-Trimethylbenzene	105	9.625	9.625	(0.940)	17525	1.00000	1.06(a)
83 1,3-Dichlorobenzene	146	10.180	10.180	(0.995)	11334	1.00000	1.17(a)
54 1,3-Dichloropropane	76	7.563	7.563	(0.917)	10722	1.00000	1.15(a)
84 1,4-Dichlorobenzene	146	10.255	10.255	(1.002)	12438	1.00000	1.21(a)
26 2,2-Dichloropropane	77	4.279	4.279	(0.874)	6018	1.00000	1.09(a)
24 2-Butanone	43	4.350	4.350	(0.888)	5959	2.00000	2.13(a)
76 2-Chlorotoluene	91	9.546	9.546	(0.933)	17676	1.00000	1.15(a)
52 2-Hexanone	43	7.653	7.653	(0.928)	7345	2.00000	1.80(a)
77 4-Chlorotoluene	91	9.640	9.640	(0.942)	20313	1.00000	1.14(a)
82 p-Isopropyltoluene	119	10.210	10.210	(0.997)	17792	1.00000	1.04(a)
45 4-Methyl-2-Pentanone	43	6.915	6.915	(0.838)	11419	2.00000	1.94(a)
10 Acetone	43	2.491	2.491	(0.509)	5926	2.00000	1.80(a)
37 Benzene	78	5.220	5.220	(0.927)	25155	1.00000	1.18(a)
74 Bromobenzene	156	9.381	9.381	(0.917)	5368	1.00000	1.07(a)
29 Bromochloromethane	128	4.560	4.560	(0.931)	2036	1.00000	0.91(a)
39 Bromodichloromethane	83	6.348	6.348	(1.128)	6215	1.00000	1.04(aM)
66 Bromoform	173	8.984	8.984	(1.089)	2493	1.00000	2.57(Ta)
6 Bromomethane	94	1.681	1.681	(0.343)	5371	1.00000	2.51(a)
19 Carbon Disulfide	76	2.600	2.600	(0.531)	32370	2.00000	2.34(a)
34 Carbon Tetrachloride	117	5.003	5.003	(0.889)	5317	1.00000	1.03(a)
59 Chlorobenzene	112	8.275	8.275	(1.003)	17004	1.00000	1.21(a)
7 Chloroethane	64	1.764	1.764	(0.360)	4108	1.00000	1.12(aM)
28 Chloroform	83	4.662	4.662	(0.952)	10150	1.00000	1.16(a)
3 Chloromethane	50	1.348	1.348	(0.275)	6743	1.00000	3.64(a)
27 cis-1,2-Dichloroethene	96	4.294	4.294	(0.877)	6440	1.00000	1.16(a)
46 cis-1,3-Dichloropropene	75	6.761	6.761	(1.201)	7156	1.00000	2.08(a)
55 Dibromochloromethane	129	7.758	7.758	(0.940)	3605	1.00000	1.97(a)
44 Dibromomethane	93	6.191	6.191	(1.100)	3631	1.00000	1.12(aM)
2 Dichlorodifluoromethane	85	1.217	1.217	(0.248)	6627	1.00000	1.24(a)
61 Ethylbenzene	106	8.373	8.373	(1.015)	8053	1.00000	1.13(a)
91 Hexachlorobutadiene	225	12.065	12.065	(1.179)	2244	1.00000	1.43(a)
67 Isopropylbenzene	105	9.126	9.126	(1.106)	21622	1.00000	1.06(a)
62 m,p-Xylenes	106	8.470	8.470	(1.027)	19399	2.00000	2.24(a)
17 Methylene Chloride	84	2.881	2.881	(0.588)	7653	1.00000	0.98(a)
87 n-Butylbenzene	91	10.555	10.555	(1.031)	17832	1.00000	1.07(a)
73 n-Propylbenzene	91	9.475	9.475	(0.926)	27656	1.00000	1.11(a)
92 Naphthalene	128	12.133	12.133	(1.185)	13707	1.00000	1.39(a)
63 o-Xylene	106	8.811	8.811	(1.068)	9528	1.00000	1.07(a)
81 sec-Butylbenzene	105	10.086	10.086	(0.985)	21651	1.00000	1.06(a)
64 Styrene	104	8.826	8.826	(1.070)	15486	1.00000	1.05(a)
78 tert-Butylbenzene	119	9.902	9.902	(0.967)	15596	1.00000	1.09(a)
56 Tetrachloroethene	164	7.526	7.526	(0.912)	4447	1.00000	1.20(a)
50 Toluene	91	7.049	7.049	(0.855)	24575	1.00000	1.13(a)
20 trans-1,2-Dichloroethene	96	3.151	3.151	(0.643)	5803	1.00000	1.17(a)
51 trans-1,3-Dichloropropene	75	7.263	7.263	(1.290)	5824	1.00000	2.32(a)
38 Trichloroethene	130	5.865	5.865	(1.042)	6121	1.00000	1.24(a)
8 Trichlorofluoromethane	101	1.966	1.966	(0.402)	7890	1.00000	1.16(a)
5 Vinyl Chloride	62	1.430	1.430	(0.292)	7112	1.00000	1.18(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.



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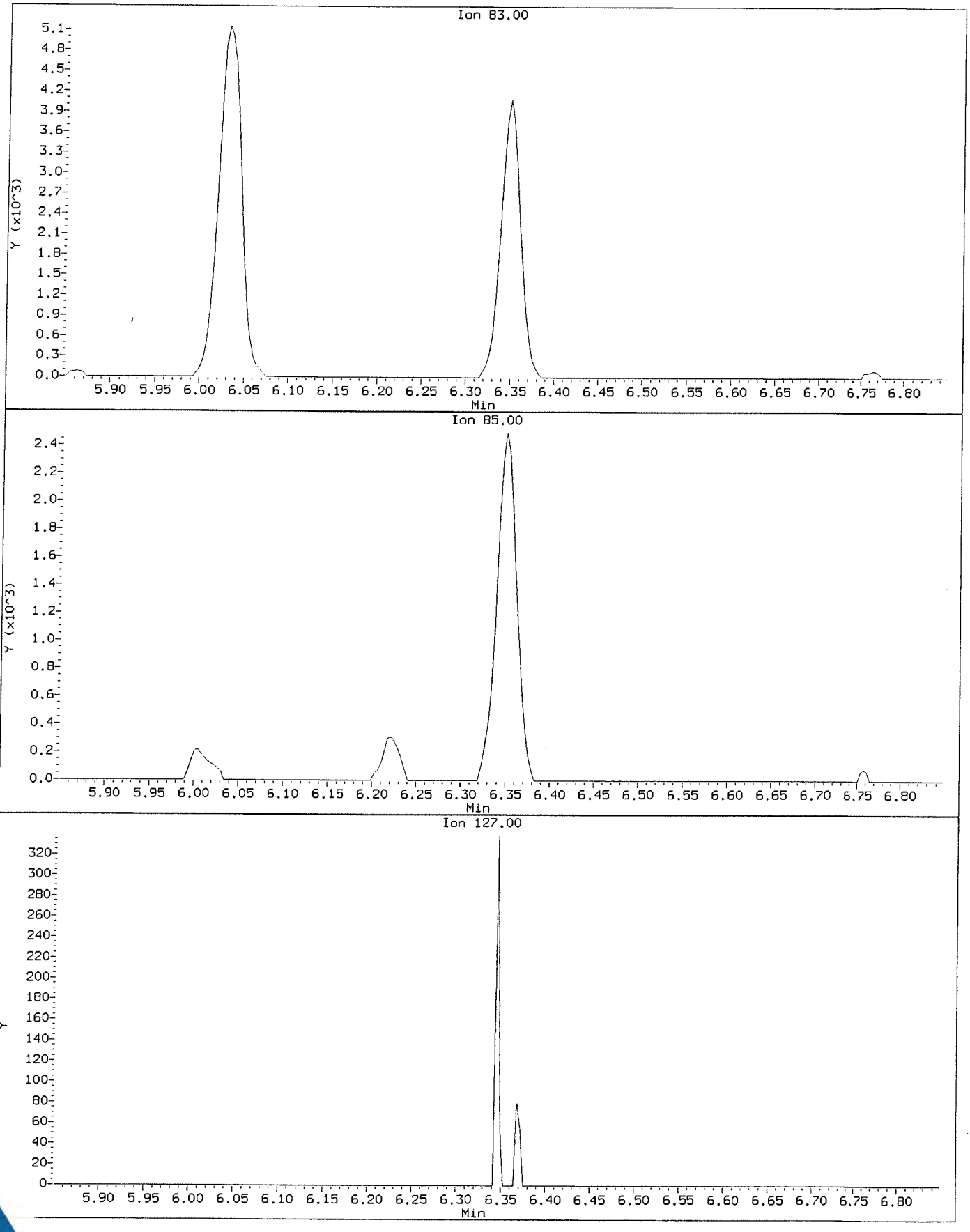
Client ID: VSTD001
Sample Info: VSTD001;VSTD001;1;3;
Purge Volume: 5.0
Column phase: DB624

\\NAHSTWS005\Target\chem\voa9,i\U190108,b\U010804.D

Instrument: VOA9,i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\Before\U010804.D
Injection Date: 08-JAN-2019 12:07
Instrument: VOA9.i
Client Sample ID: VSTD001

Compound: Bromodichloromethane
CAS Number: 75-27-4



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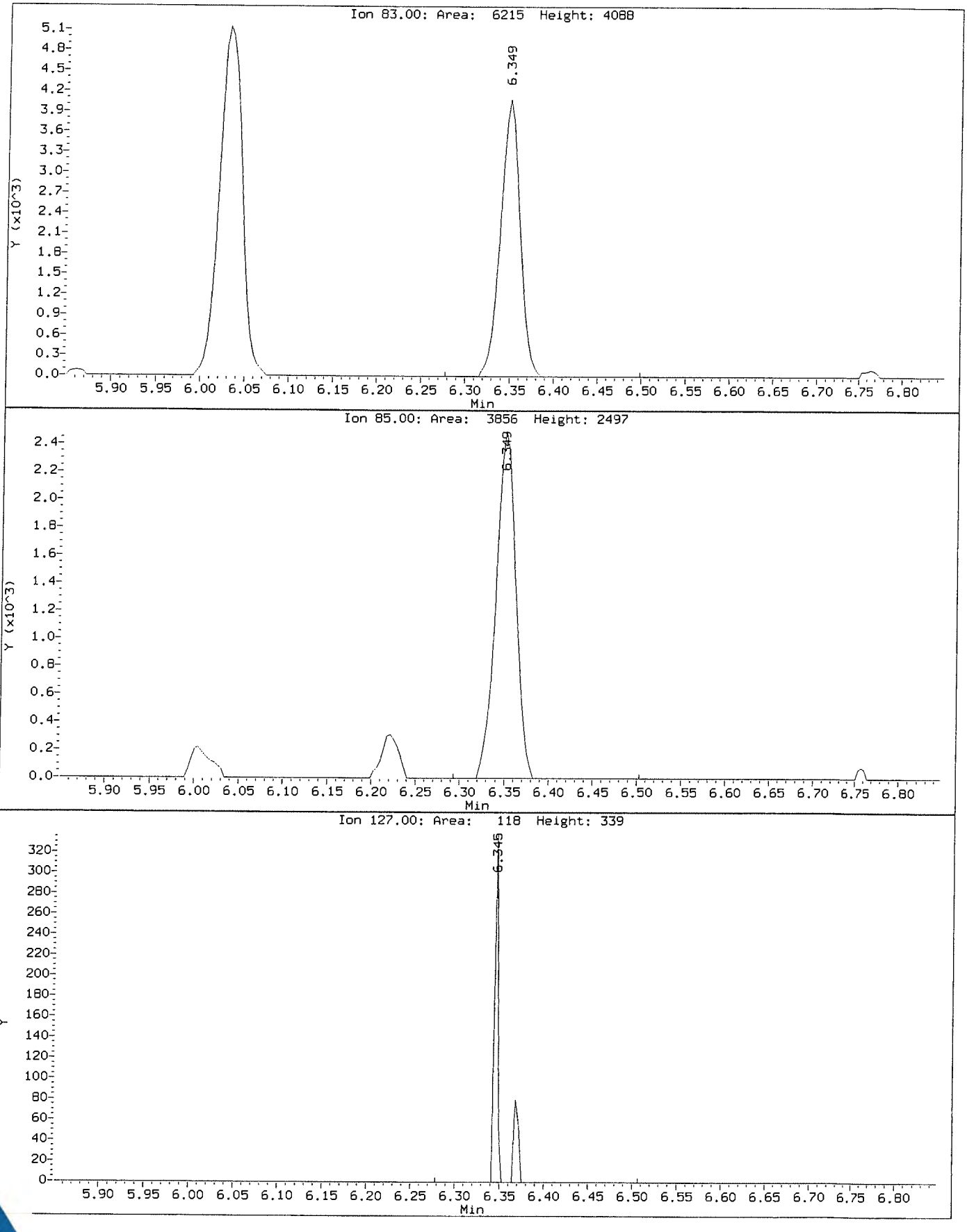
Instrument: VOA9.i
Client Sample ID: VSTD001

Compound: Bromodichloromethane
CAS Number: 75-27-4



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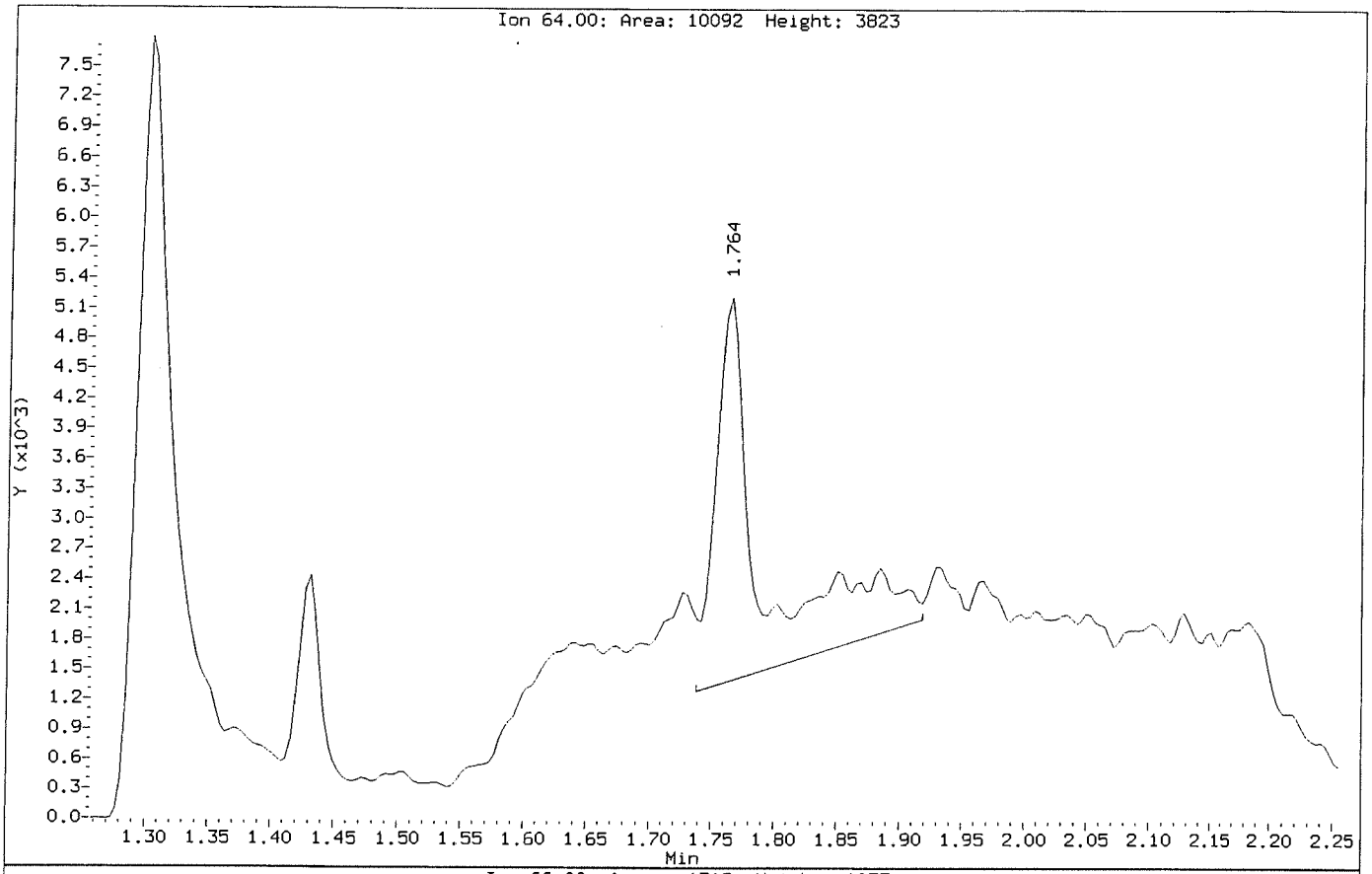
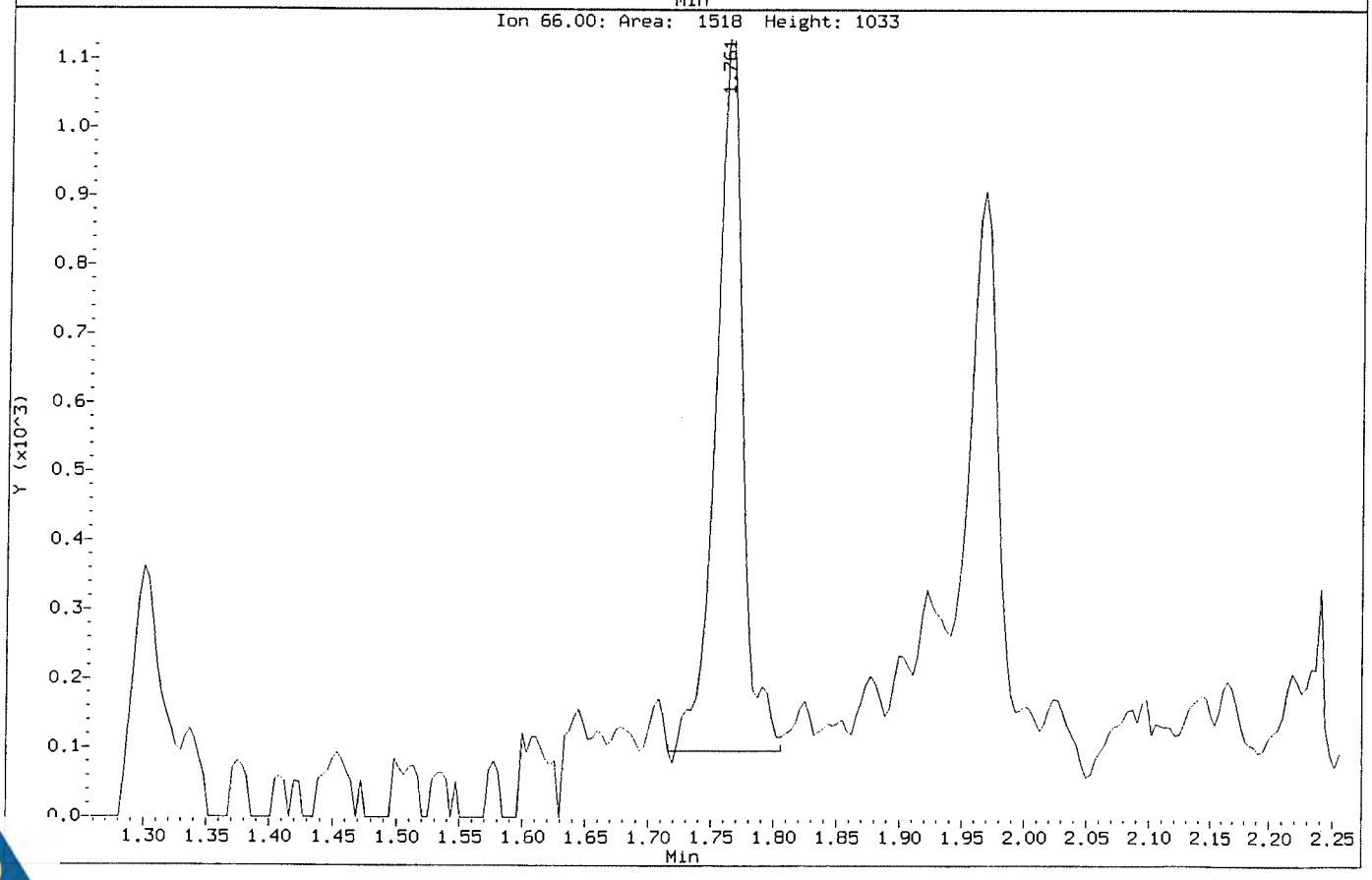
Instrument: VOA9.i
Client Sample ID: VSTD001

Compound: Chloroethane
CAS Number: 75-00-3





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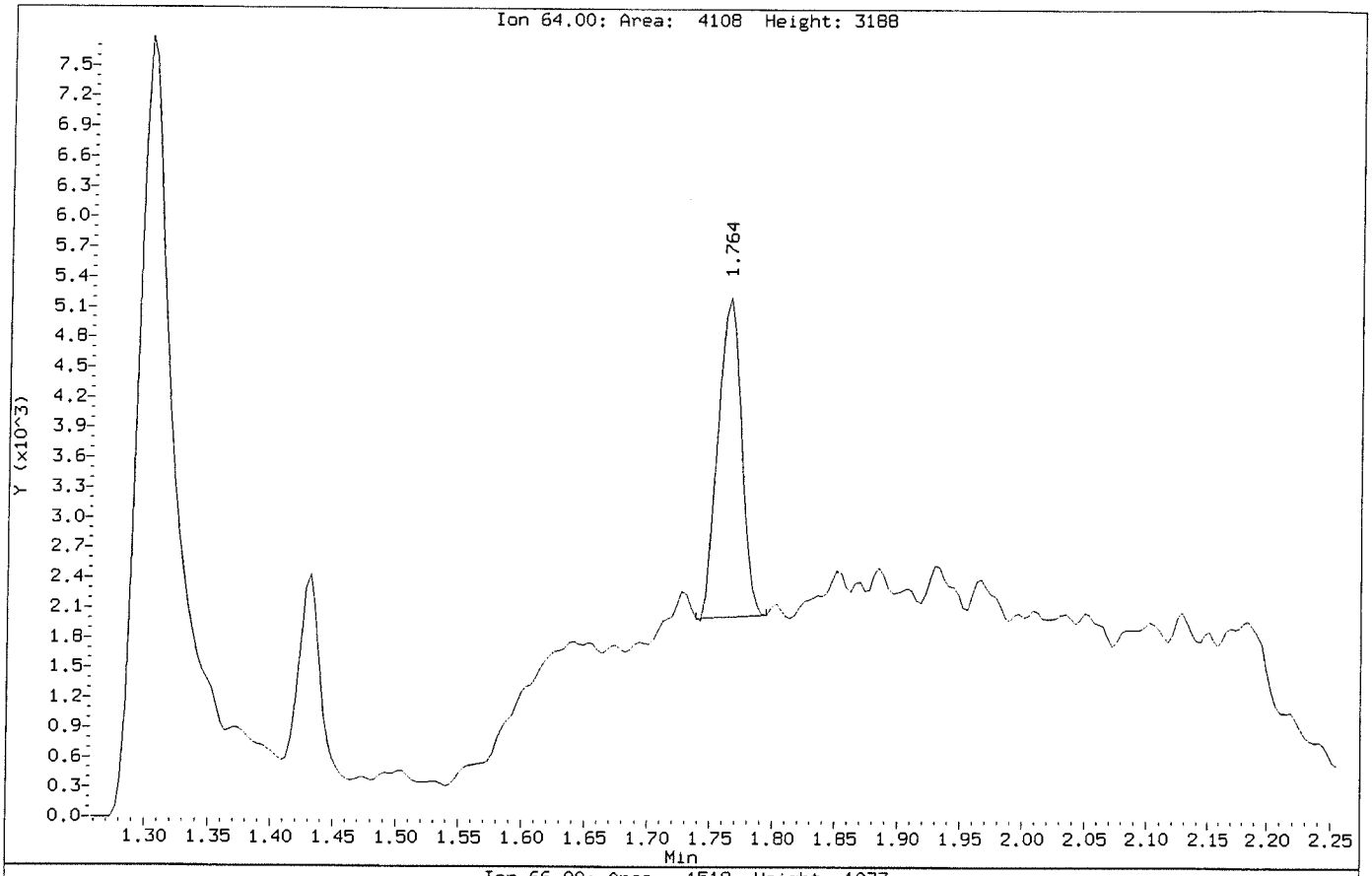
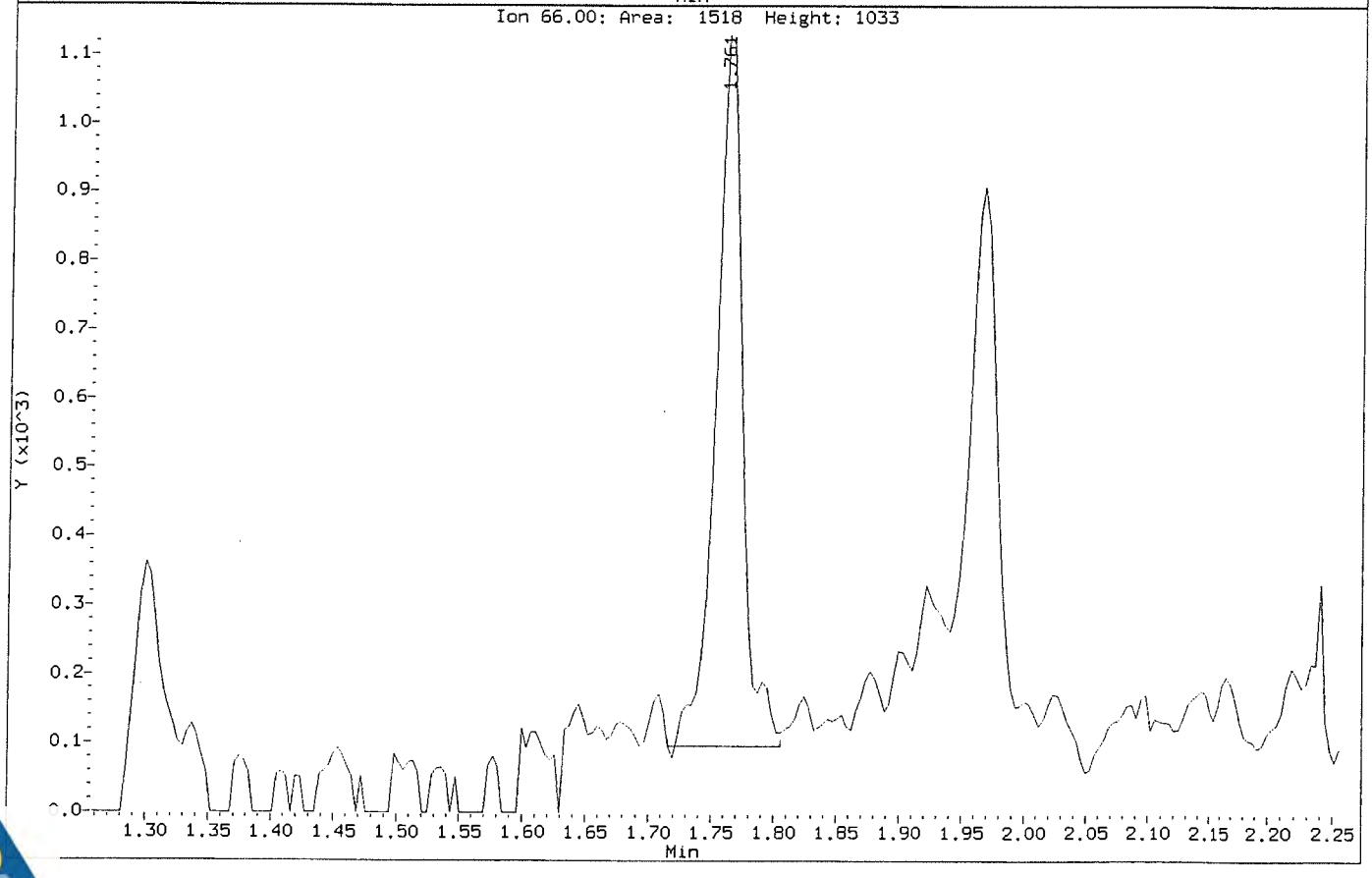
Injection Date: 08-JAN-2019 12:07
Instrument: VOA9.i
Client Sample ID: VSTD001

Compound: Chloroethane
CAS Number: 75-00-3





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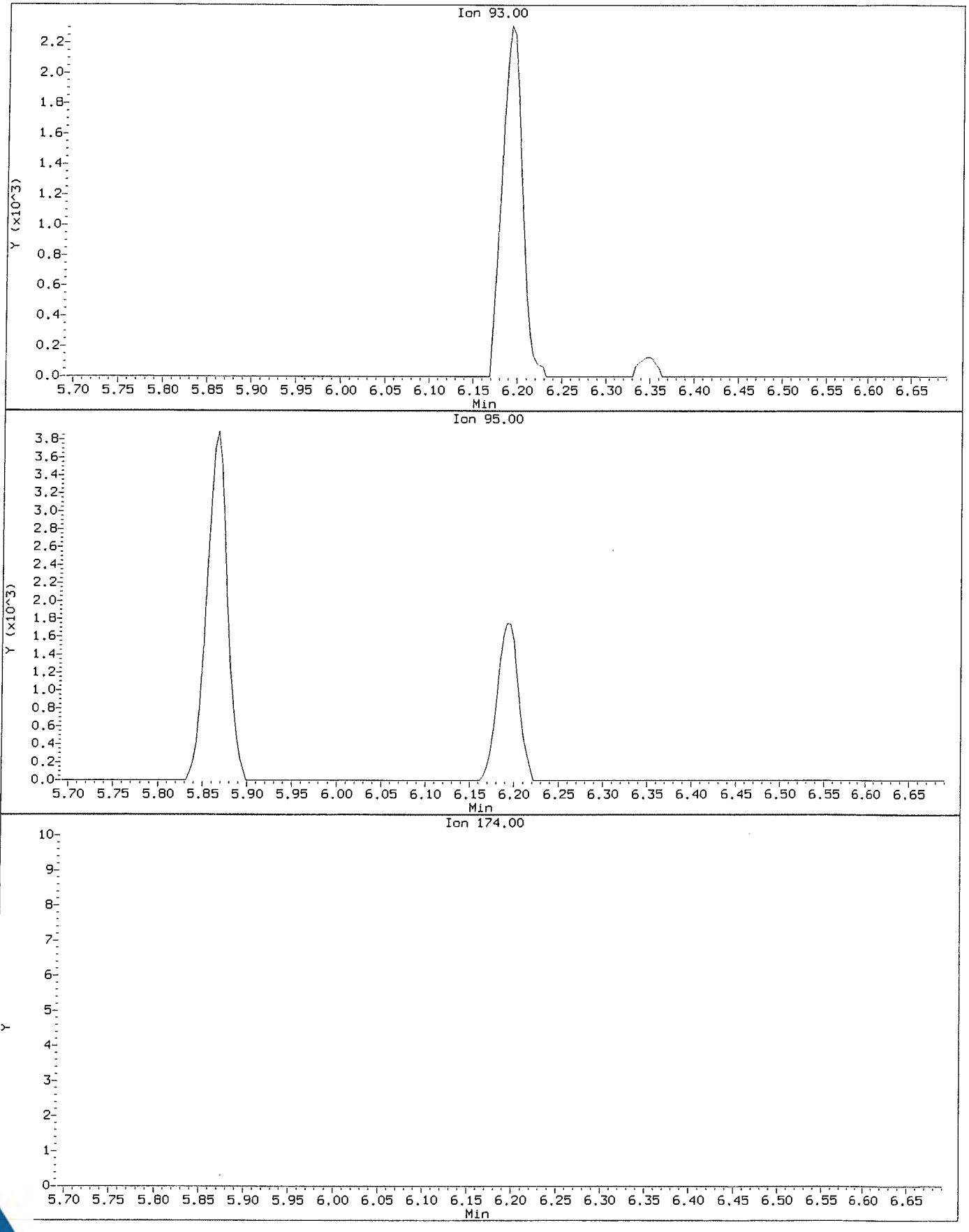
Injection Date: 08-JAN-2019 12:07
Instrument: VOA9.i
Client Sample ID: VSTD001

Compound: Dibromomethane
CAS Number: 74-95-3



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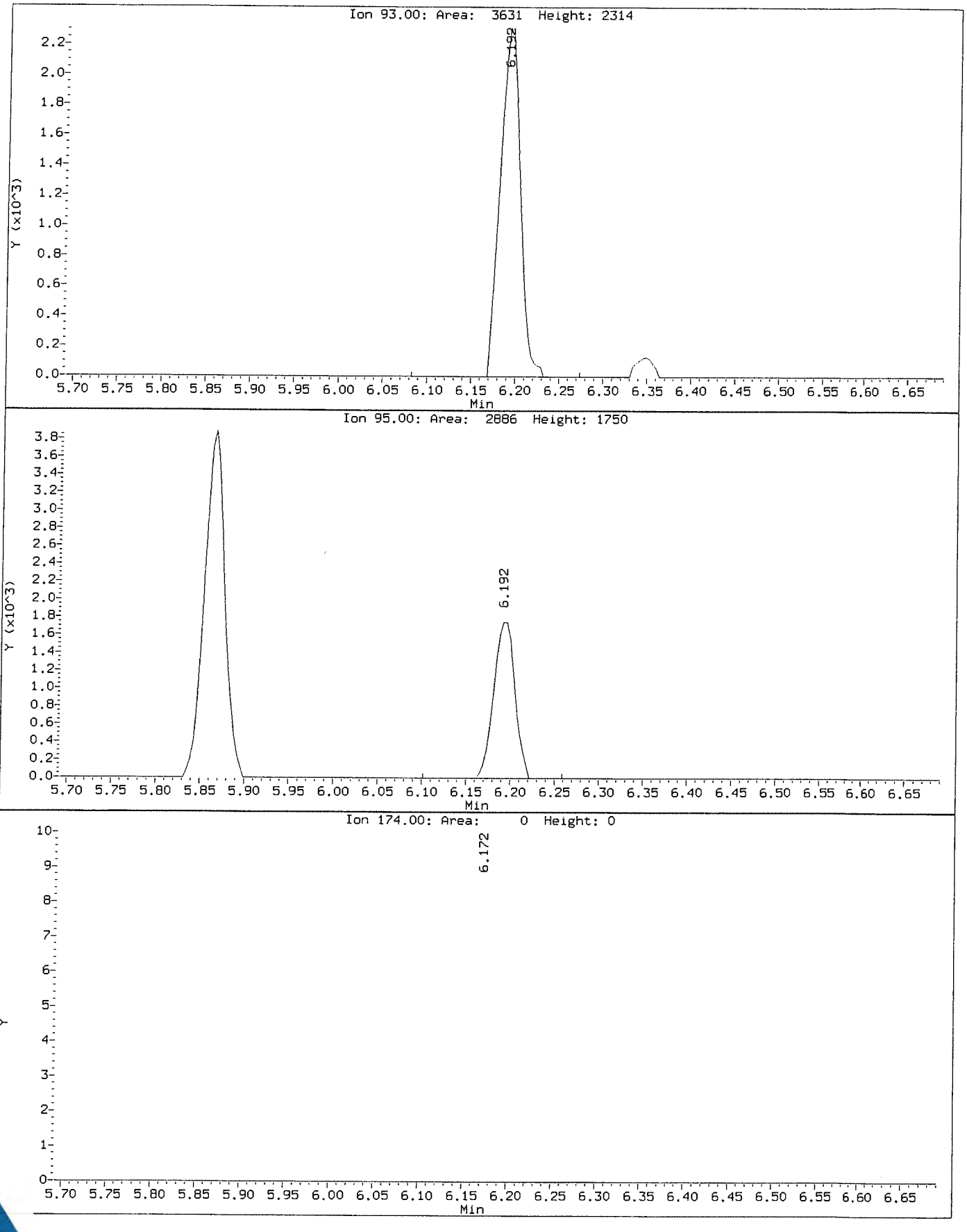
Instrument: VOA9.i
Client Sample ID: VSTD001

Compound: Dibromomethane
CAS Number: 74-95-3



ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010805.D
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Inj Date : 08-JAN-2019 12:32
Operator : PC Inst ID: VOA9.i
Smp Info : VSTD002;VSTD002;1;4;
Misc Info : 180315V9;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa9.i\U190108.b\8260C.m
Meth Date : 01-Feb-2019 15:43 VOA9.i Quant Type: ISTD
Cal Date : 08-JAN-2019 12:07 Cal File: U010804.D
Als bottle: 6 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAPb.sub
Target Version: 4.14
Processing Host: NAHSTW7087

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

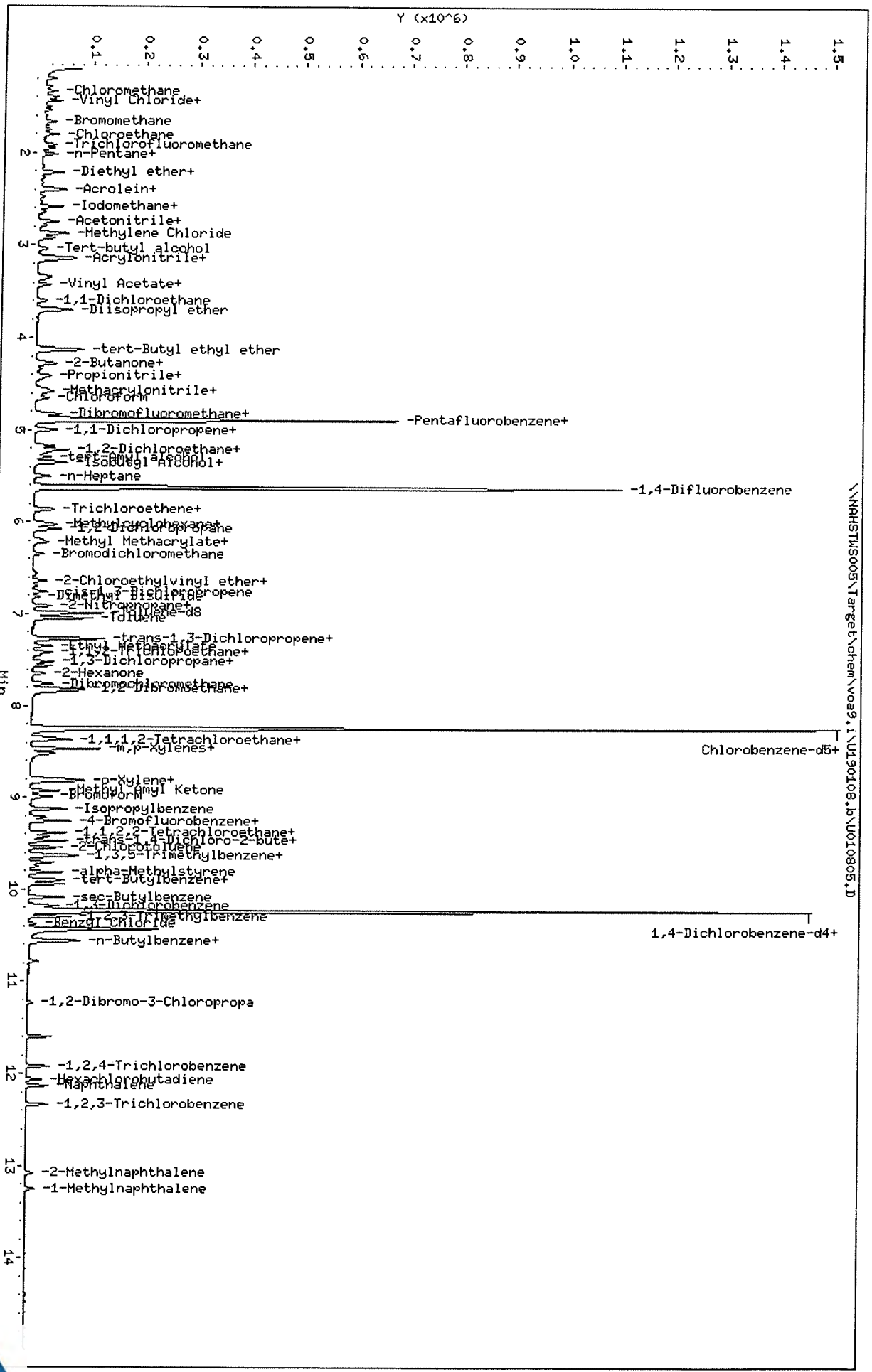
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.894	4.894	(1.000)	411388	50.0000	
* 36 1,4-Difluorobenzene	114	5.625	5.625	(1.000)	781780	50.0000	
* 47 Chlorobenzene-d5	117	8.249	8.249	(1.000)	711339	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	327173	50.0000	
$ 30 Dibromofluoromethane	113	4.826	4.826	(0.986)	16204	2.00000	1.96(a)
$ 35 1,2-Dichloroethane-d4	65	5.171	5.171	(1.057)	22691	2.00000	1.67(a)
$ 48 Toluene-d8	98	6.986	6.986	(0.847)	65875	2.00000	1.28(a)
$ 69 4-Bromofluorobenzene	95	9.257	9.257	(1.122)	23062	2.00000	1.56(a)
60 1,1,1,2-Tetrachloroethane	131	8.350	8.350	(1.012)	8129	2.00000	1.89(a)
31 1,1,1-Trichloroethane	97	4.826	4.826	(0.986)	12397	2.00000	1.83(a)
68 1,1,2,2-Tetrachloroethane	83	9.392	9.392	(0.918)	15238	2.00000	1.71(a)
53 1,1,2-Trichloroethane	83	7.421	7.421	(0.900)	8646	2.00000	1.98(a)
22 1,1-Dichloroethane	63	3.601	3.601	(0.736)	18128	2.00000	1.93(a)
11 1,1-Dichloroethene	96	2.397	2.397	(0.490)	8089	2.00000	2.03(a)
32 1,1-Dichloropropene	75	5.003	5.003	(0.889)	14077	2.00000	1.94(a)
93 1,2,3-Trichlorobenzene	180	12.335	12.335	(1.205)	11082	2.00000	1.90(a)
71 1,2,3-Trichloropropane	75	9.426	9.426	(0.921)	14015	2.00000	1.77(a)
90 1,2,4-Trichlorobenzene	180	11.923	11.923	(1.165)	10799	2.00000	1.83(a)
79 1,2,4-Trimethylbenzene	105	9.943	9.943	(0.971)	32293	2.00000	1.87(a)
89 1,2-Dibromo-3-Chloropropane	155	11.233	11.233	(1.097)	1607	2.00000	3.40(a)
57 1,2-Dibromoethane	107	7.852	7.852	(0.952)	9729	2.00000	1.96(a)
88 1,2-Dichlorobenzene	146	10.569	10.569	(1.033)	19936	2.00000	2.00(a)

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010805.D Page 2
Report Date: 01-Feb-2019 15:43

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
33 1,2-Dichloroethane	62	5.250	5.250	(0.933)	15308	2.00000	2.02(a)
42 1,2-Dichloropropane	63	6.082	6.082	(1.081)	10932	2.00000	1.94(a)
75 1,3,5-Trimethylbenzene	105	9.625	9.625	(0.940)	31100	2.00000	1.85(a)
83 1,3-Dichlorobenzene	146	10.180	10.180	(0.995)	19150	2.00000	1.94(a)
54 1,3-Dichloropropane	76	7.563	7.563	(0.917)	18409	2.00000	1.96(a)
84 1,4-Dichlorobenzene	146	10.255	10.255	(1.002)	20771	2.00000	1.98(a)
26 2,2-Dichloropropane	77	4.275	4.275	(0.874)	10615	2.00000	1.89(a)
24 2-Butanone	43	4.343	4.343	(0.887)	10679	4.00000	3.75(a)
76 2-Chlorotoluene	91	9.546	9.546	(0.933)	30026	2.00000	1.93(a)
52 2-Hexanone	43	7.649	7.649	(0.927)	14671	4.00000	3.57(a)
77 4-Chlorotoluene	91	9.640	9.640	(0.942)	35027	2.00000	1.93(a)
82 p-Isopropyltoluene	119	10.210	10.210	(0.997)	32429	2.00000	1.86(a)
45 4-Methyl-2-Pentanone	43	6.914	6.914	(0.838)	21707	4.00000	3.66(a)
10 Acetone	43	2.476	2.476	(0.506)	8715	4.00000	3.33(a)
37 Benzene	78	5.216	5.216	(0.927)	42681	2.00000	1.98(a)
74 Bromobenzene	156	9.381	9.381	(0.917)	9942	2.00000	1.94(a)
29 Bromochloromethane	128	4.549	4.549	(0.930)	4787	2.00000	2.11(a)
39 Bromodichloromethane	83	6.348	6.348	(1.129)	11132	2.00000	1.83(aM)
66 Bromoform	173	8.984	8.984	(1.089)	4283	2.00000	3.12(Ta)
6 Bromomethane	94	1.670	1.670	(0.341)	8201	2.00000	3.38(a)
19 Carbon Disulfide	76	2.585	2.585	(0.528)	54864	4.00000	3.89(a)
34 Carbon Tetrachloride	117	4.995	4.995	(0.888)	9328	2.00000	1.78(a)
59 Chlorobenzene	112	8.275	8.275	(1.003)	28361	2.00000	1.99(a)
7 Chloroethane	64	1.749	1.749	(0.357)	8411	2.00000	2.26(aM)
28 Chloroform	83	4.654	4.654	(0.951)	17506	2.00000	1.97(a)
3 Chloromethane	50	1.336	1.336	(0.273)	11251	2.00000	4.40(a)
27 cis-1,2-Dichloroethene	96	4.283	4.283	(0.875)	10808	2.00000	1.92(a)
46 cis-1,3-Dichloropropene	75	6.757	6.757	(1.201)	13084	2.00000	2.70(a)
55 Dibromochloromethane	129	7.758	7.758	(0.940)	6755	2.00000	2.61(a)
44 Dibromomethane	93	6.187	6.187	(1.100)	6107	2.00000	1.85(aM)
2 Dichlorodifluoromethane	85	1.201	1.201	(0.246)	10985	2.00000	2.02(a)
61 Ethylbenzene	106	8.369	8.369	(1.015)	13549	2.00000	1.89(a)
91 Hexachlorobutadiene	225	12.065	12.065	(1.179)	4288	2.00000	2.38(a)
67 Isopropylbenzene	105	9.126	9.126	(1.106)	39125	2.00000	1.91(a)
62 m,p-Xylenes	106	8.470	8.470	(1.027)	33013	4.00000	3.78(a)
17 Methylene Chloride	84	2.870	2.870	(0.586)	11877	2.00000	1.76(a)
87 n-Butylbenzene	91	10.554	10.554	(1.031)	32867	2.00000	1.94(a)
73 n-Propylbenzene	91	9.475	9.475	(0.926)	48396	2.00000	1.91(a)
92 Naphthalene	128	12.133	12.133	(1.185)	27018	2.00000	2.04(a)
63 o-Xylene	106	8.811	8.811	(1.068)	17076	2.00000	1.91(a)
81 sec-Butylbenzene	105	10.086	10.086	(0.985)	40095	2.00000	1.93(a)
64 Styrene	104	8.823	8.823	(1.070)	27152	2.00000	1.83(a)
78 tert-Butylbenzene	119	9.898	9.898	(0.967)	28296	2.00000	1.95(a)
56 Tetrachloroethene	164	7.522	7.522	(0.912)	7657	2.00000	2.04(a)
50 Toluene	91	7.046	7.046	(0.854)	42945	2.00000	1.96(a)
20 trans-1,2-Dichloroethene	96	3.140	3.140	(0.642)	9537	2.00000	1.90(a)
51 trans-1,3-Dichloropropene	75	7.259	7.259	(1.291)	10454	2.00000	2.88(a)
38 Trichloroethene	130	5.861	5.861	(1.042)	9990	2.00000	2.00(a)
8 Trichlorofluoromethane	101	1.951	1.951	(0.399)	13385	2.00000	1.94(a)
5 Vinyl Chloride	62	1.415	1.415	(0.289)	11713	2.00000	1.91(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.



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Client ID: VSTD002
Sample Info: VSTD002;VSTD002;1;4;
Purge Volume: 5.0
Column phase: DB624

Instrument: VOA9,i
Operator: PC
Column diameter: 0.18

\\NAHSTWS005\Target\chem\voa9,i\U190108,b\U010805.D

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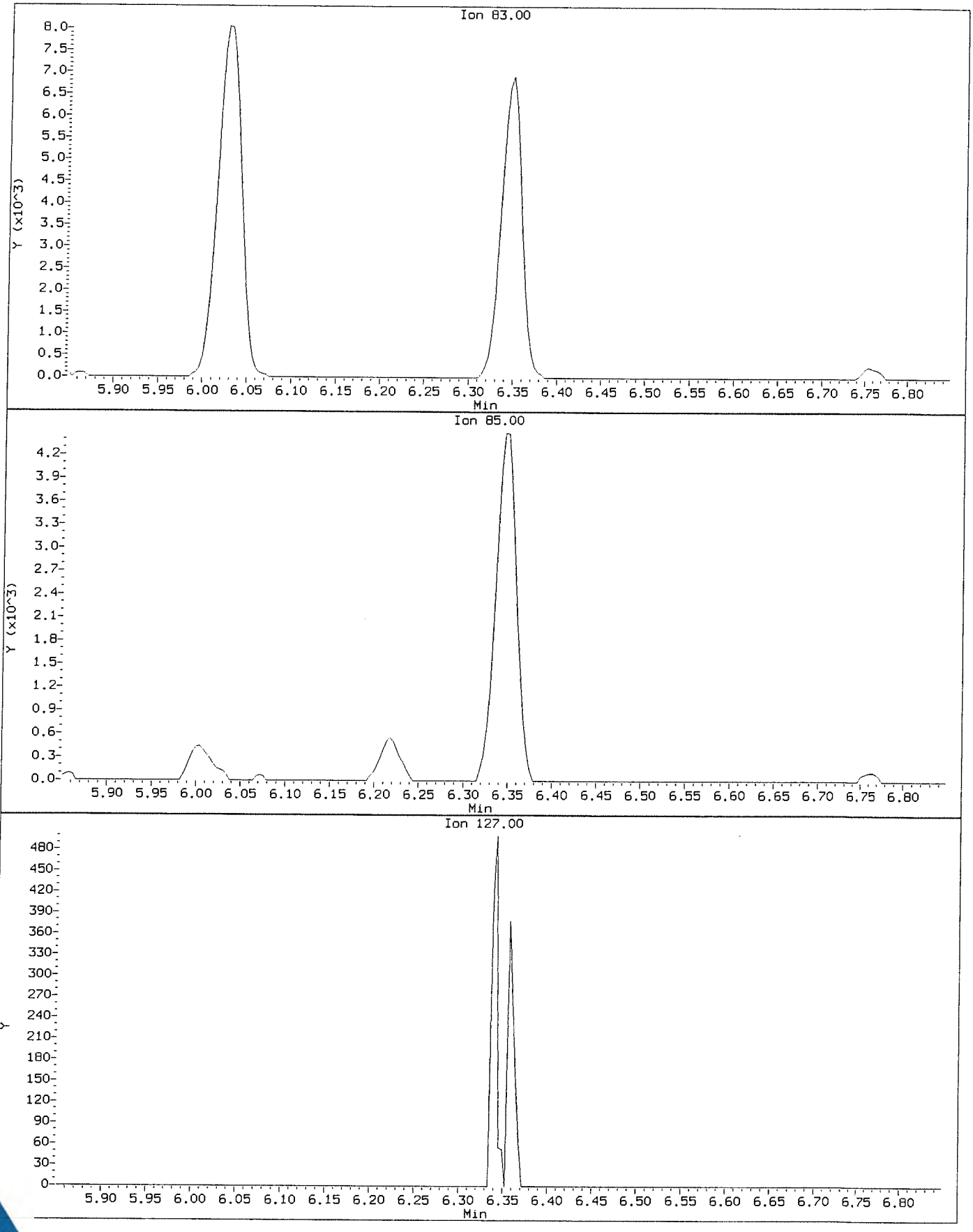
Instrument: VOA9.i
Client Sample ID: VSTD002

Compound: Bromodichloromethane
CAS Number: 75-27-4



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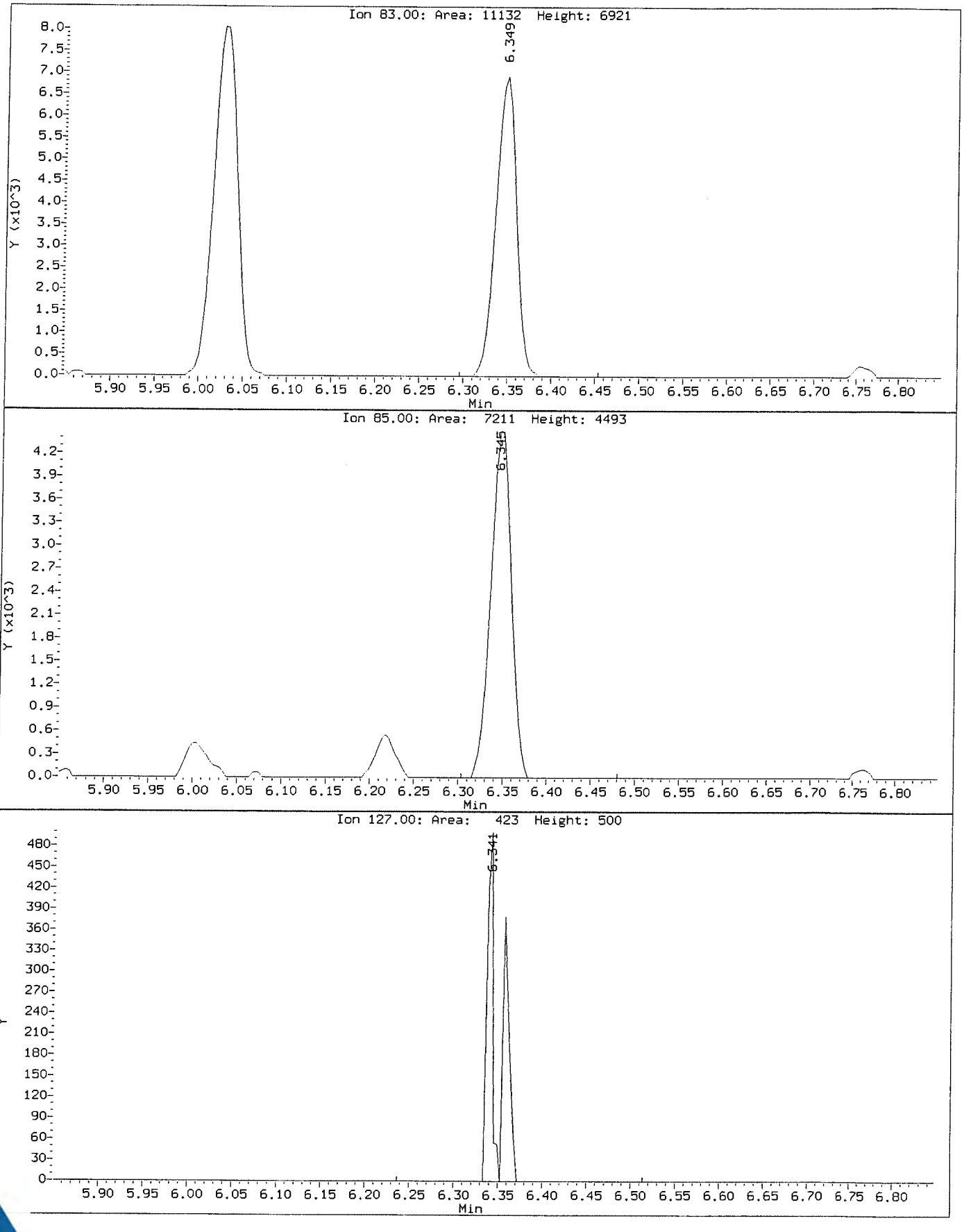
CAS Number: 75-27-4



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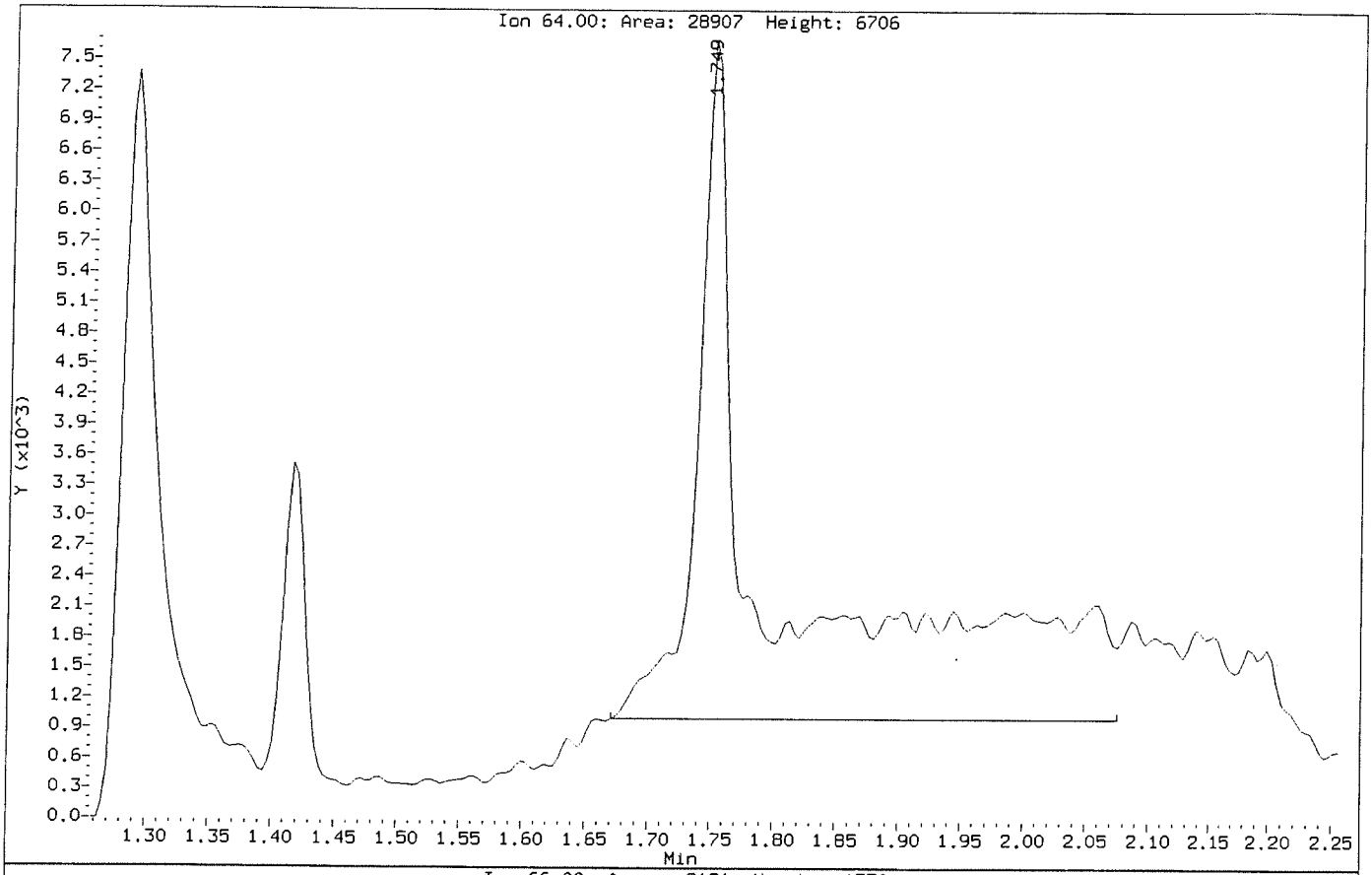
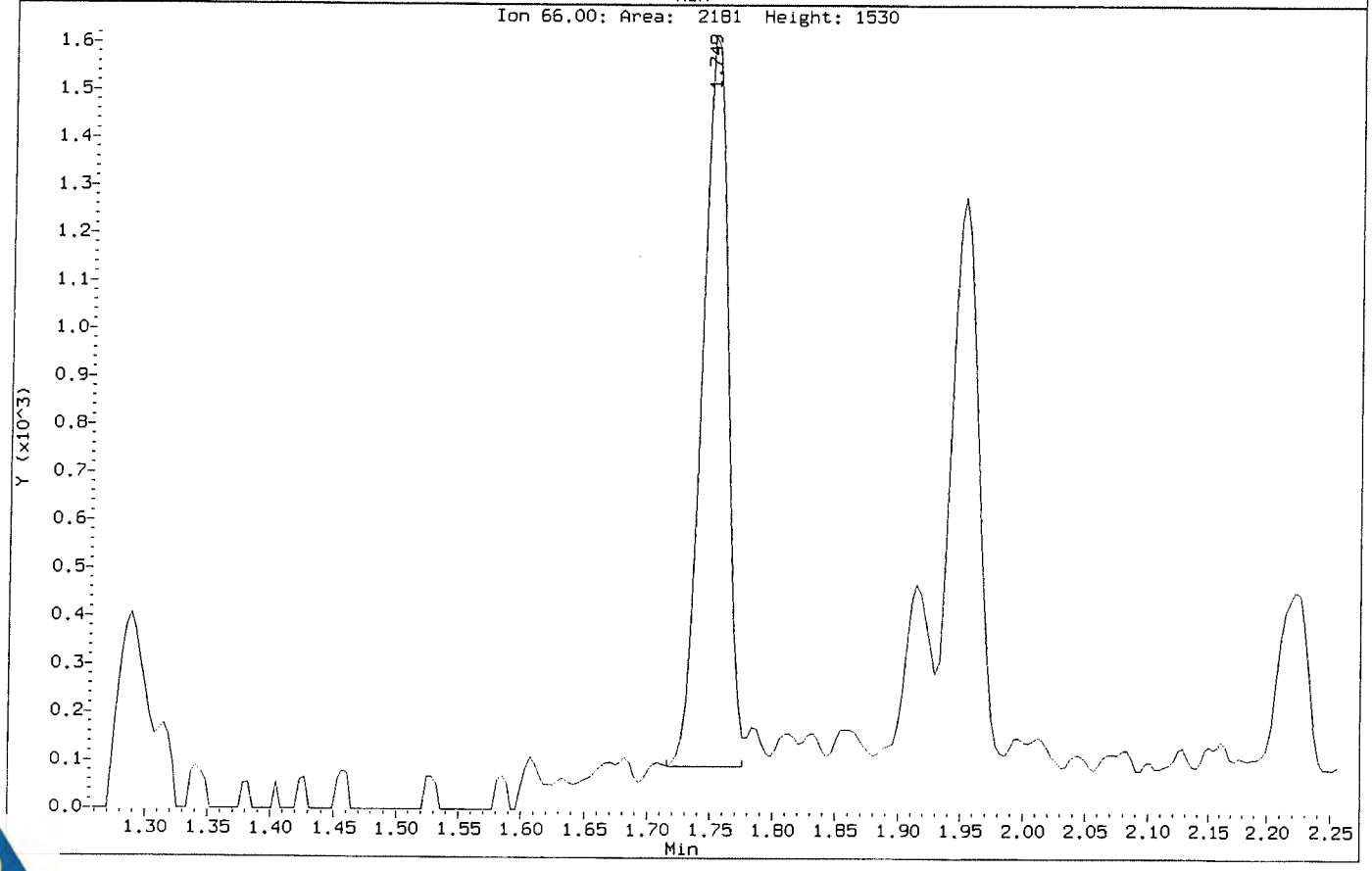
Compound: Chloroethane
CAS Number: 75-00-3





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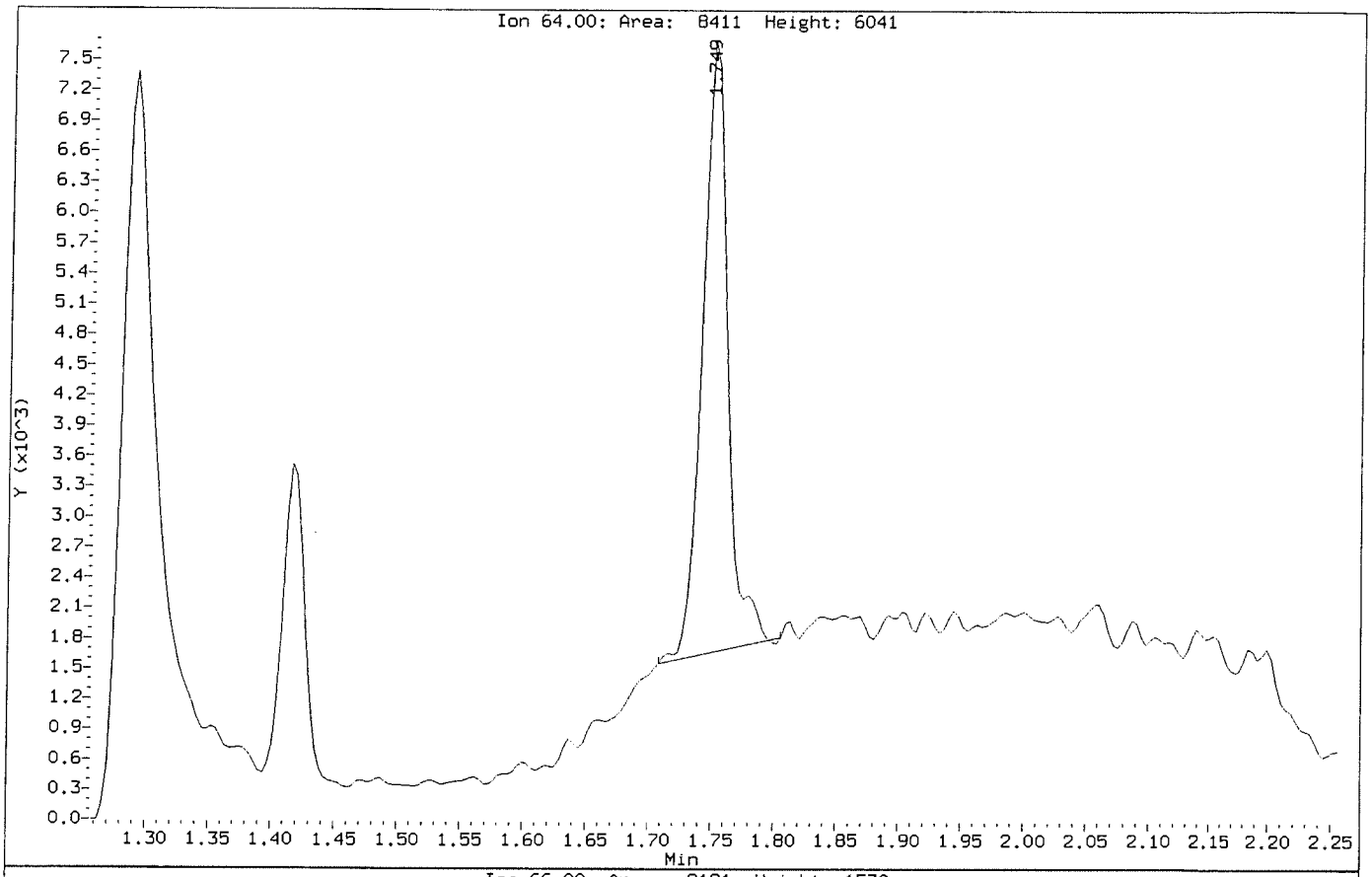
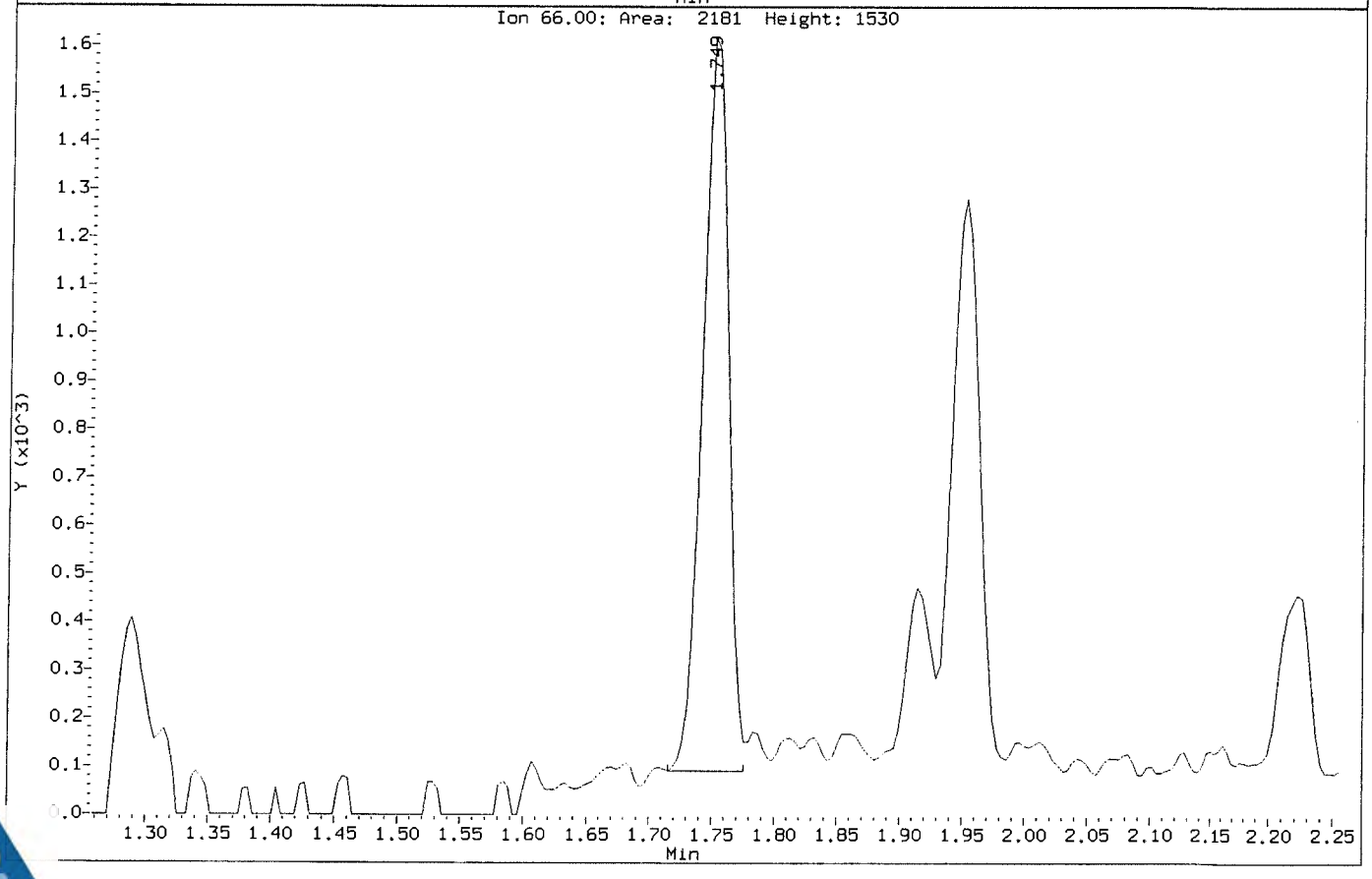
CAS Number: 75-00-3





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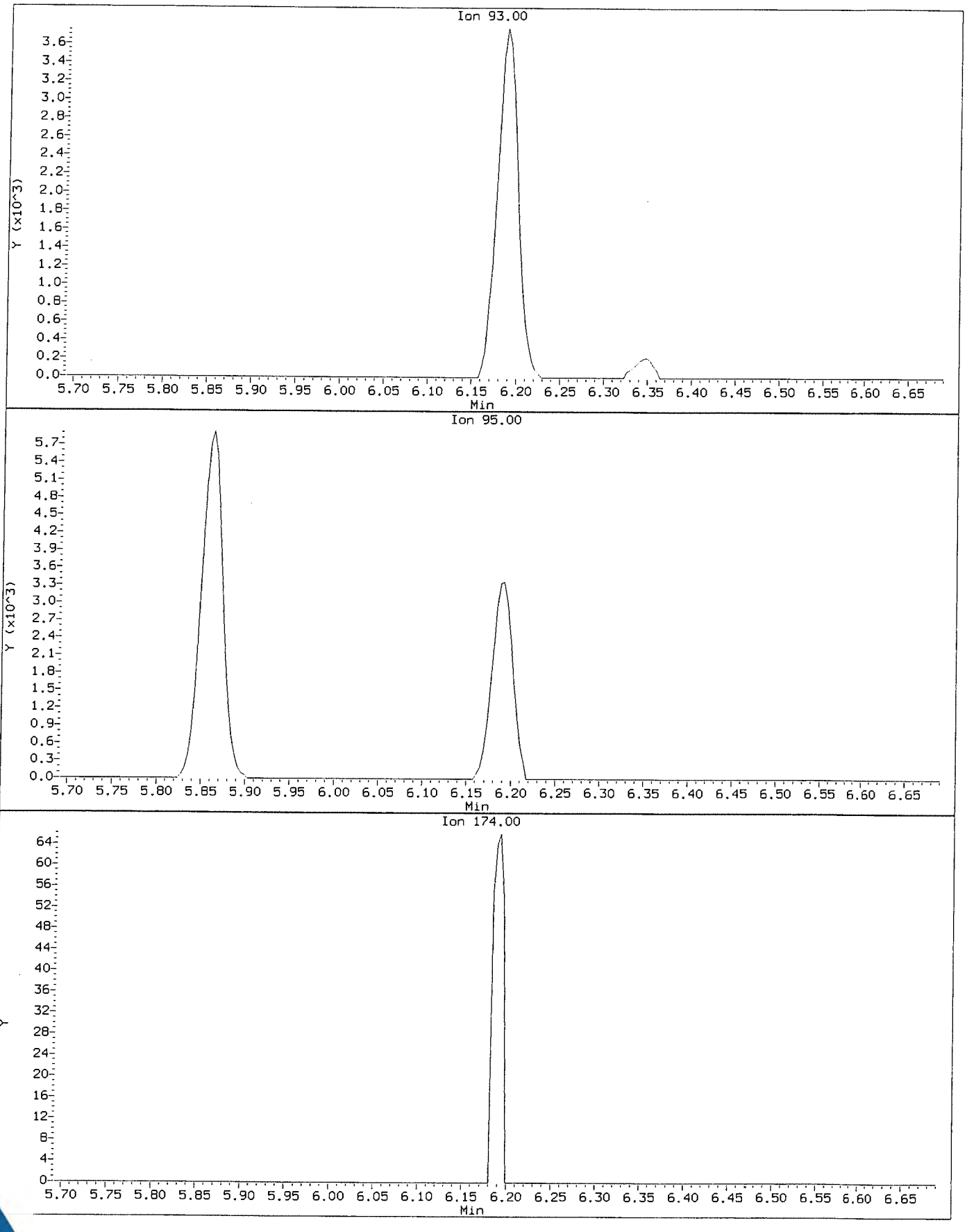
Instrument: VOA9.i
Client Sample ID: VSTD002

Compound: Dibromomethane
CAS Number: 74-95-3



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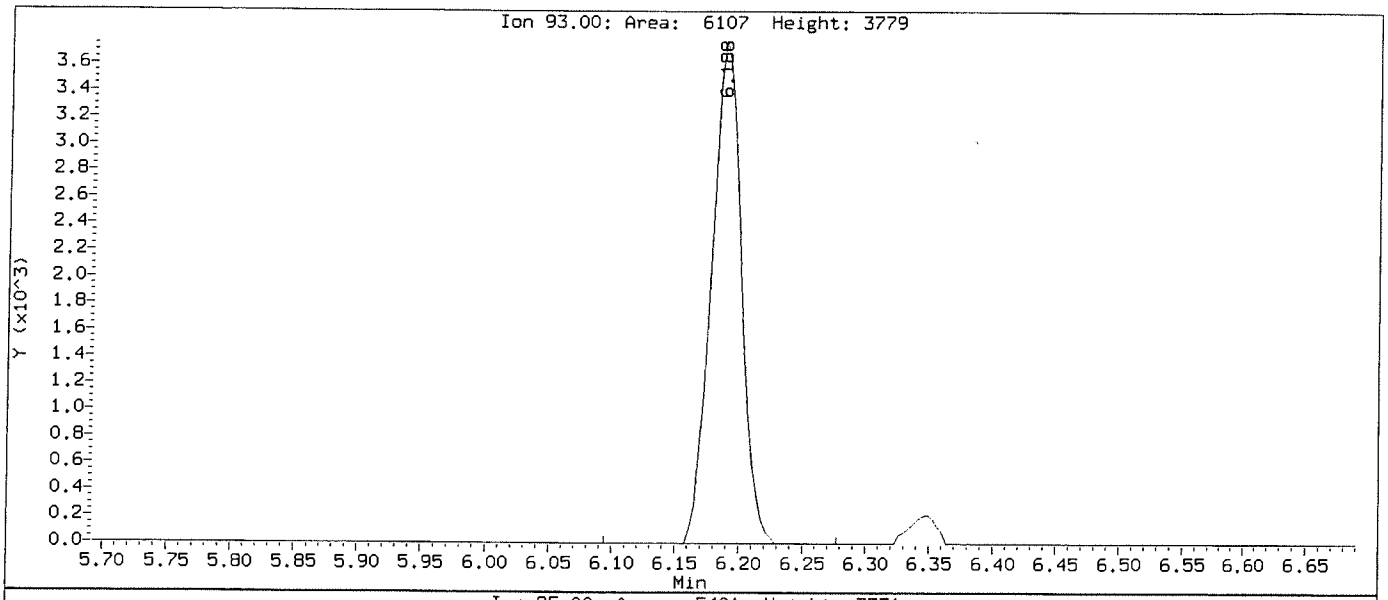
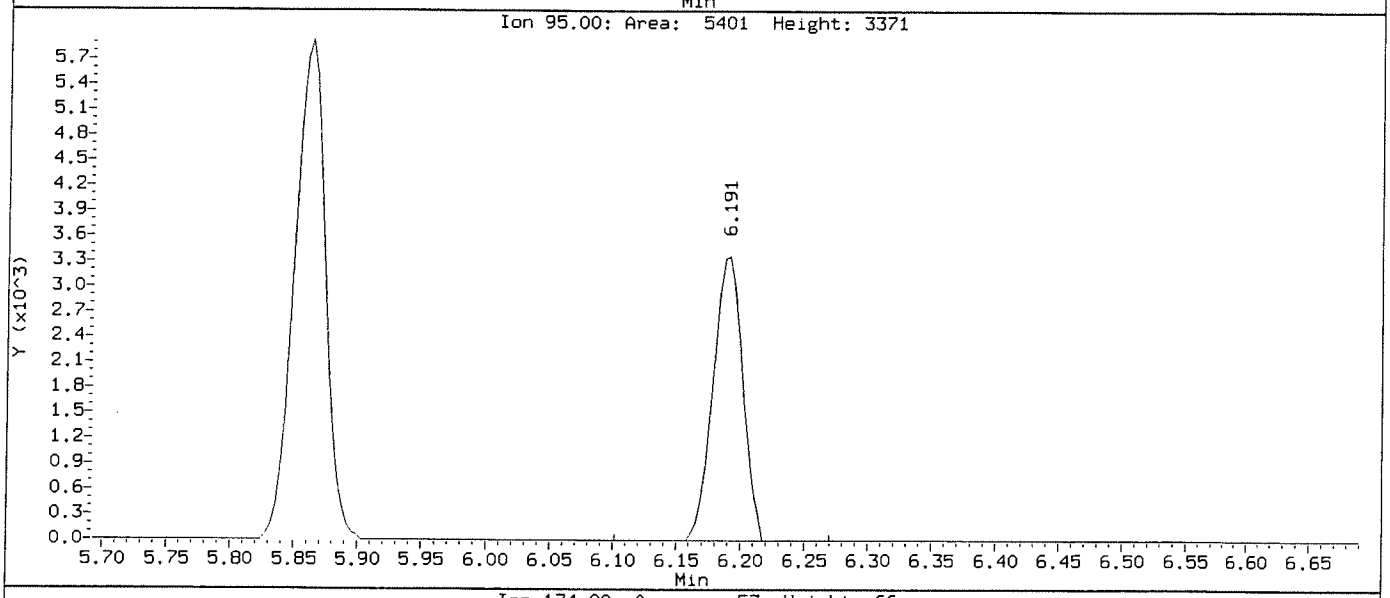
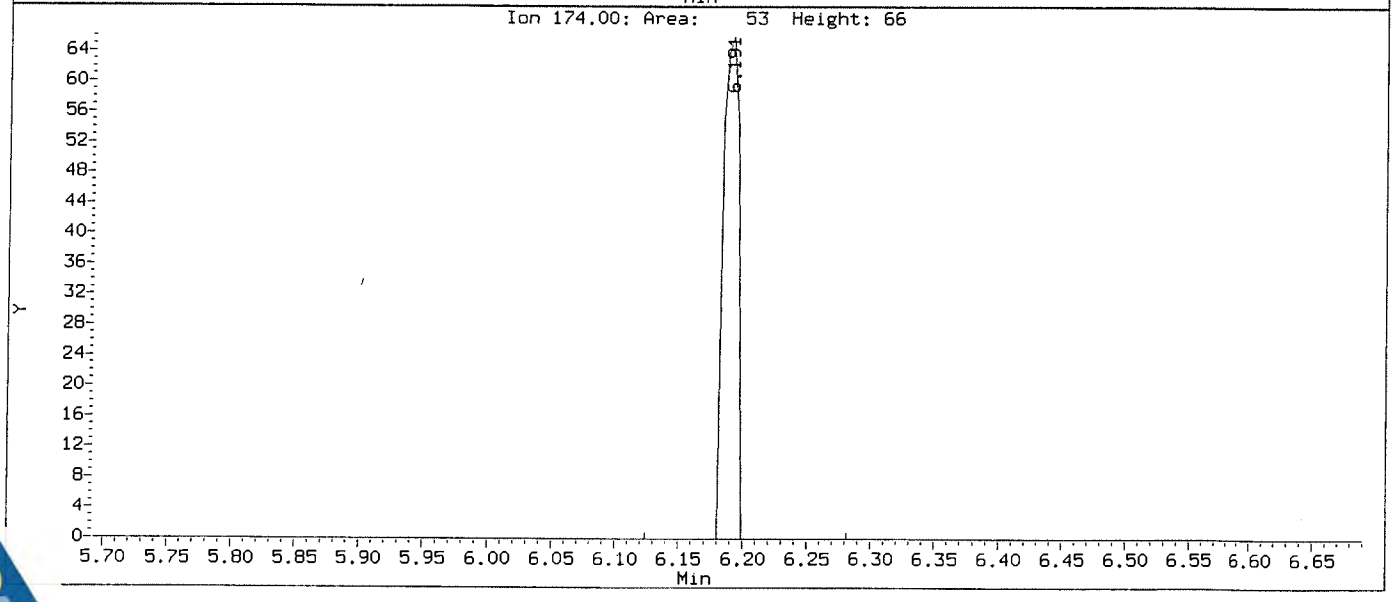
Client Sample ID: VSTD002

Compound: Dibromomethane
CAS Number: 74-95-3







Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010806.D Page 1
Report Date: 01-Feb-2019 15:44

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010806.D
Lab Smp Id: VSTD005 Client Smp ID: VSTD005
Inj Date : 08-JAN-2019 12:56
Operator : PC Inst ID: VOA9.i
Smp Info : VSTD005;VSTD005;1;5;
Misc Info : 180315V9;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa9.i\U190108.b\8260C.m
Meth Date : 01-Feb-2019 15:43 VOA9.i Quant Type: ISTD
Cal Date : 08-JAN-2019 12:32 Cal File: U010805.D
Als bottle: 7 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAPb.sub
Target Version: 4.14
Processing Host: NAHSTW7087

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

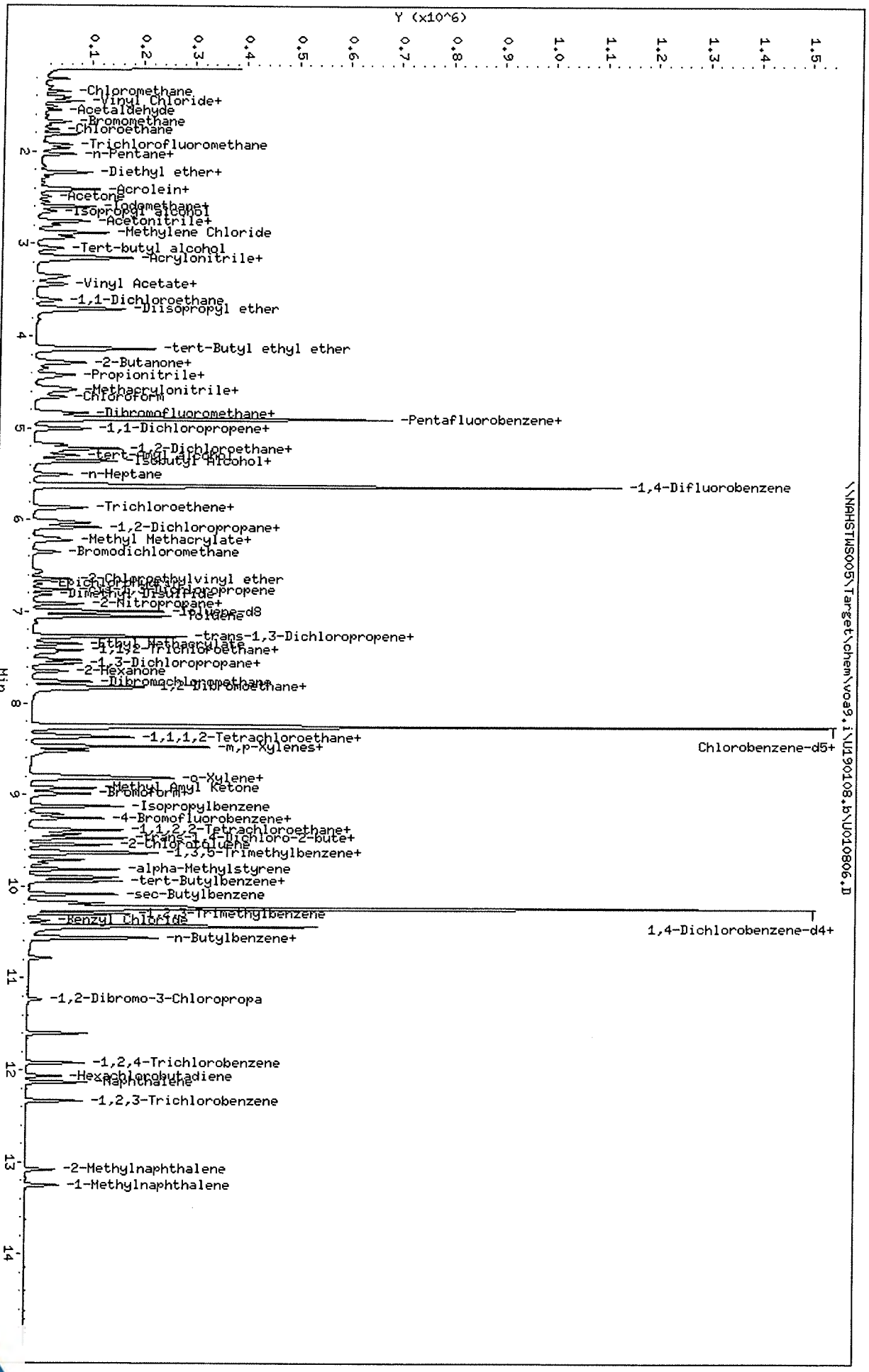
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
*	1 Pentafluorobenzene	168	4.898	4.898	(1.000)	405638	50.0000	
*	36 1,4-Difluorobenzene	114	5.629	5.629	(1.000)	777213	50.0000	
*	47 Chlorobenzene-d5	117	8.249	8.249	(1.000)	712128	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	333957	50.0000	
$	30 Dibromofluoromethane	113	4.834	4.834	(0.987)	29602	5.00000	5.02
$	35 1,2-Dichloroethane-d4	65	5.179	5.179	(1.057)	40286	5.00000	4.80(a)
$	48 Toluene-d8	98	6.989	6.989	(0.847)	119933	5.00000	4.34(a)
$	69 4-Bromofluorobenzene	95	9.257	9.257	(1.122)	43652	5.00000	4.61(a)
	60 1,1,1,2-Tetrachloroethane	131	8.350	8.350	(1.012)	19854	5.00000	4.61(a)
	31 1,1,1-Trichloroethane	97	4.830	4.830	(0.986)	32499	5.00000	4.89(a)
	68 1,1,2,2-Tetrachloroethane	83	9.392	9.392	(0.918)	38499	5.00000	4.78(a)
	53 1,1,2-Trichloroethane	83	7.421	7.421	(0.900)	22485	5.00000	5.15
	22 1,1-Dichloroethane	63	3.612	3.612	(0.737)	46642	5.00000	5.05
	11 1,1-Dichloroethene	96	2.409	2.409	(0.492)	19649	5.00000	5.02
	32 1,1-Dichloropropene	75	5.006	5.006	(0.889)	34745	5.00000	4.83(a)
	93 1,2,3-Trichlorobenzene	180	12.335	12.335	(1.205)	28573	5.00000	4.80(a)
	71 1,2,3-Trichloropropane	75	9.426	9.426	(0.921)	38197	5.00000	4.73(a)
	90 1,2,4-Trichlorobenzene	180	11.923	11.923	(1.165)	30102	5.00000	5.00
	79 1,2,4-Trimethylbenzene	105	9.943	9.943	(0.971)	88744	5.00000	5.05
	89 1,2-Dibromo-3-Chloropropane	155	11.233	11.233	(1.097)	4313	5.00000	5.55
	57 1,2-Dibromoethane	107	7.852	7.852	(0.952)	24841	5.00000	5.00
	88 1,2-Dichlorobenzene	146	10.569	10.569	(1.033)	50465	5.00000	4.97(a)

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010806.D Page 2
Report Date: 01-Feb-2019 15:44

	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	5.258	5.258	(0.934)	38061	5.00000	5.06
42	1,2-Dichloropropane	63	6.082	6.082	(1.081)	27875	5.00000	4.98(a)
75	1,3,5-Trimethylbenzene	105	9.625	9.625	(0.940)	85261	5.00000	4.97(a)
83	1,3-Dichlorobenzene	146	10.180	10.180	(0.995)	50290	5.00000	4.99(a)
54	1,3-Dichloropropane	76	7.563	7.563	(0.917)	48349	5.00000	5.14
84	1,4-Dichlorobenzene	146	10.255	10.255	(1.002)	52430	5.00000	4.91(a)
26	2,2-Dichloropropane	77	4.279	4.279	(0.874)	25547	5.00000	4.62(a)
24	2-Butanone	43	4.347	4.347	(0.887)	27636	10.0000	9.84
76	2-Chlorotoluene	91	9.546	9.546	(0.933)	79748	5.00000	5.02
52	2-Hexanone	43	7.649	7.649	(0.927)	39211	10.0000	9.54
77	4-Chlorotoluene	91	9.640	9.640	(0.942)	93282	5.00000	5.05
82	p-Isopropyltoluene	119	10.210	10.210	(0.997)	85940	5.00000	4.83(a)
45	4-Methyl-2-Pentanone	43	6.914	6.914	(0.838)	57873	10.0000	9.77
10	Acetone	43	2.487	2.487	(0.508)	20388	10.0000	10.16
37	Benzene	78	5.220	5.220	(0.927)	107806	5.00000	5.04
74	Bromobenzene	156	9.381	9.381	(0.917)	25880	5.00000	4.96(a)
29	Bromochloromethane	128	4.557	4.557	(0.930)	12768	5.00000	5.72
39	Bromodichloromethane	83	6.348	6.348	(1.128)	28624	5.00000	4.75(a)
66	Bromoform	173	8.984	8.984	(1.089)	11809	5.00000	5.45(T)
6	Bromomethane	94	1.681	1.681	(0.343)	18180	5.00000	6.66
19	Carbon Disulfide	76	2.596	2.596	(0.530)	134704	10.0000	9.70
34	Carbon Tetrachloride	117	4.999	4.999	(0.888)	23952	5.00000	4.60(a)
59	Chlorobenzene	112	8.275	8.275	(1.003)	71313	5.00000	5.02
7	Chloroethane	64	1.760	1.760	(0.359)	17395	5.00000	4.75(aM)
28	Chloroform	83	4.662	4.662	(0.952)	44943	5.00000	5.13
3	Chloromethane	50	1.348	1.348	(0.275)	26856	5.00000	7.17
27	cis-1,2-Dichloroethene	96	4.290	4.290	(0.876)	27531	5.00000	4.96(a)
46	cis-1,3-Dichloropropene	75	6.757	6.757	(1.200)	36876	5.00000	5.27
55	Dibromochloromethane	129	7.758	7.758	(0.940)	19557	5.00000	5.22
44	Dibromomethane	93	6.191	6.191	(1.100)	16911	5.00000	5.17(M)
2	Dichlorodifluoromethane	85	1.213	1.213	(0.248)	25193	5.00000	4.69(a)
61	Ethylbenzene	106	8.369	8.369	(1.015)	35660	5.00000	4.97(a)
91	Hexachlorobutadiene	225	12.065	12.065	(1.179)	10485	5.00000	5.23
67	Isopropylbenzene	105	9.126	9.126	(1.106)	103615	5.00000	5.06
62	m,p-Xylenes	106	8.474	8.474	(1.027)	87243	10.0000	9.97
17	Methylene Chloride	84	2.877	2.877	(0.587)	29083	5.00000	5.12
87	n-Butylbenzene	91	10.554	10.554	(1.031)	85817	5.00000	4.96(a)
73	n-Propylbenzene	91	9.475	9.475	(0.926)	128144	5.00000	4.96(a)
92	Naphthalene	128	12.133	12.133	(1.185)	81349	5.00000	4.64(a)
63	o-Xylene	106	8.811	8.811	(1.068)	44232	5.00000	4.95(a)
81	sec-Butylbenzene	105	10.086	10.086	(0.985)	104968	5.00000	4.97(a)
64	Styrene	104	8.823	8.823	(1.070)	73947	5.00000	4.97(a)
78	tert-Butylbenzene	119	9.902	9.902	(0.967)	72849	5.00000	4.93(a)
56	Tetrachloroethene	164	7.526	7.526	(0.912)	18354	5.00000	4.90(a)
50	Toluene	91	7.049	7.049	(0.855)	110149	5.00000	5.03
20	trans-1,2-Dichloroethene	96	3.147	3.147	(0.643)	25017	5.00000	5.05
51	trans-1,3-Dichloropropene	75	7.263	7.263	(1.290)	29527	5.00000	5.25
38	Trichloroethene	130	5.865	5.865	(1.042)	25110	5.00000	5.07
8	Trichlorofluoromethane	101	1.962	1.962	(0.401)	32396	5.00000	4.77(a)
5	Vinyl Chloride	62	1.426	1.426	(0.291)	28725	5.00000	4.77(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.



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Column phase: DB624

\\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010806.D

Instrument: VOA9.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\Before\U010806.D
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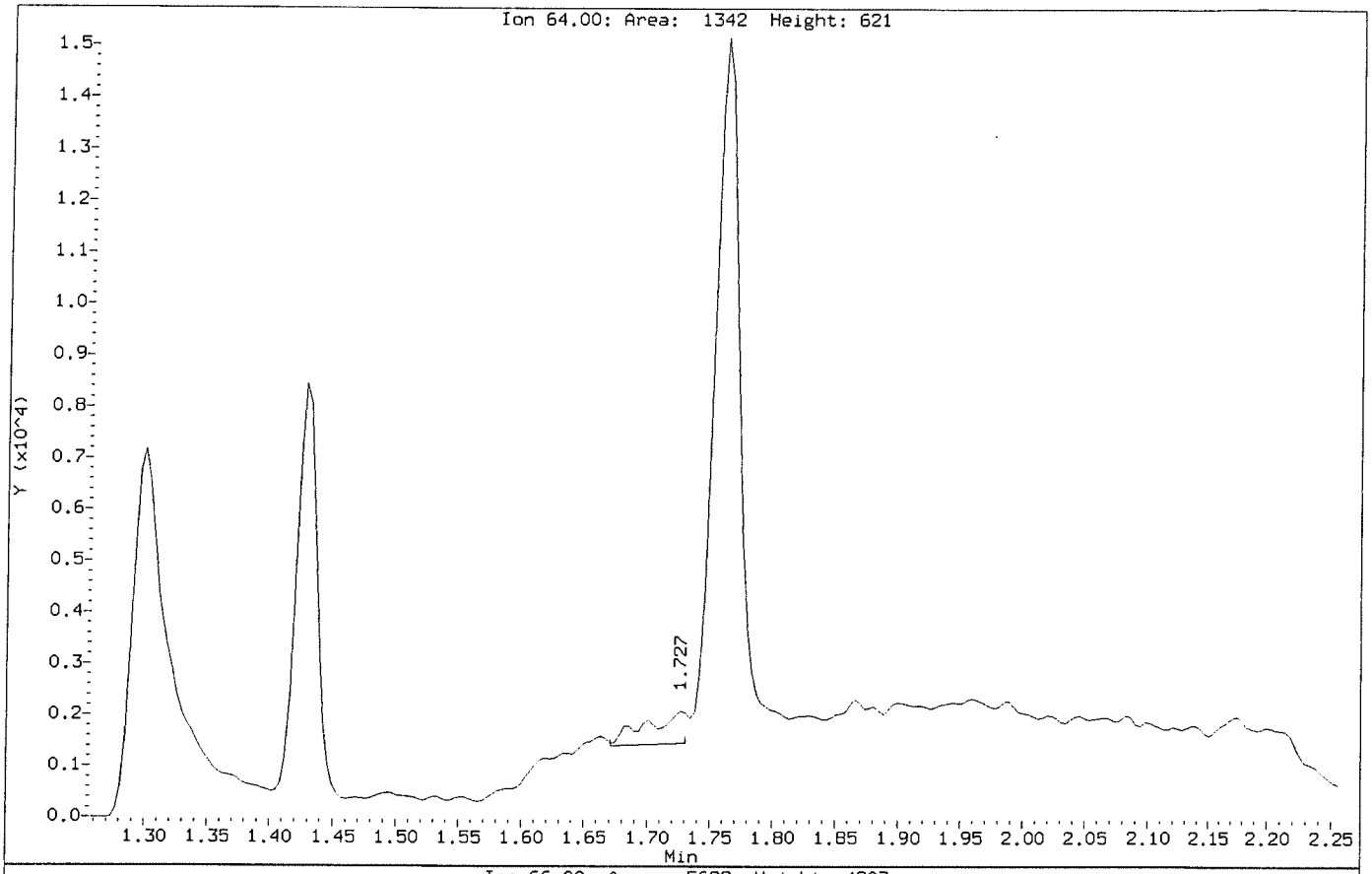
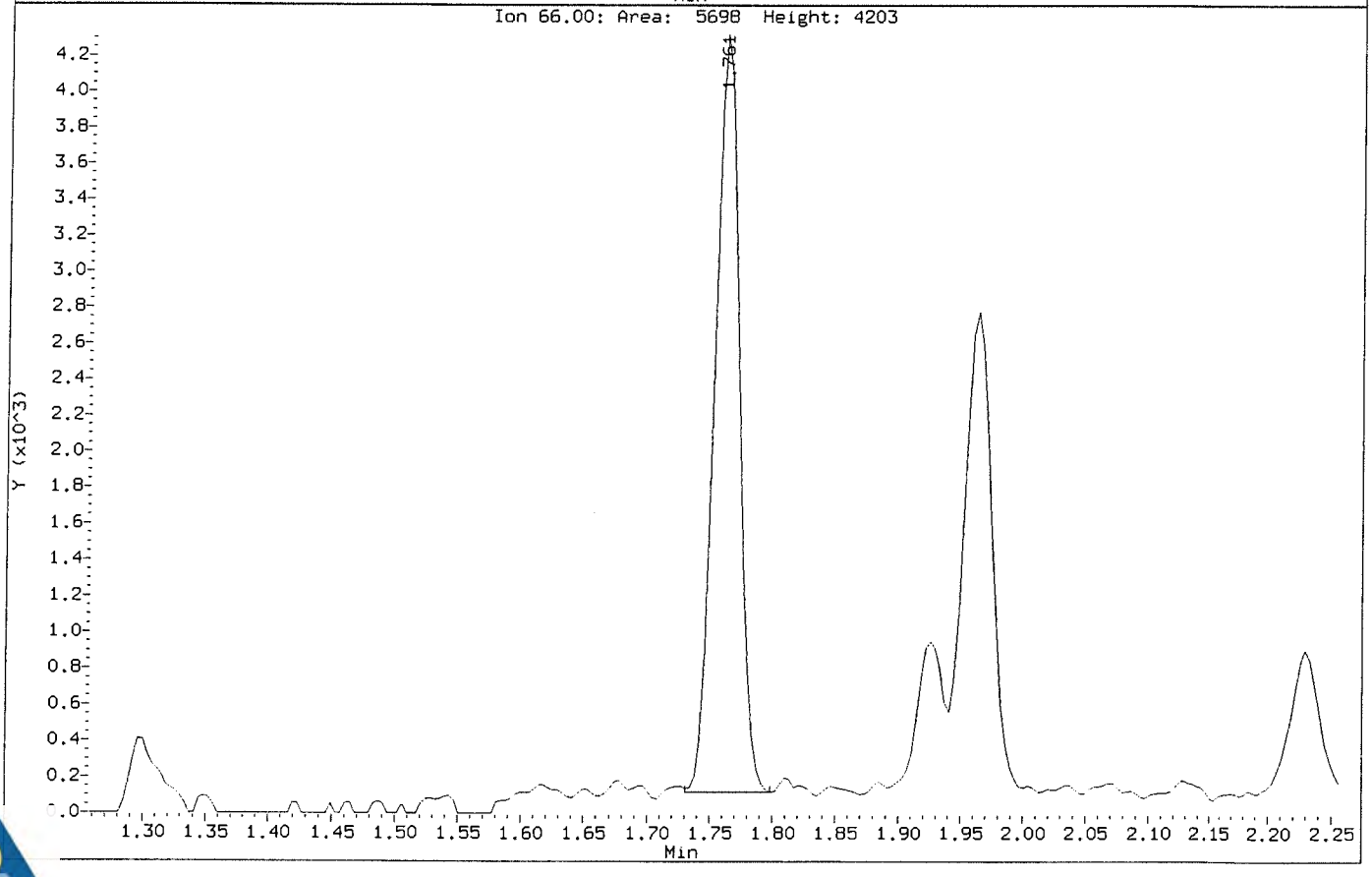
Client Sample ID: VSTD005

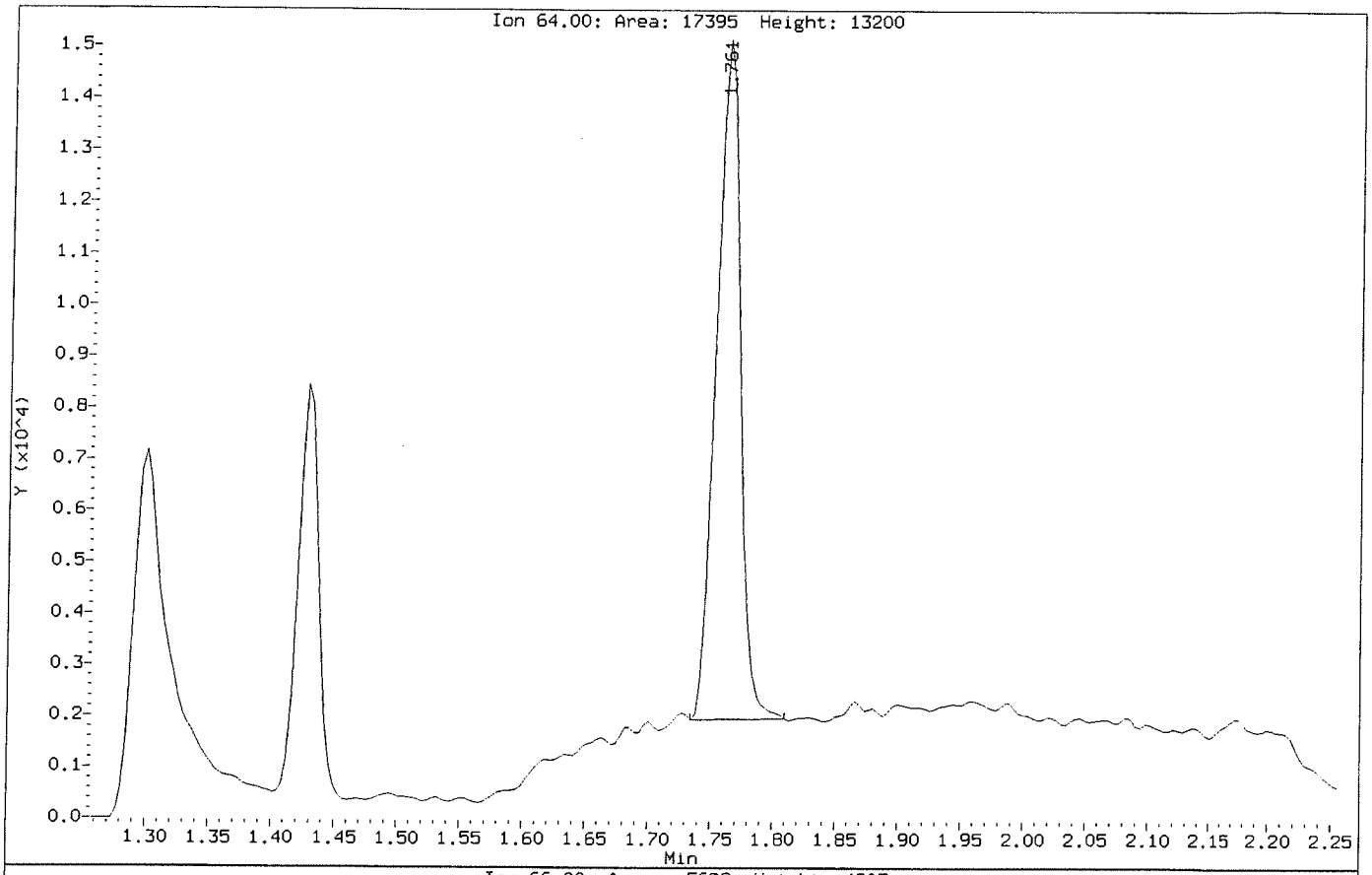
Compound: Chloroethane
CAS Number: 75-00-3

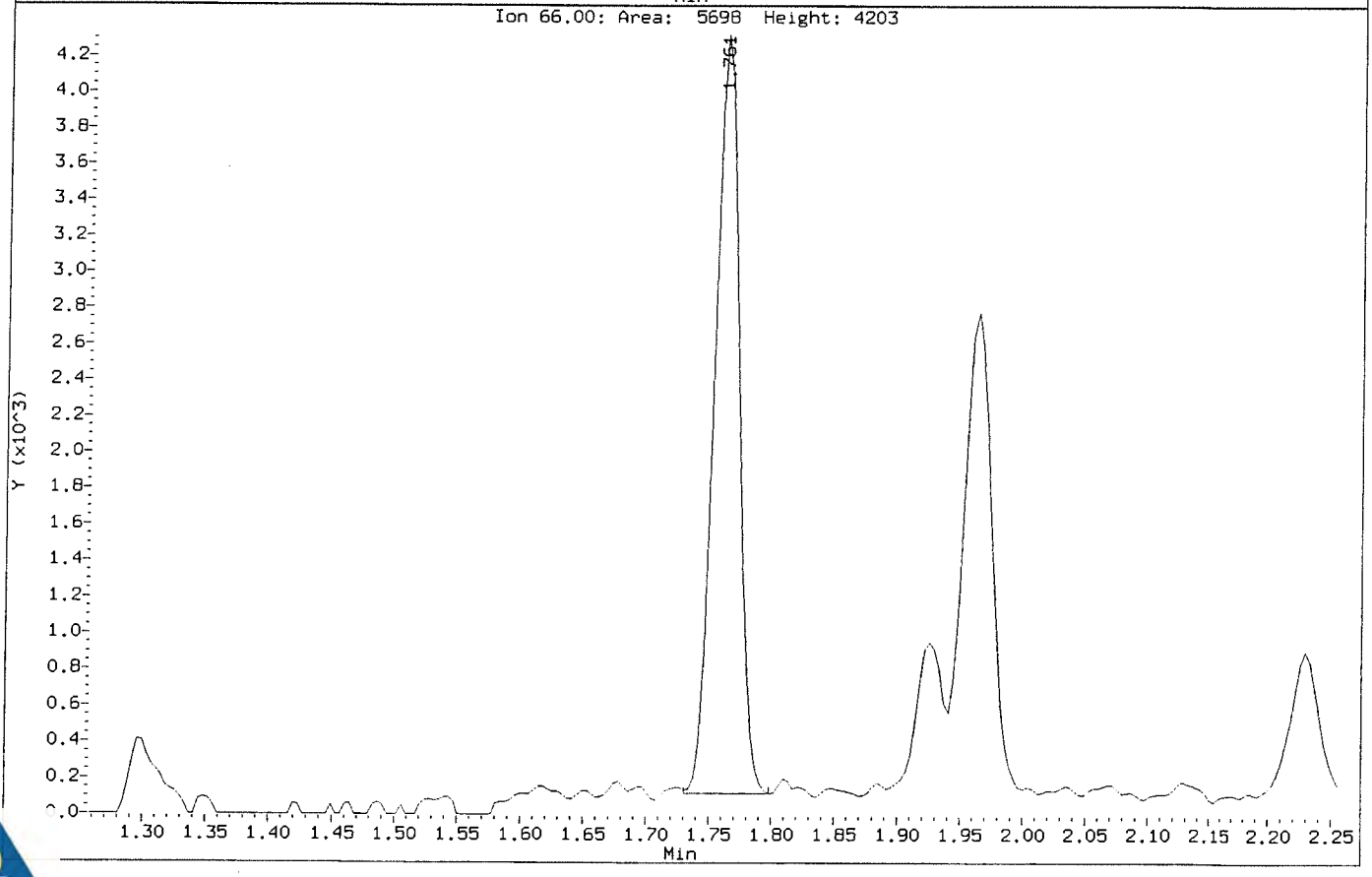




Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010806.D
Injection Date: 08-JAN-2019 12:56
Instrument: VOA9.i
Client Sample ID: VSTD005

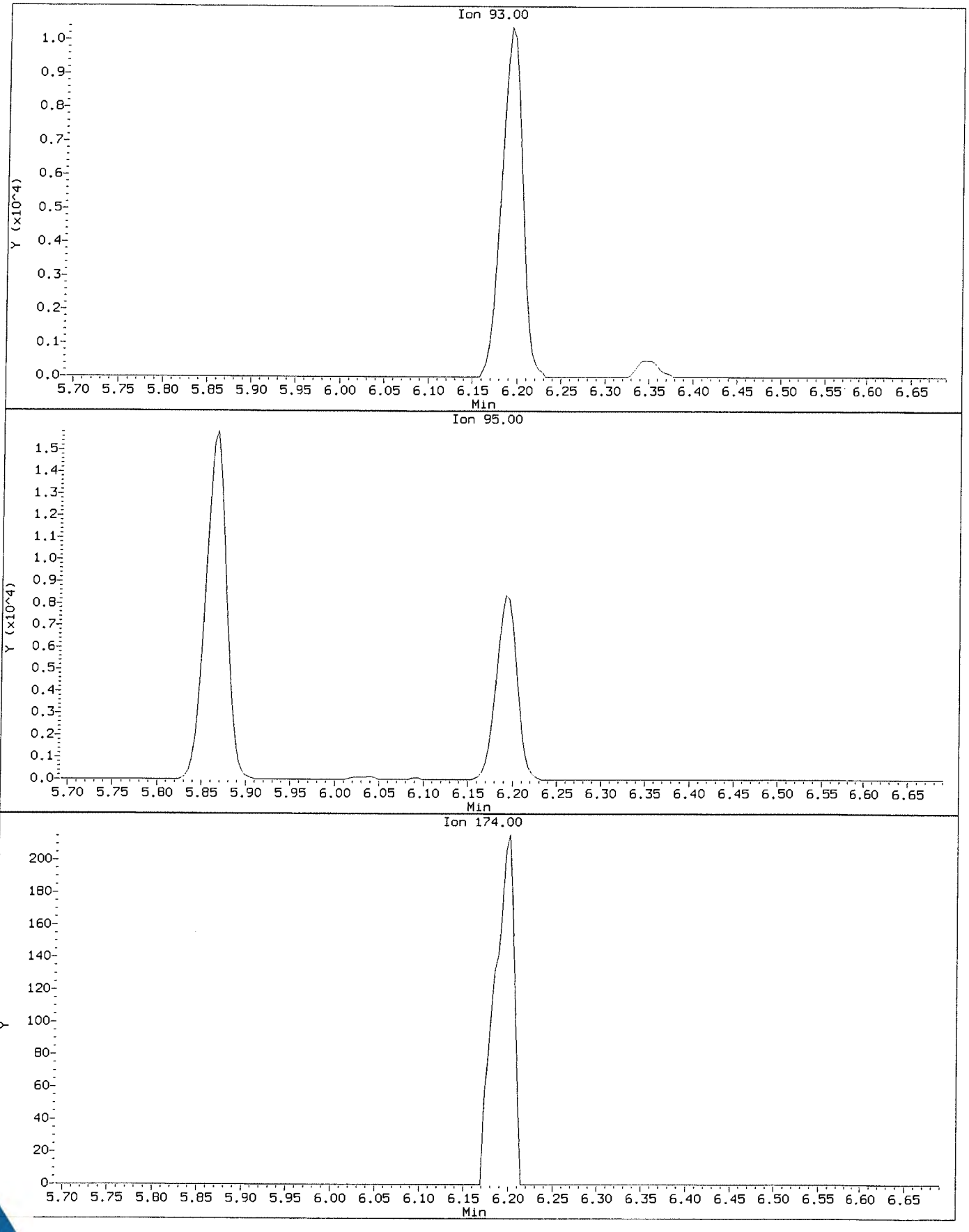
Compound: Chloroethane
CAS Number: 75-00-3





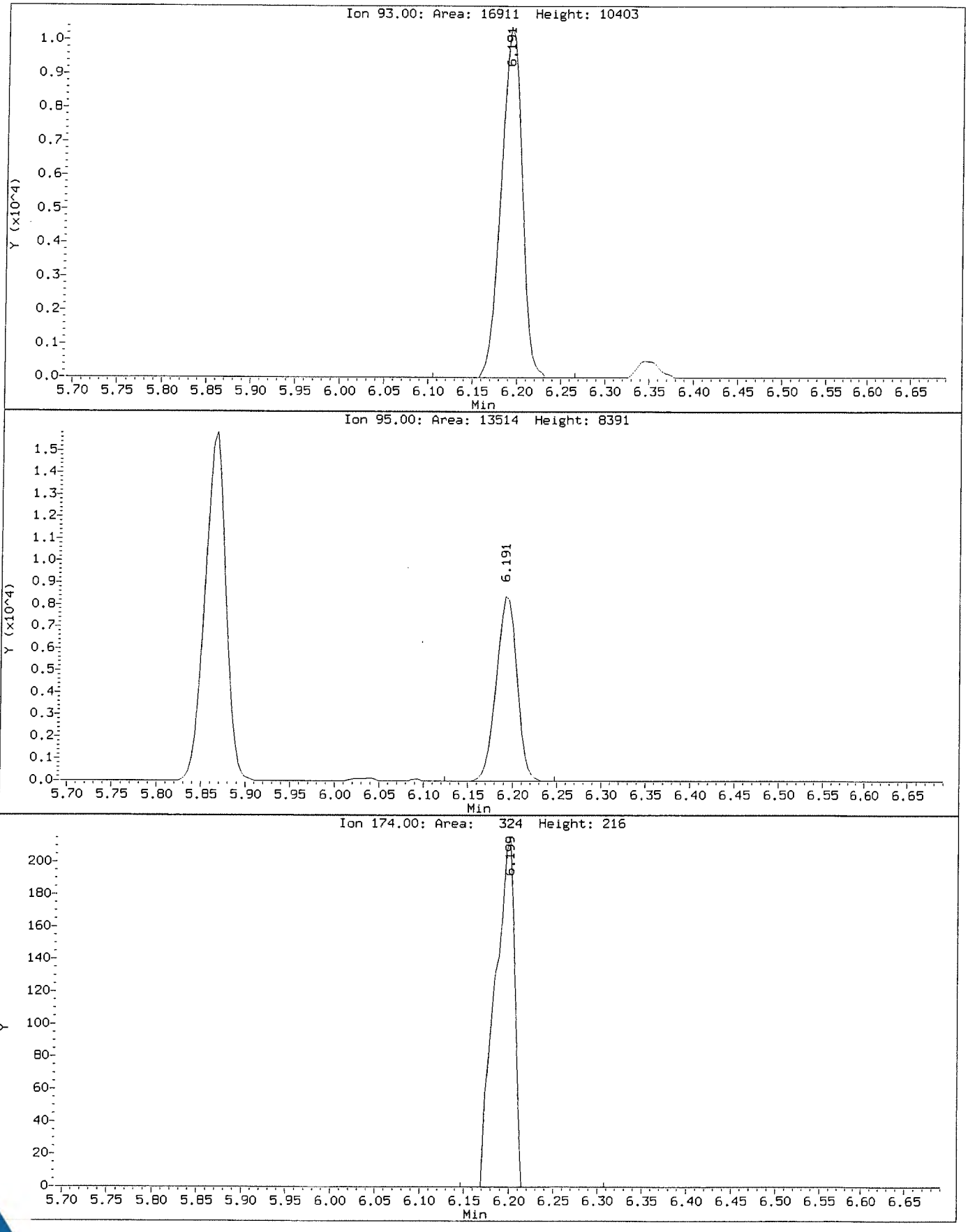
Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\Before\U010806.D
Injection Date: 08-JAN-2019 12:56
Instrument: VOA9.i
Client Sample ID: VSTD005

Compound: Dibromomethane
CAS Number: 74-95-3



Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010806.D
Injection Date: 08-JAN-2019 12:56
Instrument: VOA9.i
Client Sample ID: VSTD005

Compound: Dibromomethane
CAS Number: 74-95-3



Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010807.D Page 1
Report Date: 01-Feb-2019 15:44

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Data file : \\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010807.D
Lab Smp Id: VSTD020 Client Smp ID: VSTD020
Inj Date : 08-JAN-2019 13:21
Operator : PC Inst ID: VOA9.i
Smp Info : VSTD020;VSTD020;1;6;
Misc Info : 180315V9;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa9.i\U190108.b\8260C.m
Meth Date : 01-Feb-2019 15:44 VOA9.i Quant Type: ISTD
Cal Date : 08-JAN-2019 12:56 Cal File: U010806.D
Als bottle: 8 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAPb.sub
Target Version: 4.14
Processing Host: NAHSTW7087

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

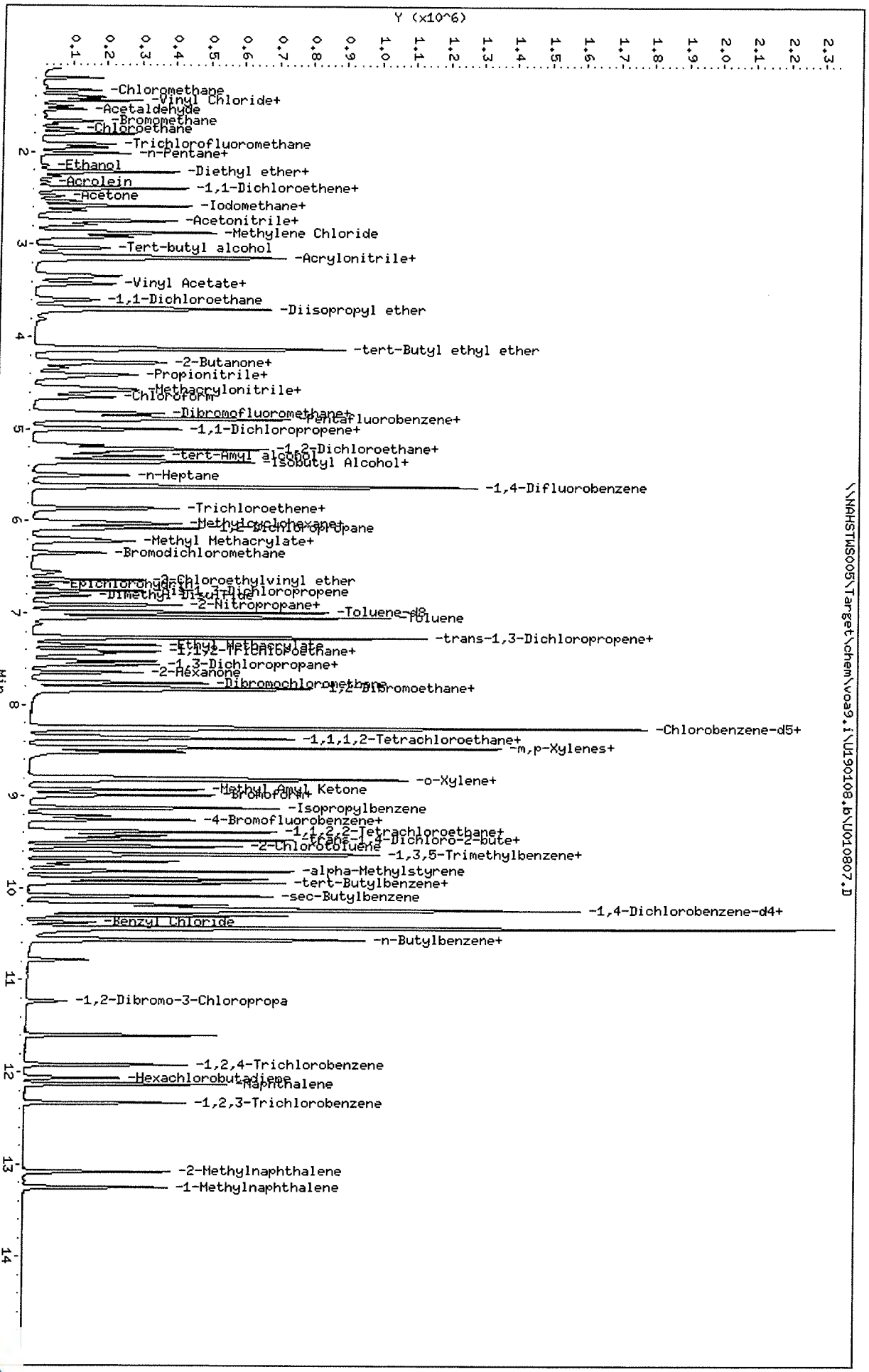
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.894	4.894	(1.000)	408412	50.0000	
* 36 1,4-Difluorobenzene	114	5.625	5.625	(1.000)	770613	50.0000	
* 47 Chlorobenzene-d5	117	8.249	8.249	(1.000)	706222	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.235	10.235	(1.000)	336174	50.0000	
$ 30 Dibromofluoromethane	113	4.826	4.826	(0.986)	96372	20.0000	19.92
$ 35 1,2-Dichloroethane-d4	65	5.171	5.171	(1.057)	129430	20.0000	20.22
$ 48 Toluene-d8	98	6.989	6.989	(0.847)	399583	20.0000	20.38
$ 69 4-Bromofluorobenzene	95	9.257	9.257	(1.122)	148618	20.0000	20.38
60 1,1,1,2-Tetrachloroethane	131	8.346	8.346	(1.012)	85911	20.0000	20.13
31 1,1,1-Trichloroethane	97	4.826	4.826	(0.986)	132087	20.0000	19.74
68 1,1,2,2-Tetrachloroethane	83	9.392	9.392	(0.918)	157201	20.0000	20.50
53 1,1,2-Trichloroethane	83	7.420	7.420	(0.900)	87262	20.0000	20.18
22 1,1-Dichloroethane	63	3.600	3.600	(0.736)	183036	20.0000	19.71
11 1,1-Dichloroethene	96	2.393	2.393	(0.489)	72998	20.0000	18.52
32 1,1-Dichloropropene	75	5.002	5.002	(0.889)	138272	20.0000	19.40
93 1,2,3-Trichlorobenzene	180	12.335	12.335	(1.205)	120642	20.0000	20.13
71 1,2,3-Trichloropropane	75	9.426	9.426	(0.921)	164112	20.0000	20.19
90 1,2,4-Trichlorobenzene	180	11.922	11.922	(1.165)	122692	20.0000	20.25
79 1,2,4-Trimethylbenzene	105	9.943	9.943	(0.971)	369135	20.0000	20.90
89 1,2-Dibromo-3-Chloropropane	155	11.233	11.233	(1.097)	21582	20.0000	19.35
57 1,2-Dibromoethane	107	7.851	7.851	(0.952)	101296	20.0000	20.57
88 1,2-Dichlorobenzene	146	10.569	10.569	(1.033)	199304	20.0000	19.52

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010807.D Page 2
Report Date: 01-Feb-2019 15:44

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	5.250	5.250	(0.933)	149925	20.0000	20.10
42 1,2-Dichloropropane	63	6.078	6.078	(1.081)	111568	20.0000	20.11
75 1,3,5-Trimethylbenzene	105	9.624	9.624	(0.940)	356170	20.0000	20.65
83 1,3-Dichlorobenzene	146	10.179	10.179	(0.995)	197740	20.0000	19.49
54 1,3-Dichloropropane	76	7.563	7.563	(0.917)	189420	20.0000	20.31
84 1,4-Dichlorobenzene	146	10.254	10.254	(1.002)	206094	20.0000	19.17
26 2,2-Dichloropropane	77	4.271	4.271	(0.873)	106586	20.0000	19.17
24 2-Butanone	43	4.335	4.335	(0.886)	115875	40.0000	41.00
76 2-Chlorotoluene	91	9.546	9.546	(0.933)	320757	20.0000	20.06
52 2-Hexanone	43	7.649	7.649	(0.927)	177225	40.0000	43.51
77 4-Chlorotoluene	91	9.639	9.639	(0.942)	377240	20.0000	20.29
82 p-Isopropyltoluene	119	10.209	10.209	(0.997)	374090	20.0000	20.89
45 4-Methyl-2-Pentanone	43	6.910	6.910	(0.838)	251751	40.0000	42.86
10 Acetone	43	2.476	2.476	(0.506)	79871	40.0000	44.29
37 Benzene	78	5.216	5.216	(0.927)	420661	20.0000	19.83
74 Bromobenzene	156	9.381	9.381	(0.917)	103837	20.0000	19.80
29 Bromochloromethane	128	4.552	4.552	(0.930)	48718	20.0000	21.70
39 Bromodichloromethane	83	6.344	6.344	(1.128)	119391	20.0000	19.98
66 Bromoform	173	8.983	8.983	(1.089)	53545	20.0000	18.54(T)
6 Bromomethane	94	1.666	1.666	(0.341)	59235	20.0000	19.88
19 Carbon Disulfide	76	2.584	2.584	(0.528)	552263	40.0000	39.51
34 Carbon Tetrachloride	117	4.991	4.991	(0.887)	103163	20.0000	19.99
59 Chlorobenzene	112	8.275	8.275	(1.003)	275304	20.0000	19.55
7 Chloroethane	64	1.748	1.748	(0.357)	70548	20.0000	19.16(M)
28 Chloroform	83	4.654	4.654	(0.951)	176811	20.0000	20.04
3 Chloromethane	50	1.336	1.336	(0.273)	106870	20.0000	21.10
27 cis-1,2-Dichloroethene	96	4.283	4.283	(0.875)	110851	20.0000	19.84
46 cis-1,3-Dichloropropene	75	6.757	6.757	(1.201)	160416	20.0000	18.72
55 Dibromochloromethane	129	7.758	7.758	(0.940)	85941	20.0000	18.94
44 Dibromomethane	93	6.187	6.187	(1.100)	65082	20.0000	20.10
2 Dichlorodifluoromethane	85	1.201	1.201	(0.246)	101679	20.0000	18.83
61 Ethylbenzene	106	8.369	8.369	(1.015)	140051	20.0000	19.71
91 Hexachlorobutadiene	225	12.065	12.065	(1.179)	43278	20.0000	20.26
67 Isopropylbenzene	105	9.126	9.126	(1.106)	423334	20.0000	20.86
62 m,p-Xylenes	106	8.474	8.474	(1.027)	355496	40.0000	41.00
17 Methylene Chloride	84	2.866	2.866	(0.586)	108486	20.0000	20.35
87 n-Butylbenzene	91	10.554	10.554	(1.031)	350744	20.0000	20.15
73 n-Propylbenzene	91	9.474	9.474	(0.926)	531172	20.0000	20.44
92 Naphthalene	128	12.132	12.132	(1.185)	393536	20.0000	19.63
63 o-Xylene	106	8.811	8.811	(1.068)	180697	20.0000	20.42
81 sec-Butylbenzene	105	10.086	10.086	(0.985)	435570	20.0000	20.49
64 Styrene	104	8.826	8.826	(1.070)	307465	20.0000	20.87
78 tert-Butylbenzene	119	9.902	9.902	(0.967)	303148	20.0000	20.41
56 Tetrachloroethene	164	7.521	7.521	(0.912)	68828	20.0000	18.55
50 Toluene	91	7.045	7.045	(0.854)	437406	20.0000	20.14
20 trans-1,2-Dichloroethene	96	3.139	3.139	(0.642)	97245	20.0000	19.51
51 trans-1,3-Dichloropropene	75	7.259	7.259	(1.291)	135765	20.0000	18.55
38 Trichloroethene	130	5.861	5.861	(1.042)	97355	20.0000	19.84
8 Trichlorofluoromethane	101	1.947	1.947	(0.398)	130134	20.0000	19.04
5 Vinyl Chloride	62	1.415	1.415	(0.289)	116217	20.0000	19.17

QC Flag Legend

T - Target compound detected outside RT window.
M - Compound response manually integrated.



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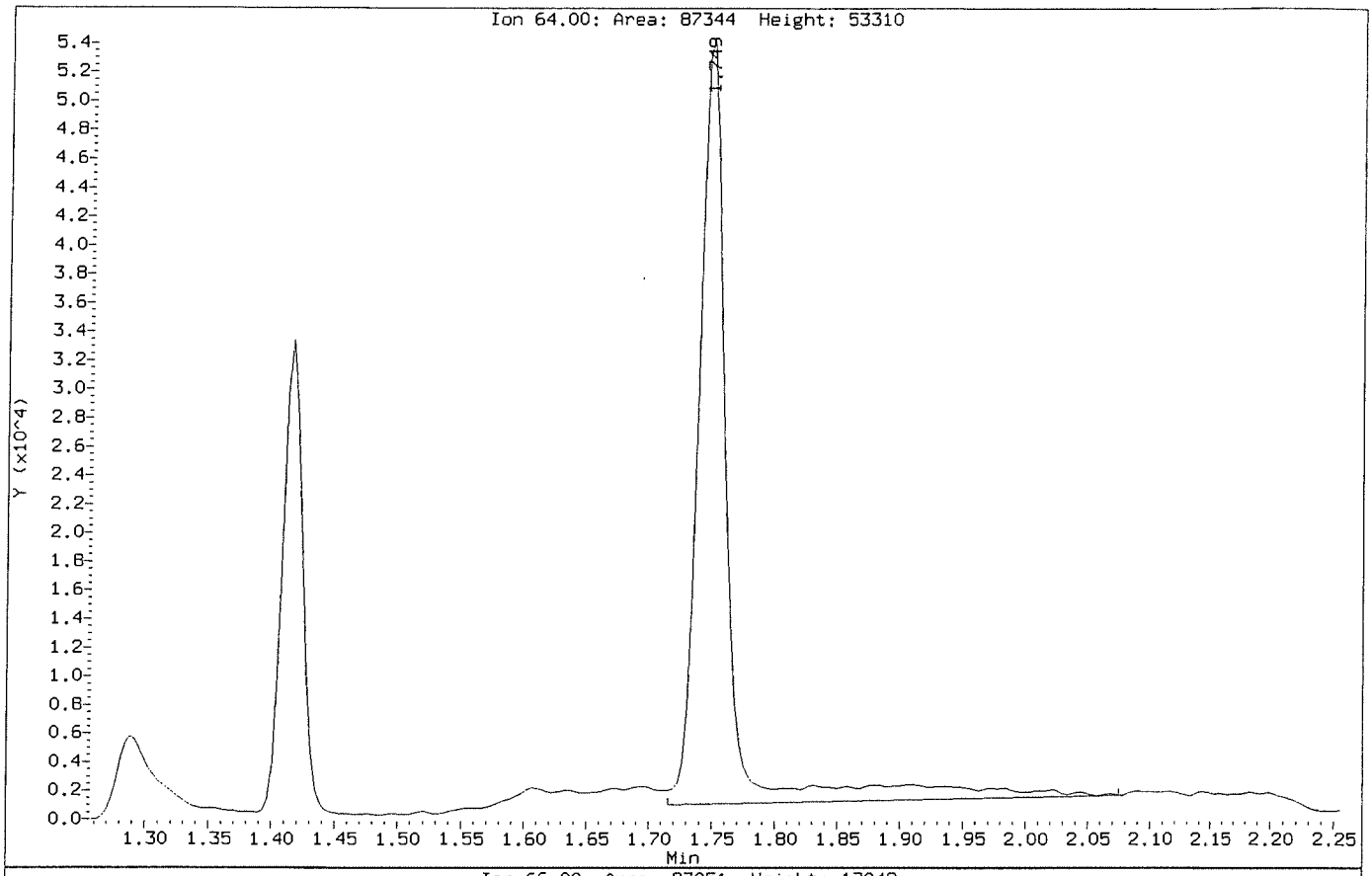
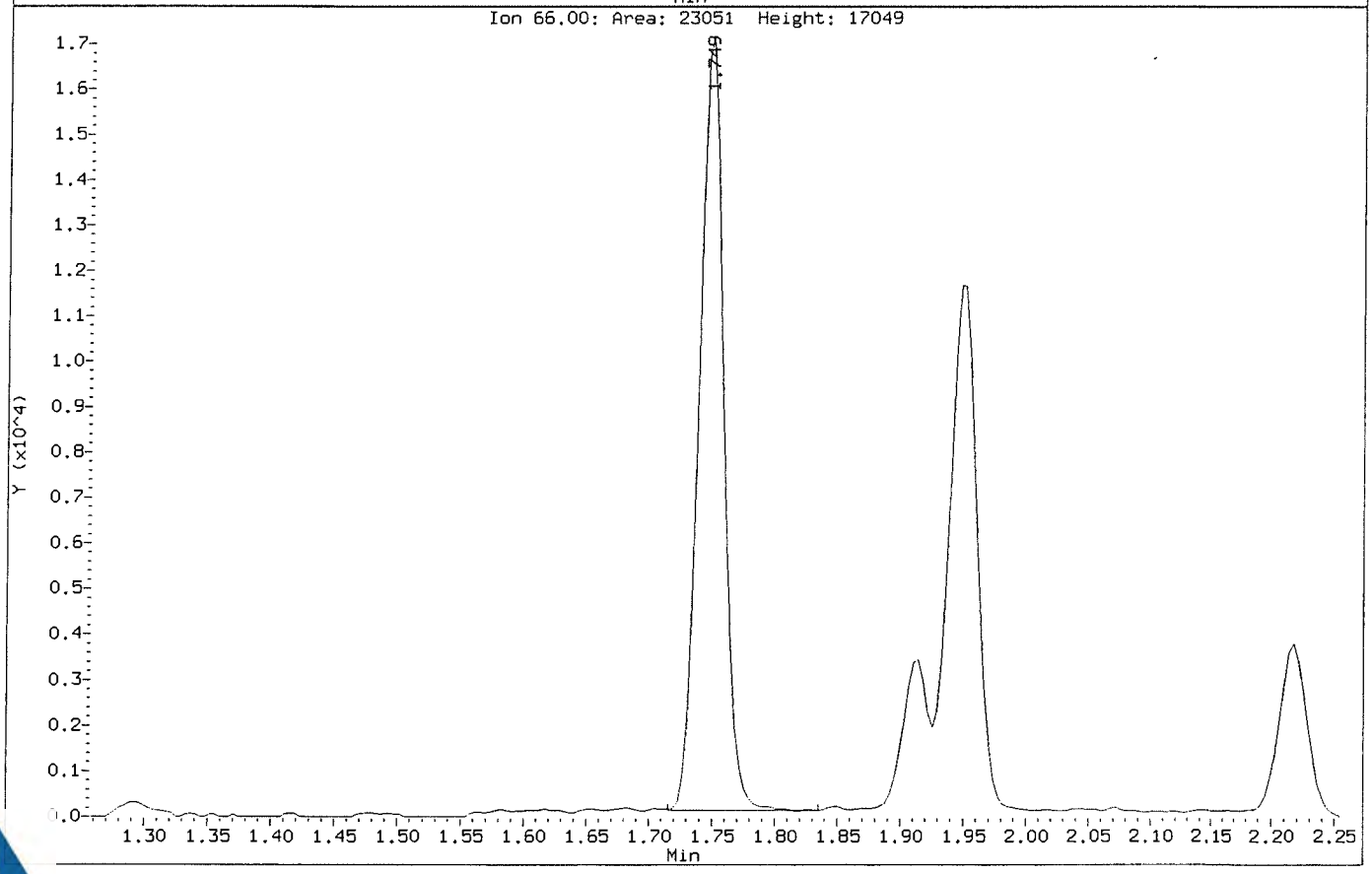
Date : 08-JAN-2019 13:21
Client ID: VSTD020
Sample Info: VSTD020;VSTD020;1;6;
Purge Volume: 5.0
Column phase: DB624

Instrument: VOA9.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\Before\U010807.D
Injection Date: 08-JAN-2019 13:21
Instrument: VOA9.i
Client Sample ID: VSTD020

Compound: Chloroethane
CAS Number: 75-00-3





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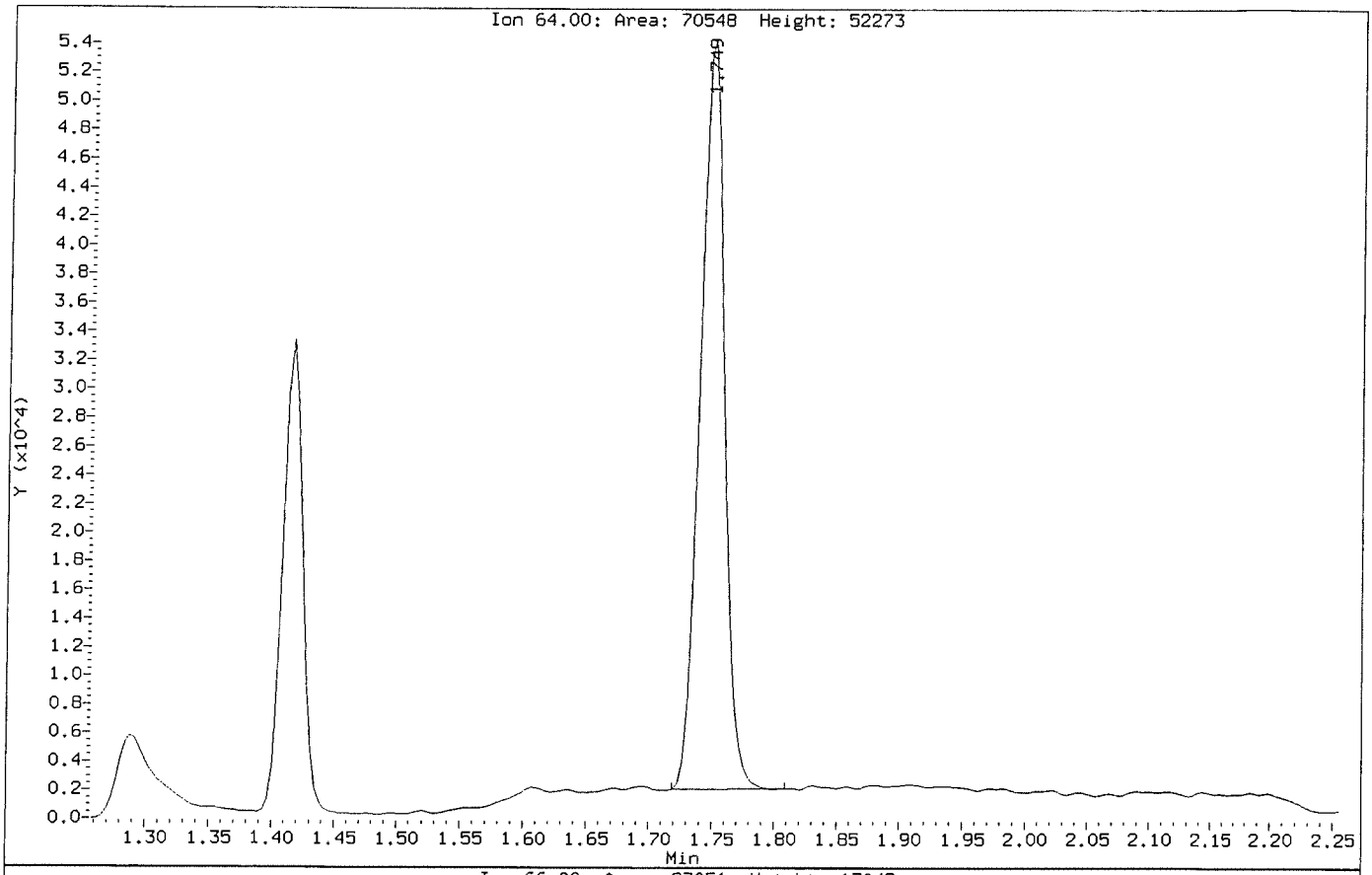
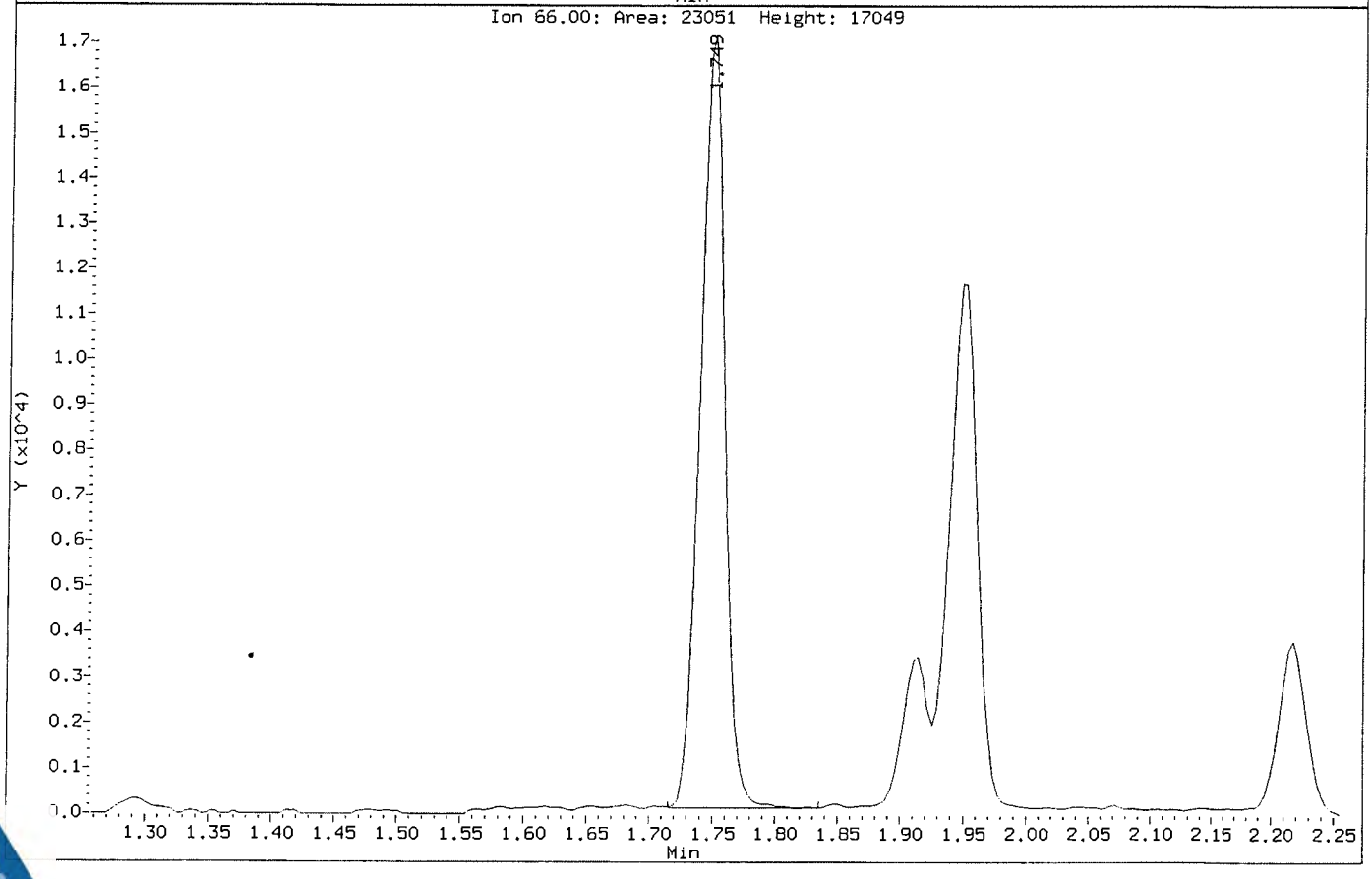
Injection Date: 08-JAN-2019 13:21
Instrument: VOA9.i
Client Sample ID: VSTD020

Compound: Chloroethane
CAS Number: 75-00-3





Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010808.D Page 1
Report Date: 01-Feb-2019 15:44

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Data file : \\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010808.D
Lab Smp Id: VSTD050 Client Smp ID: VSTD050
Inj Date : 08-JAN-2019 13:45
Operator : PC Inst ID: VOA9.i
Smp Info : VSTD050;VSTD050;1;7;
Misc Info : 180315V9;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa9.i\U190108.b\8260C.m
Meth Date : 01-Feb-2019 15:44 VOA9.i Quant Type: ISTD
Cal Date : 08-JAN-2019 13:21 Cal File: U010807.D
Als bottle: 9 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAPb.sub
Target Version: 4.14
Processing Host: NAHSTW7087

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

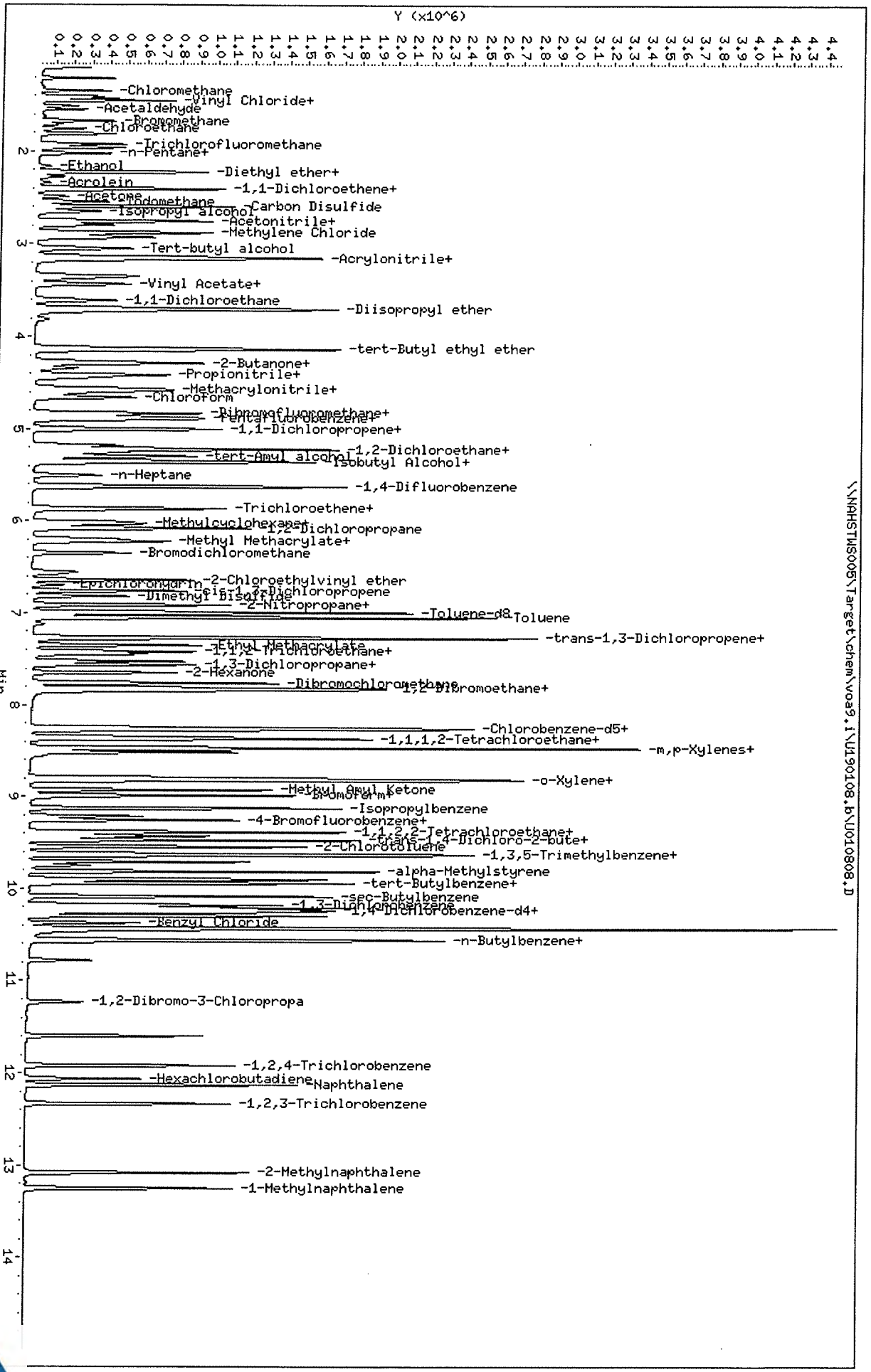
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.898	4.898	(1.000)	414347	50.0000	
* 36 1,4-Difluorobenzene	114	5.629	5.629	(1.000)	776802	50.0000	
* 47 Chlorobenzene-d5	117	8.249	8.249	(1.000)	713069	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	338482	50.0000	
$ 30 Dibromofluoromethane	113	4.830	4.830	(0.986)	233946	50.0000	50.02
$ 35 1,2-Dichloroethane-d4	65	5.179	5.179	(1.057)	310401	50.0000	50.84
$ 48 Toluene-d8	98	6.989	6.989	(0.847)	963061	50.0000	52.06
$ 69 4-Bromofluorobenzene	95	9.257	9.257	(1.122)	358290	50.0000	51.25
60 1,1,1,2-Tetrachloroethane	131	8.350	8.350	(1.012)	221211	50.0000	51.34
31 1,1,1-Trichloroethane	97	4.830	4.830	(0.986)	331736	50.0000	48.88
68 1,1,2,2-Tetrachloroethane	83	9.392	9.392	(0.918)	386140	50.0000	50.54
53 1,1,2-Trichloroethane	83	7.421	7.421	(0.900)	214927	50.0000	49.25
22 1,1-Dichloroethane	63	3.608	3.608	(0.737)	451089	50.0000	47.89
11 1,1-Dichloroethene	96	2.405	2.405	(0.491)	182121	50.0000	45.56
32 1,1-Dichloropropene	75	5.006	5.006	(0.889)	333700	50.0000	46.46
93 1,2,3-Trichlorobenzene	180	12.335	12.335	(1.205)	301189	50.0000	49.93
71 1,2,3-Trichloropropane	75	9.426	9.426	(0.921)	422281	50.0000	51.61
90 1,2,4-Trichlorobenzene	180	11.923	11.923	(1.165)	307395	50.0000	50.40
79 1,2,4-Trimethylbenzene	105	9.943	9.943	(0.971)	896480	50.0000	50.43
89 1,2-Dibromo-3-Chloropropane	155	11.233	11.233	(1.097)	55985	50.0000	46.57
57 1,2-Dibromoethane	107	7.852	7.852	(0.952)	252046	50.0000	50.70
88 1,2-Dichlorobenzene	146	10.569	10.569	(1.033)	489667	50.0000	47.64

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010808.D Page 2
Report Date: 01-Feb-2019 15:44

	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	5.254	5.254	(0.933)	363631	50.0000	48.37
42	1,2-Dichloropropane	63	6.082	6.082	(1.081)	275994	50.0000	49.35
75	1,3,5-Trimethylbenzene	105	9.625	9.625	(0.940)	857361	50.0000	49.38
83	1,3-Dichlorobenzene	146	10.180	10.180	(0.995)	486555	50.0000	47.65
54	1,3-Dichloropropane	76	7.563	7.563	(0.917)	463080	50.0000	49.18
84	1,4-Dichlorobenzene	146	10.255	10.255	(1.002)	499101	50.0000	46.11
26	2,2-Dichloropropane	77	4.279	4.279	(0.874)	272467	50.0000	48.30
24	2-Butanone	43	4.339	4.339	(0.886)	291898	100.000	101.80
76	2-Chlorotoluene	91	9.546	9.546	(0.933)	778719	50.0000	48.39
52	2-Hexanone	43	7.649	7.649	(0.927)	438000	100.000	106.50
77	4-Chlorotoluene	91	9.640	9.640	(0.942)	904919	50.0000	48.34
82	p-Isopropyltoluene	119	10.210	10.210	(0.997)	890116	50.0000	49.37
45	4-Methyl-2-Pentanone	43	6.914	6.914	(0.838)	623060	100.000	105.06
10	Acetone	43	2.487	2.487	(0.508)	179800	100.000	100.27
37	Benzene	78	5.220	5.220	(0.927)	1030161	50.0000	48.19
74	Bromobenzene	156	9.381	9.381	(0.917)	260209	50.0000	49.30
29	Bromochloromethane	128	4.557	4.557	(0.930)	122545	50.0000	53.80
39	Bromodichloromethane	83	6.348	6.348	(1.128)	306984	50.0000	50.97
66	Bromoform	173	8.984	8.984	(1.089)	144409	50.0000	46.54(T)
6	Bromomethane	94	1.674	1.674	(0.342)	136129	50.0000	44.08
19	Carbon Disulfide	76	2.596	2.596	(0.530)	1378159	100.000	97.20
34	Carbon Tetrachloride	117	4.999	4.999	(0.888)	253682	50.0000	48.77
59	Chlorobenzene	112	8.275	8.275	(1.003)	677236	50.0000	47.63
7	Chloroethane	64	1.756	1.756	(0.359)	171276	50.0000	45.86(M)
28	Chloroform	83	4.661	4.661	(0.952)	430908	50.0000	48.16
3	Chloromethane	50	1.344	1.344	(0.274)	245400	50.0000	44.67
27	cis-1,2-Dichloroethene	96	4.290	4.290	(0.876)	273726	50.0000	48.29
46	cis-1,3-Dichloropropene	75	6.761	6.761	(1.201)	428865	50.0000	47.50
55	Dibromochloromethane	129	7.758	7.758	(0.940)	229139	50.0000	48.00
44	Dibromomethane	93	6.191	6.191	(1.100)	161716	50.0000	49.55
2	Dichlorodifluoromethane	85	1.209	1.209	(0.247)	250329	50.0000	45.71
61	Ethylbenzene	106	8.373	8.373	(1.015)	346744	50.0000	48.35
91	Hexachlorobutadiene	225	12.065	12.065	(1.179)	101106	50.0000	46.13
67	Isopropylbenzene	105	9.126	9.126	(1.106)	1002931	50.0000	48.96
62	m,p-Xylenes	106	8.474	8.474	(1.027)	862970	100.000	98.57
17	Methylene Chloride	84	2.877	2.877	(0.587)	264627	50.0000	49.63
87	n-Butylbenzene	91	10.554	10.554	(1.031)	828759	50.0000	47.30
73	n-Propylbenzene	91	9.475	9.475	(0.926)	1268447	50.0000	48.48
92	Naphthalene	128	12.133	12.133	(1.185)	1013970	50.0000	49.17
63	o-Xylene	106	8.811	8.811	(1.068)	439304	50.0000	49.19
81	sec-Butylbenzene	105	10.086	10.086	(0.985)	1037873	50.0000	48.49
64	Styrene	104	8.826	8.826	(1.070)	765954	50.0000	51.51
78	tert-Butylbenzene	119	9.902	9.902	(0.967)	716058	50.0000	47.89
56	Tetrachloroethene	164	7.525	7.525	(0.912)	165995	50.0000	44.31
50	Toluene	91	7.049	7.049	(0.855)	1073622	50.0000	48.97
20	trans-1,2-Dichloroethene	96	3.147	3.147	(0.643)	237541	50.0000	46.99
51	trans-1,3-Dichloropropene	75	7.263	7.263	(1.290)	367494	50.0000	47.13
38	Trichloroethene	130	5.865	5.865	(1.042)	239064	50.0000	48.33
8	Trichlorofluoromethane	101	1.959	1.959	(0.400)	315299	50.0000	45.48
5	Vinyl Chloride	62	1.426	1.426	(0.291)	280091	50.0000	45.55

QC Flag Legend

T - Target compound detected outside RT window.
M - Compound response manually integrated.



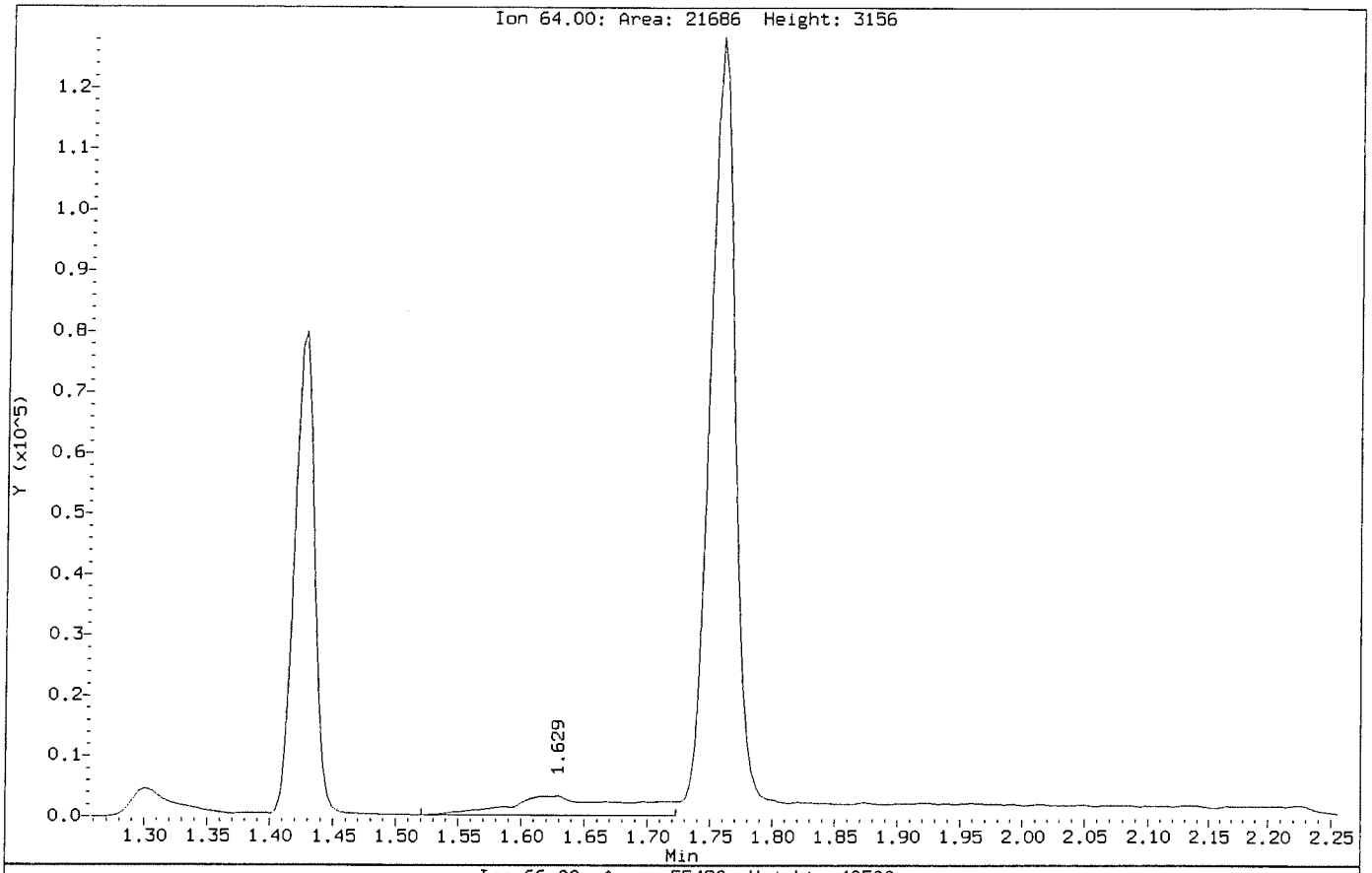
Data File: \\NAHSTWS005\Target\chem\voa9,i\U190108.b\U010808.D
Date : 08-JAN-2019 13:45
Client ID: VSTD050
Sample Info: VSTD050;VSTD050;1;7;
Purge Volume: 5.0
Column phase: DB624

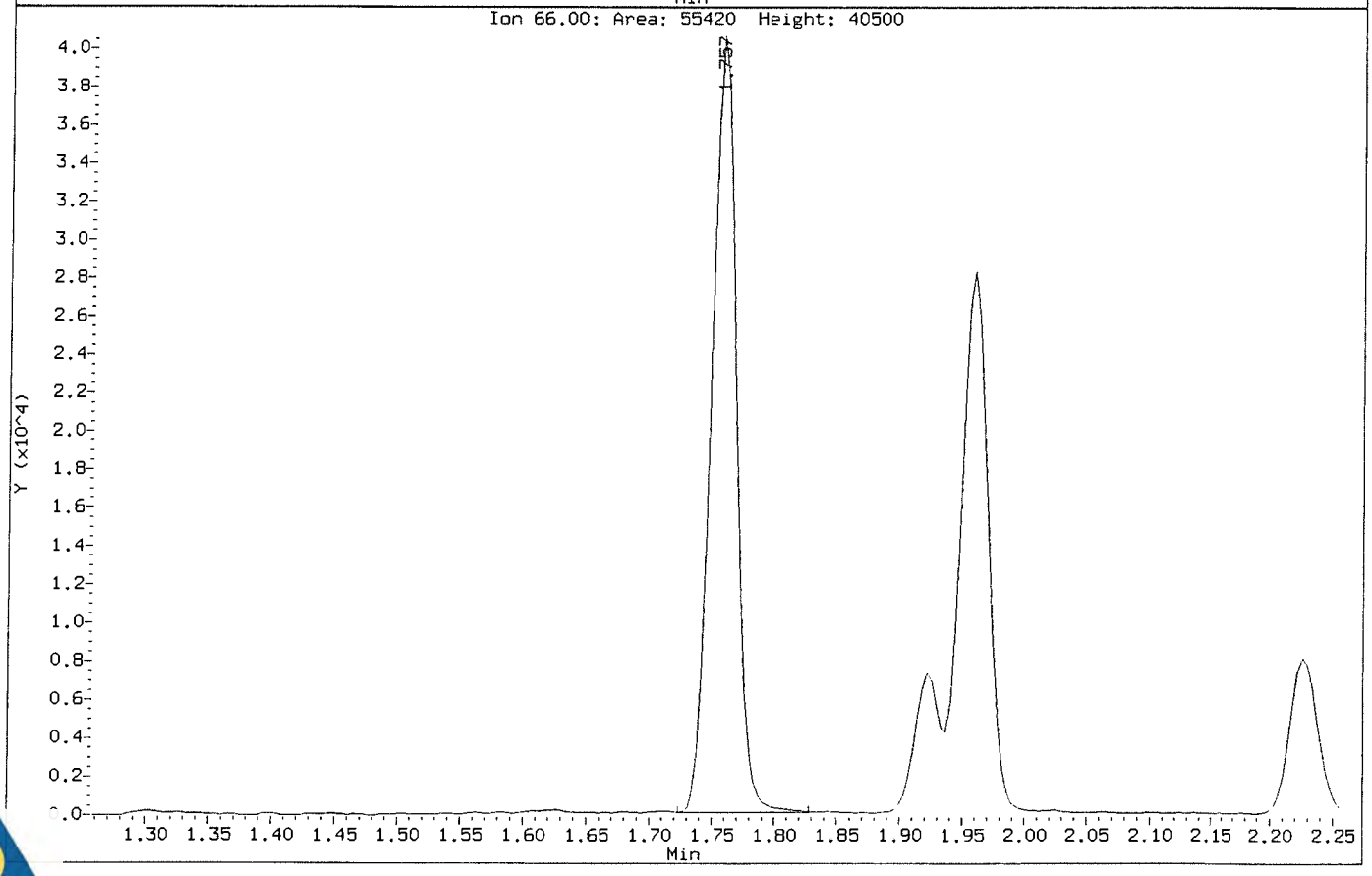
\\NAHSTWS005\Target\chem\voa9,i\U190108.b\U010808.D

Instrument: VOA9,i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\Before\U010808.D
Injection Date: 08-JAN-2019 13:45
Instrument: VOA9.i
Client Sample ID: VSTD050

Compound: Chloroethane
CAS Number: 75-00-3





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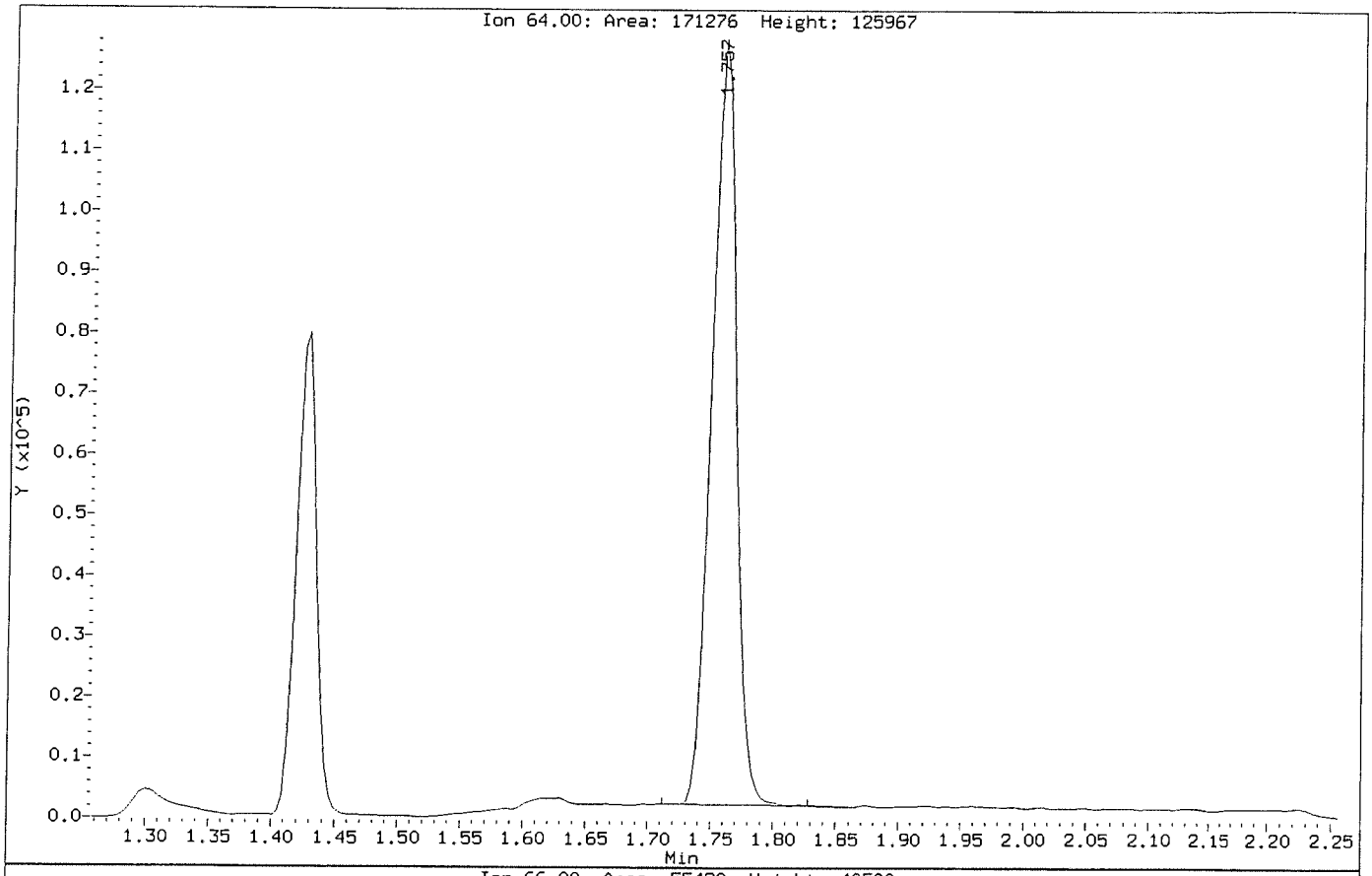
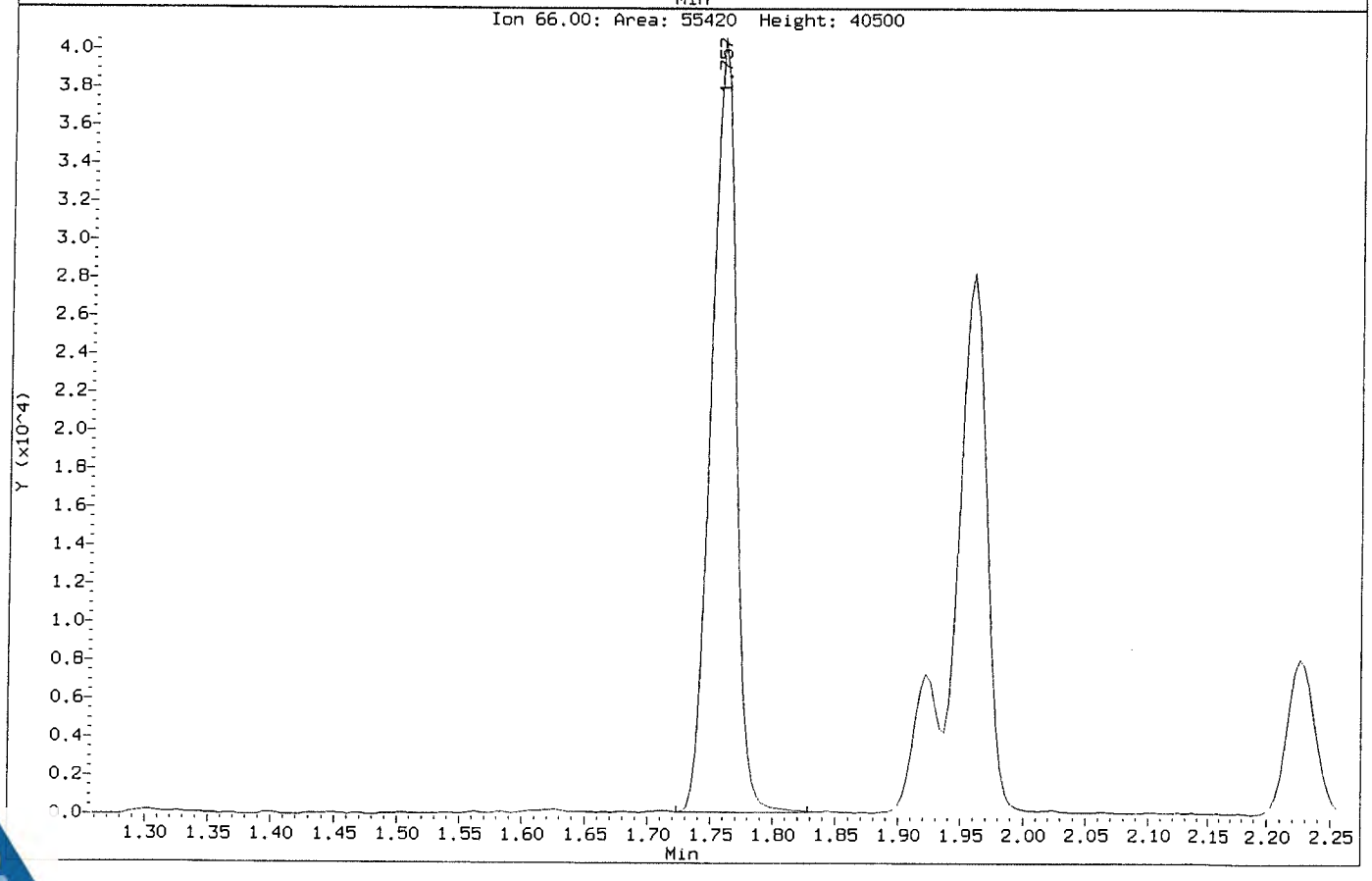
Injection Date: 08-JAN-2019 13:45
Instrument: VOA9.i
Client Sample ID: VSTD050

Compound: Chloroethane
CAS Number: 75-00-3





Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010809.D Page 1
Report Date: 01-Feb-2019 15:44

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Data file : \\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010809.D
Lab Smp Id: VSTD100 Client Smp ID: VSTD100
Inj Date : 08-JAN-2019 14:10
Operator : PC Inst ID: VOA9.i
Smp Info : VSTD100;VSTD100;1;8;
Misc Info : 180315V9;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa9.i\U190108.b\8260C.m
Meth Date : 01-Feb-2019 15:44 VOA9.i Quant Type: ISTD
Cal Date : 08-JAN-2019 13:45 Cal File: U010808.D
Als bottle: 10 Calibration Sample, Level: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAPb.sub
Target Version: 4.14
Processing Host: NAHSTW7087

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

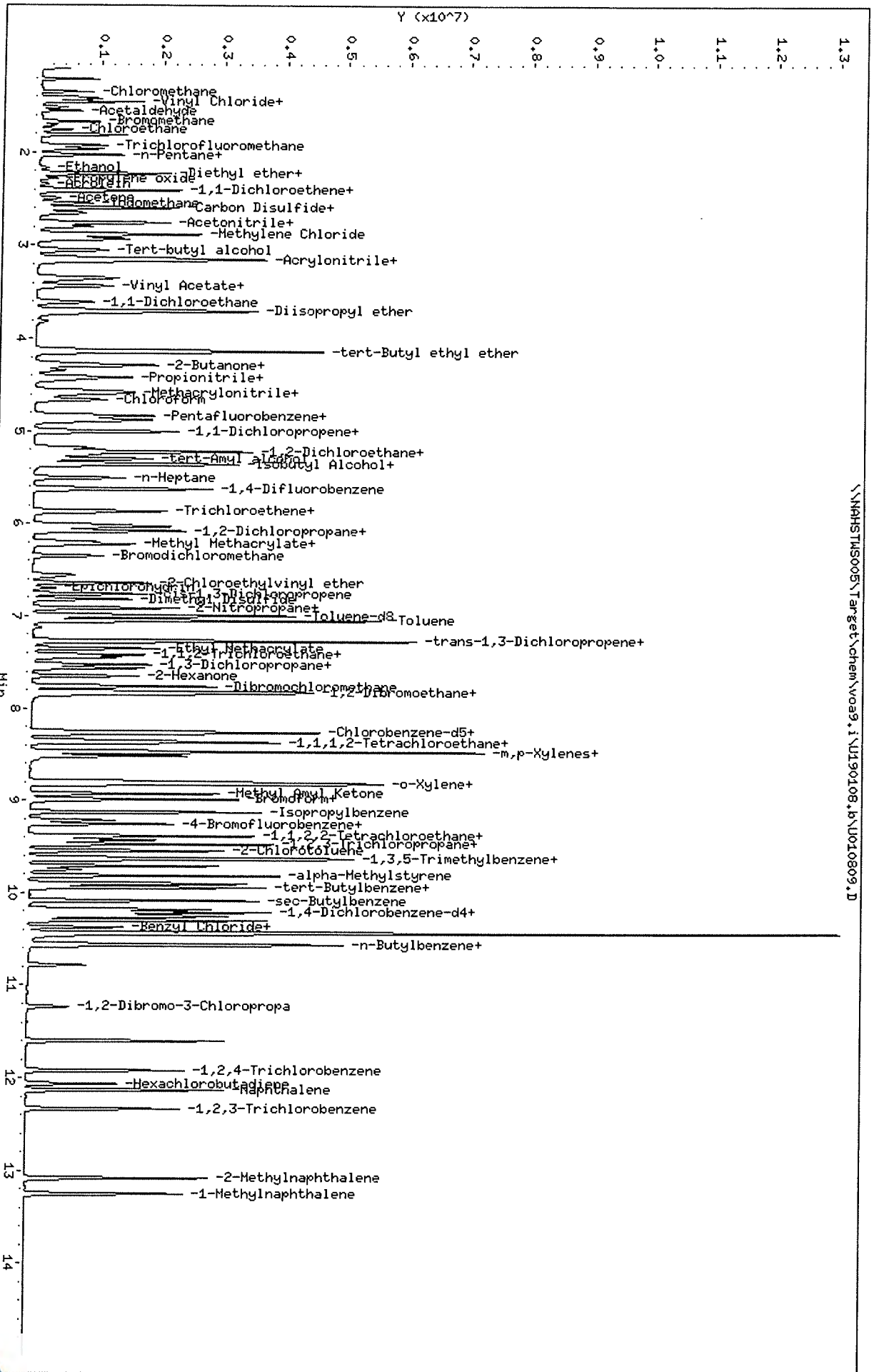
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.898	4.898	(1.000)	421162	50.0000	
* 36 1,4-Difluorobenzene	114	5.629	5.629	(1.000)	790870	50.0000	
* 47 Chlorobenzene-d5	117	8.253	8.253	(1.000)	736125	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	349513	50.0000	
$ 30 Dibromofluoromethane	113	4.834	4.834	(0.987)	464059	100.000	99.44
$ 35 1,2-Dichloroethane-d4	65	5.179	5.179	(1.057)	607717	100.000	100.00
$ 48 Toluene-d8	98	6.989	6.989	(0.847)	1896057	100.000	101.52
$ 69 4-Bromofluorobenzene	95	9.257	9.257	(1.122)	714768	100.000	100.78
60 1,1,1,2-Tetrachloroethane	131	8.350	8.350	(1.012)	472198	100.000	106.17
31 1,1,1-Trichloroethane	97	4.834	4.834	(0.987)	725193	100.000	105.13
68 1,1,2,2-Tetrachloroethane	83	9.392	9.392	(0.918)	791393	100.000	100.67
53 1,1,2-Trichloroethane	83	7.421	7.421	(0.899)	438628	100.000	97.36
22 1,1-Dichloroethane	63	3.612	3.612	(0.737)	942325	100.000	98.43
11 1,1-Dichloroethene	96	2.405	2.405	(0.491)	394650	100.000	97.14
32 1,1-Dichloropropene	75	5.010	5.010	(0.890)	725797	100.000	99.25
93 1,2,3-Trichlorobenzene	180	12.335	12.335	(1.205)	650560	100.000	104.45
71 1,2,3-Trichloropropane	75	9.430	9.430	(0.921)	883225	100.000	104.54
90 1,2,4-Trichlorobenzene	180	11.923	11.923	(1.165)	673602	100.000	106.97
79 1,2,4-Trimethylbenzene	105	9.943	9.943	(0.971)	1876622	100.000	102.23
89 1,2-Dibromo-3-Chloropropane	155	11.233	11.233	(1.097)	123999	100.000	97.52
57 1,2-Dibromoethane	107	7.852	7.852	(0.951)	517332	100.000	100.81
88 1,2-Dichlorobenzene	146	10.569	10.569	(1.033)	1023463	100.000	96.44

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010809.D Page 2
Report Date: 01-Feb-2019 15:44

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	5.258	5.258	(0.934)	735470	100.000	96.10
42 1,2-Dichloropropane	63	6.082	6.082	(1.081)	570835	100.000	100.25
75 1,3,5-Trimethylbenzene	105	9.625	9.625	(0.940)	1870258	100.000	104.32
83 1,3-Dichlorobenzene	146	10.180	10.180	(0.995)	1034507	100.000	98.12
54 1,3-Dichloropropane	76	7.567	7.567	(0.917)	952005	100.000	97.95
84 1,4-Dichlorobenzene	146	10.255	10.255	(1.002)	1056308	100.000	94.52
26 2,2-Dichloropropane	77	4.279	4.279	(0.874)	602840	100.000	105.14
24 2-Butanone	43	4.343	4.343	(0.887)	595792	200.000	204.43(A)
76 2-Chlorotoluene	91	9.546	9.546	(0.933)	1639232	100.000	98.65
52 2-Hexanone	43	7.653	7.653	(0.927)	931571	200.000	219.42(A)
77 4-Chlorotoluene	91	9.640	9.640	(0.942)	1912542	100.000	98.95
82 p-Isopropyltoluene	119	10.210	10.210	(0.997)	1976899	100.000	106.18
45 4-Methyl-2-Pentanone	43	6.914	6.914	(0.838)	1312369	200.000	214.36(A)
10 Acetone	43	2.491	2.491	(0.509)	376346	200.000	208.23(A)
37 Benzene	78	5.224	5.224	(0.928)	2132651	100.000	97.99
74 Bromobenzene	156	9.381	9.381	(0.917)	550328	100.000	100.97
29 Bromochloromethane	128	4.560	4.560	(0.931)	233959	100.000	101.06
39 Bromodichloromethane	83	6.348	6.348	(1.128)	650240	100.000	106.05
66 Bromoform	173	8.984	8.984	(1.089)	321354	100.000	98.27(T)
6 Bromomethane	94	1.670	1.670	(0.341)	307120	100.000	96.91
19 Carbon Disulfide	76	2.600	2.600	(0.531)	2926603	200.000	203.08(A)
34 Carbon Tetrachloride	117	4.999	4.999	(0.888)	580173	100.000	109.55
59 Chlorobenzene	112	8.275	8.275	(1.003)	1405423	100.000	95.76
7 Chloroethane	64	1.756	1.756	(0.359)	365339	100.000	96.23(M)
28 Chloroform	83	4.661	4.661	(0.952)	891596	100.000	98.03
3 Chloromethane	50	1.348	1.348	(0.275)	515965	100.000	89.77
27 cis-1,2-Dichloroethene	96	4.290	4.290	(0.876)	567776	100.000	98.56
46 cis-1,3-Dichloropropene	75	6.761	6.761	(1.201)	926076	100.000	99.29
55 Dibromochloromethane	129	7.758	7.758	(0.940)	491650	100.000	98.45
44 Dibromomethane	93	6.191	6.191	(1.100)	331611	100.000	99.81
2 Dichlorodifluoromethane	85	1.213	1.213	(0.248)	546194	100.000	98.13
61 Ethylbenzene	106	8.373	8.373	(1.015)	748694	100.000	101.13
91 Hexachlorobutadiene	225	12.065	12.065	(1.179)	235659	100.000	101.50
67 Isopropylbenzene	105	9.126	9.126	(1.106)	2188066	100.000	103.47
62 m,p-Xylenes	106	8.474	8.474	(1.027)	1848649	200.000	204.56(A)
17 Methylene Chloride	84	2.877	2.877	(0.587)	540514	100.000	100.25
87 n-Butylbenzene	91	10.558	10.558	(1.031)	1831040	100.000	101.22
73 n-Propylbenzene	91	9.475	9.475	(0.926)	2755541	100.000	101.99
92 Naphthalene	128	12.133	12.133	(1.185)	2158340	100.000	100.73
63 o-Xylene	106	8.811	8.811	(1.068)	931273	100.000	101.01
81 sec-Butylbenzene	105	10.086	10.086	(0.985)	2314669	100.000	104.74
64 Styrene	104	8.826	8.826	(1.069)	1608460	100.000	104.78
78 tert-Butylbenzene	119	9.902	9.902	(0.967)	1536739	100.000	99.54
56 Tetrachloroethene	164	7.525	7.525	(0.912)	369314	100.000	95.50
50 Toluene	91	7.049	7.049	(0.854)	2230274	100.000	98.55
20 trans-1,2-Dichloroethene	96	3.147	3.147	(0.643)	502759	100.000	97.85
51 trans-1,3-Dichloropropene	75	7.263	7.263	(1.290)	801236	100.000	99.11
38 Trichloroethene	130	5.865	5.865	(1.042)	488802	100.000	97.07
8 Trichlorofluoromethane	101	1.962	1.962	(0.401)	691347	100.000	98.12
5 Vinyl Chloride	62	1.426	1.426	(0.291)	621317	100.000	99.40

QC Flag Legend

T - Target compound detected outside RT window.
A - Target compound detected but, quantitated amount exceeded maximum amount.
M - Compound response manually integrated.



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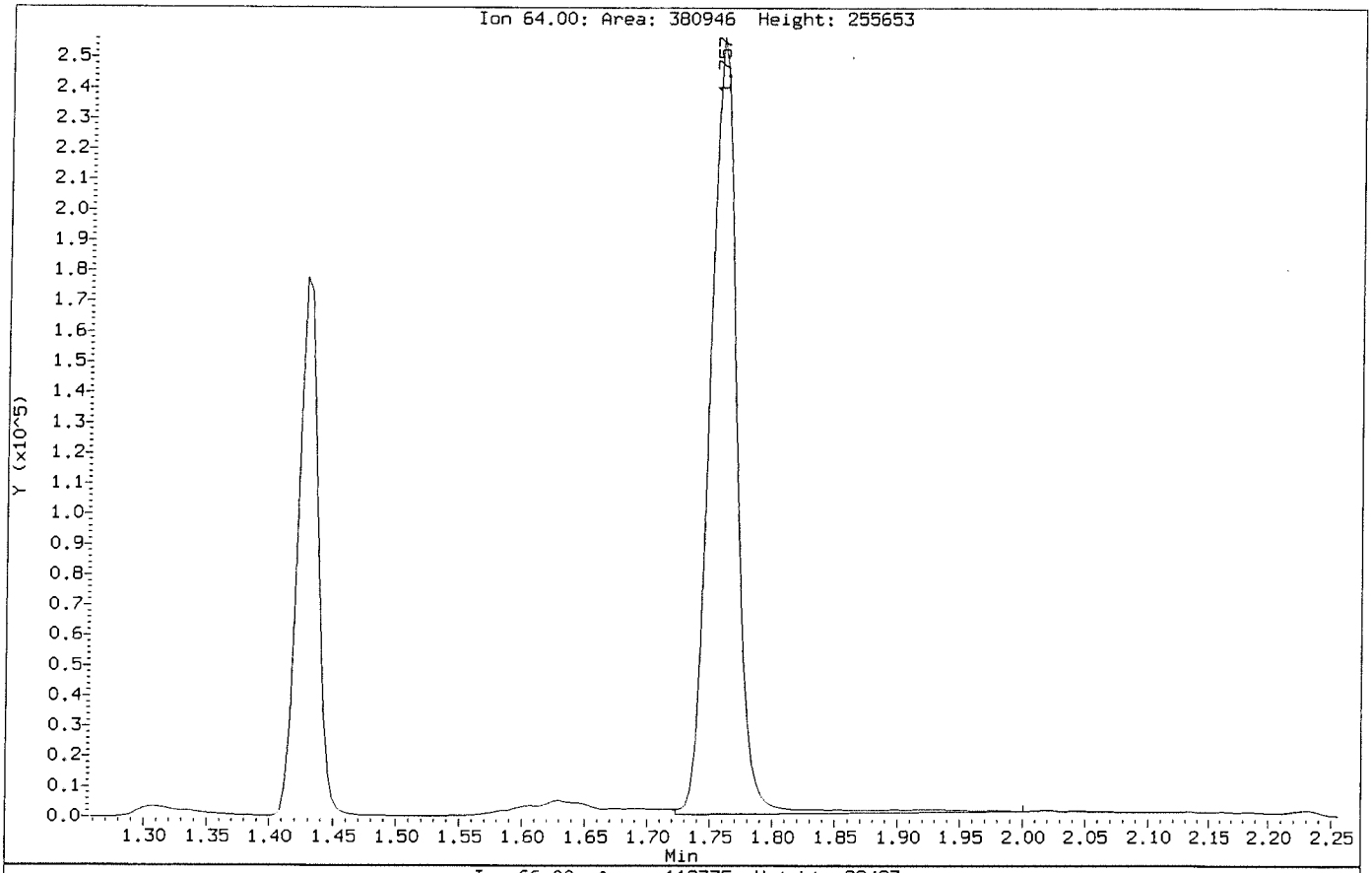
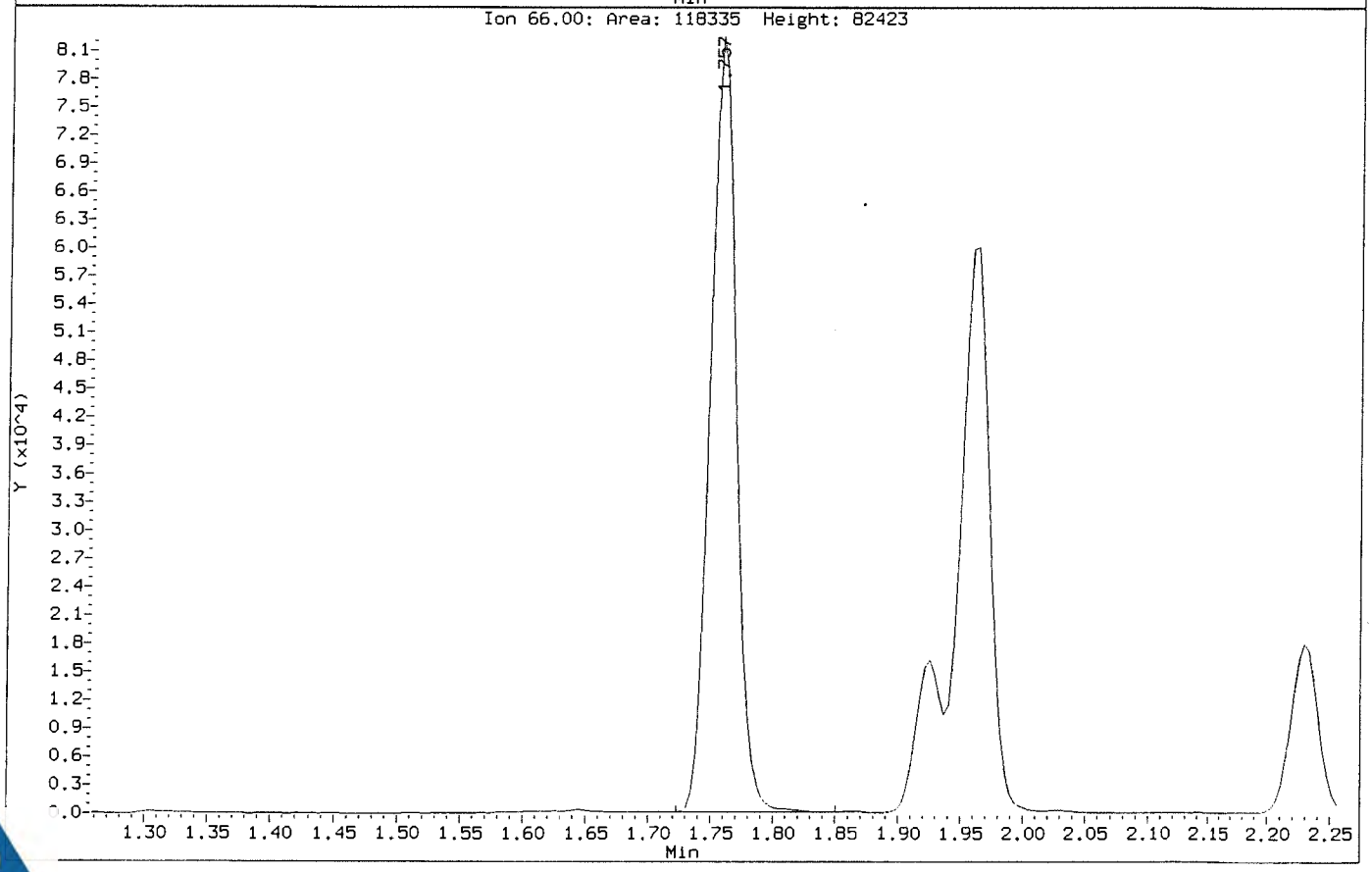
Date : 08-JAN-2019 14:10
Client ID: VSTD100
Sample Info: VSTD100;VSTD100;1;8;
Purge Volume: 5.0
Column phase: DB624

Instrument: VOA9.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\Before\U010809.D
Injection Date: 08-JAN-2019 14:10
Instrument: VOA9.i
Client Sample ID: VSTD100

Compound: Chloroethane
CAS Number: 75-00-3





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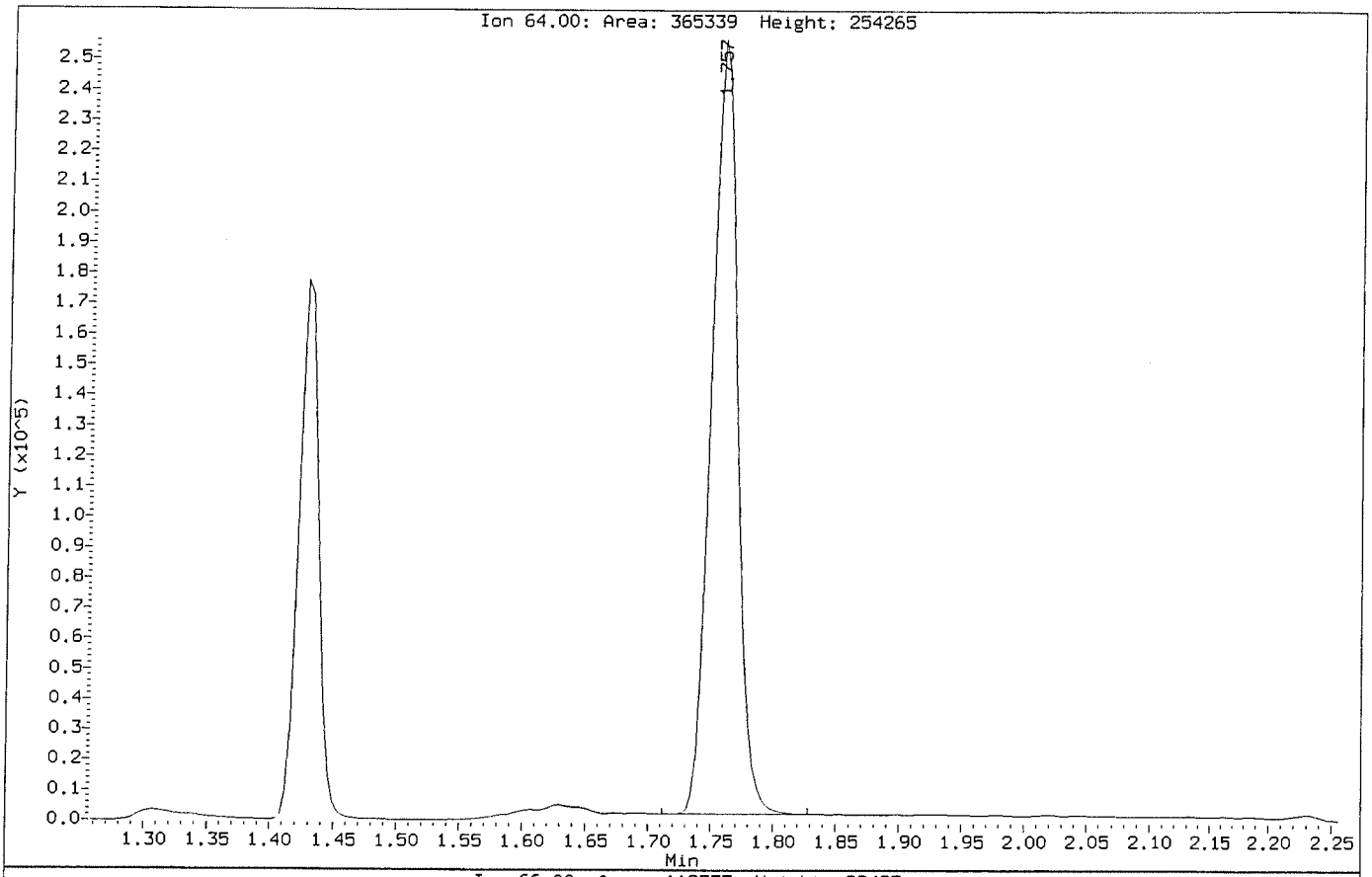
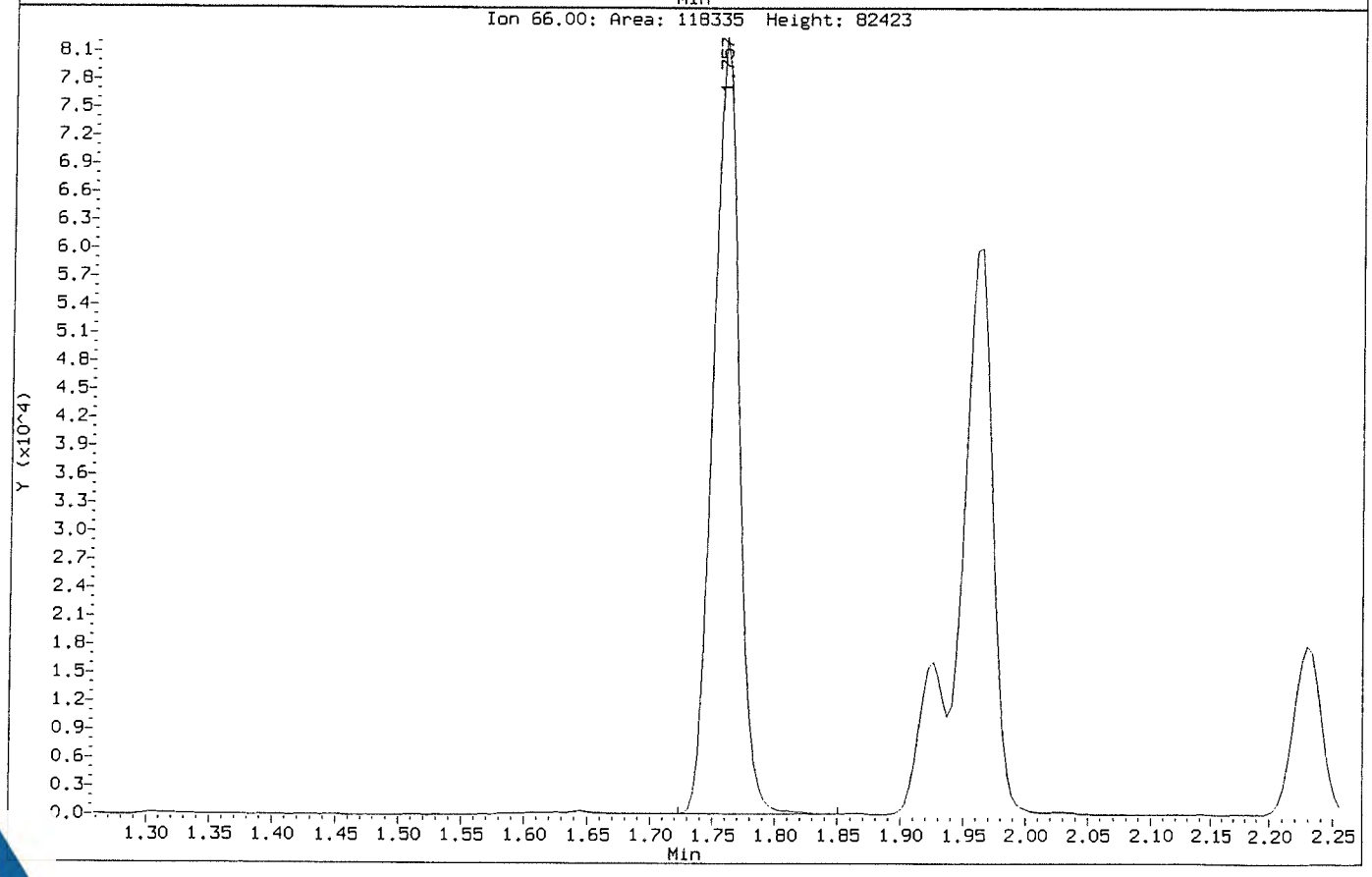
Injection Date: 08-JAN-2019 14:10
Instrument: VOA9.i
Client Sample ID: VSTD100

Compound: Chloroethane
CAS Number: 75-00-3





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Data file : \\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010810.D
Lab Smp Id: VSTD150 Client Smp ID: VSTD150
Inj Date : 08-JAN-2019 14:34
Operator : PC Inst ID: VOA9.i
Smp Info : VSTD150;VSTD150;1;9;
Misc Info : 180315V9;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa9.i\U190108.b\8260C.m
Meth Date : 01-Feb-2019 15:44 VOA9.i Quant Type: ISTD
Cal Date : 08-JAN-2019 14:10 Cal File: U010809.D
Als bottle: 11 Calibration Sample, Level: 9
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAPb.sub
Target Version: 4.14
Processing Host: NAHSTW7087

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

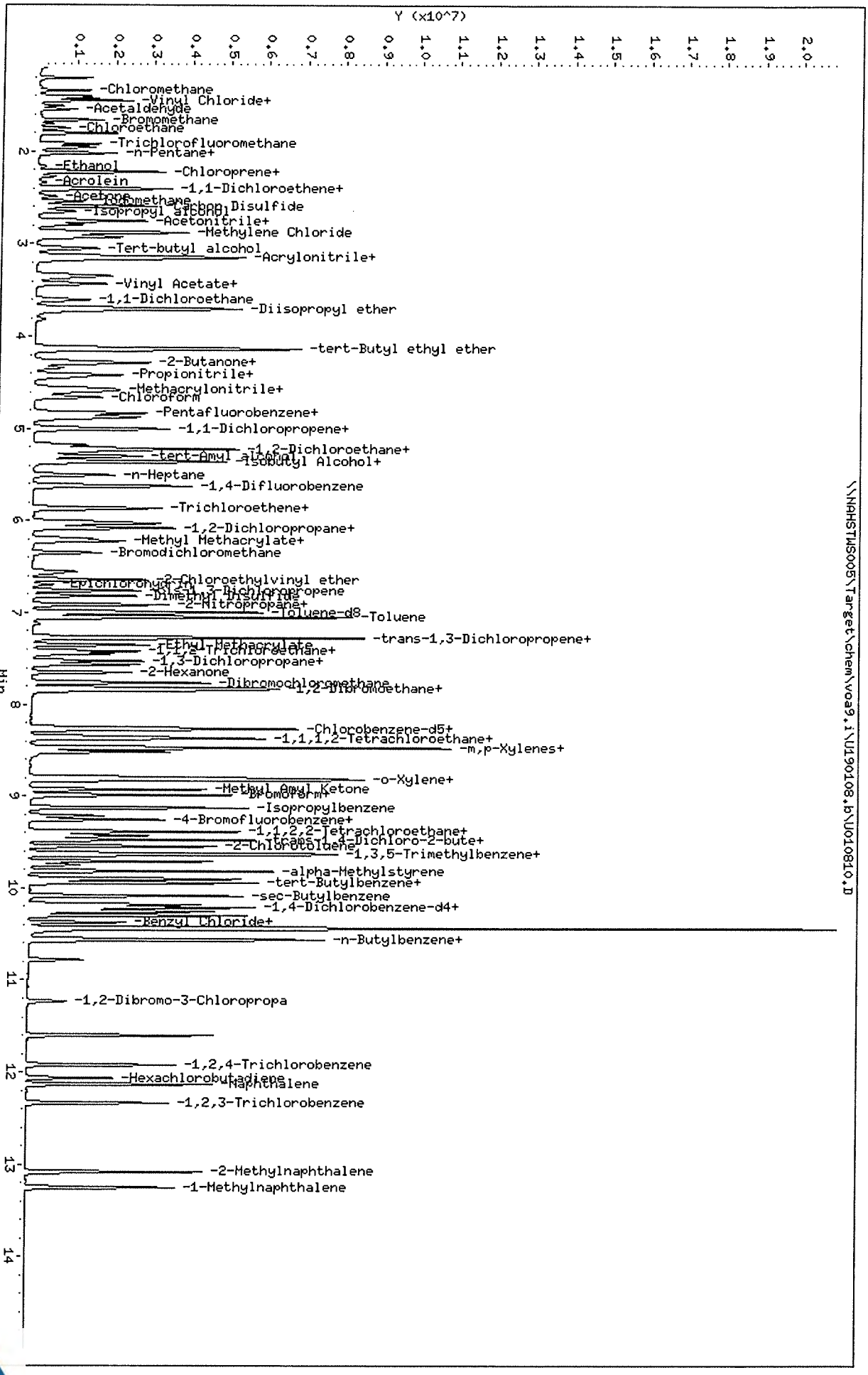
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.898	4.898	(1.000)	421886	50.0000	
* 36 1,4-Difluorobenzene	114	5.625	5.625	(1.000)	800287	50.0000	
* 47 Chlorobenzene-d5	117	8.249	8.249	(1.000)	746796	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	352073	50.0000	
$ 30 Dibromofluoromethane	113	4.830	4.830	(0.986)	699083	150.000	150.76
$ 35 1,2-Dichloroethane-d4	65	5.175	5.175	(1.057)	910863	150.000	150.73
$ 48 Toluene-d8	98	6.989	6.989	(0.847)	2828636	150.000	150.44
$ 69 4-Bromofluorobenzene	95	9.257	9.257	(1.122)	1067232	150.000	149.22
60 1,1,1,2-Tetrachloroethane	131	8.350	8.350	(1.012)	733799	150.000	162.63
31 1,1,1-Trichloroethane	97	4.830	4.830	(0.986)	1125782	150.000	162.93
68 1,1,2,2-Tetrachloroethane	83	9.392	9.392	(0.918)	1181566	150.000	149.39
53 1,1,2-Trichloroethane	83	7.421	7.421	(0.900)	666579	150.000	145.84
22 1,1-Dichloroethane	63	3.604	3.604	(0.736)	1438222	150.000	149.97
11 1,1-Dichloroethene	96	2.401	2.401	(0.490)	606646	150.000	149.06
32 1,1-Dichloropropene	75	5.006	5.006	(0.890)	1107792	150.000	149.71
93 1,2,3-Trichlorobenzene	180	12.335	12.335	(1.205)	997739	150.000	159.03
71 1,2,3-Trichloropropane	75	9.430	9.430	(0.921)	1361534	150.000	159.99
90 1,2,4-Trichlorobenzene	180	11.926	11.926	(1.165)	1038733	150.000	163.75
79 1,2,4-Trimethylbenzene	105	9.943	9.943	(0.971)	2881082	150.000	155.82
89 1,2-Dibromo-3-Chloropropane	155	11.233	11.233	(1.097)	188865	150.000	146.39
57 1,2-Dibromoethane	107	7.852	7.852	(0.952)	788311	150.000	151.43
88 1,2-Dichlorobenzene	146	10.569	10.569	(1.033)	1550379	150.000	145.03

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010810.D Page 2
Report Date: 01-Feb-2019 15:44

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	5.254	5.254	(0.934)	1110306	150.000	143.38
42 1,2-Dichloropropane	63	6.082	6.082	(1.081)	870571	150.000	151.10
75 1,3,5-Trimethylbenzene	105	9.625	9.625	(0.940)	2834428	150.000	156.95
83 1,3-Dichlorobenzene	146	10.180	10.180	(0.995)	1575358	150.000	148.33
54 1,3-Dichloropropane	76	7.563	7.563	(0.917)	1445134	150.000	146.57
84 1,4-Dichlorobenzene	146	10.258	10.258	(1.002)	1608865	150.000	142.91
26 2,2-Dichloropropane	77	4.275	4.275	(0.873)	928351	150.000	161.64
24 2-Butanone	43	4.339	4.339	(0.886)	875837	300.000	300.00(A)
76 2-Chlorotoluene	91	9.550	9.550	(0.933)	2482833	150.000	148.33
52 2-Hexanone	43	7.653	7.653	(0.928)	1403558	300.000	325.87(A)
77 4-Chlorotoluene	91	9.640	9.640	(0.942)	2889930	150.000	148.43
82 p-Isopropyltoluene	119	10.210	10.210	(0.997)	2965061	150.000	158.11
45 4-Methyl-2-Pentanone	43	6.914	6.914	(0.838)	1970058	300.000	317.19(A)
10 Acetone	43	2.484	2.484	(0.507)	504121	300.000	279.00(A)
37 Benzene	78	5.220	5.220	(0.928)	3240723	150.000	147.15
74 Bromobenzene	156	9.385	9.385	(0.917)	842882	150.000	153.53
29 Bromochloromethane	128	4.557	4.557	(0.930)	342313	150.000	147.61
39 Bromodichloromethane	83	6.348	6.348	(1.129)	1008643	150.000	162.58
66 Bromoform	173	8.984	8.984	(1.089)	502752	150.000	150.57
6 Bromomethane	94	1.663	1.663	(0.340)	488763	150.000	153.52
19 Carbon Disulfide	76	2.592	2.592	(0.529)	3988539	300.000	276.30(A)
34 Carbon Tetrachloride	117	4.995	4.995	(0.888)	897860	150.000	167.55
59 Chlorobenzene	112	8.275	8.275	(1.003)	2143923	150.000	143.99
7 Chloroethane	64	1.749	1.749	(0.357)	563792	150.000	148.26(M)
28 Chloroform	83	4.658	4.658	(0.951)	1353118	150.000	148.53
3 Chloromethane	50	1.340	1.340	(0.274)	861673	150.000	148.03
27 cis-1,2-Dichloroethene	96	4.287	4.287	(0.875)	865247	150.000	149.94
46 cis-1,3-Dichloropropene	75	6.761	6.761	(1.202)	1431850	150.000	151.03
55 Dibromochloromethane	129	7.758	7.758	(0.940)	772060	150.000	151.72
44 Dibromomethane	93	6.191	6.191	(1.101)	505820	150.000	150.45
2 Dichlorodifluoromethane	85	1.209	1.209	(0.247)	835318	150.000	149.83
61 Ethylbenzene	106	8.373	8.373	(1.015)	1138800	150.000	151.63
91 Hexachlorobutadiene	225	12.065	12.065	(1.179)	361569	150.000	151.28
67 Isopropylbenzene	105	9.126	9.126	(1.106)	3302960	150.000	153.97
62 m,p-Xylenes	106	8.474	8.474	(1.027)	2795974	300.000	304.96(A)
17 Methylene Chloride	84	2.873	2.873	(0.587)	814401	150.000	151.04
87 n-Butylbenzene	91	10.558	10.558	(1.031)	2752533	150.000	151.06
73 n-Propylbenzene	91	9.479	9.479	(0.926)	4111490	150.000	151.08
92 Naphthalene	128	12.133	12.133	(1.185)	3241704	150.000	150.02
63 o-Xylene	106	8.811	8.811	(1.068)	1419753	150.000	151.79
81 sec-Butylbenzene	105	10.086	10.086	(0.985)	3466750	150.000	155.74
64 Styrene	104	8.826	8.826	(1.070)	2437657	150.000	156.52
78 tert-Butylbenzene	119	9.902	9.902	(0.967)	2394976	150.000	154.00
56 Tetrachloroethene	164	7.525	7.525	(0.912)	569750	150.000	145.23
50 Toluene	91	7.049	7.049	(0.855)	3364863	150.000	146.56
20 trans-1,2-Dichloroethene	96	3.143	3.143	(0.642)	764493	150.000	148.54
51 trans-1,3-Dichloropropene	75	7.263	7.263	(1.291)	1237749	150.000	150.46
38 Trichloroethene	130	5.861	5.861	(1.042)	785531	150.000	154.17
8 Trichlorofluoromethane	101	1.955	1.955	(0.399)	1050633	150.000	148.85
5 Vinyl Chloride	62	1.423	1.423	(0.291)	956094	150.000	152.70

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
M - Compound response manually integrated.

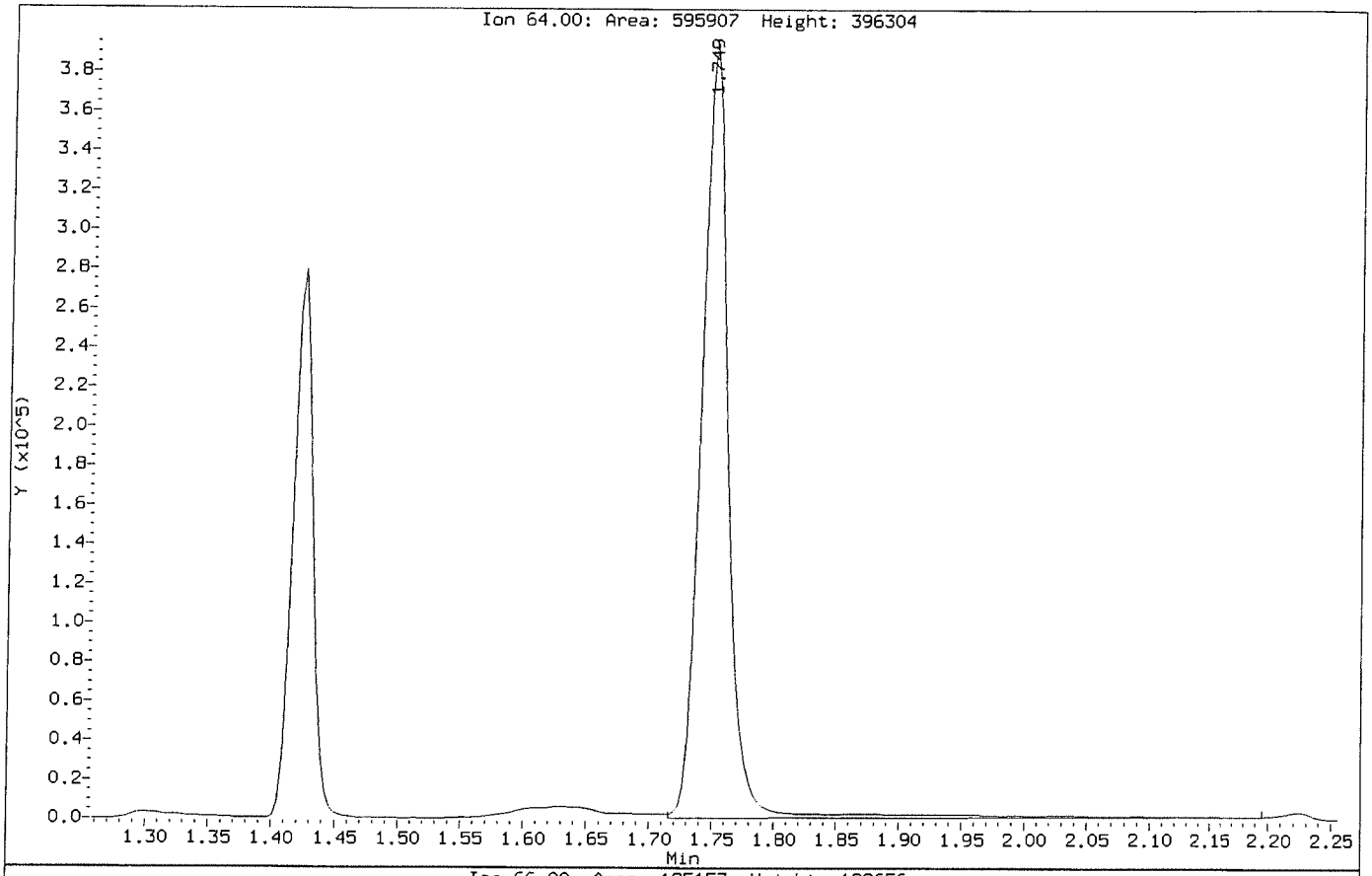


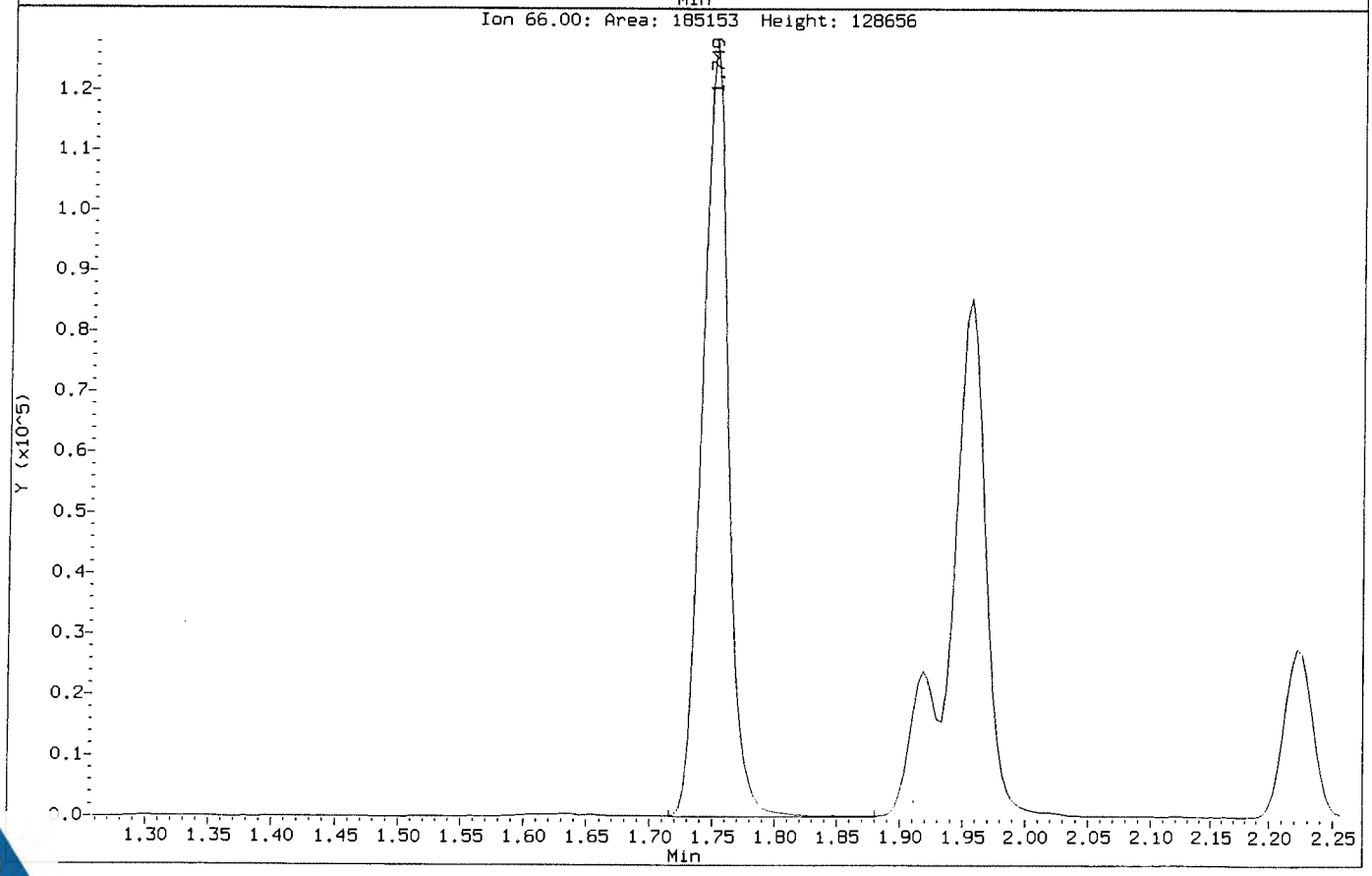
Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010810.D
Date : 08-JAN-2019 14:34
Client ID: VSTD150
Sample Info: VSTD150;VSTD150;1;9;
Purge Volume: 5.0
Column phase: DB624

Instrument: VOA9.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\Before\U010810.D
Injection Date: 08-JAN-2019 14:34
Instrument: VOA9.i
Client Sample ID: VSTD150

Compound: Chloroethane
CAS Number: 75-00-3





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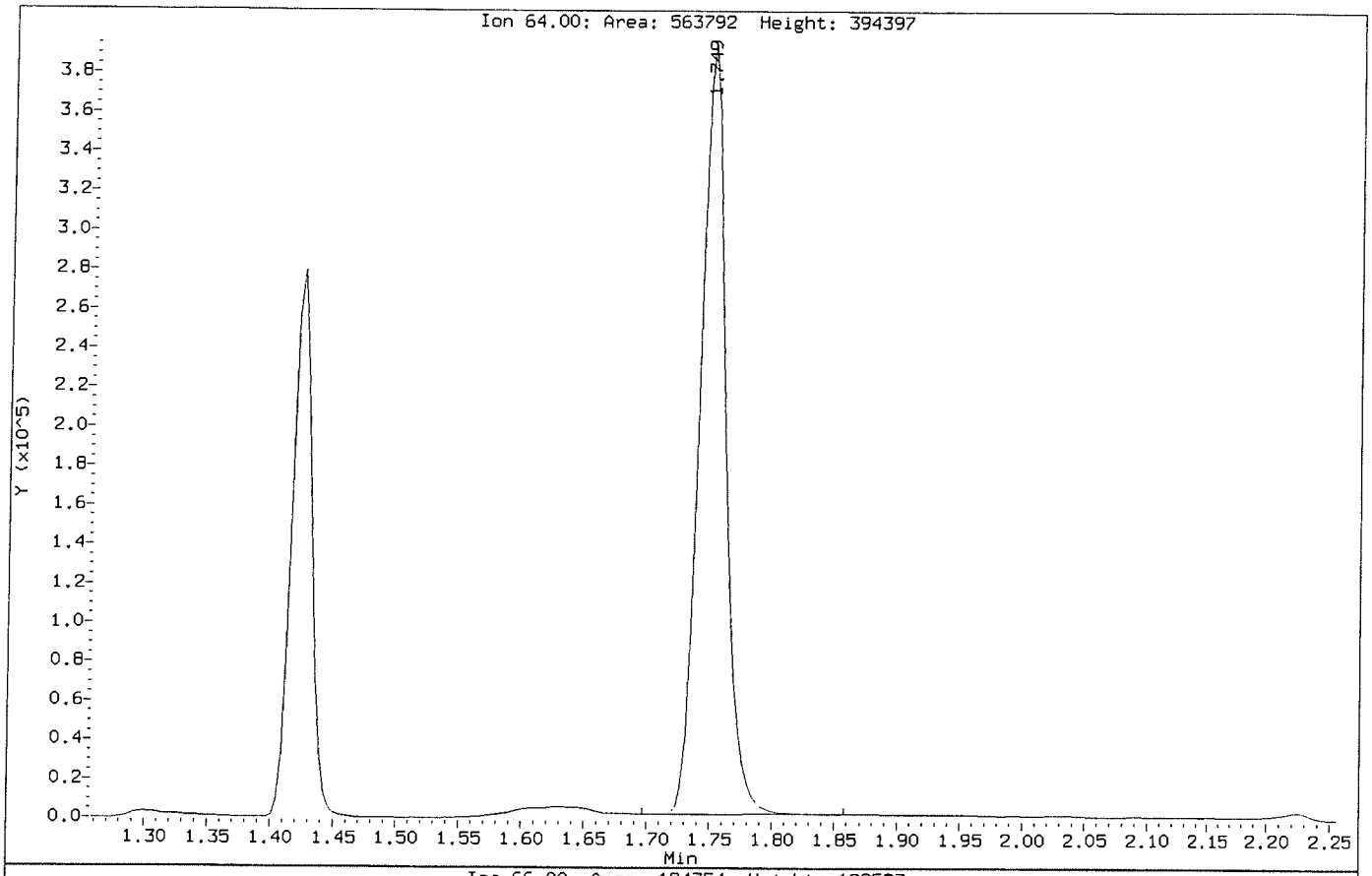
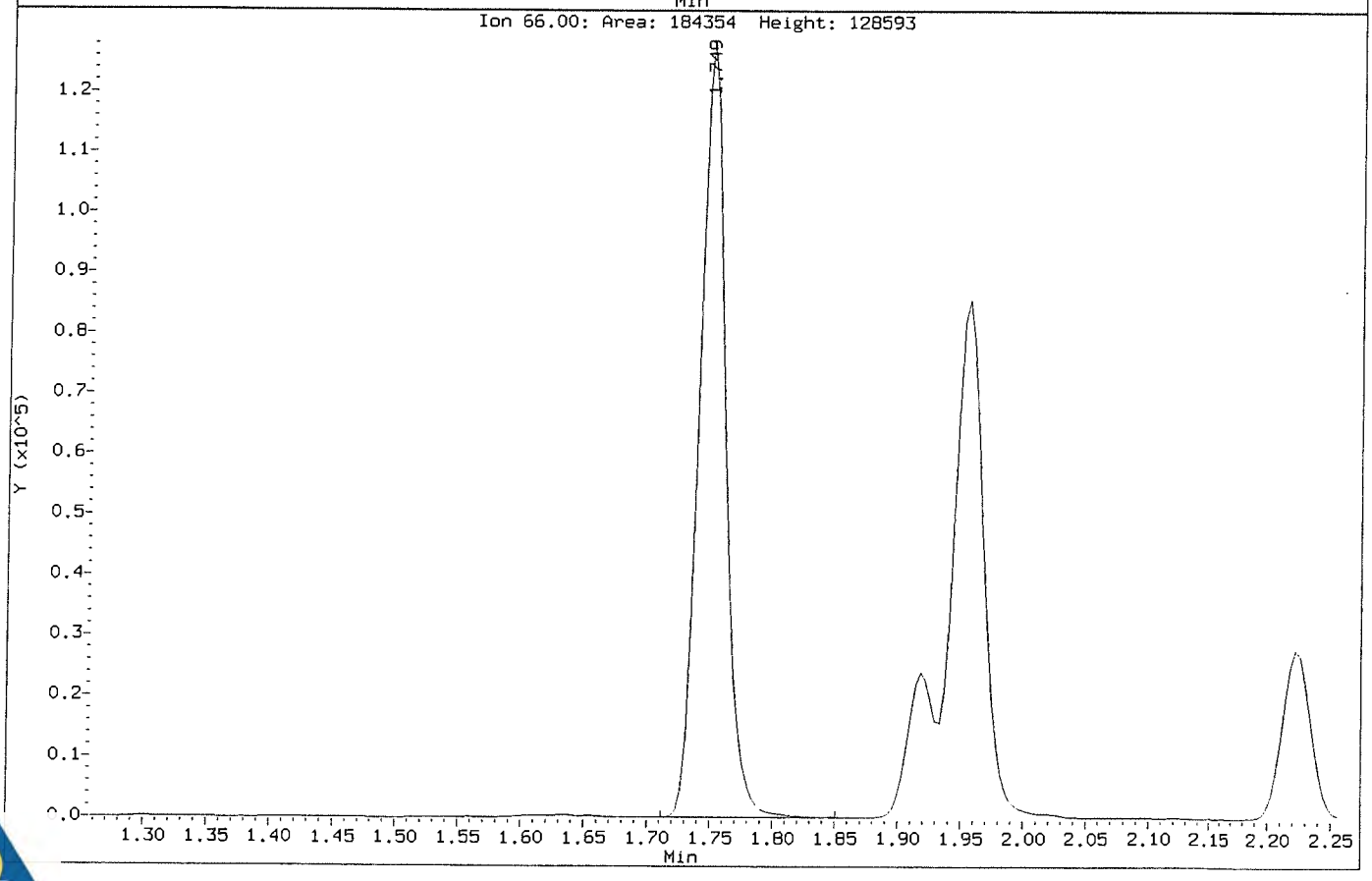
Instrument: VOA9.i
Client Sample ID: VSTD150

Compound: Chloroethane
CAS Number: 75-00-3





ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010811.D
Lab Smp Id: VSTD200 Client Smp ID: VSTD200
Inj Date : 08-JAN-2019 14:59
Operator : PC Inst ID: VOA9.i
Smp Info : VSTD200;VSTD200;1;10;
Misc Info : 180315V9;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa9.i\U190108.b\8260C.m
Meth Date : 01-Feb-2019 15:44 VOA9.i Quant Type: ISTD
Cal Date : 08-JAN-2019 14:34 Cal File: U010810.D
Als bottle: 12 Calibration Sample, Level: 10
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAPb.sub
Target Version: 4.14
Processing Host: NAHSTW7087

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

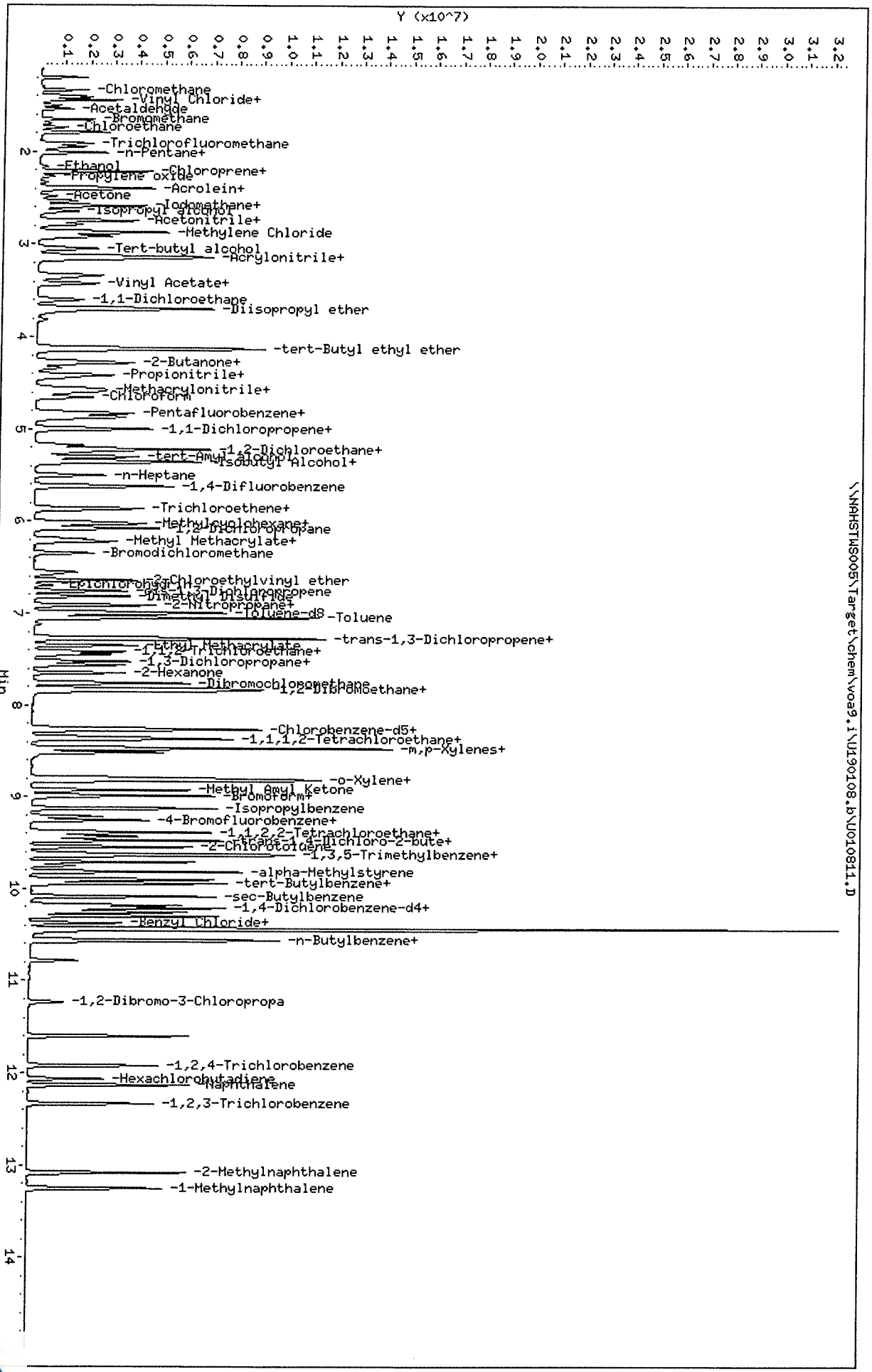
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.894	4.894	(1.000)	429927	50.0000	
* 36 1,4-Difluorobenzene	114	5.625	5.625	(1.000)	808219	50.0000	
* 47 Chlorobenzene-d5	117	8.249	8.249	(1.000)	761406	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	355794	50.0000	
$ 30 Dibromofluoromethane	113	4.830	4.830	(0.987)	938870	200.000	199.70
$ 35 1,2-Dichloroethane-d4	65	5.175	5.175	(1.057)	1222427	200.000	199.21
$ 48 Toluene-d8	98	6.989	6.989	(0.847)	3786858	200.000	198.31
$ 69 4-Bromofluorobenzene	95	9.257	9.257	(1.122)	1452643	200.000	199.83
60 1,1,1,2-Tetrachloroethane	131	8.350	8.350	(1.012)	984879	200.000	214.09(A)
31 1,1,1-Trichloroethane	97	4.826	4.826	(0.986)	1505349	200.000	213.79(A)
68 1,1,2,2-Tetrachloroethane	83	9.392	9.392	(0.918)	1597058	200.000	199.93
53 1,1,2-Trichloroethane	83	7.420	7.420	(0.900)	895818	200.000	192.24
22 1,1-Dichloroethane	63	3.601	3.601	(0.736)	1889553	200.000	193.35
11 1,1-Dichloroethene	96	2.393	2.393	(0.489)	823517	200.000	198.57
32 1,1-Dichloropropene	75	5.003	5.003	(0.889)	1465844	200.000	196.15
93 1,2,3-Trichlorobenzene	180	12.335	12.335	(1.205)	1348801	200.000	212.74(A)
71 1,2,3-Trichloropropane	75	9.430	9.430	(0.921)	1870824	200.000	217.53(A)
90 1,2,4-Trichlorobenzene	180	11.923	11.923	(1.165)	1398348	200.000	218.14(A)
79 1,2,4-Trimethylbenzene	105	9.943	9.943	(0.971)	3800889	200.000	203.41(A)
89 1,2-Dibromo-3-Chloropropane	155	11.233	11.233	(1.097)	267735	200.000	204.51(A)
57 1,2-Dibromoethane	107	7.852	7.852	(0.952)	1052363	200.000	198.27
88 1,2-Dichlorobenzene	146	10.573	10.573	(1.033)	2060137	200.000	190.70

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010811.D Page 2
Report Date: 01-Feb-2019 15:44

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	5.254	5.254	(0.934)	1467861	200.000	187.69
42 1,2-Dichloropropane	63	6.082	6.082	(1.081)	1146745	200.000	197.08
75 1,3,5-Trimethylbenzene	105	9.628	9.628	(0.941)	3747524	200.000	205.34(A)
83 1,3-Dichlorobenzene	146	10.179	10.179	(0.995)	2100365	200.000	195.69
54 1,3-Dichloropropane	76	7.563	7.563	(0.917)	1923251	200.000	191.32
84 1,4-Dichlorobenzene	146	10.258	10.258	(1.002)	2142590	200.000	188.33
26 2,2-Dichloropropane	77	4.272	4.272	(0.873)	1232463	200.000	210.58(A)
24 2-Butanone	43	4.335	4.335	(0.886)	1216697	400.000	408.96(A)
76 2-Chlorotoluene	91	9.550	9.550	(0.933)	3297612	200.000	194.95
52 2-Hexanone	43	7.653	7.653	(0.928)	1936963	400.000	441.09(A)
77 4-Chlorotoluene	91	9.640	9.640	(0.942)	3826594	200.000	194.48
82 p-Isopropyltoluene	119	10.213	10.213	(0.998)	3919599	200.000	206.82(A)
45 4-Methyl-2-Pentanone	43	6.914	6.914	(0.838)	2707197	400.000	427.51(A)
10 Acetone	43	2.480	2.480	(0.507)	752770	400.000	409.58(A)
37 Benzene	78	5.216	5.216	(0.927)	4245482	200.000	190.88
74 Bromobenzene	156	9.385	9.385	(0.917)	1128976	200.000	203.49(A)
29 Bromochloromethane	128	4.553	4.553	(0.930)	439869	200.000	186.13
39 Bromodichloromethane	83	6.348	6.348	(1.129)	1348130	200.000	215.17(A)
66 Bromoform	173	8.984	8.984	(1.089)	687286	200.000	201.28(A)
6 Bromomethane	94	1.655	1.655	(0.338)	585977	200.000	180.48
19 Carbon Disulfide	76	2.585	2.585	(0.528)	5745653	400.000	390.57(A)
34 Carbon Tetrachloride	117	4.995	4.995	(0.888)	1203648	200.000	222.41(A)
59 Chlorobenzene	112	8.275	8.275	(1.003)	2838218	200.000	186.97
7 Chloroethane	64	1.737	1.737	(0.355)	753381	200.000	194.41(M)
28 Chloroform	83	4.658	4.658	(0.952)	1774825	200.000	191.17
3 Chloromethane	50	1.336	1.336	(0.273)	1231855	200.000	206.67(A)
27 cis-1,2-Dichloroethene	96	4.283	4.283	(0.875)	1145016	200.000	194.71
46 cis-1,3-Dichloropropene	75	6.761	6.761	(1.202)	1921305	200.000	200.24(A)
55 Dibromochloromethane	129	7.758	7.758	(0.940)	1039615	200.000	199.99
44 Dibromomethane	93	6.191	6.191	(1.101)	674252	200.000	198.59
2 Dichlorodifluoromethane	85	1.201	1.201	(0.246)	1134745	200.000	199.73
61 Ethylbenzene	106	8.373	8.373	(1.015)	1527436	200.000	199.48
91 Hexachlorobutadiene	225	12.065	12.065	(1.179)	491406	200.000	199.11
67 Isopropylbenzene	105	9.126	9.126	(1.106)	4368746	200.000	199.74
62 m,p-Xylenes	106	8.474	8.474	(1.027)	3708605	400.000	396.75(A)
17 Methylene Chloride	84	2.866	2.866	(0.586)	1093304	200.000	199.13
87 n-Butylbenzene	91	10.558	10.558	(1.031)	3656443	200.000	198.57
73 n-Propylbenzene	91	9.478	9.478	(0.926)	5413907	200.000	196.86
92 Naphthalene	128	12.133	12.133	(1.185)	4364184	200.000	199.85
63 o-Xylene	106	8.811	8.811	(1.068)	1887398	200.000	197.92
81 sec-Butylbenzene	105	10.090	10.090	(0.986)	4586325	200.000	203.88(A)
64 Styrene	104	8.826	8.826	(1.070)	3221123	200.000	202.86(A)
78 tert-Butylbenzene	119	9.902	9.902	(0.967)	3165126	200.000	201.39(A)
56 Tetrachloroethene	164	7.525	7.525	(0.912)	765741	200.000	191.45
50 Toluene	91	7.049	7.049	(0.855)	4399106	200.000	187.93
20 trans-1,2-Dichloroethene	96	3.136	3.136	(0.641)	1011119	200.000	192.78
51 trans-1,3-Dichloropropene	75	7.263	7.263	(1.291)	1672981	200.000	200.84(A)
38 Trichloroethene	130	5.861	5.861	(1.042)	1053661	200.000	204.76(A)
8 Trichlorofluoromethane	101	1.947	1.947	(0.398)	1422198	200.000	197.73
5 Vinyl Chloride	62	1.415	1.415	(0.289)	1280236	200.000	200.65(A)

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
M - Compound response manually integrated.



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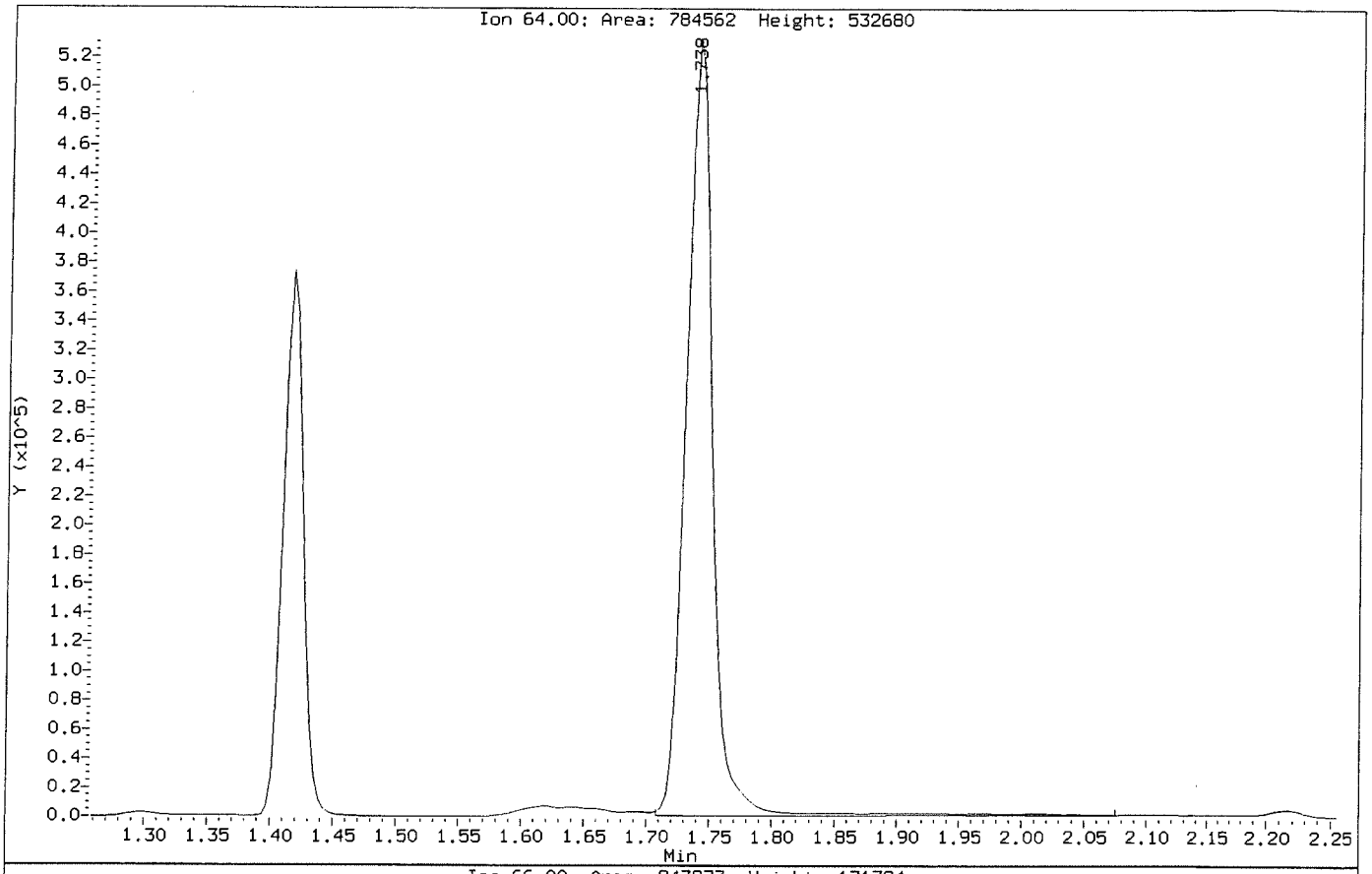
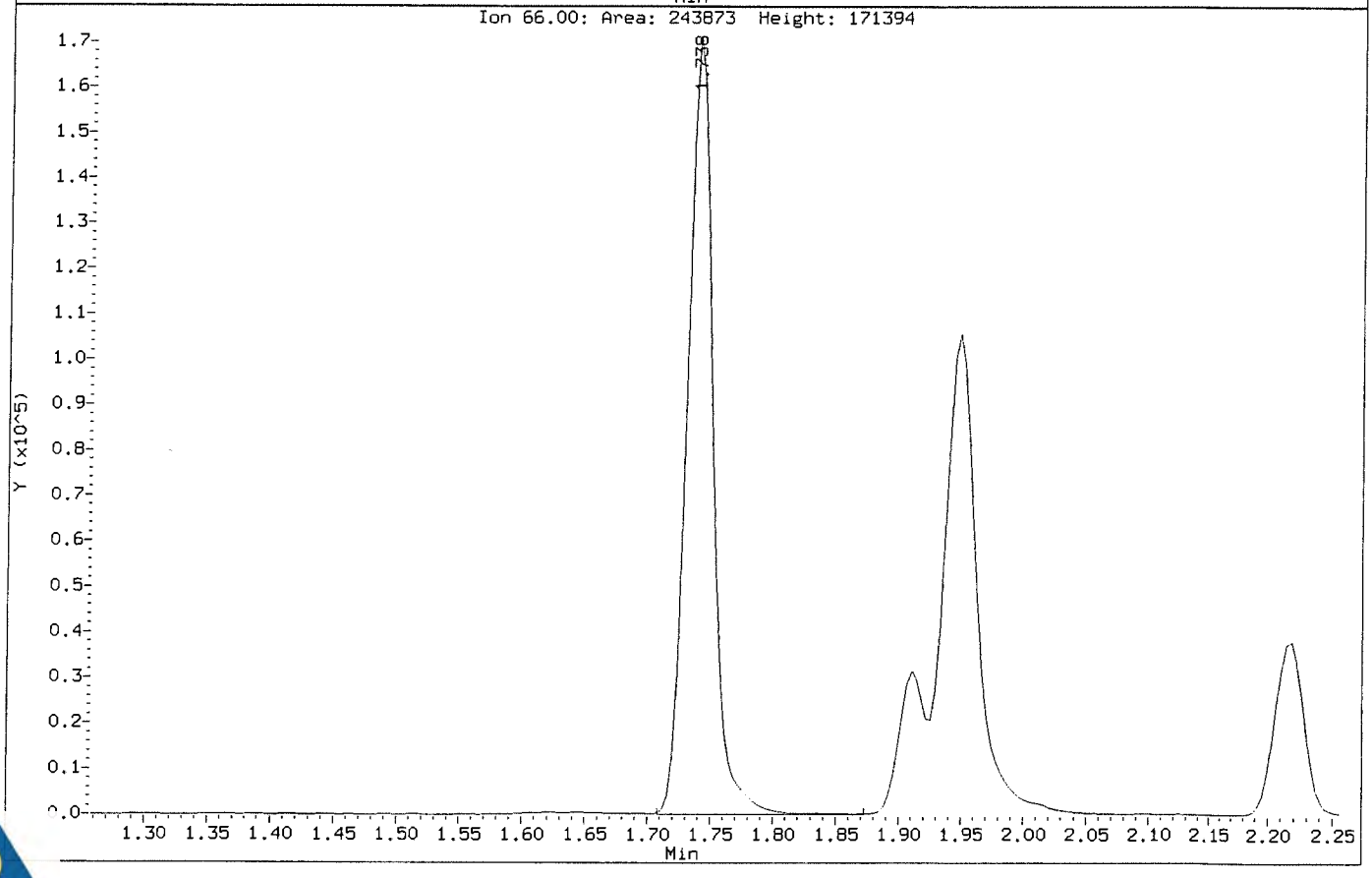
Client ID: VSTD200
Sample Info: VSTD200;VSTD200;1;10;
Purge Volume: 5.0
Column phase: DB624

Instrument: VOA9,i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\Before\U010811.D
Injection Date: 08-JAN-2019 14:59
Instrument: VOA9.i
Client Sample ID: VSTD200

Compound: Chloroethane
CAS Number: 75-00-3





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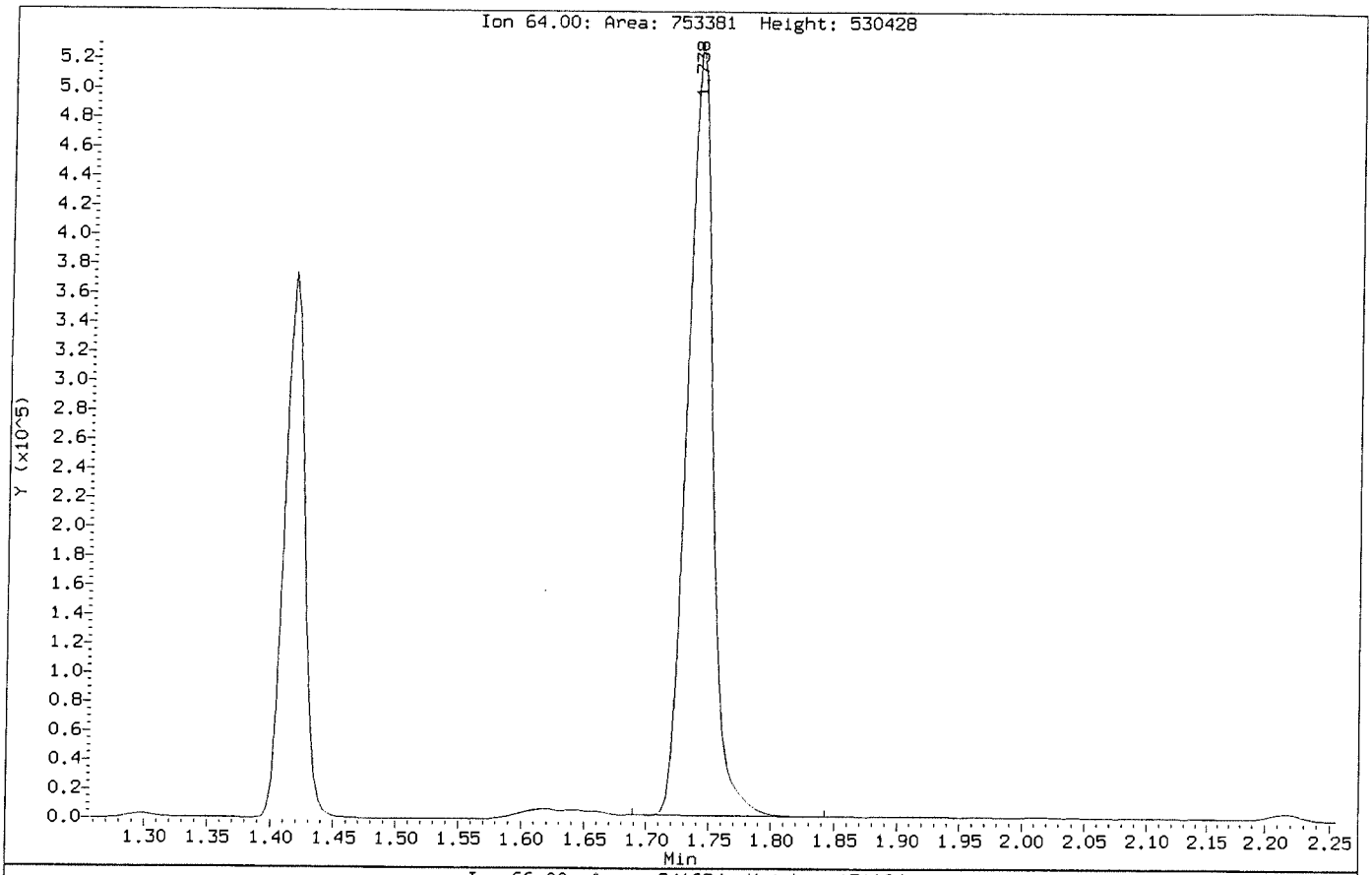
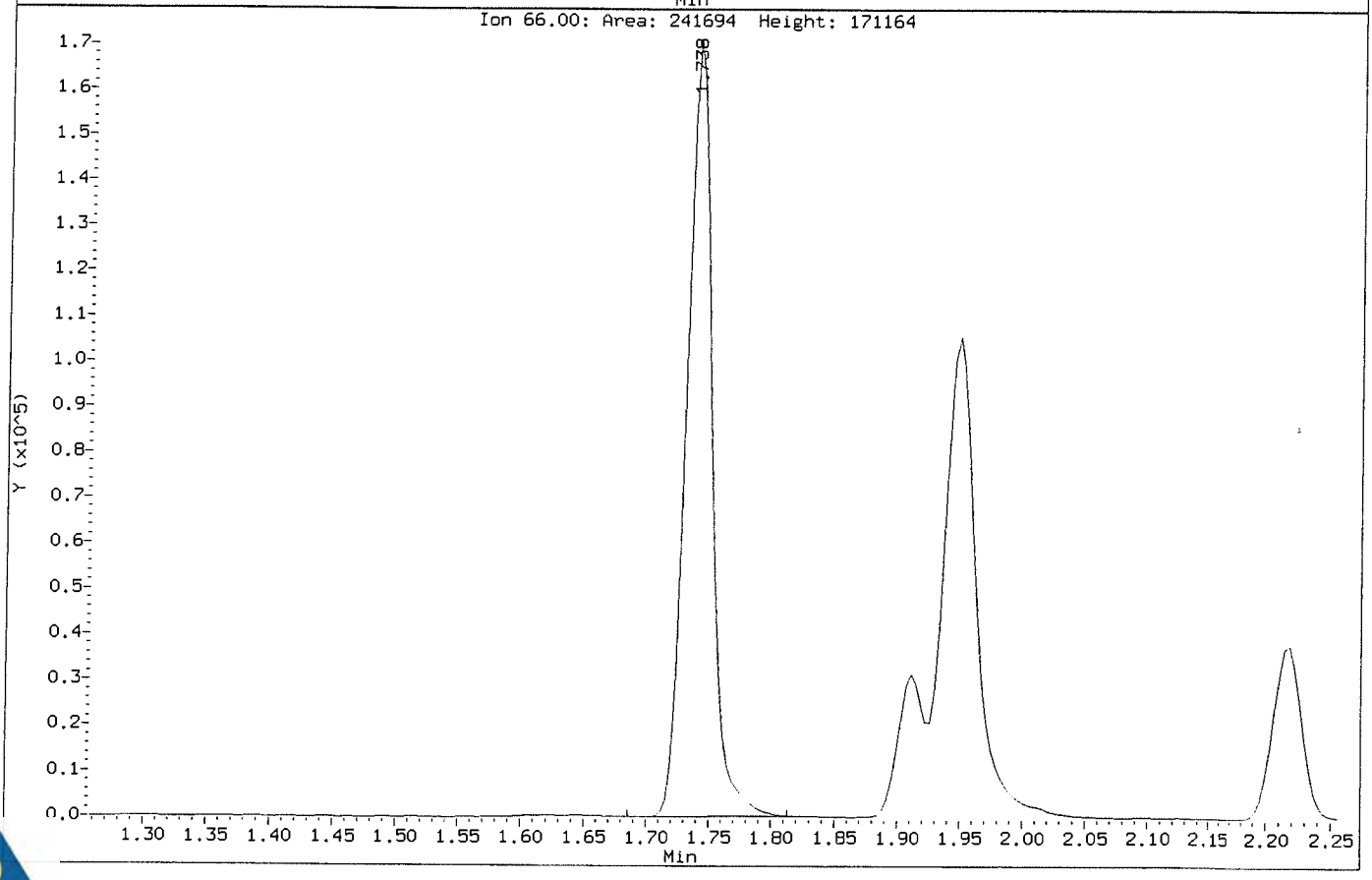
Client Sample ID: VSTD200

Compound: Chloroethane
CAS Number: 75-00-3





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Data file : \\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010813.D
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Inj Date : 08-JAN-2019 15:48
Operator : PC Inst ID: VOA9.i
Smp Info : VSTD050;VSTD050;2;;ICV
Misc Info : 180315V9;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa9.i\U190108.b\8260C.m
Meth Date : 01-Feb-2019 15:44 VOA9.i Quant Type: ISTD
Cal Date : 08-JAN-2019 14:59 Cal File: U010811.D
Als bottle: 14 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAPb.sub
Target Version: 4.14
Processing Host: NAHSTW7087

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

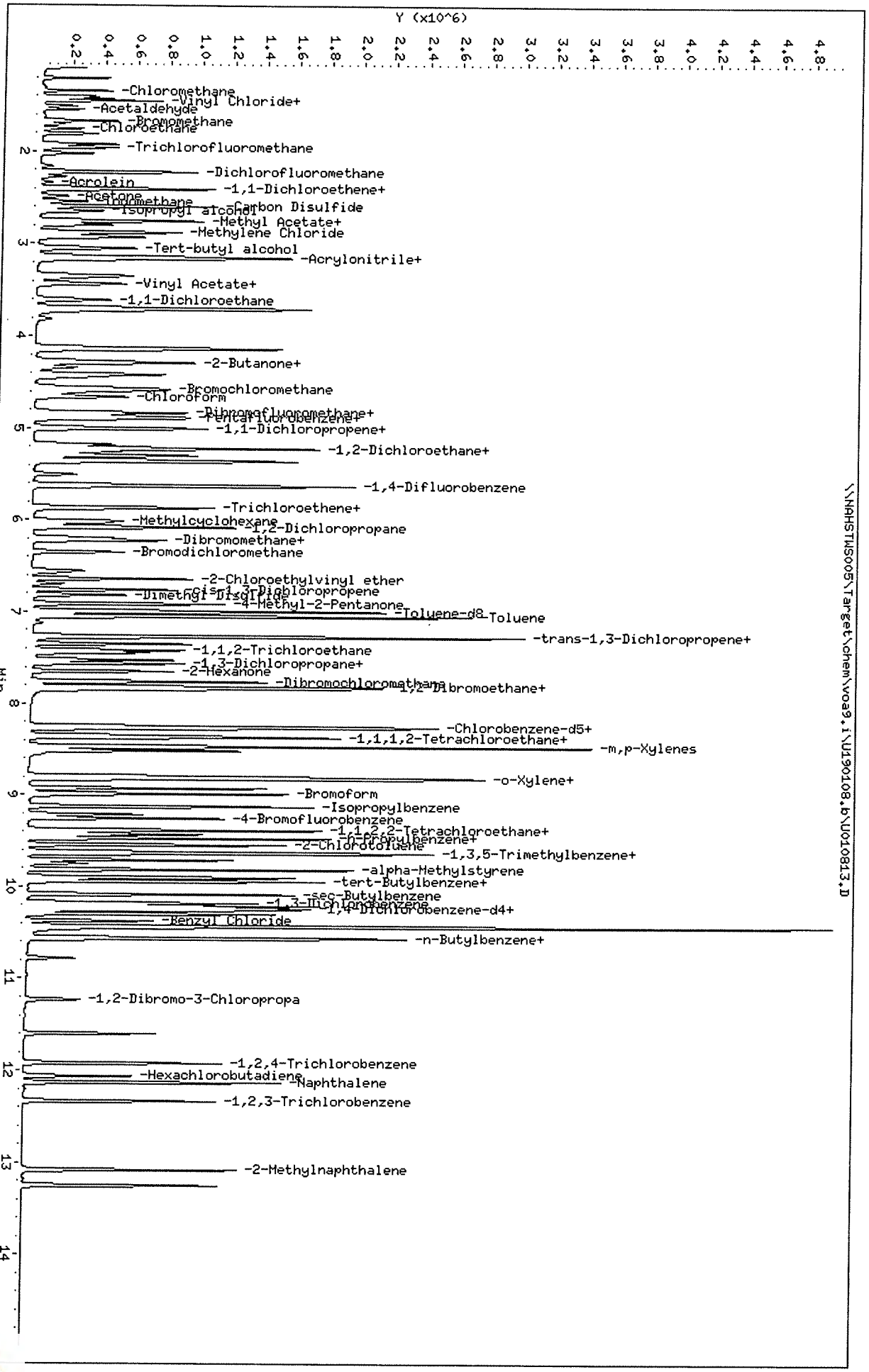
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.898	4.898	(1.000)	430548	50.0000	
* 36 1,4-Difluorobenzene	114	5.629	5.629	(1.000)	797004	50.0000	
* 47 Chlorobenzene-d5	117	8.249	8.249	(1.000)	736491	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	345661	50.0000	
$ 30 Dibromofluoromethane	113	4.830	4.830	(0.986)	239269	50.0000	49.21
$ 35 1,2-Dichloroethane-d4	65	5.175	5.175	(1.057)	314304	50.0000	49.49
$ 48 Toluene-d8	98	6.989	6.989	(0.847)	974246	50.0000	50.94
$ 69 4-Bromofluorobenzene	95	9.257	9.257	(1.122)	367815	50.0000	50.93
60 1,1,1,2-Tetrachloroethane	131	8.350	8.350	(1.012)	226050	50.0000	50.80
31 1,1,1-Trichloroethane	97	4.830	4.830	(0.986)	337056	50.0000	47.80
68 1,1,2,2-Tetrachloroethane	83	9.392	9.392	(0.918)	403909	50.0000	51.77
53 1,1,2-Trichloroethane	83	7.421	7.421	(0.900)	223064	50.0000	49.48
22 1,1-Dichloroethane	63	3.608	3.608	(0.737)	458068	50.0000	46.80
11 1,1-Dichloroethene	96	2.405	2.405	(0.491)	187340	50.0000	45.10
32 1,1-Dichloropropene	75	5.006	5.006	(0.889)	336995	50.0000	45.73
93 1,2,3-Trichlorobenzene	180	12.335	12.335	(1.205)	308927	50.0000	50.15
71 1,2,3-Trichloropropane	75	9.426	9.426	(0.921)	450600	50.0000	53.93
90 1,2,4-Trichlorobenzene	180	11.923	11.923	(1.165)	320108	50.0000	51.40
79 1,2,4-Trimethylbenzene	105	9.943	9.943	(0.971)	918581	50.0000	50.60
89 1,2-Dibromo-3-Chloropropane	155	11.233	11.233	(1.097)	61712	50.0000	50.11
57 1,2-Dibromoethane	107	7.852	7.852	(0.952)	262149	50.0000	51.06
88 1,2-Dichlorobenzene	146	10.569	10.569	(1.033)	502063	50.0000	47.83

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010813.D Page 2
Report Date: 01-Feb-2019 15:44

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	5.254	5.254	(0.933)	369789	50.0000	47.94
42 1,2-Dichloropropane	63	6.082	6.082	(1.081)	282197	50.0000	49.18
75 1,3,5-Trimethylbenzene	105	9.625	9.625	(0.940)	872265	50.0000	49.19
83 1,3-Dichlorobenzene	146	10.180	10.180	(0.995)	502149	50.0000	48.15
54 1,3-Dichloropropane	76	7.563	7.563	(0.917)	481086	50.0000	49.47
84 1,4-Dichlorobenzene	146	10.255	10.255	(1.002)	515943	50.0000	46.68
26 2,2-Dichloropropane	77	4.279	4.279	(0.874)	305623	50.0000	52.14
24 2-Butanone	43	4.339	4.339	(0.886)	313100	100.000	105.08
76 2-Chlorotoluene	91	9.546	9.546	(0.933)	801797	50.0000	48.79
52 2-Hexanone	43	7.649	7.649	(0.927)	474501	100.000	111.71
77 4-Chlorotoluene	91	9.640	9.640	(0.942)	931854	50.0000	48.74
82 p-Isopropyltoluene	119	10.210	10.210	(0.997)	890763	50.0000	48.38
45 4-Methyl-2-Pentanone	43	6.914	6.914	(0.838)	670625	100.000	109.48
10 Acetone	43	2.483	2.483	(0.507)	186681	100.000	100.19
37 Benzene	78	5.220	5.220	(0.927)	1041442	50.0000	47.48
74 Bromobenzene	156	9.381	9.381	(0.917)	269447	50.0000	49.99
29 Bromochloromethane	128	4.557	4.557	(0.930)	125415	50.0000	52.99
39 Bromodichloromethane	83	6.348	6.348	(1.128)	313432	50.0000	50.72
66 Bromoform	173	8.984	8.984	(1.089)	153603	50.0000	47.88(T)
6 Bromomethane	94	1.670	1.670	(0.341)	164593	50.0000	51.16
19 Carbon Disulfide	76	2.596	2.596	(0.530)	1390922	100.000	94.41
34 Carbon Tetrachloride	117	4.999	4.999	(0.888)	260150	50.0000	48.74
59 Chlorobenzene	112	8.275	8.275	(1.003)	694010	50.0000	47.26
7 Chloroethane	64	1.756	1.756	(0.359)	171448	50.0000	44.17(M)
28 Chloroform	83	4.661	4.661	(0.952)	438854	50.0000	47.20
3 Chloromethane	50	1.344	1.344	(0.274)	267263	50.0000	46.70
27 cis-1,2-Dichloroethene	96	4.290	4.290	(0.876)	277790	50.0000	47.17
46 cis-1,3-Dichloropropene	75	6.757	6.757	(1.200)	452822	50.0000	48.85
55 Dibromochloromethane	129	7.758	7.758	(0.940)	238591	50.0000	48.38
44 Dibromomethane	93	6.191	6.191	(1.100)	165264	50.0000	49.36
2 Dichlorodifluoromethane	85	1.209	1.209	(0.247)	250516	50.0000	44.03
61 Ethylbenzene	106	8.369	8.369	(1.015)	350049	50.0000	47.26
91 Hexachlorobutadiene	225	12.065	12.065	(1.179)	105872	50.0000	47.27
67 Isopropylbenzene	105	9.126	9.126	(1.106)	1025574	50.0000	48.47
62 m,p-Xylenes	106	8.474	8.474	(1.027)	888998	100.000	98.32
17 Methylene Chloride	84	2.877	2.877	(0.587)	268195	50.0000	48.39
87 n-Butylbenzene	91	10.554	10.554	(1.031)	822061	50.0000	45.95
73 n-Propylbenzene	91	9.475	9.475	(0.926)	1282894	50.0000	48.01
92 Naphthalene	128	12.133	12.133	(1.185)	1070210	50.0000	50.80
63 o-Xylene	106	8.811	8.811	(1.068)	452391	50.0000	49.04
81 sec-Butylbenzene	105	10.086	10.086	(0.985)	1015099	50.0000	46.44
64 Styrene	104	8.826	8.826	(1.070)	785930	50.0000	51.17
78 tert-Butylbenzene	119	9.902	9.902	(0.967)	718649	50.0000	47.06
56 Tetrachloroethene	164	7.525	7.525	(0.912)	170507	50.0000	44.07
50 Toluene	91	7.049	7.049	(0.855)	1095105	50.0000	48.36
20 trans-1,2-Dichloroethene	96	3.147	3.147	(0.643)	241088	50.0000	45.90
51 trans-1,3-Dichloropropene	75	7.259	7.259	(1.290)	389510	50.0000	48.64
38 Trichloroethene	130	5.865	5.865	(1.042)	246948	50.0000	48.66
8 Trichlorofluoromethane	101	1.959	1.959	(0.400)	310344	50.0000	43.08
5 Vinyl Chloride	62	1.423	1.423	(0.291)	284020	50.0000	44.45

QC Flag Legend

T - Target compound detected outside RT window.
M - Compound response manually integrated.

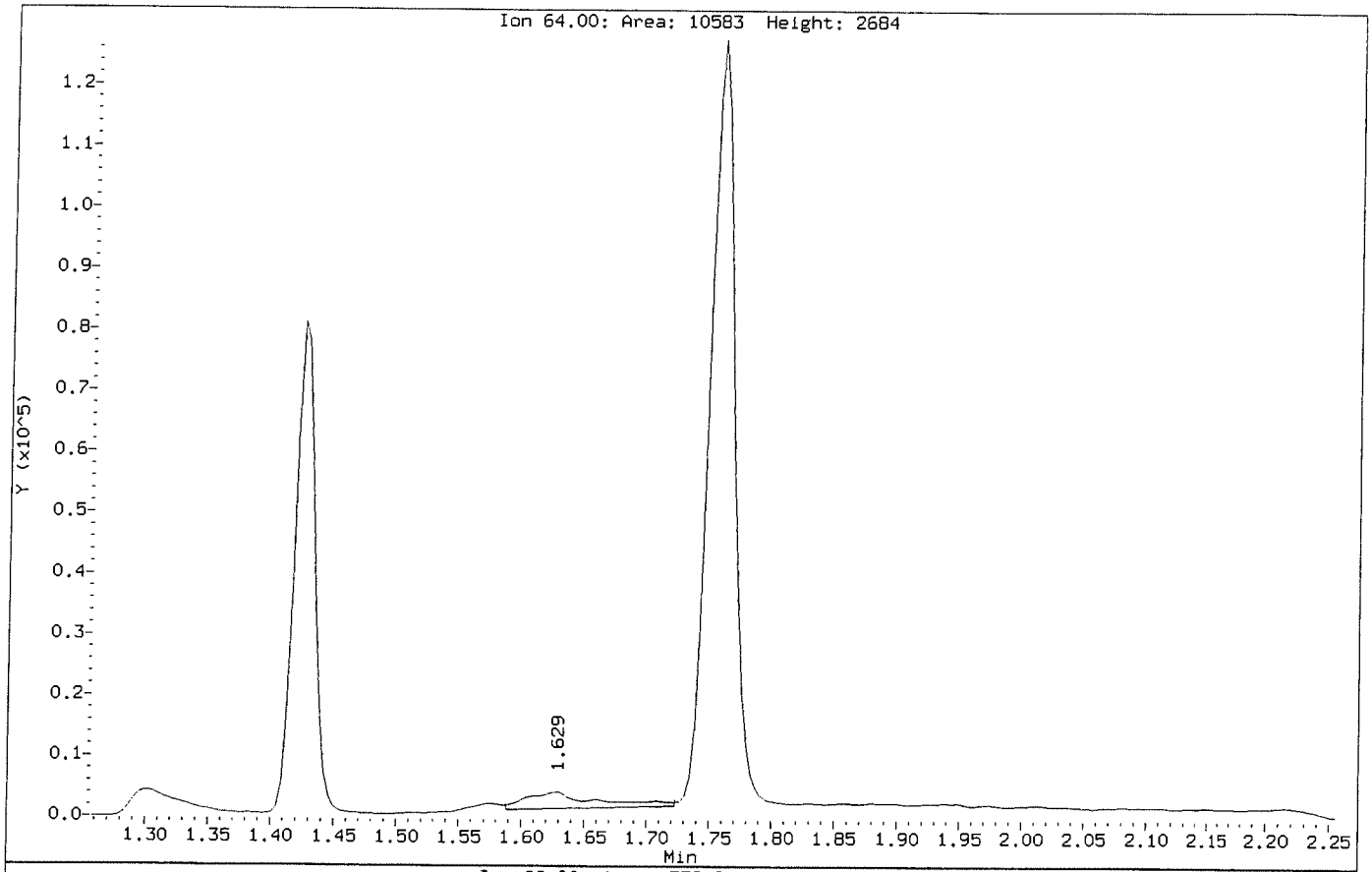


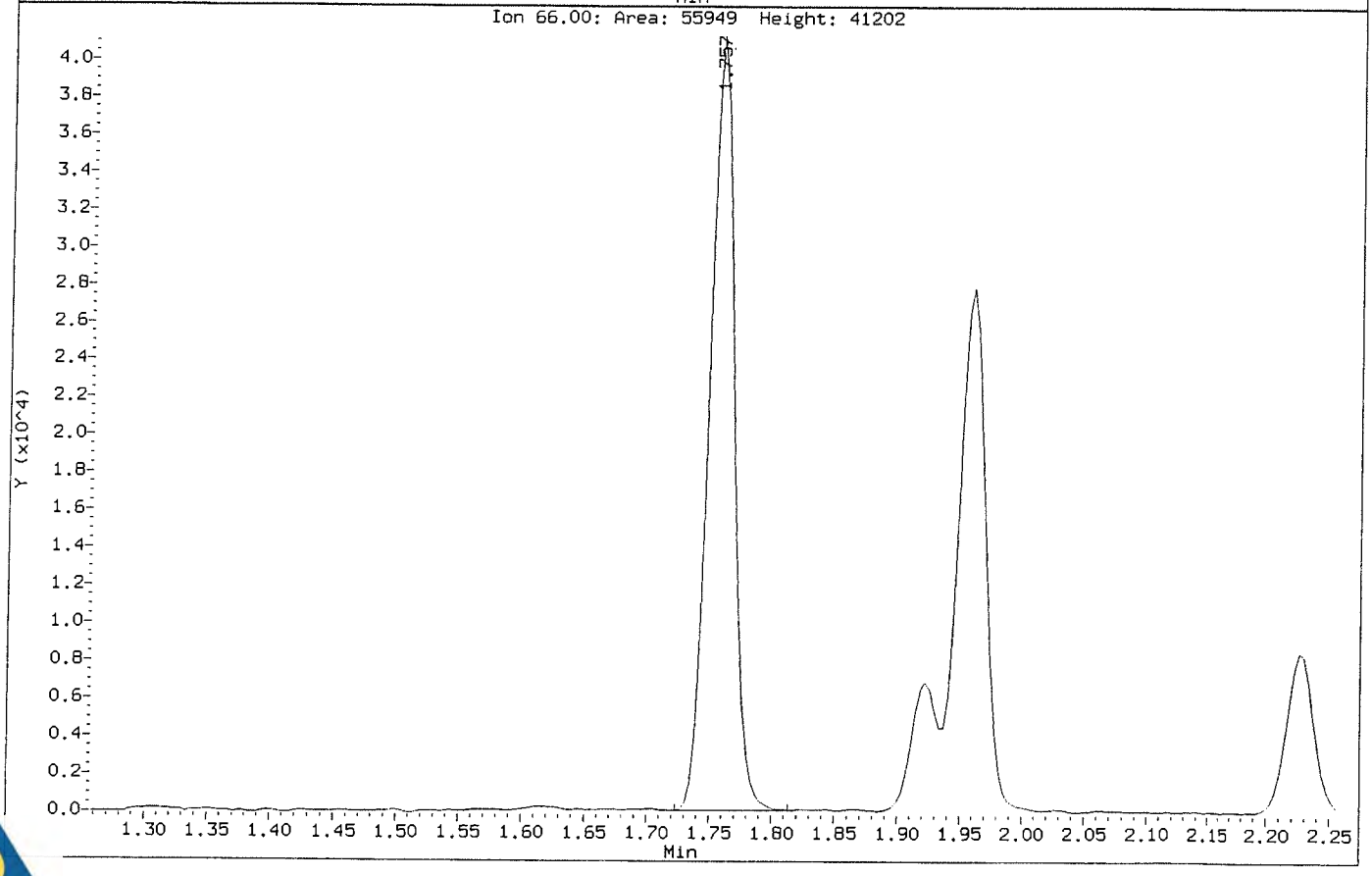
Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010813.D
Date : 08-JAN-2019 15:48
Client ID: VSTD050
Sample Info: VSTD050;VSTD050;2;;ICV
Purge Volume: 5.0
Column phase: DB624

Instrument: VOA9.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\Before\U010813.D
Injection Date: 08-JAN-2019 15:48
Instrument: VOA9.i
Client Sample ID: VSTD050

Compound: Chloroethane
CAS Number: 75-00-3





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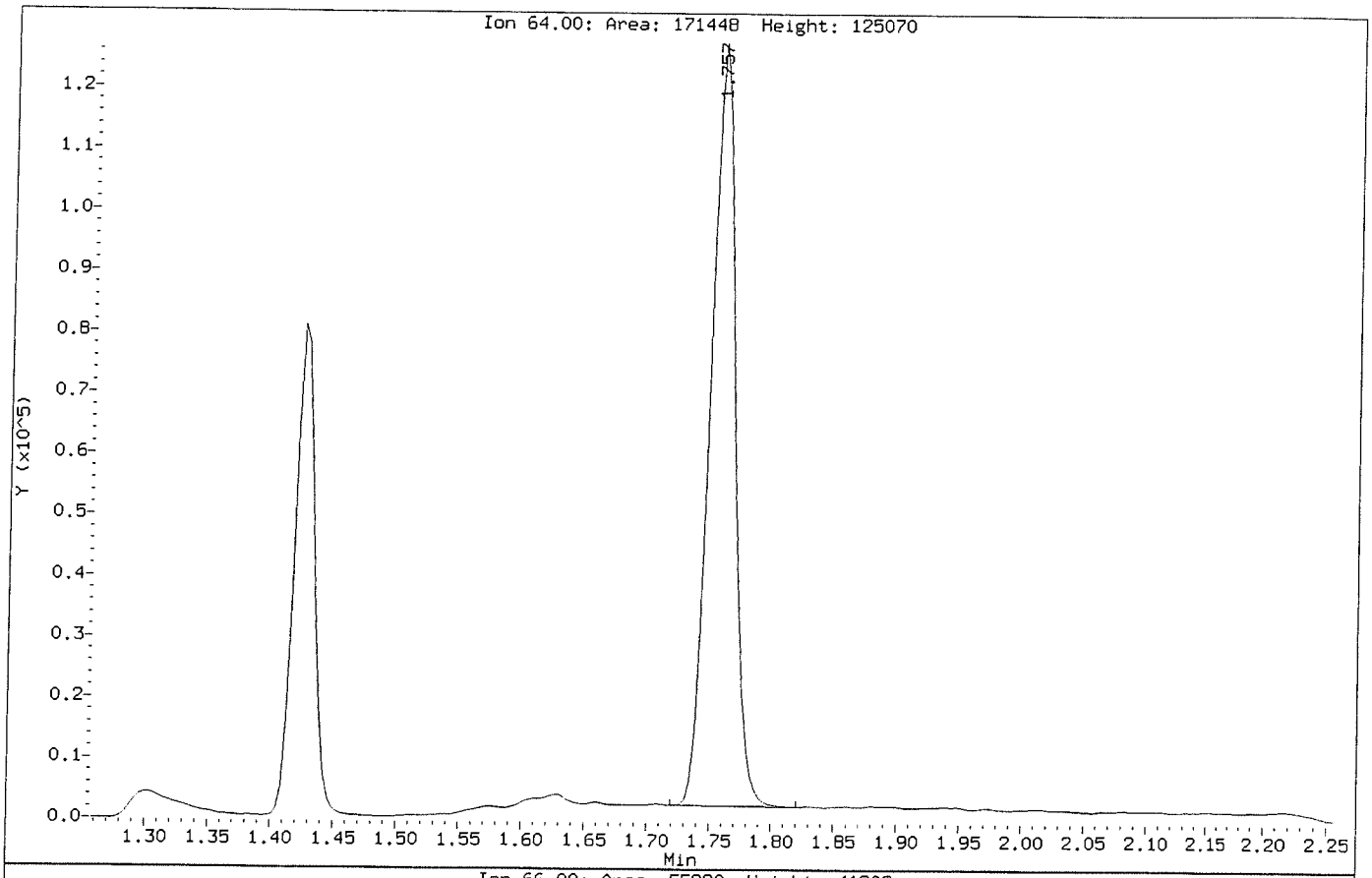
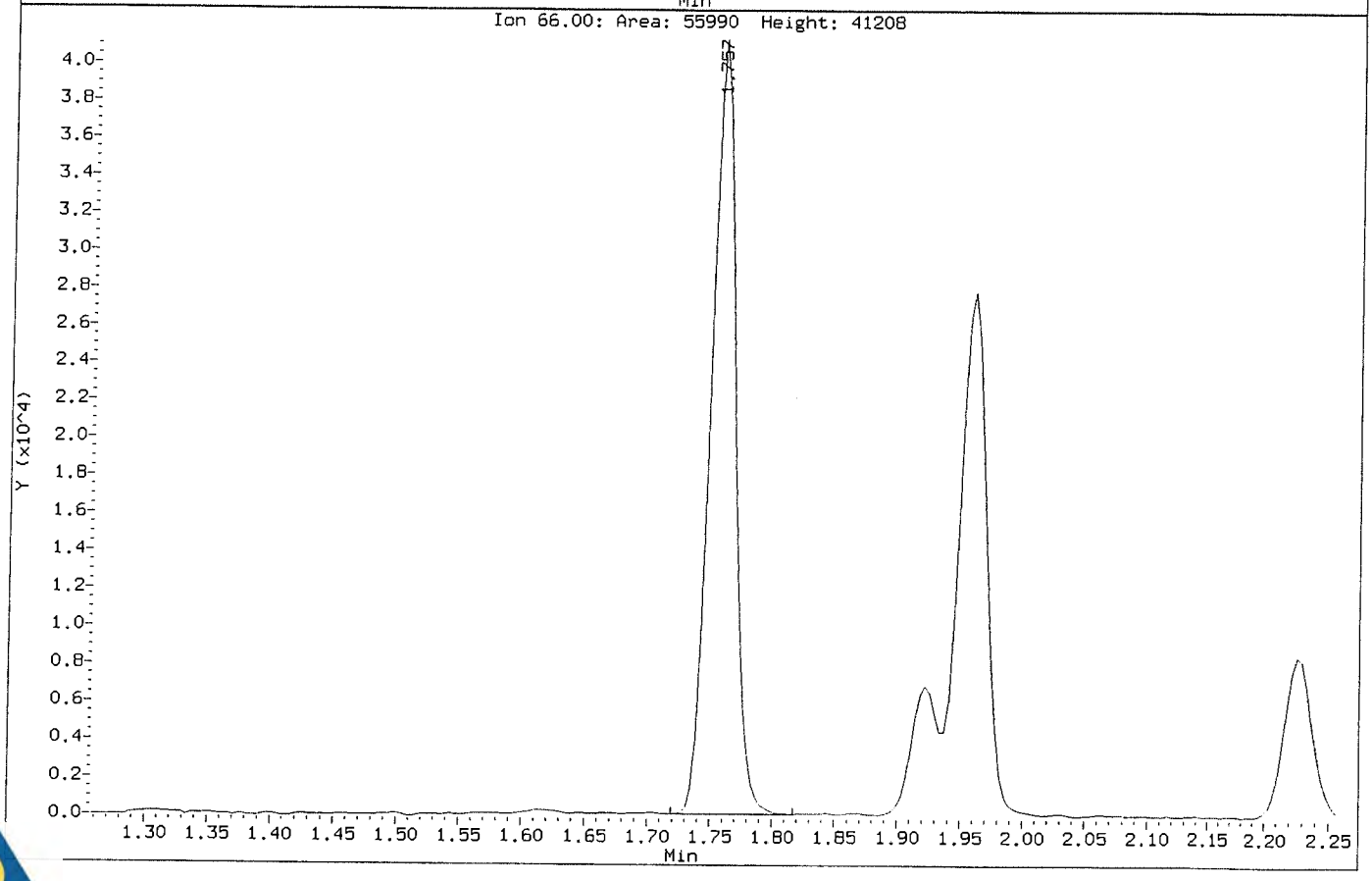
Injection Date: 08-JAN-2019 15:48
Instrument: VOA9.i
Client Sample ID: VSTD050

Compound: Chloroethane
CAS Number: 75-00-3





MSVOA09 -Logbook

Batch: 34078
Date: 01-08-2019
Method: 8260
Comments:

Analyst: Presenta Cabascango
Reviewer:
Laboratory: Houston

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	g
1	BFB	TUNE	01-08-2019 10:29 am	1.00	50 mL	50 mL	U010801.D	Liquid	Y	N
2	*Auto find/ purged* VSTD000.25	ICAL1	01-08-2019 10:54 am	1.00	50 mL	50 mL	U010802.D	Liquid	Y	N
3	*0.1 uL cal std/100 mL DI* VSTD000.5	ICAL2	01-08-2019 11:18 am	1.00	50 mL	50 mL	U010803.D	Liquid	Y	N
4	*0.1 uL cal std/50 mL DI* VSTD001	ICAL3	01-08-2019 12:07 pm	1.00	50 mL	50 mL	U010804.D	Liquid	Y	N
5	*0.2 uL cal std/50 mL DI* VSTD002	ICAL4	01-08-2019 12:32 pm	1.00	50 mL	50 mL	U010805.D	Liquid	Y	N
6	*0.4 uL cal std/50 mL DI* VSTD005	ICAL5	01-08-2019 12:56 pm	1.00	50 mL	50 mL	U010806.D	Liquid	Y	N
7	*1.0 uL cal std/50 mL DI* VSTD020	ICAL6	01-08-2019 01:21 pm	1.00	50 mL	50 mL	U010807.D	Liquid	Y	N
8	*4.0 uL cal std/50 mL DI* VSTD050	ICAL7	01-08-2019 01:45 pm	1.00	50 mL	50 mL	U010808.D	Liquid	Y	N
9	*10 uL cal std/50 mL DI* VSTD100	ICAL8	01-08-2019 02:10 pm	1.00	50 mL	50 mL	U010809.D	Liquid	Y	N
10	*20 uL cal std/50 mL DI* VSTD150	ICAL9	01-08-2019 02:34 pm	1.00	50 mL	50 mL	U010810.D	Liquid	Y	N
11	*30 uL cal std/50 mL DI* VSTD200	ICAL	01-08-2019 02:59 pm	1.00	50 mL	50 mL	U010811.D	Liquid	Y	N
12	*40 uL cal std/50 mL DI* BLANK	SAMP	01-08-2019 03:24 pm	1.00	50 mL	50 mL	U010812.D	Liquid	Y	N
13	*clean up blank* VSTD050	ICV	01-08-2019 03:48 pm	1.00	50 mL	50 mL	U010813.D	Liquid	Y	N
14	*10 uL ical std/50 mL DI* Blank	SAMP	01-08-2019 04:13 pm	1.00	50 mL	50 mL	U010814.D	Liquid	Y	N
15	BFB	TUNE	01-08-2019 04:38 pm	1.00	50 mL	50 mL	V010801.D	Liquid	Y	N
16	*Auto find/ purged* VSTD050	CCV	01-08-2019 05:03 pm	1.00	50 mL	50 mL	V010802.D	Liquid	Y	r
17	*10 uL cal std/50 mL DI* VSTD050	CCV	01-08-2019 05:27 pm	1.00	50 mL	50 mL	V010803.D	Liquid	Y	r
18	*10 uL cal std/50 mL DI* VLCSW-190108	LCS	01-08-2019 05:52 pm	1.00	50 mL	50 mL	V010804.D	Liquid	Y	r
19	*4.0 uL cal std/50 mL DI* BLANK	SAMP	01-08-2019 06:17 pm	1.00	50 mL	50 mL	V010805.D	Liquid	Y	r
20	BLANK	SAMP	01-08-2019 06:42 pm	1.00	50 mL	50 mL	V010806.D	Liquid	Y	r
21	VBLKW-190108	MBLK	01-08-2019 07:06 pm	1.00	50 mL	50 mL	V010807.D	Liquid	Y	r
22	HS18121523-07	SAMP	01-08-2019 07:31 pm	1.00	50 mL	50 mL	V010808.D	Liquid	Y	>
23	HS18121520-09	SAMP	01-08-2019 07:56 pm	5.00	10 mL	50 mL	V010809.D	Liquid	Y	>
24	HS18121520-09DL	SAMP	01-08-2019 08:21 pm	50.00	1 mL	50 mL	V010810.D	Liquid	Y	>
25	HS18121520-09MS	MS	01-08-2019 08:46 pm	1.00	50 mL	50 mL	V010811.D	Liquid	Y	>
26	*305 uL cal std/43 mL samp* HS18121520-09MSD	MSD	01-08-2019 09:10 pm	1.00	50 mL	50 mL	V010812.D	Liquid	Y	>
27	*305 uL cal std/43 mL samp* HS18121520-06DL	SAMP	01-08-2019 09:35 pm	25.00	2 mL	50 mL	V010813.D	Liquid	Y	>
28	BLANK	SAMP	01-08-2019 10:00 pm	1.00	50 mL	50 mL	V010814.D	Liquid	Y	r
29	BLANK	SAMP	01-08-2019 10:24 pm	1.00	50 mL	50 mL	V010815.D	Liquid	Y	r
30	HS18121520-05	SAMP	01-08-2019 10:49 pm	1.00	50 mL	50 mL	V010816.D	Liquid	Y	>
31	HS18121520-07	SAMP	01-08-2019 11:14 pm	1.00	50 mL	50 mL	V010817.D	Liquid	Y	>

MSVOA09 -Logbook

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	p
32	HS18121520-08	SAMP	01-08-2019 11:39 pm	1.00	50 mL	50 mL	V010818.D	Liquid	Y	>
33	HS18121523-03	SAMP	01-09-2019 12:03 am	1.00	50 mL	50 mL	V010819.D	Liquid	Y	>
34	HS18121523-04	SAMP	01-09-2019 12:28 am	1.00	50 mL	50 mL	V010820.D	Liquid	Y	>
35	HS18121523-05	SAMP	01-09-2019 12:53 am	1.00	50 mL	50 mL	V010821.D	Liquid	Y	>
36	HS18121523-02	SAMP	01-09-2019 01:17 am	1.00	50 mL	50 mL	V010822.D	Liquid	Y	>
37	HS18121523-06	SAMP	01-09-2019 01:42 am	5.00	10 mL	50 mL	V010823.D	Liquid	Y	>
38	HS18121523-01	SAMP	01-09-2019 02:07 am	1.00	50 mL	50 mL	V010824.D	Liquid	Y	>
39	HS18121523-01DL	SAMP	01-09-2019 02:31 am	5.00	10 mL	50 mL	V010825.D	Liquid	Y	>
40	VSTD050-END	CCV	01-09-2019 02:56 am	1.00	50 mL	50 mL	V010826.D	Liquid	Y	>
41	VSTD050-END	CCV	01-09-2019 03:20 am	1.00	50 mL	50 mL	V010827.D	Liquid	Y	r
42	*10 uL cal std/50 mL DI* BLANK	SAMP	01-09-2019 03:45 am	1.00	50 mL	50 mL	V010828.D	Liquid	Y	>

Chemical	Value
SURR SPK ID	30502-57-03
IS ID	30502-57-04
ICV STD ID	30603-49-01
LCS/MS ID	30603-49-01
CAL STD ID	30502-59-01/02
BFB ID	30502-57-03
pH Paper	634-40-13

FORM 2
WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS18121523

	CLIENT SAMPLE NO.	SMC1 (DCE) #	SMC2 #	SMC3 (TOL) #	OTHER #	TOT OUT
01	VLCSW-190108	102	100	105	105	0
02	VBLKW-190108	93	90	104	100	0
03	HS18121523-0	92	89	105	99	0
04	HS18121520-0	90	90	106	105	0
05	HS18121520-0	91	91	105	104	0
06	HS18121523-0	96	92	106	100	0
07	HS18121523-0	97	92	104	100	0
08	HS18121523-0	96	93	105	98	0
09	HS18121523-0	97	93	105	99	0
10	HS18121523-0	98	94	106	99	0
11	HS18121523-0	95	91	105	99	0
12	HS18121523-0	96	91	105	99	0
13						
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		QC LIMITS
SMC1 (DCE)	= 1,2-Dichloroethane-d4	(0-130)
SMC2	= Dibromofluoromethane	(0-130)
SMC3 (TOL)	= Toluene-d8	(0-130)
OTHER	= 4-Bromofluorobenzene	(0-130)

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-190108

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS18121523

Lab File ID: V010807 Lab Sample ID: VBLKW-190108

Date Analyzed: 01/08/19 Time Analyzed: 1906

GC Column: DB624 ID: 0.18 (mm) Heated Purge: (Y/N) N

Instrument ID: VOA9

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	VLCSW-190108	VLCSW-190108	V010804	1752
02	HS18121523-0	HS18121523-07	V010808	1931
03	HS18121520-0	HS18121520-09M	V010811	2046
04	HS18121520-0	HS18121520-09M	V010812	2110
05	HS18121523-0	HS18121523-03	V010819	0003
06	HS18121523-0	HS18121523-04	V010820	0028
07	HS18121523-0	HS18121523-05	V010821	0053
08	HS18121523-0	HS18121523-02	V010822	0117
09	HS18121523-0	HS18121523-06	V010823	0142
10	HS18121523-0	HS18121523-01	V010824	0207
11	HS18121523-0	HS18121523-01D	V010825	0231
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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.: HS18121523

Lab File ID: V010801 BFB Injection Date: 01/08/19

Instrument ID: VOA9 BFB Injection Time: 1638

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	18.8	
75	30.0 - 60.0% of mass 95	49.5	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0% of mass 95	7.1	
173	Less than 2.0% of mass 174	0.5	(0.8)1
174	Greater than 50.0% of mass 95	65.0	
175	5.0 - 9.0% of mass 174	4.5	(6.9)1
176	95.0 - 101.0% of mass 174	62.5	(96.1)1
177	5.0 - 9.0% of mass 176	4.5	(7.2)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	VSTD050	VSTD050	V010802	01/08/19	1703
02	VLCSW-190108	VLCSW-190108	V010804	01/08/19	1752
03	VBLKW-190108	VBLKW-190108	V010807	01/08/19	1906
04	HS18121523-0	HS18121523-07	V010808	01/08/19	1931
05	HS18121520-0	HS18121520-09M	V010811	01/08/19	2046
06	HS18121520-0	HS18121520-09M	V010812	01/08/19	2110
07	HS18121523-0	HS18121523-03	V010819	01/09/19	0003
08	HS18121523-0	HS18121523-04	V010820	01/09/19	0028
09	HS18121523-0	HS18121523-05	V010821	01/09/19	0053
10	HS18121523-0	HS18121523-02	V010822	01/09/19	0117
11	HS18121523-0	HS18121523-06	V010823	01/09/19	0142
12	HS18121523-0	HS18121523-01	V010824	01/09/19	0207
13	HS18121523-0	HS18121523-01D	V010825	01/09/19	0231
14	VSTD050-END	VSTD050-END	V010826	01/09/19	0256
15					
16					
17					
18					
19					
20					
21					
22					

FORM 7
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS18121523

Instrument ID: VOA9 Calibration Date: 01/08/19 Time: 1703

Lab File ID: V010802 Init. Calib. Date(s): 01/08/19 01/08/19

Heated Purge: (Y/N) N Init. Calib. Times: 1054 1459

GC Column: DB624 ID: 0.18 (mm)

COMPOUND	SAMPLE AMOUNT	CAL50 AMOUNT	CURVE	%D	MAX %d
cis-1,3-Dichloropropene	48.69	50.00	LINR	2.6	20.0
trans-1,3-Dichloropropene	48.63	50.00	LINR	2.7	20.0
1,3-Dichlorobenzene	48.03	50.00	AVRG	3.9	20.0
2,2-Dichloropropane	52.25	50.00	AVRG	4.5	20.0
1,1-Dichloropropene	45.94	50.00	AVRG	8.1	20.0
Dibromomethane	48.34	50.00	AVRG	3.3	20.0
1,2-Dibromoethane	51.37	50.00	AVRG	2.7	20.0
trans-1,2-Dichloroethene	46.18	50.00	AVRG	7.6	20.0
1,1,1,2-Tetrachloroethane	51.58	50.00	AVRG	3.1	20.0
1,1,1-Trichloroethane	47.98	50.00	AVRG	4.0	20.0
1,1,2,2-Tetrachloroethane	51.71	50.00	LINR	3.4	20.0
1,1,2-Trichloroethane	50.00	50.00	AVRG	0.0	20.0
1,1-Dichloroethane	47.20	50.00	AVRG	5.6	20.0
1,1-Dichloroethene	44.61	50.00	AVRG	10.7	20.0
Trichloroethene	48.90	50.00	AVRG	2.2	20.0
1,2,3-Trichlorobenzene	49.64	50.00	AVRG	0.7	20.0
Trichlorofluoromethane	42.45	50.00	AVRG	15.1	20.0
1,2,4-Trichlorobenzene	50.64	50.00	AVRG	1.2	20.0
1,2,4-Trimethylbenzene	49.77	50.00	AVRG	0.4	20.0
Tetrachloroethene	44.83	50.00	AVRG	10.3	20.0
1,2-Dichlorobenzene	47.87	50.00	AVRG	4.2	20.0
1,2-Dichloroethane	48.32	50.00	AVRG	3.3	20.0
1,2-Dichloropropane	49.39	50.00	AVRG	1.2	20.0
1,3,5-Trimethylbenzene	49.28	50.00	AVRG	1.4	20.0
1,3-Dichloropropane	49.85	50.00	AVRG	0.3	20.0
1,4-Dichlorobenzene	46.83	50.00	AVRG	6.3	20.0
Toluene	48.72	50.00	AVRG	2.5	20.0
2-Butanone	104.14	100.00	AVRG	4.1	20.0
2-Chlorotoluene	48.82	50.00	AVRG	2.3	20.0
2-Hexanone	108.99	100.00	AVRG	8.9	20.0
4-Chlorotoluene	48.80	50.00	AVRG	2.4	20.0
tert-Butylbenzene	46.95	50.00	AVRG	6.1	20.0
4-Methyl-2-Pentanone	108.43	100.00	AVRG	8.4	20.0
Acetone	104.02	100.00	LINR	4.0	20.0
Benzene	47.54	50.00	AVRG	4.9	20.0
Bromobenzene	50.65	50.00	AVRG	1.3	20.0
Bromochloromethane	53.34	50.00	AVRG	6.6	20.0

FORM 7
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS18121523

Instrument ID: VOA9 Calibration Date: 01/08/19 Time: 1703

Lab File ID: V010802 Init. Calib. Date(s): 01/08/19 01/08/19

Heated Purge: (Y/N) N Init. Calib. Times: 1054 1459

GC Column: DB624 ID: 0.18 (mm)

COMPOUND	SAMPLE AMOUNT	CAL50 AMOUNT	CURVE	%D	MAX %d
Bromodichloromethane	51.06	50.00	AVRG	2.1	20.0
Bromoform	47.95	50.00	LINR	4.1	20.0
Bromomethane	48.11	50.00	LINR	3.7	20.0
Carbon Disulfide	95.30	100.00	AVRG	4.7	20.0
Carbon Tetrachloride	48.54	50.00	AVRG	2.9	20.0
Chlorobenzene	47.48	50.00	AVRG	5.0	20.0
Chloroethane	45.14	50.00	AVRG	9.7	20.0
Chloroform	47.16	50.00	AVRG	5.6	20.0
Chloromethane	46.33	50.00	LINR	7.3	20.0
cis-1,2-Dichloroethene	47.04	50.00	AVRG	5.9	20.0
Dibromochloromethane	48.64	50.00	LINR	2.7	20.0
Dichlorodifluoromethane	42.47	50.00	AVRG	15.0	20.0
Ethylbenzene	48.72	50.00	AVRG	2.5	20.0
Hexachlorobutadiene	48.38	50.00	2ORDR	3.2	20.0
Isopropylbenzene	48.27	50.00	AVRG	3.4	20.0
m,p-Xylenes	99.16	100.00	AVRG	0.8	20.0
Methylene Chloride	48.03	50.00	LINR	3.9	20.0
n-Butylbenzene	46.43	50.00	AVRG	7.1	20.0
n-Propylbenzene	48.35	50.00	AVRG	3.3	20.0
Naphthalene	50.57	50.00	2ORDR	1.1	20.0
o-Xylene	49.27	50.00	AVRG	1.4	20.0
sec-Butylbenzene	47.15	50.00	AVRG	5.7	20.0
Styrene	51.48	50.00	AVRG	2.9	20.0
Vinyl Chloride	44.02	50.00	AVRG	11.9	20.0
1,2,3-Trichloropropane	53.80	50.00	AVRG	7.6	20.0
p-Isopropyltoluene	48.30	50.00	AVRG	3.4	20.0
1,2-Dibromo-3-Chloropropane	50.02	50.00	LINR	0.0	20.0
1,2-Dichloroethane-d4	50.53	50.00	LINR	1.0	20.0
Dibromofluoromethane	50.12	50.00	2ORDR	0.2	20.0
Toluene-d8	52.39	50.00	LINR	4.7	20.0
4-Bromofluorobenzene	52.30	50.00	LINR	4.6	20.0

FORM 7
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS18121523

Instrument ID: VOA9 Calibration Date: 01/09/19 Time: 0256

Lab File ID: V010826 Init. Calib. Date(s): 01/08/19 01/08/19

Heated Purge: (Y/N) N Init. Calib. Times: 1054 1459

GC Column: DB624 ID: 0.18 (mm)

COMPOUND	SAMPLE AMOUNT	CAL50 AMOUNT	CURVE	%D	MAX %d
cis-1,3-Dichloropropene	46.31	50.00	LINR	7.3	50.0
trans-1,3-Dichloropropene	45.57	50.00	LINR	8.8	50.0
1,3-Dichlorobenzene	47.72	50.00	AVRG	4.5	50.0
2,2-Dichloropropane	40.51	50.00	AVRG	18.9	50.0
1,1-Dichloropropene	45.09	50.00	AVRG	9.8	50.0
Dibromomethane	50.00	50.00	AVRG	0.0	50.0
1,2-Dibromoethane	50.65	50.00	AVRG	1.3	50.0
trans-1,2-Dichloroethene	49.29	50.00	AVRG	1.4	50.0
1,1,1,2-Tetrachloroethane	51.15	50.00	AVRG	2.3	50.0
1,1,1-Trichloroethane	50.05	50.00	AVRG	0.0	50.0
1,1,2,2-Tetrachloroethane	51.32	50.00	LINR	2.6	50.0
1,1,2-Trichloroethane	49.88	50.00	AVRG	0.2	50.0
1,1-Dichloroethane	51.28	50.00	AVRG	2.5	50.0
1,1-Dichloroethene	45.16	50.00	AVRG	9.6	50.0
Trichloroethene	48.62	50.00	AVRG	2.7	50.0
1,2,3-Trichlorobenzene	48.09	50.00	AVRG	3.8	50.0
Trichlorofluoromethane	43.28	50.00	AVRG	13.4	50.0
1,2,4-Trichlorobenzene	48.26	50.00	AVRG	3.4	50.0
1,2,4-Trimethylbenzene	49.89	50.00	AVRG	0.2	50.0
Tetrachloroethene	41.21	50.00	AVRG	17.5	50.0
1,2-Dichlorobenzene	47.79	50.00	AVRG	4.4	50.0
1,2-Dichloroethane	49.27	50.00	AVRG	1.4	50.0
1,2-Dichloropropane	50.54	50.00	AVRG	1.0	50.0
1,3,5-Trimethylbenzene	48.54	50.00	AVRG	2.9	50.0
1,3-Dichloropropane	50.21	50.00	AVRG	0.4	50.0
1,4-Dichlorobenzene	46.53	50.00	AVRG	6.9	50.0
Toluene	49.06	50.00	AVRG	1.8	50.0
2-Butanone	105.64	100.00	AVRG	5.6	50.0
2-Chlorotoluene	49.11	50.00	AVRG	1.7	50.0
2-Hexanone	104.90	100.00	AVRG	4.9	50.0
4-Chlorotoluene	48.91	50.00	AVRG	2.1	50.0
tert-Butylbenzene	45.77	50.00	AVRG	8.4	50.0
4-Methyl-2-Pentanone	104.02	100.00	AVRG	4.0	50.0
Acetone	99.07	100.00	LINR	0.9	50.0
Benzene	48.85	50.00	AVRG	2.3	50.0
Bromobenzene	50.41	50.00	AVRG	0.8	50.0
Bromochloromethane	56.86	50.00	AVRG	13.7	50.0

FORM 7
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS18121523

Instrument ID: VOA9 Calibration Date: 01/09/19 Time: 0256

Lab File ID: V010826 Init. Calib. Date(s): 01/08/19 01/08/19

Heated Purge: (Y/N) N Init. Calib. Times: 1054 1459

GC Column: DB624 ID: 0.18 (mm)

COMPOUND	SAMPLE AMOUNT	CAL50 AMOUNT	CURVE	%D	MAX %d
Bromodichloromethane	51.25	50.00	AVRG	2.5	50.0
Bromoform	45.70	50.00	LINR	8.6	50.0
Bromomethane	40.83	50.00	LINR	18.3	50.0
Carbon Disulfide	100.28	100.00	AVRG	0.2	50.0
Carbon Tetrachloride	46.61	50.00	AVRG	6.7	50.0
Chlorobenzene	47.80	50.00	AVRG	4.4	50.0
Chloroethane	47.08	50.00	AVRG	5.8	50.0
Chloroform	51.23	50.00	AVRG	2.4	50.0
Chloromethane	42.76	50.00	LINR	14.4	50.0
cis-1,2-Dichloroethene	51.36	50.00	AVRG	2.7	50.0
Dibromochloromethane	47.59	50.00	LINR	4.8	50.0
Dichlorodifluoromethane	43.21	50.00	AVRG	13.5	50.0
Ethylbenzene	47.53	50.00	AVRG	4.9	50.0
Hexachlorobutadiene	38.75	50.00	2ORDR	22.5	50.0
Isopropylbenzene	46.63	50.00	AVRG	6.7	50.0
m,p-Xylenes	96.85	100.00	AVRG	3.1	50.0
Methylene Chloride	52.67	50.00	LINR	5.3	50.0
n-Butylbenzene	42.29	50.00	AVRG	15.4	50.0
n-Propylbenzene	46.50	50.00	AVRG	7.0	50.0
Naphthalene	48.61	50.00	2ORDR	2.7	50.0
o-Xylene	49.13	50.00	AVRG	1.7	50.0
sec-Butylbenzene	44.38	50.00	AVRG	11.2	50.0
Styrene	51.49	50.00	AVRG	2.9	50.0
Vinyl Chloride	43.12	50.00	AVRG	13.7	50.0
1,2,3-Trichloropropane	50.98	50.00	AVRG	1.9	50.0
p-Isopropyltoluene	45.54	50.00	AVRG	8.9	50.0
1,2-Dibromo-3-Chloropropane	45.60	50.00	LINR	8.8	50.0
1,2-Dichloroethane-d4	55.33	50.00	LINR	10.6	50.0
Dibromofluoromethane	53.49	50.00	2ORDR	6.9	50.0
Toluene-d8	52.45	50.00	LINR	4.9	50.0
4-Bromofluorobenzene	51.87	50.00	LINR	3.7	50.0

FORM 8
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS18121523

Lab File ID (Standard): V010802 Date Analyzed: 01/08/19

Instrument ID: VOA9 Time Analyzed: 1703

GC Column: DB624 ID: 0.18 (mm) Heated Purge: (Y/N) N

		IS1(CBZ) AREA #	RT #	IS2(DFB) AREA #	RT #	IS3(DCB) AREA #	RT #
	12 HOUR STD	732595	8.25	798339	5.63	343988	10.24
	UPPER LIMIT	1465190	8.75	1596678	6.13	687976	10.74
	LOWER LIMIT	366298	7.75	399170	5.13	171994	9.74
	CLIENT SAMPLE NO.						
01	VLCSW-190108	722232	8.25	790261	5.63	342248	10.24
02	VBLKW-190108	542258	8.25	594768	5.63	251825	10.24
03	HS18121523-0	558005	8.25	619892	5.63	255453	10.24
04	HS18121520-0	537964	8.25	585755	5.63	262030	10.24
05	HS18121520-0	537219	8.25	583577	5.63	256827	10.24
06	HS18121523-0	508521	8.25	564651	5.63	229707	10.24
07	HS18121523-0	482430	8.25	531984	5.62	216918	10.24
08	HS18121523-0	473728	8.25	522907	5.63	214757	10.24
09	HS18121523-0	509189	8.25	558513	5.63	231619	10.24
10	HS18121523-0	502802	8.25	555830	5.63	226595	10.24
11	HS18121523-0	528251	8.25	584937	5.63	240208	10.24
12	HS18121523-0	499914	8.25	547318	5.63	226005	10.24
13							
14							
15							
16							
17							
18							
19							
20							

IS1 (CBZ) = Chlorobenzene-d5
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (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 8
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS18121523

Lab File ID (Standard): V010802 Date Analyzed: 01/08/19

Instrument ID: VOA9 Time Analyzed: 1703

GC Column: DB624 ID: 0.18 (mm) Heated Purge: (Y/N) N

		IS4 AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	430975	4.89				
	UPPER LIMIT	861950	5.39				
	LOWER LIMIT	215488	4.39				
	CLIENT SAMPLE NO.						
01	VLCSW-190108	424029	4.90				
02	VBLKW-190108	334728	4.89				
03	HS18121523-0	351167	4.90				
04	HS18121520-0	338754	4.90				
05	HS18121520-0	331443	4.90				
06	HS18121523-0	315185	4.89				
07	HS18121523-0	293801	4.89				
08	HS18121523-0	294678	4.90				
09	HS18121523-0	310238	4.89				
10	HS18121523-0	306506	4.89				
11	HS18121523-0	330346	4.90				
12	HS18121523-0	308548	4.89				
13							
14							
15							
16							
17							
18							
19							
20							

IS4 = Pentafluorobenzene

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\voa9.i\U190108.b\V010801.D

Date : 08-JAN-2019 16:38

Client ID: BFB

Instrument: VOA9.i

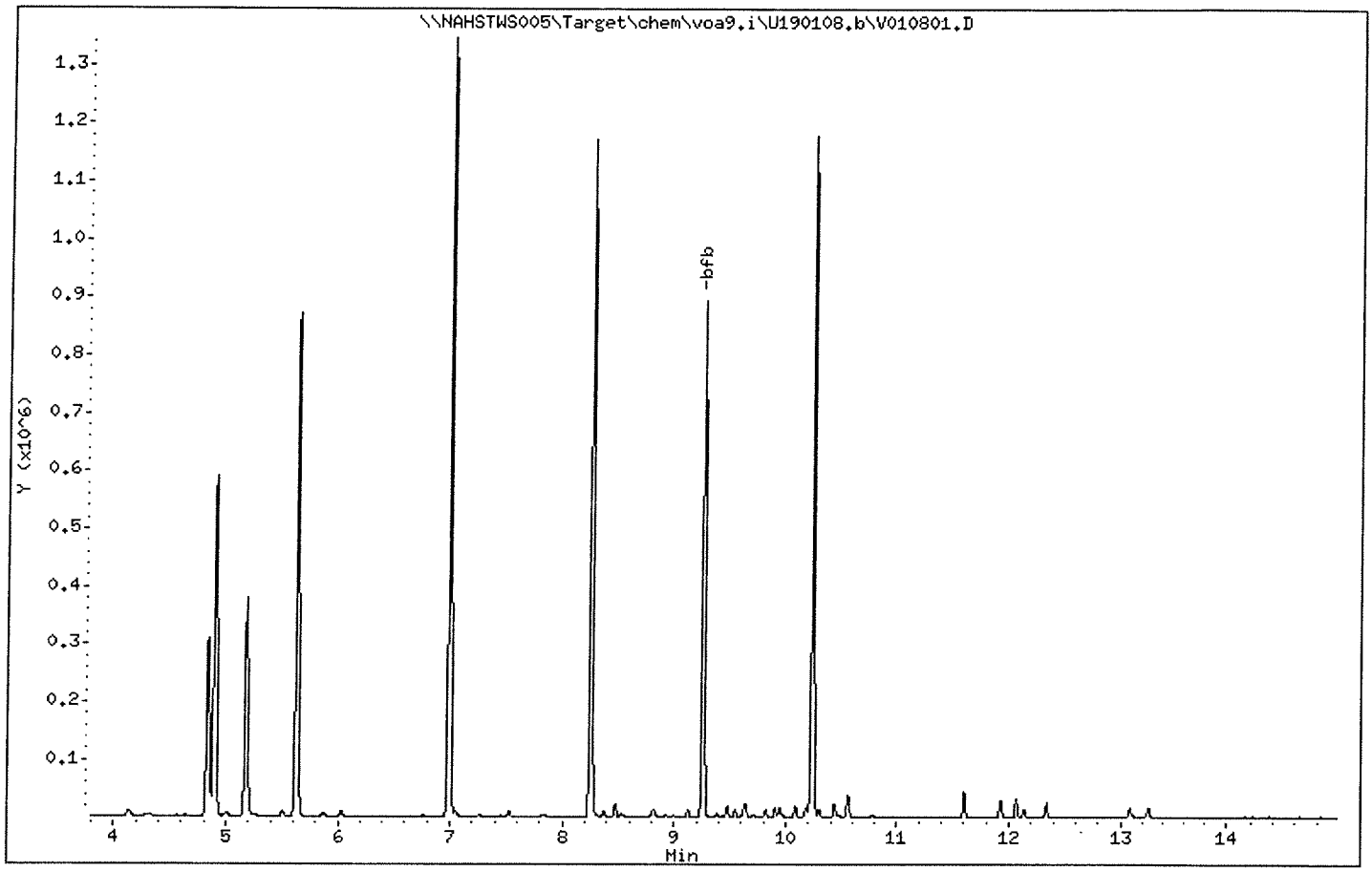
Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25



Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\V010801.D

Date : 08-JAN-2019 16:38

Client ID: BFB

Instrument: VOA9.i

Sample Info: BFB;BFB;3;;BFB

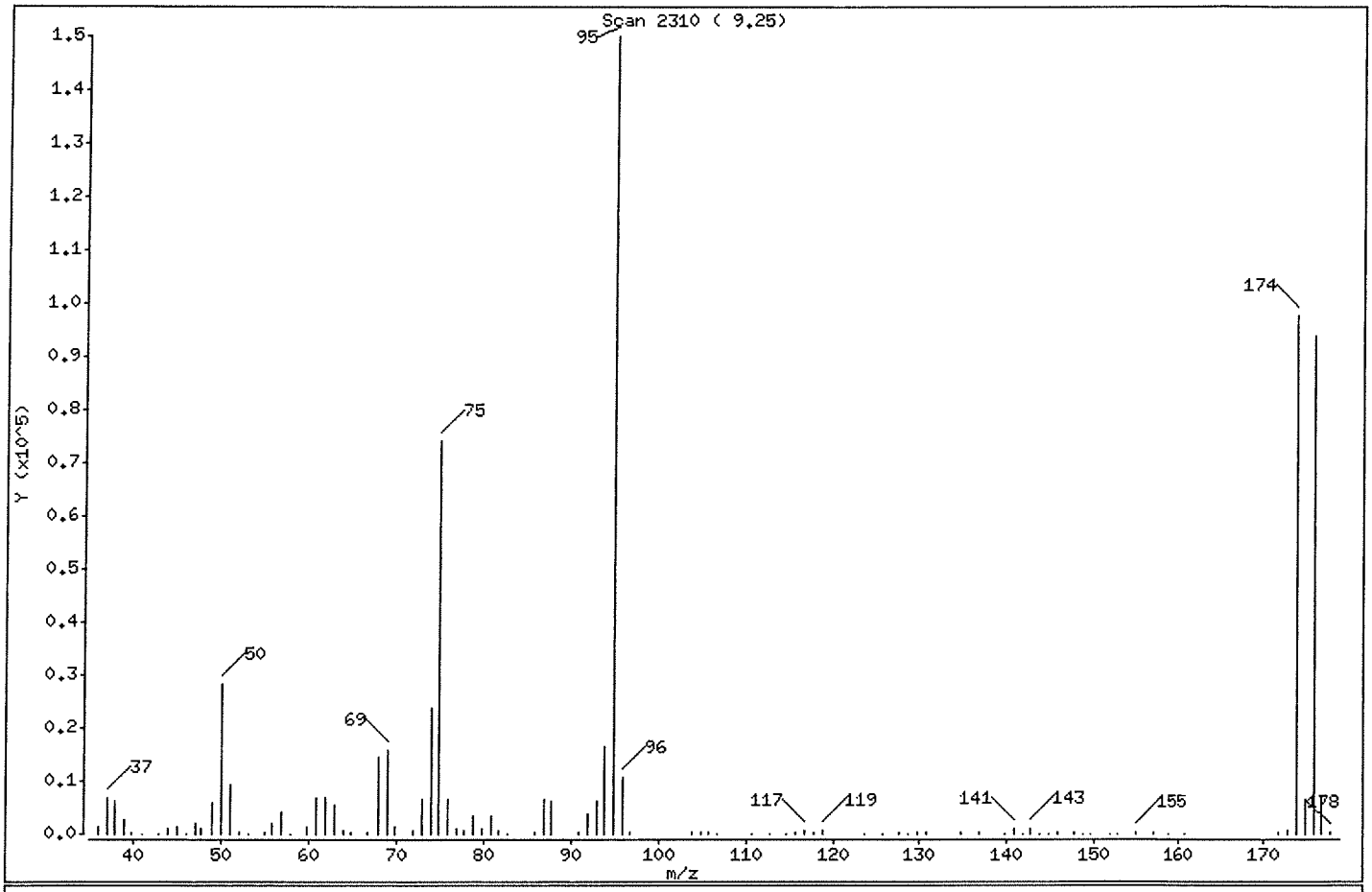
Volume Injected (uL): 2.0

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	18.79
75	30.00 - 60.00% of mass 95	49.53
96	5.00 - 9.00% of mass 95	7.14
173	Less than 2.00% of mass 174	0.55 (0.84)
174	Greater than 50.00% of mass 95	65.04
175	5.00 - 9.00% of mass 174	4.47 (6.88)
176	95.00 - 101.00% of mass 174	62.53 (96.14)
177	5.00 - 9.00% of mass 176	4.49 (7.19)

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\V010801.D

Date : 08-JAN-2019 16:38

Client ID: BFB

Instrument: VOA9.i

Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25

Data File: V010801.D
Spectrum: Scan 2310 (9.25)
Location of Maximum: 94.90
Number of points: 95

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1316	63.00	5360	92.90	6112	139.60	58
37.00	6975	63.90	564	93.90	16400	140.70	1145
38.00	6195	64.90	390	94.90	150016	141.80	129
39.00	2689	66.80	405	95.90	10707	142.70	1137
39.90	353	67.90	14588	96.80	262	143.70	76
41.10	53	68.90	15713	103.80	485	144.80	151
43.00	112	69.90	1250	104.80	227	145.70	177
43.90	1068	71.90	770	105.80	472	147.60	223
45.00	1274	72.90	6559	106.70	111	148.60	57
46.00	137	73.90	23864	110.70	94	149.60	97
47.00	1978	74.90	74304	112.70	99	151.80	66
47.80	890	75.90	6621	114.70	144	152.60	83
49.00	5949	76.90	941	115.70	434	154.70	253
50.00	28184	77.80	587	116.80	813	156.70	178
51.00	9358	78.80	3382	117.70	442	158.70	100
52.00	383	79.80	1071	118.80	635	160.70	161
53.10	93	80.80	3489	123.70	73	171.60	405
55.00	440	81.80	822	125.70	75	172.70	820
55.90	2138	82.80	50	127.70	421	173.70	97568
57.00	3979	85.90	176	128.70	160	174.70	6711
57.90	139	86.90	6721	129.70	436	175.70	93800
59.90	1318	87.80	6256	130.70	256	176.70	6741
60.90	6983	90.80	385	134.70	196	177.70	187
62.00	6968	91.90	3893	136.70	212		

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\V010802.D Page 1
Report Date: 01-Feb-2019 16:42

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U190108.b\V010802.D
Lab Smp Id: VSTD050 Client Smp ID: VSTD050
Inj Date : 08-JAN-2019 17:03
Operator : PC Inst ID: VOA9.i
Smp Info : VSTD050;VSTD050;2;;
Misc Info : 180315V9;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa9.i\U190108.b\8260C.m
Meth Date : 01-Feb-2019 16:42 VOA9.i Quant Type: ISTD
Cal Date : 08-JAN-2019 14:59 Cal File: U010811.D
Als bottle: 17 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAPb.sub
Target Version: 4.14
Processing Host: NAHSTW7087

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

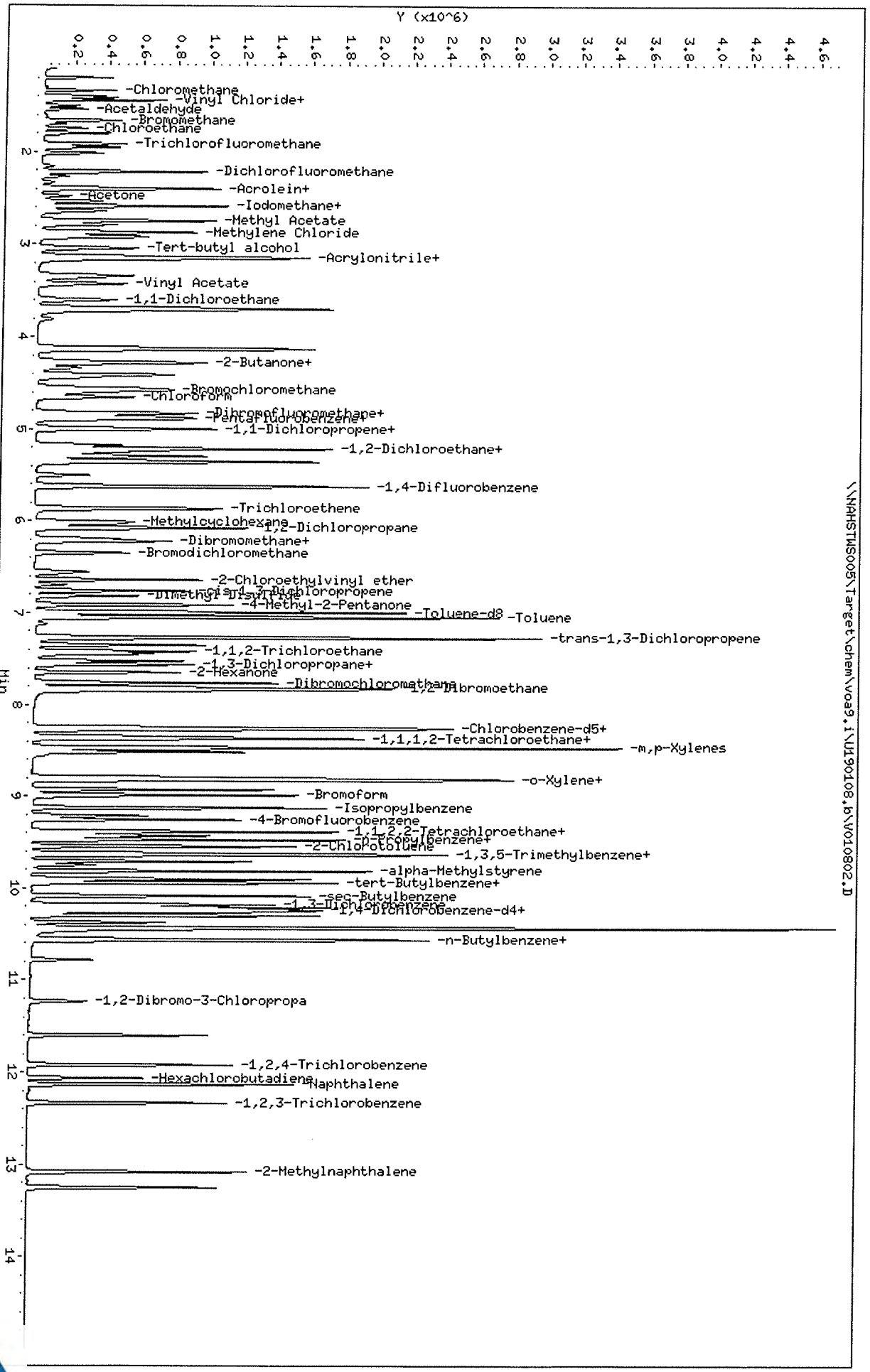
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.894	4.894	(1.000)	430975	50.0000	
* 36 1,4-Difluorobenzene	114	5.625	5.625	(1.000)	798339	50.0000	
* 47 Chlorobenzene-d5	117	8.249	8.249	(1.000)	732595	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	343988	50.0000	
$ 30 Dibromofluoromethane	113	4.827	4.827	(0.986)	243779	50.0000	50.12
$ 35 1,2-Dichloroethane-d4	65	5.175	5.175	(1.057)	320988	50.0000	50.53
$ 48 Toluene-d8	98	6.990	6.990	(0.847)	995486	50.0000	52.39
$ 69 4-Bromofluorobenzene	95	9.258	9.258	(1.122)	375359	50.0000	52.30
60 1,1,1,2-Tetrachloroethane	131	8.350	8.350	(1.012)	228303	50.0000	51.58
31 1,1,1-Trichloroethane	97	4.827	4.827	(0.986)	338670	50.0000	47.98
68 1,1,2,2-Tetrachloroethane	83	9.392	9.392	(0.918)	401478	50.0000	51.71
53 1,1,2-Trichloroethane	83	7.421	7.421	(0.900)	224208	50.0000	50.00
22 1,1-Dichloroethane	63	3.601	3.601	(0.736)	462405	50.0000	47.20
11 1,1-Dichloroethene	96	2.394	2.394	(0.489)	185464	50.0000	44.61
32 1,1-Dichloropropene	75	5.003	5.003	(0.889)	339170	50.0000	45.94
93 1,2,3-Trichlorobenzene	180	12.335	12.335	(1.205)	304296	50.0000	49.64
71 1,2,3-Trichloropropane	75	9.426	9.426	(0.921)	447401	50.0000	53.80
90 1,2,4-Trichlorobenzene	180	11.923	11.923	(1.165)	313838	50.0000	50.64
79 1,2,4-Trimethylbenzene	105	9.944	9.944	(0.971)	899158	50.0000	49.77
89 1,2-Dibromo-3-Chloropropane	155	11.233	11.233	(1.097)	61297	50.0000	50.02
57 1,2-Dibromoethane	107	7.852	7.852	(0.952)	262351	50.0000	51.37
88 1,2-Dichlorobenzene	146	10.570	10.570	(1.033)	499992	50.0000	47.87

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\V010802.D Page 2
Report Date: 01-Feb-2019 16:42

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	5.250	5.250	(0.933)	373283	50.0000	48.32
42 1,2-Dichloropropane	63	6.079	6.079	(1.081)	283891	50.0000	49.39
75 1,3,5-Trimethylbenzene	105	9.625	9.625	(0.940)	869648	50.0000	49.28
83 1,3-Dichlorobenzene	146	10.180	10.180	(0.995)	498408	50.0000	48.03
54 1,3-Dichloropropane	76	7.563	7.563	(0.917)	482210	50.0000	49.85
84 1,4-Dichlorobenzene	146	10.255	10.255	(1.002)	515118	50.0000	46.83
26 2,2-Dichloropropane	77	4.272	4.272	(0.873)	306596	50.0000	52.25
24 2-Butanone	43	4.336	4.336	(0.886)	310594	100.000	104.14
76 2-Chlorotoluene	91	9.546	9.546	(0.933)	798445	50.0000	48.82
52 2-Hexanone	43	7.649	7.649	(0.927)	460523	100.000	108.99
77 4-Chlorotoluene	91	9.640	9.640	(0.942)	928356	50.0000	48.80
82 p-Isopropyltoluene	119	10.210	10.210	(0.997)	885082	50.0000	48.30
45 4-Methyl-2-Pentanone	43	6.915	6.915	(0.838)	660671	100.000	108.43
10 Acetone	43	2.480	2.480	(0.507)	193891	100.000	104.02
37 Benzene	78	5.216	5.216	(0.927)	1044432	50.0000	47.54
74 Bromobenzene	156	9.381	9.381	(0.917)	271689	50.0000	50.65
29 Bromochloromethane	128	4.553	4.553	(0.930)	126384	50.0000	53.34
39 Bromodichloromethane	83	6.349	6.349	(1.129)	316021	50.0000	51.06
66 Bromoform	173	8.984	8.984	(1.089)	153038	50.0000	47.95(T)
6 Bromomethane	94	1.663	1.663	(0.340)	154771	50.0000	48.11
19 Carbon Disulfide	76	2.585	2.585	(0.528)	1405487	100.000	95.30
34 Carbon Tetrachloride	117	4.995	4.995	(0.888)	259482	50.0000	48.54
59 Chlorobenzene	112	8.275	8.275	(1.003)	693525	50.0000	47.48
7 Chloroethane	64	1.749	1.749	(0.357)	175369	50.0000	45.14(M)
28 Chloroform	83	4.654	4.654	(0.951)	438906	50.0000	47.16
3 Chloromethane	50	1.337	1.337	(0.273)	265332	50.0000	46.33
27 cis-1,2-Dichloroethene	96	4.283	4.283	(0.875)	277325	50.0000	47.04
46 cis-1,3-Dichloropropene	75	6.757	6.757	(1.201)	452059	50.0000	48.69
55 Dibromochloromethane	129	7.758	7.758	(0.940)	238621	50.0000	48.64
44 Dibromomethane	93	6.187	6.187	(1.100)	162126	50.0000	48.34
2 Dichlorodifluoromethane	85	1.202	1.202	(0.246)	241910	50.0000	42.47
61 Ethylbenzene	106	8.369	8.369	(1.015)	358954	50.0000	48.72
91 Hexachlorobutadiene	225	12.065	12.065	(1.179)	107901	50.0000	48.38
67 Isopropylbenzene	105	9.126	9.126	(1.106)	1015816	50.0000	48.27
62 m,p-Xylenes	106	8.474	8.474	(1.027)	891902	100.000	99.16
17 Methylene Chloride	84	2.870	2.870	(0.586)	266436	50.0000	48.03
87 n-Butylbenzene	91	10.555	10.555	(1.031)	826652	50.0000	46.43
73 n-Propylbenzene	91	9.475	9.475	(0.926)	1285702	50.0000	48.35
92 Naphthalene	128	12.133	12.133	(1.185)	1060110	50.0000	50.57
63 o-Xylene	106	8.811	8.811	(1.068)	452111	50.0000	49.27
81 sec-Butylbenzene	105	10.086	10.086	(0.985)	1025620	50.0000	47.15
64 Styrene	104	8.823	8.823	(1.070)	786495	50.0000	51.48
78 tert-Butylbenzene	119	9.902	9.902	(0.967)	713393	50.0000	46.95
56 Tetrachloroethene	164	7.526	7.526	(0.912)	172522	50.0000	44.83
50 Toluene	91	7.046	7.046	(0.854)	1097470	50.0000	48.72
20 trans-1,2-Dichloroethene	96	3.140	3.140	(0.642)	242823	50.0000	46.18
51 trans-1,3-Dichloropropene	75	7.259	7.259	(1.291)	390099	50.0000	48.63
38 Trichloroethene	130	5.861	5.861	(1.042)	248588	50.0000	48.90
8 Trichlorofluoromethane	101	1.951	1.951	(0.399)	306131	50.0000	42.45
5 Vinyl Chloride	62	1.415	1.415	(0.289)	281576	50.0000	44.02

QC Flag Legend

T - Target compound detected outside RT window.
M - Compound response manually integrated.



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Date : 08-JAN-2019 17:03
Client ID: VSTD050
Sample Info: VSTD050;VSTD050;2;;
Purge Volume: 5.0
Column phase: DB624

\\NAHSTWS005\Target\chem\voa9,i\U190108,b\V010802.D

Instrument: VOA9,i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\Before\V010802.D
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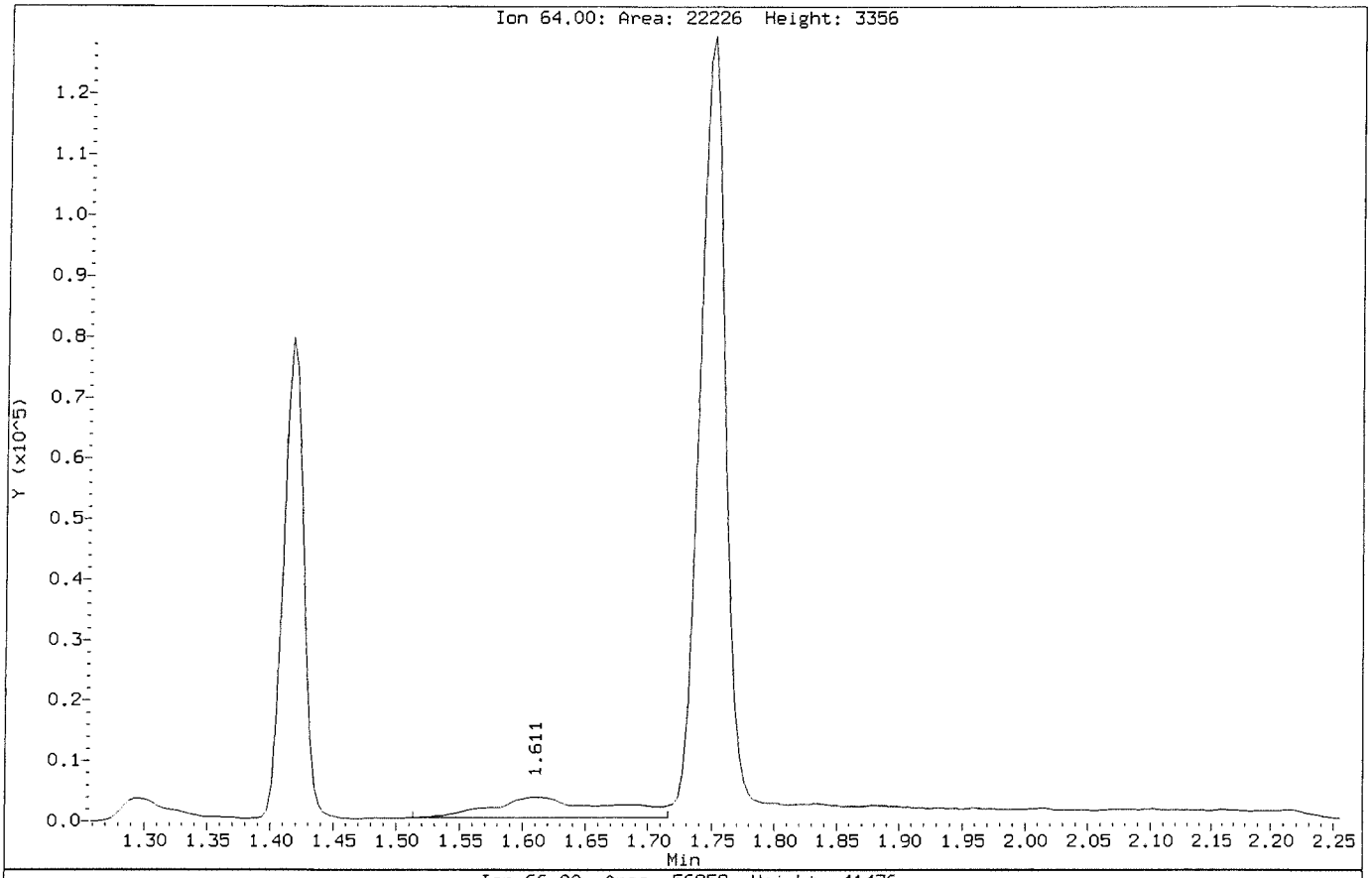
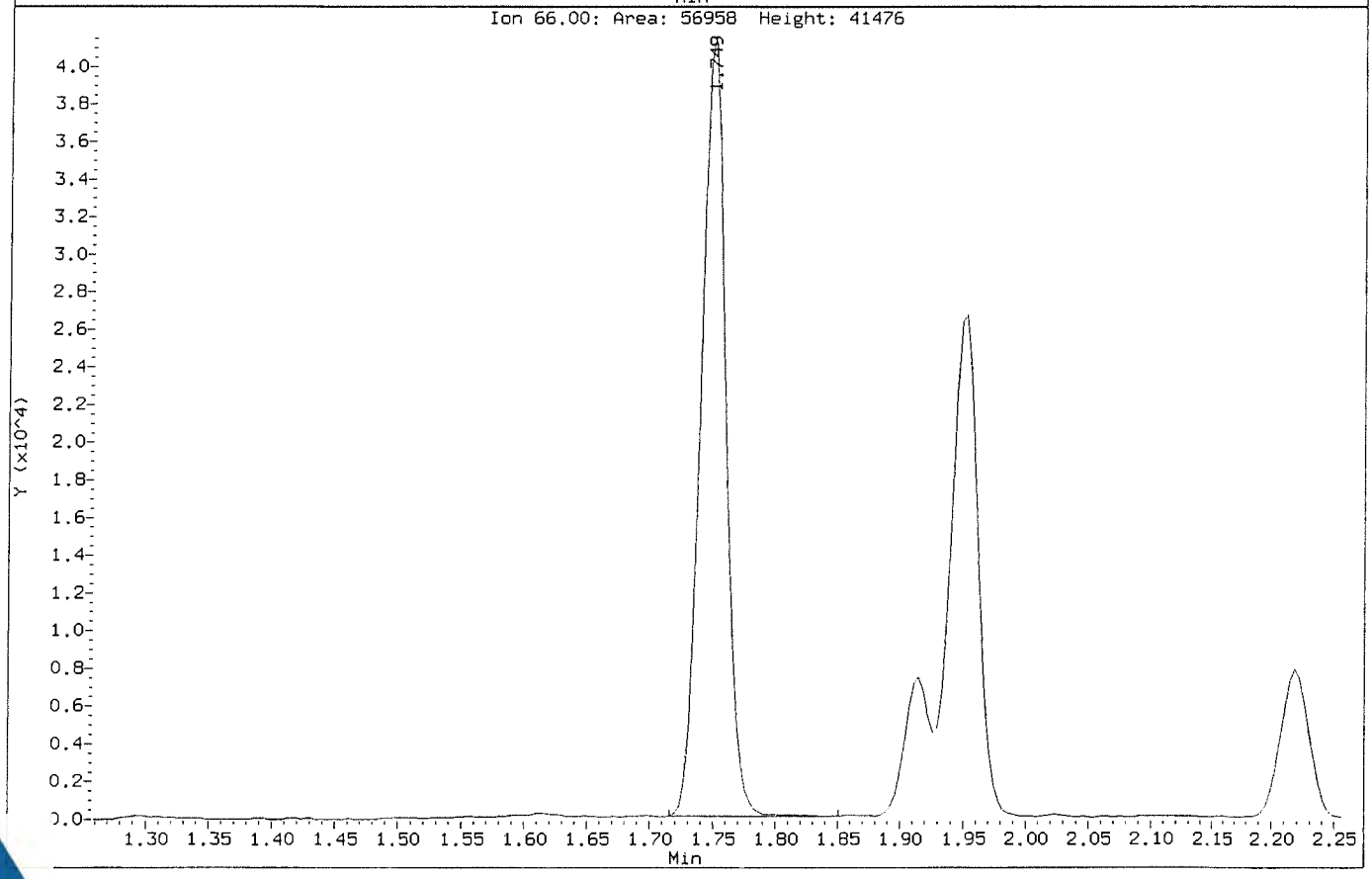
Instrument: VOA9.i
Client Sample ID: VSTD050

Compound: Chloroethane
CAS Number: 75-00-3





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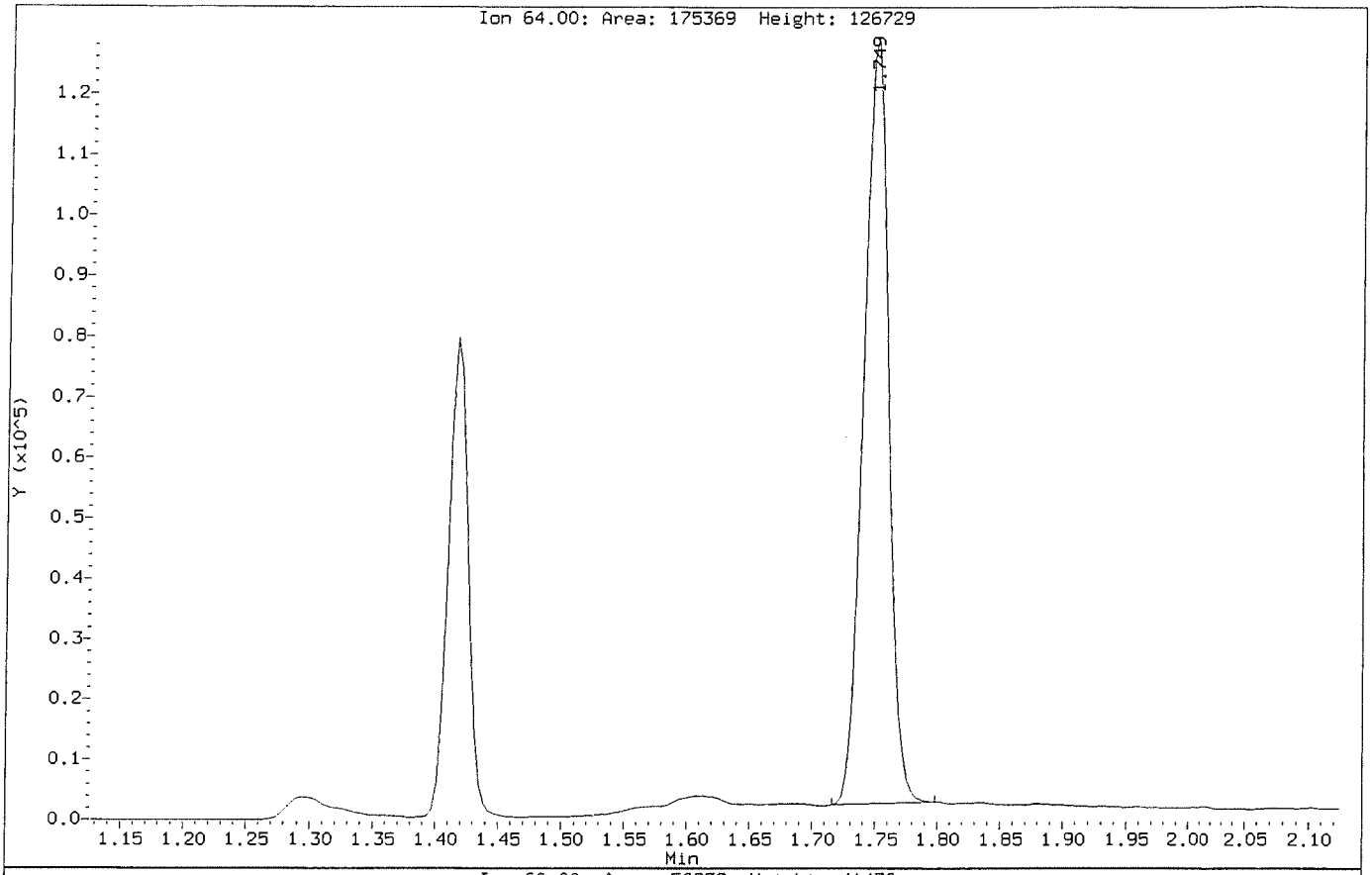
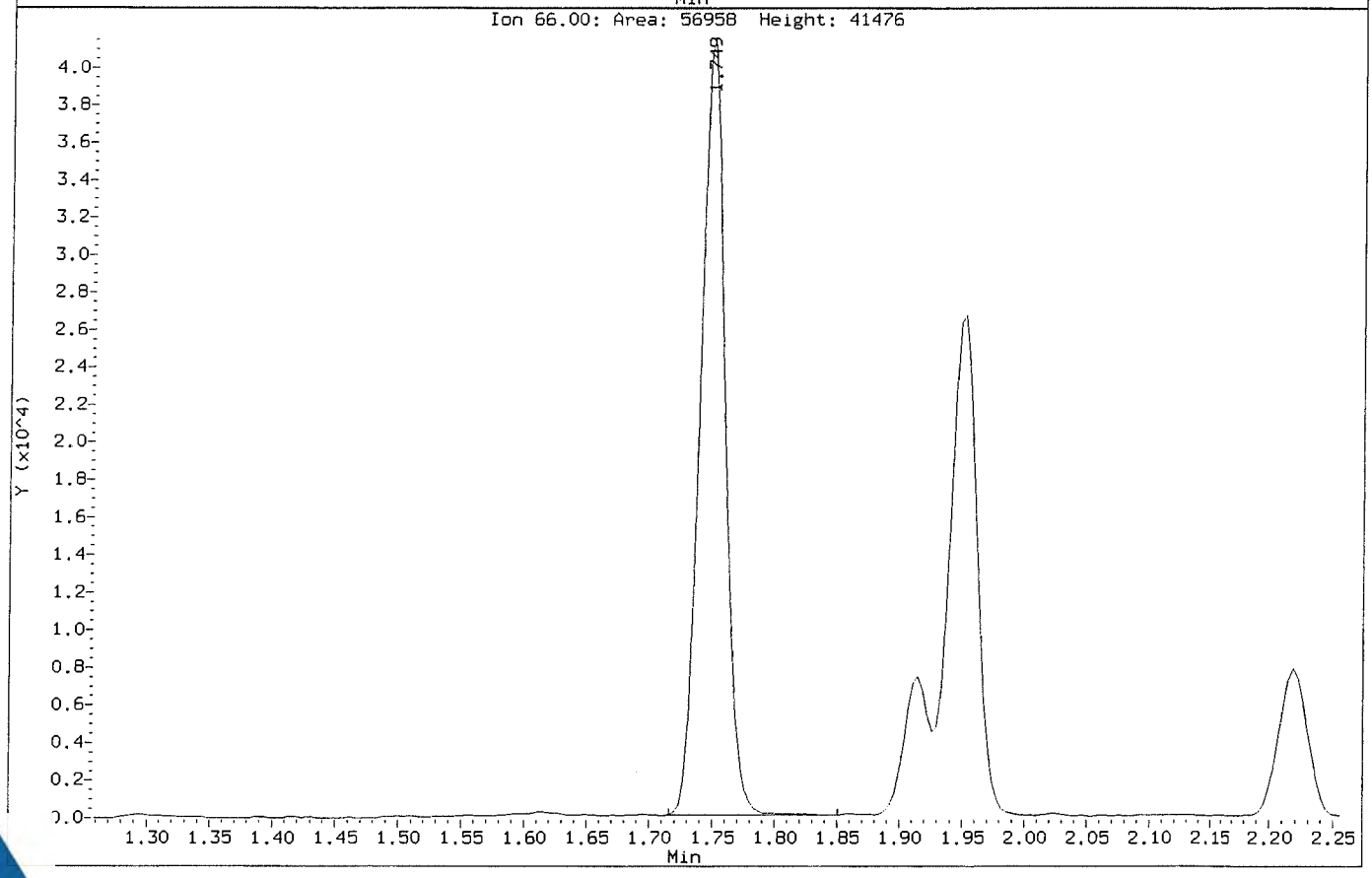
Instrument: VOA9.i
Client Sample ID: VSTD050

Compound: Chloroethane
CAS Number: 75-00-3





ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U190108.b\V010804.D
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Inj Date : 08-JAN-2019 17:52
Operator : PC Inst ID: VOA9.i
Smp Info : VLCSW-190108;VLCSW-190108;3;;LCS
Misc Info : 180315V9;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa9.i\U190108.b\8260C.m
Meth Date : 01-Feb-2019 16:42 VOA9.i Quant Type: ISTD
Cal Date : 08-JAN-2019 14:59 Cal File: U010811.D
Als bottle: 19 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAPb.sub
Target Version: 4.14
Processing Host: NAHSTW7087

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

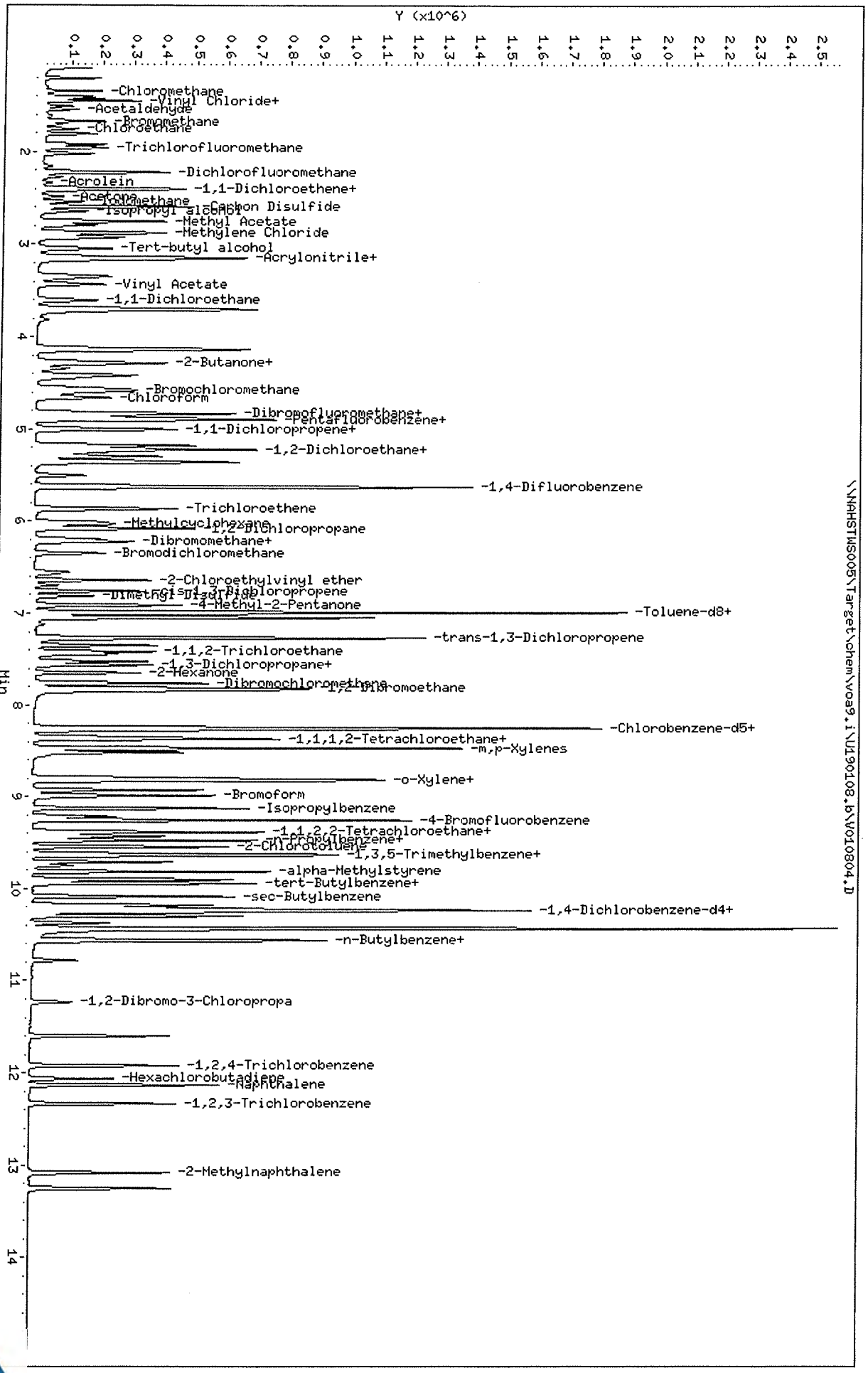
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
*	1 Pentafluorobenzene	168	4.898	4.894	(1.000)	424029	50.0000	
*	36 1,4-Difluorobenzene	114	5.625	5.625	(1.000)	790261	50.0000	
*	47 Chlorobenzene-d5	117	8.249	8.249	(1.000)	722232	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	342248	50.0000	
$	30 Dibromofluoromethane	113	4.830	4.827	(0.986)	239189	49.9798	49.97
$	35 1,2-Dichloroethane-d4	65	5.175	5.175	(1.057)	320060	51.2473	51.24
$	48 Toluene-d8	98	6.989	6.990	(0.847)	985165	52.6084	52.60
$	69 4-Bromofluorobenzene	95	9.257	9.258	(1.122)	373105	52.7498	52.74
	60 1,1,1,2-Tetrachloroethane	131	8.350	8.350	(1.012)	90975	20.8489	20.84
	31 1,1,1-Trichloroethane	97	4.830	4.827	(0.986)	140823	20.2782	20.27
	68 1,1,2,2-Tetrachloroethane	83	9.392	9.392	(0.918)	163411	20.9417	20.94
	53 1,1,2-Trichloroethane	83	7.420	7.421	(0.900)	89423	20.2312	20.23
	22 1,1-Dichloroethane	63	3.604	3.601	(0.736)	192296	19.9506	19.95
	11 1,1-Dichloroethene	96	2.401	2.394	(0.490)	81187	19.8488	19.84
	32 1,1-Dichloropropene	75	5.006	5.003	(0.890)	144296	19.7480	19.74
	93 1,2,3-Trichlorobenzene	180	12.335	12.335	(1.205)	120643	19.7818	19.78
	71 1,2,3-Trichloropropane	75	9.426	9.426	(0.921)	172013	20.7932	20.79
	90 1,2,4-Trichlorobenzene	180	11.923	11.923	(1.165)	124452	20.1835	20.18
	79 1,2,4-Trimethylbenzene	105	9.943	9.944	(0.971)	359424	19.9971	19.99
	89 1,2-Dibromo-3-Chloropropane	155	11.233	11.233	(1.097)	22853	20.0457	20.04
	57 1,2-Dibromoethane	107	7.852	7.852	(0.952)	106218	21.0979	21.09
	88 1,2-Dichlorobenzene	146	10.569	10.570	(1.033)	199106	19.1601	19.16

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\V010804.D Page 2
Report Date: 01-Feb-2019 16:42

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
33 1,2-Dichloroethane	62	5.254	5.250	(0.934)	154179	20.1627	20.16
42 1,2-Dichloropropane	63	6.082	6.079	(1.081)	115454	20.2934	20.29
75 1,3,5-Trimethylbenzene	105	9.625	9.625	(0.940)	343161	19.5481	19.54
83 1,3-Dichlorobenzene	146	10.179	10.180	(0.995)	200077	19.3796	19.37
54 1,3-Dichloropropane	76	7.563	7.563	(0.917)	194709	20.4203	20.42
84 1,4-Dichlorobenzene	146	10.254	10.255	(1.002)	204927	18.7265	18.72
26 2,2-Dichloropropane	77	4.275	4.272	(0.873)	124766	21.6149	21.61
24 2-Butanone	43	4.339	4.336	(0.886)	125360	42.7231	42.72
76 2-Chlorotoluene	91	9.546	9.546	(0.933)	317741	19.5284	19.52
52 2-Hexanone	43	7.649	7.649	(0.927)	185762	44.5972	44.59
77 4-Chlorotoluene	91	9.640	9.640	(0.942)	374855	19.8058	19.80
82 p-Isopropyltoluene	119	10.209	10.210	(0.997)	350179	19.2092	19.20
45 4-Methyl-2-Pentanone	43	6.914	6.915	(0.838)	266211	44.3194	44.31
10 Acetone	43	2.483	2.480	(0.507)	79597	42.4494	42.44
37 Benzene	78	5.220	5.216	(0.928)	436792	20.0850	20.08
74 Bromobenzene	156	9.381	9.381	(0.917)	108438	20.3190	20.31
29 Bromochloromethane	128	4.556	4.553	(0.930)	52100	22.3529	22.35
39 Bromodichloromethane	83	6.348	6.349	(1.129)	125949	20.5591	20.55
66 Bromoform	173	8.984	8.984	(1.089)	57848	19.4944	19.49
6 Bromomethane	94	1.674	1.663	(0.342)	65105	21.0047	21.00
19 Carbon Disulfide	76	2.592	2.585	(0.529)	602421	41.5209	41.52
34 Carbon Tetrachloride	117	4.995	4.995	(0.888)	103777	19.6121	19.61
59 Chlorobenzene	112	8.275	8.275	(1.003)	285860	19.8529	19.85
7 Chloroethane	64	1.752	1.749	(0.358)	73489	19.2280	19.22(M)
28 Chloroform	83	4.658	4.654	(0.951)	183278	20.0168	20.01
3 Chloromethane	50	1.340	1.337	(0.274)	117495	22.2089	22.20
27 cis-1,2-Dichloroethene	96	4.286	4.283	(0.875)	115296	19.8796	19.87
46 cis-1,3-Dichloropropene	75	6.757	6.757	(1.201)	176748	20.0252	20.02
55 Dibromochloromethane	129	7.758	7.758	(0.940)	92614	19.8969	19.89
44 Dibromomethane	93	6.191	6.187	(1.101)	67420	20.3090	20.30
2 Dichlorodifluoromethane	85	1.209	1.202	(0.247)	106229	18.9579	18.95
61 Ethylbenzene	106	8.369	8.369	(1.015)	143588	19.7695	19.76
91 Hexachlorobutadiene	225	12.065	12.065	(1.179)	42244	19.4534	19.45
67 Isopropylbenzene	105	9.126	9.126	(1.106)	400904	19.3241	19.32
62 m,p-Xylenes	106	8.474	8.474	(1.027)	357013	40.2654	40.26
17 Methylene Chloride	84	2.873	2.870	(0.587)	112335	20.2947	20.29
87 n-Butylbenzene	91	10.554	10.555	(1.031)	326567	18.4370	18.43
73 n-Propylbenzene	91	9.475	9.475	(0.926)	503427	19.0304	19.03
92 Naphthalene	128	12.133	12.133	(1.185)	408370	20.0001	20.00
63 o-Xylene	106	8.811	8.811	(1.068)	180926	20.0024	20.00
81 sec-Butylbenzene	105	10.086	10.086	(0.985)	399878	18.4800	18.48
64 Styrene	104	8.826	8.823	(1.070)	316862	21.0385	21.03
78 tert-Butylbenzene	119	9.902	9.902	(0.967)	281972	18.6523	18.65
56 Tetrachloroethene	164	7.525	7.526	(0.912)	70320	18.5354	18.53
50 Toluene	91	7.049	7.046	(0.855)	456558	20.5629	20.56
20 trans-1,2-Dichloroethene	96	3.143	3.140	(0.642)	103678	20.0431	20.04
51 trans-1,3-Dichloropropene	75	7.259	7.259	(1.291)	148808	19.7266	19.72
38 Trichloroethene	130	5.861	5.861	(1.042)	103124	20.4963	20.49
8 Trichlorofluoromethane	101	1.955	1.951	(0.399)	135656	19.1230	19.12
5 Vinyl Chloride	62	1.423	1.415	(0.291)	119720	19.0254	19.02

QC Flag Legend

M - Compound response manually integrated.



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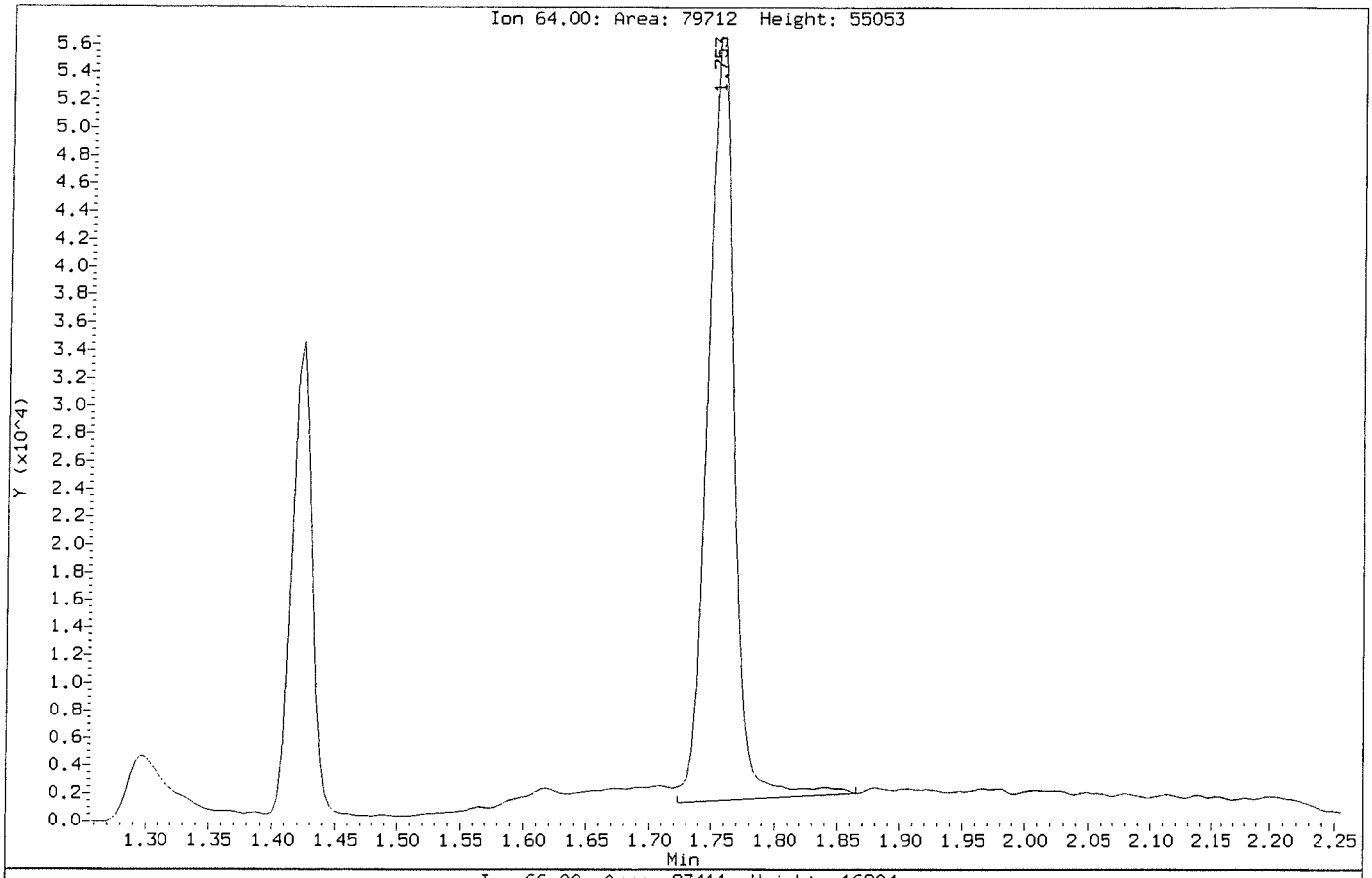
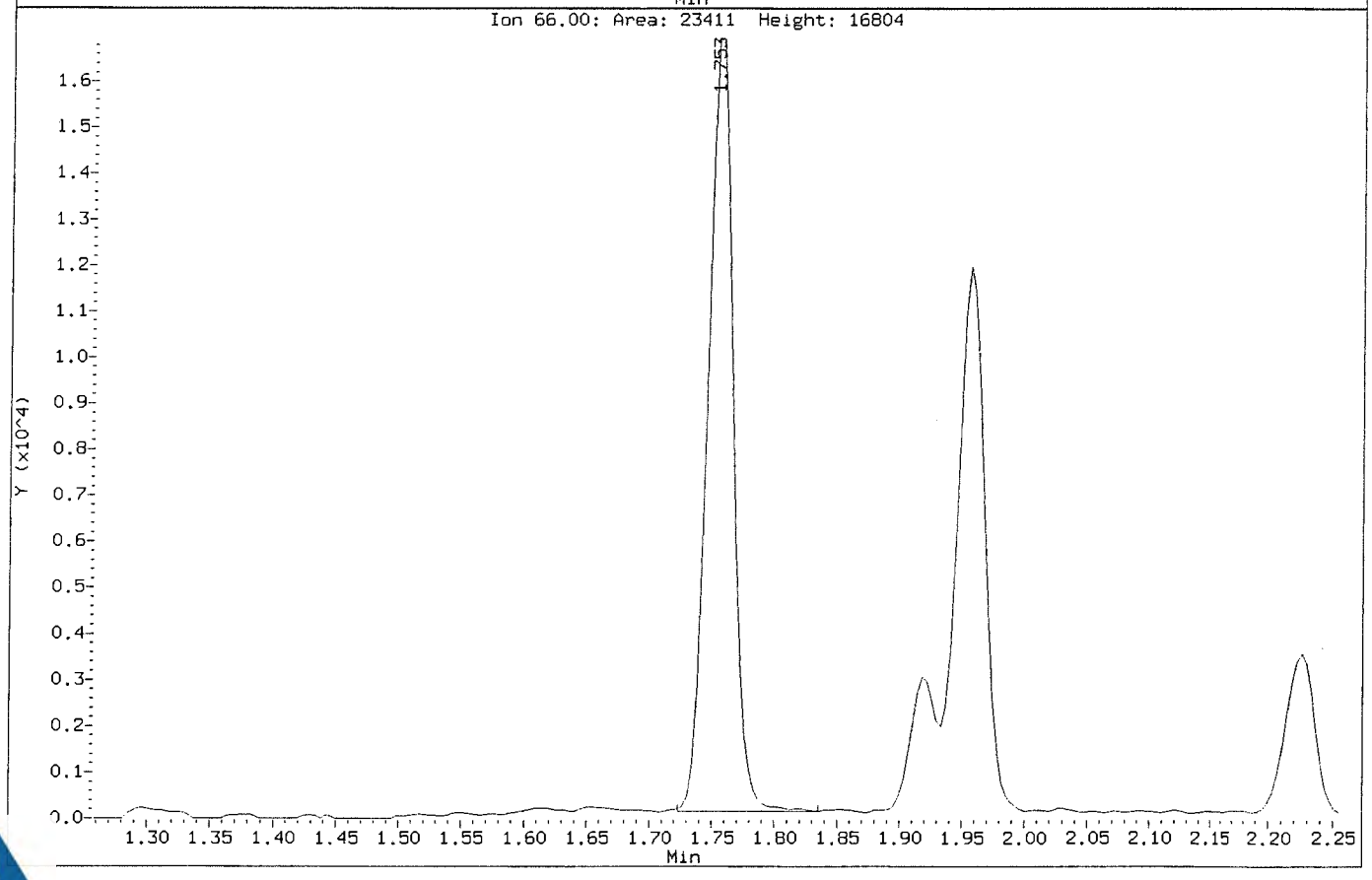
Sample Info: VLCSW-190108;VLCSW-190108;3;;LCS
Purge Volume: 5.0
Column phase: DB624

Instrument: VOA9.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\Before\V010804.D
Injection Date: 08-JAN-2019 17:52
Instrument: VOA9.i
Client Sample ID: VLCSW-190108

Compound: Chloroethane
CAS Number: 75-00-3





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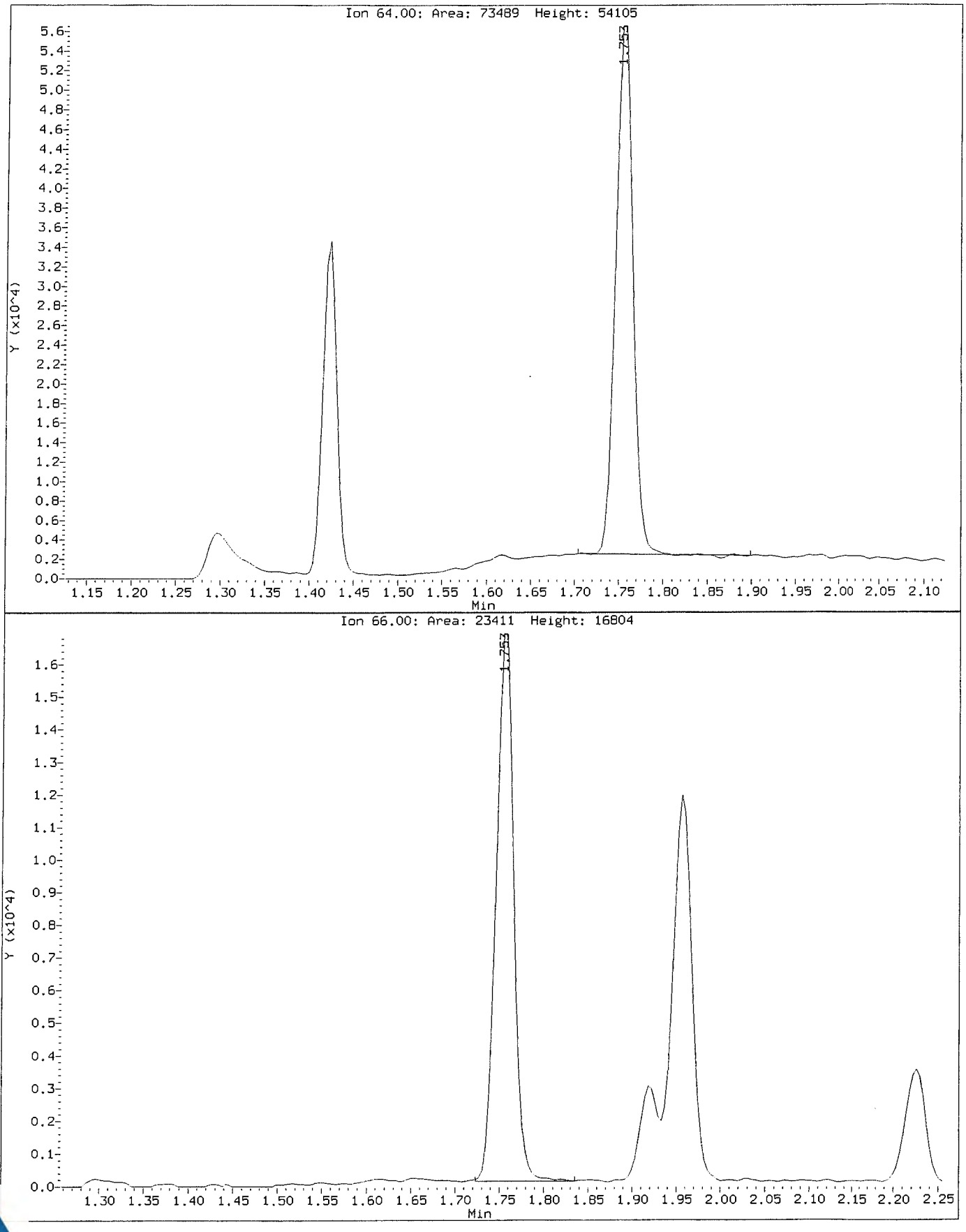
Compound: Chloroethane
CAS Number: 75-00-3



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Data file : \\NAHSTWS005\Target\chem\voa9.i\U190108.b\V010807.D
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Operator : PC Inst ID: VOA9.i
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Comment :
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Meth Date : 01-Feb-2019 16:42 VOA9.i Quant Type: ISTD
Cal Date : 08-JAN-2019 14:59 Cal File: U010811.D
Als bottle: 22 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAPb.sub
Target Version: 4.14
Processing Host: NAHSTW7087

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	4.894	4.894	(1.000)	334728	50.0000	
*	36 1,4-Difluorobenzene	114	5.625	5.625	(1.000)	594768	50.0000	
*	47 Chlorobenzene-d5	117	8.249	8.249	(1.000)	542258	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	251825	50.0000	
$	30 Dibromofluoromethane	113	4.827	4.827	(0.986)	169821	44.7751	44.77
$	35 1,2-Dichloroethane-d4	65	5.171	5.175	(1.057)	230192	46.4928	46.49
$	48 Toluene-d8	98	6.989	6.990	(0.847)	734548	52.2271	52.22
$	69 4-Bromofluorobenzene	95	9.257	9.258	(1.122)	267181	50.2251	50.22

00930982

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\V010807.D
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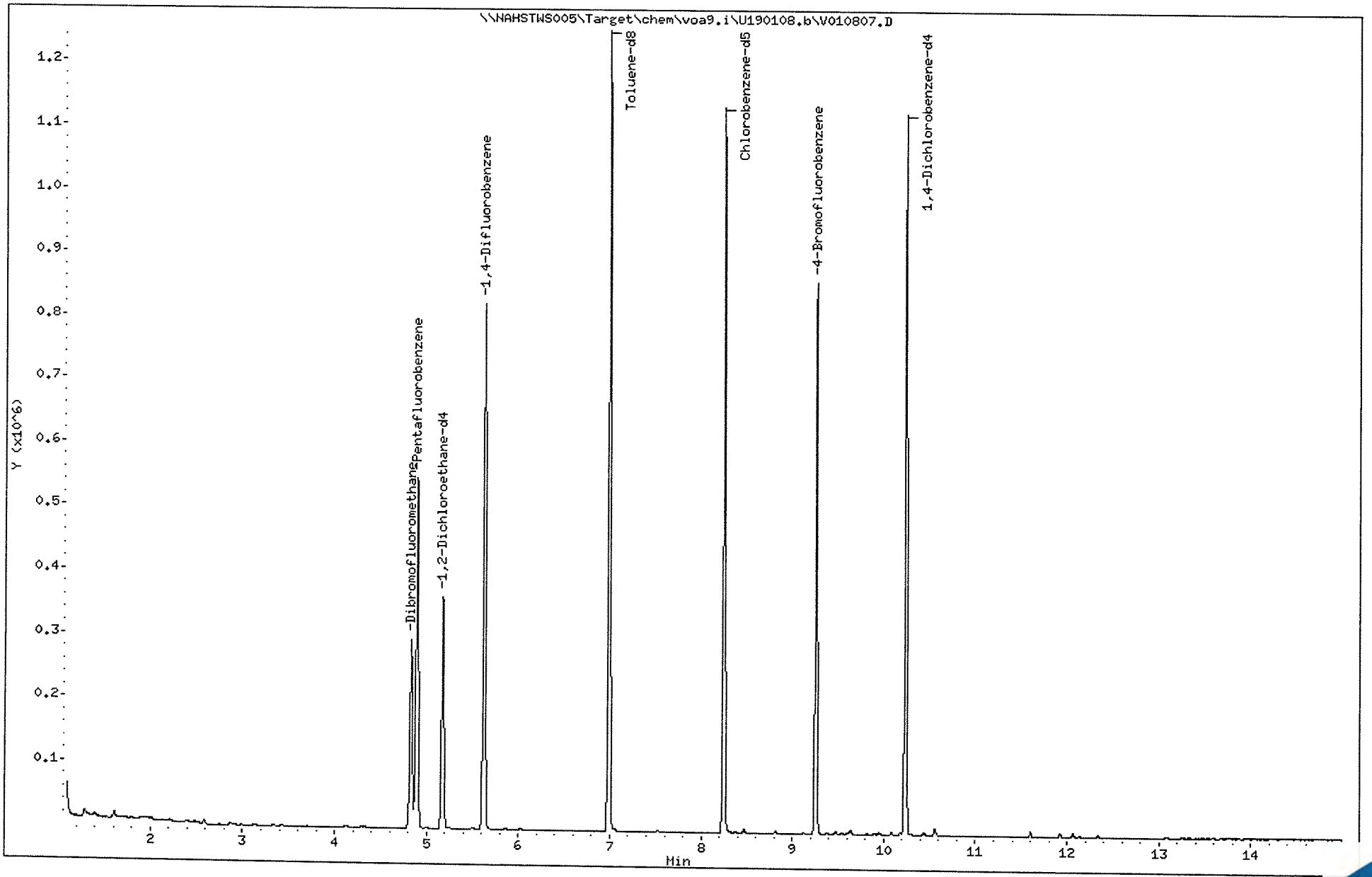
Sample Info: VBLKW-190108;VBLKW-190108;3;;BLANK
Purge Volume: 5.0
Column phase: DB624

Instrument: VOA9.i

Operator: PC
Column diameter: 0.18



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Data file : \\NAHSTWS005\Target\chem\voa9.i\U190108.b\V010808.D
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Misc Info : 180315V9;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa9.i\U190108.b\8260C.m
Meth Date : 01-Feb-2019 16:53 hvan Quant Type: ISTD
Cal Date : 08-JAN-2019 14:59 Cal File: U010811.D
Als bottle: 23
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAPb.sub
Target Version: 4.14
Processing Host: NAHSTW7087

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	4.898	4.898	(1.000)	351167	50.0000	
* 36 1,4-Difluorobenzene	114	5.625	5.625	(1.000)	619892	50.0000	
* 47 Chlorobenzene-d5	117	8.249	8.249	(1.000)	558005	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	255453	50.0000	
$ 30 Dibromofluoromethane	113	4.834	4.830	(0.987)	177687	44.6512	44.65
$ 35 1,2-Dichloroethane-d4	65	5.179	5.175	(1.057)	239024	45.9939	45.99
$ 48 Toluene-d8	98	6.990	6.989	(0.847)	757979	52.3790	52.37
$ 69 4-Bromofluorobenzene	95	9.258	9.257	(1.122)	271070	49.4919	49.49

00930984

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\V010808.D

Date : 08-JAN-2019 19:31

Client ID: HS18121523-07

Instrument: VOA9.i

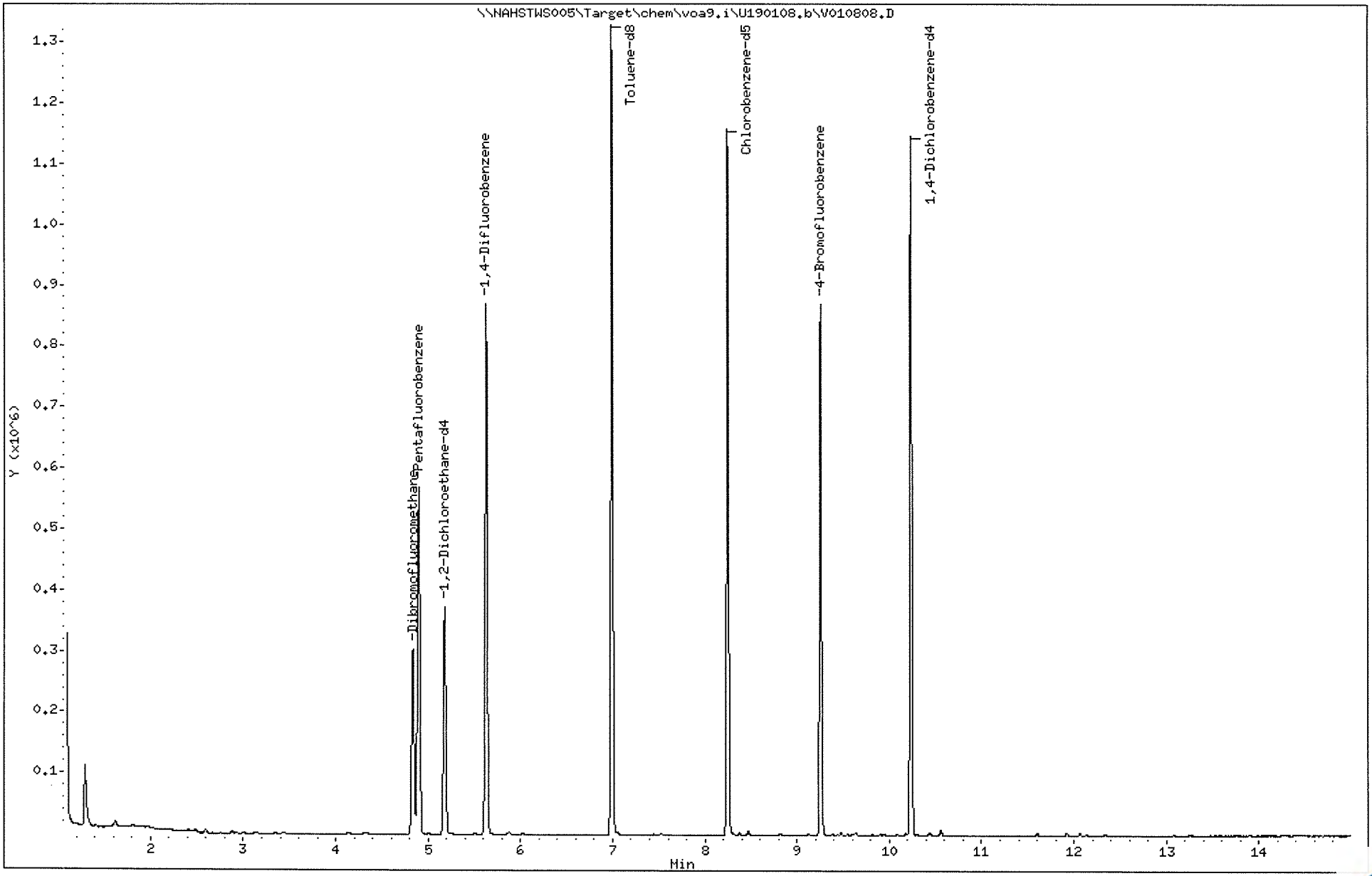
Sample Info: HS18121523-07;HS18121523-07;;;

Purge Volume: 5.0

Operator: PC

Column phase: DB624

Column diameter: 0.18



ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U190108.b\V010811.D
Lab Smp Id: HS18121520-09MS Client Smp ID: HS18121520-09MS
Inj Date : 08-JAN-2019 20:46
Operator : PC Inst ID: VOA9.i
Smp Info : HS18121520-09MS;HS18121520-09MS;3;;MS
Misc Info : 180315V9;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa9.i\U190108.b\8260C.m
Meth Date : 01-Feb-2019 16:42 VOA9.i Quant Type: ISTD
Cal Date : 08-JAN-2019 14:59 Cal File: U010811.D
Als bottle: 26 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAPb.sub
Target Version: 4.14
Processing Host: NAHSTW7087

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	4.898	4.894	(1.000)	338754	50.0000	
*	36 1,4-Difluorobenzene	114	5.629	5.625	(1.000)	585755	50.0000	
*	47 Chlorobenzene-d5	117	8.249	8.249	(1.000)	537964	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	262030	50.0000	
$	30 Dibromofluoromethane	113	4.834	4.827	(0.987)	172744	45.0134	45.01
$	35 1,2-Dichloroethane-d4	65	5.179	5.175	(1.057)	225993	45.0356	45.03
$	48 Toluene-d8	98	6.990	6.990	(0.847)	742833	53.2853	53.28
$	69 4-Bromofluorobenzene	95	9.258	9.258	(1.122)	276981	52.5668	52.56
	60 1,1,1,2-Tetrachloroethane	131	8.350	8.350	(1.012)	90000	27.6903	27.69
	31 1,1,1-Trichloroethane	97	4.830	4.827	(0.986)	147189	26.5302	26.53
	68 1,1,2,2-Tetrachloroethane	83	9.392	9.392	(0.918)	159004	26.7138	26.71
	53 1,1,2-Trichloroethane	83	7.421	7.421	(0.900)	90993	27.6378	27.63
	22 1,1-Dichloroethane	63	3.608	3.601	(0.737)	195450	25.3824	25.38
	11 1,1-Dichloroethene	96	2.409	2.394	(0.492)	84111	25.7401	25.74
	32 1,1-Dichloropropene	75	5.006	5.003	(0.889)	153748	28.3878	28.38
	93 1,2,3-Trichlorobenzene	180	12.335	12.335	(1.205)	121291	25.9766	25.97
	71 1,2,3-Trichloropropane	75	9.426	9.426	(0.921)	164367	25.9516	25.95
	90 1,2,4-Trichlorobenzene	180	11.923	11.923	(1.165)	126267	26.7469	26.74
	79 1,2,4-Trimethylbenzene	105	9.944	9.944	(0.971)	388554	28.2359	28.23
	89 1,2-Dibromo-3-Chloropropane	155	11.233	11.233	(1.097)	21434	24.0881	24.08
	57 1,2-Dibromoethane	107	7.852	7.852	(0.952)	103965	27.7237	27.72
	88 1,2-Dichlorobenzene	146	10.570	10.570	(1.033)	205783	25.8650	25.86

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
33 1,2-Dichloroethane	62	5.258	5.250	(0.934)	166835	29.4351	29.43
42 1,2-Dichloropropane	63	6.082	6.079	(1.081)	116031	27.5153	27.51
75 1,3,5-Trimethylbenzene	105	9.625	9.625	(0.940)	376873	28.0409	28.04
83 1,3-Dichlorobenzene	146	10.180	10.180	(0.995)	203648	25.7642	25.76
54 1,3-Dichloropropane	76	7.563	7.563	(0.917)	195121	27.4728	27.47
84 1,4-Dichlorobenzene	146	10.255	10.255	(1.002)	211809	25.2809	25.28
26 2,2-Dichloropropane	77	4.279	4.272	(0.874)	115830	25.1182	25.11
24 2-Butanone	43	4.343	4.336	(0.887)	115104	49.1027	49.10
76 2-Chlorotoluene	91	9.546	9.546	(0.933)	339955	27.2901	27.29
52 2-Hexanone	43	7.649	7.649	(0.927)	173366	55.8776	55.87
77 4-Chlorotoluene	91	9.640	9.640	(0.942)	395404	27.2873	27.28
82 p-Isopropyltoluene	119	10.210	10.210	(0.997)	395037	28.3040	28.30
45 4-Methyl-2-Pentanone	43	6.915	6.915	(0.838)	247512	55.3208	55.32
10 Acetone	43	2.487	2.480	(0.508)	77440	52.0521	52.05
37 Benzene	78	5.220	5.216	(0.927)	448962	27.8523	27.85
74 Bromobenzene	156	9.381	9.381	(0.917)	109907	26.8991	26.89
29 Bromochloromethane	128	4.560	4.553	(0.931)	51974	27.9121	27.91
39 Bromodichloromethane	83	6.349	6.349	(1.128)	124664	27.4539	27.45
66 Bromoform	173	8.984	8.984	(1.089)	54349	24.1202	24.12
6 Bromomethane	94	1.678	1.663	(0.343)	68808	27.5427	27.54
19 Carbon Disulfide	76	2.596	2.585	(0.530)	604396	52.1434	52.14
34 Carbon Tetrachloride	117	4.999	4.995	(0.888)	114458	29.1825	29.18
59 Chlorobenzene	112	8.275	8.275	(1.003)	286291	26.6933	26.69
7 Chloroethane	64	1.760	1.749	(0.359)	74074	24.2599	24.25(M)
28 Chloroform	83	4.662	4.654	(0.952)	187053	25.5717	25.57
3 Chloromethane	50	1.348	1.337	(0.275)	98947	23.2779	23.27
27 cis-1,2-Dichloroethene	96	4.290	4.283	(0.876)	120037	25.9072	25.90
46 cis-1,3-Dichloropropene	75	6.761	6.757	(1.201)	167843	25.2875	25.28
55 Dibromochloromethane	129	7.758	7.758	(0.940)	88941	25.2971	25.29
44 Dibromomethane	93	6.191	6.187	(1.100)	66702	27.1077	27.10
2 Dichlorodifluoromethane	85	1.213	1.202	(0.248)	84395	18.8527	18.85
61 Ethylbenzene	106	8.373	8.369	(1.015)	152424	28.1743	28.17
91 Hexachlorobutadiene	225	12.065	12.065	(1.179)	45060	26.8935	26.89
67 Isopropylbenzene	105	9.126	9.126	(1.106)	452133	29.2582	29.25
62 m,p-Xylenes	106	8.474	8.474	(1.027)	381394	57.7491	57.74
17 Methylene Chloride	84	2.877	2.870	(0.587)	114917	26.1286	26.12
87 n-Butylbenzene	91	10.555	10.555	(1.031)	375580	27.6955	27.69
73 n-Propylbenzene	91	9.475	9.475	(0.926)	569144	28.1011	28.10
92 Naphthalene	128	12.133	12.133	(1.185)	398599	25.3061	25.30
63 o-Xylene	106	8.811	8.811	(1.068)	190470	28.2704	28.27
81 sec-Butylbenzene	105	10.086	10.086	(0.985)	470739	28.4148	28.41
64 Styrene	104	8.826	8.823	(1.070)	324864	28.9581	28.95
78 tert-Butylbenzene	119	9.902	9.902	(0.967)	326023	28.1685	28.16
56 Tetrachloroethene	164	7.526	7.526	(0.912)	76648	27.1237	27.12
50 Toluene	91	7.050	7.046	(0.855)	469320	28.3779	28.37
20 trans-1,2-Dichloroethene	96	3.147	3.140	(0.643)	104196	25.2139	25.21
51 trans-1,3-Dichloropropene	75	7.263	7.259	(1.290)	140689	24.7203	24.72
38 Trichloroethene	130	5.865	5.861	(1.042)	456459	122.397	122.39
8 Trichlorofluoromethane	101	1.963	1.951	(0.401)	139745	24.6583	24.65
5 Vinyl Chloride	62	1.426	1.415	(0.291)	117926	23.4578	23.45

QC Flag Legend

M - Compound response manually integrated.

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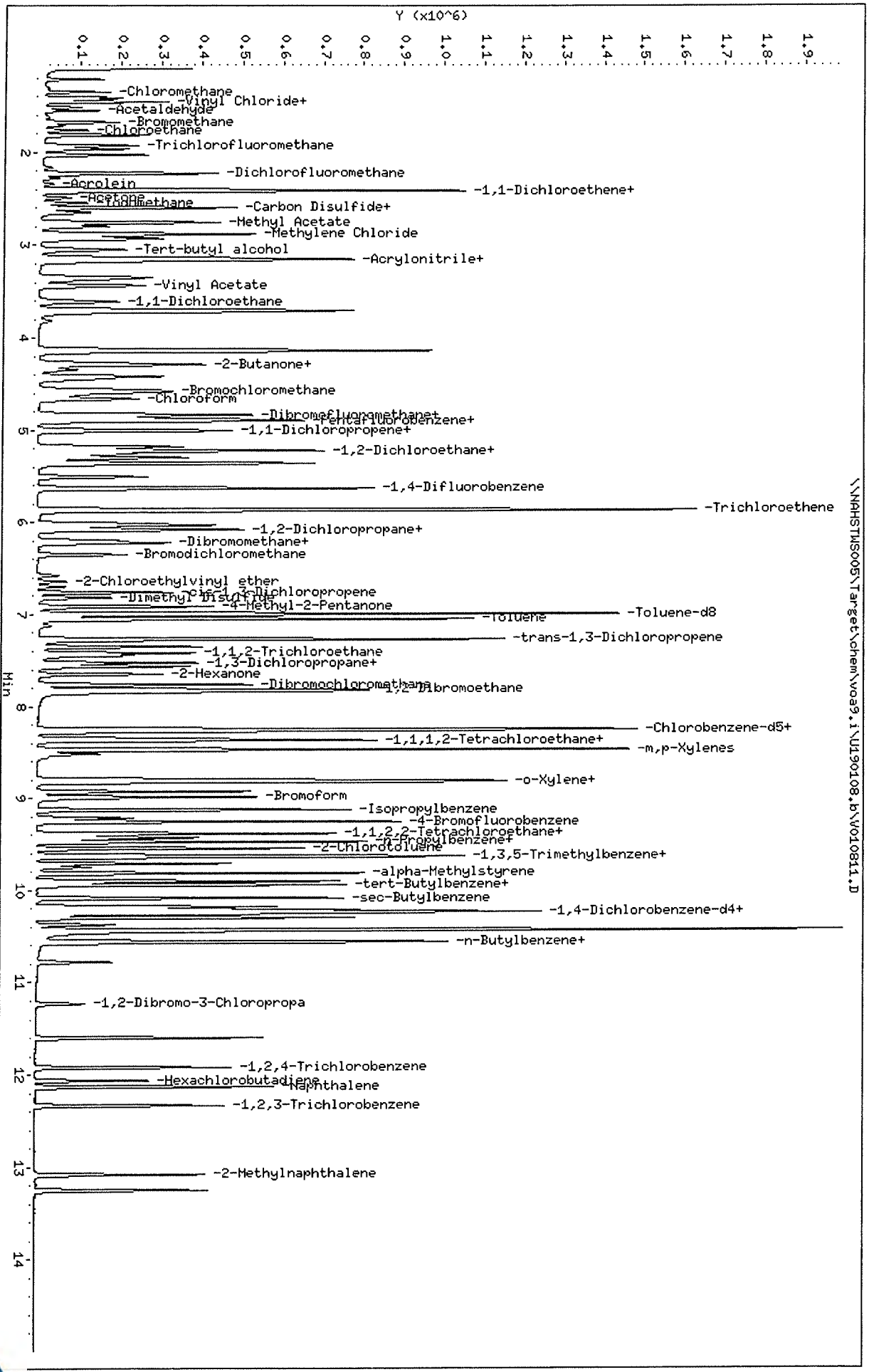

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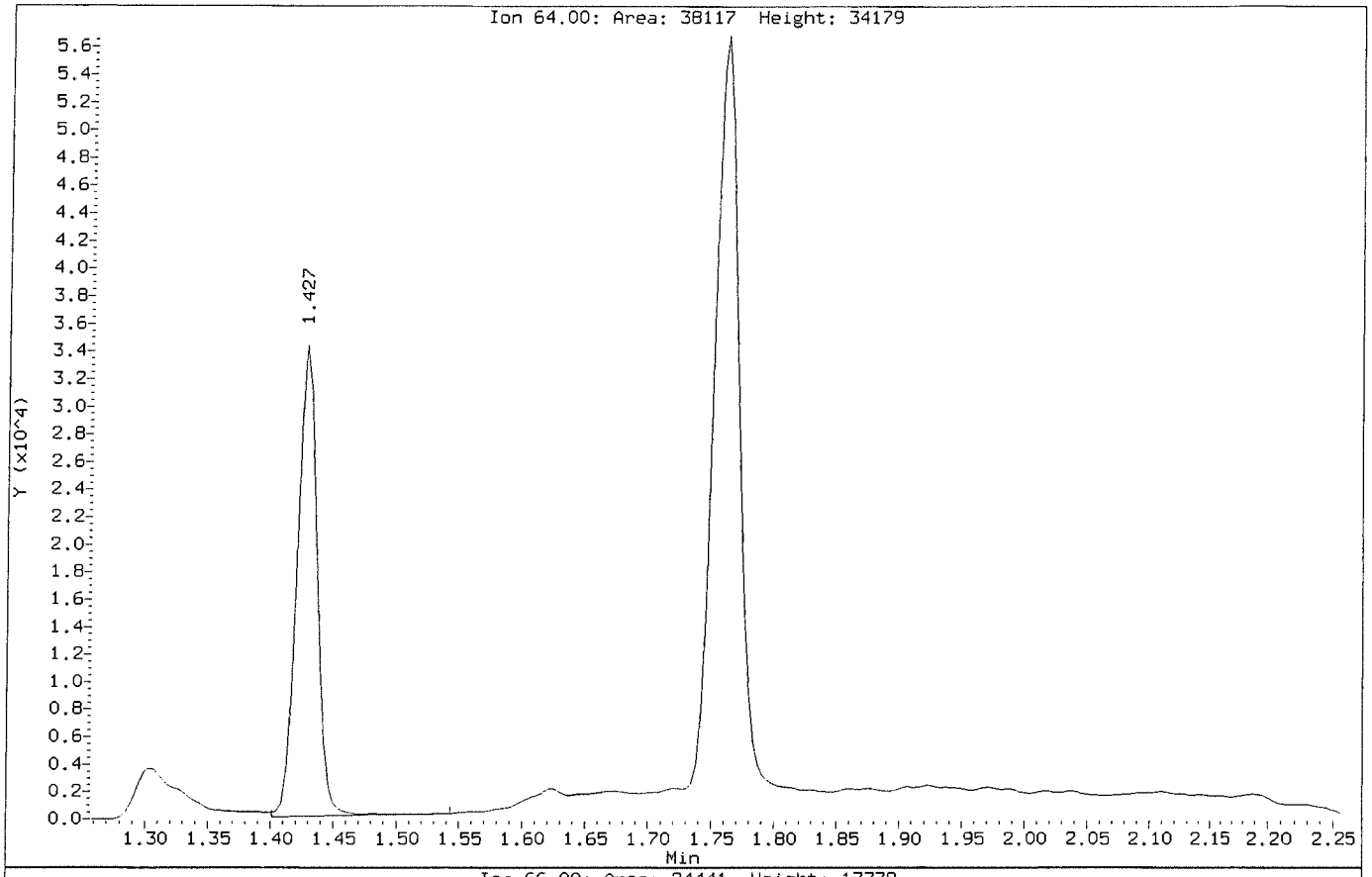
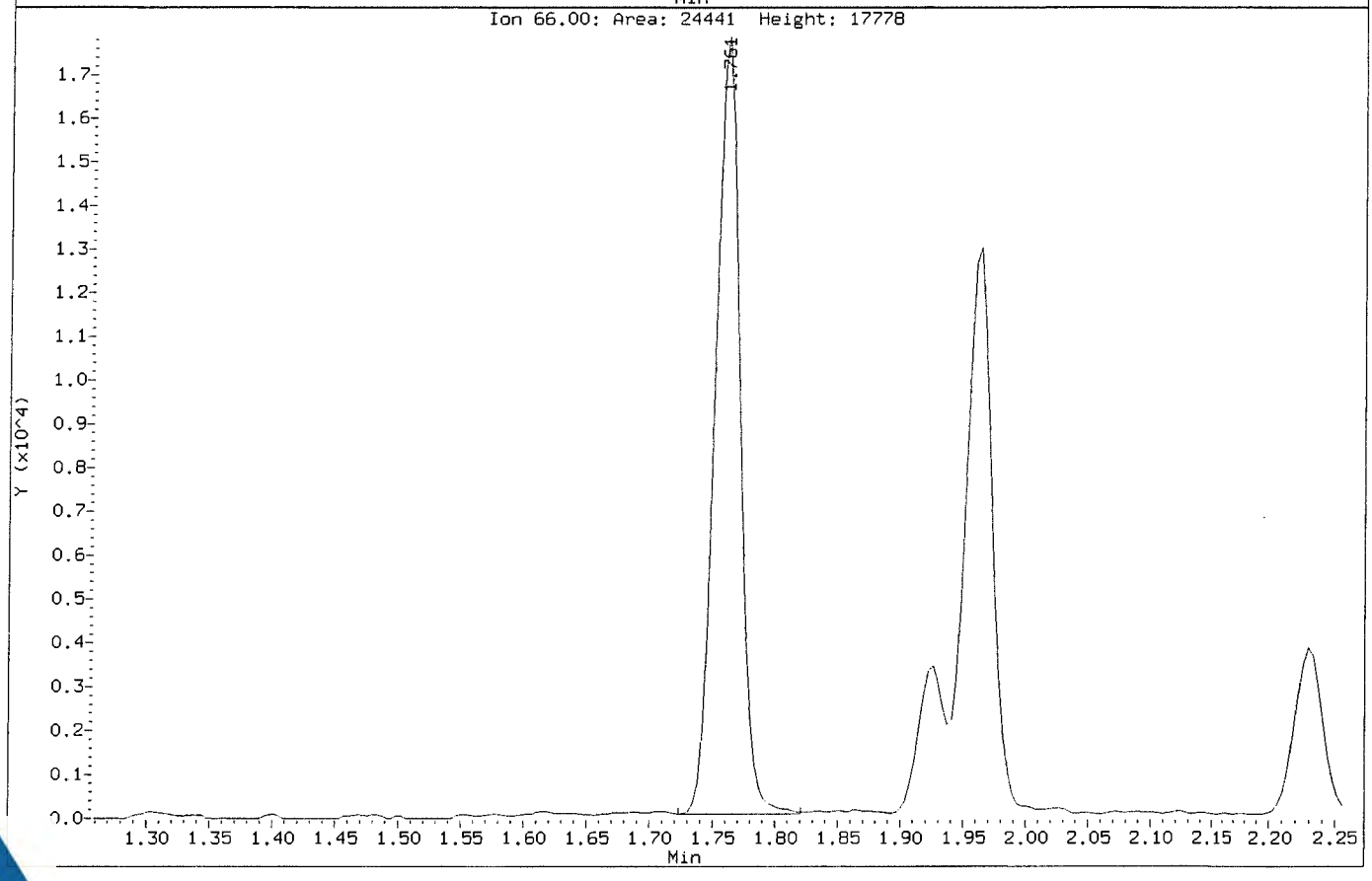
Sample Info: HS181121520-09MS;HS181121520-09MS;3;;MS
Purge Volume: 5.0
Column phase: DB624

Instrument: VOA9.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\Before\V010811.D
Injection Date: 08-JAN-2019 20:46
Instrument: VOA9.i
Client Sample ID: HS18121520-09MS

Compound: Chloroethane
CAS Number: 75-00-3





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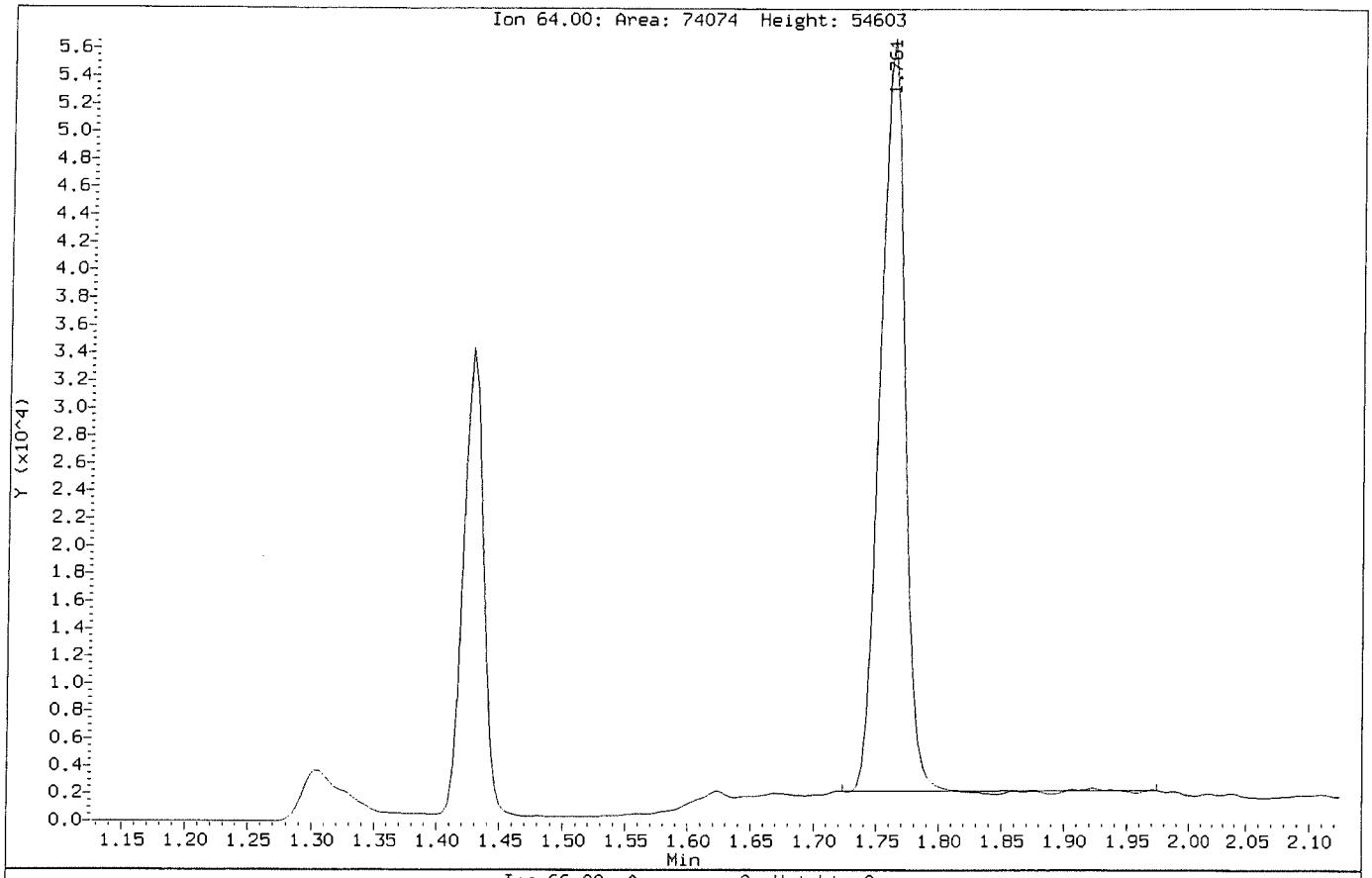
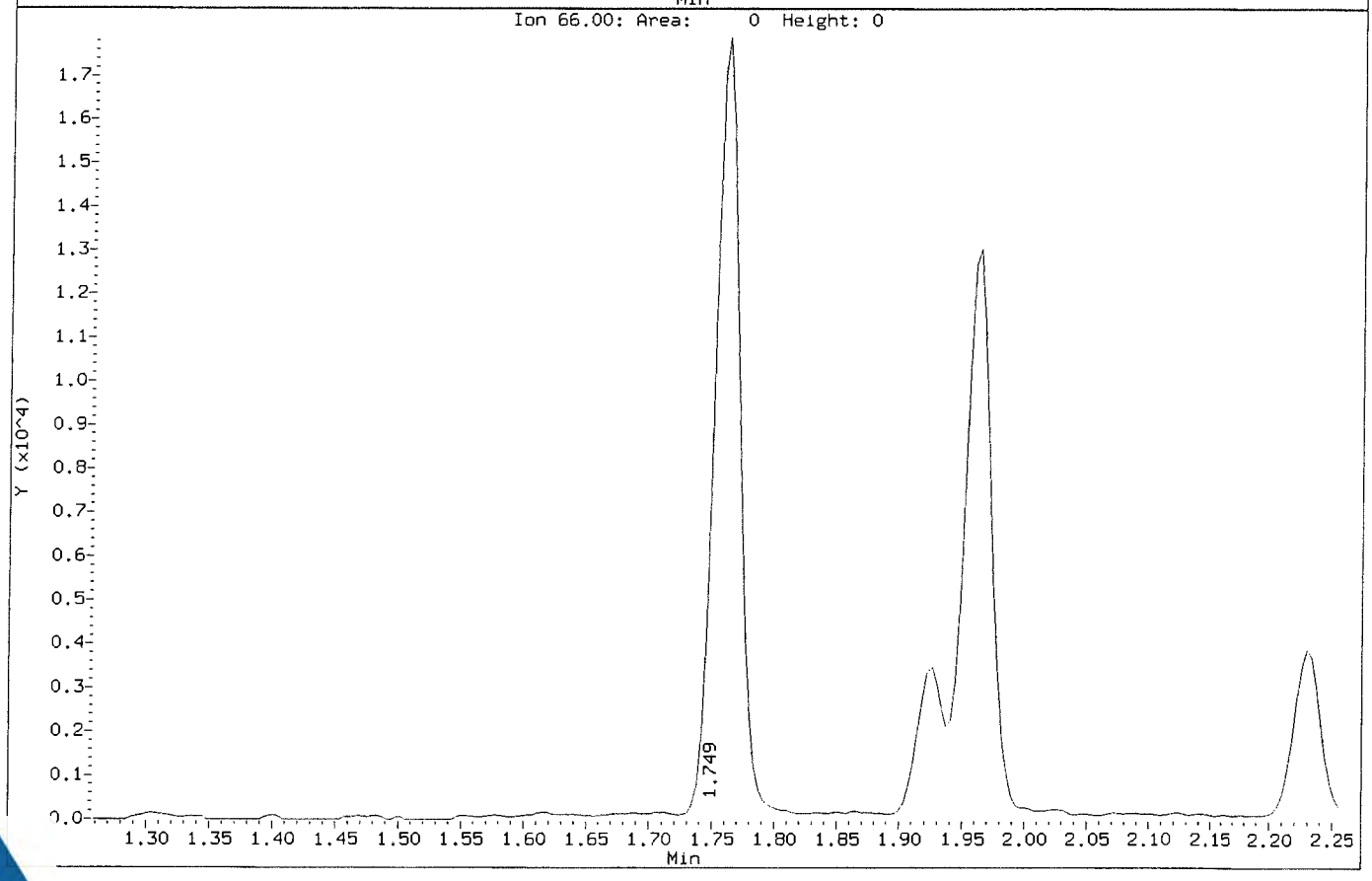
Injection Date: 08-JAN-2019 20:46
Instrument: VOA9.i
Client Sample ID: HS18121520-09MS

Compound: Chloroethane
CAS Number: 75-00-3





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Data file : \\NAHSTWS005\Target\chem\voa9.i\U190108.b\V010812.D
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Inj Date : 08-JAN-2019 21:10
Operator : PC Inst ID: VOA9.i
Smp Info : HS18121520-09MSD;HS18121520-09MSD;3;;MSD
Misc Info : 180315V9;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa9.i\U190108.b\8260C.m
Meth Date : 01-Feb-2019 16:42 VOA9.i Quant Type: ISTD
Cal Date : 08-JAN-2019 14:59 Cal File: U010811.D
Als bottle: 26 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAPb.sub
Target Version: 4.14
Processing Host: NAHSTW7087

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

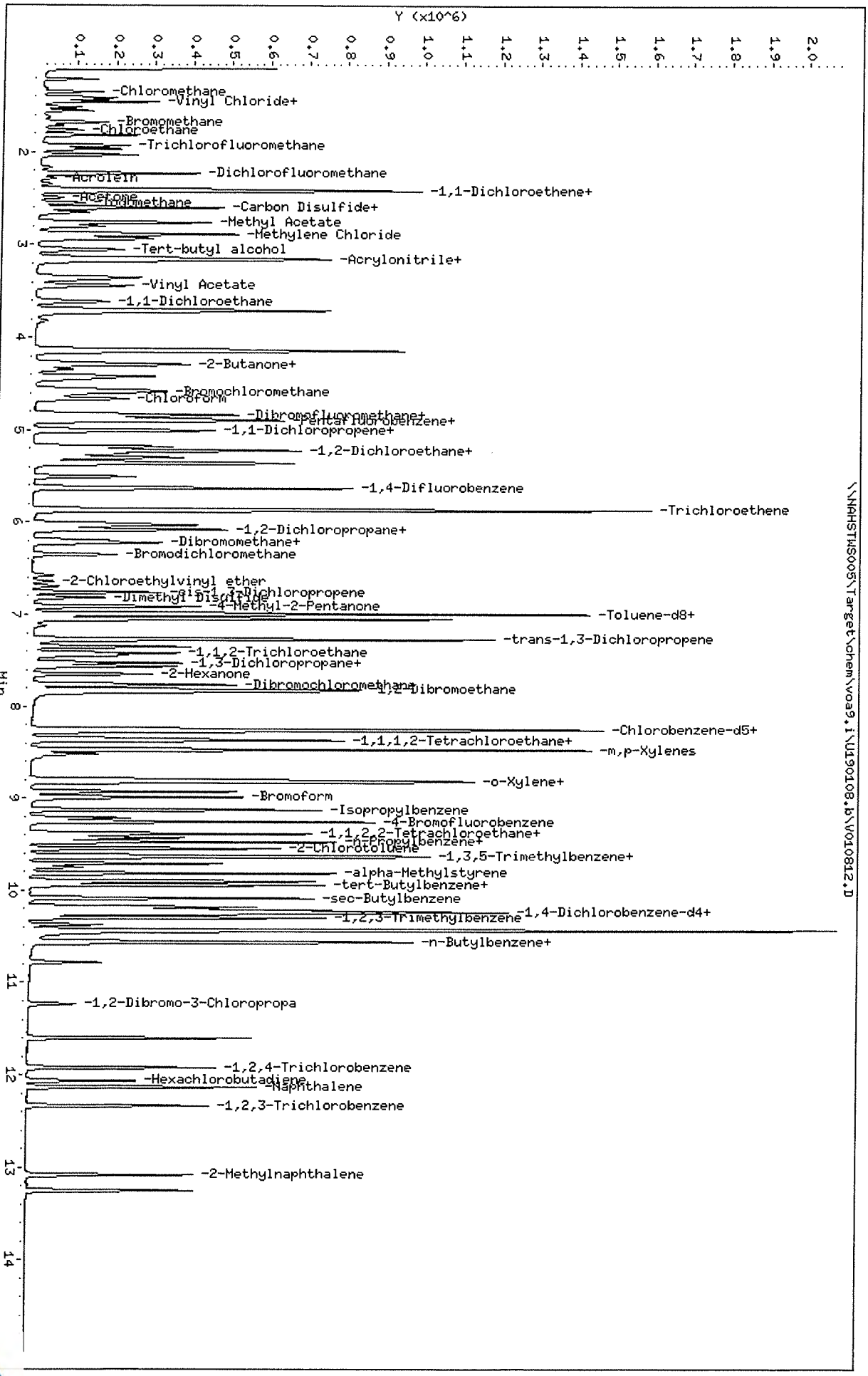
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.901	4.894	(1.000)	331443	50.0000	
* 36 1,4-Difluorobenzene	114	5.629	5.625	(1.000)	583577	50.0000	
* 47 Chlorobenzene-d5	117	8.249	8.249	(1.000)	537219	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	256827	50.0000	
$ 30 Dibromofluoromethane	113	4.834	4.827	(0.986)	171640	45.7394	45.73
$ 35 1,2-Dichloroethane-d4	65	5.179	5.175	(1.057)	222746	45.3841	45.38
$ 48 Toluene-d8	98	6.989	6.990	(0.847)	730187	52.4123	52.41
$ 69 4-Bromofluorobenzene	95	9.257	9.258	(1.122)	273442	51.9458	51.94
60 1,1,1,2-Tetrachloroethane	131	8.350	8.350	(1.012)	88005	27.1140	27.11
31 1,1,1-Trichloroethane	97	4.834	4.827	(0.986)	144729	26.6623	26.66
68 1,1,2,2-Tetrachloroethane	83	9.392	9.392	(0.918)	158178	27.1188	27.11
53 1,1,2-Trichloroethane	83	7.420	7.421	(0.900)	89385	27.1870	27.18
22 1,1-Dichloroethane	63	3.612	3.601	(0.737)	188651	25.0399	25.03
11 1,1-Dichloroethene	96	2.412	2.394	(0.492)	79617	24.9023	24.90
32 1,1-Dichloropropene	75	5.010	5.003	(0.890)	147596	27.3536	27.35
93 1,2,3-Trichlorobenzene	180	12.335	12.335	(1.205)	122251	26.7126	26.71
71 1,2,3-Trichloropropane	75	9.426	9.426	(0.921)	166482	26.8180	26.81
90 1,2,4-Trichlorobenzene	180	11.923	11.923	(1.165)	125988	27.2285	27.22
79 1,2,4-Trimethylbenzene	105	9.943	9.944	(0.971)	377853	28.0146	28.01
89 1,2-Dibromo-3-Chloropropane	155	11.233	11.233	(1.097)	20617	23.6781	23.67
57 1,2-Dibromoethane	107	7.851	7.852	(0.952)	102600	27.3977	27.39
88 1,2-Dichlorobenzene	146	10.569	10.570	(1.033)	201297	25.8137	25.81

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\V010812.D Page 2
Report Date: 01-Feb-2019 16:42

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
33 1,2-Dichloroethane	62	5.257	5.250	(0.934)	163757	28.9998	28.99
42 1,2-Dichloropropane	63	6.082	6.079	(1.081)	114421	27.2347	27.23
75 1,3,5-Trimethylbenzene	105	9.625	9.625	(0.940)	368220	27.9522	27.95
83 1,3-Dichlorobenzene	146	10.179	10.180	(0.995)	202034	26.0779	26.07
54 1,3-Dichloropropane	76	7.563	7.563	(0.917)	192961	27.2064	27.20
84 1,4-Dichlorobenzene	146	10.254	10.255	(1.002)	207044	25.2128	25.21
26 2,2-Dichloropropane	77	4.283	4.272	(0.874)	110483	24.4872	24.48
24 2-Butanone	43	4.346	4.336	(0.887)	117332	51.1573	51.15
76 2-Chlorotoluene	91	9.546	9.546	(0.933)	329936	27.0224	27.02
52 2-Hexanone	43	7.649	7.649	(0.927)	172819	55.7785	55.77
77 4-Chlorotoluene	91	9.640	9.640	(0.942)	385371	27.1336	27.13
82 p-Isopropyltoluene	119	10.209	10.210	(0.997)	388195	28.3772	28.37
45 4-Methyl-2-Pentanone	43	6.914	6.915	(0.838)	248192	55.5497	55.54
10 Acetone	43	2.491	2.480	(0.508)	68119	46.6315	46.63
37 Benzene	78	5.224	5.216	(0.928)	436800	27.1989	27.19
74 Bromobenzene	156	9.381	9.381	(0.917)	106794	26.6667	26.66
29 Bromochloromethane	128	4.560	4.553	(0.930)	51092	28.0437	28.04
39 Bromodichloromethane	83	6.348	6.349	(1.128)	122708	27.1240	27.12
66 Bromoform	173	8.984	8.984	(1.089)	54122	24.0578	24.05
6 Bromomethane	94	1.681	1.663	(0.343)	61471	25.2145	25.21
19 Carbon Disulfide	76	2.600	2.585	(0.530)	580811	51.2140	51.21
34 Carbon Tetrachloride	117	5.002	4.995	(0.889)	109852	28.1127	28.11
59 Chlorobenzene	112	8.275	8.275	(1.003)	282727	26.3976	26.39
7 Chloroethane	64	1.764	1.749	(0.360)	70036	23.4434	23.44(M)
28 Chloroform	83	4.661	4.654	(0.951)	182659	25.5218	25.52
3 Chloromethane	50	1.351	1.337	(0.276)	95454	22.9860	22.98
27 cis-1,2-Dichloroethene	96	4.294	4.283	(0.876)	117003	25.8094	25.80
46 cis-1,3-Dichloropropene	75	6.761	6.757	(1.201)	166055	25.1206	25.12
55 Dibromochloromethane	129	7.758	7.758	(0.940)	88980	25.3410	25.34
44 Dibromomethane	93	6.195	6.187	(1.101)	66286	27.0392	27.03
2 Dichlorodifluoromethane	85	1.216	1.202	(0.248)	81161	18.5302	18.53
61 Ethylbenzene	106	8.373	8.369	(1.015)	149097	27.5976	27.59
91 Hexachlorobutadiene	225	12.065	12.065	(1.179)	44858	27.3058	27.30
67 Isopropylbenzene	105	9.126	9.126	(1.106)	441516	28.6108	28.61
62 m,p-Xylenes	106	8.474	8.474	(1.027)	368189	55.8269	55.82
17 Methylene Chloride	84	2.881	2.870	(0.588)	111863	25.9927	25.99
87 n-Butylbenzene	91	10.554	10.555	(1.031)	363588	27.3544	27.35
73 n-Propylbenzene	91	9.475	9.475	(0.926)	553176	27.8660	27.86
92 Naphthalene	128	12.132	12.133	(1.185)	398602	25.8048	25.80
63 o-Xylene	106	8.811	8.811	(1.068)	184776	27.4633	27.46
81 sec-Butylbenzene	105	10.086	10.086	(0.985)	459120	28.2749	28.27
64 Styrene	104	8.826	8.823	(1.070)	316236	28.2281	28.22
78 tert-Butylbenzene	119	9.902	9.902	(0.967)	317104	27.9529	27.95
56 Tetrachloroethene	164	7.525	7.526	(0.912)	74631	26.4465	26.44
50 Toluene	91	7.049	7.046	(0.855)	451631	27.3462	27.34
20 trans-1,2-Dichloroethene	96	3.151	3.140	(0.643)	103087	25.4958	25.49
51 trans-1,3-Dichloropropene	75	7.263	7.259	(1.290)	139546	24.6181	24.61
38 Trichloroethene	130	5.865	5.861	(1.042)	441104	118.721	118.72
8 Trichlorofluoromethane	101	1.966	1.951	(0.401)	136311	24.5829	24.58
5 Vinyl Chloride	62	1.430	1.415	(0.292)	112886	22.9505	22.95

QC Flag Legend

M - Compound response manually integrated.

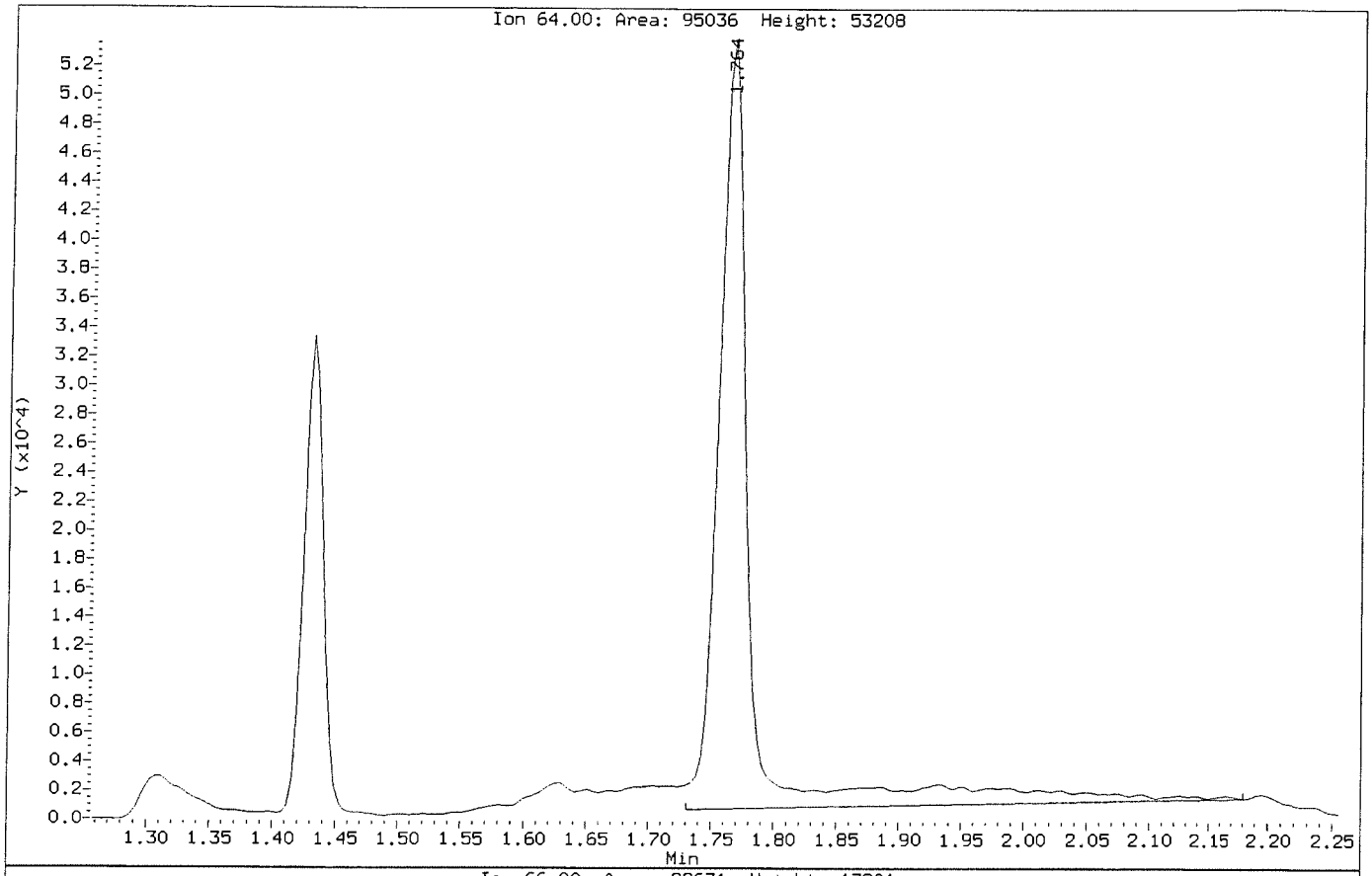


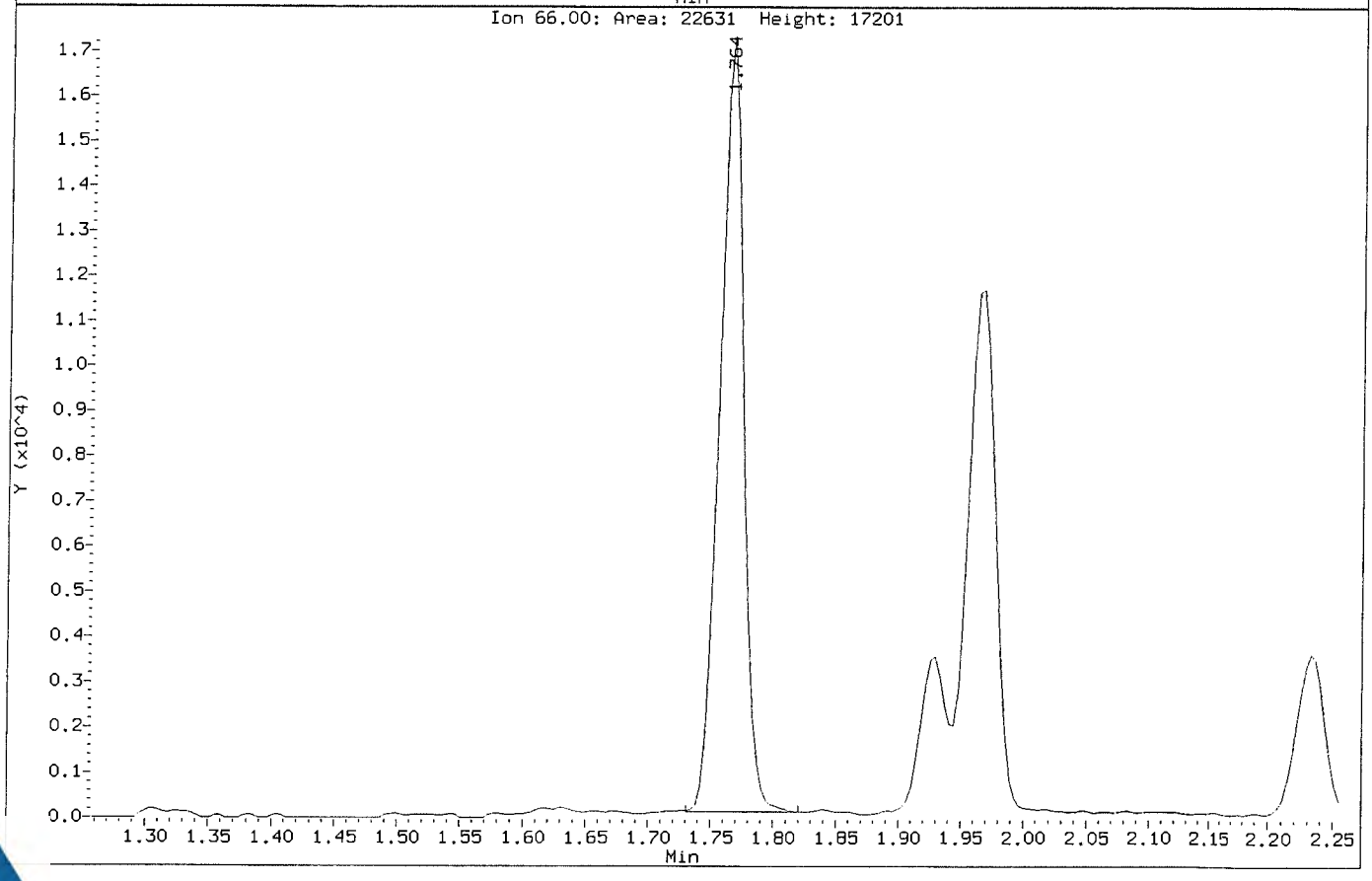
Data File: \\NAHSTWS005\Target\chem\voa9,i\U190108,b\V010812,D
Date : 08-JAN-2019 21:10
Client ID: HS18121520-09MSD
Sample Info: HS18121520-09MSD;HS18121520-09MSD;3;;MSD
Purge Volume: 5.0
Column phase: DB624

Instrument: VOA9,i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\Before\V010812.D
Injection Date: 08-JAN-2019 21:10
Instrument: VOA9.i
Client Sample ID: HS18121520-09MSD

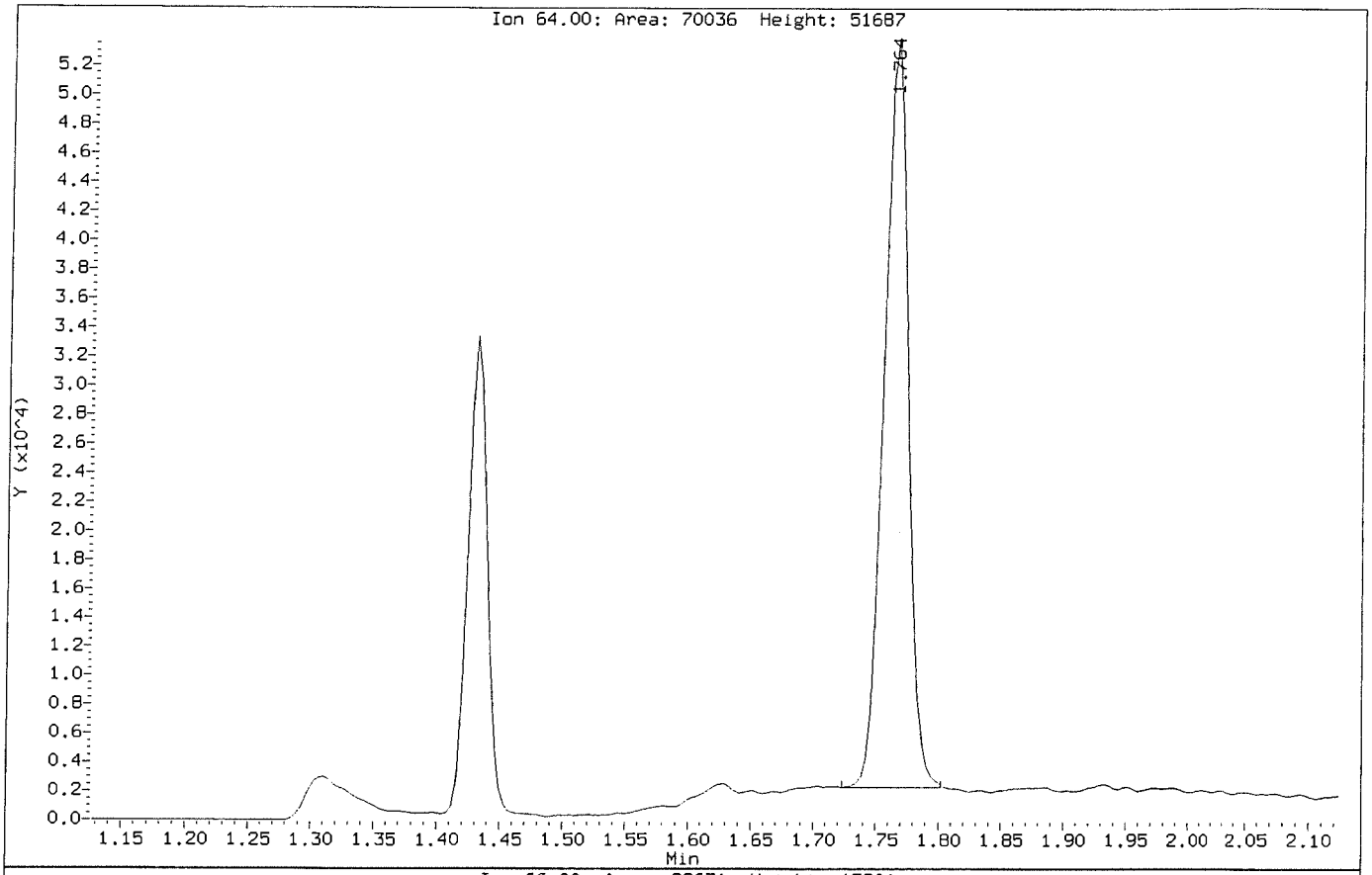
Compound: Chloroethane
CAS Number: 75-00-3

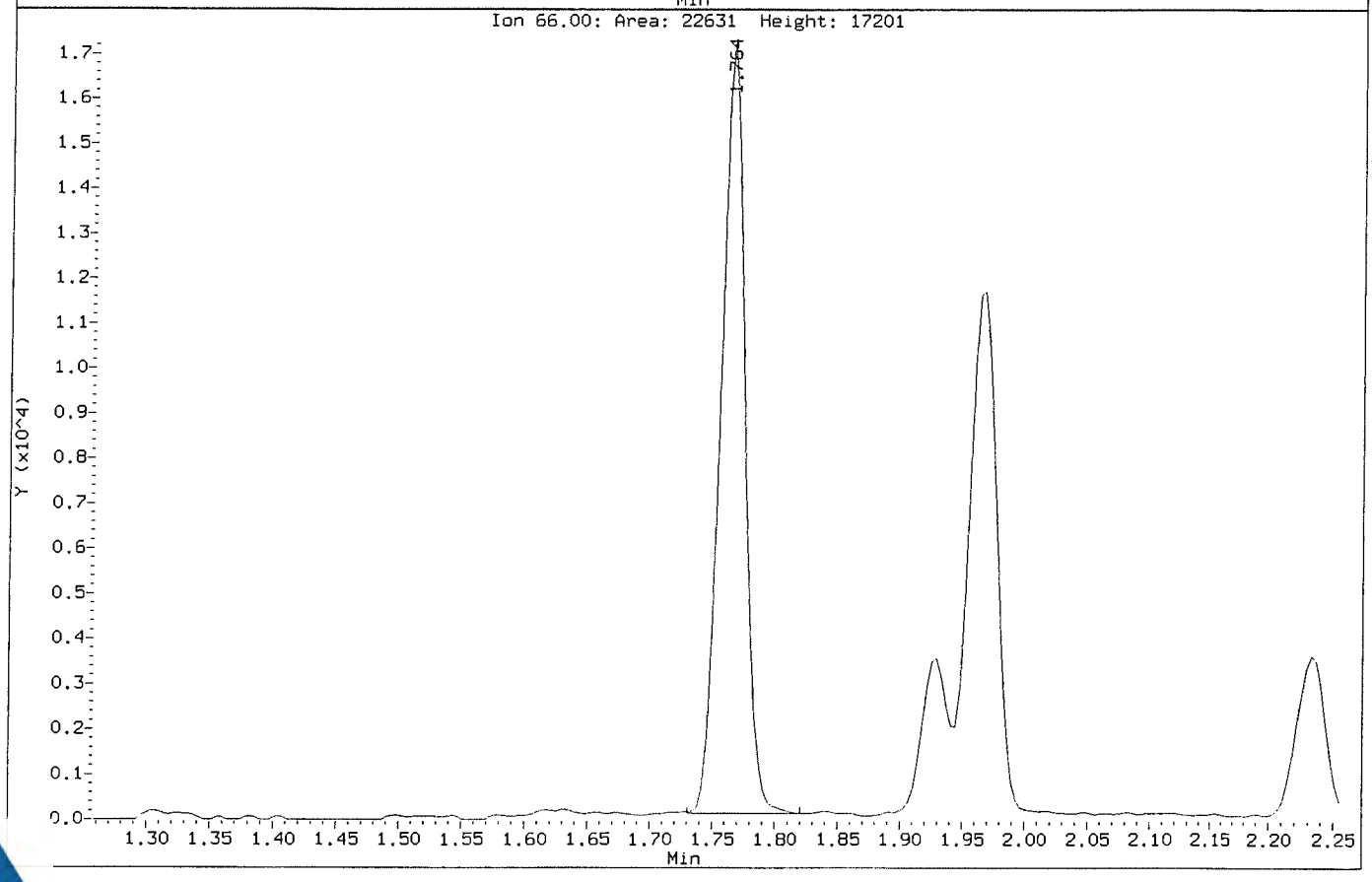




Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\V010812.D
Injection Date: 08-JAN-2019 21:10
Instrument: VOA9.i
Client Sample ID: HS18121520-09MSD

Compound: Chloroethane
CAS Number: 75-00-3





ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U190108.b\V010819.D
Lab Smp Id: HS18121523-03 Client Smp ID: HS18121523-03
Inj Date : 09-JAN-2019 00:03
Operator : PC Inst ID: VOA9.i
Smp Info : HS18121523-03;HS18121523-03;;;
Misc Info : 180315V9;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa9.i\U190108.b\8260C.m
Meth Date : 01-Feb-2019 16:53 hvan Quant Type: ISTD
Cal Date : 08-JAN-2019 14:59 Cal File: U010811.D
Als bottle: 33
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAPb.sub
Target Version: 4.14
Processing Host: NAHSTW7087

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	4.894	4.898	(1.000)	315185	50.0000	
* 36 1,4-Difluorobenzene	114	5.625	5.625	(1.000)	564651	50.0000	
* 47 Chlorobenzene-d5	117	8.249	8.249	(1.000)	508521	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	229707	50.0000	
$ 30 Dibromofluoromethane	113	4.830	4.830	(0.987)	163703	45.8797	45.87
$ 35 1,2-Dichloroethane-d4	65	5.175	5.175	(1.057)	223224	47.9475	47.94
$ 48 Toluene-d8	98	6.989	6.989	(0.847)	695844	52.7825	52.78
$ 69 4-Bromofluorobenzene	95	9.257	9.257	(1.122)	249390	49.9822	49.98
19 Carbon Disulfide	76	2.592	2.596	(0.530)	11676	1.08266	1.08(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

00930998

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\V010819.D

Page 2

Date : 09-JAN-2019 00:03

Client ID: HS18121523-03

Instrument: VOA9.i

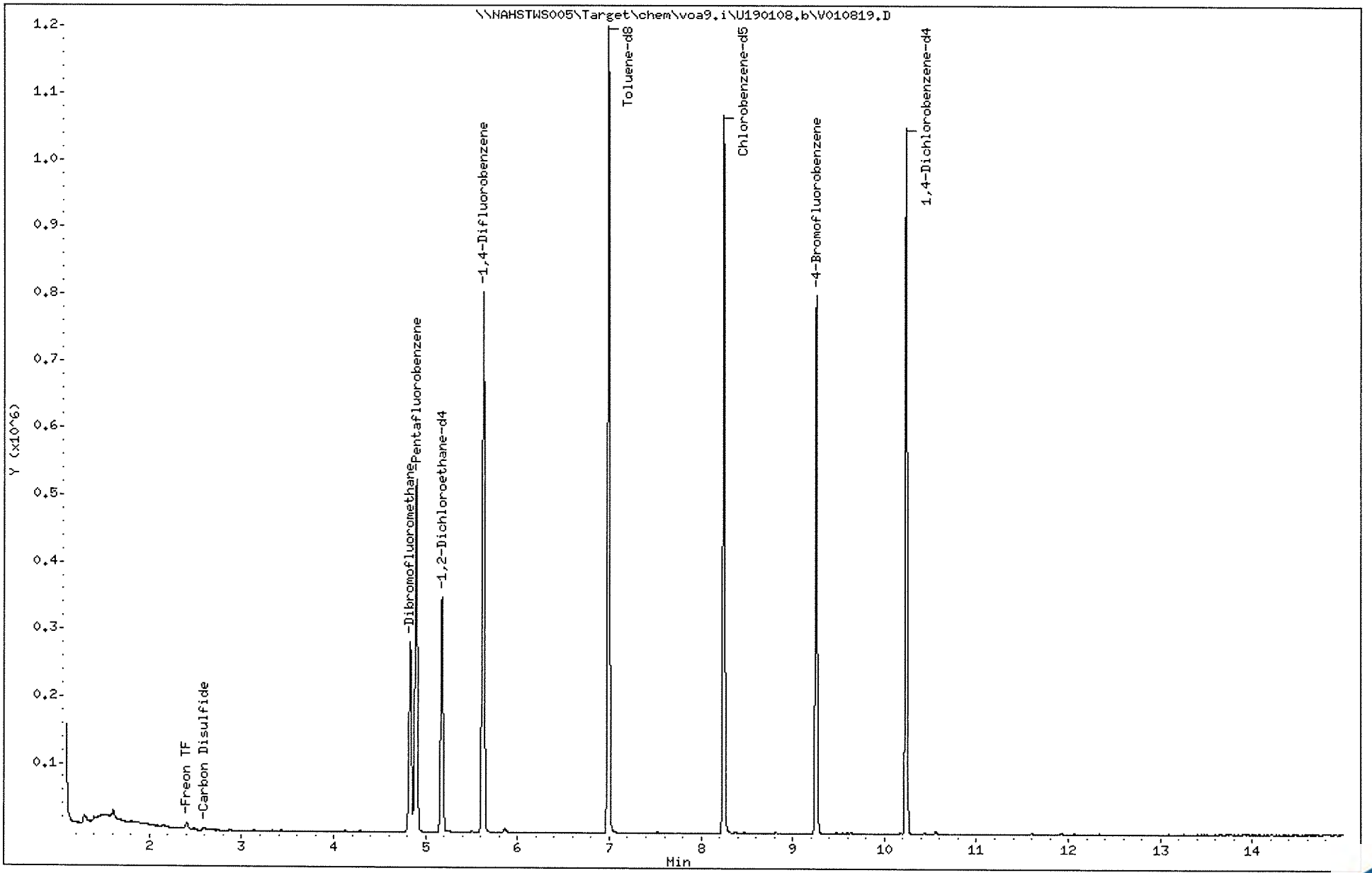
Sample Info: HS18121523-03;HS18121523-03;;;

Purge Volume: 5.0

Operator: PC

Column phase: DB624

Column diameter: 0.18



Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\V010819.D

Date : 09-JAN-2019 00:03

Client ID: HS18121523-03

Instrument: VOA9.i

Sample Info: HS18121523-03;HS18121523-03;;;

Purge Volume: 5.0

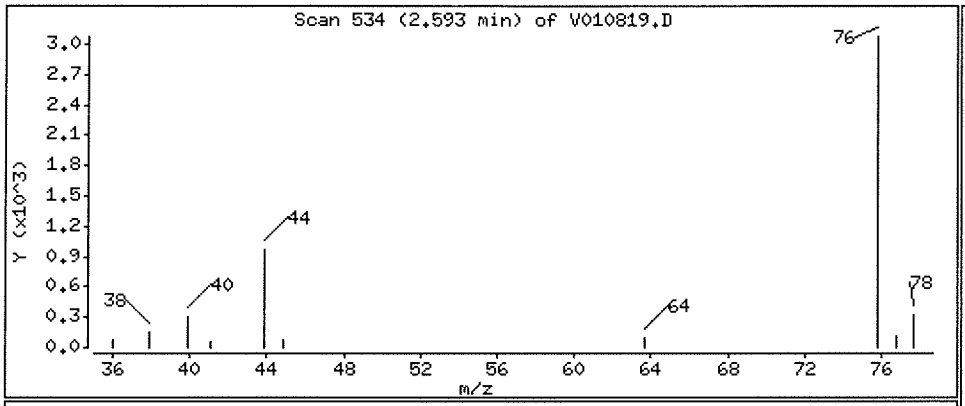
Operator: PC

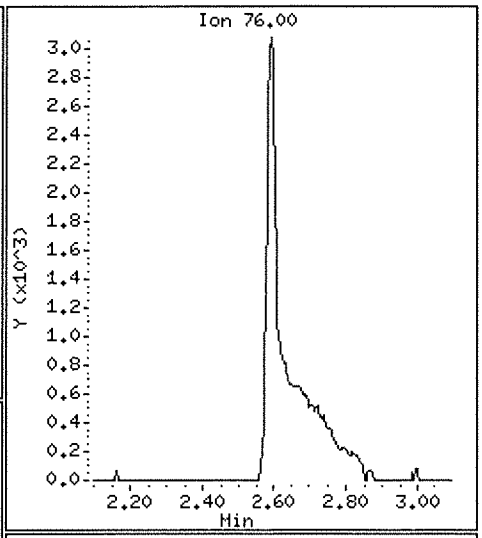
Column phase: DB624

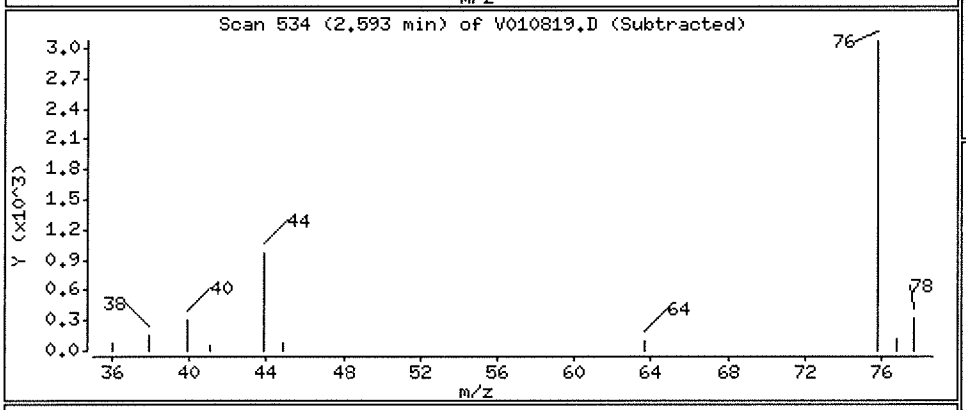
Column diameter: 0.18

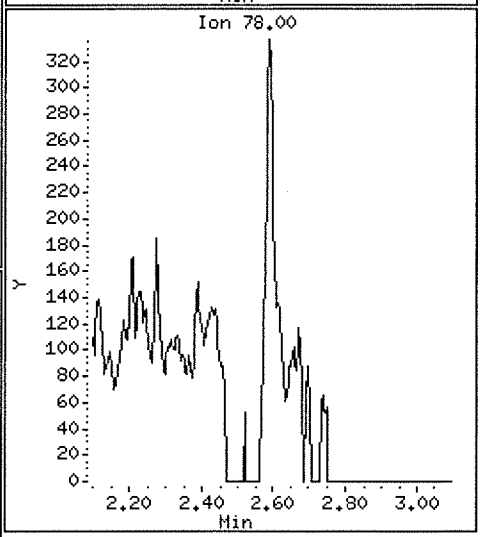
19 Carbon Disulfide

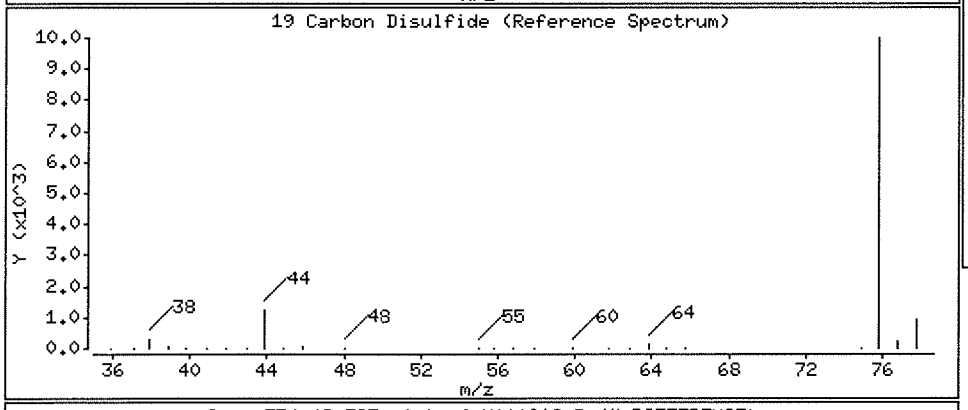
Concentration: 1.08 ug/l

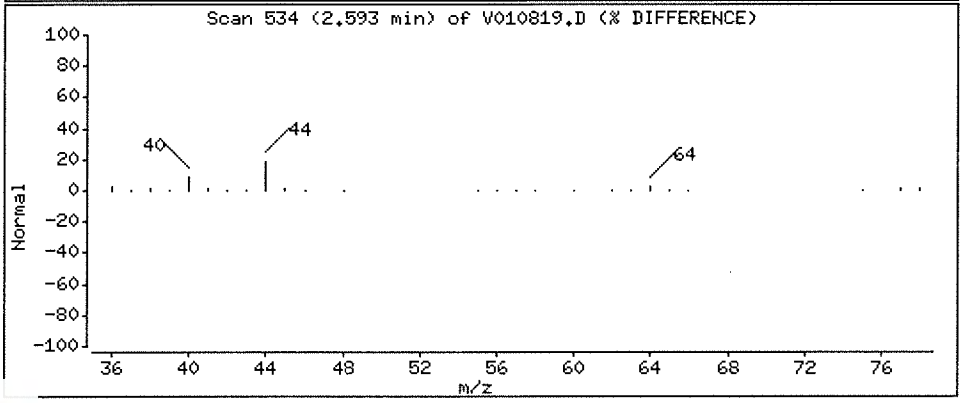












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Data file : \\NAHSTWS005\Target\chem\voa9.i\U190108.b\V010820.D
Lab Smp Id: HS18121523-04 Client Smp ID: HS18121523-04
Inj Date : 09-JAN-2019 00:28
Operator : PC Inst ID: VOA9.i
Smp Info : HS18121523-04;HS18121523-04;;;
Misc Info : 180315V9;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa9.i\U190108.b\8260C.m
Meth Date : 01-Feb-2019 16:53 hvan Quant Type: ISTD
Cal Date : 08-JAN-2019 14:59 Cal File: U010811.D
Als bottle: 34
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAPb.sub
Target Version: 4.14
Processing Host: NAHSTW7087

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	4.890	4.898	(1.000)	293801	50.0000	
* 36 1,4-Difluorobenzene	114	5.621	5.625	(1.000)	531984	50.0000	
* 47 Chlorobenzene-d5	117	8.249	8.249	(1.000)	482430	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	216918	50.0000	
$ 30 Dibromofluoromethane	113	4.826	4.830	(0.987)	153559	46.1802	46.18
$ 35 1,2-Dichloroethane-d4	65	5.171	5.175	(1.057)	211105	48.6772	48.67
$ 48 Toluene-d8	98	6.989	6.989	(0.847)	650976	52.0155	52.01
$ 69 4-Bromofluorobenzene	95	9.257	9.257	(1.122)	237673	50.2186	50.21

00931001

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\V010820.D

Date : 09-JAN-2019 00:28

Client ID: HS18121523-04

Sample Info: HS18121523-04;HS18121523-04;;;

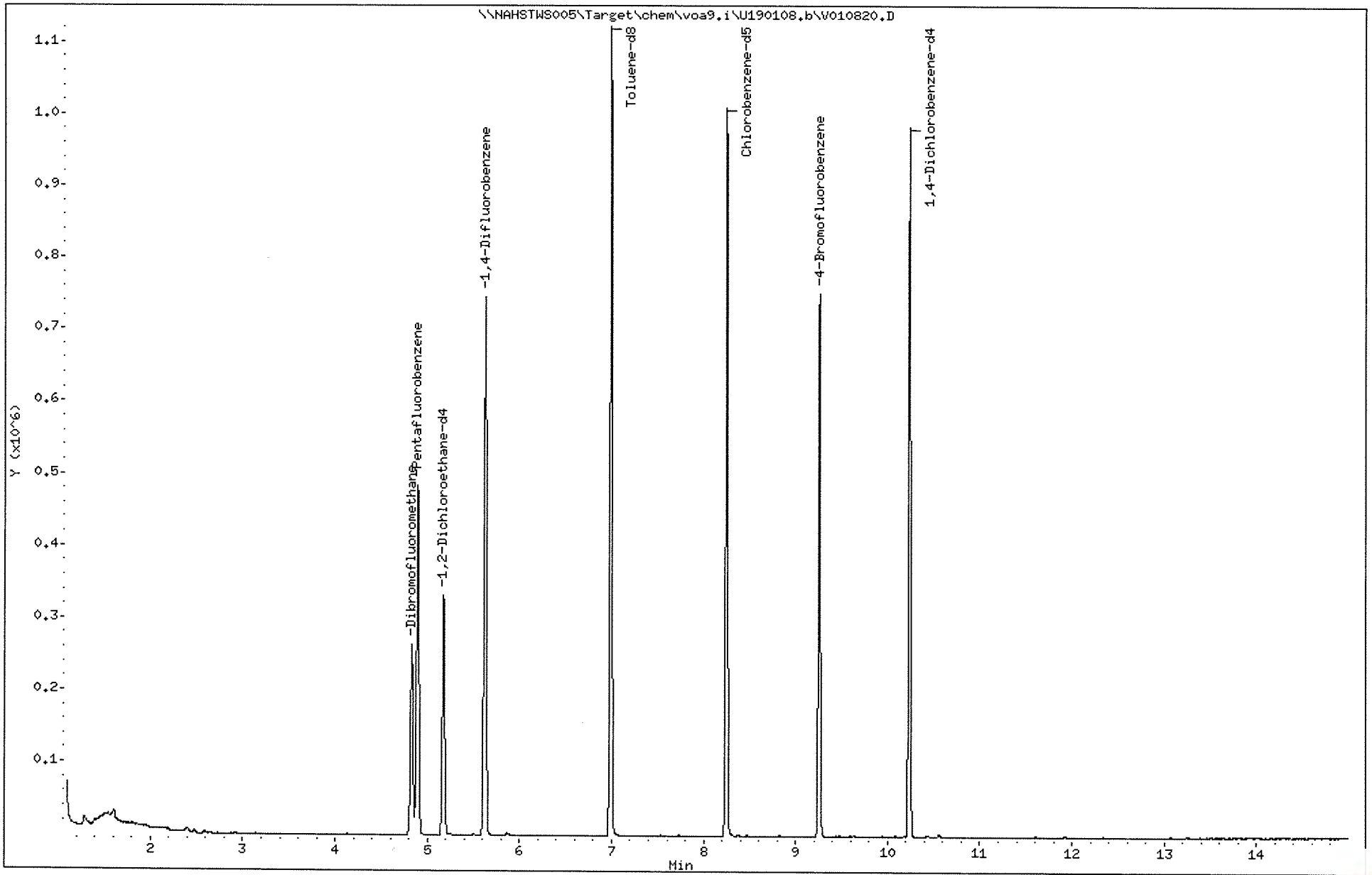
Purge Volume: 5.0

Column phase: DB624

Instrument: VOA9.i

Operator: PC

Column diameter: 0.18



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Data file : \\NAHSTWS005\Target\chem\voa9.i\U190108.b\V010821.D
Lab Smp Id: HS18121523-05 Client Smp ID: HS18121523-05
Inj Date : 09-JAN-2019 00:53
Operator : PC Inst ID: VOA9.i
Smp Info : HS18121523-05;HS18121523-05;;;
Misc Info : 180315V9;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa9.i\U190108.b\8260C.m
Meth Date : 01-Feb-2019 16:53 hvan Quant Type: ISTD
Cal Date : 08-JAN-2019 14:59 Cal File: U010811.D
Als bottle: 35
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAPb.sub
Target Version: 4.14
Processing Host: NAHSTW7087

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	4.898	4.898	(1.000)	294678	50.0000	
*	36 1,4-Difluorobenzene	114	5.625	5.625	(1.000)	522907	50.0000	
*	47 Chlorobenzene-d5	117	8.249	8.249	(1.000)	473728	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	214757	50.0000	
$	30 Dibromofluoromethane	113	4.834	4.830	(0.987)	154585	46.3569	46.35
$	35 1,2-Dichloroethane-d4	65	5.175	5.175	(1.057)	208180	47.8224	47.82
$	48 Toluene-d8	98	6.989	6.989	(0.847)	644405	52.4562	52.45
$	69 4-Bromofluorobenzene	95	9.257	9.257	(1.122)	228212	49.0639	49.06

00931003

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\V010821.D

Date : 09-JAN-2019 00:53

Client ID: HS18121523-05

Instrument: VOA9.i

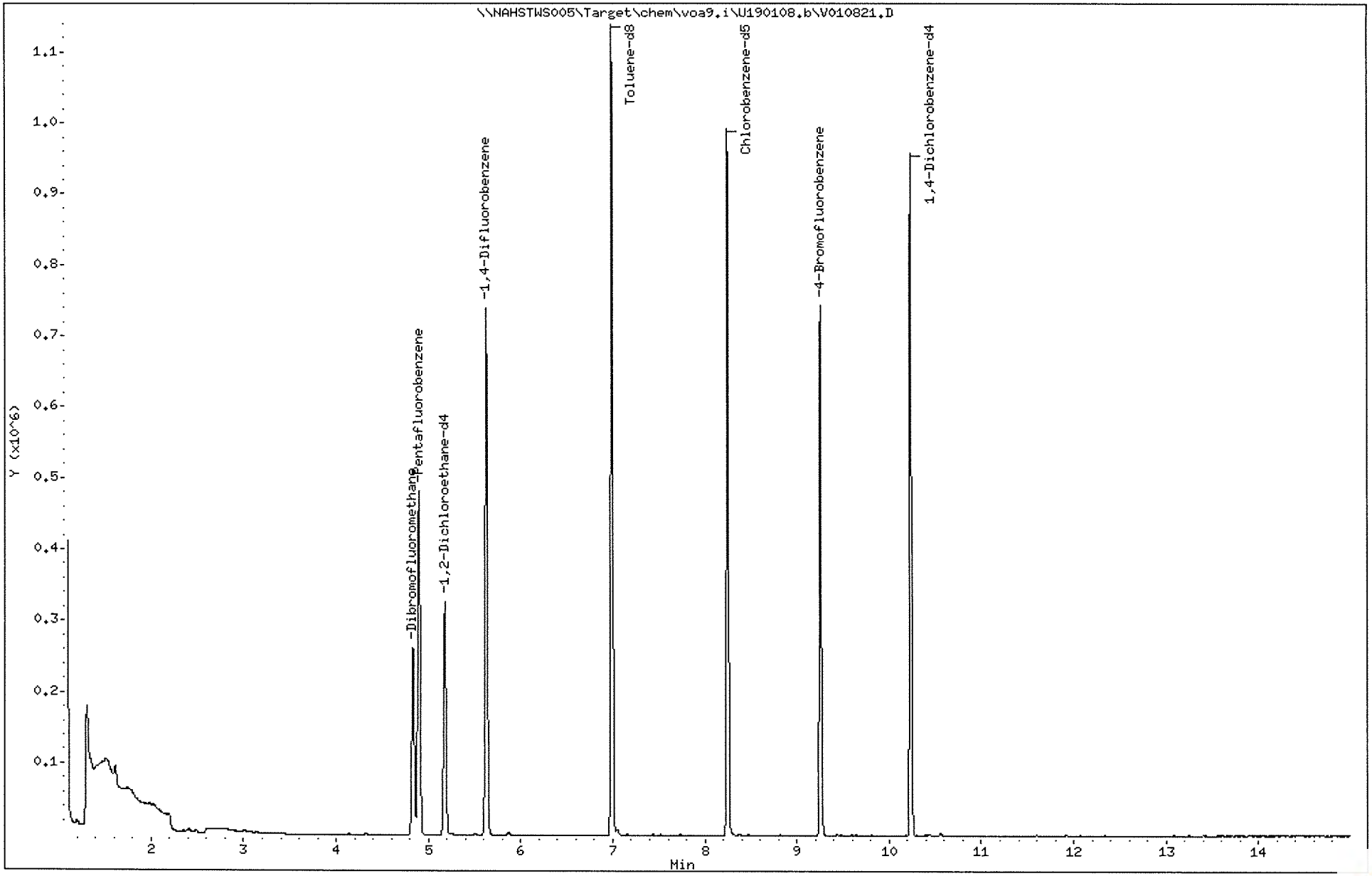
Sample Info: HS18121523-05;HS18121523-05;;;

Purge Volume: 5.0

Operator: PC

Column phase: DB624

Column diameter: 0.18



ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U190108.b\V010822.D
Lab Smp Id: HS18121523-02 Client Smp ID: HS18121523-02
Inj Date : 09-JAN-2019 01:17
Operator : PC Inst ID: VOA9.i
Smp Info : HS18121523-02;HS18121523-02;;;
Misc Info : 180315V9;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa9.i\U190108.b\8260C.m
Meth Date : 01-Feb-2019 16:53 hvan Quant Type: ISTD
Cal Date : 08-JAN-2019 14:59 Cal File: U010811.D
Als bottle: 36
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAPb.sub
Target Version: 4.14
Processing Host: NAHSTW7087

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	4.894	4.898	(1.000)	310238	50.0000	
* 36 1,4-Difluorobenzene	114	5.625	5.625	(1.000)	558513	50.0000	
* 47 Chlorobenzene-d5	117	8.249	8.249	(1.000)	509189	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	231619	50.0000	
$ 30 Dibromofluoromethane	113	4.830	4.830	(0.987)	163295	46.5187	46.51
$ 35 1,2-Dichloroethane-d4	65	5.175	5.175	(1.057)	222930	48.6805	48.68
$ 48 Toluene-d8	98	6.989	6.989	(0.847)	691577	52.3717	52.37
$ 69 4-Bromofluorobenzene	95	9.257	9.257	(1.122)	248590	49.7481	49.74
27 cis-1,2-Dichloroethene	96	4.287	4.290	(0.876)	124252	29.2818	29.28
38 Trichloroethene	130	5.861	5.861	(1.042)	63061	17.7343	17.73

00931005

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\V010822.D

Date : 09-JAN-2019 01:17

Client ID: HS18121523-02

Sample Info: HS18121523-02;HS18121523-02;;;

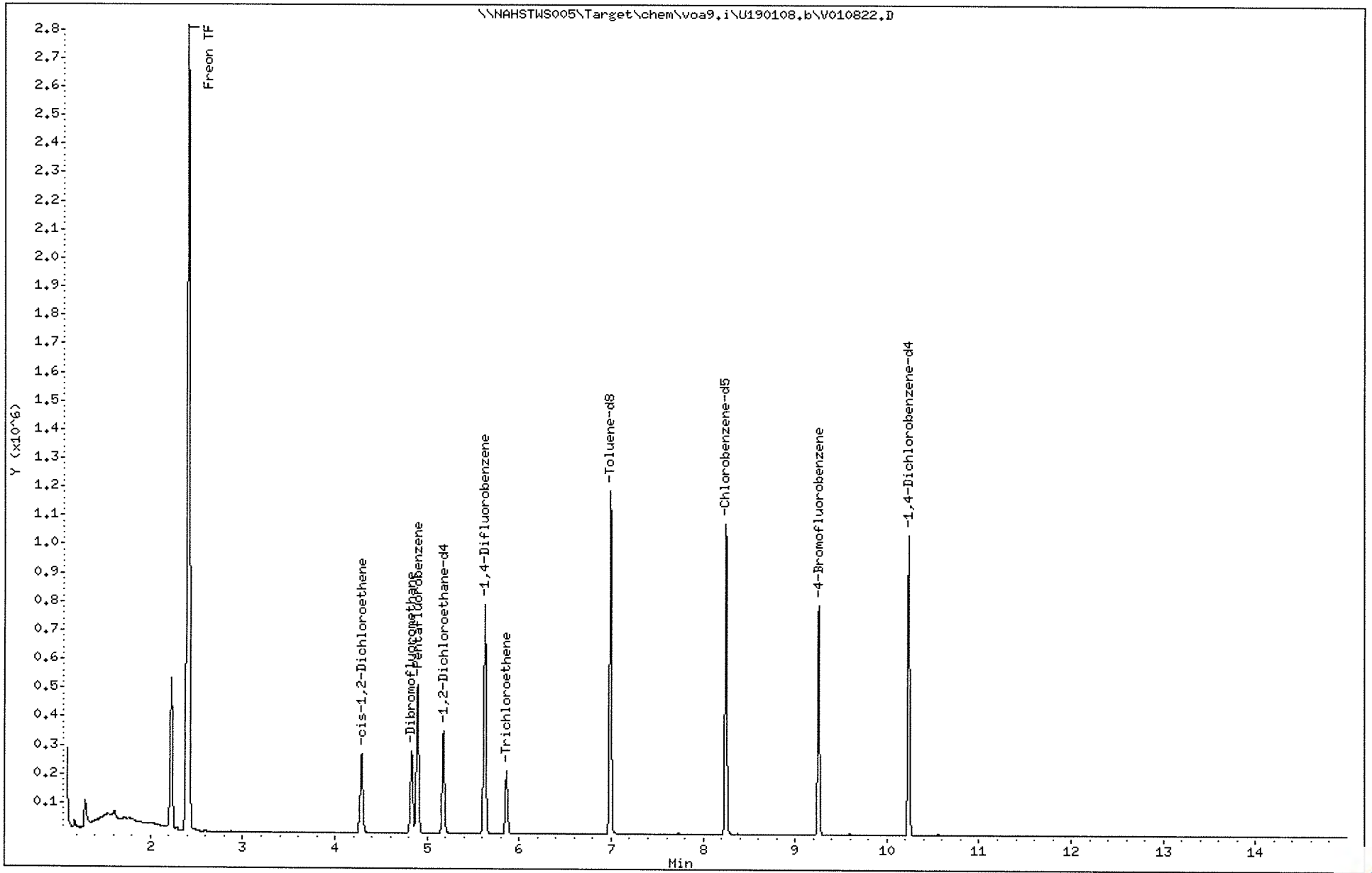
Purge Volume: 5.0

Column phase: DB624

Instrument: VOA9.i

Operator: PC

Column diameter: 0.18



Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\V010822.D

Date : 09-JAN-2019 01:17

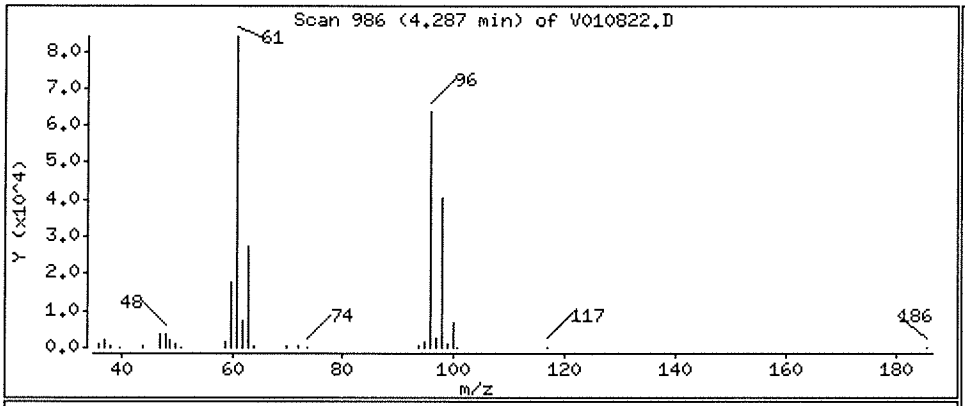
Client ID: HS18121523-02 Instrument: VOA9.i

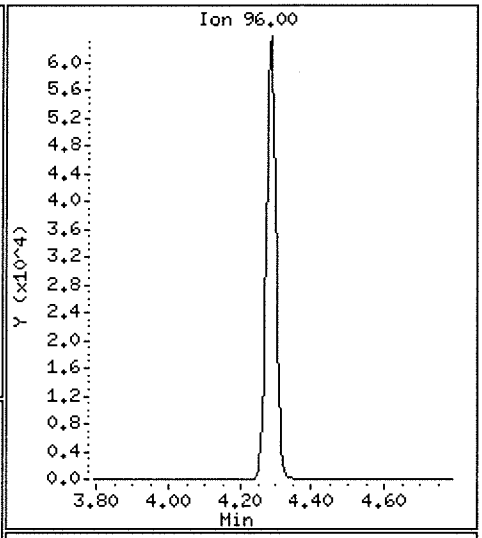
Sample Info: HS18121523-02;HS18121523-02;;;

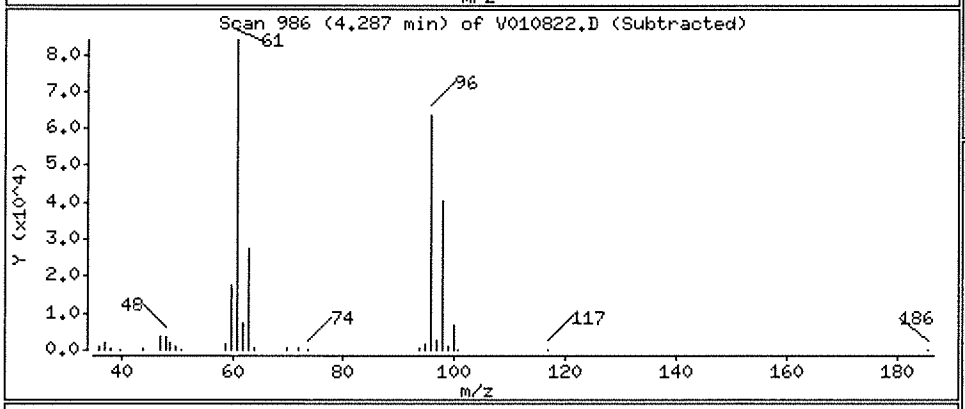
Purge Volume: 5.0 Operator: PC

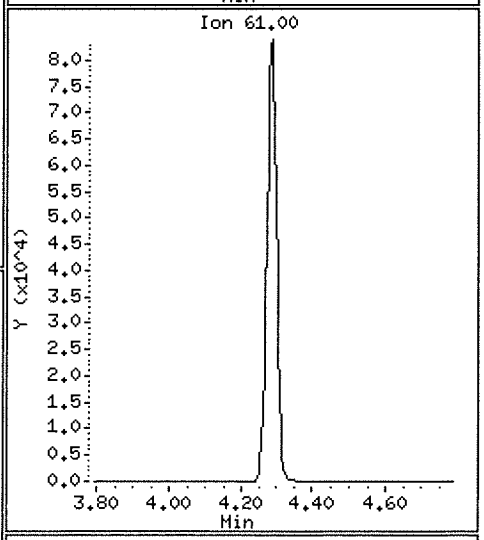
Column phase: DB624 Column diameter: 0.18

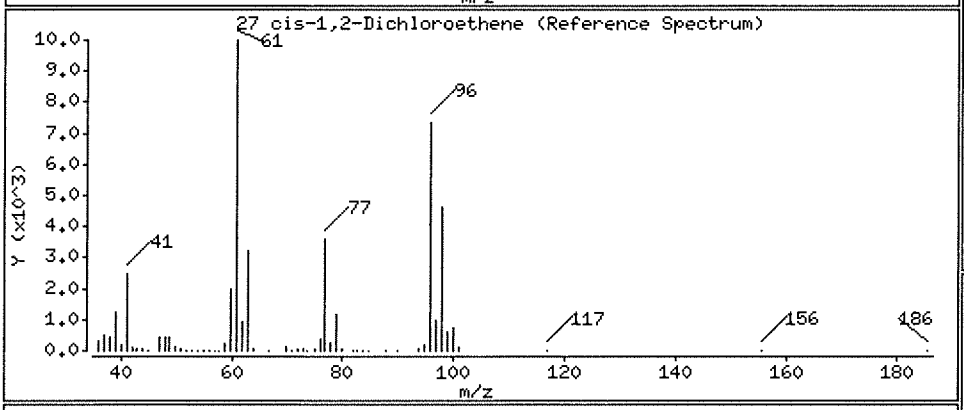
27 cis-1,2-Dichloroethene Concentration: 29.28 ug/l

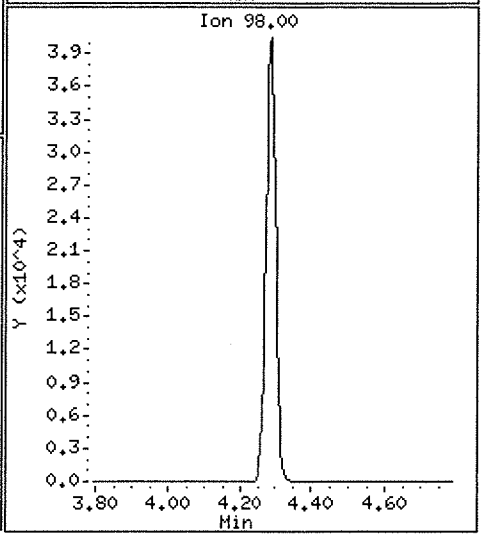


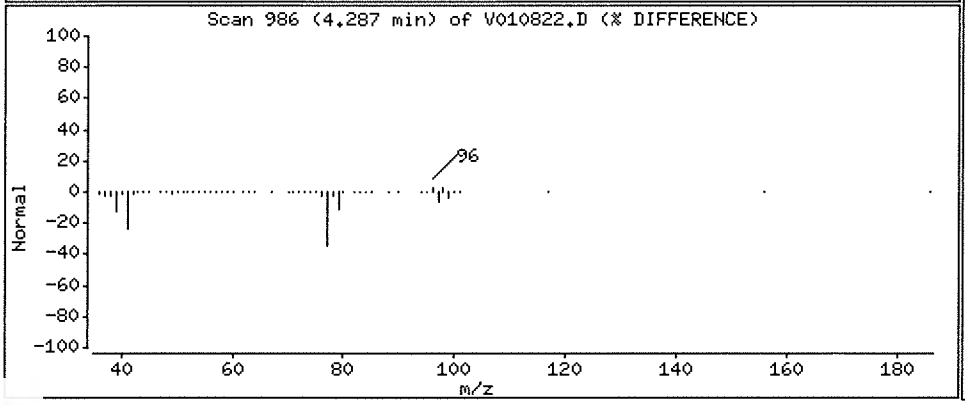












Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\V010822.D Page 4

Date : 09-JAN-2019 01:17

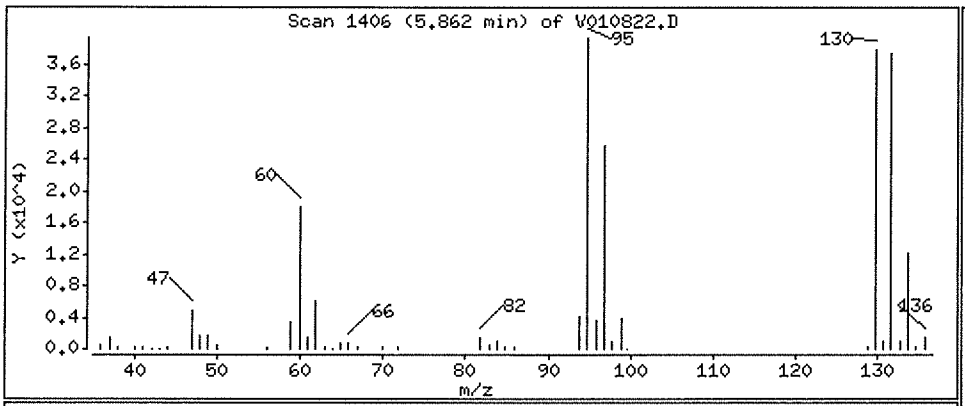
Client ID: HS18121523-02 Instrument: VOA9.i

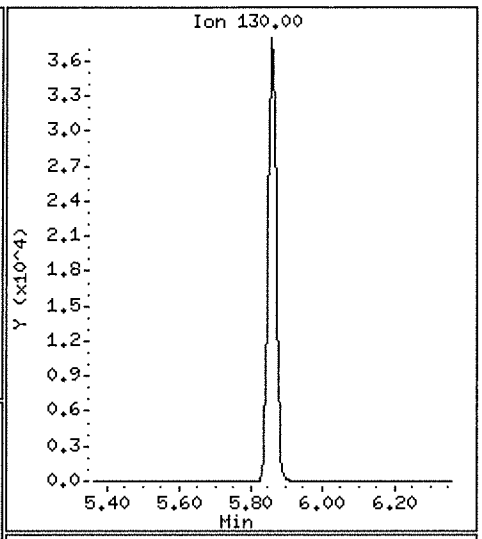
Sample Info: HS18121523-02;HS18121523-02;;;

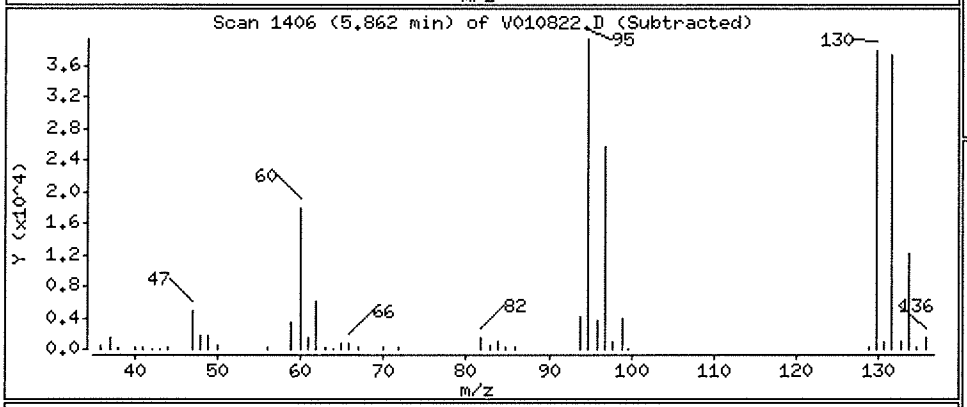
Purge Volume: 5.0 Operator: PC

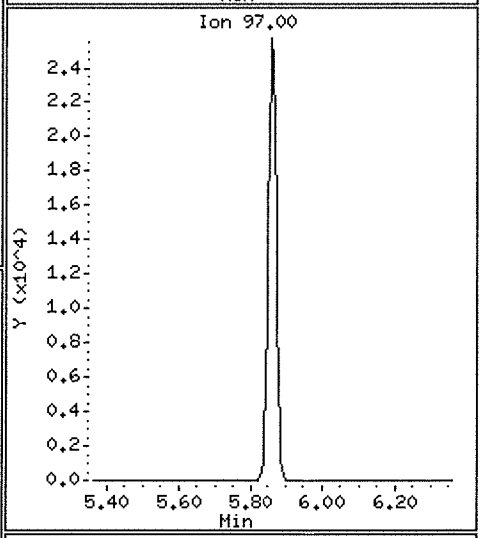
Column phase: DB624 Column diameter: 0.18

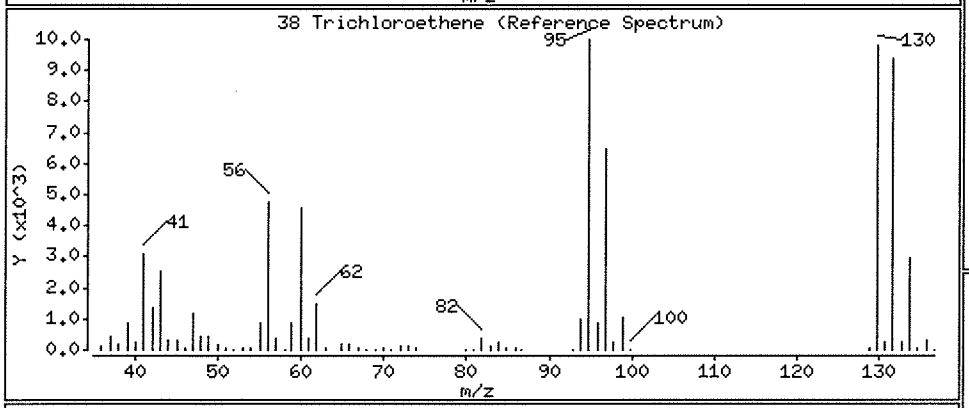
38 Trichloroethene Concentration: 17.73 ug/l

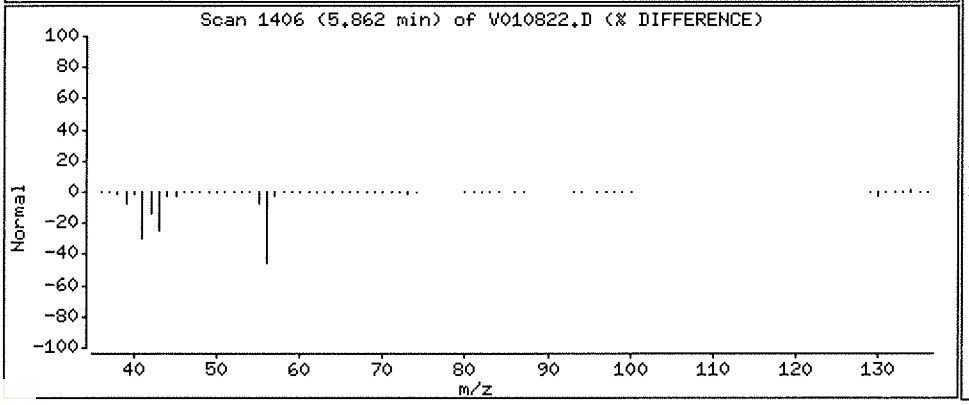


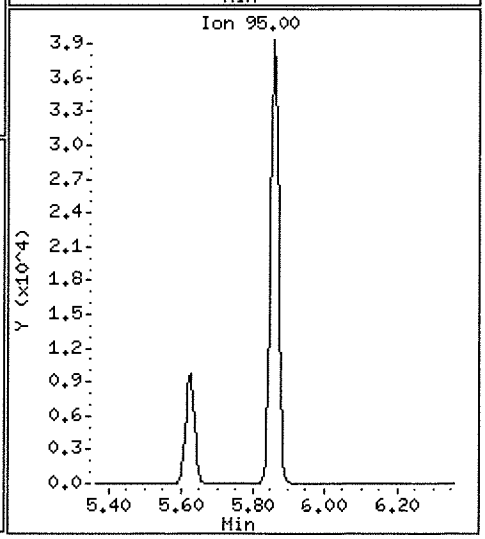












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Data file : \\NAHSTWS005\Target\chem\voa9.i\U190108.b\V010823.D
Lab Smp Id: HS18121523-06 Client Smp ID: HS18121523-06
Inj Date : 09-JAN-2019 01:42
Operator : PC Inst ID: VOA9.i
Smp Info : HS18121523-06;HS18121523-06;;;
Misc Info : 180315V9;WATER;0;5;
Comment :
Method : \\NAHSTWS005\Target\chem\voa9.i\U190108.b\8260C.m
Meth Date : 01-Feb-2019 16:53 hvan Quant Type: ISTD
Cal Date : 08-JAN-2019 14:59 Cal File: U010811.D
Als bottle: 37
Dil Factor: 5.00000
Integrator: HP RTE Compound Sublist: LHAAPb.sub
Target Version: 4.14
Processing Host: NAHSTW7087

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	5.000	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	4.894	4.898	(1.000)	306506	50.0000	
* 36 1,4-Difluorobenzene	114	5.625	5.625	(1.000)	555830	50.0000	
* 47 Chlorobenzene-d5	117	8.249	8.249	(1.000)	502802	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	226595	50.0000	
$ 30 Dibromofluoromethane	113	4.830	4.830	(0.987)	162165	46.7683	46.76
$ 35 1,2-Dichloroethane-d4	65	5.175	5.175	(1.057)	222424	49.1834	49.18
$ 48 Toluene-d8	98	6.990	6.989	(0.847)	687909	52.7737	52.77
$ 69 4-Bromofluorobenzene	95	9.257	9.257	(1.122)	244652	49.5757	49.57
27 cis-1,2-Dichloroethene	96	4.290	4.290	(0.877)	2763	0.65907	3.29(a)
38 Trichloroethene	130	5.865	5.861	(1.043)	7885	2.22815	11.14(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

00931009

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\V010823.D

Date : 09-JAN-2019 01:42

Client ID: HS18121523-06

Instrument: VOA9.i

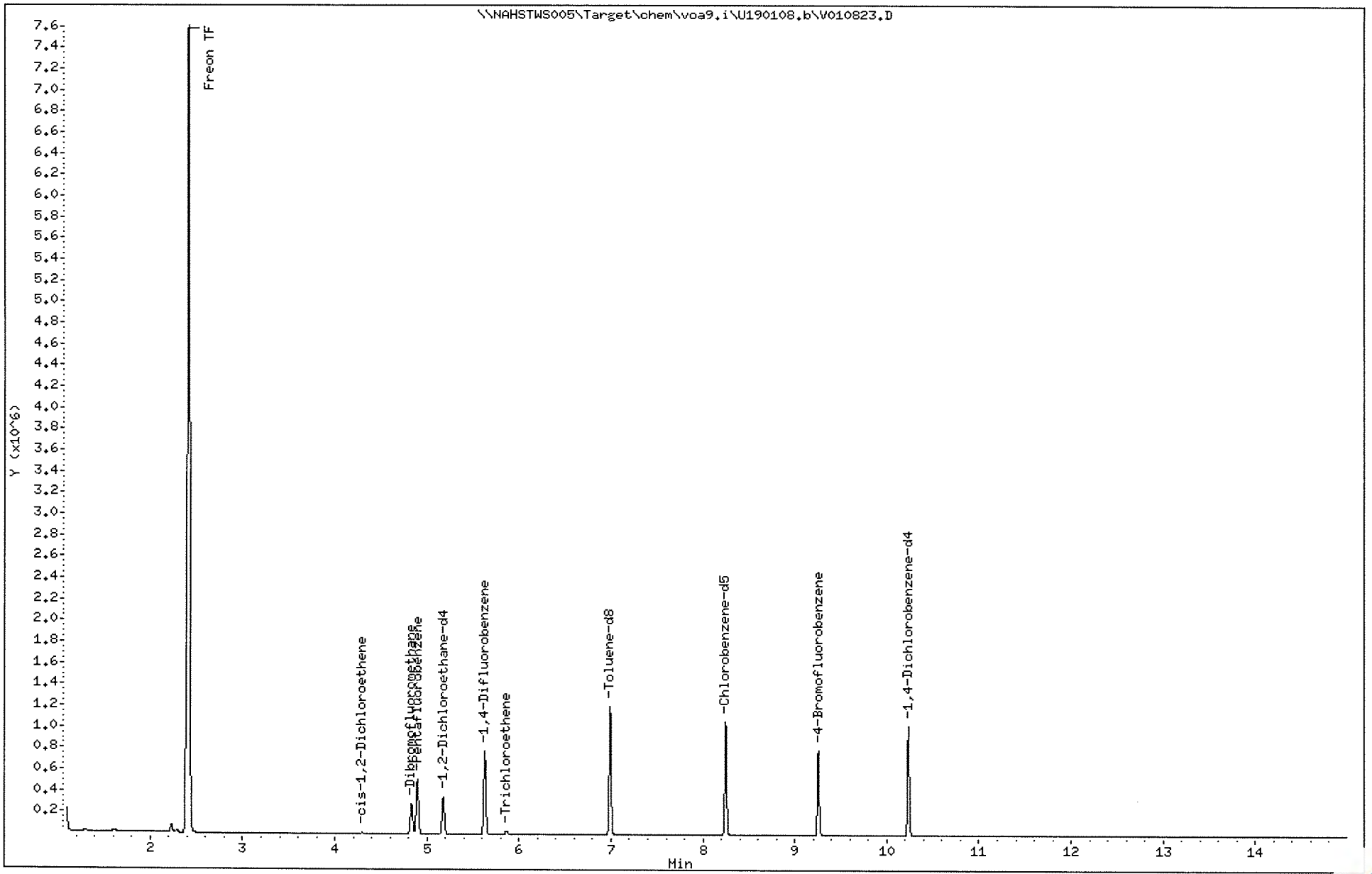
Sample Info: HS18121523-06;HS18121523-06;;;

Purge Volume: 5.0

Operator: PC

Column phase: DB624

Column diameter: 0.18



Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\V010823.D

Date : 09-JAN-2019 01:42

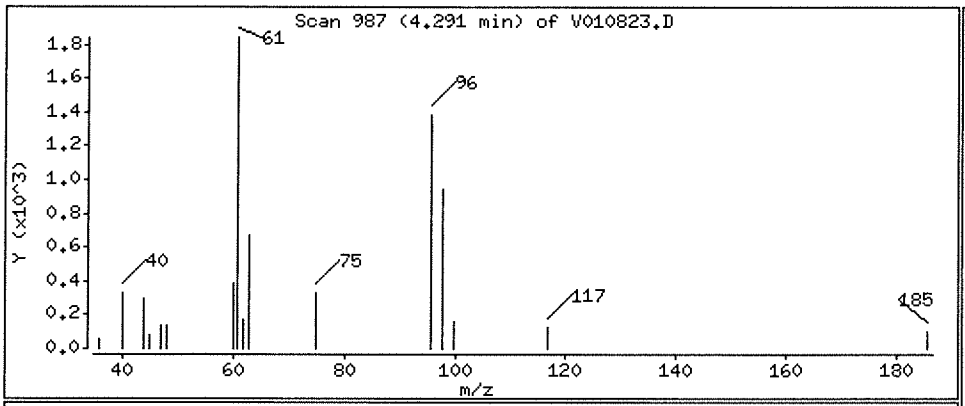
Client ID: HS18121523-06 Instrument: VOA9.i

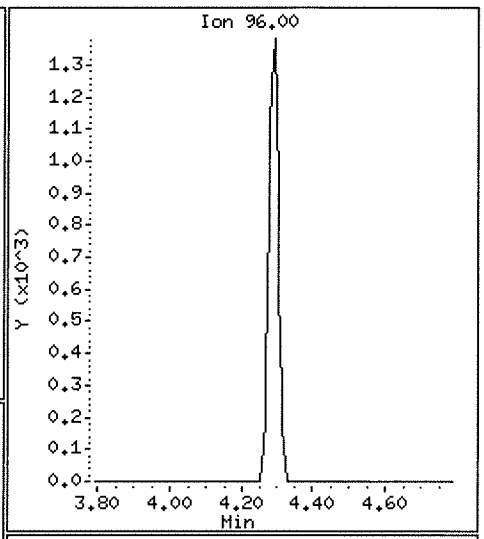
Sample Info: HS18121523-06;HS18121523-06;;;

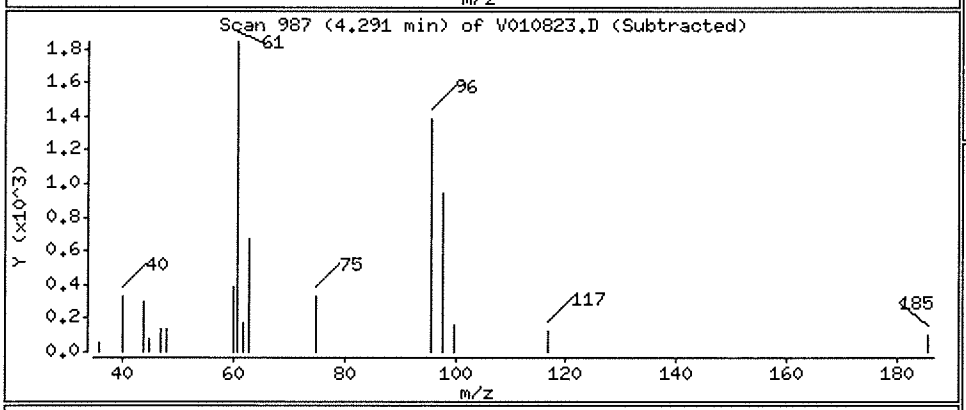
Purge Volume: 5.0 Operator: PC

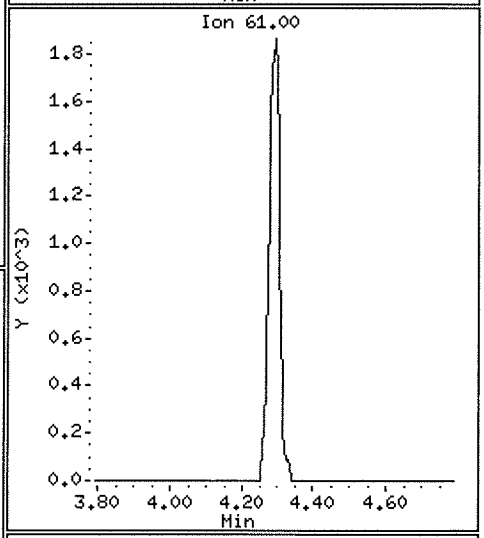
Column phase: DB624 Column diameter: 0.18

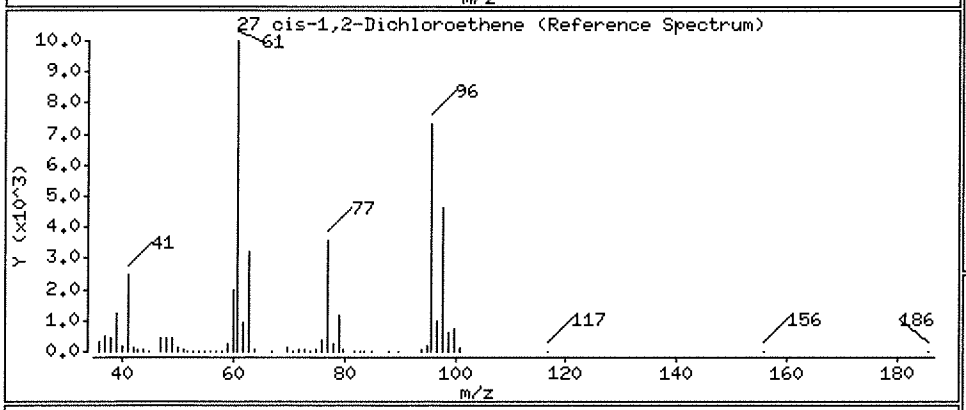
27 cis-1,2-Dichloroethene Concentration: 3.29 ug/l

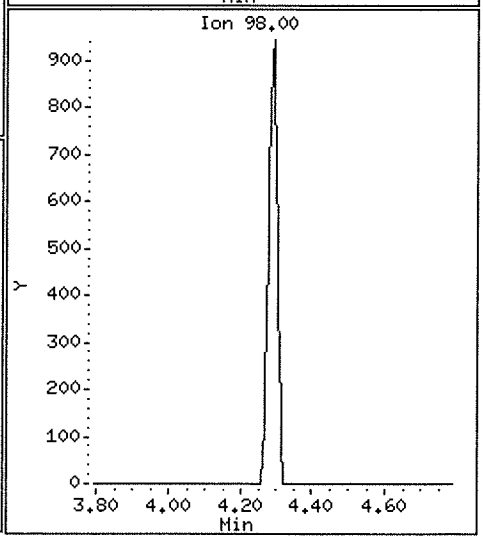


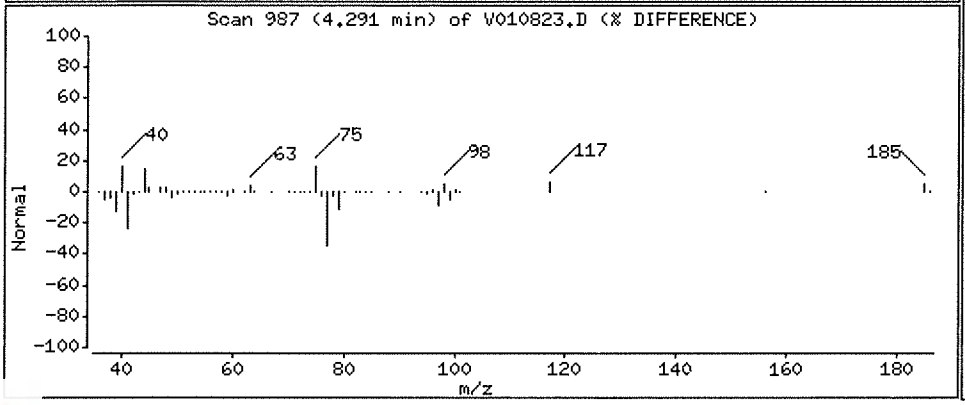












Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\V010823.D

Date : 09-JAN-2019 01:42

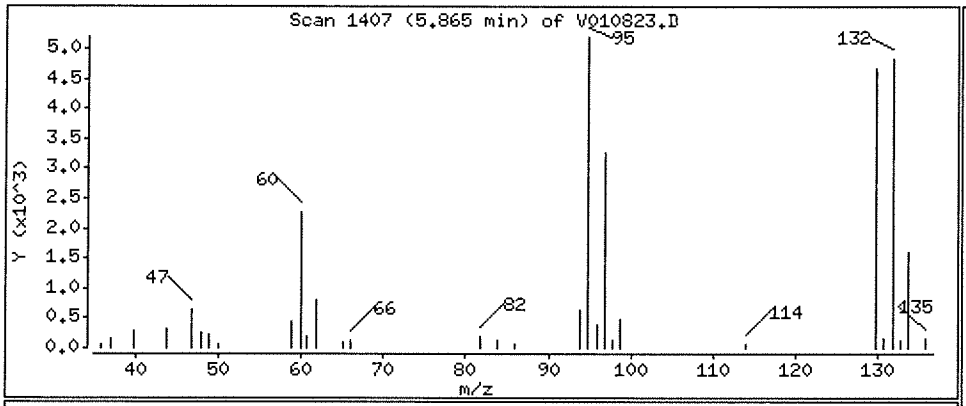
Client ID: HS18121523-06 Instrument: VOA9.i

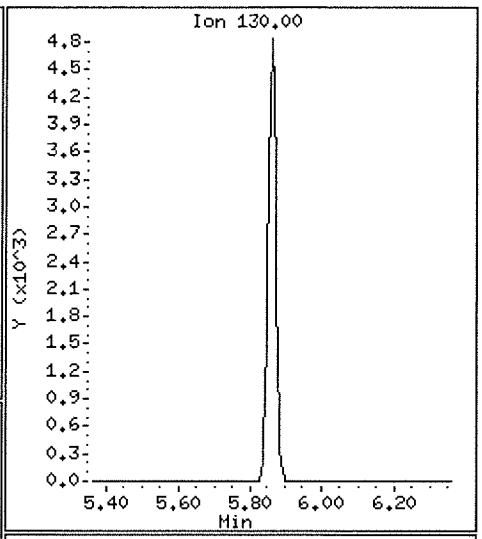
Sample Info: HS18121523-06;HS18121523-06;;;

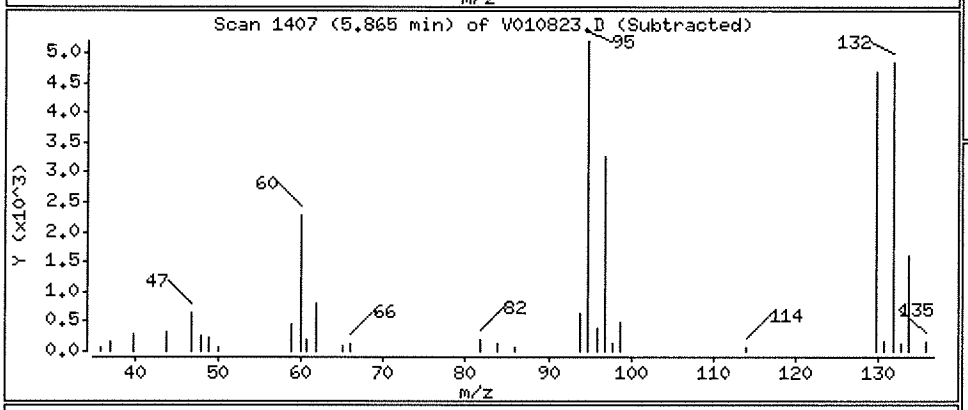
Purge Volume: 5.0 Operator: PC

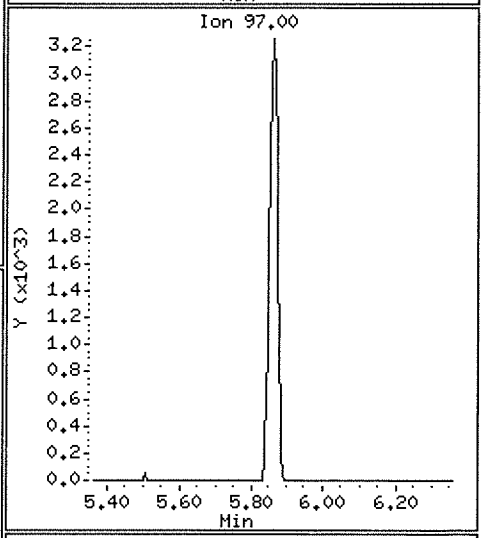
Column phase: DB624 Column diameter: 0.18

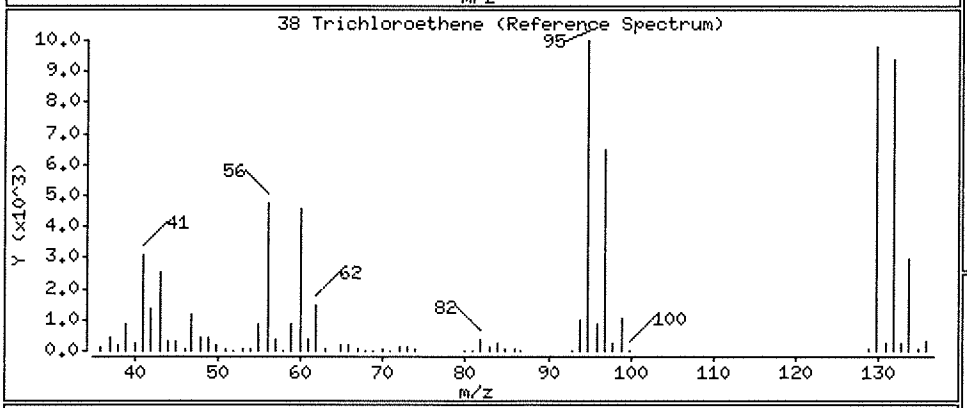
38 Trichloroethene Concentration: 11.14 ug/l

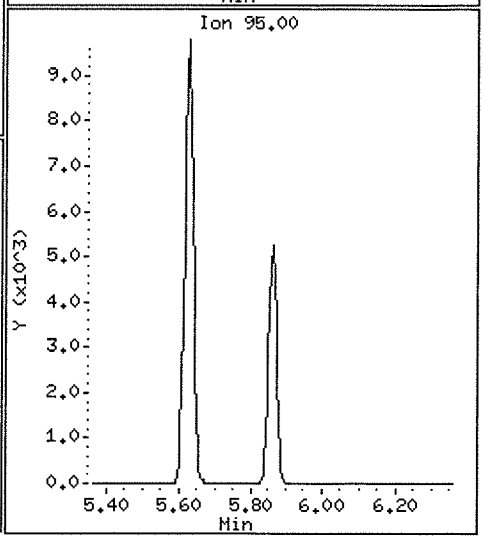


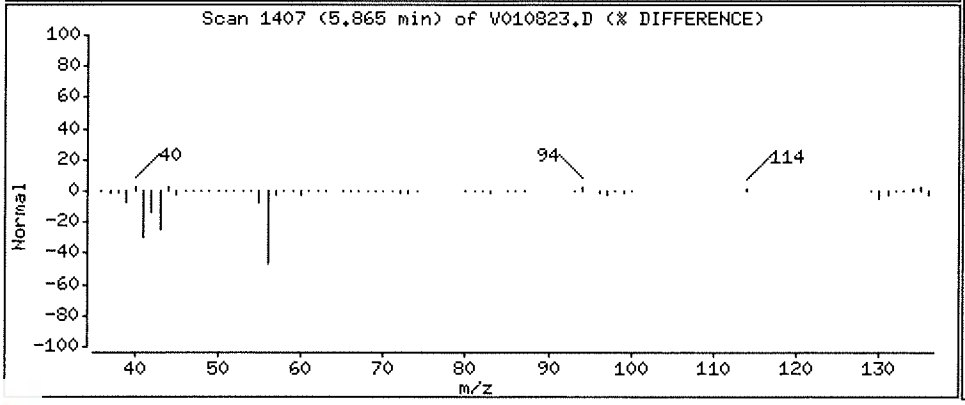












Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\V010824.D Page 1
Report Date: 01-Feb-2019 16:55

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U190108.b\V010824.D
Lab Smp Id: HS18121523-01 Client Smp ID: HS18121523-01
Inj Date : 09-JAN-2019 02:07
Operator : PC Inst ID: VOA9.i
Smp Info : HS18121523-01;HS18121523-01;;;
Misc Info : 180315V9;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa9.i\U190108.b\8260C.m
Meth Date : 01-Feb-2019 16:53 hvan Quant Type: ISTD
Cal Date : 08-JAN-2019 14:59 Cal File: U010811.D
Als bottle: 38
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAPb.sub
Target Version: 4.14
Processing Host: NAHSTW7087

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	4.898	4.898	(1.000)	330346	50.0000	
* 36 1,4-Difluorobenzene	114	5.625	5.625	(1.000)	584937	50.0000	
* 47 Chlorobenzene-d5	117	8.249	8.249	(1.000)	528251	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	240208	50.0000	
$ 30 Dibromofluoromethane	113	4.834	4.830	(0.987)	169889	45.4110	45.41
$ 35 1,2-Dichloroethane-d4	65	5.175	5.175	(1.057)	232881	47.7158	47.71
$ 48 Toluene-d8	98	6.990	6.989	(0.847)	718930	52.4835	52.48
$ 69 4-Bromofluorobenzene	95	9.257	9.257	(1.122)	257532	49.6752	49.67
22 1,1-Dichloroethane	63	3.608	3.608	(0.737)	6326	0.84245	0.84(a)
28 Chloroform	83	4.662	4.658	(0.952)	9739	1.36529	1.36(a)
27 cis-1,2-Dichloroethene	96	4.290	4.290	(0.876)	572659	126.741	126.74
20 trans-1,2-Dichloroethene	96	3.147	3.147	(0.643)	5716	1.41839	1.41(a)
38 Trichloroethene	130	5.865	5.861	(1.043)	1710934	459.420	459.41(A)

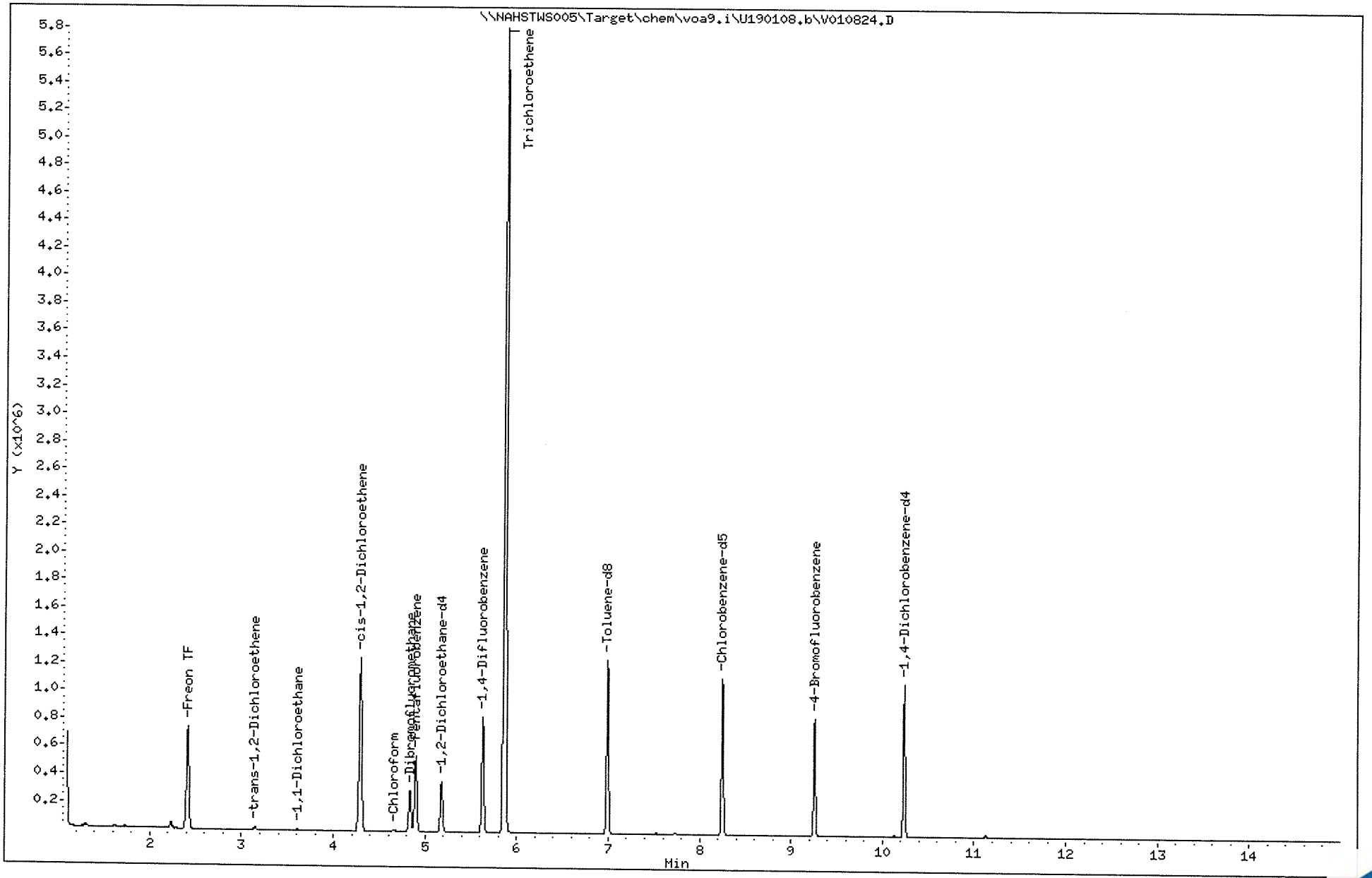
QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
A - Target compound detected but, quantitated amount
exceeded maximum amount.

00931013

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\V010824.D
Date : 09-JAN-2019 02:07
Client ID: HS18121523-01
Sample Info: HS18121523-01;HS18121523-01;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: VOA9.i
Operator: PC
Column diameter: 0.18



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Date : 09-JAN-2019 02:07

Client ID: HS18121523-01

Instrument: VOA9.i

Sample Info: HS18121523-01;HS18121523-01;;;

Purge Volume: 5.0

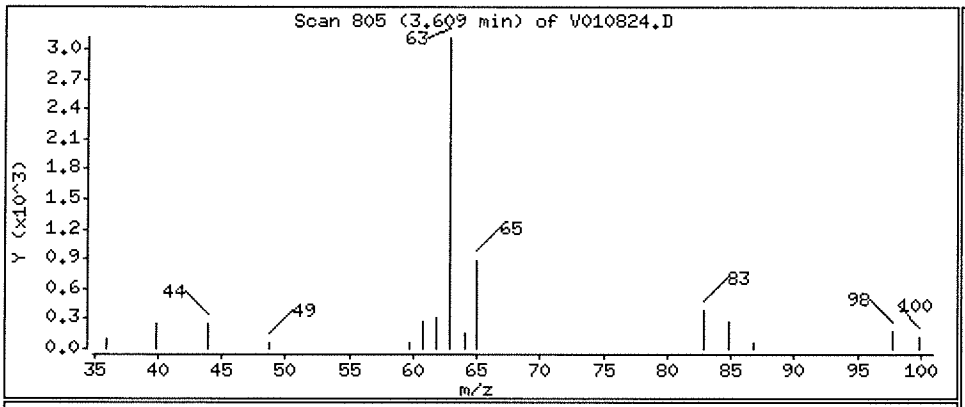
Operator: PC

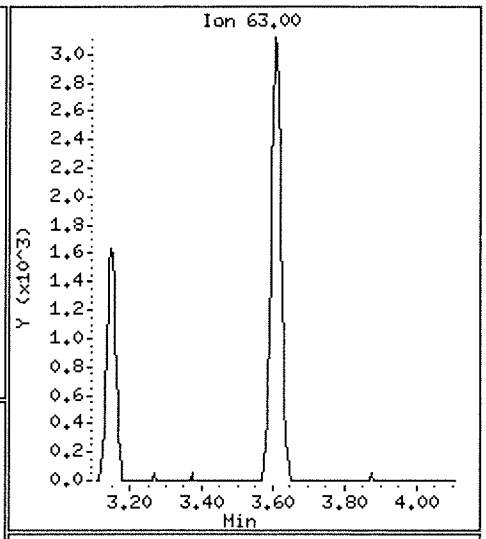
Column phase: DB624

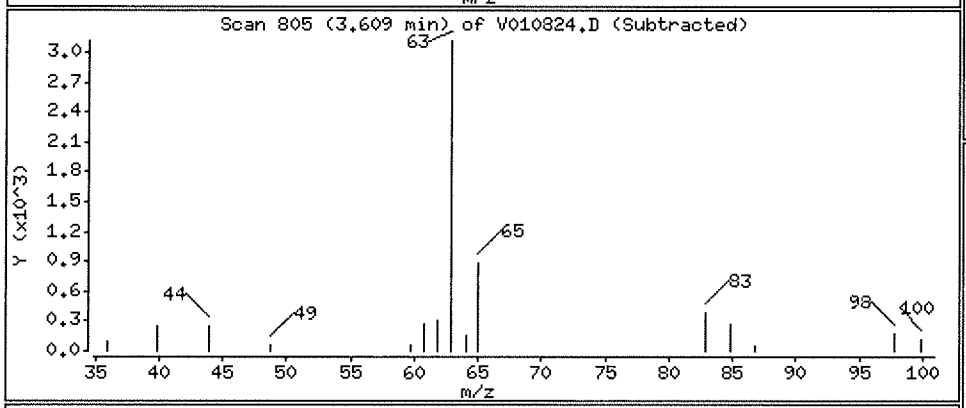
Column diameter: 0.18

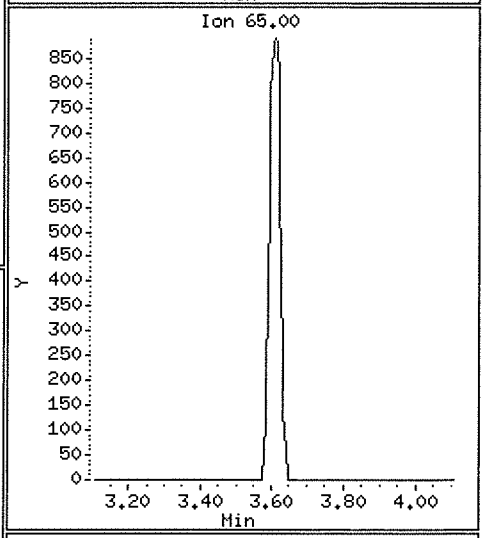
22 1,1-Dichloroethane

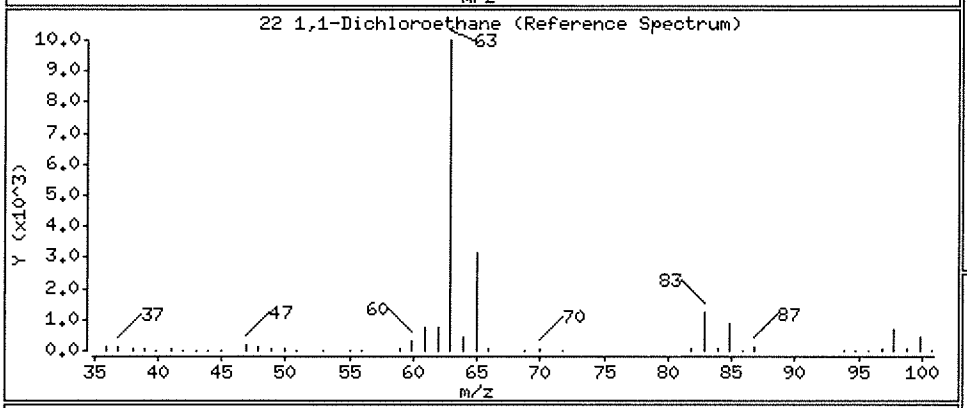
Concentration: 0.84 ug/l

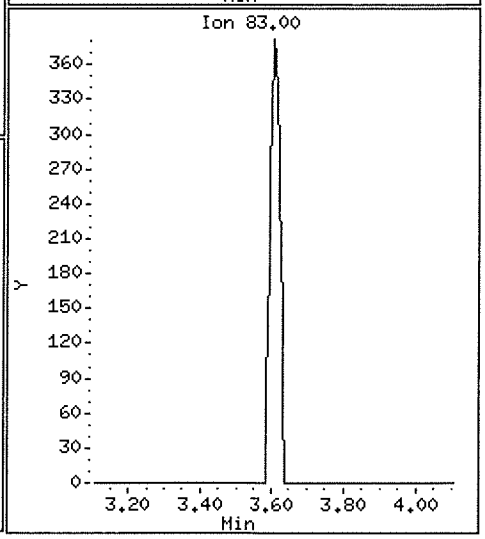


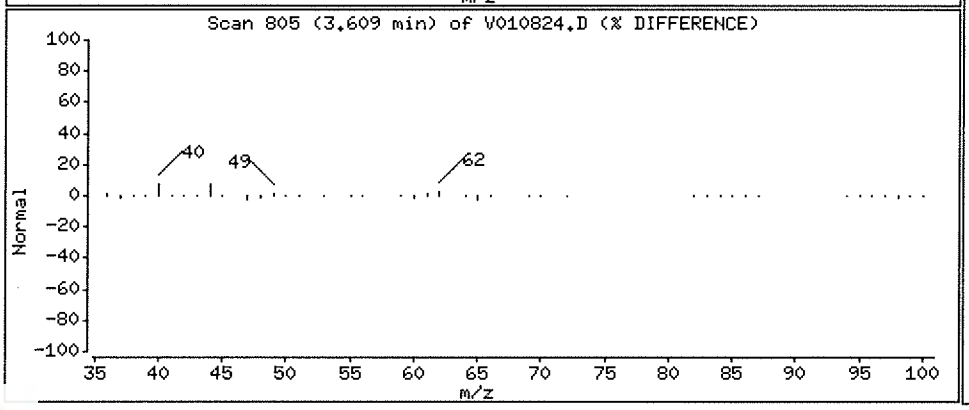












Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\V010824.D

Date : 09-JAN-2019 02:07

Client ID: HS18121523-01

Instrument: VOA9.i

Sample Info: HS18121523-01;HS18121523-01;;;

Purge Volume: 5.0

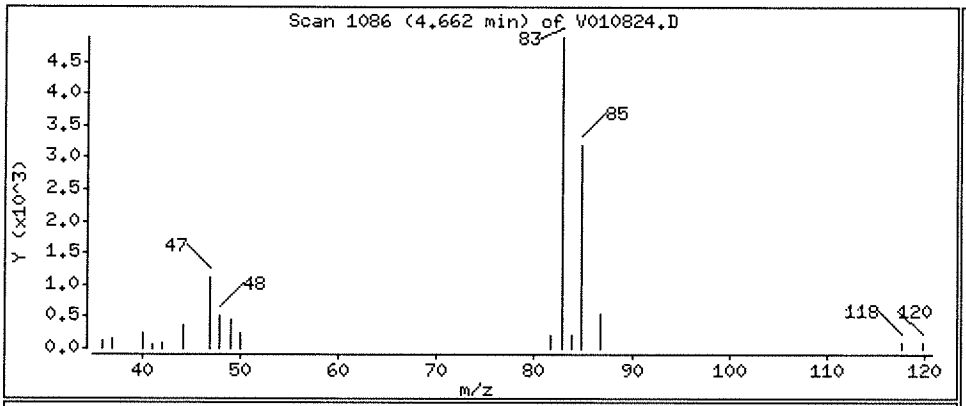
Operator: PC

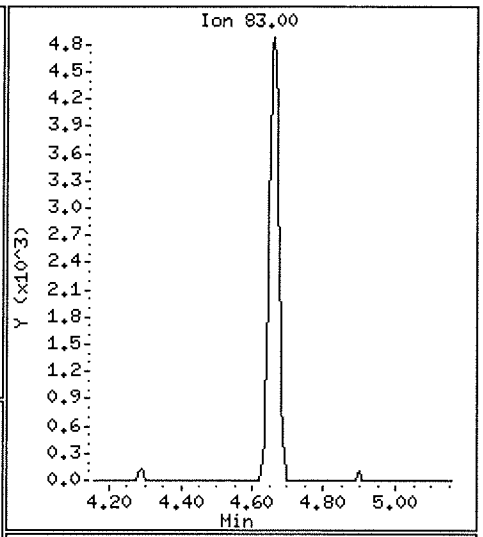
Column phase: DB624

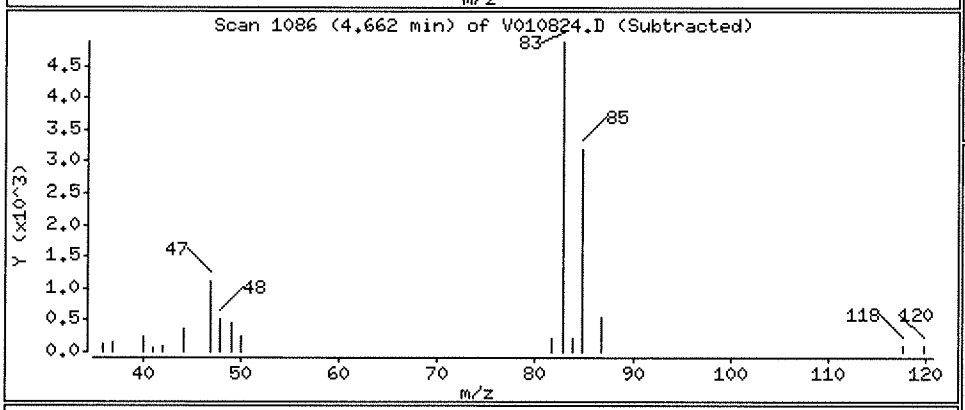
Column diameter: 0.18

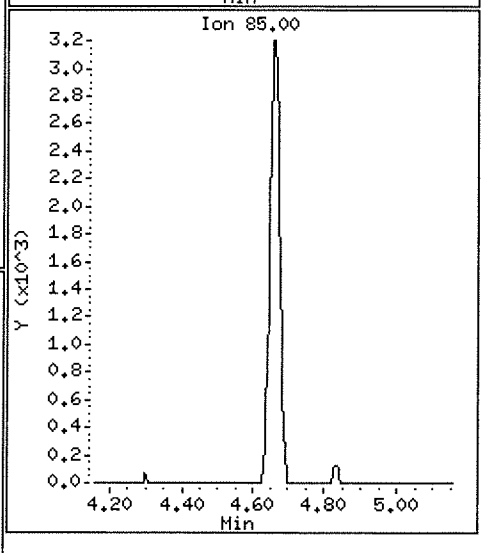
28 Chloroform

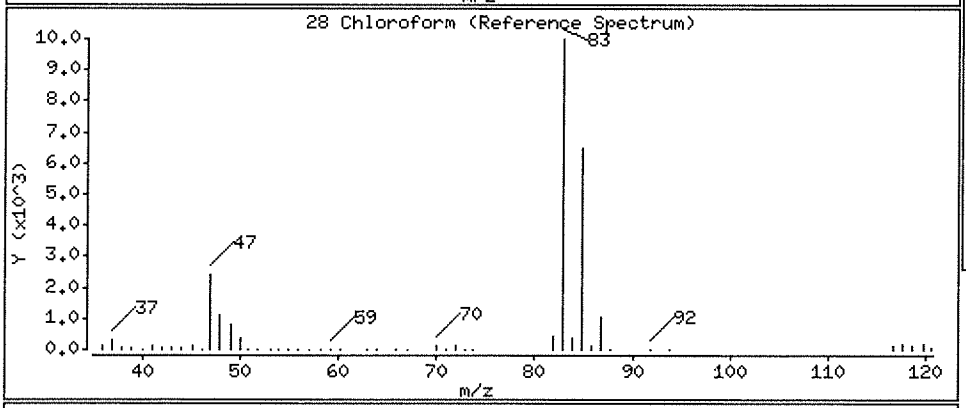
Concentration: 1.36 ug/l

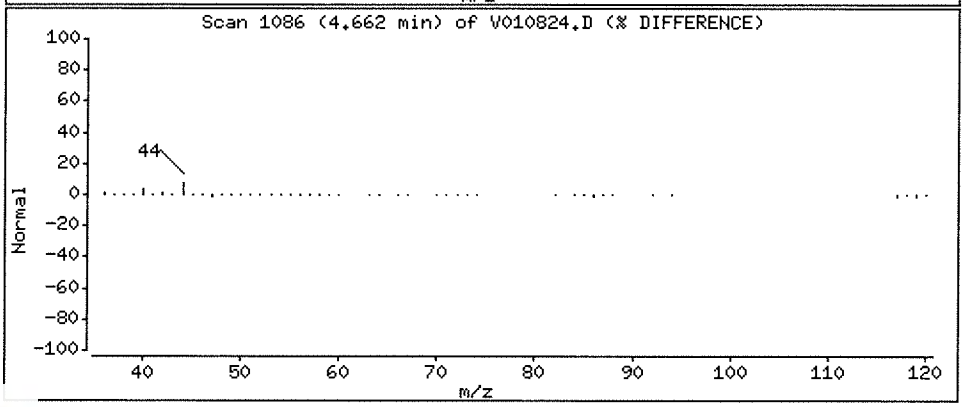












Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\V010824.D

Date : 09-JAN-2019 02:07

Client ID: HS18121523-01

Instrument: VOA9.i

Sample Info: HS18121523-01;HS18121523-01;;;

Purge Volume: 5.0

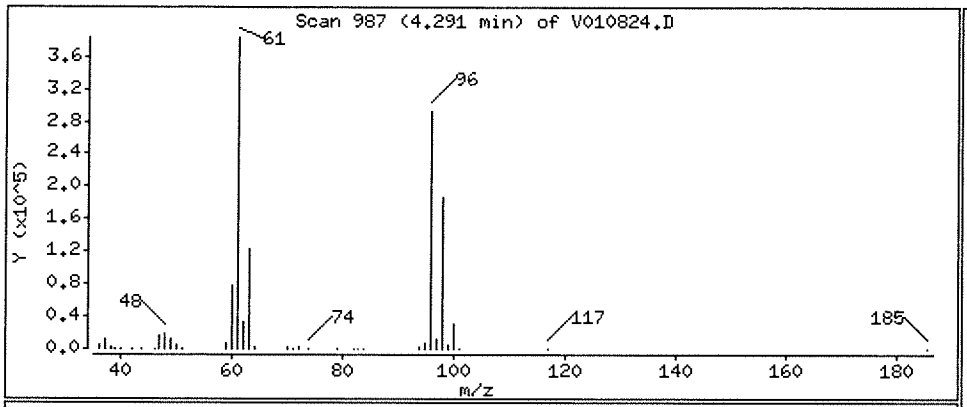
Operator: PC

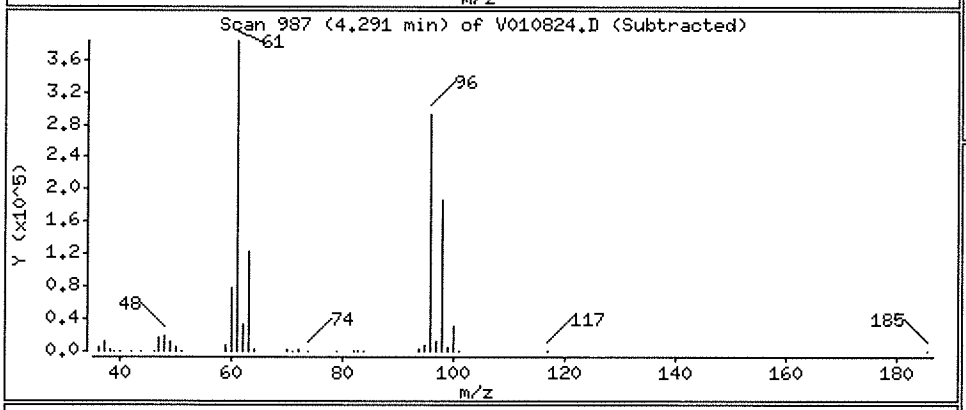
Column phase: DB624

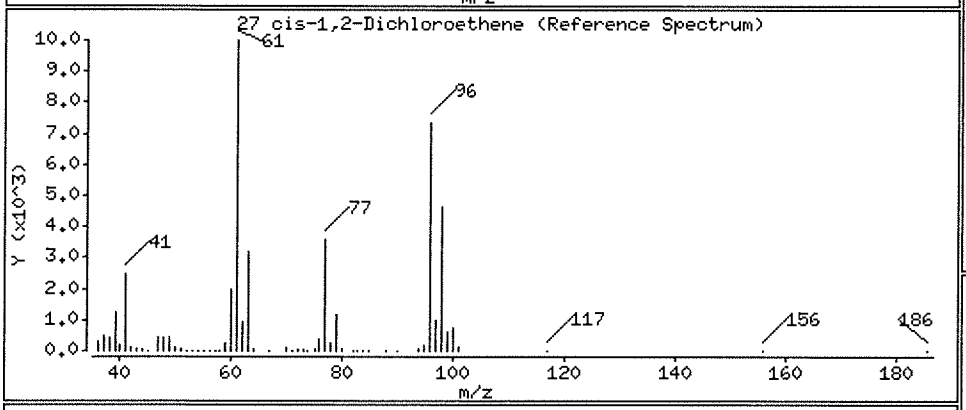
Column diameter: 0.18

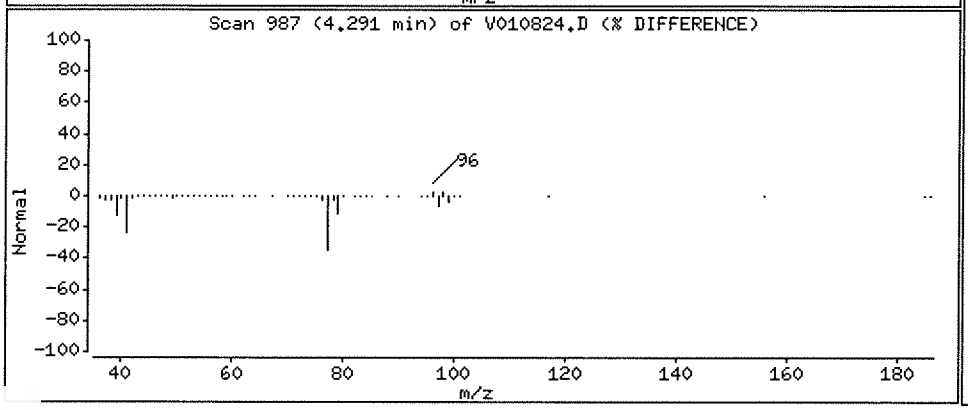
27 cis-1,2-Dichloroethene

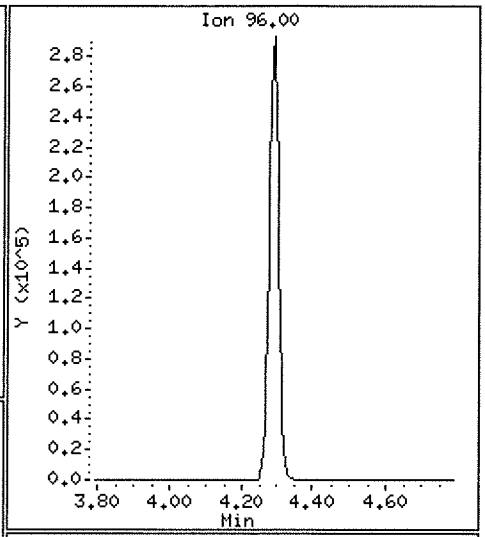
Concentration: 126.74 ug/l

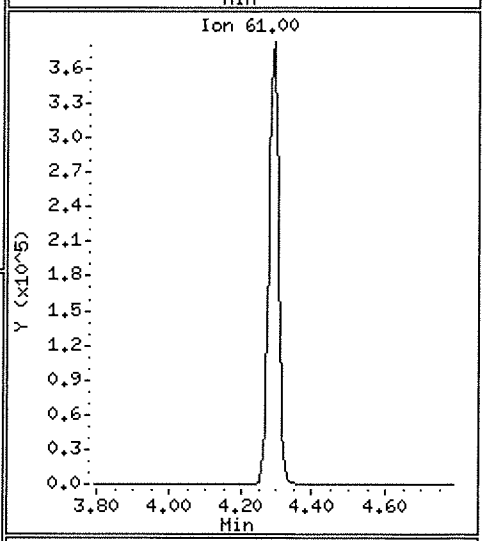


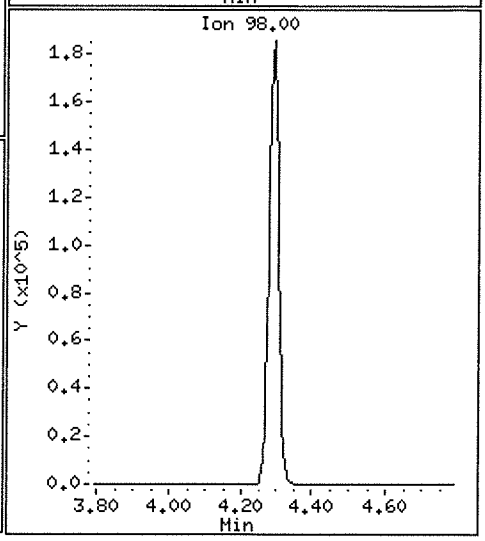












Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\V010824.D

Date : 09-JAN-2019 02:07

Client ID: HS18121523-01

Instrument: VOA9.i

Sample Info: HS18121523-01;HS18121523-01;;;

Purge Volume: 5.0

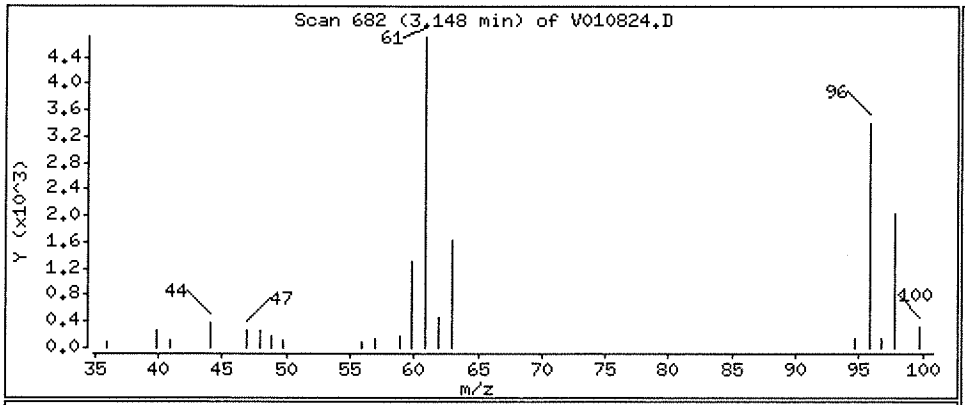
Operator: PC

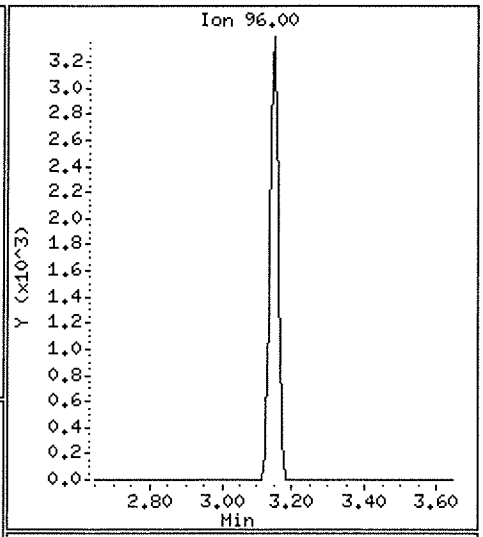
Column phase: DB624

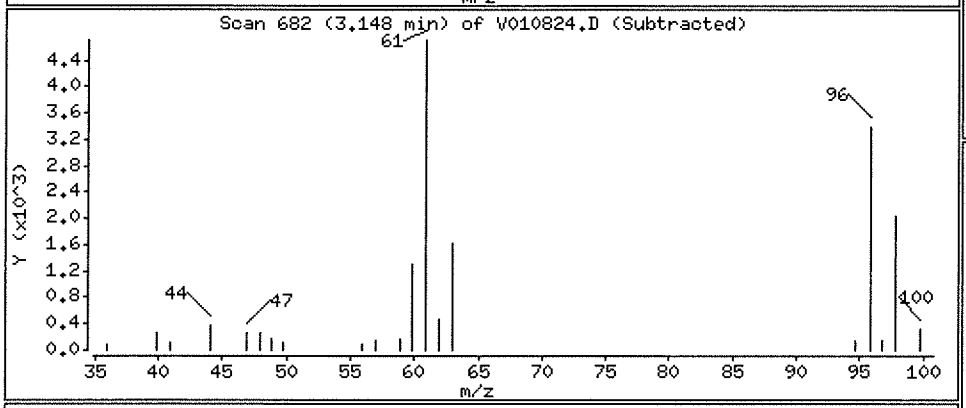
Column diameter: 0.18

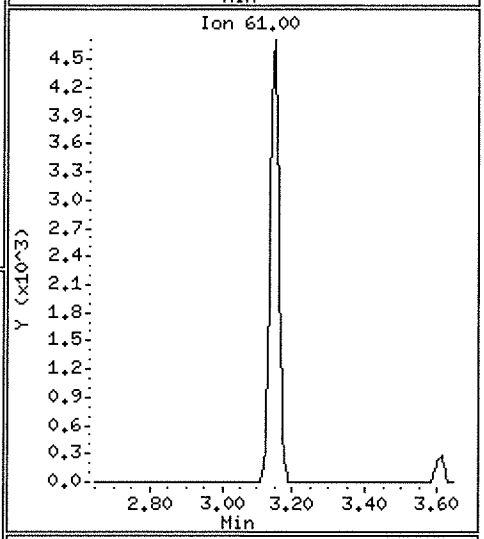
20 trans-1,2-Dichloroethene

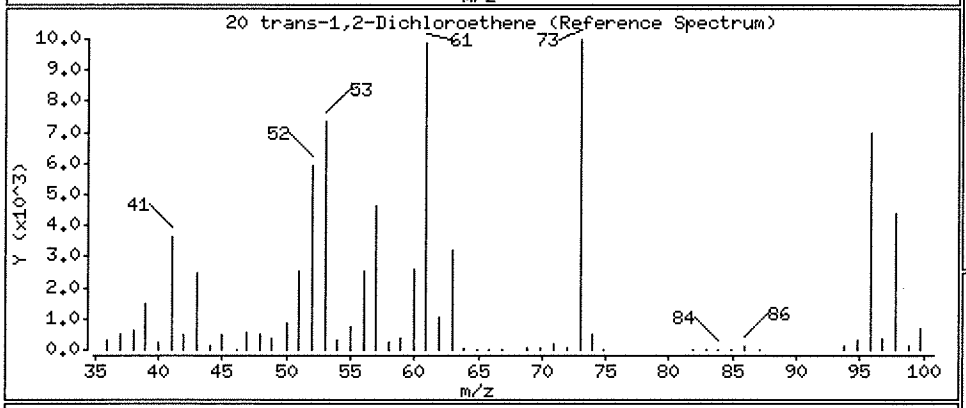
Concentration: 1.41 ug/l

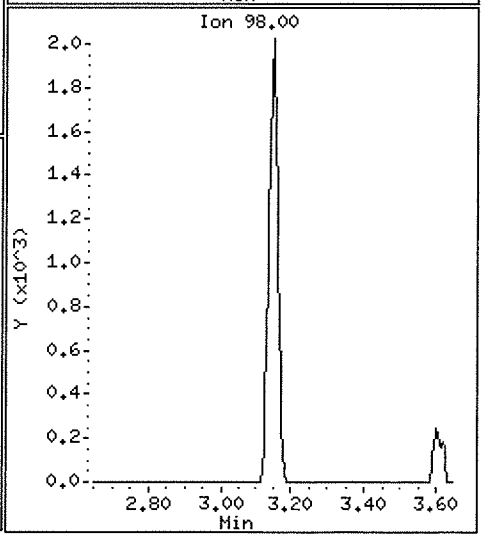


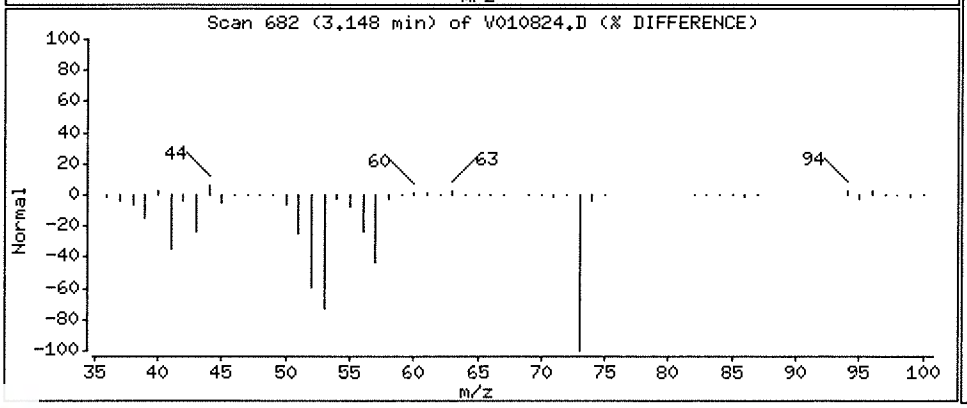












Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\V010824.D

Date : 09-JAN-2019 02:07

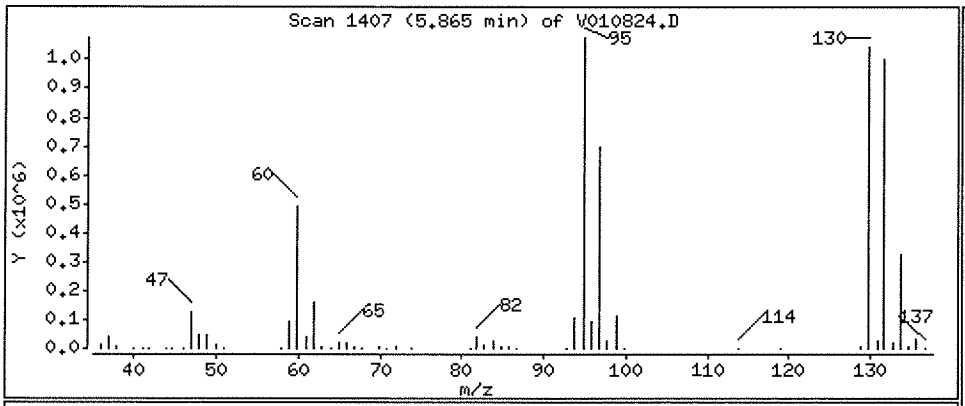
Client ID: HS18121523-01 Instrument: VOA9.i

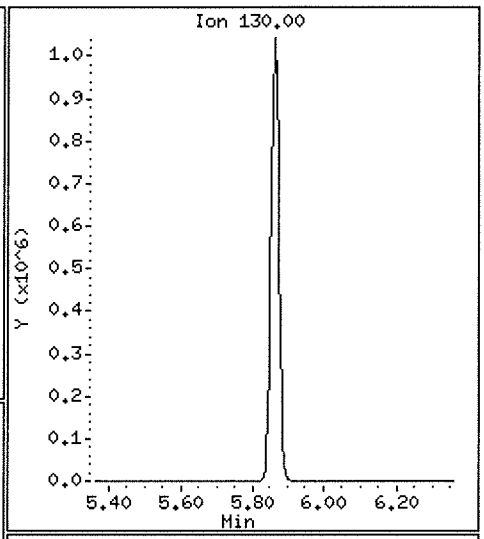
Sample Info: HS18121523-01;HS18121523-01;;;

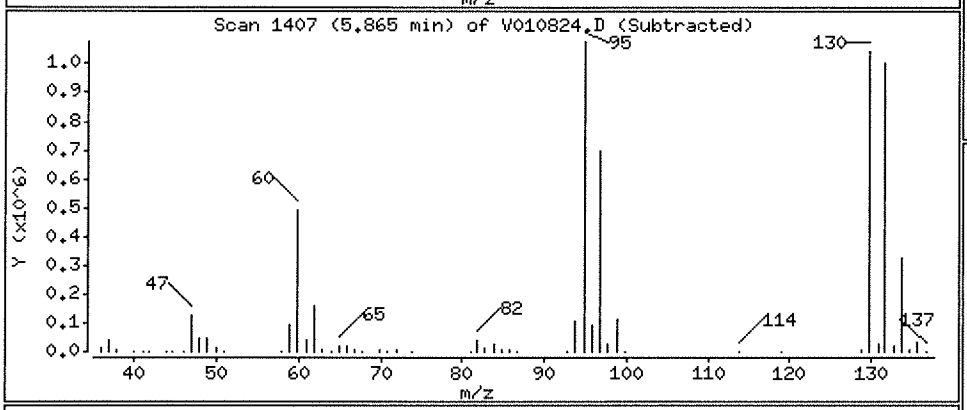
Purge Volume: 5.0 Operator: PC

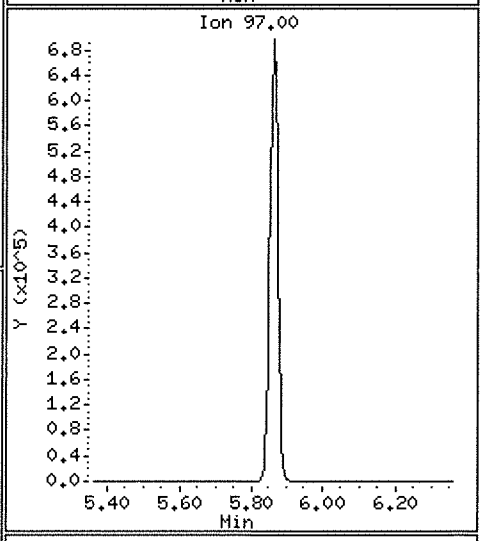
Column phase: DB624 Column diameter: 0.18

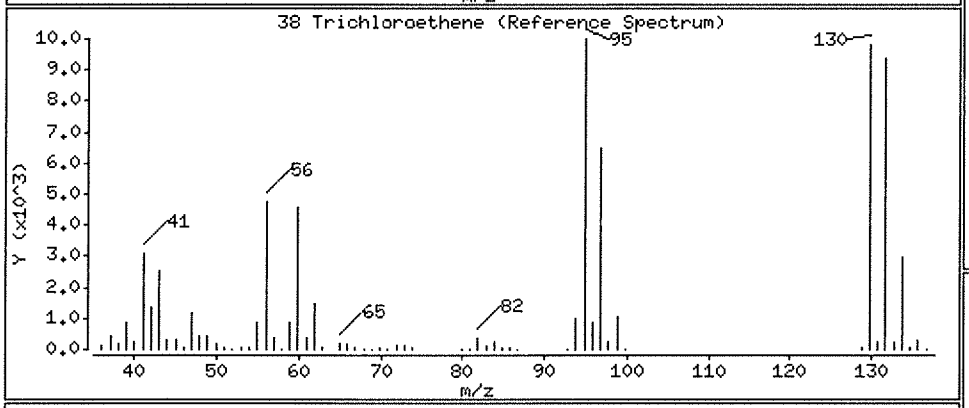
38 Trichloroethene Concentration: 459.41 ug/l

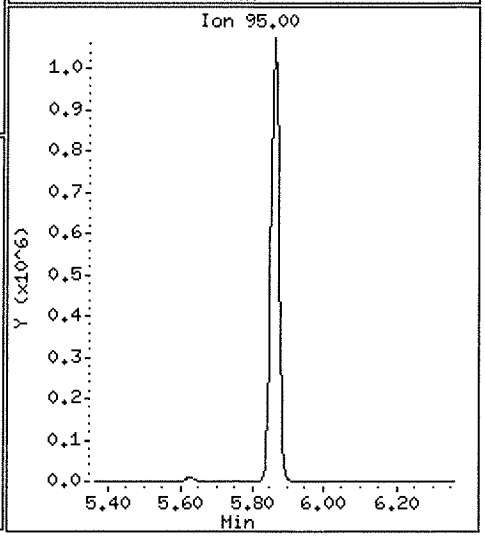


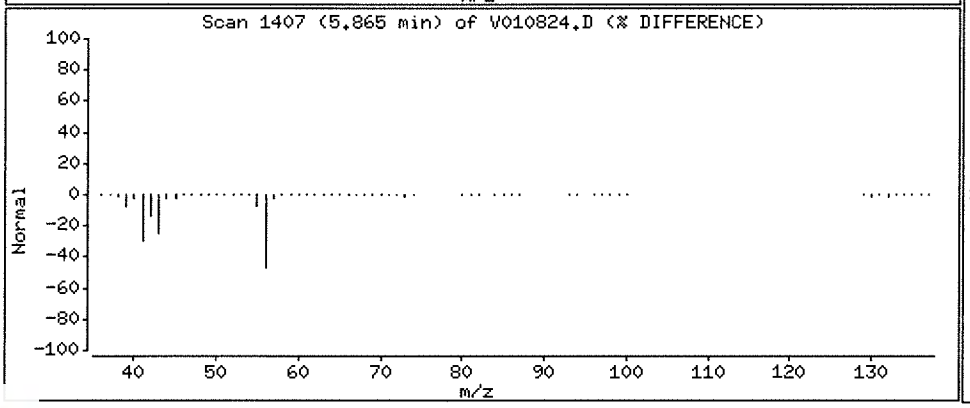












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Data file : \\NAHSTWS005\Target\chem\voa9.i\U190108.b\V010825.D
Lab Smp Id: HS18121523-01DL Client Smp ID: HS18121523-01DL
Inj Date : 09-JAN-2019 02:31
Operator : PC Inst ID: VOA9.i
Smp Info : HS18121523-01;HS18121523-01;;;
Misc Info : 180315V9;WATER;0;5;
Comment :
Method : \\NAHSTWS005\Target\chem\voa9.i\U190108.b\8260C.m
Meth Date : 01-Feb-2019 16:53 hvan Quant Type: ISTD
Cal Date : 08-JAN-2019 14:59 Cal File: U010811.D
Als bottle: 39
Dil Factor: 5.00000
Integrator: HP RTE Compound Sublist: LHAAPb.sub
Target Version: 4.14
Processing Host: NAHSTW7087

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	5.000	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	4.894	4.898	(1.000)	308548	50.0000	
* 36 1,4-Difluorobenzene	114	5.625	5.625	(1.000)	547318	50.0000	
* 47 Chlorobenzene-d5	117	8.249	8.249	(1.000)	499914	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	226005	50.0000	
$ 30 Dibromofluoromethane	113	4.830	4.830	(0.987)	159272	45.5873	45.58
$ 35 1,2-Dichloroethane-d4	65	5.175	5.175	(1.057)	219819	48.2450	48.24
$ 48 Toluene-d8	98	6.989	6.989	(0.847)	683266	52.7179	52.71
$ 69 4-Bromofluorobenzene	95	9.257	9.257	(1.122)	242063	49.3253	49.32
10 Acetone	43	2.480	2.484	(0.507)	6070	2.98251	14.91(a)
27 cis-1,2-Dichloroethene	96	4.286	4.290	(0.876)	103328	24.4842	122.42
38 Trichloroethene	130	5.861	5.861	(1.042)	296091	84.9710	424.85

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

00931020

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\V010825.D

Date : 09-JAN-2019 02:31

Client ID: HS18121523-01DL

Instrument: VOA9.i

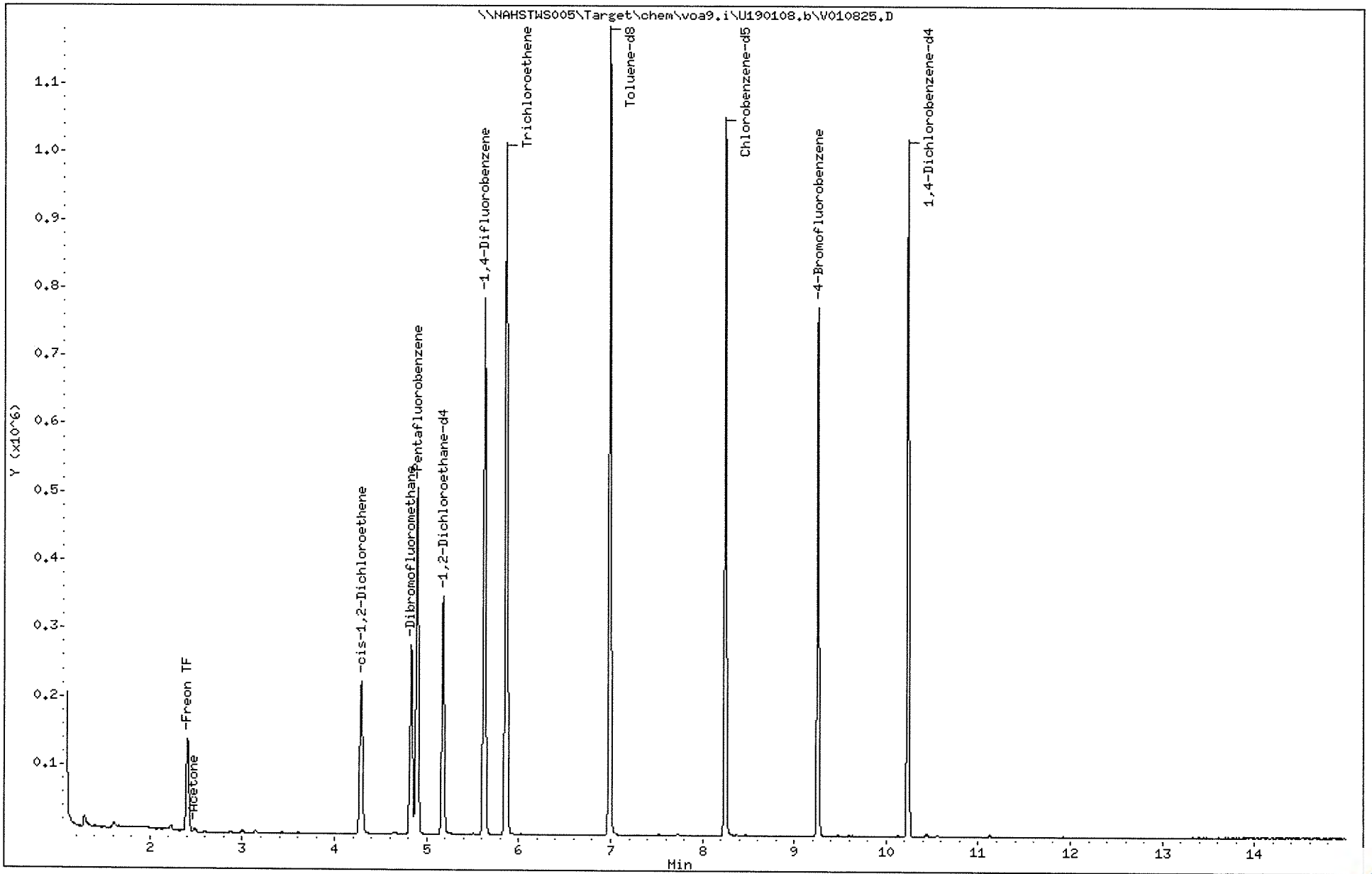
Sample Info: HS18121523-01;HS18121523-01;;;

Purge Volume: 5.0

Operator: PC

Column phase: DB624

Column diameter: 0.18



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Date : 09-JAN-2019 02:31

Client ID: HS18121523-01DL

Instrument: VOA9.i

Sample Info: HS18121523-01;HS18121523-01;;;

Purge Volume: 5.0

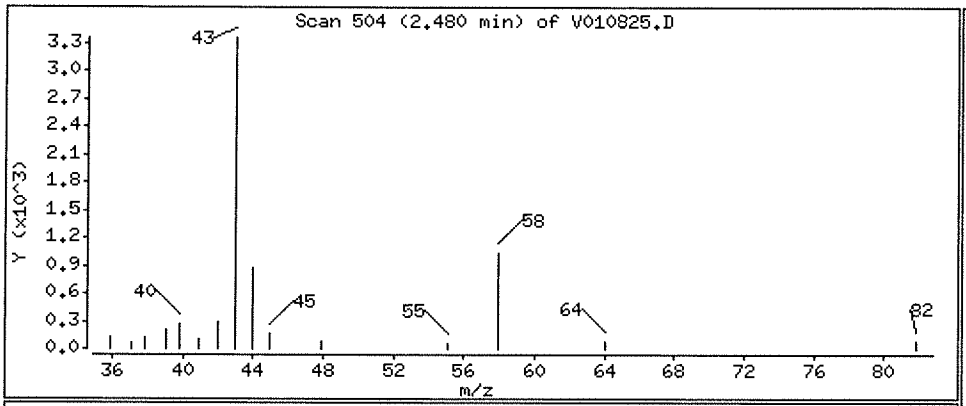
Operator: PC

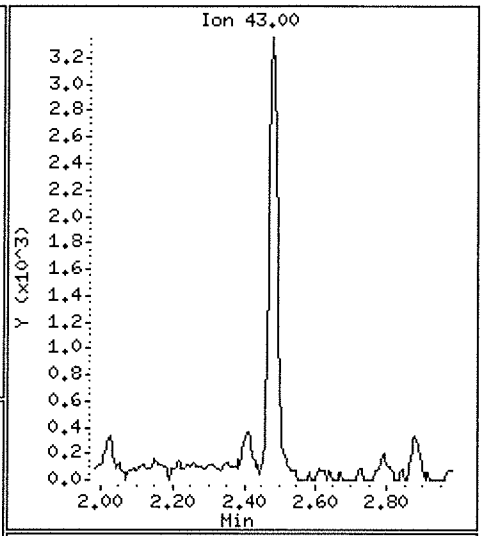
Column phase: DB624

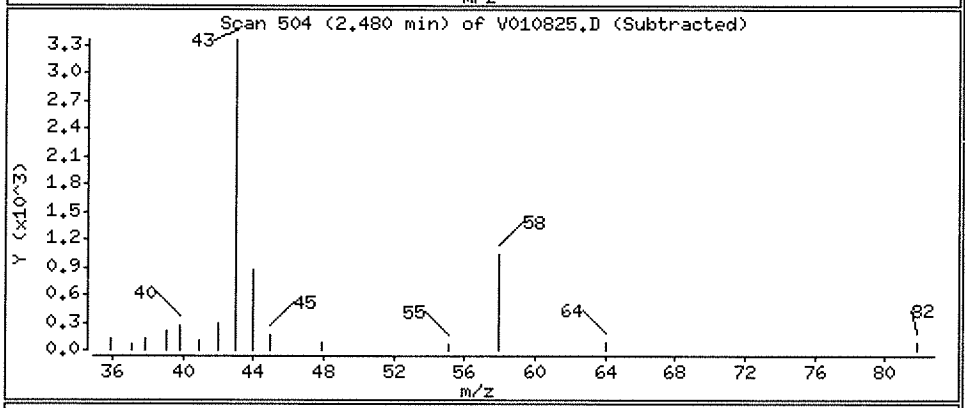
Column diameter: 0.18

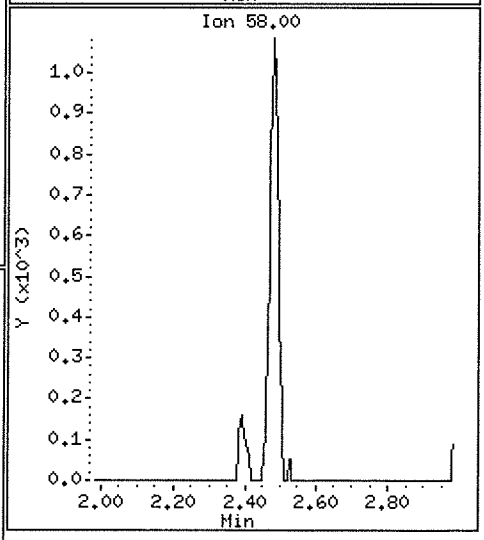
10 Acetone

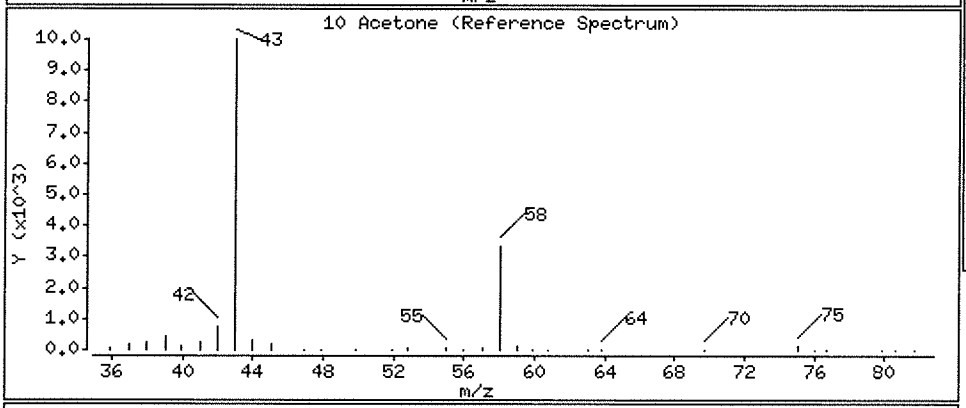
Concentration: 14.91 ug/l

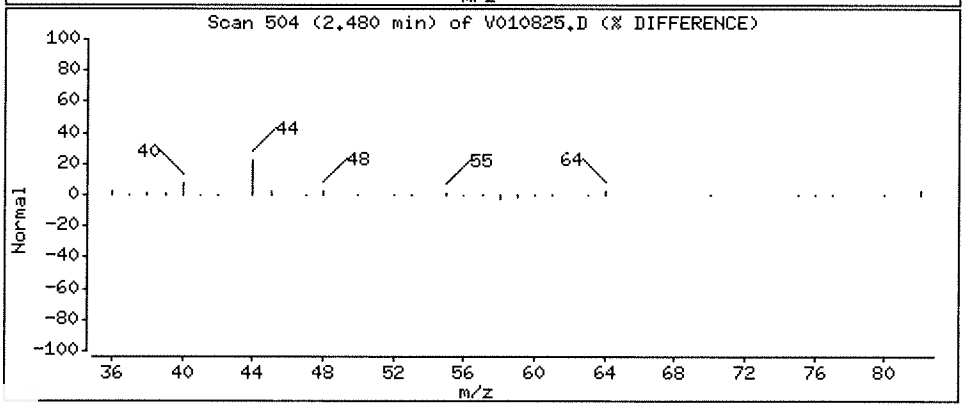












Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\V010825.D

Date : 09-JAN-2019 02:31

Client ID: HS18121523-01DL

Instrument: VOA9.i

Sample Info: HS18121523-01;HS18121523-01;;;

Purge Volume: 5.0

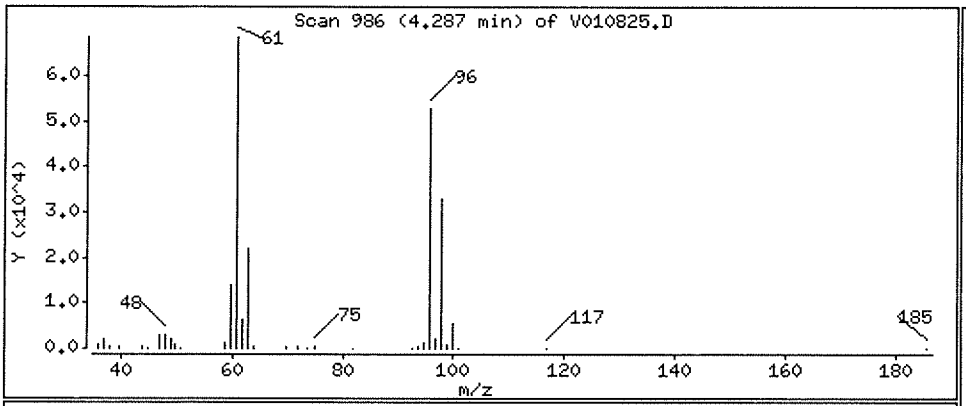
Operator: PC

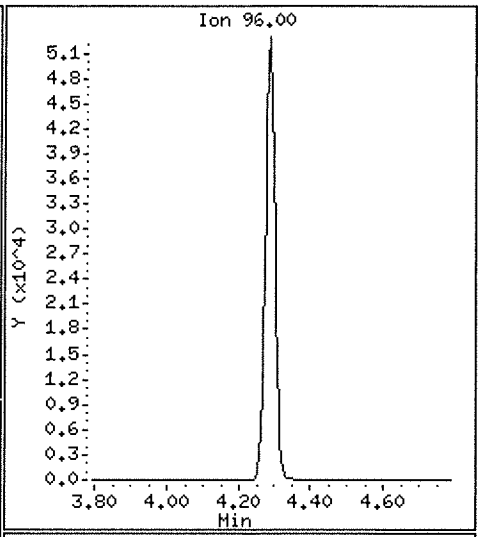
Column phase: DB624

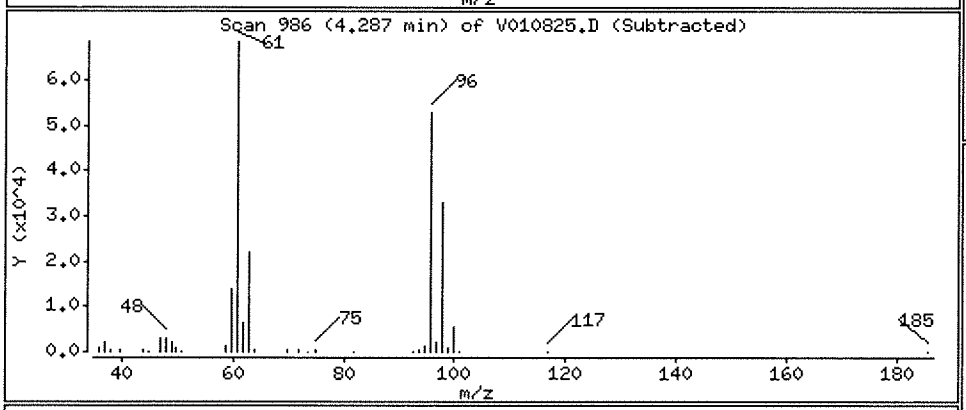
Column diameter: 0.18

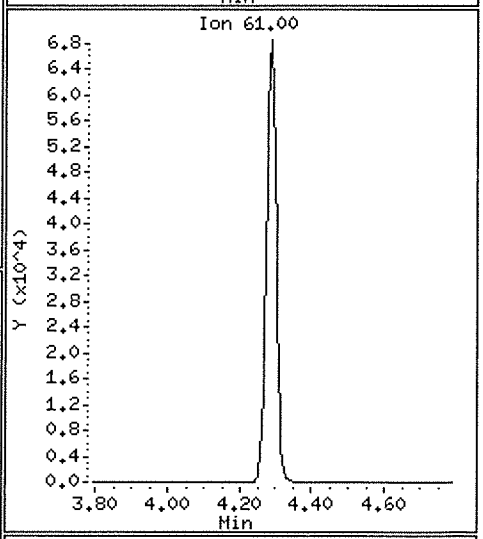
27 cis-1,2-Dichloroethene

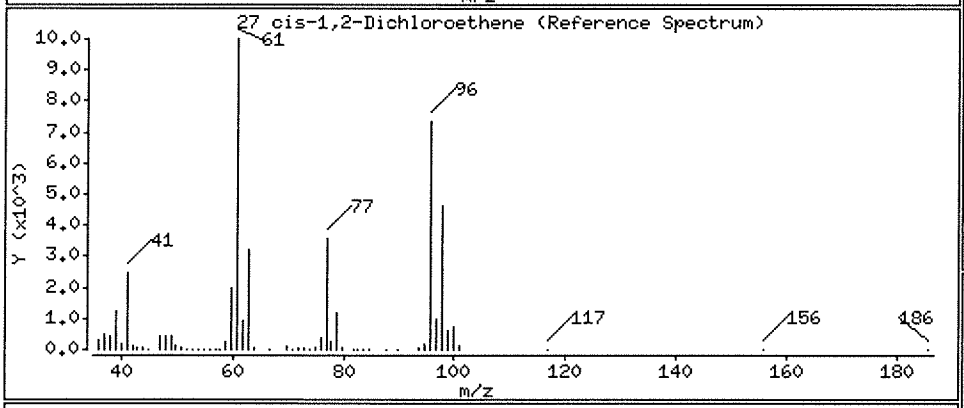
Concentration: 122.42 ug/l

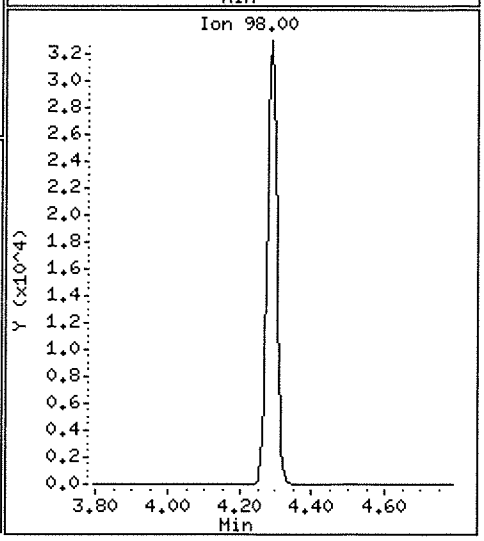


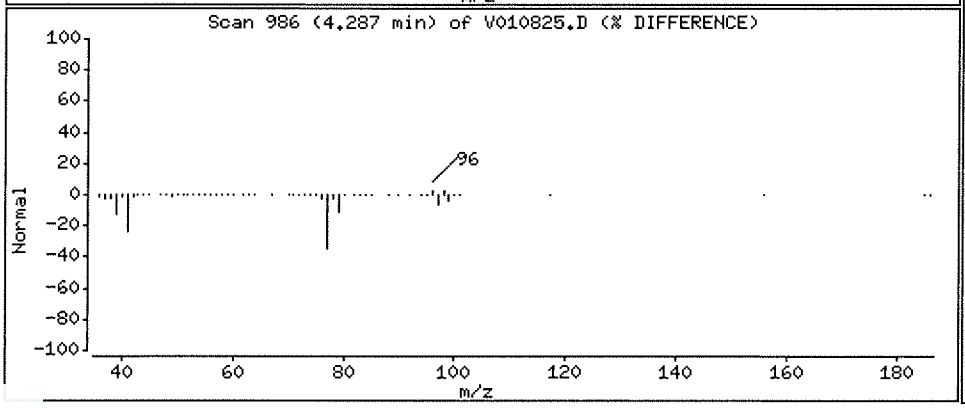












Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\V010825.D

Date : 09-JAN-2019 02:31

Client ID: HS18121523-01DL

Instrument: VOA9.i

Sample Info: HS18121523-01;HS18121523-01;;;

Purge Volume: 5.0

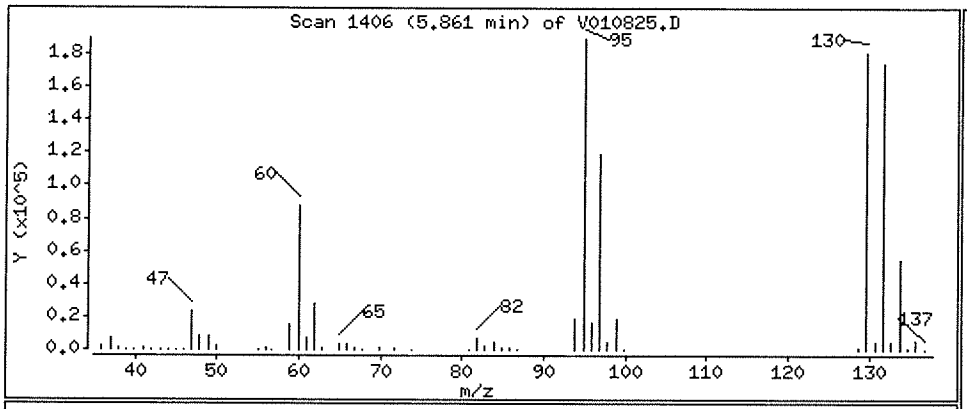
Operator: PC

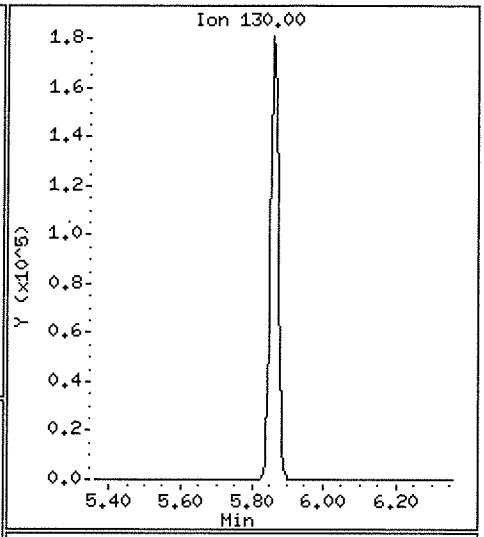
Column phase: DB624

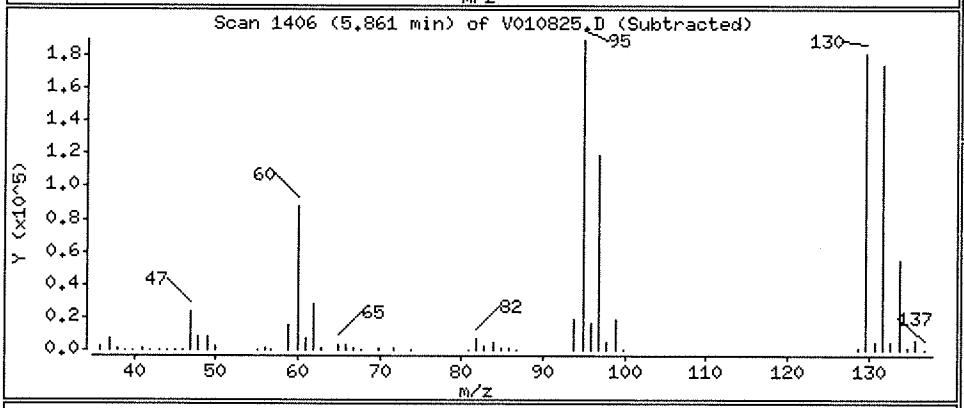
Column diameter: 0.18

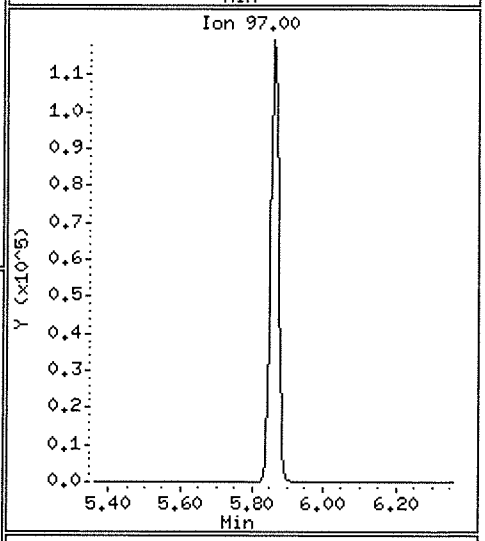
38 Trichloroethene

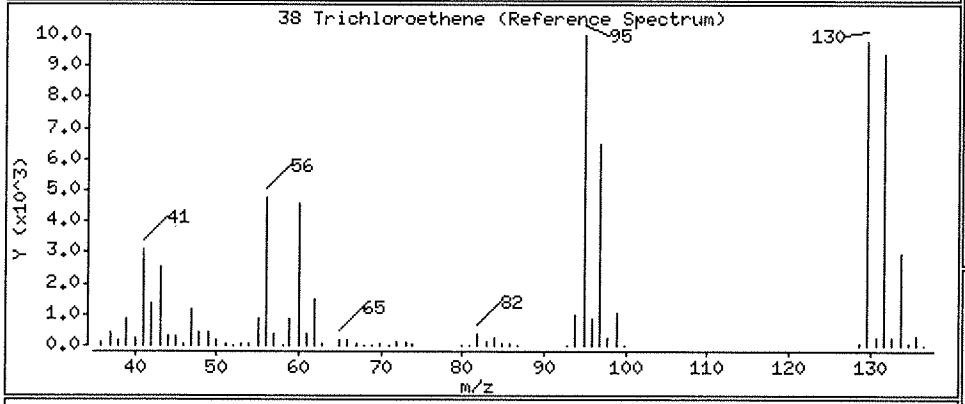
Concentration: 424.85 ug/l

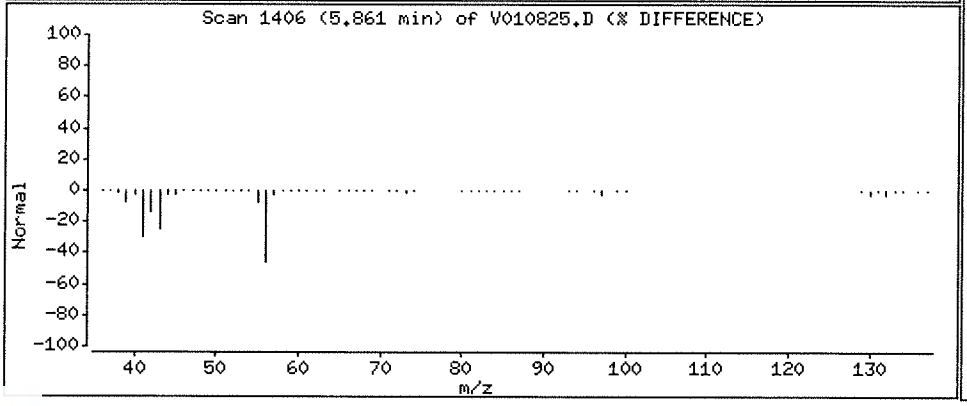


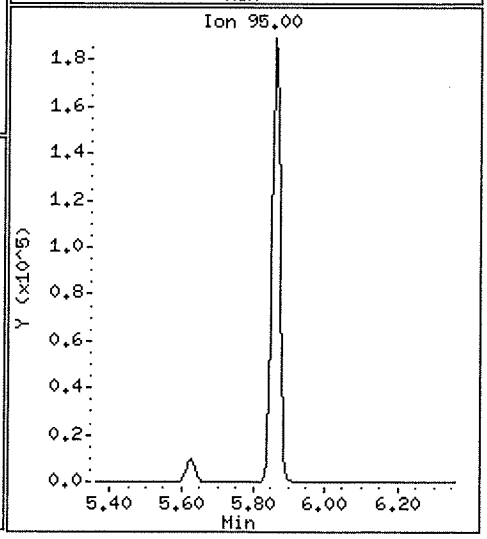












ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U190108.b\V010826.D
Lab Smp Id: VSTD050-END Client Smp ID: VSTD050-END
Inj Date : 09-JAN-2019 02:56
Operator : PC Inst ID: VOA9.i
Smp Info : VSTD050-END;VSTD050-END;2;;
Misc Info : 180315V9;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa9.i\U190108.b\8260C.m
Meth Date : 01-Feb-2019 16:53 hvan Quant Type: ISTD
Cal Date : 08-JAN-2019 11:18 Cal File: U010803.D
Als bottle: 40 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAPb.sub
Target Version: 4.14

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

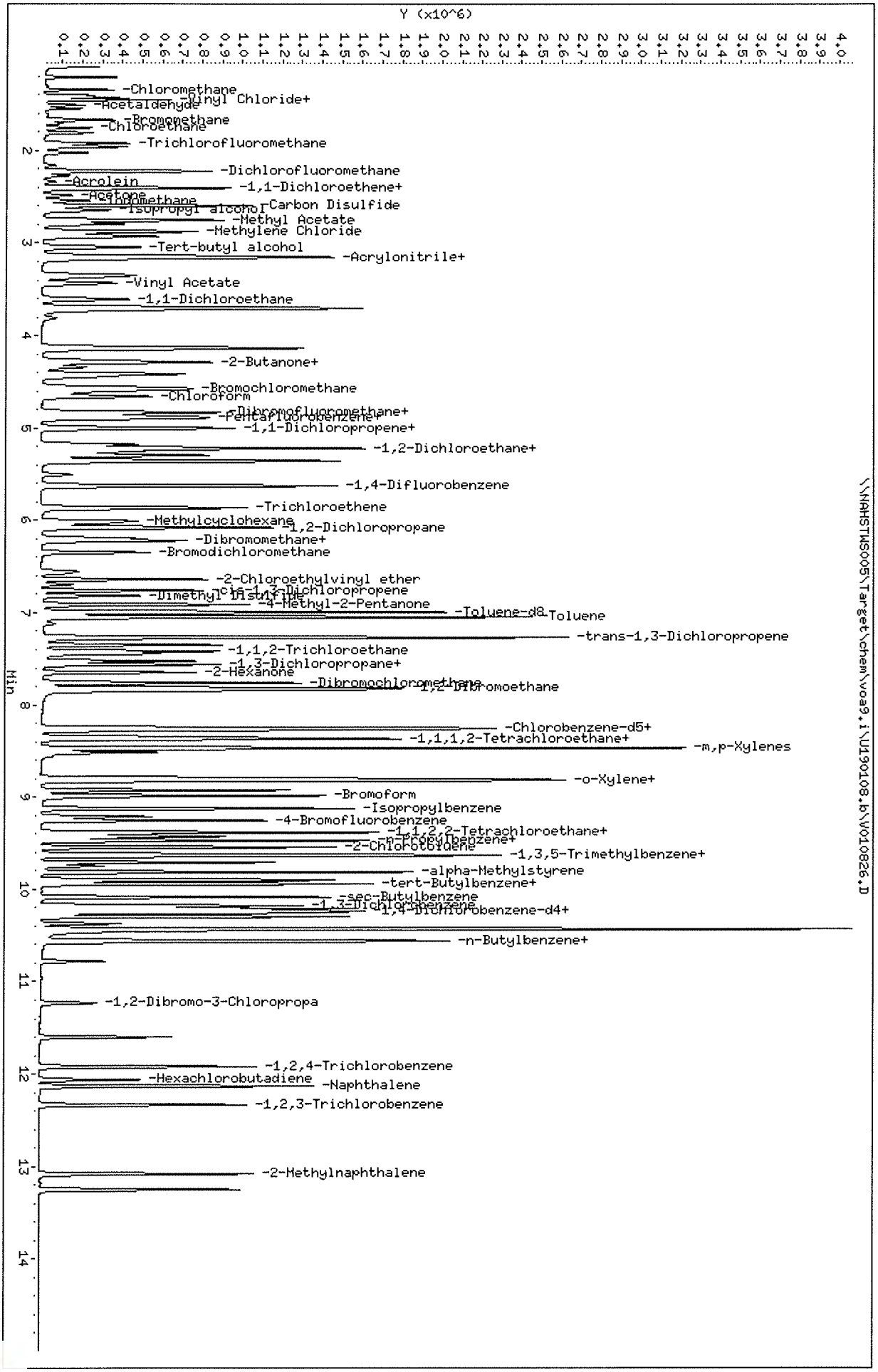
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.898	4.898	(1.000)	379857	50.0000	
* 36 1,4-Difluorobenzene	114	5.625	5.625	(1.000)	749541	50.0000	
* 47 Chlorobenzene-d5	117	8.249	8.249	(1.000)	685384	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	317221	50.0000	
$ 30 Dibromofluoromethane	113	4.830	4.830	(0.986)	228821	50.0000	53.49
$ 35 1,2-Dichloroethane-d4	65	5.175	5.175	(1.057)	308648	50.0000	55.33
$ 48 Toluene-d8	98	6.989	6.989	(0.847)	932317	50.0000	52.45
$ 69 4-Bromofluorobenzene	95	9.257	9.257	(1.122)	348378	50.0000	51.87
60 1,1,1,2-Tetrachloroethane	131	8.350	8.350	(1.012)	211819	50.0000	51.15
31 1,1,1-Trichloroethane	97	4.830	4.830	(0.986)	311422	50.0000	50.05
68 1,1,2,2-Tetrachloroethane	83	9.392	9.392	(0.918)	367459	50.0000	51.32
53 1,1,2-Trichloroethane	83	7.421	7.421	(0.900)	209261	50.0000	49.88
22 1,1-Dichloroethane	63	3.608	3.608	(0.737)	442784	50.0000	51.28
11 1,1-Dichloroethene	96	2.405	2.405	(0.491)	165497	50.0000	45.16
32 1,1-Dichloropropene	75	5.006	5.006	(0.890)	312527	50.0000	45.09
93 1,2,3-Trichlorobenzene	180	12.335	12.335	(1.205)	271865	50.0000	48.09
71 1,2,3-Trichloropropane	75	9.426	9.426	(0.921)	390949	50.0000	50.98
90 1,2,4-Trichlorobenzene	180	11.923	11.923	(1.165)	275853	50.0000	48.26
79 1,2,4-Trimethylbenzene	105	9.943	9.943	(0.971)	831235	50.0000	49.89
89 1,2-Dibromo-3-Chloropropane	155	11.233	11.233	(1.097)	51324	50.0000	45.60
57 1,2-Dibromoethane	107	7.852	7.852	(0.952)	242030	50.0000	50.65
88 1,2-Dichlorobenzene	146	10.569	10.569	(1.033)	460366	50.0000	47.79
33 1,2-Dichloroethane	62	5.254	5.254	(0.934)	357381	50.0000	49.27

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\V010826.D Page 2
Report Date: 01-Feb-2019 17:03

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	6.082	6.082	(1.081)	272720	50.0000	50.54
75 1,3,5-Trimethylbenzene	105	9.625	9.625	(0.940)	789846	50.0000	48.54
83 1,3-Dichlorobenzene	146	10.180	10.180	(0.995)	456704	50.0000	47.72
54 1,3-Dichloropropane	76	7.563	7.563	(0.917)	454344	50.0000	50.21
84 1,4-Dichlorobenzene	146	10.255	10.255	(1.002)	472003	50.0000	46.53
26 2,2-Dichloropropane	77	4.275	4.275	(0.873)	209491	50.0000	40.51
24 2-Butanone	43	4.339	4.339	(0.886)	277691	100.000	105.64
76 2-Chlorotoluene	91	9.546	9.546	(0.933)	740757	50.0000	49.11
52 2-Hexanone	43	7.649	7.649	(0.927)	414686	100.000	104.90
77 4-Chlorotoluene	91	9.640	9.640	(0.942)	858039	50.0000	48.91
82 p-Isopropyltoluene	119	10.210	10.210	(0.997)	769518	50.0000	45.54
45 4-Methyl-2-Pentanone	43	6.915	6.915	(0.838)	592945	100.000	104.02
10 Acetone	43	2.484	2.484	(0.507)	162889	100.000	99.07
37 Benzene	78	5.220	5.220	(0.928)	1007625	50.0000	48.85
74 Bromobenzene	156	9.381	9.381	(0.917)	249367	50.0000	50.41
29 Bromochloromethane	128	4.557	4.557	(0.930)	118725	50.0000	56.86
39 Bromodichloromethane	83	6.348	6.348	(1.129)	297793	50.0000	51.25
66 Bromoform	173	8.984	8.984	(1.089)	136170	50.0000	45.70(T)
6 Bromomethane	94	1.674	1.674	(0.342)	115437	50.0000	40.83
19 Carbon Disulfide	76	2.596	2.596	(0.530)	1303500	100.000	100.28
34 Carbon Tetrachloride	117	4.999	4.999	(0.889)	233947	50.0000	46.61
59 Chlorobenzene	112	8.275	8.275	(1.003)	653275	50.0000	47.80
7 Chloroethane	64	1.756	1.756	(0.359)	161228	50.0000	47.08(M)
28 Chloroform	83	4.658	4.658	(0.951)	420227	50.0000	51.23
3 Chloromethane	50	1.344	1.344	(0.274)	214807	50.0000	42.76
27 cis-1,2-Dichloroethene	96	4.290	4.290	(0.876)	266878	50.0000	51.36
46 cis-1,3-Dichloropropene	75	6.757	6.757	(1.201)	403151	50.0000	46.31
55 Dibromochloromethane	129	7.758	7.758	(0.940)	218277	50.0000	47.59
44 Dibromomethane	93	6.191	6.191	(1.101)	157440	50.0000	50.00
2 Dichlorodifluoromethane	85	1.209	1.209	(0.247)	216922	50.0000	43.21
61 Ethylbenzene	106	8.369	8.369	(1.015)	327634	50.0000	47.53
91 Hexachlorobutadiene	225	12.061	12.061	(1.178)	79269	50.0000	38.75
67 Isopropylbenzene	105	9.126	9.126	(1.106)	918147	50.0000	46.63
62 m,p-Xylenes	106	8.470	8.470	(1.027)	814934	100.000	96.85
17 Methylene Chloride	84	2.877	2.877	(0.587)	257303	50.0000	52.67
87 n-Butylbenzene	91	10.554	10.554	(1.031)	694368	50.0000	42.29
73 n-Propylbenzene	91	9.475	9.475	(0.926)	1140199	50.0000	46.50
92 Naphthalene	128	12.133	12.133	(1.185)	939361	50.0000	48.61
63 o-Xylene	106	8.811	8.811	(1.068)	421791	50.0000	49.13
81 sec-Butylbenzene	105	10.086	10.086	(0.985)	890233	50.0000	44.38
64 Styrene	104	8.823	8.823	(1.070)	736013	50.0000	51.49
78 tert-Butylbenzene	119	9.898	9.898	(0.967)	641329	50.0000	45.77
56 Tetrachloroethene	164	7.526	7.526	(0.912)	148367	50.0000	41.21
50 Toluene	91	7.049	7.049	(0.855)	1033889	50.0000	49.06
20 trans-1,2-Dichloroethene	96	3.147	3.147	(0.643)	228413	50.0000	49.29
51 trans-1,3-Dichloropropene	75	7.259	7.259	(1.291)	342457	50.0000	45.57
38 Trichloroethene	130	5.861	5.861	(1.042)	232049	50.0000	48.62
8 Trichlorofluoromethane	101	1.959	1.959	(0.400)	275070	50.0000	43.28
5 Vinyl Chloride	62	1.426	1.426	(0.291)	243120	50.0000	43.12

QC Flag Legend

T - Target compound detected outside RT window.
M - Compound response manually integrated.



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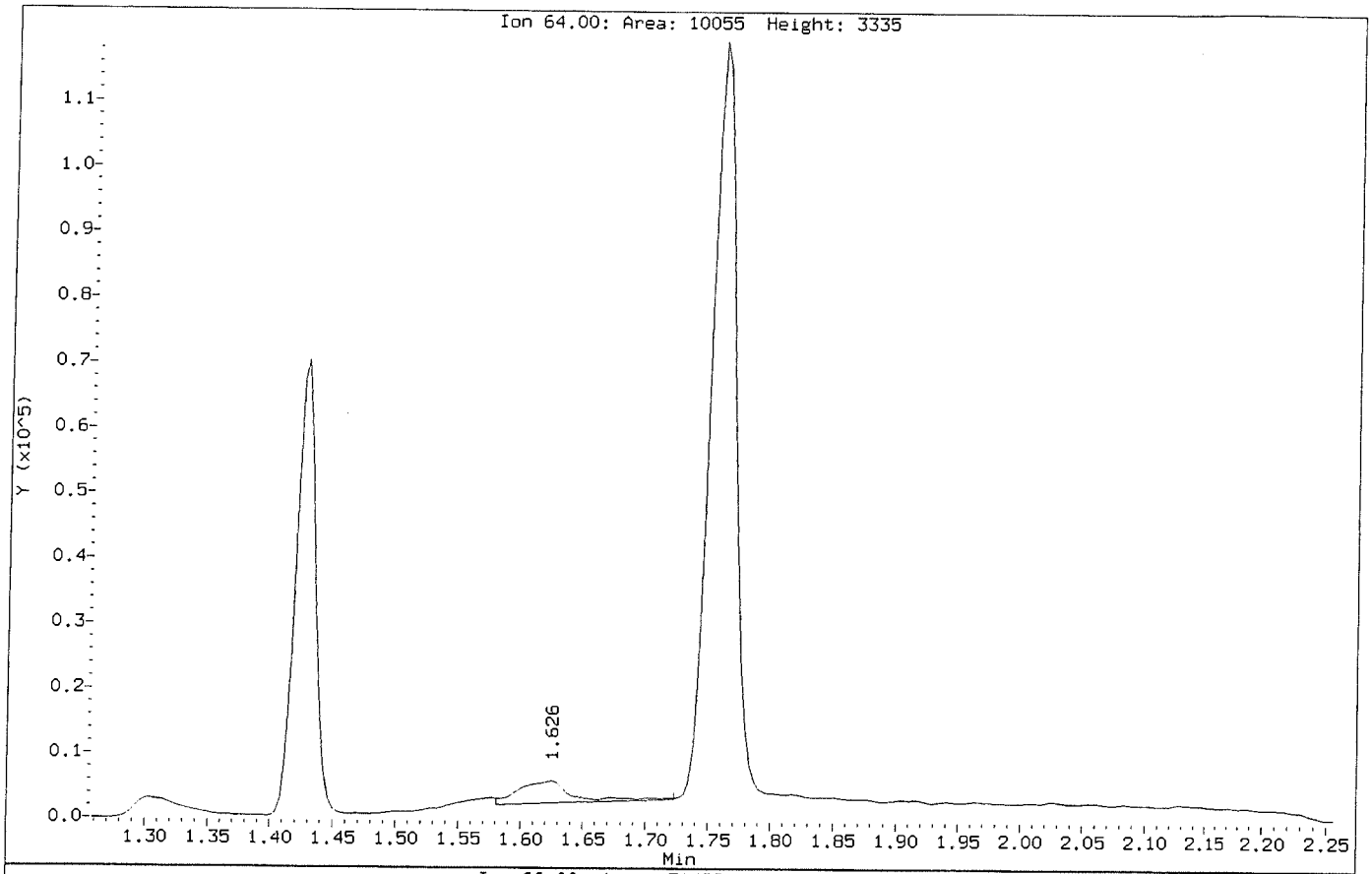
Date : 09-JAN-2019 02:56
Client ID: VSTD050-END
Sample Info: VSTD050-END;VSTD050-END;2;;
Purge Volume: 5.0
Column phase: DB624

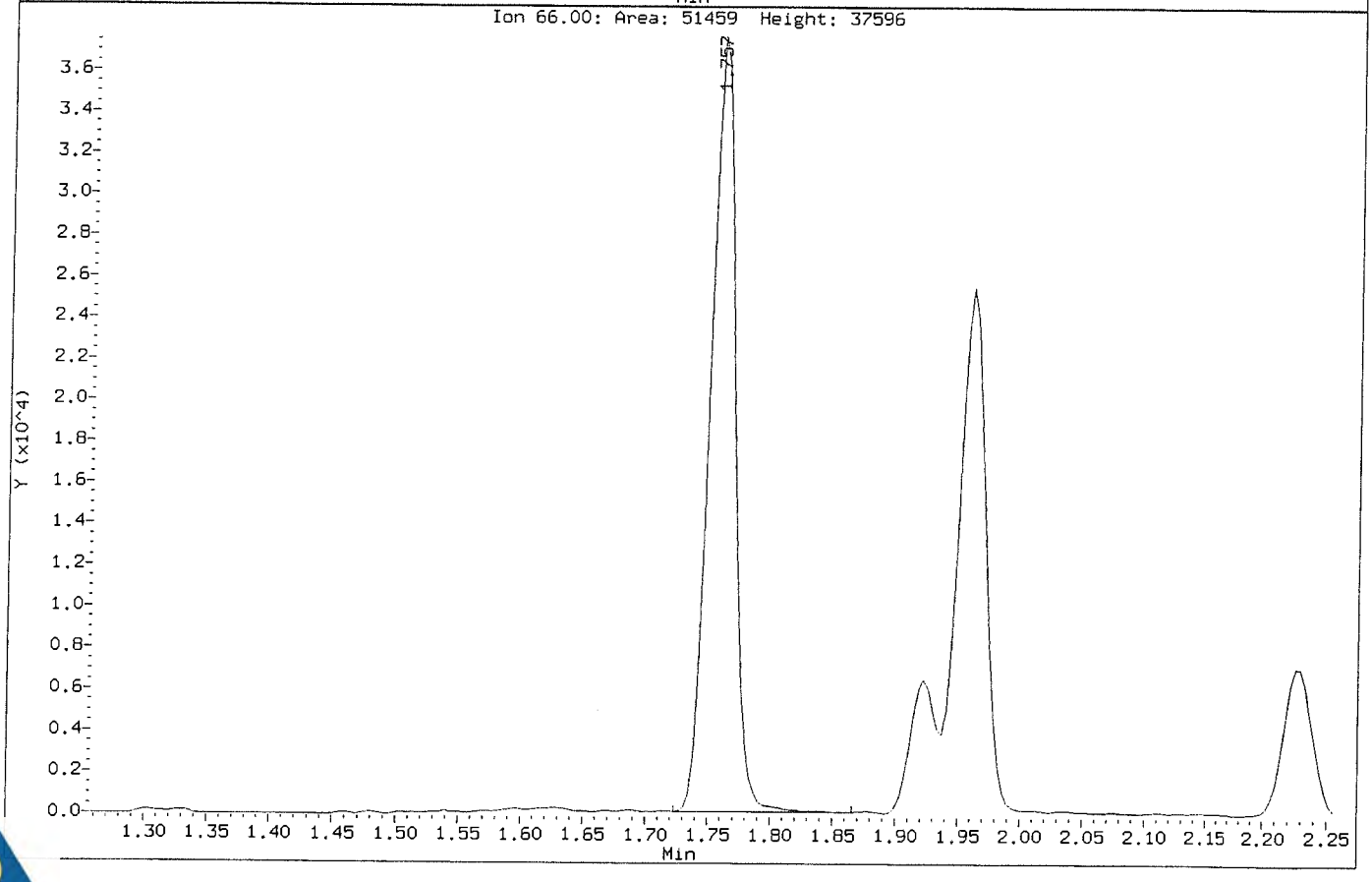
\\NAHSTWS005\Target\chem\voa9,i\U190108,b\V010826,D

Instrument: VOA9,i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\Before\V010826.D
Injection Date: 09-JAN-2019 02:56
Instrument: VOA9.i
Client Sample ID: VSTD050-END

Compound: Chloroethane
CAS Number: 75-00-3





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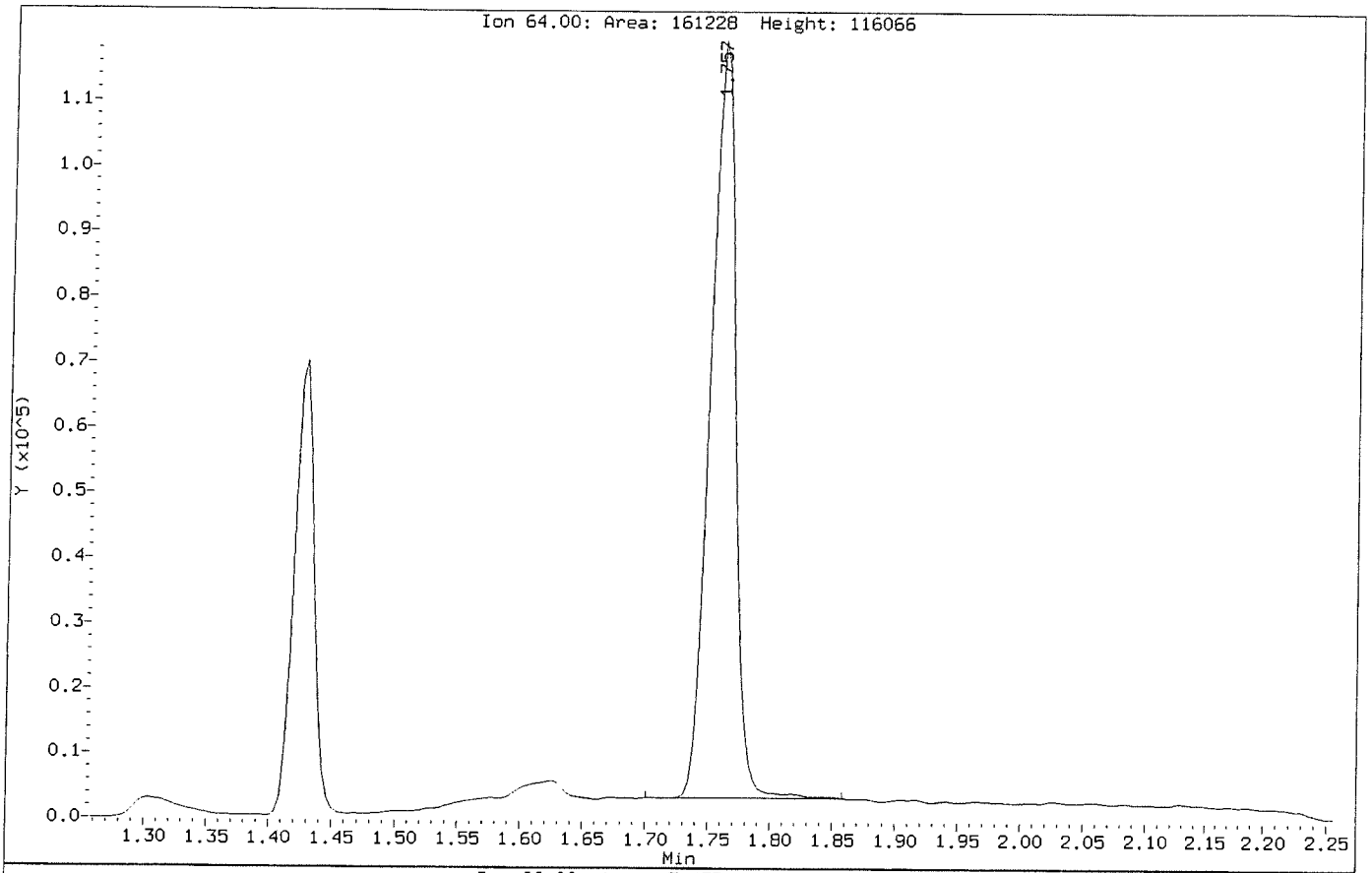
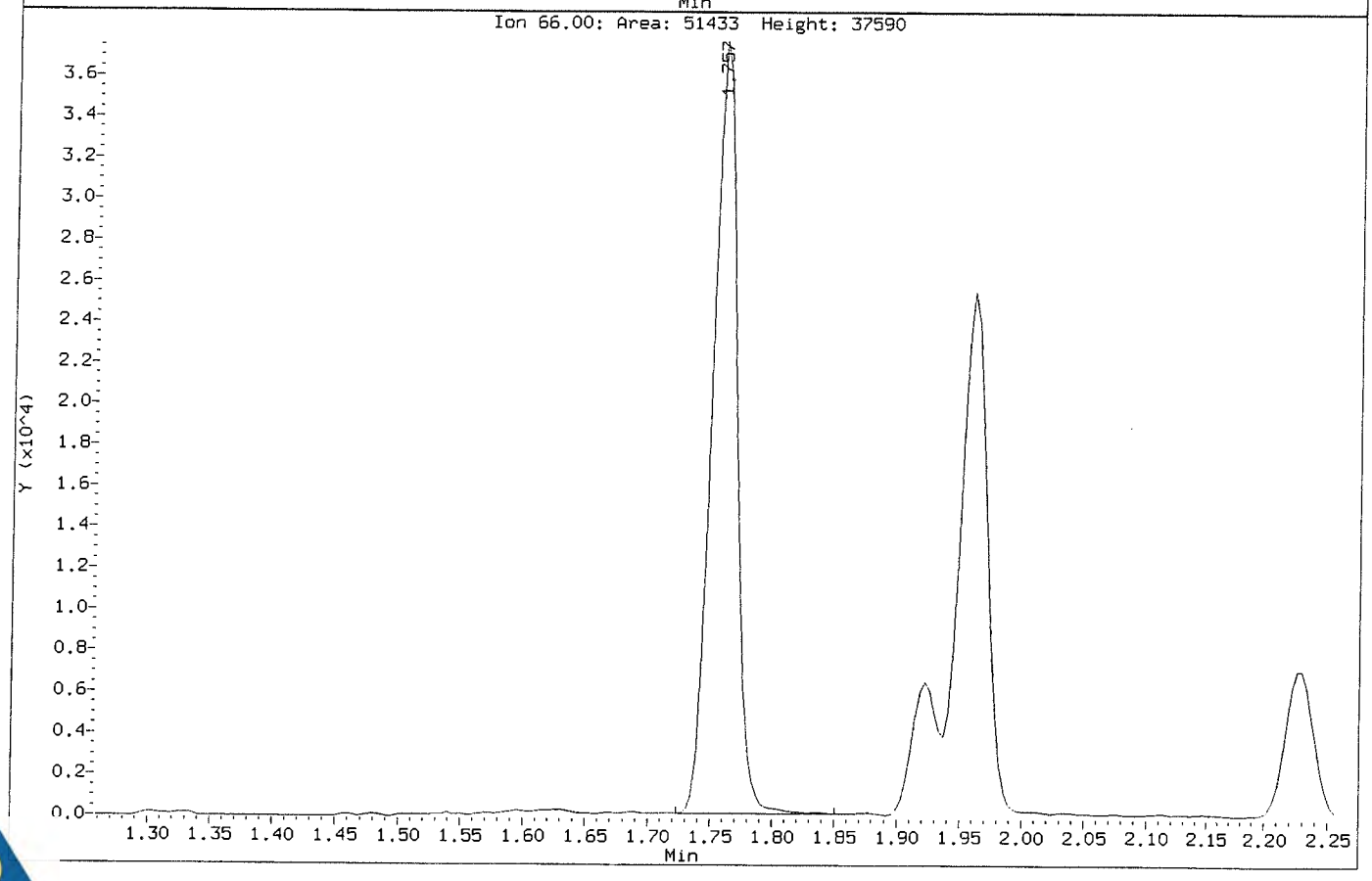
Injection Date: 09-JAN-2019 02:56
Instrument: VOA9.i
Client Sample ID: VSTD050-END

Compound: Chloroethane
CAS Number: 75-00-3





Metals Raw Data

ALS WO# HS18121523

ALS Houston, US

Date: 19-Jan-19

Form 11 - INTERNAL STANDARD ASSOCIATION

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121523

Instrument:ICPMS05

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

ALS Houston, US

Date: 19-Jan-19

FORM 12 - PREPARATION LOG

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121523
Start Date: 08-Jan-2019 10:30 End Date: 08-Jan-2019 12:30

Batch ID: 136401
Prep Code: Hg_WPr
Method: SW7470
Technician:

SampID	ClientID	Matrix	Init Wt	Init Vol	FinalVol (mL)	PrepFac
HS18121523-02	18CPTMW24_122718	Groundwater		10	10	1
HS18121523-02MS				10	10	1
HS18121523-02MSD				10	10	1
HS18121523-05	18WW02_122718	Groundwater		10	10	1
HS18121523-06	125_122718	Groundwater		10	10	1
LCS-136401				10	10	1
MBLK-136401				10	10	1

ALS Houston, US

Date: 19-Jan-19

FORM 12 - PREPARATION LOG

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121523
Start Date: 02-Jan-2019 13:00 End Date: 02-Jan-2019 17:00

Batch ID: 136233
Prep Code: 3010A
Method: SW3010A
Technician:

SampID	ClientID	Matrix	Init Wt	Init Vol	FinalVol (mL)	PrepFac
HS18121325-04MS				10	10	1
HS18121325-04MSD				10	10	1
HS18121325-04PDS				10	10	1
HS18121325-04SD				10	10	1
HS18121523-02	18CPTMW24_122718	Groundwater		10	10	1
HS18121523-05	18WW02_122718	Groundwater		10	10	1
HS18121523-06	125_122718	Groundwater		10	10	1
LCS-136233				10	10	1
MBLK-136233				10	10	1

ALS Houston, US

Date: 19-Jan-19

FORM 13 - ANALYSIS RUN LOG

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121523
Start Date: 08-Jan-2019 End Date: 08-Jan-2019

Run ID:HG03_330677
Instrument:HG03
Method:SW7470

Sample No.	D/F	Time	FileID	Analytes
ICCV 1	1	08-Jan-2019 14:41	HG03_330677 Raw Data_4899900	HG
ICV	1	08-Jan-2019 14:42		HG
ICB	1	08-Jan-2019 14:44		HG
CRA	1	08-Jan-2019 14:46		HG
CCV 2	1	08-Jan-2019 15:04		HG
CCB 1	1	08-Jan-2019 15:06		HG
CCV 3	1	08-Jan-2019 15:24		HG
CCB 2	1	08-Jan-2019 15:26		HG
CCV 4	1	08-Jan-2019 15:46		HG
CCB 3	1	08-Jan-2019 15:48		HG
MBLK-136401	1	08-Jan-2019 15:50		HG
LCS-136401	1	08-Jan-2019 15:51		HG
18CPTMW24_122718	1	08-Jan-2019 15:53		HG
18CPTMW24_122718MS	1	08-Jan-2019 15:55		HG
18CPTMW24_122718MSD	1	08-Jan-2019 15:56		HG
CCV 5	1	08-Jan-2019 16:07		HG
CCB 4	1	08-Jan-2019 16:08		HG
18WW02_122718	1	08-Jan-2019 16:15		HG
125_122718	1	08-Jan-2019 16:17		HG
CCV 6	1	08-Jan-2019 16:27		HG
CCB 5	1	08-Jan-2019 16:29		HG
CCV 7	1	08-Jan-2019 16:59		HG
CCB 6	1	08-Jan-2019 17:01		HG
CCV 8	1	08-Jan-2019 17:24		HG
CCB 7	1	08-Jan-2019 17:26		HG
CCV 9	1	08-Jan-2019 17:45		HG
CCB 8	1	08-Jan-2019 17:46		HG
CCV 10	1	08-Jan-2019 18:18		HG
CCB 9	1	08-Jan-2019 18:20		HG
CCV 11	1	08-Jan-2019 18:39		HG
CCB 10	1	08-Jan-2019 18:41		HG
CCV 12	1	08-Jan-2019 18:58		HG
CCB 11	1	08-Jan-2019 19:00		HG

FORM 13 - ANALYSIS RUN LOG

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121523
Start Date: 08-Jan-2019 End Date: 09-Jan-2019

Run ID:ICPMS05_330637
Instrument:ICPMS05
Method:

Sample No.	D/F	Time	FileID	Analytes
ICPMS05_330637_Tune	1	08-Jan-2019 00:00	ICPMS05_330637_Tune_1	
CAL BLK	1	08-Jan-2019 12:02	030CALB.d_4899011	AG AS BE CA CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
2/10/200	1	08-Jan-2019 12:04	031CALS.d_4899012	AG AS BE CA CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
5/25/500	1	08-Jan-2019 12:06	032CALS.d_4899013	AG AS BE CA CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
10/50/1000	1	08-Jan-2019 12:08	033CALS.d_4899014	AG AS BE CA CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
100/500/10K	1	08-Jan-2019 12:10	034CALS.d_4899015	AG AS BE CA CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
200/1000/20K	1	08-Jan-2019 12:12	035CALS.d_4899016	AG AS BE CA CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
ICV	1	08-Jan-2019 12:16	037_ICV.d_4899018	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
LLICV2	1	08-Jan-2019 12:18	038SMPL.d_4899019	AG AS BE CA CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
LLICV5	1	08-Jan-2019 12:20	039LICV.d_4899020	AG AS BE CA CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
ICB	1	08-Jan-2019 12:22	040_ICB.d_4899021	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
ICSA	1	08-Jan-2019 12:34	042ICSA.d_4899267	AG AS BE CA CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
ICSAB	1	08-Jan-2019 12:36	043ICSB.d_4899268	AG AS BE CA CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 1	1	08-Jan-2019 13:03	056_CCB.d_4899281	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 1	1	08-Jan-2019 13:08	058_CCV.d_4899283	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 2	1	08-Jan-2019 13:29	068_CCV.d_4899293	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 2	1	08-Jan-2019 13:31	069_CCB.d_4899294	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CAL BLK	1	08-Jan-2019 13:44	075CALB.d_4899363	AG AS BE CA CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
2/10/200	1	08-Jan-2019 13:46	076CALS.d_4899364	AG AS BE CA CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
5/25/500	1	08-Jan-2019 13:48	077CALS.d_4899365	AG AS BE CA CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
10/50/1000	1	08-Jan-2019 13:50	078CALS.d_4899366	AG AS BE CA CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
100/500/10K	1	08-Jan-2019 13:52	079CALS.d_4899367	AG AS BE CA CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
200/1000/20K	1	08-Jan-2019 13:54	080CALS.d_4899368	AG AS BE CA CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
ICCV 3	1	08-Jan-2019 13:58	082_ICV.d_4899370	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
LLCCV2	1	08-Jan-2019 14:02	084SMPL.d_4899372	AG AS BE CA CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
ICCB 3	1	08-Jan-2019 14:04	085_ICB.d_4899373	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
LLCCV5	1	08-Jan-2019 14:06	086LICV.d_4899374	AG AS BE CA CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 4	1	08-Jan-2019 14:26	096_CCV.d_4899384	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 4	1	08-Jan-2019 14:28	097_CCB.d_4899385	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 5	1	08-Jan-2019 14:50	108_CCV.d_4899571	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 5	1	08-Jan-2019 14:52	109_CCB.d_4899572	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 6	1	08-Jan-2019 15:14	120_CCV.d_4899583	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN

FORM 13 - ANALYSIS RUN LOG

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121523
Start Date: 08-Jan-2019 End Date: 09-Jan-2019

Run ID:ICPMS05_330637
Instrument:ICPMS05
Method:

Sample No.	D/F	Time	FileID	Analytes
CCB 6	1	08-Jan-2019 15:16	121_CCB.d_4899584	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 7	1	08-Jan-2019 15:39	131_CCV.d_4899598	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 7	1	08-Jan-2019 15:41	132_CCB.d_4899601	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CAL BLK	1	08-Jan-2019 15:53	138CALB.d_4899738	AG AS BE CA CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
2/10/200	1	08-Jan-2019 15:55	139CALS.d_4899739	AG AS BE CA CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
5/25/500	1	08-Jan-2019 15:57	140CALS.d_4899740	AG AS BE CA CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
10/50/1000	1	08-Jan-2019 15:59	141CALS.d_4899741	AG AS BE CA CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
100/500/10K	1	08-Jan-2019 16:01	142CALS.d_4899742	AG AS BE CA CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
200/1000/20K	1	08-Jan-2019 16:03	143CALS.d_4899743	AG AS BE CA CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
ICCV 8	1	08-Jan-2019 16:07	145_ICV.d_4899745	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
LLCCV5	1	08-Jan-2019 16:09	146LICV.d_4899746	AG AS BE CA CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
LLCCV2	1	08-Jan-2019 16:11	147SMPL.d_4899747	AG AS BE CA CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
ICCB 8	1	08-Jan-2019 16:13	148_ICB.d_4899748	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 9	1	08-Jan-2019 16:44	160_CCB.d_4899861	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 9	1	08-Jan-2019 16:46	161_CCV.d_4899862	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 10	1	08-Jan-2019 17:09	172_CCV.d_4899873	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 10	1	08-Jan-2019 17:11	173_CCB.d_4899874	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 11	1	08-Jan-2019 17:33	184_CCV.d_4899885	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 11	1	08-Jan-2019 17:35	185_CCB.d_4899886	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 12	1	08-Jan-2019 17:49	192_CCV.d_4899897	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 12	1	08-Jan-2019 17:51	193_CCB.d_4899898	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CAL BLK	1	08-Jan-2019 19:26	215CALB.d_4900154	AG AS BE CA CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
2/10/200	1	08-Jan-2019 19:28	216CALS.d_4900155	AG AS BE CA CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
5/25/500	1	08-Jan-2019 19:30	217CALS.d_4900156	AG AS BE CA CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
10/50/1000	1	08-Jan-2019 19:32	218CALS.d_4900157	AG AS BE CA CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
100/500/10K	1	08-Jan-2019 19:34	219CALS.d_4900158	AG AS BE CA CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
200/1000/20K	1	08-Jan-2019 19:36	220CALS.d_4900159	AG AS BE CA CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
LLCCV5	1	08-Jan-2019 19:42	223LICV.d_4900162	AG AS BE CA CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
LLCCV2	1	08-Jan-2019 19:44	224SMPL.d_4900163	AG AS BE CA CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
ICCV 13	1	08-Jan-2019 19:46	225_ICV.d_4900164	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
ICCB 13	1	08-Jan-2019 19:48	226_ICB.d_4900165	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 14	1	08-Jan-2019 20:06	235_CCV.d_4900174	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN

FORM 13 - ANALYSIS RUN LOG

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121523
Start Date: 08-Jan-2019 End Date: 09-Jan-2019

Run ID:ICPMS05_330637
Instrument:ICPMS05
Method:

Sample No.	D/F	Time	FileID	Analytes
CCB 14	1	08-Jan-2019 20:07	236_CCB.d_4900175	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 15	1	08-Jan-2019 20:29	247_CCV.d_4900186	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 15	1	08-Jan-2019 20:31	248_CCB.d_4900187	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 16	1	08-Jan-2019 20:51	258_CCV.d_4900197	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 16	1	08-Jan-2019 20:53	259_CCB.d_4900198	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CAL BLK	1	08-Jan-2019 21:41	273CALB.d_4900278	AG AS BE CA CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
2/10/200	1	08-Jan-2019 21:43	274CALS.d_4900279	AG AS BE CA CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
5/25/500	1	08-Jan-2019 21:45	275CALS.d_4900280	AG AS BE CA CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
10/50/1000	1	08-Jan-2019 21:47	276CALS.d_4900281	AG AS BE CA CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
100/500/10K	1	08-Jan-2019 21:49	277CALS.d_4900282	AG AS BE CA CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
200/1000/20K	1	08-Jan-2019 21:51	278CALS.d_4900283	AG AS BE CA CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
LLCCV5	1	08-Jan-2019 21:57	281LICV.d_4900286	AG AS BE CA CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
LLCCV2	1	08-Jan-2019 21:59	282SMPL.d_4900287	AG AS BE CA CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
ICCV 17	1	08-Jan-2019 22:01	283_ICV.d_4900288	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
ICCB 17	1	08-Jan-2019 22:03	284_ICB.d_4900289	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 18	1	08-Jan-2019 22:17	290_CCV.d_4900295	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 18	1	08-Jan-2019 22:19	291_CCB.d_4900296	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 19	1	08-Jan-2019 22:31	297_CCV.d_4900302	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 19	1	08-Jan-2019 22:33	298_CCB.d_4900303	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 20	1	08-Jan-2019 22:55	309_CCV.d_4900314	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 20	1	08-Jan-2019 22:57	310_CCB.d_4900315	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 21	1	08-Jan-2019 23:18	321_CCV.d_4900326	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 21	1	08-Jan-2019 23:20	322_CCB.d_4900327	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
MBLK-136233	1	08-Jan-2019 23:22	323SMPL.d_4900328	AG AS BE CA CO CR CU FE K MG MN NA NI SB SE TL V ZN
LCS-136233	1	08-Jan-2019 23:24	324SMPL.d_4900329	AG AS BE CA CO CR CU FE K MG MN NA NI SB SE TL V ZN
ZZZZZZSD	5	08-Jan-2019 23:28	326SMPL.d_4900331	AG AS BE CO CR CU FE K NI SB SE TL V ZN
ZZZZZZMS	1	08-Jan-2019 23:30	327SMPL.d_4900332	AG AS BE CA CO CR CU FE K MG MN NA NI SB SE TL V ZN
ZZZZZZMSD	1	08-Jan-2019 23:32	328SMPL.d_4900333	AG AS BE CA CO CR CU FE K MG MN NA NI SB SE TL V ZN
ZZZZZZPDS	1	08-Jan-2019 23:34	329SMPL.d_4900334	AG AS BE CO CR CU FE K NI SB SE TL V ZN
CCV 22	1	08-Jan-2019 23:36	330_CCV.d_4900335	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 22	1	08-Jan-2019 23:38	331_CCB.d_4900336	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 23	1	09-Jan-2019 00:00	342_CCV.d_4900347	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 23	1	09-Jan-2019 00:02	343_CCB.d_4900348	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN

ALS Houston, US

Date: 19-Jan-19

FORM 13 - ANALYSIS RUN LOG

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121523
Start Date: 08-Jan-2019 End Date: 09-Jan-2019

Run ID:ICPMS05_330637
Instrument:ICPMS05
Method:

Sample No.	D/F	Time	FileID	Analytes
18CPTMW24_122718	1	09-Jan-2019 00:10	347SMPL.d_4900352	AG AS CO CR CU FE MN NI PB SB SE TL V ZN
18WW02_122718	1	09-Jan-2019 00:12	348SMPL.d_4900353	AG AS CA CO CR CU FE MG MN NI PB SB SE TL V ZN
125_122718	1	09-Jan-2019 00:14	349SMPL.d_4900354	AG AS CA CO CR CU FE MG MN NI PB SB SE TL V ZN
CCV 24	1	09-Jan-2019 00:18	351_CCV.d_4900356	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 24	1	09-Jan-2019 00:19	352_CCB.d_4900357	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
LLCCV5	1	09-Jan-2019 00:21	353LICV.d_4900358	AG AS BE CA CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
LLCCV2	1	09-Jan-2019 00:23	354SMPL.d_4900359	AG AS BE CA CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
ICSA	1	09-Jan-2019 00:25	355ICSA.d_4900360	AG AS BE CA CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
ICSAB	1	09-Jan-2019 00:27	356ICSB.d_4900361	AG AS BE CA CO CR CU FE K MG MN NA NI PB SB SE TL V ZN

FORM 13 - ANALYSIS RUN LOG

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121523
Start Date: 09-Jan-2019 End Date: 10-Jan-2019

Run ID:ICPMS05_330716
Instrument:ICPMS05
Method:

Sample No.	D/F	Time	FileID	Analytes
ICPMS05_330716_Tune	1	09-Jan-2019 00:00	ICPMS05_330716_Tune_1	
CAL BLK	1	09-Jan-2019 11:53	017CALB.d_4901063	AL BA BE CA CD K MG MN NA PB
2/10/200	1	09-Jan-2019 11:55	018CALS.d_4901064	AL BA BE CA CD K MG MN NA PB
5/25/500	1	09-Jan-2019 11:57	019CALS.d_4901065	AL BA BE CA CD K MG MN NA PB
10/50/1000	1	09-Jan-2019 11:59	020CALS.d_4901066	AL BA BE CA CD K MG MN NA PB
100/500/10K	1	09-Jan-2019 12:01	021CALS.d_4901067	AL BA BE CA CD K MG MN NA PB
200/1000/20K	1	09-Jan-2019 12:03	022CALS.d_4901068	AL BA BE CA CD K MG MN NA PB
LLICV2	1	09-Jan-2019 12:09	025SMPL.d_4901071	AL BA BE CA CD K MG MN NA PB
LLICV5	1	09-Jan-2019 12:11	026LICV.d_4901072	AL BA BE CA CD K MG MN NA PB
ICB	1	09-Jan-2019 12:13	027_ICB.d_4901073	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
ICV	1	09-Jan-2019 12:15	028_ICV.d_4901074	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
ICSA	1	09-Jan-2019 12:17	029ICSA.d_4901075	AL BA BE CA CD K MG MN NA PB
ICSAB	1	09-Jan-2019 12:19	030ICSB.d_4901076	AL BA BE CA CD K MG MN NA PB
CCV 1	1	09-Jan-2019 12:43	042_CCV.d_4901088	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 1	1	09-Jan-2019 12:45	043_CCB.d_4901089	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 2	1	09-Jan-2019 13:07	054_CCV.d_4901100	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 2	1	09-Jan-2019 13:09	055_CCB.d_4901101	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 3	1	09-Jan-2019 13:27	064_CCV.d_4901110	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 3	1	09-Jan-2019 13:29	065_CCB.d_4901111	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CAL BLK	1	09-Jan-2019 13:41	070CALB.d_4901183	AL BA BE CA CD K MG MN NA PB
2/10/200	1	09-Jan-2019 13:43	071CALS.d_4901184	AL BA BE CA CD K MG MN NA PB
5/25/500	1	09-Jan-2019 13:45	072CALS.d_4901185	AL BA BE CA CD K MG MN NA PB
10/50/1000	1	09-Jan-2019 13:47	073CALS.d_4901186	AL BA BE CA CD K MG MN NA PB
100/500/10K	1	09-Jan-2019 13:49	074CALS.d_4901187	AL BA BE CA CD K MG MN NA PB
200/1000/20K	1	09-Jan-2019 13:51	075CALS.d_4901188	AL BA BE CA CD K MG MN NA PB
ICCV 4	1	09-Jan-2019 13:55	077_ICV.d_4901190	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
LLCCV5	1	09-Jan-2019 13:57	078LICV.d_4901191	AL BA BE CA CD K MG MN NA PB
LLCCV2	1	09-Jan-2019 13:59	079SMPL.d_4901192	AL BA BE CA CD K MG MN NA PB
ICCB 4	1	09-Jan-2019 14:01	080_ICB.d_4901193	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 5	1	09-Jan-2019 14:21	090_CCV.d_4901203	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 5	1	09-Jan-2019 14:23	091_CCB.d_4901204	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 6	1	09-Jan-2019 14:44	102_CCV.d_4901340	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 6	1	09-Jan-2019 14:46	103_CCB.d_4901341	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 7	1	09-Jan-2019 14:51	105_CCV.d_4901344	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 8	1	09-Jan-2019 15:12	115_CCV.d_4901358	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 7	1	09-Jan-2019 15:14	116_CCB.d_4901359	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 9	1	09-Jan-2019 15:35	127_CCV.d_4901506	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 8	1	09-Jan-2019 15:37	128_CCB.d_4901507	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 10	1	09-Jan-2019 15:59	139_CCV.d_4901518	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN

FORM 13 - ANALYSIS RUN LOG

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121523
Start Date: 09-Jan-2019 End Date: 10-Jan-2019

Run ID:ICPMS05_330716
Instrument:ICPMS05
Method:

Sample No.	D/F	Time	FileID	Analytes
CCB 9	1	09-Jan-2019 16:01	140_CCB.d_4901519	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 10	1	09-Jan-2019 16:25	152_CCB.d_4901551	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 11	1	09-Jan-2019 16:29	154_CCV.d_4901553	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 12	1	09-Jan-2019 16:50	164_CCV.d_4901706	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 11	1	09-Jan-2019 16:52	165_CCB.d_4901707	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 13	1	09-Jan-2019 17:14	176_CCV.d_4901718	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 12	1	09-Jan-2019 17:16	177_CCB.d_4901719	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
MBLK-136233	1	09-Jan-2019 17:24	181SMPL.d_4901789	AL BA CD PB
LCS-136233	1	09-Jan-2019 17:25	182SMPL.d_4901790	AL BA CD PB
ZZZZZZSD	100	09-Jan-2019 17:29	184SMPL.d_4901792	CA MG MN NA
ZZZZZZPDS	20	09-Jan-2019 17:31	185SMPL.d_4901793	CA MG MN NA
CCV 14	1	09-Jan-2019 17:35	187_CCV.d_4901795	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 13	1	09-Jan-2019 17:37	188_CCB.d_4901796	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
18CPTMW24_122718	100	09-Jan-2019 17:47	193SMPL.d_4901801	BA CA MG NA
125_122718	50	09-Jan-2019 17:49	194SMPL.d_4901802	AL
CCV 15	1	09-Jan-2019 17:53	196_CCV.d_4901804	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 14	1	09-Jan-2019 17:55	197_CCB.d_4901805	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
18CPTMW24_122718	2	09-Jan-2019 18:15	207SMPL.d_4901918	AL BE CD K
CCV 16	1	09-Jan-2019 18:17	208_CCV.d_4901919	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 15	1	09-Jan-2019 18:19	209_CCB.d_4901920	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
18WW02_122718	1	09-Jan-2019 18:21	210SMPL.d_4901921	AL BA BE CD K NA
125_122718	1	09-Jan-2019 18:23	211SMPL.d_4901922	BA BE CD K NA
CCV 17	1	09-Jan-2019 18:27	213_CCV.d_4901924	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 16	1	09-Jan-2019 18:29	214_CCB.d_4901925	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CAL BLK	1	09-Jan-2019 19:12	221CALB.d_4902035	AL BA BE CA CD K MG MN NA PB
2/10/200	1	09-Jan-2019 19:14	222CALS.d_4902036	AL BA BE CA CD K MG MN NA PB
5/25/500	1	09-Jan-2019 19:16	223CALS.d_4902037	AL BA BE CA CD K MG MN NA PB
10/50/1000	1	09-Jan-2019 19:18	224CALS.d_4902038	AL BA BE CA CD K MG MN NA PB
200/1000/20K	1	09-Jan-2019 19:22	226CALS.d_4902040	AL BA BE CA CD K MG MN NA PB
100/500/10K	1	09-Jan-2019 19:24	227CALS.d_4902041	AL BA BE CA CD K MG MN NA PB
ICCV 18	1	09-Jan-2019 19:28	229_ICV.d_4902043	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
LLCCV5	1	09-Jan-2019 19:30	230LICV.d_4902044	AL BA BE CA CD K MG MN NA PB
LLCCV2	1	09-Jan-2019 19:32	231SMPL.d_4902045	AL BA BE CA CD K MG MN NA PB
ICCB 17	1	09-Jan-2019 19:34	232_ICB.d_4902046	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
ZZZZZZSD	10	09-Jan-2019 19:38	234SMPL.d_4902117	AL BA CD PB
ZZZZZZMS	2	09-Jan-2019 19:40	235SMPL.d_4902118	AL BA CD PB
ZZZZZZMSD	2	09-Jan-2019 19:42	236SMPL.d_4902119	AL BA CD PB
ZZZZZZPDS	2	09-Jan-2019 19:44	237SMPL.d_4902120	AL BA CD PB
CCV 19	1	09-Jan-2019 19:46	238_CCV.d_4902121	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 18	1	09-Jan-2019 19:48	239_CCB.d_4902122	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN

FORM 13 - ANALYSIS RUN LOG

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121523
Start Date: 09-Jan-2019 End Date: 10-Jan-2019

Run ID:ICPMS05_330716
Instrument:ICPMS05
Method:

Sample No.	D/F	Time	FileID	Analytes
CCV 20	1	09-Jan-2019 20:02	246_CCV.d_4902181	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 19	1	09-Jan-2019 20:04	247_CCB.d_4902182	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 21	1	09-Jan-2019 20:25	258_CCV.d_4902193	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 20	1	09-Jan-2019 20:27	259_CCB.d_4902194	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 22	1	09-Jan-2019 20:43	267_CCV.d_4902202	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 21	1	09-Jan-2019 20:45	268_CCB.d_4902203	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 23	1	09-Jan-2019 21:01	276_CCV.d_4902211	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 22	1	09-Jan-2019 21:03	277_CCB.d_4902212	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 24	1	09-Jan-2019 21:25	288_CCV.d_4902223	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 23	1	09-Jan-2019 21:27	289_CCB.d_4902224	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 25	1	09-Jan-2019 21:44	298_CCV.d_4902233	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 24	1	09-Jan-2019 21:46	299_CCB.d_4902234	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 26	1	09-Jan-2019 22:06	309_CCV.d_4902244	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 25	1	09-Jan-2019 22:08	310_CCB.d_4902245	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 27	1	09-Jan-2019 22:20	316_CCV.d_4902251	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 26	1	09-Jan-2019 22:22	317_CCB.d_4902252	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 27	1	09-Jan-2019 22:42	327_CCB.d_4902299	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 28	1	09-Jan-2019 22:47	329_CCV.d_4902301	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 29	1	09-Jan-2019 23:07	339_CCV.d_4902311	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 28	1	09-Jan-2019 23:09	340_CCB.d_4902312	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 30	1	09-Jan-2019 23:29	350_CCV.d_4902341	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 29	1	09-Jan-2019 23:31	351_CCB.d_4902342	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 31	1	09-Jan-2019 23:52	362_CCV.d_4902353	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 30	1	09-Jan-2019 23:54	363_CCB.d_4902354	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 32	1	10-Jan-2019 00:16	374_CCV.d_4902365	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 31	1	10-Jan-2019 00:18	375_CCB.d_4902366	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 33	1	10-Jan-2019 00:34	383_CCV.d_4902605	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 32	1	10-Jan-2019 00:36	384_CCB.d_4902606	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 34	1	10-Jan-2019 00:58	395_CCV.d_4902617	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 33	1	10-Jan-2019 01:00	396_CCB.d_4902618	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 35	1	10-Jan-2019 01:02	397_CCV.d_4902619	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 34	1	10-Jan-2019 01:04	398_CCB.d_4902620	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN

ALS Houston, US

Date: 19-Jan-19

FORM 13 - ANALYSIS RUN LOG

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121523
Start Date: 09-Jan-2019 End Date: 10-Jan-2019

Run ID:ICPMS05_330716
Instrument:ICPMS05
Method:

Sample No.	D/F	Time	FileID	Analytes
LLCCV5	1	10-Jan-2019 01:06	399LICV.d_4902621	AL BA BE CA CD K MG MN NA PB
LLCCV2	1	10-Jan-2019 01:08	400SMPL.d_4902622	AL BA BE CA CD K MG MN NA PB
ICSA	1	10-Jan-2019 01:10	401ICSA.d_4902623	AL BA BE CA CD K MG MN NA PB
ICSAB	1	10-Jan-2019 01:12	402ICSB.d_4902624	AL BA BE CA CD K MG MN NA PB

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Date: 19-Jan-19

Form 2 - Initial and Continuing Calibration Verification

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121523

Run ID: HG03_330677
Instrument: HG03
Method: SW7470

ICCV1 Date: 08-Jan-2019 14:41 Seq: 4899900 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Mercury	5	4.87	97	90-110	

ICV Date: 08-Jan-2019 14:42 Seq: 4899901 ICV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Mercury	5	4.96	99	90-110	

CCV2 Date: 08-Jan-2019 15:04 Seq: 4899910 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Mercury	5	5.14	103	90-110	

CCV3 Date: 08-Jan-2019 15:24 Seq: 4899922 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Mercury	5	5.07	101	90-110	

CCV4 Date: 08-Jan-2019 15:46 Seq: 4899931 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Mercury	5	5.05	101	90-110	

CCV5 Date: 08-Jan-2019 16:07 Seq: 4899943 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Mercury	5	5.08	102	90-110	

CCV6 Date: 08-Jan-2019 16:27 Seq: 4899955 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Mercury	5	5.13	103	90-110	

CCV7 Date: 08-Jan-2019 16:59 Seq: 4899967 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Mercury	5	4.97	99	90-110	

CCV8 Date: 08-Jan-2019 17:24 Seq: 4899977 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Mercury	5	4.99	100	90-110	

CCV9 Date: 08-Jan-2019 17:45 Seq: 4899989 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Mercury	5	5.25	105	90-110	

CCV10 Date: 08-Jan-2019 18:18 Seq: 4900114 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Mercury	5	5.24	105	90-110	

CCV11 Date: 08-Jan-2019 18:39 Seq: 4900126 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Mercury	5	5.18	104	90-110	

CCV12 Date: 08-Jan-2019 18:58 Seq: 4900137 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Mercury	5	5.11	102	90-110	

Form 2 - Initial and Continuing Calibration Verification

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121523

Run ID: ICPMS05_330637
Instrument: ICPMS05
Method: SW6020

ICV Date: 08-Jan-2019 12:16 Seq: 4899018 ICV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Antimony	100	101.605	102	90-110	
Arsenic	100	101.68	102	90-110	
Beryllium	100	94.819	95	90-110	
Calcium	10000	10242.492	102	90-110	
Chromium	100	101.322	101	90-110	
Cobalt	100	102.489	102	90-110	
Copper	100	103.268	103	90-110	
Iron	10000	10034.015	100	90-110	
Lead	100	104.989	105	90-110	
Magnesium	10000	10227.564	102	90-110	
Manganese	100	102.563	103	90-110	
Nickel	100	103.192	103	90-110	
Potassium	10000	9497.549	95	90-110	
Selenium	100	103.022	103	90-110	
Silver	100	93.768	94	90-110	
Sodium	10000	10157.006	102	90-110	
Thallium	100	97.324	97	90-110	
Vanadium	100	100.681	101	90-110	
Zinc	100	94.978	95	90-110	

CCV1 Date: 08-Jan-2019 13:08 Seq: 4899283 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Antimony	100	99.588	100	90-110	
Arsenic	100	99.634	100	90-110	
Beryllium	100	94.23	94	90-110	
Calcium	10000	10471.408	105	90-110	
Chromium	100	98.885	99	90-110	
Cobalt	100	99.968	100	90-110	
Copper	100	103.855	104	90-110	
Iron	10000	10113.527	101	90-110	
Lead	100	104.075	104	90-110	
Magnesium	10000	10555.922	106	90-110	
Manganese	100	99.706	100	90-110	
Nickel	100	102.053	102	90-110	
Potassium	10000	9768.093	98	90-110	
Selenium	100	96.482	97	90-110	
Silver	100	90.748	91	90-110	
Sodium	10000	10334.403	103	90-110	
Thallium	100	92.42	92	90-110	
Vanadium	100	100.741	101	90-110	
Zinc	100	96.048	96	90-110	

CCV2 Date: 08-Jan-2019 13:29 Seq: 4899293 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Antimony	100	99.676	100	90-110	
Arsenic	100	100.341	100	90-110	
Beryllium	100	100.149	100	90-110	
Calcium	10000	10790.195	108	90-110	
Chromium	100	103.257	103	90-110	
Cobalt	100	101.806	102	90-110	
Copper	100	103.814	104	90-110	
Iron	10000	10437.697	104	90-110	
Lead	100	85.841	86	90-110	S
Magnesium	10000	10679.648	107	90-110	
Manganese	100	103.238	103	90-110	

Form 2 - Initial and Continuing Calibration Verification

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121523

Run ID: ICPMS05_330637
Instrument: ICPMS05
Method: SW6020

CCV2 Date: 08-Jan-2019 13:29 Seq: 4899293 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Nickel	100	103.282	103	90-110	
Potassium	10000	10004.209	100	90-110	
Selenium	100	95.824	96	90-110	
Silver	100	91.55	92	90-110	
Sodium	10000	10745.924	107	90-110	
Thallium	100	107.704	108	90-110	
Vanadium	100	105.911	106	90-110	
Zinc	100	94.972	95	90-110	

ICCV3 Date: 08-Jan-2019 13:58 Seq: 4899370 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Antimony	100	108.13	108	90-110	
Arsenic	100	102.595	103	90-110	
Beryllium	100	105.784	106	90-110	
Calcium	10000	10365.12	104	90-110	
Chromium	100	103.477	103	90-110	
Cobalt	100	101.886	102	90-110	
Copper	100	102.912	103	90-110	
Iron	10000	10770.2	108	90-110	
Lead	100	107.89	108	90-110	
Magnesium	10000	10833.633	108	90-110	
Manganese	100	103.994	104	90-110	
Nickel	100	102.444	102	90-110	
Potassium	10000	11058.641	111	90-110	S
Selenium	100	101.409	101	90-110	
Silver	100	105.36	105	90-110	
Sodium	10000	10862.277	109	90-110	
Thallium	100	93.223	93	90-110	
Vanadium	100	101.07	101	90-110	
Zinc	100	104.57	105	90-110	

CCV4 Date: 08-Jan-2019 14:26 Seq: 4899384 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Antimony	100	95.76	96	90-110	
Arsenic	100	95.992	96	90-110	
Beryllium	100	103.17	103	90-110	
Calcium	10000	9651.291	97	90-110	
Chromium	100	98.844	99	90-110	
Cobalt	100	98.462	99	90-110	
Copper	100	99.114	99	90-110	
Iron	10000	9965.505	100	90-110	
Lead	100	95.252	95	90-110	
Magnesium	10000	10037.586	100	90-110	
Manganese	100	98.154	98	90-110	
Nickel	100	98.539	99	90-110	
Potassium	10000	10146.382	101	90-110	
Selenium	100	94.187	94	90-110	
Silver	100	101.661	102	90-110	
Sodium	10000	10124.443	101	90-110	
Thallium	100	97.469	98	90-110	
Vanadium	100	98.207	98	90-110	
Zinc	100	102.03	102	90-110	

Form 2 - Initial and Continuing Calibration Verification

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121523

Run ID: ICPMS05_330637
Instrument: ICPMS05
Method: SW6020

CCV5 Date: 08-Jan-2019 14:50 Seq: 4899571 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Antimony	100	95.574	96	90-110	
Arsenic	100	94.527	95	90-110	
Beryllium	100	95.919	96	90-110	
Calcium	10000	9661.674	97	90-110	
Chromium	100	97.838	98	90-110	
Cobalt	100	97.322	97	90-110	
Copper	100	98.79	99	90-110	
Iron	10000	9920.473	99	90-110	
Lead	100	96.426	96	90-110	
Magnesium	10000	9930.525	99	90-110	
Manganese	100	97.324	97	90-110	
Nickel	100	98.054	98	90-110	
Potassium	10000	10415.44	104	90-110	
Selenium	100	92.208	92	90-110	
Silver	100	105.469	105	90-110	
Sodium	10000	10011.592	100	90-110	
Thallium	100	88.402	88	90-110	S
Vanadium	100	96.301	96	90-110	
Zinc	100	103.63	104	90-110	

CCV6 Date: 08-Jan-2019 15:14 Seq: 4899583 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Antimony	100	93.183	93	90-110	
Arsenic	100	92.642	93	90-110	
Beryllium	100	101.383	101	90-110	
Calcium	10000	9552.166	96	90-110	
Chromium	100	96.716	97	90-110	
Cobalt	100	95.141	95	90-110	
Copper	100	94.919	95	90-110	
Iron	10000	9631.241	96	90-110	
Lead	100	94.52	95	90-110	
Magnesium	10000	9379.152	94	90-110	
Manganese	100	95.212	95	90-110	
Nickel	100	95.219	95	90-110	
Potassium	10000	9618.682	96	90-110	
Selenium	100	89.804	90	90-110	S
Silver	100	100.074	100	90-110	
Sodium	10000	9585.55	96	90-110	
Thallium	100	94.944	95	90-110	
Vanadium	100	93.602	94	90-110	
Zinc	100	97.345	97	90-110	

CCV7 Date: 08-Jan-2019 15:39 Seq: 4899598 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Antimony	100	105.763	106	90-110	
Arsenic	100	99.417	99	90-110	
Beryllium	100	104.416	104	90-110	
Calcium	10000	10913.933	109	90-110	
Chromium	100	103.276	103	90-110	
Cobalt	100	100.837	101	90-110	
Copper	100	105.64	106	90-110	
Iron	10000	10490.393	105	90-110	
Lead	100	99.226	99	90-110	
Magnesium	10000	10637.498	106	90-110	
Manganese	100	102.114	102	90-110	

Form 2 - Initial and Continuing Calibration Verification

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121523

Run ID: ICPMS05_330637
Instrument: ICPMS05
Method: SW6020

CCV7	Date: 08-Jan-2019 15:39		Seq: 4899598	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Nickel	100	102.667	103	90-110	
Potassium	10000	10430.912	104	90-110	
Selenium	100	96.217	96	90-110	
Silver	100	99.964	100	90-110	
Sodium	10000	10805.476	108	90-110	
Thallium	100	99.735	100	90-110	
Vanadium	100	100.748	101	90-110	
Zinc	100	99.517	100	90-110	

ICCV8	Date: 08-Jan-2019 16:07		Seq: 4899745	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Antimony	100	105.926	106	90-110	
Arsenic	100	103.001	103	90-110	
Beryllium	100	103.091	103	90-110	
Calcium	10000	10774.582	108	90-110	
Chromium	100	102.493	102	90-110	
Cobalt	100	104.589	105	90-110	
Copper	100	104.122	104	90-110	
Iron	10000	10863.142	109	90-110	
Lead	100	106.757	107	90-110	
Magnesium	10000	10977.381	110	90-110	
Manganese	100	104.273	104	90-110	
Nickel	100	103.674	104	90-110	
Potassium	10000	9978.313	100	90-110	
Selenium	100	102.129	102	90-110	
Silver	100	99.813	100	90-110	
Sodium	10000	10836.875	108	90-110	
Thallium	100	95.451	96	90-110	
Vanadium	100	102.94	103	90-110	
Zinc	100	96.42	96	90-110	

CCV9	Date: 08-Jan-2019 16:46		Seq: 4899862	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Antimony	100	101.515	102	90-110	
Arsenic	100	101.058	101	90-110	
Beryllium	100	108.097	108	90-110	
Calcium	10000	10173.147	102	90-110	
Chromium	100	100.49	100	90-110	
Cobalt	100	104.01	104	90-110	
Copper	100	99.683	100	90-110	
Iron	10000	10379.026	104	90-110	
Lead	100	98.775	99	90-110	
Magnesium	10000	10457.718	105	90-110	
Manganese	100	100.947	101	90-110	
Nickel	100	103.505	104	90-110	
Potassium	10000	10277.671	103	90-110	
Selenium	100	104.595	105	90-110	
Silver	100	104.943	105	90-110	
Sodium	10000	10425.837	104	90-110	
Thallium	100	104.754	105	90-110	
Vanadium	100	101.742	102	90-110	
Zinc	100	103.268	103	90-110	

Form 2 - Initial and Continuing Calibration Verification

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121523

Run ID: ICPMS05_330637
Instrument: ICPMS05
Method: SW6020

CCV10 Date: 08-Jan-2019 17:09 Seq: 4899873 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Antimony	100	101.784	102	90-110	
Arsenic	100	102.078	102	90-110	
Beryllium	100	105.76	106	90-110	
Calcium	10000	10274.155	103	90-110	
Chromium	100	103.101	103	90-110	
Cobalt	100	103.395	103	90-110	
Copper	100	100.551	101	90-110	
Iron	10000	10309.773	103	90-110	
Lead	100	98.988	99	90-110	
Magnesium	10000	10428.062	104	90-110	
Manganese	100	103.564	104	90-110	
Nickel	100	102.59	103	90-110	
Potassium	10000	10158.724	102	90-110	
Selenium	100	102.099	102	90-110	
Silver	100	102.415	102	90-110	
Sodium	10000	10598.014	106	90-110	
Thallium	100	107.045	107	90-110	
Vanadium	100	103.99	104	90-110	
Zinc	100	100.675	101	90-110	

CCV11 Date: 08-Jan-2019 17:33 Seq: 4899885 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Antimony	100	100.687	101	90-110	
Arsenic	100	99.728	100	90-110	
Beryllium	100	99.831	100	90-110	
Calcium	10000	10271.287	103	90-110	
Chromium	100	100.293	100	90-110	
Cobalt	100	101.338	101	90-110	
Copper	100	101.684	102	90-110	
Iron	10000	10195.128	102	90-110	
Lead	100	92.843	93	90-110	
Magnesium	10000	10307.629	103	90-110	
Manganese	100	103.428	103	90-110	
Nickel	100	99.261	99	90-110	
Potassium	10000	9290.834	93	90-110	
Selenium	100	102.839	103	90-110	
Silver	100	94.668	95	90-110	
Sodium	10000	10229.351	102	90-110	
Thallium	100	99.996	100	90-110	
Vanadium	100	101.224	101	90-110	
Zinc	100	93.168	93	90-110	

CCV12 Date: 08-Jan-2019 17:49 Seq: 4899897 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Antimony	100	101.041	101	90-110	
Arsenic	100	100.813	101	90-110	
Beryllium	100	98.239	98	90-110	
Calcium	10000	10109.754	101	90-110	
Chromium	100	98.527	99	90-110	
Cobalt	100	101.674	102	90-110	
Copper	100	100.056	100	90-110	
Iron	10000	10312.768	103	90-110	
Lead	100	115.553	116	90-110	S
Magnesium	10000	10458.185	105	90-110	
Manganese	100	100.826	101	90-110	

Form 2 - Initial and Continuing Calibration Verification

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121523

Run ID: ICPMS05_330637
Instrument: ICPMS05
Method: SW6020

CCV12 Date: 08-Jan-2019 17:49 Seq: 4899897 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Nickel	100	101.749	102	90-110	
Potassium	10000	9574.37	96	90-110	
Selenium	100	104.571	105	90-110	
Silver	100	97.823	98	90-110	
Sodium	10000	10204.047	102	90-110	
Thallium	100	96.989	97	90-110	
Vanadium	100	100.643	101	90-110	
Zinc	100	96.361	96	90-110	

ICCV13 Date: 08-Jan-2019 19:46 Seq: 4900164 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Antimony	100	99.311	99	90-110	
Arsenic	100	101.98	102	90-110	
Beryllium	100	87.337	87	90-110	S
Calcium	10000	10282.365	103	90-110	
Chromium	100	103.775	104	90-110	
Cobalt	100	101.986	102	90-110	
Copper	100	101.913	102	90-110	
Iron	10000	10403.171	104	90-110	
Lead	100	102.097	102	90-110	
Magnesium	10000	10330.365	103	90-110	
Manganese	100	104.258	104	90-110	
Nickel	100	101.887	102	90-110	
Potassium	10000	9868.062	99	90-110	
Selenium	100	103.429	103	90-110	
Silver	100	99.637	100	90-110	
Sodium	10000	10325.384	103	90-110	
Thallium	100	98.44	98	90-110	
Vanadium	100	102.106	102	90-110	
Zinc	100	97.896	98	90-110	

CCV14 Date: 08-Jan-2019 20:06 Seq: 4900174 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Antimony	100	98.583	99	90-110	
Arsenic	100	100.469	100	90-110	
Beryllium	100	92.354	92	90-110	
Calcium	10000	10135.144	101	90-110	
Chromium	100	99.933	100	90-110	
Cobalt	100	100.082	100	90-110	
Copper	100	100.774	101	90-110	
Iron	10000	10053.253	101	90-110	
Lead	100	100.02	100	90-110	
Magnesium	10000	10079.438	101	90-110	
Manganese	100	103.488	103	90-110	
Nickel	100	101.025	101	90-110	
Potassium	10000	9969.058	100	90-110	
Selenium	100	100.578	101	90-110	
Silver	100	100.57	101	90-110	
Sodium	10000	10167.761	102	90-110	
Thallium	100	98.417	98	90-110	
Vanadium	100	99.691	100	90-110	
Zinc	100	98.884	99	90-110	

ALS Houston, US

Date: 19-Jan-19

Form 2 - Initial and Continuing Calibration Verification

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121523

Run ID: ICPMS05_330637
Instrument: ICPMS05
Method: SW6020

CCV15 Date: 08-Jan-2019 20:29 Seq: 4900186 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Antimony	100	97.893	98	90-110	
Arsenic	100	100.839	101	90-110	
Beryllium	100	94.279	94	90-110	
Calcium	10000	10504.197	105	90-110	
Chromium	100	99.674	100	90-110	
Cobalt	100	98.96	99	90-110	
Copper	100	99.914	100	90-110	
Iron	10000	10068.435	101	90-110	
Lead	100	96.374	96	90-110	
Magnesium	10000	10191.922	102	90-110	
Manganese	100	102.443	102	90-110	
Nickel	100	99.316	99	90-110	
Potassium	10000	9899.367	99	90-110	
Selenium	100	102.765	103	90-110	
Silver	100	98.381	98	90-110	
Sodium	10000	10757.114	108	90-110	
Thallium	100	99.933	100	90-110	
Vanadium	100	101.077	101	90-110	
Zinc	100	96.489	97	90-110	

CCV16 Date: 08-Jan-2019 20:51 Seq: 4900197 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Antimony	100	93.311	93	90-110	
Arsenic	100	99.541	100	90-110	
Beryllium	100	96.912	97	90-110	
Calcium	10000	10948.347	109	90-110	
Chromium	100	105.81	106	90-110	
Cobalt	100	102.58	103	90-110	
Copper	100	102.007	102	90-110	
Iron	10000	10521.604	105	90-110	
Lead	100	155.462	155	90-110	S
Magnesium	10000	10641.966	106	90-110	
Manganese	100	106.039	106	90-110	
Nickel	100	103.847	104	90-110	
Potassium	10000	10500.888	105	90-110	
Selenium	100	106.687	107	90-110	
Silver	100	98.473	99	90-110	
Sodium	10000	12263.844	123	90-110	S
Thallium	100	101.173	101	90-110	
Vanadium	100	106.238	106	90-110	
Zinc	100	99.325	99	90-110	

ICCV17 Date: 08-Jan-2019 22:01 Seq: 4900288 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Antimony	100	101.124	101	90-110	
Arsenic	100	99.311	99	90-110	
Beryllium	100	96.854	97	90-110	
Calcium	10000	9852.67	99	90-110	
Chromium	100	101.382	101	90-110	
Cobalt	100	101.125	101	90-110	
Copper	100	103.245	103	90-110	
Iron	10000	10173.218	102	90-110	
Lead	100	109.824	110	90-110	
Magnesium	10000	10110.626	101	90-110	
Manganese	100	100.731	101	90-110	

Form 2 - Initial and Continuing Calibration Verification

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121523

Run ID: ICPMS05_330637
Instrument: ICPMS05
Method: SW6020

ICCV17 Date: 08-Jan-2019 22:01 Seq: 4900288 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Nickel	100	102.972	103	90-110	
Potassium	10000	10303.558	103	90-110	
Selenium	100	98.697	99	90-110	
Silver	100	107.755	108	90-110	
Sodium	10000	9992.799	100	90-110	
Thallium	100	103.859	104	90-110	
Vanadium	100	100.233	100	90-110	
Zinc	100	107.171	107	90-110	

CCV18 Date: 08-Jan-2019 22:17 Seq: 4900295 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Antimony	100	103.185	103	90-110	
Arsenic	100	100.631	101	90-110	
Beryllium	100	92.004	92	90-110	
Calcium	10000	10207.467	102	90-110	
Chromium	100	103.177	103	90-110	
Cobalt	100	102.144	102	90-110	
Copper	100	104.005	104	90-110	
Iron	10000	10337.206	103	90-110	
Lead	100	107.575	108	90-110	
Magnesium	10000	10215.256	102	90-110	
Manganese	100	102.869	103	90-110	
Nickel	100	103.994	104	90-110	
Potassium	10000	9756.231	98	90-110	
Selenium	100	100.397	100	90-110	
Silver	100	99.919	100	90-110	
Sodium	10000	10088.871	101	90-110	
Thallium	100	95.707	96	90-110	
Vanadium	100	101.079	101	90-110	
Zinc	100	99.772	100	90-110	

CCV19 Date: 08-Jan-2019 22:31 Seq: 4900302 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Antimony	100	99.957	100	90-110	
Arsenic	100	99.625	100	90-110	
Beryllium	100	94.413	94	90-110	
Calcium	10000	9957.336	100	90-110	
Chromium	100	101.635	102	90-110	
Cobalt	100	101.412	101	90-110	
Copper	100	102.699	103	90-110	
Iron	10000	10206.903	102	90-110	
Lead	100	110.813	111	90-110	S
Magnesium	10000	10094.908	101	90-110	
Manganese	100	102.706	103	90-110	
Nickel	100	102.312	102	90-110	
Potassium	10000	9800.96	98	90-110	
Selenium	100	98.812	99	90-110	
Silver	100	100.093	100	90-110	
Sodium	10000	10049.603	100	90-110	
Thallium	100	95.276	95	90-110	
Vanadium	100	100.723	101	90-110	
Zinc	100	98.058	98	90-110	

Form 2 - Initial and Continuing Calibration Verification

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121523

Run ID: ICPMS05_330637
Instrument: ICPMS05
Method: SW6020

CCV20 Date: 08-Jan-2019 22:55 Seq: 4900314 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Antimony	100	98.904	99	90-110	
Arsenic	100	99.812	100	90-110	
Beryllium	100	93.857	94	90-110	
Calcium	10000	9954.949	100	90-110	
Chromium	100	102.005	102	90-110	
Cobalt	100	101.291	101	90-110	
Copper	100	102.898	103	90-110	
Iron	10000	10296.154	103	90-110	
Lead	100	120.128	120	90-110	S
Magnesium	10000	10364.164	104	90-110	
Manganese	100	102.835	103	90-110	
Nickel	100	101.973	102	90-110	
Potassium	10000	10037.713	100	90-110	
Selenium	100	102.354	102	90-110	
Silver	100	101.383	101	90-110	
Sodium	10000	10262.171	103	90-110	
Thallium	100	92.924	93	90-110	
Vanadium	100	101.685	102	90-110	
Zinc	100	98.705	99	90-110	

CCV21 Date: 08-Jan-2019 23:18 Seq: 4900326 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Antimony	100	100.324	100	90-110	
Arsenic	100	98.028	98	90-110	
Beryllium	100	94.734	95	90-110	
Calcium	10000	9802.358	98	90-110	
Chromium	100	100.039	100	90-110	
Cobalt	100	100.275	100	90-110	
Copper	100	100.981	101	90-110	
Iron	10000	10095.805	101	90-110	
Lead	100	112.537	113	90-110	S
Magnesium	10000	10008.484	100	90-110	
Manganese	100	99.991	100	90-110	
Nickel	100	102.565	103	90-110	
Potassium	10000	10322.581	103	90-110	
Selenium	100	96.749	97	90-110	
Silver	100	106.042	106	90-110	
Sodium	10000	9954.337	100	90-110	
Thallium	100	103.967	104	90-110	
Vanadium	100	99.776	100	90-110	
Zinc	100	104.407	104	90-110	

CCV22 Date: 08-Jan-2019 23:36 Seq: 4900335 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Antimony	100	98.38	98	90-110	
Arsenic	100	97.437	97	90-110	
Beryllium	100	97.622	98	90-110	
Calcium	10000	10122.183	101	90-110	
Chromium	100	101.395	101	90-110	
Cobalt	100	100.267	100	90-110	
Copper	100	104.042	104	90-110	
Iron	10000	10103.98	101	90-110	
Lead	100	102.183	102	90-110	
Magnesium	10000	10445.022	104	90-110	
Manganese	100	103.077	103	90-110	

Form 2 - Initial and Continuing Calibration Verification

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121523

Run ID: ICPMS05_330637
Instrument: ICPMS05
Method: SW6020

CCV22 Date: 08-Jan-2019 23:36 Seq: 4900335 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Nickel	100	101.826	102	90-110	
Potassium	10000	10864.536	109	90-110	
Selenium	100	95.748	96	90-110	
Silver	100	107.262	107	90-110	
Sodium	10000	10613.356	106	90-110	
Thallium	100	107.18	107	90-110	
Vanadium	100	101.724	102	90-110	
Zinc	100	109.131	109	90-110	

CCV23 Date: 09-Jan-2019 00:00 Seq: 4900347 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Antimony	100	94.216	94	90-110	
Arsenic	100	97.611	98	90-110	
Beryllium	100	101.611	102	90-110	
Calcium	10000	10310.198	103	90-110	
Chromium	100	102.316	102	90-110	
Cobalt	100	100.637	101	90-110	
Copper	100	101.704	102	90-110	
Iron	10000	10139.683	101	90-110	
Lead	100	97.379	97	90-110	
Magnesium	10000	10546.991	105	90-110	
Manganese	100	101.658	102	90-110	
Nickel	100	102.106	102	90-110	
Potassium	10000	11089.214	111	90-110	S
Selenium	100	95.68	96	90-110	
Silver	100	104.451	104	90-110	
Sodium	10000	11321.14	113	90-110	S
Thallium	100	106.359	106	90-110	
Vanadium	100	102.622	103	90-110	
Zinc	100	108.265	108	90-110	

CCV24 Date: 09-Jan-2019 00:18 Seq: 4900356 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Antimony	100	97.826	98	90-110	
Arsenic	100	99.676	100	90-110	
Beryllium	100	89.125	89	90-110	S
Calcium	10000	10062.95	101	90-110	
Chromium	100	102.261	102	90-110	
Cobalt	100	101.197	101	90-110	
Copper	100	105.069	105	90-110	
Iron	10000	10110.496	101	90-110	
Lead	100	108.44	108	90-110	
Magnesium	10000	10097.006	101	90-110	
Manganese	100	101.091	101	90-110	
Nickel	100	103.126	103	90-110	
Potassium	10000	9820.681	98	90-110	
Selenium	100	100.592	101	90-110	
Silver	100	97.323	97	90-110	
Sodium	10000	10339.292	103	90-110	
Thallium	100	91.062	91	90-110	
Vanadium	100	101.743	102	90-110	
Zinc	100	98.311	98	90-110	

Form 2 - Initial and Continuing Calibration Verification

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121523

Run ID: ICPMS05_330716
Instrument: ICPMS05
Method: SW6020

ICV Date: 09-Jan-2019 12:15 Seq: 4901074 ICV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	100.362	100	90-110	
Barium	100	99.961	100	90-110	
Beryllium	100	107.456	107	90-110	
Cadmium	100	101.693	102	90-110	
Calcium	10000	9892.007	99	90-110	
Lead	100	99.439	99	90-110	
Magnesium	10000	10244.397	102	90-110	
Manganese	100	101.241	101	90-110	
Potassium	10000	10325.826	103	90-110	
Sodium	10000	10216.592	102	90-110	

CCV1 Date: 09-Jan-2019 12:43 Seq: 4901088 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	96.337	96	90-110	
Barium	100	103.791	104	90-110	
Beryllium	100	114.036	114	90-110	S
Cadmium	100	106.128	106	90-110	
Calcium	10000	10102.69	101	90-110	
Lead	100	104.14	104	90-110	
Magnesium	10000	9712.781	97	90-110	
Manganese	100	96.729	97	90-110	
Potassium	10000	10269.691	103	90-110	
Sodium	10000	9956.132	100	90-110	

CCV2 Date: 09-Jan-2019 13:07 Seq: 4901100 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	97.746	98	90-110	
Barium	100	100.967	101	90-110	
Beryllium	100	115.401	115	90-110	S
Cadmium	100	103.15	103	90-110	
Calcium	10000	9964.709	100	90-110	
Lead	100	103.72	104	90-110	
Magnesium	10000	9810.133	98	90-110	
Manganese	100	97.121	97	90-110	
Potassium	10000	9964.169	100	90-110	
Sodium	10000	10002.52	100	90-110	

CCV3 Date: 09-Jan-2019 13:27 Seq: 4901110 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	99.62	100	90-110	
Barium	100	103.396	103	90-110	
Beryllium	100	118.954	119	90-110	S
Cadmium	100	103.886	104	90-110	
Calcium	10000	9973.428	100	90-110	
Lead	100	130.492	130	90-110	S
Magnesium	10000	9755.214	98	90-110	
Manganese	100	99.504	100	90-110	
Potassium	10000	10069.903	101	90-110	
Sodium	10000	10032.393	100	90-110	

ICCV4 Date: 09-Jan-2019 13:55 Seq: 4901190 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	101.824	102	90-110	
Barium	100	101.147	101	90-110	
Beryllium	100	106.707	107	90-110	

Form 2 - Initial and Continuing Calibration Verification

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121523

Run ID: ICPMS05_330716
Instrument: ICPMS05
Method: SW6020

ICCV4 Date: 09-Jan-2019 13:55 Seq: 4901190 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Cadmium	100	100.428	100	90-110	
Calcium	10000	10229.973	102	90-110	
Lead	100	96.3	96	90-110	
Magnesium	10000	10158.446	102	90-110	
Manganese	100	101.359	101	90-110	
Potassium	10000	10238.644	102	90-110	
Sodium	10000	10310.67	103	90-110	

CCV5 Date: 09-Jan-2019 14:21 Seq: 4901203 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	104.409	104	90-110	
Barium	100	96.555	97	90-110	
Beryllium	100	101.09	101	90-110	
Cadmium	100	99.349	99	90-110	
Calcium	10000	10261.536	103	90-110	
Lead	100	93.278	93	90-110	
Magnesium	10000	10430.643	104	90-110	
Manganese	100	104.221	104	90-110	
Potassium	10000	10289.458	103	90-110	
Sodium	10000	10426.397	104	90-110	

CCV6 Date: 09-Jan-2019 14:44 Seq: 4901340 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	102.223	102	90-110	
Barium	100	110.246	110	90-110	
Beryllium	100	112.02	112	90-110	S
Cadmium	100	111.602	112	90-110	S
Calcium	10000	10268.77	103	90-110	
Lead	100	97.749	98	90-110	
Magnesium	10000	10416.445	104	90-110	
Manganese	100	102.179	102	90-110	
Potassium	10000	11127.141	111	90-110	S
Sodium	10000	10378.779	104	90-110	

CCV7 Date: 09-Jan-2019 14:51 Seq: 4901344 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	104.913	105	90-110	
Barium	100	106.872	107	90-110	
Beryllium	100	102.672	103	90-110	
Cadmium	100	107.29	107	90-110	
Calcium	10000	10630.808	106	90-110	
Lead	100	96.261	96	90-110	
Magnesium	10000	10434.217	104	90-110	
Manganese	100	104.495	104	90-110	
Potassium	10000	10592.21	106	90-110	
Sodium	10000	10507.816	105	90-110	

CCV8 Date: 09-Jan-2019 15:12 Seq: 4901358 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	103.889	104	90-110	
Barium	100	97.616	98	90-110	
Beryllium	100	101.583	102	90-110	
Cadmium	100	98.138	98	90-110	
Calcium	10000	10110.273	101	90-110	
Lead	100	92.844	93	90-110	

ALS Houston, US

Date: 19-Jan-19

Form 2 - Initial and Continuing Calibration Verification

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121523

Run ID: ICPMS05_330716
Instrument: ICPMS05
Method: SW6020

CCV8 Date: 09-Jan-2019 15:12 Seq: 4901358 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Magnesium	10000	10242.226	102	90-110	
Manganese	100	100.462	100	90-110	
Potassium	10000	10239.775	102	90-110	
Sodium	10000	10204.331	102	90-110	

CCV9 Date: 09-Jan-2019 15:35 Seq: 4901506 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	102.991	103	90-110	
Barium	100	100.953	101	90-110	
Beryllium	100	103.359	103	90-110	
Cadmium	100	100.048	100	90-110	
Calcium	10000	10491.564	105	90-110	
Lead	100	94.622	95	90-110	
Magnesium	10000	10365.725	104	90-110	
Manganese	100	103.266	103	90-110	
Potassium	10000	10317.326	103	90-110	
Sodium	10000	10128.735	101	90-110	

CCV10 Date: 09-Jan-2019 15:59 Seq: 4901518 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	103.851	104	90-110	
Barium	100	97.834	98	90-110	
Beryllium	100	102.288	102	90-110	
Cadmium	100	99.252	99	90-110	
Calcium	10000	10117.767	101	90-110	
Lead	100	111.586	112	90-110	S
Magnesium	10000	10113.223	101	90-110	
Manganese	100	100.552	101	90-110	
Potassium	10000	9992.751	100	90-110	
Sodium	10000	10279.956	103	90-110	

CCV11 Date: 09-Jan-2019 16:29 Seq: 4901553 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	100.271	100	90-110	
Barium	100	99.698	100	90-110	
Beryllium	100	103.684	104	90-110	
Cadmium	100	101.814	102	90-110	
Calcium	10000	10016.144	100	90-110	
Lead	100	113.251	113	90-110	S
Magnesium	10000	10083.329	101	90-110	
Manganese	100	99.216	99	90-110	
Potassium	10000	10483.343	105	90-110	
Sodium	10000	10004.697	100	90-110	

CCV12 Date: 09-Jan-2019 16:50 Seq: 4901706 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	101.598	102	90-110	
Barium	100	95.781	96	90-110	
Beryllium	100	100.838	101	90-110	
Cadmium	100	94.878	95	90-110	
Calcium	10000	9964.873	100	90-110	
Lead	100	93.612	94	90-110	
Magnesium	10000	9932.043	99	90-110	
Manganese	100	99.245	99	90-110	
Potassium	10000	9864.149	99	90-110	

Form 2 - Initial and Continuing Calibration Verification

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121523

Run ID: ICPMS05_330716
Instrument: ICPMS05
Method: SW6020

CCV12 Date: 09-Jan-2019 16:50 Seq: 4901706 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Sodium	10000	10246.542	102	90-110	

CCV13 Date: 09-Jan-2019 17:14 Seq: 4901718 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	97.506	98	90-110	
Barium	100	100.668	101	90-110	
Beryllium	100	103.972	104	90-110	
Cadmium	100	100.226	100	90-110	
Calcium	10000	9756.209	98	90-110	
Lead	100	103.35	103	90-110	
Magnesium	10000	9540.336	95	90-110	
Manganese	100	98.903	99	90-110	
Potassium	10000	10261.958	103	90-110	
Sodium	10000	9661.529	97	90-110	

CCV14 Date: 09-Jan-2019 17:35 Seq: 4901795 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	95.633	96	90-110	
Barium	100	98.679	99	90-110	
Beryllium	100	101.764	102	90-110	
Cadmium	100	97.377	97	90-110	
Calcium	10000	9731.52	97	90-110	
Lead	100	113.598	114	90-110	S
Magnesium	10000	9507.859	95	90-110	
Manganese	100	98.695	99	90-110	
Potassium	10000	9899.892	99	90-110	
Sodium	10000	9365.115	94	90-110	

CCV15 Date: 09-Jan-2019 17:53 Seq: 4901804 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	99.997	100	90-110	
Barium	100	102.371	102	90-110	
Beryllium	100	100.385	100	90-110	
Cadmium	100	100.478	100	90-110	
Calcium	10000	9906.353	99	90-110	
Lead	100	110.778	111	90-110	S
Magnesium	10000	9879.341	99	90-110	
Manganese	100	99.834	100	90-110	
Potassium	10000	9812.289	98	90-110	
Sodium	10000	9705.659	97	90-110	

CCV16 Date: 09-Jan-2019 18:17 Seq: 4901919 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	95.931	96	90-110	
Barium	100	103.727	104	90-110	
Beryllium	100	98.037	98	90-110	
Cadmium	100	98.446	98	90-110	
Calcium	10000	9637.71	96	90-110	
Lead	100	114.974	115	90-110	S
Magnesium	10000	9335.668	93	90-110	
Manganese	100	96.696	97	90-110	
Potassium	10000	9877.857	99	90-110	
Sodium	10000	9397.619	94	90-110	

Form 2 - Initial and Continuing Calibration Verification

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121523

Run ID: ICPMS05_330716
Instrument: ICPMS05
Method: SW6020

CCV17 Date: 09-Jan-2019 18:27 Seq: 4901924 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	95.962	96	90-110	
Barium	100	96.679	97	90-110	
Beryllium	100	99.208	99	90-110	
Cadmium	100	95.369	95	90-110	
Calcium	10000	9685.007	97	90-110	
Lead	100	107.143	107	90-110	
Magnesium	10000	9422.415	94	90-110	
Manganese	100	98.047	98	90-110	
Potassium	10000	9835.636	98	90-110	
Sodium	10000	9378.091	94	90-110	

ICCV18 Date: 09-Jan-2019 19:28 Seq: 4902043 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	101.984	102	90-110	
Barium	100	98.366	98	90-110	
Beryllium	100	92.729	93	90-110	
Cadmium	100	98.816	99	90-110	
Calcium	10000	9963.214	100	90-110	
Lead	100	101.569	102	90-110	
Magnesium	10000	10280.681	103	90-110	
Manganese	100	100.801	101	90-110	
Potassium	10000	9986.797	100	90-110	
Sodium	10000	10278.577	103	90-110	

CCV19 Date: 09-Jan-2019 19:46 Seq: 4902121 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	99.628	100	90-110	
Barium	100	102.288	102	90-110	
Beryllium	100	94.652	95	90-110	
Cadmium	100	101.376	101	90-110	
Calcium	10000	9847.064	99	90-110	
Lead	100	108.063	108	90-110	
Magnesium	10000	10275.773	103	90-110	
Manganese	100	100.897	101	90-110	
Potassium	10000	10467.954	105	90-110	
Sodium	10000	10315.06	103	90-110	

CCV20 Date: 09-Jan-2019 20:02 Seq: 4902181 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	103.255	103	90-110	
Barium	100	103.636	104	90-110	
Beryllium	100	99.917	100	90-110	
Cadmium	100	101.474	101	90-110	
Calcium	10000	10166.824	102	90-110	
Lead	100	100.542	101	90-110	
Magnesium	10000	10407.417	104	90-110	
Manganese	100	101.852	102	90-110	
Potassium	10000	10236.1	102	90-110	
Sodium	10000	10540.021	105	90-110	

CCV21 Date: 09-Jan-2019 20:25 Seq: 4902193 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	100.008	100	90-110	
Barium	100	104.257	104	90-110	
Beryllium	100	99.648	100	90-110	

ALS Houston, US

Date: 19-Jan-19

Form 2 - Initial and Continuing Calibration Verification

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121523

Run ID: ICPMS05_330716
Instrument: ICPMS05
Method: SW6020

CCV21 Date: 09-Jan-2019 20:25 Seq: 4902193 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Cadmium	100	103.384	103	90-110	
Calcium	10000	10020.185	100	90-110	
Lead	100	104.106	104	90-110	
Magnesium	10000	10318.546	103	90-110	
Manganese	100	100.508	101	90-110	
Potassium	10000	10499.409	105	90-110	
Sodium	10000	10351.401	104	90-110	

CCV22 Date: 09-Jan-2019 20:43 Seq: 4902202 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	98.107	98	90-110	
Barium	100	102.724	103	90-110	
Beryllium	100	97.132	97	90-110	
Cadmium	100	101.516	102	90-110	
Calcium	10000	9828.264	98	90-110	
Lead	100	102.612	103	90-110	
Magnesium	10000	9990.473	100	90-110	
Manganese	100	98.924	99	90-110	
Potassium	10000	10147.861	101	90-110	
Sodium	10000	10045.106	100	90-110	

CCV23 Date: 09-Jan-2019 21:01 Seq: 4902211 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	100.767	101	90-110	
Barium	100	101.556	102	90-110	
Beryllium	100	97.341	97	90-110	
Cadmium	100	100.923	101	90-110	
Calcium	10000	9924.528	99	90-110	
Lead	100	105.215	105	90-110	
Magnesium	10000	9971.526	100	90-110	
Manganese	100	99.143	99	90-110	
Potassium	10000	10179.711	102	90-110	
Sodium	10000	10058.463	101	90-110	

CCV24 Date: 09-Jan-2019 21:25 Seq: 4902223 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	101.323	101	90-110	
Barium	100	100.112	100	90-110	
Beryllium	100	105.039	105	90-110	
Cadmium	100	99.37	99	90-110	
Calcium	10000	9916.612	99	90-110	
Lead	100	102.614	103	90-110	
Magnesium	10000	10131.17	101	90-110	
Manganese	100	100.188	100	90-110	
Potassium	10000	10220.885	102	90-110	
Sodium	10000	10106.073	101	90-110	

CCV25 Date: 09-Jan-2019 21:44 Seq: 4902233 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	99.584	100	90-110	
Barium	100	100.08	100	90-110	
Beryllium	100	97.137	97	90-110	
Cadmium	100	100.384	100	90-110	
Calcium	10000	9872.997	99	90-110	
Lead	100	104.202	104	90-110	

ALS Houston, US

Date: 19-Jan-19

Form 2 - Initial and Continuing Calibration Verification

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121523

Run ID: ICPMS05_330716
Instrument: ICPMS05
Method: SW6020

CCV25 Date: 09-Jan-2019 21:44 Seq: 4902233 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Magnesium	10000	9851.863	99	90-110	
Manganese	100	101.296	101	90-110	
Potassium	10000	9996.165	100	90-110	
Sodium	10000	10081.074	101	90-110	

CCV26 Date: 09-Jan-2019 22:06 Seq: 4902244 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	98.056	98	90-110	
Barium	100	98.295	98	90-110	
Beryllium	100	96.812	97	90-110	
Cadmium	100	97.394	97	90-110	
Calcium	10000	9707.852	97	90-110	
Lead	100	106.776	107	90-110	
Magnesium	10000	9962.643	100	90-110	
Manganese	100	99.976	100	90-110	
Potassium	10000	10122.589	101	90-110	
Sodium	10000	9993.583	100	90-110	

CCV27 Date: 09-Jan-2019 22:20 Seq: 4902251 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	97.594	98	90-110	
Barium	100	103.642	104	90-110	
Beryllium	100	100.213	100	90-110	
Cadmium	100	100.494	100	90-110	
Calcium	10000	9416.24	94	90-110	
Lead	100	104.433	104	90-110	
Magnesium	10000	9893.091	99	90-110	
Manganese	100	99.099	99	90-110	
Potassium	10000	10076.388	101	90-110	
Sodium	10000	9924.536	99	90-110	

CCV28 Date: 09-Jan-2019 22:47 Seq: 4902301 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	101.077	101	90-110	
Barium	100	105.249	105	90-110	
Beryllium	100	96.973	97	90-110	
Cadmium	100	104.303	104	90-110	
Calcium	10000	10004.72	100	90-110	
Lead	100	104.149	104	90-110	
Magnesium	10000	9983.728	100	90-110	
Manganese	100	101.65	102	90-110	
Potassium	10000	10203.661	102	90-110	
Sodium	10000	9886.342	99	90-110	

CCV29 Date: 09-Jan-2019 23:07 Seq: 4902311 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	97.813	98	90-110	
Barium	100	108.091	108	90-110	
Beryllium	100	106.777	107	90-110	
Cadmium	100	110.405	110	90-110	
Calcium	10000	9851.025	99	90-110	
Lead	100	128.012	128	90-110	S
Magnesium	10000	9808.598	98	90-110	
Manganese	100	100.931	101	90-110	
Potassium	10000	10770.566	108	90-110	

Form 2 - Initial and Continuing Calibration Verification

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121523

Run ID: ICPMS05_330716
Instrument: ICPMS05
Method: SW6020

CCV29 Date: 09-Jan-2019 23:07 Seq: 4902311 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Sodium	10000	10147.585	101	90-110	

CCV30 Date: 09-Jan-2019 23:29 Seq: 4902341 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	93.327	93	90-110	
Barium	100	105.87	106	90-110	
Beryllium	100	99.57	100	90-110	
Cadmium	100	104.482	104	90-110	
Calcium	10000	9219.603	92	90-110	
Lead	100	124.083	124	90-110	S
Magnesium	10000	9243.573	92	90-110	
Manganese	100	95.064	95	90-110	
Potassium	10000	10251.203	103	90-110	
Sodium	10000	9315.504	93	90-110	

CCV31 Date: 09-Jan-2019 23:52 Seq: 4902353 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	97.816	98	90-110	
Barium	100	104.916	105	90-110	
Beryllium	100	99.164	99	90-110	
Cadmium	100	102.952	103	90-110	
Calcium	10000	9719.431	97	90-110	
Lead	100	120.568	121	90-110	S
Magnesium	10000	9676.989	97	90-110	
Manganese	100	101.389	101	90-110	
Potassium	10000	10117.88	101	90-110	
Sodium	10000	9763.152	98	90-110	

CCV32 Date: 10-Jan-2019 00:16 Seq: 4902365 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	93.676	94	90-110	
Barium	100	100.141	100	90-110	
Beryllium	100	96.531	97	90-110	
Cadmium	100	99.188	99	90-110	
Calcium	10000	9462.835	95	90-110	
Lead	100	122.167	122	90-110	S
Magnesium	10000	9515.161	95	90-110	
Manganese	100	97.967	98	90-110	
Potassium	10000	10116.051	101	90-110	
Sodium	10000	9415.681	94	90-110	

CCV33 Date: 10-Jan-2019 00:34 Seq: 4902605 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	91.467	92	90-110	
Barium	100	98.973	99	90-110	
Beryllium	100	93.688	94	90-110	
Cadmium	100	100.339	100	90-110	
Calcium	10000	9196.918	92	90-110	
Lead	100	117.829	118	90-110	S
Magnesium	10000	9122.884	91	90-110	
Manganese	100	97.629	98	90-110	
Potassium	10000	10031.458	100	90-110	
Sodium	10000	9210.56	92	90-110	

Form 2 - Initial and Continuing Calibration Verification

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121523

Run ID: ICPMS05_330716
Instrument: ICPMS05
Method: SW6020

CCV34 Date: 10-Jan-2019 00:58 Seq: 4902617 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	91.923	92	90-110	
Barium	100	103.875	104	90-110	
Beryllium	100	99.873	100	90-110	
Cadmium	100	99.488	100	90-110	
Calcium	10000	9249.971	93	90-110	
Lead	100	114.031	114	90-110	S
Magnesium	10000	8898.645	89	90-110	S
Manganese	100	95.25	95	90-110	
Potassium	10000	9819.289	98	90-110	
Sodium	10000	8995.108	90	90-110	

CCV35 Date: 10-Jan-2019 01:02 Seq: 4902619 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	91.653	92	90-110	
Barium	100	102.056	102	90-110	
Beryllium	100	94.814	95	90-110	
Cadmium	100	99.382	99	90-110	
Calcium	10000	9232.172	92	90-110	
Lead	100	113.797	114	90-110	S
Magnesium	10000	8872.234	89	90-110	S
Manganese	100	94.643	95	90-110	
Potassium	10000	9948.937	100	90-110	
Sodium	10000	8935.714	89	90-110	S

Form 3 - BLANKS

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121523

Run ID: HG03_330677
Instrument: HG03
Method: SW7470

ICB	Date: 08-Jan-2019 14:44		Seq: 4899902	ICB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Mercury	0.2	0.03	0.2	U	

CCB1	Date: 08-Jan-2019 15:06		Seq: 4899911	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Mercury	0.2	0.03	0.2	U	

CCB2	Date: 08-Jan-2019 15:26		Seq: 4899923	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Mercury	0.2	0.03	0.2	U	

CCB3	Date: 08-Jan-2019 15:48		Seq: 4899932	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Mercury	0.2	0.03	0.2	U	

MBLK-136401	Date: 08-Jan-2019 15:50		Seq: 4899933	MBLK	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Mercury	0.2	0.03	0.2	U	

CCB4	Date: 08-Jan-2019 16:08		Seq: 4899944	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Mercury	0.2	0.03	0.2	U	

CCB5	Date: 08-Jan-2019 16:29		Seq: 4899956	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Mercury	0.2	0.03	0.2	U	

CCB6	Date: 08-Jan-2019 17:01		Seq: 4899968	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Mercury	0.2	0.03	0.2	U	

CCB7	Date: 08-Jan-2019 17:26		Seq: 4899978	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Mercury	0.03	0.03	0.2	J	

CCB8	Date: 08-Jan-2019 17:46		Seq: 4899990	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Mercury	0.037	0.03	0.2	J	

CCB9	Date: 08-Jan-2019 18:20		Seq: 4900115	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Mercury	0.2	0.03	0.2	U	

CCB10	Date: 08-Jan-2019 18:41		Seq: 4900127	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Mercury	0.2	0.03	0.2	U	

CCB11	Date: 08-Jan-2019 19:00		Seq: 4900138	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Mercury	0.2	0.03	0.2	U	

Form 3 - BLANKS

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121523

Run ID: ICPMS05_330637
Instrument: ICPMS05
Method: SW6020

ICB	Date: 08-Jan-2019 12:22		Seq: 4899021	ICB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Antimony	2	0.4	2	U	
Arsenic	2	0.4	2	U	
Beryllium	2	0.2	2	U	
Calcium	500	34	500	U	
Chromium	4	0.4	4	U	
Cobalt	5	0.2	5	U	
Copper	2	1	2	U	
Iron	200	12	200	U	
Lead	2	0.6	2	U	
Magnesium	200	10	200	U	
Manganese	5	0.7	5	U	
Nickel	2	0.6	2	U	
Potassium	28.02	18	200	J	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	
Sodium	200	14	200	U	
Thallium	2	0.2	2	U	
Vanadium	5	0.6	5	U	
Zinc	4	2	4	U	

CCB1	Date: 08-Jan-2019 13:03		Seq: 4899281	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Antimony	2	0.4	2	U	
Arsenic	2	0.4	2	U	
Beryllium	2	0.2	2	U	
Calcium	40.02	34	500	J	
Chromium	4	0.4	4	U	
Cobalt	5	0.2	5	U	
Copper	2	1	2	U	
Iron	200	12	200	U	
Lead	2	0.6	2	U	
Magnesium	200	10	200	U	
Manganese	5	0.7	5	U	
Nickel	2	0.6	2	U	
Potassium	24.55	18	200	J	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	
Sodium	35.5	14	200	J	
Thallium	1.147	0.2	2	J	
Vanadium	5	0.6	5	U	
Zinc	4	2	4	U	

CCB2	Date: 08-Jan-2019 13:31		Seq: 4899294	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Antimony	2	0.4	2	U	
Arsenic	2	0.4	2	U	
Beryllium	2	0.2	2	U	
Calcium	500	34	500	U	
Chromium	4	0.4	4	U	
Cobalt	5	0.2	5	U	
Copper	2	1	2	U	
Iron	200	12	200	U	
Lead	2	0.6	2	U	
Magnesium	200	10	200	U	
Manganese	5	0.7	5	U	

Form 3 - BLANKS

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121523

Run ID: ICPMS05_330637
Instrument: ICPMS05
Method: SW6020

CCB2	Date: 08-Jan-2019 13:31		Seq: 4899294	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Nickel	2	0.6	2	U	
Potassium	22.53	18	200	J	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	
Sodium	75.66	14	200	J	
Thallium	1.194	0.2	2	J	
Vanadium	0.631	0.6	5	J	
Zinc	4	2	4	U	

ICCB3	Date: 08-Jan-2019 14:04		Seq: 4899373	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Antimony	2	0.4	2	U	
Arsenic	2	0.4	2	U	
Beryllium	2	0.2	2	U	
Calcium	500	34	500	U	
Chromium	4	0.4	4	U	
Cobalt	5	0.2	5	U	
Copper	2	1	2	U	
Iron	200	12	200	U	
Lead	2	0.6	2	U	
Magnesium	200	10	200	U	
Manganese	5	0.7	5	U	
Nickel	2	0.6	2	U	
Potassium	-40.86	18	200	J	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	
Sodium	-18.16	14	200	J	
Thallium	2	0.2	2	U	
Vanadium	-1.868	0.6	5	J	
Zinc	4	2	4	U	

CCB4	Date: 08-Jan-2019 14:28		Seq: 4899385	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Antimony	1.491	0.4	2	J	
Arsenic	2	0.4	2	U	
Beryllium	2	0.2	2	U	
Calcium	500	34	500	U	
Chromium	4	0.4	4	U	
Cobalt	5	0.2	5	U	
Copper	2	1	2	U	
Iron	200	12	200	U	
Lead	2	0.6	2	U	
Magnesium	200	10	200	U	
Manganese	5	0.7	5	U	
Nickel	2	0.6	2	U	
Potassium	29.48	18	200	J	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	
Sodium	27.25	14	200	J	
Thallium	2	0.2	2	U	
Vanadium	-1.807	0.6	5	J	
Zinc	4	2	4	U	

Form 3 - BLANKS

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121523

Run ID: ICPMS05_330637
Instrument: ICPMS05
Method: SW6020

CCB5	Date: 08-Jan-2019 14:52		Seq: 4899572	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Antimony	1.358	0.4	2	J	
Arsenic	2	0.4	2	U	
Beryllium	2	0.2	2	U	
Calcium	500	34	500	U	
Chromium	4	0.4	4	U	
Cobalt	5	0.2	5	U	
Copper	2	1	2	U	
Iron	200	12	200	U	
Lead	2	0.6	2	U	
Magnesium	200	10	200	U	
Manganese	5	0.7	5	U	
Nickel	2	0.6	2	U	
Potassium	-19.18	18	200	J	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	
Sodium	200	14	200	U	
Thallium	2	0.2	2	U	
Vanadium	-1.999	0.6	5	J	
Zinc	4	2	4	U	

CCB6	Date: 08-Jan-2019 15:16		Seq: 4899584	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Antimony	1.435	0.4	2	J	
Arsenic	2	0.4	2	U	
Beryllium	2	0.2	2	U	
Calcium	500	34	500	U	
Chromium	4	0.4	4	U	
Cobalt	5	0.2	5	U	
Copper	2	1	2	U	
Iron	200	12	200	U	
Lead	2	0.6	2	U	
Magnesium	200	10	200	U	
Manganese	5	0.7	5	U	
Nickel	2	0.6	2	U	
Potassium	-48.5	18	200	J	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	
Sodium	200	14	200	U	
Thallium	2	0.2	2	U	
Vanadium	-2.19	0.6	5	J	
Zinc	4	2	4	U	

CCB7	Date: 08-Jan-2019 15:41		Seq: 4899601	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Antimony	2	0.4	2	U	
Arsenic	2	0.4	2	U	
Beryllium	2	0.2	2	U	
Calcium	500	34	500	U	
Chromium	4	0.4	4	U	
Cobalt	5	0.2	5	U	
Copper	2	1	2	U	
Iron	200	12	200	U	
Lead	2	0.6	2	U	
Magnesium	200	10	200	U	
Manganese	5	0.7	5	U	

Form 3 - BLANKS

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121523

Run ID: ICPMS05_330637
Instrument: ICPMS05
Method: SW6020

CCB7	Date: 08-Jan-2019 15:41		Seq: 4899601	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Nickel	2	0.6	2	U	
Potassium	-18.24	18	200	J	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	
Sodium	-14.88	14	200	J	
Thallium	2	0.2	2	U	
Vanadium	-2.263	0.6	5	J	
Zinc	4	2	4	U	

ICCB8	Date: 08-Jan-2019 16:13		Seq: 4899748	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Antimony	2	0.4	2	U	
Arsenic	2	0.4	2	U	
Beryllium	2	0.2	2	U	
Calcium	500	34	500	U	
Chromium	4	0.4	4	U	
Cobalt	5	0.2	5	U	
Copper	2	1	2	U	
Iron	200	12	200	U	
Lead	2	0.6	2	U	
Magnesium	200	10	200	U	
Manganese	5	0.7	5	U	
Nickel	2	0.6	2	U	
Potassium	-36.13	18	200	J	
Selenium	-1.211	1.1	2	J	
Silver	2	0.2	2	U	
Sodium	200	14	200	U	
Thallium	2	0.2	2	U	
Vanadium	-0.895	0.6	5	J	
Zinc	4	2	4	U	

CCB9	Date: 08-Jan-2019 16:44		Seq: 4899861	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Antimony	2	0.4	2	U	
Arsenic	2	0.4	2	U	
Beryllium	2	0.2	2	U	
Calcium	500	34	500	U	
Chromium	4	0.4	4	U	
Cobalt	5	0.2	5	U	
Copper	2	1	2	U	
Iron	200	12	200	U	
Lead	2	0.6	2	U	
Magnesium	200	10	200	U	
Manganese	5	0.7	5	U	
Nickel	2	0.6	2	U	
Potassium	-36.01	18	200	J	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	
Sodium	27.96	14	200	J	
Thallium	0.218	0.2	2	J	
Vanadium	-0.818	0.6	5	J	
Zinc	4	2	4	U	

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Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121523

Run ID: ICPMS05_330637
Instrument: ICPMS05
Method: SW6020

CCB10	Date: 08-Jan-2019 17:11		Seq: 4899874	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Antimony	1.05	0.4	2	J	
Arsenic	2	0.4	2	U	
Beryllium	2	0.2	2	U	
Calcium	500	34	500	U	
Chromium	4	0.4	4	U	
Cobalt	5	0.2	5	U	
Copper	2	1	2	U	
Iron	200	12	200	U	
Lead	2	0.6	2	U	
Magnesium	200	10	200	U	
Manganese	5	0.7	5	U	
Nickel	2	0.6	2	U	
Potassium	-36.47	18	200	J	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	
Sodium	94.22	14	200	J	
Thallium	0.255	0.2	2	J	
Vanadium	5	0.6	5	U	
Zinc	4	2	4	U	

CCB11	Date: 08-Jan-2019 17:35		Seq: 4899886	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Antimony	1.068	0.4	2	J	
Arsenic	2	0.4	2	U	
Beryllium	2	0.2	2	U	
Calcium	500	34	500	U	
Chromium	4	0.4	4	U	
Cobalt	5	0.2	5	U	
Copper	2	1	2	U	
Iron	200	12	200	U	
Lead	2	0.6	2	U	
Magnesium	200	10	200	U	
Manganese	5	0.7	5	U	
Nickel	2	0.6	2	U	
Potassium	-37.88	18	200	J	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	
Sodium	120.6	14	200	J	
Thallium	0.266	0.2	2	J	
Vanadium	-1.065	0.6	5	J	
Zinc	4	2	4	U	

CCB12	Date: 08-Jan-2019 17:51		Seq: 4899898	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Antimony	0.947	0.4	2	J	
Arsenic	2	0.4	2	U	
Beryllium	2	0.2	2	U	
Calcium	500	34	500	U	
Chromium	4	0.4	4	U	
Cobalt	5	0.2	5	U	
Copper	2	1	2	U	
Iron	200	12	200	U	
Lead	2	0.6	2	U	
Magnesium	200	10	200	U	
Manganese	5	0.7	5	U	

Form 3 - BLANKS

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121523

Run ID: ICPMS05_330637
Instrument: ICPMS05
Method: SW6020

CCB12	Date: 08-Jan-2019 17:51		Seq: 4899898	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Nickel	2	0.6	2	U	
Potassium	-66.14	18	200	J	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	
Sodium	55.11	14	200	J	
Thallium	0.229	0.2	2	J	
Vanadium	5	0.6	5	U	
Zinc	4	2	4	U	

ICCB13	Date: 08-Jan-2019 19:48		Seq: 4900165	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Antimony	0.806	0.4	2	J	
Arsenic	2	0.4	2	U	
Beryllium	2	0.2	2	U	
Calcium	500	34	500	U	
Chromium	4	0.4	4	U	
Cobalt	5	0.2	5	U	
Copper	2	1	2	U	
Iron	200	12	200	U	
Lead	2	0.6	2	U	
Magnesium	200	10	200	U	
Manganese	5	0.7	5	U	
Nickel	2	0.6	2	U	
Potassium	200	18	200	U	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	
Sodium	200	14	200	U	
Thallium	0.266	0.2	2	J	
Vanadium	5	0.6	5	U	
Zinc	4	2	4	U	

CCB14	Date: 08-Jan-2019 20:07		Seq: 4900175	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Antimony	1.009	0.4	2	J	
Arsenic	2	0.4	2	U	
Beryllium	2	0.2	2	U	
Calcium	500	34	500	U	
Chromium	4	0.4	4	U	
Cobalt	5	0.2	5	U	
Copper	2	1	2	U	
Iron	200	12	200	U	
Lead	2	0.6	2	U	
Magnesium	200	10	200	U	
Manganese	0.791	0.7	5	J	
Nickel	2	0.6	2	U	
Potassium	200	18	200	U	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	
Sodium	15.02	14	200	J	
Thallium	0.4	0.2	2	J	
Vanadium	5	0.6	5	U	
Zinc	4	2	4	U	

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Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121523

Run ID: ICPMS05_330637
Instrument: ICPMS05
Method: SW6020

CCB15	Date: 08-Jan-2019 20:31		Seq: 4900187	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Antimony	0.707	0.4	2	J	
Arsenic	2	0.4	2	U	
Beryllium	2	0.2	2	U	
Calcium	39.34	34	500	J	
Chromium	4	0.4	4	U	
Cobalt	5	0.2	5	U	
Copper	2	1	2	U	
Iron	200	12	200	U	
Lead	2	0.6	2	U	
Magnesium	11.71	10	200	J	
Manganese	5	0.7	5	U	
Nickel	2	0.6	2	U	
Potassium	200	18	200	U	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	
Sodium	267.2	14	200		
Thallium	0.377	0.2	2	J	
Vanadium	1.347	0.6	5	J	
Zinc	4	2	4	U	

CCB16	Date: 08-Jan-2019 20:53		Seq: 4900198	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Antimony	0.673	0.4	2	J	
Arsenic	2	0.4	2	U	
Beryllium	2	0.2	2	U	
Calcium	40.02	34	500	J	
Chromium	4	0.4	4	U	
Cobalt	5	0.2	5	U	
Copper	2	1	2	U	
Iron	200	12	200	U	
Lead	2	0.6	2	U	
Magnesium	200	10	200	U	
Manganese	5	0.7	5	U	
Nickel	2	0.6	2	U	
Potassium	200	18	200	U	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	
Sodium	1473	14	200		
Thallium	0.397	0.2	2	J	
Vanadium	5	0.6	5	U	
Zinc	4	2	4	U	

ICCB17	Date: 08-Jan-2019 22:03		Seq: 4900289	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Antimony	0.799	0.4	2	J	
Arsenic	2	0.4	2	U	
Beryllium	2	0.2	2	U	
Calcium	500	34	500	U	
Chromium	4	0.4	4	U	
Cobalt	5	0.2	5	U	
Copper	2	1	2	U	
Iron	200	12	200	U	
Lead	2	0.6	2	U	
Magnesium	200	10	200	U	
Manganese	5	0.7	5	U	

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Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121523

Run ID: ICPMS05_330637
Instrument: ICPMS05
Method: SW6020

ICCB17	Date: 08-Jan-2019 22:03		Seq: 4900289	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Nickel	2	0.6	2	U	
Potassium	200	18	200	U	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	
Sodium	200	14	200	U	
Thallium	0.342	0.2	2	J	
Vanadium	-0.808	0.6	5	J	
Zinc	4	2	4	U	

CCB18	Date: 08-Jan-2019 22:19		Seq: 4900296	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Antimony	0.583	0.4	2	J	
Arsenic	2	0.4	2	U	
Beryllium	2	0.2	2	U	
Calcium	500	34	500	U	
Chromium	4	0.4	4	U	
Cobalt	5	0.2	5	U	
Copper	2	1	2	U	
Iron	200	12	200	U	
Lead	2	0.6	2	U	
Magnesium	200	10	200	U	
Manganese	5	0.7	5	U	
Nickel	2	0.6	2	U	
Potassium	200	18	200	U	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	
Sodium	-42.34	14	200	J	
Thallium	0.35	0.2	2	J	
Vanadium	-0.826	0.6	5	J	
Zinc	4	2	4	U	

CCB19	Date: 08-Jan-2019 22:33		Seq: 4900303	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Antimony	0.755	0.4	2	J	
Arsenic	2	0.4	2	U	
Beryllium	2	0.2	2	U	
Calcium	39.45	34	500	J	
Chromium	4	0.4	4	U	
Cobalt	5	0.2	5	U	
Copper	2	1	2	U	
Iron	200	12	200	U	
Lead	2	0.6	2	U	
Magnesium	200	10	200	U	
Manganese	5	0.7	5	U	
Nickel	2	0.6	2	U	
Potassium	200	18	200	U	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	
Sodium	-33.42	14	200	J	
Thallium	0.393	0.2	2	J	
Vanadium	-0.91	0.6	5	J	
Zinc	4	2	4	U	

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Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121523

Run ID: ICPMS05_330637
Instrument: ICPMS05
Method: SW6020

CCB20	Date: 08-Jan-2019 22:57		Seq: 4900315	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Antimony	0.53	0.4	2	J	
Arsenic	2	0.4	2	U	
Beryllium	2	0.2	2	U	
Calcium	500	34	500	U	
Chromium	4	0.4	4	U	
Cobalt	5	0.2	5	U	
Copper	2	1	2	U	
Iron	200	12	200	U	
Lead	2	0.6	2	U	
Magnesium	200	10	200	U	
Manganese	5	0.7	5	U	
Nickel	2	0.6	2	U	
Potassium	-20.86	18	200	J	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	
Sodium	200	14	200	U	
Thallium	0.299	0.2	2	J	
Vanadium	5	0.6	5	U	
Zinc	4	2	4	U	

CCB21	Date: 08-Jan-2019 23:20		Seq: 4900327	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Antimony	0.588	0.4	2	J	
Arsenic	2	0.4	2	U	
Beryllium	2	0.2	2	U	
Calcium	500	34	500	U	
Chromium	4	0.4	4	U	
Cobalt	5	0.2	5	U	
Copper	2	1	2	U	
Iron	200	12	200	U	
Lead	2	0.6	2	U	
Magnesium	200	10	200	U	
Manganese	5	0.7	5	U	
Nickel	2	0.6	2	U	
Potassium	-30.47	18	200	J	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	
Sodium	-46.74	14	200	J	
Thallium	0.408	0.2	2	J	
Vanadium	5	0.6	5	U	
Zinc	4	2	4	U	

MBLK-136233	Date: 08-Jan-2019 23:22		Seq: 4900328	MBLK	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Antimony	2	0.4	2	U	
Arsenic	2	0.4	2	U	
Beryllium	2	0.2	2	U	
Calcium	500	34	500	U	
Chromium	4	0.4	4	U	
Cobalt	5	0.2	5	U	
Copper	2	1	2	U	
Iron	200	12	200	U	
Magnesium	10.72	10	200	J	
Manganese	1.085	0.7	5	J	
Nickel	2	0.6	2	U	

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Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121523

Run ID: ICPMS05_330637
Instrument: ICPMS05
Method: SW6020

MBLK-136233 Date: 08-Jan-2019 23:22 Seq: 4900328 MBLK Units: ug/L

Analyte	Result	MDL	Report Limit	Qual
Potassium	200	18	200	U
Selenium	2	1.1	2	U
Silver	2	0.2	2	U
Sodium	200	14	200	U
Thallium	2	0.2	2	U
Vanadium	5	0.6	5	U
Zinc	4	2	4	U

CCB22 Date: 08-Jan-2019 23:38 Seq: 4900336 CCB Units: ug/L

Analyte	Result	MDL	Report Limit	Qual
Antimony	0.685	0.4	2	J
Arsenic	2	0.4	2	U
Beryllium	2	0.2	2	U
Calcium	41.64	34	500	J
Chromium	4	0.4	4	U
Cobalt	5	0.2	5	U
Copper	2	1	2	U
Iron	200	12	200	U
Lead	2	0.6	2	U
Magnesium	20.15	10	200	J
Manganese	5	0.7	5	U
Nickel	2	0.6	2	U
Potassium	200	18	200	U
Selenium	2	1.1	2	U
Silver	2	0.2	2	U
Sodium	82.27	14	200	J
Thallium	0.469	0.2	2	J
Vanadium	5	0.6	5	U
Zinc	4	2	4	U

CCB23 Date: 09-Jan-2019 00:02 Seq: 4900348 CCB Units: ug/L

Analyte	Result	MDL	Report Limit	Qual
Antimony	0.484	0.4	2	J
Arsenic	2	0.4	2	U
Beryllium	2	0.2	2	U
Calcium	500	34	500	U
Chromium	4	0.4	4	U
Cobalt	5	0.2	5	U
Copper	2	1	2	U
Iron	200	12	200	U
Lead	2	0.6	2	U
Magnesium	23.56	10	200	J
Manganese	5	0.7	5	U
Nickel	2	0.6	2	U
Potassium	200	18	200	U
Selenium	2	1.1	2	U
Silver	2	0.2	2	U
Sodium	462.9	14	200	
Thallium	0.395	0.2	2	J
Vanadium	5	0.6	5	U
Zinc	4	2	4	U

CCB24 Date: 09-Jan-2019 00:19 Seq: 4900357 CCB Units: ug/L

Analyte	Result	MDL	Report Limit	Qual
Antimony	0.613	0.4	2	J

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Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121523

Run ID: ICPMS05_330637
Instrument: ICPMS05
Method: SW6020

CCB24 Date: 09-Jan-2019 00:19 Seq: 4900357 CCB Units: ug/L

Analyte	Result	MDL	Report Limit	Qual
Arsenic	2	0.4	2	U
Beryllium	2	0.2	2	U
Calcium	500	34	500	U
Chromium	4	0.4	4	U
Cobalt	5	0.2	5	U
Copper	2	1	2	U
Iron	200	12	200	U
Lead	2	0.6	2	U
Magnesium	14.61	10	200	J
Manganese	5	0.7	5	U
Nickel	2	0.6	2	U
Potassium	200	18	200	U
Selenium	2	1.1	2	U
Silver	2	0.2	2	U
Sodium	115.5	14	200	J
Thallium	0.5	0.2	2	J
Vanadium	5	0.6	5	U
Zinc	4	2	4	U

Form 3 - BLANKS

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121523

Run ID: ICPMS05_330716
Instrument: ICPMS05
Method: SW6020

ICB	Date: 09-Jan-2019 12:13		Seq: 4901073	ICB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Aluminum	10	1.8	10	U	
Barium	4	1.9	4	U	
Beryllium	2	0.2	2	U	
Cadmium	2	0.2	2	U	
Calcium	500	34	500	U	
Lead	2	0.6	2	U	
Magnesium	200	10	200	U	
Manganese	5	0.7	5	U	
Potassium	200	18	200	U	
Sodium	200	14	200	U	

CCB1	Date: 09-Jan-2019 12:45		Seq: 4901089	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Aluminum	10	1.8	10	U	
Barium	4	1.9	4	U	
Beryllium	2	0.2	2	U	
Cadmium	2	0.2	2	U	
Calcium	500	34	500	U	
Lead	2	0.6	2	U	
Magnesium	200	10	200	U	
Manganese	5	0.7	5	U	
Potassium	-40.47	18	200	J	
Sodium	47.44	14	200	J	

CCB2	Date: 09-Jan-2019 13:09		Seq: 4901101	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Aluminum	91.14	1.8	10		
Barium	4	1.9	4	U	
Beryllium	2	0.2	2	U	
Cadmium	2	0.2	2	U	
Calcium	500	34	500	U	
Lead	2	0.6	2	U	
Magnesium	200	10	200	U	
Manganese	5	0.7	5	U	
Potassium	200	18	200	U	
Sodium	46.99	14	200	J	

CCB3	Date: 09-Jan-2019 13:29		Seq: 4901111	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Aluminum	10	1.8	10	U	
Barium	4	1.9	4	U	
Beryllium	2	0.2	2	U	
Cadmium	2	0.2	2	U	
Calcium	500	34	500	U	
Lead	2	0.6	2	U	
Magnesium	200	10	200	U	
Manganese	5	0.7	5	U	
Potassium	-43.65	18	200	J	
Sodium	39	14	200	J	

ICCB4	Date: 09-Jan-2019 14:01		Seq: 4901193	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Aluminum	10	1.8	10	U	
Barium	4	1.9	4	U	
Beryllium	2	0.2	2	U	

Form 3 - BLANKS

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121523

Run ID: ICPMS05_330716
Instrument: ICPMS05
Method: SW6020

ICCB4	Date: 09-Jan-2019 14:01		Seq: 4901193	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Cadmium	2	0.2	2	U	
Calcium	500	34	500	U	
Lead	2	0.6	2	U	
Magnesium	200	10	200	U	
Manganese	5	0.7	5	U	
Potassium	200	18	200	U	
Sodium	200	14	200	U	

CCB5	Date: 09-Jan-2019 14:23		Seq: 4901204	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Aluminum	10	1.8	10	U	
Barium	4	1.9	4	U	
Beryllium	2	0.2	2	U	
Cadmium	2	0.2	2	U	
Calcium	500	34	500	U	
Lead	2	0.6	2	U	
Magnesium	200	10	200	U	
Manganese	5	0.7	5	U	
Potassium	200	18	200	U	
Sodium	15.13	14	200	J	

CCB6	Date: 09-Jan-2019 14:46		Seq: 4901341	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Aluminum	10	1.8	10	U	
Barium	4	1.9	4	U	
Beryllium	2	0.2	2	U	
Cadmium	2	0.2	2	U	
Calcium	500	34	500	U	
Lead	2	0.6	2	U	
Magnesium	200	10	200	U	
Manganese	5	0.7	5	U	
Potassium	200	18	200	U	
Sodium	200	14	200	U	

CCB7	Date: 09-Jan-2019 15:14		Seq: 4901359	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Aluminum	10	1.8	10	U	
Barium	4	1.9	4	U	
Beryllium	2	0.2	2	U	
Cadmium	2	0.2	2	U	
Calcium	500	34	500	U	
Lead	2	0.6	2	U	
Magnesium	200	10	200	U	
Manganese	5	0.7	5	U	
Potassium	200	18	200	U	
Sodium	200	14	200	U	

CCB8	Date: 09-Jan-2019 15:37		Seq: 4901507	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Aluminum	10	1.8	10	U	
Barium	4	1.9	4	U	
Beryllium	2	0.2	2	U	
Cadmium	2	0.2	2	U	
Calcium	500	34	500	U	
Lead	2	0.6	2	U	

Form 3 - BLANKS

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121523

Run ID: ICPMS05_330716
Instrument: ICPMS05
Method: SW6020

CCB8	Date: 09-Jan-2019 15:37		Seq: 4901507	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Magnesium	200	10	200	U	
Manganese	5	0.7	5	U	
Potassium	200	18	200	U	
Sodium	200	14	200	U	

CCB9	Date: 09-Jan-2019 16:01		Seq: 4901519	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Aluminum	10	1.8	10	U	
Barium	4	1.9	4	U	
Beryllium	2	0.2	2	U	
Cadmium	2	0.2	2	U	
Calcium	500	34	500	U	
Lead	2	0.6	2	U	
Magnesium	200	10	200	U	
Manganese	5	0.7	5	U	
Potassium	200	18	200	U	
Sodium	45.74	14	200	J	

CCB10	Date: 09-Jan-2019 16:25		Seq: 4901551	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Aluminum	10	1.8	10	U	
Barium	4	1.9	4	U	
Beryllium	2	0.2	2	U	
Cadmium	2	0.2	2	U	
Calcium	500	34	500	U	
Lead	2	0.6	2	U	
Magnesium	200	10	200	U	
Manganese	5	0.7	5	U	
Potassium	200	18	200	U	
Sodium	54.44	14	200	J	

CCB11	Date: 09-Jan-2019 16:52		Seq: 4901707	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Aluminum	9.357	1.8	10	J	
Barium	4	1.9	4	U	
Beryllium	2	0.2	2	U	
Cadmium	2	0.2	2	U	
Calcium	500	34	500	U	
Lead	2	0.6	2	U	
Magnesium	18.82	10	200	J	
Manganese	5	0.7	5	U	
Potassium	22.9	18	200	J	
Sodium	108.8	14	200	J	

CCB12	Date: 09-Jan-2019 17:16		Seq: 4901719	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Aluminum	10	1.8	10	U	
Barium	4	1.9	4	U	
Beryllium	2	0.2	2	U	
Cadmium	2	0.2	2	U	
Calcium	500	34	500	U	
Lead	2	0.6	2	U	
Magnesium	200	10	200	U	
Manganese	5	0.7	5	U	
Potassium	200	18	200	U	

Form 3 - BLANKS

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121523

Run ID: ICPMS05_330716
Instrument: ICPMS05
Method: SW6020

CCB12	Date: 09-Jan-2019 17:16		Seq: 4901719	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Sodium	49.17	14	200	J	

MBLK-136233	Date: 09-Jan-2019 17:24		Seq: 4901789	MBLK	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Aluminum	3.559	1.8	10	J	
Barium	4	1.9	4	U	
Cadmium	2	0.2	2	U	
Lead	2	0.6	2	U	

CCB13	Date: 09-Jan-2019 17:37		Seq: 4901796	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Aluminum	10	1.8	10	U	
Barium	4	1.9	4	U	
Beryllium	2	0.2	2	U	
Cadmium	2	0.2	2	U	
Calcium	500	34	500	U	
Lead	2	0.6	2	U	
Magnesium	200	10	200	U	
Manganese	5	0.7	5	U	
Potassium	200	18	200	U	
Sodium	14.84	14	200	J	

CCB14	Date: 09-Jan-2019 17:55		Seq: 4901805	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Aluminum	10	1.8	10	U	
Barium	4	1.9	4	U	
Beryllium	2	0.2	2	U	
Cadmium	2	0.2	2	U	
Calcium	500	34	500	U	
Lead	2	0.6	2	U	
Magnesium	200	10	200	U	
Manganese	5	0.7	5	U	
Potassium	200	18	200	U	
Sodium	200	14	200	U	

CCB15	Date: 09-Jan-2019 18:19		Seq: 4901920	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Aluminum	10	1.8	10	U	
Barium	4	1.9	4	U	
Beryllium	2	0.2	2	U	
Cadmium	2	0.2	2	U	
Calcium	500	34	500	U	
Lead	2	0.6	2	U	
Magnesium	11.72	10	200	J	
Manganese	5	0.7	5	U	
Potassium	200	18	200	U	
Sodium	128.1	14	200	J	

CCB16	Date: 09-Jan-2019 18:29		Seq: 4901925	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Aluminum	10	1.8	10	U	
Barium	4	1.9	4	U	
Beryllium	2	0.2	2	U	
Cadmium	2	0.2	2	U	
Calcium	500	34	500	U	

Form 3 - BLANKS

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121523

Run ID: ICPMS05_330716
Instrument: ICPMS05
Method: SW6020

CCB16	Date: 09-Jan-2019 18:29		Seq: 4901925	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Lead	2	0.6	2	U	
Magnesium	200	10	200	U	
Manganese	5	0.7	5	U	
Potassium	-44.03	18	200	J	
Sodium	50.77	14	200	J	

ICCB17	Date: 09-Jan-2019 19:34		Seq: 4902046	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Aluminum	10	1.8	10	U	
Barium	4	1.9	4	U	
Beryllium	2	0.2	2	U	
Cadmium	2	0.2	2	U	
Calcium	500	34	500	U	
Lead	2	0.6	2	U	
Magnesium	200	10	200	U	
Manganese	5	0.7	5	U	
Potassium	200	18	200	U	
Sodium	200	14	200	U	

CCB18	Date: 09-Jan-2019 19:48		Seq: 4902122	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Aluminum	10	1.8	10	U	
Barium	4	1.9	4	U	
Beryllium	2	0.2	2	U	
Cadmium	2	0.2	2	U	
Calcium	500	34	500	U	
Lead	2	0.6	2	U	
Magnesium	19.48	10	200	J	
Manganese	5	0.7	5	U	
Potassium	200	18	200	U	
Sodium	112.9	14	200	J	

CCB19	Date: 09-Jan-2019 20:04		Seq: 4902182	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Aluminum	10	1.8	10	U	
Barium	4	1.9	4	U	
Beryllium	2	0.2	2	U	
Cadmium	2	0.2	2	U	
Calcium	500	34	500	U	
Lead	2	0.6	2	U	
Magnesium	200	10	200	U	
Manganese	5	0.7	5	U	
Potassium	200	18	200	U	
Sodium	193.1	14	200	J	

CCB20	Date: 09-Jan-2019 20:27		Seq: 4902194	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Aluminum	10	1.8	10	U	
Barium	4	1.9	4	U	
Beryllium	2	0.2	2	U	
Cadmium	2	0.2	2	U	
Calcium	500	34	500	U	
Lead	2	0.6	2	U	
Magnesium	200	10	200	U	
Manganese	5	0.7	5	U	

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Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121523

Run ID: ICPMS05_330716
Instrument: ICPMS05
Method: SW6020

CCB20	Date: 09-Jan-2019 20:27		Seq: 4902194	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Potassium	200	18	200	U	
Sodium	59.7	14	200	J	

CCB21	Date: 09-Jan-2019 20:45		Seq: 4902203	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Aluminum	10	1.8	10	U	
Barium	4	1.9	4	U	
Beryllium	2	0.2	2	U	
Cadmium	2	0.2	2	U	
Calcium	500	34	500	U	
Lead	2	0.6	2	U	
Magnesium	200	10	200	U	
Manganese	5	0.7	5	U	
Potassium	200	18	200	U	
Sodium	27.78	14	200	J	

CCB22	Date: 09-Jan-2019 21:03		Seq: 4902212	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Aluminum	10	1.8	10	U	
Barium	4	1.9	4	U	
Beryllium	2	0.2	2	U	
Cadmium	2	0.2	2	U	
Calcium	500	34	500	U	
Lead	2	0.6	2	U	
Magnesium	200	10	200	U	
Manganese	5	0.7	5	U	
Potassium	200	18	200	U	
Sodium	16	14	200	J	

CCB23	Date: 09-Jan-2019 21:27		Seq: 4902224	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Aluminum	10	1.8	10	U	
Barium	4	1.9	4	U	
Beryllium	2	0.2	2	U	
Cadmium	2	0.2	2	U	
Calcium	500	34	500	U	
Lead	2	0.6	2	U	
Magnesium	200	10	200	U	
Manganese	5	0.7	5	U	
Potassium	200	18	200	U	
Sodium	16.4	14	200	J	

CCB24	Date: 09-Jan-2019 21:46		Seq: 4902234	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Aluminum	10	1.8	10	U	
Barium	4	1.9	4	U	
Beryllium	2	0.2	2	U	
Cadmium	2	0.2	2	U	
Calcium	500	34	500	U	
Lead	2	0.6	2	U	
Magnesium	200	10	200	U	
Manganese	5	0.7	5	U	
Potassium	200	18	200	U	
Sodium	200	14	200	U	

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Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121523

Run ID: ICPMS05_330716
Instrument: ICPMS05
Method: SW6020

CCB25	Date: 09-Jan-2019 22:08		Seq: 4902245	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Aluminum	10	1.8	10	U	
Barium	4	1.9	4	U	
Beryllium	2	0.2	2	U	
Cadmium	2	0.2	2	U	
Calcium	500	34	500	U	
Lead	2	0.6	2	U	
Magnesium	200	10	200	U	
Manganese	5	0.7	5	U	
Potassium	19.46	18	200	J	
Sodium	22.46	14	200	J	

CCB26	Date: 09-Jan-2019 22:22		Seq: 4902252	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Aluminum	10	1.8	10	U	
Barium	4	1.9	4	U	
Beryllium	2	0.2	2	U	
Cadmium	2	0.2	2	U	
Calcium	500	34	500	U	
Lead	2	0.6	2	U	
Magnesium	200	10	200	U	
Manganese	5	0.7	5	U	
Potassium	200	18	200	U	
Sodium	200	14	200	U	

CCB27	Date: 09-Jan-2019 22:42		Seq: 4902299	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Aluminum	10	1.8	10	U	
Barium	4	1.9	4	U	
Beryllium	2	0.2	2	U	
Cadmium	2	0.2	2	U	
Calcium	500	34	500	U	
Lead	2	0.6	2	U	
Magnesium	200	10	200	U	
Manganese	5	0.7	5	U	
Potassium	63.03	18	200	J	
Sodium	22.58	14	200	J	

CCB28	Date: 09-Jan-2019 23:09		Seq: 4902312	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Aluminum	10	1.8	10	U	
Barium	4	1.9	4	U	
Beryllium	2	0.2	2	U	
Cadmium	2	0.2	2	U	
Calcium	500	34	500	U	
Lead	2	0.6	2	U	
Magnesium	200	10	200	U	
Manganese	5	0.7	5	U	
Potassium	29.89	18	200	J	
Sodium	66.79	14	200	J	

CCB29	Date: 09-Jan-2019 23:31		Seq: 4902342	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Aluminum	10	1.8	10	U	
Barium	4	1.9	4	U	
Beryllium	2	0.2	2	U	

Form 3 - BLANKS

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121523

Run ID: ICPMS05_330716
Instrument: ICPMS05
Method: SW6020

CCB29	Date: 09-Jan-2019 23:31		Seq: 4902342	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Cadmium	2	0.2	2	U	
Calcium	500	34	500	U	
Lead	2	0.6	2	U	
Magnesium	200	10	200	U	
Manganese	5	0.7	5	U	
Potassium	200	18	200	U	
Sodium	44.42	14	200	J	

CCB30	Date: 09-Jan-2019 23:54		Seq: 4902354	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Aluminum	10	1.8	10	U	
Barium	4	1.9	4	U	
Beryllium	2	0.2	2	U	
Cadmium	2	0.2	2	U	
Calcium	500	34	500	U	
Lead	2	0.6	2	U	
Magnesium	200	10	200	U	
Manganese	5	0.7	5	U	
Potassium	200	18	200	U	
Sodium	49.07	14	200	J	

CCB31	Date: 10-Jan-2019 00:18		Seq: 4902366	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Aluminum	10	1.8	10	U	
Barium	4	1.9	4	U	
Beryllium	2	0.2	2	U	
Cadmium	2	0.2	2	U	
Calcium	500	34	500	U	
Lead	2	0.6	2	U	
Magnesium	200	10	200	U	
Manganese	5	0.7	5	U	
Potassium	200	18	200	U	
Sodium	40.47	14	200	J	

CCB32	Date: 10-Jan-2019 00:36		Seq: 4902606	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Aluminum	10	1.8	10	U	
Barium	4	1.9	4	U	
Beryllium	2	0.2	2	U	
Cadmium	2	0.2	2	U	
Calcium	500	34	500	U	
Lead	2	0.6	2	U	
Magnesium	200	10	200	U	
Manganese	5	0.7	5	U	
Potassium	200	18	200	U	
Sodium	39.58	14	200	J	

CCB33	Date: 10-Jan-2019 01:00		Seq: 4902618	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Aluminum	10	1.8	10	U	
Barium	4	1.9	4	U	
Beryllium	2	0.2	2	U	
Cadmium	2	0.2	2	U	
Calcium	500	34	500	U	
Lead	2	0.6	2	U	

Form 3 - BLANKS

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121523

Run ID: ICPMS05_330716
Instrument: ICPMS05
Method: SW6020

CCB33	Date: 10-Jan-2019 01:00		Seq: 4902618	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Magnesium	200	10	200	U	
Manganese	5	0.7	5	U	
Potassium	200	18	200	U	
Sodium	18.95	14	200	J	

CCB34	Date: 10-Jan-2019 01:04		Seq: 4902620	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Aluminum	10	1.8	10	U	
Barium	4	1.9	4	U	
Beryllium	2	0.2	2	U	
Cadmium	2	0.2	2	U	
Calcium	500	34	500	U	
Lead	2	0.6	2	U	
Magnesium	200	10	200	U	
Manganese	5	0.7	5	U	
Potassium	200	18	200	U	
Sodium	16.83	14	200	J	

Form 4 - ICP Interference Check Sample

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121523

Run ID:ICPMS05_330637
Instrument:ICPMS05
Method:SW6020

ICSA	Date: 08-Jan-2019 12:34	Seq: 4899267	ICSA	Units: ug/L
Analyte	**True**	**Found**	**%R**	
Antimony		0.105	0	
Arsenic		0.154	0	
Beryllium		0.004	0	
Calcium	100000	100400	100	
Chromium		0.252	0	
Cobalt		0.283	0	
Copper		-0.064	0	
Iron	100000	99670	99.7	
Lead		0.071	0	
Magnesium	100000	100200	100	
Manganese		0.381	0	
Nickel		0.276	0	
Potassium	100000	103000	103	
Selenium		0.392	0	
Silver		-0.165	0	
Sodium	100000	100700	101	
Thallium		-0.013	0	
Vanadium		-0.446	0	
Zinc		2.128	0	

ICSAB	Date: 08-Jan-2019 12:36	Seq: 4899268	ICSAB	Units: ug/L
Analyte	**True**	**Found**	**%R**	
Antimony	100	115.1	115	
Arsenic	100	113.2	113	
Beryllium	100	110.5	110	
Calcium	110000	110900	101	
Chromium	100	112.3	112	
Cobalt	100	114.9	115	
Copper	100	112.5	112	
Iron	110000	110400	100	
Lead	100	112.5	113	
Magnesium	110000	109100	99.2	
Manganese	100	112.2	112	
Nickel	100	114.1	114	
Potassium	110000	103600	94.2	
Selenium	100	114.8	115	
Silver	100	101.9	102	
Sodium	110000	109600	99.6	
Thallium	100	104	104	
Vanadium	100	113.1	113	
Zinc	100	107.9	108	

ICSA	Date: 09-Jan-2019 00:25	Seq: 4900360	ICSA	Units: ug/L
Analyte	**True**	**Found**	**%R**	
Antimony		0.243	0	
Arsenic		0.092	0	
Beryllium		0.011	0	
Calcium	100000	103400	103	
Chromium		0.275	0	
Cobalt		0.306	0	
Copper		0.492	0	
Iron	100000	107800	108	
Lead		0.078	0	
Magnesium	100000	105300	105	

Form 4 - ICP Interference Check Sample

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121523

Run ID:ICPMS05_330637
Instrument:ICPMS05
Method:SW6020

ICSA	Date: 09-Jan-2019 00:25	Seq: 4900360	ICSA	Units: ug/L
Analyte	**True**	**Found**	**%R**	
Manganese		0.284	0	
Nickel		0.174	0	
Potassium	100000	104700	105	
Selenium		0.041	0	
Silver		0.013	0	
Sodium	100000	106700	107	
Thallium		0.026	0	
Vanadium		-0.377	0	
Zinc		1.332	0	

ICSAB	Date: 09-Jan-2019 00:27	Seq: 4900361	ICSAB	Units: ug/L
Analyte	**True**	**Found**	**%R**	
Antimony	100	115.9	116	
Arsenic	100	116.2	116	
Beryllium	100	108.4	108	
Calcium	110000	110700	101	
Chromium	100	113.1	113	
Cobalt	100	113.8	114	
Copper	100	116.2	116	
Iron	110000	116200	106	
Lead	100	112.9	113	
Magnesium	110000	113200	103	
Manganese	100	112.8	113	
Nickel	100	115.4	115	
Potassium	110000	121700	111	
Selenium	100	115	115	
Silver	100	117.9	118	
Sodium	110000	114200	104	
Thallium	100	114.6	115	
Vanadium	100	115.3	115	
Zinc	100	123.9	124	

Form 4 - ICP Interference Check Sample

Client: Bhate Environmental Associates, Inc. Run ID:ICPMS05_330716

Project: LHAAP 18/24 Instrument:ICPMS05

WorkOrder: HS18121523 Method:SW6020

ICSA	Date: 09-Jan-2019 12:17	Seq: 4901075	ICSA	Units: ug/L
Analyte	**True**	**Found**	**%R**	
Aluminum	100000	97590	97.6	
Barium		0.244	0	
Beryllium		0.009	0	
Cadmium		1.666	0	
Calcium	100000	101700	102	
Lead		0.093	0	
Magnesium	100000	104500	104	
Manganese		0.306	0	
Potassium	100000	106000	106	
Sodium	100000	106100	106	

ICSAB	Date: 09-Jan-2019 12:19	Seq: 4901076	ICSAB	Units: ug/L
Analyte	**True**	**Found**	**%R**	
Aluminum	100500	99250	98.8	
Barium	100	123.7	124	
Beryllium	100	134.3	134	
Cadmium	100	126	126	
Calcium	110000	115500	105	
Lead	100	110.2	110	
Magnesium	110000	115600	105	
Manganese	100	116.4	116	
Potassium	110000	122700	112	
Sodium	110000	117200	107	

ICSA	Date: 10-Jan-2019 01:10	Seq: 4902623	ICSA	Units: ug/L
Analyte	**True**	**Found**	**%R**	
Aluminum	100000	90570	90.6	
Barium		0.156	0	
Beryllium		-0.012	0	
Cadmium		2.027	0	
Calcium	100000	93910	93.9	
Lead		0.076	0	
Magnesium	100000	94550	94.6	
Manganese		0.07	0	
Potassium	100000	103600	104	
Sodium	100000	96520	96.5	

ICSAB	Date: 10-Jan-2019 01:12	Seq: 4902624	ICSAB	Units: ug/L
Analyte	**True**	**Found**	**%R**	
Aluminum	100500	88340	87.9	
Barium	100	119.1	119	
Beryllium	100	115.5	115	
Cadmium	100	118.3	118	
Calcium	110000	104400	94.9	
Lead	100	127.7	128	
Magnesium	110000	103900	94.4	
Manganese	100	108.6	109	
Potassium	110000	115200	105	
Sodium	110000	105900	96.3	

ALS Houston, US

Date: 19-Jan-19

Form 5A - Matrix Spike/Matrix Spike Duplicate Recovery

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121523

Date Analyzed: 08-Jan-2019 15:56
Date Extracted: 08-Jan-2019 10:30
Units: ug/L

Matrix Spike: HS18121523-02MS
Client Sample ID: 18CPTMW24_122718

Analysis Method: SW7470

Analyte	Sample Result	MS Result	Spike Amount	% Rec	MSD Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
Mercury	0.2000	4.840	5.000	96.5	4.850	5.000	96.7	75-125	0.206	20

ALS Houston, US

Date: 19-Jan-19

Form 5A - Matrix Spike/Matrix Spike Duplicate Recovery

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121523

Date Analyzed: 08-Jan-2019 23:32
Date Extracted: 02-Jan-2019 13:00
Units: ug/L

Matrix Spike: HS18121325-04MS
Client Sample ID:

Analysis Method: SW6020

Analyte	Sample Result	MS Result	Spike Amount	% Rec	MSD Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
Antimony	2.000	53.57	50.00	107	54.10	50.00	108	80-120	0.983	20
Arsenic	2.104	56.62	50.00	109	56.79	50.00	109	80-120	0.293	20
Beryllium	2.000	54.18	50.00	108	57.30	50.00	114	80-120	5.60	20
Calcium	360100	356300	5000	-77.6	360500	5000	8.14	80-120	1.20	20
Chromium	9.366	64.35	50.00	110	65.17	50.00	112	80-120	1.27	20
Cobalt	17.43	70.03	50.00	105	69.87	50.00	105	80-120	0.230	20
Copper	2.000	54.24	50.00	107	54.43	50.00	107	80-120	0.344	20
Iron	1213	6679	5000	109	6768	5000	111	80-120	1.33	20
Magnesium	235000	234700	5000	-6.96	234900	5000	-1.10	80-120	0.125	20
Manganese	2577	2536	50.00	-82.2	2532	50.00	-90.5	80-120	0.164	20
Nickel	15.43	68.43	50.00	106	69.31	50.00	108	80-120	1.28	20
Potassium	4976	10050	5000	101	10530	5000	111	80-120	4.71	20
Selenium	2.000	53.28	50.00	106	54.59	50.00	109	80-120	2.44	20
Silver	2.000	49.90	50.00	99.7	52.04	50.00	104	80-120	4.18	20
Sodium	890100	885400	5000	-94.3	886600	5000	-70.1	80-120	0.137	20
Thallium	0.9850	47.89	50.00	93.8	54.64	50.00	107	80-120	13.2	20
Vanadium	1.180	58.56	50.00	115	58.90	50.00	115	80-120	0.589	20
Zinc	16.26	66.20	50.00	99.9	69.74	50.00	107	80-120	5.20	20

ALS Houston, US

Date: 19-Jan-19

Form 5A - Matrix Spike/Matrix Spike Duplicate Recovery

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121523

Date Analyzed: 09-Jan-2019 19:42
Date Extracted: 02-Jan-2019 13:00
Units: ug/L

Matrix Spike: HS18121325-04MS
Client Sample ID:

Analysis Method: SW6020

Analyte	Sample Result	MS Result	Spike Amount	% Rec	MSD Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
Aluminum	35.95	140.3	100.0	104	142.5	100.0	107	80-120	1.58	20
Barium	711.8	778.0	50.00	132	746.4	50.00	69.3	80-120	4.14	20
Cadmium	4.000	54.26	50.00	108	53.31	50.00	106	80-120	1.77	20
Lead	4.000	50.92	50.00	102	52.58	50.00	105	80-120	3.22	20

ALS Houston, US

Date: 19-Jan-19

Form 5B - Post Digest Sample Recovery

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121523

Date Analyzed: 08-Jan-2019 23:34
Date Extracted: 02-Jan-2019 13:00
Units: ug/L

Lab Sample ID: HS18121325-04PDS
Client Sample ID:

Analysis Method: SW6020

Analyte	Sample Result	PDS Result	Spike Amount	% Rec	% Rec Limits
Antimony	0	106.6	100	106	75-125
Arsenic	2.104	113.1	100	111	75-125
Beryllium	0	109	100	109	75-125
Chromium	9.366	125	100	116	75-125
Cobalt	17.43	127.5	100	110	75-125
Copper	0	110.7	100	110	75-125
Iron	1213	12700	10000	115	75-125
Nickel	15.43	124.5	100	109	75-125
Potassium	4976	16390	10000	114	75-125
Selenium	0	107.7	100	108	75-125
Silver	0	101.9	100	102	75-125
Thallium	0.985	114	100	113	75-125
Vanadium	1.18	119.1	100	118	75-125
Zinc	16.26	126	100	110	75-125

ALS Houston, US

Date: 19-Jan-19

Form 5B - Post Digest Sample Recovery

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121523

Date Analyzed: 09-Jan-2019 17:31
Date Extracted: 02-Jan-2019 13:00
Units: ug/L

Lab Sample ID: HS18121325-04PDS
Client Sample ID:

Analysis Method: SW6020

Analyte	Sample Result	PDS Result	Spike Amount	% Rec	% Rec Limits
Calcium	341500	529900	200000	94	75-125
Magnesium	213300	404900	200000	96	75-125
Manganese	2495	4552	2000	103	75-125
Sodium	803000	946300	200000	72	75-125
Aluminum	35.95	255.8	200	110	75-125
Barium	711.8	946.6	200	117	75-125
Cadmium	0	232.2	200	116	75-125
Lead	0	224	200	112	75-125

ALS Houston, US

Date: 19-Jan-19

Form 7 - Laboratory Control Sample

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121523

Date Analyzed: 08-Jan-2019 15:51
Date Extracted: 08-Jan-2019 10:30
Units: ug/L

Lab Sample ID: LCS-136401

Analysis Method: SW7470

Analyte	Spike Amount	LCS Result	% Rec	% Rec Limits
Mercury	5	4.98	100	80-120

ALS Houston, US

Date: 19-Jan-19

Form 7 - Laboratory Control Sample

Client: Bhate Environmental Associates, Inc.

Project: LHAAP 18/24

WorkOrder: HS18121523

Date Analyzed: 08-Jan-2019 23:24

Date Extracted: 02-Jan-2019 13:00

Units: ug/L

Lab Sample ID: LCS-136233

Analysis Method: SW6020

Analyte	Spike Amount	LCS Result	% Rec	% Rec Limits
Antimony	50	56.82	114	80-120
Arsenic	50	54.35	109	80-120
Beryllium	50	51.95	104	80-120
Calcium	5000	5595	112	80-120
Chromium	50	56.53	113	80-120
Cobalt	50	55.94	112	80-120
Copper	50	57.85	116	80-120
Iron	5000	5733	115	80-120
Magnesium	5000	5686	114	80-120
Manganese	50	56.25	112	80-120
Nickel	50	57.09	114	80-120
Potassium	5000	5528	111	80-120
Selenium	50	55.36	111	80-120
Silver	50	55.7	111	80-120
Sodium	5000	5563	111	80-120
Thallium	50	51.81	104	80-120
Vanadium	50	54.39	109	80-120
Zinc	50	56.75	113	80-120

ALS Houston, US

Date: 19-Jan-19

Form 7 - Laboratory Control Sample

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121523

Date Analyzed: 09-Jan-2019 17:25
Date Extracted: 02-Jan-2019 13:00
Units: ug/L

Lab Sample ID: LCS-136233

Analysis Method: SW6020

Analyte	Spike Amount	LCS Result	% Rec	% Rec Limits
Aluminum	100	107	107	80-120
Barium	50	52.24	104	80-120
Cadmium	50	52.24	104	80-120
Lead	50	59.89	120	80-120

ALS Houston, US

Date: 19-Jan-19

Form 8 - ICP Serial Dilutions

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121523

Date Analyzed: 08-Jan-2019 23:28
Date Extracted: 02-Jan-2019 13:00
Units: ug/L

Lab Sample ID: HS18121325-04SD
Client Sample ID:

Analysis Method: SW6020

Analyte	Sample Result	C	SD Result	C	RPD	Q
Antimony	0	U	0	U	0	
Arsenic	2.104		2.387	J	13	
Beryllium	0	U	0	U	0	
Chromium	9.366		9.393	J	0	
Cobalt	17.43		17.58	J	1	
Copper	0	U	0	U	0	
Iron	1213		1246		3	
Nickel	15.43		15.87		3	
Potassium	4976		4832		3	
Selenium	0	U	0	U	0	
Silver	0	U	0	U	0	
Thallium	0.985	J	0	U	0	
Vanadium	1.18	J	7.768	J	558	
Zinc	16.26		15.52	J	5	

ALS Houston, US

Date: 19-Jan-19

Form 8 - ICP Serial Dilutions

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121523

Date Analyzed: 09-Jan-2019 17:29
Date Extracted: 02-Jan-2019 13:00
Units: ug/L

Lab Sample ID: HS18121325-04SD
Client Sample ID:

Analysis Method: SW6020

Analyte	Sample Result	C	SD Result	C	RPD	Q
Calcium	341500		355900		4	
Magnesium	213300		221700		4	
Manganese	2495		2547		2	
Sodium	803000		820100		2	
Aluminum	35.95		35.9	J	0	
Barium	711.8		726.4		2	
Cadmium	0	U	0	U	0	
Lead	0	U	0	U	0	

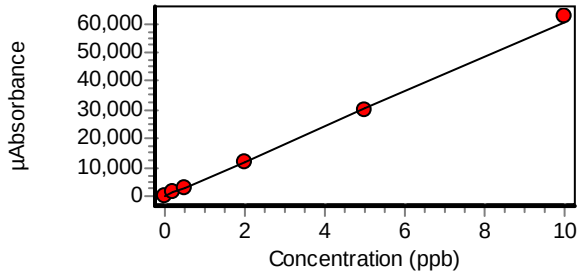
Report Generated By CETAC QuickTrace
Analyst: ALSHS.NoUser
Worksheet file: C:\Program Files (x86)\QuickTrace\Worksheets\010819AW.wsz
Date Started: 1/8/2019 1:46:51 PM
Comment:

Results

Sample Name					Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
Calibration Blank					STD	01/08/19 02:25:01 pm	0.000	89	10.24	
Replicates	85.7	100.6	91.9	79.1						
Standard #1 (0.2 ppb)					STD	01/08/19 02:26:43 pm	0.200	1310	1.73	
Replicates	1343.6	1293.9	1298.7	1304.9						
Standard #2 (0.5 ppb)					STD	01/08/19 02:28:25 pm	0.500	2721	0.91	
Replicates	2716.4	2698.4	2714.6	2756.6						
Standard #3 (2.0 ppb)					STD	01/08/19 02:30:08 pm	2.000	11751	0.28	
Replicates	11708.1	11742.1	11777.6	11777.6						
Standard #4 (5.0 ppb)					STD	01/08/19 02:31:51 pm	5.000	30073	0.25	
Replicates	29972.8	30065.4	30145.9	30108.9						
Standard #5 (10.0 ppb)					STD	01/08/19 02:33:34 pm	10.000	62574	0.60	
Replicates	62143.6	62426.8	62697.8	63026.5						
ICCV					UNK	01/08/19 02:41:17 pm	4.870	29601	0.35	
Replicates	29478.6	29550.3	29694.1	29681.8						
ICV					UNK	01/08/19 02:42:58 pm	4.960	30116	0.23	
Replicates	30035.2	30083.3	30189.6	30155.6						

Calibration

Equation: A = -49.511 + 6085.535C
R2: 0.99885
SEE: 931.2210
Flags:



Sample Name					Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
ICB					UNK	01/08/19 02:44:40 pm	0.020	69	10.35	s
	Replicates	73.8	58.6	73.3	70.6					
CRA					UNK	01/08/19 02:46:22 pm	0.236	1386	1.91	
	Replicates	1357.2	1390.3	1420.5	1377.5					
MBLK-136400					UNK	01/08/19 02:54:06 pm	0.019	67	42.12	s
	Replicates	104.0	44.9	72.7	45.2					
LCS-136400					UNK	01/08/19 02:55:48 pm	4.990	30294	0.06	
	Replicates	30279.4	30277.9	30306.1	30313.4					
HS18121520-01					UNK	01/08/19 02:57:31 pm	0.044	216	4.30	
	Replicates	220.5	226.5	205.5	211.7					
HS18121520-01MS					UNK	01/08/19 02:59:14 pm	5.050	30679	0.29	
	Replicates	30800.7	30686.1	30635.9	30592.4					
HS18121520-01MSD					UNK	01/08/19 03:00:57 pm	5.000	30370	0.70	
	Replicates	30126.1	30280.8	30452.3	30621.3					
HS18121454-01					UNK	01/08/19 03:02:41 pm	0.012	22	110.53	
	Replicates	43.5	42.7	9.7	-6.3					
CCV					CCV	01/08/19 03:04:25 pm	5.140	31244	0.55	
	Replicates	31057.7	31146.5	31345.8	31426.5					
	% Recovery	102.85								
CCB					CCB	01/08/19 03:06:09 pm	0.018	62	44.66	s
	Replicates	66.8	84.7	22.0	75.0					
HS18121454-02					UNK	01/08/19 03:07:53 pm	0.018	58	72.82	s
	Replicates	106.8	62.3	60.8	3.3					
HS18121454-03					UNK	01/08/19 03:09:37 pm	0.008	-1	942.27	
	Replicates	-39.5	7.8	15.1	11.3					

Sample Name					Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
HS18121454-04					UNK	01/08/19 03:11:17 pm	0.014	36	34.60	
Replicates	33.6	38.4	21.6	52.1						
HS18121454-05					UNK	01/08/19 03:12:58 pm	0.014	37	77.39	
Replicates	-2.8	35.2	58.7	56.9						
HS18121454-06					UNK	01/08/19 03:14:39 pm	0.011	20	124.96	
Replicates	50.5	24.6	-10.6	16.1						
HS18121454-07					UNK	01/08/19 03:16:20 pm	0.028	118	34.80	s
Replicates	57.2	129.1	144.1	141.8						
HS18121454-08					UNK	01/08/19 03:18:02 pm	0.018	59	48.67	s
Replicates	65.9	94.5	51.0	25.5						
HS18121454-10					UNK	01/08/19 03:19:44 pm	0.054	282	14.29	s
Replicates	245.1	248.5	312.8	319.8						
HS18121454-11					UNK	01/08/19 03:21:27 pm	0.017	54	92.85	s
Replicates	94.0	98.8	4.0	17.5						
HS18121459-01					UNK	01/08/19 03:23:09 pm	0.018	58	59.86	s
Replicates	9.4	60.4	71.9	90.6						
CCV					CCV	01/08/19 03:24:54 pm	5.070	30798	0.29	
Replicates	30674.7	30791.3	30866.0	30860.0						
% Recovery	101.38									
CCB					CCB	01/08/19 03:26:38 pm	0.024	94	26.51	s
Replicates	114.8	98.0	106.0	58.2						
HS18121459-02					UNK	01/08/19 03:28:21 pm	0.010	10	285.79	
Replicates	-28.2	7.7	23.7	35.7						
HS18121459-03					UNK	01/08/19 03:30:04 pm	0.017	54	23.96	s
Replicates	71.9	49.1	42.1	51.1						

Sample Name					Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
HS18121459-04					UNK	01/08/19 03:31:48 pm	0.024	94	11.51	s
Replicates	108.6	95.1	83.9	88.1						
HS18121459-06					UNK	01/08/19 03:33:31 pm	0.013	28	149.58	
Replicates	-10.2	-3.5	48.8	75.3						
HS18121520-02					UNK	01/08/19 03:35:12 pm	0.020	71	49.30	s
Replicates	101.4	99.7	30.7	53.0						
HS18121520-07					UNK	01/08/19 03:36:53 pm	0.011	20	160.67	
Replicates	-4.3	20.3	-1.5	63.5						
HS18121520-08					UNK	01/08/19 03:38:34 pm	0.033	154	18.56	s
Replicates	181.2	163.1	155.9	113.9						
CCV					CCV	01/08/19 03:46:36 pm	5.050	30707	0.14	
Replicates	30728.1	30655.9	30688.1	30755.1						
% Recovery	101.08									
CCB					CCB	01/08/19 03:48:21 pm	0.021	79	8.38	s
Replicates	79.4	71.6	78.6	87.9						
MBLK-136401					UNK	01/08/19 03:50:02 pm	0.022	82	13.96	s
Replicates	74.6	80.2	75.4	99.2						
LCS-136401					UNK	01/08/19 03:51:44 pm	4.980	30257	0.18	
Replicates	30229.8	30209.3	30258.3	30331.3						
HS18121523-02					UNK	01/08/19 03:53:26 pm	0.014	35	27.76	
Replicates	36.7	46.0	22.2	36.2						
HS18121523-02MS					UNK	01/08/19 03:55:08 pm	4.840	29420	0.22	
Replicates	29452.9	29334.7	29412.2	29481.7						
HS18121523-02MSD					UNK	01/08/19 03:56:51 pm	4.850	29440	0.15	
Replicates	29503.0	29427.5	29414.0	29414.0						

Sample Name					Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
HS18121490-01					UNK	01/08/19 03:58:34 pm	0.213	1250	2.37	
Replicates	1226.2	1221.9	1273.2	1277.2						
HS18121490-02					UNK	01/08/19 04:00:17 pm	0.051	260	4.78	
Replicates	275.0	244.7	262.2	259.5						
HS18121490-03					UNK	01/08/19 04:02:00 pm	0.020	71	31.78	s
Replicates	43.0	67.2	74.7	97.5						
HS18121490-04					UNK	01/08/19 04:03:44 pm	0.010	10	245.29	
Replicates	5.5	46.8	-3.2	-8.2						
HS18121490-05					UNK	01/08/19 04:05:25 pm	0.044	217	3.33	
Replicates	220.9	215.7	207.4	223.9						
CCV					CCV	01/08/19 04:07:09 pm	5.080	30857	0.55	
Replicates	30625.0	30845.6	30955.6	31002.6						
% Recovery	101.57									
CCB					CCB	01/08/19 04:08:53 pm	0.022	84	6.88	s
Replicates	92.2	81.0	84.5	79.0						
HS18121490-06					UNK	01/08/19 04:10:34 pm	0.014	38	35.80	
Replicates	40.0	22.7	55.2	33.7						
HS18121490-07					UNK	01/08/19 04:12:15 pm	0.028	119	12.54	s
Replicates	125.1	117.5	133.2	98.5						
HS18121490-08					UNK	01/08/19 04:13:57 pm	0.015	44	28.50	
Replicates	39.1	52.4	28.2	54.9						
HS18121523-05					UNK	01/08/19 04:15:38 pm	0.015	43	10.86	
Replicates	37.5	40.6	46.6	47.1						
HS18121523-06					UNK	01/08/19 04:17:20 pm	0.077	421	1.35	
Replicates	415.8	420.6	419.1	429.1						

Sample Name				Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
HS18121527-01				UNK	01/08/19 04:19:02 pm	0.011	16	115.97	
Replicates	21.4	39.3	2.0	0.5					
HS18121527-02				UNK	01/08/19 04:20:45 pm	0.012	24	106.86	
Replicates	13.0	8.3	11.6	61.1					
HS18121527-03				UNK	01/08/19 04:22:28 pm	0.035	164	2.61	
Replicates	167.0	159.4	168.6	162.1					
HS18121544-01				UNK	01/08/19 04:24:11 pm	0.016	47	29.14	
Replicates	27.0	49.2	57.5	53.5					
HS18121544-02				UNK	01/08/19 04:25:54 pm	0.025	101	9.06	s
Replicates	96.6	112.8	104.3	91.8					
CCV				CCV	01/08/19 04:27:38 pm	5.130	31154	0.15	
Replicates	31086.1	31157.8	31186.8	31184.8					
% Recovery	102.55								
CCB				CCB	01/08/19 04:29:23 pm	0.018	60	8.30	s
Replicates	64.1	55.0	55.7	63.7					
HS18121544-03				UNK	01/08/19 04:31:06 pm	0.022	87	27.94	s
Replicates	64.2	120.6	75.6	88.1					
HS18121544-04				UNK	01/08/19 04:32:48 pm	0.161	929	1.57	
Replicates	935.6	907.5	940.3	931.3					
HS18121544-05				UNK	01/08/19 04:34:29 pm	0.013	31	51.51	
Replicates	29.5	8.9	42.4	42.9					
HS18121544-06				UNK	01/08/19 04:36:10 pm	0.022	82	17.67	s
Replicates	98.2	90.7	71.7	68.2					
MBLK-136402				UNK	01/08/19 04:49:33 pm	0.022	84	22.25	s
Replicates	56.4	96.6	89.6	94.1					

Sample Name					Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
LCS-136402					UNK	01/08/19 04:51:15 pm	4.950	30075	0.43	
Replicates	29923.9	30012.3	30162.8	30201.0						
HS19010051-02					UNK	01/08/19 04:52:57 pm	0.010	14	52.81	
Replicates	20.2	9.0	19.2	6.0						
HS19010051-02MS					UNK	01/08/19 04:54:39 pm	4.930	29941	0.41	
Replicates	29807.0	29885.8	29976.3	30095.6						
HS19010051-02MSD					UNK	01/08/19 04:56:22 pm	4.880	29622	0.24	
Replicates	29616.8	29528.7	29638.2	29702.7						
HS18121442-01					UNK	01/08/19 04:58:05 pm	0.300	1777	1.04	
Replicates	1750.0	1785.7	1781.7	1790.7						
CCV					CCV	01/08/19 04:59:49 pm	4.970	30209	0.19	
Replicates	30144.2	30188.9	30227.2	30276.2						
% Recovery	99.44									
CCB					CCB	01/08/19 05:01:33 pm	0.023	91	9.62	s
Replicates	84.8	87.3	104.3	89.0						
HS18121442-02					UNK	01/08/19 05:03:16 pm	0.436	2605	1.87	
Replicates	2546.8	2597.7	2611.2	2665.2						
HS18121442-03					UNK	01/08/19 05:05:00 pm	0.472	2823	0.47	
Replicates	2816.6	2828.3	2808.3	2838.8						
HS18121442-04					UNK	01/08/19 05:06:43 pm	0.253	1491	1.67	
Replicates	1456.0	1509.5	1508.0	1491.8						
HS18121445-01					UNK	01/08/19 05:08:25 pm	0.020	69	14.17	s
Replicates	76.1	59.4	62.4	79.1						
HS18121445-02					UNK	01/08/19 05:10:07 pm	0.008	-1	343.02	
Replicates	-13.6	-3.1	1.7	11.9						

Sample Name				Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
HS18121445-03				UNK	01/08/19 05:11:49 pm	0.016	51	18.20	s
Replicates	54.7	43.1	42.9	61.6					
HS18121445-04				UNK	01/08/19 05:13:31 pm	0.011	16	80.15	
Replicates	1.3	26.6	9.6	28.3					
HS19010051-03				UNK	01/08/19 05:15:13 pm	0.026	107	13.98	s
Replicates	88.8	101.0	116.2	121.7					
CCV				CCV	01/08/19 05:24:30 pm	4.990	30347	0.87	
Replicates	30029.2	30250.6	30479.1	30628.1					
% Recovery	99.90								
CCB				CCB	01/08/19 05:26:15 pm	0.030	133	6.00	s
Replicates	136.3	121.7	140.2	134.2					
MBLK-136403				UNK	01/08/19 05:27:57 pm	0.045	224	8.78	s
Replicates	194.2	232.2	232.5	235.2					
LCS-136403				UNK	01/08/19 05:29:39 pm	4.650	28271	0.04	
Replicates	28259.0	28287.2	28268.7	28269.5					
HS19010166-01				UNK	01/08/19 05:31:22 pm	0.017	51	41.39	s
Replicates	56.8	23.0	50.8	74.0					
HS19010166-01MS				UNK	01/08/19 05:33:04 pm	4.590	27863	0.30	
Replicates	27796.0	27800.7	27883.4	27970.7					
HS19010166-01MSD				UNK	01/08/19 05:34:48 pm	4.570	27734	0.40	
Replicates	27594.8	27712.4	27771.1	27857.9					
HS18121396-01				UNK	01/08/19 05:36:31 pm	0.020	74	18.10	s
Replicates	75.8	65.8	63.1	92.8					
HS18121470-01				UNK	01/08/19 05:38:15 pm	0.029	130	13.85	s
Replicates	125.7	119.4	155.9	117.1					

Sample Name				Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
HS18121470-02				UNK	01/08/19 05:39:58 pm	0.017	51	19.18	s
Replicates	56.4	37.2	59.2	51.0					
HS18121502-01				UNK	01/08/19 05:41:40 pm	0.010	9	115.34	
Replicates	8.9	2.7	24.2	0.9					
HS18121521-01				UNK	01/08/19 05:43:22 pm	0.020	74	3.28	
Replicates	76.2	70.8	73.5	75.5					
CCV				CCV	01/08/19 05:45:06 pm	5.250	31880	0.22	
Replicates	31793.3	31864.3	31904.1	31957.6					
% Recovery	104.94								
CCB				CCB	01/08/19 05:46:50 pm	0.037	178	3.20	
Replicates	186.3	173.4	176.9	175.6					
HS18121521-02				UNK	01/08/19 05:48:33 pm	0.014	37	28.01	
Replicates	21.9	45.3	41.3	37.8					
HS19010166-02				UNK	01/08/19 05:50:15 pm	0.020	72	45.14	s
Replicates	89.0	63.7	30.2	104.5					
HS19010167-01				UNK	01/08/19 05:51:58 pm	0.015	39	21.25	
Replicates	42.2	41.2	26.7	45.2					
HS19010234-01				UNK	01/08/19 05:53:40 pm	0.016	45	23.16	
Replicates	33.6	59.1	44.3	43.8					
MBLK-136407				UNK	01/08/19 06:08:26 pm	0.004	-28	34.31	
Replicates	-30.8	-40.0	-20.7	-19.7					
LCS-136407				UNK	01/08/19 06:10:09 pm	5.190	31559	0.11	
Replicates	31537.0	31608.2	31538.7	31554.0					
HS18121528-07				UNK	01/08/19 06:11:52 pm	0.016	46	21.38	
Replicates	39.2	38.3	48.3	59.5					

Sample Name				Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
HS18121528-07MS				UNK	01/08/19 06:13:36 pm	5.230	31756	0.16	
Replicates	31685.6	31756.5	31789.2	31794.2					
HS18121528-07MSD				UNK	01/08/19 06:15:20 pm	5.210	31639	0.11	
Replicates	31597.5	31641.2	31633.5	31682.2					
GBLKT1-136407				UNK	01/08/19 06:17:02 pm	0.000	-51	20.94	
Replicates	-39.7	-48.2	-65.2	-49.7					
CCV				CCV	01/08/19 06:18:46 pm	5.240	31820	0.32	
Replicates	31680.8	31811.2	31890.7	31897.2					
% Recovery	104.74								
CCB				CCB	01/08/19 06:20:30 pm	0.003	-31	37.87	
Replicates	-39.0	-39.8	-32.0	-14.3					
HS18121528-08				UNK	01/08/19 06:22:12 pm	0.013	26	48.28	
Replicates	8.7	39.0	27.8	30.0					
HS18121528-09				UNK	01/08/19 06:23:55 pm	0.012	22	44.16	
Replicates	22.6	26.9	30.9	8.4					
HS18121528-11				UNK	01/08/19 06:25:37 pm	0.024	96	16.89	s
Replicates	103.1	98.8	108.8	72.3					
HS18121528-12				UNK	01/08/19 06:27:19 pm	0.014	34	35.54	
Replicates	29.2	45.9	41.9	19.4					
HS18121528-13				UNK	01/08/19 06:29:02 pm	0.017	54	25.26	s
Replicates	58.0	34.3	65.8	57.3					
HS18121528-14				UNK	01/08/19 06:30:44 pm	0.016	49	49.53	
Replicates	15.4	51.5	73.0	55.0					
HS18121528-15				UNK	01/08/19 06:32:27 pm	0.014	35	25.46	
Replicates	35.6	30.1	27.1	47.4					

Sample Name				Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
HS18121528-16				UNK	01/08/19 06:34:10 pm	0.013	27	41.62	
Replicates	37.9	26.1	32.6	11.8					
HS18121528-17				UNK	01/08/19 06:35:53 pm	0.025	102	8.70	s
Replicates	104.6	96.0	112.7	93.2					
HS18121528-18				UNK	01/08/19 06:37:36 pm	0.019	64	24.21	s
Replicates	71.8	44.5	79.7	59.0					
CCV				CCV	01/08/19 06:39:20 pm	5.180	31458	0.07	
Replicates	31466.6	31475.5	31427.3	31461.5					
% Recovery	103.55								
CCB				CCB	01/08/19 06:41:04 pm	0.003	-33	52.48	
Replicates	-58.5	-21.1	-22.3	-30.8					
HS18121528-19				UNK	01/08/19 06:42:48 pm	0.020	71	18.26	s
Replicates	56.0	87.8	70.8	70.0					
HS18121528-20				UNK	01/08/19 06:44:31 pm	0.017	51	31.88	s
Replicates	37.6	47.4	45.4	75.1					
HS18121528-21				UNK	01/08/19 06:46:13 pm	0.035	161	8.21	s
Replicates	150.8	162.7	151.7	179.2					
HS18121572-01				UNK	01/08/19 06:47:56 pm	0.013	30	73.40	
Replicates	39.7	9.0	15.5	57.2					
HS18121572-02				UNK	01/08/19 06:49:39 pm	0.045	223	3.90	
Replicates	230.4	222.4	227.4	210.6					
HS18121572-03				UNK	01/08/19 06:51:21 pm	0.451	2698	1.19	
Replicates	2675.0	2668.6	2737.6	2709.3					
HS19010065-01				UNK	01/08/19 06:53:04 pm	0.016	48	75.74	
Replicates	27.6	35.1	26.4	101.4					

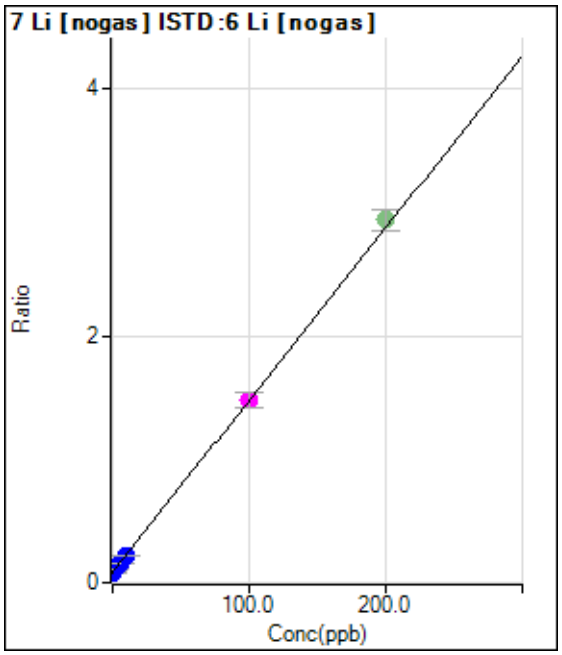
Sample Name					Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
HS18121035-01					UNK	01/08/19 06:54:47 pm	0.010	11	98.34	
	Replicates	15.4	0.7	25.2	4.2					
HS18121042-01					UNK	01/08/19 06:56:29 pm	0.012	21	39.54	
	Replicates	19.6	21.9	11.7	32.2					
CCV					CCV	01/08/19 06:58:58 pm	5.110	31044	0.10	
	Replicates	31003.3	31033.3	31067.3	31071.3					
	% Recovery	102.19								
CCB					CCB	01/08/19 07:00:42 pm	0.001	-41	41.14	
	Replicates	-29.0	-43.5	-63.3	-27.0					

Calibration for 037_ICV.d

Batch Folder: C:\Agilent\ICPMH\1\DATA\010819B.b\
Analysis File: 010819B.batch.bin
DA Date-Time: 2019-01-08 22:05:28
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	030CALB.d	CAL BLK	2019-01-08 12:02:20
2	031CALS.d	2/10/200	2019-01-08 12:04:21
3	032CALS.d	5/25/500	2019-01-08 12:06:18
4	033CALS.d	10/50/1000	2019-01-08 12:08:18
5	034CALS.d	100/500/10K	2019-01-08 12:10:17
6	035CALS.d	200/1000/20K	2019-01-08 12:12:13
7			

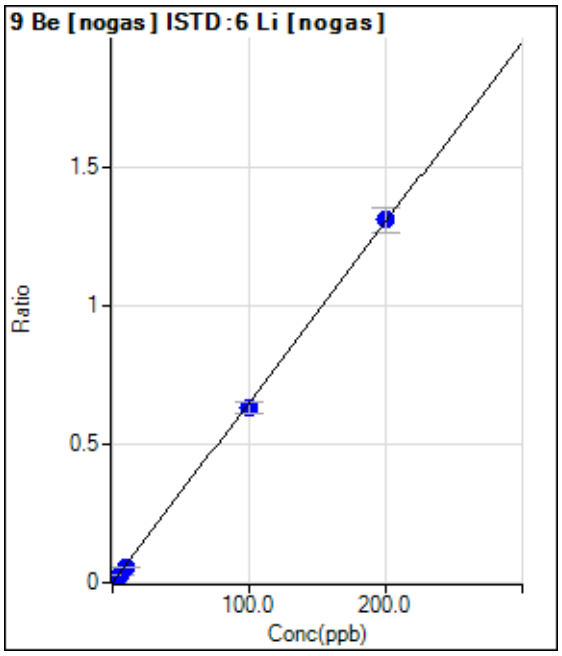
Calibration for 037_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	70121.92	0.0848	P	3.2
2	☐	2.000	1.859	89348.53	0.1107	P	1.3
3	☐	5.000	4.837	117105.45	0.1523	P	1.9
4	☐	10.000	9.247	167940.97	0.2137	P	2.1
5	☐	100.000	100.086	1084849.88	1.4802	M	8.2
6	☑	200.000		2069056.90	2.9404	A	6.1
7	☐	1.000					

y = 0.0139 * x + 0.0848
R = 1.0000
DL = 0.5833
BEC = 6.085

Weight: <None>
Min Conc: <None>

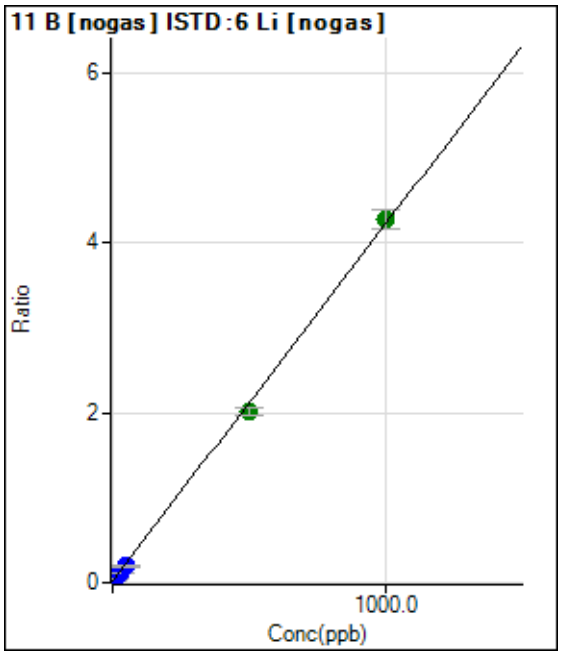


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	70.00	0.0001	P	37.4
2	☐	2.000	1.676	8875.51	0.0110	P	2.8
3	☐	5.000	4.470	22410.02	0.0292	P	6.5
4	☐	10.000	8.713	44658.64	0.0568	P	1.3
5	☐	100.000	97.477	465547.28	0.6348	P	6.6
6	☐	200.000	201.342	922231.34	1.3111	P	6.8
7	☐	1.000					

y = 0.0065 * x + 8.4600E-005
R = 0.9999
DL = 0.01458
BEC = 0.01299

Weight: <None>
Min Conc: <None>

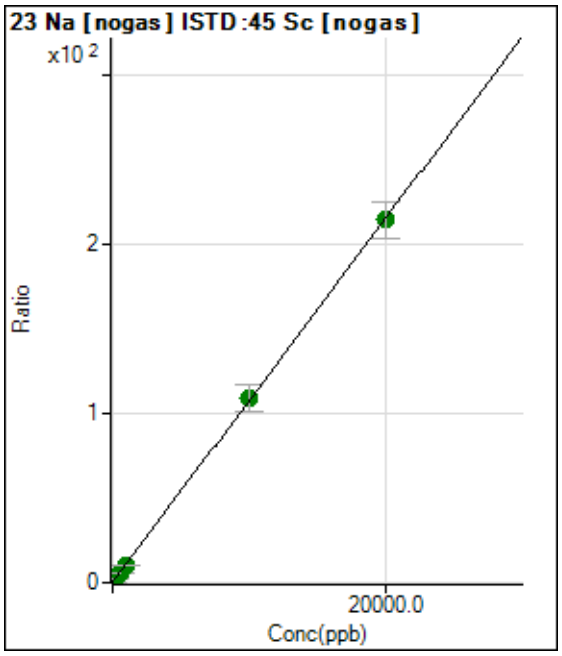
Calibration for 037_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	14689.19	0.0178	P	3.0
2	☐	10.000	7.969	41324.83	0.0512	P	2.5
3	☐	25.000	21.084	81597.40	0.1062	P	5.6
4	☐	50.000	41.794	151760.13	0.1931	P	2.3
5	☐	500.000	477.292	1483117.89	2.0206	A	4.5
6	☐	1000.000	1011.882	3000594.54	4.2639	A	5.4
7	☐	5.000					

y = 0.0042 * x + 0.0178
R = 0.9997
DL = 0.375
BEC = 4.235

Weight: <None>
Min Conc: <None>

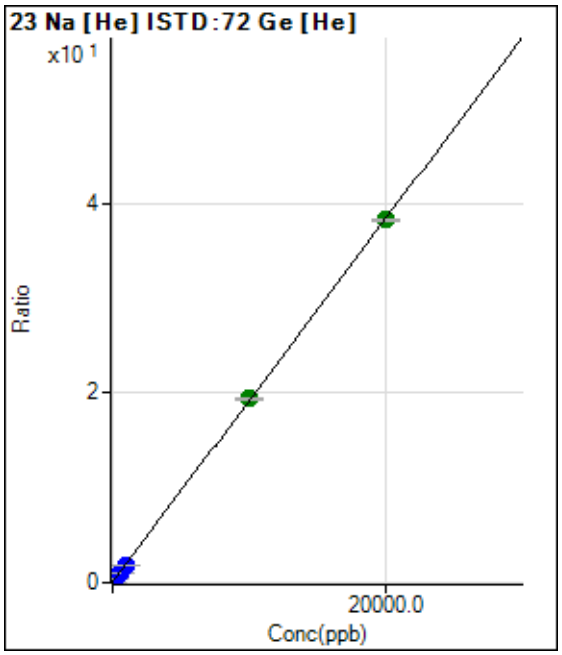


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	289129.92	0.1959	P	1.2
2	☐	200.000	191.632	3326080.54	2.2568	A	2.9
3	☐	500.000	518.915	7781921.79	5.7765	A	12.6
4	☐	1000.000	958.181	14827119.60	10.5006	A	3.3
5	☐	10000.00	10145.991	148901428.3	109.310	A	15.0
6	☐	20000.00	19928.706	297120448.3	214.518	A	10.4
7	☐	100.000					

y = 0.0108 * x + 0.1959
R = 1.0000
DL = 0.6712
BEC = 18.21

Weight: <None>
Min Conc: <None>

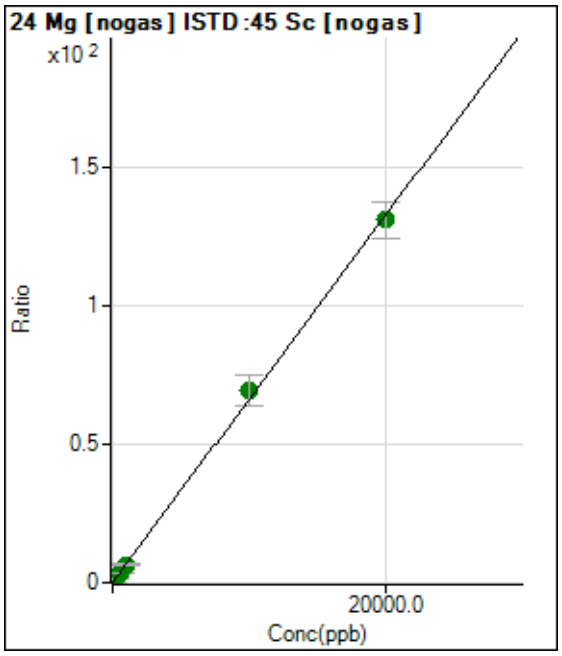
Calibration for 037_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	31346.07	0.0604	P	2.3
2	☐	200.000	193.719	224961.31	0.4312	P	1.6
3	☐	500.000	487.457	516577.66	0.9934	P	0.8
4	☐	1000.000	958.261	987595.32	1.8945	P	1.2
5	☐	10000.00	10103.371	10024189.23	19.3982	A	1.1
6	☐	20000.00	19950.778	19306984.71	38.2461	A	0.3
7	☐	100.000					

y = 0.0019 * x + 0.0604
R = 1.0000
DL = 2.162
BEC = 31.56

Weight: <None>
Min Conc: <None>

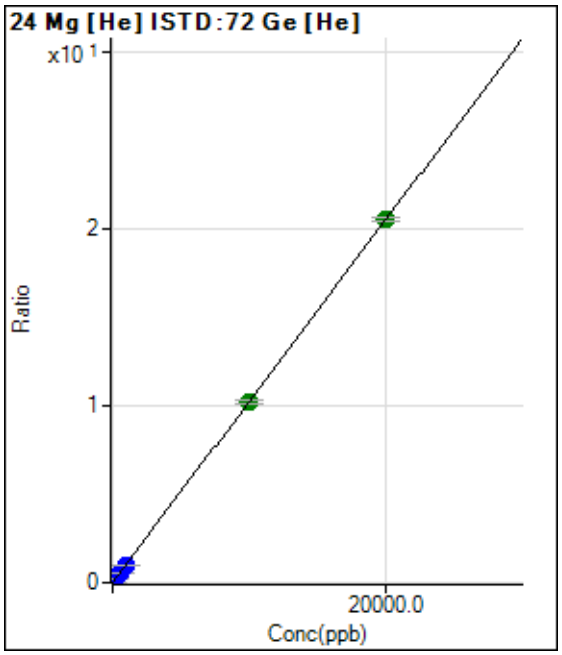


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	16042.36	0.0109	P	17.6
2	☐	200.000	199.849	1966312.02	1.3346	A	1.7
3	☐	500.000	524.290	4688941.38	3.4836	A	13.6
4	☐	1000.000	983.874	9216626.77	6.5277	A	3.5
5	☐	10000.00	10471.116	94480393.78	69.3682	A	15.1
6	☐	20000.00	19764.643	181395512.3	130.925	A	10.0
7	☐	100.000					

y = 0.0066 * x + 0.0109
R = 0.9996
DL = 0.8692
BEC = 1.643

Weight: <None>
Min Conc: <None>

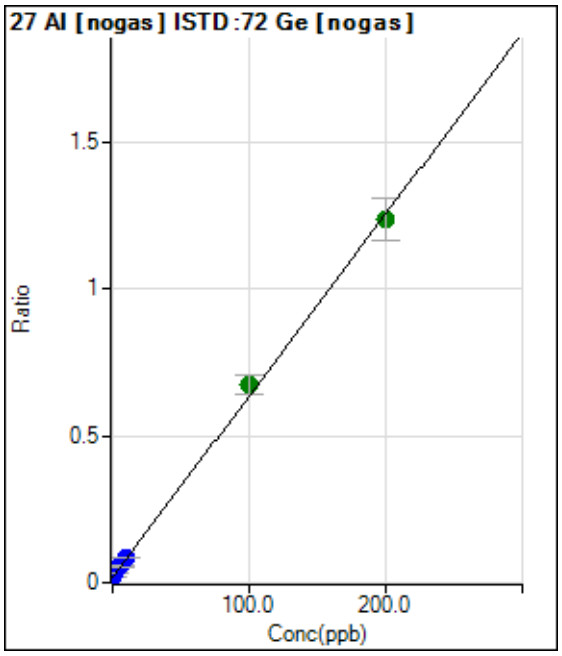
Calibration for 037_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	933.37	0.0018	P	15.9
2	☐	200.000	199.945	107841.91	0.2067	P	2.2
3	☐	500.000	497.741	266193.56	0.5119	P	1.4
4	☐	1000.000	972.279	520336.54	0.9982	P	2.0
5	☐	10000.00	9983.400	5287951.17	10.2331	A	1.5
6	☐	20000.00	20009.743	10352786.30	20.5084	A	1.0
7	☐	100.000					

y = 0.0010 * x + 0.0018
R = 1.0000
DL = 0.8369
BEC = 1.756

Weight: <None>
Min Conc: <None>

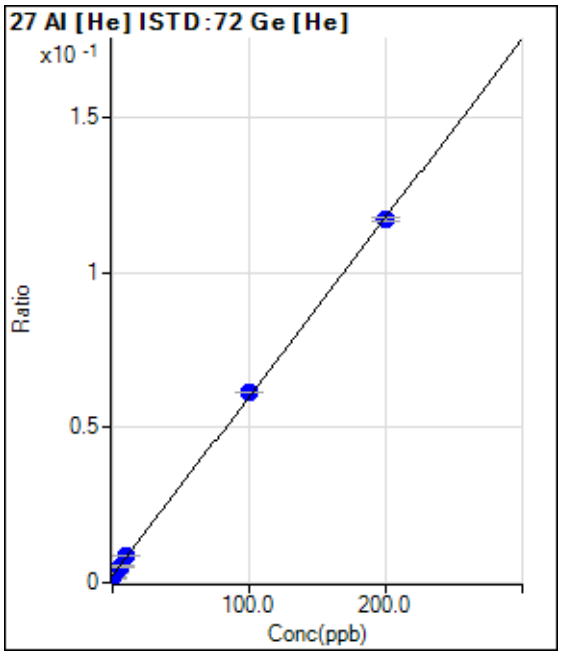


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	33583.53	0.0179	P	6.2
2	☐	2.000	2.211	59721.30	0.0316	P	5.0
3	☐	5.000	6.383	100144.56	0.0574	P	9.8
4	☐	10.000	10.542	158459.59	0.0831	P	2.3
5	☐	100.000	105.892	1211415.66	0.6730	A	9.6
6	☐	200.000	196.990	2196130.80	1.2365	A	11.8
7	☐	1.000					

y = 0.0062 * x + 0.0179
R = 0.9994
DL = 0.5362
BEC = 2.894

Weight: <None>
Min Conc: <None>

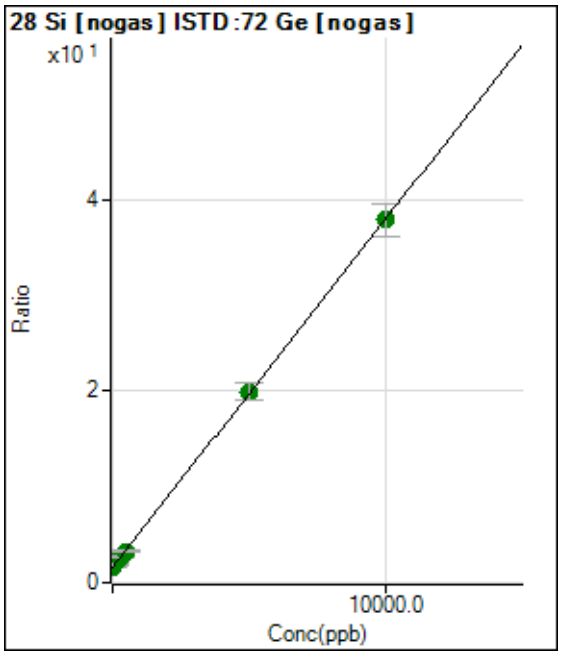
Calibration for 037_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-1.125	876.70	0.0017	P	17.7
2	☐	2.000	1.065	1540.09	0.0030	P	4.9
3	☐	5.000	5.041	2726.91	0.0052	P	7.8
4	☐	10.000	10.849	4477.27	0.0086	P	4.8
5	☐	100.000	102.408	31700.01	0.0613	P	0.2
6	☐	200.000	198.762	58988.67	0.1169	P	1.1
7	☐	1.000					

y = 5.7615E-004 * x + 0.0023
R = 0.9998
DL = 1.561
BEC = 4.061

Weight: <None>
Min Conc: <None>

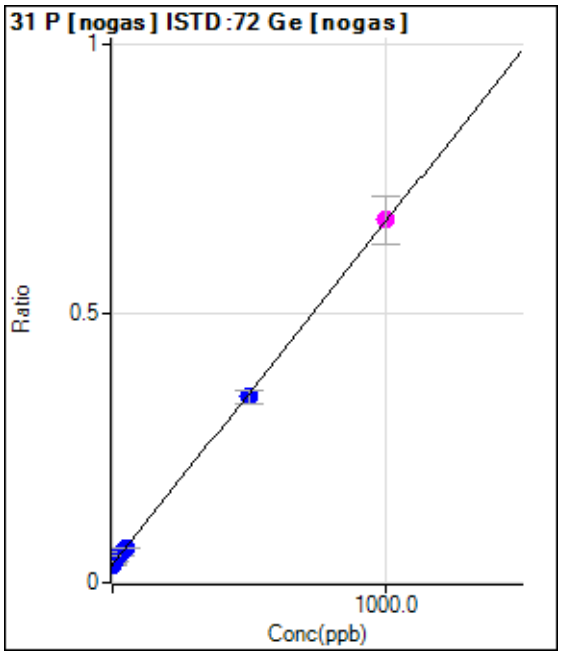


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2988508.29	1.5926	A	4.5
2	☐	100.000	88.539	3621399.22	1.9143	A	2.8
3	☐	250.000	286.255	4597909.52	2.6326	A	8.2
4	☐	500.000	463.045	6242705.53	3.2750	A	2.7
5	☐	5000.000	5043.257	35851291.13	19.9160	A	9.6
6	☐	10000.00	9979.427	67341304.00	37.8504	A	8.8
7	☐	5.000					

y = 0.0036 * x + 1.5926
R = 1.0000
DL = 58.95
BEC = 438.3

Weight: <None>
Min Conc: <None>

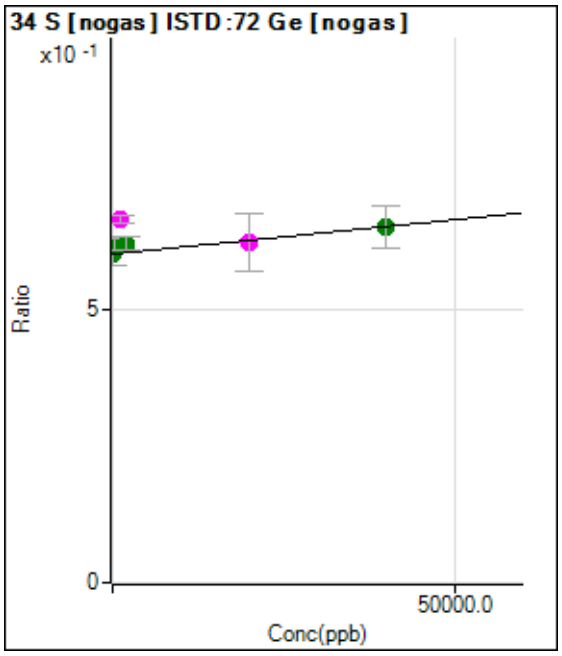
Calibration for 037_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	63499.74	0.0338	P	2.9
2	☐	10.000	8.691	74472.50	0.0394	P	3.1
3	☐	25.000	30.111	92518.23	0.0530	P	10.0
4	☐	50.000	48.383	123271.38	0.0647	P	2.8
5	☐	500.000	489.279	622927.15	0.3457	P	7.7
6	☐	1000.000	1005.327	1197004.36	0.6747	M	13.5
7	☐	5.000					

y = 6.3744E-004 * x + 0.0338
R = 0.9999
DL = 4.595
BEC = 53.07

Weight: <None>
Min Conc: <None>

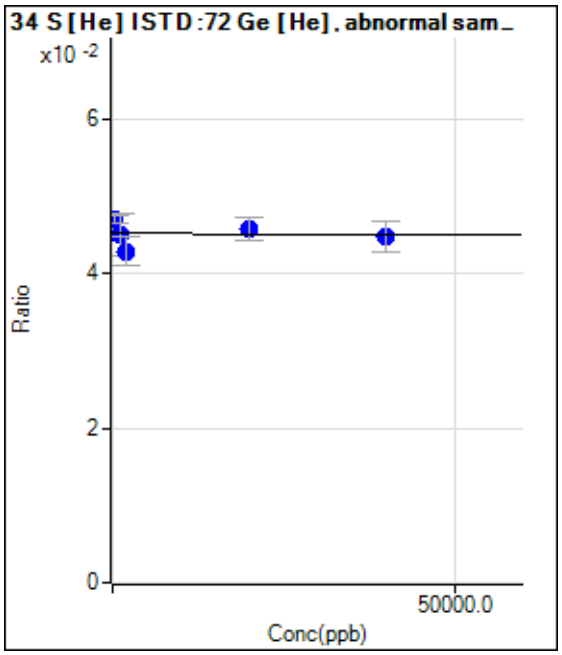


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1125789.02	0.6001	A	7.3
2	☐	400.000	14774.253	1170286.68	0.6186	A	3.1
3	☐	1000.000	49635.707	1160575.06	0.6623	M	2.0
4	☐	2000.000	14716.398	1179025.58	0.6186	A	4.1
5	☐	20000.00	16292.045	1112553.93	0.6205	M	17.0
6	☐	40000.00	39858.522	1154244.39	0.6500	A	12.2
7	☐	100.000					

y = 1.2521E-006 * x + 0.6001
R = 0.3818
DL = 1.049E+05
BEC = 4.793E+05

Weight: <None>
Min Conc: <None>

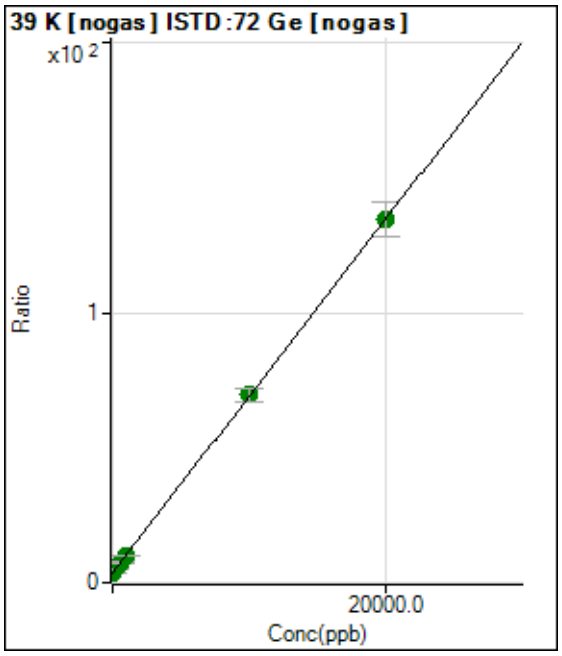
Calibration for 037_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	23451.35	0.0452	P	2.9
2	☐	400.000	-602879.22	24486.10	0.0469	P	2.0
3	☐	1000.000	70732.064	23384.36	0.0450	P	11.9
4	☐	2000.000	787470.95	22383.17	0.0429	P	8.9
5	☐	20000.00	-199896.13	23651.83	0.0458	P	6.3
6	☐	40000.00	114964.01	22650.81	0.0449	P	8.9
7	☐	100.000					

y = -2.9003E-009 * x + 0.0452
R = -0.0055
DL = -1.357E+06
BEC = -1.558E+07

Weight: <None>
Min Conc: <None>

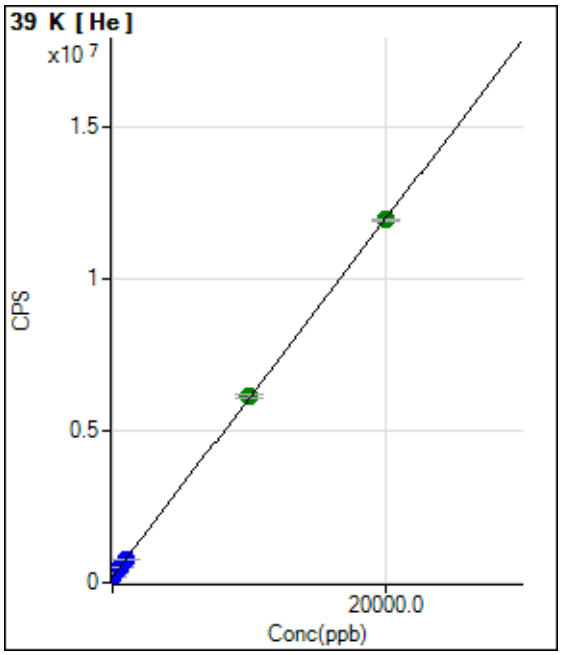


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6864279.58	3.6574	A	3.3
2	☐	200.000	188.609	9256871.82	4.8929	A	2.5
3	☐	500.000	548.396	12662283.87	7.2497	A	8.1
4	☐	1000.000	961.711	18972057.19	9.9571	A	4.5
5	☐	10000.00	10060.746	125430344.4	69.5604	A	6.3
6	☐	20000.00	19970.446	239214855.3	134.474	A	9.4
7	☐	100.000					

y = 0.0066 * x + 3.6574
R = 1.0000
DL = 55.46
BEC = 558.3

Weight: <None>
Min Conc: <None>

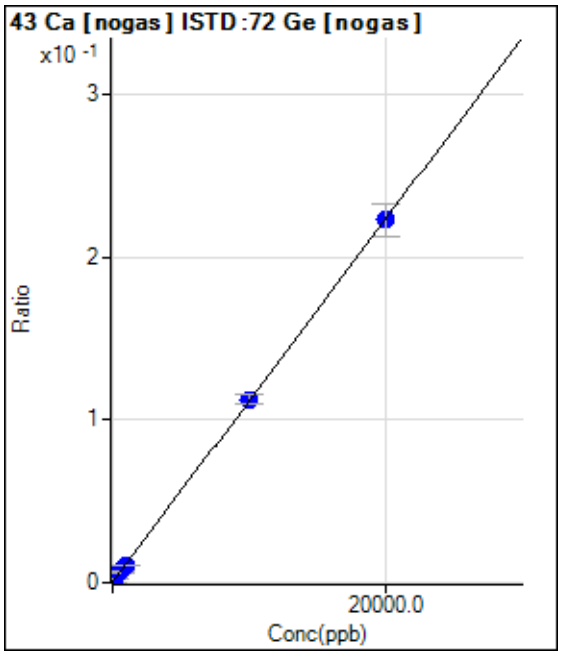
Calibration for 037_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	190358.59		P	0.4
2	☐	200.000	204.893	310887.96		P	0.5
3	☐	500.000	510.218	490497.48		P	1.4
4	☐	1000.000	1005.057	781588.92		P	1.0
5	☐	10000.00	10088.213	6124808.24		A	2.7
6	☐	20000.00	19955.336	11929200.65		A	0.7
7	☐	100.000					

y = 588.2558 * x + 190358.5867
R = 1.0000
DL = 3.531
BEC = 323.6

Weight: <None>
Min Conc: <None>

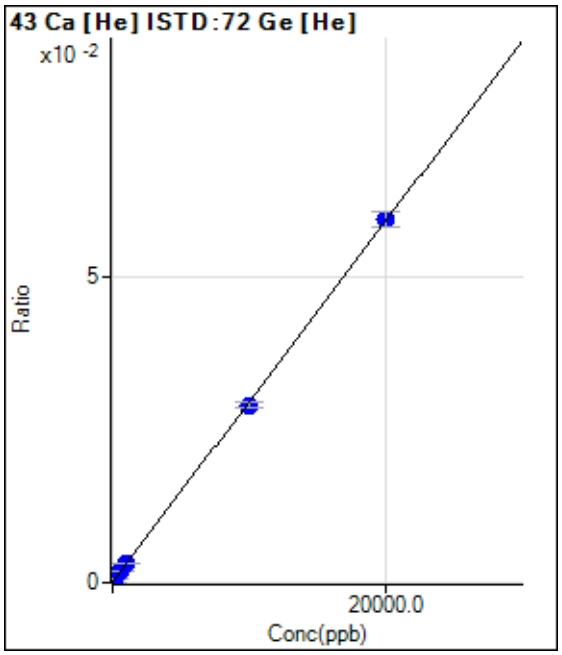


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	566.69	0.0003	P	5.3
2	☐	200.000	184.930	4473.93	0.0024	P	2.5
3	☐	500.000	558.139	11397.00	0.0065	P	8.8
4	☐	1000.000	951.045	20795.14	0.0109	P	3.2
5	☐	10000.00	10067.598	203196.20	0.1126	P	4.9
6	☐	20000.00	19967.346	396770.80	0.2230	P	8.9
7	☐	100.000					

y = 1.1155E-005 * x + 3.0198E-004
R = 1.0000
DL = 4.297
BEC = 27.07

Weight: <None>
Min Conc: <None>

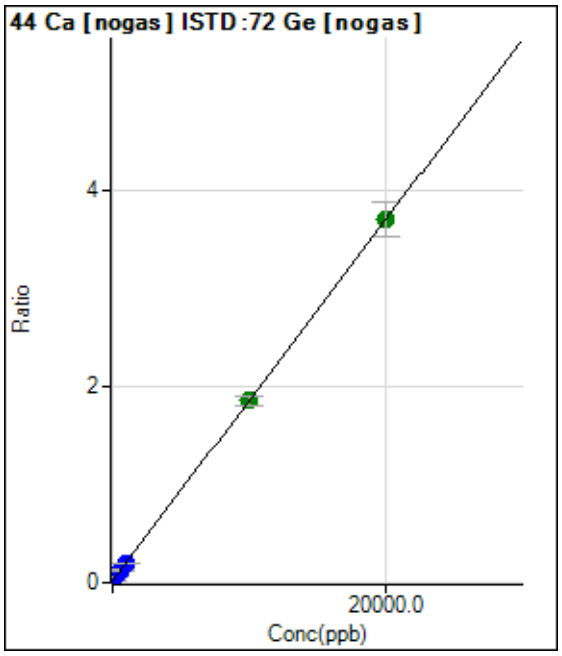
Calibration for 037_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	46.67	0.0001	P	76.0
2	☐	200.000	181.610	326.68	0.0006	P	13.1
3	☐	500.000	572.945	926.71	0.0018	P	3.6
4	☐	1000.000	1048.042	1660.10	0.0032	P	2.5
5	☐	10000.00	9815.092	15019.64	0.0291	P	3.1
6	☐	20000.00	20088.412	29987.67	0.0594	P	4.2
7	☐	100.000					

y = 2.9523E-006 * x + 9.0224E-005
R = 0.9999
DL = 69.71
BEC = 30.56

Weight: <None>
Min Conc: <None>

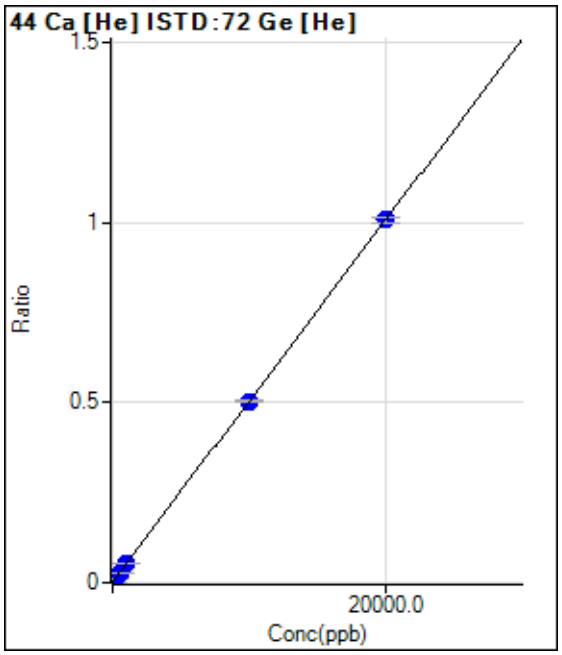


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	42729.09	0.0228	P	2.0
2	☐	200.000	190.817	109558.92	0.0579	P	0.5
3	☐	500.000	548.656	216204.96	0.1238	P	7.9
4	☐	1000.000	910.672	363014.16	0.1904	P	1.9
5	☐	10000.00	9973.558	3352957.03	1.8587	A	5.6
6	☐	20000.00	20016.563	6593824.28	3.7074	A	9.6
7	☐	100.000					

y = 1.8408E-004 * x + 0.0228
R = 1.0000
DL = 7.411
BEC = 123.6

Weight: <None>
Min Conc: <None>

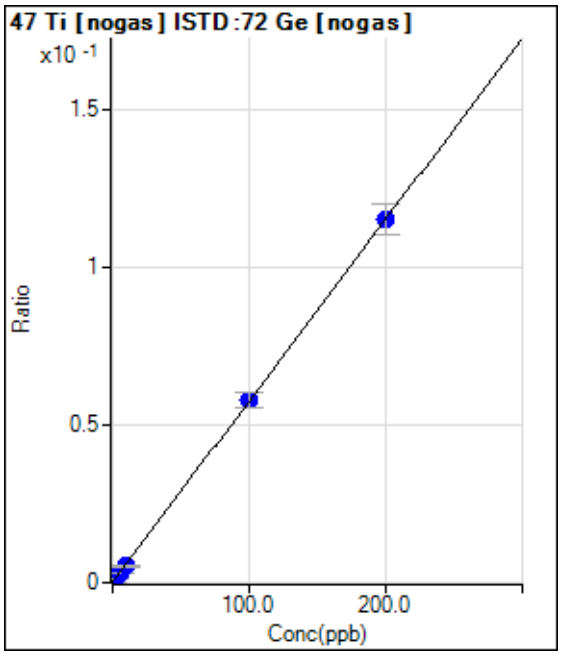
Calibration for 037_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	930.04	0.0018	P	15.1
2	☐	200.000	202.195	6237.80	0.0119	P	3.5
3	☐	500.000	533.082	14859.50	0.0286	P	1.9
4	☐	1000.000	989.565	26852.90	0.0515	P	0.8
5	☐	10000.00	9972.577	259831.59	0.5028	P	1.0
6	☐	20000.00	20013.384	508448.03	1.0072	P	1.9
7	☐	100.000					

y = 5.0239E-005 * x + 0.0018
R = 1.0000
DL = 16.19
BEC = 35.65

Weight: <None>
Min Conc: <None>

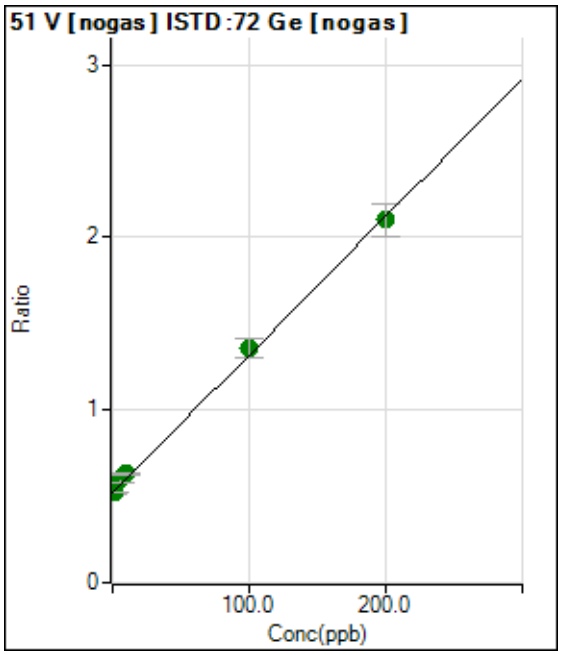


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	243.33	0.0001	P	15.8
2	☐	2.000	1.909	2323.51	0.0012	P	7.1
3	☐	5.000	5.039	5300.83	0.0030	P	4.8
4	☐	10.000	8.912	9999.50	0.0052	P	3.9
5	☐	100.000	100.382	104047.02	0.0578	P	8.0
6	☐	200.000	199.863	204384.95	0.1149	P	8.6
7	☐	1.000					

y = 5.7404E-004 * x + 1.2981E-004
R = 1.0000
DL = 0.1071
BEC = 0.2261

Weight: <None>
Min Conc: <None>

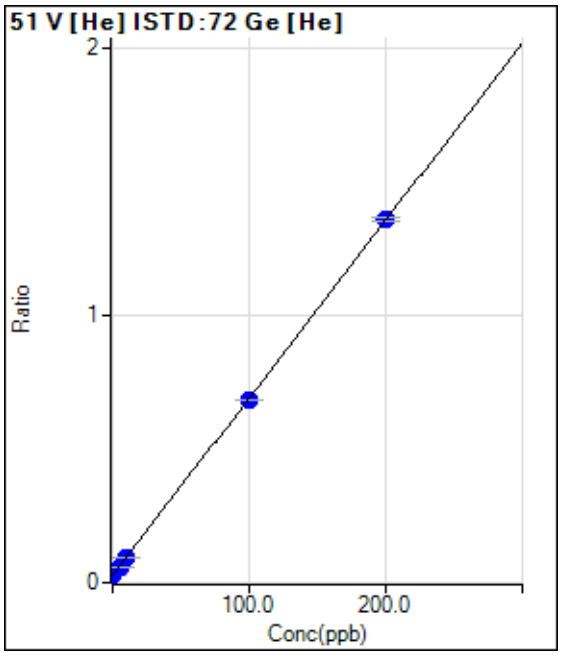
Calibration for 037_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	973352.01	0.5186	A	3.6
2	☐	2.000	0.726	992743.81	0.5244	A	0.5
3	☐	5.000	10.179	1049303.90	0.6002	A	6.9
4	☐	10.000	13.993	1202722.23	0.6308	A	1.5
5	☐	100.000	104.470	2443220.95	1.3560	A	7.9
6	☐	200.000	197.449	3738628.21	2.1013	A	8.9
7	☐	1.000					

y = 0.0080 * x + 0.5186
R = 0.9993
DL = 6.928
BEC = 64.7

Weight: <None>
Min Conc: <None>

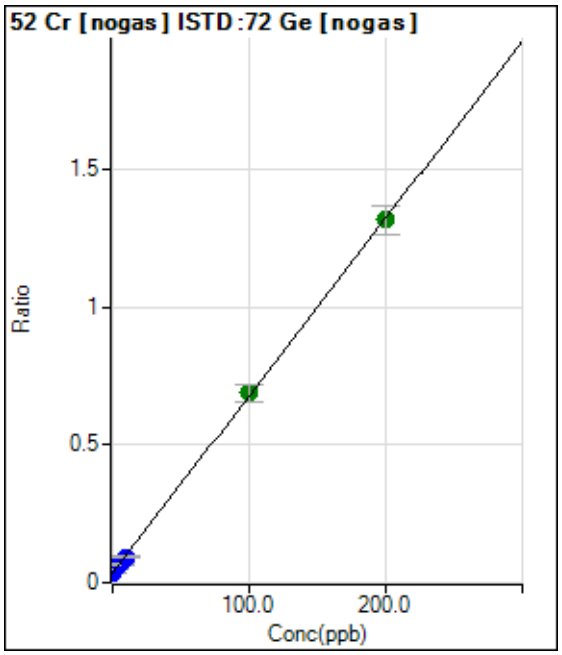


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.276	15040.75	0.0290	P	1.5
2	☐	2.000	2.104	21447.62	0.0411	P	1.4
3	☐	5.000	4.907	31047.74	0.0597	P	1.9
4	☐	10.000	10.126	49171.78	0.0943	P	1.9
5	☐	100.000	99.185	354062.86	0.6851	P	0.4
6	☐	200.000	200.403	684827.94	1.3566	P	0.9
7	☐	1.000					

y = 0.0066 * x + 0.0272
R = 1.0000
DL = 0.1988
BEC = 4.093

Weight: <None>
Min Conc: <None>

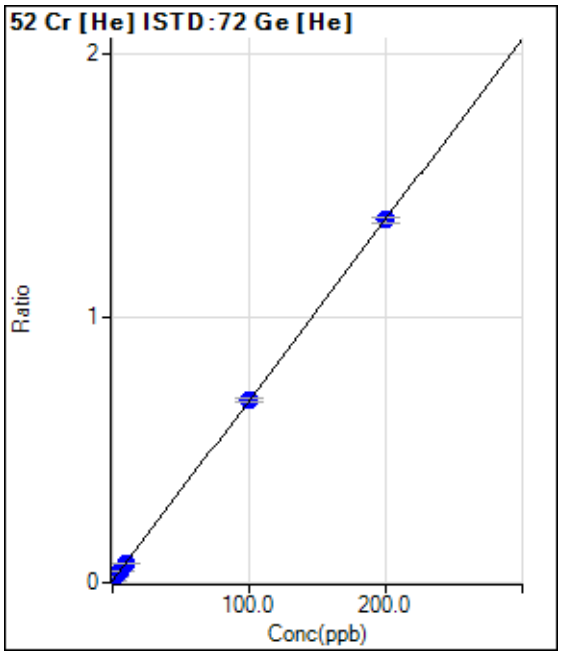
Calibration for 037_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	66739.61	0.0356	P	2.4
2	☐	2.000	1.738	88416.23	0.0467	P	3.6
3	☐	5.000	5.139	119858.17	0.0686	P	8.5
4	☐	10.000	9.086	179237.09	0.0940	P	3.5
5	☐	100.000	101.626	1241556.41	0.6896	A	9.5
6	☐	200.000	199.232	2345522.93	1.3178	A	8.2
7	☐	1.000					

y = 0.0064 * x + 0.0356
R = 0.9999
DL = 0.4027
BEC = 5.524

Weight: <None>
Min Conc: <None>

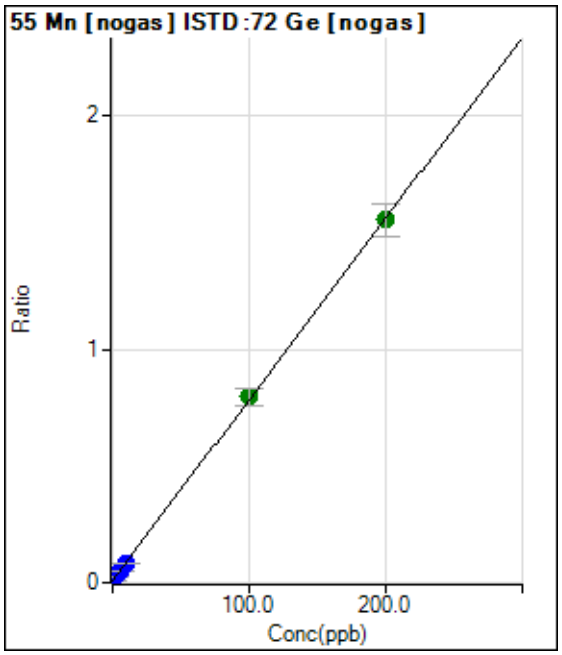


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3415.36	0.0066	P	2.4
2	☐	2.000	1.985	10503.13	0.0201	P	3.7
3	☐	5.000	5.021	21249.10	0.0409	P	2.5
4	☐	10.000	9.670	37855.72	0.0726	P	2.9
5	☐	100.000	100.347	357538.18	0.6919	P	1.6
6	☐	200.000	199.843	692221.06	1.3714	P	1.5
7	☐	1.000					

y = 0.0068 * x + 0.0066
R = 1.0000
DL = 0.06953
BEC = 0.9635

Weight: <None>
Min Conc: <None>

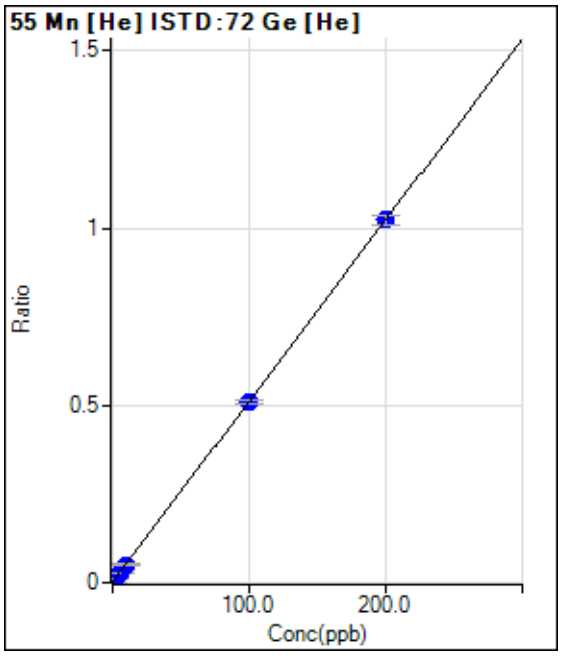
Calibration for 037_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	17158.12	0.0091	P	2.3
2	☐	2.000	1.960	46037.52	0.0243	P	1.8
3	☐	5.000	5.320	87862.00	0.0504	P	10.8
4	☐	10.000	9.474	157405.88	0.0826	P	2.8
5	☐	100.000	101.464	1432237.27	0.7956	A	9.8
6	☐	200.000	199.287	2764379.44	1.5538	A	8.8
7	☐	1.000					

y = 0.0078 * x + 0.0091
R = 1.0000
DL = 0.08273
BEC = 1.179

Weight: <None>
Min Conc: <None>

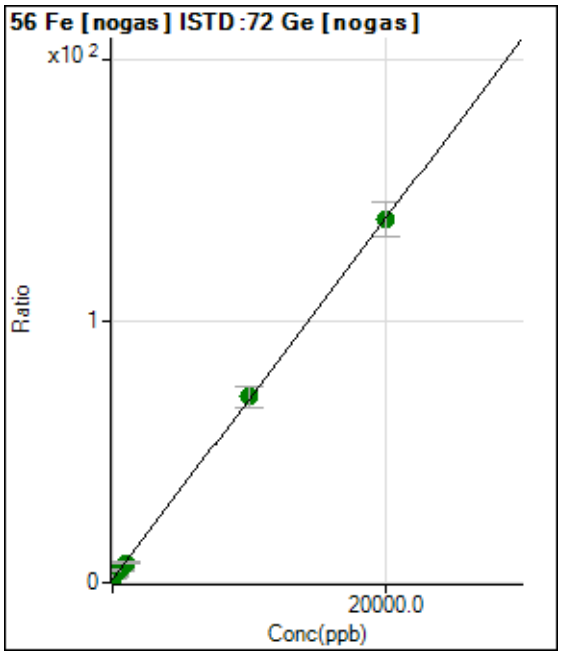


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	660.02	0.0013	P	13.6
2	☐	2.000	2.007	6011.09	0.0115	P	3.6
3	☐	5.000	5.179	14402.41	0.0277	P	3.2
4	☐	10.000	9.798	26719.73	0.0513	P	2.5
5	☐	100.000	99.645	263358.30	0.5097	P	3.1
6	☐	200.000	200.183	516137.23	1.0226	P	2.5
7	☐	1.000					

y = 0.0051 * x + 0.0013
R = 1.0000
DL = 0.1021
BEC = 0.2495

Weight: <None>
Min Conc: <None>

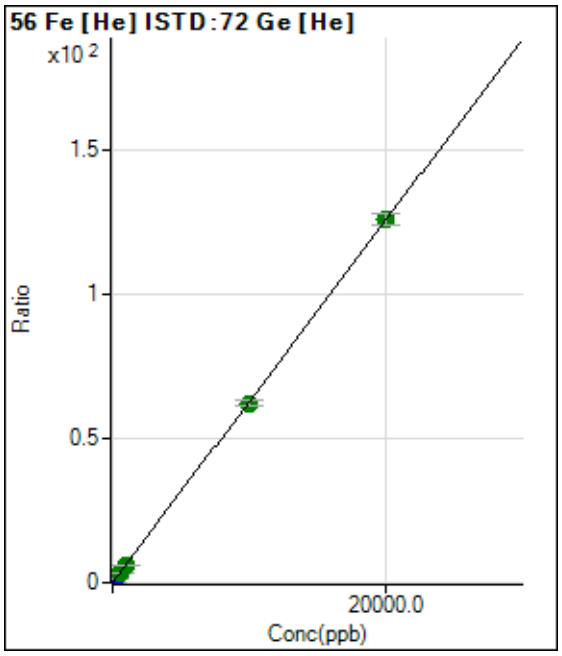
Calibration for 037_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2476830.65	1.3197	A	3.3
2	☐	200.000	183.257	4885262.74	2.5816	A	1.4
3	☐	500.000	510.670	8443879.36	4.8361	A	8.7
4	☐	1000.000	915.735	14537134.18	7.6253	A	4.1
5	☐	10000.00	10121.957	127746352.8	71.0184	A	10.9
6	☐	20000.00	19943.135	246578680.5	138.646	A	9.5
7	☐	100.000					

y = 0.0069 * x + 1.3197
R = 1.0000
DL = 19.2
BEC = 191.7

Weight: <None>
Min Conc: <None>

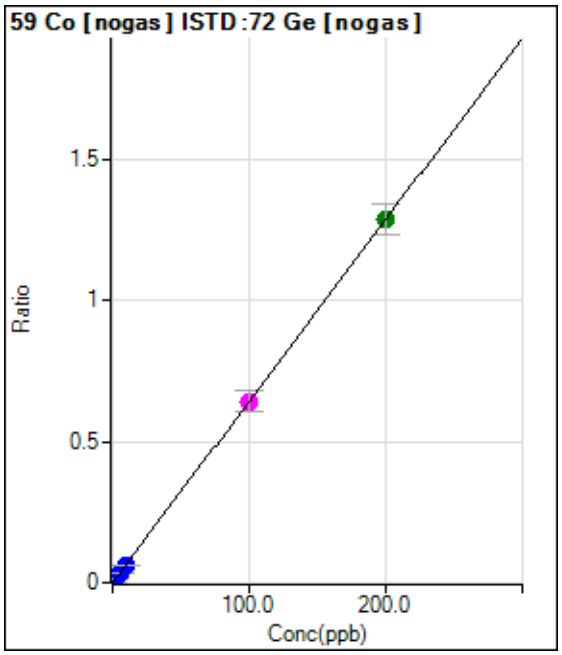


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	17485.07	0.0337	P	3.4
2	☐	200.000	192.973	649848.27	1.2456	P	2.1
3	☐	500.000	498.893	1646848.05	3.1668	A	1.0
4	☐	1000.000	970.909	3195893.60	6.1312	A	2.1
5	☐	10000.00	9926.651	32232500.35	62.3749	A	4.0
6	☐	20000.00	20038.227	63531460.72	125.877	A	3.1
7	☐	100.000					

y = 0.0063 * x + 0.0337
R = 1.0000
DL = 0.541
BEC = 5.365

Weight: <None>
Min Conc: <None>

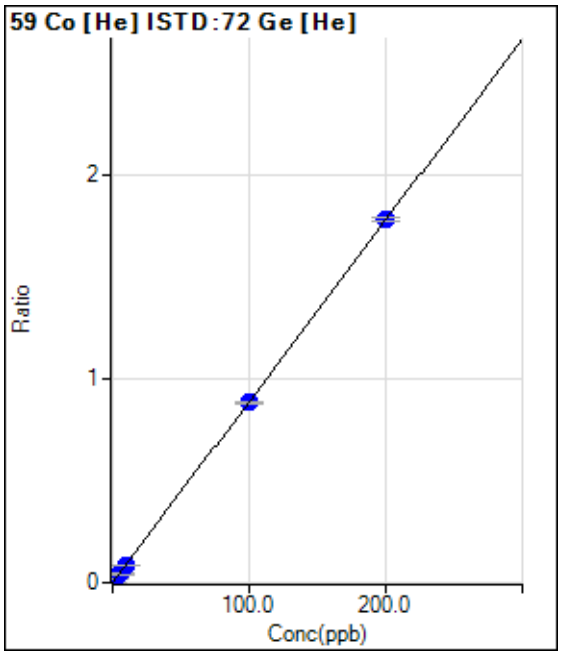
Calibration for 037_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	500.01	0.0003	P	14.1
2	☐	2.000	1.921	23889.06	0.0126	P	4.4
3	☐	5.000	5.159	58473.54	0.0335	P	8.3
4	☐	10.000	9.346	115204.37	0.0604	P	3.0
5	☐	100.000	100.065	1158451.81	0.6444	M	12.0
6	☐	200.000	199.997	2291259.55	1.2877	A	8.6
7	☐	1.000					

y = 0.0064 * x + 2.6589E-004
R = 1.0000
DL = 0.0175
BEC = 0.04131

Weight: <None>
Min Conc: <None>

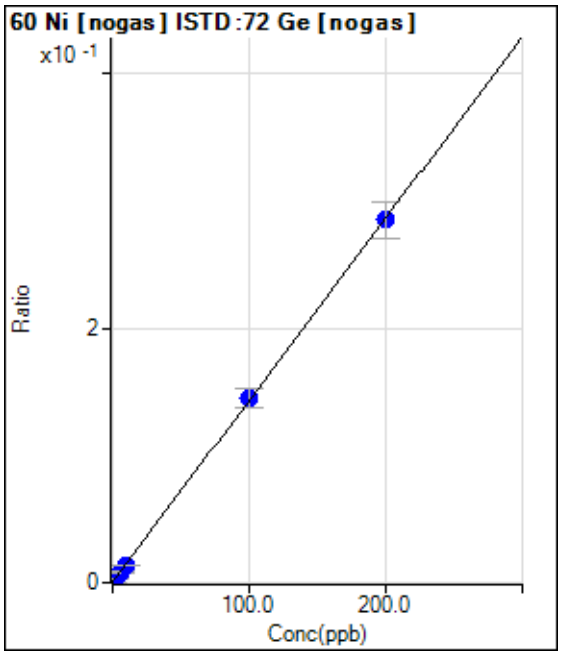


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	70.00	0.0001	P	36.8
2	☐	2.000	2.029	9482.54	0.0182	P	2.8
3	☐	5.000	4.851	22497.32	0.0433	P	5.8
4	☐	10.000	9.821	45600.08	0.0875	P	1.5
5	☐	100.000	99.481	457212.52	0.8847	P	1.6
6	☐	200.000	200.272	899016.42	1.7810	P	1.1
7	☐	1.000					

y = 0.0089 * x + 1.3462E-004
R = 1.0000
DL = 0.01673
BEC = 0.01514

Weight: <None>
Min Conc: <None>

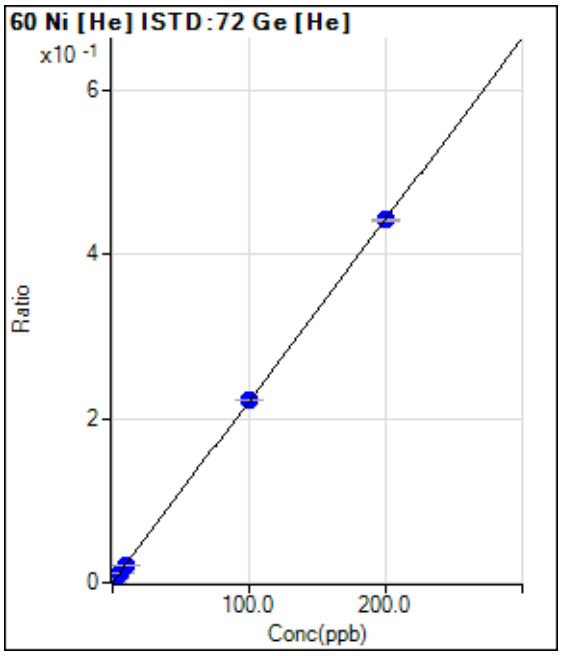
Calibration for 037_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.072	673.35	0.0004	P	5.5
2	☐	2.000	1.818	5784.32	0.0031	P	6.4
3	☐	5.000	5.334	14125.59	0.0081	P	7.4
4	☐	10.000	9.122	25721.66	0.0135	P	2.0
5	☐	100.000	101.523	261778.15	0.1455	P	9.9
6	☐	200.000	199.276	506789.40	0.2851	P	10.1
7	☐	1.000					

y = 0.0014 * x + 4.6197E-004
R = 0.9999
DL = 0.04163
BEC = 0.3235

Weight: <None>
Min Conc: <None>

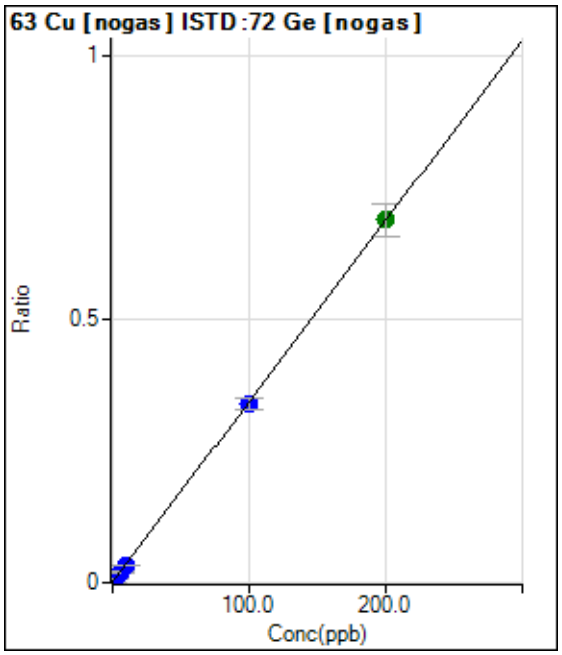


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.042	113.33	0.0002	P	21.5
2	☐	2.000	2.091	2580.22	0.0049	P	11.3
3	☐	5.000	5.010	5927.71	0.0114	P	1.3
4	☐	10.000	9.684	11333.58	0.0217	P	2.7
5	☐	100.000	100.483	115082.74	0.2227	P	0.9
6	☐	200.000	199.773	223360.56	0.4424	P	0.8
7	☐	1.000					

y = 0.0022 * x + 3.1067E-004
R = 1.0000
DL = 0.06368
BEC = 0.1404

Weight: <None>
Min Conc: <None>

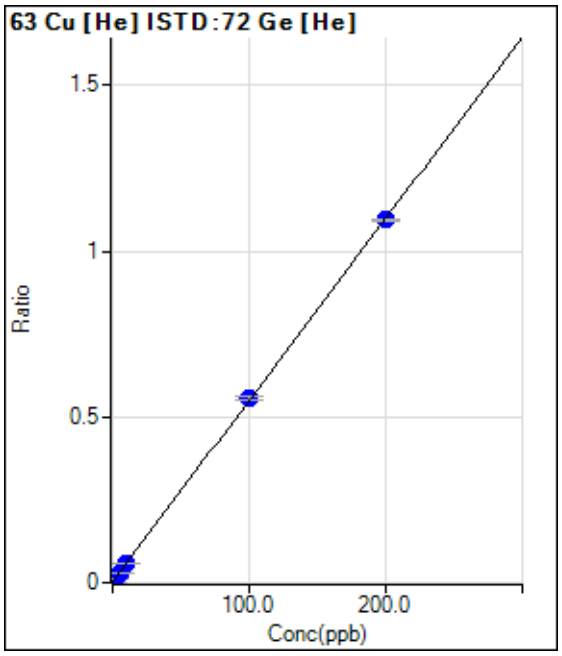
Calibration for 037_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2193.50	0.0012	P	4.3
2	☐	2.000	1.930	14726.02	0.0078	P	1.6
3	☐	5.000	5.350	34075.36	0.0195	P	7.1
4	☐	10.000	9.358	63340.02	0.0332	P	3.3
5	☐	100.000	99.082	614355.38	0.3407	P	6.3
6	☐	200.000	200.483	1223838.81	0.6881	A	9.3
7	☐	1.000					

y = 0.0034 * x + 0.0012
R = 1.0000
DL = 0.04365
BEC = 0.3409

Weight: <None>
Min Conc: <None>

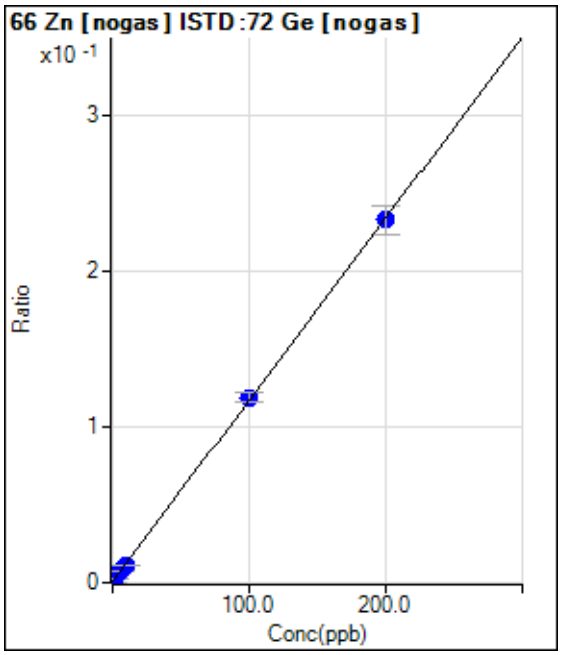


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.183	806.70	0.0016	P	5.3
2	☐	2.000	1.826	6551.25	0.0125	P	2.5
3	☐	5.000	4.926	15353.26	0.0295	P	1.8
4	☐	10.000	9.836	29400.50	0.0564	P	2.6
5	☐	100.000	101.167	287558.28	0.5565	P	2.0
6	☐	200.000	199.428	552505.11	1.0945	P	0.7
7	☐	1.000					

y = 0.0055 * x + 0.0026
R = 1.0000
DL = 0.04537
BEC = 0.4664

Weight: <None>
Min Conc: <None>

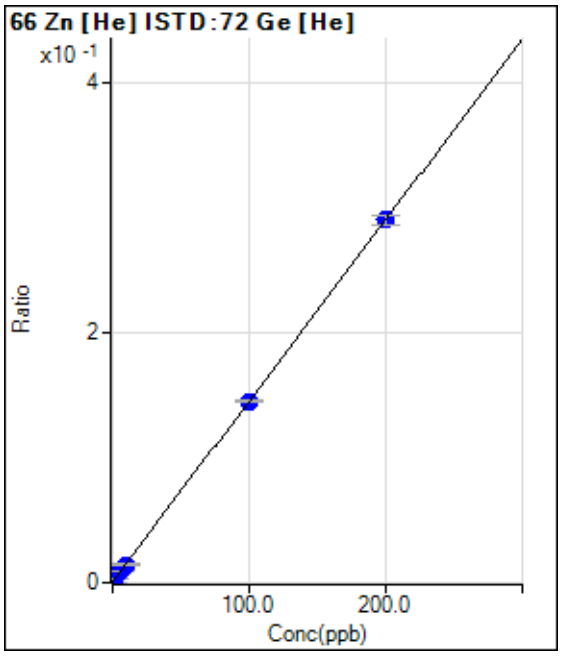
Calibration for 037_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.212	726.69	0.0004	P	13.3
2	☐	2.000	1.710	4960.74	0.0026	P	6.0
3	☐	5.000	5.494	12291.01	0.0070	P	5.7
4	☐	10.000	9.170	21562.99	0.0113	P	2.0
5	☐	100.000	101.612	214462.06	0.1189	P	6.1
6	☐	200.000	199.226	413931.83	0.2325	P	8.0
7	☐	1.000					

y = 0.0012 * x + 6.3315E-004
R = 0.9999
DL = 0.1327
BEC = 0.5439

Weight: <None>
Min Conc: <None>

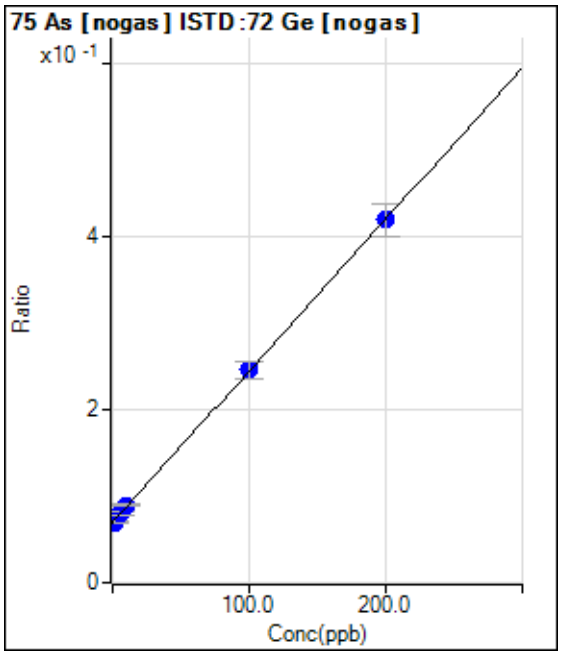


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.126	220.01	0.0004	P	23.2
2	☐	2.000	2.011	1836.79	0.0035	P	8.3
3	☐	5.000	5.593	4530.62	0.0087	P	3.9
4	☐	10.000	9.588	7558.32	0.0145	P	2.0
5	☐	100.000	99.854	75094.49	0.1453	P	1.5
6	☐	200.000	200.079	146647.77	0.2905	P	2.9
7	☐	1.000					

y = 0.0014 * x + 6.0547E-004
R = 1.0000
DL = 0.2037
BEC = 0.4178

Weight: <None>
Min Conc: <None>

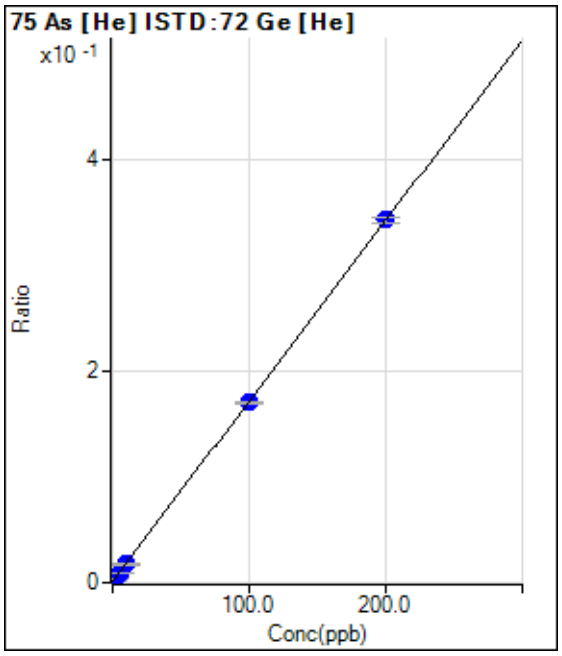
Calibration for 037_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.609	129079.57	0.0688	P	0.9
2	☐	2.000	0.132	132547.00	0.0701	P	1.9
3	☐	5.000	5.877	140049.46	0.0801	P	6.6
4	☐	10.000	11.280	170831.95	0.0896	P	3.0
5	☐	100.000	100.775	444200.19	0.2465	P	7.9
6	☐	200.000	199.545	746818.32	0.4197	P	8.7
7	☐	1.000					

y = 0.0018 * x + 0.0698
R = 0.9999
DL = 1.085
BEC = 39.82

Weight: <None>
Min Conc: <None>

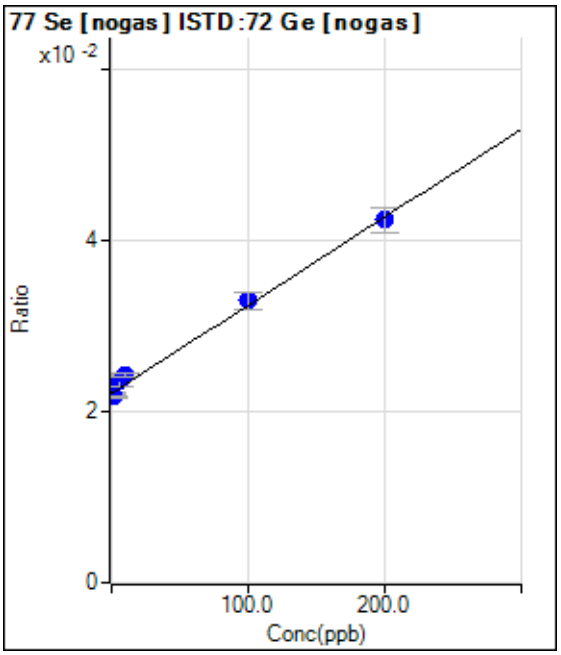


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	578.90	0.0011	P	19.3
2	☐	2.000	1.897	2270.15	0.0044	P	5.8
3	☐	5.000	4.964	4980.70	0.0096	P	5.3
4	☐	10.000	9.556	9075.61	0.0174	P	2.0
5	☐	100.000	99.121	87913.76	0.1701	P	1.8
6	☐	200.000	200.464	173107.76	0.3429	P	1.8
7	☐	1.000					

y = 0.0017 * x + 0.0011
R = 1.0000
DL = 0.3801
BEC = 0.6551

Weight: <None>
Min Conc: <None>

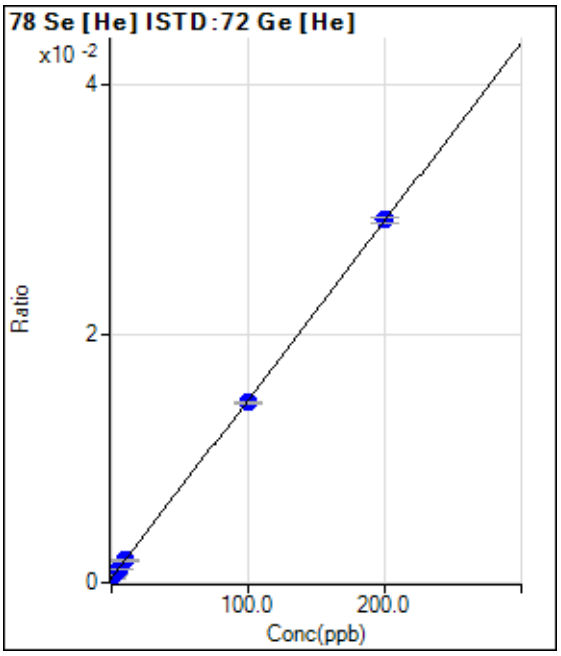
Calibration for 037_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	41564.34	0.0221	P	0.8
2	☐	2.000	-3.979	41126.58	0.0217	P	0.6
3	☐	5.000	14.895	41417.39	0.0237	P	5.5
4	☐	10.000	21.462	46419.13	0.0243	P	1.9
5	☐	100.000	104.935	59423.58	0.0329	P	5.8
6	☐	200.000	196.772	75489.12	0.0424	P	7.2
7	☐	1.000					

y = 1.0293E-004 * x + 0.0221
R = 0.9964
DL = 5.234
BEC = 215

Weight: <None>
Min Conc: <None>

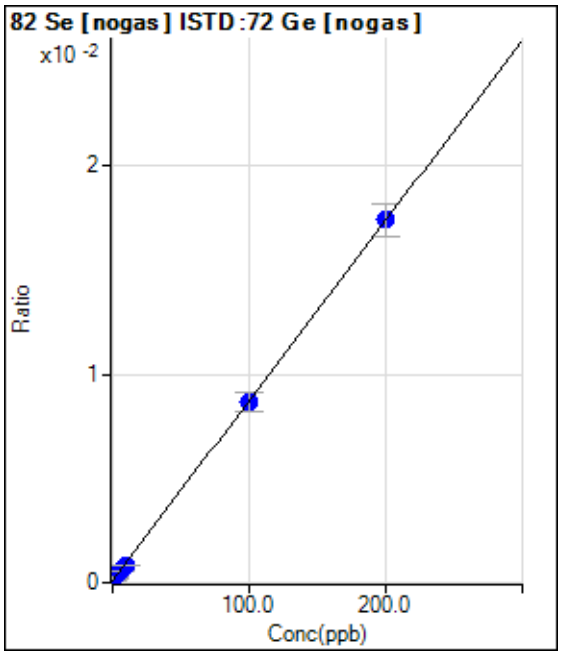


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.270	202.00	0.0004	P	12.2
2	☐	2.000	2.279	353.34	0.0007	P	11.3
3	☐	5.000	5.201	570.01	0.0011	P	5.0
4	☐	10.000	10.042	933.36	0.0018	P	2.2
5	☐	100.000	98.437	7475.55	0.0145	P	1.0
6	☐	200.000	200.772	14708.61	0.0291	P	1.9
7	☐	1.000					

y = 1.4339E-004 * x + 3.5057E-004
R = 1.0000
DL = 0.9909
BEC = 2.445

Weight: <None>
Min Conc: <None>

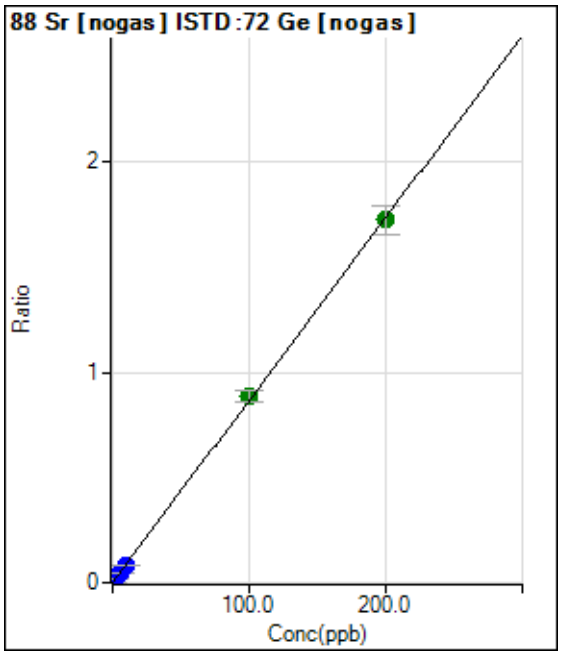
Calibration for 037_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	176.67	0.0001	P	18.2
2	☐	2.000	1.814	476.68	0.0003	P	16.9
3	☐	5.000	4.959	916.70	0.0005	P	1.3
4	☐	10.000	8.703	1616.76	0.0008	P	6.5
5	☐	100.000	99.435	15640.24	0.0087	P	10.3
6	☐	200.000	200.350	30963.39	0.0174	P	9.2
7	☐	1.000					

y = 8.6417E-005 * x + 9.4285E-005
R = 1.0000
DL = 0.5945
BEC = 1.091

Weight: <None>
Min Conc: <None>

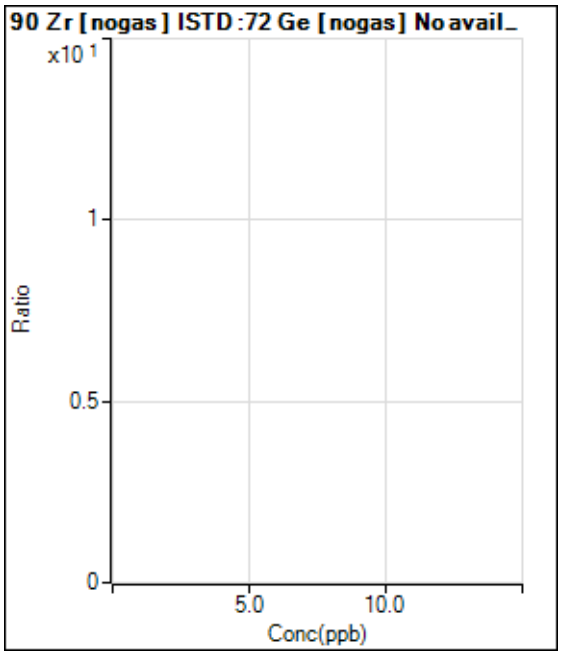


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1106.72	0.0006	P	9.0
2	☐	2.000	1.905	32342.81	0.0171	P	3.8
3	☐	5.000	5.159	79077.47	0.0453	P	9.0
4	☐	10.000	9.119	151812.40	0.0796	P	2.6
5	☐	100.000	102.130	1596452.06	0.8856	A	6.9
6	☐	200.000	198.976	3070311.62	1.7249	A	8.2
7	☐	1.000					

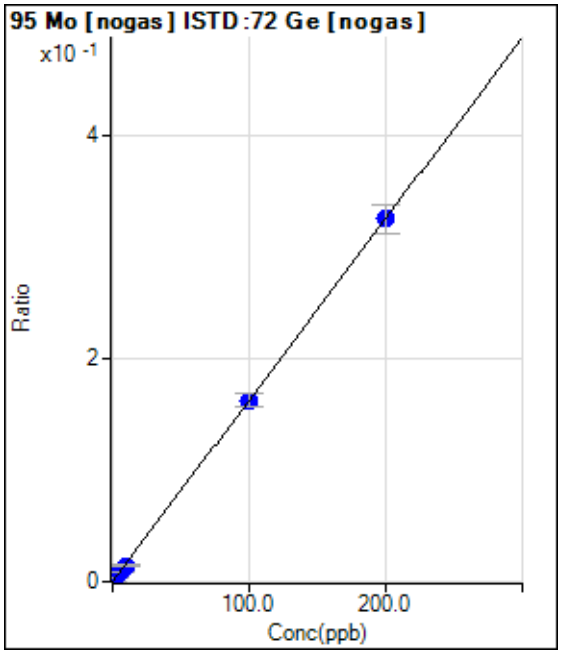
y = 0.0087 * x + 5.8970E-004
R = 0.9999
DL = 0.01828
BEC = 0.06805

Weight: <None>
Min Conc: <None>

Calibration for 037_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					

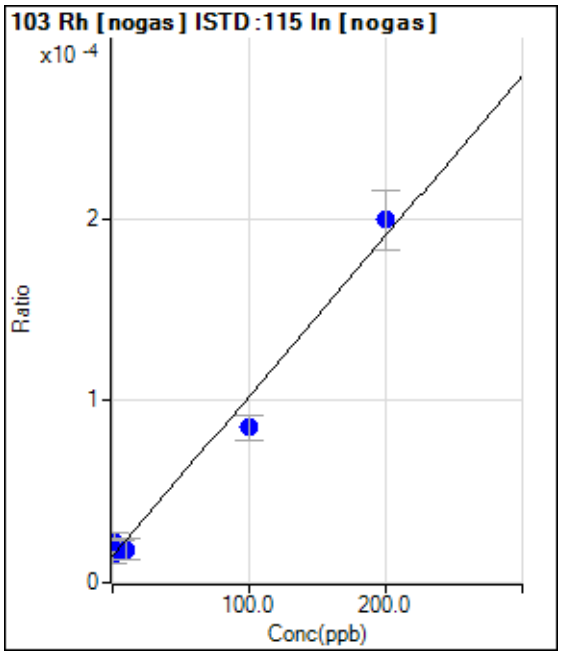


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	293.34	0.0002	P	14.4
2	☐	2.000	1.883	6081.15	0.0032	P	5.9
3	☐	5.000	4.986	14429.35	0.0083	P	7.4
4	☐	10.000	8.872	27781.92	0.0146	P	4.3
5	☐	100.000	100.120	293413.28	0.1629	P	8.2
6	☐	200.000	199.998	578753.78	0.3252	P	8.3
7	☐	1.000					

y = 0.0016 * x + 1.5600E-004
R = 1.0000
DL = 0.0414
BEC = 0.09599

Weight: <None>
Min Conc: <None>

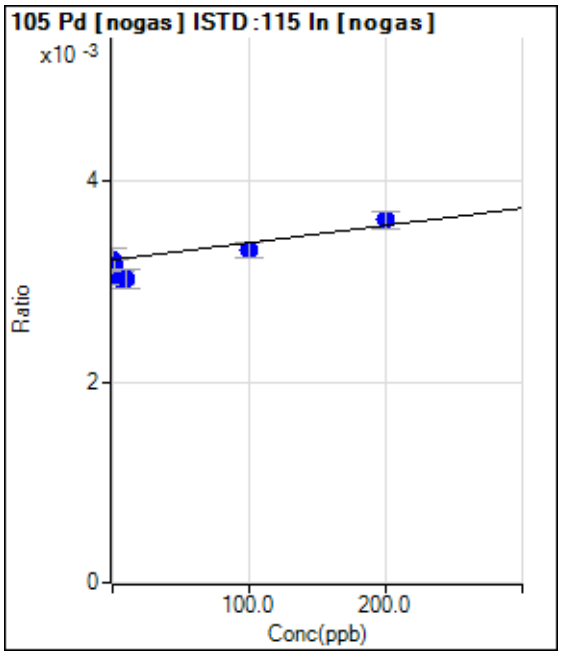
Calibration for 037_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	23.33	0.0000	P	49.2
2	☐	2.000	8.814	36.67	0.0000	P	43.4
3	☐	5.000	5.945	30.00	0.0000	P	32.4
4	☐	10.000	3.970	30.00	0.0000	P	64.2
5	☐	100.000	80.491	130.00	0.0001	P	15.7
6	☐	200.000	209.964	303.34	0.0002	P	16.8
7	☐	1.000					

y = 8.8107E-007 * x + 1.4580E-005
R = 0.9921
DL = 24.44
BEC = 16.55

Weight: <None>
Min Conc: <None>

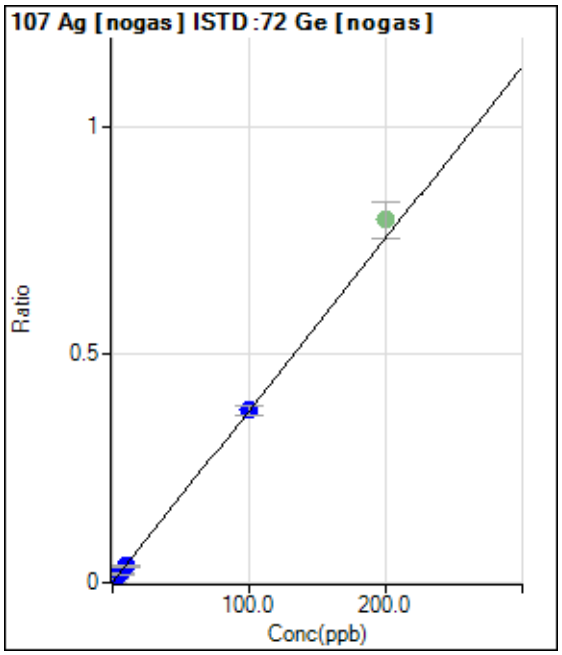


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	5137.51	0.0032	P	7.6
2	☐	2.000	-37.326	5207.53	0.0032	P	4.4
3	☐	5.000	-104.611	4617.33	0.0030	P	3.9
4	☐	10.000	-108.722	4940.78	0.0030	P	5.9
5	☐	100.000	54.967	5007.46	0.0033	P	4.7
6	☐	200.000	231.586	5514.28	0.0036	P	4.6
7	☐	1.000					

y = 1.7200E-006 * x + 0.0032
R = 0.9299
DL = 427.4
BEC = 1869

Weight: <None>
Min Conc: <None>

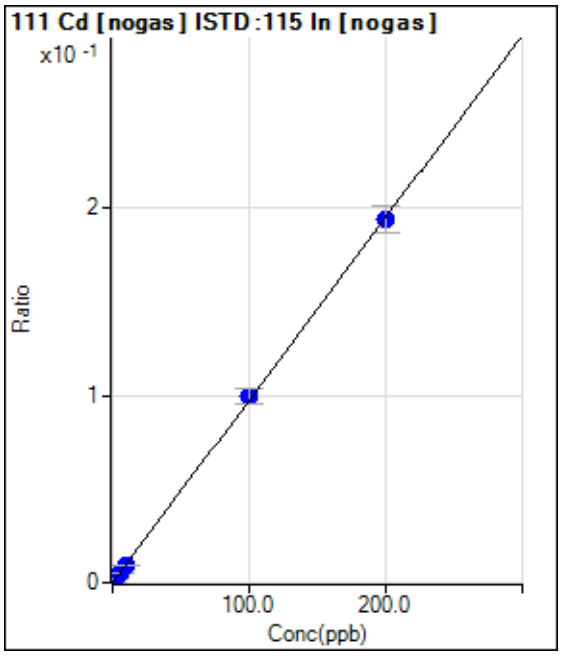
Calibration for 037_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1356.74	0.0007	P	8.3
2	☐	2.000	1.710	13538.66	0.0072	P	5.3
3	☐	5.000	4.923	33602.33	0.0193	P	10.2
4	☐	10.000	9.342	68436.02	0.0359	P	2.9
5	☐	100.000	100.075	680705.95	0.3775	P	6.3
6	☑	200.000		1412684.98	0.7945	A	10.0
7	☐	1.000					

y = 0.0038 * x + 7.2341E-004
R = 1.0000
DL = 0.0476
BEC = 0.1921

Weight: <None>
Min Conc: <None>

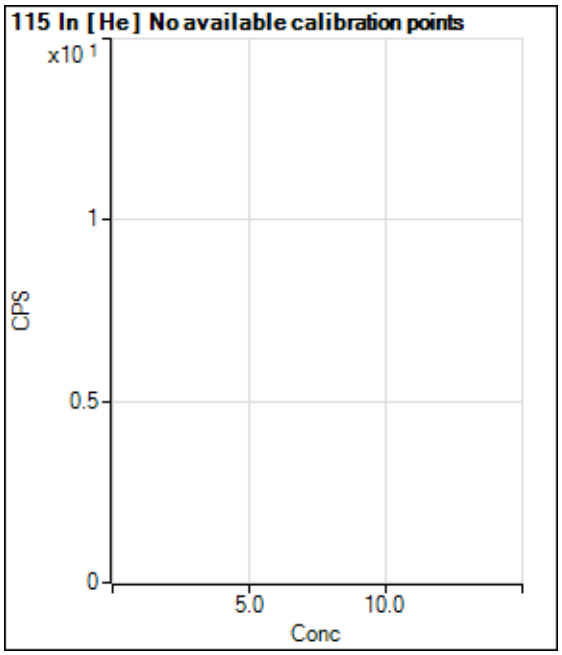


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	16.67	0.0000	P	36.2
2	☐	2.000	1.858	3010.30	0.0018	P	8.1
3	☐	5.000	5.180	7635.07	0.0051	P	14.3
4	☐	10.000	9.260	14723.02	0.0090	P	1.1
5	☐	100.000	102.369	149928.74	0.0999	P	8.7
6	☐	200.000	198.849	294697.88	0.1940	P	7.3
7	☐	1.000					

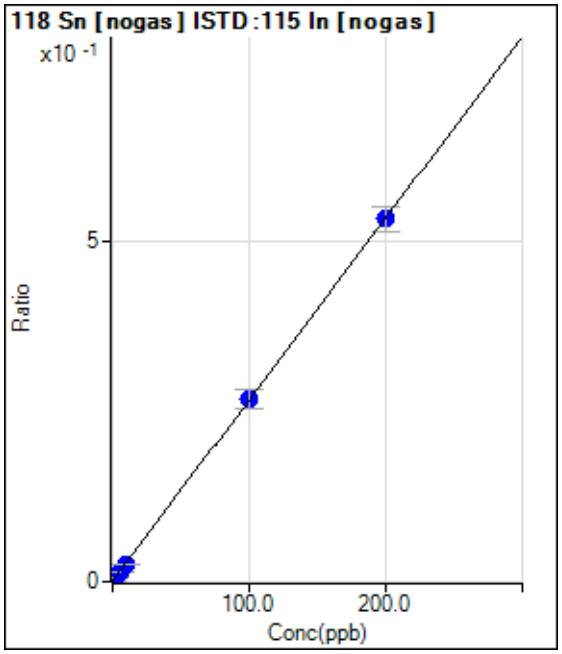
y = 9.7542E-004 * x + 1.0487E-005
R = 0.9999
DL = 0.01167
BEC = 0.01075

Weight: <None>
Min Conc: <None>

Calibration for 037_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			665907.86		P	1.4
2	☐			674499.80		P	2.0
3	☐			684267.03		P	2.1
4	☐			678346.22		P	0.9
5	☐			656280.76		P	1.3
6	☐			642562.83		P	1.2
7	☐						

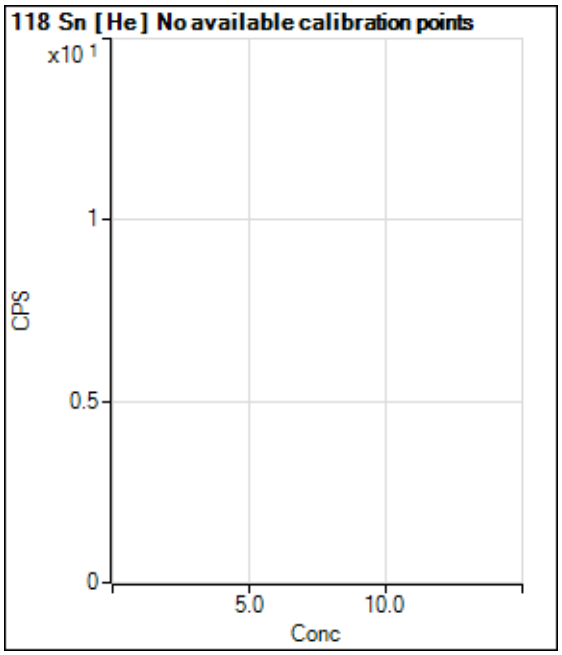


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1167.04	0.0007	P	49.2
2	☐	2.000	1.713	8752.31	0.0053	P	4.3
3	☐	5.000	5.059	21446.86	0.0142	P	13.6
4	☐	10.000	8.995	40210.03	0.0247	P	4.4
5	☐	100.000	100.705	404027.42	0.2693	P	10.3
6	☐	200.000	199.699	810644.75	0.5334	P	6.9
7	☐	1.000					

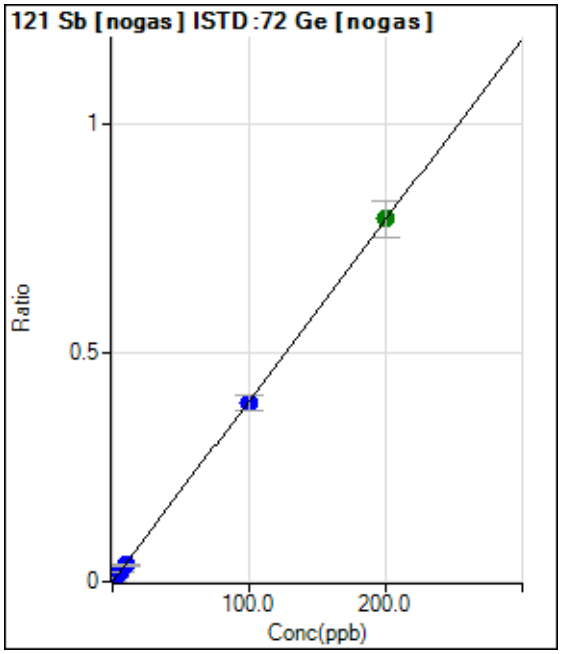
y = 0.0027 * x + 7.2560E-004
R = 1.0000
DL = 0.4016
BEC = 0.272

Weight: <None>
Min Conc: <None>

Calibration for 037_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			390.01		P	7.7
2	☐			3787.14		P	0.7
3	☐			9872.96		P	2.7
4	☐			18660.15		P	1.2
5	☐			183964.87		P	2.1
6	☐			362158.38		P	1.6
7	☐						

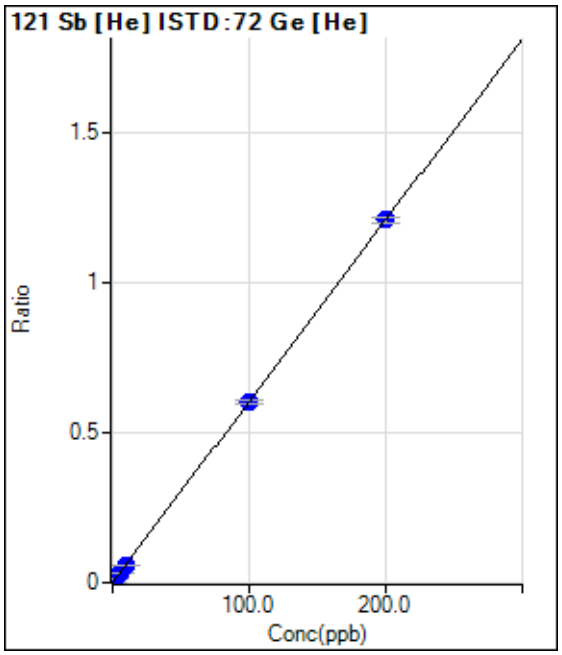


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	780.03	0.0004	P	4.2
2	☐	2.000	1.742	13812.31	0.0073	P	4.7
3	☐	5.000	4.877	34424.20	0.0197	P	7.5
4	☐	10.000	8.985	68538.26	0.0359	P	2.0
5	☐	100.000	98.819	704796.21	0.3912	P	8.0
6	☐	200.000	200.647	1411708.10	0.7939	A	9.8
7	☐	1.000					

y = 0.0040 * x + 4.1565E-004
R = 1.0000
DL = 0.01317
BEC = 0.1051

Weight: <None>
Min Conc: <None>

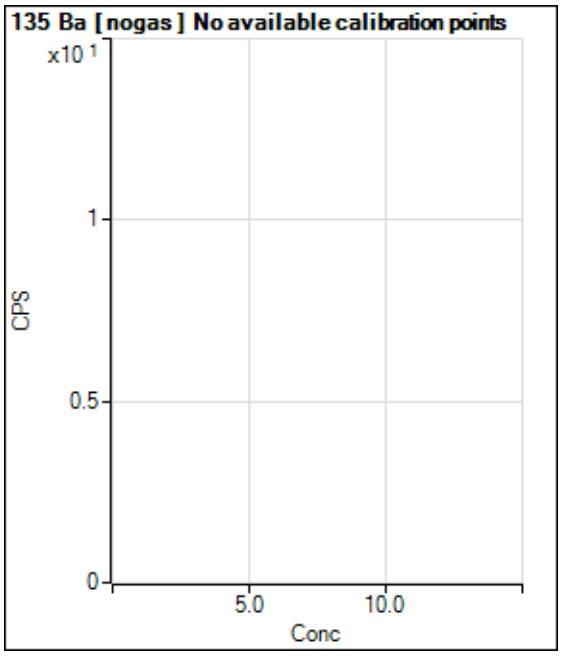
Calibration for 037_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	370.01	0.0007	P	4.8
2	☐	2.000	1.848	6181.20	0.0119	P	4.5
3	☐	5.000	4.798	15406.99	0.0296	P	1.7
4	☐	10.000	9.513	30256.43	0.0580	P	1.4
5	☐	100.000	99.557	310412.42	0.6007	P	1.4
6	☐	200.000	200.252	609499.08	1.2075	P	1.8
7	☐	1.000					

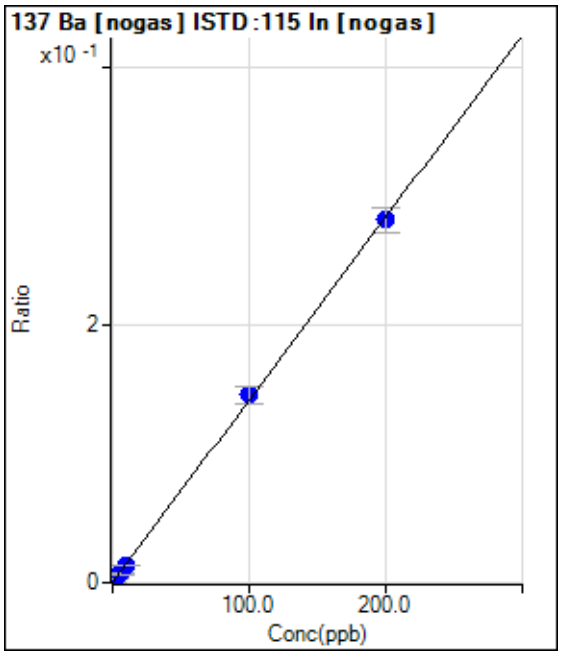
y = 0.0060 * x + 7.1277E-004
R = 1.0000
DL = 0.01694
BEC = 0.1183

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			176.67		P	56.7
2	☐			2633.57		P	1.6
3	☐			6477.98		P	4.2
4	☐			12604.77		P	3.9
5	☐			127713.08		P	1.5
6	☐			248026.74		P	1.0
7	☐						

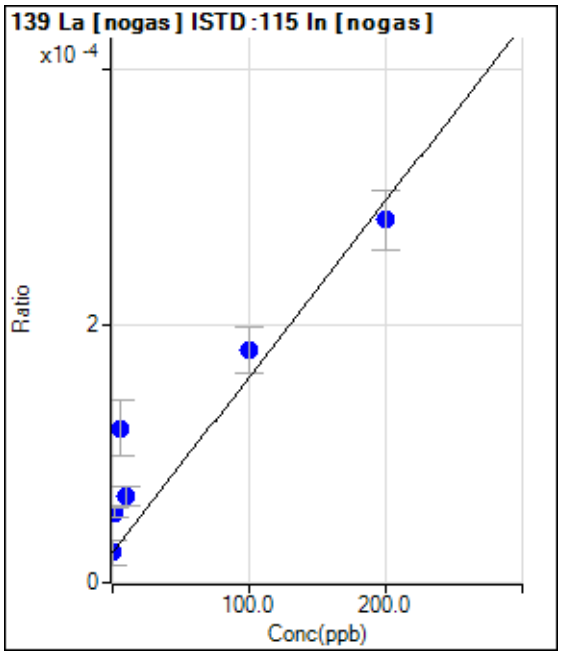
Calibration for 037_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	270.01	0.0002	P	25.3
2	☐	2.000	1.788	4470.65	0.0027	P	2.8
3	☐	5.000	4.889	10720.14	0.0071	P	11.9
4	☐	10.000	9.090	21226.57	0.0131	P	4.4
5	☐	100.000	102.730	218709.74	0.1458	P	9.7
6	☐	200.000	198.685	428231.79	0.2817	P	6.7
7	☐	1.000					

y = 0.0014 * x + 1.6888E-004
R = 0.9998
DL = 0.0904
BEC = 0.1192

Weight: <None>
Min Conc: <None>

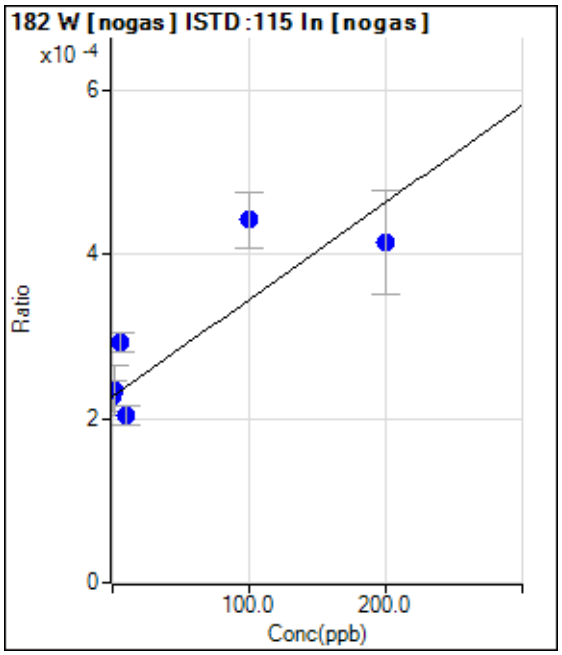


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	36.67	0.0000	P	84.5
2	☐	2.000	22.910	90.00	0.0001	P	13.9
3	☐	5.000	71.061	180.00	0.0001	P	35.4
4	☐	10.000	32.071	110.00	0.0001	P	23.3
5	☐	100.000	115.377	270.01	0.0002	P	20.3
6	☐	200.000	189.347	433.35	0.0003	P	16.7
7	☐	1.000					

y = 1.3681E-006 * x + 2.3212E-005
R = 0.9505
DL = 43
BEC = 16.97

Weight: <None>
Min Conc: <None>

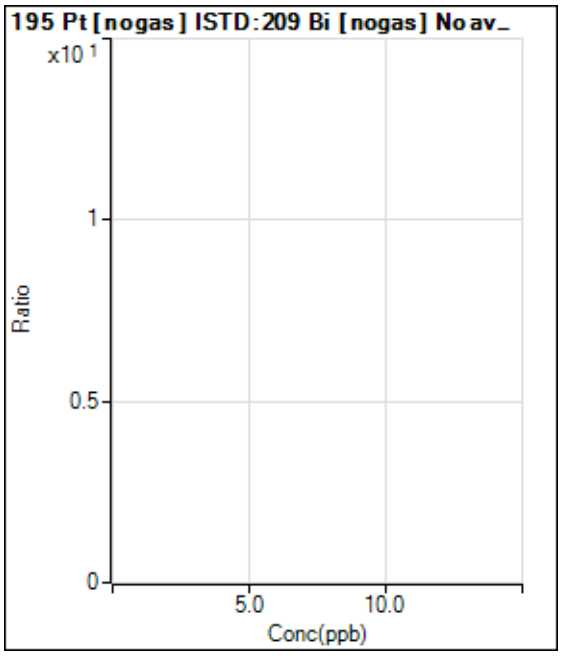
Calibration for 037_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	363.34	0.0002	P	17.2
2	☐	2.000	6.546	386.68	0.0002	P	25.9
3	☐	5.000	55.474	446.68	0.0003	P	7.8
4	☐	10.000	-19.639	333.34	0.0002	P	12.2
5	☐	100.000	181.876	673.36	0.0004	P	15.5
6	☐	200.000	159.236	626.69	0.0004	P	30.5
7	☐	1.000					

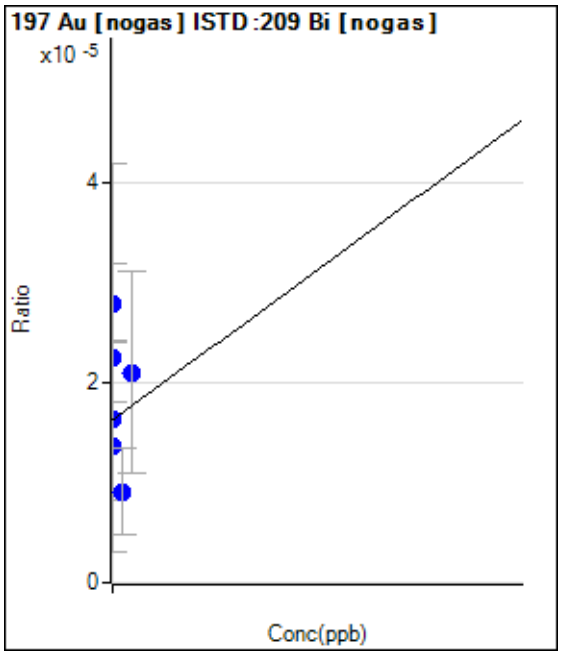
y = 1.1845E-006 * x + 2.2716E-004
R = 0.8450
DL = 98.81
BEC = 191.8

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					

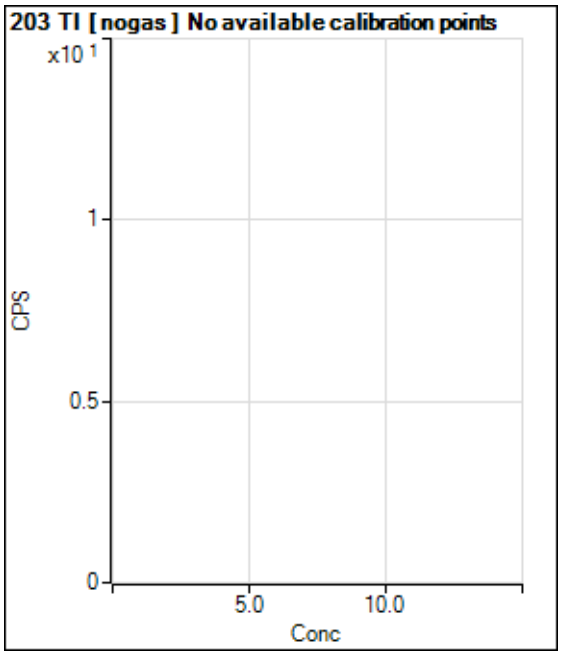
Calibration for 037_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	20.00	0.0000	P	98.4
2	☐	2.000	-395.234	16.67	0.0000	P	66.1
3	☐	5.000	1705.538	30.00	0.0000	P	28.3
4	☐	10.000	902.778	26.67	0.0000	P	173.
5	☐	100.000	-1045.009	10.00	0.0000	P	94.9
6	☐	200.000	689.325	23.33	0.0000	P	96.0
7	☐	1.000					

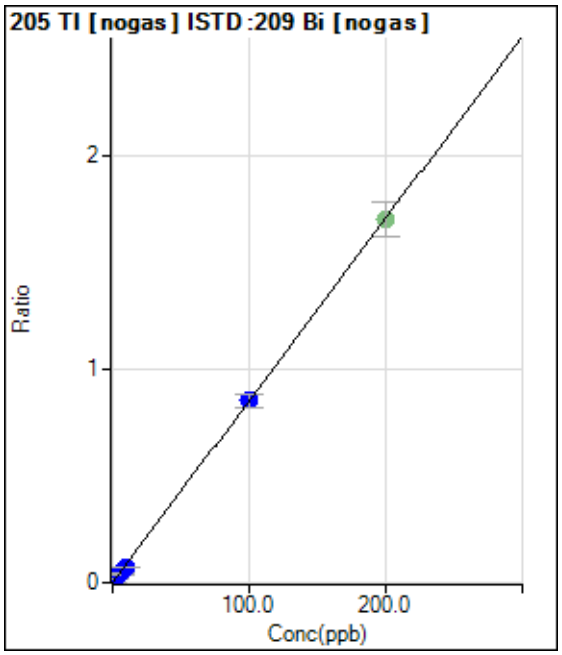
y = 6.8328E-009 * x + 1.6248E-005
R = -0.1190
DL = 7016
BEC = 2378

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			150.00		P	13.3
2	☐			7501.83		P	1.9
3	☐			19044.69		P	2.9
4	☐			36628.21		P	5.6
5	☐			387442.38		P	0.6
6	☐			765767.49		P	1.5
7	☐						

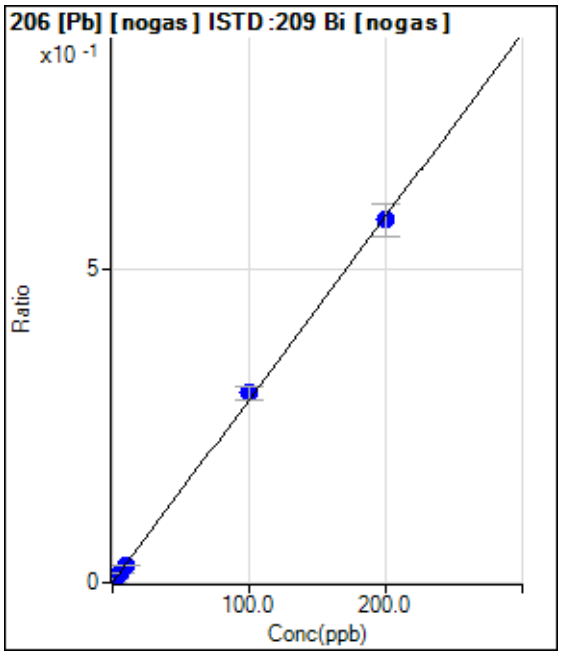
Calibration for 037_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	466.68	0.0004	P	25.6
2	☐	2.000	1.697	18030.17	0.0149	P	5.7
3	☐	5.000	4.900	44658.26	0.0422	P	9.2
4	☐	10.000	8.659	89140.06	0.0743	P	6.1
5	☐	100.000	100.145	924218.06	0.8550	P	7.1
6	☑	200.000		1853604.71	1.7013	A	9.5
7	☐	1.000					

y = 0.0085 * x + 3.8216E-004
R = 0.9999
DL = 0.03441
BEC = 0.04478

Weight: <None>
Min Conc: <None>

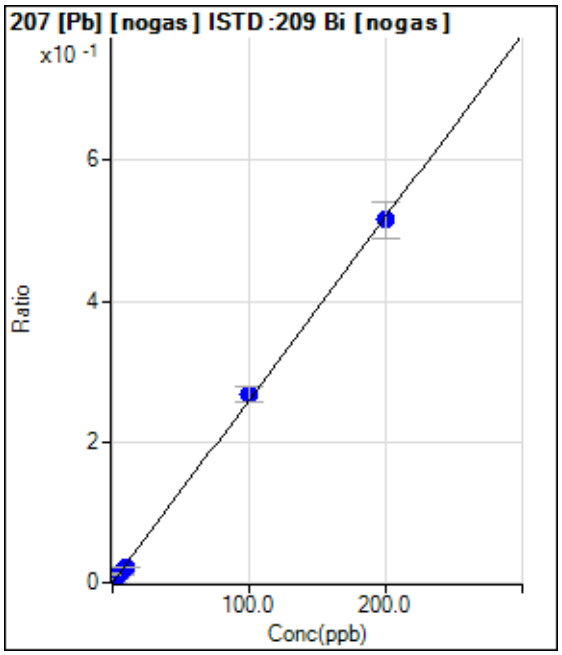


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	136.67	0.0001	P	22.1
2	☐	2.000	1.850	6678.14	0.0055	P	6.7
3	☐	5.000	5.225	16208.27	0.0153	P	11.1
4	☐	10.000	9.222	32375.92	0.0270	P	4.8
5	☐	100.000	103.703	326772.18	0.3022	P	6.6
6	☐	200.000	198.183	629482.73	0.5775	P	8.9
7	☐	1.000					

y = 0.0029 * x + 1.1258E-004
R = 0.9997
DL = 0.02557
BEC = 0.03864

Weight: <None>
Min Conc: <None>

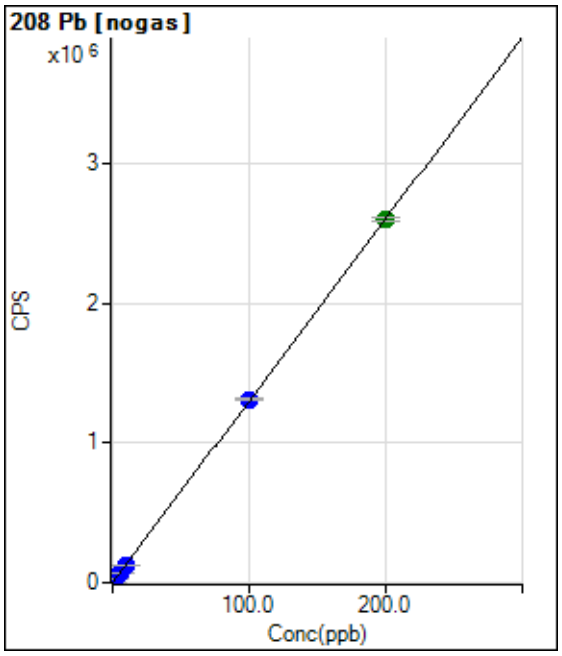
Calibration for 037_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	66.67	0.0001	P	25.2
2	☐	2.000	1.870	5954.51	0.0049	P	7.2
3	☐	5.000	4.970	13706.01	0.0130	P	11.0
4	☐	10.000	8.655	27032.75	0.0225	P	6.1
5	☐	100.000	103.066	289196.73	0.2677	P	8.2
6	☐	200.000	198.536	561697.48	0.5156	P	9.9
7	☐	1.000					

y = 0.0026 * x + 5.5075E-005
R = 0.9998
DL = 0.01604
BEC = 0.02121

Weight: <None>
Min Conc: <None>

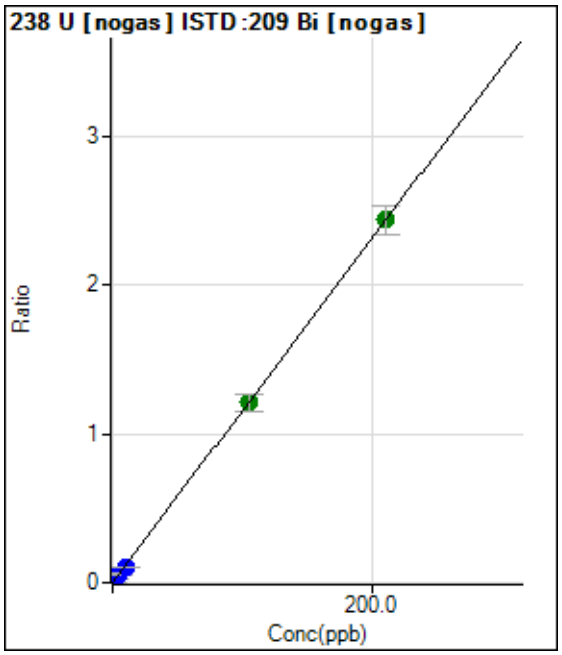


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	323.33		P	4.7
2	☐	2.000	2.018	26545.42		P	1.8
3	☐	5.000	4.878	63696.50		P	2.4
4	☐	10.000	9.718	126580.56		P	3.8
5	☐	100.000	100.846	1310460.49		P	0.7
6	☐	200.000	199.594	2593356.80		A	1.0
7	☐	1.000					

y = 12991.5277 * x + 323.3333
R = 1.0000
DL = 0.003527
BEC = 0.02489

Weight: <None>
Min Conc: <None>

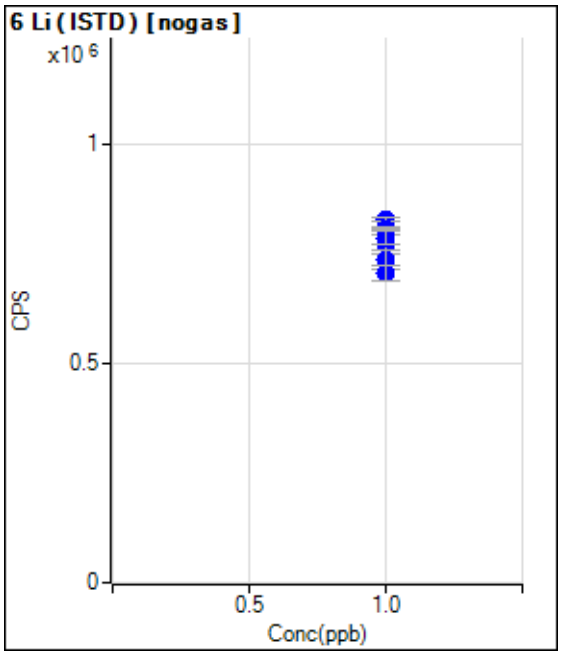
Calibration for 037_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	146.67	0.0001	P	15.8
2	☐	2.000	1.717	24288.85	0.0200	P	4.8
3	☐	5.000	4.938	60706.38	0.0573	P	8.3
4	☐	10.000	8.671	120704.18	0.1006	P	4.3
5	☐	105.000	104.385	1305934.85	1.2095	A	9.2
6	☐	210.000	210.375	2657602.36	2.4374	A	8.2
7	☐	1.000					

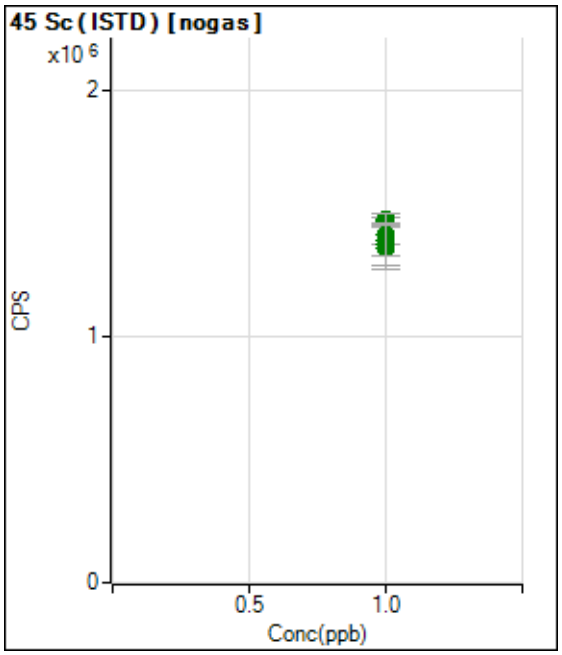
y = 0.0116 * x + 1.2083E-004
R = 1.0000
DL = 0.004948
BEC = 0.01043

Weight: <None>
Min Conc: <None>

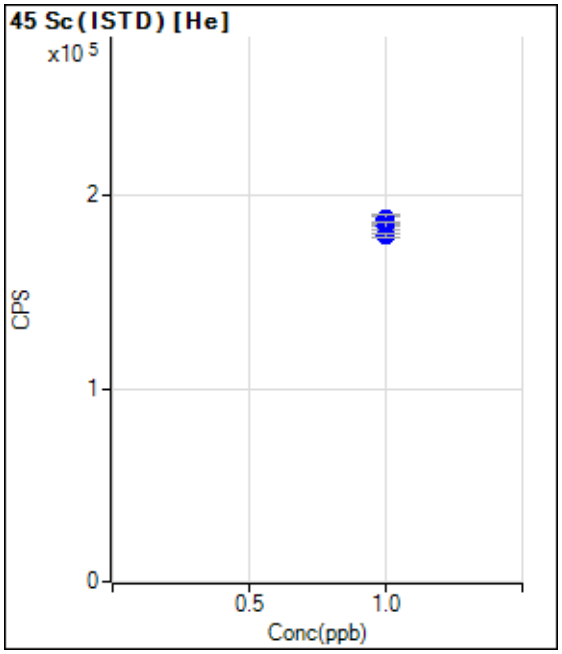


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		826647.96		P	1.1
2	☐	1.000		806856.59		P	0.7
3	☐	1.000		769673.54		P	5.9
4	☐	1.000		786176.10		P	4.3
5	☐	1.000		735287.30		P	6.1
6	☐	1.000		704975.19		P	5.0
7	☐	1.000					

Calibration for 037_ICV.d

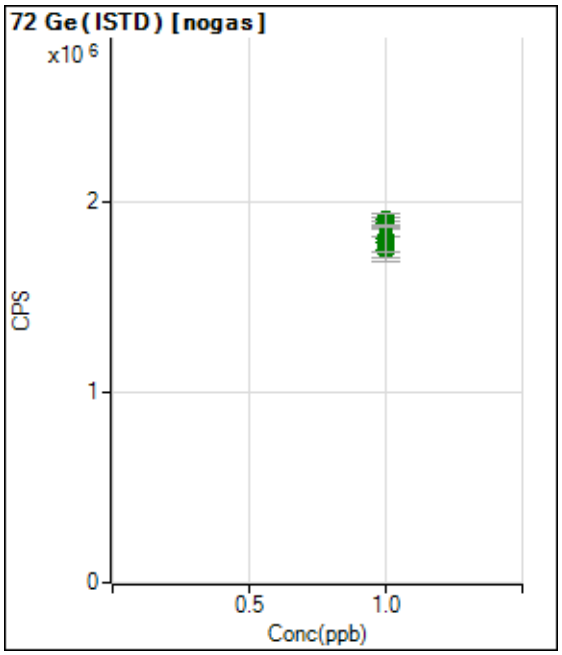


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1475779.25		A	1.9
2	☐	1.000		1473933.78		A	3.7
3	☐	1.000		1360965.84		A	12.2
4	☐	1.000		1413750.19		A	5.6
5	☐	1.000		1379496.96		A	12.6
6	☐	1.000		1394281.43		A	9.5
7	☐	1.000					

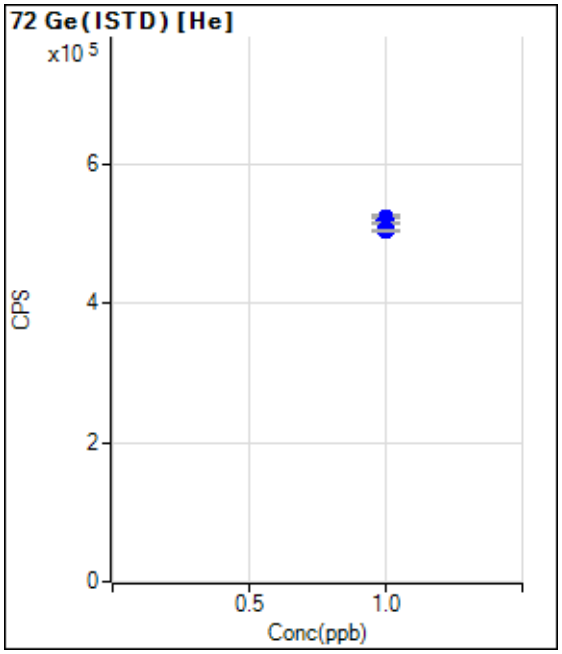


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		185753.03		P	0.5
2	☐	1.000		185897.33		P	0.6
3	☐	1.000		186831.50		P	2.4
4	☐	1.000		187875.87		P	2.1
5	☐	1.000		184061.96		P	2.0
6	☐	1.000		179280.95		P	0.9
7	☐	1.000					

Calibration for 037_ICV.d

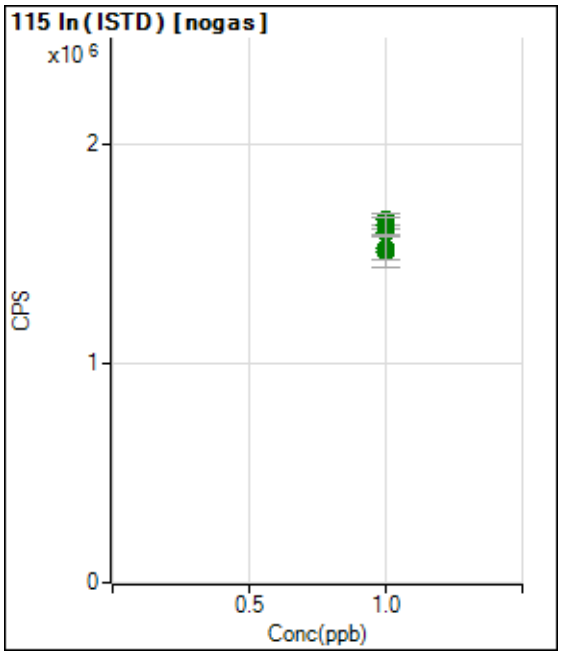


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1877763.93		A	2.3
2	☐	1.000		1892790.65		A	2.9
3	☐	1.000		1753628.98		A	7.5
4	☐	1.000		1907356.22		A	3.4
5	☐	1.000		1809278.15		A	8.0
6	☐	1.000		1788355.18		A	8.8
7	☐	1.000					

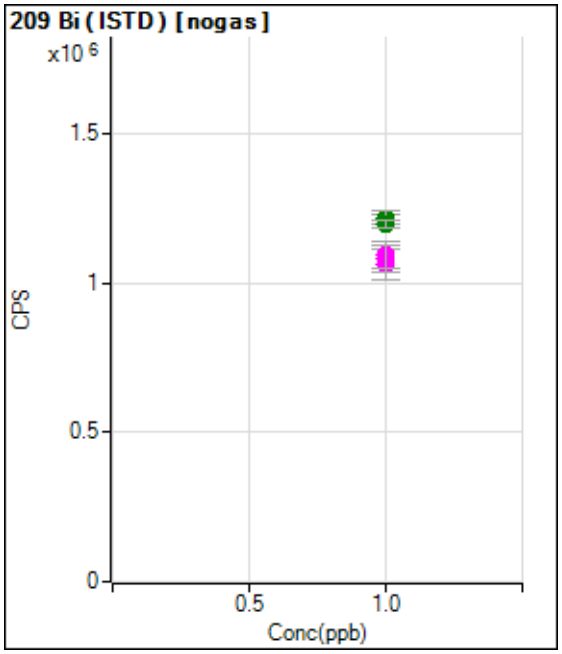


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		519023.12		P	1.2
2	☐	1.000		521848.11		P	2.1
3	☐	1.000		520028.77		P	0.8
4	☐	1.000		521349.59		P	1.3
5	☐	1.000		516775.86		P	0.5
6	☐	1.000		504821.02		P	1.1
7	☐	1.000					

Calibration for 037_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1597661.51		A	2.3
2	☐	1.000		1654239.53		A	3.1
3	☐	1.000		1524655.66		A	11.8
4	☐	1.000		1628728.75		A	4.8
5	☐	1.000		1509275.42		A	9.0
6	☐	1.000		1524410.79		A	6.9
7	☐	1.000					



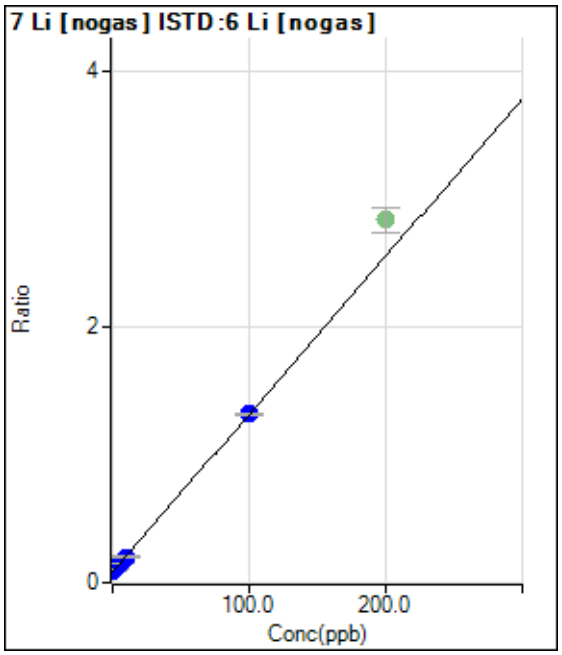
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1215842.35		A	2.7
2	☐	1.000		1215072.35		A	4.4
3	☐	1.000		1064647.90		M	9.8
4	☐	1.000		1200776.28		A	2.0
5	☐	1.000		1085117.35		M	8.3
6	☐	1.000		1095607.35		M	8.8
7	☐	1.000					

Calibration for 082_ICV.d

Batch Folder: C:\Agilent\ICPMH\1\DATA\010819B.b\
Analysis File: 010819B.batch.bin
DA Date-Time: 2019-01-08 22:05:28
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	075CALB.d	CAL BLK	2019-01-08 13:44:58
2	076CALS.d	2/10/200	2019-01-08 13:46:56
3	077CALS.d	5/25/500	2019-01-08 13:48:56
4	078CALS.d	10/50/1000	2019-01-08 13:50:56
5	079CALS.d	100/500/10K	2019-01-08 13:52:54
6	080CALS.d	200/1000/20K	2019-01-08 13:54:52
7			

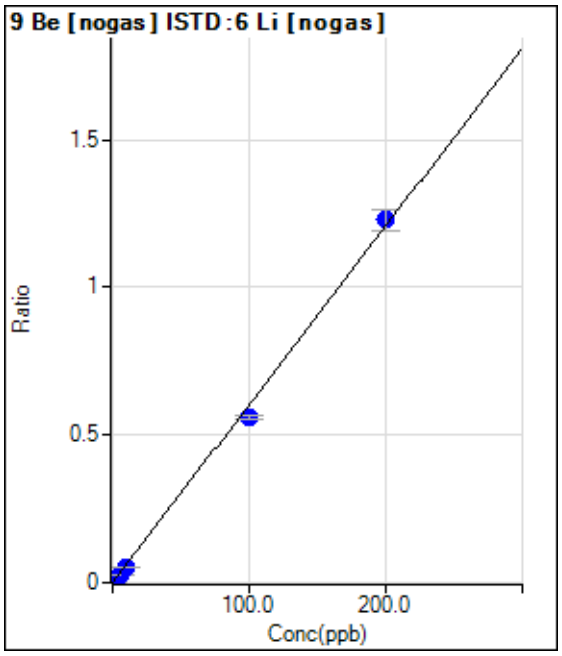
Calibration for 082_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	57115.74	0.0851	P	3.4
2	☐	2.000	1.610	72393.16	0.1050	P	2.7
3	☐	5.000	4.884	97428.30	0.1454	P	1.5
4	☐	10.000	9.414	137221.54	0.2014	P	3.5
5	☐	100.000	100.072	848720.17	1.3207	P	0.9
6	☑	200.000		1732064.77	2.8408	A	7.1
7	☐	1.000					

y = 0.0123 * x + 0.0851
R = 1.0000
DL = 0.7008
BEC = 6.895

Weight: <None>
Min Conc: <None>

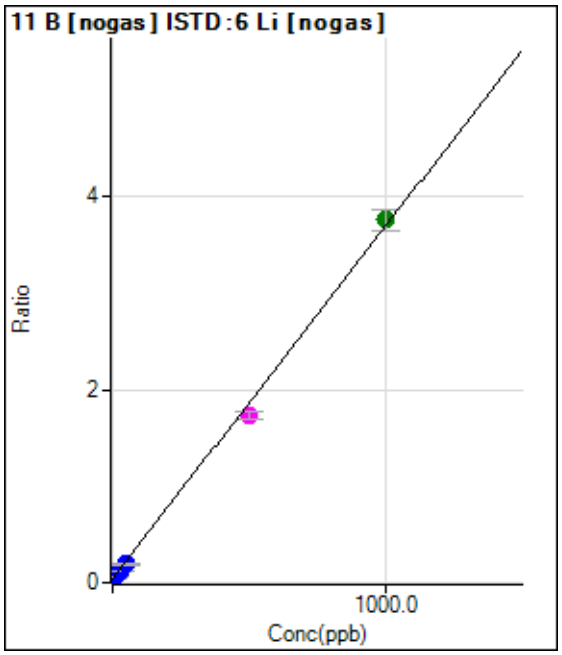


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	80.00	0.0001	P	40.3
2	☐	2.000	1.744	7331.52	0.0106	P	2.0
3	☐	5.000	4.649	18822.77	0.0281	P	5.7
4	☐	10.000	8.528	35122.47	0.0515	P	3.0
5	☐	100.000	92.868	359952.01	0.5600	P	1.4
6	☐	200.000	203.651	748980.35	1.2279	P	6.1
7	☐	1.000					

y = 0.0060 * x + 1.2053E-004
R = 0.9991
DL = 0.02415
BEC = 0.01999

Weight: <None>
Min Conc: <None>

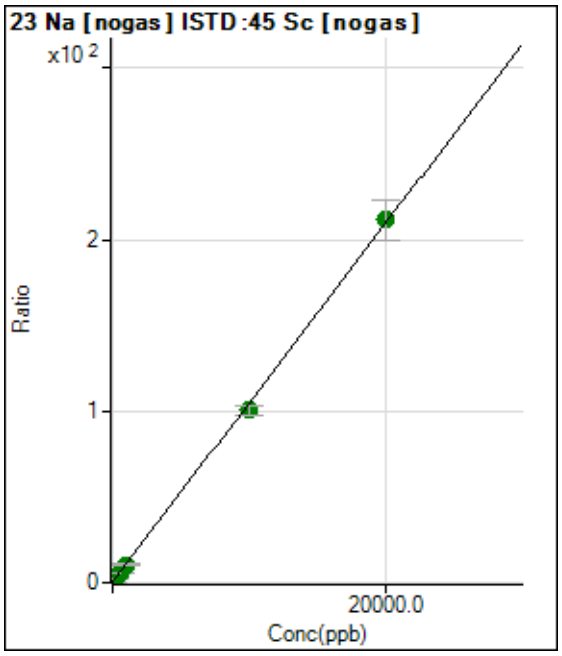
Calibration for 082_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	27456.59	0.0409	P	2.5
2	☐	10.000	7.421	46897.54	0.0680	P	2.2
3	☐	25.000	21.450	79772.40	0.1193	P	5.8
4	☐	50.000	41.378	130955.91	0.1922	P	3.0
5	☐	500.000	464.452	1118157.07	1.7385	M	4.7
6	☐	1000.000	1018.320	2296029.08	3.7630	A	5.6
7	☐	5.000					

y = 0.0037 * x + 0.0409
R = 0.9992
DL = 0.843
BEC = 11.19

Weight: <None>
Min Conc: <None>

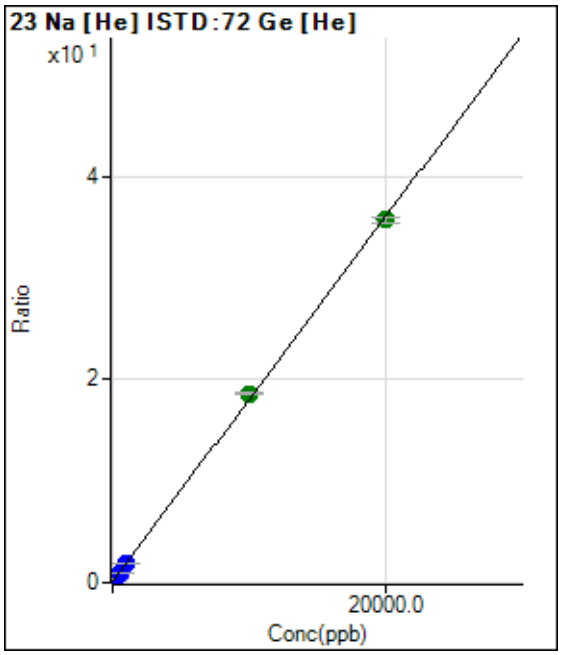


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	423105.84	0.3845	P	2.8
2	☐	200.000	188.545	2690696.28	2.3550	A	2.3
3	☐	500.000	524.542	6224997.40	5.8667	A	10.0
4	☐	1000.000	981.561	11865032.56	10.6432	A	7.7
5	☐	10000.00	9598.269	113153727.5	100.700	A	5.3
6	☐	20000.00	20201.289	231400346.8	211.518	A	11.2
7	☐	100.000					

y = 0.0105 * x + 0.3845
R = 0.9997
DL = 3.097
BEC = 36.78

Weight: <None>
Min Conc: <None>

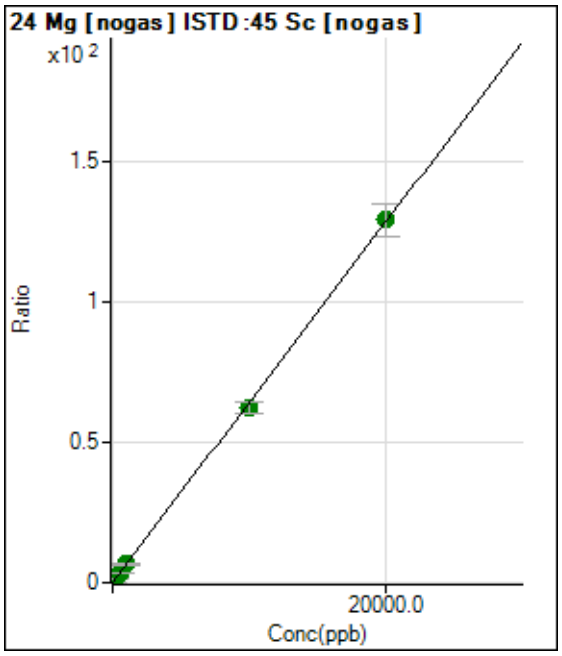
Calibration for 082_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	40580.02	0.1005	P	1.7
2	☐	200.000	193.173	183026.43	0.4470	P	1.2
3	☐	500.000	502.914	414093.12	1.0025	P	3.2
4	☐	1000.000	968.240	759608.77	1.8371	P	2.1
5	☐	10000.00	10326.898	7528608.01	18.6226	A	1.4
6	☐	20000.00	19838.134	14602653.53	35.6818	A	1.2
7	☐	100.000					

y = 0.0018 * x + 0.1005
R = 0.9998
DL = 2.935
BEC = 56.05

Weight: <None>
Min Conc: <None>

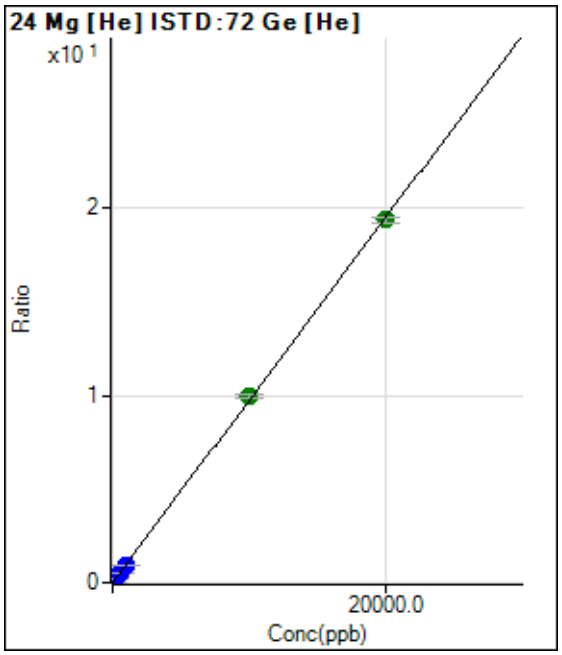


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	7369.32	0.0067	P	7.1
2	☐	200.000	198.494	1465321.39	1.2825	A	3.3
3	☐	500.000	546.959	3732605.03	3.5223	A	12.3
4	☐	1000.000	1024.615	7343054.85	6.5925	A	9.4
5	☐	10000.00	9722.739	70211601.57	62.5005	A	6.2
6	☐	20000.00	20136.241	141771886.5	129.434	A	9.2
7	☐	100.000					

y = 0.0064 * x + 0.0067
R = 0.9999
DL = 0.222
BEC = 1.038

Weight: <None>
Min Conc: <None>

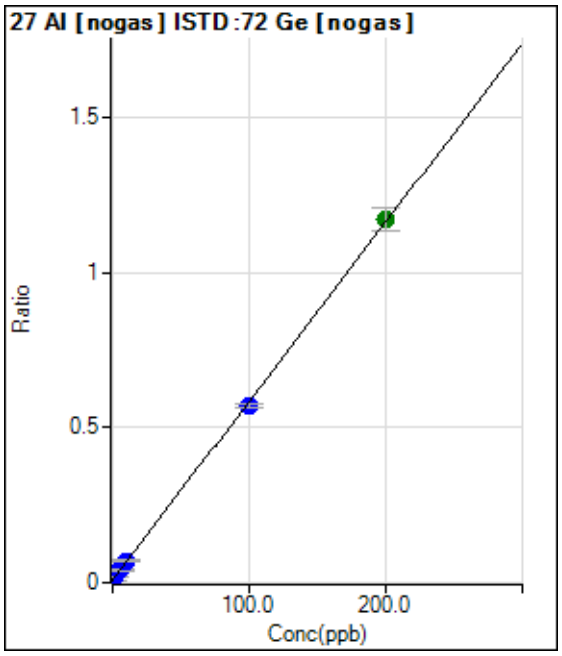
Calibration for 082_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	450.01	0.0011	P	16.3
2	☐	200.000	202.388	81233.25	0.1984	P	3.9
3	☐	500.000	514.660	207716.54	0.5029	P	3.7
4	☐	1000.000	977.720	394649.27	0.9544	P	0.5
5	☐	10000.00	10225.166	4029917.96	9.9710	A	2.9
6	☐	20000.00	19888.140	7936318.84	19.3926	A	1.3
7	☐	100.000					

y = 9.7503E-004 * x + 0.0011
R = 0.9999
DL = 0.5581
BEC = 1.141

Weight: <None>
Min Conc: <None>

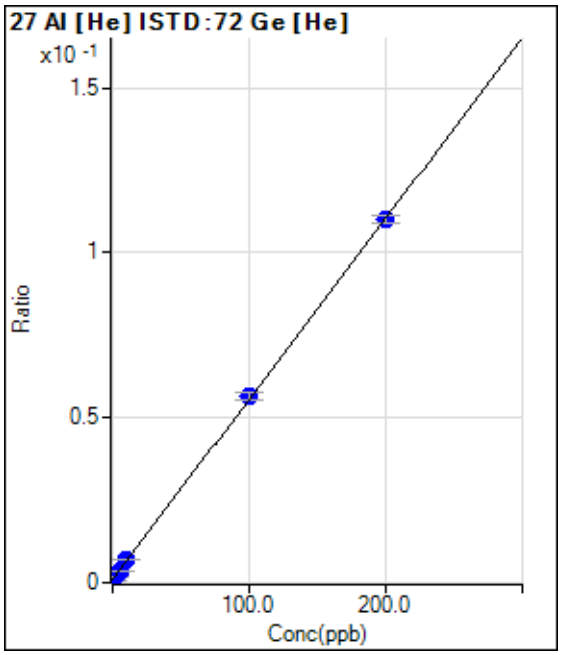


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	11783.85	0.0080	P	9.0
2	☐	2.000	2.016	29486.61	0.0196	P	2.9
3	☐	5.000	5.701	58045.84	0.0409	P	12.6
4	☐	10.000	10.876	102494.53	0.0708	P	7.0
5	☐	100.000	97.129	835223.92	0.5688	P	2.4
6	☐	200.000	201.374	1728710.91	1.1706	A	6.4
7	☐	1.000					

y = 0.0058 * x + 0.0080
R = 0.9998
DL = 0.3765
BEC = 1.387

Weight: <None>
Min Conc: <None>

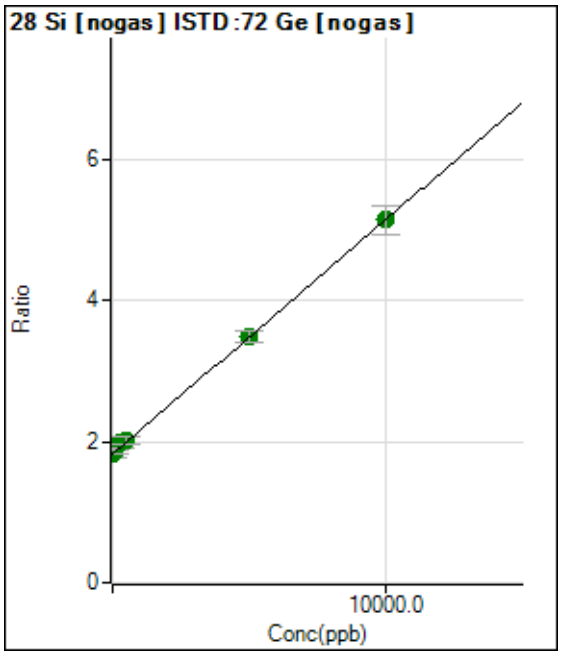
Calibration for 082_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.406	333.34	0.0008	P	7.7
2	☐	2.000	1.422	746.69	0.0018	P	9.8
3	☐	5.000	4.605	1473.41	0.0036	P	4.8
4	☐	10.000	10.649	2840.26	0.0069	P	3.2
5	☐	100.000	101.495	22844.07	0.0565	P	3.2
6	☐	200.000	199.236	44997.11	0.1100	P	2.0
7	☐	1.000					

y = 5.4660E-004 * x + 0.0010
R = 0.9999
DL = 0.3505
BEC = 1.916

Weight: <None>
Min Conc: <None>

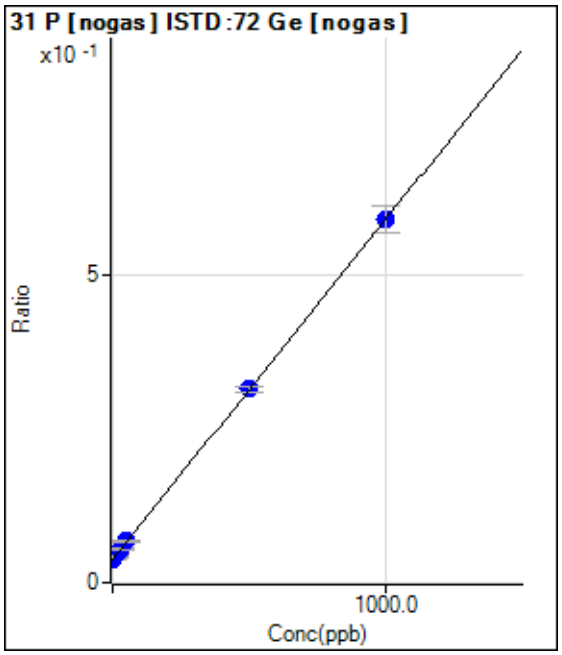


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2687573.40	1.8248	A	6.4
2	☐	100.000	74.194	2775368.81	1.8494	A	2.2
3	☐	250.000	481.179	2820944.02	1.9846	A	8.2
4	☐	500.000	601.694	2932057.04	2.0246	A	5.9
5	☐	5000.000	4992.046	5111263.15	3.4826	A	4.4
6	☐	10000.00	9993.371	7590137.39	5.1436	A	7.8
7	☐	5.000					

y = 3.3210E-004 * x + 1.8248
R = 0.9997
DL = 1051
BEC = 5495

Weight: <None>
Min Conc: <None>

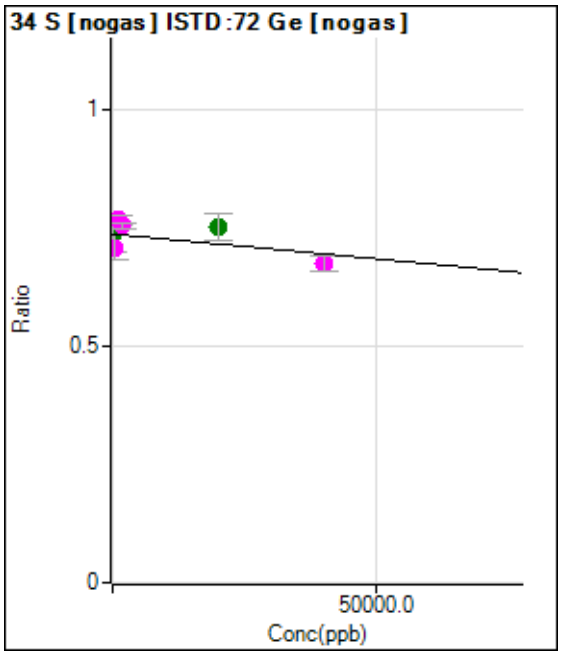
Calibration for 082_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	55310.53	0.0375	P	5.8
2	☐	10.000	8.776	63630.04	0.0424	P	2.6
3	☐	25.000	30.989	77738.76	0.0547	P	8.6
4	☐	50.000	55.274	98726.22	0.0681	P	4.5
5	☐	500.000	501.060	462218.81	0.3149	P	3.3
6	☐	1000.000	999.069	871522.04	0.5905	P	7.4
7	☐	5.000					

y = 5.5346E-004 * x + 0.0375
R = 1.0000
DL = 11.73
BEC = 67.84

Weight: <None>
Min Conc: <None>

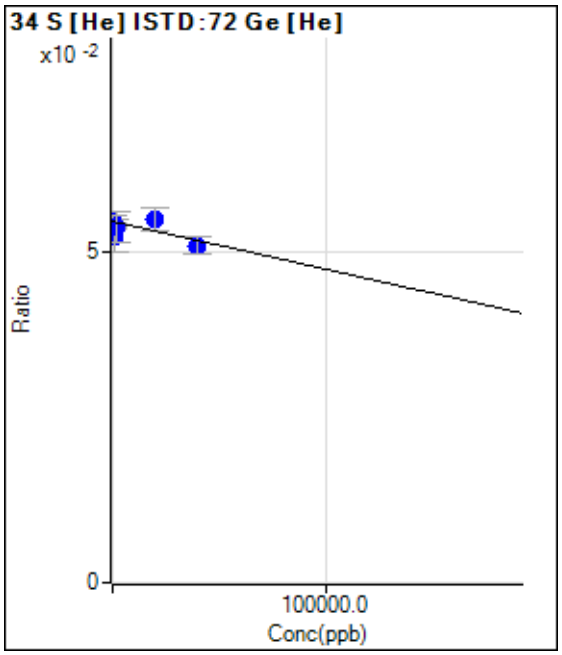


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1084231.47	0.7370	A	10.3
2	☐	400.000	27922.754	1062011.00	0.7077	M	7.6
3	☐	1000.000	-28453.420	1093970.56	0.7668	M	2.7
4	☐	2000.000	-16451.370	1094247.22	0.7542	M	1.8
5	☐	20000.00	-13825.153	1101754.06	0.7514	A	7.8
6	☐	40000.00	58296.253	1000353.12	0.6759	M	4.6
7	☐	100.000					

y = -1.0470E-006 * x + 0.7370
R = -0.6431
DL = -2.174E+05
BEC = -7.039E+05

Weight: <None>
Min Conc: <None>

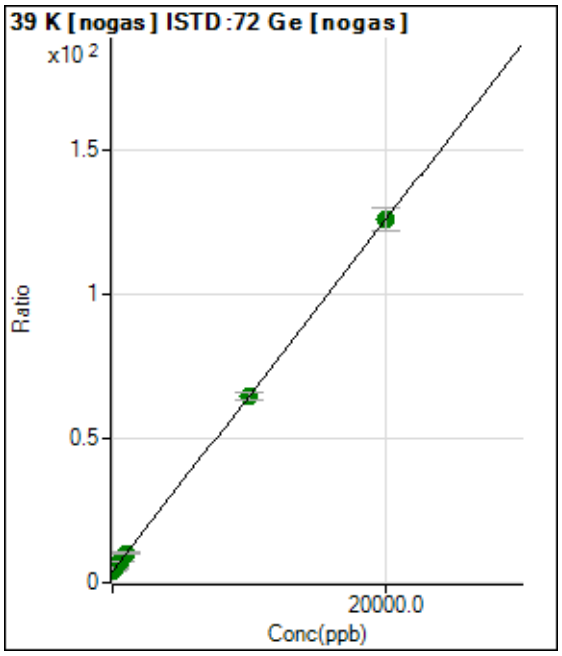
Calibration for 082_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	22083.29	0.0547	P	3.3
2	☐	400.000	10998.764	22082.91	0.0539	P	1.5
3	☐	1000.000	30299.890	21682.62	0.0525	P	9.8
4	☐	2000.000	10517.108	22316.66	0.0540	P	8.8
5	☐	20000.00	-3048.478	22216.62	0.0549	P	6.2
6	☐	40000.00	50259.899	20914.53	0.0511	P	5.6
7	☐	100.000					

y = -7.2407E-008 * x + 0.0547
R = -0.5794
DL = -7.561E+04
BEC = -7.557E+05

Weight: <None>
Min Conc: <None>

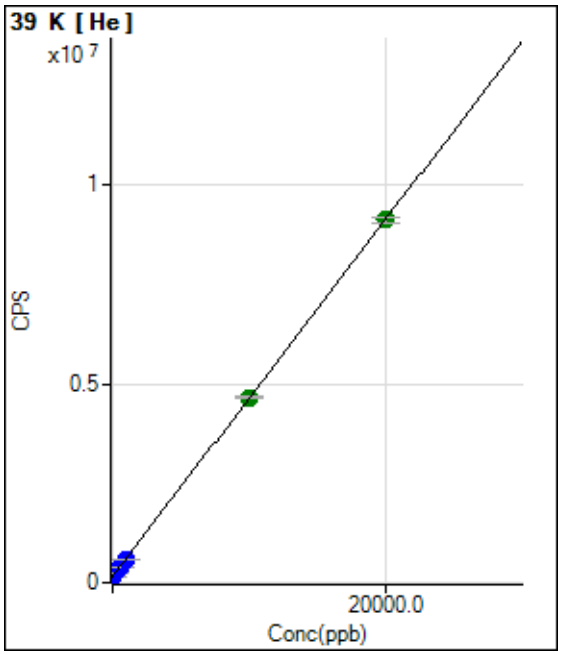


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	5711736.72	3.8778	A	6.2
2	☐	200.000	177.482	7439017.87	4.9572	A	2.3
3	☐	500.000	563.610	10389976.28	7.3054	A	7.2
4	☐	1000.000	1020.354	14607389.91	10.0832	A	4.9
5	☐	10000.00	9982.562	94796587.54	64.5873	A	3.8
6	☐	20000.00	20006.336	185404599.9	125.547	A	6.2
7	☐	100.000					

y = 0.0061 * x + 3.8778
R = 1.0000
DL = 118.2
BEC = 637.6

Weight: <None>
Min Conc: <None>

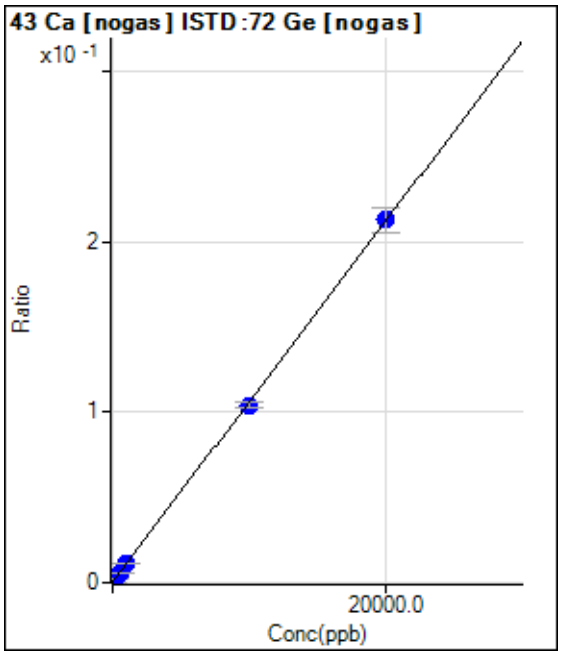
Calibration for 082_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	157324.39		P	0.3
2	☐	200.000	193.772	244295.80		P	0.4
3	☐	500.000	500.537	381982.90		P	1.2
4	☐	1000.000	984.182	599059.31		P	0.7
5	☐	10000.00	10038.720	4663048.78		A	0.9
6	☐	20000.00	19981.480	9125702.37		A	1.3
7	☐	100.000					

y = 448.8345 * x + 157324.3867
R = 1.0000
DL = 3.064
BEC = 350.5

Weight: <None>
Min Conc: <None>

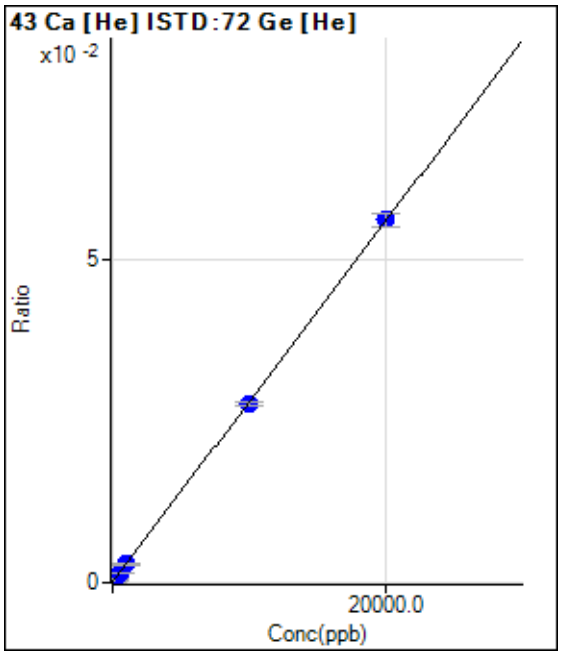


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	403.34	0.0003	P	18.7
2	☐	200.000	192.378	3463.71	0.0023	P	6.3
3	☐	500.000	541.258	8542.09	0.0060	P	5.3
4	☐	1000.000	1013.398	15930.39	0.0110	P	5.0
5	☐	10000.00	9832.471	153136.10	0.1043	P	3.4
6	☐	20000.00	20082.140	314191.65	0.2128	P	6.6
7	☐	100.000					

y = 1.0582E-005 * x + 2.7286E-004
R = 0.9999
DL = 14.5
BEC = 25.78

Weight: <None>
Min Conc: <None>

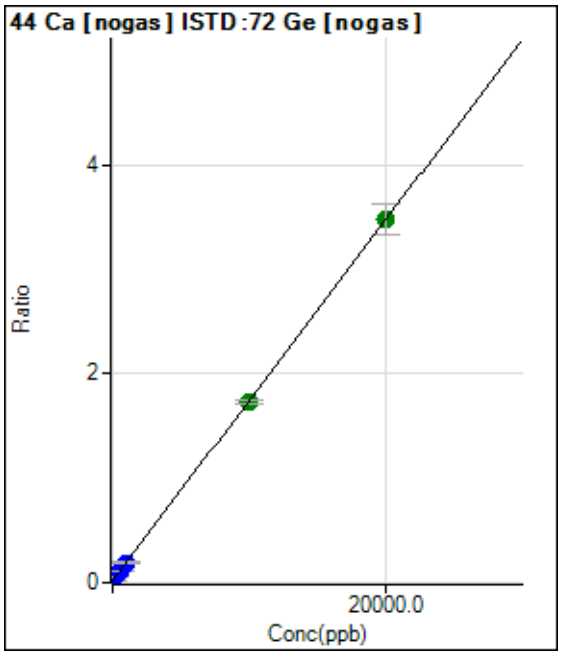
Calibration for 082_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	23.33	0.0001	P	88.7
2	☐	200.000	168.713	216.67	0.0005	P	39.1
3	☐	500.000	498.468	600.02	0.0015	P	8.0
4	☐	1000.000	999.164	1180.05	0.0029	P	2.9
5	☐	10000.00	9858.377	11180.19	0.0276	P	2.0
6	☐	20000.00	20071.205	23007.71	0.0562	P	3.7
7	☐	100.000					

y = 2.7986E-006 * x + 5.7843E-005
R = 1.0000
DL = 55.02
BEC = 20.67

Weight: <None>
Min Conc: <None>

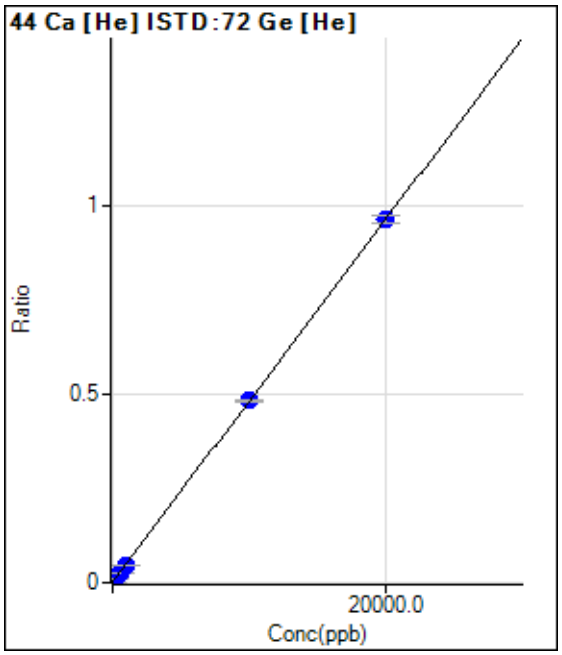


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	28124.67	0.0191	P	7.5
2	☐	200.000	190.847	78132.66	0.0521	P	2.0
3	☐	500.000	528.326	156733.47	0.1103	P	9.7
4	☐	1000.000	997.002	277053.11	0.1913	P	5.6
5	☐	10000.00	9963.633	2554807.57	1.7399	A	2.1
6	☐	20000.00	20017.717	5127967.63	3.4763	A	8.5
7	☐	100.000					

y = 1.7270E-004 * x + 0.0191
R = 1.0000
DL = 24.97
BEC = 110.6

Weight: <None>
Min Conc: <None>

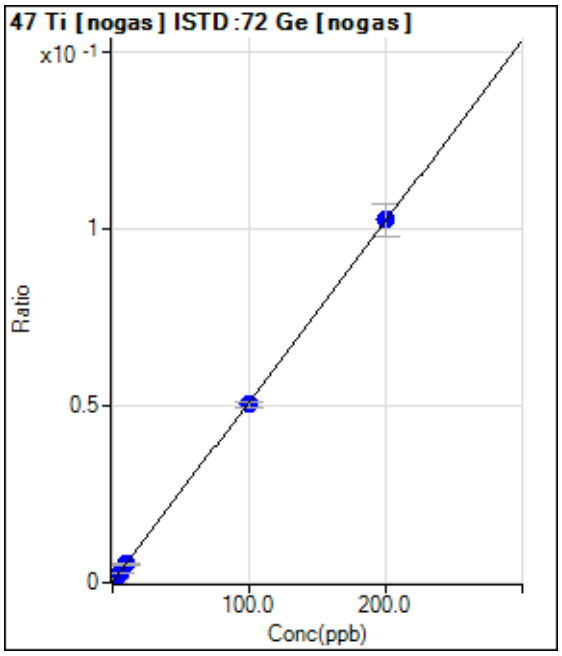
Calibration for 082_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	530.02	0.0013	P	10.8
2	☐	200.000	198.388	4440.60	0.0108	P	3.8
3	☐	500.000	503.829	10539.79	0.0255	P	5.8
4	☐	1000.000	953.134	19480.46	0.0471	P	1.4
5	☐	10000.00	10019.461	195169.87	0.4828	P	1.0
6	☐	20000.00	19992.533	393661.99	0.9620	P	2.1
7	☐	100.000					

y = 4.8052E-005 * x + 0.0013
R = 1.0000
DL = 8.864
BEC = 27.34

Weight: <None>
Min Conc: <None>

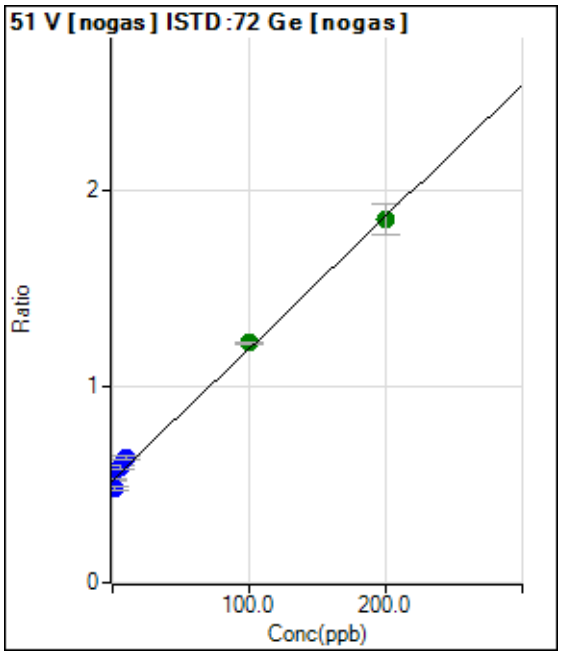


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	133.33	0.0001	P	51.9
2	☐	2.000	1.879	1576.76	0.0011	P	2.7
3	☐	5.000	5.075	3817.12	0.0027	P	5.7
4	☐	10.000	10.128	7625.00	0.0053	P	5.2
5	☐	100.000	98.577	74047.86	0.0504	P	3.2
6	☐	200.000	200.704	151120.82	0.1025	P	9.0
7	☐	1.000					

y = 5.1006E-004 * x + 9.2108E-005
R = 1.0000
DL = 0.2811
BEC = 0.1806

Weight: <None>
Min Conc: <None>

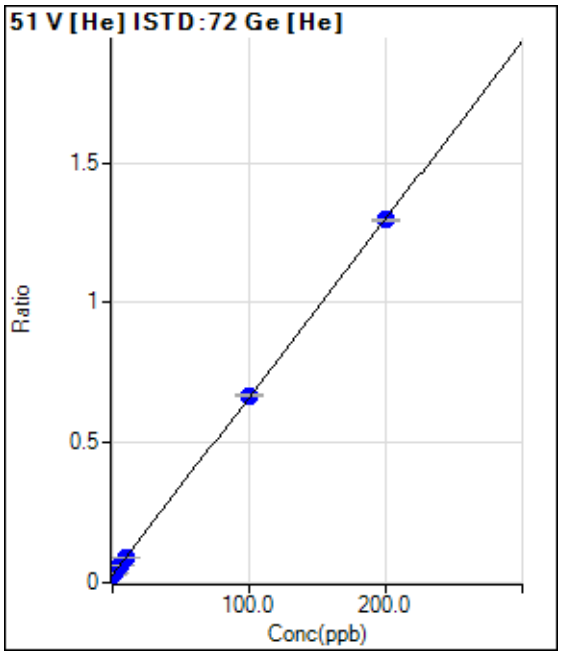
Calibration for 082_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	770104.56	0.5219	P	1.5
2	☐	2.000	-6.120	721610.68	0.4808	P	3.2
3	☐	5.000	10.146	841064.50	0.5900	P	2.7
4	☐	10.000	17.123	923330.26	0.6368	P	2.6
5	☐	100.000	104.472	1796770.09	1.2231	A	0.7
6	☐	200.000	197.360	2724212.69	1.8466	A	8.4
7	☐	1.000					

y = 0.0067 * x + 0.5219
R = 0.9975
DL = 3.53
BEC = 77.75

Weight: <None>
Min Conc: <None>

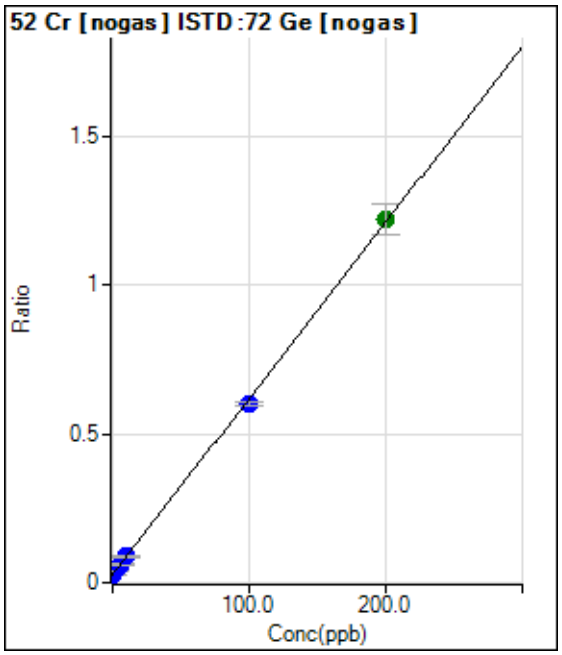


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.059	11054.62	0.0274	P	2.0
2	☐	2.000	1.588	15193.52	0.0371	P	2.8
3	☐	5.000	5.107	24571.45	0.0595	P	2.0
4	☐	10.000	9.809	36955.77	0.0894	P	1.4
5	☐	100.000	100.852	270119.32	0.6682	P	1.3
6	☐	200.000	199.585	530364.46	1.2959	P	0.7
7	☐	1.000					

y = 0.0064 * x + 0.0270
R = 1.0000
DL = 0.2546
BEC = 4.249

Weight: <None>
Min Conc: <None>

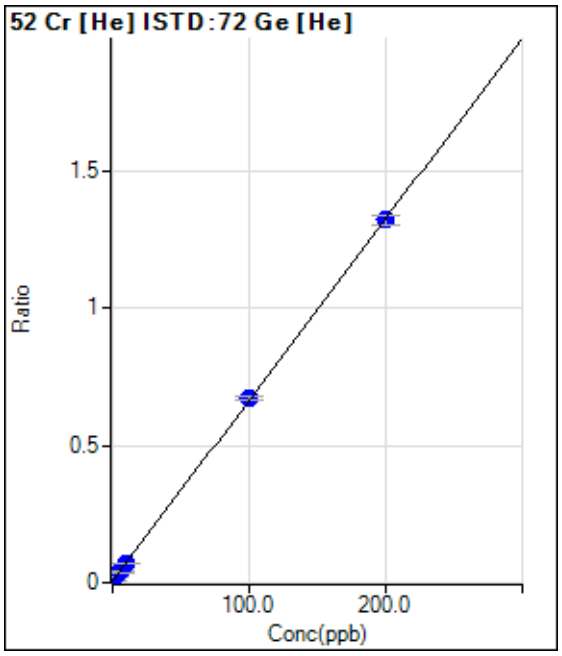
Calibration for 082_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	40427.57	0.0274	P	4.1
2	☐	2.000	1.580	55171.93	0.0368	P	2.3
3	☐	5.000	5.499	85298.83	0.0599	P	5.8
4	☐	10.000	10.403	128750.73	0.0889	P	6.7
5	☐	100.000	96.867	881496.13	0.6001	P	2.3
6	☐	200.000	201.538	1797923.72	1.2189	A	8.6
7	☐	1.000					

y = 0.0059 * x + 0.0274
R = 0.9998
DL = 0.5675
BEC = 4.639

Weight: <None>
Min Conc: <None>

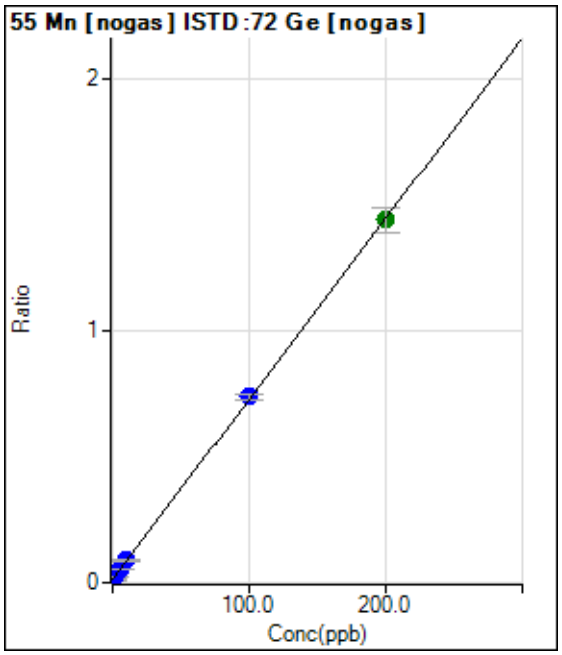


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2306.85	0.0057	P	5.9
2	☐	2.000	1.914	7508.33	0.0183	P	1.6
3	☐	5.000	5.011	16007.14	0.0388	P	6.5
4	☐	10.000	9.785	29046.37	0.0702	P	3.0
5	☐	100.000	100.823	271095.87	0.6707	P	1.8
6	☐	200.000	199.600	541011.62	1.3221	P	2.5
7	☐	1.000					

y = 0.0066 * x + 0.0057
R = 1.0000
DL = 0.1539
BEC = 0.8663

Weight: <None>
Min Conc: <None>

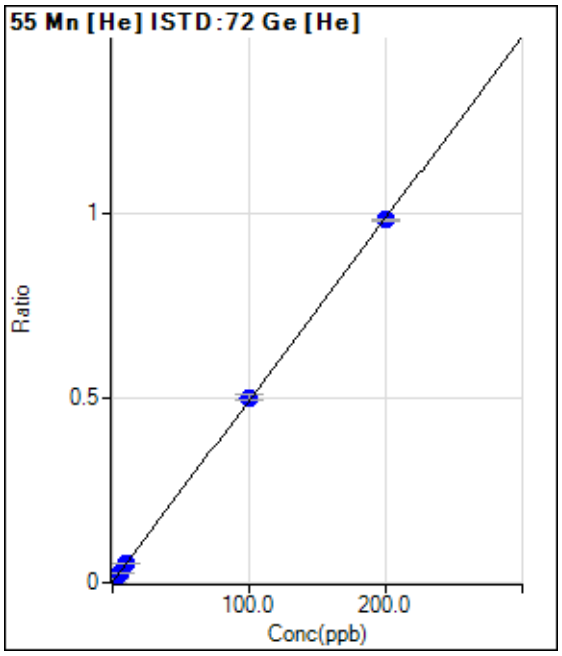
Calibration for 082_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	16927.92	0.0115	P	11.3
2	☐	2.000	1.938	38142.90	0.0254	P	2.7
3	☐	5.000	5.596	73435.55	0.0516	P	7.7
4	☐	10.000	10.729	128137.91	0.0885	P	5.2
5	☐	100.000	101.211	1082308.63	0.7374	P	3.8
6	☐	200.000	199.344	2127614.71	1.4412	A	6.9
7	☐	1.000					

y = 0.0072 * x + 0.0115
R = 1.0000
DL = 0.5432
BEC = 1.606

Weight: <None>
Min Conc: <None>

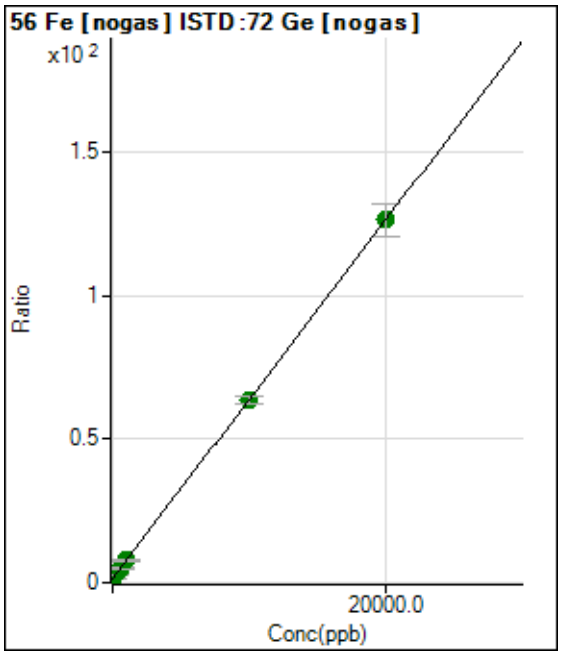


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	513.35	0.0013	P	9.7
2	☐	2.000	2.090	4734.00	0.0116	P	5.0
3	☐	5.000	5.063	10819.99	0.0262	P	2.4
4	☐	10.000	10.002	20871.97	0.0505	P	1.8
5	☐	100.000	101.678	202706.56	0.5015	P	2.8
6	☐	200.000	199.158	401552.29	0.9811	P	0.8
7	☐	1.000					

y = 0.0049 * x + 0.0013
R = 1.0000
DL = 0.07488
BEC = 0.2582

Weight: <None>
Min Conc: <None>

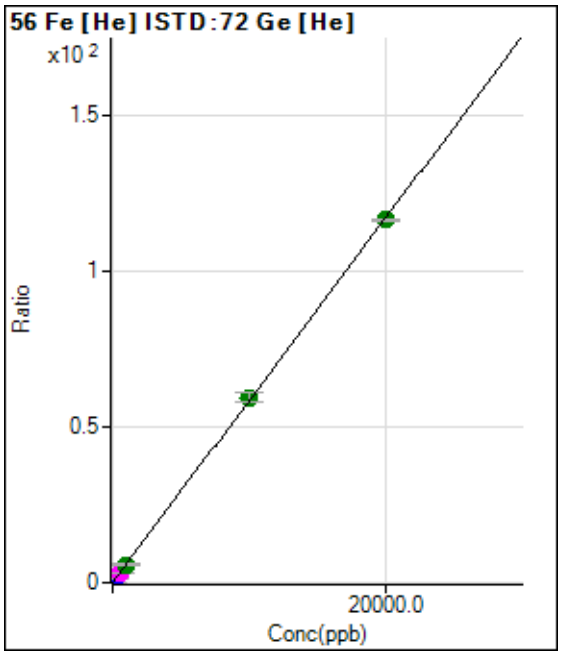
Calibration for 082_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2078495.95	1.4097	A	3.7
2	☐	200.000	186.923	3868161.02	2.5775	A	1.8
3	☐	500.000	552.993	6910398.59	4.8647	A	9.5
4	☐	1000.000	1038.255	11430657.03	7.8965	A	7.3
5	☐	10000.00	9954.803	93341806.25	63.6053	A	4.3
6	☐	20000.00	20019.492	186517866.6	126.487	A	9.2
7	☐	100.000					

y = 0.0062 * x + 1.4097
R = 1.0000
DL = 24.84
BEC = 225.6

Weight: <None>
Min Conc: <None>

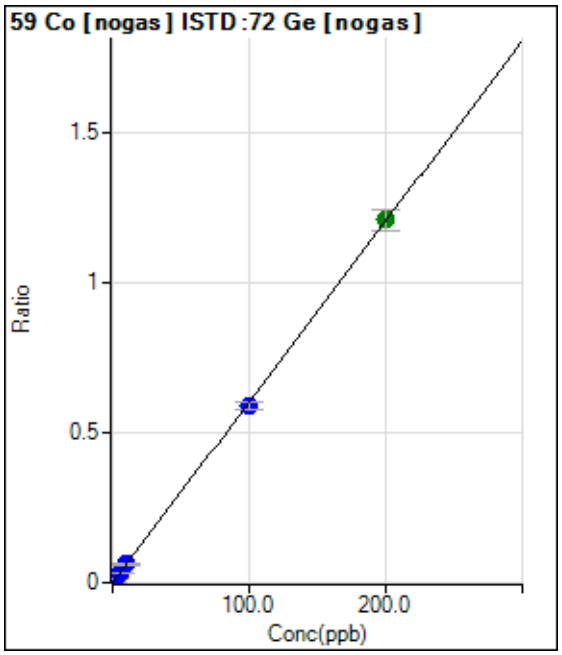


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	9569.25	0.0237	P	3.5
2	☐	200.000	197.449	483416.79	1.1807	P	1.4
3	☐	500.000	505.198	1232790.21	2.9839	M	3.1
4	☐	1000.000	997.306	2426056.68	5.8674	A	2.3
5	☐	10000.00	10181.157	24116035.47	59.6803	A	4.3
6	☐	20000.00	19909.452	47757012.62	116.683	A	0.6
7	☐	100.000					

y = 0.0059 * x + 0.0237
R = 0.9999
DL = 0.4276
BEC = 4.046

Weight: <None>
Min Conc: <None>

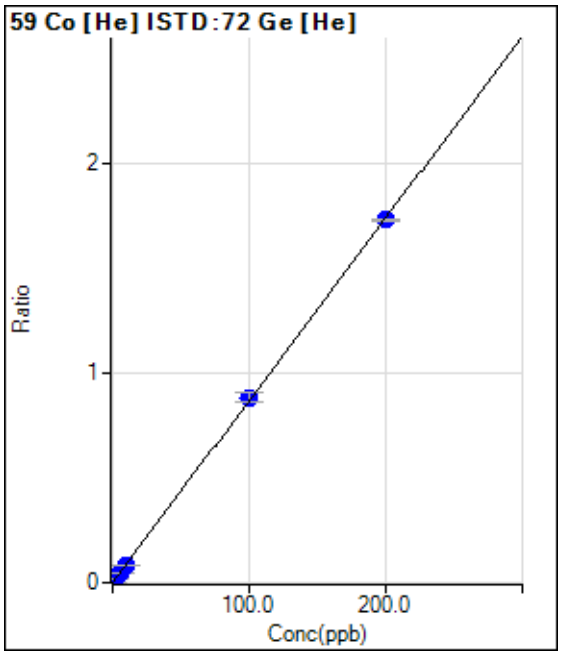
Calibration for 082_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	353.34	0.0002	P	10.2
2	☐	2.000	1.900	17521.91	0.0117	P	3.2
3	☐	5.000	5.318	45807.27	0.0322	P	9.4
4	☐	10.000	10.236	89594.40	0.0618	P	5.2
5	☐	100.000	98.344	868977.93	0.5921	P	4.2
6	☐	200.000	200.809	1785765.96	1.2088	A	5.6
7	☐	1.000					

y = 0.0060 * x + 2.4025E-004
R = 0.9999
DL = 0.01218
BEC = 0.03992

Weight: <None>
Min Conc: <None>

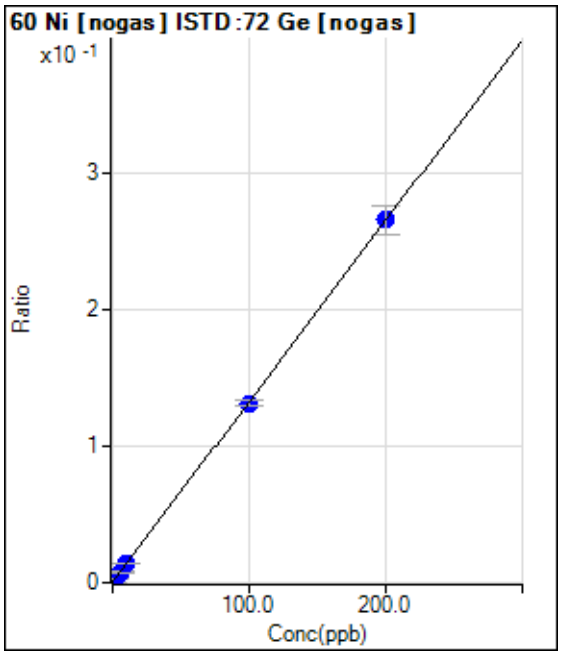


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	76.67	0.0002	P	28.7
2	☐	2.000	2.038	7311.55	0.0179	P	6.3
3	☐	5.000	4.968	17868.91	0.0433	P	6.4
4	☐	10.000	9.802	35223.90	0.0852	P	1.5
5	☐	100.000	101.641	356143.35	0.8815	P	5.2
6	☐	200.000	199.190	706938.82	1.7273	P	0.6
7	☐	1.000					

y = 0.0087 * x + 1.9045E-004
R = 1.0000
DL = 0.01894
BEC = 0.02196

Weight: <None>
Min Conc: <None>

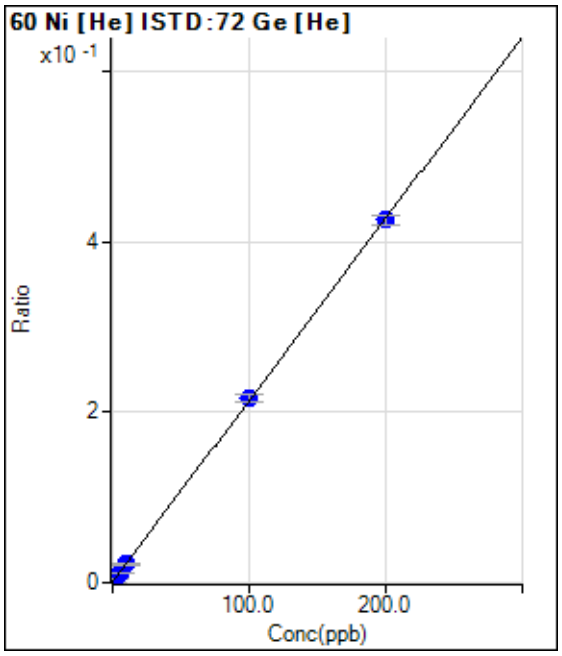
Calibration for 082_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.088	466.68	0.0003	P	30.6
2	☐	2.000	1.978	4577.30	0.0031	P	5.7
3	☐	5.000	5.402	10763.34	0.0076	P	11.2
4	☐	10.000	10.269	20321.51	0.0140	P	3.8
5	☐	100.000	98.925	192812.04	0.1313	P	3.6
6	☐	200.000	200.514	392160.79	0.2657	P	7.7
7	☐	1.000					

y = 0.0013 * x + 4.3452E-004
R = 1.0000
DL = 0.2201
BEC = 0.3284

Weight: <None>
Min Conc: <None>

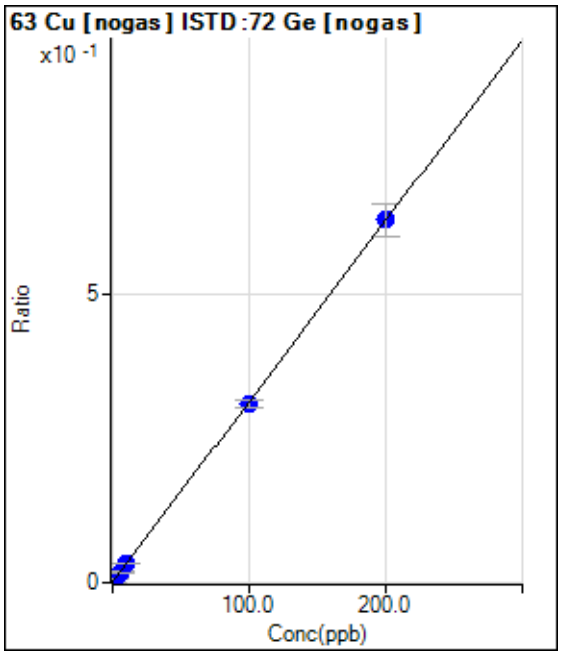


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.222	53.33	0.0001	P	48.6
2	☐	2.000	1.913	1916.79	0.0047	P	6.2
3	☐	5.000	4.785	4467.27	0.0108	P	6.0
4	☐	10.000	9.880	8958.98	0.0217	P	2.3
5	☐	100.000	101.263	87488.15	0.2165	P	3.6
6	☐	200.000	199.381	174187.86	0.4257	P	2.3
7	☐	1.000					

y = 0.0021 * x + 6.0504E-004
R = 1.0000
DL = 0.09086
BEC = 0.2838

Weight: <None>
Min Conc: <None>

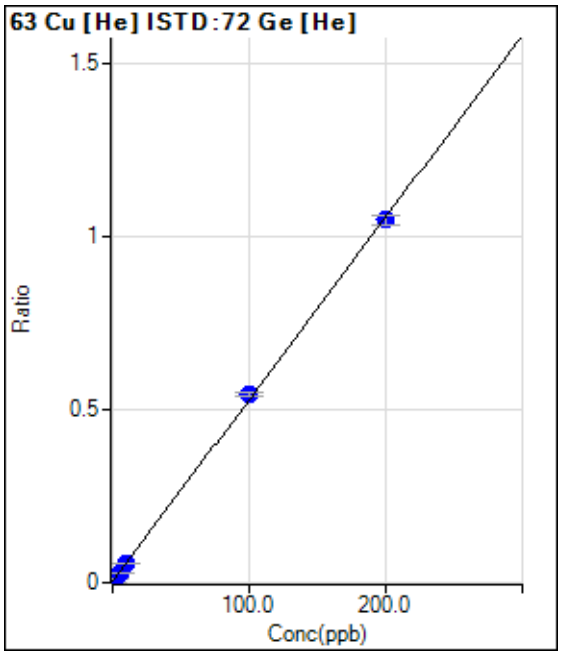
Calibration for 082_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1403.41	0.0010	P	4.0
2	☐	2.000	2.022	10933.38	0.0073	P	2.2
3	☐	5.000	5.475	25765.09	0.0181	P	5.9
4	☐	10.000	10.327	48226.95	0.0333	P	6.3
5	☐	100.000	98.843	456124.81	0.3106	P	4.2
6	☐	200.000	200.550	928023.06	0.6292	P	8.9
7	☐	1.000					

y = 0.0031 * x + 9.5066E-004
R = 1.0000
DL = 0.03617
BEC = 0.3034

Weight: <None>
Min Conc: <None>

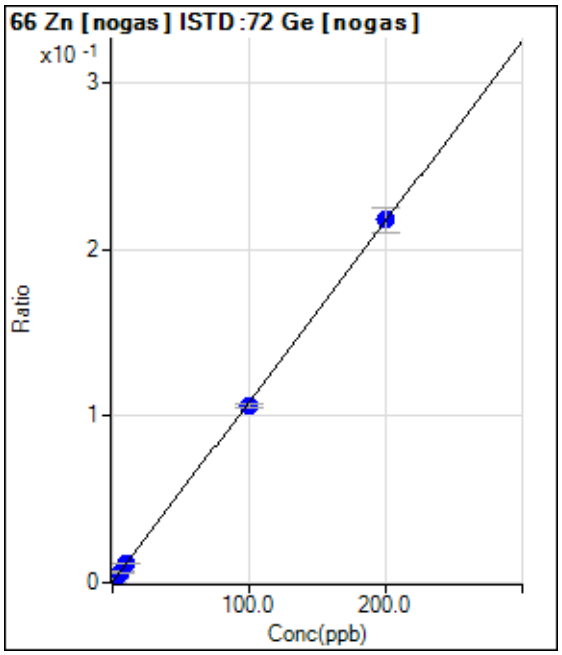


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.407	453.34	0.0011	P	23.2
2	☐	2.000	1.603	4794.02	0.0117	P	3.7
3	☐	5.000	4.737	11657.18	0.0282	P	3.4
4	☐	10.000	9.698	22467.35	0.0543	P	0.8
5	☐	100.000	102.685	219871.06	0.5440	P	2.0
6	☐	200.000	198.683	429425.77	1.0494	P	2.7
7	☐	1.000					

y = 0.0053 * x + 0.0033
R = 0.9999
DL = 0.1488
BEC = 0.6205

Weight: <None>
Min Conc: <None>

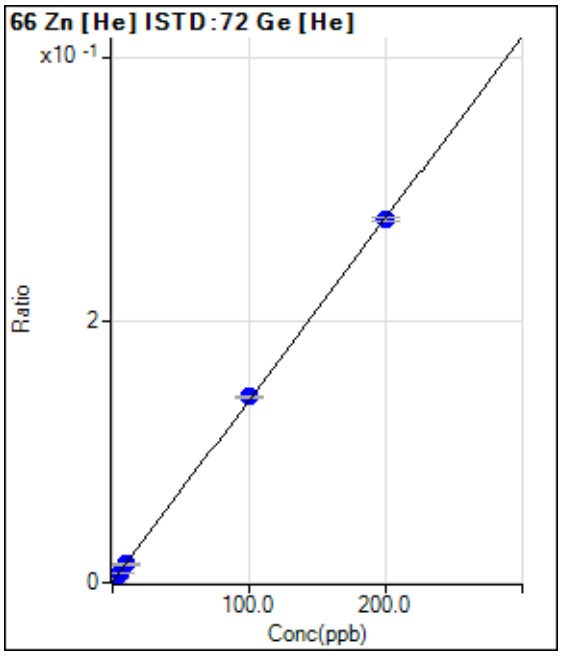
Calibration for 082_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.055	443.34	0.0003	P	8.3
2	☐	2.000	1.903	3450.38	0.0023	P	7.7
3	☐	5.000	5.603	8952.31	0.0063	P	10.7
4	☐	10.000	10.483	16787.95	0.0116	P	5.1
5	☐	100.000	97.990	156138.54	0.1063	P	2.6
6	☐	200.000	200.967	321547.31	0.2178	P	6.9
7	☐	1.000					

y = 0.0011 * x + 2.4077E-004
R = 0.9999
DL = 0.06861
BEC = 0.2224

Weight: <None>
Min Conc: <None>

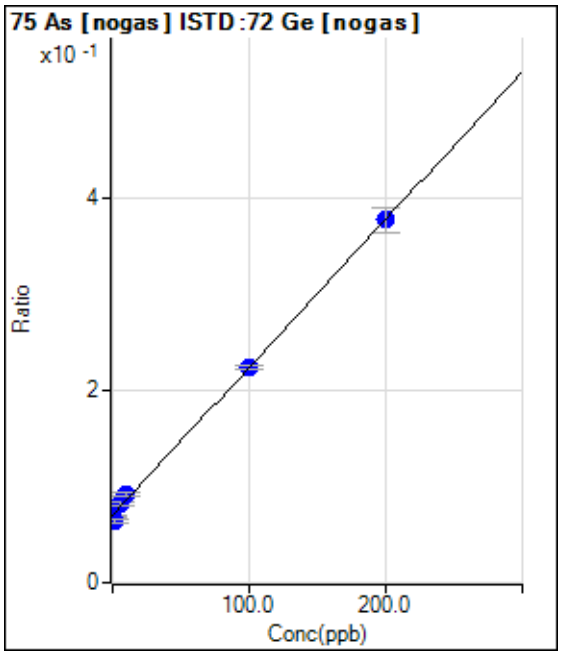


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.372	63.33	0.0002	P	31.9
2	☐	2.000	1.617	1193.39	0.0029	P	6.9
3	☐	5.000	5.158	3233.67	0.0078	P	5.6
4	☐	10.000	9.689	5830.99	0.0141	P	3.4
5	☐	100.000	101.786	57316.76	0.1418	P	0.9
6	☐	200.000	199.122	113247.74	0.2767	P	1.1
7	☐	1.000					

y = 0.0014 * x + 6.7210E-004
R = 0.9999
DL = 0.108
BEC = 0.4848

Weight: <None>
Min Conc: <None>

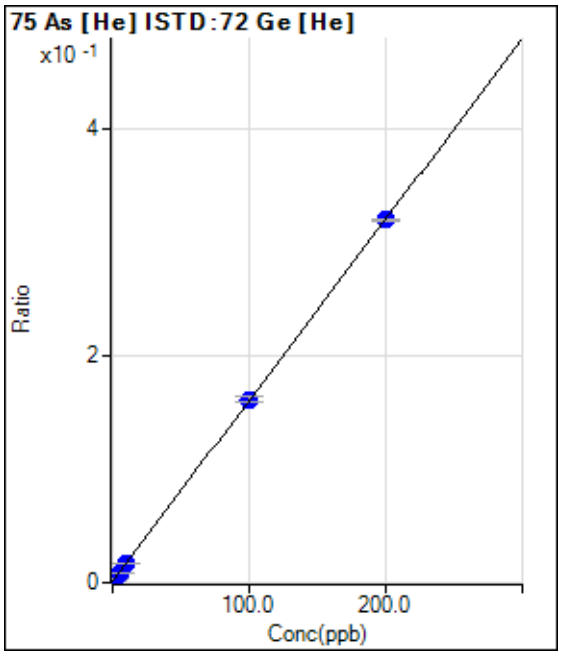
Calibration for 082_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.718	102419.24	0.0694	P	3.3
2	☐	2.000	-3.714	97278.72	0.0648	P	5.6
3	☐	5.000	7.530	117083.82	0.0822	P	3.1
4	☐	10.000	13.997	133555.26	0.0921	P	2.6
5	☐	100.000	100.222	330345.56	0.2249	P	2.2
6	☐	200.000	199.683	558356.89	0.3782	P	6.6
7	☐	1.000					

y = 0.0015 * x + 0.0706
R = 0.9992
DL = 4.482
BEC = 45.8

Weight: <None>
Min Conc: <None>

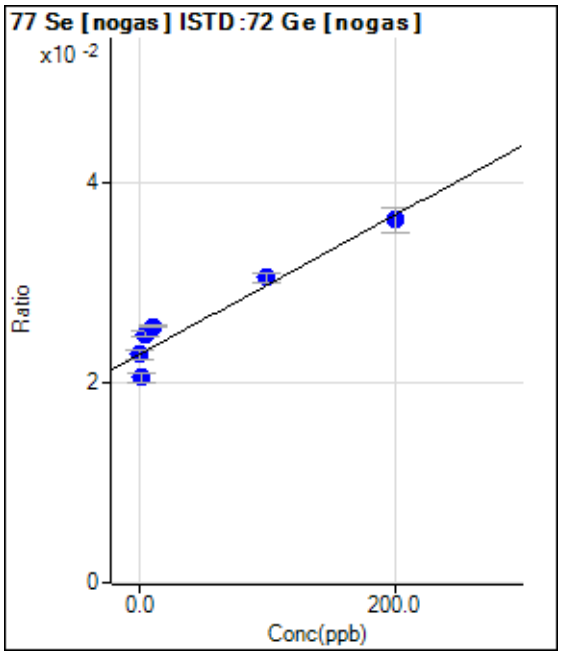


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	421.12	0.0010	P	7.8
2	☐	2.000	1.968	1714.53	0.0042	P	4.6
3	☐	5.000	4.876	3649.27	0.0088	P	3.1
4	☐	10.000	9.557	6746.83	0.0163	P	1.3
5	☐	100.000	100.526	65347.29	0.1617	P	2.6
6	☐	200.000	199.763	131070.61	0.3202	P	0.4
7	☐	1.000					

y = 0.0016 * x + 0.0010
R = 1.0000
DL = 0.1521
BEC = 0.6533

Weight: <None>
Min Conc: <None>

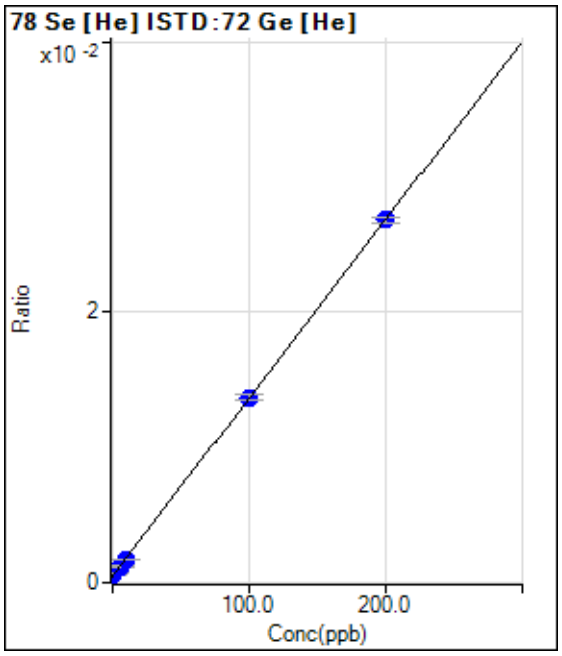
Calibration for 082_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	33607.84	0.0228	P	3.9
2	☐	2.000	-33.709	30696.12	0.0205	P	3.9
3	☐	5.000	29.479	35411.49	0.0248	P	2.8
4	☐	10.000	39.959	37114.63	0.0256	P	0.8
5	☐	100.000	109.966	44691.66	0.0304	P	2.8
6	☐	200.000	193.264	53455.21	0.0362	P	7.1
7	☐	1.000					

y = 6.9416E-005 * x + 0.0228
R = 0.9579
DL = 38.77
BEC = 328.4

Weight: <None>
Min Conc: <None>

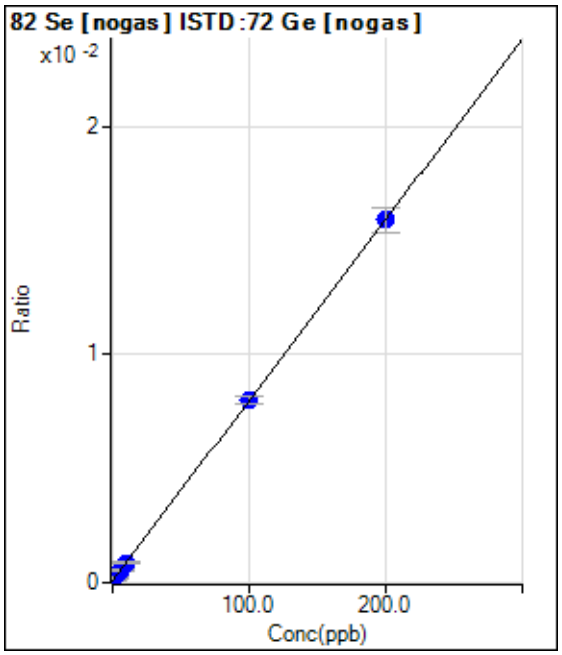


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.289	214.00	0.0005	P	5.6
2	☐	2.000	2.238	322.00	0.0008	P	9.9
3	☐	5.000	4.976	474.01	0.0011	P	12.2
4	☐	10.000	9.373	714.02	0.0017	P	4.7
5	☐	100.000	100.190	5534.19	0.0137	P	2.9
6	☐	200.000	199.935	10979.31	0.0268	P	1.7
7	☐	1.000					

y = 1.3173E-004 * x + 4.9232E-004
R = 1.0000
DL = 0.6756
BEC = 3.737

Weight: <None>
Min Conc: <None>

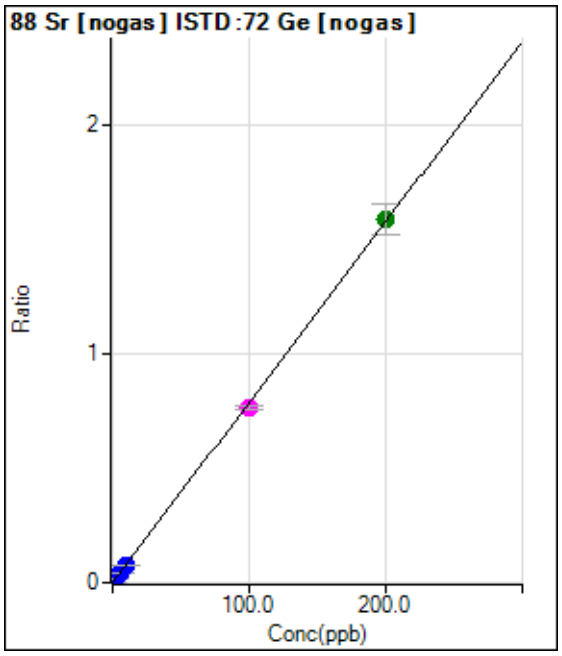
Calibration for 082_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	113.33	0.0001	P	59.8
2	☐	2.000	2.033	360.01	0.0002	P	26.3
3	☐	5.000	5.753	760.03	0.0005	P	8.2
4	☐	10.000	9.957	1260.07	0.0009	P	12.4
5	☐	100.000	100.045	11740.59	0.0080	P	3.9
6	☐	200.000	199.961	23485.42	0.0159	P	7.1
7	☐	1.000					

y = 7.9172E-005 * x + 7.8439E-005
R = 1.0000
DL = 1.778
BEC = 0.9907

Weight: <None>
Min Conc: <None>

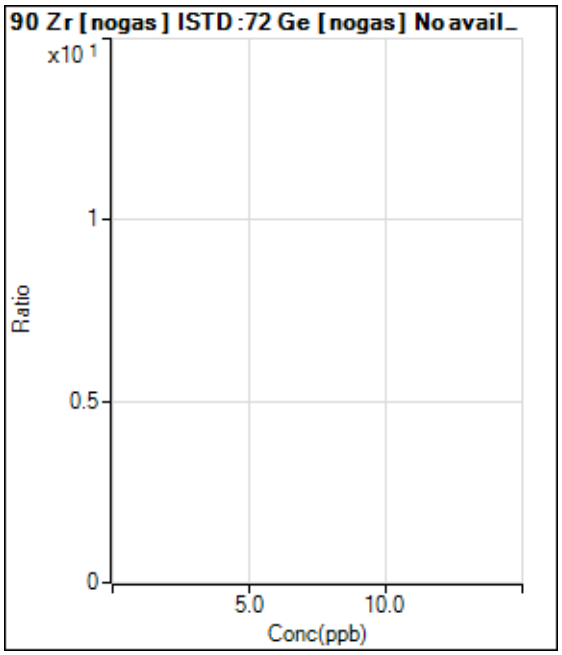


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	490.02	0.0003	P	5.7
2	☐	2.000	1.907	23068.41	0.0154	P	2.2
3	☐	5.000	5.263	59458.72	0.0418	P	8.9
4	☐	10.000	9.902	113664.20	0.0784	P	3.7
5	☐	100.000	97.425	1128659.12	0.7687	M	2.5
6	☐	200.000	201.287	2342306.47	1.5879	A	8.5
7	☐	1.000					

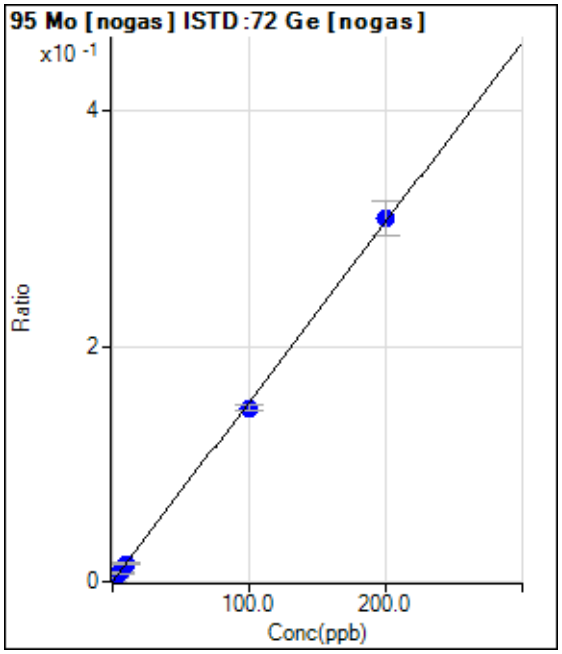
y = 0.0079 * x + 3.3128E-004
R = 0.9999
DL = 0.007136
BEC = 0.042

Weight: <None>
Min Conc: <None>

Calibration for 082_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					

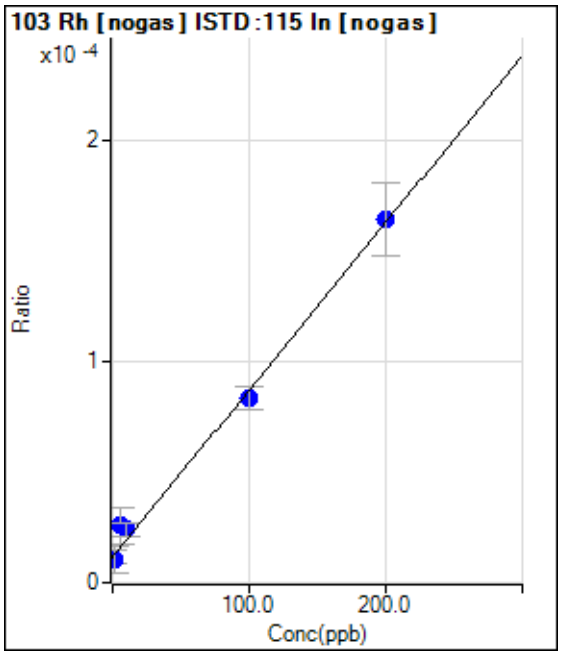


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	126.67	0.0001	P	43.6
2	☐	2.000	1.904	4487.30	0.0030	P	6.3
3	☐	5.000	4.979	10910.16	0.0077	P	10.3
4	☐	10.000	9.982	22204.19	0.0153	P	4.9
5	☐	100.000	96.431	216309.83	0.1473	P	3.1
6	☐	200.000	201.787	454174.38	0.3081	P	9.6
7	☐	1.000					

y = 0.0015 * x + 8.4593E-005
R = 0.9998
DL = 0.0725
BEC = 0.05543

Weight: <None>
Min Conc: <None>

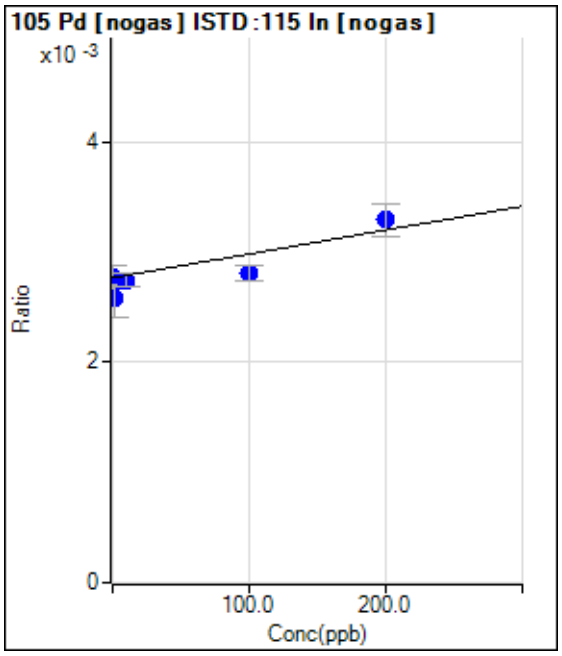
Calibration for 082_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	13.33	0.0000	P	53.1
2	☐	2.000	-1.658	13.33	0.0000	P	115.
3	☐	5.000	18.698	30.00	0.0000	P	61.9
4	☐	10.000	16.388	30.00	0.0000	P	25.4
5	☐	100.000	95.290	106.67	0.0001	P	12.4
6	☐	200.000	201.730	196.67	0.0002	P	20.1
7	☐	1.000					

y = 7.5451E-007 * x + 1.1579E-005
R = 0.9966
DL = 24.43
BEC = 15.35

Weight: <None>
Min Conc: <None>

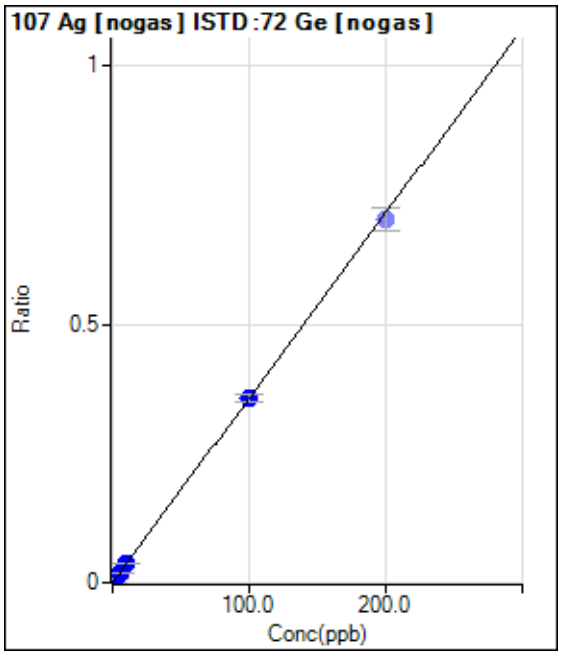


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3267.01	0.0028	P	7.6
2	☐	2.000	-86.905	3343.70	0.0026	P	13.0
3	☐	5.000	-13.462	3283.70	0.0027	P	2.1
4	☐	10.000	-9.979	3377.05	0.0027	P	4.6
5	☐	100.000	19.959	3563.74	0.0028	P	5.1
6	☐	200.000	242.370	3970.51	0.0033	P	9.0
7	☐	1.000					

y = 2.1647E-006 * x + 0.0028
R = 0.9171
DL = 291.4
BEC = 1277

Weight: <None>
Min Conc: <None>

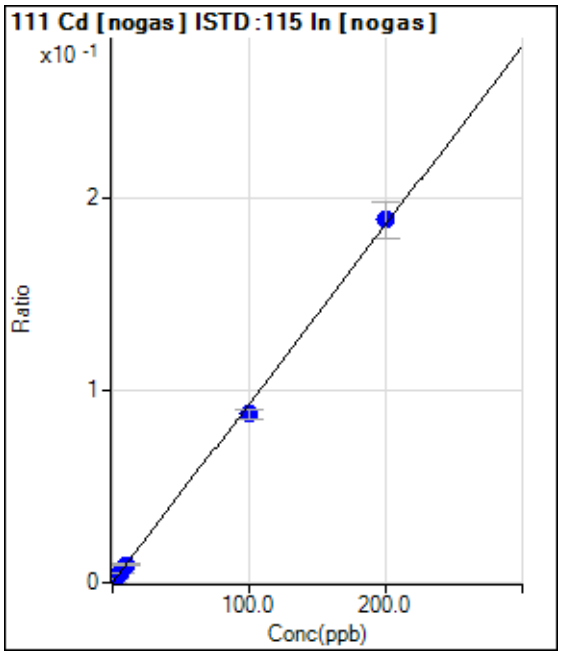
Calibration for 082_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	40.00	0.0000	P	64.2
2	☐	2.000	2.016	10843.47	0.0072	P	0.2
3	☐	5.000	5.452	27712.01	0.0195	P	8.0
4	☐	10.000	10.270	53173.55	0.0367	P	4.6
5	☐	100.000	99.950	523694.54	0.3569	P	5.0
6	☑	200.000		1035856.60	0.7015	P	6.4
7	☐	1.000					

y = 0.0036 * x + 2.6469E-005
R = 1.0000
DL = 0.01428
BEC = 0.007413

Weight: <None>
Min Conc: <None>

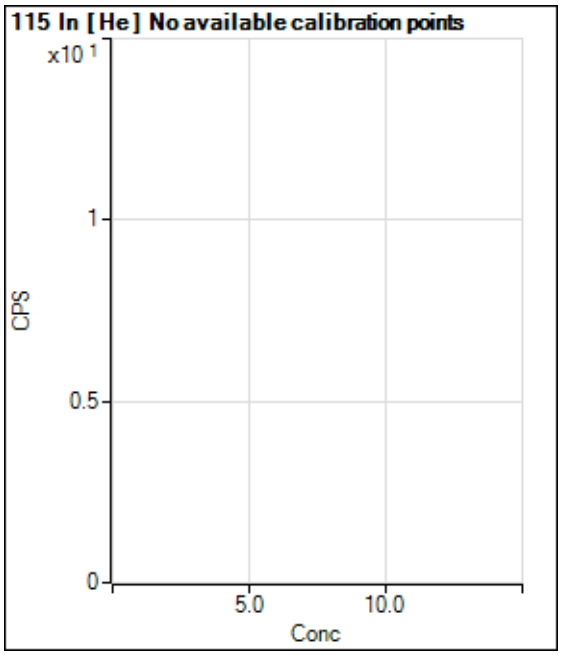


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	20.00	0.0000	P	83.0
2	☐	2.000	2.054	2506.89	0.0019	P	3.7
3	☐	5.000	5.236	5817.71	0.0049	P	15.5
4	☐	10.000	9.733	11153.76	0.0091	P	10.0
5	☐	100.000	94.307	111430.40	0.0879	P	5.6
6	☐	200.000	202.854	227229.56	0.1891	P	9.9
7	☐	1.000					

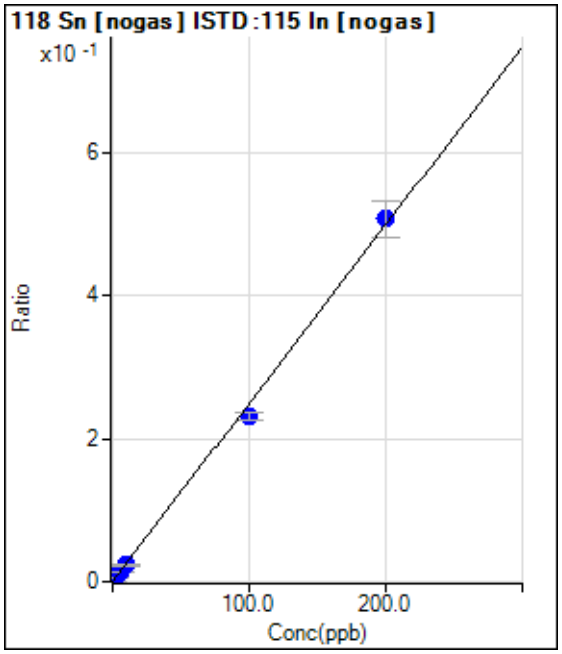
y = 9.3214E-004 * x + 1.6578E-005
R = 0.9994
DL = 0.04428
BEC = 0.01778

Weight: <None>
Min Conc: <None>

Calibration for 082_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			535844.53		P	1.6
2	☐			528983.01		P	2.8
3	☐			542641.29		P	2.2
4	☐			537545.91		P	0.8
5	☐			516594.15		P	1.0
6	☐			515804.79		P	0.5
7	☐						

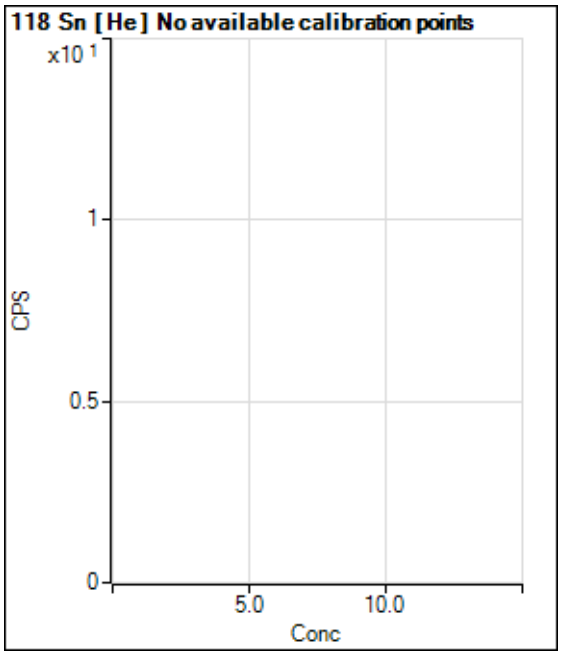


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	360.01	0.0003	P	13.8
2	☐	2.000	1.747	6047.80	0.0047	P	6.7
3	☐	5.000	5.140	15613.95	0.0131	P	12.6
4	☐	10.000	9.354	28947.61	0.0236	P	13.0
5	☐	100.000	93.036	294589.07	0.2324	P	4.8
6	☐	200.000	203.513	610124.41	0.5079	P	10.3
7	☐	1.000					

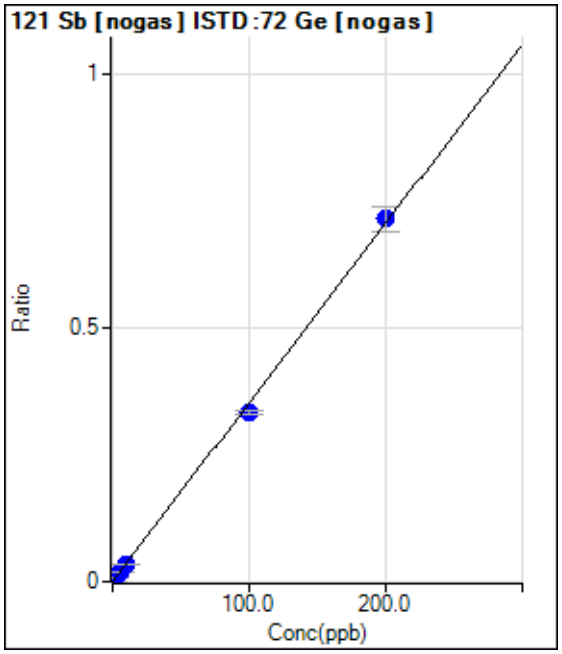
y = 0.0025 * x + 3.0195E-004
R = 0.9992
DL = 0.05009
BEC = 0.1211

Weight: <None>
Min Conc: <None>

Calibration for 082_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			180.00		P	5.6
2	☐			2673.58		P	6.8
3	☐			6978.16		P	3.0
4	☐			13565.46		P	1.3
5	☐			131737.08		P	1.3
6	☐			268898.02		P	0.5
7	☐						

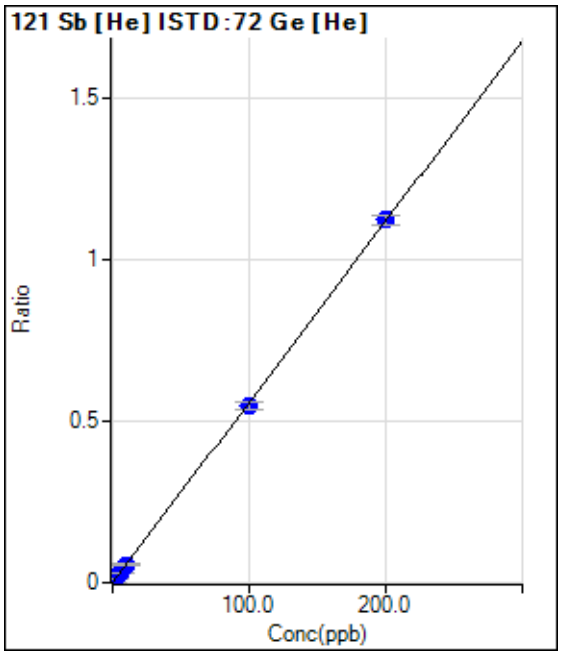


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	226.67	0.0002	P	8.7
2	☐	2.000	1.960	10600.03	0.0071	P	0.9
3	☐	5.000	5.152	26046.29	0.0183	P	7.2
4	☐	10.000	9.863	50596.66	0.0349	P	4.6
5	☐	100.000	94.734	490689.17	0.3341	P	1.8
6	☐	200.000	202.636	1054661.02	0.7144	P	6.9
7	☐	1.000					

y = 0.0035 * x + 1.5368E-004
R = 0.9995
DL = 0.01135
BEC = 0.0436

Weight: <None>
Min Conc: <None>

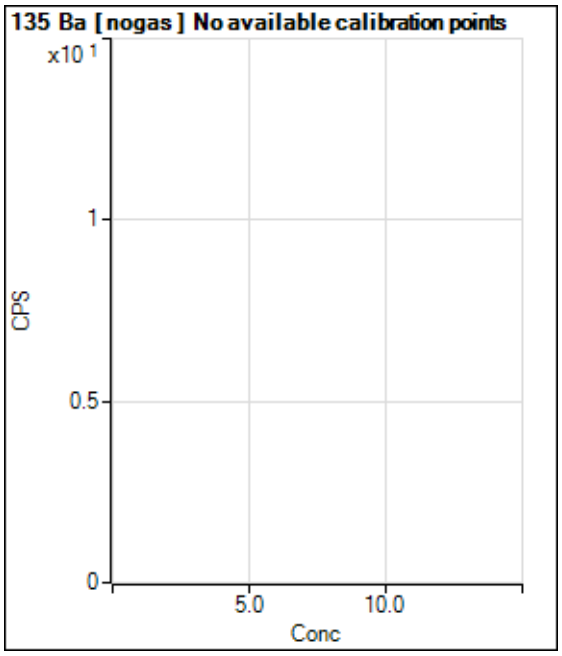
Calibration for 082_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	100.00	0.0002	P	28.0
2	☐	2.000	1.950	4560.66	0.0111	P	4.3
3	☐	5.000	4.889	11377.19	0.0275	P	0.5
4	☐	10.000	10.020	23225.74	0.0562	P	5.2
5	☐	100.000	98.031	221202.73	0.5474	P	4.4
6	☐	200.000	200.987	459164.08	1.1221	P	2.6
7	☐	1.000					

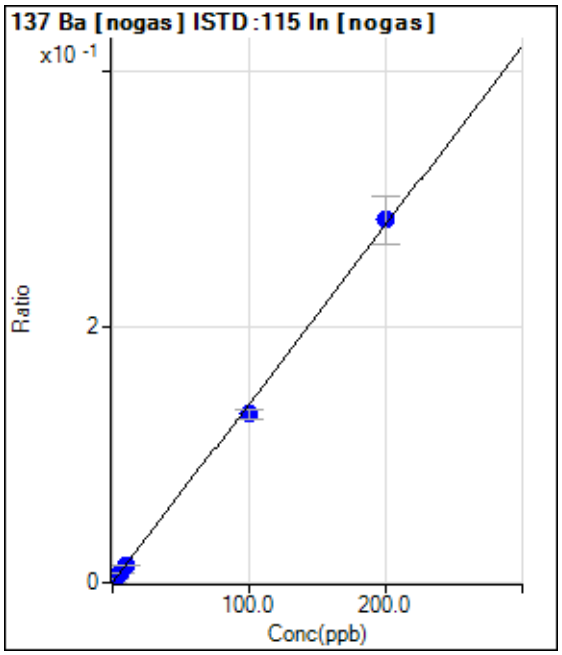
y = 0.0056 * x + 2.4834E-004
R = 0.9999
DL = 0.03737
BEC = 0.04449

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			36.67		P	15.7
2	☐			2033.49		P	6.6
3	☐			5164.17		P	3.4
4	☐			9849.59		P	3.8
5	☐			97004.59		P	1.6
6	☐			199842.75		P	1.3
7	☐						

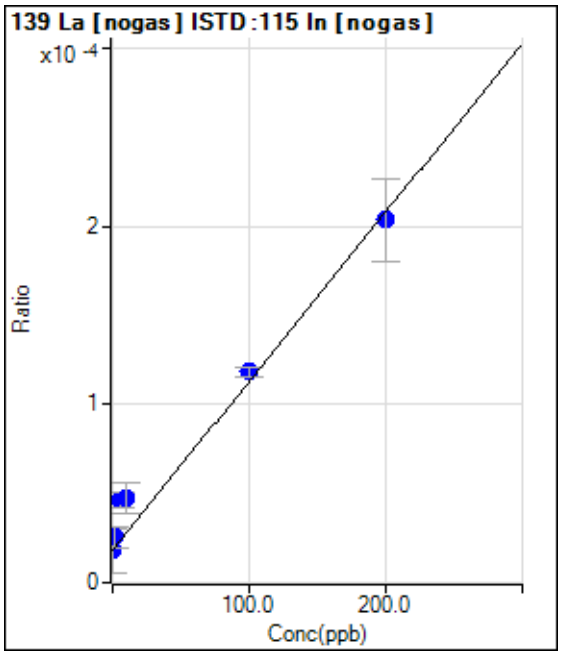
Calibration for 082_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	83.33	0.0001	P	70.4
2	☐	2.000	1.779	3323.71	0.0026	P	2.0
3	☐	5.000	5.300	8932.42	0.0075	P	8.6
4	☐	10.000	9.555	16491.39	0.0134	P	9.5
5	☐	100.000	94.196	166962.19	0.1318	P	6.4
6	☐	200.000	202.919	340266.14	0.2838	P	12.9
7	☐	1.000					

y = 0.0014 * x + 7.3098E-005
R = 0.9994
DL = 0.1103
BEC = 0.05228

Weight: <None>
Min Conc: <None>

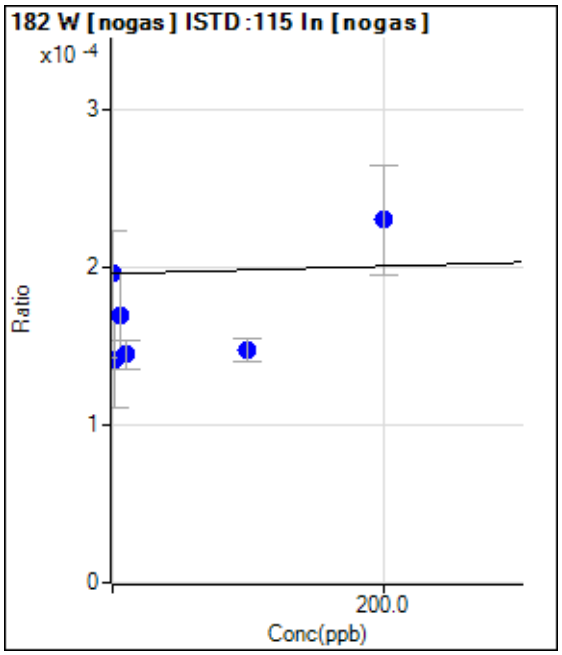


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	20.00	0.0000	P	137.
2	☐	2.000	7.884	33.33	0.0000	P	45.7
3	☐	5.000	30.013	56.67	0.0000	P	18.3
4	☐	10.000	30.939	60.00	0.0000	P	38.2
5	☐	100.000	105.464	150.00	0.0001	P	4.9
6	☐	200.000	195.537	250.01	0.0002	P	22.9
7	☐	1.000					

y = 9.4764E-007 * x + 1.8211E-005
R = 0.9921
DL = 79.06
BEC = 19.22

Weight: <None>
Min Conc: <None>

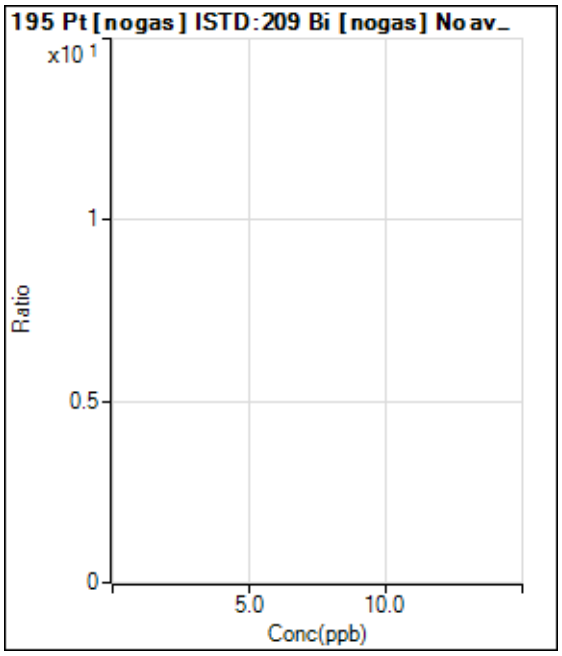
Calibration for 082_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	230.01	0.0002	P	27.1
2	☐	2.000	-2308.337	183.34	0.0001	P	43.1
3	☐	5.000	-1103.018	203.34	0.0002	P	31.7
4	☐	10.000	-2158.113	180.00	0.0001	P	12.9
5	☐	100.000	-2057.477	186.67	0.0001	P	10.3
6	☐	200.000	1437.948	273.34	0.0002	P	30.5
7	☐	1.000					

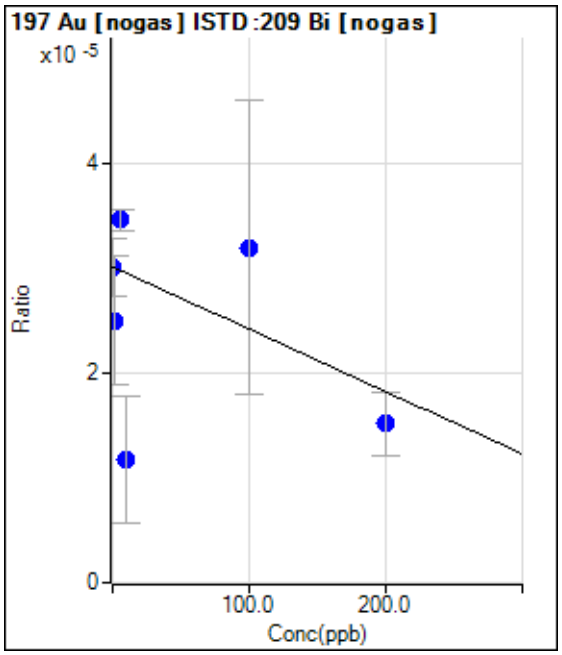
y = 2.3735E-008 * x + 1.9632E-004
R = 0.6190
DL = 6731
BEC = 8271

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					

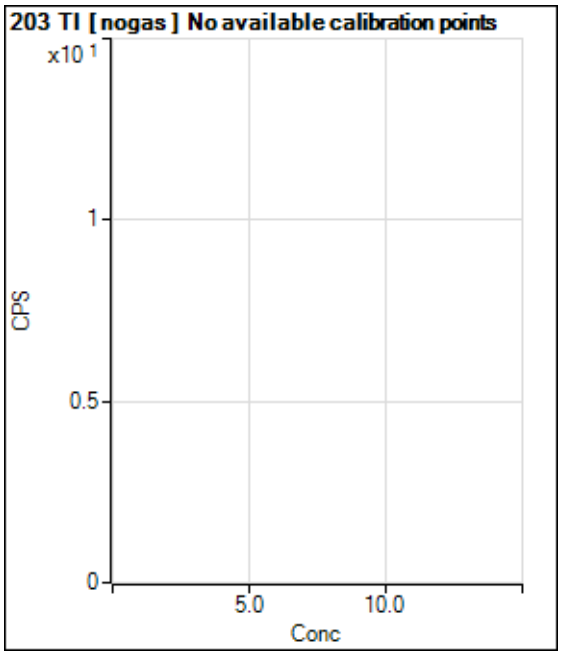
Calibration for 082_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	26.67	0.0000	P	18.4
2	☐	2.000	85.934	23.33	0.0000	P	49.3
3	☐	5.000	-75.192	30.00	0.0000	P	6.1
4	☐	10.000	309.676	10.00	0.0000	P	102.
5	☐	100.000	-30.977	30.00	0.0000	P	88.0
6	☐	200.000	251.670	13.33	0.0000	P	40.3
7	☐	1.000					

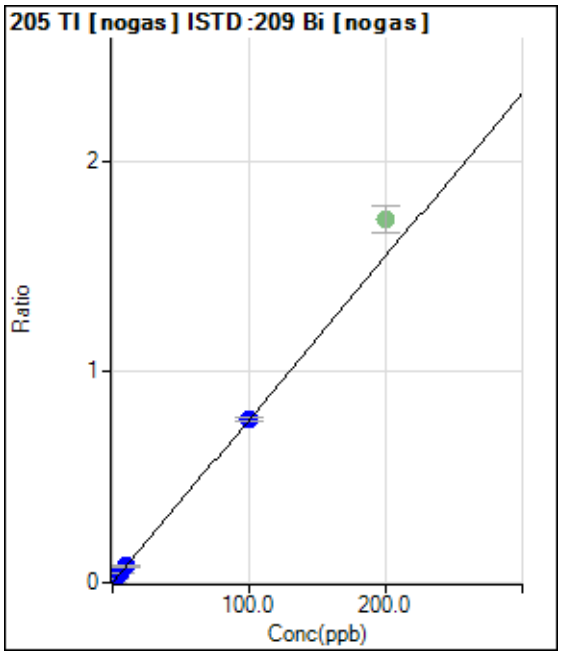
y = -5.9384E-008 * x + 3.0077E-005
R = -0.3342
DL = -279.4
BEC = -506.5

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			100.00		P	30.0
2	☐			6161.26		P	1.5
3	☐			15147.25		P	2.7
4	☐			30138.15		P	1.8
5	☐			308677.10		P	1.3
6	☐			620386.12		P	1.7
7	☐						

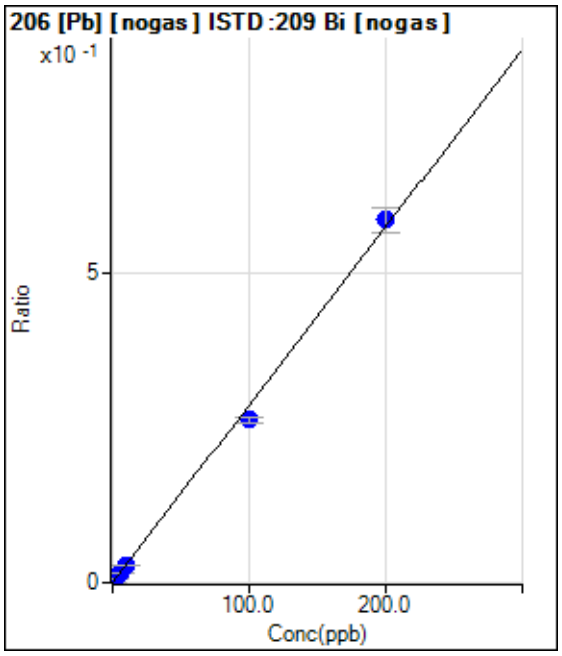
Calibration for 082_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	240.00	0.0003	P	20.7
2	☐	2.000	1.954	14356.50	0.0154	P	5.0
3	☐	5.000	5.489	37156.04	0.0428	P	5.4
4	☐	10.000	10.083	70261.59	0.0783	P	7.1
5	☐	100.000	99.968	735229.29	0.7740	P	2.5
6	☑	200.000		1503663.68	1.7212	A	7.3
7	☐	1.000					

y = 0.0077 * x + 2.7154E-004
R = 1.0000
DL = 0.02178
BEC = 0.03508

Weight: <None>
Min Conc: <None>

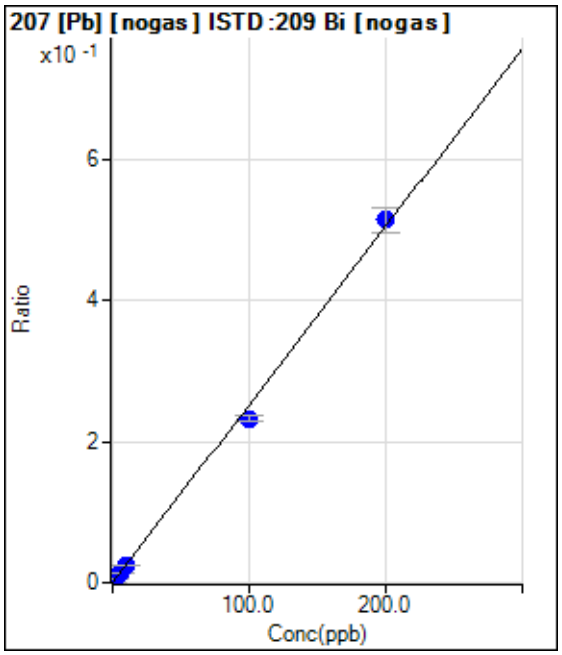


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	36.67	0.0000	P	30.5
2	☐	2.000	1.935	5224.24	0.0056	P	4.6
3	☐	5.000	5.356	13402.35	0.0154	P	6.9
4	☐	10.000	9.804	25316.62	0.0282	P	7.1
5	☐	100.000	91.736	250438.75	0.2637	P	3.6
6	☐	200.000	204.134	512641.34	0.5867	P	6.8
7	☐	1.000					

y = 0.0029 * x + 4.1502E-005
R = 0.9988
DL = 0.01323
BEC = 0.01444

Weight: <None>
Min Conc: <None>

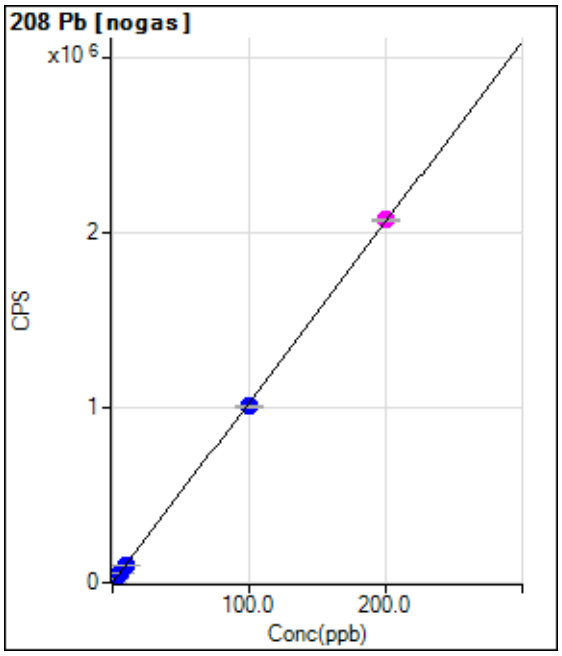
Calibration for 082_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	36.67	0.0000	P	60.9
2	☐	2.000	1.877	4454.01	0.0048	P	1.6
3	☐	5.000	5.164	11340.79	0.0131	P	6.2
4	☐	10.000	9.749	22108.54	0.0246	P	4.7
5	☐	100.000	92.349	221086.20	0.2328	P	3.3
6	☐	200.000	203.835	448929.82	0.5137	P	6.7
7	☐	1.000					

y = 0.0025 * x + 4.2226E-005
R = 0.9990
DL = 0.03059
BEC = 0.01676

Weight: <None>
Min Conc: <None>

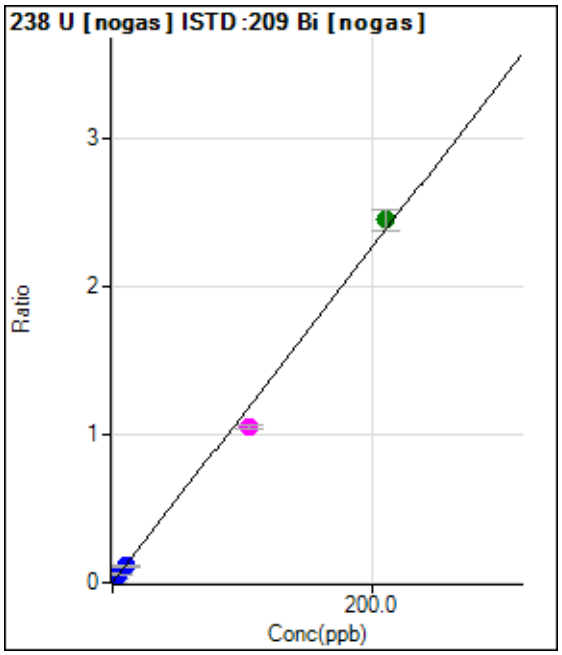


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	133.33		P	4.3
2	☐	2.000	1.976	20512.01		P	1.1
3	☐	5.000	5.086	52580.63		P	1.2
4	☐	10.000	9.885	102070.51		P	2.3
5	☐	100.000	97.668	1007331.21		P	1.7
6	☐	200.000	201.170	2074701.77		M	0.8
7	☐	1.000					

y = 10312.5105 * x + 133.3333
R = 0.9999
DL = 0.00168
BEC = 0.01293

Weight: <None>
Min Conc: <None>

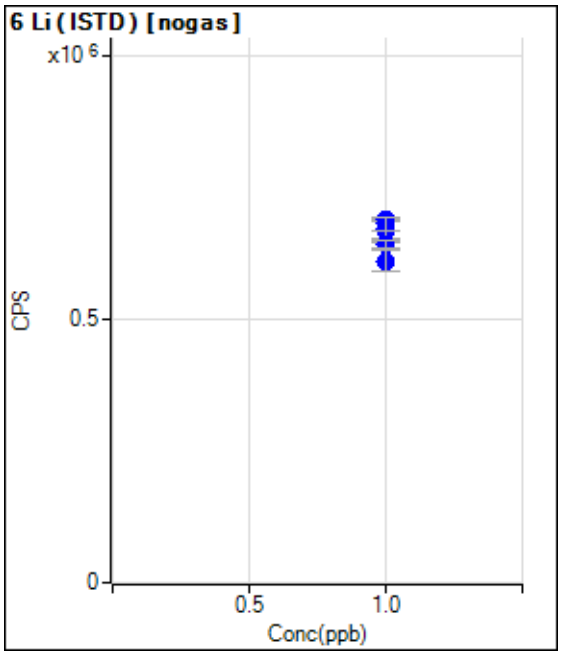
Calibration for 082_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	40.00	0.0000	P	40.9
2	☐	2.000	1.900	20109.62	0.0216	P	5.5
3	☐	5.000	5.063	49865.06	0.0574	P	4.3
4	☐	10.000	9.800	99590.00	0.1110	P	7.2
5	☐	105.000	92.870	998791.49	1.0516	M	3.3
6	☐	210.000	216.074	2138716.32	2.4465	A	5.6
7	☐	1.000					

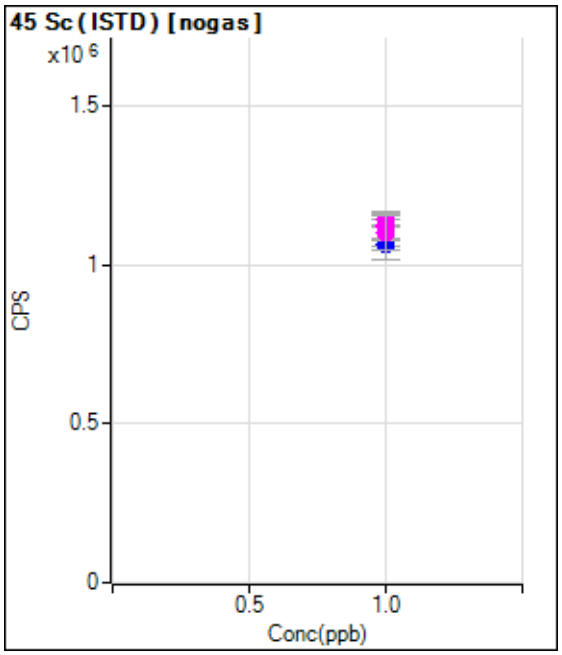
y = 0.0113 * x + 4.4860E-005
R = 0.9977
DL = 0.004857
BEC = 0.003962

Weight: <None>
Min Conc: <None>

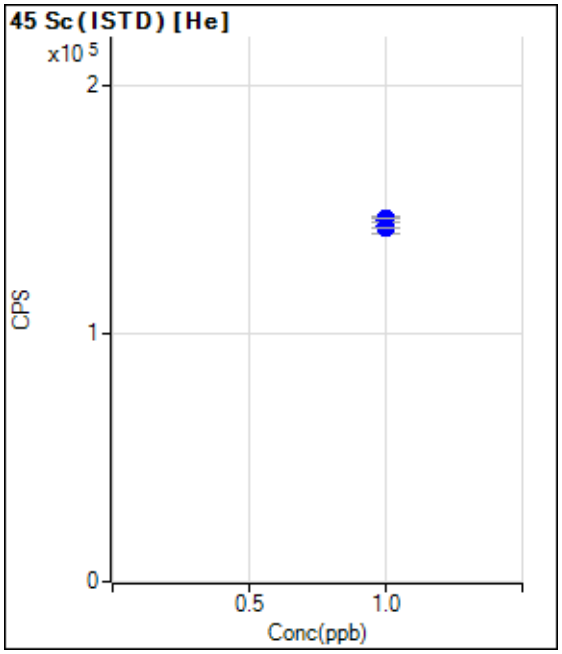


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		671259.72		P	5.3
2	☐	1.000		689388.65		P	1.0
3	☐	1.000		670301.51		P	6.8
4	☐	1.000		682008.37		P	3.6
5	☐	1.000		642630.85		P	2.7
6	☐	1.000		611712.60		P	6.9
7	☐	1.000					

Calibration for 082_ICV.d

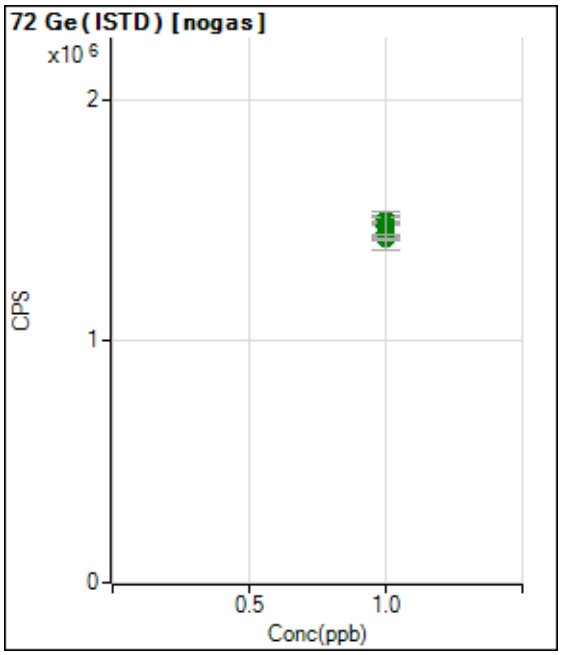


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1102075.87		M	7.5
2	☐	1.000		1142944.36		M	2.8
3	☐	1.000		1068008.97		P	9.8
4	☐	1.000		1119160.92		M	7.6
5	☐	1.000		1126598.91		M	7.6
6	☐	1.000		1101830.30		M	9.6
7	☐	1.000					

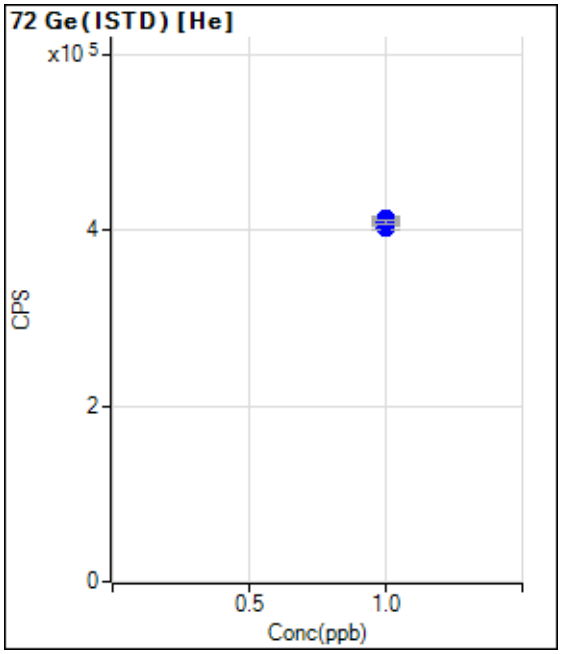


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		145951.31		P	2.0
2	☐	1.000		142935.91		P	4.2
3	☐	1.000		146041.33		P	1.4
4	☐	1.000		145342.61		P	1.3
5	☐	1.000		142305.61		P	0.2
6	☐	1.000		142372.58		P	0.4
7	☐	1.000					

Calibration for 082_ICV.d

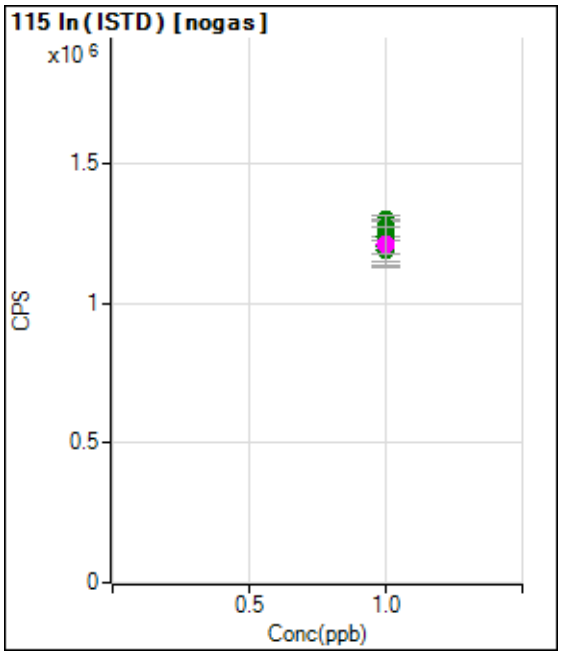


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1476428.16		A	5.8
2	☐	1.000		1501014.30		A	1.6
3	☐	1.000		1427398.24		A	7.6
4	☐	1.000		1451110.24		A	5.1
5	☐	1.000		1469237.74		A	4.1
6	☐	1.000		1481278.52		A	7.3
7	☐	1.000					

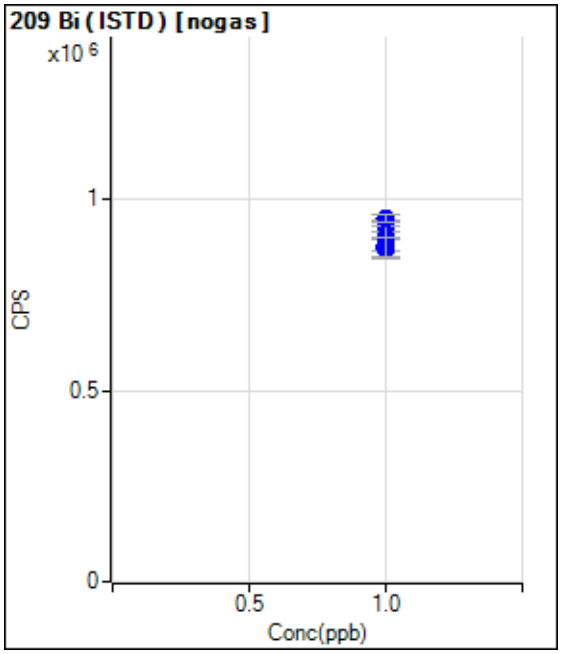


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		403705.63		P	1.5
2	☐	1.000		409504.71		P	1.6
3	☐	1.000		413173.26		P	1.6
4	☐	1.000		413507.24		P	0.8
5	☐	1.000		404323.67		P	2.1
6	☐	1.000		409287.48		P	1.2
7	☐	1.000					

Calibration for 082_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1187104.91		A	8.5
2	☐	1.000		1297947.89		A	0.7
3	☐	1.000		1202085.84		A	12.1
4	☐	1.000		1234983.65		A	9.5
5	☐	1.000		1270625.00		A	6.9
6	☐	1.000		1209695.51		M	10.2
7	☐	1.000					



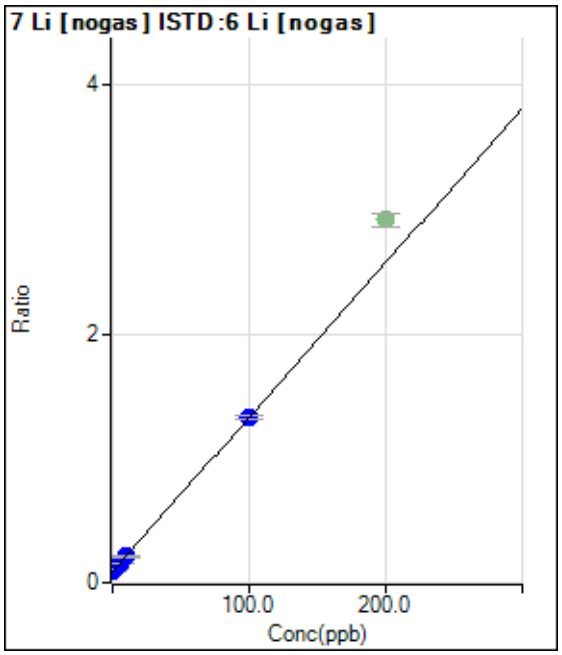
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		882577.28		P	4.0
2	☐	1.000		933264.73		P	3.2
3	☐	1.000		870660.14		P	6.1
4	☐	1.000		900264.89		P	7.2
5	☐	1.000		950215.45		P	2.2
6	☐	1.000		876085.12		P	5.9
7	☐	1.000					

Calibration for 149_ICV.d

Batch Folder: C:\Agilent\ICPMH\1\DATA\010819B.b\
Analysis File: 010819B.batch.bin
DA Date-Time: 2019-01-08 16:20:35
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	138CALB.d	CAL BLK	2019-01-08 15:53:31
2	139CALS.d	2/10/200	2019-01-08 15:55:30
3	140CALS.d	5/25/500	2019-01-08 15:57:29
4	141CALS.d	10/50/1000	2019-01-08 15:59:29
5	142CALS.d	100/500/10K	2019-01-08 16:01:27
6	143CALS.d	200/1000/20K	2019-01-08 16:03:24
7			

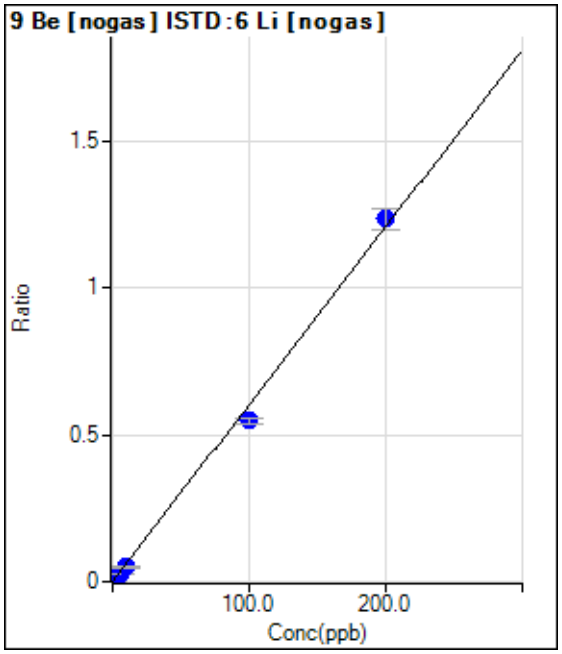
Calibration for 149_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	56487.26	0.0903	P	1.4
2	☐	2.000	1.881	73152.86	0.1136	P	2.0
3	☐	5.000	4.983	95517.39	0.1521	P	1.5
4	☐	10.000	9.551	132047.69	0.2087	P	2.3
5	☐	100.000	100.048	799870.33	1.3310	P	3.1
6	☑	200.000		1620070.65	2.9147	A	3.8
7	☐	1.000					

y = 0.0124 * x + 0.0903
R = 1.0000
DL = 0.3062

Weight: <None>
Min Conc: <None>

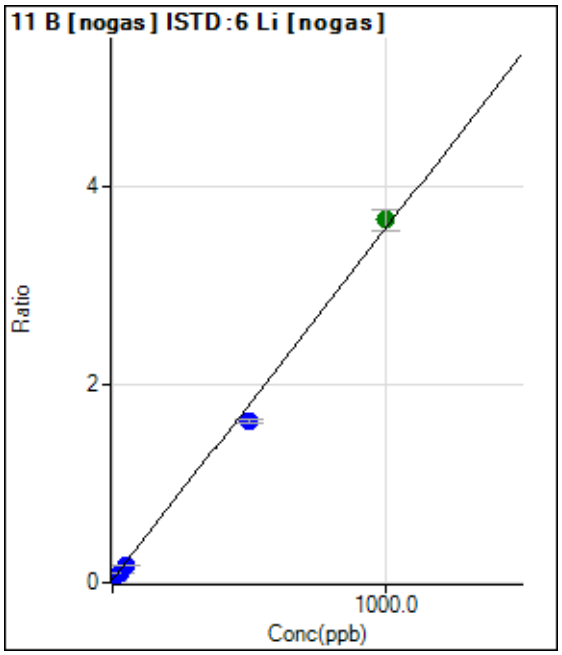


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	93.33	0.0002	P	25.2
2	☐	2.000	1.693	6664.58	0.0104	P	0.7
3	☐	5.000	4.275	16273.74	0.0259	P	2.4
4	☐	10.000	8.324	31803.28	0.0503	P	5.6
5	☐	100.000	90.814	328908.39	0.5474	P	3.5
6	☐	200.000	204.698	685347.31	1.2336	P	6.0
7	☐	1.000					

y = 0.0060 * x + 1.5024E-004
R = 0.9986
DL = 0.01887

Weight: <None>
Min Conc: <None>

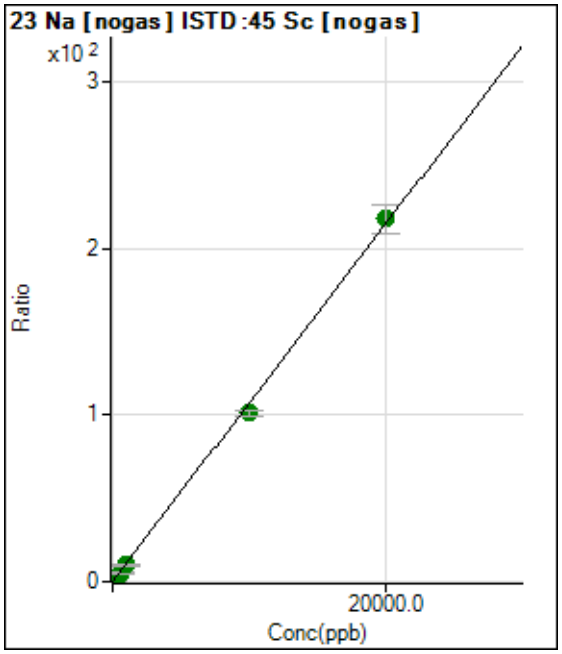
Calibration for 149_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	18549.15	0.0297	P	5.0
2	☐	10.000	7.572	36401.34	0.0566	P	2.8
3	☐	25.000	20.549	64427.90	0.1026	P	2.5
4	☐	50.000	40.440	109569.22	0.1732	P	1.5
5	☐	500.000	450.198	978104.26	1.6271	P	2.3
6	☐	1000.000	1025.515	2037681.64	3.6685	A	5.8
7	☐	5.000					

y = 0.0035 * x + 0.0297
R = 0.9983
DL = 1.26

Weight: <None>
Min Conc: <None>

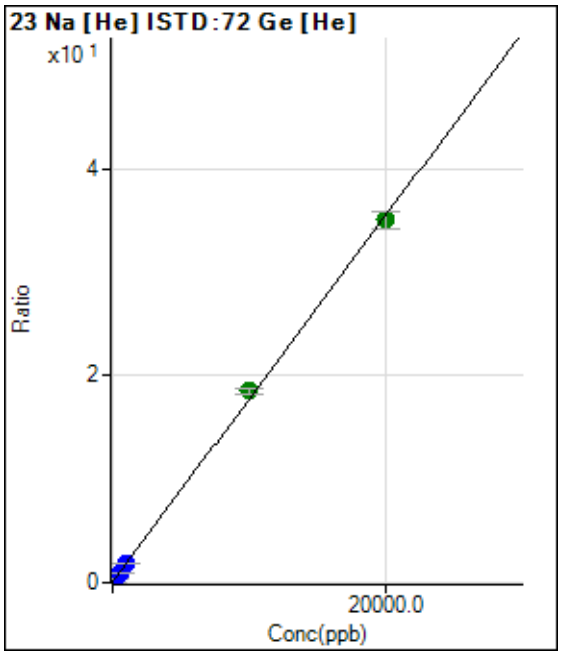


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	198309.49	0.1891	P	7.0
2	☐	200.000	184.993	2450894.65	2.1716	A	5.4
3	☐	500.000	452.235	5651123.43	5.0356	A	8.1
4	☐	1000.000	916.239	10839581.23	10.0083	A	4.5
5	☐	10000.00	9408.907	108646319.1	101.022	A	3.6
6	☐	20000.00	20301.079	217129238.1	217.752	A	8.1
7	☐	100.000					

y = 0.0107 * x + 0.1891
R = 0.9994
DL = 3.722

Weight: <None>
Min Conc: <None>

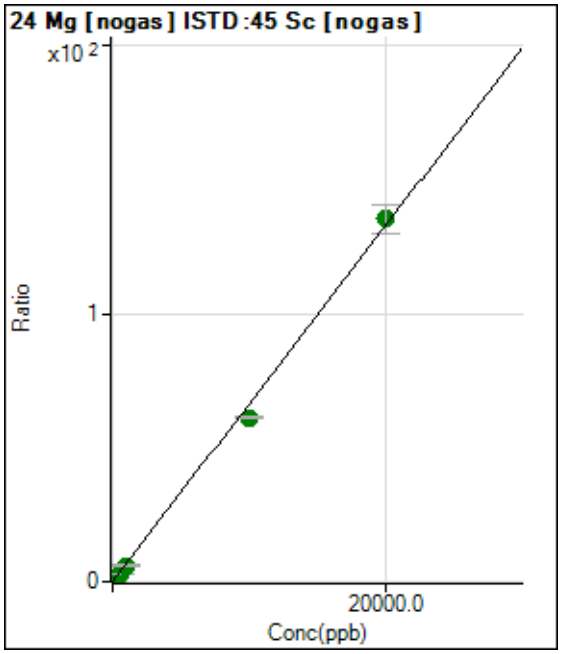
Calibration for 149_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	24382.41	0.0636	P	1.7
2	☐	200.000	198.382	160487.29	0.4146	P	1.3
3	☐	500.000	509.064	366886.14	0.9643	P	0.8
4	☐	1000.000	985.009	684957.77	1.8064	P	0.9
5	☐	10000.00	10446.976	6951300.94	18.5477	A	2.8
6	☐	20000.00	19777.051	13523761.47	35.0557	A	5.0
7	☐	100.000					

y = 0.0018 * x + 0.0636
R = 0.9996
DL = 1.817

Weight: <None>
Min Conc: <None>

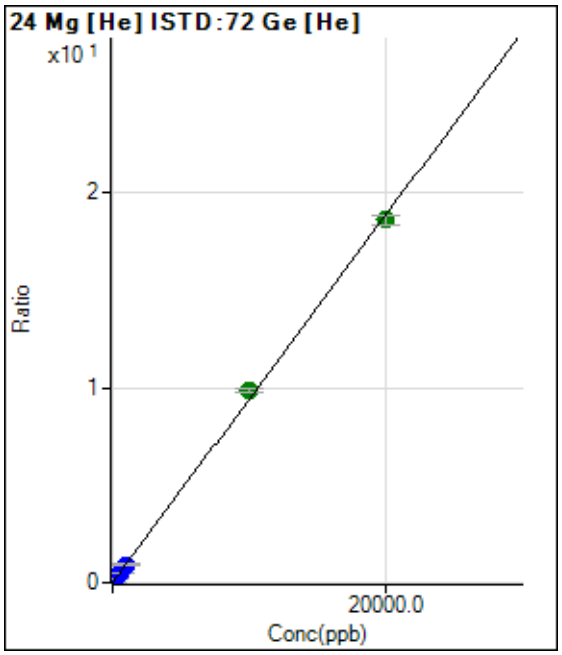


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4434.61	0.0042	P	20.2
2	☐	200.000	189.577	1424398.86	1.2620	A	5.2
3	☐	500.000	464.226	3459758.67	3.0842	A	8.8
4	☐	1000.000	908.163	6529955.36	6.0296	A	5.1
5	☐	10000.00	9225.390	65885049.39	61.2128	A	0.7
6	☐	20000.00	20392.895	134970428.0	135.307	A	7.9
7	☐	100.000					

y = 0.0066 * x + 0.0042
R = 0.9990
DL = 0.3787

Weight: <None>
Min Conc: <None>

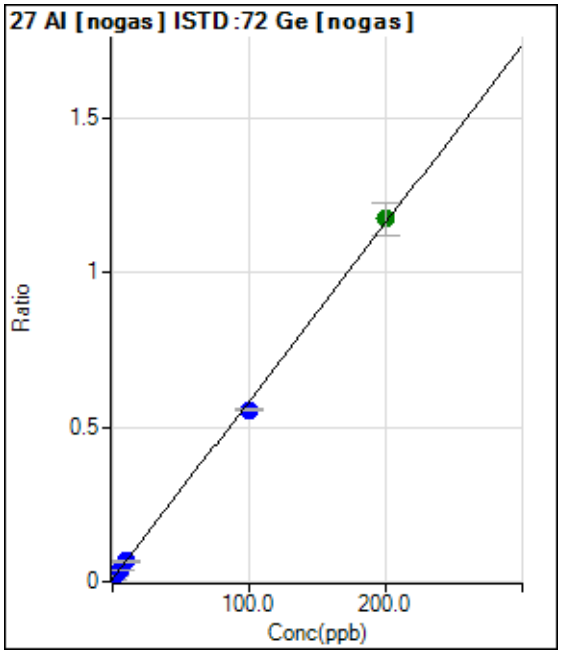
Calibration for 149_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	366.68	0.0010	P	22.4
2	☐	200.000	203.031	74345.10	0.1921	P	2.4
3	☐	500.000	519.456	186389.66	0.4899	P	1.2
4	☐	1000.000	988.289	353016.52	0.9312	P	3.2
5	☐	10000.00	10479.906	3697815.15	9.8654	A	1.8
6	☐	20000.00	19760.116	7177156.77	18.6006	A	2.9
7	☐	100.000					

y = 9.4127E-004 * x + 9.5703E-004
R = 0.9996
DL = 0.6821

Weight: <None>
Min Conc: <None>

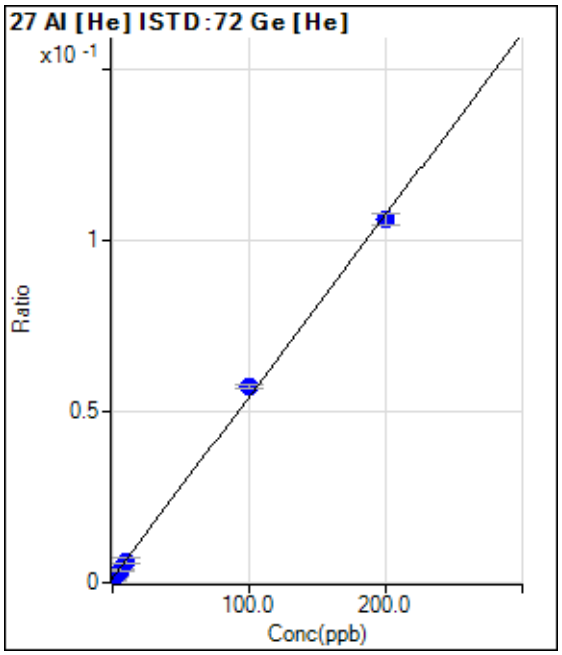


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	11113.40	0.0081	P	6.9
2	☐	2.000	2.163	29466.68	0.0206	P	4.2
3	☐	5.000	5.258	55752.27	0.0384	P	1.8
4	☐	10.000	9.983	93343.08	0.0655	P	4.4
5	☐	100.000	95.247	790793.69	0.5561	P	1.8
6	☐	200.000	202.369	1606129.77	1.1723	A	9.0
7	☐	1.000					

y = 0.0058 * x + 0.0081
R = 0.9996
DL = 0.2905

Weight: <None>
Min Conc: <None>

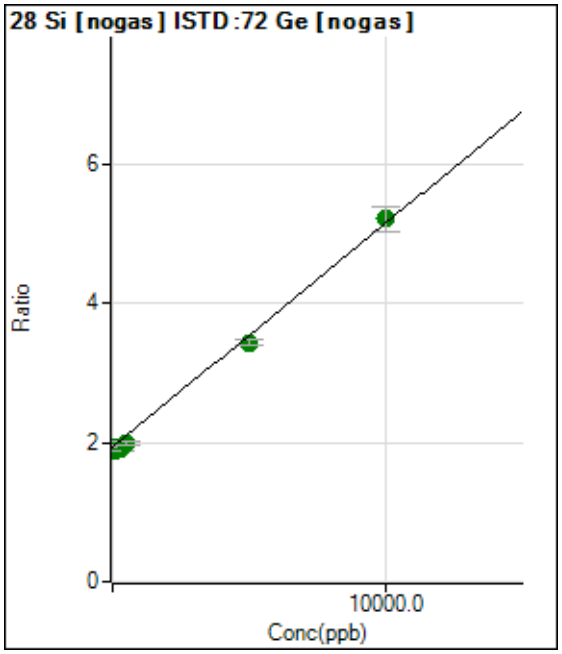
Calibration for 149_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.819	333.34	0.0009	P	11.7
2	☐	2.000	0.903	690.03	0.0018	P	14.1
3	☐	5.000	4.413	1386.74	0.0036	P	7.6
4	☐	10.000	9.681	2433.53	0.0064	P	18.9
5	☐	100.000	105.561	21462.36	0.0573	P	2.0
6	☐	200.000	197.261	40851.01	0.1059	P	3.2
7	☐	1.000					

y = 5.3010E-004 * x + 0.0013
R = 0.9994
DL = 0.5738

Weight: <None>
Min Conc: <None>

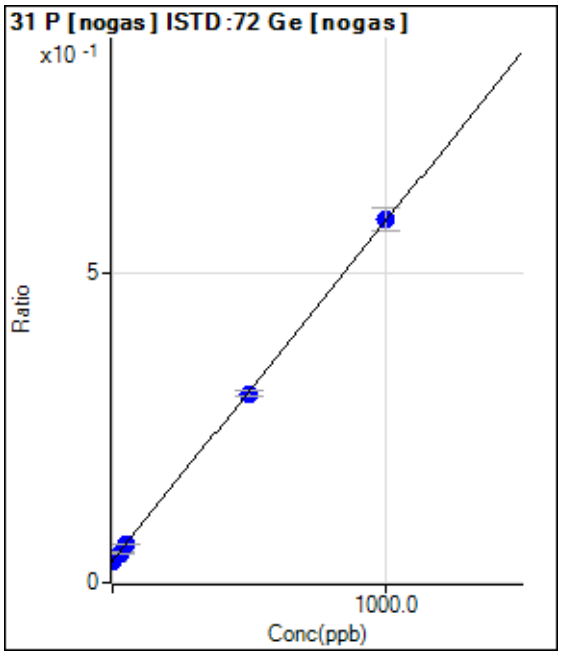


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2656866.79	1.9394	A	7.2
2	☐	100.000	-192.958	2691988.40	1.8773	A	2.3
3	☐	250.000	-115.435	2762877.46	1.9022	A	2.6
4	☐	500.000	187.453	2848858.81	1.9997	A	2.9
5	☐	5000.000	4675.019	4896375.97	3.4442	A	2.7
6	☐	10000.00	10190.183	7156750.93	5.2195	A	6.9
7	☐	5.000					

y = 3.2189E-004 * x + 1.9394
R = 0.9991
DL = 1308

Weight: <None>
Min Conc: <None>

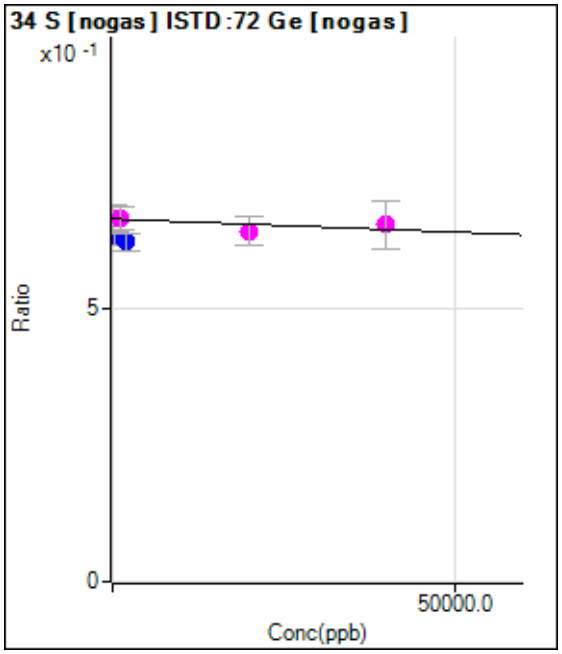
Calibration for 149_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	48792.94	0.0356	P	7.3
2	☐	10.000	8.569	57818.04	0.0403	P	2.4
3	☐	25.000	22.692	69828.13	0.0481	P	0.7
4	☐	50.000	48.672	88757.10	0.0623	P	2.7
5	☐	500.000	491.793	433922.74	0.3052	P	2.7
6	☐	1000.000	1004.242	803854.81	0.5861	P	6.3
7	☐	5.000					

y = 5.4813E-004 * x + 0.0356
R = 1.0000
DL = 14.28

Weight: <None>
Min Conc: <None>

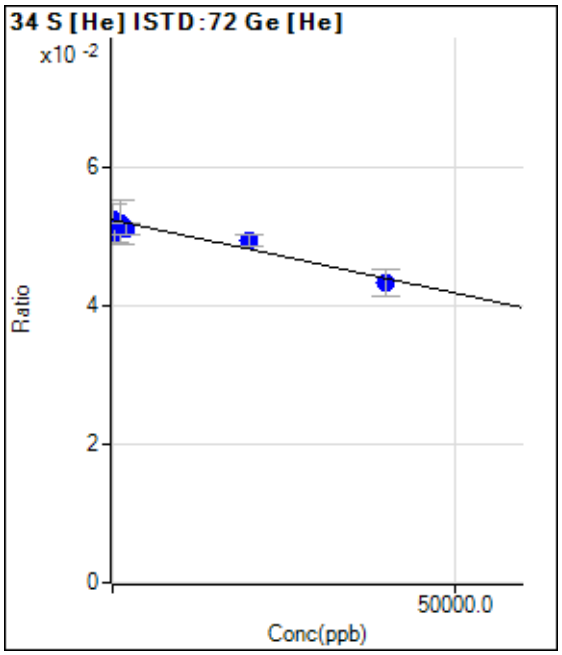


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	912326.25	0.6655	M	7.8
2	☐	400.000	73117.438	903490.58	0.6303	P	4.1
3	☐	1000.000	168.193	967561.64	0.6655	M	6.5
4	☐	2000.000	87742.083	887174.27	0.6232	P	5.2
5	☐	20000.00	46439.832	913930.36	0.6431	M	8.4
6	☐	40000.00	21786.601	895793.18	0.6550	M	13.5
7	☐	100.000					

y = -4.8250E-007 * x + 0.6655
R = 0.1373
DL = -3.209E+05

Weight: <None>
Min Conc: <None>

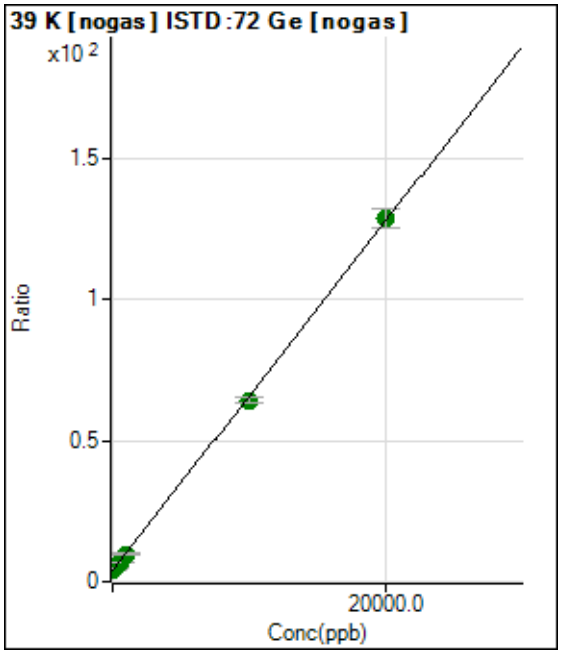
Calibration for 149_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	20114.46	0.0525	P	8.4
2	☐	400.000	8431.674	19613.48	0.0507	P	6.1
3	☐	1000.000	1581.523	19846.95	0.0521	P	12.3
4	☐	2000.000	6355.675	19379.86	0.0511	P	3.3
5	☐	20000.00	14084.265	18545.48	0.0495	P	2.9
6	☐	40000.00	42645.229	16777.05	0.0435	P	9.2
7	☐	100.000					

y = -2.1106E-007 * x + 0.0525
R = -0.9579
DL = -6.286E+04

Weight: <None>
Min Conc: <None>

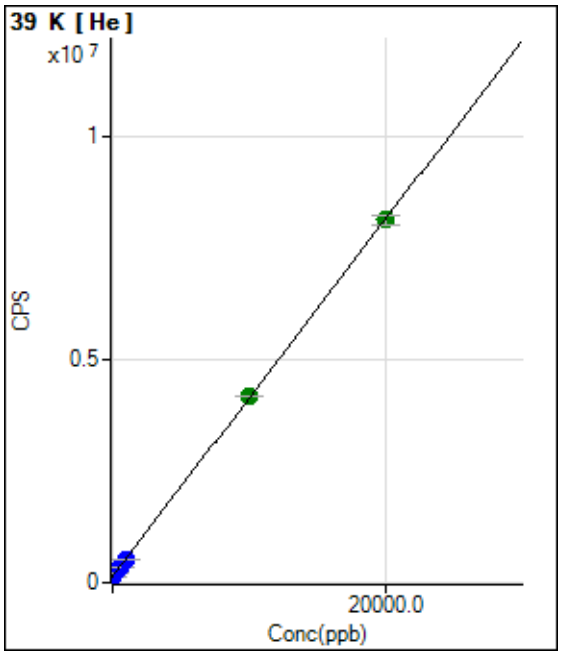


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	5358642.18	3.9107	A	6.6
2	☐	200.000	169.678	7112122.55	4.9598	A	2.1
3	☐	500.000	431.039	9550691.88	6.5757	A	2.7
4	☐	1000.000	927.014	13725955.51	9.6421	A	5.1
5	☐	10000.00	9755.597	91307520.79	64.2258	A	3.9
6	☐	20000.00	20127.878	176125591.4	128.353	A	5.4
7	☐	100.000					

y = 0.0062 * x + 3.9107
R = 0.9999
DL = 124.8

Weight: <None>
Min Conc: <None>

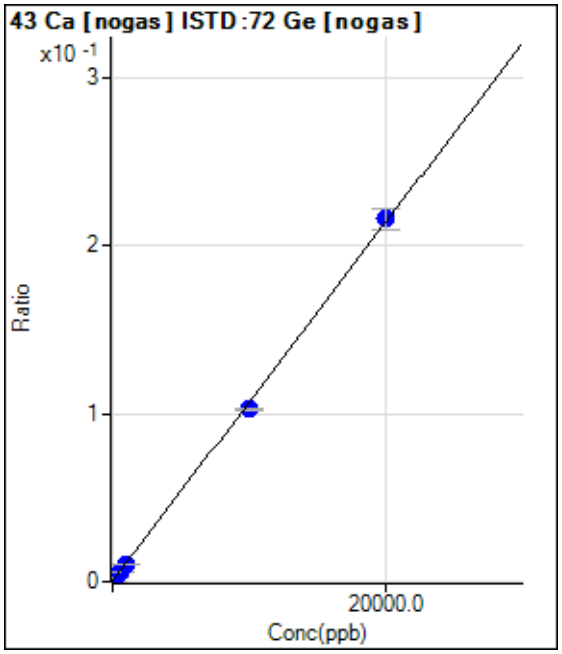
Calibration for 149_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	139939.10		P	1.2
2	☐	200.000	213.562	225584.16		P	1.5
3	☐	500.000	509.092	344101.43		P	0.0
4	☐	1000.000	984.362	534700.04		P	1.4
5	☐	10000.00	10083.533	4183759.94		A	0.7
6	☐	20000.00	19958.652	8144000.09		A	2.6
7	☐	100.000					

y = 401.0321 * x + 139939.1033
R = 1.0000
DL = 12.17

Weight: <None>
Min Conc: <None>

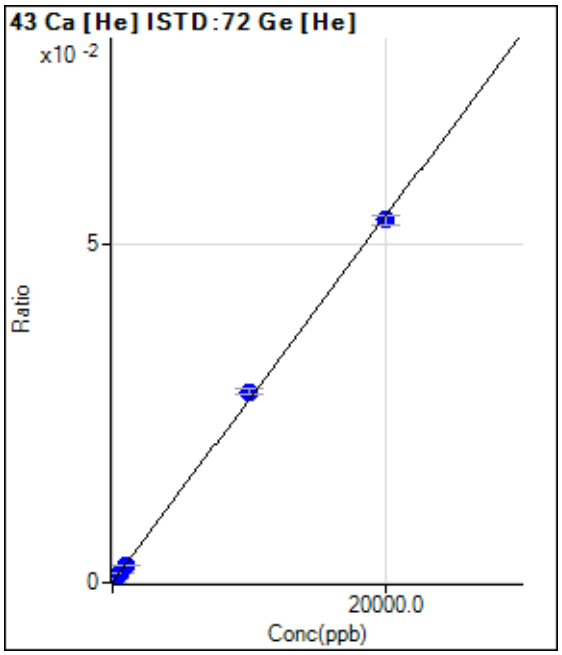


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	413.34	0.0003	P	9.9
2	☐	200.000	183.672	3247.00	0.0023	P	11.0
3	☐	500.000	468.203	7701.72	0.0053	P	2.5
4	☐	1000.000	898.279	14098.85	0.0099	P	1.6
5	☐	10000.00	9596.099	146092.08	0.1027	P	1.5
6	☐	20000.00	20207.995	296449.05	0.2160	P	5.5
7	☐	100.000					

y = 1.0675E-005 * x + 3.0190E-004
R = 0.9997
DL = 8.367

Weight: <None>
Min Conc: <None>

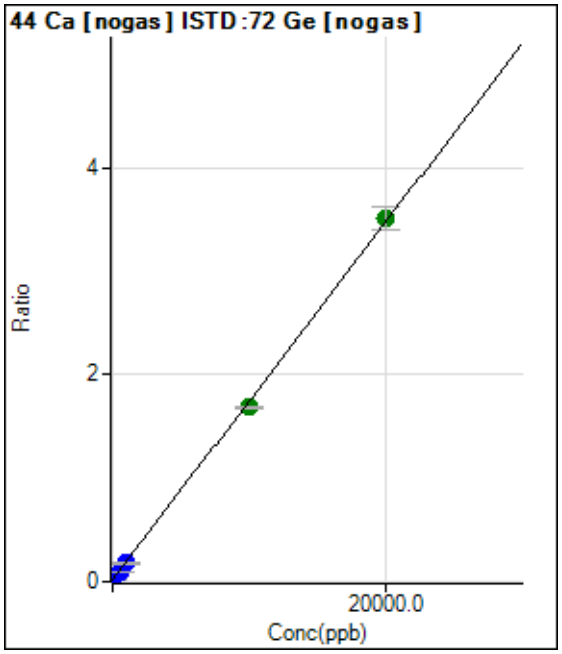
Calibration for 149_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	13.33	0.0000	P	43.0
2	☐	200.000	239.128	263.34	0.0007	P	28.7
3	☐	500.000	496.790	523.35	0.0014	P	11.0
4	☐	1000.000	939.385	973.37	0.0026	P	5.8
5	☐	10000.00	10399.613	10526.47	0.0281	P	3.0
6	☐	20000.00	19802.913	20631.69	0.0535	P	2.6
7	☐	100.000					

y = 2.6975E-006 * x + 3.4749E-005
R = 0.9997
DL = 16.61

Weight: <None>
Min Conc: <None>

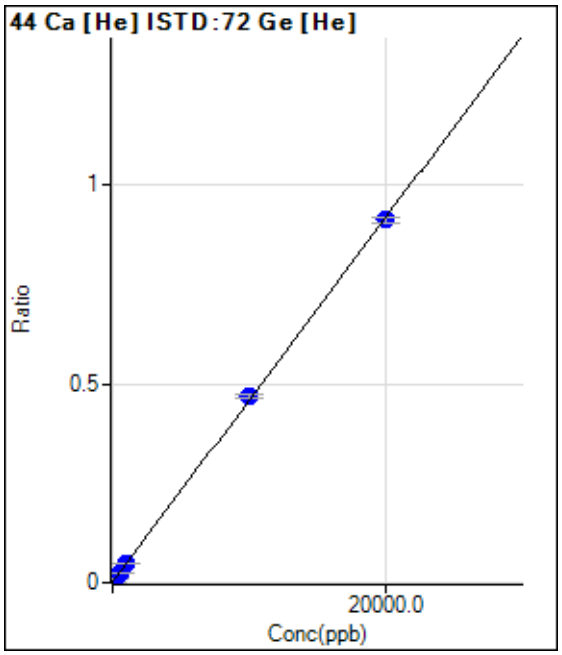


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	25964.97	0.0190	P	7.3
2	☐	200.000	188.687	73912.05	0.0515	P	0.6
3	☐	500.000	464.609	144078.00	0.0992	P	2.2
4	☐	1000.000	915.267	252158.97	0.1770	P	2.4
5	☐	10000.00	9630.101	2391145.49	1.6813	A	1.4
6	☐	20000.00	20190.184	4808732.74	3.5043	A	6.3
7	☐	100.000					

y = 1.7262E-004 * x + 0.0190
R = 0.9998
DL = 24.19

Weight: <None>
Min Conc: <None>

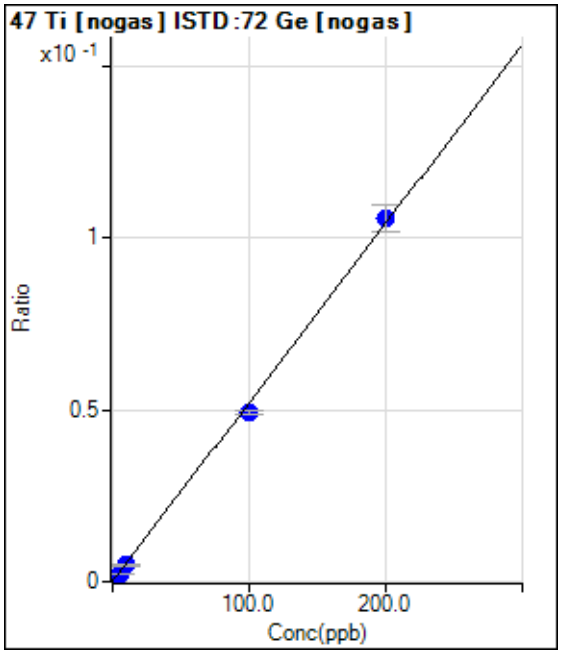
Calibration for 149_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	483.35	0.0013	P	23.6
2	☐	200.000	219.350	4377.24	0.0113	P	13.8
3	☐	500.000	532.337	9759.37	0.0256	P	0.8
4	☐	1000.000	1003.801	17908.81	0.0473	P	4.9
5	☐	10000.00	10216.703	175935.09	0.4694	P	1.8
6	☐	20000.00	19890.456	352169.16	0.9126	P	1.6
7	☐	100.000					

y = 4.5816E-005 * x + 0.0013
R = 0.9999
DL = 19.43

Weight: <None>
Min Conc: <None>

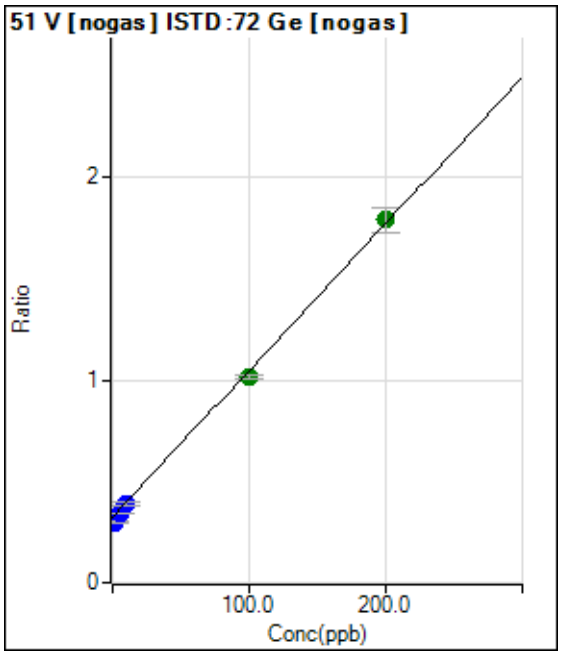


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	150.00	0.0001	P	19.2
2	☐	2.000	1.814	1510.09	0.0011	P	7.3
3	☐	5.000	4.428	3503.72	0.0024	P	8.4
4	☐	10.000	9.112	6904.73	0.0049	P	5.5
5	☐	100.000	94.737	70236.24	0.0494	P	2.0
6	☐	200.000	202.692	144764.24	0.1056	P	7.4
7	☐	1.000					

y = 5.2026E-004 * x + 1.0996E-004
R = 0.9995
DL = 0.1216

Weight: <None>
Min Conc: <None>

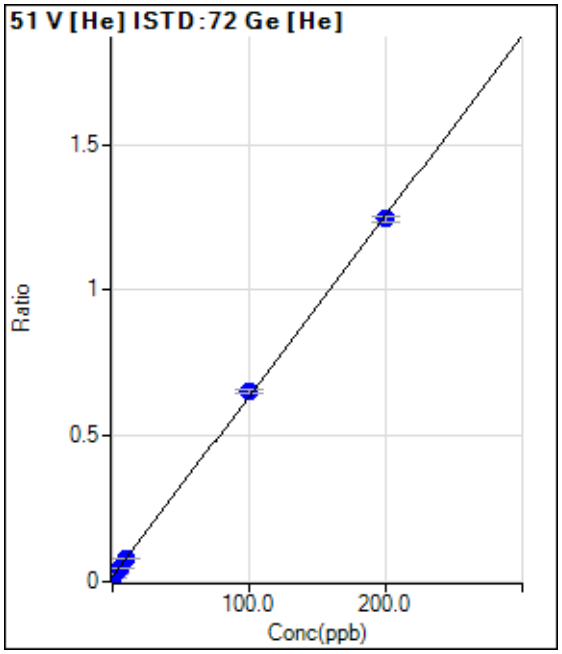
Calibration for 149_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	445243.60	0.3247	P	4.9
2	☐	2.000	-3.842	426004.31	0.2969	P	2.0
3	☐	5.000	2.255	495596.30	0.3410	P	1.9
4	☐	10.000	8.831	553475.01	0.3886	P	3.4
5	☐	100.000	95.304	1442823.57	1.0144	A	2.5
6	☐	200.000	202.534	2455531.17	1.7904	A	6.8
7	☐	1.000					

y = 0.0072 * x + 0.3247
R = 0.9995
DL = 6.634

Weight: <None>
Min Conc: <None>

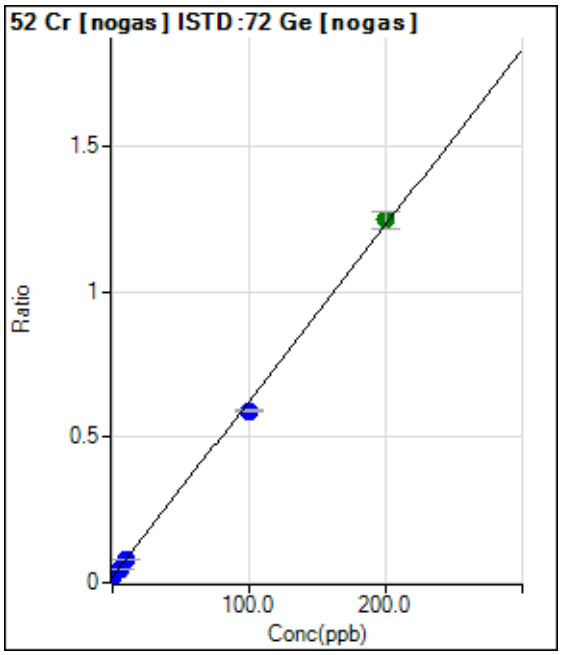


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.347	5806.25	0.0151	P	1.1
2	☐	2.000	1.426	10105.41	0.0261	P	1.7
3	☐	5.000	4.732	17713.08	0.0466	P	0.8
4	☐	10.000	9.562	28980.46	0.0764	P	0.9
5	☐	100.000	103.185	245667.99	0.6555	P	1.9
6	☐	200.000	198.442	480308.08	1.2446	P	1.4
7	☐	1.000					

y = 0.0062 * x + 0.0173
R = 0.9998
DL = 0.08343

Weight: <None>
Min Conc: <None>

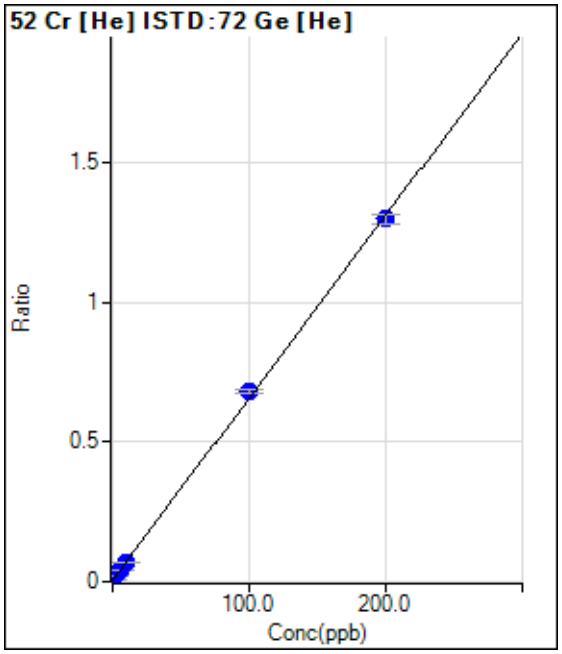
Calibration for 149_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	28018.05	0.0205	P	7.6
2	☐	2.000	1.639	43544.63	0.0304	P	0.4
3	☐	5.000	4.645	70466.72	0.0485	P	2.3
4	☐	10.000	9.615	111862.61	0.0785	P	3.2
5	☐	100.000	94.123	837675.38	0.5889	P	1.4
6	☐	200.000	202.970	1710582.11	1.2464	A	4.8
7	☐	1.000					

y = 0.0060 * x + 0.0205
R = 0.9994
DL = 0.769

Weight: <None>
Min Conc: <None>

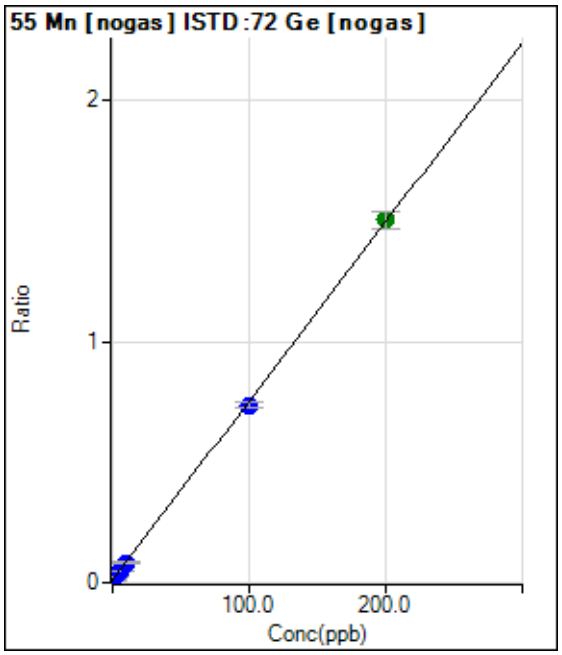


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1923.46	0.0050	P	10.0
2	☐	2.000	2.015	7028.08	0.0182	P	1.6
3	☐	5.000	5.207	14829.47	0.0390	P	3.8
4	☐	10.000	9.699	25881.66	0.0683	P	1.8
5	☐	100.000	103.487	254810.15	0.6799	P	2.2
6	☐	200.000	198.266	500865.88	1.2979	P	2.5
7	☐	1.000					

y = 0.0065 * x + 0.0050
R = 0.9998
DL = 0.2303

Weight: <None>
Min Conc: <None>

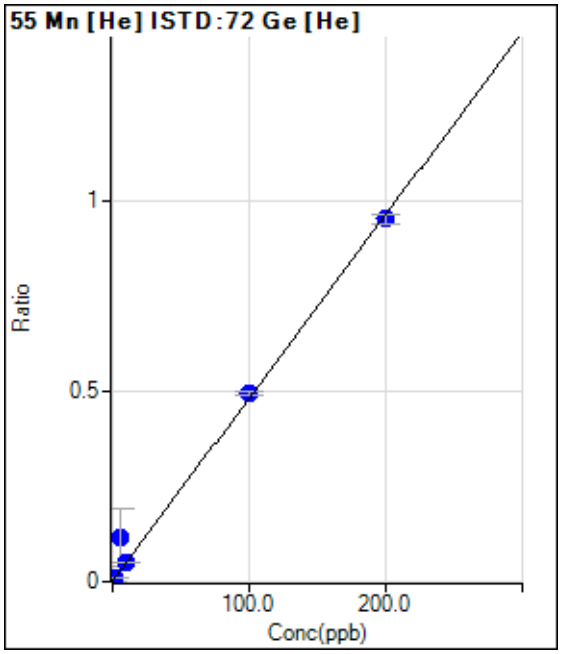
Calibration for 149_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	15833.63	0.0116	P	8.1
2	☐	2.000	1.912	36950.56	0.0258	P	0.8
3	☐	5.000	4.918	69821.50	0.0481	P	1.8
4	☐	10.000	9.687	118853.07	0.0835	P	4.1
5	☐	100.000	97.594	1046208.71	0.7359	P	3.4
6	☐	200.000	201.221	2065901.74	1.5051	A	4.7
7	☐	1.000					

y = 0.0074 * x + 0.0116
R = 0.9999
DL = 0.3792

Weight: <None>
Min Conc: <None>

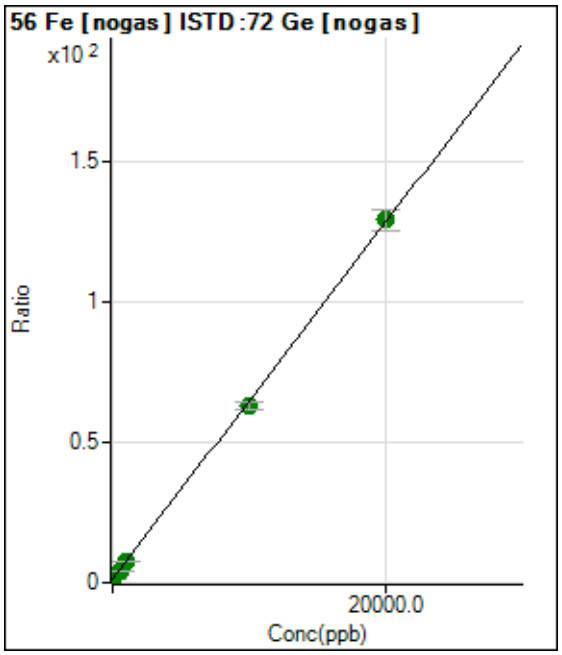


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	493.35	0.0013	P	27.3
2	☐	2.000	2.057	4317.23	0.0112	P	2.7
3	☐	5.000	23.712	43387.77	0.1150	P	132.
4	☐	10.000	10.223	19083.38	0.0503	P	0.4
5	☐	100.000	103.128	185892.00	0.4959	P	2.0
6	☐	200.000	197.957	366827.62	0.9507	P	2.9
7	☐	1.000					

y = 0.0048 * x + 0.0013
R = 0.9958
DL = 0.2194

Weight: <None>
Min Conc: <None>

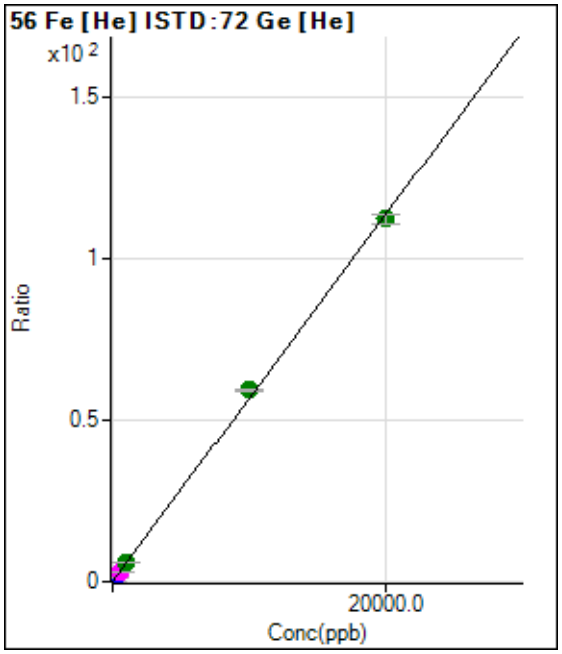
Calibration for 149_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1782816.84	1.3022	A	8.5
2	☐	200.000	192.906	3621176.25	2.5247	A	2.8
3	☐	500.000	480.053	6310952.88	4.3446	A	2.0
4	☐	1000.000	961.791	10535363.26	7.3977	A	3.8
5	☐	10000.00	9723.947	89470927.00	62.9292	A	3.6
6	☐	20000.00	20140.506	176872928.9	128.945	A	6.1
7	☐	100.000					

y = 0.0063 * x + 1.3022
R = 0.9999
DL = 52.66

Weight: <None>
Min Conc: <None>

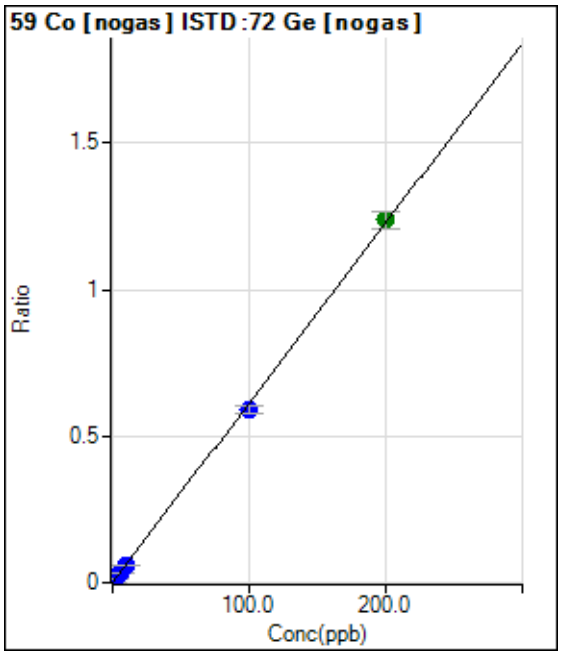


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	8215.27	0.0214	P	5.5
2	☐	200.000	204.677	458060.78	1.1834	P	2.3
3	☐	500.000	524.349	1140132.46	2.9982	M	8.2
4	☐	1000.000	1024.251	2212806.79	5.8361	A	1.4
5	☐	10000.00	10433.565	22212840.50	59.2531	A	1.2
6	☐	20000.00	19781.349	43340751.02	112.320	A	2.6
7	☐	100.000					

y = 0.0057 * x + 0.0214
R = 0.9997
DL = 0.6217

Weight: <None>
Min Conc: <None>

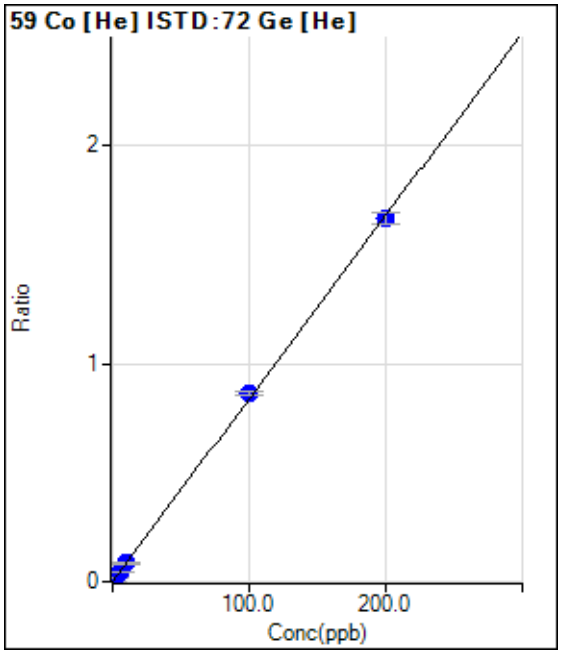
Calibration for 149_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	480.02	0.0004	P	7.8
2	☐	2.000	1.962	17768.86	0.0124	P	2.9
3	☐	5.000	4.799	43251.29	0.0298	P	1.6
4	☐	10.000	9.495	83405.62	0.0586	P	4.1
5	☐	100.000	96.329	840143.29	0.5910	P	3.9
6	☐	200.000	201.866	1699921.54	1.2381	A	5.0
7	☐	1.000					

y = 0.0061 * x + 3.5010E-004
R = 0.9998
DL = 0.01336

Weight: <None>
Min Conc: <None>

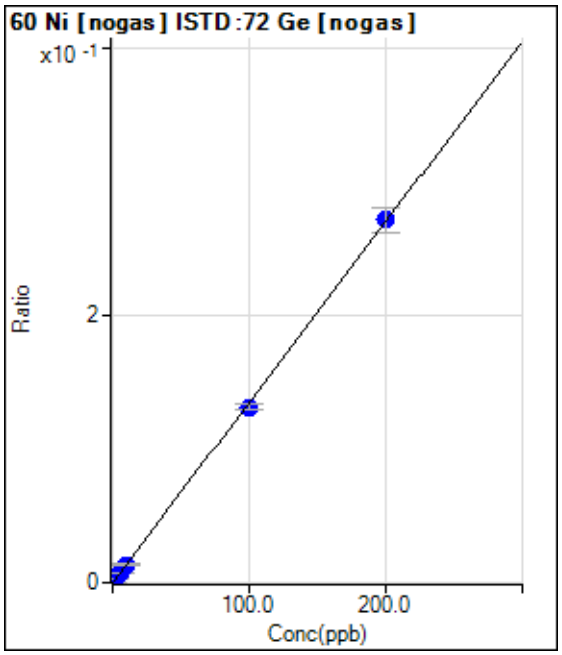


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	80.00	0.0002	P	21.9
2	☐	2.000	2.023	6651.33	0.0172	P	0.3
3	☐	5.000	5.294	16974.68	0.0446	P	2.5
4	☐	10.000	9.980	31807.61	0.0839	P	4.6
5	☐	100.000	103.301	324916.61	0.8668	P	1.7
6	☐	200.000	198.343	642115.60	1.6642	P	3.1
7	☐	1.000					

y = 0.0084 * x + 2.0873E-004
R = 0.9998
DL = 0.01632

Weight: <None>
Min Conc: <None>

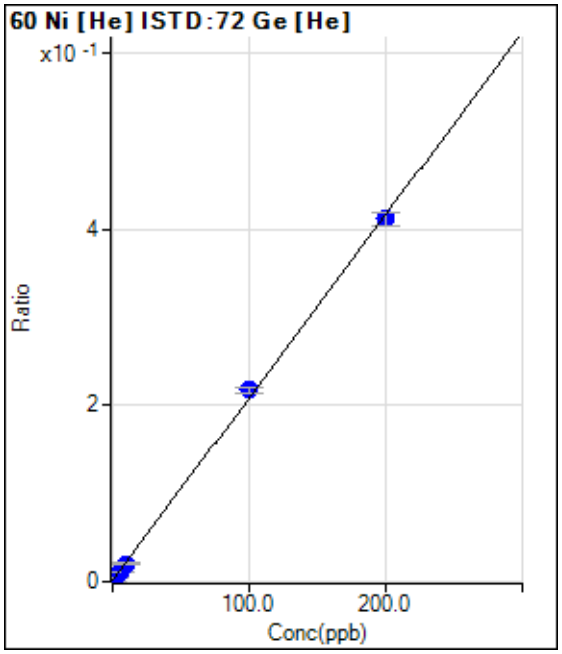
Calibration for 149_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.398	320.01	0.0002	P	21.9
2	☐	2.000	2.420	4250.54	0.0030	P	3.9
3	☐	5.000	5.157	9679.33	0.0067	P	2.7
4	☐	10.000	10.243	19256.92	0.0135	P	5.3
5	☐	100.000	97.605	187036.89	0.1315	P	3.8
6	☐	200.000	201.177	372090.15	0.2713	P	7.1
7	☐	1.000					

y = 0.0014 * x - 3.0312E-004
R = 0.9999
DL = 0.114

Weight: <None>
Min Conc: <None>

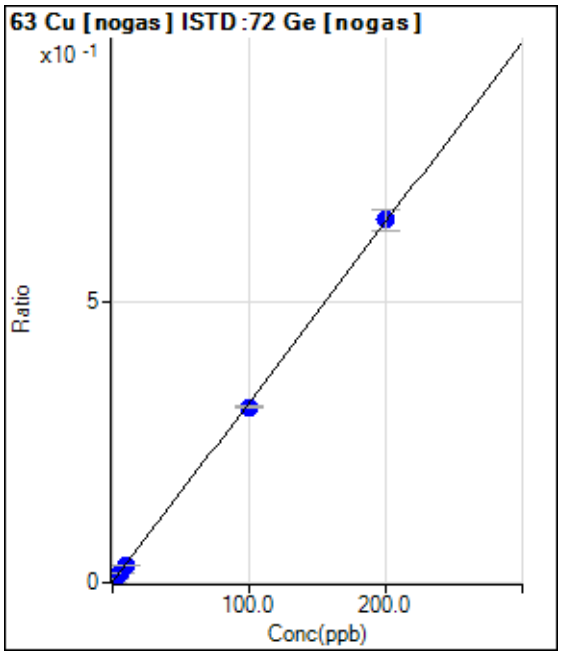


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.557	80.00	0.0002	P	37.1
2	☐	2.000	1.451	1693.43	0.0044	P	8.4
3	☐	5.000	4.708	4237.21	0.0111	P	2.6
4	☐	10.000	9.188	7755.06	0.0204	P	3.9
5	☐	100.000	104.313	81667.72	0.2179	P	3.0
6	☐	200.000	197.897	159029.01	0.4122	P	4.0
7	☐	1.000					

y = 0.0021 * x + 0.0014
R = 0.9996
DL = 0.1119

Weight: <None>
Min Conc: <None>

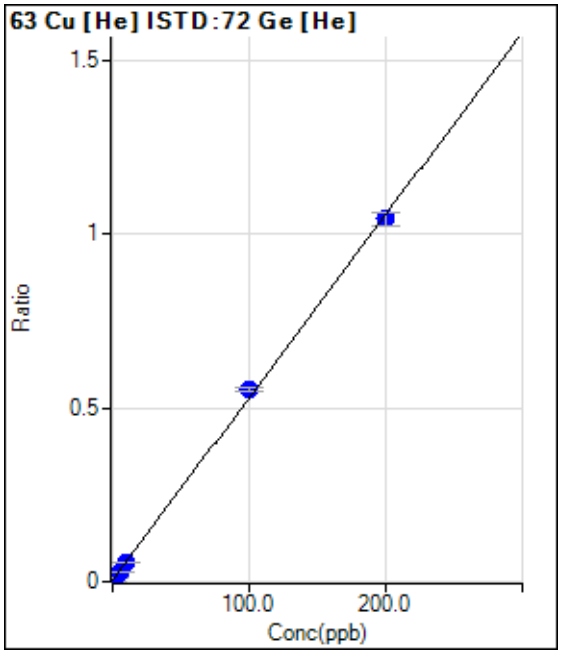
Calibration for 149_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1050.04	0.0008	P	7.3
2	☐	2.000	2.013	10333.03	0.0072	P	4.1
3	☐	5.000	4.826	23562.05	0.0162	P	0.9
4	☐	10.000	9.482	44334.07	0.0311	P	3.3
5	☐	100.000	97.408	444635.70	0.3126	P	1.9
6	☐	200.000	201.326	885305.61	0.6453	P	5.7
7	☐	1.000					

y = 0.0032 * x + 7.6512E-004
R = 0.9999
DL = 0.05201

Weight: <None>
Min Conc: <None>

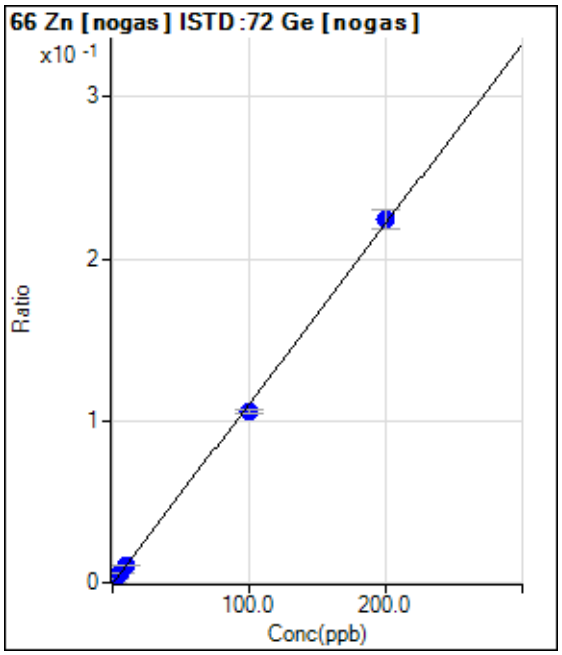


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.655	333.34	0.0009	P	8.2
2	☐	2.000	1.379	4477.27	0.0116	P	6.0
3	☐	5.000	4.670	10983.39	0.0289	P	2.7
4	☐	10.000	9.424	20428.41	0.0539	P	2.7
5	☐	100.000	104.277	207141.27	0.5526	P	1.7
6	☐	200.000	197.905	403180.76	1.0450	P	3.6
7	☐	1.000					

y = 0.0053 * x + 0.0043
R = 0.9996
DL = 0.04051

Weight: <None>
Min Conc: <None>

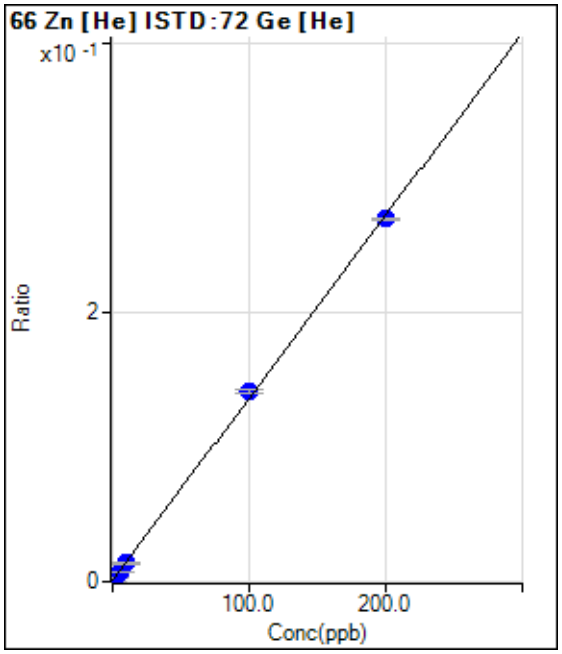
Calibration for 149_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.794	326.68	0.0002	P	19.3
2	☐	2.000	2.666	3322.01	0.0023	P	1.4
3	☐	5.000	5.695	8251.98	0.0057	P	1.7
4	☐	10.000	10.183	15203.12	0.0107	P	5.3
5	☐	100.000	95.391	149731.37	0.1053	P	2.6
6	☐	200.000	202.271	307378.24	0.2240	P	5.2
7	☐	1.000					

y = 0.0011 * x - 6.4533E-004
R = 0.9996
DL = 0.1233

Weight: <None>
Min Conc: <None>

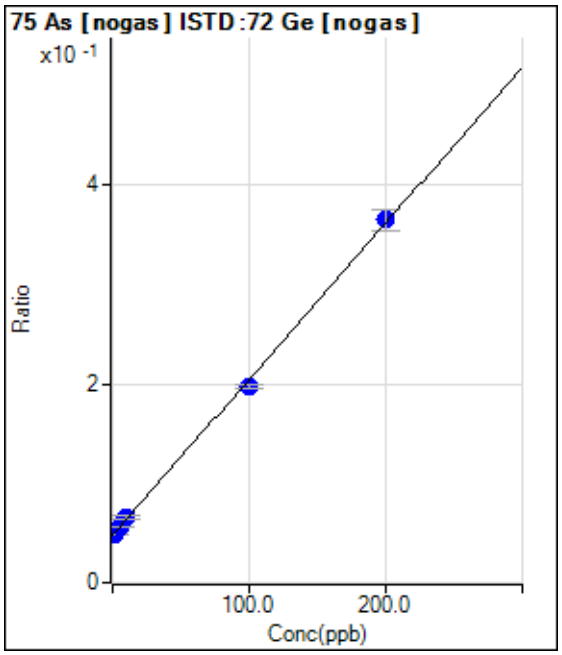


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.491	90.00	0.0002	P	59.3
2	☐	2.000	1.671	1226.73	0.0032	P	7.8
3	☐	5.000	4.490	2660.22	0.0070	P	6.6
4	☐	10.000	9.442	5197.47	0.0137	P	4.2
5	☐	100.000	103.687	53060.39	0.1415	P	2.0
6	☐	200.000	198.201	104094.50	0.2697	P	0.8
7	☐	1.000					

y = 0.0014 * x + 9.0179E-004
R = 0.9997
DL = 0.3088

Weight: <None>
Min Conc: <None>

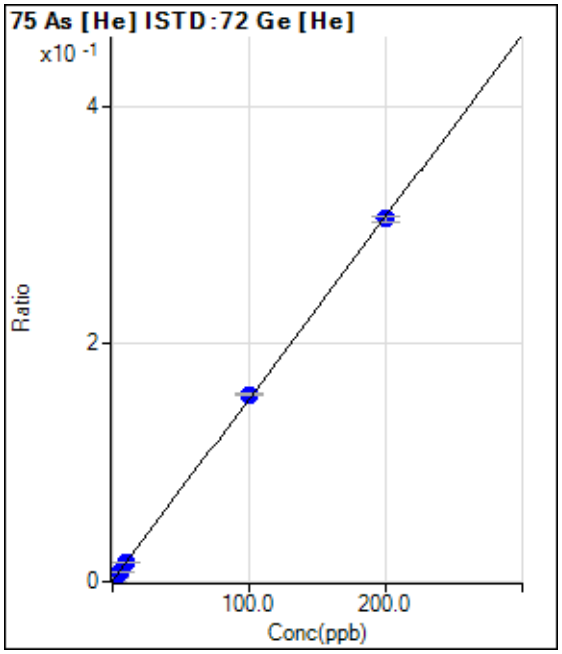
Calibration for 149_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	2.292	70526.15	0.0514	P	3.1
2	☐	2.000	0.280	69200.95	0.0482	P	1.9
3	☐	5.000	5.178	81270.23	0.0559	P	2.3
4	☐	10.000	11.511	93867.25	0.0659	P	3.3
5	☐	100.000	95.605	281441.50	0.1979	P	1.5
6	☐	200.000	202.135	501141.41	0.3652	P	5.6
7	☐	1.000					

y = 0.0016 * x + 0.0478
R = 0.9995
DL = 3.064

Weight: <None>
Min Conc: <None>

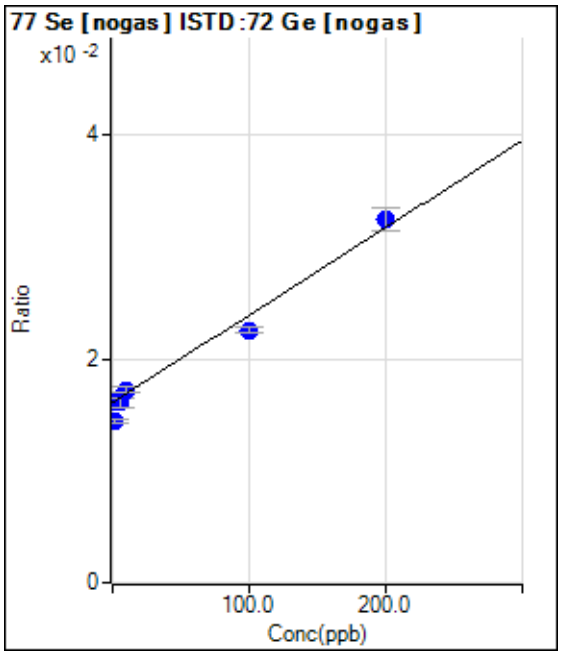


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	268.89	0.0007	P	20.5
2	☐	2.000	1.926	1414.51	0.0037	P	6.6
3	☐	5.000	5.068	3223.63	0.0085	P	5.8
4	☐	10.000	9.994	6073.26	0.0160	P	3.4
5	☐	100.000	102.403	59105.13	0.1577	P	1.0
6	☐	200.000	198.798	117871.80	0.3055	P	1.9
7	☐	1.000					

y = 0.0015 * x + 7.0148E-004
R = 0.9999
DL = 0.2813

Weight: <None>
Min Conc: <None>

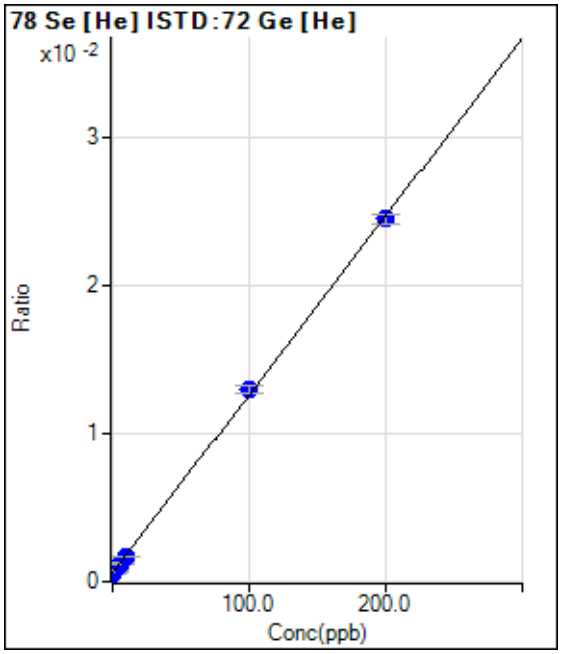
Calibration for 149_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	22100.36	0.0161	P	4.3
2	☐	2.000	-21.402	20722.10	0.0144	P	2.5
3	☐	5.000	-0.357	23388.64	0.0161	P	5.4
4	☐	10.000	14.580	24576.87	0.0172	P	2.4
5	☐	100.000	82.789	32111.76	0.0226	P	1.9
6	☐	200.000	208.744	44437.61	0.0324	P	6.3
7	☐	1.000					

y = 7.8037E-005 * x + 0.0161
R = 0.9906
DL = 26.4

Weight: <None>
Min Conc: <None>

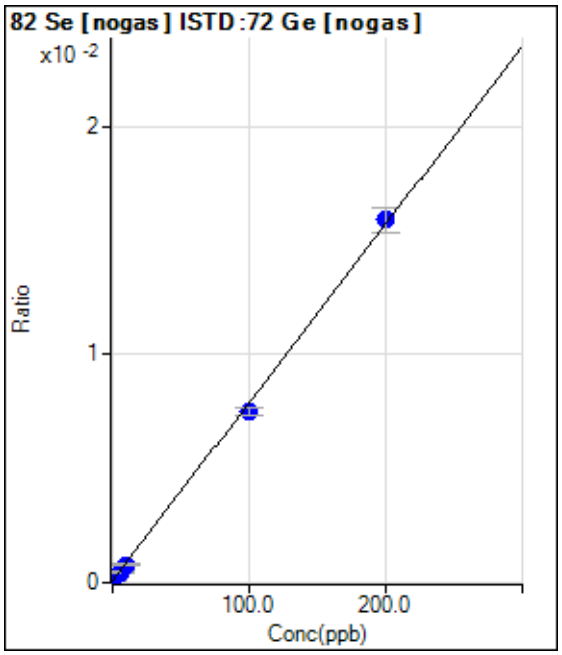


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.334	209.33	0.0005	P	2.6
2	☐	2.000	1.494	296.67	0.0008	P	13.6
3	☐	5.000	5.178	460.68	0.0012	P	4.8
4	☐	10.000	9.164	641.35	0.0017	P	5.7
5	☐	100.000	102.910	4872.66	0.0130	P	3.2
6	☐	200.000	198.587	9468.47	0.0245	P	2.4
7	☐	1.000					

y = 1.2061E-004 * x + 5.8626E-004
R = 0.9998
DL = 0.3467

Weight: <None>
Min Conc: <None>

Calibration for 149_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	126.67	0.0001	P	9.9
2	☐	2.000	1.854	340.01	0.0002	P	5.2
3	☐	5.000	4.611	656.69	0.0005	P	10.6
4	☐	10.000	9.036	1140.06	0.0008	P	6.5
5	☐	100.000	94.990	10683.32	0.0075	P	5.3
6	☐	200.000	202.564	21826.76	0.0159	P	6.8
7	☐	1.000					

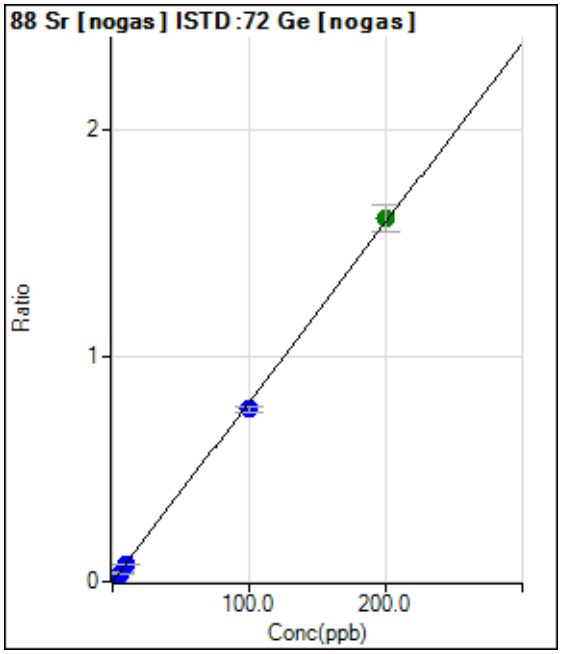
y = 7.8123E-005 * x + 9.2380E-005

R = 0.9996

DL = 0.3524

Weight: <None>

Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	446.68	0.0003	P	16.8
2	☐	2.000	1.925	22417.71	0.0156	P	3.2
3	☐	5.000	4.744	55302.23	0.0381	P	4.8
4	☐	10.000	9.383	106870.97	0.0750	P	1.8
5	☐	100.000	95.905	1085234.62	0.7633	P	3.5
6	☐	200.000	202.085	2203983.30	1.6080	A	7.6
7	☐	1.000					

y = 0.0080 * x + 3.2361E-004

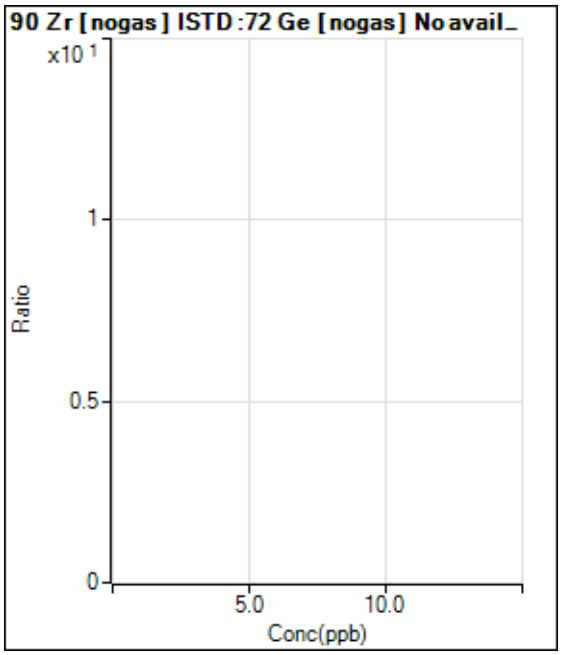
R = 0.9997

DL = 0.02051

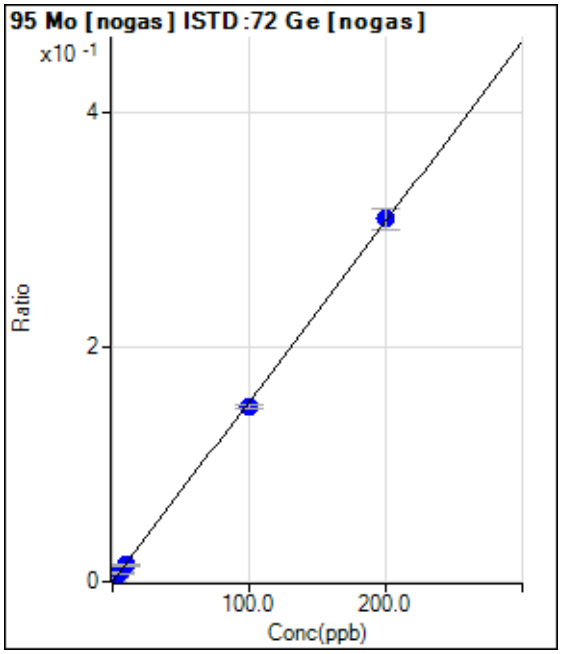
Weight: <None>

Min Conc: <None>

Calibration for 149_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					

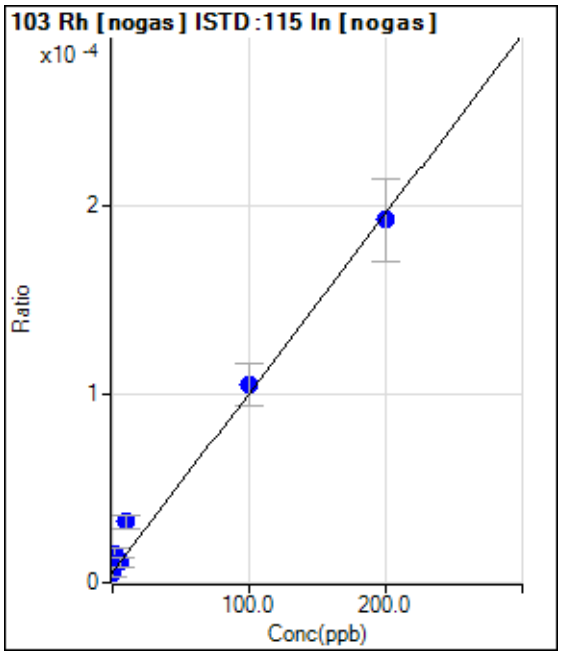


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	50.00	0.0000	P	51.2
2	☐	2.000	1.857	4137.21	0.0029	P	5.8
3	☐	5.000	4.858	10883.49	0.0075	P	6.5
4	☐	10.000	9.175	20118.29	0.0141	P	4.2
5	☐	100.000	97.026	211849.93	0.1490	P	2.3
6	☐	200.000	201.533	424590.32	0.3095	P	5.5
7	☐	1.000					

y = 0.0015 * x + 3.6142E-005
R = 0.9998
DL = 0.03614

Weight: <None>
Min Conc: <None>

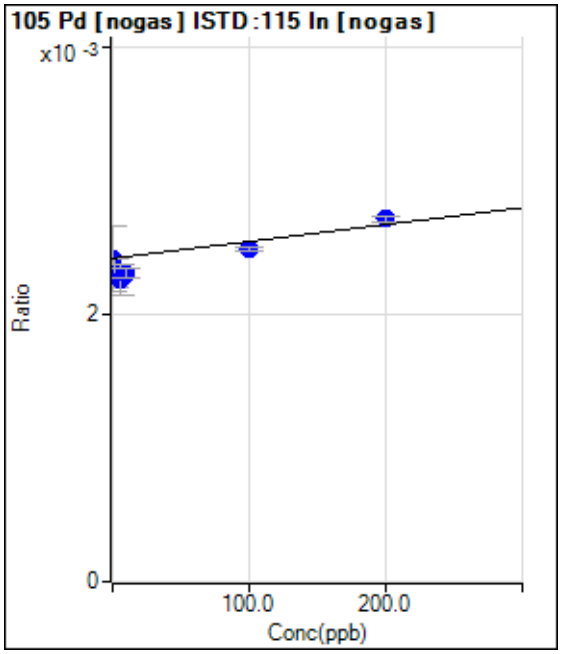
Calibration for 149_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6.67	0.0000	P	86.6
2	☐	2.000	10.287	20.00	0.0000	P	44.4
3	☐	5.000	5.636	13.33	0.0000	P	41.8
4	☐	10.000	28.127	40.00	0.0000	P	24.8
5	☐	100.000	104.777	126.67	0.0001	P	20.4
6	☐	200.000	196.606	220.01	0.0002	P	22.8
7	☐	1.000					

y = 9.5203E-007 * x + 5.3912E-006
R = 0.9962
DL = 14.72

Weight: <None>
Min Conc: <None>

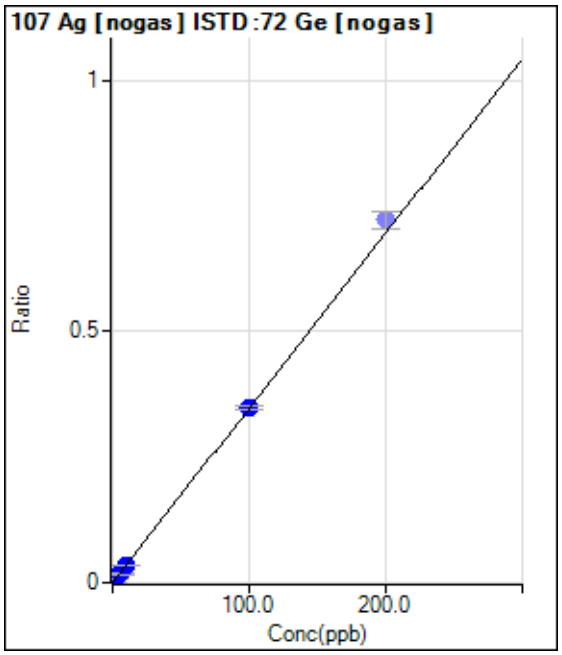


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2786.94	0.0024	P	20.0
2	☐	2.000	-84.398	2976.97	0.0023	P	9.2
3	☐	5.000	-123.496	2786.92	0.0023	P	10.2
4	☐	10.000	-88.614	2866.95	0.0023	P	3.0
5	☐	100.000	51.020	3000.30	0.0025	P	1.1
6	☐	200.000	233.497	3063.64	0.0027	P	1.8
7	☐	1.000					

y = 1.2647E-006 * x + 0.0024
R = 0.9402
DL = 1146

Weight: <None>
Min Conc: <None>

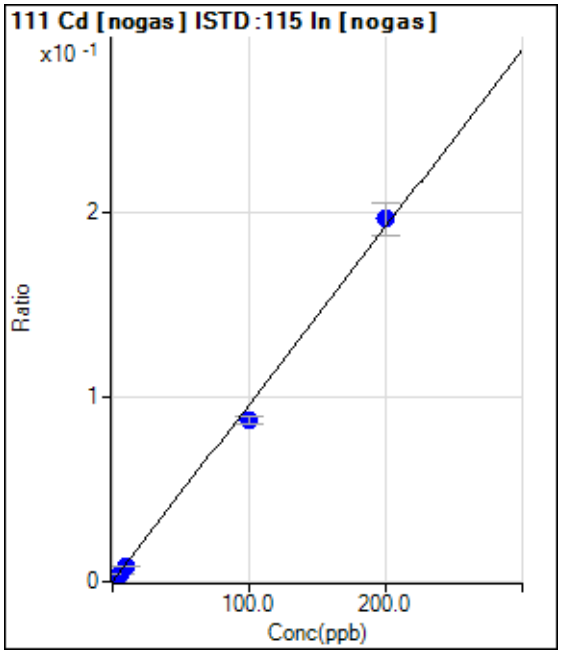
Calibration for 149_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	26.67	0.0000	P	41.9
2	☐	2.000	1.921	9602.73	0.0067	P	6.2
3	☐	5.000	4.999	25274.97	0.0174	P	4.1
4	☐	10.000	9.828	48687.45	0.0342	P	4.6
5	☐	100.000	100.019	494498.12	0.3478	P	2.8
6	☑	200.000		991979.86	0.7228	P	5.0
7	☐	1.000					

y = 0.0035 * x + 1.9382E-005
R = 1.0000
DL = 0.007008

Weight: <None>
Min Conc: <None>

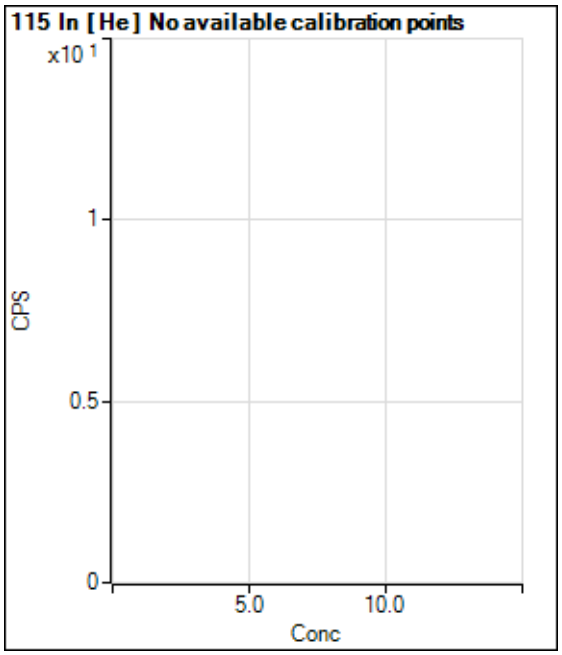


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	13.33	0.0000	P	39.2
2	☐	2.000	1.703	2126.83	0.0016	P	4.2
3	☐	5.000	4.611	5487.60	0.0044	P	6.2
4	☐	10.000	8.413	10083.06	0.0081	P	4.2
5	☐	100.000	91.031	105752.76	0.0876	P	4.0
6	☐	200.000	204.577	221277.63	0.1968	P	9.4
7	☐	1.000					

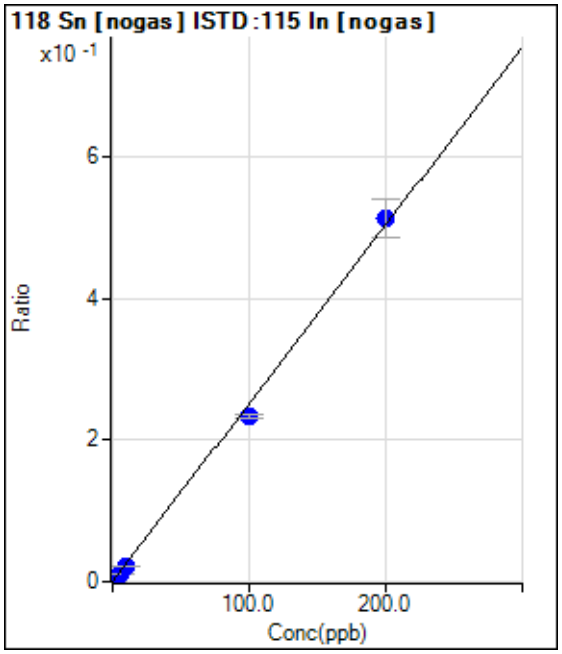
y = 9.6180E-004 * x + 1.1409E-005
R = 0.9986
DL = 0.01394

Weight: <None>
Min Conc: <None>

Calibration for 149_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			493811.36		P	1.4
2	☐			491013.79		P	1.4
3	☐			491476.80		P	1.8
4	☐			492195.32		P	2.2
5	☐			479986.38		P	1.0
6	☐			482622.22		P	0.6
7	☐						

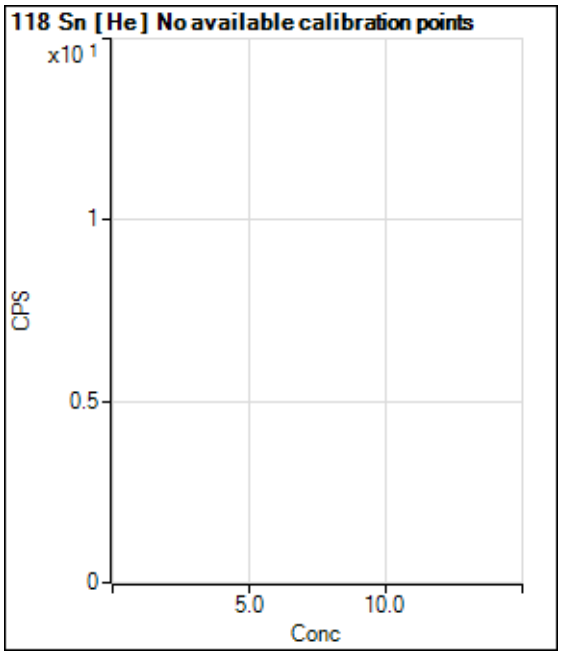


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	330.01	0.0003	P	43.5
2	☐	2.000	1.748	6044.49	0.0047	P	5.0
3	☐	5.000	4.491	14312.67	0.0116	P	1.7
4	☐	10.000	8.747	27678.92	0.0223	P	4.1
5	☐	100.000	92.979	282624.74	0.2338	P	1.8
6	☐	200.000	203.588	575037.92	0.5116	P	10.6
7	☐	1.000					

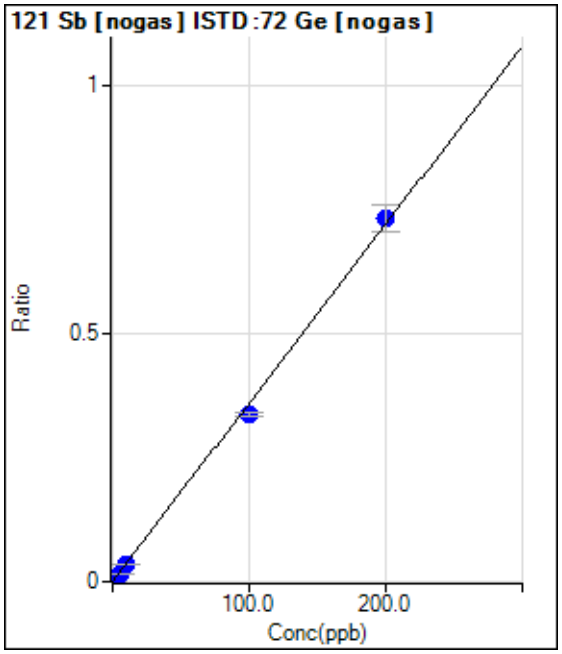
y = 0.0025 * x + 2.9282E-004
R = 0.9992
DL = 0.1522

Weight: <None>
Min Conc: <None>

Calibration for 149_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			153.33		P	32.8
2	☐			2586.89		P	8.5
3	☐			6524.63		P	4.5
4	☐			11860.83		P	1.5
5	☐			122364.54		P	1.4
6	☐			245623.81		P	1.6
7	☐						

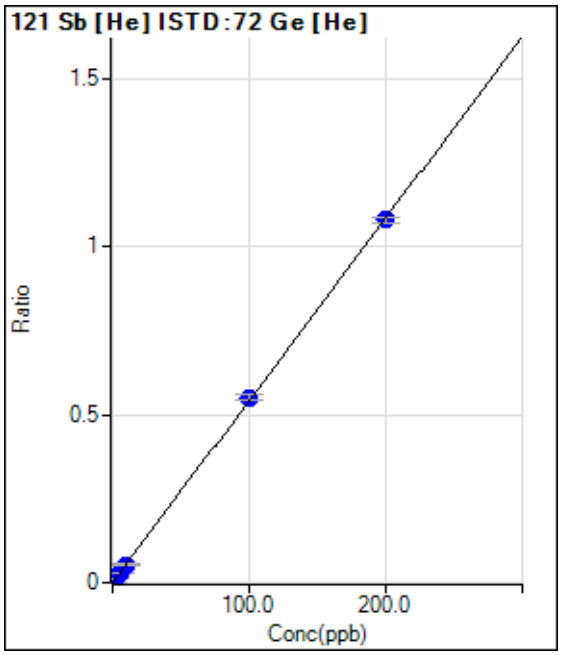


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	316.68	0.0002	P	17.3
2	☐	2.000	1.919	10223.13	0.0071	P	0.3
3	☐	5.000	4.586	24297.14	0.0167	P	5.0
4	☐	10.000	9.446	48714.84	0.0342	P	2.0
5	☐	100.000	93.638	479048.33	0.3368	P	3.0
6	☐	200.000	203.220	1001804.96	0.7307	P	7.5
7	☐	1.000					

y = 0.0036 * x + 2.2901E-004
R = 0.9993
DL = 0.03299

Weight: <None>
Min Conc: <None>

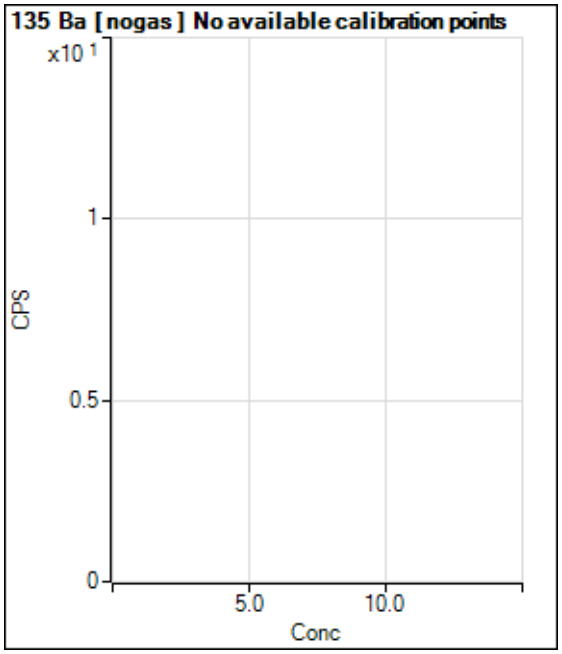
Calibration for 149_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	153.33	0.0004	P	26.8
2	☐	2.000	1.916	4167.22	0.0108	P	3.2
3	☐	5.000	5.215	10883.49	0.0286	P	1.7
4	☐	10.000	9.916	20475.57	0.0540	P	6.2
5	☐	100.000	101.437	205737.06	0.5490	P	3.1
6	☐	200.000	199.281	416059.19	1.0781	P	1.7
7	☐	1.000					

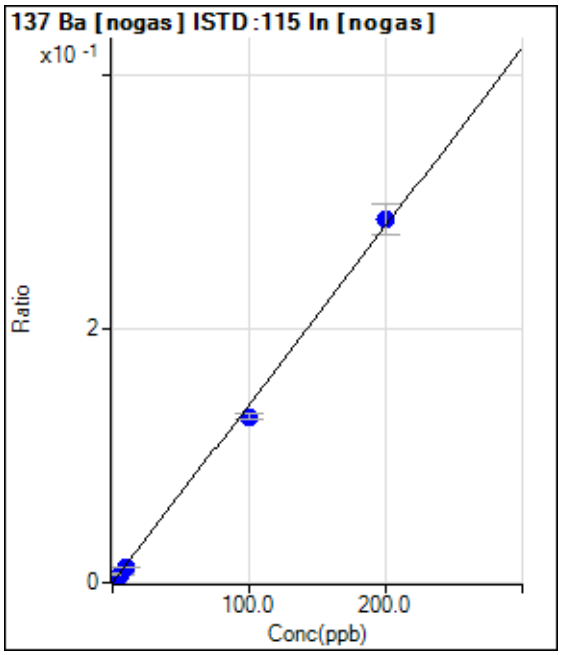
y = 0.0054 * x + 4.0023E-004
R = 1.0000
DL = 0.05945

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			46.67		P	53.9
2	☐			1616.77		P	7.4
3	☐			4794.08		P	3.4
4	☐			9035.82		P	7.0
5	☐			92255.85		P	2.4
6	☐			189288.26		P	0.6
7	☐						

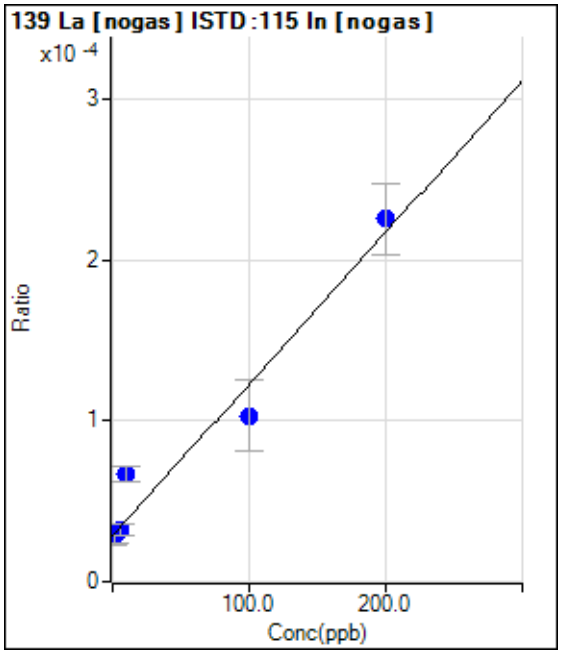
Calibration for 149_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	53.33	0.0000	P	76.0
2	☐	2.000	1.760	3253.69	0.0025	P	5.5
3	☐	5.000	4.777	8348.83	0.0068	P	4.8
4	☐	10.000	8.778	15397.05	0.0124	P	1.1
5	☐	100.000	93.203	158269.37	0.1310	P	3.0
6	☐	200.000	203.468	321599.40	0.2859	P	8.4
7	☐	1.000					

y = 0.0014 * x + 4.8492E-005
R = 0.9992
DL = 0.07864

Weight: <None>
Min Conc: <None>

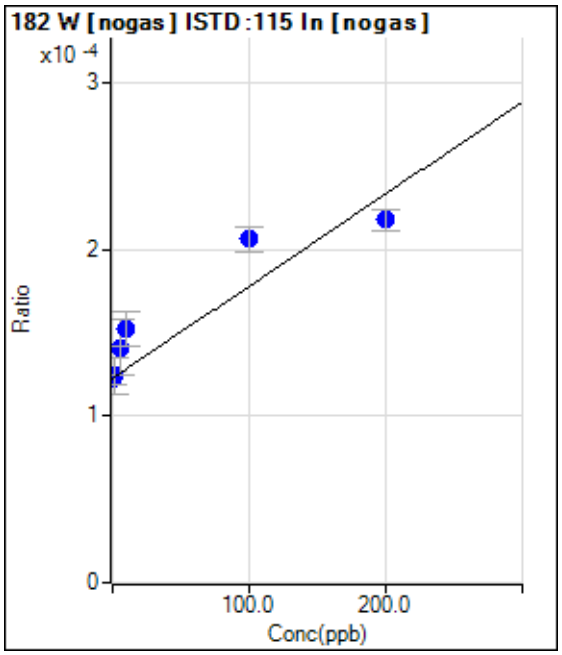


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	33.33	0.0000	P	40.8
2	☐	2.000	0.302	36.67	0.0000	P	38.2
3	☐	5.000	3.838	40.00	0.0000	P	21.7
4	☐	10.000	40.878	83.33	0.0001	P	14.8
5	☐	100.000	79.272	123.33	0.0001	P	41.9
6	☐	200.000	208.866	253.34	0.0002	P	19.4
7	☐	1.000					

y = 9.4239E-007 * x + 2.8556E-005
R = 0.9786
DL = 37.13

Weight: <None>
Min Conc: <None>

Calibration for 149_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	143.33	0.0001	P	6.2
2	☐	2.000	2.640	160.00	0.0001	P	18.1
3	☐	5.000	33.335	176.67	0.0001	P	23.5
4	☐	10.000	53.535	190.00	0.0002	P	14.3
5	☐	100.000	150.660	250.01	0.0002	P	7.3
6	☐	200.000	171.779	246.67	0.0002	P	6.1
7	☐	1.000					

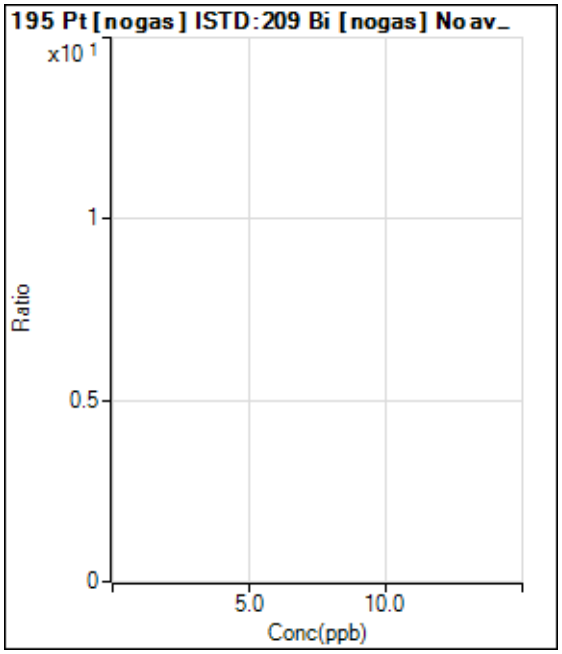
y = 5.5330E-007 * x + 1.2292E-004

R = 0.9293

DL = 41.1

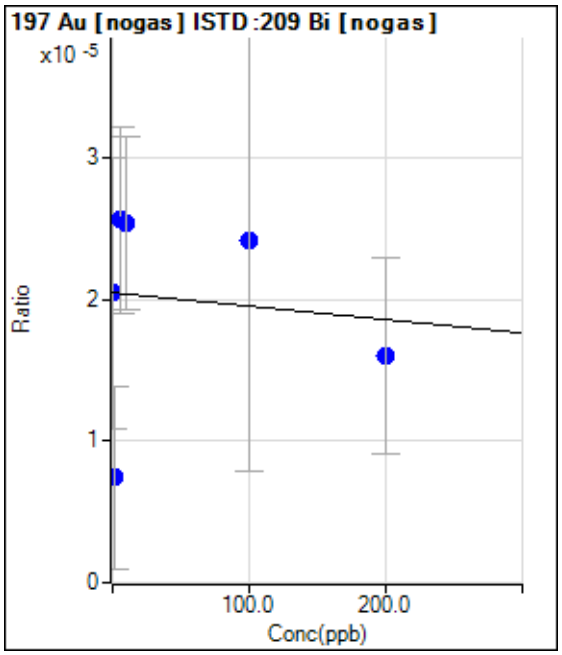
Weight: <None>

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 149_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	16.67	0.0000	P	93.7
2	☐	2.000	1374.964	6.67	0.0000	P	173.
3	☐	5.000	-541.218	23.33	0.0000	P	51.5
4	☐	10.000	-519.482	23.33	0.0000	P	47.8
5	☐	100.000	-382.125	23.33	0.0000	P	134.
6	☐	200.000	467.462	13.33	0.0000	P	86.8
7	☐	1.000					

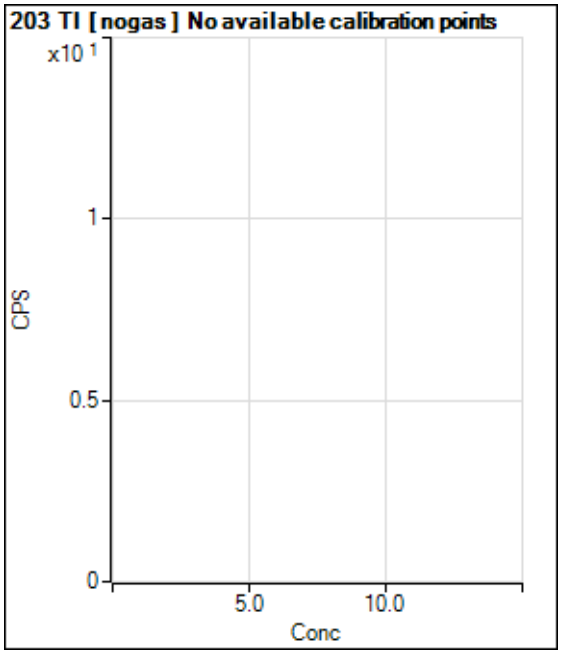
y = -9.5020E-009 * x + 2.0500E-005

R = -0.0951

DL = -6063

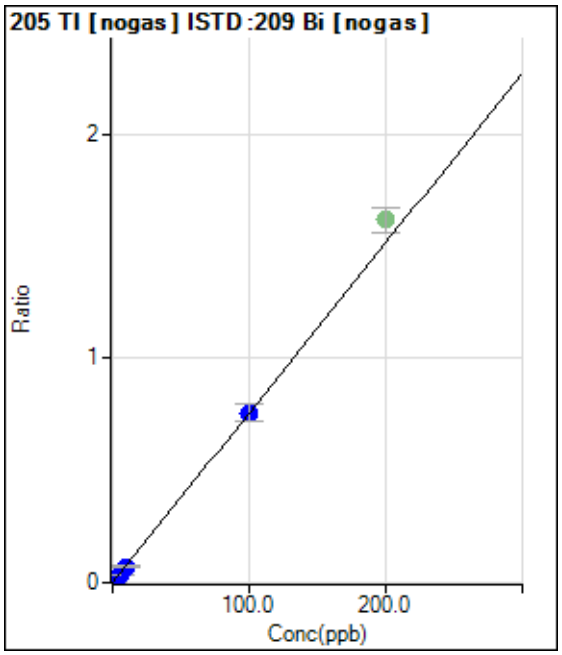
Weight: <None>

Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			60.00		P	44.1
2	☐			5894.49		P	5.7
3	☐			13685.91		P	0.7
4	☐			27837.22		P	1.1
5	☐			291768.58		P	3.7
6	☐			588421.28		P	1.7
7	☐						

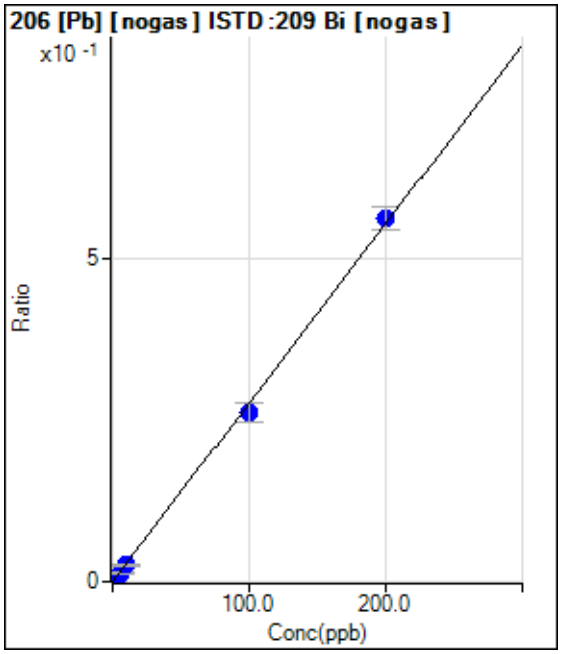
Calibration for 149_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	106.67	0.0001	P	20.3
2	☐	2.000	1.984	13909.43	0.0151	P	7.0
3	☐	5.000	4.807	33605.08	0.0365	P	5.7
4	☐	10.000	9.529	65518.62	0.0722	P	6.2
5	☐	100.000	100.057	690690.22	0.7573	P	10.2
6	☑	200.000		1382875.71	1.6172	A	6.7
7	☐	1.000					

y = 0.0076 * x + 1.2666E-004
R = 1.0000
DL = 0.0102

Weight: <None>
Min Conc: <None>

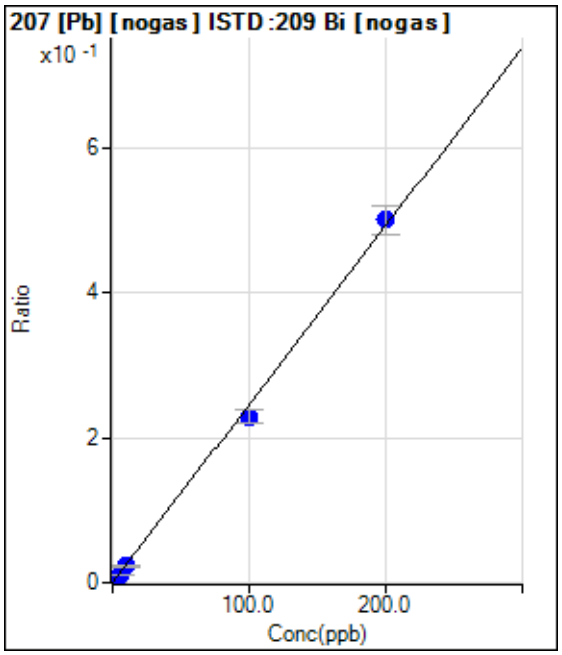


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	56.67	0.0001	P	43.3
2	☐	2.000	1.895	4874.14	0.0053	P	8.7
3	☐	5.000	4.724	12084.65	0.0131	P	5.9
4	☐	10.000	9.187	23093.21	0.0255	P	6.6
5	☐	100.000	94.315	237768.88	0.2608	P	10.9
6	☐	200.000	202.891	479782.44	0.5609	P	6.2
7	☐	1.000					

y = 0.0028 * x + 6.8298E-005
R = 0.9994
DL = 0.03212

Weight: <None>
Min Conc: <None>

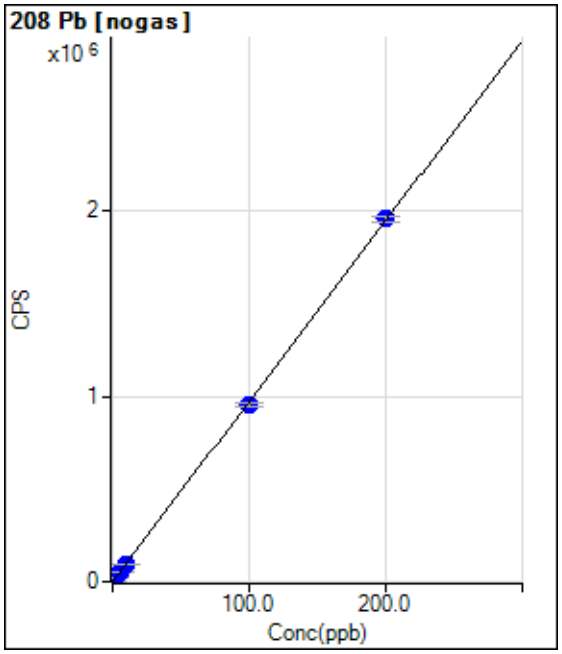
Calibration for 149_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	20.00	0.0000	P	50.4
2	☐	2.000	1.882	4283.98	0.0046	P	4.0
3	☐	5.000	4.575	10370.13	0.0113	P	8.0
4	☐	10.000	9.294	20723.41	0.0229	P	8.4
5	☐	100.000	93.162	208991.25	0.2289	P	8.4
6	☐	200.000	203.466	427330.87	0.5000	P	7.9
7	☐	1.000					

y = 0.0025 * x + 2.3907E-005
R = 0.9992
DL = 0.0147

Weight: <None>
Min Conc: <None>

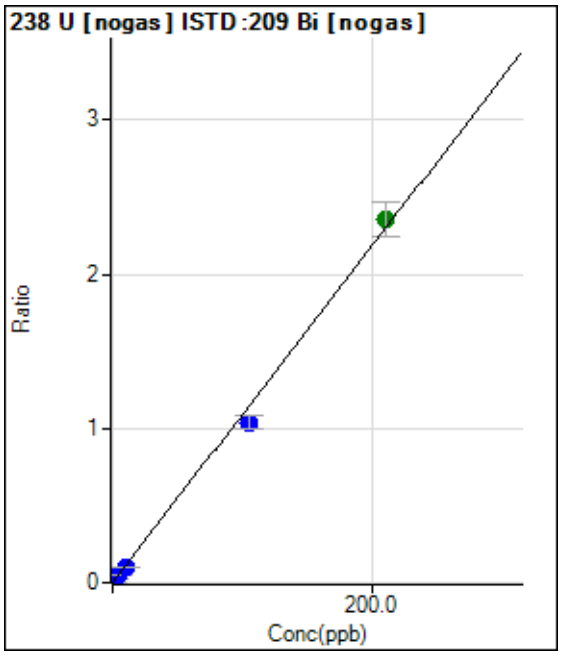


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	160.00		P	33.1
2	☐	2.000	1.980	19411.51		P	3.4
3	☐	5.000	4.934	48128.66		P	2.6
4	☐	10.000	9.598	93468.96		P	2.9
5	☐	100.000	97.874	951685.88		P	2.0
6	☐	200.000	201.085	1955106.57		P	1.9
7	☐	1.000					

y = 9721.9841 * x + 160.0000
R = 0.9999
DL = 0.01633

Weight: <None>
Min Conc: <None>

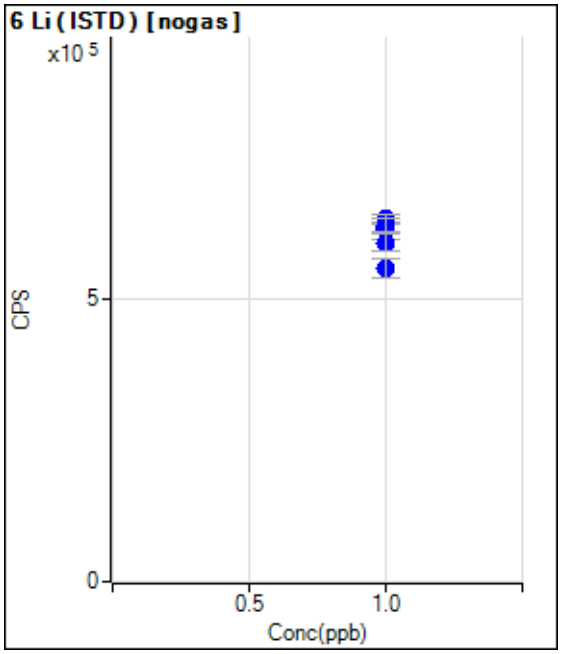
Calibration for 149_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	40.00	0.0000	P	6.4
2	☐	2.000	1.808	18197.35	0.0198	P	9.4
3	☐	5.000	4.583	46197.40	0.0502	P	7.1
4	☐	10.000	9.093	90339.18	0.0995	P	4.1
5	☐	105.000	95.036	949108.61	1.0400	P	8.7
6	☐	210.000	215.037	2009692.37	2.3530	A	9.6
7	☐	1.000					

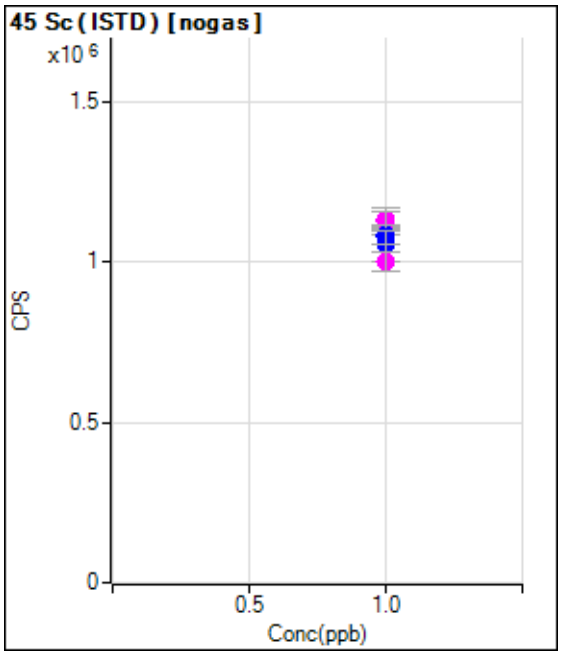
y = 0.0109 * x + 4.7472E-005
R = 0.9985
DL = 0.0008312

Weight: <None>
Min Conc: <None>

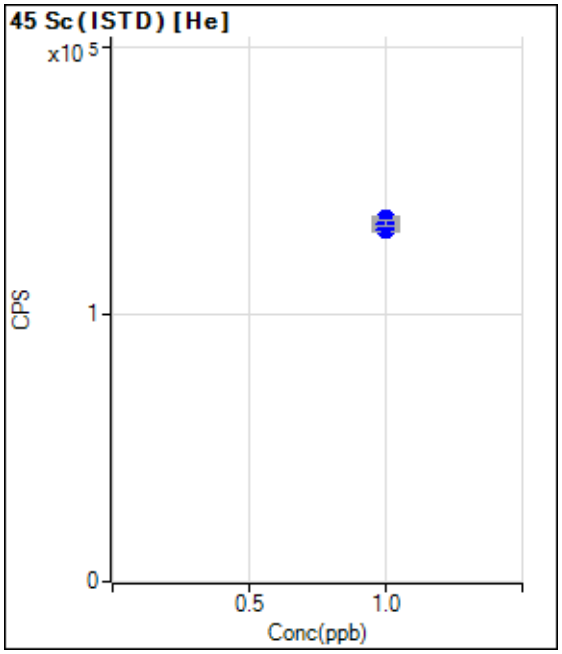


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		625644.70		P	5.7
2	☐	1.000		643849.53		P	2.6
3	☐	1.000		628264.19		P	3.6
4	☐	1.000		632859.48		P	3.5
5	☐	1.000		601531.99		P	4.9
6	☐	1.000		556640.84		P	5.9
7	☐	1.000					

Calibration for 149_ICV.d

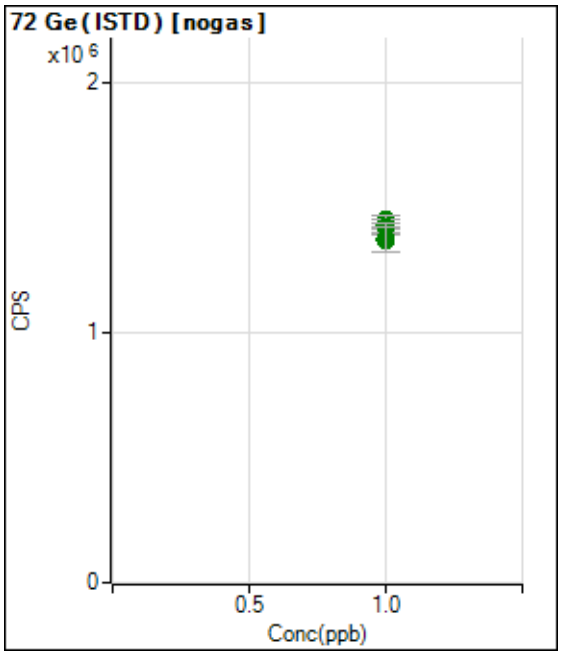


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1053566.81		P	10.0
2	☐	1.000		1130561.86		M	4.8
3	☐	1.000		1126536.76		M	7.6
4	☐	1.000		1084779.02		P	5.5
5	☐	1.000		1076496.31		P	4.0
6	☐	1.000		1000504.93		M	6.5
7	☐	1.000					

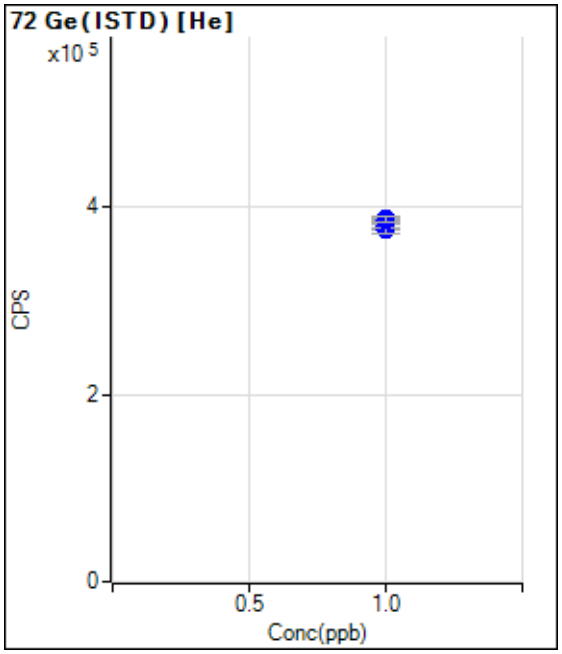


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		135658.03		P	1.7
2	☐	1.000		134145.91		P	2.2
3	☐	1.000		133188.15		P	2.0
4	☐	1.000		133252.89		P	1.2
5	☐	1.000		131781.67		P	1.2
6	☐	1.000		134093.01		P	1.6
7	☐	1.000					

Calibration for 149_ICV.d

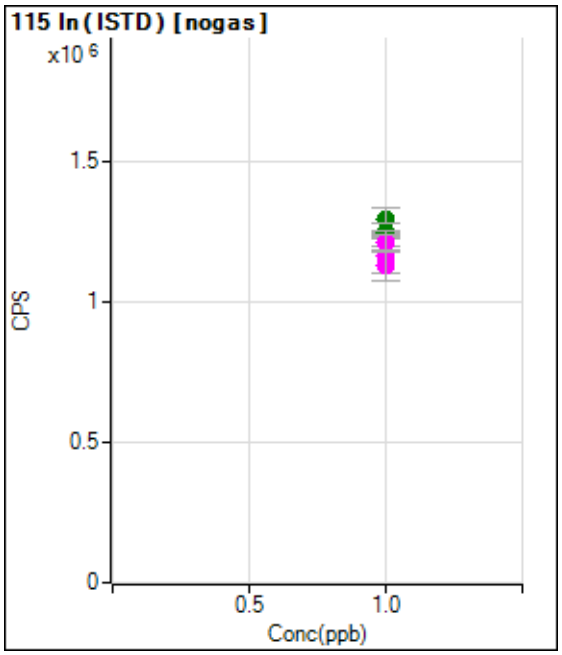


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1374265.32		A	6.8
2	☐	1.000		1434480.60		A	2.6
3	☐	1.000		1452982.01		A	2.2
4	☐	1.000		1425835.76		A	4.7
5	☐	1.000		1422284.36		A	2.7
6	☐	1.000		1375523.68		A	7.0
7	☐	1.000					

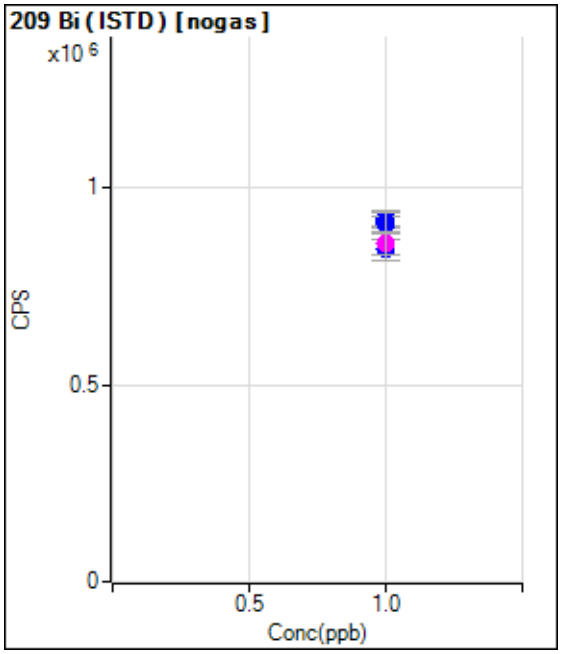


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		383404.47		P	0.5
2	☐	1.000		387102.76		P	0.4
3	☐	1.000		380491.28		P	1.1
4	☐	1.000		379235.50		P	2.3
5	☐	1.000		374873.99		P	1.4
6	☐	1.000		385968.76		P	1.5
7	☐	1.000					

Calibration for 149_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1163835.21		M	11.0
2	☐	1.000		1291434.68		A	6.7
3	☐	1.000		1237331.74		A	6.4
4	☐	1.000		1243698.39		A	1.9
5	☐	1.000		1209338.18		M	5.1
6	☐	1.000		1130791.43		M	9.5
7	☐	1.000					



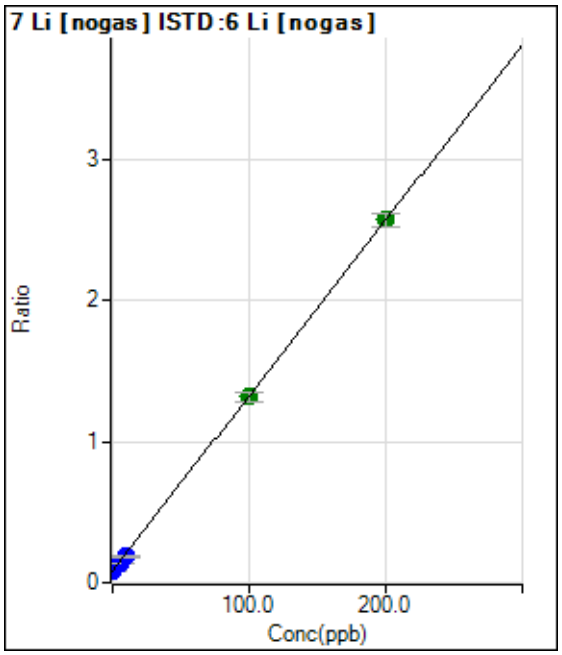
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		844864.93		P	6.3
2	☐	1.000		920507.41		P	5.1
3	☐	1.000		921939.80		P	3.8
4	☐	1.000		908519.18		P	4.0
5	☐	1.000		916010.66		P	6.4
6	☐	1.000		857677.78		M	6.7
7	☐	1.000					

Calibration for 225_ICV.d

Batch Folder: C:\Agilent\ICPMH\1\DATA\010819B.b\
Analysis File: 010819B.batch.bin
DA Date-Time: 2019-01-08 22:05:29
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	215CALB.d	CAL BLK	2019-01-08 19:26:43
2	216CALS.d	2/10/200	2019-01-08 19:28:43
3	217CALS.d	5/25/500	2019-01-08 19:30:41
4	218CALS.d	10/50/1000	2019-01-08 19:32:39
5	219CALS.d	100/500/10K	2019-01-08 19:34:37
6	220CALS.d	200/1000/20K	2019-01-08 19:36:32
7			

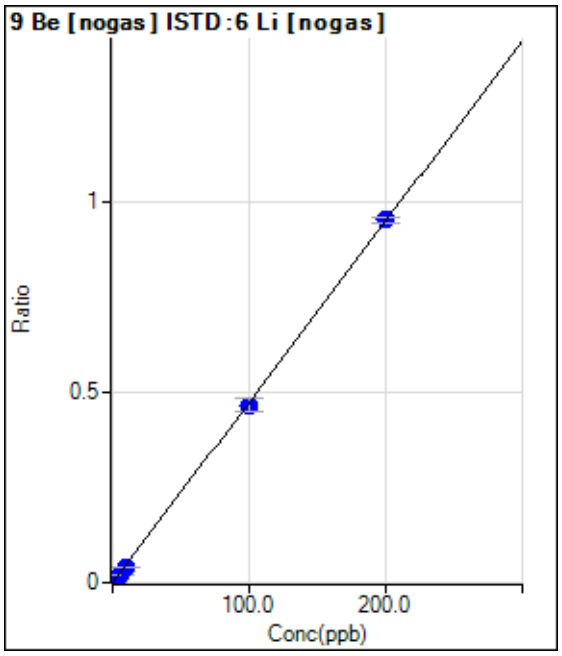
Calibration for 225_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	90289.58	0.0839	P	2.6
2	☐	2.000	1.572	114952.42	0.1034	P	1.5
3	☐	5.000	4.070	152428.41	0.1345	P	5.4
4	☐	10.000	8.151	211647.34	0.1851	P	1.8
5	☐	100.000	99.635	1298658.86	1.3209	A	5.3
6	☐	200.000	200.302	2439773.82	2.5707	A	3.4
7	☐	1.000					

y = 0.0124 * x + 0.0839
R = 1.0000
DL = 0.5195
BEC = 6.76

Weight: <None>
Min Conc: <None>

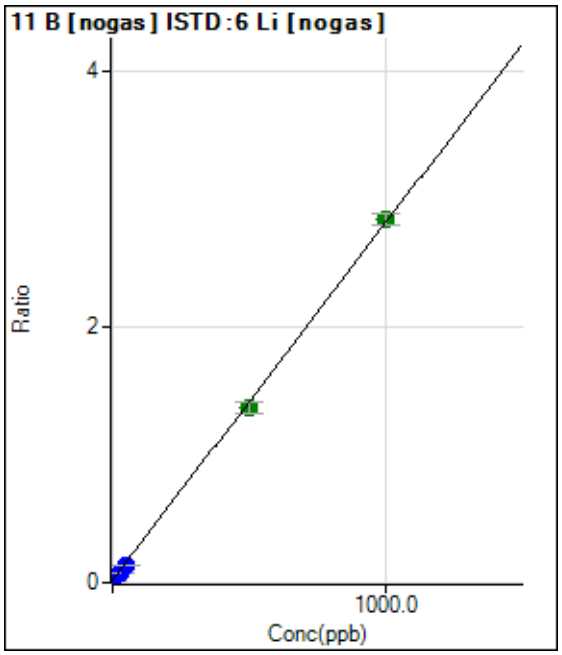


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	123.33	0.0001	P	45.0
2	☐	2.000	1.718	9182.31	0.0083	P	7.7
3	☐	5.000	4.184	22650.17	0.0200	P	4.8
4	☐	10.000	8.441	45938.07	0.0402	P	2.9
5	☐	100.000	98.462	459513.53	0.4676	P	6.7
6	☐	200.000	200.870	905391.50	0.9537	P	1.7
7	☐	1.000					

y = 0.0047 * x + 1.1554E-004
R = 0.9999
DL = 0.03283
BEC = 0.02434

Weight: <None>
Min Conc: <None>

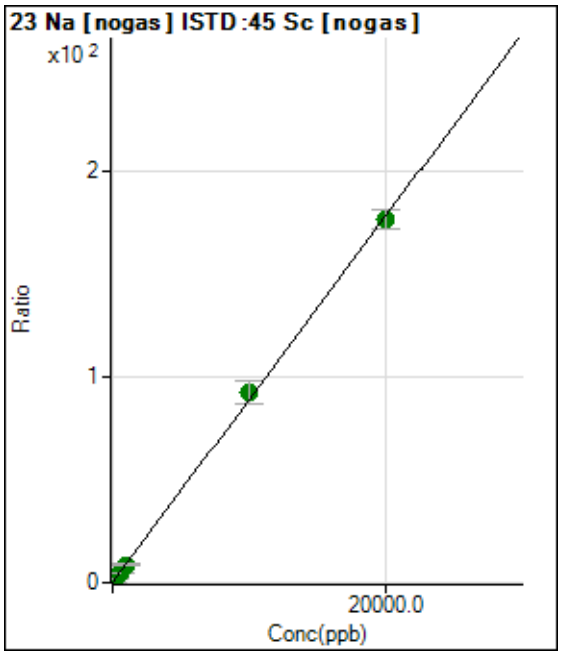
Calibration for 225_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	20871.52	0.0194	P	5.9
2	☐	10.000	7.985	46322.39	0.0417	P	2.7
3	☐	25.000	19.815	84648.34	0.0747	P	6.3
4	☐	50.000	40.414	151022.14	0.1321	P	3.1
5	☐	500.000	484.015	1345555.87	1.3692	A	6.5
6	☐	1000.000	1008.622	2688007.88	2.8322	A	3.3
7	☐	5.000					

y = 0.0028 * x + 0.0194
R = 0.9998
DL = 1.224
BEC = 6.964

Weight: <None>
Min Conc: <None>

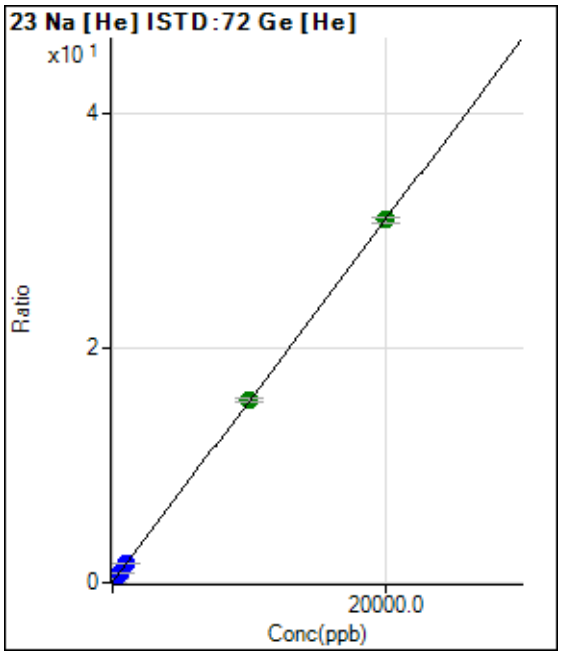


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	209647.11	0.1169	P	3.3
2	☐	200.000	205.724	3507621.69	1.9468	A	3.9
3	☐	500.000	492.842	8304111.38	4.5006	A	4.4
4	☐	1000.000	965.744	16187855.05	8.7068	A	4.9
5	☐	10000.00	10386.998	161826841.1	92.5050	A	11.2
6	☐	20000.00	19808.335	317662398.7	176.303	A	5.2
7	☐	100.000					

y = 0.0089 * x + 0.1169
R = 0.9997
DL = 1.321
BEC = 13.15

Weight: <None>
Min Conc: <None>

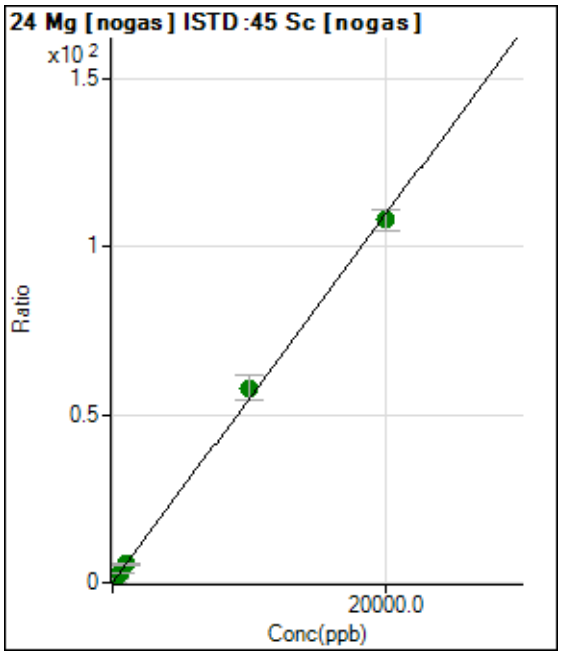
Calibration for 225_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	20988.45	0.0340	P	1.5
2	☐	200.000	202.620	215741.99	0.3467	P	0.7
3	☐	500.000	497.626	504314.81	0.8020	P	0.3
4	☐	1000.000	994.818	985977.88	1.5693	P	0.5
5	☐	10000.00	10011.948	9671617.56	15.4852	A	2.1
6	☐	20000.00	19994.318	18891702.22	30.8907	A	1.8
7	☐	100.000					

y = 0.0015 * x + 0.0340
R = 1.0000
DL = 0.9697
BEC = 22.02

Weight: <None>
Min Conc: <None>

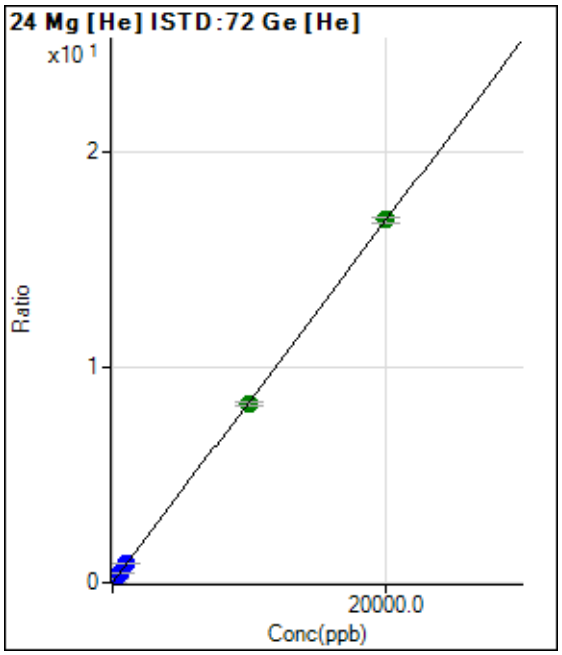


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	8836.85	0.0050	P	18.7
2	☐	200.000	213.250	2112678.83	1.1721	A	2.0
3	☐	500.000	512.904	5183735.66	2.8122	A	6.9
4	☐	1000.000	1006.371	10242869.24	5.5130	A	6.6
5	☐	10000.00	10579.191	101185525.1	57.9070	A	13.2
6	☐	20000.00	19709.631	194295621.0	107.879	A	6.1
7	☐	100.000					

y = 0.0055 * x + 0.0050
R = 0.9994
DL = 0.508
BEC = 0.9053

Weight: <None>
Min Conc: <None>

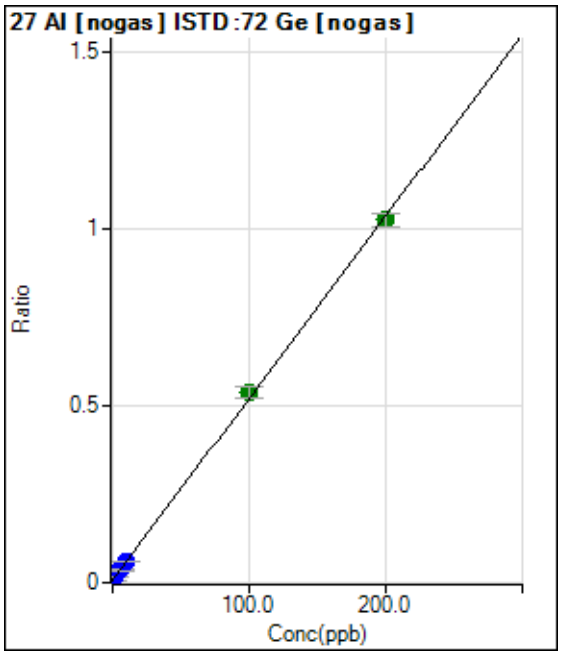
Calibration for 225_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	540.01	0.0009	P	7.8
2	☐	200.000	209.296	109901.55	0.1766	P	2.0
3	☐	500.000	507.148	268312.87	0.4267	P	1.4
4	☐	1000.000	1011.642	534220.90	0.8502	P	0.1
5	☐	10000.00	9886.060	5184529.61	8.3012	A	1.9
6	☐	20000.00	20056.116	10298505.68	16.8400	A	1.9
7	☐	100.000					

y = 8.3960E-004 * x + 8.7416E-004
R = 1.0000
DL = 0.2447
BEC = 1.041

Weight: <None>
Min Conc: <None>

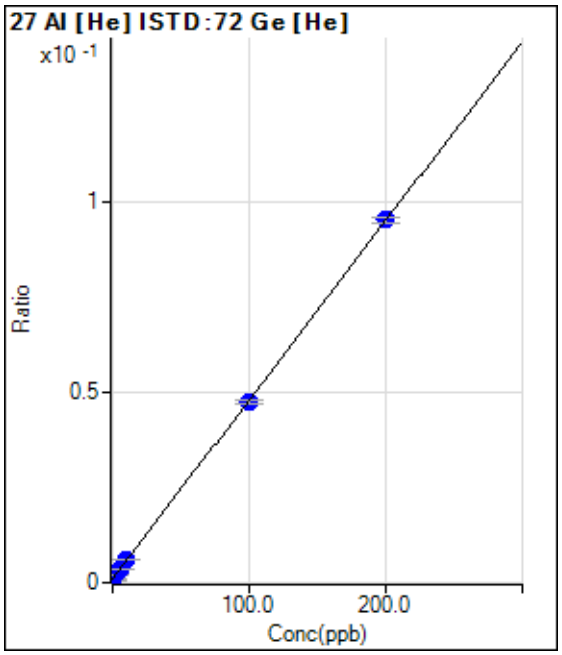


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	17321.39	0.0073	P	1.9
2	☐	2.000	2.239	44869.77	0.0188	P	1.9
3	☐	5.000	5.463	85291.11	0.0354	P	2.6
4	☐	10.000	10.399	147678.54	0.0608	P	2.5
5	☐	100.000	103.664	1227839.33	0.5401	A	6.3
6	☐	200.000	198.134	2395303.72	1.0257	A	3.9
7	☐	1.000					

y = 0.0051 * x + 0.0073
R = 0.9998
DL = 0.08222
BEC = 1.421

Weight: <None>
Min Conc: <None>

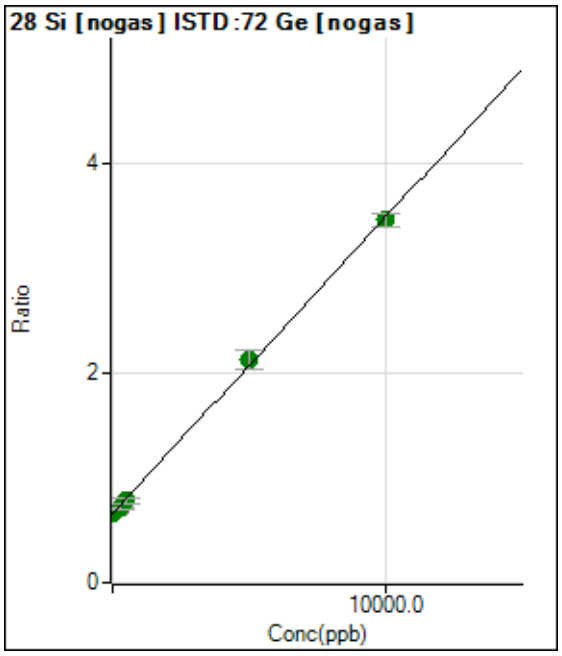
Calibration for 225_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.486	463.35	0.0008	P	6.2
2	☐	2.000	2.005	1193.39	0.0019	P	14.9
3	☐	5.000	5.464	2226.83	0.0035	P	5.3
4	☐	10.000	10.709	3770.43	0.0060	P	1.3
5	☐	100.000	98.710	29529.90	0.0473	P	2.4
6	☐	200.000	200.598	58145.60	0.0951	P	1.7
7	☐	1.000					

y = 4.6906E-004 * x + 9.7811E-004
R = 1.0000
DL = 0.2973
BEC = 2.085

Weight: <None>
Min Conc: <None>

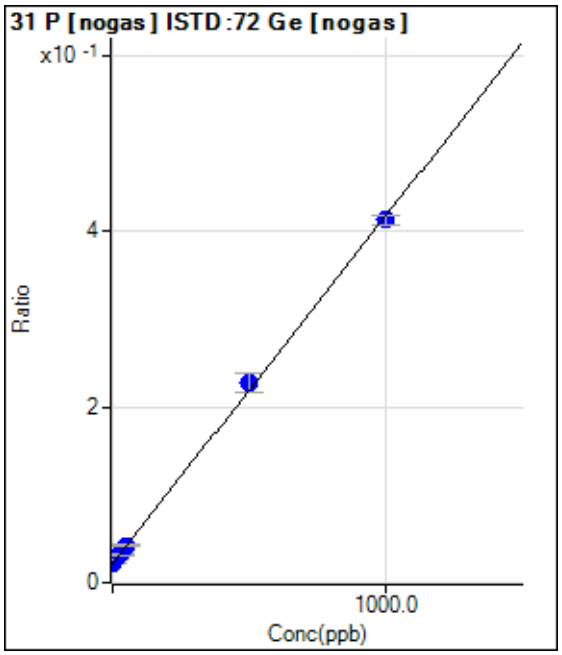


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1564902.48	0.6607	A	5.0
2	☐	100.000	37.584	1601289.14	0.6714	A	2.0
3	☐	250.000	187.665	1720703.73	0.7140	A	3.2
4	☐	500.000	439.284	1907310.86	0.7853	A	5.9
5	☐	5000.000	5206.590	4850570.86	2.1372	A	8.6
6	☐	10000.00	9901.923	8097618.42	3.4686	A	3.6
7	☐	5.000					

y = 2.8357E-004 * x + 0.6607
R = 0.9996
DL = 351.8
BEC = 2330

Weight: <None>
Min Conc: <None>

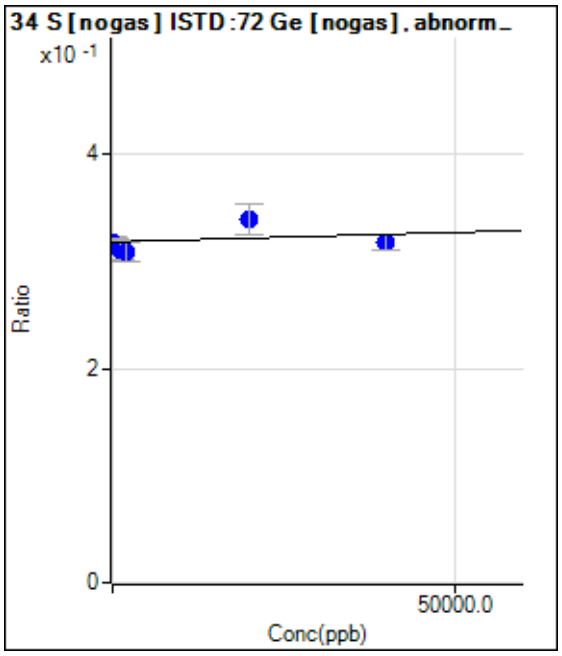
Calibration for 225_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	51433.44	0.0217	P	4.3
2	☐	10.000	9.861	61081.81	0.0256	P	1.5
3	☐	25.000	25.874	76996.09	0.0319	P	1.5
4	☐	50.000	51.038	101751.64	0.0419	P	4.5
5	☐	500.000	520.294	515842.61	0.2273	P	9.4
6	☐	1000.000	989.780	964100.77	0.4129	P	2.6
7	☐	5.000					

y = 3.9521E-004 * x + 0.0217
R = 0.9997
DL = 7.055
BEC = 54.94

Weight: <None>
Min Conc: <None>

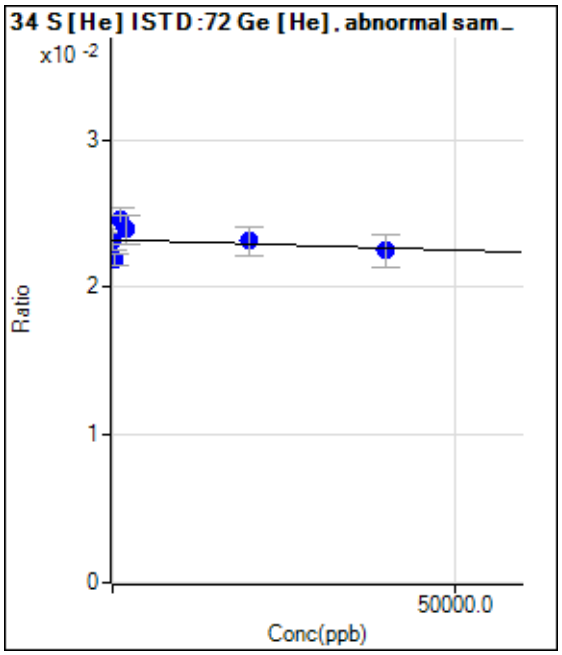


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	753557.91	0.3180	P	2.8
2	☐	400.000	-9512.732	754171.91	0.3163	P	2.6
3	☐	1000.000	-40602.675	748589.31	0.3107	P	5.5
4	☐	2000.000	-55604.469	748175.28	0.3081	P	5.7
5	☐	20000.00	115057.99	768304.80	0.3385	P	8.7
6	☐	40000.00	-3509.581	740727.16	0.3174	P	4.9
7	☐	100.000					

y = 1.7852E-007 * x + 0.3180
R = 0.3956
DL = 1.518E+05
BEC = 1.781E+06

Weight: <None>
Min Conc: <None>

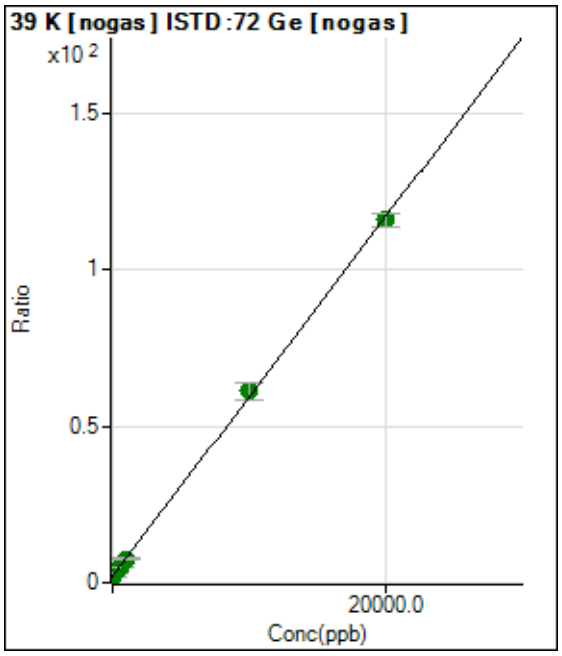
Calibration for 225_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	14340.98	0.0232	P	5.8
2	☐	400.000	96592.115	13607.00	0.0219	P	3.4
3	☐	1000.000	-93956.827	15442.81	0.0246	P	7.2
4	☐	2000.000	-46756.905	15008.25	0.0239	P	8.6
5	☐	20000.00	7372.917	14440.77	0.0231	P	8.8
6	☐	40000.00	50163.386	13774.39	0.0225	P	9.8
7	☐	100.000					

y = -1.4184E-008 * x + 0.0232
R = -0.3371
DL = -2.827E+05
BEC = -1.638E+06

Weight: <None>
Min Conc: <None>

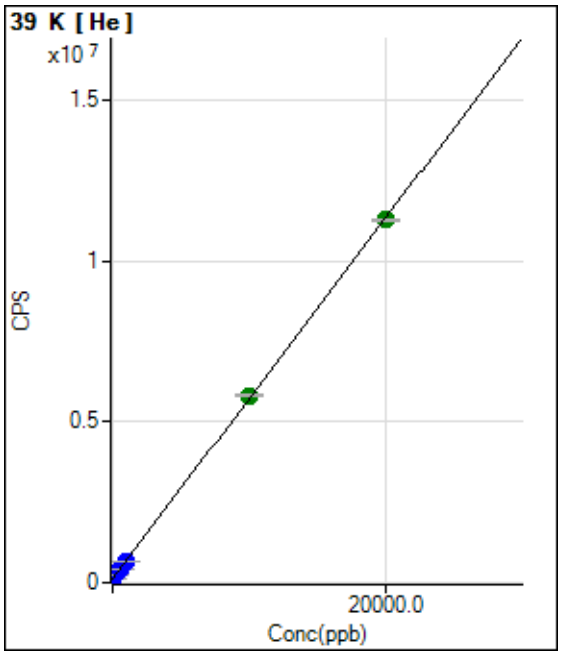


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4817556.75	2.0340	A	4.7
2	☐	200.000	196.970	7546315.27	3.1641	A	1.2
3	☐	500.000	493.612	11729722.40	4.8660	A	1.8
4	☐	1000.000	963.526	18376307.18	7.5621	A	3.5
5	☐	10000.00	10314.438	138949932.2	61.2112	A	9.0
6	☐	20000.00	19844.795	270535622.7	115.889	A	3.9
7	☐	100.000					

y = 0.0057 * x + 2.0340
R = 0.9998
DL = 50.16
BEC = 354.5

Weight: <None>
Min Conc: <None>

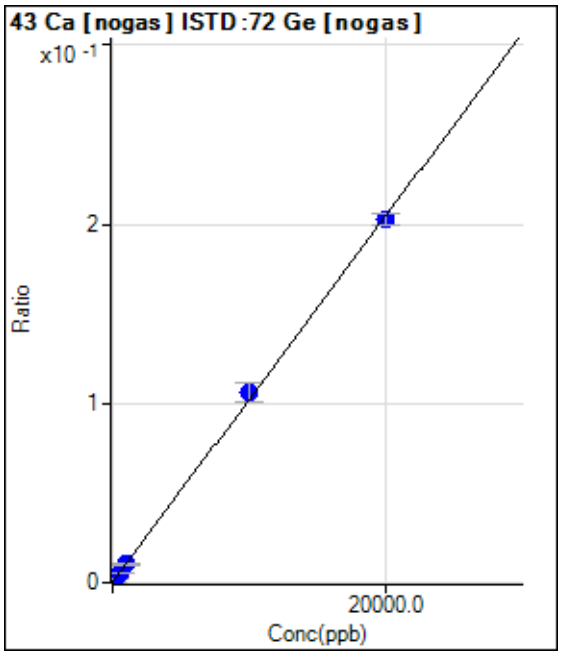
Calibration for 225_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	113987.39		P	1.4
2	☐	200.000	205.540	229343.28		P	0.8
3	☐	500.000	508.450	399345.72		P	0.5
4	☐	1000.000	1010.340	681022.93		P	0.4
5	☐	10000.00	10182.085	5828500.96		A	1.4
6	☐	20000.00	19908.174	11287094.83		A	0.4
7	☐	100.000					

y = 561.2322 * x + 113987.3933
R = 0.9999
DL = 8.557
BEC = 203.1

Weight: <None>
Min Conc: <None>

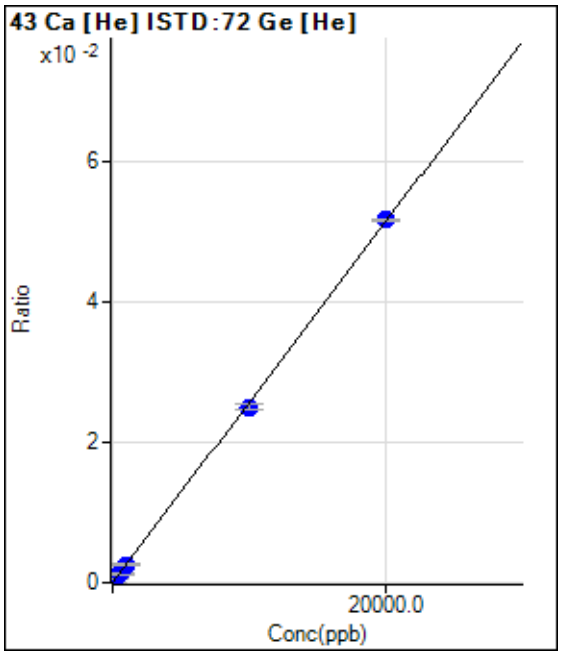


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	376.68	0.0002	P	27.9
2	☐	200.000	202.394	5314.17	0.0022	P	2.9
3	☐	500.000	498.323	12651.11	0.0052	P	6.6
4	☐	1000.000	993.063	25043.65	0.0103	P	2.3
5	☐	10000.00	10388.783	241174.10	0.1063	P	9.6
6	☐	20000.00	19805.973	472679.91	0.2024	P	3.0
7	☐	100.000					

y = 1.0213E-005 * x + 1.5995E-004
R = 0.9997
DL = 13.12
BEC = 15.66

Weight: <None>
Min Conc: <None>

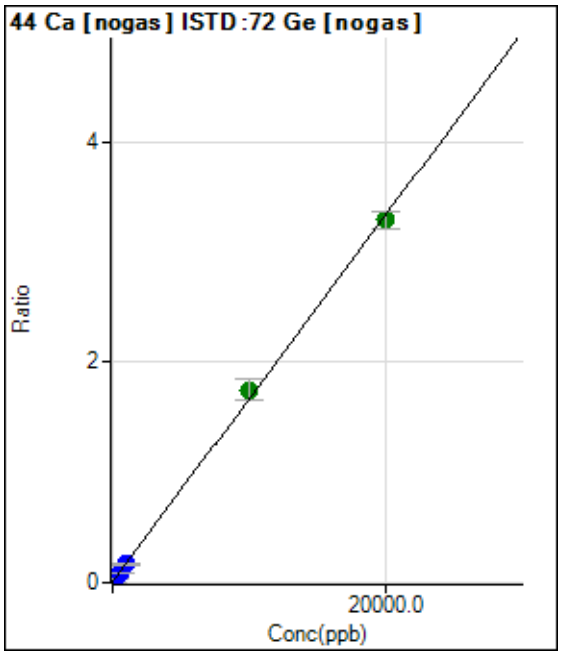
Calibration for 225_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	13.33	0.0000	P	114.
2	☐	200.000	245.754	406.68	0.0007	P	2.9
3	☐	500.000	480.096	790.03	0.0013	P	11.2
4	☐	1000.000	1000.051	1630.09	0.0026	P	6.8
5	☐	10000.00	9754.420	15686.70	0.0251	P	2.6
6	☐	20000.00	20122.828	31673.72	0.0518	P	0.3
7	☐	100.000					

y = 2.5725E-006 * x + 2.1453E-005
R = 0.9999
DL = 28.57
BEC = 8.339

Weight: <None>
Min Conc: <None>

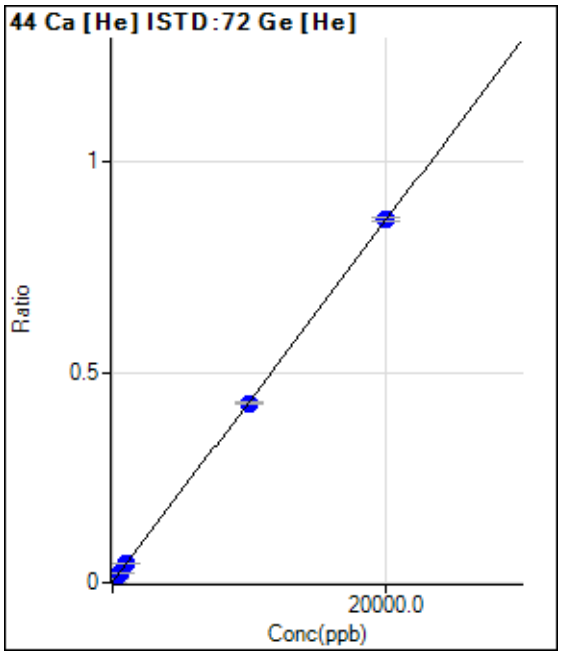


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	16127.19	0.0068	P	5.3
2	☐	200.000	193.223	92785.69	0.0389	P	2.5
3	☐	500.000	490.667	212936.93	0.0883	P	1.5
4	☐	1000.000	957.958	403411.63	0.1660	P	2.6
5	☐	10000.00	10492.239	3968217.86	1.7501	A	10.7
6	☐	20000.00	19756.284	7677339.68	3.2892	A	4.8
7	☐	100.000					

y = 1.6615E-004 * x + 0.0068
R = 0.9996
DL = 6.475
BEC = 40.99

Weight: <None>
Min Conc: <None>

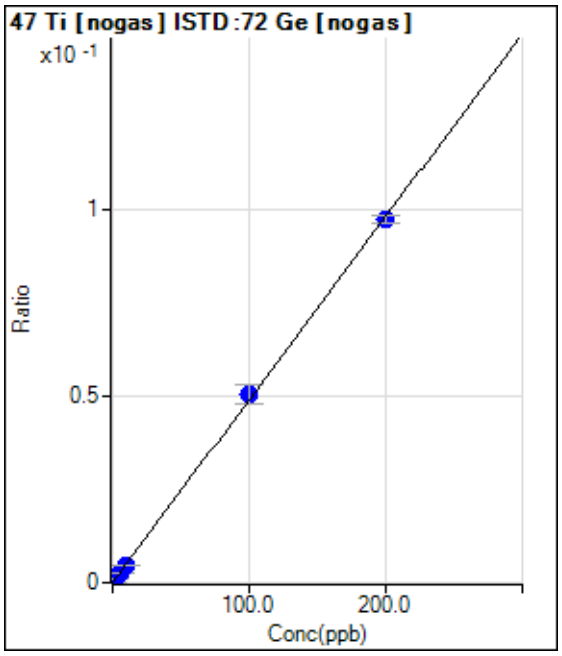
Calibration for 225_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	560.02	0.0009	P	7.2
2	☐	200.000	194.481	5764.30	0.0093	P	4.0
3	☐	500.000	492.665	13885.35	0.0221	P	1.4
4	☐	1000.000	998.530	27533.84	0.0438	P	1.0
5	☐	10000.00	9917.843	266775.97	0.4272	P	1.4
6	☐	20000.00	20041.391	527341.82	0.8622	P	1.0
7	☐	100.000					

y = 4.2978E-005 * x + 9.0718E-004
R = 1.0000
DL = 4.578
BEC = 21.11

Weight: <None>
Min Conc: <None>

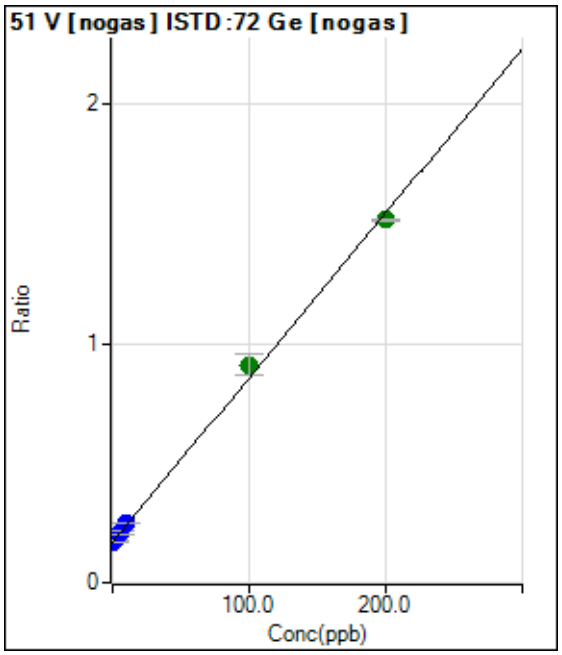


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	103.33	0.0000	P	56.0
2	☐	2.000	1.909	2336.85	0.0010	P	6.2
3	☐	5.000	4.995	6011.05	0.0025	P	3.3
4	☐	10.000	9.617	11580.42	0.0048	P	1.9
5	☐	100.000	103.328	115093.98	0.0507	P	10.1
6	☐	200.000	198.356	227388.34	0.0974	P	2.0
7	☐	1.000					

y = 4.9061E-004 * x + 4.3602E-005
R = 0.9998
DL = 0.1493
BEC = 0.08887

Weight: <None>
Min Conc: <None>

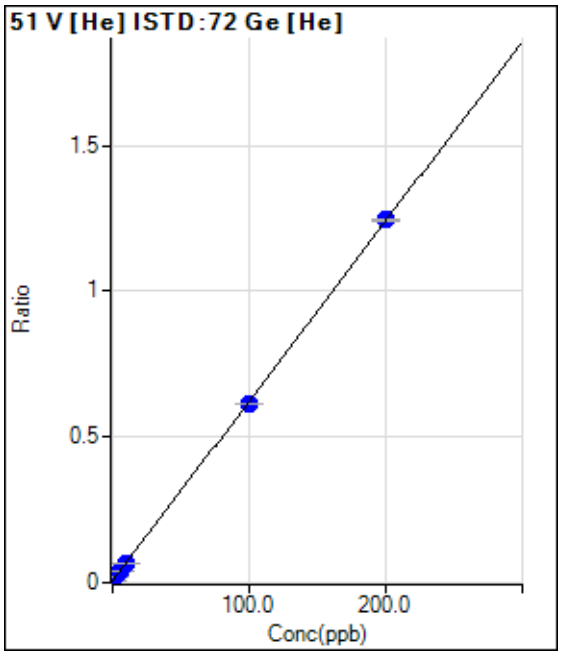
Calibration for 225_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	403019.21	0.1698	P	4.5
2	☐	2.000	0.681	416239.73	0.1745	P	1.9
3	☐	5.000	5.818	506057.06	0.2098	P	4.7
4	☐	10.000	11.718	608854.20	0.2504	P	1.3
5	☐	100.000	107.920	2068404.73	0.9119	A	9.7
6	☐	200.000	195.947	3544244.48	1.5171	A	0.8
7	☐	1.000					

y = 0.0069 * x + 0.1698
R = 0.9988
DL = 3.345
BEC = 24.7

Weight: <None>
Min Conc: <None>

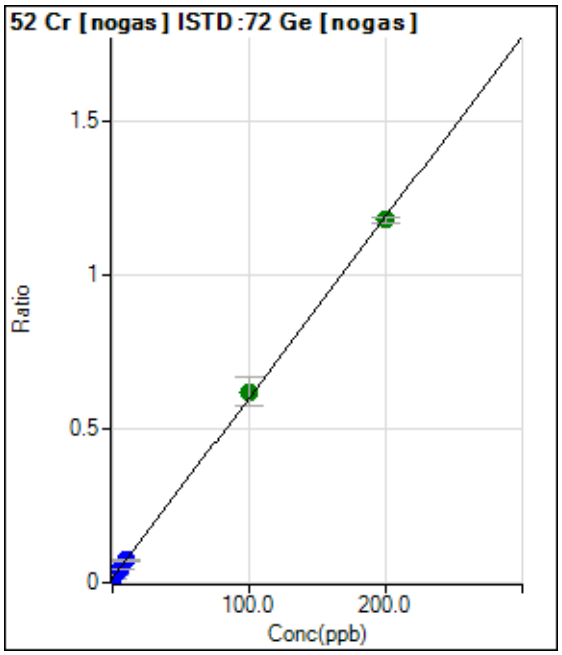


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.289	4788.63	0.0078	P	0.9
2	☐	2.000	2.240	12310.74	0.0198	P	2.7
3	☐	5.000	5.205	23943.98	0.0381	P	0.8
4	☐	10.000	10.113	42940.43	0.0683	P	1.0
5	☐	100.000	98.332	382504.80	0.6124	P	0.6
6	☐	200.000	200.821	761139.19	1.2445	P	0.7
7	☐	1.000					

y = 0.0062 * x + 0.0060
R = 0.9999
DL = 0.03331
BEC = 0.9683

Weight: <None>
Min Conc: <None>

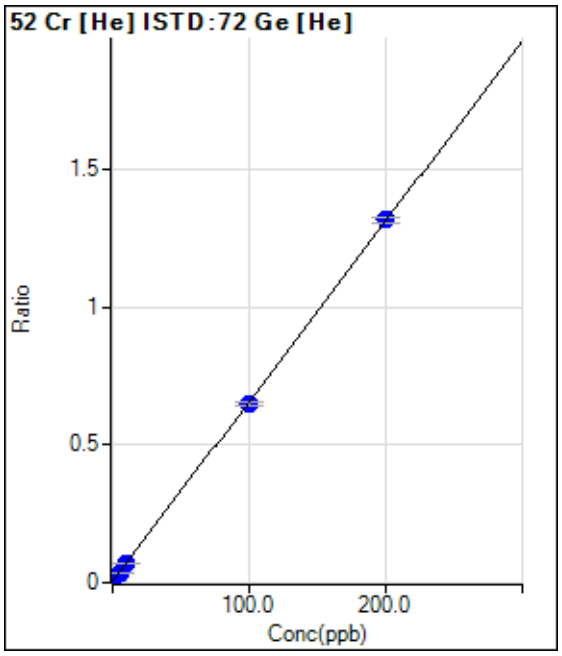
Calibration for 225_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	34061.46	0.0144	P	2.3
2	☐	2.000	1.943	61478.00	0.0258	P	1.7
3	☐	5.000	5.045	106047.55	0.0440	P	1.8
4	☐	10.000	9.855	175516.38	0.0722	P	3.2
5	☐	100.000	103.279	1405385.39	0.6207	A	15.0
6	☐	200.000	198.367	2753677.25	1.1789	A	1.7
7	☐	1.000					

y = 0.0059 * x + 0.0144
R = 0.9998
DL = 0.1658
BEC = 2.448

Weight: <None>
Min Conc: <None>

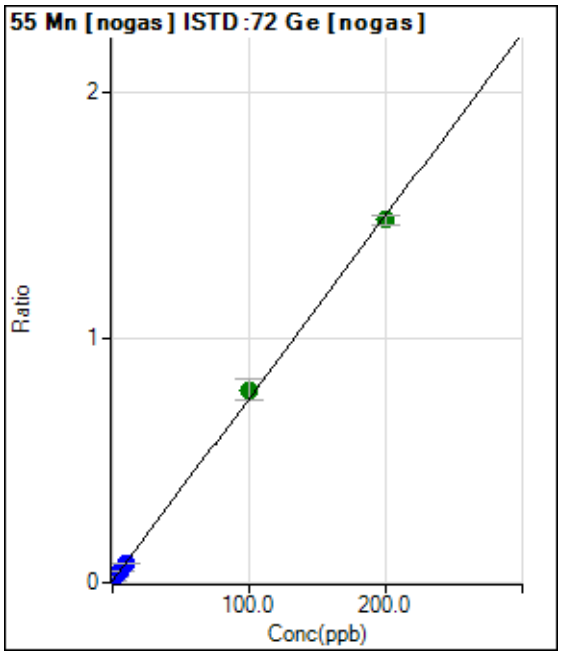


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2430.19	0.0039	P	3.0
2	☐	2.000	2.153	11200.18	0.0180	P	2.1
3	☐	5.000	5.056	23238.08	0.0370	P	0.9
4	☐	10.000	9.808	42719.20	0.0680	P	1.2
5	☐	100.000	98.502	404215.71	0.6472	P	1.4
6	☐	200.000	200.755	804224.96	1.3150	P	1.3
7	☐	1.000					

y = 0.0065 * x + 0.0039
R = 1.0000
DL = 0.05424
BEC = 0.6027

Weight: <None>
Min Conc: <None>

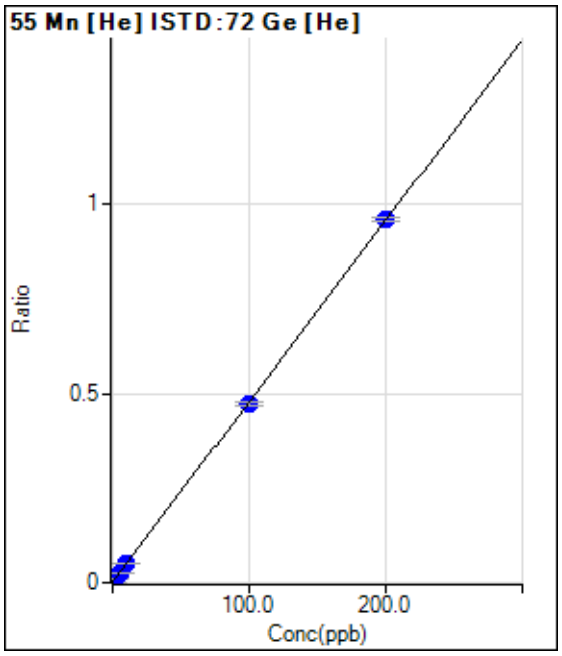
Calibration for 225_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	16480.86	0.0070	P	3.2
2	☐	2.000	2.051	53066.02	0.0223	P	2.7
3	☐	5.000	5.116	108750.47	0.0451	P	2.3
4	☐	10.000	9.903	196465.42	0.0808	P	2.5
5	☐	100.000	104.601	1785128.72	0.7871	A	10.8
6	☐	200.000	197.701	3459145.37	1.4815	A	2.8
7	☐	1.000					

y = 0.0075 * x + 0.0070
R = 0.9996
DL = 0.08939
BEC = 0.9326

Weight: <None>
Min Conc: <None>

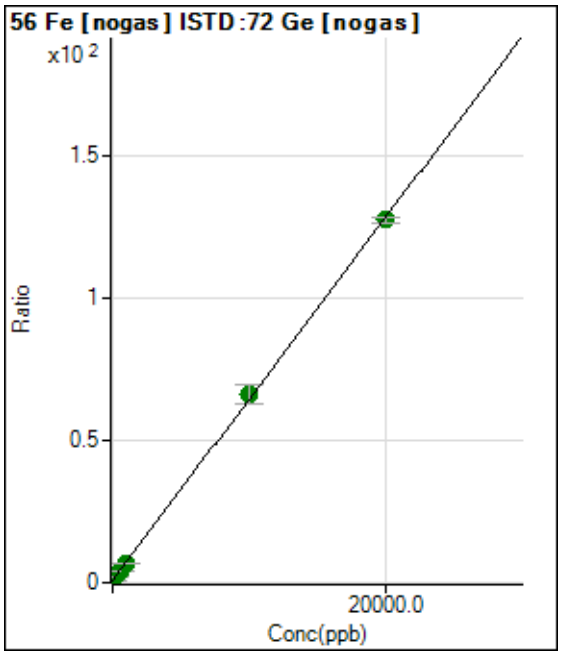


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	663.36	0.0011	P	22.6
2	☐	2.000	2.102	6921.41	0.0111	P	7.8
3	☐	5.000	5.043	15830.32	0.0252	P	3.0
4	☐	10.000	10.251	31453.69	0.0501	P	0.8
5	☐	100.000	99.080	296372.32	0.4745	P	1.9
6	☐	200.000	200.446	586479.85	0.9589	P	1.0
7	☐	1.000					

y = 0.0048 * x + 0.0011
R = 1.0000
DL = 0.1524
BEC = 0.2247

Weight: <None>
Min Conc: <None>

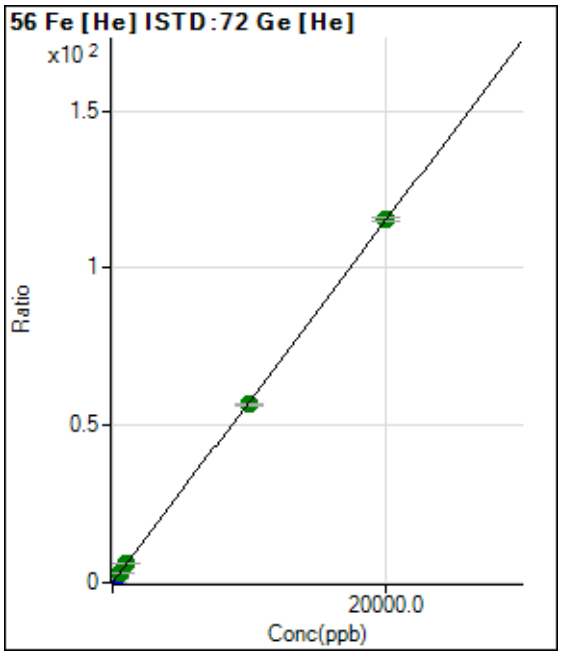
Calibration for 225_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1816794.51	0.7670	A	4.6
2	☐	200.000	194.655	4787148.03	2.0071	A	0.8
3	☐	500.000	495.767	9461886.15	3.9253	A	2.2
4	☐	1000.000	961.609	16752026.94	6.8929	A	3.0
5	☐	10000.00	10256.937	149943803.3	66.1087	A	10.4
6	☐	20000.00	19873.610	297522223.3	127.371	A	1.4
7	☐	100.000					

y = 0.0064 * x + 0.7670
R = 0.9999
DL = 16.54
BEC = 120.4

Weight: <None>
Min Conc: <None>

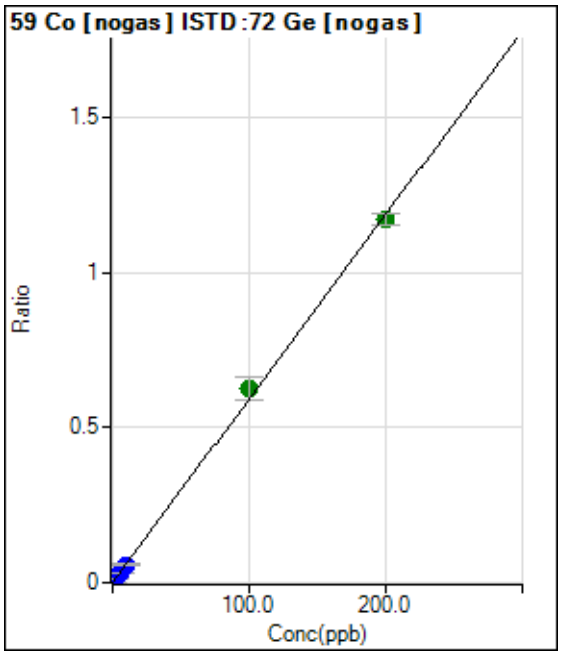


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	8885.59	0.0144	P	4.3
2	☐	200.000	202.299	732265.04	1.1767	P	2.8
3	☐	500.000	510.683	1854227.63	2.9486	A	1.4
4	☐	1000.000	1022.532	3700469.94	5.8896	A	0.8
5	☐	10000.00	9874.396	35443834.47	56.7502	A	0.9
6	☐	20000.00	20061.385	70504553.95	115.282	A	1.1
7	☐	100.000					

y = 0.0057 * x + 0.0144
R = 1.0000
DL = 0.3195
BEC = 2.504

Weight: <None>
Min Conc: <None>

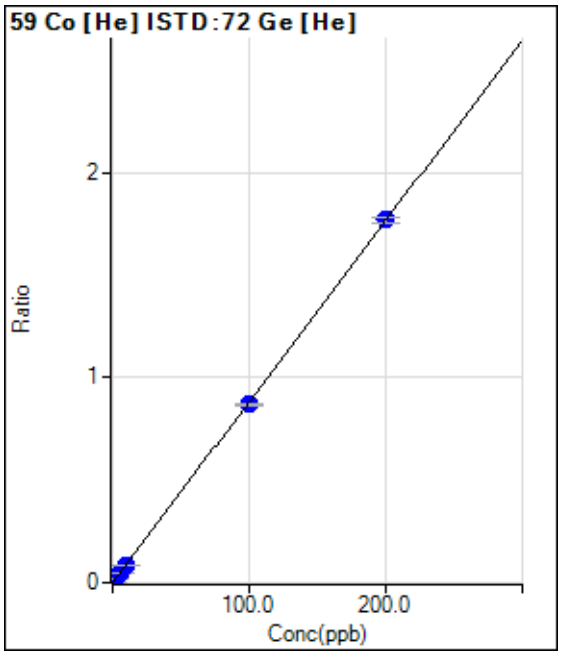
Calibration for 225_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	420.01	0.0002	P	30.4
2	☐	2.000	2.056	29483.80	0.0124	P	3.1
3	☐	5.000	5.123	73663.24	0.0305	P	1.2
4	☐	10.000	9.904	143140.37	0.0589	P	2.8
5	☐	100.000	105.436	1417108.47	0.6253	A	11.8
6	☐	200.000	197.283	2731303.71	1.1698	A	3.0
7	☐	1.000					

y = 0.0059 * x + 1.7809E-004
R = 0.9995
DL = 0.02738
BEC = 0.03004

Weight: <None>
Min Conc: <None>

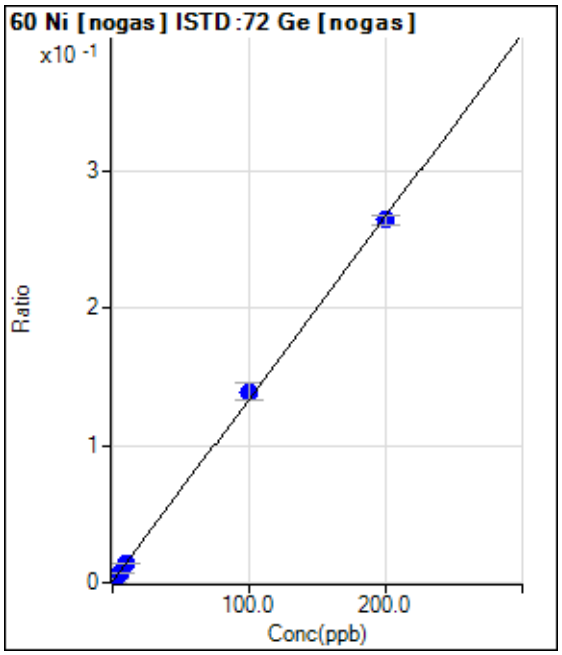


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	56.67	0.0001	P	73.5
2	☐	2.000	2.034	11210.26	0.0180	P	3.3
3	☐	5.000	4.938	27423.86	0.0436	P	2.1
4	☐	10.000	9.918	54978.56	0.0875	P	2.4
5	☐	100.000	98.721	543469.93	0.8702	P	1.0
6	☐	200.000	200.645	1081530.90	1.7685	P	1.9
7	☐	1.000					

y = 0.0088 * x + 9.1533E-005
R = 1.0000
DL = 0.0229
BEC = 0.01039

Weight: <None>
Min Conc: <None>

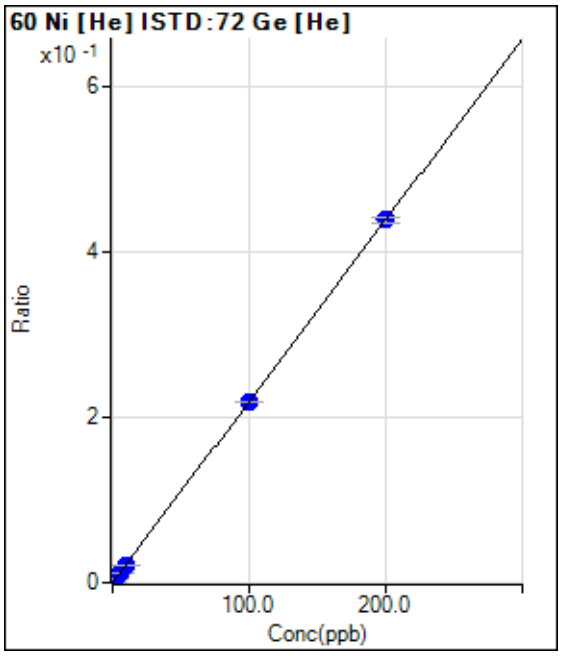
Calibration for 225_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.486	403.34	0.0002	P	9.7
2	☐	2.000	1.462	6574.61	0.0028	P	3.9
3	☐	5.000	4.591	16657.72	0.0069	P	4.6
4	☐	10.000	9.492	32632.37	0.0134	P	1.6
5	☐	100.000	103.800	314650.89	0.1387	P	9.3
6	☐	200.000	198.141	616454.65	0.2640	P	2.6
7	☐	1.000					

y = 0.0013 * x + 8.1548E-004
R = 0.9997
DL = 0.0372
BEC = 0.614

Weight: <None>
Min Conc: <None>

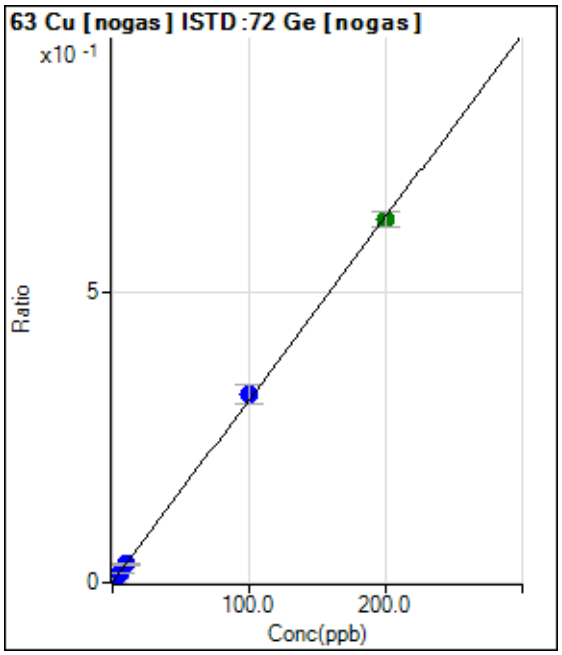


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.026	130.00	0.0002	P	27.0
2	☐	2.000	2.145	3026.97	0.0049	P	5.4
3	☐	5.000	5.179	7244.84	0.0115	P	6.2
4	☐	10.000	9.781	13585.16	0.0216	P	2.7
5	☐	100.000	99.727	136823.79	0.2191	P	0.9
6	☐	200.000	200.142	268786.77	0.4395	P	1.6
7	☐	1.000					

y = 0.0022 * x + 1.5228E-004
R = 1.0000
DL = 0.07769
BEC = 0.06937

Weight: <None>
Min Conc: <None>

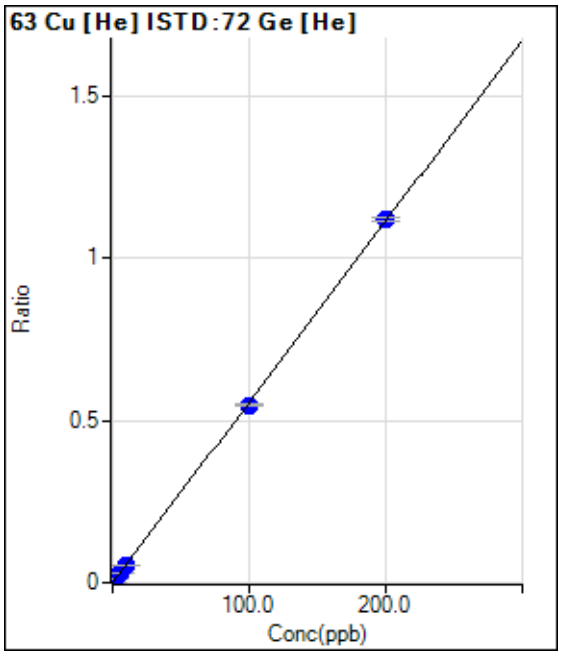
Calibration for 225_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	963.37	0.0004	P	4.6
2	☐	2.000	1.994	15877.04	0.0067	P	6.3
3	☐	5.000	4.997	38787.84	0.0161	P	1.4
4	☐	10.000	9.969	77034.16	0.0317	P	3.0
5	☐	100.000	103.140	735086.03	0.3241	P	10.3
6	☐	200.000	198.432	1454920.24	0.6232	A	4.1
7	☐	1.000					

y = 0.0031 * x + 4.0637E-004
R = 0.9998
DL = 0.0179
BEC = 0.1295

Weight: <None>
Min Conc: <None>

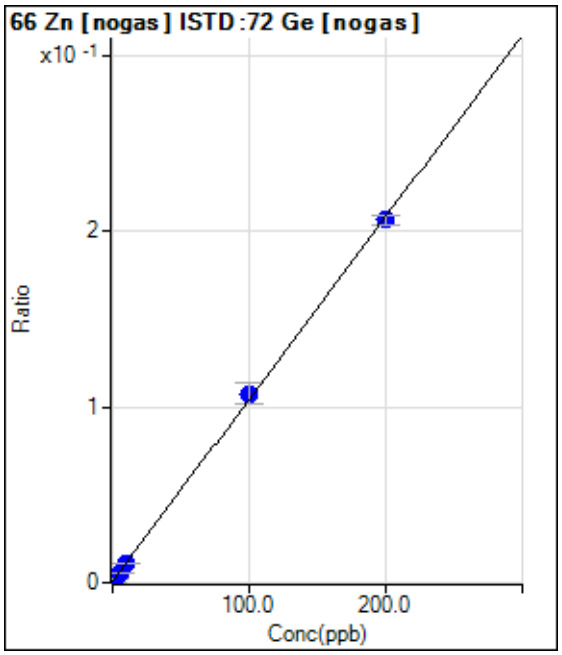


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.181	350.01	0.0006	P	17.1
2	☐	2.000	2.232	7461.60	0.0120	P	2.3
3	☐	5.000	5.290	18245.89	0.0290	P	4.8
4	☐	10.000	10.079	34986.77	0.0557	P	1.4
5	☐	100.000	98.463	342141.85	0.5478	P	1.4
6	☐	200.000	200.755	683421.14	1.1174	P	1.2
7	☐	1.000					

y = 0.0056 * x - 4.3916E-004
R = 1.0000
DL = 0.05215
BEC = -0.07887

Weight: <None>
Min Conc: <None>

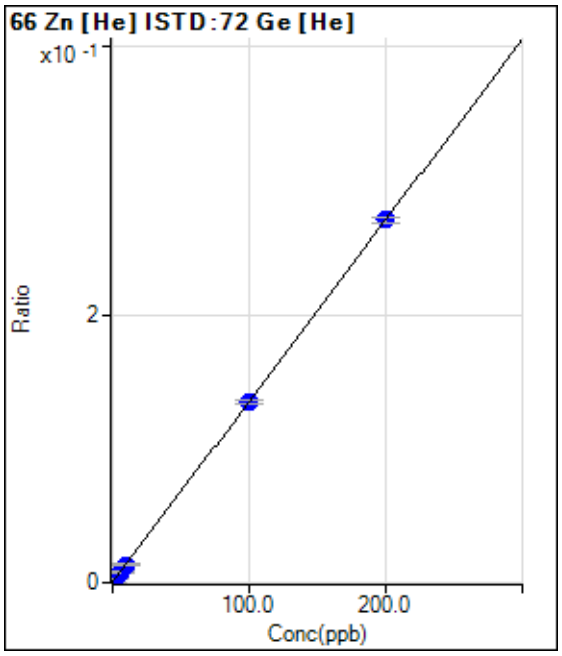
Calibration for 225_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.532	550.02	0.0002	P	1.4
2	☐	2.000	1.521	5617.61	0.0024	P	7.7
3	☐	5.000	4.762	13782.03	0.0057	P	2.8
4	☐	10.000	9.685	26272.29	0.0108	P	3.3
5	☐	100.000	103.074	243773.11	0.1075	P	11.0
6	☐	200.000	198.490	481725.83	0.2063	P	2.6
7	☐	1.000					

y = 0.0010 * x + 7.8300E-004
R = 0.9998
DL = 0.009629
BEC = 0.7563

Weight: <None>
Min Conc: <None>

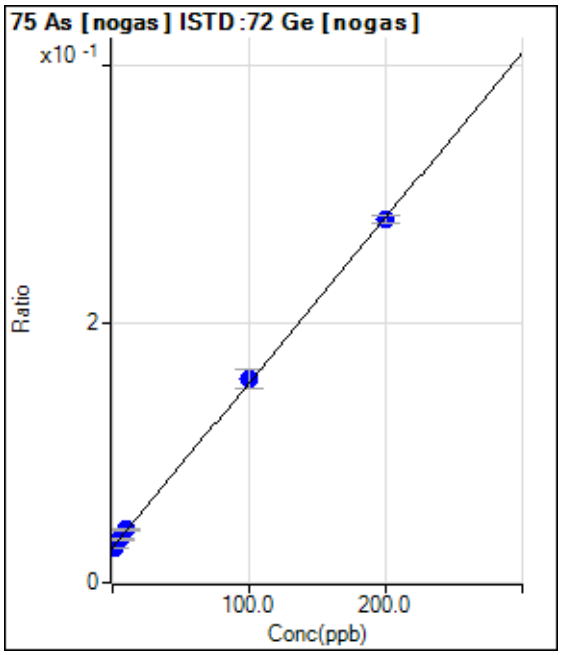


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.003	163.34	0.0003	P	36.6
2	☐	2.000	1.984	1833.45	0.0029	P	6.0
3	☐	5.000	5.542	4874.05	0.0078	P	3.8
4	☐	10.000	9.729	8422.05	0.0134	P	4.7
5	☐	100.000	99.499	84065.34	0.1346	P	1.4
6	☐	200.000	200.251	165535.98	0.2706	P	1.8
7	☐	1.000					

y = 0.0014 * x + 2.6951E-004
R = 1.0000
DL = 0.2151
BEC = 0.1996

Weight: <None>
Min Conc: <None>

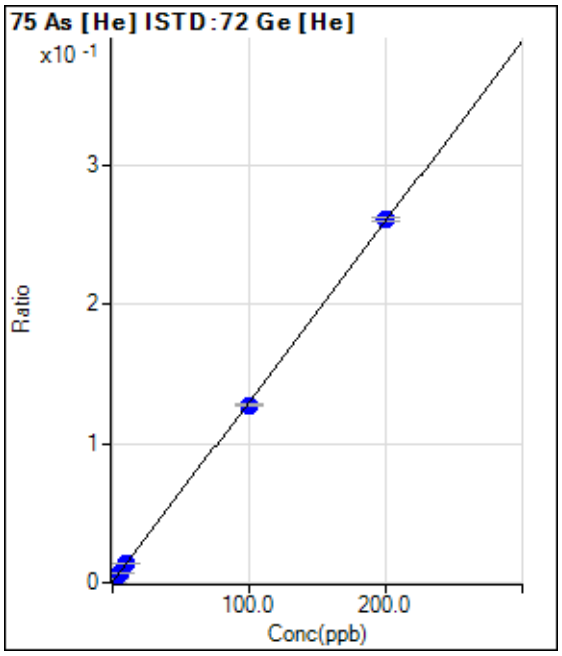
Calibration for 225_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.263	63337.22	0.0267	P	5.0
2	☐	2.000	-0.108	64173.11	0.0269	P	0.5
3	☐	5.000	5.141	81026.50	0.0336	P	2.5
4	☐	10.000	10.903	99553.92	0.0410	P	1.8
5	☐	100.000	102.710	358758.52	0.1581	P	9.3
6	☐	200.000	198.618	654952.18	0.2805	P	2.3
7	☐	1.000					

y = 0.0013 * x + 0.0270
R = 0.9998
DL = 3.146
BEC = 21.19

Weight: <None>
Min Conc: <None>

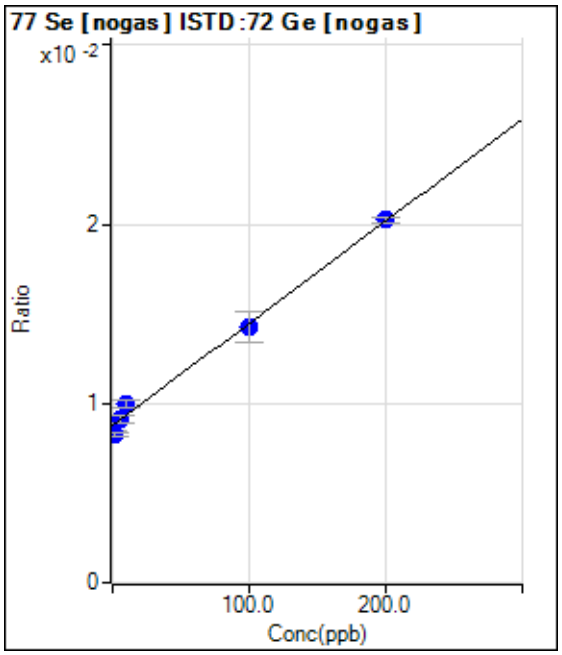


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	203.34	0.0003	P	13.8
2	☐	2.000	2.019	1831.21	0.0029	P	8.6
3	☐	5.000	4.882	4180.49	0.0066	P	3.3
4	☐	10.000	9.936	8286.35	0.0132	P	1.1
5	☐	100.000	98.073	79480.42	0.1273	P	0.9
6	☐	200.000	200.969	159273.44	0.2604	P	1.1
7	☐	1.000					

y = 0.0013 * x + 3.2909E-004
R = 0.9999
DL = 0.1051
BEC = 0.2543

Weight: <None>
Min Conc: <None>

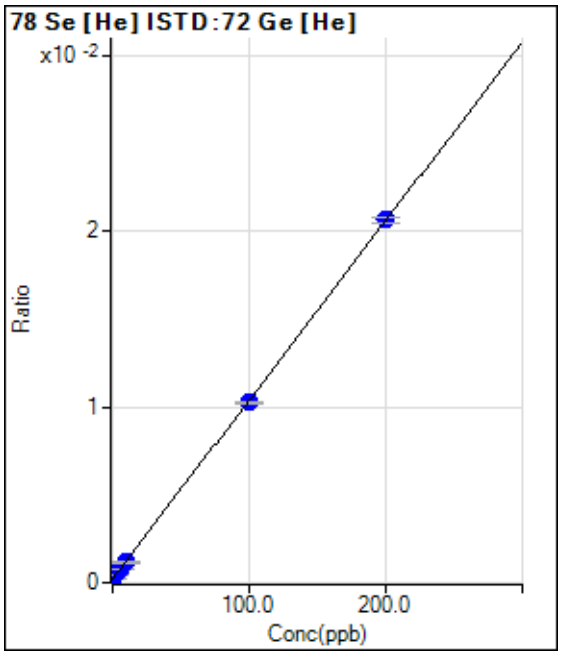
Calibration for 225_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	20848.96	0.0088	P	8.0
2	☐	2.000	-9.073	19724.29	0.0083	P	2.6
3	☐	5.000	6.641	22093.70	0.0092	P	4.8
4	☐	10.000	20.908	24256.57	0.0100	P	3.5
5	☐	100.000	96.930	32439.16	0.0143	P	12.1
6	☐	200.000	201.059	47301.47	0.0202	P	1.7
7	☐	1.000					

y = 5.7013E-005 * x + 0.0088
R = 0.9962
DL = 36.91
BEC = 154

Weight: <None>
Min Conc: <None>

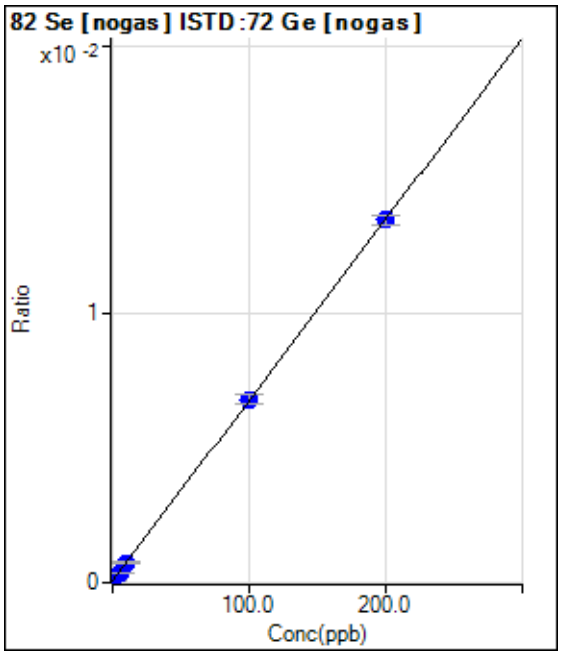


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.135	135.33	0.0002	P	13.8
2	☐	2.000	2.465	284.00	0.0005	P	4.3
3	☐	5.000	5.665	492.01	0.0008	P	1.3
4	☐	10.000	9.392	730.02	0.0012	P	5.4
5	☐	100.000	98.666	6405.14	0.0103	P	1.2
6	☐	200.000	200.676	12625.71	0.0206	P	1.3
7	☐	1.000					

y = 1.0185E-004 * x + 2.0536E-004
R = 1.0000
DL = 0.8877
BEC = 2.016

Weight: <None>
Min Conc: <None>

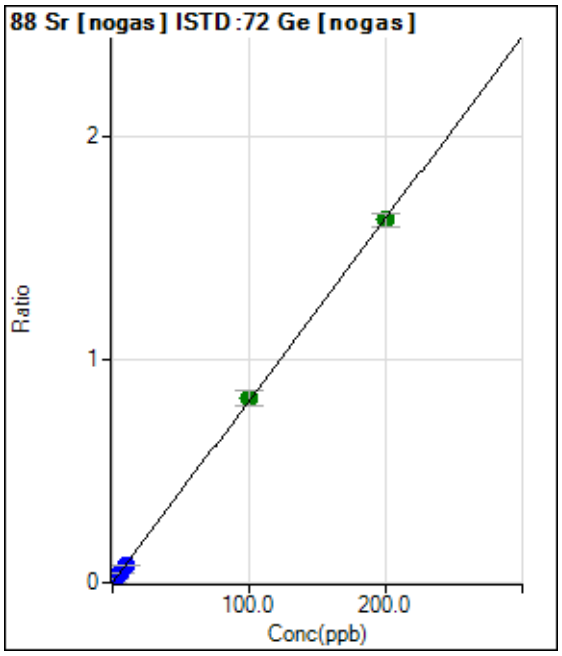
Calibration for 225_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	156.67	0.0001	P	24.2
2	☐	2.000	1.990	476.68	0.0002	P	5.1
3	☐	5.000	4.692	920.04	0.0004	P	6.0
4	☐	10.000	10.027	1803.45	0.0007	P	10.5
5	☐	100.000	100.507	15520.14	0.0068	P	5.1
6	☐	200.000	199.753	31534.34	0.0135	P	2.4
7	☐	1.000					

y = 6.7275E-005 * x + 6.5884E-005
R = 1.0000
DL = 0.7103
BEC = 0.9793

Weight: <None>
Min Conc: <None>

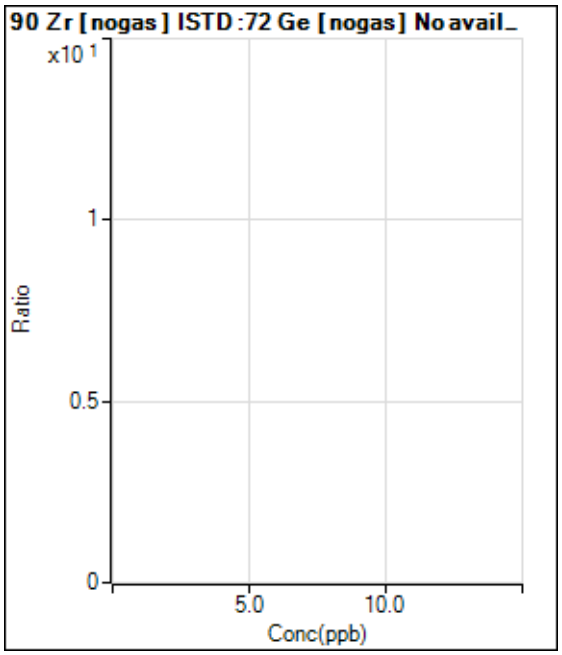


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	723.36	0.0003	P	9.6
2	☐	2.000	1.990	39393.45	0.0165	P	0.5
3	☐	5.000	4.984	98602.59	0.0409	P	3.4
4	☐	10.000	9.676	192259.85	0.0791	P	4.0
5	☐	100.000	101.430	1876905.80	0.8266	A	9.0
6	☐	200.000	199.302	3791538.38	1.6238	A	3.7
7	☐	1.000					

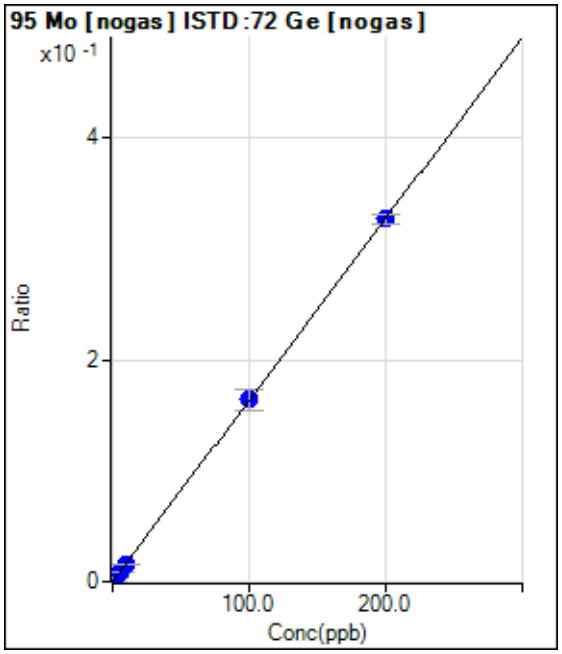
y = 0.0081 * x + 3.0545E-004
R = 1.0000
DL = 0.01084
BEC = 0.0375

Weight: <None>
Min Conc: <None>

Calibration for 225_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					

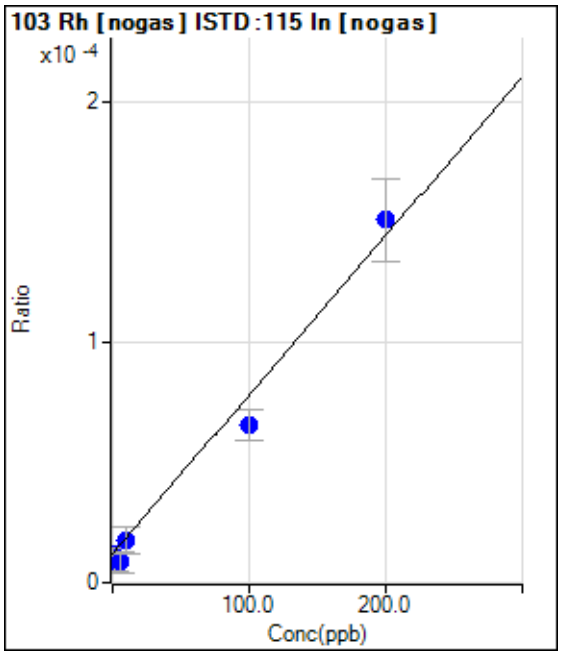


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	123.34	0.0001	P	46.5
2	☐	2.000	1.850	7344.94	0.0031	P	7.5
3	☐	5.000	4.878	19370.74	0.0080	P	2.6
4	☐	10.000	9.607	38338.12	0.0158	P	4.4
5	☐	100.000	100.184	372040.61	0.1640	P	11.2
6	☐	200.000	199.932	764434.16	0.3273	P	2.9
7	☐	1.000					

y = 0.0016 * x + 5.1825E-005
R = 1.0000
DL = 0.04417
BEC = 0.03166

Weight: <None>
Min Conc: <None>

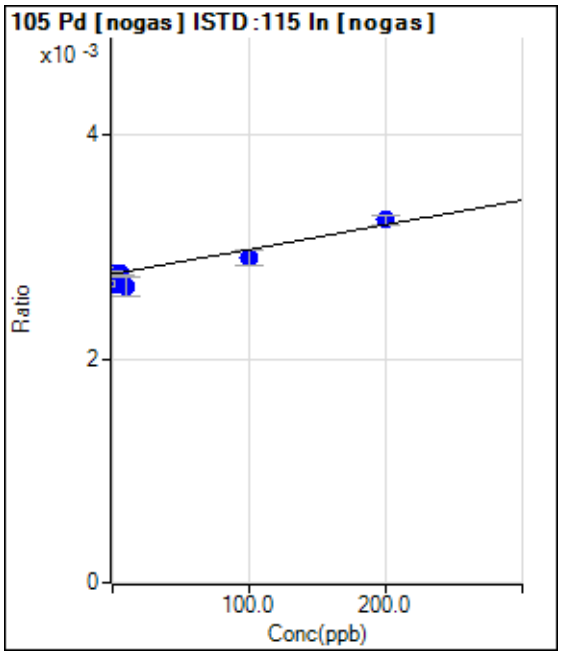
Calibration for 225_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	26.67	0.0000	P	41.7
2	☐	2.000	-6.919	16.67	0.0000	P	74.6
3	☐	5.000	-5.160	20.00	0.0000	P	100.
4	☐	10.000	8.362	40.00	0.0000	P	65.5
5	☐	100.000	80.897	136.67	0.0001	P	20.4
6	☐	200.000	209.976	323.34	0.0002	P	22.5
7	☐	1.000					

y = 6.6065E-007 * x + 1.2009E-005
R = 0.9942
DL = 22.74
BEC = 18.18

Weight: <None>
Min Conc: <None>

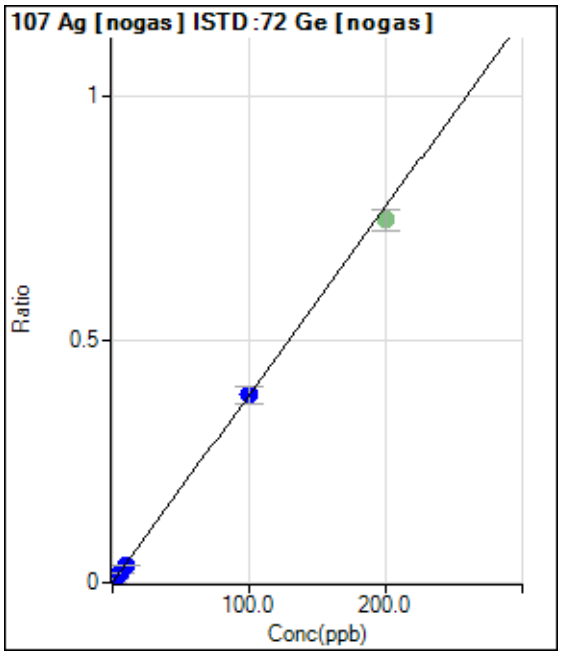


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6121.16	0.0028	P	4.9
2	☐	2.000	-39.570	6134.47	0.0027	P	1.6
3	☐	5.000	2.219	6271.20	0.0028	P	1.6
4	☐	10.000	-50.436	5954.42	0.0026	P	6.6
5	☐	100.000	68.266	6121.21	0.0029	P	4.7
6	☐	200.000	219.374	6984.81	0.0032	P	2.7
7	☐	1.000					

y = 2.2045E-006 * x + 0.0028
R = 0.9662
DL = 183.3
BEC = 1251

Weight: <None>
Min Conc: <None>

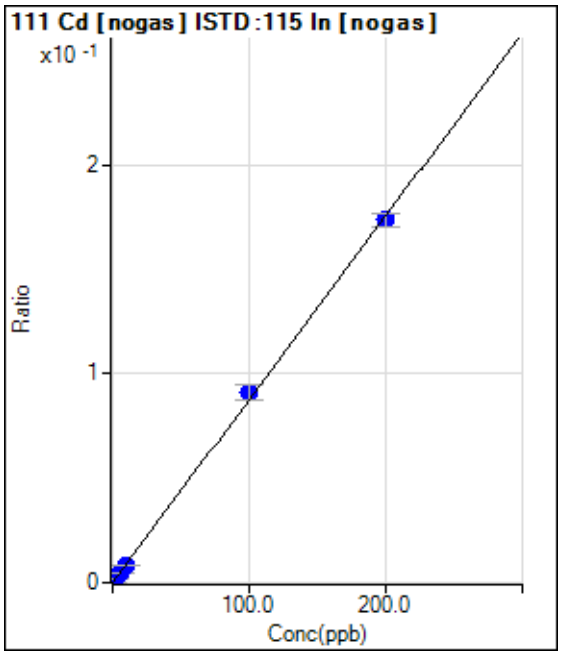
Calibration for 225_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	56.67	0.0000	P	58.8
2	☐	2.000	1.938	17932.66	0.0075	P	3.8
3	☐	5.000	4.954	46270.75	0.0192	P	2.5
4	☐	10.000	9.460	89026.39	0.0366	P	1.9
5	☐	100.000	100.058	878296.52	0.3871	P	9.3
6	☑	200.000		1743115.60	0.7470	A	6.1
7	☐	1.000					

y = 0.0039 * x + 2.4228E-005
R = 1.0000
DL = 0.01104
BEC = 0.006263

Weight: <None>
Min Conc: <None>

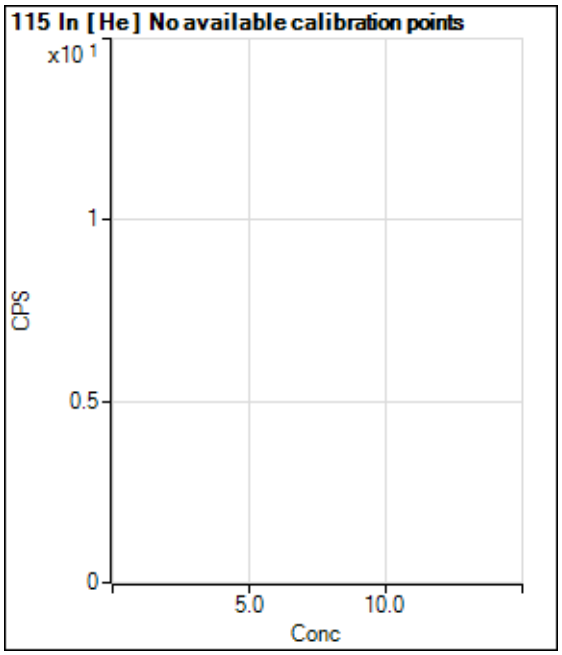


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6.67	0.0000	P	86.8
2	☐	2.000	1.941	3910.48	0.0017	P	6.5
3	☐	5.000	5.053	10063.04	0.0044	P	0.8
4	☐	10.000	9.471	18713.43	0.0083	P	2.6
5	☐	100.000	103.967	191187.62	0.0912	P	8.0
6	☐	200.000	198.042	374218.08	0.1737	P	3.7
7	☐	1.000					

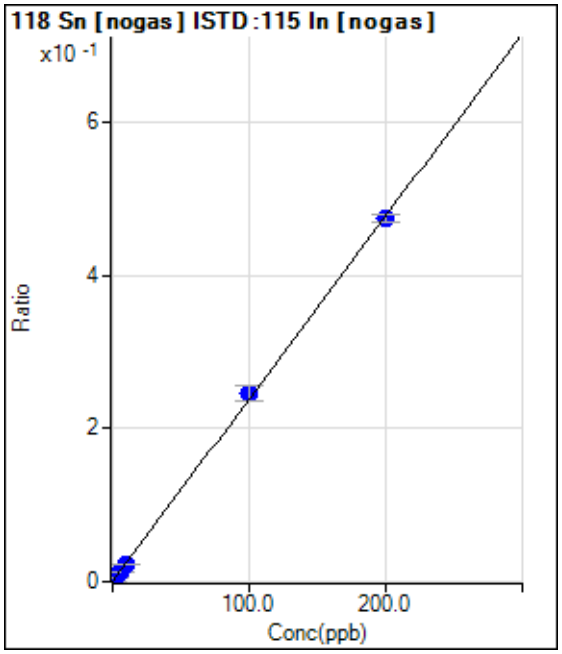
y = 8.7715E-004 * x + 3.0937E-006
R = 0.9997
DL = 0.009189
BEC = 0.003527

Weight: <None>
Min Conc: <None>

Calibration for 225_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			855781.23		P	1.2
2	☐			868855.16		P	0.9
3	☐			868948.85		P	1.1
4	☐			864503.20		P	0.7
5	☐			837572.60		P	0.9
6	☐			825670.09		P	1.3
7	☐						

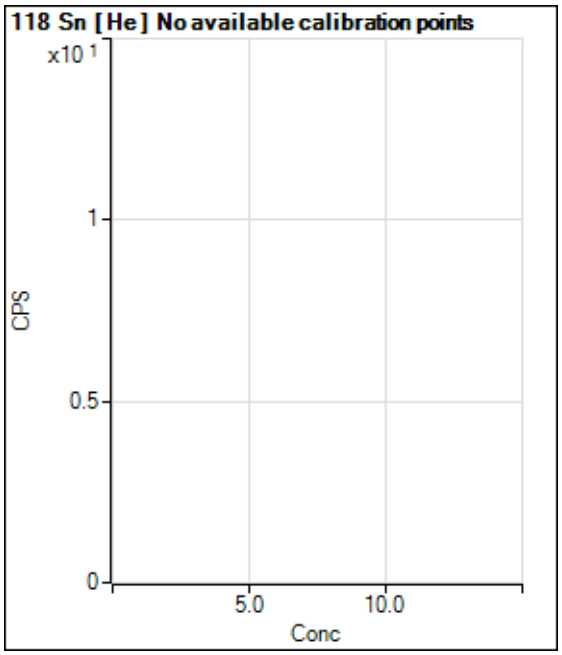


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	686.69	0.0003	P	6.6
2	☐	2.000	1.904	11096.99	0.0048	P	9.3
3	☐	5.000	4.877	27057.90	0.0119	P	1.4
4	☐	10.000	9.582	52020.85	0.0231	P	5.4
5	☐	100.000	102.812	514197.66	0.2452	P	8.4
6	☐	200.000	198.619	1020333.58	0.4735	P	2.0
7	☐	1.000					

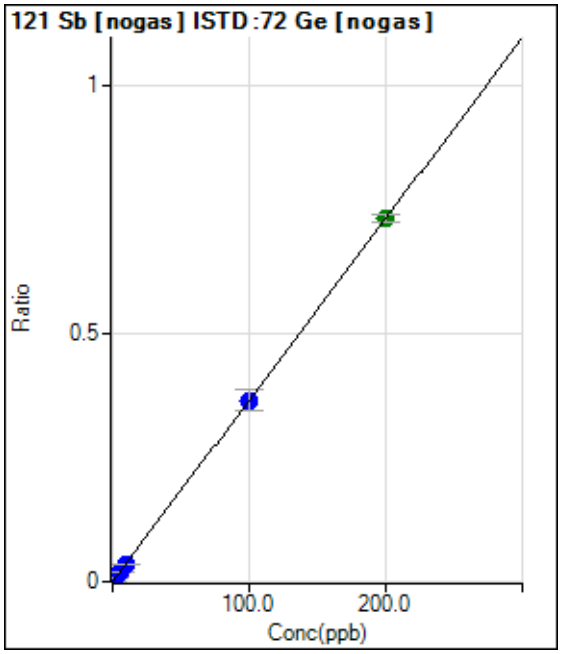
y = 0.0024 * x + 3.1073E-004
R = 0.9999
DL = 0.02572
BEC = 0.1304

Weight: <None>
Min Conc: <None>

Calibration for 225_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			316.68		P	10.2
2	☐			4617.34		P	4.4
3	☐			11437.23		P	3.2
4	☐			21720.29		P	1.6
5	☐			218128.10		P	1.4
6	☐			439019.56		P	1.6
7	☐						

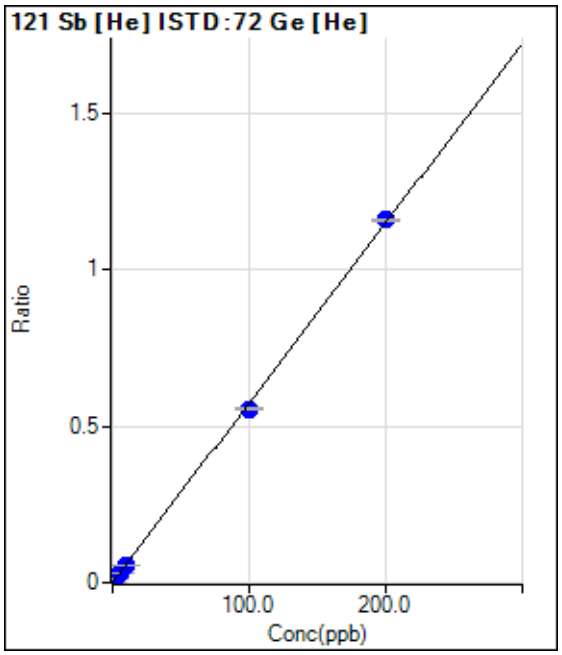


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	570.02	0.0002	P	13.8
2	☐	2.000	1.921	17318.83	0.0073	P	2.1
3	☐	5.000	4.851	43330.47	0.0180	P	3.5
4	☐	10.000	9.559	85511.21	0.0352	P	3.6
5	☐	100.000	100.039	830221.52	0.3660	P	11.1
6	☐	200.000	200.007	1709277.32	0.7316	A	2.2
7	☐	1.000					

y = 0.0037 * x + 2.3951E-004
R = 1.0000
DL = 0.02703
BEC = 0.0655

Weight: <None>
Min Conc: <None>

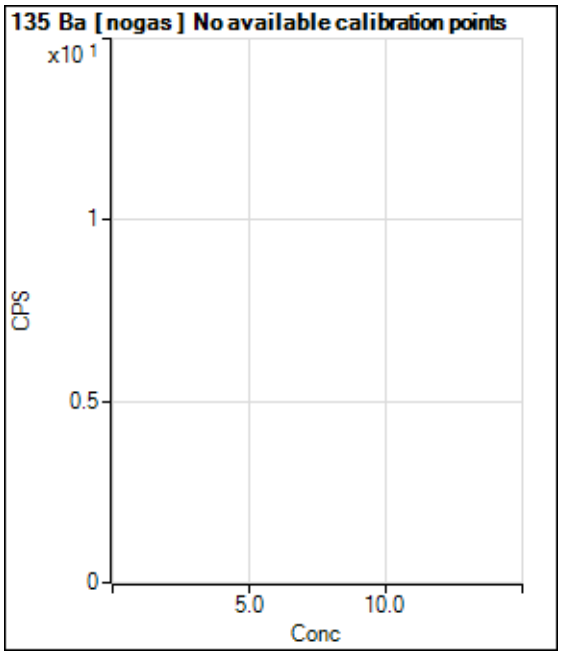
Calibration for 225_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	333.34	0.0005	P	1.0
2	☐	2.000	1.871	7021.50	0.0113	P	5.7
3	☐	5.000	4.868	17922.82	0.0285	P	1.3
4	☐	10.000	9.448	34434.01	0.0548	P	1.9
5	☐	100.000	96.361	345994.12	0.5540	P	0.9
6	☐	200.000	201.852	709375.51	1.1599	P	0.7
7	☐	1.000					

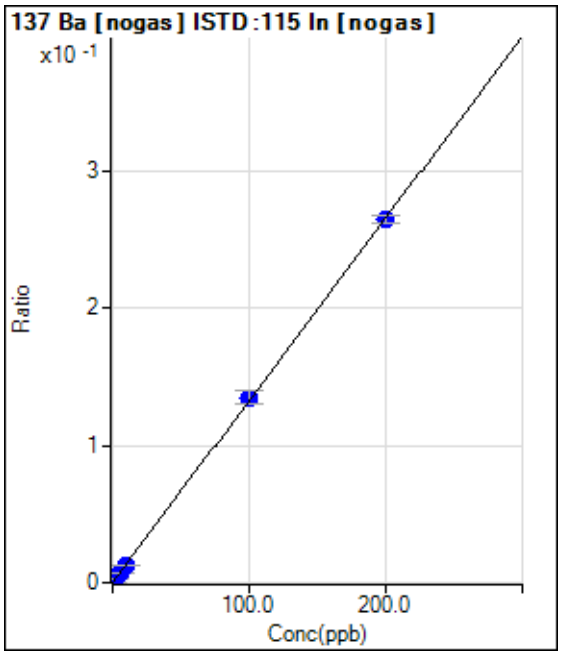
y = 0.0057 * x + 5.3975E-004
R = 0.9998
DL = 0.002793
BEC = 0.09398

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			60.00		P	28.9
2	☐			3200.35		P	8.5
3	☐			8685.61		P	4.6
4	☐			17195.44		P	4.3
5	☐			164140.95		P	5.3
6	☐			333627.11		P	1.1
7	☐						

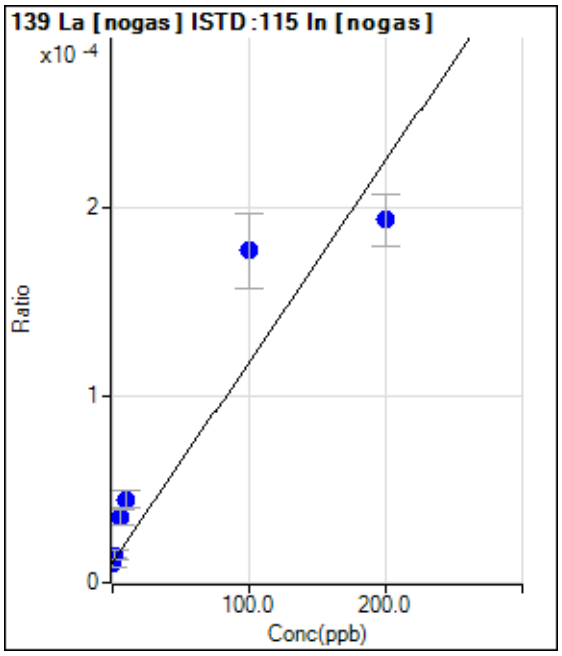
Calibration for 225_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	133.33	0.0001	P	13.7
2	☐	2.000	1.911	5957.78	0.0026	P	4.4
3	☐	5.000	4.779	14526.32	0.0064	P	1.8
4	☐	10.000	9.525	28573.76	0.0127	P	4.7
5	☐	100.000	101.638	283064.58	0.1350	P	7.7
6	☐	200.000	199.211	570045.28	0.2645	P	2.2
7	☐	1.000					

y = 0.0013 * x + 6.0483E-005
R = 0.9999
DL = 0.01867
BEC = 0.04556

Weight: <None>
Min Conc: <None>

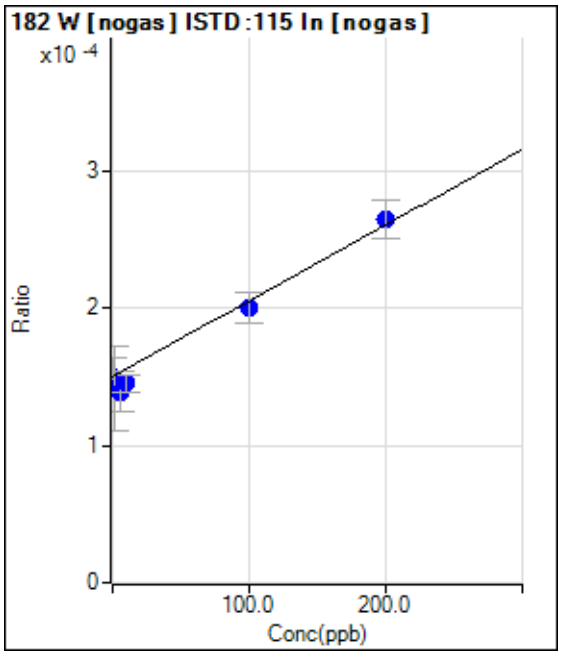


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	23.33	0.0000	P	51.0
2	☐	2.000	3.777	33.33	0.0000	P	37.7
3	☐	5.000	22.793	80.00	0.0000	P	21.5
4	☐	10.000	31.713	100.00	0.0000	P	21.3
5	☐	100.000	155.459	370.01	0.0002	P	22.5
6	☐	200.000	170.722	416.68	0.0002	P	14.0
7	☐	1.000					

y = 1.0732E-006 * x + 1.0614E-005
R = 0.9388
DL = 15.13
BEC = 9.891

Weight: <None>
Min Conc: <None>

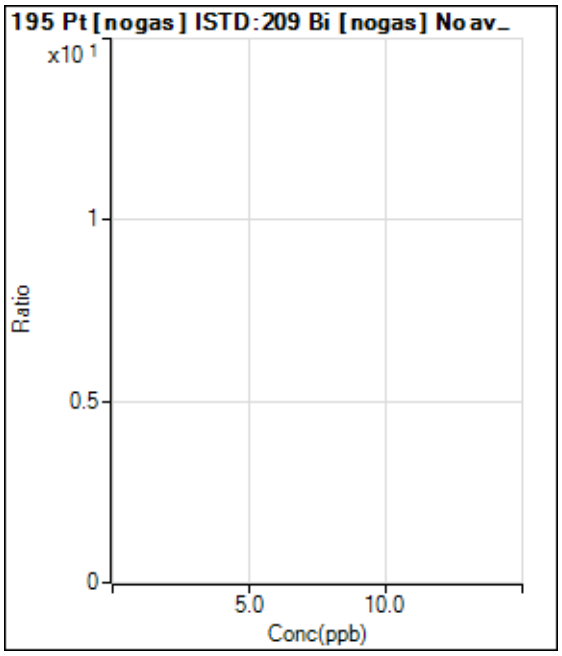
Calibration for 225_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	333.34	0.0002	P	18.6
2	☐	2.000	-15.792	320.01	0.0001	P	43.5
3	☐	5.000	-20.465	316.68	0.0001	P	20.8
4	☐	10.000	-9.456	326.68	0.0001	P	7.9
5	☐	100.000	90.332	420.01	0.0002	P	11.4
6	☐	200.000	206.621	570.02	0.0003	P	10.7
7	☐	1.000					

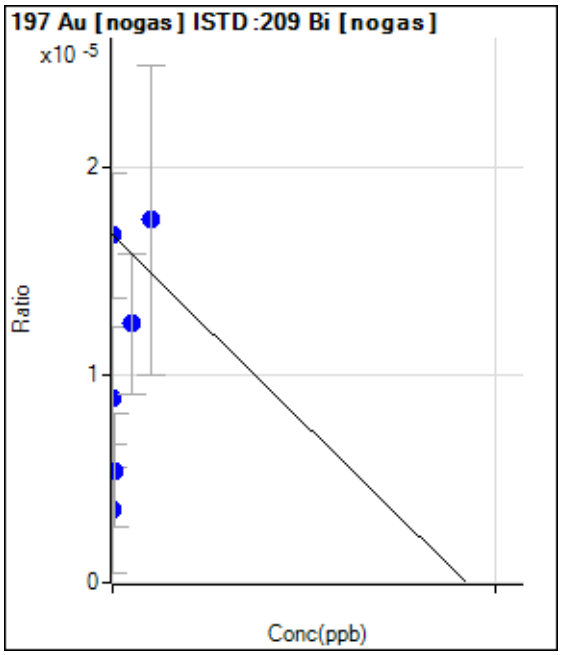
y = 5.5127E-007 * x + 1.5004E-004
R = 0.9951
DL = 151.8
BEC = 272.2

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					

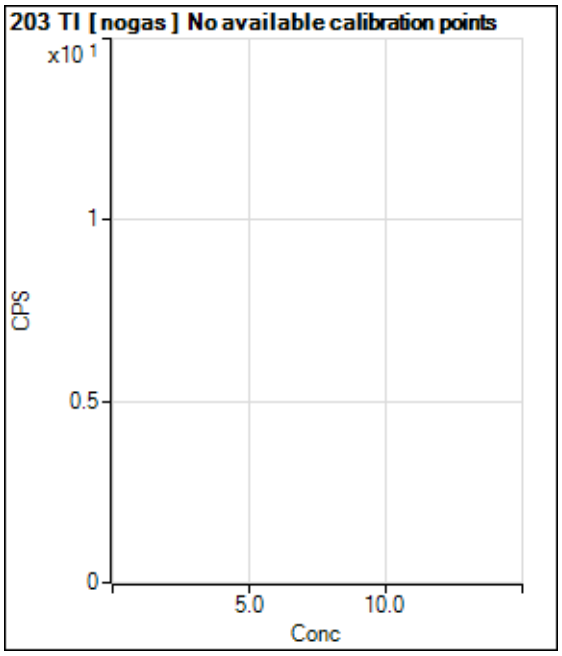
Calibration for 225_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	30.00	0.0000	P	35.7
2	☐	2.000	1452.690	6.67	0.0000	P	173.
3	☐	5.000	862.594	16.67	0.0000	P	75.8
4	☐	10.000	1249.613	10.00	0.0000	P	101.
5	☐	100.000	469.181	20.00	0.0000	P	53.7
6	☐	200.000	-82.518	30.00	0.0000	P	85.0
7	☐	1.000					

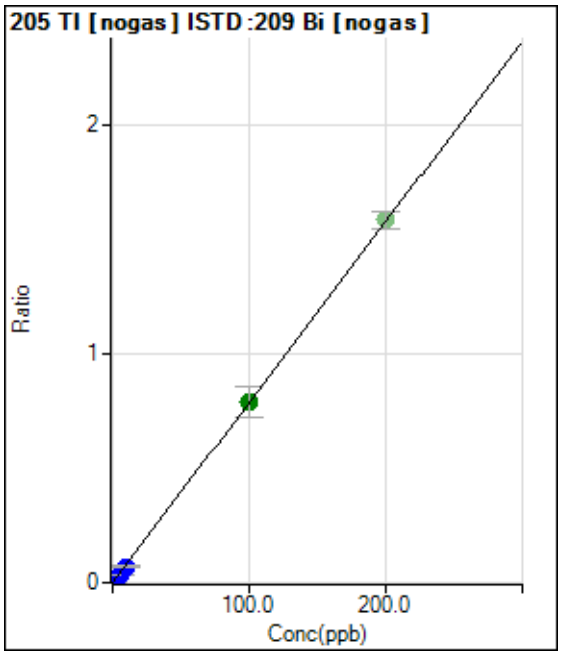
y = -9.0772E-009 * x + 1.6739E-005
R = 0.6079
DL = -1974
BEC = -1844

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			136.67		P	33.0
2	☐			11384.10		P	2.8
3	☐			27636.94		P	4.7
4	☐			54306.79		P	4.1
5	☐			564095.61		P	3.9
6	☐			1104627.59		A	3.0
7	☐						

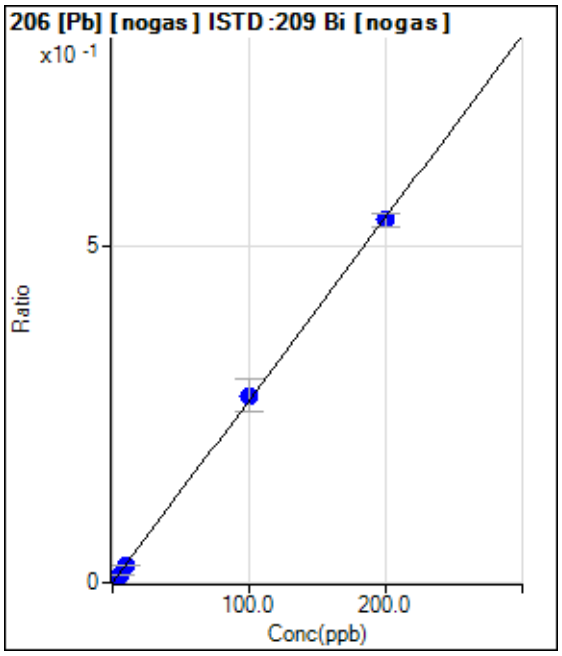
Calibration for 225_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	256.67	0.0001	P	13.9
2	☐	2.000	1.815	26197.79	0.0145	P	6.2
3	☐	5.000	4.337	65942.95	0.0343	P	13.4
4	☐	10.000	8.977	130602.61	0.0709	P	4.4
5	☐	100.000	100.139	1292535.06	0.7898	A	17.3
6	☑	200.000		2674486.00	1.5861	A	5.0
7	☐	1.000					

y = 0.0079 * x + 1.4224E-004
R = 1.0000
DL = 0.007527
BEC = 0.01804

Weight: <None>
Min Conc: <None>

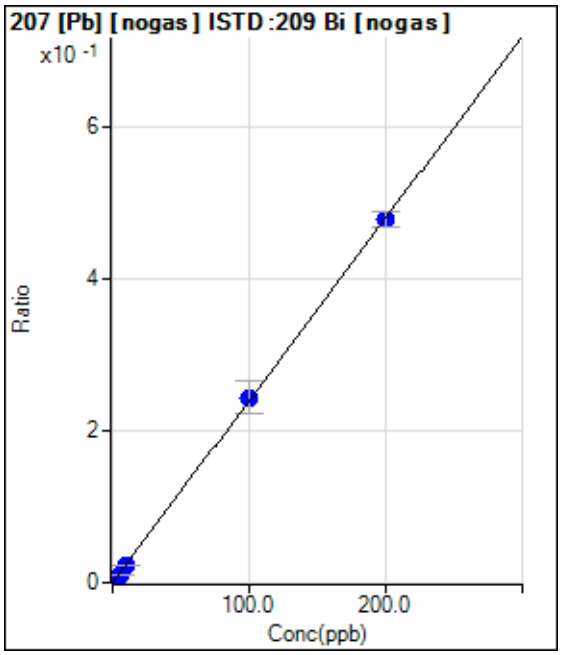


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	73.33	0.0000	P	24.7
2	☐	2.000	1.913	9439.58	0.0052	P	10.6
3	☐	5.000	4.400	22923.03	0.0119	P	13.6
4	☐	10.000	9.210	45951.55	0.0249	P	2.9
5	☐	100.000	102.597	454290.38	0.2775	P	16.9
6	☐	200.000	198.757	906715.90	0.5376	P	3.9
7	☐	1.000					

y = 0.0027 * x + 4.0489E-005
R = 0.9999
DL = 0.01108
BEC = 0.01497

Weight: <None>
Min Conc: <None>

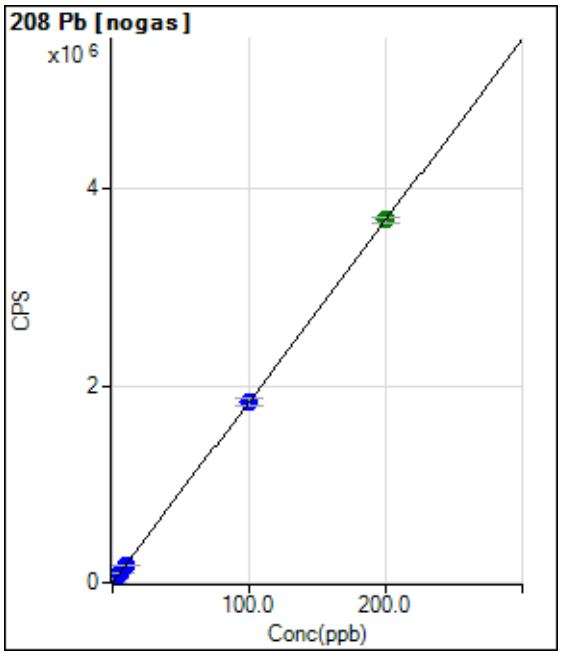
Calibration for 225_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	56.67	0.0000	P	8.3
2	☐	2.000	1.832	8022.08	0.0044	P	7.3
3	☐	5.000	4.358	20132.78	0.0105	P	12.8
4	☐	10.000	9.185	40637.44	0.0221	P	0.4
5	☐	100.000	101.765	399411.22	0.2440	P	17.1
6	☐	200.000	199.176	805468.53	0.4776	P	4.2
7	☐	1.000					

y = 0.0024 * x + 3.1479E-005
R = 0.9999
DL = 0.00326
BEC = 0.01313

Weight: <None>
Min Conc: <None>

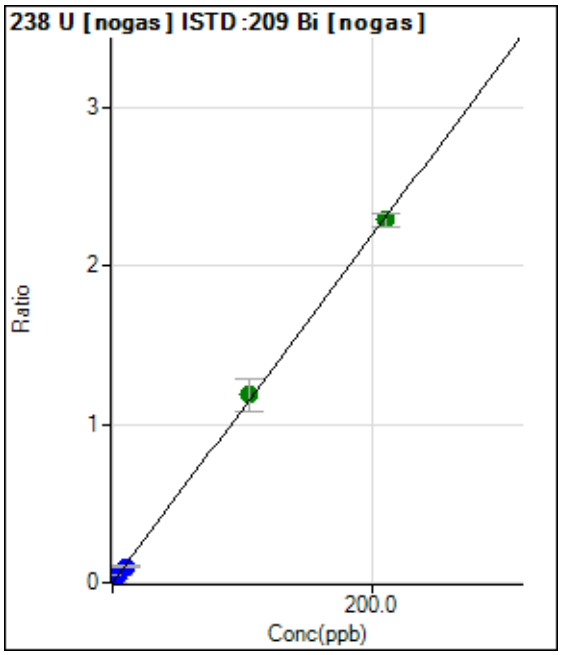


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	230.00		P	11.5
2	☐	2.000	2.011	37197.12		P	1.8
3	☐	5.000	5.042	92912.10		P	1.1
4	☐	10.000	9.977	183613.22		P	0.3
5	☐	100.000	99.454	1828327.97		P	4.4
6	☐	200.000	200.273	3681516.74		A	1.8
7	☐	1.000					

y = 18381.3426 * x + 230.0000
R = 1.0000
DL = 0.004318
BEC = 0.01251

Weight: <None>
Min Conc: <None>

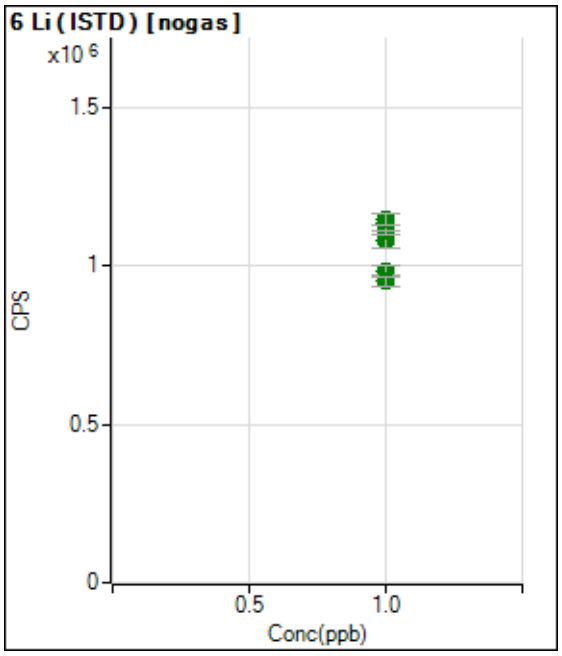
Calibration for 225_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	73.33	0.0000	P	25.8
2	☐	2.000	1.858	37033.29	0.0204	P	4.2
3	☐	5.000	4.479	94362.42	0.0492	P	13.8
4	☐	10.000	9.182	185427.80	0.1007	P	5.5
5	☐	105.000	107.859	1936906.43	1.1829	A	16.7
6	☐	210.000	208.623	3859870.25	2.2880	A	4.0
7	☐	1.000					

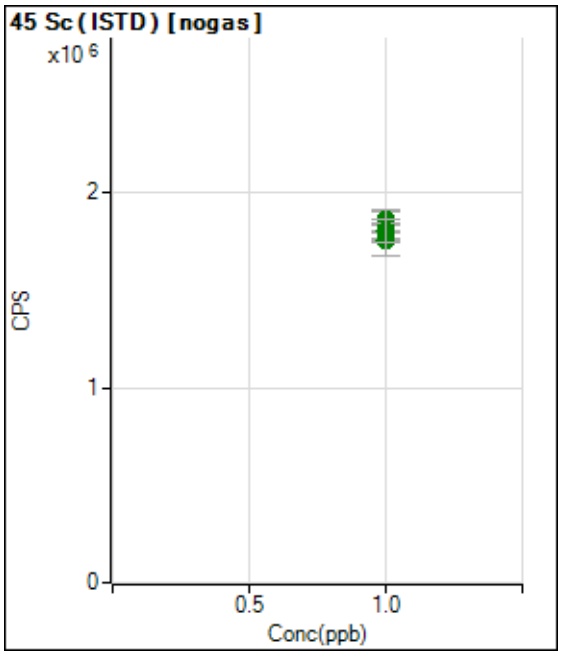
y = 0.0110 * x + 4.0589E-005
R = 0.9999
DL = 0.002869
BEC = 0.003701

Weight: <None>
Min Conc: <None>

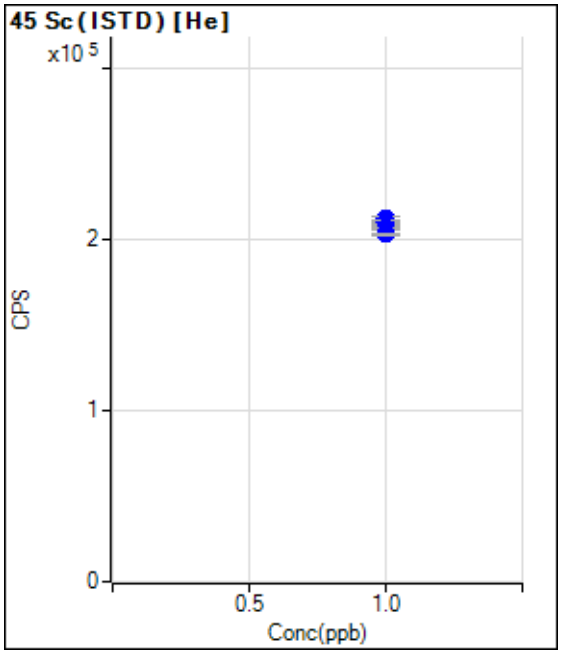


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1076308.82		A	4.2
2	☐	1.000		1111485.37		A	2.8
3	☐	1.000		1135377.52		A	4.6
4	☐	1.000		1143719.04		A	3.1
5	☐	1.000		983805.30		A	2.7
6	☐	1.000		949657.04		A	3.1
7	☐	1.000					

Calibration for 225_ICV.d

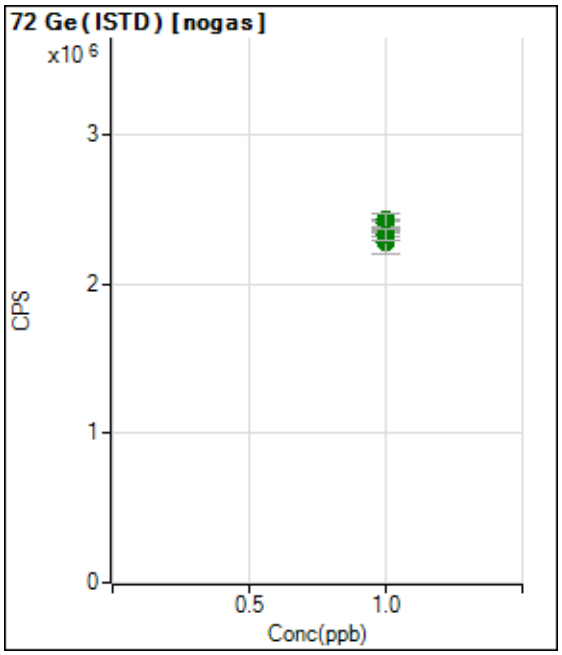


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1793297.58		A	4.4
2	☐	1.000		1803375.13		A	3.9
3	☐	1.000		1848263.20		A	5.8
4	☐	1.000		1862938.82		A	6.1
5	☐	1.000		1761878.05		A	9.6
6	☐	1.000		1805658.05		A	6.3
7	☐	1.000					

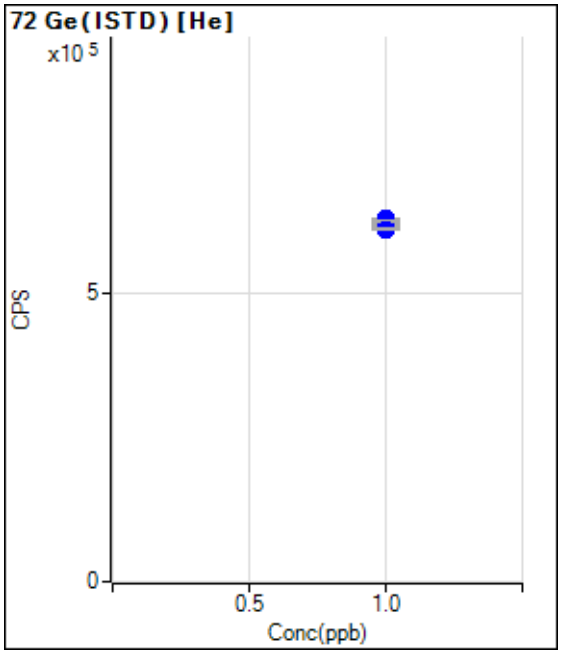


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		208011.27		P	0.6
2	☐	1.000		211721.30		P	1.1
3	☐	1.000		208849.03		P	0.6
4	☐	1.000		209841.02		P	1.4
5	☐	1.000		206219.73		P	0.4
6	☐	1.000		202692.90		P	0.9
7	☐	1.000					

Calibration for 225_ICV.d

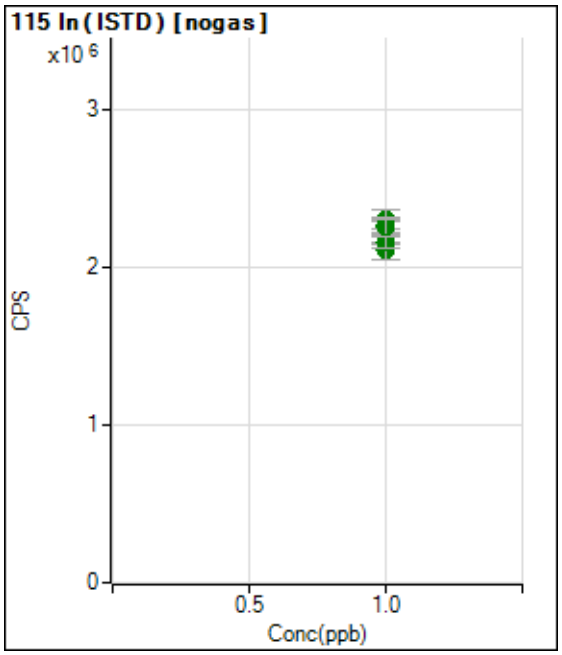


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		2371436.79		A	4.0
2	☐	1.000		2385497.67		A	2.8
3	☐	1.000		2411200.90		A	2.5
4	☐	1.000		2432240.90		A	3.9
5	☐	1.000		2278187.57		A	6.8
6	☐	1.000		2336391.27		A	3.3
7	☐	1.000					

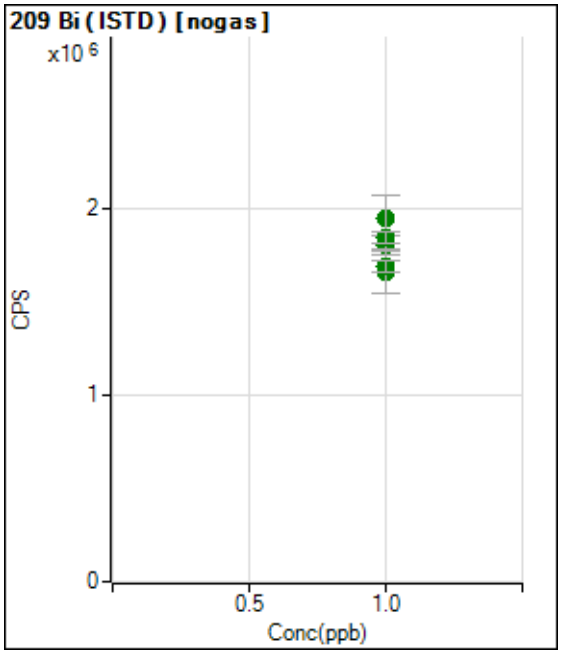


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		617556.72		P	0.8
2	☐	1.000		622344.34		P	1.5
3	☐	1.000		628857.79		P	0.3
4	☐	1.000		628310.77		P	0.3
5	☐	1.000		624576.57		P	0.6
6	☐	1.000		611621.78		P	0.9
7	☐	1.000					

Calibration for 225_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		2215793.12		A	6.1
2	☐	1.000		2297192.68		A	5.2
3	☐	1.000		2268786.10		A	4.4
4	☐	1.000		2251640.11		A	4.1
5	☐	1.000		2101806.51		A	5.3
6	☐	1.000		2156018.53		A	3.5
7	☐	1.000					



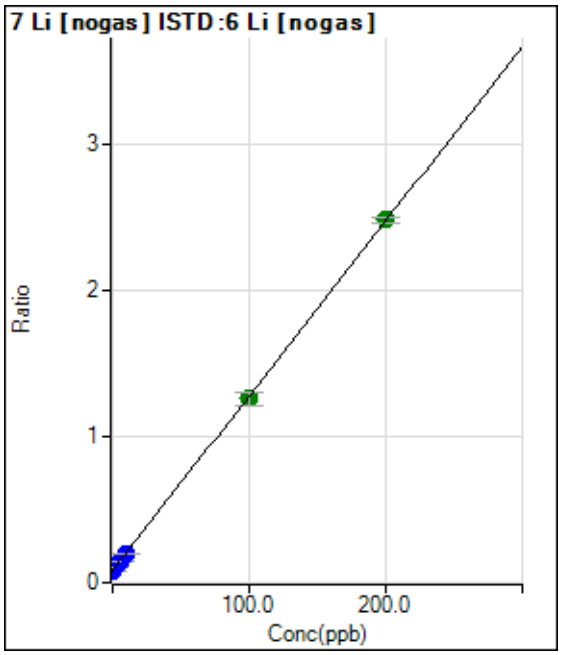
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1799697.37		A	5.8
2	☐	1.000		1815254.40		A	3.8
3	☐	1.000		1942653.93		A	13.0
4	☐	1.000		1842923.57		A	3.2
5	☐	1.000		1662519.61		A	13.6
6	☐	1.000		1688240.65		A	3.6
7	☐	1.000					

Calibration for 283_ICV.d

Batch Folder: C:\Agilent\ICPMH\1\DATA\010819B.b\
Analysis File: 010819B.batch.bin
DA Date-Time: 2019-01-08 22:05:29
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	273CALB.d	CAL BLK	2019-01-08 21:41:36
2	274CALS.d	2/10/200	2019-01-08 21:43:36
3	275CALS.d	5/25/500	2019-01-08 21:45:38
4	276CALS.d	10/50/1000	2019-01-08 21:47:39
5	277CALS.d	100/500/10K	2019-01-08 21:49:40
6	278CALS.d	200/1000/20K	2019-01-08 21:51:37
7			

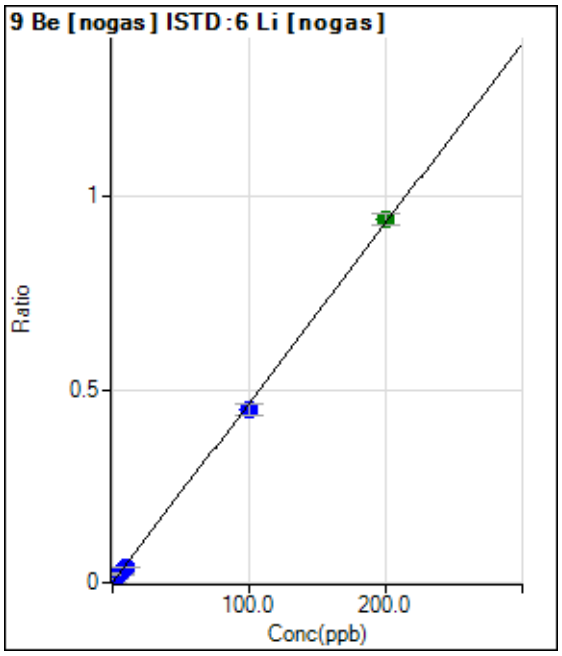
Calibration for 283_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	130241.76	0.0835	P	3.4
2	☐	2.000	1.695	164122.42	0.1037	P	2.7
3	☐	5.000	5.163	213328.10	0.1451	P	4.7
4	☐	10.000	9.311	292075.26	0.1945	P	1.4
5	☐	100.000	98.457	1767732.99	1.2573	A	7.0
6	☐	200.000	200.805	3259921.10	2.4775	A	1.8
7	☐	1.000					

y = 0.0119 * x + 0.0835
R = 1.0000
DL = 0.7244
BEC = 7.006

Weight: <None>
Min Conc: <None>

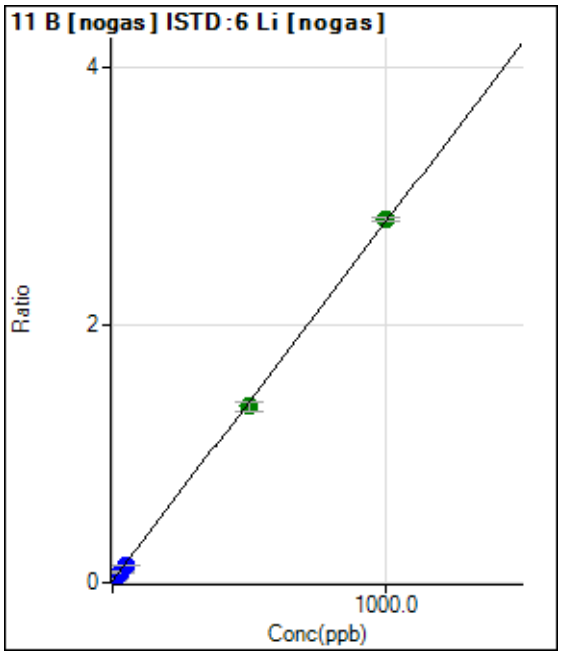


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	80.00	0.0001	P	60.4
2	☐	2.000	1.777	13188.00	0.0083	P	2.3
3	☐	5.000	4.851	33268.89	0.0227	P	7.5
4	☐	10.000	8.873	62166.70	0.0414	P	1.5
5	☐	100.000	96.420	631856.37	0.4493	P	6.2
6	☐	200.000	201.852	1237472.40	0.9406	A	3.1
7	☐	1.000					

y = 0.0047 * x + 5.2402E-005
R = 0.9998
DL = 0.02037
BEC = 0.01125

Weight: <None>
Min Conc: <None>

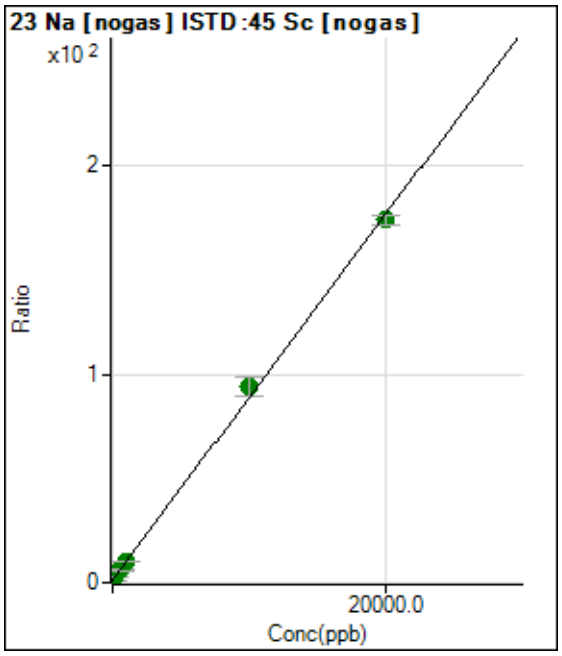
Calibration for 283_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	21769.20	0.0140	P	8.8
2	☐	10.000	8.193	58284.59	0.0368	P	1.3
3	☐	25.000	23.392	116224.17	0.0792	P	9.1
4	☐	50.000	43.846	204537.64	0.1362	P	0.4
5	☐	500.000	487.384	1930705.08	1.3727	A	5.8
6	☐	1000.000	1006.674	3711451.82	2.8204	A	1.1
7	☐	5.000					

y = 0.0028 * x + 0.0140
R = 0.9999
DL = 1.329
BEC = 5.019

Weight: <None>
Min Conc: <None>

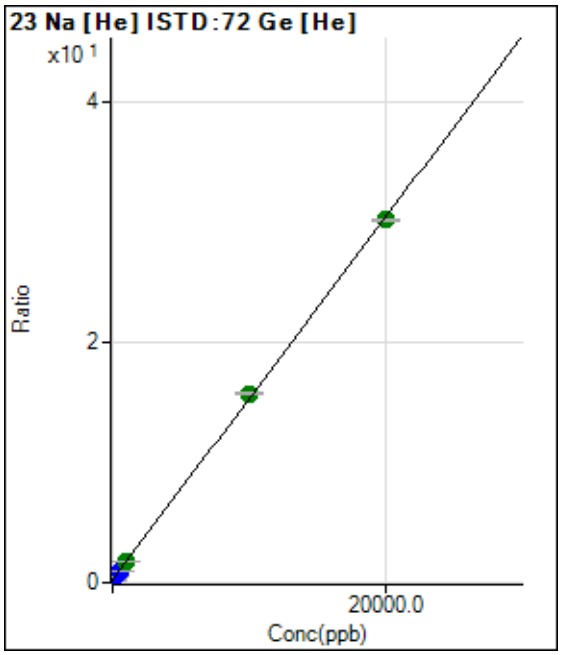


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3503206.98	1.2607	A	9.1
2	☐	200.000	191.306	8367845.76	2.9402	A	4.1
3	☐	500.000	547.133	15862124.83	6.0641	A	9.6
4	☐	1000.000	1008.255	27174075.61	10.1123	A	4.9
5	☐	10000.00	10581.908	239433022.0	94.1613	A	9.7
6	☐	20000.00	19707.542	455973760.1	174.277	A	2.4
7	☐	100.000					

y = 0.0088 * x + 1.2607
R = 0.9994
DL = 39.33
BEC = 143.6

Weight: <None>
Min Conc: <None>

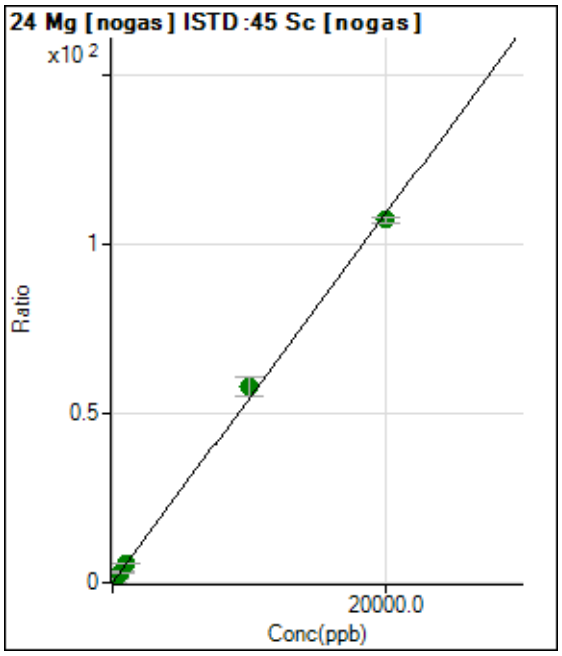
Calibration for 283_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	218340.82	0.2390	P	2.6
2	☐	200.000	205.128	509185.80	0.5485	P	2.0
3	☐	500.000	526.856	937824.15	1.0338	P	0.9
4	☐	1000.000	1015.472	1606899.25	1.7710	A	0.7
5	☐	10000.00	10277.037	13872806.46	15.7439	A	0.5
6	☐	20000.00	19859.985	26489877.10	30.2016	A	0.8
7	☐	100.000					

y = 0.0015 * x + 0.2390
R = 0.9999
DL = 12.21
BEC = 158.4

Weight: <None>
Min Conc: <None>

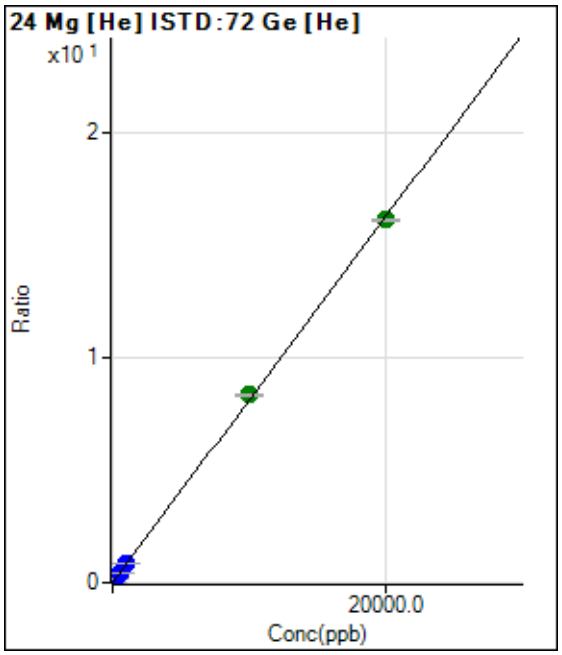


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	32699.81	0.0118	P	11.8
2	☐	200.000	205.282	3219726.05	1.1313	A	4.0
3	☐	500.000	555.028	7943948.10	3.0386	A	10.5
4	☐	1000.000	1016.796	14930068.04	5.5568	A	5.4
5	☐	10000.00	10639.588	147522953.2	58.0340	A	10.3
6	☐	20000.00	19677.938	280848172.9	107.323	A	1.2
7	☐	100.000					

y = 0.0055 * x + 0.0118
R = 0.9993
DL = 0.7661
BEC = 2.161

Weight: <None>
Min Conc: <None>

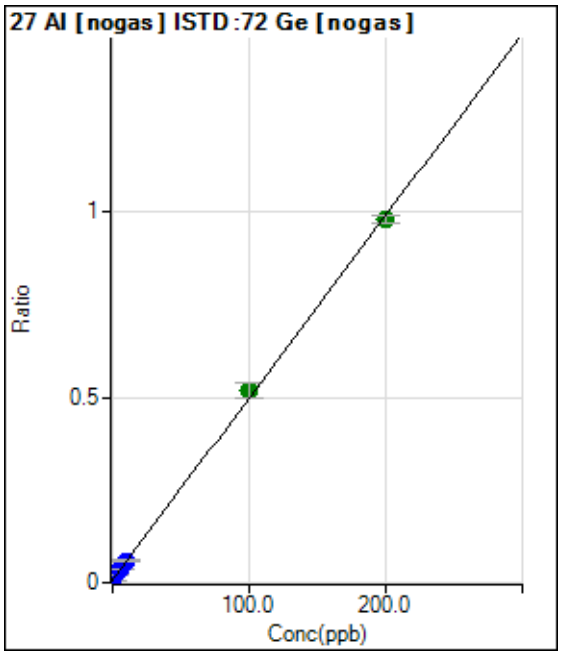
Calibration for 283_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1790.11	0.0020	P	7.5
2	☐	200.000	216.800	165175.94	0.1779	P	2.6
3	☐	500.000	537.858	397781.68	0.4385	P	1.8
4	☐	1000.000	1009.897	745385.56	0.8216	P	1.5
5	☐	10000.00	10289.000	7360312.18	8.3530	A	0.8
6	☐	20000.00	19853.891	14135847.71	16.1163	A	0.4
7	☐	100.000					

y = 8.1165E-004 * x + 0.0020
R = 0.9999
DL = 0.5412
BEC = 2.415

Weight: <None>
Min Conc: <None>

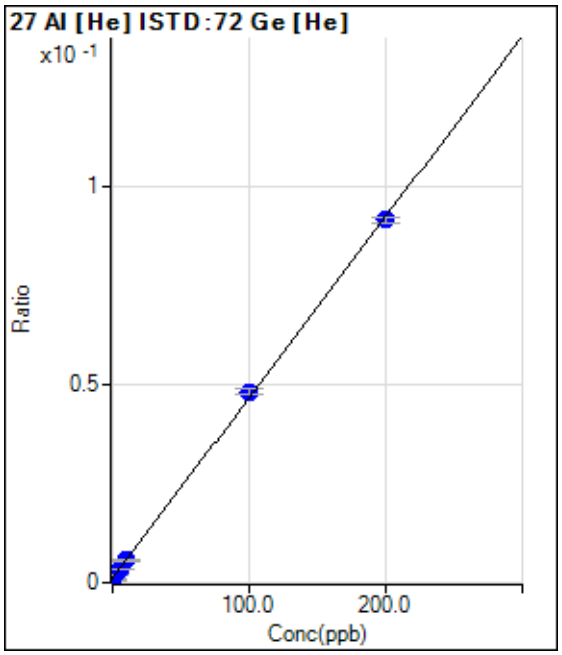


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	26612.29	0.0071	P	3.5
2	☐	2.000	2.355	69775.01	0.0187	P	0.4
3	☐	5.000	6.054	129398.41	0.0369	P	7.4
4	☐	10.000	10.667	212888.51	0.0596	P	1.9
5	☐	100.000	104.413	1786075.39	0.5204	A	7.6
6	☐	200.000	197.730	3358567.55	0.9792	A	2.2
7	☐	1.000					

y = 0.0049 * x + 0.0071
R = 0.9997
DL = 0.1544
BEC = 1.453

Weight: <None>
Min Conc: <None>

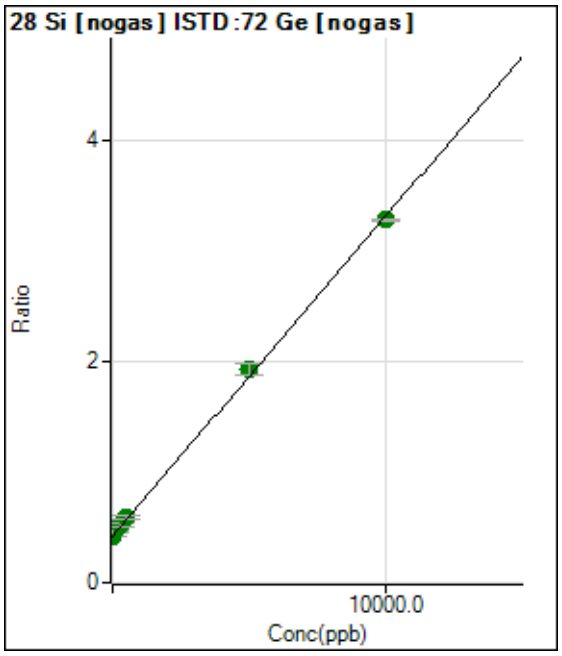
Calibration for 283_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.907	663.35	0.0007	P	1.8
2	☐	2.000	1.510	1700.10	0.0018	P	10.5
3	☐	5.000	4.899	3063.62	0.0034	P	5.3
4	☐	10.000	9.783	5090.77	0.0056	P	8.8
5	☐	100.000	103.394	42611.67	0.0484	P	2.3
6	☐	200.000	198.321	80446.32	0.0917	P	1.3
7	☐	1.000					

y = 4.5670E-004 * x + 0.0011
R = 0.9998
DL = 0.08681
BEC = 2.497

Weight: <None>
Min Conc: <None>

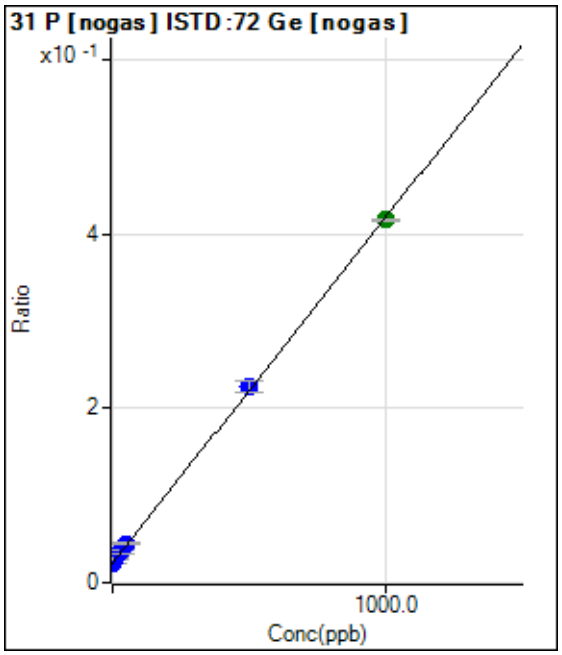


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1568632.79	0.4209	A	1.8
2	☐	100.000	136.692	1714785.86	0.4604	A	5.9
3	☐	250.000	356.477	1835428.72	0.5238	A	8.6
4	☐	500.000	573.492	2094473.46	0.5864	A	4.6
5	☐	5000.000	5203.693	6601083.86	1.9227	A	5.5
6	☐	10000.00	9891.450	11236243.58	3.2756	A	0.7
7	☐	5.000					

y = 2.8861E-004 * x + 0.4209
R = 0.9997
DL = 76.63
BEC = 1458

Weight: <None>
Min Conc: <None>

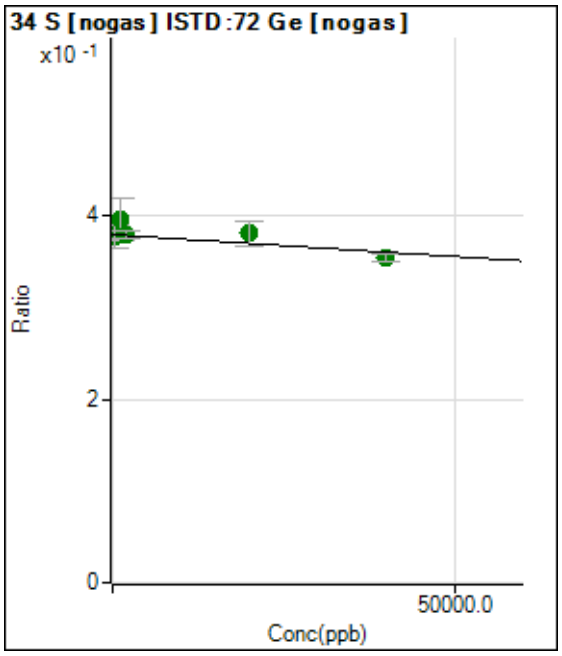
Calibration for 283_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	83473.60	0.0224	P	2.4
2	☐	10.000	12.416	101788.41	0.0273	P	1.9
3	☐	25.000	32.834	124076.48	0.0354	P	8.7
4	☐	50.000	56.748	160301.86	0.0449	P	3.4
5	☐	500.000	512.002	773304.20	0.2253	P	5.9
6	☐	1000.000	993.442	1427175.08	0.4160	A	0.9
7	☐	5.000					

y = 3.9624E-004 * x + 0.0224
R = 0.9999
DL = 4.073
BEC = 56.52

Weight: <None>
Min Conc: <None>

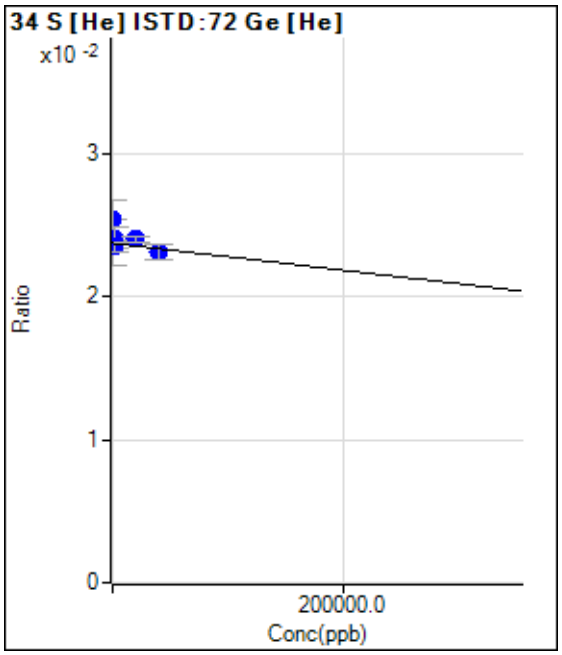


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1415986.36	0.3800	A	2.0
2	☐	400.000	5527.777	1405464.36	0.3773	A	6.6
3	☐	1000.000	-33953.440	1386106.02	0.3961	A	11.6
4	☐	2000.000	325.576	1356890.33	0.3798	A	2.2
5	☐	20000.00	-3008.623	1308608.56	0.3814	A	7.5
6	☐	40000.00	52410.591	1218122.75	0.3551	A	2.3
7	☐	100.000					

y = -4.7509E-007 * x + 0.3800
R = -0.7837
DL = -4.859E+04
BEC = -7.998E+05

Weight: <None>
Min Conc: <None>

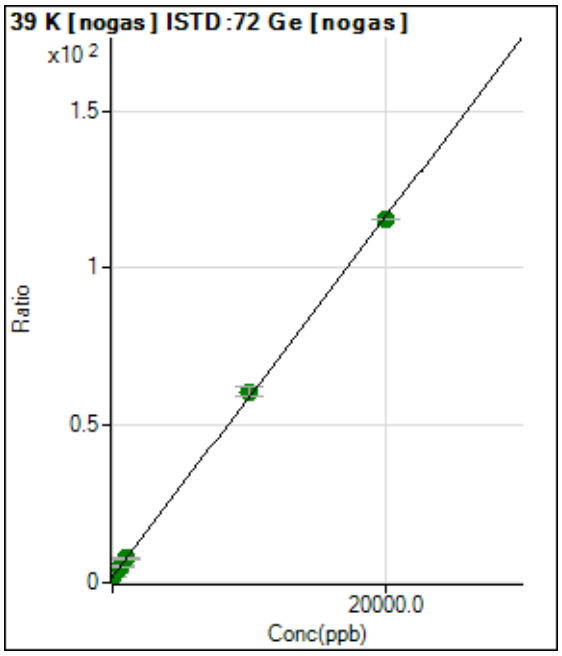
Calibration for 283_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	21682.63	0.0238	P	13.6
2	☐	400.000	-173319.24	23552.45	0.0254	P	11.2
3	☐	1000.000	-38469.951	21882.59	0.0241	P	6.0
4	☐	2000.000	27170.547	21315.12	0.0235	P	2.8
5	☐	20000.00	-30526.132	21181.99	0.0240	P	2.0
6	☐	40000.00	66728.480	20280.21	0.0231	P	4.3
7	☐	100.000					

y = -9.4252E-009 * x + 0.0238
R = -0.5306
DL = -1.028E+06
BEC = -2.52E+06

Weight: <None>
Min Conc: <None>

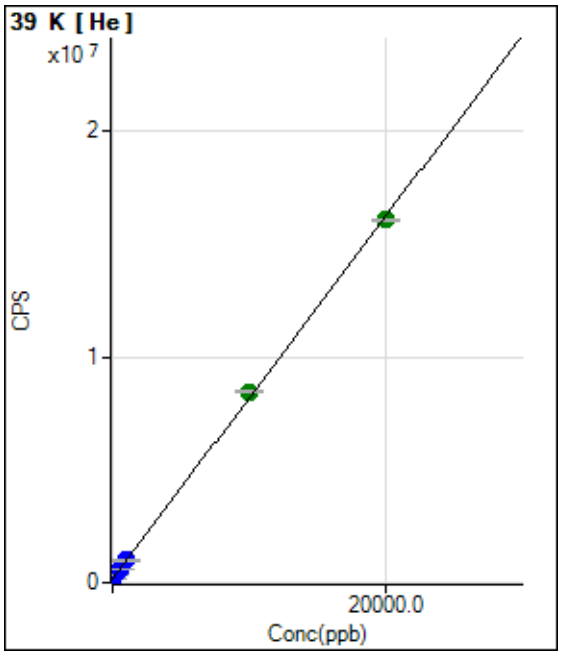


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	7232153.81	1.9406	A	1.8
2	☐	200.000	208.162	11662633.60	3.1303	A	3.1
3	☐	500.000	555.159	17930374.88	5.1135	A	7.2
4	☐	1000.000	1016.779	27686544.37	7.7518	A	3.4
5	☐	10000.00	10301.273	208873788.0	60.8162	A	4.2
6	☐	20000.00	19847.064	395774275.5	115.374	A	0.1
7	☐	100.000					

y = 0.0057 * x + 1.9406
R = 0.9998
DL = 18.62
BEC = 339.5

Weight: <None>
Min Conc: <None>

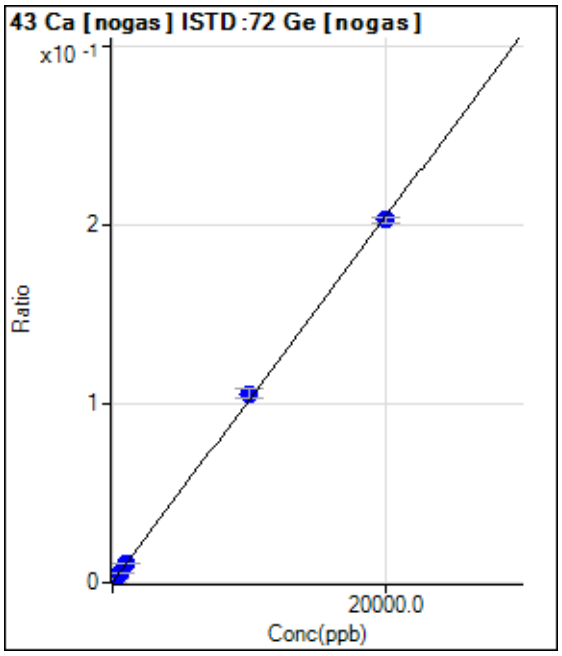
Calibration for 283_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	160463.01		P	1.0
2	☐	200.000	217.797	335355.91		P	0.4
3	☐	500.000	534.865	589964.42		P	0.4
4	☐	1000.000	1020.999	980335.30		P	0.8
5	☐	10000.00	10357.055	8477277.17		A	1.9
6	☐	20000.00	19819.373	16075608.93		A	0.6
7	☐	100.000					

y = 803.0096 * x + 160463.0133
R = 0.9998
DL = 6.237
BEC = 199.8

Weight: <None>
Min Conc: <None>

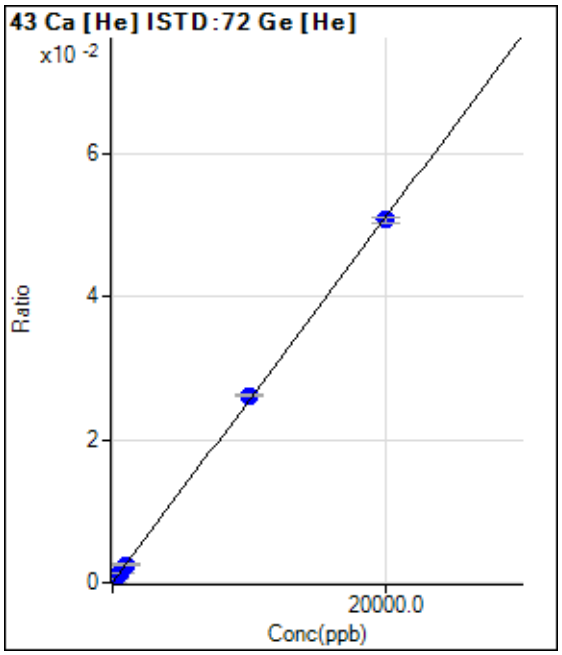


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	513.35	0.0001	P	13.9
2	☐	200.000	199.557	8118.54	0.0022	P	5.0
3	☐	500.000	517.436	19019.87	0.0054	P	10.4
4	☐	1000.000	1009.070	37400.84	0.0105	P	1.7
5	☐	10000.00	10327.336	363319.97	0.1058	P	4.9
6	☐	20000.00	19835.447	696633.24	0.2031	P	1.3
7	☐	100.000					

y = 1.0232E-005 * x + 1.3783E-004
R = 0.9998
DL = 5.602
BEC = 13.47

Weight: <None>
Min Conc: <None>

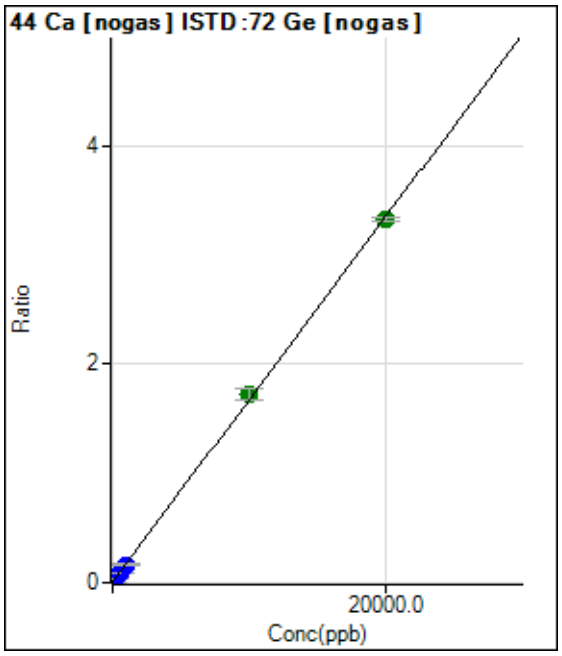
Calibration for 283_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	23.33	0.0000	P	49.2
2	☐	200.000	227.654	563.35	0.0006	P	17.8
3	☐	500.000	505.860	1193.39	0.0013	P	10.0
4	☐	1000.000	963.986	2253.50	0.0025	P	6.7
5	☐	10000.00	10256.137	23074.44	0.0262	P	1.6
6	☐	20000.00	19873.309	44489.82	0.0507	P	1.7
7	☐	100.000					

y = 2.5509E-006 * x + 2.5484E-005
R = 0.9999
DL = 14.73
BEC = 9.99

Weight: <None>
Min Conc: <None>

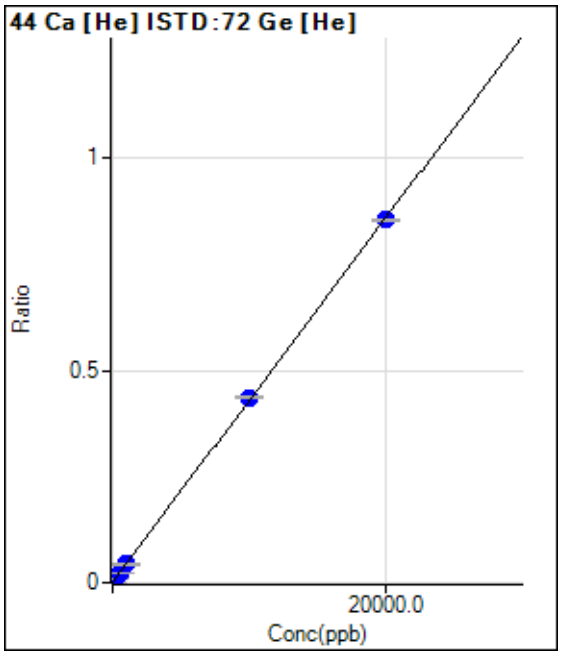


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	18856.40	0.0051	P	4.5
2	☐	200.000	197.904	141973.71	0.0381	P	2.2
3	☐	500.000	523.113	323798.33	0.0924	P	8.4
4	☐	1000.000	968.417	595724.89	0.1667	P	1.7
5	☐	10000.00	10309.777	5925872.62	1.7262	A	5.8
6	☐	20000.00	19846.134	11382074.41	3.3182	A	1.2
7	☐	100.000					

y = 1.6694E-004 * x + 0.0051
R = 0.9998
DL = 4.127
BEC = 30.32

Weight: <None>
Min Conc: <None>

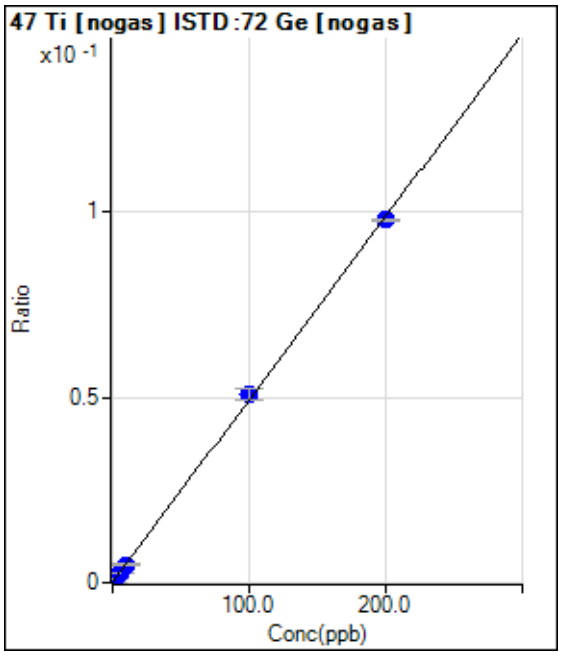
Calibration for 283_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	633.35	0.0007	P	13.1
2	☐	200.000	199.065	8562.09	0.0092	P	2.0
3	☐	500.000	536.711	21485.94	0.0237	P	3.9
4	☐	1000.000	1000.150	39505.14	0.0435	P	3.1
5	☐	10000.00	10165.664	384381.15	0.4362	P	0.6
6	☐	20000.00	19916.252	749028.74	0.8540	P	0.8
7	☐	100.000					

y = 4.2844E-005 * x + 6.9381E-004
R = 1.0000
DL = 6.384
BEC = 16.19

Weight: <None>
Min Conc: <None>

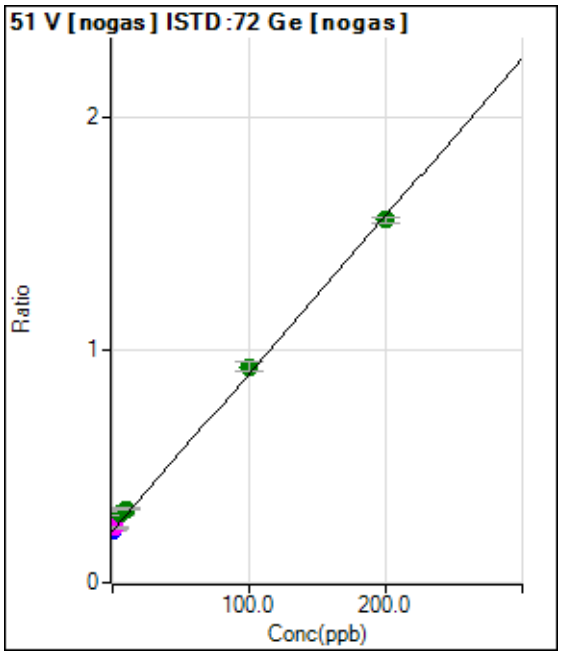


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	223.34	0.0001	P	12.0
2	☐	2.000	1.929	3763.78	0.0010	P	8.5
3	☐	5.000	5.241	9262.43	0.0026	P	9.0
4	☐	10.000	9.695	17288.32	0.0048	P	4.1
5	☐	100.000	103.306	175033.10	0.0510	P	5.9
6	☐	200.000	198.357	335652.90	0.0979	P	0.8
7	☐	1.000					

y = 4.9301E-004 * x + 5.9801E-005
R = 0.9998
DL = 0.04359
BEC = 0.1213

Weight: <None>
Min Conc: <None>

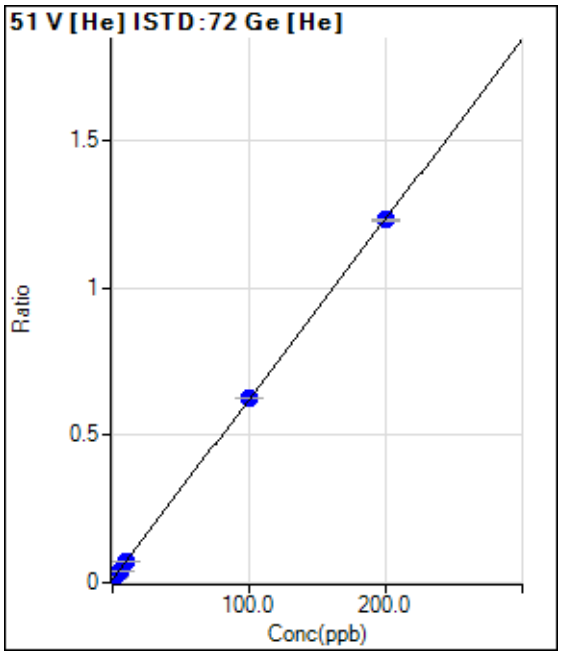
Calibration for 283_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	829456.86	0.2225	P	0.5
2	☐	2.000	2.119	882487.00	0.2368	M	2.8
3	☐	5.000	11.093	1043791.04	0.2976	A	7.2
4	☐	10.000	13.855	1130461.35	0.3163	A	1.5
5	☐	100.000	104.453	3191693.43	0.9296	A	5.2
6	☐	200.000	197.427	5347263.53	1.5589	A	1.7
7	☐	1.000					

y = 0.0068 * x + 0.2225
R = 0.9993
DL = 0.4629
BEC = 32.87

Weight: <None>
Min Conc: <None>

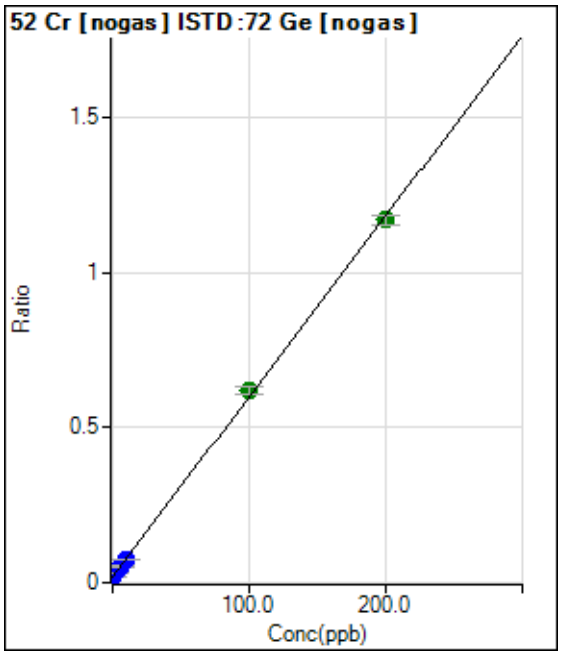


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.070	9677.86	0.0106	P	1.6
2	☐	2.000	1.867	20822.91	0.0224	P	0.4
3	☐	5.000	5.097	38250.32	0.0422	P	1.0
4	☐	10.000	9.660	63553.41	0.0701	P	1.0
5	☐	100.000	100.860	552862.38	0.6274	P	0.3
6	☐	200.000	199.586	1079523.71	1.2308	P	0.9
7	☐	1.000					

y = 0.0061 * x + 0.0110
R = 1.0000
DL = 0.0809
BEC = 1.802

Weight: <None>
Min Conc: <None>

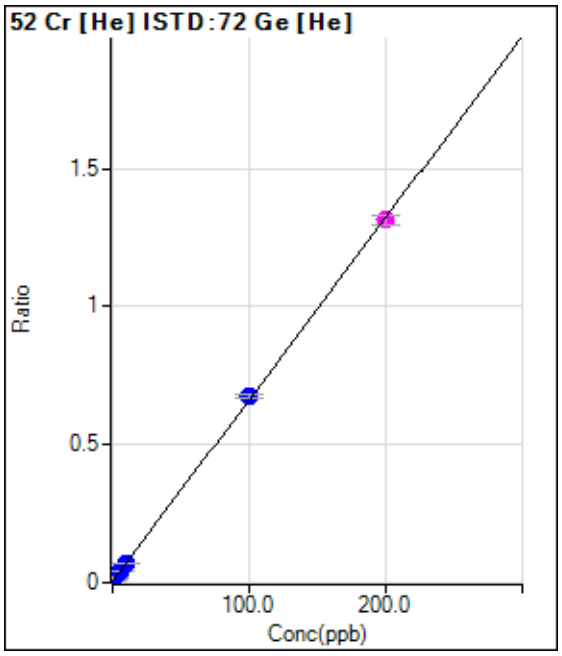
Calibration for 283_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	67625.71	0.0181	P	0.9
2	☐	2.000	1.954	109999.46	0.0295	P	1.3
3	☐	5.000	5.723	180349.52	0.0515	P	8.3
4	☐	10.000	10.046	273819.05	0.0766	P	1.3
5	☐	100.000	103.829	2138474.81	0.6226	A	4.4
6	☐	200.000	198.066	4017181.29	1.1712	A	2.8
7	☐	1.000					

y = 0.0058 * x + 0.0181
R = 0.9997
DL = 0.08787
BEC = 3.116

Weight: <None>
Min Conc: <None>

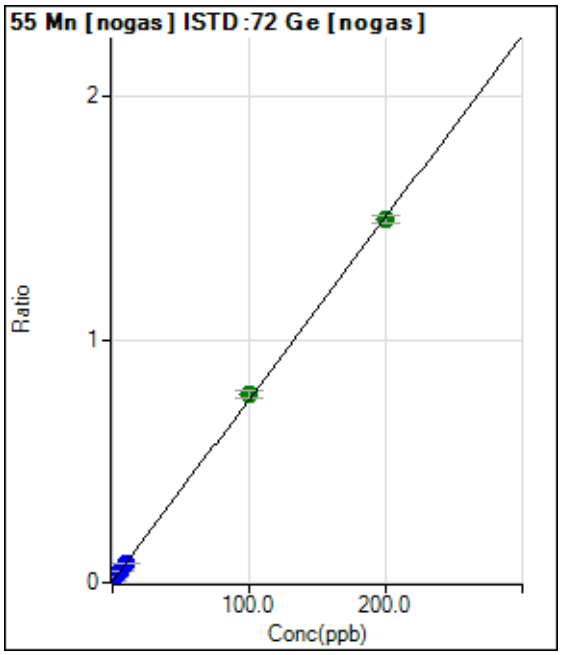


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3733.76	0.0041	P	6.2
2	☐	2.000	2.052	16340.74	0.0176	P	2.6
3	☐	5.000	5.255	35106.81	0.0387	P	1.1
4	☐	10.000	9.851	62578.68	0.0690	P	0.9
5	☐	100.000	102.108	596239.24	0.6767	P	2.4
6	☐	200.000	198.947	1152916.94	1.3146	M	2.5
7	☐	1.000					

y = 0.0066 * x + 0.0041
R = 0.9999
DL = 0.116
BEC = 0.6202

Weight: <None>
Min Conc: <None>

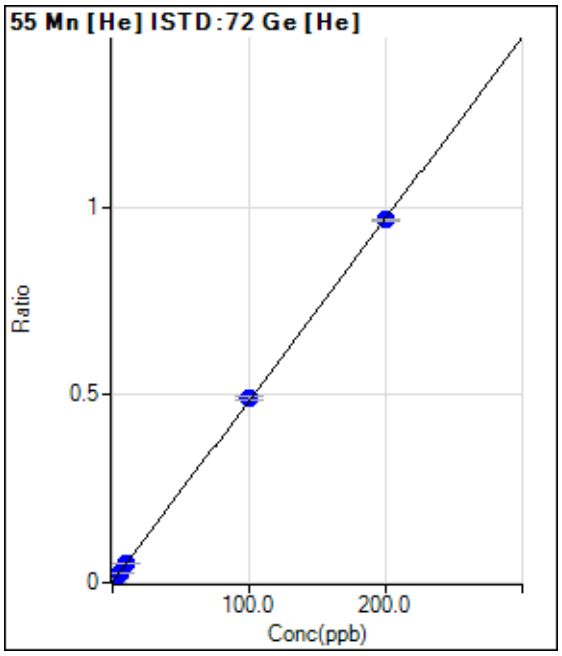
Calibration for 283_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	19984.26	0.0054	P	3.2
2	☐	2.000	2.093	78348.48	0.0210	P	2.9
3	☐	5.000	5.515	163577.99	0.0467	P	7.5
4	☐	10.000	10.045	287871.03	0.0806	P	1.8
5	☐	100.000	102.782	2660856.73	0.7749	A	4.9
6	☐	200.000	198.593	5118570.65	1.4922	A	2.1
7	☐	1.000					

y = 0.0075 * x + 0.0054
R = 0.9999
DL = 0.06951
BEC = 0.7161

Weight: <None>
Min Conc: <None>

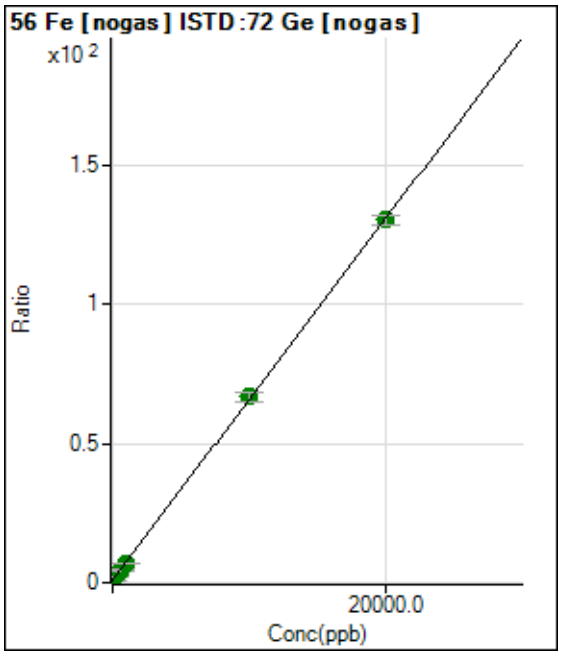


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	903.37	0.0010	P	26.3
2	☐	2.000	2.005	9939.45	0.0107	P	1.8
3	☐	5.000	5.226	23858.97	0.0263	P	2.4
4	☐	10.000	9.997	44824.50	0.0494	P	1.9
5	☐	100.000	101.179	432693.65	0.4911	P	2.2
6	☐	200.000	199.405	847982.96	0.9668	P	0.8
7	☐	1.000					

y = 0.0048 * x + 9.8978E-004
R = 1.0000
DL = 0.1612
BEC = 0.2043

Weight: <None>
Min Conc: <None>

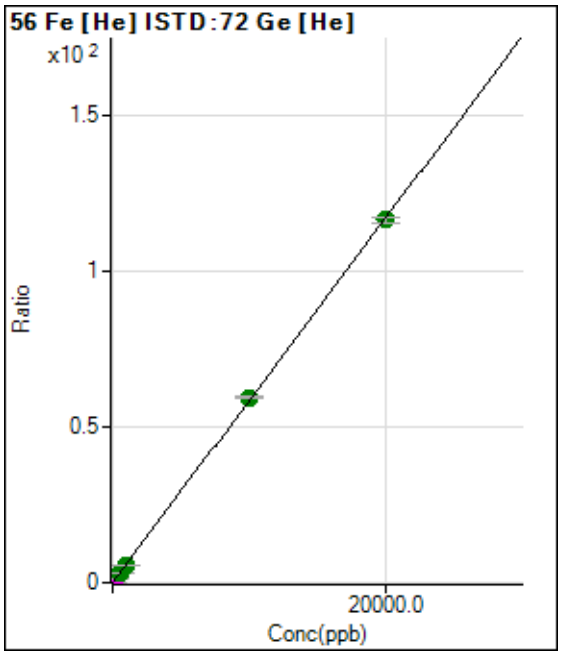
Calibration for 283_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3475326.64	0.9327	A	2.7
2	☐	200.000	197.690	8253109.82	2.2149	A	2.5
3	☐	500.000	525.808	15227973.26	4.3431	A	7.4
4	☐	1000.000	963.734	25667364.64	7.1836	A	1.5
5	☐	10000.00	10132.800	228862805.1	66.6556	A	5.2
6	☐	20000.00	19934.791	446697409.9	130.232	A	2.3
7	☐	100.000					

y = 0.0065 * x + 0.9327
R = 1.0000
DL = 11.68
BEC = 143.8

Weight: <None>
Min Conc: <None>

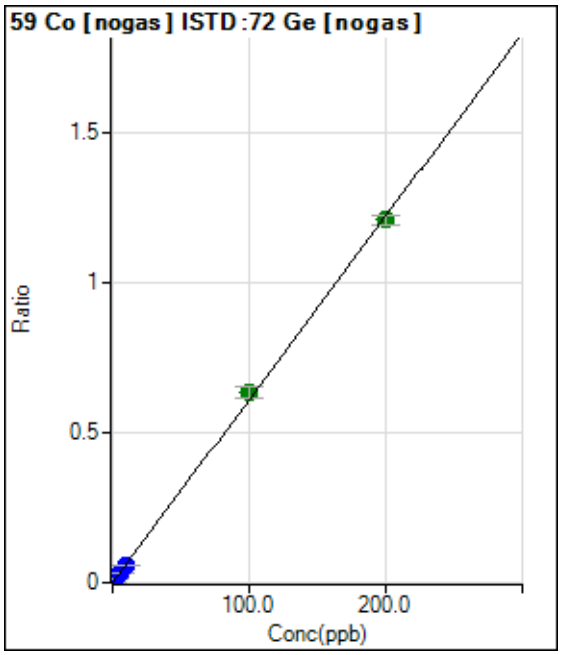


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	13418.38	0.0147	P	3.5
2	☐	200.000	204.407	1124419.54	1.2111	M	2.2
3	☐	500.000	519.921	2773818.50	3.0578	A	0.6
4	☐	1000.000	983.525	5235604.61	5.7713	A	2.3
5	☐	10000.00	10176.200	52494760.89	59.5762	A	1.4
6	☐	20000.00	19912.181	102232328.4	116.561	A	1.7
7	☐	100.000					

y = 0.0059 * x + 0.0147
R = 0.9999
DL = 0.2624
BEC = 2.509

Weight: <None>
Min Conc: <None>

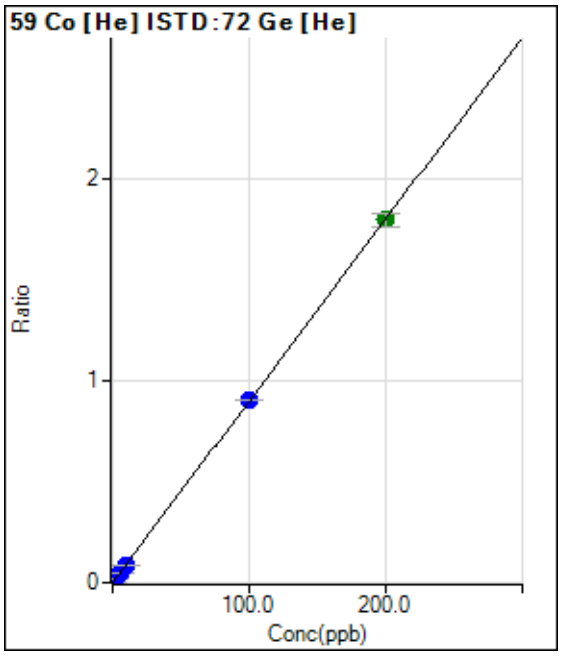
Calibration for 283_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	433.34	0.0001	P	11.4
2	☐	2.000	2.006	46030.96	0.0124	P	3.0
3	☐	5.000	5.262	113034.25	0.0322	P	6.3
4	☐	10.000	9.887	216017.69	0.0604	P	0.6
5	☐	100.000	103.725	2172840.02	0.6330	A	6.0
6	☐	200.000	198.136	4146868.27	1.2090	A	2.8
7	☐	1.000					

y = 0.0061 * x + 1.1616E-004
R = 0.9998
DL = 0.006534
BEC = 0.01904

Weight: <None>
Min Conc: <None>

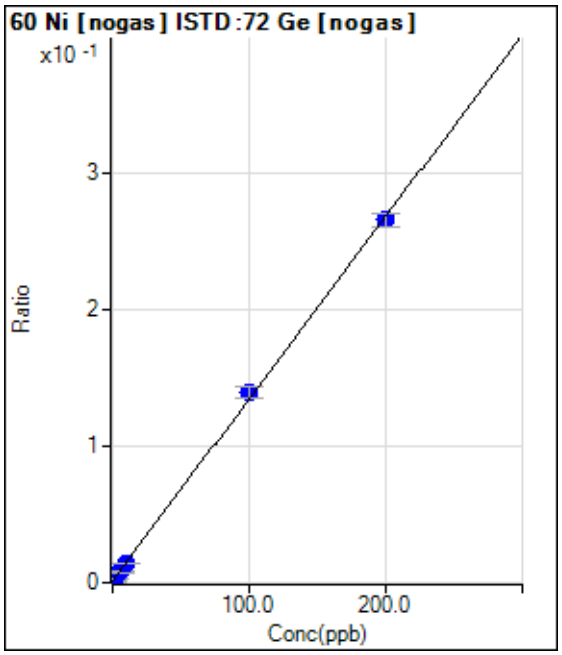


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	60.00	0.0001	P	33.6
2	☐	2.000	2.022	16978.04	0.0183	P	1.9
3	☐	5.000	5.199	42546.04	0.0469	P	4.4
4	☐	10.000	9.722	79517.32	0.0876	P	1.0
5	☐	100.000	100.621	798769.18	0.9065	P	0.6
6	☐	200.000	199.698	1577889.30	1.7990	A	3.6
7	☐	1.000					

y = 0.0090 * x + 6.5665E-005
R = 1.0000
DL = 0.007344
BEC = 0.007289

Weight: <None>
Min Conc: <None>

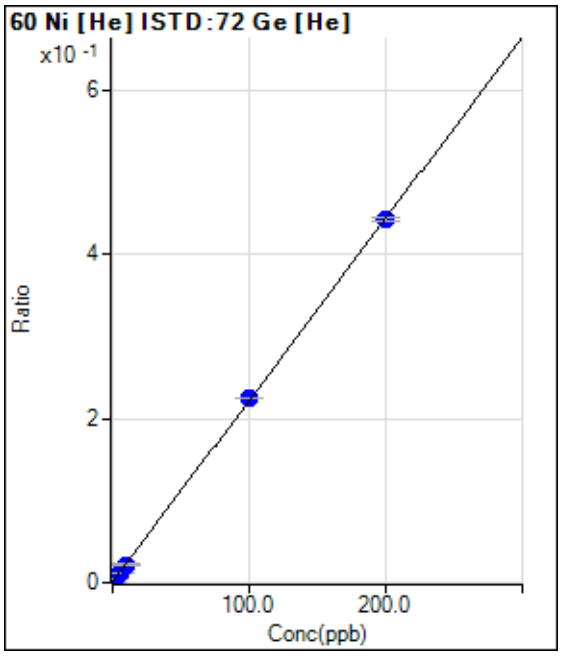
Calibration for 283_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.548	2590.23	0.0007	P	16.2
2	☐	2.000	1.540	12968.08	0.0035	P	2.4
3	☐	5.000	4.806	27420.70	0.0078	P	9.9
4	☐	10.000	9.427	49974.48	0.0140	P	2.3
5	☐	100.000	103.476	478360.58	0.1393	P	5.3
6	☐	200.000	198.300	911285.30	0.2657	P	3.5
7	☐	1.000					

y = 0.0013 * x + 0.0014
R = 0.9998
DL = 0.254
BEC = 1.069

Weight: <None>
Min Conc: <None>

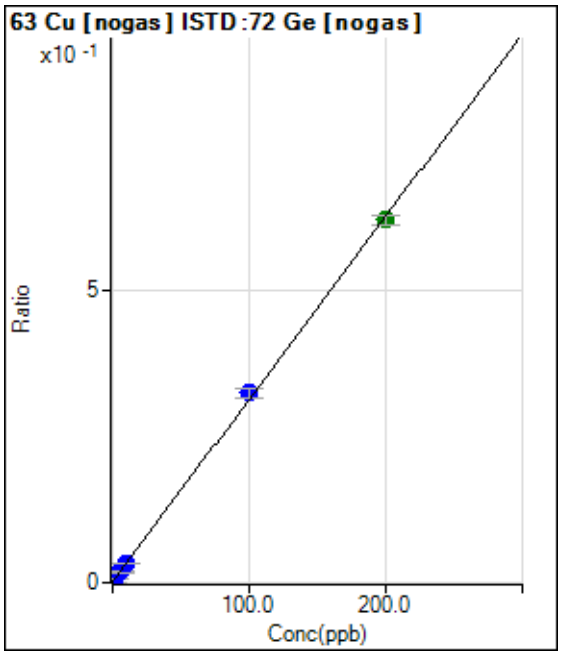


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.200	196.67	0.0002	P	39.6
2	☐	2.000	1.841	4400.59	0.0047	P	1.6
3	☐	5.000	5.060	10769.94	0.0119	P	4.6
4	☐	10.000	9.625	19954.29	0.0220	P	3.4
5	☐	100.000	101.309	198408.76	0.2252	P	0.8
6	☐	200.000	199.364	388082.55	0.4425	P	1.1
7	☐	1.000					

y = 0.0022 * x + 6.5873E-004
R = 1.0000
DL = 0.1151
BEC = 0.2972

Weight: <None>
Min Conc: <None>

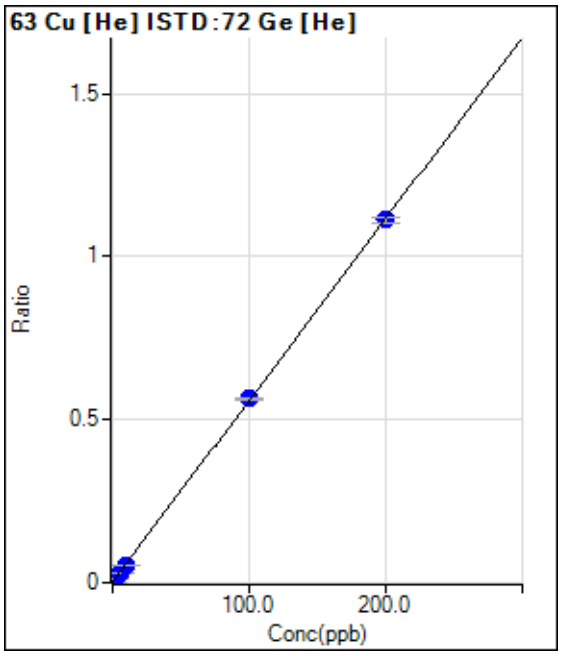
Calibration for 283_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	5360.86	0.0014	P	8.8
2	☐	2.000	2.031	29029.70	0.0078	P	0.8
3	☐	5.000	5.517	65452.99	0.0187	P	10.2
4	☐	10.000	10.059	117459.38	0.0329	P	4.6
5	☐	100.000	103.381	1115155.17	0.3247	P	4.9
6	☐	200.000	198.293	2131900.59	0.6216	A	2.9
7	☐	1.000					

y = 0.0031 * x + 0.0014
R = 0.9998
DL = 0.121
BEC = 0.4596

Weight: <None>
Min Conc: <None>

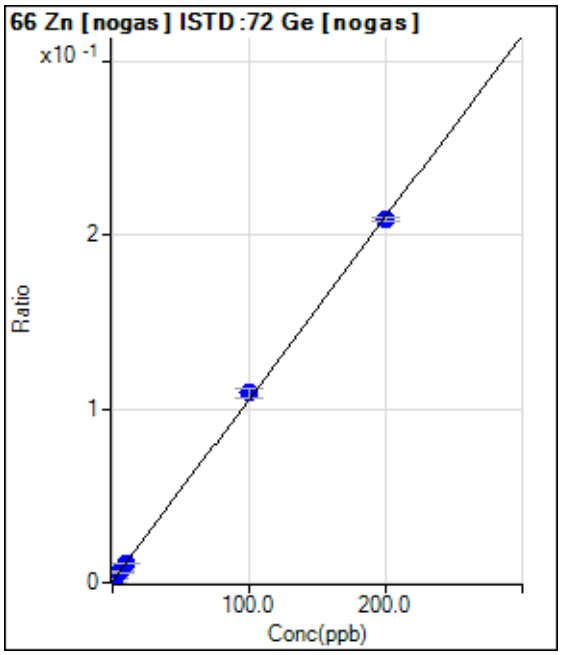


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.216	956.70	0.0010	P	5.5
2	☐	2.000	1.887	11827.29	0.0127	P	5.9
3	☐	5.000	5.216	28362.03	0.0313	P	1.0
4	☐	10.000	9.638	50693.36	0.0559	P	0.4
5	☐	100.000	100.923	496766.39	0.5638	P	0.6
6	☐	200.000	199.552	975789.31	1.1125	P	1.7
7	☐	1.000					

y = 0.0056 * x + 0.0022
R = 1.0000
DL = 0.0313
BEC = 0.4037

Weight: <None>
Min Conc: <None>

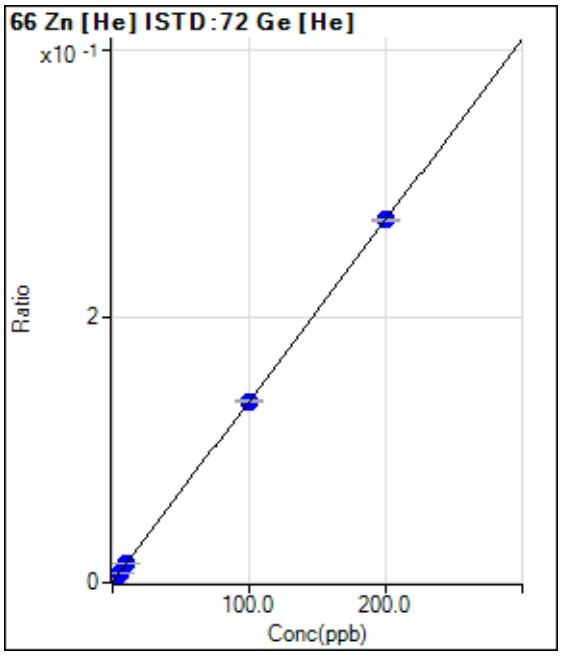
Calibration for 283_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.645	796.70	0.0002	P	17.2
2	☐	2.000	1.400	8792.23	0.0024	P	1.5
3	☐	5.000	5.010	21572.87	0.0061	P	4.5
4	☐	10.000	9.613	39222.15	0.0110	P	1.3
5	☐	100.000	103.193	374583.39	0.1091	P	5.5
6	☐	200.000	198.429	716838.06	0.2090	P	1.2
7	☐	1.000					

y = 0.0010 * x + 8.9032E-004
R = 0.9998
DL = 0.1052
BEC = 0.849

Weight: <None>
Min Conc: <None>

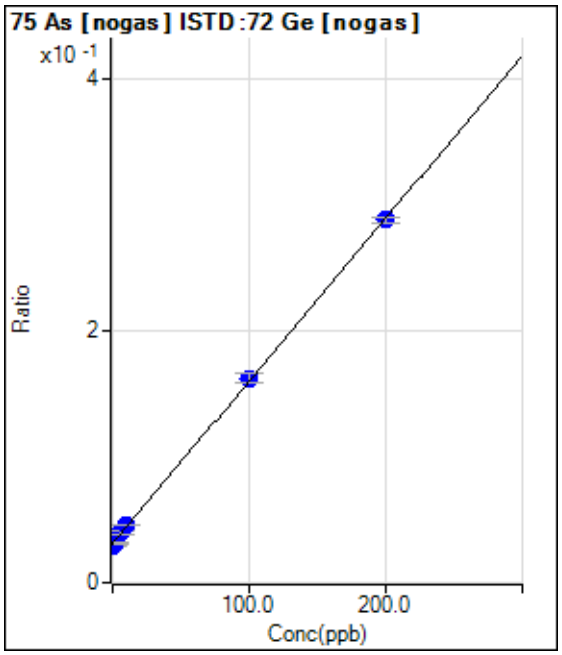


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.097	253.34	0.0003	P	17.7
2	☐	2.000	1.985	2890.29	0.0031	P	5.5
3	☐	5.000	5.214	6811.36	0.0075	P	3.9
4	☐	10.000	10.015	12744.56	0.0140	P	1.8
5	☐	100.000	99.779	120093.60	0.1363	P	1.5
6	☐	200.000	200.104	239369.65	0.2729	P	0.6
7	☐	1.000					

y = 0.0014 * x + 4.0965E-004
R = 1.0000
DL = 0.1083
BEC = 0.3008

Weight: <None>
Min Conc: <None>

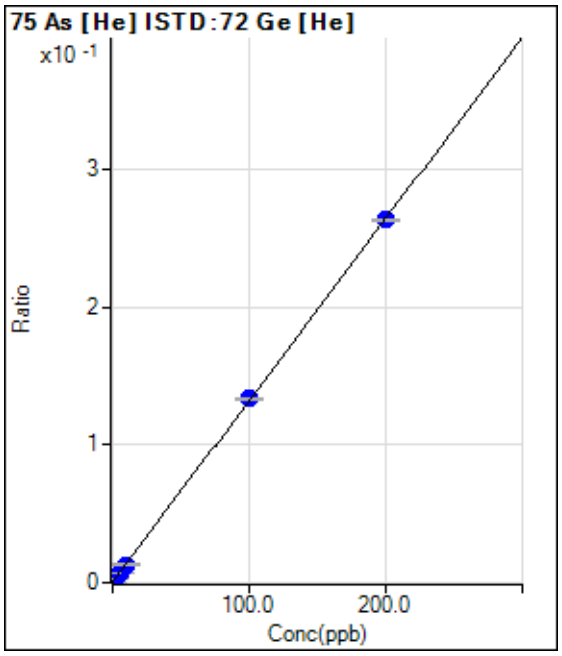
Calibration for 283_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-1.636	108294.63	0.0290	P	4.6
2	☐	2.000	-0.077	115816.81	0.0311	P	3.4
3	☐	5.000	6.604	139361.03	0.0397	P	5.3
4	☐	10.000	11.351	163779.53	0.0458	P	1.8
5	☐	100.000	101.688	558382.75	0.1626	P	4.9
6	☐	200.000	199.069	989617.87	0.2885	P	1.7
7	☐	1.000					

y = 0.0013 * x + 0.0312
R = 0.9998
DL = 3.095
BEC = 24.1

Weight: <None>
Min Conc: <None>

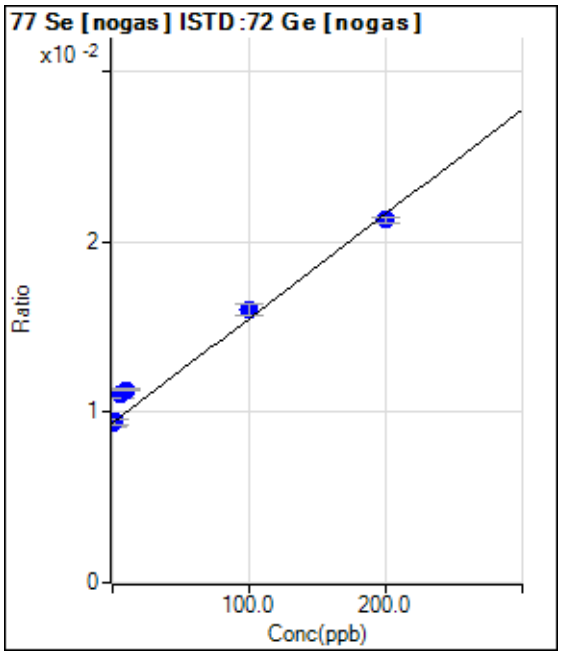


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	352.23	0.0004	P	9.8
2	☐	2.000	2.019	2826.90	0.0030	P	2.6
3	☐	5.000	5.079	6418.92	0.0071	P	2.4
4	☐	10.000	9.650	11880.56	0.0131	P	3.6
5	☐	100.000	100.971	117549.20	0.1334	P	0.8
6	☐	200.000	199.530	230899.31	0.2633	P	0.4
7	☐	1.000					

y = 0.0013 * x + 3.8520E-004
R = 1.0000
DL = 0.08625
BEC = 0.2924

Weight: <None>
Min Conc: <None>

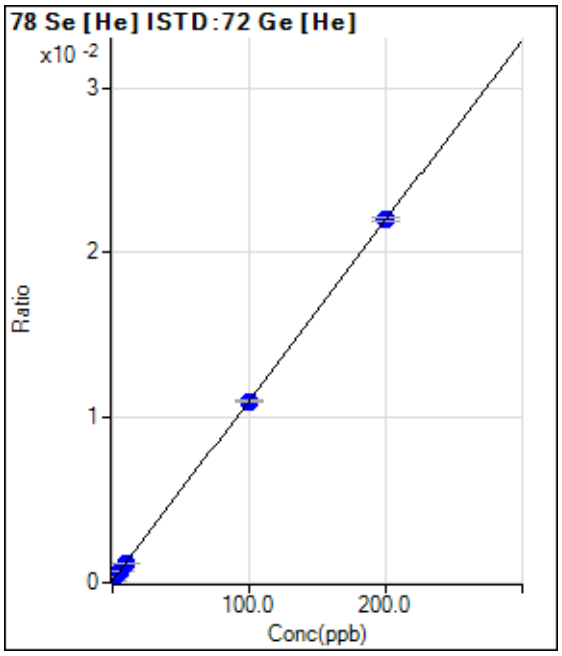
Calibration for 283_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	34970.98	0.0094	P	5.5
2	☐	2.000	0.763	35141.27	0.0094	P	4.4
3	☐	5.000	27.981	38938.87	0.0111	P	4.8
4	☐	10.000	31.751	40462.25	0.0113	P	1.5
5	☐	100.000	108.496	55029.90	0.0160	P	3.9
6	☐	200.000	194.102	72942.53	0.0213	P	1.4
7	☐	1.000					

y = 6.1257E-005 * x + 0.0094
R = 0.9901
DL = 25.27
BEC = 153

Weight: <None>
Min Conc: <None>

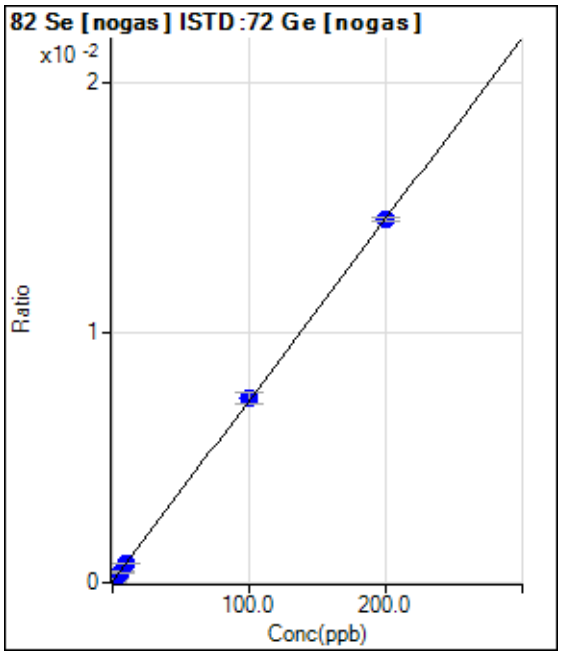


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.071	132.00	0.0001	P	18.1
2	☐	2.000	2.354	365.34	0.0004	P	6.2
3	☐	5.000	5.043	623.34	0.0007	P	6.4
4	☐	10.000	9.706	1085.37	0.0012	P	1.7
5	☐	100.000	99.629	9705.93	0.0110	P	1.5
6	☐	200.000	200.195	19292.19	0.0220	P	1.1
7	☐	1.000					

y = 1.0919E-004 * x + 1.3651E-004
R = 1.0000
DL = 0.719
BEC = 1.25

Weight: <None>
Min Conc: <None>

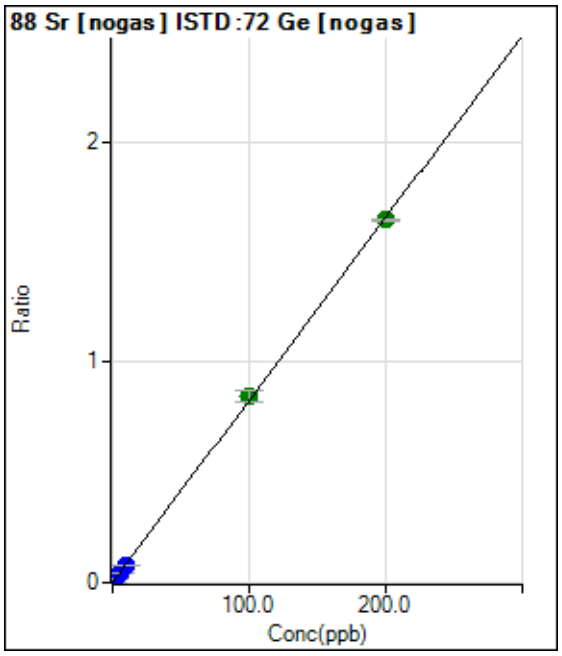
Calibration for 283_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	143.33	0.0000	P	22.8
2	☐	2.000	1.835	640.02	0.0002	P	4.3
3	☐	5.000	5.025	1406.74	0.0004	P	18.4
4	☐	10.000	9.940	2716.92	0.0008	P	3.7
5	☐	100.000	100.886	25267.83	0.0074	P	6.2
6	☐	200.000	199.561	49821.99	0.0145	P	0.9
7	☐	1.000					

y = 7.2587E-005 * x + 3.8485E-005
R = 1.0000
DL = 0.3619
BEC = 0.5302

Weight: <None>
Min Conc: <None>

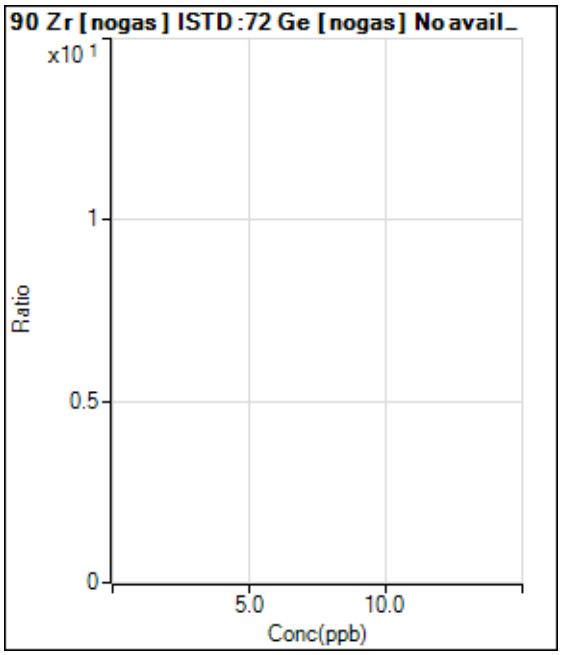


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2760.26	0.0007	P	4.5
2	☐	2.000	1.966	63361.86	0.0170	P	2.7
3	☐	5.000	5.153	152059.01	0.0434	P	7.0
4	☐	10.000	9.705	289433.34	0.0810	P	2.1
5	☐	100.000	102.200	2904729.75	0.8461	A	5.7
6	☐	200.000	198.911	5646506.38	1.6460	A	0.3
7	☐	1.000					

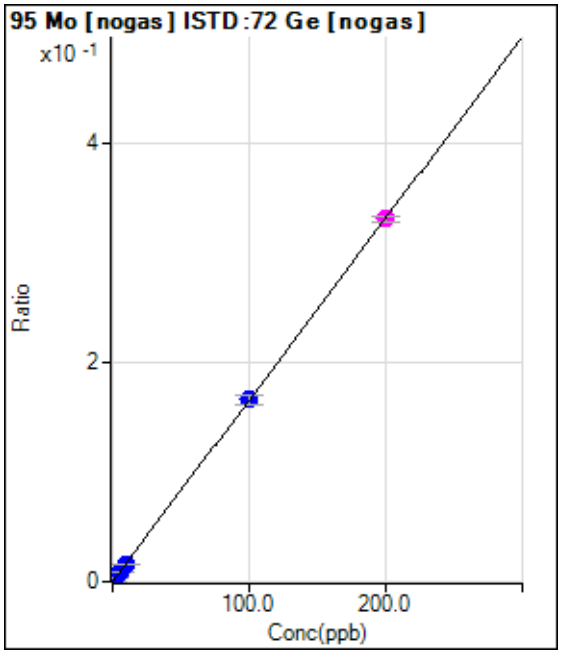
y = 0.0083 * x + 7.4004E-004
R = 0.9999
DL = 0.01204
BEC = 0.08947

Weight: <None>
Min Conc: <None>

Calibration for 283_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					

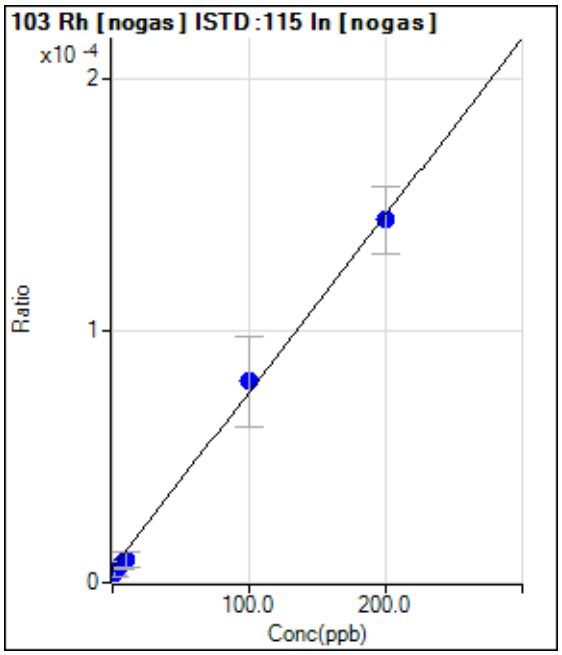


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	136.67	0.0000	P	34.4
2	☐	2.000	1.900	11867.42	0.0032	P	1.6
3	☐	5.000	5.108	29761.68	0.0085	P	9.8
4	☐	10.000	9.304	55215.29	0.0154	P	1.9
5	☐	100.000	100.466	571471.84	0.1665	P	5.4
6	☐	200.000	199.800	1135329.64	0.3310	M	1.7
7	☐	1.000					

y = 0.0017 * x + 3.6451E-005
R = 1.0000
DL = 0.02273
BEC = 0.02201

Weight: <None>
Min Conc: <None>

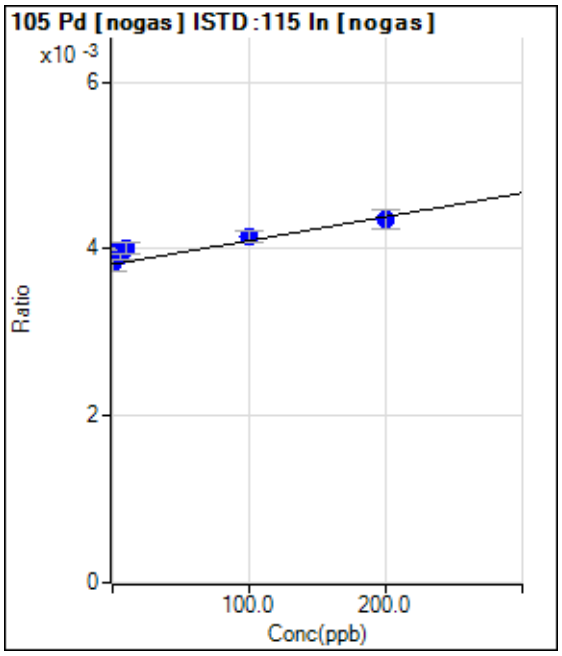
Calibration for 283_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	20.00	0.0000	P	86.7
2	☐	2.000	-2.486	13.33	0.0000	P	86.6
3	☐	5.000	2.028	23.33	0.0000	P	44.0
4	☐	10.000	4.931	30.00	0.0000	P	64.1
5	☐	100.000	106.215	250.00	0.0001	P	44.8
6	☐	200.000	197.265	473.35	0.0001	P	18.2
7	☐	1.000					

y = 7.0262E-007 * x + 5.5800E-006
R = 0.9988
DL = 20.66
BEC = 7.942

Weight: <None>
Min Conc: <None>

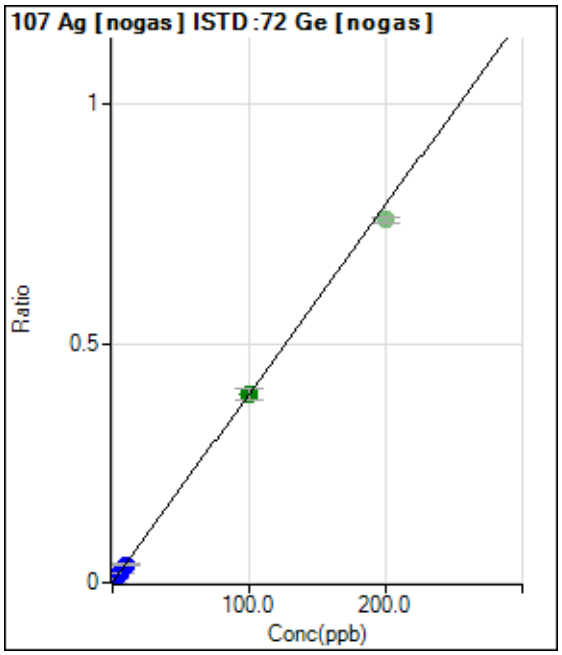


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	13325.19	0.0038	P	4.3
2	☐	2.000	58.329	13992.44	0.0040	P	1.9
3	☐	5.000	39.737	12728.11	0.0039	P	2.6
4	☐	10.000	66.393	13265.21	0.0040	P	3.2
5	☐	100.000	118.235	12998.32	0.0042	P	3.5
6	☐	200.000	186.631	14272.65	0.0043	P	5.3
7	☐	1.000					

y = 2.8546E-006 * x + 0.0038
R = 0.9459
DL = 173.9
BEC = 1336

Weight: <None>
Min Conc: <None>

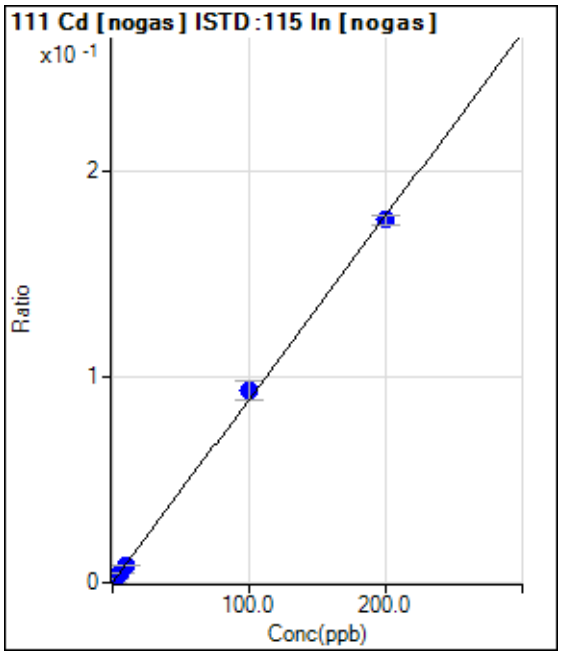
Calibration for 283_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	163.36	0.0000	P	96.3
2	☐	2.000	1.893	28002.38	0.0075	P	2.7
3	☐	5.000	5.035	69777.37	0.0199	P	8.9
4	☐	10.000	9.627	135810.18	0.0380	P	5.0
5	☐	100.000	100.038	1355344.56	0.3948	A	6.1
6	☑	200.000		2601707.98	0.7585	A	1.4
7	☐	1.000					

y = 0.0039 * x + 4.4411E-005
R = 1.0000
DL = 0.0325
BEC = 0.01125

Weight: <None>
Min Conc: <None>

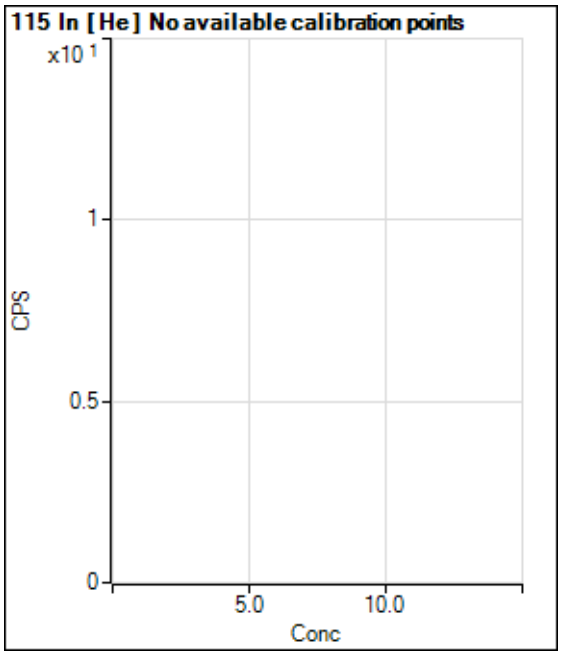


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	30.00	0.0000	P	31.9
2	☐	2.000	1.911	6007.77	0.0017	P	3.3
3	☐	5.000	5.289	15210.16	0.0047	P	9.2
4	☐	10.000	9.689	28583.48	0.0086	P	3.6
5	☐	100.000	104.429	289802.88	0.0929	P	10.2
6	☐	200.000	197.795	577562.62	0.1760	P	2.7
7	☐	1.000					

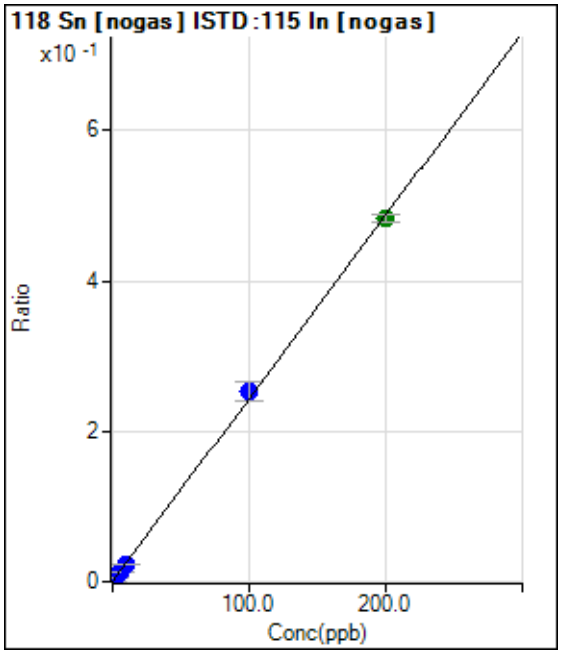
y = 8.8983E-004 * x + 8.5518E-006
R = 0.9996
DL = 0.009197
BEC = 0.009611

Weight: <None>
Min Conc: <None>

Calibration for 283_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			1304341.71		A	0.8
2	☐			1326196.52		A	1.0
3	☐			1303085.08		A	2.1
4	☐			1256180.38		A	0.9
5	☐			1216230.08		A	2.1
6	☐			1232509.45		A	1.8
7	☐						

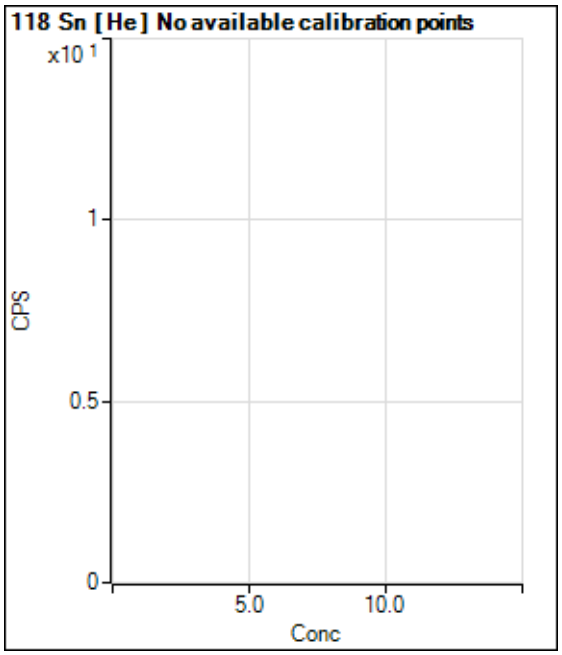


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	996.71	0.0003	P	3.2
2	☐	2.000	1.819	16558.05	0.0047	P	5.3
3	☐	5.000	5.117	41068.38	0.0127	P	10.1
4	☐	10.000	9.592	78315.03	0.0236	P	1.6
5	☐	100.000	103.696	787913.56	0.2526	P	9.9
6	☐	200.000	198.171	1583321.33	0.4825	A	2.3
7	☐	1.000					

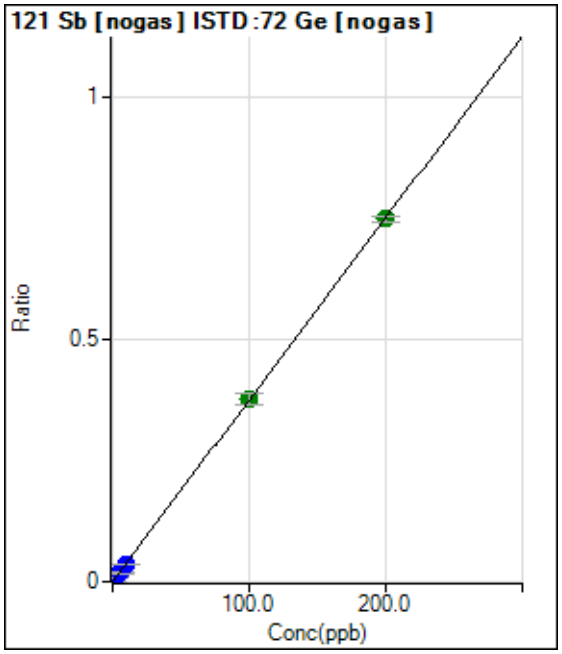
y = 0.0024 * x + 2.8548E-004
R = 0.9997
DL = 0.01128
BEC = 0.1173

Weight: <None>
Min Conc: <None>

Calibration for 283_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			406.68		P	12.4
2	☐			6728.07		P	2.6
3	☐			16841.59		P	4.0
4	☐			31137.93		P	3.4
5	☐			312781.85		P	1.4
6	☐			630668.49		P	1.0
7	☐						

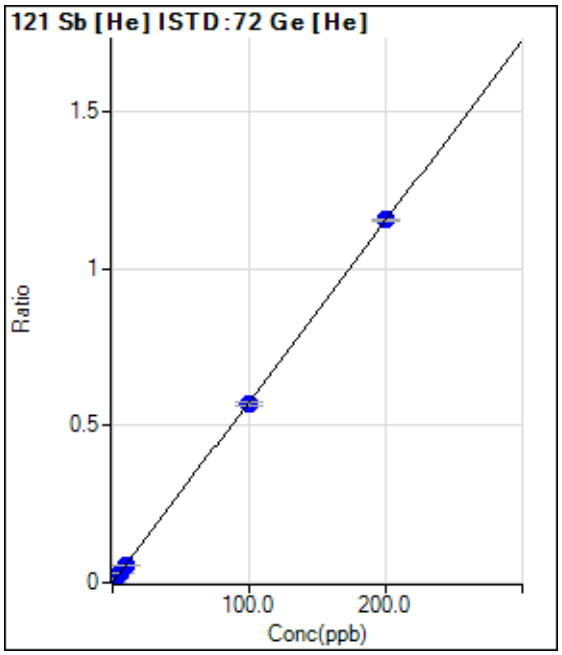


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	296.68	0.0001	P	11.6
2	☐	2.000	1.888	26693.96	0.0072	P	4.2
3	☐	5.000	4.924	65067.39	0.0186	P	8.1
4	☐	10.000	9.419	126611.04	0.0354	P	1.5
5	☐	100.000	100.817	1299039.09	0.3785	A	6.7
6	☐	200.000	199.623	2570602.72	0.7493	A	1.3
7	☐	1.000					

y = 0.0038 * x + 7.9642E-005
R = 1.0000
DL = 0.007399
BEC = 0.02122

Weight: <None>
Min Conc: <None>

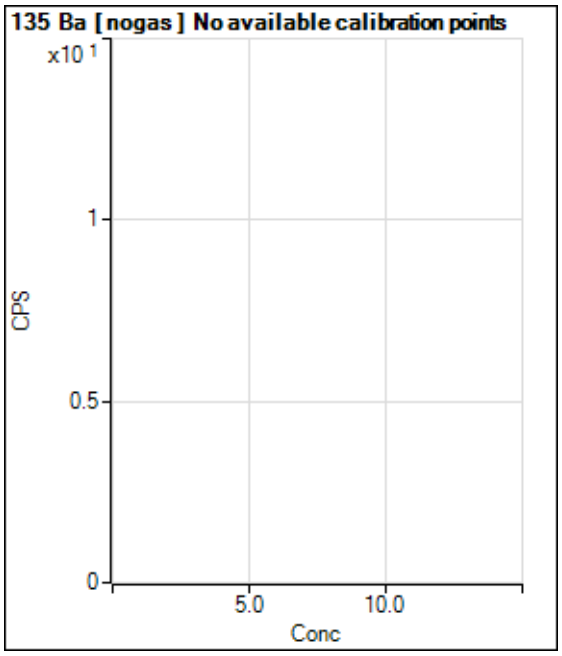
Calibration for 283_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	106.67	0.0001	P	13.4
2	☐	2.000	1.980	10690.09	0.0115	P	1.5
3	☐	5.000	4.976	26089.78	0.0288	P	2.2
4	☐	10.000	9.300	48667.95	0.0536	P	1.8
5	☐	100.000	98.793	501163.47	0.5688	P	1.3
6	☐	200.000	200.639	1013013.06	1.1550	P	0.6
7	☐	1.000					

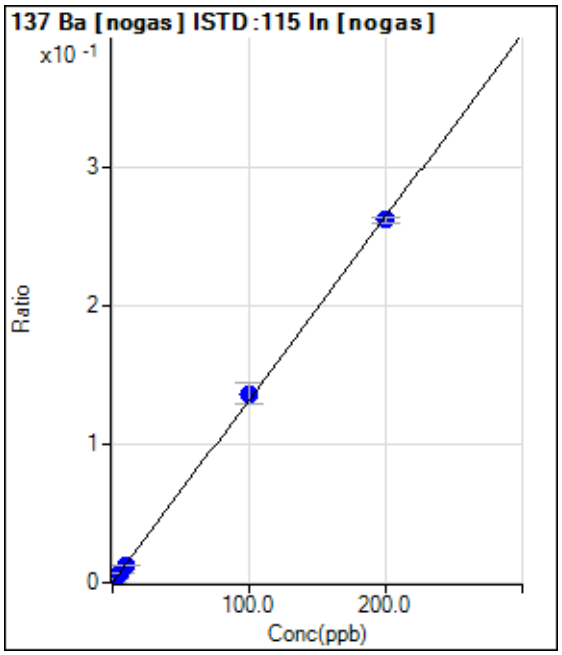
y = 0.0058 * x + 1.1664E-004
R = 1.0000
DL = 0.008155
BEC = 0.02026

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			143.33		P	32.2
2	☐			5160.85		P	1.4
3	☐			12998.45		P	3.0
4	☐			24484.27		P	2.6
5	☐			248379.44		P	0.9
6	☐			490069.47		P	1.9
7	☐						

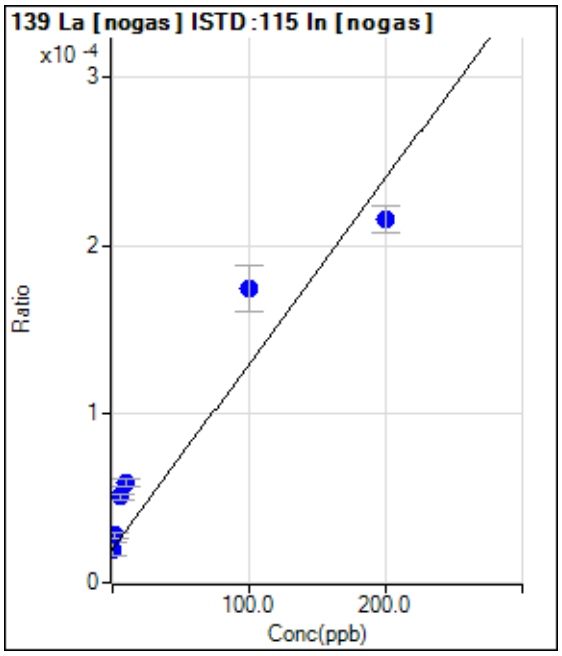
Calibration for 283_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	226.67	0.0001	P	25.8
2	☐	2.000	1.874	8909.11	0.0025	P	5.1
3	☐	5.000	5.264	22548.33	0.0070	P	12.3
4	☐	10.000	9.525	41774.19	0.0126	P	5.7
5	☐	100.000	103.315	424775.18	0.1363	P	11.0
6	☐	200.000	198.361	858584.13	0.2616	P	1.5
7	☐	1.000					

y = 0.0013 * x + 6.4296E-005
R = 0.9998
DL = 0.03768
BEC = 0.04877

Weight: <None>
Min Conc: <None>

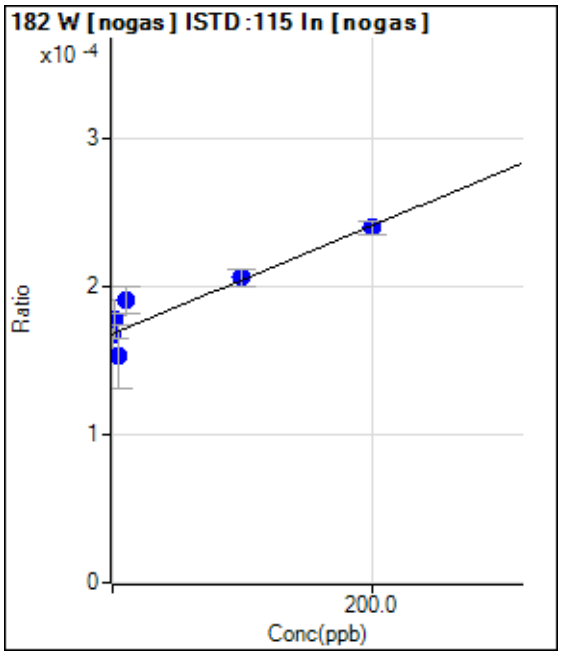


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	70.00	0.0000	P	41.7
2	☐	2.000	7.787	100.00	0.0000	P	11.8
3	☐	5.000	28.464	166.67	0.0001	P	7.1
4	☐	10.000	35.987	196.67	0.0001	P	8.3
5	☐	100.000	140.830	543.35	0.0002	P	15.5
6	☐	200.000	177.641	706.69	0.0002	P	7.4
7	☐	1.000					

y = 1.0994E-006 * x + 1.9919E-005
R = 0.9625
DL = 22.68
BEC = 18.12

Weight: <None>
Min Conc: <None>

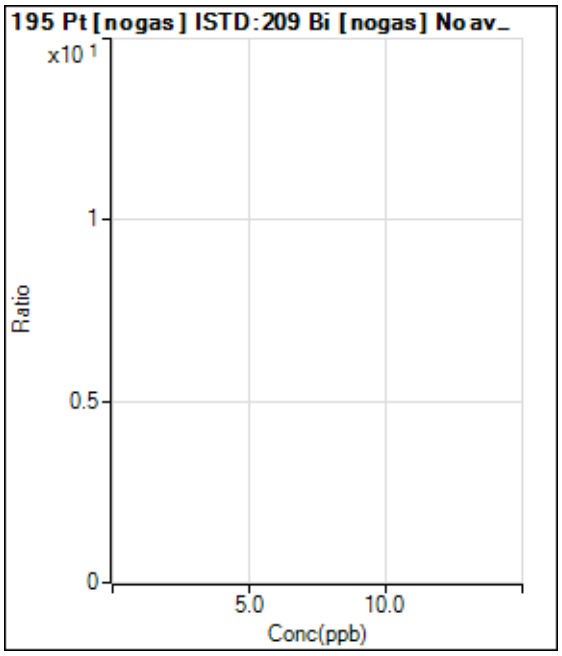
Calibration for 283_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	583.36	0.0002	P	14.2
2	☐	2.000	26.827	623.36	0.0002	P	14.7
3	☐	5.000	-41.847	503.35	0.0002	P	27.9
4	☐	10.000	62.378	630.02	0.0002	P	9.9
5	☐	100.000	103.671	643.35	0.0002	P	6.1
6	☐	200.000	196.469	786.70	0.0002	P	4.0
7	☐	1.000					

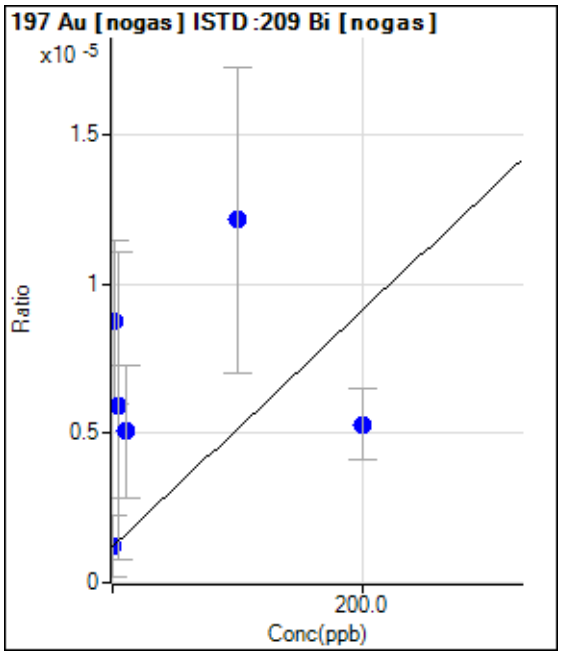
y = 3.6486E-007 * x + 1.6785E-004
R = 0.9218
DL = 196
BEC = 460

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					

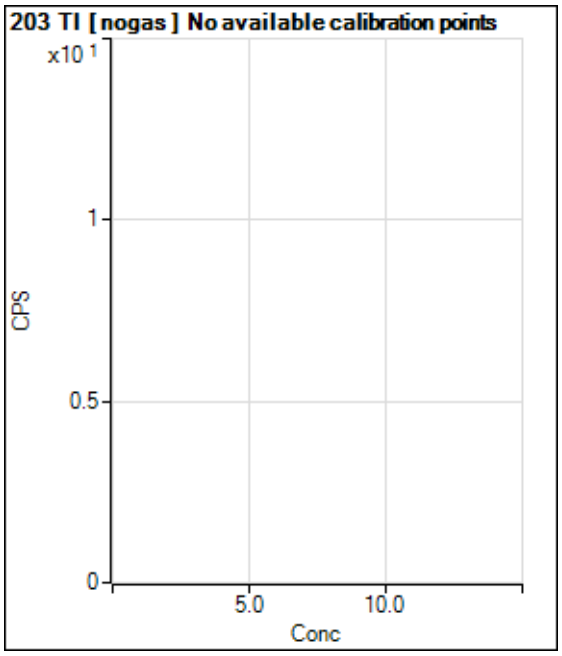
Calibration for 283_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3.33	0.0000	P	173.
2	☐	2.000	189.504	23.33	0.0000	P	62.6
3	☐	5.000	118.783	13.33	0.0000	P	173.
4	☐	10.000	96.996	13.33	0.0000	P	86.9
5	☐	100.000	275.410	30.00	0.0000	P	84.2
6	☐	200.000	103.225	13.33	0.0000	P	45.5
7	☐	1.000					

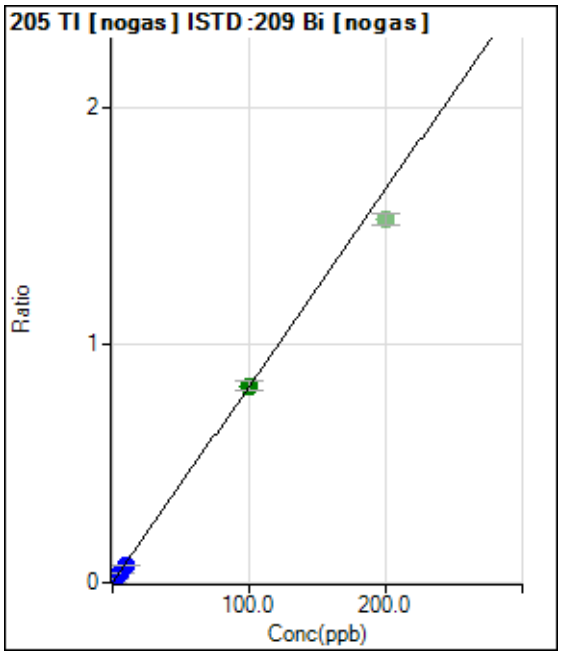
y = 3.9731E-008 * x + 1.2028E-006
R = 0.2286
DL = 157.3
BEC = 30.27

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			66.67		P	37.7
2	☐			17119.25		P	2.8
3	☐			41579.91		P	1.2
4	☐			79597.06		P	3.6
5	☐			821817.88		P	4.1
6	☐			1671901.90		A	2.3
7	☐						

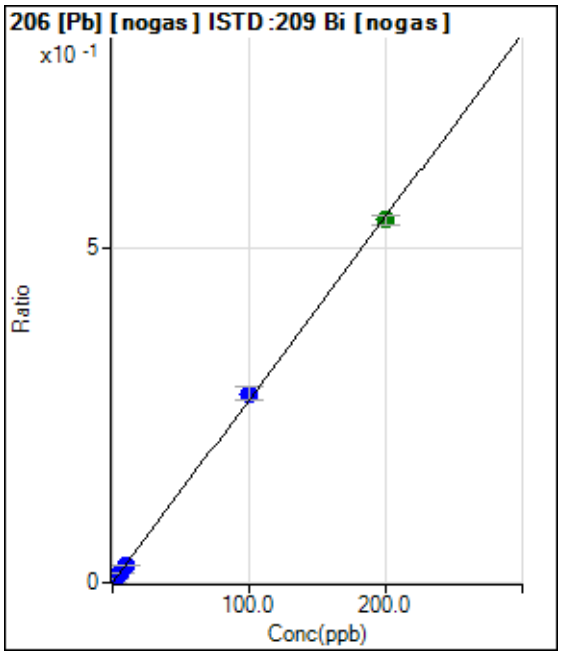
Calibration for 283_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	193.34	0.0001	P	18.8
2	☐	2.000	1.851	40740.99	0.0154	P	5.0
3	☐	5.000	5.037	100588.81	0.0417	P	6.0
4	☐	10.000	8.893	190015.75	0.0736	P	8.8
5	☐	100.000	100.112	1979502.47	0.8282	A	5.4
6	☑	200.000		3861400.36	1.5275	A	3.2
7	☐	1.000					

y = 0.0083 * x + 7.2553E-005
R = 0.9999
DL = 0.00495
BEC = 0.008771

Weight: <None>
Min Conc: <None>

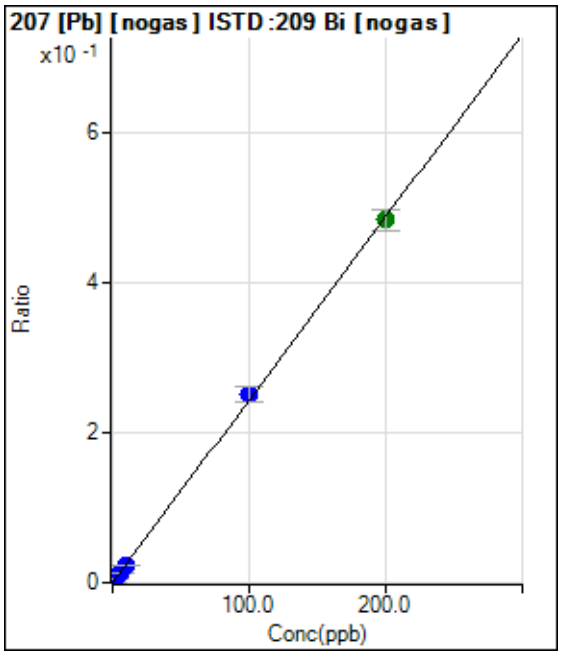


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	66.67	0.0000	P	58.0
2	☐	2.000	1.960	14263.03	0.0054	P	2.4
3	☐	5.000	5.302	35021.14	0.0145	P	4.2
4	☐	10.000	9.532	67342.04	0.0261	P	6.4
5	☐	100.000	103.488	675581.37	0.2828	P	6.5
6	☐	200.000	198.272	1369804.36	0.5418	A	2.7
7	☐	1.000					

y = 0.0027 * x + 2.5234E-005
R = 0.9998
DL = 0.01606
BEC = 0.009235

Weight: <None>
Min Conc: <None>

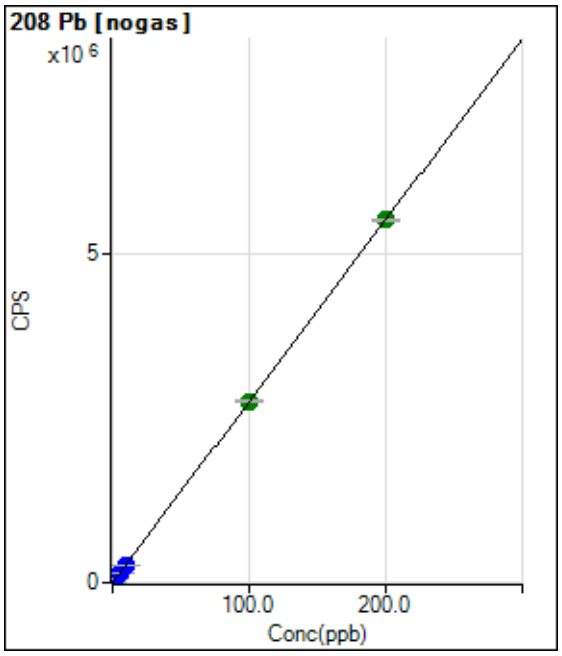
Calibration for 283_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	90.00	0.0000	P	40.8
2	☐	2.000	1.997	13005.38	0.0049	P	3.2
3	☐	5.000	5.232	30866.07	0.0128	P	5.1
4	☐	10.000	9.306	58752.44	0.0227	P	6.3
5	☐	100.000	102.978	599927.82	0.2513	P	8.3
6	☐	200.000	198.540	1224342.85	0.4846	A	5.6
7	☐	1.000					

y = 0.0024 * x + 3.3877E-005
R = 0.9998
DL = 0.01698
BEC = 0.01388

Weight: <None>
Min Conc: <None>

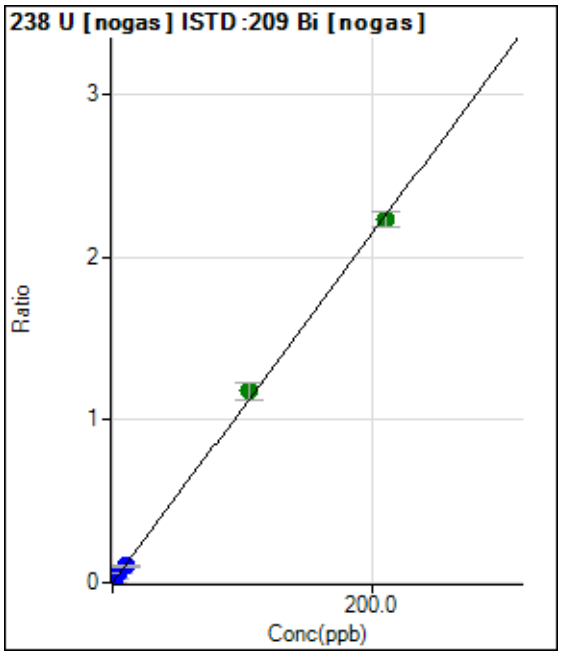


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	306.67		P	12.3
2	☐	2.000	2.069	57352.99		P	2.1
3	☐	5.000	5.109	141171.14		P	0.4
4	☐	10.000	9.703	267837.44		P	0.6
5	☐	100.000	99.748	2750600.00		A	1.1
6	☐	200.000	200.137	5518582.89		A	0.8
7	☐	1.000					

y = 27572.4291 * x + 306.6667
R = 1.0000
DL = 0.004119
BEC = 0.01112

Weight: <None>
Min Conc: <None>

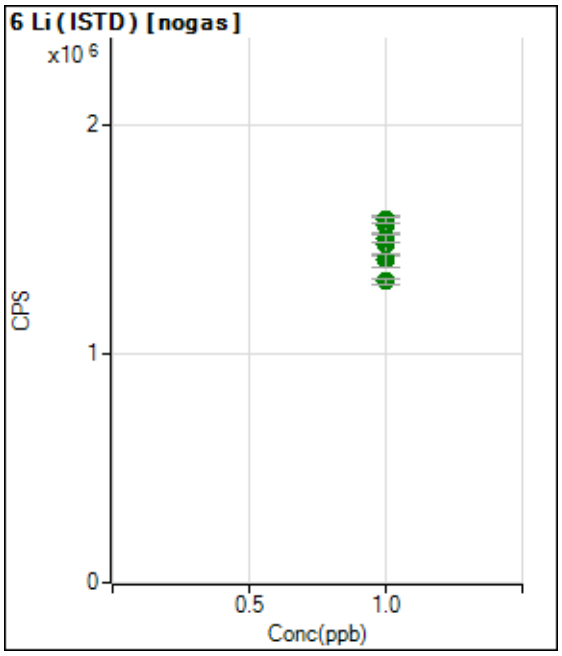
Calibration for 283_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	70.00	0.0000	P	76.6
2	☐	2.000	1.982	56471.05	0.0213	P	3.2
3	☐	5.000	5.422	140377.29	0.0583	P	6.9
4	☐	10.000	9.636	267280.05	0.1035	P	7.5
5	☐	105.000	109.840	2814542.25	1.1797	A	9.3
6	☐	210.000	207.587	5635326.58	2.2296	A	4.1
7	☐	1.000					

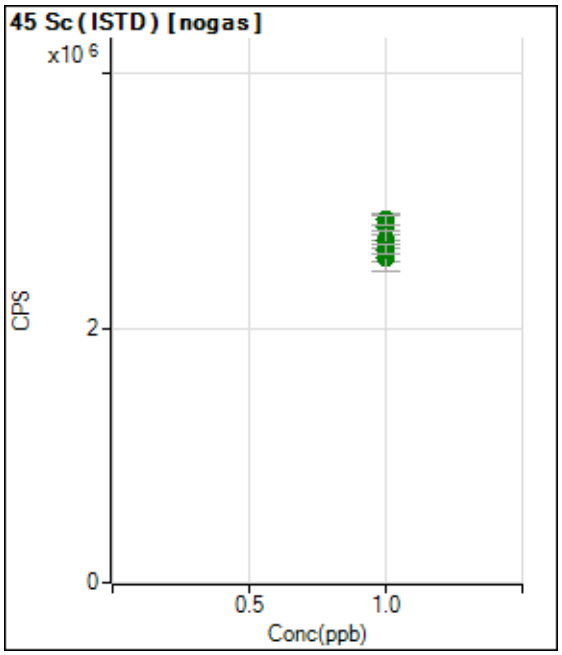
y = 0.0107 * x + 2.6312E-005
R = 0.9996
DL = 0.005626
BEC = 0.00245

Weight: <None>
Min Conc: <None>

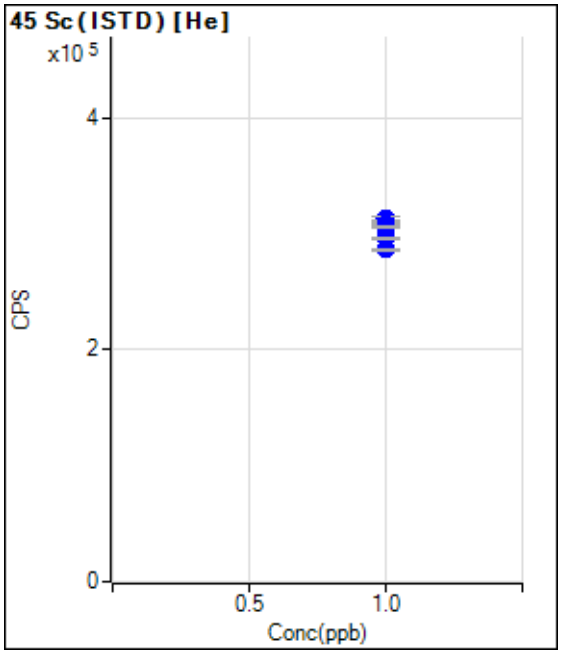


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1561049.21		A	5.6
2	☐	1.000		1582672.72		A	1.9
3	☐	1.000		1473574.63		A	7.0
4	☐	1.000		1501518.35		A	1.7
5	☐	1.000		1408609.05		A	4.1
6	☐	1.000		1316097.75		A	2.0
7	☐	1.000					

Calibration for 283_ICV.d

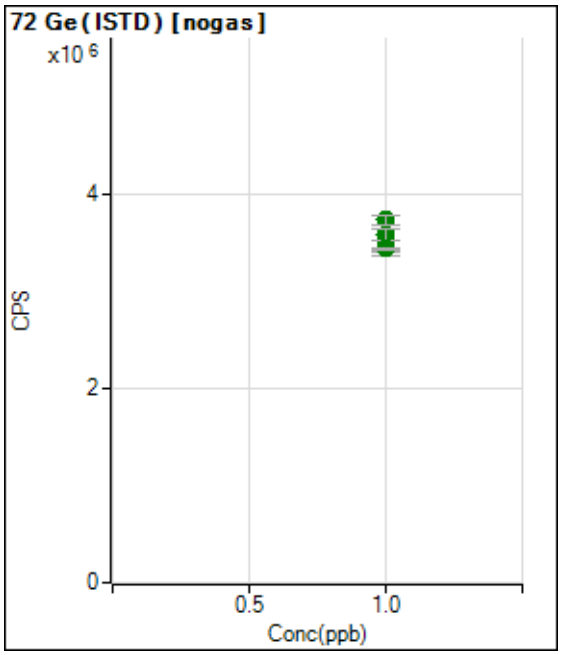


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		2792104.23		A	7.8
2	☐	1.000		2848253.29		A	2.9
3	☐	1.000		2629538.29		A	8.3
4	☐	1.000		2691751.83		A	5.1
5	☐	1.000		2556439.28		A	8.3
6	☐	1.000		2617377.67		A	2.5
7	☐	1.000					

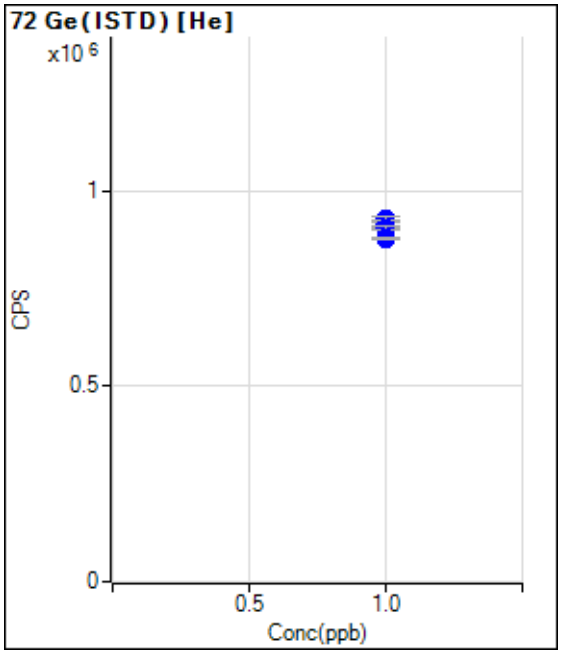


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		310721.29		P	0.4
2	☐	1.000		312837.78		P	1.7
3	☐	1.000		307894.91		P	0.7
4	☐	1.000		305644.45		P	0.5
5	☐	1.000		296519.14		P	0.4
6	☐	1.000		286195.62		P	0.5
7	☐	1.000					

Calibration for 283_ICV.d

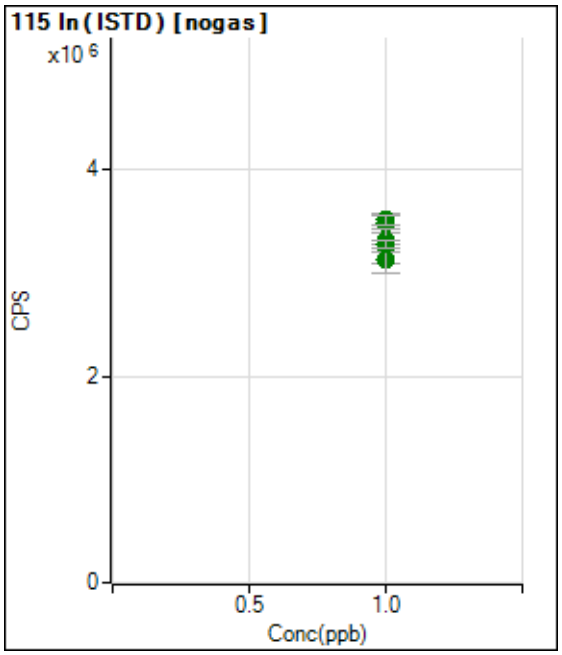


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3727881.30		A	2.5
2	☐	1.000		3727478.59		A	2.3
3	☐	1.000		3518477.97		A	7.1
4	☐	1.000		3574184.01		A	3.2
5	☐	1.000		3438831.09		A	4.5
6	☐	1.000		3430381.93		A	0.8
7	☐	1.000					

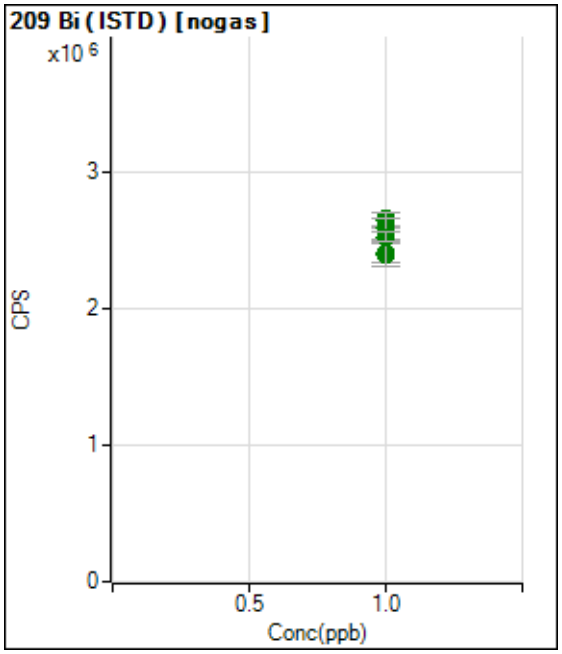


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		913805.84		P	1.2
2	☐	1.000		928507.20		P	1.1
3	☐	1.000		907153.56		P	0.7
4	☐	1.000		907296.55		P	1.1
5	☐	1.000		881144.99		P	0.4
6	☐	1.000		877109.31		P	0.6
7	☐	1.000					

Calibration for 283_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3493075.68		A	5.4
2	☐	1.000		3516344.70		A	2.4
3	☐	1.000		3243733.85		A	9.2
4	☐	1.000		3317166.57		A	6.3
5	☐	1.000		3137443.23		A	8.9
6	☐	1.000		3282583.35		A	2.1
7	☐	1.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		2658884.91		A	3.8
2	☐	1.000		2651686.57		A	3.9
3	☐	1.000		2415811.32		A	5.9
4	☐	1.000		2589500.90		A	5.9
5	☐	1.000		2396302.57		A	7.2
6	☐	1.000		2529566.32		A	3.1
7	☐	1.000					

Calibration Blank Report

Sample Table

Sample Name	CAL BLK
Data File Name	030CALB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T12:02:20-06:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	70	53.99
Na	23	1	nogas	289130	0.00
Mg	24	1	nogas	16042	0.11
Al	27	1	nogas	33584	0.01
K	39	1	nogas	6864280	0.00
Ti	47	1	nogas	243	5.93
V	51	1	nogas	973352	0.00
Cr	52	1	nogas	66740	0.00
Mn	55	1	nogas	17158	0.01
Co	59	1	nogas	500	3.12
Ni	60	1	nogas	673	0.89
Cu	63	1	nogas	2193	0.23
Zn	66	1	nogas	727	1.91
As	75	1	nogas	129080	0.00
Sr	88	1	nogas	1107	0.74
Ag	107	1	nogas	1357	0.46
Cd	111	1	nogas	17	207.85
Sb	121	1	nogas	780	0.28
Tl	205	1	nogas	467	6.10
Pb	208	1	nogas	323	1.46
[Pb]	206	1	nogas	137	15.46
[Pb]	207	1	nogas	67	34.37
Na	23	2	He	31346	0.01
Mg	24	2	He	933	1.66
Al	27	2	He	877	1.89
K	39	2	He	190359	0.00
Ca	43	2	He	47	161.26
Ca	44	2	He	930	1.70
V	51	2	He	15041	0.00
Cr	52	2	He	3415	0.09
Mn	55	2	He	660	1.88
Fe	56	2	He	17485	0.02
Co	59	2	He	70	53.99
Ni	60	2	He	113	19.59
Cu	63	2	He	807	0.62
Zn	66	2	He	220	10.93
As	75	2	He	579	3.13
Se	78	2	He	202	5.96
B	11	1	nogas	14689	0.01
Si	28	1	nogas	2988508	0.00
Ca	43	1	nogas	567	0.65
Ca	44	1	nogas	42729	0.00

Calibration Blank Report

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	2476831	0.00
Se	77	1	nogas	41564	0.01
Se	82	1	nogas	177	9.25
Mo	95	1	nogas	293	5.37
Sn	118	1	nogas	1167	4.42
Ba	137	1	nogas	270	9.50
Sb	121	2	He	370	1.46
Li	7	1	nogas	70122	0.00
P	31	1	nogas	63500	0.00
La	139	1	nogas	37	227.24

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	6	1	nogas	826648	1.09
Ge	72	1	nogas	1877764	2.28
In	115	1	nogas	1597662	2.25
Bi	209	1	nogas	1215842	2.65
Ge	72	2	He	519023	1.20

Calibration Standard Report

Sample Table

Sample Name	2/10/200
Data File Name	031CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T12:04:21-06:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	030CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	8876	0.03
Na	23	1	nogas	3326081	0.00
Mg	24	1	nogas	1966312	0.00
Al	27	1	nogas	59721	0.00
K	39	1	nogas	9256872	0.00
Ti	47	1	nogas	2324	0.42
V	51	1	nogas	992744	0.00
Cr	52	1	nogas	88416	0.00
Mn	55	1	nogas	46038	0.00
Co	59	1	nogas	23889	0.01
Ni	60	1	nogas	5784	0.09
Cu	63	1	nogas	14726	0.01
Zn	66	1	nogas	4961	0.08
As	75	1	nogas	132547	0.00
Sr	88	1	nogas	32343	0.00
Ag	107	1	nogas	13539	0.02
Cd	111	1	nogas	3010	0.17
Sb	121	1	nogas	13812	0.01
Tl	205	1	nogas	18030	0.01
Pb	208	1	nogas	26545	0.01
[Pb]	206	1	nogas	6678	0.08
[Pb]	207	1	nogas	5955	0.05
Na	23	2	He	224961	0.00
Mg	24	2	He	107842	0.00
Al	27	2	He	1540	0.18
K	39	2	He	310888	0.00
Ca	43	2	He	327	3.79
Ca	44	2	He	6238	0.08
V	51	2	He	21448	0.00
Cr	52	2	He	10503	0.01
Mn	55	2	He	6011	0.10
Fe	56	2	He	649848	0.00
Co	59	2	He	9483	0.03
Ni	60	2	He	2580	0.51
Cu	63	2	He	6551	0.07
Zn	66	2	He	1837	0.45
As	75	2	He	2270	0.24
Se	78	2	He	353	3.07
B	11	1	nogas	41325	0.01
Si	28	1	nogas	3621399	0.00

Calibration Standard Report

Ca	43	1	nogas	4474	0.01
Ca	44	1	nogas	109559	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	4885263	0.00
Se	77	1	nogas	41127	0.01
Se	82	1	nogas	477	4.07
Mo	95	1	nogas	6081	0.05
Sn	118	1	nogas	8752	0.03
Ba	137	1	nogas	4471	0.10
Sb	121	2	He	6181	0.05
P	31	1	nogas	74473	0.00
La	139	1	nogas	90	12.35

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	806857	0.65	826648	97.61	70	125	
Ge	72	1	nogas	1892791	2.89	1877764	100.80	70	125	
In	115	1	nogas	1654240	3.11	1597662	103.54	70	125	
Bi	209	1	nogas	1215072	4.38	1215842	99.94	70	125	
Ge	72	2	He	521848	2.13	519023	100.54	70	125	

Calibration Standard Report

Sample Table

Sample Name	5/25/500
Data File Name	032CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T12:06:18-06:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	
ISTD Ref File Name	030CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	22410	0.01
Na	23	1	nogas	7781922	0.00
Mg	24	1	nogas	4688941	0.00
Al	27	1	nogas	100145	0.00
K	39	1	nogas	12662284	0.00
Ti	47	1	nogas	5301	0.17
V	51	1	nogas	1049304	0.00
Cr	52	1	nogas	119858	0.00
Mn	55	1	nogas	87862	0.00
Co	59	1	nogas	58474	0.00
Ni	60	1	nogas	14126	0.03
Cu	63	1	nogas	34075	0.00
Zn	66	1	nogas	12291	0.02
As	75	1	nogas	140049	0.00
Sr	88	1	nogas	79077	0.00
Ag	107	1	nogas	33602	0.01
Cd	111	1	nogas	7635	0.06
Sb	121	1	nogas	34424	0.00
Tl	205	1	nogas	44658	0.00
Pb	208	1	nogas	63696	0.00
[Pb]	206	1	nogas	16208	0.01
[Pb]	207	1	nogas	13706	0.03
Na	23	2	He	516578	0.00
Mg	24	2	He	266194	0.00
Al	27	2	He	2727	0.28
K	39	2	He	490497	0.00
Ca	43	2	He	927	0.47
Ca	44	2	He	14860	0.02
V	51	2	He	31048	0.01
Cr	52	2	He	21249	0.01
Mn	55	2	He	14402	0.02
Fe	56	2	He	1646848	0.00
Co	59	2	He	22497	0.02
Ni	60	2	He	5928	0.01
Cu	63	2	He	15353	0.01
Zn	66	2	He	4531	0.10
As	75	2	He	4981	0.09
Se	78	2	He	570	0.74
B	11	1	nogas	81597	0.00
Si	28	1	nogas	4597910	0.00

Calibration Standard Report

Ca	43	1	nogas	11397	0.01
Ca	44	1	nogas	216205	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	8443879	0.00
Se	77	1	nogas	41417	0.01
Se	82	1	nogas	917	0.81
Mo	95	1	nogas	14429	0.00
Sn	118	1	nogas	21447	0.01
Ba	137	1	nogas	10720	0.01
Sb	121	2	He	15407	0.01
P	31	1	nogas	92518	0.00
La	139	1	nogas	180	16.04

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	769674	5.86	826648	93.11	70	125	
Ge	72	1	nogas	1753629	7.48	1877764	93.39	70	125	
In	115	1	nogas	1524656	11.79	1597662	95.43	70	125	
Bi	209	1	nogas	1064648	9.80	1215842	87.56	70	125	
Ge	72	2	He	520029	0.78	519023	100.19	70	125	

Calibration Standard Report

Sample Table

Sample Name	10/50/1000
Data File Name	033CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T12:08:18-06:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	
ISTD Ref File Name	030CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	44659	0.01
Na	23	1	nogas	14827120	0.00
Mg	24	1	nogas	9216627	0.00
Al	27	1	nogas	158460	0.00
K	39	1	nogas	18972057	0.00
Ti	47	1	nogas	10000	0.03
V	51	1	nogas	1202722	0.00
Cr	52	1	nogas	179237	0.00
Mn	55	1	nogas	157406	0.00
Co	59	1	nogas	115204	0.00
Ni	60	1	nogas	25722	0.01
Cu	63	1	nogas	63340	0.00
Zn	66	1	nogas	21563	0.02
As	75	1	nogas	170832	0.00
Sr	88	1	nogas	151812	0.00
Ag	107	1	nogas	68436	0.00
Cd	111	1	nogas	14723	0.03
Sb	121	1	nogas	68538	0.00
Tl	205	1	nogas	89140	0.01
Pb	208	1	nogas	126581	0.00
[Pb]	206	1	nogas	32376	0.01
[Pb]	207	1	nogas	27033	0.02
Na	23	2	He	987595	0.00
Mg	24	2	He	520337	0.00
Al	27	2	He	4477	0.09
K	39	2	He	781589	0.00
Ca	43	2	He	1660	0.16
Ca	44	2	He	26853	0.01
V	51	2	He	49172	0.00
Cr	52	2	He	37856	0.01
Mn	55	2	He	26720	0.00
Fe	56	2	He	3195894	0.00
Co	59	2	He	45600	0.00
Ni	60	2	He	11334	0.01
Cu	63	2	He	29401	0.00
Zn	66	2	He	7558	0.01
As	75	2	He	9076	0.01
Se	78	2	He	933	0.21
B	11	1	nogas	151760	0.00
Si	28	1	nogas	6242706	0.00

Calibration Standard Report

Ca	43	1	nogas	20795	0.00
Ca	44	1	nogas	363014	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	14537134	0.00
Se	77	1	nogas	46419	0.01
Se	82	1	nogas	1617	0.62
Mo	95	1	nogas	27782	0.01
Sn	118	1	nogas	40210	0.01
Ba	137	1	nogas	21227	0.00
Sb	121	2	He	30256	0.00
P	31	1	nogas	123271	0.00
La	139	1	nogas	110	24.79

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	786176	4.27	826648	95.10	70	125	
Ge	72	1	nogas	1907356	3.43	1877764	101.58	70	125	
In	115	1	nogas	1628729	4.82	1597662	101.94	70	125	
Bi	209	1	nogas	1200776	2.03	1215842	98.76	70	125	
Ge	72	2	He	521350	1.34	519023	100.45	70	125	

Calibration Standard Report

Sample Table

Sample Name	100/500/10K
Data File Name	034CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T12:10:17-06:00
Sample Type	CalStd
Level	5
Dilution	1
Comment	
ISTD Ref File Name	030CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	465547	0.00
Na	23	1	nogas	148901428	0.00
Mg	24	1	nogas	94480394	0.00
Al	27	1	nogas	1211416	0.00
K	39	1	nogas	125430344	0.00
Ti	47	1	nogas	104047	0.00
V	51	1	nogas	2443221	0.00
Cr	52	1	nogas	1241556	0.00
Mn	55	1	nogas	1432237	0.00
Co	59	1	nogas	1158452	0.00
Ni	60	1	nogas	261778	0.00
Cu	63	1	nogas	614355	0.00
Zn	66	1	nogas	214462	0.00
As	75	1	nogas	444200	0.00
Sr	88	1	nogas	1596452	0.00
Ag	107	1	nogas	680706	0.00
Cd	111	1	nogas	149929	0.00
Sb	121	1	nogas	704796	0.00
Tl	205	1	nogas	924218	0.00
Pb	208	1	nogas	1310460	0.00
[Pb]	206	1	nogas	326772	0.00
[Pb]	207	1	nogas	289197	0.00
Na	23	2	He	10024189	0.00
Mg	24	2	He	5287951	0.00
Al	27	2	He	31700	0.00
K	39	2	He	6124808	0.00
Ca	43	2	He	15020	0.02
Ca	44	2	He	259832	0.00
V	51	2	He	354063	0.00
Cr	52	2	He	357538	0.00
Mn	55	2	He	263358	0.00
Fe	56	2	He	32232500	0.00
Co	59	2	He	457213	0.00
Ni	60	2	He	115083	0.00
Cu	63	2	He	287558	0.00
Zn	66	2	He	75094	0.00
As	75	2	He	87914	0.00
Se	78	2	He	7476	0.02
B	11	1	nogas	1483118	0.00
Si	28	1	nogas	35851291	0.00

Calibration Standard Report

Ca	43	1	nogas	203196	0.00
Ca	44	1	nogas	3352957	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	127746353	0.00
Se	77	1	nogas	59424	0.01
Se	82	1	nogas	15640	0.03
Mo	95	1	nogas	293413	0.00
Sn	118	1	nogas	404027	0.00
Ba	137	1	nogas	218710	0.00
Sb	121	2	He	310412	0.00
P	31	1	nogas	622927	0.00
La	139	1	nogas	270	4.11

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	735287	6.14	826648	88.95	70	125	
Ge	72	1	nogas	1809278	7.98	1877764	96.35	70	125	
In	115	1	nogas	1509275	9.03	1597662	94.47	70	125	
Bi	209	1	nogas	1085117	8.29	1215842	89.25	70	125	
Ge	72	2	He	516776	0.49	519023	99.57	70	125	

Calibration Standard Report

Sample Table

Sample Name	200/1000/20K
Data File Name	035CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T12:12:13-06:00
Sample Type	CalStd
Level	6
Dilution	1
Comment	
ISTD Ref File Name	030CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	922231	0.00
Na	23	1	nogas	297120448	0.00
Mg	24	1	nogas	181395512	0.00
Al	27	1	nogas	2196131	0.00
K	39	1	nogas	239214855	0.00
Ti	47	1	nogas	204385	0.00
V	51	1	nogas	3738628	0.00
Cr	52	1	nogas	2345523	0.00
Mn	55	1	nogas	2764379	0.00
Co	59	1	nogas	2291260	0.00
Ni	60	1	nogas	506789	0.00
Cu	63	1	nogas	1223839	0.00
Zn	66	1	nogas	413932	0.00
As	75	1	nogas	746818	0.00
Sr	88	1	nogas	3070312	0.00
Ag	107	1	nogas	1412685	0.00
Cd	111	1	nogas	294698	0.00
Sb	121	1	nogas	1411708	0.00
Tl	205	1	nogas	1853605	0.00
Pb	208	1	nogas	2593357	0.00
[Pb]	206	1	nogas	629483	0.00
[Pb]	207	1	nogas	561697	0.00
Na	23	2	He	19306985	0.00
Mg	24	2	He	10352786	0.00
Al	27	2	He	58989	0.00
K	39	2	He	11929201	0.00
Ca	43	2	He	29988	0.02
Ca	44	2	He	508448	0.00
V	51	2	He	684828	0.00
Cr	52	2	He	692221	0.00
Mn	55	2	He	516137	0.00
Fe	56	2	He	63531461	0.00
Co	59	2	He	899016	0.00
Ni	60	2	He	223361	0.00
Cu	63	2	He	552505	0.00
Zn	66	2	He	146648	0.00
As	75	2	He	173108	0.00
Se	78	2	He	14709	0.01
B	11	1	nogas	3000595	0.00
Si	28	1	nogas	67341304	0.00

Calibration Standard Report

Ca	43	1	nogas	396771	0.00
Ca	44	1	nogas	6593824	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	246578681	0.00
Se	77	1	nogas	75489	0.00
Se	82	1	nogas	30963	0.00
Mo	95	1	nogas	578754	0.00
Sn	118	1	nogas	810645	0.00
Ba	137	1	nogas	428232	0.00
Sb	121	2	He	609499	0.00
P	31	1	nogas	1197004	0.00
La	139	1	nogas	433	5.44

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	704975	4.99	826648	85.28	70	125	
Ge	72	1	nogas	1788355	8.79	1877764	95.24	70	125	
In	115	1	nogas	1524411	6.94	1597662	95.42	70	125	
Bi	209	1	nogas	1095607	8.78	1215842	90.11	70	125	
Ge	72	2	He	504821	1.06	519023	97.26	70	125	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	ICV
Data File Name	037_ICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T12:16:13-06:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	030CALB.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	94.819	4.969	476488	1.06	100	94.8	90	110	
Na	23	1	nogas	9506.017	4.381	156502124	0.54	10000	95.1	90	110	
Mg	24	1	nogas	9497.477	1.935	96201044	2.29	10000	95.0	90	110	
Al	27	1	nogas	93.413	1.386	1173079	3.60	100	93.4	90	110	
K	39	1	nogas	9497.549	3.978	129599257	1.10	10000	95.0	90	110	
Ti	47	1	nogas	101.853	1.635	115334	1.32	100	101.9	90	110	
V	51	1	nogas	76.668	6.970	2229549	1.49	100	76.7	90	110	ICV Main CR1 Failed
Cr	52	1	nogas	93.771	2.446	1258104	3.25	100	93.8	90	110	
Mn	55	1	nogas	96.832	0.155	1495691	2.84	100	96.8	90	110	
Co	59	1	nogas	97.182	1.796	1232272	3.72	100	97.2	90	110	
Ni	60	1	nogas	94.391	0.836	266349	3.44	100	94.4	90	110	
Cu	63	1	nogas	93.738	0.722	634667	3.12	100	93.7	90	110	
Zn	66	1	nogas	94.978	1.570	218950	3.80	100	95.0	90	110	
As	75	1	nogas	83.350	2.087	425107	1.31	100	83.3	90	110	ICV Main CR1 Failed
Sr	88	1	nogas	98.229	3.263	1676088	0.82	100	98.2	90	110	
Ag	107	1	nogas	93.768	1.582	726367	1.75	100	93.8	90	110	
Cd	111	1	nogas	96.979	3.275	159122	1.87	100	97.0	90	110	
Sb	121	1	nogas	91.266	1.293	711226	1.53	100	91.3	90	110	
Tl	205	1	nogas	97.324	5.402	989526	2.02	100	97.3	90	110	
Pb	208	1	nogas	104.989	2.184	1364297	2.18	100	105.0	90	110	
U	238	1	nogas	100.816	6.795	1394471	3.42	100	100.8	90	110	
[Pb]	206	1	nogas	100.891	4.915	351177	1.64	100	100.9	90	110	
[Pb]	207	1	nogas	94.974	5.816	294531	2.43	100	95.0	90	110	
Na	23	2	He	10157.006	1.410	10322060	1.68	10000	101.6	90	110	
Mg	24	2	He	10227.564	0.863	5549556	2.21	10000	102.3	90	110	
Al	27	2	He	99.490	1.177	31580	1.54	100	99.5	90	110	
K	39	2	He	10687.765	0.275	6477498	0.27	10000	106.9	90	110	
Ca	43	2	He	10242.492	2.538	16050	1.35	10000	102.4	90	110	
Ca	44	2	He	10108.805	1.801	269734	0.87	10000	101.1	90	110	
V	51	2	He	100.681	1.789	367863	0.22	100	100.7	90	110	
Cr	52	2	He	101.322	0.215	369772	1.81	100	101.3	90	110	
Mn	55	2	He	102.563	0.563	277658	1.57	100	102.6	90	110	
Fe	56	2	He	10034.015	1.078	33371385	0.91	10000	100.3	90	110	
Co	59	2	He	102.489	2.713	482350	1.16	100	102.5	90	110	
Ni	60	2	He	103.192	3.542	121008	1.66	100	103.2	90	110	
Cu	63	2	He	103.268	2.116	300588	0.85	100	103.3	90	110	
Zn	66	2	He	101.299	0.938	78023	1.48	100	101.3	90	110	
As	75	2	He	101.680	1.359	92355	0.88	100	101.7	90	110	
Se	78	2	He	103.022	3.257	8002	1.44	100	103.0	90	110	
B	11	1	nogas	441.806	5.583	1444080	1.78	500	88.4	90	110	ICV Main CR1 Failed
Si	28	1	nogas	463.247	4.110	6446891	1.13	5000	9.3	90	110	ICV Main CR1 Failed
Ca	43	1	nogas	9438.072	1.277	207833	2.15	10000	94.4	90	110	
Ca	44	1	nogas	9424.910	2.893	3458807	0.51	10000	94.2	90	110	
Fe	56	1	nogas	9400.401	2.098	130067770	4.29	10000	94.0	90	110	
Se	77	1	nogas	27.518	27.460	49130	0.70	100	27.5	90	110	ICV Main CR1 Failed
Se	82	1	nogas	95.837	0.372	16491	2.80	100	95.8	90	110	
Mo	95	1	nogas	98.672	2.837	315864	0.11	100	98.7	90	110	
Sn	118	1	nogas	100.342	2.954	451635	4.27	100	100.3	90	110	
Ba	137	1	nogas	96.038	3.937	229171	1.83	100	96.0	90	110	
Sb	121	2	He	101.605	3.577	324367	1.89	100	101.6	90	110	
Li	7	1	nogas	99.224	4.421	1153726	1.04	100	99.2	90	110	
P	31	1	nogas	435.213	2.184	612579	0.97	500	87.0	90	110	ICV Main CR1 Failed
La	139	1	nogas	134.430	38.416	350	35.69	100	134.4	90	110	ICV Main CR1 Failed
Au	197	1	nogas	2919.663	120.904	43	66.62	100	2919.7	90	110	ICV Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	772631	3.87	826648	93.47	70	125	
Ge	72	1	nogas	1968785	2.70	1877764	104.85	70	125	
In	115	1	nogas	1683650	4.77	1597662	105.38	70	125	
Bi	209	1	nogas	1195631	3.43	1215842	98.34	70	125	

Initial Calibration Verification (ICV) Report

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	2	He	529364	1.94	519023	101.99	70	125	

Sample Report

Sample Table

Sample Name	LLICV2
Data File Name	038SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T12:18:10-06:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	030CALB.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	1.750	1.750	3.53	9472	0.02	2000	
Na	23	1	nogas	196.782	196.782	4.41	3478713	0.01	200000	
Mg	24	1	nogas	204.162	204.162	5.01	2050172	0.01	200000	
Al	27	1	nogas	2.010	2.010	15.51	57471	0.00	2000	
K	39	1	nogas	212.878	212.878	20.78	9571354	0.00	200000	
Ti	47	1	nogas	2.017	2.017	5.33	2440	0.08	2000	
V	51	1	nogas	-13.045	-13.045	-6.11	785447	0.00	2000	
Cr	52	1	nogas	1.176	1.176	14.25	81786	0.00	2000	
Mn	55	1	nogas	2.097	2.097	9.23	48116	0.00	2000	
Co	59	1	nogas	2.021	2.021	5.09	25161	0.01	2000	
Ni	60	1	nogas	1.921	1.921	1.55	6081	0.03	2000	
Cu	63	1	nogas	2.056	2.056	7.56	15553	0.01	2000	
Zn	66	1	nogas	1.833	1.833	9.79	5241	0.03	2000	
As	75	1	nogas	-4.184	-4.184	-5.10	118567	0.00	2000	
Sr	88	1	nogas	2.066	2.066	8.23	35021	0.01	2000	
Ag	107	1	nogas	1.774	1.774	4.10	14583	0.01	2000	
Cd	111	1	nogas	1.858	1.858	4.91	3010	0.06	2000	
Sb	121	1	nogas	1.982	1.982	2.19	15654	0.01	2000	
Tl	205	1	nogas	2.590	2.590	20.00	26312	0.01	2000	
Pb	208	1	nogas	2.135	2.135	1.60	28063	0.01	2000	
U	238	1	nogas	2.031	2.031	7.76	27875	0.01	2000	
[Pb]	206	1	nogas	1.962	1.962	4.75	6892	0.03	2000	
[Pb]	207	1	nogas	2.028	2.028	10.08	6271	0.03	2000	
Na	23	2	He	197.805	197.805	1.96	235068	0.08	200000	
Mg	24	2	He	203.858	203.858	2.84	112834	0.18	200000	
Al	27	2	He	1.085	1.085	55.21	1587	0.07	2000	
K	39	2	He	210.691	210.691	1.15	314299	0.07	200000	
Ca	43	2	He	222.573	222.573	16.23	400	55.64	200000	
Ca	44	2	He	206.189	206.189	5.03	6505	3.17	200000	
V	51	2	He	1.127	1.127	2.25	18545	0.01	2000	
Cr	52	2	He	1.991	1.991	4.39	10803	0.02	2000	
Mn	55	2	He	2.042	2.042	5.56	6258	0.03	2000	
Fe	56	2	He	201.097	201.097	0.91	694348	0.03	200000	
Co	59	2	He	2.043	2.043	2.21	9799	0.02	2000	
Ni	60	2	He	2.051	2.051	4.42	2597	0.08	2000	
Cu	63	2	He	1.837	1.837	5.27	6751	0.03	2000	
Zn	66	2	He	1.941	1.941	9.99	1830	0.11	2000	
As	75	2	He	1.847	1.847	4.39	2285	0.08	2000	
Se	78	2	He	1.811	1.811	23.93	327	0.55	2000	
B	11	1	nogas	17.344	17.344	5.51	74706	0.02	2000	

Sample Report

Si	28	1	nogas	83.379	83.379	28.76	3592573	0.00	2000	
Ca	43	1	nogas	213.157	213.157	6.13	5077	4.20	200000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Ca	44	1	nogas	198.790	198.790	8.98	112462	0.18	200000	
Fe	56	1	nogas	169.049	169.049	15.10	4703975	0.00	200000	
Se	77	1	nogas	-26.985	-26.985	-10.01	36734	-0.07	2000	
Se	82	1	nogas	2.281	2.281	29.58	550	0.41	2000	
Mo	95	1	nogas	2.302	2.302	7.11	7382	0.03	2000	
Sn	118	1	nogas	2.120	2.120	11.56	10510	0.02	2000	
Ba	137	1	nogas	1.888	1.888	5.96	4697	0.04	2000	
Sb	121	2	He	1.944	1.944	2.48	6655	0.03	2000	
La	139	1	nogas	17.691	17.691	74.99	80	22.11	2000	
Au	197	1	nogas	152.301	152.301	914.41	20	761.50	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	825436	2.05	826648	99.85	70	125	
Ge	72	1	nogas	1897790	4.38	1877764	101.07	70	125	
In	115	1	nogas	1655491	7.59	1597662	103.62	70	125	
Bi	209	1	nogas	1182378	5.89	1215842	97.25	70	125	
Ge	72	2	He	535484	0.79	519023	103.17	70	125	

Low Level Initial Calibration Verification (LLICV) Report

Sample Table

Sample Name	LLICV5
Data File Name	039LICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T12:20:11-06:00
Sample Type	LLICV
Dilution	1
Comment	
ISTD Ref File Name	030CALB.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	4.200	1.845	23118	1.58	5	84.0	70	130	
Na	23	1	nogas	482.909	9.060	8039540	1.55	500	96.6	70	130	
Mg	24	1	nogas	488.798	7.499	4849940	2.60	500	97.8	70	130	
Al	27	1	nogas	6.340	18.728	110905	14.29	5	126.8	70	130	
K	39	1	nogas	480.635	9.358	13189963	1.02	500	96.1	70	130	
Ti	47	1	nogas	4.689	6.655	5468	4.17	5	93.8	70	130	
V	51	1	nogas	-6.175	-31.315	909749	3.54	5	-123.5	70	130	LLICV Main CR1 Failed
Cr	52	1	nogas	4.035	11.134	119224	0.59	5	80.7	70	130	
Mn	55	1	nogas	4.965	7.717	92237	1.80	5	99.3	70	130	
Co	59	1	nogas	4.864	6.374	61169	3.60	5	97.3	70	130	
Ni	60	1	nogas	4.837	2.401	14296	3.30	5	96.7	70	130	
Cu	63	1	nogas	4.898	5.014	34787	0.80	5	98.0	70	130	
Zn	66	1	nogas	5.135	5.129	12818	4.60	5	102.7	70	130	
As	75	1	nogas	0.194	651.558	136033	2.43	5	3.9	70	130	LLICV Main CR1 Failed
Sr	88	1	nogas	4.819	3.094	82115	2.32	5	96.4	70	130	
Ag	107	1	nogas	4.433	1.659	35179	3.79	5	88.7	70	130	
Cd	111	1	nogas	4.408	7.135	7332	4.07	5	88.2	70	130	
Sb	121	1	nogas	4.624	5.182	36241	1.92	5	92.5	70	130	
Tl	205	1	nogas	4.258	5.604	47082	1.31	5	85.2	70	130	
Pb	208	1	nogas	5.130	4.228	66975	4.21	5	102.6	70	130	
U	238	1	nogas	4.430	6.261	66118	2.03	5	88.6	70	130	
[Pb]	206	1	nogas	4.466	10.452	16849	6.04	5	89.3	70	130	
[Pb]	207	1	nogas	4.415	11.280	14784	6.95	5	88.3	70	130	
Na	23	2	He	487.609	2.722	529881	0.81	500	97.5	70	130	
Mg	24	2	He	504.236	3.355	276493	1.56	500	100.8	70	130	
Al	27	2	He	5.360	8.370	2894	2.98	5	107.2	70	130	
K	39	2	He	513.149	1.321	492221	0.81	500	102.6	70	130	
Ca	43	2	He	578.836	3.666	960	5.21	500	115.8	70	130	
Ca	44	2	He	529.307	2.031	15143	3.64	500	105.9	70	130	
V	51	2	He	4.509	3.158	30432	0.31	5	90.2	70	130	
Cr	52	2	He	4.966	6.099	21589	3.72	5	99.3	70	130	
Mn	55	2	He	5.249	1.627	14963	1.79	5	105.0	70	130	
Fe	56	2	He	503.407	2.028	1704288	2.47	500	100.7	70	130	
Co	59	2	He	5.109	3.351	24300	2.83	5	102.2	70	130	
Ni	60	2	He	5.208	4.933	6311	3.48	5	104.2	70	130	
Cu	63	2	He	4.958	1.592	15840	1.68	5	99.2	70	130	
Zn	66	2	He	5.400	6.287	4494	4.26	5	108.0	70	130	
As	75	2	He	5.000	1.870	5144	3.41	5	100.0	70	130	
Se	78	2	He	5.056	5.864	574	5.74	5	101.1	70	130	
B	11	1	nogas	24.772	5.454	102516	2.71	25	99.1	70	130	
Si	28	1	nogas	206.694	15.035	4541152	0.33	25	826.8	70	130	LLICV Main CR1 Failed
Ca	43	1	nogas	494.033	3.872	11280	6.07	500	98.8	70	130	
Ca	44	1	nogas	483.053	3.921	216537	2.20	500	96.6	70	130	
Fe	56	1	nogas	452.350	9.286	8588287	1.99	500	90.5	70	130	
Se	77	1	nogas	-15.086	-16.956	39961	6.07	5	-301.7	70	130	LLICV Main CR1 Failed
Se	82	1	nogas	4.550	17.064	947	15.68	5	91.0	70	130	
Mo	95	1	nogas	4.715	5.565	15147	0.54	5	94.3	70	130	
Sn	118	1	nogas	4.613	9.232	22131	1.27	5	92.3	70	130	
Ba	137	1	nogas	4.496	4.863	11130	2.60	5	89.9	70	130	
Sb	121	2	He	4.918	1.735	16188	2.35	5	98.4	70	130	
Li	7	1	nogas	4.573	0.474	126255	2.16	5	91.5	70	130	
P	31	1	nogas	27.347	16.878	99299	0.92	25	109.4	70	130	
La	139	1	nogas	33.612	57.232	117	35.69	5	672.2	70	130	LLICV Main CR1 Failed
Au	197	1	nogas	1404.994	123.886	33	45.83	5	28099.9	70	130	LLICV Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	842758	2.09	826648	101.95	70	125	
Ge	72	1	nogas	1940819	5.01	1877764	103.36	70	125	
In	115	1	nogas	1705739	7.17	1597662	106.76	70	125	
Bi	209	1	nogas	1287726	4.44	1215842	105.91	70	125	

Low Level Initial Calibration Verification (LLICV) Report

Ge	72	2	He	533415	1.82	519023	102.77	70	125	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	ICB
Data File Name	040_ICB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T12:22:11-06:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	030CALB.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	0.019	62.2	167	33.0	1	
Na	23	1	nogas	0.099	811.6	269784	5.4	100	
Mg	24	1	nogas	0.077	482.0	15442	12.7	100	
Al	27	1	nogas	0.003	18623.5	32525	11.1	5	
K	39	1	nogas	28.025	116.8	7002069	0.4	100	
Ti	47	1	nogas	0.002	4125.6	240	33.3	2.5	
V	51	1	nogas	-3.299	-99.6	897638	3.4	2.5	
Cr	52	1	nogas	0.092	151.1	65974	3.5	2.5	
Mn	55	1	nogas	0.176	71.5	19120	3.3	2.5	
Co	59	1	nogas	0.000	521.8	490	4.1	2.5	
Ni	60	1	nogas	-0.146	-20.6	460	14.3	2.5	
Cu	63	1	nogas	0.013	408.6	2203	10.4	1	
Zn	66	1	nogas	0.166	49.0	1503	6.0	2.5	
As	75	1	nogas	-0.173	-747.6	126868	3.5	2.5	
Sr	88	1	nogas	-0.002	-298.2	1040	12.0	2.5	
Ag	107	1	nogas	-0.165	-5.0	133	43.9	2.5	
Cd	111	1	nogas	0.014	127.9	37	68.6	1	
Sb	121	1	nogas	-0.031	-19.6	537	2.8	2.5	
Tl	205	1	nogas	0.069	66.9	1160	41.2	1	
Pb	208	1	nogas	0.009	23.4	447	6.5	2.5	
U	238	1	nogas	0.011	59.6	300	32.1	2.5	
[Pb]	206	1	nogas	-0.006	-226.5	113	35.7	2.5	
[Pb]	207	1	nogas	0.027	31.2	150	17.6	2.5	
Na	23	2	He	-1.389	-24.5	30725	1.3	100	
Mg	24	2	He	-0.020	-408.2	947	5.8	100	
Al	27	2	He	-1.201	-5.6	877	2.4	5	
K	39	2	He	3.948	46.3	192681	0.6	100	
Ca	43	2	He	-3.029	-310.9	43	35.3	100	
Ca	44	2	He	3.218	149.7	1040	13.5	100	
V	51	2	He	-0.166	-14.3	13863	1.2	2.5	
Cr	52	2	He	-0.051	-141.8	3317	9.4	2.5	
Mn	55	2	He	0.058	118.7	833	21.0	2.5	
Fe	56	2	He	-0.206	-36.2	17242	1.5	100	
Co	59	2	He	0.001	496.9	77	32.8	2.5	
Ni	60	2	He	-0.002	-1654.4	163	19.7	2.5	
Cu	63	2	He	-0.145	-25.8	937	12.7	1	
Zn	66	2	He	0.260	17.2	523	8.0	2.5	
As	75	2	He	-0.035	-257.2	562	12.9	2.5	
Se	78	2	He	0.218	147.2	203	12.8	1	
B	11	1	nogas	3.249	10.3	24773	0.1	10	
Si	28	1	nogas	0.576	6047.8	2904631	2.3	5	
Ca	43	1	nogas	12.182	34.0	797	5.1	100	
Ca	44	1	nogas	9.463	115.0	44623	2.2	100	
Fe	56	1	nogas	-7.137	-118.0	2317780	3.1	100	

Initial Calibration Blank (ICB) Report

Se	77	1	nogas	3.043	318.6	40953	3.2	2.5	ICB Main CR1 Failed
Se	82	1	nogas	-0.283	-66.2	127	19.9	1	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Mo	95	1	nogas	0.002	450.6	290	3.4	2.5	
Sn	118	1	nogas	-0.013	-787.3	1083	36.8	5	
Ba	137	1	nogas	-0.020	-127.6	220	19.8	2.5	
Sb	121	2	He	-0.050	-49.3	220	36.4	2.5	
P	31	1	nogas	8.170	40.0	71174	1.4	10	
La	139	1	nogas	22.248	69.8	83	36.7	2.5	ICB Main CR1 Failed
Au	197	1	nogas	96.160	1366.2	20	50.0	2.5	ICB Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	806219	4.27	826648	97.53	70	125	
Ge	72	1	nogas	1827067	5.99	1877764	97.30	70	125	
In	115	1	nogas	1574084	6.21	1597662	98.52	70	125	
Bi	209	1	nogas	1194821	3.75	1215842	98.27	70	125	
Ge	72	2	He	532151	1.44	519023	102.53	70	125	

Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	ICSA
Data File Name	042ICSA.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T12:34:49-06:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	030CALB.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	0.004	200.9	83	42.1	0	ICSA Main CR1 Failed
Na	23	1	nogas	103222.475	8.1	1464431266	1.5	0	
Mg	24	1	nogas	103012.463	9.4	899198587	1.1	0	
Al	27	1	nogas	93404.051	3.4	1012799345	0.2	0	
K	39	1	nogas	102973.731	4.0	1188574360	0.8	0	
Ti	47	1	nogas	2169.792	6.2	2184096	5.9	0	
V	51	1	nogas	-8.892	-7.9	784484	2.1	0	ICSA Main CR1 Failed
Cr	52	1	nogas	1.023	24.8	73856	1.1	0	ICSA Main CR1 Failed
Mn	55	1	nogas	0.553	13.7	23532	2.3	0	ICSA Main CR1 Failed
Co	59	1	nogas	0.516	7.5	6281	4.0	0	ICSA Main CR1 Failed
Ni	60	1	nogas	1.139	2.4	3664	4.8	0	ICSA Main CR1 Failed
Cu	63	1	nogas	1.480	5.8	10933	1.6	0	ICSA Main CR1 Failed
Zn	66	1	nogas	2.128	7.6	5454	5.8	0	ICSA Main CR1 Failed
As	75	1	nogas	1.918	38.1	128324	1.8	0	ICSA Main CR1 Failed
Sr	88	1	nogas	0.821	1.1	13509	2.9	0	ICSA Main CR1 Failed
Ag	107	1	nogas	-0.165	-1.0	133	8.7	0	ICSA Main CR1 Failed
Cd	111	1	nogas	1.982	10.9	2814	4.2	0	ICSA Main CR1 Failed
Sb	121	1	nogas	0.123	6.1	1583	3.0	0	ICSA Main CR1 Failed
Tl	205	1	nogas	-0.013	-48.4	283	15.9	0	ICSA Main CR1 Failed
Pb	208	1	nogas	0.071	5.1	1247	3.8	0	ICSA Main CR1 Failed
[Pb]	206	1	nogas	0.063	36.3	310	22.6	0	ICSA Main CR1 Failed
[Pb]	207	1	nogas	0.076	35.6	260	19.2	0	ICSA Main CR1 Failed
Na	23	2	He	100703.790	0.3	96340465	1.3	0	
Mg	24	2	He	100192.884	0.9	51305259	1.0	0	
Al	27	2	He	97356.648	1.3	28028978	1.7	0	
K	39	2	He	101386.214	0.7	59831386	0.7	0	
Ca	43	2	He	100440.385	2.2	148187	1.2	0	
Ca	44	2	He	102835.848	0.2	2582378	1.1	0	
V	51	2	He	-0.446	-5.4	12089	0.5	0	ICSA Main CR1 Failed
Cr	52	2	He	0.252	11.5	4147	1.4	0	ICSA Main CR1 Failed
Mn	55	2	He	0.381	2.3	1607	1.6	0	ICSA Main CR1 Failed
Fe	56	2	He	99674.361	1.5	312770949	1.0	0	
Co	59	2	He	0.283	3.4	1327	4.2	0	ICSA Main CR1 Failed
Ni	60	2	He	0.276	12.5	460	7.8	0	ICSA Main CR1 Failed
Cu	63	2	He	-0.064	-103.5	1100	16.2	0	ICSA Main CR1 Failed
Zn	66	2	He	0.828	39.4	903	27.1	0	ICSA Main CR1 Failed
As	75	2	He	0.154	49.2	690	10.1	0	ICSA Main CR1 Failed
Se	78	2	He	0.392	119.1	203	16.8	0	ICSA Main CR1 Failed
B	11	1	nogas	0.841	56.6	16060	3.0	0	ICSA Main CR1 Failed
Si	28	1	nogas	79.400	29.1	3296658	2.0	0	
Ca	43	1	nogas	104278.263	1.6	2040171	1.7	0	
Ca	44	1	nogas	101411.285	4.5	32753381	1.3	0	
Fe	56	1	nogas	100788.574	1.7	1219249261	1.6	0	
Se	77	1	nogas	11.233	21.2	40849	2.6	0	
Se	82	1	nogas	-0.052	-464.0	157	20.5	0	ICSA Main CR1 Failed
Mo	95	1	nogas	2066.697	4.0	5888341	2.8	0	
Sn	118	1	nogas	-0.017	-162.4	990	9.9	0	ICSA Main CR1 Failed
Ba	137	1	nogas	0.145	9.9	543	2.8	0	ICSA Main CR1 Failed
Sb	121	2	He	0.105	16.5	673	6.9	0	ICSA Main CR1 Failed

Interference Check Solution A (ICS-A) Report

P	31	1	nogas	96001.101	2.9	107333048	0.4	0	
La	139	1	nogas	50.306	13.6	133	4.3	0	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	762598	6.12	826648	92.25	70	125	
Ge	72	1	nogas	1754104	3.29	1877764	93.41	70	125	
In	115	1	nogas	1455990	8.04	1597662	91.13	70	125	
Bi	209	1	nogas	1047110	9.51	1215842	86.12	70	125	
Ge	72	2	He	499665	1.00	519023	96.27	70	125	

Interference Check Solution AB (ICS-AB) Report

Sample Table

Sample Name	ICSAB
Data File Name	043ICSB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T12:36:52-06:00
Sample Type	ICSB
Dilution	1
Comment	
ISTD Ref File Name	030CALB.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	110.493	3.420	518096	1.51	100	110.5	80	120	
Na	23	1	nogas	103099.892	3.646	1604849236	1.55	100	103099.9	80	120	ICSB Main CR1 Failed
Mg	24	1	nogas	102454.910	4.505	981788755	0.41	100	102454.9	80	120	ICSB Main CR1 Failed
Al	27	1	nogas	87507.282	1.677	1007047745	0.48	100	87507.3	80	120	ICSB Main CR1 Failed
K	39	1	nogas	103604.233	1.874	1269290595	0.87	100	103604.2	80	120	ICSB Main CR1 Failed
Ti	47	1	nogas	2133.109	2.014	2278023	0.24	100	2133.1	80	120	ICSB Main CR1 Failed
V	51	1	nogas	104.846	1.685	2528434	1.15	100	104.8	80	120	
Cr	52	1	nogas	104.592	2.993	1318242	1.20	100	104.6	80	120	
Mn	55	1	nogas	105.780	1.882	1542206	0.39	100	105.8	80	120	
Co	59	1	nogas	109.751	1.639	1315038	2.61	100	109.8	80	120	
Ni	60	1	nogas	108.190	1.293	288317	1.10	100	108.2	80	120	
Cu	63	1	nogas	106.099	1.421	678470	1.07	100	106.1	80	120	
Zn	66	1	nogas	107.880	1.555	234866	3.09	100	107.9	80	120	
As	75	1	nogas	108.721	1.331	484596	1.28	100	108.7	80	120	
Sr	88	1	nogas	109.186	0.830	1761471	1.37	100	109.2	80	120	
Ag	107	1	nogas	101.852	1.378	745593	0.89	100	101.9	80	120	
Cd	111	1	nogas	112.295	2.077	170719	0.47	100	112.3	80	120	
Sb	121	1	nogas	106.590	1.652	784949	1.34	100	106.6	80	120	
Tl	205	1	nogas	104.045	5.992	1015540	2.77	100	104.0	80	120	
Pb	208	1	nogas	112.516	1.778	1462078	1.78	100	112.5	80	120	
U	238	1	nogas	116.196	2.297	1545362	3.96	100	116.2	80	120	
[Pb]	206	1	nogas	108.902	4.206	363985	0.91	100	108.9	80	120	
[Pb]	207	1	nogas	107.497	2.678	320284	0.79	100	107.5	80	120	
Na	23	2	He	109609.550	1.322	105670635	0.47	100	109609.6	80	120	
Mg	24	2	He	109096.721	2.001	56297929	1.15	100	109096.7	80	120	
Al	27	2	He	95848.297	0.723	27809712	0.16	100	95848.3	80	120	ICSB Main CR1 Failed
K	39	2	He	111027.519	0.396	65502939	0.39	100	111027.5	80	120	
Ca	43	2	He	110899.071	1.743	164909	1.27	100	110899.1	80	120	
Ca	44	2	He	110585.666	3.718	2798666	3.76	100	110585.7	80	120	ICSB Main CR1 Failed
V	51	2	He	113.106	0.780	391522	0.56	100	113.1	80	120	
Cr	52	2	He	112.280	1.104	389434	0.41	100	112.3	80	120	
Mn	55	2	He	112.169	1.822	288803	1.06	100	112.2	80	120	
Fe	56	2	He	110449.875	2.434	349278248	1.60	100	110449.9	80	120	
Co	59	2	He	114.910	1.650	514585	0.79	100	114.9	80	120	
Ni	60	2	He	114.131	2.159	127345	1.46	100	114.1	80	120	
Cu	63	2	He	112.487	2.598	311404	1.96	100	112.5	80	120	
Zn	66	2	He	113.831	2.559	83363	1.77	100	113.8	80	120	
As	75	2	He	113.219	1.645	97771	0.78	100	113.2	80	120	
Se	78	2	He	114.808	0.823	8467	0.83	100	114.8	80	120	
B	11	1	nogas	566.033	3.051	1642755	0.51	100	566.0	80	120	
Si	28	1	nogas	5395.849	1.814	39432399	0.48	100	5395.8	80	120	ICSB Main CR1 Failed
Ca	43	1	nogas	110174.661	2.491	2286858	2.28	100	110174.7	80	120	ICSB Main CR1 Failed
Ca	44	1	nogas	105457.045	2.678	36152707	1.60	100	105457.0	80	120	ICSB Main CR1 Failed
Fe	56	1	nogas	103474.043	1.502	1327954330	0.66	100	103474.0	80	120	ICSB Main CR1 Failed
Se	77	1	nogas	122.617	3.189	64664	1.41	100	122.6	80	120	
Se	82	1	nogas	109.608	3.111	17792	0.92	100	109.6	80	120	
Mo	95	1	nogas	2036.255	0.692	6157668	1.85	100	2036.3	80	120	ICSB Main CR1 Failed
Sn	118	1	nogas	107.619	1.674	448515	0.91	100	107.6	80	120	
Ba	137	1	nogas	110.402	2.444	244121	2.23	100	110.4	80	120	
Sb	121	2	He	115.105	1.967	349637	1.20	100	115.1	80	120	
La	139	1	nogas	170.335	13.598	400	13.92	100	170.3	80	120	ICSB Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	720548	3.60	826648	87.17	70	125	
Ge	72	1	nogas	1860720	2.15	1877764	99.09	70	125	
In	115	1	nogas	1558929	2.37	1597662	97.58	70	125	
Bi	209	1	nogas	1147884	3.30	1215842	94.41	70	125	
Ge	72	2	He	503585	0.87	519023	97.03	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	056_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T13:03:45-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	030CALB.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	0.062	8.3	403	1.4	1	
Na	23	1	nogas	38.917	13.4	904804	2.3	100	
Mg	24	1	nogas	7.893	36.0	92113	22.7	100	
Al	27	1	nogas	3.797	7.5	79049	2.0	5	
K	39	1	nogas	24.548	140.3	7287195	0.4	100	
Ti	47	1	nogas	0.071	104.9	323	18.9	2.5	
V	51	1	nogas	-1.262	-235.1	974538	10.4	2.5	
Cr	52	1	nogas	-0.914	-21.4	56663	1.9	2.5	
Mn	55	1	nogas	0.266	42.7	21373	3.1	2.5	
Co	59	1	nogas	0.050	46.0	1113	18.7	2.5	
Ni	60	1	nogas	0.028	157.8	957	8.9	2.5	
Cu	63	1	nogas	0.094	14.0	2850	3.1	2	
Zn	66	1	nogas	0.592	10.2	2527	5.7	2.5	
As	75	1	nogas	-3.869	-28.1	120472	4.1	2.5	
Sr	88	1	nogas	0.223	17.8	4794	7.4	2.5	
Ag	107	1	nogas	-0.133	-10.8	380	21.5	2.5	
Cd	111	1	nogas	0.027	41.2	57	27.0	1	
Sb	121	1	nogas	0.110	36.3	1617	12.2	2.5	
Tl	205	1	nogas	1.147	74.2	12704	74.8	1	CCB Main CR1 Failed
Pb	208	1	nogas	0.076	28.3	1313	21.3	2.5	
U	238	1	nogas	0.131	63.0	2044	61.5	2.5	
[Pb]	206	1	nogas	0.052	35.7	327	20.8	2.5	
[Pb]	207	1	nogas	0.071	47.6	300	40.4	2.5	
Na	23	2	He	35.505	2.4	67643	1.9	100	
Mg	24	2	He	5.607	16.2	3970	10.3	100	
Al	27	2	He	3.499	7.6	2297	5.5	5	
K	39	2	He	9.870	23.1	196165	0.7	100	
Ca	43	2	He	40.023	40.1	110	24.1	100	
Ca	44	2	He	38.199	21.7	1953	10.1	100	
V	51	2	He	-0.083	-171.5	14012	1.4	2.5	
Cr	52	2	He	-0.180	-26.1	2817	4.6	2.5	
Mn	55	2	He	0.168	7.9	1123	3.7	2.5	
Fe	56	2	He	3.987	5.7	30956	3.2	100	
Co	59	2	He	0.032	34.6	220	25.3	2.5	
Ni	60	2	He	-0.017	-62.8	143	8.1	2.5	
Cu	63	2	He	-0.096	-66.3	1067	14.9	2	
Zn	66	2	He	0.412	18.8	633	8.7	2.5	
As	75	2	He	-0.034	-174.8	558	8.5	2.5	
Se	78	2	He	0.064	1155.1	189	29.0	2	
B	11	1	nogas	11.013	20.7	51025	9.5	10	CCB Main CR1 Failed
Si	28	1	nogas	-41.793	-66.3	2748580	0.8	5	
Ca	43	1	nogas	44.631	18.0	1523	5.3	100	
Ca	44	1	nogas	17.034	56.4	49415	2.3	100	
Fe	56	1	nogas	8.153	175.6	2624516	1.0	100	
Se	77	1	nogas	-20.322	-35.7	38307	4.7	2.5	
Se	82	1	nogas	-0.047	-246.9	173	16.7	2	
Mo	95	1	nogas	0.389	67.4	1477	47.3	2.5	
Sn	118	1	nogas	0.210	59.8	1987	23.5	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.216	23.3	737	15.3	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.060	25.7	567	7.3	2.5	
P	31	1	nogas	7.026	36.7	73161	2.1	10	
La	139	1	nogas	25.931	89.9	90	50.9	2.5	CCB Main CR1 Failed
Au	197	1	nogas	-817.558	-221.1	13	114.6	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	nogas	829602	5.26	826648	100.36	70	125	
Ge	72	1	nogas	1913060	5.99	1877764	101.88	70	125	
In	115	1	nogas	1550842	3.36	1597662	97.07	70	125	
Bi	209	1	nogas	1236713	3.96	1215842	101.72	70	125	
Ge	72	2	He	527050	2.14	519023	101.55	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	058_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T13:08:24-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	030CALB.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	94.230	1.965	483078	0.47	100	94.2	90	110	
Na	23	1	nogas	9957.737	3.536	160106199	1.78	10000	99.6	90	110	
Mg	24	1	nogas	9972.929	2.550	98635569	3.11	10000	99.7	90	110	
Al	27	1	nogas	95.082	3.197	1176781	2.57	100	95.1	90	110	
K	39	1	nogas	9768.093	3.139	131312649	0.41	10000	97.7	90	110	
Ti	47	1	nogas	94.102	2.852	105133	2.18	100	94.1	90	110	
V	51	1	nogas	119.574	4.070	2867633	0.81	100	119.6	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	92.873	3.309	1230171	4.47	100	92.9	90	110	
Mn	55	1	nogas	95.183	1.157	1450412	1.68	100	95.2	90	110	
Co	59	1	nogas	93.778	3.802	1172685	3.72	100	93.8	90	110	
Ni	60	1	nogas	94.677	1.805	263434	0.84	100	94.7	90	110	
Cu	63	1	nogas	92.896	1.514	620350	1.93	100	92.9	90	110	
Zn	66	1	nogas	96.048	1.959	218349	2.42	100	96.0	90	110	
As	75	1	nogas	106.971	3.012	499749	0.68	100	107.0	90	110	
Sr	88	1	nogas	93.730	2.576	1578023	0.41	100	93.7	90	110	
Ag	107	1	nogas	90.748	1.275	693614	2.21	100	90.7	90	110	
Cd	111	1	nogas	93.052	1.107	152832	1.75	100	93.1	90	110	
Sb	121	1	nogas	91.682	2.941	704686	1.49	100	91.7	90	110	
Tl	205	1	nogas	92.420	8.618	979856	3.67	100	92.4	90	110	
Pb	208	1	nogas	104.075	0.179	1352414	0.18	100	104.1	90	110	
U	238	1	nogas	94.744	7.193	1367456	1.22	100	94.7	90	110	
[Pb]	206	1	nogas	95.949	7.179	348356	1.45	100	95.9	90	110	
[Pb]	207	1	nogas	89.365	6.287	289230	0.27	100	89.4	90	110	CCV Main CR1-2 Failed
Na	23	2	He	10334.403	0.733	10170313	1.40	10000	103.3	90	110	
Mg	24	2	He	10555.922	1.593	5547275	3.06	10000	105.6	90	110	
Al	27	2	He	102.744	2.198	31557	4.24	100	102.7	90	110	
K	39	2	He	10502.183	2.375	6368329	2.30	10000	105.0	90	110	
Ca	43	2	He	10471.408	0.922	15894	1.82	10000	104.7	90	110	
Ca	44	2	He	10225.651	2.285	264202	0.47	10000	102.3	90	110	
V	51	2	He	100.741	1.475	356478	1.21	100	100.7	90	110	
Cr	52	2	He	98.885	3.007	349433	0.93	100	98.9	90	110	
Mn	55	2	He	99.706	3.135	261327	1.37	100	99.7	90	110	
Fe	56	2	He	10113.527	2.510	32569059	1.41	10000	101.1	90	110	
Co	59	2	He	99.968	2.055	455656	0.21	100	100.0	90	110	
Ni	60	2	He	102.053	1.538	115928	1.16	100	102.1	90	110	
Cu	63	2	He	103.855	1.519	292770	1.19	100	103.9	90	110	
Zn	66	2	He	103.439	3.716	77166	4.73	100	103.4	90	110	
As	75	2	He	99.634	2.028	87641	0.13	100	99.6	90	110	
Se	78	2	He	96.482	1.803	7271	2.10	100	96.5	90	110	
B	11	1	nogas	473.104	4.801	1502855	2.61	500	94.6	90	110	
Si	28	1	nogas	442.771	5.874	6214550	0.34	5000	8.9	90	110	CCV Main CR1-2 Failed
Ca	43	1	nogas	9628.764	4.070	209045	1.42	10000	96.3	90	110	
Ca	44	1	nogas	9657.195	4.759	3494915	3.43	10000	96.6	90	110	
Fe	56	1	nogas	9589.342	2.092	130772903	1.44	10000	95.9	90	110	
Se	77	1	nogas	167.130	3.590	76423	4.03	100	167.1	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	93.786	5.051	15911	2.35	100	93.8	90	110	
Mo	95	1	nogas	93.689	2.656	295899	0.21	100	93.7	90	110	
Sn	118	1	nogas	94.042	3.066	423397	1.00	100	94.0	90	110	
Ba	137	1	nogas	96.414	1.692	230362	2.90	100	96.4	90	110	
Sb	121	2	He	99.588	2.250	307939	0.14	100	99.6	90	110	
Li	7	1	nogas	104.013	1.755	1230363	1.10	100	104.0	90	110	
P	31	1	nogas	438.604	3.291	608415	0.36	500	87.7	90	110	CCV Main CR1-2 Failed
La	139	1	nogas	164.030	5.868	417	3.67	100	164.0	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	2607.214	100.415	43	58.08	100	2607.2	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	nogas	787429	2.26	826648	95.26	70	125	
Ge	72	1	nogas	1942257	2.64	1877764	103.43	70	125	
In	115	1	nogas	1683820	2.29	1597662	105.39	70	125	
Bi	209	1	nogas	1249411	6.27	1215842	102.76	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	512659	2.13	519023	98.77	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	068_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T13:29:07-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	030CALB.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	100.149	8.852	406311	0.95	100	100.1	90	110	
Na	23	1	nogas	11463.147	13.790	133740907	1.76	10000	114.6	90	110	CCV Main CR1-2 Failed
Mg	24	1	nogas	11350.729	11.760	81569612	0.57	10000	113.5	90	110	CCV Main CR1-2 Failed
Al	27	1	nogas	98.584	16.143	979996	0.36	100	98.6	90	110	
K	39	1	nogas	10004.209	18.619	107764077	2.33	10000	100.0	90	110	
Ti	47	1	nogas	96.527	15.426	86735	0.65	100	96.5	90	110	
V	51	1	nogas	177.530	16.550	3045696	5.78	100	177.5	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	94.573	17.220	1005040	0.36	100	94.6	90	110	
Mn	55	1	nogas	96.921	17.641	1185114	2.61	100	96.9	90	110	
Co	59	1	nogas	96.081	15.620	966003	0.35	100	96.1	90	110	
Ni	60	1	nogas	97.677	13.911	218958	3.03	100	97.7	90	110	
Cu	63	1	nogas	94.828	15.221	509321	1.39	100	94.8	90	110	
Zn	66	1	nogas	94.972	16.968	173370	1.62	100	95.0	90	110	
As	75	1	nogas	134.866	20.560	478084	0.09	100	134.9	90	110	CCV Main CR1-2 Failed
Sr	88	1	nogas	101.545	7.609	1388478	10.16	100	101.5	90	110	
Ag	107	1	nogas	91.550	13.814	563714	2.35	100	91.5	90	110	
Cd	111	1	nogas	102.306	14.068	123065	1.45	100	102.3	90	110	
Sb	121	1	nogas	94.293	15.251	583044	0.96	100	94.3	90	110	
Tl	205	1	nogas	107.704	7.992	806990	0.93	100	107.7	90	110	
Pb	208	1	nogas	85.841	0.697	1115531	0.70	100	85.8	90	110	CCV Main CR1-2 Failed
U	238	1	nogas	106.168	7.938	1082819	2.92	100	106.2	90	110	
[Pb]	206	1	nogas	112.024	7.531	287385	0.92	100	112.0	90	110	CCV Main CR1-2 Failed
[Pb]	207	1	nogas	103.189	7.679	235895	0.78	100	103.2	90	110	
Na	23	2	He	10745.924	1.480	8604490	1.48	10000	107.5	90	110	
Mg	24	2	He	10679.648	2.509	4565255	0.81	10000	106.8	90	110	
Al	27	2	He	104.598	3.233	26108	1.79	100	104.6	90	110	
K	39	2	He	8628.098	1.362	5265887	1.31	10000	86.3	90	110	CCV Main CR1-2 Failed
Ca	43	2	He	10790.195	4.582	13328	5.25	10000	107.9	90	110	
Ca	44	2	He	10526.855	1.040	221353	1.29	10000	105.3	90	110	
V	51	2	He	105.911	2.574	304366	1.51	100	105.9	90	110	
Cr	52	2	He	103.257	0.641	296926	2.03	100	103.3	90	110	
Mn	55	2	He	103.238	1.168	220240	1.47	100	103.2	90	110	
Fe	56	2	He	10437.697	2.074	27355052	1.51	10000	104.4	90	110	
Co	59	2	He	101.806	2.162	377615	0.54	100	101.8	90	110	
Ni	60	2	He	103.282	2.073	95466	0.80	100	103.3	90	110	
Cu	63	2	He	103.814	2.594	238170	2.82	100	103.8	90	110	
Zn	66	2	He	103.681	0.824	62935	2.34	100	103.7	90	110	
As	75	2	He	100.341	2.589	71823	1.54	100	100.3	90	110	
Se	78	2	He	95.824	2.386	5877	1.27	100	95.8	90	110	
B	11	1	nogas	464.068	16.556	1164806	11.82	500	92.8	90	110	
Si	28	1	nogas	531.826	31.785	5491462	1.72	5000	10.6	90	110	CCV Main CR1-2 Failed
Ca	43	1	nogas	10179.687	18.320	177223	2.56	10000	101.8	90	110	
Ca	44	1	nogas	10253.428	14.117	2989343	3.59	10000	102.5	90	110	
Fe	56	1	nogas	9868.551	16.846	108036015	0.68	10000	98.7	90	110	
Se	77	1	nogas	317.391	27.219	85499	1.13	100	317.4	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	92.479	18.690	12585	2.84	100	92.5	90	110	
Mo	95	1	nogas	95.426	15.995	242263	0.20	100	95.4	90	110	
Sn	118	1	nogas	106.999	14.638	352579	1.70	100	107.0	90	110	
Ba	137	1	nogas	104.409	12.616	182920	2.16	100	104.4	90	110	
Sb	121	2	He	99.676	1.662	250844	1.21	100	99.7	90	110	
Li	7	1	nogas	109.495	6.758	1023608	2.70	100	109.5	90	110	
P	31	1	nogas	438.085	18.232	488404	0.83	500	87.6	90	110	CCV Main CR1-2 Failed
La	139	1	nogas	117.600	17.792	227	2.55	100	117.6	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	3102.322	72.726	33	45.83	100	3102.3	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	nogas	626198	8.74	826648	75.75	70	125	
Ge	72	1	nogas	1589305	17.02	1877764	84.64	70	125	
In	115	1	nogas	1248522	13.39	1597662	78.15	70	125	
Bi	209	1	nogas	883482	7.30	1215842	72.66	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	417167	1.73	519023	80.38	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	069_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T13:31:04-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	030CALB.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	0.066	33.0	363	27.7	1	
Na	23	1	nogas	77.233	11.5	1266449	1.4	100	
Mg	24	1	nogas	5.908	34.9	61144	18.9	100	
Al	27	1	nogas	3.673	2.1	63818	3.2	5	
K	39	1	nogas	22.528	97.0	5973432	0.8	100	
Ti	47	1	nogas	0.073	30.7	270	9.8	2.5	
V	51	1	nogas	9.846	20.3	939663	6.6	2.5	CCB Main CR1 Failed
Cr	52	1	nogas	-0.911	-16.1	46619	1.4	2.5	
Mn	55	1	nogas	0.451	18.7	19834	1.0	2.5	
Co	59	1	nogas	0.053	62.1	947	30.8	2.5	
Ni	60	1	nogas	0.083	23.7	913	6.7	2.5	
Cu	63	1	nogas	0.064	30.6	2180	2.8	2	
Zn	66	1	nogas	0.375	19.5	1683	10.9	2.5	
As	75	1	nogas	5.397	19.6	124525	2.5	2.5	CCB Main CR1 Failed
Sr	88	1	nogas	0.129	18.6	2680	8.1	2.5	
Ag	107	1	nogas	-0.142	-5.2	263	17.9	2.5	
Cd	111	1	nogas	0.059	67.5	93	55.0	1	
Sb	121	1	nogas	0.058	57.3	1010	16.4	2.5	
Tl	205	1	nogas	1.194	65.8	10651	65.1	1	CCB Main CR1 Failed
Pb	208	1	nogas	0.047	59.0	930	38.5	2.5	
U	238	1	nogas	0.156	65.8	1950	63.3	2.5	
[Pb]	206	1	nogas	0.034	110.3	213	53.3	2.5	
[Pb]	207	1	nogas	0.060	86.5	213	65.7	2.5	
Na	23	2	He	75.657	4.0	87733	0.9	100	
Mg	24	2	He	4.912	7.8	2920	3.7	100	
Al	27	2	He	2.935	5.5	1723	1.5	5	
K	39	2	He	-44.275	-6.0	164313	0.9	100	
Ca	43	2	He	-1.567	-565.1	37	31.5	100	
Ca	44	2	He	29.631	10.1	1403	6.4	100	
V	51	2	He	0.631	8.5	13400	1.2	2.5	
Cr	52	2	He	-0.144	-26.5	2394	3.5	2.5	
Mn	55	2	He	0.175	25.0	927	9.8	2.5	
Fe	56	2	He	3.528	8.0	23879	1.6	100	
Co	59	2	He	0.030	75.8	170	48.2	2.5	
Ni	60	2	He	-0.002	-3738.6	130	53.8	2.5	
Cu	63	2	He	-0.213	-16.2	593	11.8	2	
Zn	66	2	He	0.480	12.9	557	8.9	2.5	
As	75	2	He	0.013	531.1	487	9.4	2.5	
Se	78	2	He	1.024	43.5	213	12.8	2	
B	11	1	nogas	12.458	14.0	47743	10.1	10	CCB Main CR1 Failed
Si	28	1	nogas	33.409	60.9	2690365	0.1	5	CCB Main CR1 Failed
Ca	43	1	nogas	29.123	12.1	983	2.1	100	
Ca	44	1	nogas	9.911	43.1	38603	1.1	100	
Fe	56	1	nogas	13.114	104.8	2211966	3.0	100	
Se	77	1	nogas	32.879	18.1	40108	5.0	2.5	CCB Main CR1 Failed
Se	82	1	nogas	0.046	905.9	153	33.5	2	
Mo	95	1	nogas	0.394	56.1	1237	41.2	2.5	
Sn	118	1	nogas	0.244	53.1	1877	22.4	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.141	29.3	503	13.2	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.030	153.2	383	32.4	2.5	
P	31	1	nogas	3.873	64.3	56976	1.1	10	
La	139	1	nogas	32.884	12.2	93	6.2	2.5	CCB Main CR1 Failed
Au	197	1	nogas	3945.633	57.2	43	35.3	2.5	CCB Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	706406	0.29	826648	85.45	70	125	
Ge	72	1	nogas	1571558	4.23	1877764	83.69	70	125	
In	115	1	nogas	1370263	3.48	1597662	85.77	70	125	
Bi	209	1	nogas	1003386	1.69	1215842	82.53	70	125	
Ge	72	2	He	427698	2.07	519023	82.40	70	125	

Calibration Blank Report

Sample Table

Sample Name	CAL BLK
Data File Name	075CALB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T13:44:58-06:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	80	46.88
Na	23	1	nogas	423106	0.00
Mg	24	1	nogas	7369	0.17
Al	27	1	nogas	11784	0.03
K	39	1	nogas	5711737	0.00
Ti	47	1	nogas	133	34.37
V	51	1	nogas	770105	0.00
Cr	52	1	nogas	40428	0.00
Mn	55	1	nogas	16928	0.03
Co	59	1	nogas	353	1.22
Ni	60	1	nogas	467	6.45
Cu	63	1	nogas	1403	0.48
Zn	66	1	nogas	443	2.51
As	75	1	nogas	102419	0.00
Sr	88	1	nogas	490	2.20
Ag	107	1	nogas	40	165.36
Cd	111	1	nogas	20	433.01
Sb	121	1	nogas	227	4.05
Tl	205	1	nogas	240	9.19
Pb	208	1	nogas	133	3.25
[Pb]	206	1	nogas	37	85.89
[Pb]	207	1	nogas	37	154.83
Na	23	2	He	40580	0.00
Mg	24	2	He	450	3.92
Al	27	2	He	333	2.75
K	39	2	He	157324	0.00
Ca	43	2	He	23	382.35
Ca	44	2	He	530	1.85
V	51	2	He	11055	0.01
Cr	52	2	He	2307	0.28
Mn	55	2	He	513	2.16
Fe	56	2	He	9569	0.03
Co	59	2	He	77	35.42
Ni	60	2	He	53	88.47
Cu	63	2	He	453	4.87
Zn	66	2	He	63	51.90
As	75	2	He	421	1.51
Se	78	2	He	214	1.90
B	11	1	nogas	27457	0.02
Si	28	1	nogas	2687573	0.00
Ca	43	1	nogas	403	5.23
Ca	44	1	nogas	28125	0.01

Calibration Blank Report

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	2078496	0.00
Se	77	1	nogas	33608	0.01
Se	82	1	nogas	113	47.57
Mo	95	1	nogas	127	37.57
Sn	118	1	nogas	360	5.56
Ba	137	1	nogas	83	73.90
Sb	121	2	He	100	26.46
Li	7	1	nogas	57116	0.01
P	31	1	nogas	55311	0.00
La	139	1	nogas	20	661.44

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	6	1	nogas	671260	5.26
Ge	72	1	nogas	1476428	5.75
In	115	1	nogas	1187105	8.52
Bi	209	1	nogas	882577	3.99
Ge	72	2	He	403706	1.48

Calibration Standard Report

Sample Table

Sample Name	2/10/200
Data File Name	076CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T13:46:56-06:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	075CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	7332	0.02
Na	23	1	nogas	2690696	0.00
Mg	24	1	nogas	1465321	0.00
Al	27	1	nogas	29487	0.01
K	39	1	nogas	7439018	0.00
Ti	47	1	nogas	1577	0.23
V	51	1	nogas	721611	0.00
Cr	52	1	nogas	55172	0.00
Mn	55	1	nogas	38143	0.01
Co	59	1	nogas	17522	0.01
Ni	60	1	nogas	4577	0.09
Cu	63	1	nogas	10933	0.01
Zn	66	1	nogas	3450	0.18
As	75	1	nogas	97279	0.01
Sr	88	1	nogas	23068	0.01
Ag	107	1	nogas	10843	0.01
Cd	111	1	nogas	2507	0.16
Sb	121	1	nogas	10600	0.02
Tl	205	1	nogas	14357	0.01
Pb	208	1	nogas	20512	0.01
[Pb]	206	1	nogas	5224	0.06
[Pb]	207	1	nogas	4454	0.06
Na	23	2	He	183026	0.00
Mg	24	2	He	81233	0.00
Al	27	2	He	747	1.19
K	39	2	He	244296	0.00
Ca	43	2	He	217	17.86
Ca	44	2	He	4441	0.07
V	51	2	He	15194	0.01
Cr	52	2	He	7508	0.03
Mn	55	2	He	4734	0.14
Fe	56	2	He	483417	0.00
Co	59	2	He	7312	0.08
Ni	60	2	He	1917	0.26
Cu	63	2	He	4794	0.06
Zn	66	2	He	1193	0.65
As	75	2	He	1715	0.18
Se	78	2	He	322	2.55
B	11	1	nogas	46898	0.00
Si	28	1	nogas	2775369	0.00

Calibration Standard Report

Ca	43	1	nogas	3464	0.15
Ca	44	1	nogas	78133	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	3868161	0.00
Se	77	1	nogas	30696	0.01
Se	82	1	nogas	360	7.60
Mo	95	1	nogas	4487	0.13
Sn	118	1	nogas	6048	0.12
Ba	137	1	nogas	3324	0.08
Sb	121	2	He	4561	0.13
P	31	1	nogas	63630	0.00
La	139	1	nogas	33	137.48

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	689389	1.02	671260	102.70	70	125	
Ge	72	1	nogas	1501014	1.58	1476428	101.67	70	125	
In	115	1	nogas	1297948	0.70	1187105	109.34	70	125	
Bi	209	1	nogas	933265	3.15	882577	105.74	70	125	
Ge	72	2	He	409505	1.57	403706	101.44	70	125	

Calibration Standard Report

Sample Table

Sample Name	5/25/500
Data File Name	077CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T13:48:56-06:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	
ISTD Ref File Name	075CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	18823	0.02
Na	23	1	nogas	6224997	0.00
Mg	24	1	nogas	3732605	0.00
Al	27	1	nogas	58046	0.01
K	39	1	nogas	10389976	0.00
Ti	47	1	nogas	3817	0.12
V	51	1	nogas	841065	0.00
Cr	52	1	nogas	85299	0.00
Mn	55	1	nogas	73436	0.00
Co	59	1	nogas	45807	0.00
Ni	60	1	nogas	10763	0.04
Cu	63	1	nogas	25765	0.01
Zn	66	1	nogas	8952	0.03
As	75	1	nogas	117084	0.00
Sr	88	1	nogas	59459	0.00
Ag	107	1	nogas	27712	0.00
Cd	111	1	nogas	5818	0.09
Sb	121	1	nogas	26046	0.00
Tl	205	1	nogas	37156	0.01
Pb	208	1	nogas	52581	0.00
[Pb]	206	1	nogas	13402	0.02
[Pb]	207	1	nogas	11341	0.02
Na	23	2	He	414093	0.00
Mg	24	2	He	207717	0.00
Al	27	2	He	1473	0.44
K	39	2	He	381983	0.00
Ca	43	2	He	600	1.21
Ca	44	2	He	10540	0.04
V	51	2	He	24571	0.00
Cr	52	2	He	16007	0.03
Mn	55	2	He	10820	0.04
Fe	56	2	He	1232790	0.00
Co	59	2	He	17869	0.03
Ni	60	2	He	4467	0.17
Cu	63	2	He	11657	0.04
Zn	66	2	He	3234	0.22
As	75	2	He	3649	0.05
Se	78	2	He	474	2.46
B	11	1	nogas	79772	0.00
Si	28	1	nogas	2820944	0.00

Calibration Standard Report

Ca	43	1	nogas	8542	0.03
Ca	44	1	nogas	156733	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	6910399	0.00
Se	77	1	nogas	35411	0.01
Se	82	1	nogas	760	0.90
Mo	95	1	nogas	10910	0.03
Sn	118	1	nogas	15614	0.00
Ba	137	1	nogas	8932	0.05
Sb	121	2	He	11377	0.01
P	31	1	nogas	77739	0.00
La	139	1	nogas	57	47.57

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	670302	6.84	671260	99.86	70	125	
Ge	72	1	nogas	1427398	7.63	1476428	96.68	70	125	
In	115	1	nogas	1202086	12.09	1187105	101.26	70	125	
Bi	209	1	nogas	870660	6.11	882577	98.65	70	125	
Ge	72	2	He	413173	1.59	403706	102.35	70	125	

Calibration Standard Report

Sample Table

Sample Name	10/50/1000
Data File Name	078CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T13:50:56-06:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	
ISTD Ref File Name	075CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	35122	0.00
Na	23	1	nogas	11865033	0.00
Mg	24	1	nogas	7343055	0.00
Al	27	1	nogas	102495	0.00
K	39	1	nogas	14607390	0.00
Ti	47	1	nogas	7625	0.08
V	51	1	nogas	923330	0.00
Cr	52	1	nogas	128751	0.00
Mn	55	1	nogas	128138	0.00
Co	59	1	nogas	89594	0.00
Ni	60	1	nogas	20322	0.01
Cu	63	1	nogas	48227	0.00
Zn	66	1	nogas	16788	0.00
As	75	1	nogas	133555	0.00
Sr	88	1	nogas	113664	0.00
Ag	107	1	nogas	53174	0.00
Cd	111	1	nogas	11154	0.00
Sb	121	1	nogas	50597	0.00
Tl	205	1	nogas	70262	0.00
Pb	208	1	nogas	102071	0.00
[Pb]	206	1	nogas	25317	0.00
[Pb]	207	1	nogas	22109	0.01
Na	23	2	He	759609	0.00
Mg	24	2	He	394649	0.00
Al	27	2	He	2840	0.14
K	39	2	He	599059	0.00
Ca	43	2	He	1180	0.19
Ca	44	2	He	19480	0.00
V	51	2	He	36956	0.00
Cr	52	2	He	29046	0.01
Mn	55	2	He	20872	0.01
Fe	56	2	He	2426057	0.00
Co	59	2	He	35224	0.01
Ni	60	2	He	8959	0.02
Cu	63	2	He	22467	0.01
Zn	66	2	He	5831	0.05
As	75	2	He	6747	0.03
Se	78	2	He	714	0.61
B	11	1	nogas	130956	0.00
Si	28	1	nogas	2932057	0.00

Calibration Standard Report

Ca	43	1	nogas	15930	0.00
Ca	44	1	nogas	277053	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	11430657	0.00
Se	77	1	nogas	37115	0.02
Se	82	1	nogas	1260	1.20
Mo	95	1	nogas	22204	0.02
Sn	118	1	nogas	28948	0.01
Ba	137	1	nogas	16491	0.01
Sb	121	2	He	23226	0.02
P	31	1	nogas	98726	0.00
La	139	1	nogas	60	73.49

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	682008	3.57	671260	101.60	70	125	
Ge	72	1	nogas	1451110	5.13	1476428	98.29	70	125	
In	115	1	nogas	1234984	9.52	1187105	104.03	70	125	
Bi	209	1	nogas	900265	7.23	882577	102.00	70	125	
Ge	72	2	He	413507	0.78	403706	102.43	70	125	

Calibration Standard Report

Sample Table

Sample Name	100/500/10K
Data File Name	079CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T13:52:54-06:00
Sample Type	CalStd
Level	5
Dilution	1
Comment	
ISTD Ref File Name	075CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	359952	0.00
Na	23	1	nogas	113153728	0.00
Mg	24	1	nogas	70211602	0.00
Al	27	1	nogas	835224	0.00
K	39	1	nogas	94796588	0.00
Ti	47	1	nogas	74048	0.01
V	51	1	nogas	1796770	0.00
Cr	52	1	nogas	881496	0.00
Mn	55	1	nogas	1082309	0.00
Co	59	1	nogas	868978	0.00
Ni	60	1	nogas	192812	0.00
Cu	63	1	nogas	456125	0.00
Zn	66	1	nogas	156139	0.00
As	75	1	nogas	330346	0.00
Sr	88	1	nogas	1128659	0.00
Ag	107	1	nogas	523695	0.00
Cd	111	1	nogas	111430	0.00
Sb	121	1	nogas	490689	0.00
Tl	205	1	nogas	735229	0.00
Pb	208	1	nogas	1007331	0.00
[Pb]	206	1	nogas	250439	0.00
[Pb]	207	1	nogas	221086	0.00
Na	23	2	He	7528608	0.00
Mg	24	2	He	4029918	0.00
Al	27	2	He	22844	0.00
K	39	2	He	4663049	0.00
Ca	43	2	He	11180	0.03
Ca	44	2	He	195170	0.00
V	51	2	He	270119	0.00
Cr	52	2	He	271096	0.00
Mn	55	2	He	202707	0.00
Fe	56	2	He	24116035	0.00
Co	59	2	He	356143	0.00
Ni	60	2	He	87488	0.00
Cu	63	2	He	219871	0.00
Zn	66	2	He	57317	0.00
As	75	2	He	65347	0.00
Se	78	2	He	5534	0.05
B	11	1	nogas	1118157	0.00
Si	28	1	nogas	5111263	0.00

Calibration Standard Report

Ca	43	1	nogas	153136	0.00
Ca	44	1	nogas	2554808	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	93341806	0.00
Se	77	1	nogas	44692	0.01
Se	82	1	nogas	11741	0.01
Mo	95	1	nogas	216310	0.00
Sn	118	1	nogas	294589	0.00
Ba	137	1	nogas	166962	0.00
Sb	121	2	He	221203	0.00
P	31	1	nogas	462219	0.00
La	139	1	nogas	150	4.44

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	642631	2.65	671260	95.74	70	125	
Ge	72	1	nogas	1469238	4.13	1476428	99.51	70	125	
In	115	1	nogas	1270625	6.89	1187105	107.04	70	125	
Bi	209	1	nogas	950215	2.18	882577	107.66	70	125	
Ge	72	2	He	404324	2.13	403706	100.15	70	125	

Calibration Standard Report

Sample Table

Sample Name	200/1000/20K
Data File Name	080CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T13:54:52-06:00
Sample Type	CalStd
Level	6
Dilution	1
Comment	
ISTD Ref File Name	075CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	748980	0.00
Na	23	1	nogas	231400347	0.00
Mg	24	1	nogas	141771887	0.00
Al	27	1	nogas	1728711	0.00
K	39	1	nogas	185404600	0.00
Ti	47	1	nogas	151121	0.00
V	51	1	nogas	2724213	0.00
Cr	52	1	nogas	1797924	0.00
Mn	55	1	nogas	2127615	0.00
Co	59	1	nogas	1785766	0.00
Ni	60	1	nogas	392161	0.00
Cu	63	1	nogas	928023	0.00
Zn	66	1	nogas	321547	0.00
As	75	1	nogas	558357	0.00
Sr	88	1	nogas	2342306	0.00
Ag	107	1	nogas	1035857	0.00
Cd	111	1	nogas	227230	0.00
Sb	121	1	nogas	1054661	0.00
Tl	205	1	nogas	1503664	0.00
Pb	208	1	nogas	2074702	0.00
[Pb]	206	1	nogas	512641	0.00
[Pb]	207	1	nogas	448930	0.00
Na	23	2	He	14602654	0.00
Mg	24	2	He	7936319	0.00
Al	27	2	He	44997	0.00
K	39	2	He	9125702	0.00
Ca	43	2	He	23008	0.01
Ca	44	2	He	393662	0.00
V	51	2	He	530364	0.00
Cr	52	2	He	541012	0.00
Mn	55	2	He	401552	0.00
Fe	56	2	He	47757013	0.00
Co	59	2	He	706939	0.00
Ni	60	2	He	174188	0.00
Cu	63	2	He	429426	0.00
Zn	66	2	He	113248	0.00
As	75	2	He	131071	0.00
Se	78	2	He	10979	0.01
B	11	1	nogas	2296029	0.00
Si	28	1	nogas	7590137	0.00

Calibration Standard Report

Ca	43	1	nogas	314192	0.00
Ca	44	1	nogas	5127968	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	186517867	0.00
Se	77	1	nogas	53455	0.00
Se	82	1	nogas	23485	0.01
Mo	95	1	nogas	454174	0.00
Sn	118	1	nogas	610124	0.00
Ba	137	1	nogas	340266	0.00
Sb	121	2	He	459164	0.00
P	31	1	nogas	871522	0.00
La	139	1	nogas	250	12.50

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	611713	6.88	671260	91.13	70	125	
Ge	72	1	nogas	1481279	7.35	1476428	100.33	70	125	
In	115	1	nogas	1209696	10.20	1187105	101.90	70	125	
Bi	209	1	nogas	876085	5.88	882577	99.26	70	125	
Ge	72	2	He	409287	1.25	403706	101.38	70	125	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	ICCV
Data File Name	082_ICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T13:58:50-06:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	075CALB.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	98.159	3.267	392693	1.84	100	98.2	90	110	
Na	23	1	nogas	10149.202	2.625	127335049	0.15	10000	101.5	90	110	
Mg	24	1	nogas	10442.587	3.823	80273683	1.14	10000	104.4	90	110	
Al	27	1	nogas	102.813	7.798	896167	1.01	100	102.8	90	110	
K	39	1	nogas	11058.641	6.523	106058379	2.68	10000	110.6	90	110	ICV Main CR1 Failed
Ti	47	1	nogas	103.074	6.936	78489	1.56	100	103.1	90	110	
V	51	1	nogas	66.764	4.903	1451440	8.86	100	66.8	90	110	ICV Main CR1 Failed
Cr	52	1	nogas	101.077	8.548	930773	0.32	100	101.1	90	110	
Mn	55	1	nogas	106.755	7.012	1158194	1.36	100	106.8	90	110	
Co	59	1	nogas	104.328	4.819	937174	3.40	100	104.3	90	110	
Ni	60	1	nogas	107.389	4.340	212715	4.18	100	107.4	90	110	
Cu	63	1	nogas	106.854	5.317	500745	2.97	100	106.9	90	110	
Zn	66	1	nogas	104.570	7.958	168974	0.58	100	104.6	90	110	
As	75	1	nogas	88.864	9.779	309240	1.82	100	88.9	90	110	ICV Main CR1 Failed
Sr	88	1	nogas	96.742	3.141	1142687	9.79	100	96.7	90	110	
Ag	107	1	nogas	105.360	6.512	552892	1.86	100	105.4	90	110	
Cd	111	1	nogas	100.495	5.987	122382	2.48	100	100.5	90	110	
Sb	121	1	nogas	109.383	7.147	574740	1.24	100	109.4	90	110	
Tl	205	1	nogas	93.223	14.694	826527	2.49	100	93.2	90	110	
Pb	208	1	nogas	107.890	1.890	1112749	1.89	100	107.9	90	110	
U	238	1	nogas	90.319	13.042	1076824	0.68	100	90.3	90	110	
[Pb]	206	1	nogas	93.883	13.422	284059	1.88	100	93.9	90	110	
[Pb]	207	1	nogas	89.562	15.333	237220	3.16	100	89.6	90	110	ICV Main CR1 Failed
Na	23	2	He	10862.277	2.491	8284060	1.99	10000	108.6	90	110	
Mg	24	2	He	10833.633	1.564	4469130	1.25	10000	108.3	90	110	
Al	27	2	He	101.896	1.190	24005	0.81	100	101.9	90	110	
K	39	2	He	10960.496	1.261	5076773	1.22	10000	109.6	90	110	
Ca	43	2	He	10365.120	2.711	12294	1.35	10000	103.7	90	110	
Ca	44	2	He	10562.860	1.290	215280	1.10	10000	105.6	90	110	
V	51	2	He	101.070	2.748	283219	1.32	100	101.1	90	110	
Cr	52	2	He	103.477	2.549	291079	1.00	100	103.5	90	110	
Mn	55	2	He	103.994	2.463	216989	2.20	100	104.0	90	110	
Fe	56	2	He	10770.200	1.965	26712625	2.95	10000	107.7	90	110	
Co	59	2	He	101.886	2.907	373765	2.05	100	101.9	90	110	
Ni	60	2	He	102.444	3.669	92629	2.45	100	102.4	90	110	
Cu	63	2	He	102.912	2.086	230597	0.58	100	102.9	90	110	
Zn	66	2	He	102.124	0.793	60182	1.64	100	102.1	90	110	
As	75	2	He	102.595	2.478	69785	1.00	100	102.6	90	110	
Se	78	2	He	101.409	3.871	5858	2.11	100	101.4	90	110	
B	11	1	nogas	481.359	8.800	1192876	5.12	500	96.3	90	110	
Si	28	1	nogas	4913.480	14.825	5151181	1.61	5000	98.3	90	110	
Ca	43	1	nogas	10871.103	7.315	171830	1.96	10000	108.7	90	110	
Ca	44	1	nogas	10675.333	1.230	2785143	7.25	10000	106.8	90	110	
Fe	56	1	nogas	10849.024	6.770	103132419	1.61	10000	108.5	90	110	
Se	77	1	nogas	-21.293	-41.433	31848	5.91	100	-21.3	90	110	ICV Main CR1 Failed
Se	82	1	nogas	104.685	10.191	12448	1.85	100	104.7	90	110	
Mo	95	1	nogas	97.481	5.309	222045	2.91	100	97.5	90	110	
Sn	118	1	nogas	97.763	6.211	318889	2.43	100	97.8	90	110	
Ba	137	1	nogas	99.401	6.657	181556	1.61	100	99.4	90	110	
Sb	121	2	He	108.130	2.882	255390	1.50	100	108.1	90	110	
Li	7	1	nogas	91.098	1.701	872057	2.28	100	91.1	90	110	
P	31	1	nogas	507.859	7.477	474948	2.03	500	101.6	90	110	
La	139	1	nogas	156.651	16.763	217	7.05	100	156.7	90	110	ICV Main CR1 Failed
Au	197	1	nogas	174.723	109.584	20	50.00	100	174.7	90	110	ICV Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	663889	3.42	671260	98.90	70	125	
Ge	72	1	nogas	1495768	7.94	1476428	101.31	70	125	
In	115	1	nogas	1310392	8.03	1187105	110.39	70	125	
Bi	209	1	nogas	1065305	13.35	882577	120.70	70	125	

Initial Calibration Verification (ICV) Report

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	2	He	423094	1.66	403706	104.80	70	125	

Sample Report

Sample Table

Sample Name	LLCCV2
Data File Name	084SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T14:02:47-06:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	075CALB.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	1.743	1.743	5.55	7708	0.02	2000	
Na	23	1	nogas	183.907	183.907	7.25	2742225	0.01	200000	
Mg	24	1	nogas	202.690	202.690	2.56	1558296	0.01	200000	
Al	27	1	nogas	2.003	2.003	3.58	31350	0.01	2000	
K	39	1	nogas	140.395	140.395	8.28	7579543	0.00	200000	
Ti	47	1	nogas	1.942	1.942	20.51	1733	0.11	2000	
V	51	1	nogas	-39.003	-39.003	-4.29	416699	-0.01	2000	
Cr	52	1	nogas	0.335	0.335	16.19	47100	0.00	2000	
Mn	55	1	nogas	1.894	1.894	3.22	40207	0.00	2000	
Co	59	1	nogas	1.952	1.952	2.88	19204	0.01	2000	
Ni	60	1	nogas	1.822	1.822	3.93	4557	0.04	2000	
Cu	63	1	nogas	1.885	1.885	5.90	10983	0.02	2000	
Zn	66	1	nogas	1.955	1.955	7.71	3777	0.05	2000	
As	75	1	nogas	-16.603	-16.603	-6.83	72055	-0.02	2000	
Sr	88	1	nogas	1.938	1.938	2.88	25011	0.01	2000	
Ag	107	1	nogas	1.925	1.925	2.76	10897	0.02	2000	
Cd	111	1	nogas	1.970	1.970	11.20	2517	0.08	2000	
Sb	121	1	nogas	2.262	2.262	3.06	13018	0.02	2000	
Tl	205	1	nogas	1.766	1.766	8.23	16248	0.01	2000	
Pb	208	1	nogas	2.099	2.099	4.10	21779	0.01	2000	
U	238	1	nogas	1.713	1.713	7.45	20847	0.01	2000	
[Pb]	206	1	nogas	1.686	1.686	3.20	5251	0.03	2000	
[Pb]	207	1	nogas	1.739	1.739	13.89	4737	0.04	2000	
Na	23	2	He	181.447	181.447	3.01	184262	0.10	200000	
Mg	24	2	He	203.720	203.720	2.71	86402	0.24	200000	
Al	27	2	He	1.496	1.496	13.93	807	0.19	2000	
K	39	2	He	193.144	193.144	1.57	244014	0.08	200000	
Ca	43	2	He	213.363	213.363	4.38	283	75.30	200000	
Ca	44	2	He	194.819	194.819	9.54	4617	4.22	200000	
V	51	2	He	-0.292	-0.292	-30.87	10884	0.00	2000	
Cr	52	2	He	1.971	1.971	2.75	8095	0.02	2000	
Mn	55	2	He	2.065	2.065	3.58	4944	0.04	2000	
Fe	56	2	He	195.903	195.903	2.32	506800	0.04	200000	
Co	59	2	He	2.014	2.014	1.21	7635	0.03	2000	
Ni	60	2	He	1.769	1.769	7.74	1893	0.09	2000	
Cu	63	2	He	1.756	1.756	0.72	5414	0.03	2000	
Zn	66	2	He	1.844	1.844	18.33	1397	0.13	2000	
As	75	2	He	1.692	1.692	5.66	1621	0.10	2000	
Se	78	2	He	1.491	1.491	17.28	298	0.50	2000	
B	11	1	nogas	12.456	12.456	12.70	62639	0.02	2000	
Si	28	1	nogas	-461.333	-461.333	-8.15	2677691	-0.02	2000	
Ca	43	1	nogas	190.380	190.380	9.56	3664	5.20	200000	

Sample Report

Ca	44	1	nogas	176.725	176.725	2.08	79495	0.22	200000	
Fe	56	1	nogas	133.900	133.900	4.61	3598231	0.00	200000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Se	77	1	nogas	-130.026	-130.026	-7.76	22064	-0.59	2000	
Se	82	1	nogas	2.031	2.031	43.17	383	0.53	2000	
Mo	95	1	nogas	2.023	2.023	6.63	5081	0.04	2000	
Sn	118	1	nogas	2.000	2.000	3.38	7188	0.03	2000	
Ba	137	1	nogas	1.845	1.845	1.46	3607	0.05	2000	
Sb	121	2	He	2.305	2.305	2.22	5674	0.04	2000	
La	139	1	nogas	-0.991	-0.991	-520.20	23	-4.25	2000	
Au	197	1	nogas	174.584	174.584	259.07	20	872.92	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	726119	4.64	671260	108.17	70	125	
Ge	72	1	nogas	1601858	0.52	1476428	108.50	70	125	
In	115	1	nogas	1359222	3.48	1187105	114.50	70	125	
Bi	209	1	nogas	1075816	6.76	882577	121.89	70	125	
Ge	72	2	He	432601	0.50	403706	107.16	70	125	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	ICCB
Data File Name	085_ICB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T14:04:45-06:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	075CALB.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	0.012	85.9	140	31.1	1	
Na	23	1	nogas	-14.897	-3.7	282594	2.8	100	
Mg	24	1	nogas	0.301	88.1	10571	15.1	100	
Al	27	1	nogas	0.283	39.2	15350	3.0	5	
K	39	1	nogas	-40.858	-47.0	5781070	0.7	100	
Ti	47	1	nogas	-0.022	-230.3	130	35.3	2.5	
V	51	1	nogas	-34.018	-7.6	467837	6.3	2.5	
Cr	52	1	nogas	-1.035	-10.4	33948	2.7	2.5	
Mn	55	1	nogas	-0.101	-72.1	17178	1.4	2.5	
Co	59	1	nogas	0.011	108.6	490	21.3	2.5	
Ni	60	1	nogas	-0.103	-49.7	473	19.1	2.5	
Cu	63	1	nogas	-0.073	-7.6	1153	4.8	1	
Zn	66	1	nogas	0.006	852.6	393	21.2	2.5	
As	75	1	nogas	-13.962	-12.5	78194	6.9	2.5	
Sr	88	1	nogas	0.011	44.1	660	5.2	2.5	
Ag	107	1	nogas	0.003	220.3	57	56.7	2.5	
Cd	111	1	nogas	-0.006	-195.9	17	91.7	1	
Sb	121	1	nogas	0.292	11.4	1880	7.0	2.5	
Tl	205	1	nogas	0.015	94.7	417	32.4	1	
Pb	208	1	nogas	0.017	34.0	310	19.4	2.5	
U	238	1	nogas	0.011	38.8	180	28.9	2.5	
[Pb]	206	1	nogas	0.013	118.9	83	59.2	2.5	
[Pb]	207	1	nogas	0.010	34.6	70	14.3	2.5	
Na	23	2	He	-18.163	-10.3	29560	2.0	100	
Mg	24	2	He	0.399	88.7	657	26.1	100	
Al	27	2	He	-0.105	-224.0	430	10.7	5	
K	39	2	He	-9.164	-54.7	153211	1.5	100	
Ca	43	2	He	-9.829	-43.4	13	43.3	100	
Ca	44	2	He	0.849	59.3	590	4.5	100	
V	51	2	He	-1.868	-1.7	6592	2.3	2.5	
Cr	52	2	He	-0.153	-23.5	2050	6.3	2.5	
Mn	55	2	He	-0.004	-1048.1	543	14.3	2.5	
Fe	56	2	He	0.027	589.8	10403	7.6	100	
Co	59	2	He	0.001	565.6	87	24.0	2.5	
Ni	60	2	He	-0.202	-13.7	77	37.7	2.5	
Cu	63	2	He	-0.429	-3.5	440	9.9	1	
Zn	66	2	He	-0.270	-15.3	130	20.4	2.5	
As	75	2	He	-0.205	-10.4	312	6.2	2.5	
Se	78	2	He	-0.296	-78.8	197	6.6	1	
B	11	1	nogas	2.428	18.5	35887	1.8	10	
Si	28	1	nogas	-534.730	-43.5	2622839	1.2	5	
Ca	43	1	nogas	-0.575	-1251.1	427	30.9	100	
Ca	44	1	nogas	-7.545	-40.8	28355	0.9	100	
Fe	56	1	nogas	-45.691	-6.3	1791436	2.2	100	
Se	77	1	nogas	-102.664	-6.3	24974	3.7	2.5	
Se	82	1	nogas	0.249	91.4	157	19.5	1	

Initial Calibration Blank (ICB) Report

Mo	95	1	nogas	0.035	56.0	220	18.2	2.5	
Sn	118	1	nogas	0.043	59.7	583	12.4	5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Ba	137	1	nogas	-0.015	-158.6	73	64.4	2.5	
Sb	121	2	He	0.319	2.6	883	1.7	2.5	
P	31	1	nogas	-3.147	-92.4	57012	0.9	10	
La	139	1	nogas	10.673	86.1	40	25.0	2.5	ICB Main CR1 Failed
Au	197	1	nogas	-32.285	-250.9	33	17.3	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	nogas	721074	1.55	671260	107.42	70	125	
Ge	72	1	nogas	1594130	3.71	1476428	107.97	70	125	
In	115	1	nogas	1428034	6.02	1187105	120.30	70	125	
Bi	209	1	nogas	1039662	2.31	882577	117.80	70	125	
Ge	72	2	He	435477	3.63	403706	107.87	70	125	

Low Level Initial Calibration Verification (LLICV) Report

Sample Table

Sample Name	LLCCV5
Data File Name	086LICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T14:06:55-06:00
Sample Type	LLICV
Dilution	1
Comment	
ISTD Ref File Name	075CALB.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	4.277	8.416	18739	5.48	5	85.5	70	130	
Na	23	1	nogas	454.734	3.297	6204415	0.81	500	90.9	70	130	
Mg	24	1	nogas	486.971	3.564	3787929	0.11	500	97.4	70	130	
Al	27	1	nogas	5.225	3.071	59370	1.25	5	104.5	70	130	
K	39	1	nogas	474.703	6.627	10520104	0.71	500	94.9	70	130	
Ti	47	1	nogas	4.832	6.785	3974	4.50	5	96.6	70	130	
V	51	1	nogas	-24.783	-10.201	553246	5.74	5	-495.7	70	130	LLICV Main CR1 Failed
Cr	52	1	nogas	4.050	3.833	79922	3.15	5	81.0	70	130	
Mn	55	1	nogas	5.129	3.271	75119	1.59	5	102.6	70	130	
Co	59	1	nogas	4.915	1.725	46382	0.50	5	98.3	70	130	
Ni	60	1	nogas	5.055	4.235	11077	2.71	5	101.1	70	130	
Cu	63	1	nogas	5.117	3.023	26409	1.08	5	102.3	70	130	
Zn	66	1	nogas	5.077	2.967	8929	4.72	5	101.5	70	130	
As	75	1	nogas	-7.145	-36.403	92618	6.50	5	-142.9	70	130	LLICV Main CR1 Failed
Sr	88	1	nogas	4.808	5.251	59462	3.18	5	96.2	70	130	
Ag	107	1	nogas	5.016	4.008	27505	3.53	5	100.3	70	130	
Cd	111	1	nogas	4.792	8.839	6034	6.56	5	95.8	70	130	
Sb	121	1	nogas	5.107	1.476	28243	2.14	5	102.1	70	130	
Tl	205	1	nogas	4.285	9.257	38299	1.61	5	85.7	70	130	
Pb	208	1	nogas	5.093	2.349	52650	2.34	5	101.9	70	130	
U	238	1	nogas	4.326	8.925	51597	0.83	5	86.5	70	130	
[Pb]	206	1	nogas	4.406	11.582	13356	4.64	5	88.1	70	130	
[Pb]	207	1	nogas	4.442	11.830	11804	2.87	5	88.8	70	130	
Na	23	2	He	471.980	1.834	408555	1.57	500	94.4	70	130	
Mg	24	2	He	488.841	0.868	206097	0.82	500	97.8	70	130	
Al	27	2	He	4.983	6.130	1627	4.36	5	99.7	70	130	
K	39	2	He	502.463	1.289	382847	0.76	500	100.5	70	130	
Ca	43	2	He	495.725	14.084	623	13.36	500	99.1	70	130	
Ca	44	2	He	496.395	1.613	10857	1.48	500	99.3	70	130	
V	51	2	He	3.138	2.731	20261	1.34	5	62.8	70	130	LLICV Main CR1 Failed
Cr	52	2	He	4.951	2.739	16551	2.48	5	99.0	70	130	
Mn	55	2	He	4.946	2.640	11047	2.71	5	98.9	70	130	
Fe	56	2	He	491.802	1.861	1253356	1.65	500	98.4	70	130	
Co	59	2	He	4.790	0.255	17999	0.46	5	95.8	70	130	
Ni	60	2	He	4.563	3.557	4457	3.28	5	91.3	70	130	
Cu	63	2	He	4.651	1.544	11974	1.39	5	93.0	70	130	
Zn	66	2	He	4.972	7.782	3264	7.28	5	99.4	70	130	
As	75	2	He	4.669	3.609	3669	3.35	5	93.4	70	130	
Se	78	2	He	5.109	5.277	503	3.04	5	102.2	70	130	
B	11	1	nogas	21.368	6.736	86163	0.95	25	85.5	70	130	
Si	28	1	nogas	-52.262	-295.603	2810797	0.72	25	-209.0	70	130	LLICV Main CR1 Failed
Ca	43	1	nogas	497.358	3.515	8609	1.35	500	99.5	70	130	
Ca	44	1	nogas	472.461	3.958	156608	1.96	500	94.5	70	130	
Fe	56	1	nogas	455.422	3.589	6617911	1.17	500	91.1	70	130	
Se	77	1	nogas	-75.390	-19.551	27334	6.97	5	-1507.8	70	130	LLICV Main CR1 Failed
Se	82	1	nogas	5.021	15.557	740	12.39	5	100.4	70	130	
Mo	95	1	nogas	4.750	2.882	11407	1.82	5	95.0	70	130	
Sn	118	1	nogas	4.563	1.691	15744	2.61	5	91.3	70	130	
Ba	137	1	nogas	4.592	7.189	8739	3.84	5	91.8	70	130	
Sb	121	2	He	4.987	5.207	12114	5.00	5	99.7	70	130	
Li	7	1	nogas	4.094	8.083	101713	4.38	5	81.9	70	130	
P	31	1	nogas	25.659	11.565	80470	1.18	25	102.6	70	130	
La	139	1	nogas	35.747	25.202	70	14.29	5	714.9	70	130	LLICV Main CR1 Failed
Au	197	1	nogas	90.985	149.784	27	43.30	5	1819.7	70	130	LLICV Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	724747	3.64	671260	107.97	70	125	
Ge	72	1	nogas	1555772	2.17	1476428	105.37	70	125	
In	115	1	nogas	1348172	4.24	1187105	113.57	70	125	
Bi	209	1	nogas	1058562	9.60	882577	119.94	70	125	

Low Level Initial Calibration Verification (LLICV) Report

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	2	He	431395	0.21	403706	106.86	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	096_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T14:26:43-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	075CALB.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	95.733	1.593	349992	1.71	100	95.7	90	110	
Na	23	1	nogas	10173.492	3.301	111155311	1.04	10000	101.7	90	110	
Mg	24	1	nogas	10264.524	3.289	68728672	0.63	10000	102.6	90	110	
Al	27	1	nogas	100.157	1.668	813618	0.90	100	100.2	90	110	
K	39	1	nogas	10146.382	1.360	91024752	1.02	10000	101.5	90	110	
Ti	47	1	nogas	102.359	2.854	72582	2.09	100	102.4	90	110	
V	51	1	nogas	92.696	6.858	1587323	1.56	100	92.7	90	110	
Cr	52	1	nogas	101.386	3.894	869705	2.25	100	101.4	90	110	
Mn	55	1	nogas	103.786	3.593	1048883	2.54	100	103.8	90	110	
Co	59	1	nogas	100.579	1.245	840598	2.16	100	100.6	90	110	
Ni	60	1	nogas	103.641	0.642	190979	2.74	100	103.6	90	110	
Cu	63	1	nogas	102.806	2.275	448332	2.01	100	102.8	90	110	
Zn	66	1	nogas	102.030	1.617	153636	1.46	100	102.0	90	110	
As	75	1	nogas	89.042	2.083	288304	1.11	100	89.0	90	110	CCV Main CR1-2 Failed
Sr	88	1	nogas	100.464	2.688	1099929	0.42	100	100.5	90	110	
Ag	107	1	nogas	101.661	1.143	496736	1.26	100	101.7	90	110	
Cd	111	1	nogas	97.642	1.792	108678	0.46	100	97.6	90	110	
Sb	121	1	nogas	98.708	3.242	483000	1.99	100	98.7	90	110	
Tl	205	1	nogas	97.469	1.652	708481	2.91	100	97.5	90	110	
Pb	208	1	nogas	95.252	2.179	982419	2.18	100	95.3	90	110	
U	238	1	nogas	102.496	2.904	999978	1.69	100	102.5	90	110	
[Pb]	206	1	nogas	98.489	1.817	243991	2.52	100	98.5	90	110	
[Pb]	207	1	nogas	98.723	1.165	214480	2.23	100	98.7	90	110	
Na	23	2	He	10124.443	1.353	7054520	1.06	10000	101.2	90	110	
Mg	24	2	He	10037.586	1.703	3781482	1.16	10000	100.4	90	110	
Al	27	2	He	98.752	1.157	21262	2.25	100	98.8	90	110	
K	39	2	He	9202.311	0.631	4287639	0.61	10000	92.0	90	110	
Ca	43	2	He	9651.291	2.619	10460	3.46	10000	96.5	90	110	
Ca	44	2	He	9728.023	3.656	181077	2.84	10000	97.3	90	110	
V	51	2	He	98.207	0.621	251673	1.24	100	98.2	90	110	
Cr	52	2	He	98.844	3.711	254033	3.04	100	98.8	90	110	
Mn	55	2	He	98.154	2.180	187050	1.07	100	98.2	90	110	
Fe	56	2	He	9965.505	2.982	22565886	1.96	10000	99.7	90	110	
Co	59	2	He	98.462	2.021	329886	0.95	100	98.5	90	110	
Ni	60	2	He	98.539	2.702	81387	1.65	100	98.5	90	110	
Cu	63	2	He	99.114	1.195	202885	0.24	100	99.1	90	110	
Zn	66	2	He	98.486	1.266	53007	0.51	100	98.5	90	110	
As	75	2	He	95.992	1.939	59659	0.86	100	96.0	90	110	
Se	78	2	He	94.187	1.951	4983	1.28	100	94.2	90	110	
B	11	1	nogas	462.877	0.678	1050567	0.63	500	92.6	90	110	
Si	28	1	nogas	5227.836	5.935	4941073	0.66	5000	104.6	90	110	
Ca	43	1	nogas	10212.600	2.128	150355	0.34	10000	102.1	90	110	
Ca	44	1	nogas	10300.733	4.436	2494706	2.81	10000	103.0	90	110	
Fe	56	1	nogas	10062.567	3.645	89194369	2.37	10000	100.6	90	110	
Se	77	1	nogas	34.925	29.843	35027	5.17	100	34.9	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	95.680	9.720	10617	8.59	100	95.7	90	110	
Mo	95	1	nogas	100.548	3.537	213036	1.29	100	100.5	90	110	
Sn	118	1	nogas	96.655	3.438	288105	1.34	100	96.7	90	110	
Ba	137	1	nogas	95.671	0.912	159835	3.07	100	95.7	90	110	
Sb	121	2	He	95.760	1.606	206602	1.39	100	95.8	90	110	
Li	7	1	nogas	120.974	7.175	1040618	6.01	100	121.0	90	110	CCV Main CR1-2 Failed
P	31	1	nogas	490.866	1.961	429146	0.56	500	98.2	90	110	
La	139	1	nogas	131.055	17.859	170	15.56	100	131.1	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	113.249	346.654	20	100.00	100	113.2	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	nogas	606323	1.25	671260	90.33	70	125	
Ge	72	1	nogas	1388191	2.30	1476428	94.02	70	125	
In	115	1	nogas	1194144	2.18	1187105	100.59	70	125	
Bi	209	1	nogas	861848	1.25	882577	97.65	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	386373	1.12	403706	95.71	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	097_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T14:28:42-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	075CALB.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	0.078	8.3	363	4.2	1	
Na	23	1	nogas	44.103	37.8	867600	6.1	100	
Mg	24	1	nogas	7.004	45.7	52081	25.8	100	
Al	27	1	nogas	0.668	73.5	15847	11.0	5	
K	39	1	nogas	29.479	259.5	5474208	1.0	100	
Ti	47	1	nogas	0.420	47.5	417	36.0	2.5	
V	51	1	nogas	-29.020	-14.2	442613	5.3	2.5	
Cr	52	1	nogas	-1.031	-34.4	28816	2.7	2.5	
Mn	55	1	nogas	0.211	102.7	17572	2.1	2.5	
Co	59	1	nogas	0.060	30.7	813	15.5	2.5	
Ni	60	1	nogas	0.040	72.2	660	5.5	2.5	
Cu	63	1	nogas	0.047	93.1	1480	5.9	2	
Zn	66	1	nogas	0.574	31.8	1153	13.0	2.5	
As	75	1	nogas	-12.590	-21.7	69205	4.1	2.5	
Sr	88	1	nogas	0.120	22.9	1713	6.8	2.5	
Ag	107	1	nogas	0.047	33.1	257	17.6	2.5	
Cd	111	1	nogas	0.056	56.9	80	45.1	1	
Sb	121	1	nogas	2.310	30.6	11027	17.0	2.5	
Tl	205	1	nogas	0.128	62.0	1117	41.7	1	
Pb	208	1	nogas	0.064	25.1	790	20.8	2.5	
U	238	1	nogas	0.100	49.9	973	39.6	2.5	
[Pb]	206	1	nogas	0.059	59.3	177	39.8	2.5	
[Pb]	207	1	nogas	0.074	21.0	193	10.8	2.5	
Na	23	2	He	27.253	4.1	59432	1.0	100	
Mg	24	2	He	4.273	7.5	2100	6.0	100	
Al	27	2	He	-0.002	-10204.2	417	13.6	5	
K	39	2	He	-29.008	-2.7	144305	0.2	100	
Ca	43	2	He	30.189	15.0	57	10.2	100	
Ca	44	2	He	12.831	40.1	767	10.9	100	
V	51	2	He	-1.807	-6.7	6174	3.2	2.5	
Cr	52	2	He	-0.145	-59.4	1893	11.7	2.5	
Mn	55	2	He	0.007	1067.5	517	25.2	2.5	
Fe	56	2	He	3.331	6.5	17191	1.5	100	
Co	59	2	He	0.023	44.8	153	21.0	2.5	
Ni	60	2	He	-0.174	-22.1	93	34.4	2.5	
Cu	63	2	He	-0.385	-0.6	493	1.2	2	
Zn	66	2	He	-0.044	-7.1	243	2.4	2.5	
As	75	2	He	-0.181	-14.2	300	4.4	2.5	
Se	78	2	He	-0.176	-90.4	187	5.4	2	
B	11	1	nogas	13.952	23.4	57446	6.8	10	CCB Main CR1 Failed
Si	28	1	nogas	94.902	665.6	2505074	1.2	5	CCB Main CR1 Failed
Ca	43	1	nogas	24.277	41.1	710	7.8	100	
Ca	44	1	nogas	28.524	78.8	32301	3.9	100	
Fe	56	1	nogas	-11.807	-221.8	1801586	1.3	100	
Se	77	1	nogas	-89.926	-18.4	22424	6.0	2.5	
Se	82	1	nogas	0.985	34.3	213	23.1	2	

Continuing Calibration Blank (CCB) Report

Mo	95	1	nogas	0.251	50.0	617	28.5	2.5	
Sn	118	1	nogas	0.332	35.2	1310	19.3	5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Ba	137	1	nogas	0.032	63.6	137	22.4	2.5	
Sb	121	2	He	1.491	10.8	3407	9.6	2.5	
P	31	1	nogas	0.373	2154.2	50925	0.7	10	
La	139	1	nogas	11.250	108.9	33	34.6	2.5	CCB Main CR1 Failed
Au	197	1	nogas	-57.779	-1377.1	30	145.3	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	nogas	654454	6.67	671260	97.50	70	125	
Ge	72	1	nogas	1361671	11.89	1476428	92.23	70	125	
In	115	1	nogas	1177467	11.86	1187105	99.19	70	125	
Bi	209	1	nogas	850798	8.58	882577	96.40	70	125	
Ge	72	2	He	397838	2.06	403706	98.55	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	108_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T14:50:33-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	075CALB.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	95.919	4.582	351932	3.66	100	95.9	90	110	
Na	23	1	nogas	10180.284	12.219	111429244	1.31	10000	101.8	90	110	
Mg	24	1	nogas	10269.047	13.268	68836766	2.53	10000	102.7	90	110	
Al	27	1	nogas	102.622	8.256	824736	1.94	100	102.6	90	110	
K	39	1	nogas	10415.440	8.871	92318356	2.22	10000	104.2	90	110	
Ti	47	1	nogas	103.269	5.338	72555	0.84	100	103.3	90	110	
V	51	1	nogas	80.626	7.308	1464838	6.95	100	80.6	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	102.380	7.976	869274	2.77	100	102.4	90	110	
Mn	55	1	nogas	105.284	7.368	1053382	2.11	100	105.3	90	110	
Co	59	1	nogas	103.305	6.936	854708	0.86	100	103.3	90	110	
Ni	60	1	nogas	105.429	7.347	192259	1.26	100	105.4	90	110	
Cu	63	1	nogas	106.032	8.409	457530	2.53	100	106.0	90	110	
Zn	66	1	nogas	103.630	8.438	154403	2.49	100	103.6	90	110	
As	75	1	nogas	90.057	11.277	287559	2.27	100	90.1	90	110	
Sr	88	1	nogas	95.975	8.844	1047013	14.31	100	96.0	90	110	
Ag	107	1	nogas	105.469	7.810	510103	2.79	100	105.5	90	110	
Cd	111	1	nogas	99.631	8.956	110978	2.28	100	99.6	90	110	
Sb	121	1	nogas	100.913	6.658	489045	0.77	100	100.9	90	110	
Tl	205	1	nogas	88.402	4.135	721162	1.44	100	88.4	90	110	CCV Main CR1-2 Failed
Pb	208	1	nogas	96.426	2.100	994528	2.10	100	96.4	90	110	
U	238	1	nogas	93.268	4.960	1021450	2.35	100	93.3	90	110	
[Pb]	206	1	nogas	88.101	3.569	244993	0.94	100	88.1	90	110	CCV Main CR1-2 Failed
[Pb]	207	1	nogas	88.536	4.985	215854	2.38	100	88.5	90	110	CCV Main CR1-2 Failed
Na	23	2	He	10011.592	5.108	7183984	4.10	10000	100.1	90	110	
Mg	24	2	He	9930.525	2.281	3853318	1.31	10000	99.3	90	110	
Al	27	2	He	100.425	0.411	22263	1.36	100	100.4	90	110	
K	39	2	He	9336.014	0.810	4347650	0.78	10000	93.4	90	110	
Ca	43	2	He	9661.674	2.029	10783	1.67	10000	96.6	90	110	
Ca	44	2	He	9632.397	1.761	184711	1.17	10000	96.3	90	110	
V	51	2	He	96.301	2.871	254367	1.78	100	96.3	90	110	
Cr	52	2	He	97.838	1.536	259048	0.57	100	97.8	90	110	
Mn	55	2	He	97.324	0.815	191064	0.21	100	97.3	90	110	
Fe	56	2	He	9920.473	0.496	23142807	0.52	10000	99.2	90	110	
Co	59	2	He	97.322	2.914	335849	1.98	100	97.3	90	110	
Ni	60	2	He	98.054	1.783	83432	1.69	100	98.1	90	110	
Cu	63	2	He	98.790	0.774	208313	0.84	100	98.8	90	110	
Zn	66	2	He	97.858	3.029	54267	3.94	100	97.9	90	110	
As	75	2	He	94.527	1.743	60522	0.94	100	94.5	90	110	
Se	78	2	He	92.208	2.091	5029	1.50	100	92.2	90	110	
B	11	1	nogas	476.608	2.885	1086653	2.05	500	95.3	90	110	
Si	28	1	nogas	5384.216	18.666	4960067	3.01	5000	107.7	90	110	
Ca	43	1	nogas	10262.282	6.737	149621	0.99	10000	102.6	90	110	
Ca	44	1	nogas	10024.146	3.783	2408602	3.10	10000	100.2	90	110	
Fe	56	1	nogas	10323.107	8.121	90529060	1.73	10000	103.2	90	110	
Se	77	1	nogas	19.191	169.324	33130	4.03	100	19.2	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	98.635	12.628	10817	6.95	100	98.6	90	110	
Mo	95	1	nogas	102.870	7.655	215806	1.50	100	102.9	90	110	
Sn	118	1	nogas	97.958	7.649	292442	0.89	100	98.0	90	110	
Ba	137	1	nogas	96.514	8.062	161424	3.35	100	96.5	90	110	
Sb	121	2	He	95.574	0.239	212408	0.97	100	95.6	90	110	
Li	7	1	nogas	99.827	3.080	864062	0.71	100	99.8	90	110	
P	31	1	nogas	505.619	7.569	436233	2.08	500	101.1	90	110	
La	139	1	nogas	99.350	31.698	133	21.65	100	99.3	90	110	
Au	197	1	nogas	217.545	44.543	17	34.64	100	217.5	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	nogas	656003	2.18	671260	97.73	70	125	
Ge	72	1	nogas	1377983	6.00	1476428	93.33	70	125	
In	115	1	nogas	1199518	6.71	1187105	101.05	70	125	
Bi	209	1	nogas	968089	2.76	882577	109.69	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	397978	0.98	403706	98.58	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	109_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T14:52:31-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	075CALB.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	0.067	25.0	340	14.7	1	
Na	23	1	nogas	1.419	345.2	435238	2.2	100	
Mg	24	1	nogas	6.380	37.8	51211	20.4	100	
Al	27	1	nogas	0.432	62.9	15108	5.2	5	
K	39	1	nogas	-19.179	-312.4	5429471	0.9	100	
Ti	47	1	nogas	0.114	40.7	217	10.7	2.5	
V	51	1	nogas	-35.345	-5.3	412250	5.1	2.5	
Cr	52	1	nogas	-1.310	-21.7	28432	1.3	2.5	
Mn	55	1	nogas	0.212	90.3	18806	2.3	2.5	
Co	59	1	nogas	0.054	21.5	813	9.4	2.5	
Ni	60	1	nogas	-0.037	-186.7	553	15.4	2.5	
Cu	63	1	nogas	0.027	226.2	1487	9.0	2	
Zn	66	1	nogas	0.039	125.9	407	13.5	2.5	
As	75	1	nogas	-15.570	-10.6	67405	4.4	2.5	
Sr	88	1	nogas	0.114	23.0	1767	7.1	2.5	
Ag	107	1	nogas	0.039	41.9	233	26.2	2.5	
Cd	111	1	nogas	0.058	17.8	87	13.3	1	
Sb	121	1	nogas	2.075	26.0	10673	15.6	2.5	
Tl	205	1	nogas	0.131	44.0	1223	27.6	1	
Pb	208	1	nogas	0.079	26.9	943	23.1	2.5	
U	238	1	nogas	0.109	44.9	1133	35.5	2.5	
[Pb]	206	1	nogas	0.078	45.4	237	32.8	2.5	
[Pb]	207	1	nogas	0.070	29.9	197	21.2	2.5	
Na	23	2	He	-4.020	-12.6	37567	0.8	100	
Mg	24	2	He	4.499	10.1	2213	7.8	100	
Al	27	2	He	-0.385	-97.2	337	24.2	5	
K	39	2	He	-37.784	-17.7	140365	2.1	100	
Ca	43	2	He	0.051	10102.0	23	24.7	100	
Ca	44	2	He	17.648	94.1	870	36.8	100	
V	51	2	He	-1.999	-1.6	5758	1.6	2.5	
Cr	52	2	He	-0.123	-26.4	1973	4.6	2.5	
Mn	55	2	He	0.169	32.3	847	13.0	2.5	
Fe	56	2	He	4.157	1.7	19350	1.0	100	
Co	59	2	He	0.030	41.9	180	24.2	2.5	
Ni	60	2	He	-0.198	-23.7	73	55.1	2.5	
Cu	63	2	He	-0.418	-9.2	430	19.0	2	
Zn	66	2	He	-0.252	-25.8	130	27.7	2.5	
As	75	2	He	-0.211	-11.5	284	5.3	2.5	
Se	78	2	He	0.022	127.7	199	0.6	2	
B	11	1	nogas	14.698	26.0	62004	9.2	10	CCB Main CR1 Failed
Si	28	1	nogas	-283.373	-178.7	2498307	2.0	5	
Ca	43	1	nogas	11.988	53.1	580	18.6	100	
Ca	44	1	nogas	2.732	243.6	28328	4.2	100	
Fe	56	1	nogas	-30.612	-62.9	1759415	3.6	100	
Se	77	1	nogas	-113.182	-14.2	21596	2.1	2.5	
Se	82	1	nogas	0.346	36.1	153	10.0	2	
Mo	95	1	nogas	0.323	47.6	820	30.9	2.5	
Sn	118	1	nogas	0.397	37.7	1567	16.8	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.022	95.8	127	16.4	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	1.358	3.0	3150	3.0	2.5	
P	31	1	nogas	-2.489	-221.1	52249	1.5	10	
La	139	1	nogas	16.939	166.0	40	66.1	2.5	CCB Main CR1 Failed
Au	197	1	nogas	-55.291	-340.3	30	33.3	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	nogas	686416	4.84	671260	102.26	70	125	
Ge	72	1	nogas	1452276	9.39	1476428	98.36	70	125	
In	115	1	nogas	1239072	11.16	1187105	104.38	70	125	
Bi	209	1	nogas	904072	7.01	882577	102.44	70	125	
Ge	72	2	He	402554	0.25	403706	99.71	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	120_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T15:14:18-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	075CALB.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	101.383	5.545	350245	2.16	100	101.4	90	110	
Na	23	1	nogas	9402.598	9.413	109156986	0.83	10000	94.0	90	110	
Mg	24	1	nogas	9445.146	10.744	67123185	1.39	10000	94.5	90	110	
Al	27	1	nogas	96.834	4.381	815071	0.62	100	96.8	90	110	
K	39	1	nogas	9618.682	5.260	89639142	0.69	10000	96.2	90	110	
Ti	47	1	nogas	98.923	3.108	72685	1.72	100	98.9	90	110	
V	51	1	nogas	76.528	9.590	1488302	0.28	100	76.5	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	97.990	5.624	871845	1.46	100	98.0	90	110	
Mn	55	1	nogas	100.855	3.221	1056646	1.85	100	100.9	90	110	
Co	59	1	nogas	98.140	4.489	849335	1.27	100	98.1	90	110	
Ni	60	1	nogas	100.742	5.068	192199	2.01	100	100.7	90	110	
Cu	63	1	nogas	100.245	4.640	452757	1.31	100	100.2	90	110	
Zn	66	1	nogas	97.345	4.627	151822	1.95	100	97.3	90	110	
As	75	1	nogas	81.654	6.479	282242	1.19	100	81.7	90	110	CCV Main CR1-2 Failed
Sr	88	1	nogas	97.136	4.057	1102019	2.94	100	97.1	90	110	
Ag	107	1	nogas	100.074	5.687	506209	1.75	100	100.1	90	110	
Cd	111	1	nogas	96.198	8.220	109945	1.87	100	96.2	90	110	
Sb	121	1	nogas	94.451	3.098	478924	1.72	100	94.5	90	110	
Tl	205	1	nogas	94.944	5.817	710518	2.19	100	94.9	90	110	
Pb	208	1	nogas	94.520	1.400	974868	1.40	100	94.5	90	110	
U	238	1	nogas	97.622	5.282	981041	1.55	100	97.6	90	110	
[Pb]	206	1	nogas	96.109	4.477	245227	0.90	100	96.1	90	110	
[Pb]	207	1	nogas	95.245	3.019	213213	1.87	100	95.2	90	110	
Na	23	2	He	9585.550	2.797	7011534	1.44	10000	95.9	90	110	
Mg	24	2	He	9379.152	0.882	3709581	2.29	10000	93.8	90	110	
Al	27	2	He	96.168	1.533	21746	2.86	100	96.2	90	110	
K	39	2	He	9482.293	1.825	4413305	1.76	10000	94.8	90	110	
Ca	43	2	He	9552.166	4.618	10860	2.98	10000	95.5	90	110	
Ca	44	2	He	9285.803	2.645	181447	1.17	10000	92.9	90	110	
V	51	2	He	93.602	3.180	252220	1.40	100	93.6	90	110	
Cr	52	2	He	96.716	2.914	260933	1.37	100	96.7	90	110	
Mn	55	2	He	95.212	0.486	190505	1.78	100	95.2	90	110	
Fe	56	2	He	9631.241	1.629	22894060	0.78	10000	96.3	90	110	
Co	59	2	He	95.141	2.926	334544	1.48	100	95.1	90	110	
Ni	60	2	He	95.219	4.261	82539	2.73	100	95.2	90	110	
Cu	63	2	He	94.919	2.596	203969	0.92	100	94.9	90	110	
Zn	66	2	He	92.227	2.042	52115	0.40	100	92.2	90	110	
As	75	2	He	92.642	1.920	60452	1.22	100	92.6	90	110	
Se	78	2	He	89.804	5.038	4995	3.23	100	89.8	90	110	CCV Main CR1-2 Failed
B	11	1	nogas	489.765	5.382	1050563	0.52	500	98.0	90	110	
Si	28	1	nogas	4816.816	9.940	4921706	0.43	5000	96.3	90	110	
Ca	43	1	nogas	9603.964	5.569	146418	0.74	10000	96.0	90	110	
Ca	44	1	nogas	9785.517	3.532	2457287	1.45	10000	97.9	90	110	
Fe	56	1	nogas	9859.852	3.667	90602185	2.20	10000	98.6	90	110	
Se	77	1	nogas	-0.486	-1382.687	32743	2.75	100	-0.5	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	97.156	7.366	11160	3.20	100	97.2	90	110	
Mo	95	1	nogas	98.850	4.387	216979	0.99	100	98.9	90	110	
Sn	118	1	nogas	92.937	5.754	284866	2.13	100	92.9	90	110	
Ba	137	1	nogas	95.604	10.276	163756	2.62	100	95.6	90	110	
Sb	121	2	He	93.183	0.532	211037	1.20	100	93.2	90	110	
Li	7	1	nogas	103.625	2.937	843264	2.60	100	103.6	90	110	
P	31	1	nogas	468.659	5.496	426740	0.57	500	93.7	90	110	
La	139	1	nogas	109.033	24.785	150	24.04	100	109.0	90	110	
Au	197	1	nogas	316.117	59.038	10	100.00	100	316.1	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	nogas	618516	5.09	671260	92.14	70	125	
Ge	72	1	nogas	1439333	4.73	1476428	97.49	70	125	
In	115	1	nogas	1230909	7.69	1187105	103.69	70	125	
Bi	209	1	nogas	888698	3.80	882577	100.69	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	405572	1.69	403706	100.46	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	121_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T15:16:17-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	075CALB.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	0.063	6.5	327	6.4	1	
Na	23	1	nogas	-10.046	-41.6	337933	8.4	100	
Mg	24	1	nogas	5.697	31.1	52082	19.3	100	
Al	27	1	nogas	0.452	35.8	16301	8.6	5	
K	39	1	nogas	-48.496	-2.3	5500705	0.7	100	
Ti	47	1	nogas	0.075	104.0	200	30.4	2.5	
V	51	1	nogas	-40.030	-4.7	388789	5.4	2.5	
Cr	52	1	nogas	-1.509	-6.1	28405	3.1	2.5	
Mn	55	1	nogas	-0.035	-145.6	17292	2.5	2.5	
Co	59	1	nogas	0.071	33.5	1027	21.9	2.5	
Ni	60	1	nogas	-0.084	-49.6	497	16.8	2.5	
Cu	63	1	nogas	-0.038	-77.0	1277	11.8	2	
Zn	66	1	nogas	0.079	63.8	500	16.4	2.5	
As	75	1	nogas	-18.873	-7.1	63685	5.1	2.5	
Sr	88	1	nogas	0.083	40.6	1510	26.8	2.5	
Ag	107	1	nogas	0.040	46.4	257	39.0	2.5	
Cd	111	1	nogas	0.039	70.5	73	56.8	1	
Sb	121	1	nogas	2.262	26.5	12472	25.8	2.5	
Tl	205	1	nogas	0.159	68.0	1633	61.1	1	
Pb	208	1	nogas	0.070	51.3	857	43.3	2.5	
U	238	1	nogas	0.131	53.7	1547	56.6	2.5	
[Pb]	206	1	nogas	0.063	40.8	223	38.1	2.5	
[Pb]	207	1	nogas	0.053	54.1	177	45.4	2.5	
Na	23	2	He	-13.270	-10.8	31092	2.1	100	
Mg	24	2	He	4.100	11.9	2073	11.0	100	
Al	27	2	He	-0.007	-2728.0	423	12.1	5	
K	39	2	He	-30.002	-12.2	143858	1.1	100	
Ca	43	2	He	-0.151	-3111.8	23	24.7	100	
Ca	44	2	He	5.166	63.7	633	10.5	100	
V	51	2	He	-2.190	-2.6	5306	1.2	2.5	
Cr	52	2	He	-0.146	-57.5	1923	10.1	2.5	
Mn	55	2	He	0.071	50.4	657	12.2	2.5	
Fe	56	2	He	4.022	4.2	19160	1.3	100	
Co	59	2	He	0.037	80.8	210	52.4	2.5	
Ni	60	2	He	-0.153	-15.9	113	20.4	2.5	
Cu	63	2	He	-0.357	-0.5	563	1.0	2	
Zn	66	2	He	-0.283	-10.2	113	13.5	2.5	
As	75	2	He	-0.200	-40.4	293	17.2	2.5	
Se	78	2	He	-0.012	-3663.3	199	10.7	2	
B	11	1	nogas	10.492	16.8	52836	7.4	10	CCB Main CR1 Failed
Si	28	1	nogas	-502.530	-26.8	2545696	3.5	5	
Ca	43	1	nogas	12.385	35.4	620	11.3	100	
Ca	44	1	nogas	-2.557	-159.6	28649	3.6	100	
Fe	56	1	nogas	-39.730	-19.7	1783006	4.0	100	
Se	77	1	nogas	-133.848	-5.7	20735	3.9	2.5	
Se	82	1	nogas	0.629	51.5	197	19.3	2	
Mo	95	1	nogas	0.411	33.8	1093	29.6	2.5	
Sn	118	1	nogas	0.283	38.2	1353	20.7	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.036	51.3	167	13.9	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	1.435	3.4	3347	4.6	2.5	
P	31	1	nogas	-8.494	-21.8	50417	2.4	10	
La	139	1	nogas	20.474	78.1	50	34.6	2.5	CCB Main CR1 Failed
Au	197	1	nogas	393.985	24.8	7	86.6	2.5	CCB Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	691096	2.41	671260	102.96	70	125	
Ge	72	1	nogas	1535286	0.78	1476428	103.99	70	125	
In	115	1	nogas	1359862	8.37	1187105	114.55	70	125	
Bi	209	1	nogas	994978	4.63	882577	112.74	70	125	
Ge	72	2	He	405338	1.67	403706	100.40	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	131_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T15:39:34-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	075CALB.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	104.416	4.079	359234	1.86	100	104.4	90	110	
Na	23	1	nogas	10213.581	2.383	121774907	2.29	10000	102.1	90	110	
Mg	24	1	nogas	10352.697	1.136	75648689	1.43	10000	103.5	90	110	
Al	27	1	nogas	100.265	1.757	880927	2.58	100	100.3	90	110	
K	39	1	nogas	10430.912	1.805	101022142	0.33	10000	104.3	90	110	
Ti	47	1	nogas	95.968	4.618	73589	3.76	100	96.0	90	110	
V	51	1	nogas	67.862	2.778	1467158	2.26	100	67.9	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	96.194	1.496	894638	0.55	100	96.2	90	110	
Mn	55	1	nogas	101.945	1.654	1114876	2.93	100	101.9	90	110	
Co	59	1	nogas	100.205	1.786	905634	2.54	100	100.2	90	110	
Ni	60	1	nogas	100.757	0.785	200748	1.01	100	100.8	90	110	
Cu	63	1	nogas	100.314	1.649	473072	0.11	100	100.3	90	110	
Zn	66	1	nogas	99.517	1.771	162055	1.65	100	99.5	90	110	
As	75	1	nogas	79.076	1.464	288753	1.80	100	79.1	90	110	CCV Main CR1-2 Failed
Sr	88	1	nogas	94.255	4.322	1115804	2.63	100	94.3	90	110	
Ag	107	1	nogas	99.964	1.338	528178	1.04	100	100.0	90	110	
Cd	111	1	nogas	95.864	1.137	115288	1.60	100	95.9	90	110	
Sb	121	1	nogas	99.910	1.672	528745	0.94	100	99.9	90	110	
Tl	205	1	nogas	99.735	4.271	768680	1.86	100	99.7	90	110	
Pb	208	1	nogas	99.226	1.327	1023398	1.33	100	99.2	90	110	
U	238	1	nogas	97.118	3.823	1005156	1.73	100	97.1	90	110	
[Pb]	206	1	nogas	100.328	2.615	263666	1.84	100	100.3	90	110	
[Pb]	207	1	nogas	95.926	2.447	221080	1.64	100	95.9	90	110	
Na	23	2	He	10805.476	1.206	7650213	1.92	10000	108.1	90	110	
Mg	24	2	He	10637.498	1.105	4073057	0.51	10000	106.4	90	110	
Al	27	2	He	105.153	1.535	22981	1.54	100	105.2	90	110	
K	39	2	He	10027.507	1.765	4658016	1.71	10000	100.3	90	110	
Ca	43	2	He	10913.933	0.910	12017	1.73	10000	109.1	90	110	
Ca	44	2	He	10335.042	0.538	195537	1.55	10000	103.4	90	110	
V	51	2	He	100.748	1.122	262111	0.21	100	100.7	90	110	
Cr	52	2	He	103.276	0.500	269713	1.27	100	103.3	90	110	
Mn	55	2	He	102.114	0.378	197782	0.66	100	102.1	90	110	
Fe	56	2	He	10490.393	1.326	24144977	0.32	10000	104.9	90	110	
Co	59	2	He	100.837	2.261	343362	1.40	100	100.8	90	110	
Ni	60	2	He	102.667	1.275	86189	1.74	100	102.7	90	110	
Cu	63	2	He	105.640	1.624	219728	2.38	100	105.6	90	110	
Zn	66	2	He	103.424	1.337	56567	1.89	100	103.4	90	110	
As	75	2	He	99.417	0.660	62792	1.26	100	99.4	90	110	
Se	78	2	He	96.217	1.680	5170	1.47	100	96.2	90	110	
B	11	1	nogas	495.621	4.152	1058577	2.56	500	99.1	90	110	
Si	28	1	nogas	4589.631	3.113	5026185	0.36	5000	91.8	90	110	
Ca	43	1	nogas	10367.753	2.052	165057	0.33	10000	103.7	90	110	
Ca	44	1	nogas	10480.760	5.137	2744181	3.47	10000	104.8	90	110	
Fe	56	1	nogas	10308.725	0.874	98789296	1.53	10000	103.1	90	110	
Se	77	1	nogas	-36.951	-12.549	30372	2.86	100	-37.0	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	95.551	2.167	11470	0.62	100	95.6	90	110	
Mo	95	1	nogas	89.760	2.412	205721	1.54	100	89.8	90	110	CCV Main CR1-2 Failed
Sn	118	1	nogas	92.584	0.301	298296	1.98	100	92.6	90	110	
Ba	137	1	nogas	95.276	2.032	171900	1.30	100	95.3	90	110	
Sb	121	2	He	105.763	1.342	231916	1.68	100	105.8	90	110	
Li	7	1	nogas	100.327	0.920	814434	1.42	100	100.3	90	110	
P	31	1	nogas	462.253	1.193	440337	0.83	500	92.5	90	110	
La	139	1	nogas	223.581	30.889	297	28.07	100	223.6	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	131.123	288.499	20	100.00	100	131.1	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	nogas	615264	2.27	671260	91.66	70	125	
Ge	72	1	nogas	1501052	1.74	1476428	101.67	70	125	
In	115	1	nogas	1289999	1.70	1187105	108.67	70	125	
Bi	209	1	nogas	914676	2.86	882577	103.64	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	392686	1.02	403706	97.27	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	132_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T15:41:31-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	075CALB.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	0.056	73.3	287	48.4	1	
Na	23	1	nogas	-11.066	-20.7	294554	2.6	100	
Mg	24	1	nogas	4.347	39.6	37446	22.9	100	
Al	27	1	nogas	1.940	148.1	26416	79.3	5	
K	39	1	nogas	-18.239	-313.9	5370279	0.6	100	
Ti	47	1	nogas	0.066	144.1	177	33.2	2.5	
V	51	1	nogas	-39.556	-4.9	366458	4.1	2.5	
Cr	52	1	nogas	-1.549	-21.4	26025	3.3	2.5	
Mn	55	1	nogas	0.063	209.9	17075	1.5	2.5	
Co	59	1	nogas	0.050	36.4	763	12.1	2.5	
Ni	60	1	nogas	-0.079	-9.8	473	8.5	2.5	
Cu	63	1	nogas	-0.052	-46.9	1123	3.4	2	
Zn	66	1	nogas	0.046	124.7	417	22.7	2.5	
As	75	1	nogas	-17.685	-9.7	61872	3.6	2.5	
Sr	88	1	nogas	0.049	22.7	1027	4.9	2.5	
Ag	107	1	nogas	0.036	8.8	220	15.7	2.5	
Cd	111	1	nogas	0.028	15.9	53	10.8	1	
Sb	121	1	nogas	0.152	24.6	977	10.7	2.5	
Tl	205	1	nogas	0.170	68.3	1493	53.5	1	
Pb	208	1	nogas	0.066	20.3	810	17.0	2.5	
U	238	1	nogas	0.134	44.5	1373	39.0	2.5	
[Pb]	206	1	nogas	0.071	25.5	217	19.2	2.5	
[Pb]	207	1	nogas	0.067	48.6	187	38.0	2.5	
Na	23	2	He	-14.879	-1.5	29533	0.7	100	
Mg	24	2	He	3.236	4.5	1707	3.2	100	
Al	27	2	He	-0.086	-437.5	400	20.5	5	
K	39	2	He	-33.369	-15.6	142347	1.6	100	
Ca	43	2	He	15.077	157.0	40	66.1	100	
Ca	44	2	He	7.536	122.0	670	26.2	100	
V	51	2	He	-2.263	-3.9	5050	4.7	2.5	
Cr	52	2	He	-0.119	-25.4	1970	3.8	2.5	
Mn	55	2	He	0.069	35.9	643	7.3	2.5	
Fe	56	2	He	3.626	6.9	17979	3.2	100	
Co	59	2	He	0.011	31.6	113	10.2	2.5	
Ni	60	2	He	-0.120	-35.7	140	25.8	2.5	
Cu	63	2	He	-0.397	-9.1	470	16.1	2	
Zn	66	2	He	-0.202	-37.2	157	26.6	2.5	
As	75	2	He	-0.189	-18.8	297	7.9	2.5	
Se	78	2	He	0.338	310.1	215	25.7	2	
B	11	1	nogas	8.147	31.6	45765	8.4	10	
Si	28	1	nogas	-150.063	-334.1	2530264	1.0	5	
Ca	43	1	nogas	11.814	50.1	567	10.8	100	
Ca	44	1	nogas	-1.364	-638.4	26933	4.1	100	
Fe	56	1	nogas	-40.501	-40.1	1651150	5.2	100	
Se	77	1	nogas	-125.388	-7.2	20151	4.6	2.5	
Se	82	1	nogas	0.643	121.8	183	45.7	2	
Mo	95	1	nogas	0.334	31.7	840	18.9	2.5	
Sn	118	1	nogas	0.313	18.1	1333	8.8	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.011	286.7	107	42.3	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.118	15.3	363	11.1	2.5	
P	31	1	nogas	-3.081	-154.4	51156	1.7	10	
La	139	1	nogas	8.442	237.2	33	75.5	2.5	CCB Main CR1 Failed
Au	197	1	nogas	195.108	105.5	17	69.3	2.5	CCB Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	670144	4.32	671260	99.83	70	125	
Ge	72	1	nogas	1433809	9.23	1476428	97.11	70	125	
In	115	1	nogas	1238221	6.54	1187105	104.31	70	125	
Bi	209	1	nogas	890217	3.88	882577	100.87	70	125	
Ge	72	2	He	399923	0.22	403706	99.06	70	125	

Calibration Blank Report

Sample Table

Sample Name	CAL BLK
Data File Name	138CALB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T15:53:31-06:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	93	23.90
Na	23	1	nogas	198309	0.00
Mg	24	1	nogas	4435	0.64
Al	27	1	nogas	11113	0.02
K	39	1	nogas	5358642	0.00
Ti	47	1	nogas	150	8.89
V	51	1	nogas	445244	0.00
Cr	52	1	nogas	28018	0.00
Mn	55	1	nogas	15834	0.01
Co	59	1	nogas	480	1.30
Ni	60	1	nogas	320	6.40
Cu	63	1	nogas	1050	0.74
Zn	66	1	nogas	327	7.80
As	75	1	nogas	70526	0.01
Sr	88	1	nogas	447	4.92
Ag	107	1	nogas	27	162.38
Cd	111	1	nogas	13	324.76
Sb	121	1	nogas	317	7.35
Tl	205	1	nogas	107	18.30
Pb	208	1	nogas	160	20.67
[Pb]	206	1	nogas	57	64.83
[Pb]	207	1	nogas	20	250.00
Na	23	2	He	24382	0.01
Mg	24	2	He	367	5.97
Al	27	2	He	333	3.64
K	39	2	He	139939	0.00
Ca	43	2	He	13	324.76
Ca	44	2	He	483	4.96
V	51	2	He	5806	0.02
Cr	52	2	He	1923	0.49
Mn	55	2	He	493	5.55
Fe	56	2	He	8215	0.07
Co	59	2	He	80	27.06
Ni	60	2	He	80	46.88
Cu	63	2	He	333	2.60
Zn	66	2	He	90	65.33
As	75	2	He	269	7.58
Se	78	2	He	209	1.32
B	11	1	nogas	18549	0.02
Si	28	1	nogas	2656867	0.00
Ca	43	1	nogas	413	1.47
Ca	44	1	nogas	25965	0.00

Calibration Blank Report

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	1782817	0.00
Se	77	1	nogas	22100	0.01
Se	82	1	nogas	127	7.20
Mo	95	1	nogas	50	105.83
Sn	118	1	nogas	330	9.67
Ba	137	1	nogas	53	123.46
Sb	121	2	He	153	17.19
Li	7	1	nogas	56487	0.01
P	31	1	nogas	48793	0.00
La	139	1	nogas	33	137.48

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	6	1	nogas	625645	5.69
Ge	72	1	nogas	1374265	6.84
In	115	1	nogas	1163835	11.04
Bi	209	1	nogas	844865	6.28
Ge	72	2	He	383404	0.52

Calibration Standard Report

Sample Table

Sample Name	2/10/200
Data File Name	139CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T15:55:30-06:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	138CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	6665	0.04
Na	23	1	nogas	2450895	0.00
Mg	24	1	nogas	1424399	0.00
Al	27	1	nogas	29467	0.01
K	39	1	nogas	7112123	0.00
Ti	47	1	nogas	1510	0.39
V	51	1	nogas	426004	0.00
Cr	52	1	nogas	43545	0.01
Mn	55	1	nogas	36951	0.01
Co	59	1	nogas	17769	0.03
Ni	60	1	nogas	4251	0.03
Cu	63	1	nogas	10333	0.01
Zn	66	1	nogas	3322	0.12
As	75	1	nogas	69201	0.01
Sr	88	1	nogas	22418	0.00
Ag	107	1	nogas	9603	0.05
Cd	111	1	nogas	2127	0.14
Sb	121	1	nogas	10223	0.03
Tl	205	1	nogas	13909	0.03
Pb	208	1	nogas	19412	0.02
[Pb]	206	1	nogas	4874	0.11
[Pb]	207	1	nogas	4284	0.21
Na	23	2	He	160487	0.00
Mg	24	2	He	74345	0.00
Al	27	2	He	690	2.07
K	39	2	He	225584	0.00
Ca	43	2	He	263	11.01
Ca	44	2	He	4377	0.31
V	51	2	He	10105	0.02
Cr	52	2	He	7028	0.02
Mn	55	2	He	4317	0.05
Fe	56	2	He	458061	0.00
Co	59	2	He	6651	0.00
Ni	60	2	He	1693	0.47
Cu	63	2	He	4477	0.13
Zn	66	2	He	1227	0.65
As	75	2	He	1415	0.44
Se	78	2	He	297	4.55
B	11	1	nogas	36401	0.00
Si	28	1	nogas	2691988	0.00

Calibration Standard Report

Ca	43	1	nogas	3247	0.37
Ca	44	1	nogas	73912	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	3621176	0.00
Se	77	1	nogas	20722	0.02
Se	82	1	nogas	340	0.87
Mo	95	1	nogas	4137	0.09
Sn	118	1	nogas	6044	0.11
Ba	137	1	nogas	3254	0.21
Sb	121	2	He	4167	0.09
P	31	1	nogas	57818	0.00
La	139	1	nogas	37	85.89

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	643850	2.61	625645	102.91	70	125	
Ge	72	1	nogas	1434481	2.55	1374265	104.38	70	125	
In	115	1	nogas	1291435	6.70	1163835	110.96	70	125	
Bi	209	1	nogas	920507	5.06	844865	108.95	70	125	
Ge	72	2	He	387103	0.42	383404	100.96	70	125	

Calibration Standard Report

Sample Table

Sample Name	5/25/500
Data File Name	140CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T15:57:29-06:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	
ISTD Ref File Name	138CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	16274	0.02
Na	23	1	nogas	5651123	0.00
Mg	24	1	nogas	3459759	0.00
Al	27	1	nogas	55752	0.01
K	39	1	nogas	9550692	0.00
Ti	47	1	nogas	3504	0.20
V	51	1	nogas	495596	0.00
Cr	52	1	nogas	70467	0.00
Mn	55	1	nogas	69822	0.00
Co	59	1	nogas	43251	0.00
Ni	60	1	nogas	9679	0.05
Cu	63	1	nogas	23562	0.01
Zn	66	1	nogas	8252	0.03
As	75	1	nogas	81270	0.01
Sr	88	1	nogas	55302	0.01
Ag	107	1	nogas	25275	0.01
Cd	111	1	nogas	5488	0.01
Sb	121	1	nogas	24297	0.03
Tl	205	1	nogas	33605	0.01
Pb	208	1	nogas	48129	0.01
[Pb]	206	1	nogas	12085	0.02
[Pb]	207	1	nogas	10370	0.06
Na	23	2	He	366886	0.00
Mg	24	2	He	186390	0.00
Al	27	2	He	1387	0.63
K	39	2	He	344101	0.00
Ca	43	2	He	523	2.23
Ca	44	2	He	9759	0.01
V	51	2	He	17713	0.01
Cr	52	2	He	14829	0.03
Mn	55	2	He	43388	0.30
Fe	56	2	He	1140132	0.00
Co	59	2	He	16975	0.01
Ni	60	2	He	4237	0.05
Cu	63	2	He	10983	0.01
Zn	66	2	He	2660	0.25
As	75	2	He	3224	0.19
Se	78	2	He	461	1.03
B	11	1	nogas	64428	0.00
Si	28	1	nogas	2762877	0.00

Calibration Standard Report

Ca	43	1	nogas	7702	0.05
Ca	44	1	nogas	144078	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	6310953	0.00
Se	77	1	nogas	23389	0.03
Se	82	1	nogas	657	1.32
Mo	95	1	nogas	10883	0.05
Sn	118	1	nogas	14313	0.04
Ba	137	1	nogas	8349	0.02
Sb	121	2	He	10883	0.02
P	31	1	nogas	69828	0.00
La	139	1	nogas	40	62.50

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	628264	3.55	625645	100.42	70	125	
Ge	72	1	nogas	1452982	2.22	1374265	105.73	70	125	
In	115	1	nogas	1237332	6.40	1163835	106.32	70	125	
Bi	209	1	nogas	921940	3.80	844865	109.12	70	125	
Ge	72	2	He	380491	1.08	383404	99.24	70	125	

Calibration Standard Report

Sample Table

Sample Name	10/50/1000
Data File Name	141CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T15:59:29-06:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	
ISTD Ref File Name	138CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	31803	0.01
Na	23	1	nogas	10839581	0.00
Mg	24	1	nogas	6529955	0.00
Al	27	1	nogas	93343	0.00
K	39	1	nogas	13725956	0.00
Ti	47	1	nogas	6905	0.02
V	51	1	nogas	553475	0.00
Cr	52	1	nogas	111863	0.00
Mn	55	1	nogas	118853	0.00
Co	59	1	nogas	83406	0.00
Ni	60	1	nogas	19257	0.01
Cu	63	1	nogas	44334	0.01
Zn	66	1	nogas	15203	0.04
As	75	1	nogas	93867	0.00
Sr	88	1	nogas	106871	0.00
Ag	107	1	nogas	48687	0.00
Cd	111	1	nogas	10083	0.06
Sb	121	1	nogas	48715	0.01
Tl	205	1	nogas	65519	0.00
Pb	208	1	nogas	93469	0.00
[Pb]	206	1	nogas	23093	0.01
[Pb]	207	1	nogas	20723	0.02
Na	23	2	He	684958	0.00
Mg	24	2	He	353017	0.00
Al	27	2	He	2434	0.67
K	39	2	He	534700	0.00
Ca	43	2	He	973	0.40
Ca	44	2	He	17909	0.02
V	51	2	He	28980	0.01
Cr	52	2	He	25882	0.00
Mn	55	2	He	19083	0.01
Fe	56	2	He	2212807	0.00
Co	59	2	He	31808	0.01
Ni	60	2	He	7755	0.08
Cu	63	2	He	20428	0.02
Zn	66	2	He	5197	0.08
As	75	2	He	6073	0.02
Se	78	2	He	641	0.87
B	11	1	nogas	109569	0.00
Si	28	1	nogas	2848859	0.00

Calibration Standard Report

Ca	43	1	nogas	14099	0.03
Ca	44	1	nogas	252159	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	10535363	0.00
Se	77	1	nogas	24577	0.01
Se	82	1	nogas	1140	0.93
Mo	95	1	nogas	20118	0.02
Sn	118	1	nogas	27679	0.01
Ba	137	1	nogas	15397	0.01
Sb	121	2	He	20476	0.02
P	31	1	nogas	88757	0.00
La	139	1	nogas	83	16.63

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	632859	3.53	625645	101.15	70	125	
Ge	72	1	nogas	1425836	4.70	1374265	103.75	70	125	
In	115	1	nogas	1243698	1.89	1163835	106.86	70	125	
Bi	209	1	nogas	908519	4.01	844865	107.53	70	125	
Ge	72	2	He	379236	2.31	383404	98.91	70	125	

Calibration Standard Report

Sample Table

Sample Name	100/500/10K
Data File Name	142CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T16:01:27-06:00
Sample Type	CalStd
Level	5
Dilution	1
Comment	
ISTD Ref File Name	138CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	328908	0.00
Na	23	1	nogas	108646319	0.00
Mg	24	1	nogas	65885049	0.00
Al	27	1	nogas	790794	0.00
K	39	1	nogas	91307521	0.00
Ti	47	1	nogas	70236	0.00
V	51	1	nogas	1442824	0.00
Cr	52	1	nogas	837675	0.00
Mn	55	1	nogas	1046209	0.00
Co	59	1	nogas	840143	0.00
Ni	60	1	nogas	187037	0.00
Cu	63	1	nogas	444636	0.00
Zn	66	1	nogas	149731	0.00
As	75	1	nogas	281441	0.00
Sr	88	1	nogas	1085235	0.00
Ag	107	1	nogas	494498	0.00
Cd	111	1	nogas	105753	0.00
Sb	121	1	nogas	479048	0.00
Tl	205	1	nogas	690690	0.00
Pb	208	1	nogas	951686	0.00
[Pb]	206	1	nogas	237769	0.00
[Pb]	207	1	nogas	208991	0.00
Na	23	2	He	6951301	0.00
Mg	24	2	He	3697815	0.00
Al	27	2	He	21462	0.00
K	39	2	He	4183760	0.00
Ca	43	2	He	10526	0.02
Ca	44	2	He	175935	0.00
V	51	2	He	245668	0.00
Cr	52	2	He	254810	0.00
Mn	55	2	He	185892	0.00
Fe	56	2	He	22212841	0.00
Co	59	2	He	324917	0.00
Ni	60	2	He	81668	0.00
Cu	63	2	He	207141	0.00
Zn	66	2	He	53060	0.01
As	75	2	He	59105	0.00
Se	78	2	He	4873	0.07
B	11	1	nogas	978104	0.00
Si	28	1	nogas	4896376	0.00

Calibration Standard Report

Ca	43	1	nogas	146092	0.00
Ca	44	1	nogas	2391145	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	89470927	0.00
Se	77	1	nogas	32112	0.01
Se	82	1	nogas	10683	0.05
Mo	95	1	nogas	211850	0.00
Sn	118	1	nogas	282625	0.00
Ba	137	1	nogas	158269	0.00
Sb	121	2	He	205737	0.00
P	31	1	nogas	433923	0.00
La	139	1	nogas	123	31.07

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	601532	4.86	625645	96.15	70	125	
Ge	72	1	nogas	1422284	2.71	1374265	103.49	70	125	
In	115	1	nogas	1209338	5.10	1163835	103.91	70	125	
Bi	209	1	nogas	916011	6.37	844865	108.42	70	125	
Ge	72	2	He	374874	1.41	383404	97.78	70	125	

Calibration Standard Report

Sample Table

Sample Name	200/1000/20K
Data File Name	143CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T16:03:24-06:00
Sample Type	CalStd
Level	6
Dilution	1
Comment	
ISTD Ref File Name	138CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	685347	0.00
Na	23	1	nogas	217129238	0.00
Mg	24	1	nogas	134970428	0.00
Al	27	1	nogas	1606130	0.00
K	39	1	nogas	176125591	0.00
Ti	47	1	nogas	144764	0.00
V	51	1	nogas	2455531	0.00
Cr	52	1	nogas	1710582	0.00
Mn	55	1	nogas	2065902	0.00
Co	59	1	nogas	1699922	0.00
Ni	60	1	nogas	372090	0.00
Cu	63	1	nogas	885306	0.00
Zn	66	1	nogas	307378	0.00
As	75	1	nogas	501141	0.00
Sr	88	1	nogas	2203983	0.00
Ag	107	1	nogas	991980	0.00
Cd	111	1	nogas	221278	0.00
Sb	121	1	nogas	1001805	0.00
Tl	205	1	nogas	1382876	0.00
Pb	208	1	nogas	1955107	0.00
[Pb]	206	1	nogas	479782	0.00
[Pb]	207	1	nogas	427331	0.00
Na	23	2	He	13523761	0.00
Mg	24	2	He	7177157	0.00
Al	27	2	He	40851	0.00
K	39	2	He	8144000	0.00
Ca	43	2	He	20632	0.01
Ca	44	2	He	352169	0.00
V	51	2	He	480308	0.00
Cr	52	2	He	500866	0.00
Mn	55	2	He	366828	0.00
Fe	56	2	He	43340751	0.00
Co	59	2	He	642116	0.00
Ni	60	2	He	159029	0.00
Cu	63	2	He	403181	0.00
Zn	66	2	He	104095	0.00
As	75	2	He	117872	0.00
Se	78	2	He	9468	0.01
B	11	1	nogas	2037682	0.00
Si	28	1	nogas	7156751	0.00

Calibration Standard Report

Ca	43	1	nogas	296449	0.00
Ca	44	1	nogas	4808733	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	176872929	0.00
Se	77	1	nogas	44438	0.00
Se	82	1	nogas	21827	0.01
Mo	95	1	nogas	424590	0.00
Sn	118	1	nogas	575038	0.00
Ba	137	1	nogas	321599	0.00
Sb	121	2	He	416059	0.00
P	31	1	nogas	803855	0.00
La	139	1	nogas	253	6.30

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	556641	5.87	625645	88.97	70	125	
Ge	72	1	nogas	1375524	7.02	1374265	100.09	70	125	
In	115	1	nogas	1130791	9.50	1163835	97.16	70	125	
Bi	209	1	nogas	857678	6.68	844865	101.52	70	125	
Ge	72	2	He	385969	1.52	383404	100.67	70	125	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	ICCV
Data File Name	145_ICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T16:07:21-06:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	138CALB.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	103.091	1.201	354409	1.92	100	103.1	90	110	
Na	23	1	nogas	9639.243	6.878	119071848	0.74	10000	96.4	90	110	
Mg	24	1	nogas	9664.814	3.019	73931041	4.79	10000	96.6	90	110	
Al	27	1	nogas	99.040	3.787	864980	4.25	100	99.0	90	110	
K	39	1	nogas	9978.313	2.590	98175056	1.86	10000	99.8	90	110	
Ti	47	1	nogas	95.714	2.686	74710	3.91	100	95.7	90	110	
V	51	1	nogas	83.613	5.036	1391754	3.98	100	83.6	90	110	ICV Main CR1 Failed
Cr	52	1	nogas	95.774	4.642	896271	4.14	100	95.8	90	110	
Mn	55	1	nogas	98.255	5.756	1108594	5.25	100	98.3	90	110	
Co	59	1	nogas	95.135	4.064	873314	3.08	100	95.1	90	110	
Ni	60	1	nogas	98.374	3.607	198307	2.56	100	98.4	90	110	
Cu	63	1	nogas	97.352	2.811	467524	1.54	100	97.4	90	110	
Zn	66	1	nogas	96.420	3.048	159342	4.15	100	96.4	90	110	
As	75	1	nogas	89.478	5.482	281812	3.82	100	89.5	90	110	ICV Main CR1 Failed
Sr	88	1	nogas	92.336	3.874	1099605	2.91	100	92.3	90	110	
Ag	107	1	nogas	99.813	3.263	535704	2.73	100	99.8	90	110	
Cd	111	1	nogas	94.412	3.157	115312	4.54	100	94.4	90	110	
Sb	121	1	nogas	98.996	4.258	532747	3.10	100	99.0	90	110	
Tl	205	1	nogas	95.451	11.877	773728	2.80	100	95.5	90	110	
Pb	208	1	nogas	106.757	3.332	1038049	3.33	100	106.8	90	110	
U	238	1	nogas	90.819	13.836	1007996	4.92	100	90.8	90	110	
[Pb]	206	1	nogas	95.222	11.806	267384	2.70	100	95.2	90	110	
[Pb]	207	1	nogas	88.498	12.470	220779	3.41	100	88.5	90	110	ICV Main CR1 Failed
Na	23	2	He	10836.875	2.451	7604062	1.17	10000	108.4	90	110	
Mg	24	2	He	10977.381	1.504	4084951	0.51	10000	109.8	90	110	
Al	27	2	He	108.136	3.120	23178	3.17	100	108.1	90	110	
K	39	2	He	11121.695	1.257	4600096	1.22	10000	111.2	90	110	ICV Main CR1 Failed
Ca	43	2	He	10774.582	0.994	11504	0.61	10000	107.7	90	110	
Ca	44	2	He	10592.458	1.460	192347	0.86	10000	105.9	90	110	
V	51	2	He	102.940	0.990	258520	0.73	100	102.9	90	110	
Cr	52	2	He	102.493	2.243	266170	0.77	100	102.5	90	110	
Mn	55	2	He	104.273	2.490	198182	1.34	100	104.3	90	110	
Fe	56	2	He	10863.142	1.758	24386888	0.86	10000	108.6	90	110	
Co	59	2	He	104.589	0.922	346952	0.66	100	104.6	90	110	
Ni	60	2	He	103.674	2.798	85622	3.00	100	103.7	90	110	
Cu	63	2	He	104.122	2.738	218113	1.26	100	104.1	90	110	
Zn	66	2	He	102.917	1.009	55541	1.48	100	102.9	90	110	
As	75	2	He	103.001	0.874	62700	1.11	100	103.0	90	110	
Se	78	2	He	102.129	4.365	5100	3.19	100	102.1	90	110	
B	11	1	nogas	507.002	3.228	1035648	3.37	500	101.4	90	110	
Si	28	1	nogas	4230.493	8.318	4939110	1.65	5000	84.6	90	110	ICV Main CR1 Failed
Ca	43	1	nogas	10014.470	3.338	160446	3.18	10000	100.1	90	110	
Ca	44	1	nogas	10349.788	3.765	2701561	2.40	10000	103.5	90	110	
Fe	56	1	nogas	10015.037	5.573	96939338	5.37	10000	100.2	90	110	
Se	77	1	nogas	28.955	30.699	27494	3.60	100	29.0	90	110	ICV Main CR1 Failed
Se	82	1	nogas	93.680	6.253	11087	5.05	100	93.7	90	110	
Mo	95	1	nogas	90.555	3.306	208131	2.98	100	90.6	90	110	
Sn	118	1	nogas	92.438	3.792	295070	3.80	100	92.4	90	110	
Ba	137	1	nogas	96.528	4.529	172142	2.95	100	96.5	90	110	
Sb	121	2	He	105.926	0.153	226643	1.59	100	105.9	90	110	
Li	7	1	nogas	99.231	0.736	830353	1.16	100	99.2	90	110	
P	31	1	nogas	472.376	3.591	440776	2.47	500	94.5	90	110	
La	139	1	nogas	262.093	22.237	350	20.60	100	262.1	90	110	ICV Main CR1 Failed
Au	197	1	nogas	392.846	335.850	17	69.28	100	392.8	90	110	ICV Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	628641	0.98	625645	100.48	70	125	
Ge	72	1	nogas	1496923	2.42	1374265	108.93	70	125	
In	115	1	nogas	1271577	7.35	1163835	109.26	70	125	
Bi	209	1	nogas	1023472	9.78	844865	121.14	70	125	

Initial Calibration Verification (ICV) Report

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	2	He	395365	1.56	383404	103.12	70	125	

Low Level Initial Calibration Verification (LLICV) Report

Sample Table

Sample Name	LLCCV5
Data File Name	146LICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T16:09:20-06:00
Sample Type	LLICV
Dilution	1
Comment	
ISTD Ref File Name	138CALB.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	4.457	4.218	16968	1.58	5	89.1	70	130	
Na	23	1	nogas	470.153	6.159	5995601	2.27	500	94.0	70	130	
Mg	24	1	nogas	471.535	8.022	3589344	2.14	500	94.3	70	130	
Al	27	1	nogas	5.039	3.291	56113	2.45	5	100.8	70	130	
K	39	1	nogas	428.989	8.538	9922175	0.75	500	85.8	70	130	
Ti	47	1	nogas	4.791	1.456	3937	3.27	5	95.8	70	130	
V	51	1	nogas	-10.384	-11.725	377728	6.33	5	-207.7	70	130	LLICV Main CR1 Failed
Cr	52	1	nogas	4.110	4.193	68483	2.39	5	82.2	70	130	
Mn	55	1	nogas	4.865	3.755	72097	2.03	5	97.3	70	130	
Co	59	1	nogas	4.772	3.180	44768	1.26	5	95.4	70	130	
Ni	60	1	nogas	5.274	6.999	10300	3.84	5	105.5	70	130	
Cu	63	1	nogas	4.909	3.884	24917	0.84	5	98.2	70	130	
Zn	66	1	nogas	5.960	4.027	9029	1.40	5	119.2	70	130	
As	75	1	nogas	-0.463	-101.535	71239	5.40	5	-9.3	70	130	LLICV Main CR1 Failed
Sr	88	1	nogas	4.825	2.084	58542	2.20	5	96.5	70	130	
Ag	107	1	nogas	4.973	2.902	26998	1.47	5	99.5	70	130	
Cd	111	1	nogas	4.592	3.409	5761	4.28	5	91.8	70	130	
Sb	121	1	nogas	5.390	3.911	29635	0.71	5	107.8	70	130	
Tl	205	1	nogas	4.909	5.358	39398	1.13	5	98.2	70	130	
Pb	208	1	nogas	5.396	3.097	52624	3.09	5	107.9	70	130	
U	238	1	nogas	4.783	7.060	52494	3.15	5	95.7	70	130	
[Pb]	206	1	nogas	4.779	11.568	13276	5.51	5	95.6	70	130	
[Pb]	207	1	nogas	4.747	9.987	11698	4.50	5	94.9	70	130	
Na	23	2	He	492.018	0.776	378609	0.37	500	98.4	70	130	
Mg	24	2	He	506.441	2.223	193580	1.48	500	101.3	70	130	
Al	27	2	He	4.290	14.839	1450	9.48	5	85.8	70	130	
K	39	2	He	519.438	0.940	348250	0.56	500	103.9	70	130	
Ca	43	2	He	536.292	24.644	600	23.63	500	107.3	70	130	
Ca	44	2	He	518.691	3.665	10143	3.65	500	103.7	70	130	
V	51	2	He	3.897	1.198	16775	0.55	5	77.9	70	130	
Cr	52	2	He	5.030	4.737	15327	3.45	5	100.6	70	130	
Mn	55	2	He	5.083	3.675	10400	2.61	5	101.7	70	130	
Fe	56	2	He	502.491	4.668	1164661	3.92	500	100.5	70	130	
Co	59	2	He	5.014	2.980	17135	3.10	5	100.3	70	130	
Ni	60	2	He	4.614	6.794	4434	5.42	5	92.3	70	130	
Cu	63	2	He	4.395	1.703	11117	1.85	5	87.9	70	130	
Zn	66	2	He	4.640	6.360	2917	6.18	5	92.8	70	130	
As	75	2	He	4.828	5.497	3284	4.32	5	96.6	70	130	
Se	78	2	He	4.195	5.822	443	2.65	5	83.9	70	130	
B	11	1	nogas	36.600	9.990	101289	4.28	25	146.4	70	130	LLICV Main CR1 Failed
Si	28	1	nogas	-546.962	-46.625	2665001	0.59	25	-2187.8	70	130	LLICV Main CR1 Failed
Ca	43	1	nogas	475.841	2.764	8145	5.36	500	95.2	70	130	
Ca	44	1	nogas	462.974	3.717	149551	3.34	500	92.6	70	130	
Fe	56	1	nogas	434.724	5.606	6133586	1.08	500	86.9	70	130	
Se	77	1	nogas	-31.225	-35.983	20725	10.10	5	-624.5	70	130	LLICV Main CR1 Failed
Se	82	1	nogas	5.287	9.212	763	4.00	5	105.7	70	130	
Mo	95	1	nogas	5.058	9.168	11777	4.99	5	101.2	70	130	
Sn	118	1	nogas	4.995	6.658	16682	3.20	5	99.9	70	130	
Ba	137	1	nogas	4.601	0.467	8479	4.93	5	92.0	70	130	
Sb	121	2	He	5.699	2.634	12651	1.84	5	114.0	70	130	
Li	7	1	nogas	5.037	1.338	105834	3.59	5	100.7	70	130	
P	31	1	nogas	24.257	14.789	73947	0.29	25	97.0	70	130	
La	139	1	nogas	40.591	19.410	87	6.66	5	811.8	70	130	LLICV Main CR1 Failed
Au	197	1	nogas	94.668	975.474	20	50.00	5	1893.4	70	130	LLICV Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	692851	3.86	625645	110.74	70	125	
Ge	72	1	nogas	1513269	4.11	1374265	110.11	70	125	
In	115	1	nogas	1302010	5.34	1163835	111.87	70	125	
Bi	209	1	nogas	1004809	6.47	844865	118.93	70	125	

Low Level Initial Calibration Verification (LLICV) Report

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	2	He	405320	0.89	383404	105.72	70	125	

Sample Report

Sample Table

Sample Name	LLCCV2
Data File Name	147SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T16:11:20-06:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	138CALB.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	1.898	1.898	5.11	7245	0.03	2000	
Na	23	1	nogas	189.684	189.684	4.20	2596287	0.01	200000	
Mg	24	1	nogas	192.480	192.480	3.77	1497093	0.01	200000	
Al	27	1	nogas	2.069	2.069	12.48	31150	0.01	2000	
K	39	1	nogas	115.128	115.128	22.49	7203936	0.00	200000	
Ti	47	1	nogas	1.750	1.750	7.36	1590	0.11	2000	
V	51	1	nogas	-16.152	-16.152	-8.96	323895	0.00	2000	
Cr	52	1	nogas	1.037	1.037	17.67	41634	0.00	2000	
Mn	55	1	nogas	1.804	1.804	13.71	38848	0.00	2000	
Co	59	1	nogas	1.822	1.822	2.24	17966	0.01	2000	
Ni	60	1	nogas	2.301	2.301	2.47	4377	0.05	2000	
Cu	63	1	nogas	1.864	1.864	11.55	10470	0.02	2000	
Zn	66	1	nogas	2.780	2.780	6.60	3800	0.07	2000	
As	75	1	nogas	-5.658	-5.658	-19.73	60648	-0.01	2000	
Sr	88	1	nogas	1.835	1.835	3.71	23259	0.01	2000	
Ag	107	1	nogas	1.937	1.937	2.76	10857	0.02	2000	
Cd	111	1	nogas	1.703	1.703	10.67	2170	0.08	2000	
Sb	121	1	nogas	2.076	2.076	8.61	11974	0.02	2000	
Tl	205	1	nogas	2.007	2.007	6.19	15631	0.01	2000	
Pb	208	1	nogas	2.149	2.149	1.56	21049	0.01	2000	
U	238	1	nogas	1.920	1.920	4.00	20410	0.01	2000	
[Pb]	206	1	nogas	2.009	2.009	10.64	5438	0.04	2000	
[Pb]	207	1	nogas	1.876	1.876	8.92	4487	0.04	2000	
Na	23	2	He	197.593	197.593	2.41	163388	0.12	200000	
Mg	24	2	He	209.963	209.963	2.24	78525	0.27	200000	
Al	27	2	He	0.847	0.847	19.25	693	0.12	2000	
K	39	2	He	201.719	201.719	0.77	220835	0.09	200000	
Ca	43	2	He	196.029	196.029	21.06	223	87.77	200000	
Ca	44	2	He	210.656	210.656	3.91	4314	4.88	200000	
V	51	2	He	0.863	0.863	6.28	8948	0.01	2000	
Cr	52	2	He	2.005	2.005	6.31	7152	0.03	2000	
Mn	55	2	He	2.158	2.158	3.17	4601	0.05	2000	
Fe	56	2	He	204.570	204.570	1.65	467727	0.04	200000	
Co	59	2	He	2.065	2.065	3.30	6935	0.03	2000	
Ni	60	2	He	1.488	1.488	22.79	1763	0.08	2000	
Cu	63	2	He	1.548	1.548	4.55	4924	0.03	2000	
Zn	66	2	He	1.411	1.411	5.76	1113	0.13	2000	
As	75	2	He	1.880	1.880	1.88	1417	0.13	2000	
Se	78	2	He	1.259	1.259	18.02	292	0.43	2000	
B	11	1	nogas	14.369	14.369	9.61	51954	0.03	2000	
Si	28	1	nogas	-876.880	-876.880	-19.45	2582838	-0.03	2000	
Ca	43	1	nogas	181.282	181.282	4.63	3487	5.20	200000	
Ca	44	1	nogas	170.132	170.132	6.76	75298	0.23	200000	
Fe	56	1	nogas	134.404	134.404	7.43	3357465	0.00	200000	

Sample Report

Se	77	1	nogas	-55.489	-55.489	-19.18	18363	-0.30	2000	
Se	82	1	nogas	1.814	1.814	40.60	367	0.49	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Mo	95	1	nogas	1.931	1.931	7.97	4671	0.04	2000	
Sn	118	1	nogas	1.899	1.899	5.52	6668	0.03	2000	
Ba	137	1	nogas	1.795	1.795	4.87	3387	0.05	2000	
Sb	121	2	He	2.358	2.358	2.78	5201	0.05	2000	
La	139	1	nogas	4.370	4.370	263.78	43	10.09	2000	
Au	197	1	nogas	1079.054	1079.054	101.87	10	10790.54	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	688450	2.71	625645	110.04	70	125	
Ge	72	1	nogas	1560125	4.66	1374265	113.52	70	125	
In	115	1	nogas	1319846	5.87	1163835	113.40	70	125	
Bi	209	1	nogas	969952	4.08	844865	114.81	70	125	
Ge	72	2	He	395502	1.63	383404	103.16	70	125	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	ICCB
Data File Name	148_ICB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T16:13:20-06:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	138CALB.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	0.017	139.8	160	49.6	1	
Na	23	1	nogas	2.028	41.4	232462	1.8	100	
Mg	24	1	nogas	1.628	77.8	16344	53.3	100	
Al	27	1	nogas	0.467	22.7	15813	2.8	5	
K	39	1	nogas	-36.128	-42.7	5404793	0.7	100	
Ti	47	1	nogas	0.034	118.0	187	15.5	2.5	
V	51	1	nogas	-11.117	-7.6	358034	2.3	2.5	
Cr	52	1	nogas	-0.374	-26.9	26669	0.2	2.5	
Mn	55	1	nogas	0.025	173.8	17221	0.4	2.5	
Co	59	1	nogas	0.004	302.0	547	16.6	2.5	
Ni	60	1	nogas	0.460	6.6	467	11.8	2.5	
Cu	63	1	nogas	0.023	119.0	1227	7.4	1	
Zn	66	1	nogas	1.129	4.6	890	6.8	2.5	
As	75	1	nogas	-1.878	-21.9	65759	3.5	2.5	
Sr	88	1	nogas	0.019	109.7	690	32.0	2.5	
Ag	107	1	nogas	0.025	61.8	160	49.6	2.5	
Cd	111	1	nogas	0.009	264.1	23	107.9	1	
Sb	121	1	nogas	0.202	17.4	1397	11.6	2.5	
Tl	205	1	nogas	0.030	63.7	330	40.8	1	
Pb	208	1	nogas	0.019	60.1	340	31.8	2.5	
U	238	1	nogas	0.019	13.9	227	11.1	2.5	
[Pb]	206	1	nogas	0.016	47.9	100	17.3	2.5	
[Pb]	207	1	nogas	0.021	72.2	67	48.2	2.5	
Na	23	2	He	-0.783	-138.2	24589	2.5	100	
Mg	24	2	He	0.397	69.9	527	20.5	100	
Al	27	2	He	-0.245	-185.3	463	19.6	5	
K	39	2	He	-7.192	-46.1	137055	1.0	100	
Ca	43	2	He	21.651	110.3	37	68.6	100	
Ca	44	2	He	10.039	25.8	680	7.6	100	
V	51	2	He	-0.895	-3.6	4646	2.1	2.5	
Cr	52	2	He	-0.008	-275.8	1963	2.8	2.5	
Mn	55	2	He	0.132	33.1	760	11.8	2.5	
Fe	56	2	He	0.281	84.3	9099	5.3	100	
Co	59	2	He	0.000	1753.0	83	18.3	2.5	
Ni	60	2	He	-0.519	-3.8	113	13.5	2.5	
Cu	63	2	He	-0.601	-4.1	457	12.1	1	
Zn	66	2	He	-0.136	-71.3	283	18.1	2.5	
As	75	2	He	-0.027	-189.4	261	12.1	2.5	
Se	78	2	He	-1.211	-12.3	174	4.0	1	
B	11	1	nogas	4.098	24.8	28461	3.5	10	
Si	28	1	nogas	-540.529	-40.9	2587237	2.3	5	
Ca	43	1	nogas	7.859	116.2	563	22.5	100	
Ca	44	1	nogas	-3.651	-116.7	26856	1.7	100	
Fe	56	1	nogas	-38.602	-11.8	1550261	2.2	100	
Se	77	1	nogas	-21.300	-22.8	21183	2.1	2.5	
Se	82	1	nogas	0.076	478.8	143	26.4	1	

Initial Calibration Blank (ICB) Report

Mo	95	1	nogas	0.061	4.3	190	0.0	2.5	
Sn	118	1	nogas	0.085	51.3	623	15.6	5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Ba	137	1	nogas	0.037	56.4	123	24.8	2.5	
Sb	121	2	He	0.186	14.3	557	10.8	2.5	
P	31	1	nogas	0.647	161.7	52747	1.7	10	
La	139	1	nogas	35.474	23.7	77	7.5	2.5	ICB Main CR1 Failed
Au	197	1	nogas	1372.277	49.5	7	86.6	2.5	ICB Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	666791	4.14	625645	106.58	70	125	
Ge	72	1	nogas	1466542	3.12	1374265	106.71	70	125	
In	115	1	nogas	1242999	6.23	1163835	106.80	70	125	
Bi	209	1	nogas	900635	1.36	844865	106.60	70	125	
Ge	72	2	He	395310	0.93	383404	103.11	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	160_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T16:44:10-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	138CALB.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	0.046	21.4	267	15.2	1	
Na	23	1	nogas	30.921	20.5	573432	2.3	100	
Mg	24	1	nogas	4.145	32.6	34503	16.9	100	
Al	27	1	nogas	0.220	67.7	13372	2.5	5	
K	39	1	nogas	-36.008	-167.5	5254019	1.2	100	
Ti	47	1	nogas	0.013	544.4	170	38.6	2.5	
V	51	1	nogas	-12.059	-18.4	339049	4.6	2.5	
Cr	52	1	nogas	-0.447	-57.9	25324	2.7	2.5	
Mn	55	1	nogas	-0.098	-146.3	15447	3.8	2.5	
Co	59	1	nogas	0.022	58.3	687	5.1	2.5	
Ni	60	1	nogas	0.536	11.0	597	13.5	2.5	
Cu	63	1	nogas	0.023	114.8	1200	10.1	2	
Zn	66	1	nogas	0.875	6.4	467	21.1	2.5	
As	75	1	nogas	-3.789	-48.2	59741	4.3	2.5	
Sr	88	1	nogas	0.059	50.5	1110	19.4	2.5	
Ag	107	1	nogas	0.026	32.1	163	27.6	2.5	
Cd	111	1	nogas	0.049	122.5	70	89.2	1	
Sb	121	1	nogas	0.101	39.0	837	12.3	2.5	
Tl	205	1	nogas	0.218	56.9	1633	45.6	1	
Pb	208	1	nogas	0.048	37.1	630	27.7	2.5	
U	238	1	nogas	0.115	57.1	1147	47.5	2.5	
[Pb]	206	1	nogas	0.037	100.5	150	52.9	2.5	
[Pb]	207	1	nogas	0.056	42.9	143	29.0	2.5	
Na	23	2	He	27.963	7.0	43914	2.5	100	
Mg	24	2	He	3.333	20.2	1590	15.4	100	
Al	27	2	He	-0.856	-54.0	330	28.9	5	
K	39	2	He	-0.142	-1397.7	139882	0.6	100	
Ca	43	2	He	12.441	231.9	27	114.6	100	
Ca	44	2	He	8.660	5.6	643	0.9	100	
V	51	2	He	-0.818	-9.7	4751	4.8	2.5	
Cr	52	2	He	0.042	178.8	2057	9.7	2.5	
Mn	55	2	He	0.059	33.6	610	5.9	2.5	
Fe	56	2	He	3.350	6.7	15707	2.4	100	
Co	59	2	He	0.020	55.2	147	23.9	2.5	
Ni	60	2	He	-0.451	-5.4	167	12.5	2.5	
Cu	63	2	He	-0.613	-7.6	423	21.8	2	
Zn	66	2	He	-0.437	-7.5	120	14.4	2.5	
As	75	2	He	-0.042	-46.3	248	5.4	2.5	
Se	78	2	He	-0.037	-1151.5	226	8.7	2	
B	11	1	nogas	10.671	25.5	41879	10.5	10	CCB Main CR1 Failed
Si	28	1	nogas	-300.856	-235.1	2620693	1.3	5	
Ca	43	1	nogas	8.343	84.1	553	7.5	100	
Ca	44	1	nogas	-6.107	-164.9	25511	1.7	100	
Fe	56	1	nogas	-25.958	-72.2	1620435	1.7	100	
Se	77	1	nogas	-36.585	-48.0	18883	1.3	2.5	
Se	82	1	nogas	0.005	7342.6	133	37.0	2	
Mo	95	1	nogas	0.277	41.0	647	28.7	2.5	
Sn	118	1	nogas	0.231	40.1	1090	15.4	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.040	68.2	130	27.7	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.067	68.0	297	32.4	2.5	
P	31	1	nogas	-3.004	-237.0	48355	0.5	10	
La	139	1	nogas	6.132	206.5	43	35.3	2.5	CCB Main CR1 Failed
Au	197	1	nogas	-257.322	-816.3	20	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	nogas	658822	3.17	625645	105.30	70	125	
Ge	72	1	nogas	1434922	10.68	1374265	104.41	70	125	
In	115	1	nogas	1271375	10.21	1163835	109.24	70	125	
Bi	209	1	nogas	898097	7.03	844865	106.30	70	125	
Ge	72	2	He	388419	0.85	383404	101.31	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	161_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T16:46:10-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	138CALB.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	108.097	6.758	342988	1.73	100	108.1	90	110	
Na	23	1	nogas	10025.789	12.629	108460994	1.59	10000	100.3	90	110	
Mg	24	1	nogas	10113.574	11.746	67674608	2.56	10000	101.1	90	110	
Al	27	1	nogas	104.315	5.465	811953	2.78	100	104.3	90	110	
K	39	1	nogas	10277.671	6.667	90005304	1.91	10000	102.8	90	110	
Ti	47	1	nogas	103.637	5.861	72116	3.10	100	103.6	90	110	
V	51	1	nogas	102.527	11.792	1421833	0.40	100	102.5	90	110	
Cr	52	1	nogas	103.096	8.504	857280	0.36	100	103.1	90	110	
Mn	55	1	nogas	102.798	10.123	1031550	2.05	100	102.8	90	110	
Co	59	1	nogas	101.370	7.851	829111	0.44	100	101.4	90	110	
Ni	60	1	nogas	104.116	8.019	187013	0.49	100	104.1	90	110	
Cu	63	1	nogas	104.079	8.284	445183	0.85	100	104.1	90	110	
Zn	66	1	nogas	103.268	7.789	152057	1.08	100	103.3	90	110	
As	75	1	nogas	103.381	8.251	280390	1.88	100	103.4	90	110	
Sr	88	1	nogas	103.331	7.263	1096704	0.65	100	103.3	90	110	
Ag	107	1	nogas	104.943	8.133	501721	0.22	100	104.9	90	110	
Cd	111	1	nogas	100.167	12.909	105678	1.22	100	100.2	90	110	
Sb	121	1	nogas	100.172	6.189	480753	1.66	100	100.2	90	110	
Tl	205	1	nogas	104.754	3.503	698402	3.39	100	104.8	90	110	
Pb	208	1	nogas	98.775	0.767	960448	0.77	100	98.8	90	110	
U	238	1	nogas	106.388	3.773	972053	1.52	100	106.4	90	110	
[Pb]	206	1	nogas	104.442	5.125	241001	0.77	100	104.4	90	110	
[Pb]	207	1	nogas	101.698	6.130	208508	1.03	100	101.7	90	110	
Na	23	2	He	10425.837	2.287	7034597	1.73	10000	104.3	90	110	
Mg	24	2	He	10457.718	3.310	3741123	2.77	10000	104.6	90	110	
Al	27	2	He	105.590	5.186	21766	4.67	100	105.6	90	110	
K	39	2	He	10344.934	1.177	4288590	1.14	10000	103.4	90	110	
Ca	43	2	He	10173.147	1.621	10443	1.68	10000	101.7	90	110	
Ca	44	2	He	10263.627	1.313	179212	1.91	10000	102.6	90	110	
V	51	2	He	101.742	1.619	245718	1.39	100	101.7	90	110	
Cr	52	2	He	100.490	0.912	250966	1.15	100	100.5	90	110	
Mn	55	2	He	100.947	2.727	184478	2.23	100	100.9	90	110	
Fe	56	2	He	10379.026	2.574	22400263	1.97	10000	103.8	90	110	
Co	59	2	He	104.010	1.702	331700	1.36	100	104.0	90	110	
Ni	60	2	He	103.505	0.320	82180	0.58	100	103.5	90	110	
Cu	63	2	He	99.683	1.109	200866	1.47	100	99.7	90	110	
Zn	66	2	He	99.621	2.516	51700	2.98	100	99.6	90	110	
As	75	2	He	101.058	0.936	59144	0.56	100	101.1	90	110	
Se	78	2	He	104.595	1.112	5017	1.06	100	104.6	90	110	
B	11	1	nogas	536.781	5.900	1011578	2.78	500	107.4	90	110	
Si	28	1	nogas	5397.886	16.580	4902265	0.88	5000	108.0	90	110	
Ca	43	1	nogas	10375.239	5.397	148256	2.58	10000	103.8	90	110	
Ca	44	1	nogas	10589.477	6.401	2464306	1.62	10000	105.9	90	110	
Fe	56	1	nogas	10210.746	8.777	87978354	0.68	10000	102.1	90	110	
Se	77	1	nogas	97.214	13.294	31654	3.72	100	97.2	90	110	
Se	82	1	nogas	106.119	9.585	11167	1.60	100	106.1	90	110	
Mo	95	1	nogas	103.753	6.640	212567	1.26	100	103.8	90	110	
Sn	118	1	nogas	102.658	12.880	283140	1.80	100	102.7	90	110	
Ba	137	1	nogas	101.681	13.367	156683	0.33	100	101.7	90	110	
Sb	121	2	He	101.515	1.381	208797	0.78	100	101.5	90	110	
Li	7	1	nogas	104.832	6.003	807081	1.33	100	104.8	90	110	
P	31	1	nogas	513.511	8.468	422833	0.46	500	102.7	90	110	
La	139	1	nogas	95.838	50.867	130	38.46	100	95.8	90	110	
Au	197	1	nogas	477.317	152.021	13	43.30	100	477.3	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	nogas	581939	6.65	625645	93.01	70	125	
Ge	72	1	nogas	1338518	7.56	1374265	97.40	70	125	
In	115	1	nogas	1108697	12.52	1163835	95.26	70	125	
Bi	209	1	nogas	836044	5.11	844865	98.96	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	380069	0.60	383404	99.13	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	172_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T17:09:18-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	138CALB.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	105.760	10.764	335903	2.63	100	105.8	90	110	
Na	23	1	nogas	10249.342	13.610	110197527	0.82	10000	102.5	90	110	
Mg	24	1	nogas	10100.945	13.167	67147177	0.42	10000	101.0	90	110	
Al	27	1	nogas	101.977	10.973	806200	0.21	100	102.0	90	110	
K	39	1	nogas	10158.724	15.040	90225221	3.01	10000	101.6	90	110	
Ti	47	1	nogas	100.550	11.956	71002	0.94	100	100.5	90	110	
V	51	1	nogas	124.609	17.524	1660113	2.07	100	124.6	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	99.493	12.213	841695	1.16	100	99.5	90	110	
Mn	55	1	nogas	100.763	12.428	1028434	1.73	100	100.8	90	110	
Co	59	1	nogas	100.399	11.838	834304	1.01	100	100.4	90	110	
Ni	60	1	nogas	103.005	12.568	187900	2.17	100	103.0	90	110	
Cu	63	1	nogas	102.838	10.830	447349	1.42	100	102.8	90	110	
Zn	66	1	nogas	100.675	11.089	150656	1.44	100	100.7	90	110	
As	75	1	nogas	109.782	14.587	298349	0.40	100	109.8	90	110	
Sr	88	1	nogas	101.985	11.440	1099690	0.59	100	102.0	90	110	
Ag	107	1	nogas	102.415	11.246	497733	0.29	100	102.4	90	110	
Cd	111	1	nogas	98.834	12.263	106753	2.15	100	98.8	90	110	
Sb	121	1	nogas	98.657	9.928	481300	1.50	100	98.7	90	110	
Tl	205	1	nogas	107.045	9.861	691592	0.81	100	107.0	90	110	
Pb	208	1	nogas	98.988	0.605	962524	0.60	100	99.0	90	110	
U	238	1	nogas	108.119	9.342	957984	0.58	100	108.1	90	110	
[Pb]	206	1	nogas	107.259	8.498	240242	0.90	100	107.3	90	110	
[Pb]	207	1	nogas	105.466	9.220	209872	0.28	100	105.5	90	110	
Na	23	2	He	10598.014	2.187	7030766	2.21	10000	106.0	90	110	
Mg	24	2	He	10428.062	0.969	3668264	1.07	10000	104.3	90	110	
Al	27	2	He	102.585	1.773	20808	1.93	100	102.6	90	110	
K	39	2	He	10205.557	1.817	4232695	1.76	10000	102.1	90	110	
Ca	43	2	He	10274.155	3.058	10370	3.21	10000	102.7	90	110	
Ca	44	2	He	10350.716	1.222	177684	1.41	10000	103.5	90	110	
V	51	2	He	103.990	0.825	246791	0.95	100	104.0	90	110	
Cr	52	2	He	103.101	2.402	253111	2.43	100	103.1	90	110	
Mn	55	2	He	103.564	1.577	186079	1.35	100	103.6	90	110	
Fe	56	2	He	10309.773	1.290	21878836	1.22	10000	103.1	90	110	
Co	59	2	He	103.395	1.245	324210	1.26	100	103.4	90	110	
Ni	60	2	He	102.590	0.240	80088	0.38	100	102.6	90	110	
Cu	63	2	He	100.551	2.818	199197	2.97	100	100.6	90	110	
Zn	66	2	He	100.681	1.378	51362	1.16	100	100.7	90	110	
As	75	2	He	102.078	1.290	58737	1.51	100	102.1	90	110	
Se	78	2	He	102.099	1.776	4821	1.88	100	102.1	90	110	
B	11	1	nogas	525.726	8.983	992583	1.10	500	105.1	90	110	
Si	28	1	nogas	5285.107	21.821	4936915	0.79	5000	105.7	90	110	
Ca	43	1	nogas	10212.951	11.335	148141	0.29	10000	102.1	90	110	
Ca	44	1	nogas	10269.047	10.703	2429004	1.08	10000	102.7	90	110	
Fe	56	1	nogas	10134.704	12.217	88756650	0.93	10000	101.3	90	110	
Se	77	1	nogas	152.457	24.728	37980	2.39	100	152.5	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	102.808	10.833	11024	5.77	100	102.8	90	110	
Mo	95	1	nogas	102.393	11.554	213050	1.25	100	102.4	90	110	
Sn	118	1	nogas	100.842	16.143	283725	1.53	100	100.8	90	110	
Ba	137	1	nogas	101.168	14.791	159306	0.82	100	101.2	90	110	
Sb	121	2	He	101.784	3.208	205846	3.33	100	101.8	90	110	
Li	7	1	nogas	104.454	9.842	805482	0.85	100	104.5	90	110	
P	31	1	nogas	494.053	11.947	415438	0.48	500	98.8	90	110	
La	139	1	nogas	119.087	27.811	157	7.37	100	119.1	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	-2162.537	-33.403	33	17.32	100	-2162.5	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	nogas	584223	8.16	625645	93.38	70	125	
Ge	72	1	nogas	1365682	10.36	1374265	99.38	70	125	
In	115	1	nogas	1135612	13.73	1163835	97.58	70	125	
Bi	209	1	nogas	814224	8.93	844865	96.37	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	373679	0.22	383404	97.46	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	173_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T17:11:16-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	138CALB.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	0.055	38.2	290	24.1	1	
Na	23	1	nogas	93.349	4.4	1276549	1.4	100	
Mg	24	1	nogas	6.002	38.6	46969	32.3	100	
Al	27	1	nogas	0.251	37.8	13512	5.9	5	
K	39	1	nogas	-36.466	-12.6	5209827	0.7	100	
Ti	47	1	nogas	0.080	142.1	213	37.9	2.5	
V	51	1	nogas	1.454	101.4	473812	2.5	2.5	
Cr	52	1	nogas	0.015	395.0	29050	1.7	2.5	
Mn	55	1	nogas	0.022	219.2	16581	2.9	2.5	
Co	59	1	nogas	0.032	35.2	770	11.5	2.5	
Ni	60	1	nogas	0.708	8.7	923	12.5	2.5	
Cu	63	1	nogas	0.102	50.1	1543	13.9	2	
Zn	66	1	nogas	0.893	6.1	490	17.4	2.5	
As	75	1	nogas	2.028	55.0	72055	3.2	2.5	
Sr	88	1	nogas	0.082	33.6	1377	22.5	2.5	
Ag	107	1	nogas	0.034	62.3	200	52.9	2.5	
Cd	111	1	nogas	0.039	56.1	60	44.1	1	
Sb	121	1	nogas	1.546	22.7	8175	21.4	2.5	
Tl	205	1	nogas	0.255	44.0	1907	44.0	1	
Pb	208	1	nogas	0.063	40.3	770	31.9	2.5	
U	238	1	nogas	0.151	66.7	1503	67.7	2.5	
[Pb]	206	1	nogas	0.076	53.9	247	43.7	2.5	
[Pb]	207	1	nogas	0.060	30.4	150	29.1	2.5	
Na	23	2	He	94.218	2.6	84834	2.2	100	
Mg	24	2	He	3.830	9.6	1680	7.2	100	
Al	27	2	He	-0.802	-44.4	323	21.1	5	
K	39	2	He	8.717	47.8	143435	1.2	100	
Ca	43	2	He	24.047	105.3	37	68.6	100	
Ca	44	2	He	12.208	21.0	670	6.5	100	
V	51	2	He	0.054	184.7	6491	3.1	2.5	
Cr	52	2	He	0.076	92.5	2030	7.9	2.5	
Mn	55	2	He	0.054	37.8	570	6.1	2.5	
Fe	56	2	He	3.928	3.2	16107	2.0	100	
Co	59	2	He	0.029	70.5	167	38.1	2.5	
Ni	60	2	He	-0.548	-6.9	83	34.6	2.5	
Cu	63	2	He	-0.581	-3.6	463	9.0	2	
Zn	66	2	He	-0.485	-12.2	90	33.3	2.5	
As	75	2	He	-0.011	-840.4	252	19.6	2.5	
Se	78	2	He	-0.644	-35.6	187	5.0	2	
B	11	1	nogas	10.649	14.6	41058	6.7	10	CCB Main CR1 Failed
Si	28	1	nogas	-127.550	-110.3	2683224	0.9	5	
Ca	43	1	nogas	-2.184	-157.0	393	11.7	100	
Ca	44	1	nogas	-7.219	-19.2	25037	1.2	100	
Fe	56	1	nogas	-12.104	-54.8	1731985	2.1	100	
Se	77	1	nogas	-4.675	-164.4	22257	2.9	2.5	
Se	82	1	nogas	0.478	14.4	183	3.2	2	
Mo	95	1	nogas	0.342	50.4	793	46.5	2.5	
Sn	118	1	nogas	0.344	51.5	1420	37.8	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.050	5.9	147	3.9	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	1.050	12.9	2240	12.4	2.5	
P	31	1	nogas	-4.228	-23.1	47095	3.1	10	
La	139	1	nogas	-7.355	-131.5	27	43.3	2.5	
Au	197	1	nogas	-653.883	-113.9	23	24.7	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	nogas	645159	1.26	625645	103.12	70	125	
Ge	72	1	nogas	1413803	1.52	1374265	102.88	70	125	
In	115	1	nogas	1229585	1.04	1163835	105.65	70	125	
Bi	209	1	nogas	876094	2.72	844865	103.70	70	125	
Ge	72	2	He	368349	0.42	383404	96.07	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	184_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T17:33:27-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	138CALB.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	99.831	1.560	318755	1.08	100	99.8	90	110	
Na	23	1	nogas	9318.136	2.677	102753102	1.32	10000	93.2	90	110	
Mg	24	1	nogas	9095.234	1.562	61995797	2.21	10000	91.0	90	110	
Al	27	1	nogas	92.849	2.582	743863	2.53	100	92.8	90	110	
K	39	1	nogas	9290.834	1.690	84163150	1.64	10000	92.9	90	110	
Ti	47	1	nogas	91.921	2.152	65750	1.73	100	91.9	90	110	
V	51	1	nogas	86.549	3.303	1304600	2.15	100	86.5	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	91.014	2.978	782128	2.70	100	91.0	90	110	
Mn	55	1	nogas	96.415	1.556	997537	1.52	100	96.4	90	110	
Co	59	1	nogas	92.699	2.372	780190	2.62	100	92.7	90	110	
Ni	60	1	nogas	94.543	1.812	174713	2.10	100	94.5	90	110	
Cu	63	1	nogas	94.363	1.549	415464	1.16	100	94.4	90	110	
Zn	66	1	nogas	93.168	2.126	141055	1.86	100	93.2	90	110	
As	75	1	nogas	89.250	2.182	257827	1.46	100	89.2	90	110	CCV Main CR1-2 Failed
Sr	88	1	nogas	95.471	0.810	1042341	1.21	100	95.5	90	110	
Ag	107	1	nogas	94.668	1.034	465769	1.32	100	94.7	90	110	
Cd	111	1	nogas	91.917	1.608	100472	1.99	100	91.9	90	110	
Sb	121	1	nogas	90.513	1.096	446605	0.77	100	90.5	90	110	
Tl	205	1	nogas	99.996	4.007	656899	2.28	100	100.0	90	110	
Pb	208	1	nogas	92.843	0.818	902782	0.82	100	92.8	90	110	
U	238	1	nogas	98.438	3.671	886582	1.97	100	98.4	90	110	
[Pb]	206	1	nogas	99.493	3.020	226427	1.33	100	99.5	90	110	
[Pb]	207	1	nogas	97.891	2.638	198027	1.21	100	97.9	90	110	
Na	23	2	He	10229.351	1.833	6560485	1.39	10000	102.3	90	110	
Mg	24	2	He	10307.629	1.083	3504928	0.48	10000	103.1	90	110	
Al	27	2	He	100.874	1.723	19787	1.82	100	100.9	90	110	
K	39	2	He	9673.771	1.605	4019432	1.55	10000	96.7	90	110	
Ca	43	2	He	10271.287	4.957	10019	4.48	10000	102.7	90	110	
Ca	44	2	He	10198.714	2.506	169228	1.90	10000	102.0	90	110	
V	51	2	He	101.224	1.025	232378	0.38	100	101.2	90	110	
Cr	52	2	He	100.293	0.965	238053	0.41	100	100.3	90	110	
Mn	55	2	He	103.428	0.477	179649	0.89	100	103.4	90	110	
Fe	56	2	He	10195.128	1.325	20913949	0.83	10000	102.0	90	110	
Co	59	2	He	101.338	0.958	307164	0.38	100	101.3	90	110	
Ni	60	2	He	99.261	0.456	74922	0.34	100	99.3	90	110	
Cu	63	2	He	101.684	2.097	194690	1.47	100	101.7	90	110	
Zn	66	2	He	101.525	2.767	50069	3.15	100	101.5	90	110	
As	75	2	He	99.728	1.153	55475	0.58	100	99.7	90	110	
Se	78	2	He	102.839	1.761	4692	1.21	100	102.8	90	110	
B	11	1	nogas	479.677	2.000	910973	1.52	500	95.9	90	110	
Si	28	1	nogas	5060.272	1.063	4894935	0.82	5000	101.2	90	110	
Ca	43	1	nogas	9262.137	1.825	136045	1.42	10000	92.6	90	110	
Ca	44	1	nogas	9498.869	1.411	2275356	1.33	10000	95.0	90	110	
Fe	56	1	nogas	9413.571	2.961	83628958	3.00	10000	94.1	90	110	
Se	77	1	nogas	63.601	8.859	28910	1.82	100	63.6	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	95.294	1.991	10340	2.36	100	95.3	90	110	
Mo	95	1	nogas	95.630	2.267	201466	2.04	100	95.6	90	110	
Sn	118	1	nogas	92.850	1.921	265300	0.73	100	92.9	90	110	
Ba	137	1	nogas	96.516	3.175	154111	1.75	100	96.5	90	110	
Sb	121	2	He	100.687	1.495	196835	1.39	100	100.7	90	110	
Li	7	1	nogas	102.159	0.270	792582	2.18	100	102.2	90	110	
P	31	1	nogas	449.010	1.256	386489	1.05	500	89.8	90	110	CCV Main CR1-2 Failed
La	139	1	nogas	102.944	53.547	143	42.63	100	102.9	90	110	
Au	197	1	nogas	-1264.186	-214.384	27	78.06	100	-1264.2	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	nogas	584018	2.43	625645	93.35	70	125	
Ge	72	1	nogas	1371799	0.41	1374265	99.82	70	125	
In	115	1	nogas	1136550	2.60	1163835	97.66	70	125	
Bi	209	1	nogas	823412	1.76	844865	97.46	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	361229	0.62	383404	94.22	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	185_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T17:35:25-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	138CALB.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	0.053	23.4	280	12.9	1	
Na	23	1	nogas	123.205	10.0	1590979	4.1	100	CCB Main CR1 Failed
Mg	24	1	nogas	7.830	36.9	58671	29.1	100	
Al	27	1	nogas	0.324	17.2	13672	3.8	5	
K	39	1	nogas	-37.880	-67.4	5036111	0.5	100	
Ti	47	1	nogas	0.099	88.0	220	24.1	2.5	
V	51	1	nogas	-14.182	-4.8	304311	1.5	2.5	
Cr	52	1	nogas	-0.647	-8.2	22697	4.6	2.5	
Mn	55	1	nogas	0.103	53.9	16898	2.1	2.5	
Co	59	1	nogas	0.051	24.0	907	7.7	2.5	
Ni	60	1	nogas	0.768	6.3	1007	10.9	2.5	
Cu	63	1	nogas	0.192	17.1	1890	3.8	2	
Zn	66	1	nogas	0.942	9.1	547	19.6	2.5	
As	75	1	nogas	-5.492	-2.1	53706	4.0	2.5	
Sr	88	1	nogas	0.157	37.5	2137	25.7	2.5	
Ag	107	1	nogas	0.041	66.0	227	55.2	2.5	
Cd	111	1	nogas	0.047	126.9	67	99.9	1	
Sb	121	1	nogas	1.524	27.4	7779	22.5	2.5	
Tl	205	1	nogas	0.266	54.4	2017	55.7	1	
Pb	208	1	nogas	0.067	42.2	807	33.8	2.5	
U	238	1	nogas	0.170	58.5	1713	61.5	2.5	
[Pb]	206	1	nogas	0.060	63.2	210	49.7	2.5	
[Pb]	207	1	nogas	0.071	52.1	177	50.7	2.5	
Na	23	2	He	120.573	2.1	103884	2.4	100	CCB Main CR1 Failed
Mg	24	2	He	6.210	11.4	2550	8.8	100	
Al	27	2	He	-0.549	-39.5	380	12.1	5	
K	39	2	He	-5.952	-12.0	137552	0.2	100	
Ca	43	2	He	16.903	155.7	30	88.2	100	
Ca	44	2	He	12.474	32.2	687	9.7	100	
V	51	2	He	-1.065	-6.5	4012	3.5	2.5	
Cr	52	2	He	0.039	200.9	1977	9.1	2.5	
Mn	55	2	He	0.163	14.9	777	6.5	2.5	
Fe	56	2	He	6.364	8.4	21590	5.3	100	
Co	59	2	He	0.030	43.1	173	24.0	2.5	
Ni	60	2	He	-0.521	-13.9	107	53.3	2.5	
Cu	63	2	He	-0.541	-5.7	550	10.1	2	
Zn	66	2	He	-0.351	-18.8	160	21.7	2.5	
As	75	2	He	-0.098	-18.3	207	5.8	2.5	
Se	78	2	He	-0.486	-112.2	198	13.1	2	
B	11	1	nogas	8.187	44.5	35674	17.9	10	
Si	28	1	nogas	-24.494	-1293.7	2645146	1.5	5	
Ca	43	1	nogas	9.354	138.9	547	31.2	100	
Ca	44	1	nogas	-0.825	-931.4	25761	4.4	100	
Fe	56	1	nogas	-25.390	-64.3	1561446	5.2	100	
Se	77	1	nogas	-41.828	-5.3	17612	2.4	2.5	
Se	82	1	nogas	0.404	13.4	170	5.9	2	

Continuing Calibration Blank (CCB) Report

Mo	95	1	nogas	0.371	43.4	823	37.1	2.5	
Sn	118	1	nogas	0.345	49.6	1373	35.8	5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Ba	137	1	nogas	0.129	7.7	273	5.6	2.5	
Sb	121	2	He	1.068	9.1	2317	9.1	2.5	
P	31	1	nogas	-4.384	-39.2	45528	2.3	10	
La	139	1	nogas	-0.276	-9416.7	33	86.6	2.5	
Au	197	1	nogas	964.560	126.9	10	100.0	2.5	CCB Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	641629	3.16	625645	102.55	70	125	
Ge	72	1	nogas	1371263	3.72	1374265	99.78	70	125	
In	115	1	nogas	1187706	1.82	1163835	102.05	70	125	
Bi	209	1	nogas	883392	4.44	844865	104.56	70	125	
Ge	72	2	He	375102	0.94	383404	97.83	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	192_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T17:49:23-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	138CALB.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
Be	9	1	nogas	98.239	0.938	391197	1.03	100	98.2	90	110	
Na	23	1	nogas	8737.860	2.182	129951649	1.24	10000	87.4	90	110	CCV Main CR1-2 Failed
Mg	24	1	nogas	8748.206	3.270	80400458	3.25	10000	87.5	90	110	CCV Main CR1-2 Failed
Al	27	1	nogas	95.569	1.514	943193	2.83	100	95.6	90	110	
K	39	1	nogas	9574.370	2.715	106657388	2.12	10000	95.7	90	110	
Ti	47	1	nogas	93.891	0.252	82757	1.54	100	93.9	90	110	
V	51	1	nogas	102.037	2.064	1796827	0.62	100	102.0	90	110	
Cr	52	1	nogas	93.338	1.114	987595	2.30	100	93.3	90	110	
Mn	55	1	nogas	97.216	0.441	1239245	1.46	100	97.2	90	110	
Co	59	1	nogas	95.215	1.280	987312	0.67	100	95.2	90	110	
Ni	60	1	nogas	98.005	2.514	223128	0.90	100	98.0	90	110	
Cu	63	1	nogas	95.773	1.156	519551	0.64	100	95.8	90	110	
Zn	66	1	nogas	96.361	1.727	179851	3.32	100	96.4	90	110	
As	75	1	nogas	98.343	0.662	341875	2.09	100	98.3	90	110	
Sr	88	1	nogas	95.944	1.905	1290943	3.21	100	95.9	90	110	
Ag	107	1	nogas	97.823	1.062	593000	0.65	100	97.8	90	110	
Cd	111	1	nogas	92.101	4.452	126562	2.43	100	92.1	90	110	
Sb	121	1	nogas	92.505	2.439	562545	3.67	100	92.5	90	110	
Tl	205	1	nogas	96.989	7.025	819100	2.35	100	97.0	90	110	
Pb	208	1	nogas	115.553	2.174	1123569	2.17	100	115.6	90	110	CCV Main CR1-2 Failed
U	238	1	nogas	96.387	6.542	1116140	1.88	100	96.4	90	110	
[Pb]	206	1	nogas	96.708	6.888	282924	2.30	100	96.7	90	110	
[Pb]	207	1	nogas	94.858	6.824	246667	2.38	100	94.9	90	110	
Na	23	2	He	10204.047	2.785	8320489	2.94	10000	102.0	90	110	
Mg	24	2	He	10458.185	1.571	4521085	1.62	10000	104.6	90	110	
Al	27	2	He	101.437	3.155	25297	3.93	100	101.4	90	110	
K	39	2	He	12185.040	2.176	5026532	2.12	10000	121.9	90	110	CCV Main CR1-2 Failed
Ca	43	2	He	10109.754	2.930	12541	3.44	10000	101.1	90	110	
Ca	44	2	He	10242.539	0.995	216076	0.36	10000	102.4	90	110	
V	51	2	He	100.643	0.808	293776	0.30	100	100.6	90	110	
Cr	52	2	He	98.527	0.467	297362	0.93	100	98.5	90	110	
Mn	55	2	He	100.826	1.264	222658	1.44	100	100.8	90	110	
Fe	56	2	He	10312.768	1.829	26895516	1.78	10000	103.1	90	110	
Co	59	2	He	101.674	2.546	391765	1.92	100	101.7	90	110	
Ni	60	2	He	101.749	2.320	97615	1.84	100	101.7	90	110	
Cu	63	2	He	100.056	1.806	243580	1.13	100	100.1	90	110	
Zn	66	2	He	99.204	1.320	62202	1.31	100	99.2	90	110	
As	75	2	He	100.813	1.041	71293	1.09	100	100.8	90	110	
Se	78	2	He	104.571	2.571	6060	1.59	100	104.6	90	110	
B	11	1	nogas	514.217	2.782	1216612	3.61	500	102.8	90	110	
Si	28	1	nogas	3939.405	5.155	5421045	1.47	5000	78.8	90	110	CCV Main CR1-2 Failed
Ca	43	1	nogas	9601.796	1.712	173805	3.13	10000	96.0	90	110	
Ca	44	1	nogas	9783.143	3.766	2886579	3.78	10000	97.8	90	110	
Fe	56	1	nogas	9597.468	1.495	105037334	3.04	10000	96.0	90	110	
Se	77	1	nogas	114.452	2.051	42336	2.16	100	114.5	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	94.570	4.948	12641	4.20	100	94.6	90	110	
Mo	95	1	nogas	94.740	1.409	245992	2.94	100	94.7	90	110	
Sn	118	1	nogas	92.095	4.518	330894	3.06	100	92.1	90	110	
Ba	137	1	nogas	91.346	1.109	183507	1.35	100	91.3	90	110	
Sb	121	2	He	101.041	0.500	251123	0.84	100	101.0	90	110	
Li	7	1	nogas	96.171	0.994	934200	0.97	100	96.2	90	110	
P	31	1	nogas	475.176	1.940	500450	1.54	500	95.0	90	110	
La	139	1	nogas	108.596	20.093	187	13.48	100	108.6	90	110	
Au	197	1	nogas	-1178.009	-272.459	33	96.44	100	-1178.0	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	nogas	728230	1.42	625645	116.40	70	125	
Ge	72	1	nogas	1690407	1.59	1374265	123.00	70	125	
In	115	1	nogas	1429494	2.34	1163835	122.83	70	125	
Bi	209	1	nogas	1060405	4.73	844865	125.51	70	125	ISTD Failed

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	459242	0.97	383404	119.78	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	193_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T17:51:19-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	138CALB.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	Upper Limit	QC Flag
Be	9	1	nogas	0.047	22.8	310	11.6	1	
Na	23	1	nogas	46.603	10.9	1015587	7.4	100	
Mg	24	1	nogas	4.120	33.3	46402	28.2	100	
Al	27	1	nogas	0.229	34.1	16427	0.8	5	
K	39	1	nogas	-66.144	-32.8	6103452	1.0	100	
Ti	47	1	nogas	0.112	55.9	293	20.6	2.5	
V	51	1	nogas	-3.510	-116.2	520716	5.7	2.5	
Cr	52	1	nogas	-0.101	-188.8	34576	1.6	2.5	
Mn	55	1	nogas	-0.081	-123.8	19087	2.2	2.5	
Co	59	1	nogas	0.021	101.9	840	31.1	2.5	
Ni	60	1	nogas	0.524	7.6	703	10.0	2.5	
Cu	63	1	nogas	0.096	28.0	1873	12.1	2	
Zn	66	1	nogas	0.863	3.1	547	10.1	2.5	
As	75	1	nogas	-0.431	-745.8	81941	6.3	2.5	
Sr	88	1	nogas	0.072	25.9	1560	13.6	2.5	
Ag	107	1	nogas	0.024	39.8	187	35.7	2.5	
Cd	111	1	nogas	0.037	69.3	77	49.4	1	
Sb	121	1	nogas	1.450	24.1	9560	27.4	2.5	
Tl	205	1	nogas	0.229	65.1	2274	60.0	1	
Pb	208	1	nogas	0.062	54.4	763	43.0	2.5	
U	238	1	nogas	0.125	77.2	1643	73.7	2.5	
[Pb]	206	1	nogas	0.040	90.1	210	54.9	2.5	
[Pb]	207	1	nogas	0.045	32.0	157	25.8	2.5	
Na	23	2	He	55.109	4.5	74124	4.4	100	
Mg	24	2	He	3.542	28.0	1980	24.0	100	
Al	27	2	He	-0.602	-21.4	453	9.2	5	
K	39	2	He	49.722	9.7	159879	1.2	100	
Ca	43	2	He	16.549	51.9	37	31.5	100	
Ca	44	2	He	2.172	222.3	627	18.5	100	
V	51	2	He	-0.273	-4.7	7176	1.8	2.5	
Cr	52	2	He	-0.017	-100.5	2257	2.3	2.5	
Mn	55	2	He	0.096	20.5	803	5.9	2.5	
Fe	56	2	He	3.278	10.5	18419	5.9	100	
Co	59	2	He	0.012	88.6	143	29.0	2.5	
Ni	60	2	He	-0.553	-1.8	100	10.0	2.5	
Cu	63	2	He	-0.619	-1.5	487	5.2	2	
Zn	66	2	He	-0.388	-11.3	173	17.6	2.5	
As	75	2	He	-0.010	-414.4	316	9.8	2.5	
Se	78	2	He	-0.958	-95.6	216	22.2	2	
B	11	1	nogas	5.407	56.8	35434	16.9	10	
Si	28	1	nogas	-1007.014	-23.2	2815030	2.1	5	
Ca	43	1	nogas	3.177	279.3	590	32.3	100	
Ca	44	1	nogas	-24.630	-21.3	25614	2.2	100	
Fe	56	1	nogas	-45.308	-34.9	1776183	14.3	100	
Se	77	1	nogas	-15.170	-146.6	25959	7.3	2.5	
Se	82	1	nogas	-0.013	-1124.3	160	16.5	2	
Mo	95	1	nogas	0.394	44.5	1133	46.1	2.5	
Sn	118	1	nogas	0.279	39.2	1643	25.1	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.057	46.3	213	26.7	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.947	4.0	2540	5.2	2.5	
P	31	1	nogas	-0.666	-492.2	61430	0.5	10	
La	139	1	nogas	-13.371	-52.2	27	43.3	2.5	
Au	197	1	nogas	78.529	1682.5	23	65.5	2.5	CCB Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	758795	3.94	625645	121.28	70	125	
Ge	72	1	nogas	1744969	4.55	1374265	126.97	70	125	ISTD Failed
In	115	1	nogas	1663062	2.73	1163835	142.89	70	125	ISTD Failed
Bi	209	1	nogas	1171758	1.98	844865	138.69	70	125	ISTD Failed
Ge	72	2	He	459999	2.19	383404	119.98	70	125	

Calibration Blank Report

Sample Table

Sample Name	CAL BLK
Data File Name	215CALB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T19:26:43-06:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	123	33.74
Na	23	1	nogas	209647	0.00
Mg	24	1	nogas	8837	0.16
Al	27	1	nogas	17321	0.02
K	39	1	nogas	4817557	0.00
Ti	47	1	nogas	103	54.88
V	51	1	nogas	403019	0.00
Cr	52	1	nogas	34061	0.01
Mn	55	1	nogas	16481	0.01
Co	59	1	nogas	420	6.54
Ni	60	1	nogas	403	3.03
Cu	63	1	nogas	963	0.55
Zn	66	1	nogas	550	0.57
As	75	1	nogas	63337	0.01
Sr	88	1	nogas	723	1.17
Ag	107	1	nogas	57	100.11
Cd	111	1	nogas	7	1299.04
Sb	121	1	nogas	570	3.08
Tl	205	1	nogas	257	6.85
Pb	208	1	nogas	230	5.00
[Pb]	206	1	nogas	73	38.71
[Pb]	207	1	nogas	57	17.98
Na	23	2	He	20988	0.01
Mg	24	2	He	540	1.57
Al	27	2	He	463	1.50
K	39	2	He	113987	0.00
Ca	43	2	He	13	859.23
Ca	44	2	He	560	1.15
V	51	2	He	4789	0.04
Cr	52	2	He	2430	0.09
Mn	55	2	He	663	3.44
Fe	56	2	He	8886	0.04
Co	59	2	He	57	129.65
Ni	60	2	He	130	21.33
Cu	63	2	He	350	5.10
Zn	66	2	He	163	21.97
As	75	2	He	203	7.03
Se	78	2	He	135	10.15
B	11	1	nogas	20872	0.01
Si	28	1	nogas	1564902	0.00
Ca	43	1	nogas	377	6.32
Ca	44	1	nogas	16127	0.01

Calibration Blank Report

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	1816795	0.00
Se	77	1	nogas	20849	0.05
Se	82	1	nogas	157	16.47
Mo	95	1	nogas	123	38.52
Sn	118	1	nogas	687	0.12
Ba	137	1	nogas	133	6.50
Sb	121	2	He	333	0.52
Li	7	1	nogas	90290	0.00
P	31	1	nogas	51433	0.00
La	139	1	nogas	23	212.09

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	6	1	nogas	1076309	4.24
Ge	72	1	nogas	2371437	3.97
In	115	1	nogas	2215793	6.13
Bi	209	1	nogas	1799697	5.78
Ge	72	2	He	617557	0.84

Calibration Standard Report

Sample Table

Sample Name	2/10/200
Data File Name	216CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T19:28:43-06:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	215CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	9182	0.06
Na	23	1	nogas	3507622	0.00
Mg	24	1	nogas	2112679	0.00
Al	27	1	nogas	44870	0.00
K	39	1	nogas	7546315	0.00
Ti	47	1	nogas	2337	0.21
V	51	1	nogas	416240	0.00
Cr	52	1	nogas	61478	0.00
Mn	55	1	nogas	53066	0.00
Co	59	1	nogas	29484	0.01
Ni	60	1	nogas	6575	0.03
Cu	63	1	nogas	15877	0.02
Zn	66	1	nogas	5618	0.09
As	75	1	nogas	64173	0.00
Sr	88	1	nogas	39393	0.01
Ag	107	1	nogas	17933	0.01
Cd	111	1	nogas	3910	0.07
Sb	121	1	nogas	17319	0.01
Tl	205	1	nogas	26198	0.01
Pb	208	1	nogas	37197	0.00
[Pb]	206	1	nogas	9440	0.07
[Pb]	207	1	nogas	8022	0.07
Na	23	2	He	215742	0.00
Mg	24	2	He	109902	0.00
Al	27	2	He	1193	1.20
K	39	2	He	229343	0.00
Ca	43	2	He	407	0.35
Ca	44	2	He	5764	0.05
V	51	2	He	12311	0.01
Cr	52	2	He	11200	0.02
Mn	55	2	He	6921	0.12
Fe	56	2	He	732265	0.00
Co	59	2	He	11210	0.02
Ni	60	2	He	3027	0.21
Cu	63	2	He	7462	0.02
Zn	66	2	He	1833	0.25
As	75	2	He	1831	0.48
Se	78	2	He	284	1.24
B	11	1	nogas	46322	0.00
Si	28	1	nogas	1601289	0.00

Calibration Standard Report

Ca	43	1	nogas	5314	0.09
Ca	44	1	nogas	92786	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	4787148	0.00
Se	77	1	nogas	19724	0.03
Se	82	1	nogas	477	1.41
Mo	95	1	nogas	7345	0.09
Sn	118	1	nogas	11097	0.04
Ba	137	1	nogas	5958	0.05
Sb	121	2	He	7021	0.08
P	31	1	nogas	61082	0.00
La	139	1	nogas	33	103.92

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1111485	2.78	1076309	103.27	70	125	
Ge	72	1	nogas	2385498	2.80	2371437	100.59	70	125	
In	115	1	nogas	2297193	5.19	2215793	103.67	70	125	
Bi	209	1	nogas	1815254	3.81	1799697	100.86	70	125	
Ge	72	2	He	622344	1.52	617557	100.78	70	125	

Calibration Standard Report

Sample Table

Sample Name	5/25/500
Data File Name	217CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T19:30:41-06:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	
ISTD Ref File Name	215CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	22650	0.00
Na	23	1	nogas	8304111	0.00
Mg	24	1	nogas	5183736	0.00
Al	27	1	nogas	85291	0.00
K	39	1	nogas	11729722	0.00
Ti	47	1	nogas	6011	0.01
V	51	1	nogas	506057	0.00
Cr	52	1	nogas	106048	0.00
Mn	55	1	nogas	108750	0.00
Co	59	1	nogas	73663	0.00
Ni	60	1	nogas	16658	0.02
Cu	63	1	nogas	38788	0.01
Zn	66	1	nogas	13782	0.04
As	75	1	nogas	81027	0.01
Sr	88	1	nogas	98603	0.00
Ag	107	1	nogas	46271	0.01
Cd	111	1	nogas	10063	0.04
Sb	121	1	nogas	43330	0.01
Tl	205	1	nogas	65943	0.00
Pb	208	1	nogas	92912	0.00
[Pb]	206	1	nogas	22923	0.01
[Pb]	207	1	nogas	20133	0.01
Na	23	2	He	504315	0.00
Mg	24	2	He	268313	0.00
Al	27	2	He	2227	0.23
K	39	2	He	399346	0.00
Ca	43	2	He	790	1.40
Ca	44	2	He	13885	0.01
V	51	2	He	23944	0.00
Cr	52	2	He	23238	0.00
Mn	55	2	He	15830	0.02
Fe	56	2	He	1854228	0.00
Co	59	2	He	27424	0.01
Ni	60	2	He	7245	0.08
Cu	63	2	He	18246	0.03
Zn	66	2	He	4874	0.07
As	75	2	He	4180	0.08
Se	78	2	He	492	0.30
B	11	1	nogas	84648	0.00
Si	28	1	nogas	1720704	0.00

Calibration Standard Report

Ca	43	1	nogas	12651	0.05
Ca	44	1	nogas	212937	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	9461886	0.00
Se	77	1	nogas	22094	0.03
Se	82	1	nogas	920	0.74
Mo	95	1	nogas	19371	0.00
Sn	118	1	nogas	27058	0.01
Ba	137	1	nogas	14526	0.03
Sb	121	2	He	17923	0.01
P	31	1	nogas	76996	0.00
La	139	1	nogas	80	31.25

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1135378	4.62	1076309	105.49	70	125	
Ge	72	1	nogas	2411201	2.47	2371437	101.68	70	125	
In	115	1	nogas	2268786	4.41	2215793	102.39	70	125	
Bi	209	1	nogas	1942654	13.04	1799697	107.94	70	125	
Ge	72	2	He	628858	0.32	617557	101.83	70	125	

Calibration Standard Report

Sample Table

Sample Name	10/50/1000
Data File Name	218CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T19:32:39-06:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	
ISTD Ref File Name	215CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	45938	0.00
Na	23	1	nogas	16187855	0.00
Mg	24	1	nogas	10242869	0.00
Al	27	1	nogas	147679	0.00
K	39	1	nogas	18376307	0.00
Ti	47	1	nogas	11580	0.03
V	51	1	nogas	608854	0.00
Cr	52	1	nogas	175516	0.00
Mn	55	1	nogas	196465	0.00
Co	59	1	nogas	143140	0.00
Ni	60	1	nogas	32632	0.01
Cu	63	1	nogas	77034	0.00
Zn	66	1	nogas	26272	0.01
As	75	1	nogas	99554	0.00
Sr	88	1	nogas	192260	0.00
Ag	107	1	nogas	89026	0.00
Cd	111	1	nogas	18713	0.03
Sb	121	1	nogas	85511	0.00
Tl	205	1	nogas	130603	0.00
Pb	208	1	nogas	183613	0.00
[Pb]	206	1	nogas	45952	0.00
[Pb]	207	1	nogas	40637	0.01
Na	23	2	He	985978	0.00
Mg	24	2	He	534221	0.00
Al	27	2	He	3770	0.03
K	39	2	He	681023	0.00
Ca	43	2	He	1630	0.43
Ca	44	2	He	27534	0.00
V	51	2	He	42940	0.00
Cr	52	2	He	42719	0.00
Mn	55	2	He	31454	0.00
Fe	56	2	He	3700470	0.00
Co	59	2	He	54979	0.00
Ni	60	2	He	13585	0.02
Cu	63	2	He	34987	0.00
Zn	66	2	He	8422	0.06
As	75	2	He	8286	0.02
Se	78	2	He	730	0.72
B	11	1	nogas	151022	0.00
Si	28	1	nogas	1907311	0.00

Calibration Standard Report

Ca	43	1	nogas	25044	0.01
Ca	44	1	nogas	403412	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	16752027	0.00
Se	77	1	nogas	24257	0.02
Se	82	1	nogas	1803	0.71
Mo	95	1	nogas	38338	0.01
Sn	118	1	nogas	52021	0.00
Ba	137	1	nogas	28574	0.00
Sb	121	2	He	34434	0.01
P	31	1	nogas	101752	0.00
La	139	1	nogas	100	17.32

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1143719	3.09	1076309	106.26	70	125	
Ge	72	1	nogas	2432241	3.94	2371437	102.56	70	125	
In	115	1	nogas	2251640	4.08	2215793	101.62	70	125	
Bi	209	1	nogas	1842924	3.20	1799697	102.40	70	125	
Ge	72	2	He	628311	0.35	617557	101.74	70	125	

Calibration Standard Report

Sample Table

Sample Name	100/500/10K
Data File Name	219CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T19:34:37-06:00
Sample Type	CalStd
Level	5
Dilution	1
Comment	
ISTD Ref File Name	215CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	459514	0.00
Na	23	1	nogas	161826841	0.00
Mg	24	1	nogas	101185525	0.00
Al	27	1	nogas	1227839	0.00
K	39	1	nogas	138949932	0.00
Ti	47	1	nogas	115094	0.00
V	51	1	nogas	2068405	0.00
Cr	52	1	nogas	1405385	0.00
Mn	55	1	nogas	1785129	0.00
Co	59	1	nogas	1417108	0.00
Ni	60	1	nogas	314651	0.00
Cu	63	1	nogas	735086	0.00
Zn	66	1	nogas	243773	0.00
As	75	1	nogas	358759	0.00
Sr	88	1	nogas	1876906	0.00
Ag	107	1	nogas	878297	0.00
Cd	111	1	nogas	191188	0.00
Sb	121	1	nogas	830222	0.00
Tl	205	1	nogas	1292535	0.00
Pb	208	1	nogas	1828328	0.00
[Pb]	206	1	nogas	454290	0.00
[Pb]	207	1	nogas	399411	0.00
Na	23	2	He	9671618	0.00
Mg	24	2	He	5184530	0.00
Al	27	2	He	29530	0.01
K	39	2	He	5828501	0.00
Ca	43	2	He	15687	0.02
Ca	44	2	He	266776	0.00
V	51	2	He	382505	0.00
Cr	52	2	He	404216	0.00
Mn	55	2	He	296372	0.00
Fe	56	2	He	35443834	0.00
Co	59	2	He	543470	0.00
Ni	60	2	He	136824	0.00
Cu	63	2	He	342142	0.00
Zn	66	2	He	84065	0.00
As	75	2	He	79480	0.00
Se	78	2	He	6405	0.03
B	11	1	nogas	1345556	0.00
Si	28	1	nogas	4850571	0.00

Calibration Standard Report

Ca	43	1	nogas	241174	0.00
Ca	44	1	nogas	3968218	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	149943803	0.00
Se	77	1	nogas	32439	0.02
Se	82	1	nogas	15520	0.02
Mo	95	1	nogas	372041	0.00
Sn	118	1	nogas	514198	0.00
Ba	137	1	nogas	283065	0.00
Sb	121	2	He	345994	0.00
P	31	1	nogas	515843	0.00
La	139	1	nogas	370	4.56

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	983805	2.73	1076309	91.41	70	125	
Ge	72	1	nogas	2278188	6.82	2371437	96.07	70	125	
In	115	1	nogas	2101807	5.28	2215793	94.86	70	125	
Bi	209	1	nogas	1662520	13.59	1799697	92.38	70	125	
Ge	72	2	He	624577	0.63	617557	101.14	70	125	

Calibration Standard Report

Sample Table

Sample Name	200/1000/20K
Data File Name	220CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T19:36:32-06:00
Sample Type	CalStd
Level	6
Dilution	1
Comment	
ISTD Ref File Name	215CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	905391	0.00
Na	23	1	nogas	317662399	0.00
Mg	24	1	nogas	194295621	0.00
Al	27	1	nogas	2395304	0.00
K	39	1	nogas	270535623	0.00
Ti	47	1	nogas	227388	0.00
V	51	1	nogas	3544244	0.00
Cr	52	1	nogas	2753677	0.00
Mn	55	1	nogas	3459145	0.00
Co	59	1	nogas	2731304	0.00
Ni	60	1	nogas	616455	0.00
Cu	63	1	nogas	1454920	0.00
Zn	66	1	nogas	481726	0.00
As	75	1	nogas	654952	0.00
Sr	88	1	nogas	3791538	0.00
Ag	107	1	nogas	1743116	0.00
Cd	111	1	nogas	374218	0.00
Sb	121	1	nogas	1709277	0.00
Tl	205	1	nogas	2674486	0.00
Pb	208	1	nogas	3681517	0.00
[Pb]	206	1	nogas	906716	0.00
[Pb]	207	1	nogas	805469	0.00
Na	23	2	He	18891702	0.00
Mg	24	2	He	10298506	0.00
Al	27	2	He	58146	0.00
K	39	2	He	11287095	0.00
Ca	43	2	He	31674	0.00
Ca	44	2	He	527342	0.00
V	51	2	He	761139	0.00
Cr	52	2	He	804225	0.00
Mn	55	2	He	586480	0.00
Fe	56	2	He	70504554	0.00
Co	59	2	He	1081531	0.00
Ni	60	2	He	268787	0.00
Cu	63	2	He	683421	0.00
Zn	66	2	He	165536	0.00
As	75	2	He	159273	0.00
Se	78	2	He	12626	0.00
B	11	1	nogas	2688008	0.00
Si	28	1	nogas	8097618	0.00

Calibration Standard Report

Ca	43	1	nogas	472680	0.00
Ca	44	1	nogas	7677340	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	297522223	0.00
Se	77	1	nogas	47301	0.01
Se	82	1	nogas	31534	0.00
Mo	95	1	nogas	764434	0.00
Sn	118	1	nogas	1020334	0.00
Ba	137	1	nogas	570045	0.00
Sb	121	2	He	709376	0.00
P	31	1	nogas	964101	0.00
La	139	1	nogas	417	2.60

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	949657	3.12	1076309	88.23	70	125	
Ge	72	1	nogas	2336391	3.30	2371437	98.52	70	125	
In	115	1	nogas	2156019	3.46	2215793	97.30	70	125	
Bi	209	1	nogas	1688241	3.57	1799697	93.81	70	125	
Ge	72	2	He	611622	0.90	617557	99.04	70	125	

Low Level Initial Calibration Verification (LLICV) Report

Sample Table

Sample Name	LLCCV5
Data File Name	223LICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T19:42:27-06:00
Sample Type	LLICV
Dilution	1
Comment	
ISTD Ref File Name	215CALB.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	4.334	3.336	23117	3.33	5	86.7	70	130	
Na	23	1	nogas	515.209	5.538	8600106	2.21	500	103.0	70	130	
Mg	24	1	nogas	532.461	5.538	5341531	1.55	500	106.5	70	130	
Al	27	1	nogas	5.423	0.951	85906	1.69	5	108.5	70	130	
K	39	1	nogas	491.070	2.960	11844861	1.18	500	98.2	70	130	
Ti	47	1	nogas	4.776	3.085	5828	2.61	5	95.5	70	130	
V	51	1	nogas	-0.494	-45.800	406443	2.84	5	-9.9	70	130	LLICV Main CR1 Failed
Cr	52	1	nogas	4.695	3.280	102377	1.25	5	93.9	70	130	
Mn	55	1	nogas	5.076	2.455	109408	1.19	5	101.5	70	130	
Co	59	1	nogas	5.096	2.647	74182	0.34	5	101.9	70	130	
Ni	60	1	nogas	4.696	2.696	17218	1.01	5	93.9	70	130	
Cu	63	1	nogas	5.027	1.694	39516	2.49	5	100.5	70	130	
Zn	66	1	nogas	4.765	2.144	13956	1.30	5	95.3	70	130	
As	75	1	nogas	0.897	32.792	68820	2.11	5	17.9	70	130	LLICV Main CR1 Failed
Sr	88	1	nogas	5.015	3.945	100445	1.73	5	100.3	70	130	
Ag	107	1	nogas	5.120	2.446	47076	0.65	5	102.4	70	130	
Cd	111	1	nogas	4.755	7.587	9556	3.69	5	95.1	70	130	
Sb	121	1	nogas	5.262	2.471	47558	0.90	5	105.2	70	130	
Tl	205	1	nogas	5.040	6.850	74740	2.09	5	100.8	70	130	
Pb	208	1	nogas	5.330	1.299	98204	1.30	5	106.6	70	130	
U	238	1	nogas	5.020	4.841	102854	1.35	5	100.4	70	130	
[Pb]	206	1	nogas	4.889	12.284	24682	6.13	5	97.8	70	130	
[Pb]	207	1	nogas	4.690	6.061	21040	2.02	5	93.8	70	130	
Na	23	2	He	509.999	0.595	514963	0.73	500	102.0	70	130	
Mg	24	2	He	511.221	1.253	269747	0.96	500	102.2	70	130	
Al	27	2	He	5.153	12.444	2130	9.35	5	103.1	70	130	
K	39	2	He	510.344	0.715	400409	0.51	500	102.1	70	130	
Ca	43	2	He	487.608	6.040	800	5.45	500	97.5	70	130	
Ca	44	2	He	507.720	3.802	14252	2.84	500	101.5	70	130	
V	51	2	He	5.001	1.061	23088	0.75	5	100.0	70	130	
Cr	52	2	He	5.072	1.589	23245	1.58	5	101.4	70	130	
Mn	55	2	He	5.333	1.032	16658	1.71	5	106.7	70	130	
Fe	56	2	He	528.796	0.859	1914680	1.14	500	105.8	70	130	
Co	59	2	He	5.039	0.421	27915	1.02	5	100.8	70	130	
Ni	60	2	He	5.316	1.377	7415	2.15	5	106.3	70	130	
Cu	63	2	He	5.429	0.917	18686	1.30	5	108.6	70	130	
Zn	66	2	He	5.406	8.751	4746	7.95	5	108.1	70	130	
As	75	2	He	4.926	2.868	4205	3.10	5	98.5	70	130	
Se	78	2	He	4.465	18.973	414	12.97	5	89.3	70	130	
B	11	1	nogas	31.367	4.257	119437	3.54	25	125.5	70	130	
Si	28	1	nogas	87.740	148.942	1672979	3.12	25	351.0	70	130	LLICV Main CR1 Failed
Ca	43	1	nogas	502.664	1.626	12931	3.99	500	100.5	70	130	
Ca	44	1	nogas	488.642	2.344	214866	2.51	500	97.7	70	130	
Fe	56	1	nogas	491.041	3.914	9508645	1.86	500	98.2	70	130	
Se	77	1	nogas	-28.330	-4.703	17505	3.46	5	-566.6	70	130	LLICV Main CR1 Failed
Se	82	1	nogas	4.812	16.843	950	12.63	5	96.2	70	130	
Mo	95	1	nogas	5.285	7.927	21230	5.73	5	105.7	70	130	
Sn	118	1	nogas	5.209	6.654	29118	0.72	5	104.2	70	130	
Ba	137	1	nogas	5.063	2.240	15567	6.26	5	101.3	70	130	
Sb	121	2	He	5.239	3.719	19207	2.80	5	104.8	70	130	
Li	7	1	nogas	4.339	2.583	153971	1.36	5	86.8	70	130	
P	31	1	nogas	26.618	6.591	78689	0.48	25	106.5	70	130	
La	139	1	nogas	36.549	46.832	113	33.41	5	731.0	70	130	LLICV Main CR1 Failed
Au	197	1	nogas	452.047	203.062	23	65.47	5	9040.9	70	130	LLICV Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1117320	0.61	1076309	103.81	70	125	
Ge	72	1	nogas	2442113	2.42	2371437	102.98	70	125	
In	115	1	nogas	2296149	6.85	2215793	103.63	70	125	
Bi	209	1	nogas	1870618	6.22	1799697	103.94	70	125	

Low Level Initial Calibration Verification (LLICV) Report

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	2	He	627212	0.94	617557	101.56	70	125	

Sample Report

Sample Table

Sample Name	LLCCV2
Data File Name	224SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T19:44:25-06:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	215CALB.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	1.700	1.700	1.76	9366	0.02	2000	
Na	23	1	nogas	193.424	193.424	0.94	3518404	0.01	200000	
Mg	24	1	nogas	198.386	198.386	2.33	2088509	0.01	200000	
Al	27	1	nogas	2.180	2.180	1.76	45815	0.00	2000	
K	39	1	nogas	182.676	182.676	4.11	7628322	0.00	200000	
Ti	47	1	nogas	1.980	1.980	11.02	2514	0.08	2000	
V	51	1	nogas	-4.547	-4.547	-8.24	342957	0.00	2000	
Cr	52	1	nogas	1.566	1.566	2.54	58331	0.00	2000	
Mn	55	1	nogas	1.919	1.919	2.00	52641	0.00	2000	
Co	59	1	nogas	2.026	2.026	1.22	30172	0.01	2000	
Ni	60	1	nogas	1.510	1.510	5.81	6981	0.02	2000	
Cu	63	1	nogas	2.002	2.002	2.58	16558	0.01	2000	
Zn	66	1	nogas	1.408	1.408	4.72	5548	0.03	2000	
As	75	1	nogas	-2.785	-2.785	-26.46	58136	0.00	2000	
Sr	88	1	nogas	1.975	1.975	0.89	40576	0.00	2000	
Ag	107	1	nogas	1.994	1.994	1.10	18623	0.01	2000	
Cd	111	1	nogas	1.846	1.846	6.62	3807	0.05	2000	
Sb	121	1	nogas	2.106	2.106	5.06	19655	0.01	2000	
Tl	205	1	nogas	2.041	2.041	3.92	29166	0.01	2000	
Pb	208	1	nogas	2.117	2.117	1.56	39146	0.01	2000	
U	238	1	nogas	1.993	1.993	1.21	39169	0.01	2000	
[Pb]	206	1	nogas	2.014	2.014	6.79	9813	0.02	2000	
[Pb]	207	1	nogas	1.969	1.969	6.79	8496	0.02	2000	
Na	23	2	He	202.582	202.582	1.96	219474	0.09	200000	
Mg	24	2	He	203.847	203.847	0.92	108930	0.19	200000	
Al	27	2	He	2.071	2.071	27.31	1233	0.17	2000	
K	39	2	He	200.039	200.039	2.51	226256	0.09	200000	
Ca	43	2	He	235.110	235.110	14.45	397	59.27	200000	
Ca	44	2	He	197.581	197.581	2.65	5951	3.32	200000	
V	51	2	He	1.923	1.923	0.33	11293	0.02	2000	
Cr	52	2	He	2.099	2.099	4.56	11174	0.02	2000	
Mn	55	2	He	2.075	2.075	4.25	6958	0.03	2000	
Fe	56	2	He	204.016	204.016	1.36	751337	0.03	200000	
Co	59	2	He	2.057	2.057	3.19	11537	0.02	2000	
Ni	60	2	He	2.020	2.020	4.77	2904	0.07	2000	
Cu	63	2	He	2.228	2.228	2.86	7578	0.03	2000	
Zn	66	2	He	2.027	2.027	8.29	1903	0.11	2000	
As	75	2	He	1.936	1.936	2.28	1795	0.11	2000	
Se	78	2	He	2.275	2.275	25.66	277	0.82	2000	
B	11	1	nogas	12.024	12.024	2.71	60578	0.02	2000	
Si	28	1	nogas	-146.338	-146.338	-36.84	1532919	-0.01	2000	
Ca	43	1	nogas	199.606	199.606	5.01	5441	3.67	200000	

Sample Report

Ca	44	1	nogas	193.727	193.727	2.31	96517	0.20	200000	
Fe	56	1	nogas	178.280	178.280	1.70	4709478	0.00	200000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Se	77	1	nogas	-33.632	-33.632	-11.81	16995	-0.20	2000	
Se	82	1	nogas	1.823	1.823	7.98	467	0.39	2000	
Mo	95	1	nogas	2.047	2.047	3.87	8422	0.02	2000	
Sn	118	1	nogas	2.092	2.092	5.14	12425	0.02	2000	
Ba	137	1	nogas	1.870	1.870	4.42	5971	0.03	2000	
Sb	121	2	He	2.170	2.170	4.07	8232	0.03	2000	
La	139	1	nogas	21.991	21.991	57.00	80	27.49	2000	
Au	197	1	nogas	819.875	819.875	113.72	17	4919.25	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1144196	1.72	1076309	106.31	70	125	
Ge	72	1	nogas	2475237	0.87	2371437	104.38	70	125	
In	115	1	nogas	2348301	2.20	2215793	105.98	70	125	
Bi	209	1	nogas	1789157	1.34	1799697	99.41	70	125	
Ge	72	2	He	633235	0.99	617557	102.54	70	125	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	ICCV
Data File Name	225_ICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T19:46:24-06:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	215CALB.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	87.337	1.828	464947	0.99	100	87.3	90	110	ICV Main CR1 Failed
Na	23	1	nogas	10091.578	3.216	163300833	0.64	10000	100.9	90	110	
Mg	24	1	nogas	10484.361	1.340	104317140	2.33	10000	104.8	90	110	
Al	27	1	nogas	96.878	5.860	1244293	5.94	100	96.9	90	110	
K	39	1	nogas	9868.062	4.142	144356241	1.19	10000	98.7	90	110	
Ti	47	1	nogas	97.280	0.466	117662	2.78	100	97.3	90	110	
V	51	1	nogas	94.768	4.132	2022208	1.65	100	94.8	90	110	
Cr	52	1	nogas	98.966	1.262	1466102	1.68	100	99.0	90	110	
Mn	55	1	nogas	99.518	1.353	1845135	2.39	100	99.5	90	110	
Co	59	1	nogas	101.272	0.805	1479123	2.19	100	101.3	90	110	
Ni	60	1	nogas	96.672	3.593	318111	2.34	100	96.7	90	110	
Cu	63	1	nogas	96.934	1.985	750107	1.41	100	96.9	90	110	
Zn	66	1	nogas	97.896	2.123	251485	1.24	100	97.9	90	110	
As	75	1	nogas	93.683	3.192	360863	0.77	100	93.7	90	110	
Sr	88	1	nogas	97.003	4.376	1946569	4.29	100	97.0	90	110	
Ag	107	1	nogas	99.637	2.847	922794	0.50	100	99.6	90	110	
Cd	111	1	nogas	99.569	0.904	195524	2.21	100	99.6	90	110	
Sb	121	1	nogas	95.435	3.125	859615	0.67	100	95.4	90	110	
Tl	205	1	nogas	98.440	5.505	1382824	2.29	100	98.4	90	110	
Pb	208	1	nogas	102.097	1.068	1876905	1.07	100	102.1	90	110	
U	238	1	nogas	101.839	3.823	1981191	0.82	100	101.8	90	110	
[Pb]	206	1	nogas	97.520	6.173	467569	1.92	100	97.5	90	110	
[Pb]	207	1	nogas	96.643	5.419	410869	1.22	100	96.6	90	110	
Na	23	2	He	10325.384	1.006	9886410	1.13	10000	103.3	90	110	
Mg	24	2	He	10330.365	0.685	5370163	0.40	10000	103.3	90	110	
Al	27	2	He	105.430	3.853	31219	3.43	100	105.4	90	110	
K	39	2	He	10403.932	1.179	5953008	1.16	10000	104.0	90	110	
Ca	43	2	He	10282.365	5.063	16387	4.73	10000	102.8	90	110	
Ca	44	2	He	10257.913	1.954	273489	1.63	10000	102.6	90	110	
V	51	2	He	102.106	1.626	393552	1.34	100	102.1	90	110	
Cr	52	2	He	103.775	0.321	422018	0.63	100	103.8	90	110	
Mn	55	2	He	104.258	1.392	309106	1.12	100	104.3	90	110	
Fe	56	2	He	10403.171	1.571	37015189	1.63	10000	104.0	90	110	
Co	59	2	He	101.986	0.782	556536	0.48	100	102.0	90	110	
Ni	60	2	He	101.887	1.855	138564	1.79	100	101.9	90	110	
Cu	63	2	He	101.913	1.515	351045	1.33	100	101.9	90	110	
Zn	66	2	He	100.549	2.833	84206	2.52	100	100.5	90	110	
As	75	2	He	101.980	1.136	81916	1.12	100	102.0	90	110	
Se	78	2	He	103.429	3.143	6649	2.73	100	103.4	90	110	
B	11	1	nogas	455.375	2.823	1445781	3.60	500	91.1	90	110	
Si	28	1	nogas	4694.155	3.435	4904264	0.96	5000	93.9	90	110	
Ca	43	1	nogas	9730.949	3.730	245023	0.88	10000	97.3	90	110	
Ca	44	1	nogas	9806.217	2.808	4027890	0.83	10000	98.1	90	110	
Fe	56	1	nogas	9683.988	2.242	153815216	2.63	10000	96.8	90	110	
Se	77	1	nogas	72.416	5.432	31798	2.85	100	72.4	90	110	ICV Main CR1 Failed
Se	82	1	nogas	97.271	4.407	16267	1.54	100	97.3	90	110	
Mo	95	1	nogas	96.020	1.742	387216	2.40	100	96.0	90	110	
Sn	118	1	nogas	99.612	1.217	531839	1.07	100	99.6	90	110	
Ba	137	1	nogas	98.151	1.487	291852	2.71	100	98.2	90	110	
Sb	121	2	He	99.311	0.810	353465	0.88	100	99.3	90	110	
Li	7	1	nogas	88.622	1.024	1327601	0.03	100	88.6	90	110	ICV Main CR1 Failed
P	31	1	nogas	481.971	2.641	522434	0.72	500	96.4	90	110	
La	139	1	nogas	94.292	13.163	250	10.58	100	94.3	90	110	
Au	197	1	nogas	1423.649	51.147	7	173.21	100	1423.6	90	110	ICV Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1121188	0.96	1076309	104.17	70	125	
Ge	72	1	nogas	2463168	2.86	2371437	103.87	70	125	
In	115	1	nogas	2238682	2.09	2215793	101.03	70	125	
Bi	209	1	nogas	1775838	4.44	1799697	98.67	70	125	

Initial Calibration Verification (ICV) Report

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	2	He	619102	0.35	617557	100.25	70	125	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	ICCB
Data File Name	226_ICB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T19:48:20-06:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	215CALB.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	0.052	56.5	403	33.0	1	
Na	23	1	nogas	5.132	45.0	296447	5.7	100	
Mg	24	1	nogas	3.716	36.5	45696	20.7	100	
Al	27	1	nogas	0.549	24.5	23989	1.3	5	
K	39	1	nogas	5.381	355.9	4892888	1.0	100	
Ti	47	1	nogas	0.107	57.9	227	30.0	2.5	
V	51	1	nogas	-3.894	-30.1	338998	2.8	2.5	
Cr	52	1	nogas	-0.061	-228.2	33200	0.9	2.5	
Mn	55	1	nogas	0.142	54.4	18980	1.6	2.5	
Co	59	1	nogas	0.026	58.2	783	20.6	2.5	
Ni	60	1	nogas	-0.389	-14.5	703	20.7	2.5	
Cu	63	1	nogas	0.084	21.4	1587	2.4	1	
Zn	66	1	nogas	-0.249	-20.5	1243	5.2	2.5	
As	75	1	nogas	-2.611	-22.3	56220	2.8	2.5	
Sr	88	1	nogas	0.056	34.0	1793	14.8	2.5	
Ag	107	1	nogas	0.029	47.9	313	33.5	2.5	
Cd	111	1	nogas	0.032	73.1	70	62.3	1	
Sb	121	1	nogas	1.134	21.0	10333	13.8	2.5	
Tl	205	1	nogas	0.266	41.5	3811	32.2	1	
Pb	208	1	nogas	0.052	26.6	1177	21.4	2.5	
U	238	1	nogas	0.105	53.1	2000	44.6	2.5	
[Pb]	206	1	nogas	0.044	64.8	270	41.7	2.5	
[Pb]	207	1	nogas	0.055	56.1	277	38.6	2.5	
Na	23	2	He	3.110	23.5	24403	2.2	100	
Mg	24	2	He	2.643	1.7	1947	2.3	100	
Al	27	2	He	-0.268	-102.1	537	15.8	5	
K	39	2	He	-1.238	-255.8	113292	1.6	100	
Ca	43	2	He	12.333	78.6	33	45.8	100	
Ca	44	2	He	0.234	839.8	577	7.8	100	
V	51	2	He	0.096	11.4	4129	2.3	2.5	
Cr	52	2	He	0.073	53.2	2777	7.2	2.5	
Mn	55	2	He	0.150	44.7	1127	17.2	2.5	
Fe	56	2	He	3.123	12.6	20335	5.7	100	
Co	59	2	He	0.017	36.5	150	24.0	2.5	
Ni	60	2	He	0.075	38.8	200	21.8	2.5	
Cu	63	2	He	0.252	8.9	607	14.0	1	
Zn	66	2	He	0.338	16.4	457	11.2	2.5	
As	75	2	He	0.055	123.4	252	21.9	2.5	
Se	78	2	He	0.428	38.5	157	7.0	1	
B	11	1	nogas	8.537	22.9	48682	7.4	10	
Si	28	1	nogas	-90.032	-143.2	1504996	1.4	5	
Ca	43	1	nogas	11.740	50.0	660	17.2	100	
Ca	44	1	nogas	6.249	65.4	18573	2.8	100	
Fe	56	1	nogas	-3.734	-330.6	1757575	4.6	100	

Initial Calibration Blank (ICB) Report

Se	77	1	nogas	-19.751	-33.6	18146	2.2	2.5	
Se	82	1	nogas	-0.240	-99.5	117	26.2	1	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Mo	95	1	nogas	0.268	42.4	1150	32.0	2.5	
Sn	118	1	nogas	0.341	33.4	2544	15.7	5	
Ba	137	1	nogas	0.063	30.4	333	22.5	2.5	
Sb	121	2	He	0.806	12.5	3250	9.8	2.5	
P	31	1	nogas	1.825	197.2	53138	0.4	10	
La	139	1	nogas	31.835	26.0	103	24.4	2.5	ICB Main CR1 Failed
Au	197	1	nogas	-68.787	-3983.0	30	145.3	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	nogas	1130944	5.05	1076309	105.08	70	125	
Ge	72	1	nogas	2374409	5.81	2371437	100.13	70	125	
In	115	1	nogas	2296311	8.17	2215793	103.63	70	125	
Bi	209	1	nogas	1719275	6.13	1799697	95.53	70	125	
Ge	72	2	He	629287	1.52	617557	101.90	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	235_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T20:06:02-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	215CALB.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	92.354	0.945	458494	1.20	100	92.4	90	110	
Na	23	1	nogas	9887.787	4.609	160683258	2.08	10000	98.9	90	110	
Mg	24	1	nogas	10182.576	7.576	101565742	1.33	10000	101.8	90	110	
Al	27	1	nogas	99.302	5.971	1240368	2.82	100	99.3	90	110	
K	39	1	nogas	9969.058	2.720	142009562	1.53	10000	99.7	90	110	
Ti	47	1	nogas	98.254	2.631	115687	2.16	100	98.3	90	110	
V	51	1	nogas	106.605	1.865	2165289	2.70	100	106.6	90	110	
Cr	52	1	nogas	100.743	1.393	1453387	4.13	100	100.7	90	110	
Mn	55	1	nogas	100.685	2.487	1817889	3.71	100	100.7	90	110	
Co	59	1	nogas	99.628	4.698	1416155	2.98	100	99.6	90	110	
Ni	60	1	nogas	98.456	3.083	315463	1.73	100	98.5	90	110	
Cu	63	1	nogas	99.488	3.094	749514	1.09	100	99.5	90	110	
Zn	66	1	nogas	98.884	3.252	247294	0.94	100	98.9	90	110	
As	75	1	nogas	101.531	3.122	375440	1.57	100	101.5	90	110	
Sr	88	1	nogas	98.230	5.242	1917981	1.54	100	98.2	90	110	
Ag	107	1	nogas	100.570	4.014	906785	0.22	100	100.6	90	110	
Cd	111	1	nogas	98.514	5.892	190966	1.02	100	98.5	90	110	
Sb	121	1	nogas	97.947	1.682	859467	2.44	100	97.9	90	110	
Tl	205	1	nogas	98.417	4.218	1341672	5.33	100	98.4	90	110	
Pb	208	1	nogas	100.020	2.855	1838723	2.85	100	100.0	90	110	
U	238	1	nogas	100.206	3.309	1890931	4.33	100	100.2	90	110	
[Pb]	206	1	nogas	98.444	2.051	458108	3.00	100	98.4	90	110	
[Pb]	207	1	nogas	98.249	2.509	405295	3.09	100	98.2	90	110	
Na	23	2	He	10167.761	1.720	9796220	2.18	10000	101.7	90	110	
Mg	24	2	He	10079.438	1.297	5272290	1.78	10000	100.8	90	110	
Al	27	2	He	101.732	4.319	30338	4.71	100	101.7	90	110	
K	39	2	He	10332.828	0.695	5913103	0.68	10000	103.3	90	110	
Ca	43	2	He	10135.144	0.606	16254	0.34	10000	101.4	90	110	
Ca	44	2	He	10097.774	0.804	270891	0.36	10000	101.0	90	110	
V	51	2	He	99.691	0.637	386717	1.11	100	99.7	90	110	
Cr	52	2	He	99.933	1.498	408963	1.01	100	99.9	90	110	
Mn	55	2	He	103.488	2.240	308706	1.81	100	103.5	90	110	
Fe	56	2	He	10053.253	1.094	35989612	0.77	10000	100.5	90	110	
Co	59	2	He	100.082	0.965	549527	1.25	100	100.1	90	110	
Ni	60	2	He	101.025	0.388	138238	0.27	100	101.0	90	110	
Cu	63	2	He	100.774	0.490	349270	0.97	100	100.8	90	110	
Zn	66	2	He	100.386	0.697	84594	1.16	100	100.4	90	110	
As	75	2	He	100.469	0.112	81202	0.58	100	100.5	90	110	
Se	78	2	He	100.578	2.739	6509	2.24	100	100.6	90	110	
B	11	1	nogas	468.210	2.965	1385756	4.18	500	93.6	90	110	
Si	28	1	nogas	5162.695	6.902	5091503	1.27	5000	103.3	90	110	
Ca	43	1	nogas	9927.806	2.187	243538	2.47	10000	99.3	90	110	
Ca	44	1	nogas	9888.790	1.613	3957850	3.92	10000	98.9	90	110	
Fe	56	1	nogas	9894.848	3.559	152949483	1.86	10000	98.9	90	110	
Se	77	1	nogas	118.665	10.950	37255	0.63	100	118.7	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	100.085	3.994	16301	3.16	100	100.1	90	110	
Mo	95	1	nogas	97.567	2.240	383096	1.99	100	97.6	90	110	
Sn	118	1	nogas	99.038	3.967	522453	2.32	100	99.0	90	110	
Ba	137	1	nogas	97.970	6.373	287510	1.35	100	98.0	90	110	
Sb	121	2	He	98.583	0.629	353038	0.90	100	98.6	90	110	
Li	7	1	nogas	92.290	1.531	1285835	2.76	100	92.3	90	110	
P	31	1	nogas	491.166	3.839	517358	1.01	500	98.2	90	110	
La	139	1	nogas	127.889	10.615	327	7.70	100	127.9	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	346.783	112.309	23	24.74	100	346.8	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	nogas	1045557	1.82	1076309	97.14	70	125	
Ge	72	1	nogas	2399321	4.08	2371437	101.18	70	125	
In	115	1	nogas	2215132	6.12	2215793	99.97	70	125	
Bi	209	1	nogas	1720253	1.20	1799697	95.59	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	622914	0.49	617557	100.87	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	236_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T20:07:57-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	215CALB.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	0.083	48.0	583	37.3	1	
Na	23	1	nogas	15.851	14.7	491916	5.1	100	
Mg	24	1	nogas	6.304	27.5	74995	21.0	100	
Al	27	1	nogas	0.362	26.7	22270	3.0	5	
K	39	1	nogas	-4.278	-341.1	4881553	1.7	100	
Ti	47	1	nogas	0.162	19.6	300	14.5	2.5	
V	51	1	nogas	1.171	47.1	432341	2.6	2.5	
Cr	52	1	nogas	-0.031	-368.4	34466	2.4	2.5	
Mn	55	1	nogas	0.566	9.0	27174	4.4	2.5	
Co	59	1	nogas	0.063	29.2	1330	17.0	2.5	
Ni	60	1	nogas	-0.406	-10.1	670	18.1	2.5	
Cu	63	1	nogas	0.111	29.7	1833	12.5	2	
Zn	66	1	nogas	-0.467	-7.3	727	9.2	2.5	
As	75	1	nogas	-2.660	-28.4	57501	5.9	2.5	
Sr	88	1	nogas	0.064	15.0	2007	9.5	2.5	
Ag	107	1	nogas	0.056	21.3	570	16.7	2.5	
Cd	111	1	nogas	0.063	26.6	137	22.4	1	
Sb	121	1	nogas	1.410	21.0	13078	17.9	2.5	
Tl	205	1	nogas	0.400	48.1	6265	55.5	1	
Pb	208	1	nogas	0.079	36.3	1683	31.3	2.5	
U	238	1	nogas	0.158	50.2	3361	58.8	2.5	
[Pb]	206	1	nogas	0.071	41.4	437	43.0	2.5	
[Pb]	207	1	nogas	0.070	36.1	373	39.2	2.5	
Na	23	2	He	15.025	6.5	35914	1.3	100	
Mg	24	2	He	4.792	2.0	3077	2.2	100	
Al	27	2	He	0.200	162.8	673	14.0	5	
K	39	2	He	-2.409	-114.9	112635	1.4	100	
Ca	43	2	He	16.416	65.4	40	43.3	100	
Ca	44	2	He	1.978	184.3	623	15.8	100	
V	51	2	He	0.517	4.1	5754	1.1	2.5	
Cr	52	2	He	0.029	132.0	2590	6.2	2.5	
Mn	55	2	He	0.791	2.7	3050	2.9	2.5	
Fe	56	2	He	6.142	4.2	31220	4.2	100	
Co	59	2	He	0.051	23.2	340	20.6	2.5	
Ni	60	2	He	0.047	70.7	160	27.2	2.5	
Cu	63	2	He	0.246	7.6	587	12.0	2	
Zn	66	2	He	0.048	70.5	210	14.3	2.5	
As	75	2	He	0.034	118.4	234	13.5	2.5	
Se	78	2	He	0.339	43.1	151	5.4	2	
B	11	1	nogas	10.083	12.0	54327	7.4	10	CCB Main CR1 Failed
Si	28	1	nogas	-83.997	-21.9	1548274	2.4	5	
Ca	43	1	nogas	9.138	42.4	617	17.2	100	
Ca	44	1	nogas	4.927	43.0	18529	2.0	100	
Fe	56	1	nogas	4.224	271.7	1927055	6.6	100	
Se	77	1	nogas	-20.667	-17.6	18493	5.2	2.5	
Se	82	1	nogas	-0.103	-142.4	143	17.6	2	
Mo	95	1	nogas	0.495	51.1	2080	45.1	2.5	
Sn	118	1	nogas	0.380	32.7	2844	20.7	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.107	48.4	473	30.6	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	1.009	8.4	3981	7.3	2.5	
P	31	1	nogas	-1.781	-90.4	51052	2.0	10	
La	139	1	nogas	17.975	27.7	70	14.3	2.5	CCB Main CR1 Failed
Au	197	1	nogas	1452.454	23.6	7	86.6	2.5	CCB Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1142606	0.40	1076309	106.16	70	125	
Ge	72	1	nogas	2430952	2.58	2371437	102.51	70	125	
In	115	1	nogas	2351113	3.69	2215793	106.11	70	125	
Bi	209	1	nogas	1843128	9.40	1799697	102.41	70	125	
Ge	72	2	He	628299	1.35	617557	101.74	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	247_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T20:29:51-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	215CALB.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	94.279	1.301	442504	0.17	100	94.3	90	110	
Na	23	1	nogas	10644.717	4.696	167453208	0.64	10000	106.4	90	110	
Mg	24	1	nogas	10282.162	6.428	99357129	1.13	10000	102.8	90	110	
Al	27	1	nogas	102.984	1.431	1253492	4.32	100	103.0	90	110	
K	39	1	nogas	9899.367	4.376	137266282	1.49	10000	99.0	90	110	
Ti	47	1	nogas	96.906	2.259	111076	1.12	100	96.9	90	110	
V	51	1	nogas	134.400	5.664	2552243	2.19	100	134.4	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	99.667	3.189	1399190	2.08	100	99.7	90	110	
Mn	55	1	nogas	97.826	1.041	1720010	3.10	100	97.8	90	110	
Co	59	1	nogas	101.237	2.548	1401273	0.74	100	101.2	90	110	
Ni	60	1	nogas	97.669	2.670	304679	1.08	100	97.7	90	110	
Cu	63	1	nogas	98.057	3.253	719147	0.48	100	98.1	90	110	
Zn	66	1	nogas	96.489	2.224	235003	0.93	100	96.5	90	110	
As	75	1	nogas	115.640	3.114	407487	0.41	100	115.6	90	110	CCV Main CR1-2 Failed
Sr	88	1	nogas	103.086	5.484	1959623	2.68	100	103.1	90	110	
Ag	107	1	nogas	98.381	2.035	863935	1.00	100	98.4	90	110	
Cd	111	1	nogas	96.829	1.960	183396	1.15	100	96.8	90	110	
Sb	121	1	nogas	96.153	3.073	821066	0.74	100	96.2	90	110	
Tl	205	1	nogas	99.933	2.741	1306004	3.40	100	99.9	90	110	
Pb	208	1	nogas	96.374	1.069	1771718	1.07	100	96.4	90	110	
U	238	1	nogas	101.335	1.654	1833087	1.50	100	101.3	90	110	
[Pb]	206	1	nogas	99.588	0.854	444301	0.76	100	99.6	90	110	
[Pb]	207	1	nogas	98.049	2.062	387753	1.05	100	98.0	90	110	
Na	23	2	He	10757.114	1.312	9941736	1.50	10000	107.6	90	110	
Mg	24	2	He	10191.922	1.367	5114542	1.52	10000	101.9	90	110	
Al	27	2	He	103.163	2.154	29503	2.09	100	103.2	90	110	
K	39	2	He	9963.263	1.883	5705691	1.85	10000	99.6	90	110	
Ca	43	2	He	10504.197	3.220	16160	2.88	10000	105.0	90	110	
Ca	44	2	He	10254.918	0.502	263936	0.56	10000	102.5	90	110	
V	51	2	He	101.077	1.624	376118	1.58	100	101.1	90	110	
Cr	52	2	He	99.674	0.239	391368	0.37	100	99.7	90	110	
Mn	55	2	He	102.443	1.040	293220	1.51	100	102.4	90	110	
Fe	56	2	He	10068.435	0.723	34582549	1.18	10000	100.7	90	110	
Co	59	2	He	98.960	2.580	521297	2.56	100	99.0	90	110	
Ni	60	2	He	99.316	2.688	130378	2.35	100	99.3	90	110	
Cu	63	2	He	99.914	2.223	332218	2.16	100	99.9	90	110	
Zn	66	2	He	99.277	2.435	80268	2.82	100	99.3	90	110	
As	75	2	He	100.839	0.913	78191	0.60	100	100.8	90	110	
Se	78	2	He	102.765	1.351	6378	1.14	100	102.8	90	110	
B	11	1	nogas	502.858	1.690	1405385	1.91	500	100.6	90	110	
Si	28	1	nogas	5206.059	6.225	4986218	1.59	5000	104.1	90	110	
Ca	43	1	nogas	10043.460	1.396	239847	1.75	10000	100.4	90	110	
Ca	44	1	nogas	9911.157	0.467	3861267	3.03	10000	99.1	90	110	
Fe	56	1	nogas	9772.598	1.920	147121995	1.62	10000	97.7	90	110	
Se	77	1	nogas	235.719	4.883	51861	0.90	100	235.7	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	99.272	5.632	15737	4.08	100	99.3	90	110	
Mo	95	1	nogas	96.207	2.993	367661	0.28	100	96.2	90	110	
Sn	118	1	nogas	98.227	1.638	505945	1.47	100	98.2	90	110	
Ba	137	1	nogas	97.334	2.947	279097	1.25	100	97.3	90	110	
Sb	121	2	He	97.893	0.241	336339	0.71	100	97.9	90	110	
Li	7	1	nogas	97.071	2.004	1274259	2.25	100	97.1	90	110	
P	31	1	nogas	486.751	3.111	499643	0.39	500	97.4	90	110	
La	139	1	nogas	116.932	19.340	293	16.11	100	116.9	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	508.726	130.141	20	50.00	100	508.7	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	nogas	988529	1.40	1076309	91.84	70	125	
Ge	72	1	nogas	2335190	3.00	2371437	98.47	70	125	
In	115	1	nogas	2160069	3.07	2215793	97.49	70	125	
Bi	209	1	nogas	1649506	1.15	1799697	91.65	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	597629	0.50	617557	96.77	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	248_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T20:31:50-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	215CALB.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	0.039	41.8	317	28.3	1	
Na	23	1	nogas	287.060	9.0	4918559	5.1	100	CCB Main CR1 Failed
Mg	24	1	nogas	13.498	14.9	145038	10.5	100	
Al	27	1	nogas	0.302	15.0	21132	1.0	5	
K	39	1	nogas	8.523	193.7	4966669	1.1	100	
Ti	47	1	nogas	0.099	37.5	220	20.8	2.5	
V	51	1	nogas	18.594	2.0	710442	3.1	2.5	CCB Main CR1 Failed
Cr	52	1	nogas	0.483	8.0	41066	2.8	2.5	
Mn	55	1	nogas	0.065	81.9	17745	2.2	2.5	
Co	59	1	nogas	0.037	43.2	943	20.2	2.5	
Ni	60	1	nogas	-0.145	-14.0	1487	5.4	2.5	
Cu	63	1	nogas	0.794	9.1	6908	4.4	2	
Zn	66	1	nogas	-0.403	-3.3	873	4.8	2.5	
As	75	1	nogas	8.977	1.4	91886	3.7	2.5	CCB Main CR1 Failed
Sr	88	1	nogas	0.876	9.3	17729	5.4	2.5	
Ag	107	1	nogas	0.043	25.7	443	19.4	2.5	
Cd	111	1	nogas	0.055	15.9	113	10.2	1	
Sb	121	1	nogas	1.040	31.1	9586	25.8	2.5	
Tl	205	1	nogas	0.377	57.3	5728	62.2	1	
Pb	208	1	nogas	0.056	43.8	1267	35.8	2.5	
U	238	1	nogas	0.142	55.2	2934	61.6	2.5	
[Pb]	206	1	nogas	0.046	39.8	297	37.1	2.5	
[Pb]	207	1	nogas	0.052	29.7	280	31.1	2.5	
Na	23	2	He	267.232	2.3	278992	1.7	100	CCB Main CR1 Failed
Mg	24	2	He	11.714	3.4	6695	3.8	100	
Al	27	2	He	-0.142	-100.5	570	8.0	5	
K	39	2	He	4.972	59.6	116778	1.4	100	
Ca	43	2	He	39.338	8.9	77	7.5	100	
Ca	44	2	He	29.631	10.0	1363	6.7	100	
V	51	2	He	1.347	2.2	8926	2.1	2.5	
Cr	52	2	He	0.009	589.1	2497	9.2	2.5	
Mn	55	2	He	0.128	27.9	1053	9.5	2.5	
Fe	56	2	He	4.507	4.8	25177	2.6	100	
Co	59	2	He	0.038	36.6	267	28.6	2.5	
Ni	60	2	He	0.050	46.2	163	18.7	2.5	
Cu	63	2	He	0.794	7.5	2487	7.8	2	
Zn	66	2	He	0.144	55.9	290	24.1	2.5	
As	75	2	He	0.152	38.0	329	14.8	2.5	
Se	78	2	He	0.402	85.9	154	14.5	2	
B	11	1	nogas	20.163	9.6	79704	4.5	10	CCB Main CR1 Failed
Si	28	1	nogas	-186.240	-56.9	1449485	1.6	5	
Ca	43	1	nogas	40.209	14.9	1360	9.4	100	
Ca	44	1	nogas	36.124	20.5	30519	6.5	100	
Fe	56	1	nogas	28.497	51.8	2259096	6.4	100	
Se	77	1	nogas	61.734	3.3	29361	3.2	2.5	CCB Main CR1 Failed
Se	82	1	nogas	0.105	250.0	173	21.8	2	
Mo	95	1	nogas	0.422	69.5	1750	61.2	2.5	
Sn	118	1	nogas	0.368	29.9	2594	16.2	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.248	16.7	857	11.1	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.707	1.4	2877	1.7	2.5	
P	31	1	nogas	-3.823	-53.1	48178	0.7	10	
La	139	1	nogas	35.170	28.4	107	23.6	2.5	CCB Main CR1 Failed
Au	197	1	nogas	1653.903	19.9	3	173.2	2.5	CCB Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1054977	3.13	1076309	98.02	70	125	
Ge	72	1	nogas	2386904	3.38	2371437	100.65	70	125	
In	115	1	nogas	2204706	5.70	2215793	99.50	70	125	
Bi	209	1	nogas	1782668	7.58	1799697	99.05	70	125	
Ge	72	2	He	625030	0.80	617557	101.21	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	258_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T20:51:47-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	215CALB.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
Be	9	1	nogas	96.912	2.910	758198	0.15	100	96.9	90	110	
Na	23	1	nogas	11203.633	4.045	332267816	1.47	10000	112.0	90	110	CCV Main CR1-2 Failed
Mg	24	1	nogas	9987.686	3.170	182097292	0.58	10000	99.9	90	110	
Al	27	1	nogas	103.161	0.675	2246218	1.09	100	103.2	90	110	
K	39	1	nogas	10500.888	1.202	260250997	1.61	10000	105.0	90	110	
Ti	47	1	nogas	102.048	0.995	209380	1.03	100	102.0	90	110	
V	51	1	nogas	116.052	3.198	4044036	2.92	100	116.1	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	101.425	2.655	2547853	2.30	100	101.4	90	110	
Mn	55	1	nogas	100.008	0.929	3145712	0.56	100	100.0	90	110	
Co	59	1	nogas	104.656	1.442	2593287	1.31	100	104.7	90	110	
Ni	60	1	nogas	103.659	0.786	578700	0.95	100	103.7	90	110	
Cu	63	1	nogas	115.646	0.612	1518318	0.93	100	115.6	90	110	CCV Main CR1-2 Failed
Zn	66	1	nogas	99.325	0.484	432968	0.93	100	99.3	90	110	
As	75	1	nogas	105.980	0.595	678017	0.41	100	106.0	90	110	
Sr	88	1	nogas	100.866	1.305	3434677	1.54	100	100.9	90	110	
Ag	107	1	nogas	98.473	1.269	1548018	1.69	100	98.5	90	110	
Cd	111	1	nogas	99.601	0.930	328259	0.44	100	99.6	90	110	
Sb	121	1	nogas	92.386	1.061	1412556	1.43	100	92.4	90	110	
Tl	205	1	nogas	101.173	5.848	2040892	2.03	100	101.2	90	110	
Pb	208	1	nogas	155.462	1.258	2857836	1.26	100	155.5	90	110	CCV Main CR1-2 Failed
U	238	1	nogas	102.984	4.212	2877251	1.32	100	103.0	90	110	
[Pb]	206	1	nogas	101.707	6.740	700328	2.89	100	101.7	90	110	
[Pb]	207	1	nogas	101.787	4.086	621777	0.93	100	101.8	90	110	
Na	23	2	He	12263.844	0.626	19676278	0.95	10000	122.6	90	110	CCV Main CR1-2 Failed
Mg	24	2	He	10641.966	1.673	9272451	0.91	10000	106.4	90	110	
Al	27	2	He	106.379	2.034	52797	2.09	100	106.4	90	110	
K	39	2	He	19058.172	0.889	10810047	0.88	10000	190.6	90	110	CCV Main CR1-2 Failed
Ca	43	2	He	10948.347	2.418	29246	1.68	10000	109.5	90	110	
Ca	44	2	He	10925.395	1.003	488245	1.77	10000	109.3	90	110	
V	51	2	He	106.238	1.227	686111	0.59	100	106.2	90	110	
Cr	52	2	He	105.810	1.127	721146	0.35	100	105.8	90	110	
Mn	55	2	He	106.039	1.830	526941	1.31	100	106.0	90	110	
Fe	56	2	He	10521.604	1.583	62748067	1.11	10000	105.2	90	110	
Co	59	2	He	102.580	0.535	938310	0.28	100	102.6	90	110	
Ni	60	2	He	103.847	0.986	236720	0.31	100	103.8	90	110	
Cu	63	2	He	102.007	0.292	589001	1.07	100	102.0	90	110	
Zn	66	2	He	101.205	1.532	142085	2.24	100	101.2	90	110	
As	75	2	He	99.541	1.198	134027	0.51	100	99.5	90	110	
Se	78	2	He	106.687	1.885	11489	1.50	100	106.7	90	110	
B	11	1	nogas	518.371	2.452	2414196	1.94	500	103.7	90	110	
Si	28	1	nogas	4578.727	0.960	8186331	0.90	5000	91.6	90	110	
Ca	43	1	nogas	10390.810	0.927	444125	1.39	10000	103.9	90	110	
Ca	44	1	nogas	10438.769	1.614	7275853	2.03	10000	104.4	90	110	
Fe	56	1	nogas	9984.858	0.492	268994156	0.68	10000	99.8	90	110	
Se	77	1	nogas	160.992	1.197	75048	0.43	100	161.0	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	100.949	0.961	28653	1.10	100	100.9	90	110	
Mo	95	1	nogas	95.722	1.299	654932	0.85	100	95.7	90	110	
Sn	118	1	nogas	97.007	0.801	869428	0.63	100	97.0	90	110	
Ba	137	1	nogas	95.926	0.883	478743	1.55	100	95.9	90	110	
Sb	121	2	He	93.311	0.734	556709	0.28	100	93.3	90	110	
Li	7	1	nogas	97.527	1.578	2133818	1.81	100	97.5	90	110	
P	31	1	nogas	513.954	0.589	939479	0.93	500	102.8	90	110	
La	139	1	nogas	131.513	11.877	570	10.67	100	131.5	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	551.330	73.654	30	33.33	100	551.3	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	nogas	1648517	2.98	1076309	153.16	70	125	ISTD Failed
Ge	72	1	nogas	4178518	0.47	2371437	176.20	70	125	ISTD Failed
In	115	1	nogas	3757369	0.84	2215793	169.57	70	125	ISTD Failed
Bi	209	1	nogas	2550152	3.86	1799697	141.70	70	125	ISTD Failed

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1037757	0.77	617557	168.04	70	125	ISTD Failed

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	259_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T20:53:47-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	215CALB.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	Upper Limit	QC Flag
Be	9	1	nogas	0.050	23.1	620	12.2	1	
Na	23	1	nogas	1392.906	7.0	40625274	2.5	100	CCB Main CR1 Failed
Mg	24	1	nogas	10.385	33.5	199409	26.3	100	
Al	27	1	nogas	0.484	10.8	39692	1.2	5	
K	39	1	nogas	4.016	294.8	8334963	1.3	100	
Ti	47	1	nogas	0.252	17.9	677	9.5	2.5	
V	51	1	nogas	1.726	28.8	736761	4.3	2.5	
Cr	52	1	nogas	0.263	51.2	64461	1.3	2.5	
Mn	55	1	nogas	-0.109	-59.1	24850	4.5	2.5	
Co	59	1	nogas	0.059	47.1	2137	28.1	2.5	
Ni	60	1	nogas	1.225	5.6	9896	2.7	2.5	
Cu	63	1	nogas	8.971	0.9	115805	3.3	2	CCB Main CR1 Failed
Zn	66	1	nogas	-0.231	-22.6	2200	7.3	2.5	
As	75	1	nogas	0.146	608.1	110365	4.8	2.5	
Sr	88	1	nogas	1.272	25.5	42994	21.0	2.5	
Ag	107	1	nogas	0.093	12.3	1513	8.7	2.5	
Cd	111	1	nogas	0.060	10.7	210	4.8	1	
Sb	121	1	nogas	1.044	29.9	16352	24.7	2.5	
Tl	205	1	nogas	0.397	63.4	9087	63.1	1	
Pb	208	1	nogas	0.120	39.2	2443	35.5	2.5	
U	238	1	nogas	0.174	61.7	5385	63.0	2.5	
[Pb]	206	1	nogas	0.077	36.0	680	32.9	2.5	
[Pb]	207	1	nogas	0.069	28.3	540	26.1	2.5	
Na	23	2	He	1473.404	0.7	2412275	0.5	100	CCB Main CR1 Failed
Mg	24	2	He	8.091	2.8	8015	2.8	100	
Al	27	2	He	-0.229	-25.2	910	3.3	5	
K	39	2	He	139.906	2.3	192507	0.9	100	CCB Main CR1 Failed
Ca	43	2	He	40.021	16.4	130	13.3	100	
Ca	44	2	He	29.365	83.7	2265	48.4	100	
V	51	2	He	0.457	3.4	9187	0.9	2.5	
Cr	52	2	He	0.059	67.2	4517	5.7	2.5	
Mn	55	2	He	0.146	31.8	1850	12.7	2.5	
Fe	56	2	He	5.155	7.0	46007	5.0	100	
Co	59	2	He	0.032	11.4	390	8.9	2.5	
Ni	60	2	He	0.057	74.6	290	34.0	2.5	
Cu	63	2	He	0.467	2.9	2257	3.6	2	
Zn	66	2	He	0.301	19.5	707	11.4	2.5	
As	75	2	He	0.086	8.8	460	1.9	2.5	
Se	78	2	He	-0.445	-57.3	167	16.2	2	
B	11	1	nogas	13.477	15.9	99670	6.9	10	CCB Main CR1 Failed
Si	28	1	nogas	-707.367	-17.8	1862426	4.1	5	
Ca	43	1	nogas	25.761	25.9	1710	13.2	100	
Ca	44	1	nogas	18.755	47.5	40110	11.2	100	
Fe	56	1	nogas	23.036	66.4	3696026	7.0	100	
Se	77	1	nogas	-0.262	-2289.2	35549	5.3	2.5	
Se	82	1	nogas	0.149	141.8	307	16.1	2	
Mo	95	1	nogas	0.475	59.9	3317	52.3	2.5	
Sn	118	1	nogas	0.439	34.8	5114	21.1	5	
Ba	137	1	nogas	0.087	33.4	667	16.0	2.5	

Continuing Calibration Blank (CCB) Report

Sb	121	2	He	0.673	4.7	4604	3.9	2.5	
P	31	1	nogas	12.623	26.1	108147	1.2	10	CCB Main CR1 Failed
La	139	1	nogas	23.882	43.4	137	25.7	2.5	CCB Main CR1 Failed
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Au	197	1	nogas	623.132	115.2	30	57.7	2.5	CCB Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1752630	3.45	1076309	162.84	70	125	ISTD Failed
Ge	72	1	nogas	4054894	3.62	2371437	170.99	70	125	ISTD Failed
In	115	1	nogas	3809054	5.39	2215793	171.90	70	125	ISTD Failed
Bi	209	1	nogas	2733314	2.65	1799697	151.88	70	125	ISTD Failed
Ge	72	2	He	1045261	0.33	617557	169.26	70	125	ISTD Failed

Calibration Blank Report

Sample Table

Sample Name	CAL BLK
Data File Name	273CALB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T21:41:36-06:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	80	68.11
Na	23	1	nogas	3503207	0.00
Mg	24	1	nogas	32700	0.01
Al	27	1	nogas	26612	0.01
K	39	1	nogas	7232154	0.00
Ti	47	1	nogas	223	6.45
V	51	1	nogas	829457	0.00
Cr	52	1	nogas	67626	0.00
Mn	55	1	nogas	19984	0.02
Co	59	1	nogas	433	2.93
Ni	60	1	nogas	2590	0.64
Cu	63	1	nogas	5361	0.18
Zn	66	1	nogas	797	2.14
As	75	1	nogas	108295	0.01
Sr	88	1	nogas	2760	0.24
Ag	107	1	nogas	163	57.62
Cd	111	1	nogas	30	111.11
Sb	121	1	nogas	297	3.65
Tl	205	1	nogas	193	10.81
Pb	208	1	nogas	307	4.03
[Pb]	206	1	nogas	67	85.18
[Pb]	207	1	nogas	90	44.51
Na	23	2	He	218341	0.00
Mg	24	2	He	1790	0.36
Al	27	2	He	663	0.13
K	39	2	He	160463	0.00
Ca	43	2	He	23	212.09
Ca	44	2	He	633	1.90
V	51	2	He	9678	0.03
Cr	52	2	He	3734	0.18
Mn	55	2	He	903	2.83
Fe	56	2	He	13418	0.02
Co	59	2	He	60	55.56
Ni	60	2	He	197	20.74
Cu	63	2	He	957	0.63
Zn	66	2	He	253	7.20
As	75	2	He	352	3.09
Se	78	2	He	132	14.34
B	11	1	nogas	21769	0.01
Si	28	1	nogas	1568633	0.00
Ca	43	1	nogas	513	2.58
Ca	44	1	nogas	18856	0.01

Calibration Blank Report

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	3475327	0.00
Se	77	1	nogas	34971	0.02
Se	82	1	nogas	143	15.65
Mo	95	1	nogas	137	26.95
Sn	118	1	nogas	997	0.50
Ba	137	1	nogas	227	13.67
Sb	121	2	He	107	13.43
Li	7	1	nogas	130242	0.00
P	31	1	nogas	83474	0.00
La	139	1	nogas	70	61.22

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	6	1	nogas	1561049	5.63
Ge	72	1	nogas	3727881	2.52
In	115	1	nogas	3493076	5.41
Bi	209	1	nogas	2658885	3.77
Ge	72	2	He	913806	1.24

Calibration Standard Report

Sample Table

Sample Name	2/10/200
Data File Name	274CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T21:43:36-06:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	273CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	13188	0.01
Na	23	1	nogas	8367846	0.00
Mg	24	1	nogas	3219726	0.00
Al	27	1	nogas	69775	0.00
K	39	1	nogas	11662634	0.00
Ti	47	1	nogas	3764	0.17
V	51	1	nogas	882487	0.00
Cr	52	1	nogas	109999	0.00
Mn	55	1	nogas	78348	0.00
Co	59	1	nogas	46031	0.00
Ni	60	1	nogas	12968	0.04
Cu	63	1	nogas	29030	0.01
Zn	66	1	nogas	8792	0.03
As	75	1	nogas	115817	0.00
Sr	88	1	nogas	63362	0.00
Ag	107	1	nogas	28002	0.00
Cd	111	1	nogas	6008	0.06
Sb	121	1	nogas	26694	0.01
Tl	205	1	nogas	40741	0.00
Pb	208	1	nogas	57353	0.00
[Pb]	206	1	nogas	14263	0.02
[Pb]	207	1	nogas	13005	0.02
Na	23	2	He	509186	0.00
Mg	24	2	He	165176	0.00
Al	27	2	He	1700	0.68
K	39	2	He	335356	0.00
Ca	43	2	He	563	3.31
Ca	44	2	He	8562	0.01
V	51	2	He	20823	0.00
Cr	52	2	He	16341	0.01
Mn	55	2	He	9939	0.03
Fe	56	2	He	1124420	0.00
Co	59	2	He	16978	0.02
Ni	60	2	He	4401	0.04
Cu	63	2	He	11827	0.04
Zn	66	2	He	2890	0.19
As	75	2	He	2827	0.09
Se	78	2	He	365	1.50
B	11	1	nogas	58285	0.00
Si	28	1	nogas	1714786	0.00

Calibration Standard Report

Ca	43	1	nogas	8119	0.03
Ca	44	1	nogas	141974	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	8253110	0.00
Se	77	1	nogas	35141	0.02
Se	82	1	nogas	640	0.88
Mo	95	1	nogas	11867	0.02
Sn	118	1	nogas	16558	0.03
Ba	137	1	nogas	8909	0.05
Sb	121	2	He	10690	0.00
P	31	1	nogas	101788	0.00
La	139	1	nogas	100	10.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1582673	1.88	1561049	101.39	70	125	
Ge	72	1	nogas	3727479	2.35	3727881	99.99	70	125	
In	115	1	nogas	3516345	2.40	3493076	100.67	70	125	
Bi	209	1	nogas	2651687	3.89	2658885	99.73	70	125	
Ge	72	2	He	928507	1.06	913806	101.61	70	125	

Calibration Standard Report

Sample Table

Sample Name	5/25/500
Data File Name	275CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T21:45:38-06:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	
ISTD Ref File Name	273CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	33269	0.00
Na	23	1	nogas	15862125	0.00
Mg	24	1	nogas	7943948	0.00
Al	27	1	nogas	129398	0.00
K	39	1	nogas	17930375	0.00
Ti	47	1	nogas	9262	0.02
V	51	1	nogas	1043791	0.00
Cr	52	1	nogas	180350	0.00
Mn	55	1	nogas	163578	0.00
Co	59	1	nogas	113034	0.00
Ni	60	1	nogas	27421	0.01
Cu	63	1	nogas	65453	0.00
Zn	66	1	nogas	21573	0.01
As	75	1	nogas	139361	0.00
Sr	88	1	nogas	152059	0.00
Ag	107	1	nogas	69777	0.00
Cd	111	1	nogas	15210	0.01
Sb	121	1	nogas	65067	0.00
Tl	205	1	nogas	100589	0.00
Pb	208	1	nogas	141171	0.00
[Pb]	206	1	nogas	35021	0.01
[Pb]	207	1	nogas	30866	0.01
Na	23	2	He	937824	0.00
Mg	24	2	He	397782	0.00
Al	27	2	He	3064	0.17
K	39	2	He	589964	0.00
Ca	43	2	He	1193	0.81
Ca	44	2	He	21486	0.02
V	51	2	He	38250	0.00
Cr	52	2	He	35107	0.01
Mn	55	2	He	23859	0.01
Fe	56	2	He	2773819	0.00
Co	59	2	He	42546	0.01
Ni	60	2	He	10770	0.04
Cu	63	2	He	28362	0.00
Zn	66	2	He	6811	0.05
As	75	2	He	6419	0.04
Se	78	2	He	623	1.01
B	11	1	nogas	116224	0.00
Si	28	1	nogas	1835429	0.00

Calibration Standard Report

Ca	43	1	nogas	19020	0.02
Ca	44	1	nogas	323798	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	15227973	0.00
Se	77	1	nogas	38939	0.01
Se	82	1	nogas	1407	0.79
Mo	95	1	nogas	29762	0.01
Sn	118	1	nogas	41068	0.01
Ba	137	1	nogas	22548	0.01
Sb	121	2	He	26090	0.01
P	31	1	nogas	124076	0.00
La	139	1	nogas	167	9.06

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1473575	7.00	1561049	94.40	70	125	
Ge	72	1	nogas	3518478	7.09	3727881	94.38	70	125	
In	115	1	nogas	3243734	9.22	3493076	92.86	70	125	
Bi	209	1	nogas	2415811	5.90	2658885	90.86	70	125	
Ge	72	2	He	907154	0.74	913806	99.27	70	125	

Calibration Standard Report

Sample Table

Sample Name	10/50/1000
Data File Name	276CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T21:47:39-06:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	
ISTD Ref File Name	273CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	62167	0.01
Na	23	1	nogas	27174076	0.00
Mg	24	1	nogas	14930068	0.00
Al	27	1	nogas	212889	0.00
K	39	1	nogas	27686544	0.00
Ti	47	1	nogas	17288	0.02
V	51	1	nogas	1130461	0.00
Cr	52	1	nogas	273819	0.00
Mn	55	1	nogas	287871	0.00
Co	59	1	nogas	216018	0.00
Ni	60	1	nogas	49974	0.00
Cu	63	1	nogas	117459	0.00
Zn	66	1	nogas	39222	0.01
As	75	1	nogas	163780	0.00
Sr	88	1	nogas	289433	0.00
Ag	107	1	nogas	135810	0.00
Cd	111	1	nogas	28583	0.01
Sb	121	1	nogas	126611	0.00
Tl	205	1	nogas	190016	0.00
Pb	208	1	nogas	267837	0.00
[Pb]	206	1	nogas	67342	0.00
[Pb]	207	1	nogas	58752	0.00
Na	23	2	He	1606899	0.00
Mg	24	2	He	745386	0.00
Al	27	2	He	5091	0.19
K	39	2	He	980335	0.00
Ca	43	2	He	2254	0.27
Ca	44	2	He	39505	0.01
V	51	2	He	63553	0.00
Cr	52	2	He	62579	0.00
Mn	55	2	He	44825	0.00
Fe	56	2	He	5235605	0.00
Co	59	2	He	79517	0.00
Ni	60	2	He	19954	0.02
Cu	63	2	He	50693	0.00
Zn	66	2	He	12745	0.01
As	75	2	He	11881	0.02
Se	78	2	He	1085	0.15
B	11	1	nogas	204538	0.00
Si	28	1	nogas	2094473	0.00

Calibration Standard Report

Ca	43	1	nogas	37401	0.01
Ca	44	1	nogas	595725	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	25667365	0.00
Se	77	1	nogas	40462	0.01
Se	82	1	nogas	2717	0.20
Mo	95	1	nogas	55215	0.01
Sn	118	1	nogas	78315	0.01
Ba	137	1	nogas	41774	0.01
Sb	121	2	He	48668	0.00
P	31	1	nogas	160302	0.00
La	139	1	nogas	197	1.49

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1501518	1.70	1561049	96.19	70	125	
Ge	72	1	nogas	3574184	3.16	3727881	95.88	70	125	
In	115	1	nogas	3317167	6.32	3493076	94.96	70	125	
Bi	209	1	nogas	2589501	5.92	2658885	97.39	70	125	
Ge	72	2	He	907297	1.14	913806	99.29	70	125	

Calibration Standard Report

Sample Table

Sample Name	100/500/10K
Data File Name	277CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T21:49:40-06:00
Sample Type	CalStd
Level	5
Dilution	1
Comment	
ISTD Ref File Name	273CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	631856	0.00
Na	23	1	nogas	239433022	0.00
Mg	24	1	nogas	147522953	0.00
Al	27	1	nogas	1786075	0.00
K	39	1	nogas	208873788	0.00
Ti	47	1	nogas	175033	0.00
V	51	1	nogas	3191693	0.00
Cr	52	1	nogas	2138475	0.00
Mn	55	1	nogas	2660857	0.00
Co	59	1	nogas	2172840	0.00
Ni	60	1	nogas	478361	0.00
Cu	63	1	nogas	1115155	0.00
Zn	66	1	nogas	374583	0.00
As	75	1	nogas	558383	0.00
Sr	88	1	nogas	2904730	0.00
Ag	107	1	nogas	1355345	0.00
Cd	111	1	nogas	289803	0.00
Sb	121	1	nogas	1299039	0.00
Tl	205	1	nogas	1979502	0.00
Pb	208	1	nogas	2750600	0.00
[Pb]	206	1	nogas	675581	0.00
[Pb]	207	1	nogas	599928	0.00
Na	23	2	He	13872806	0.00
Mg	24	2	He	7360312	0.00
Al	27	2	He	42612	0.01
K	39	2	He	8477277	0.00
Ca	43	2	He	23074	0.01
Ca	44	2	He	384381	0.00
V	51	2	He	552862	0.00
Cr	52	2	He	596239	0.00
Mn	55	2	He	432694	0.00
Fe	56	2	He	52494761	0.00
Co	59	2	He	798769	0.00
Ni	60	2	He	198409	0.00
Cu	63	2	He	496766	0.00
Zn	66	2	He	120094	0.00
As	75	2	He	117549	0.00
Se	78	2	He	9706	0.02
B	11	1	nogas	1930705	0.00
Si	28	1	nogas	6601084	0.00

Calibration Standard Report

Ca	43	1	nogas	363320	0.00
Ca	44	1	nogas	5925873	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	228862805	0.00
Se	77	1	nogas	55030	0.00
Se	82	1	nogas	25268	0.01
Mo	95	1	nogas	571472	0.00
Sn	118	1	nogas	787914	0.00
Ba	137	1	nogas	424775	0.00
Sb	121	2	He	501163	0.00
P	31	1	nogas	773304	0.00
La	139	1	nogas	543	1.19

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1408609	4.13	1561049	90.23	70	125	
Ge	72	1	nogas	3438831	4.52	3727881	92.25	70	125	
In	115	1	nogas	3137443	8.92	3493076	89.82	70	125	
Bi	209	1	nogas	2396303	7.22	2658885	90.12	70	125	
Ge	72	2	He	881145	0.36	913806	96.43	70	125	

Calibration Standard Report

Sample Table

Sample Name	200/1000/20K
Data File Name	278CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T21:51:37-06:00
Sample Type	CalStd
Level	6
Dilution	1
Comment	
ISTD Ref File Name	273CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	1237472	0.00
Na	23	1	nogas	455973760	0.00
Mg	24	1	nogas	280848173	0.00
Al	27	1	nogas	3358568	0.00
K	39	1	nogas	395774276	0.00
Ti	47	1	nogas	335653	0.00
V	51	1	nogas	5347264	0.00
Cr	52	1	nogas	4017181	0.00
Mn	55	1	nogas	5118571	0.00
Co	59	1	nogas	4146868	0.00
Ni	60	1	nogas	911285	0.00
Cu	63	1	nogas	2131901	0.00
Zn	66	1	nogas	716838	0.00
As	75	1	nogas	989618	0.00
Sr	88	1	nogas	5646506	0.00
Ag	107	1	nogas	2601708	0.00
Cd	111	1	nogas	577563	0.00
Sb	121	1	nogas	2570603	0.00
Tl	205	1	nogas	3861400	0.00
Pb	208	1	nogas	5518583	0.00
[Pb]	206	1	nogas	1369804	0.00
[Pb]	207	1	nogas	1224343	0.00
Na	23	2	He	26489877	0.00
Mg	24	2	He	14135848	0.00
Al	27	2	He	80446	0.00
K	39	2	He	16075609	0.00
Ca	43	2	He	44490	0.01
Ca	44	2	He	749029	0.00
V	51	2	He	1079524	0.00
Cr	52	2	He	1152917	0.00
Mn	55	2	He	847983	0.00
Fe	56	2	He	102232328	0.00
Co	59	2	He	1577889	0.00
Ni	60	2	He	388083	0.00
Cu	63	2	He	975789	0.00
Zn	66	2	He	239370	0.00
As	75	2	He	230899	0.00
Se	78	2	He	19292	0.00
B	11	1	nogas	3711452	0.00
Si	28	1	nogas	11236244	0.00

Calibration Standard Report

Ca	43	1	nogas	696633	0.00
Ca	44	1	nogas	11382074	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	446697410	0.00
Se	77	1	nogas	72943	0.00
Se	82	1	nogas	49822	0.00
Mo	95	1	nogas	1135330	0.00
Sn	118	1	nogas	1583321	0.00
Ba	137	1	nogas	858584	0.00
Sb	121	2	He	1013013	0.00
P	31	1	nogas	1427175	0.00
La	139	1	nogas	707	1.16

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1316098	1.98	1561049	84.31	70	125	
Ge	72	1	nogas	3430382	0.84	3727881	92.02	70	125	
In	115	1	nogas	3282583	2.07	3493076	93.97	70	125	
Bi	209	1	nogas	2529566	3.09	2658885	95.14	70	125	
Ge	72	2	He	877109	0.59	913806	95.98	70	125	

Low Level Initial Calibration Verification (LLICV) Report

Sample Table

Sample Name	LLCCV5
Data File Name	281LICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T21:57:33-06:00
Sample Type	LLICV
Dilution	1
Comment	
ISTD Ref File Name	273CALB.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	4.593	5.639	31656	1.73	5	91.9	70	130	
Na	23	1	nogas	588.909	21.384	16002607	2.02	500	117.8	70	130	
Mg	24	1	nogas	560.621	17.279	7637157	1.99	500	112.1	70	130	
Al	27	1	nogas	5.969	11.318	124850	0.31	5	119.4	70	130	
K	39	1	nogas	534.233	16.283	17080017	0.52	500	106.8	70	130	
Ti	47	1	nogas	5.250	13.524	9039	3.72	5	105.0	70	130	
V	51	1	nogas	-7.366	-18.201	592108	3.97	5	-147.3	70	130	LLICV Main CR1 Failed
Cr	52	1	nogas	4.682	17.481	155221	1.75	5	93.6	70	130	
Mn	55	1	nogas	5.529	10.898	159950	1.41	5	110.6	70	130	
Co	59	1	nogas	5.490	8.544	115059	0.86	5	109.8	70	130	
Ni	60	1	nogas	4.820	8.980	26890	2.92	5	96.4	70	130	
Cu	63	1	nogas	5.507	10.722	63824	1.52	5	110.1	70	130	
Zn	66	1	nogas	5.117	9.909	21416	0.88	5	102.3	70	130	
As	75	1	nogas	-2.136	-52.986	97414	4.93	5	-42.7	70	130	LLICV Main CR1 Failed
Sr	88	1	nogas	5.495	10.712	157927	1.82	5	109.9	70	130	
Ag	107	1	nogas	5.517	10.334	72291	2.61	5	110.3	70	130	
Cd	111	1	nogas	5.391	13.920	15607	3.93	5	107.8	70	130	
Sb	121	1	nogas	5.514	9.768	71061	0.68	5	110.3	70	130	
Tl	205	1	nogas	5.846	4.799	115959	1.08	5	116.9	70	130	
Pb	208	1	nogas	5.474	1.350	151225	1.35	5	109.5	70	130	
U	238	1	nogas	5.595	7.327	153163	2.24	5	111.9	70	130	
[Pb]	206	1	nogas	5.393	3.987	37664	2.65	5	107.9	70	130	
[Pb]	207	1	nogas	5.327	6.300	33221	1.24	5	106.5	70	130	
Na	23	2	He	525.866	0.408	937742	0.27	500	105.2	70	130	
Mg	24	2	He	521.771	1.034	386451	0.47	500	104.4	70	130	
Al	27	2	He	31.456	144.728	14022	133.80	5	629.1	70	130	LLICV Main CR1 Failed
K	39	2	He	500.342	1.392	562242	0.99	500	100.1	70	130	
Ca	43	2	He	587.188	38.756	1384	38.12	500	117.4	70	130	
Ca	44	2	He	526.497	2.116	21119	1.49	500	105.3	70	130	
V	51	2	He	4.215	1.456	33403	0.83	5	84.3	70	130	
Cr	52	2	He	5.183	1.524	34726	1.42	5	103.7	70	130	
Mn	55	2	He	5.202	2.649	23785	2.12	5	104.0	70	130	
Fe	56	2	He	531.478	2.210	2839251	2.74	500	106.3	70	130	
Co	59	2	He	5.110	1.167	41874	1.49	5	102.2	70	130	
Ni	60	2	He	5.001	3.209	10667	3.22	5	100.0	70	130	
Cu	63	2	He	5.223	2.043	28436	1.35	5	104.5	70	130	
Zn	66	2	He	5.503	3.255	7178	2.61	5	110.1	70	130	
As	75	2	He	4.857	2.279	6162	1.99	5	97.1	70	130	
Se	78	2	He	4.886	4.870	609	4.38	5	97.7	70	130	
B	11	1	nogas	29.483	8.770	141844	3.62	25	117.9	70	130	
Si	28	1	nogas	277.949	63.890	1713972	2.86	25	1111.8	70	130	LLICV Main CR1 Failed
Ca	43	1	nogas	528.532	9.293	18983	3.10	500	105.7	70	130	
Ca	44	1	nogas	530.549	10.567	320237	0.98	500	106.1	70	130	
Fe	56	1	nogas	505.403	12.033	14406738	0.04	500	101.1	70	130	
Se	77	1	nogas	-30.002	-22.007	25852	4.26	5	-600.0	70	130	LLICV Main CR1 Failed
Se	82	1	nogas	5.942	7.134	1610	2.85	5	118.8	70	130	
Mo	95	1	nogas	5.698	14.180	32323	4.52	5	114.0	70	130	
Sn	118	1	nogas	5.694	17.084	45800	2.99	5	113.9	70	130	
Ba	137	1	nogas	5.432	14.704	23453	1.31	5	108.6	70	130	
Sb	121	2	He	5.446	0.734	28580	0.19	5	108.9	70	130	
Li	7	1	nogas	5.450	1.517	219392	3.40	5	109.0	70	130	
P	31	1	nogas	34.042	22.254	122852	1.39	25	136.2	70	130	LLICV Main CR1 Failed
La	139	1	nogas	19.752	77.596	133	30.31	5	395.0	70	130	LLICV Main CR1 Failed
Au	197	1	nogas	197.938	75.021	23	65.47	5	3958.8	70	130	LLICV Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1477505	3.82	1561049	94.65	70	125	
Ge	72	1	nogas	3440609	8.95	3727881	92.29	70	125	
In	115	1	nogas	3287638	13.31	3493076	94.12	70	125	
Bi	209	1	nogas	2554112	5.04	2658885	96.06	70	125	

Low Level Initial Calibration Verification (LLICV) Report

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	2	He	908361	0.56	913806	99.40	70	125	

Sample Report

Sample Table

Sample Name	LLCCV2
Data File Name	282SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T21:59:33-06:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	273CALB.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	1.882	1.882	10.13	12834	0.01	2000	
Na	23	1	nogas	258.532	258.532	27.33	8771618	0.00	200000	
Mg	24	1	nogas	228.919	228.919	15.40	3137817	0.01	200000	
Al	27	1	nogas	2.667	2.667	21.40	69437	0.00	2000	
K	39	1	nogas	212.741	212.741	27.05	10846974	0.00	200000	
Ti	47	1	nogas	2.180	2.180	15.35	3887	0.06	2000	
V	51	1	nogas	-12.253	-12.253	-19.63	479266	0.00	2000	
Cr	52	1	nogas	1.360	1.360	35.91	89524	0.00	2000	
Mn	55	1	nogas	2.241	2.241	14.42	76072	0.00	2000	
Co	59	1	nogas	2.215	2.215	10.02	46880	0.00	2000	
Ni	60	1	nogas	1.375	1.375	20.16	11187	0.01	2000	
Cu	63	1	nogas	2.130	2.130	14.33	27805	0.01	2000	
Zn	66	1	nogas	1.688	1.688	15.59	9146	0.02	2000	
As	75	1	nogas	-6.690	-6.690	-19.36	77510	-0.01	2000	
Sr	88	1	nogas	2.179	2.179	11.70	64445	0.00	2000	
Ag	107	1	nogas	2.288	2.288	12.56	30176	0.01	2000	
Cd	111	1	nogas	2.243	2.243	15.45	6491	0.03	2000	
Sb	121	1	nogas	2.241	2.241	12.48	29148	0.01	2000	
Tl	205	1	nogas	2.203	2.203	10.20	44882	0.00	2000	
Pb	208	1	nogas	2.262	2.262	1.21	62682	0.00	2000	
U	238	1	nogas	2.225	2.225	6.53	62621	0.00	2000	
[Pb]	206	1	nogas	2.157	2.157	8.58	15484	0.01	2000	
[Pb]	207	1	nogas	2.105	2.105	6.26	13539	0.02	2000	
Na	23	2	He	205.074	205.074	1.31	515054	0.04	200000	
Mg	24	2	He	207.710	207.710	2.17	160189	0.13	200000	
Al	27	2	He	1.366	1.366	3.37	1657	0.08	2000	
K	39	2	He	191.097	191.097	1.28	313916	0.06	200000	
Ca	43	2	He	221.062	221.062	22.37	553	39.95	200000	
Ca	44	2	He	204.611	204.611	1.29	8886	2.30	200000	
V	51	2	He	1.074	1.074	3.54	16510	0.01	2000	
Cr	52	2	He	2.033	2.033	2.17	16417	0.01	2000	
Mn	55	2	He	2.044	2.044	3.16	10230	0.02	2000	
Fe	56	2	He	203.162	203.162	2.15	1130652	0.02	200000	
Co	59	2	He	2.039	2.039	3.83	17312	0.01	2000	
Ni	60	2	He	1.935	1.935	2.04	4647	0.04	2000	
Cu	63	2	He	1.934	1.934	1.97	12214	0.02	2000	
Zn	66	2	He	1.920	1.920	3.60	2840	0.07	2000	
As	75	2	He	1.807	1.807	1.35	2598	0.07	2000	
Se	78	2	He	2.065	2.065	2.38	340	0.61	2000	
B	11	1	nogas	12.141	12.141	6.81	69742	0.02	2000	
Si	28	1	nogas	5.162	5.162	3419.13	1450520	0.00	2000	
Ca	43	1	nogas	216.542	216.542	12.83	8082	2.68	200000	

Sample Report

Ca	44	1	nogas	210.579	210.579	14.08	138021	0.15	200000	
Fe	56	1	nogas	190.571	190.571	18.70	7451503	0.00	200000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Se	77	1	nogas	-46.033	-46.033	-20.60	22558	-0.20	2000	
Se	82	1	nogas	2.019	2.019	18.14	637	0.32	2000	
Mo	95	1	nogas	2.166	2.166	10.69	12455	0.02	2000	
Sn	118	1	nogas	2.252	2.252	19.64	18593	0.01	2000	
Ba	137	1	nogas	2.177	2.177	14.40	9503	0.02	2000	
Sb	121	2	He	2.112	2.112	3.92	11527	0.02	2000	
La	139	1	nogas	19.507	19.507	17.92	137	14.27	2000	
Au	197	1	nogas	200.745	200.745	84.02	23	860.34	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1460618	6.02	1561049	93.57	70	125	
Ge	72	1	nogas	3461736	10.52	3727881	92.86	70	125	
In	115	1	nogas	3284379	14.77	3493076	94.03	70	125	
Bi	209	1	nogas	2626794	7.81	2658885	98.79	70	125	
Ge	72	2	He	939238	0.29	913806	102.78	70	125	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	ICCV
Data File Name	283_ICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T22:01:33-06:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	273CALB.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	96.854	7.249	625960	1.56	100	96.9	90	110	
Na	23	1	nogas	10714.423	15.789	238664672	1.75	10000	107.1	90	110	
Mg	24	1	nogas	10781.353	14.927	147319482	1.14	10000	107.8	90	110	
Al	27	1	nogas	105.321	10.068	1802466	1.04	100	105.3	90	110	
K	39	1	nogas	10303.558	9.996	208917263	0.82	10000	103.0	90	110	
Ti	47	1	nogas	104.672	9.936	177414	1.03	100	104.7	90	110	
V	51	1	nogas	96.157	13.594	2998969	1.26	100	96.2	90	110	
Cr	52	1	nogas	106.621	8.969	2195423	1.49	100	106.6	90	110	
Mn	55	1	nogas	108.495	9.996	2807877	1.05	100	108.5	90	110	
Co	59	1	nogas	105.324	10.282	2206815	1.67	100	105.3	90	110	
Ni	60	1	nogas	105.632	10.425	488213	1.40	100	105.6	90	110	
Cu	63	1	nogas	107.142	11.473	1154600	2.46	100	107.1	90	110	
Zn	66	1	nogas	107.171	9.059	389208	0.20	100	107.2	90	110	
As	75	1	nogas	97.308	11.165	539271	0.18	100	97.3	90	110	
Sr	88	1	nogas	106.925	8.026	3043343	2.39	100	106.9	90	110	
Ag	107	1	nogas	111.226	8.605	1461609	0.72	100	111.2	90	110	ICV Main CR1 Failed
Cd	111	1	nogas	108.762	12.607	317708	0.78	100	108.8	90	110	
Sb	121	1	nogas	106.311	8.409	1371713	1.32	100	106.3	90	110	
Tl	205	1	nogas	110.635	7.941	2134125	1.24	100	110.6	90	110	ICV Main CR1 Failed
Pb	208	1	nogas	109.824	0.436	3028431	0.44	100	109.8	90	110	
U	238	1	nogas	115.723	9.936	3084104	2.11	100	115.7	90	110	ICV Main CR1 Failed
[Pb]	206	1	nogas	109.286	8.474	741577	0.96	100	109.3	90	110	
[Pb]	207	1	nogas	108.686	8.788	658576	0.41	100	108.7	90	110	
Na	23	2	He	9992.799	1.427	13981433	1.15	10000	99.9	90	110	
Mg	24	2	He	10110.626	0.501	7493572	0.26	10000	101.1	90	110	
Al	27	2	He	100.871	1.673	43099	1.87	100	100.9	90	110	
K	39	2	He	10415.551	1.023	8524250	1.00	10000	104.2	90	110	
Ca	43	2	He	9852.670	2.829	22968	2.65	10000	98.5	90	110	
Ca	44	2	He	10109.023	0.320	396048	0.82	10000	101.1	90	110	
V	51	2	He	100.233	0.490	569327	0.95	100	100.2	90	110	
Cr	52	2	He	101.382	1.123	613401	0.96	100	101.4	90	110	
Mn	55	2	He	100.731	0.518	446323	0.26	100	100.7	90	110	
Fe	56	2	He	10173.218	1.439	54373076	1.34	10000	101.7	90	110	
Co	59	2	He	101.125	0.880	831745	1.16	100	101.1	90	110	
Ni	60	2	He	102.972	0.092	208934	0.45	100	103.0	90	110	
Cu	63	2	He	103.245	1.080	526496	1.39	100	103.2	90	110	
Zn	66	2	He	100.751	0.865	125636	1.37	100	100.8	90	110	
As	75	2	He	99.311	0.393	119798	0.75	100	99.3	90	110	
Se	78	2	He	98.697	1.755	9963	1.22	100	98.7	90	110	
B	11	1	nogas	495.260	5.611	1935632	1.89	500	99.1	90	110	
Si	28	1	nogas	5083.411	12.607	6483909	0.96	5000	101.7	90	110	
Ca	43	1	nogas	10494.668	10.152	369183	1.58	10000	104.9	90	110	
Ca	44	1	nogas	10306.491	10.013	5925717	1.11	10000	103.1	90	110	
Fe	56	1	nogas	10607.792	11.415	239294605	2.33	10000	106.1	90	110	
Se	77	1	nogas	71.035	23.150	47208	2.05	100	71.0	90	110	ICV Main CR1 Failed
Se	82	1	nogas	104.936	9.418	26299	1.68	100	104.9	90	110	
Mo	95	1	nogas	106.333	9.216	605231	1.10	100	106.3	90	110	
Sn	118	1	nogas	105.794	12.659	845879	0.72	100	105.8	90	110	
Ba	137	1	nogas	105.983	13.224	458658	1.08	100	106.0	90	110	
Sb	121	2	He	101.124	0.888	531479	0.49	100	101.1	90	110	
Li	7	1	nogas	100.239	6.135	1774169	0.16	100	100.2	90	110	
P	31	1	nogas	504.214	10.443	763214	0.54	500	100.8	90	110	
La	139	1	nogas	141.711	16.958	587	23.27	100	141.7	90	110	ICV Main CR1 Failed
Au	197	1	nogas	217.861	104.359	23	89.21	100	217.9	90	110	ICV Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1390517	5.50	1561049	89.08	70	125	
Ge	72	1	nogas	3453248	8.42	3727881	92.63	70	125	
In	115	1	nogas	3314089	11.37	3493076	94.88	70	125	
Bi	209	1	nogas	2495691	8.97	2658885	93.86	70	125	

Initial Calibration Verification (ICV) Report

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	2	He	912949	0.52	913806	99.91	70	125	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	ICCB
Data File Name	284_ICB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T22:03:31-06:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	273CALB.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	0.065	58.6	497	43.4	1	
Na	23	1	nogas	20.311	161.9	3538294	6.4	100	
Mg	24	1	nogas	4.233	43.1	85139	14.6	100	
Al	27	1	nogas	0.627	36.9	34441	1.6	5	
K	39	1	nogas	4.216	847.4	6621017	1.8	100	
Ti	47	1	nogas	0.088	7.5	350	9.9	2.5	
V	51	1	nogas	-12.381	-10.5	468649	4.0	2.5	
Cr	52	1	nogas	-0.649	-35.0	48453	1.4	2.5	
Mn	55	1	nogas	0.111	85.6	20855	2.1	2.5	
Co	59	1	nogas	0.039	45.6	1180	20.0	2.5	
Ni	60	1	nogas	-0.718	-1.3	1590	11.0	2.5	
Cu	63	1	nogas	-0.045	-130.3	4361	4.2	1	
Zn	66	1	nogas	-0.268	-30.7	2050	8.1	2.5	
As	75	1	nogas	-7.096	-18.2	74220	3.2	2.5	
Sr	88	1	nogas	0.052	45.5	3914	6.2	2.5	
Ag	107	1	nogas	0.034	18.6	607	5.3	2.5	
Cd	111	1	nogas	0.029	109.7	107	69.1	1	
Sb	121	1	nogas	0.994	29.8	12675	18.8	2.5	
Tl	205	1	nogas	0.364	64.3	7329	55.5	1	
Pb	208	1	nogas	0.059	29.3	1943	24.7	2.5	
U	238	1	nogas	0.126	47.6	3514	39.1	2.5	
[Pb]	206	1	nogas	0.050	31.6	413	19.4	2.5	
[Pb]	207	1	nogas	0.056	30.2	437	16.6	2.5	
Na	23	2	He	-7.911	-12.0	210036	0.5	100	
Mg	24	2	He	2.504	18.6	3694	9.6	100	
Al	27	2	He	-0.389	-96.0	890	17.6	5	
K	39	2	He	-17.844	-17.5	146134	1.7	100	
Ca	43	2	He	14.015	114.3	57	66.8	100	
Ca	44	2	He	6.765	25.5	910	7.7	100	
V	51	2	He	-0.808	-3.4	5619	2.8	2.5	
Cr	52	2	He	-0.003	-500.6	3760	2.3	2.5	
Mn	55	2	He	0.148	15.9	1580	6.7	2.5	
Fe	56	2	He	3.762	8.2	33957	5.1	100	
Co	59	2	He	0.037	31.0	367	25.8	2.5	
Ni	60	2	He	-0.143	-43.4	317	40.0	2.5	
Cu	63	2	He	-0.125	-7.4	1433	3.2	1	
Zn	66	2	He	0.215	15.7	650	6.7	2.5	
As	75	2	He	-0.037	-100.1	311	14.6	2.5	
Se	78	2	He	0.129	45.3	139	4.4	1	
B	11	1	nogas	6.388	26.8	45350	9.1	10	
Si	28	1	nogas	-44.923	-342.1	1374457	1.6	5	
Ca	43	1	nogas	11.876	37.1	870	8.0	100	
Ca	44	1	nogas	8.366	58.8	21730	2.3	100	
Fe	56	1	nogas	-18.584	-94.5	2730232	3.6	100	

Initial Calibration Blank (ICB) Report

Se	77	1	nogas	-36.831	-26.0	24026	2.5	2.5	
Se	82	1	nogas	0.229	19.4	187	8.2	1	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Mo	95	1	nogas	0.331	50.3	1927	36.4	2.5	
Sn	118	1	nogas	0.344	30.0	3630	8.4	5	
Ba	137	1	nogas	0.057	73.8	443	25.2	2.5	
Sb	121	2	He	0.799	3.9	4364	3.8	2.5	
P	31	1	nogas	8.560	86.7	86845	1.1	10	
La	139	1	nogas	32.961	31.0	183	16.7	2.5	ICB Main CR1 Failed
Au	197	1	nogas	66.702	11.0	10	0.0	2.5	ICB Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1434353	5.88	1561049	91.88	70	125	
Ge	72	1	nogas	3393392	10.00	3727881	91.03	70	125	
In	115	1	nogas	3298862	13.78	3493076	94.44	70	125	
Bi	209	1	nogas	2605275	7.52	2658885	97.98	70	125	
Ge	72	2	He	925073	0.18	913806	101.23	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	290_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T22:17:19-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	273CALB.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	92.004	2.856	619250	1.27	100	92.0	90	110	
Na	23	1	nogas	9798.859	4.270	239569389	0.42	10000	98.0	90	110	
Mg	24	1	nogas	9787.426	4.197	146527345	0.43	10000	97.9	90	110	
Al	27	1	nogas	99.845	1.027	1824954	1.20	100	99.8	90	110	
K	39	1	nogas	9756.231	0.432	211457096	0.20	10000	97.6	90	110	
Ti	47	1	nogas	95.943	0.744	173562	0.61	100	95.9	90	110	
V	51	1	nogas	87.840	0.368	2994486	0.26	100	87.8	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	97.675	0.777	2150347	0.95	100	97.7	90	110	
Mn	55	1	nogas	99.940	1.007	2761858	1.27	100	99.9	90	110	
Co	59	1	nogas	98.526	1.888	2203422	1.62	100	98.5	90	110	
Ni	60	1	nogas	98.199	0.242	484824	0.07	100	98.2	90	110	
Cu	63	1	nogas	99.701	0.697	1147948	0.96	100	99.7	90	110	
Zn	66	1	nogas	99.772	0.681	386698	0.44	100	99.8	90	110	
As	75	1	nogas	90.100	0.664	541039	0.67	100	90.1	90	110	
Sr	88	1	nogas	99.412	1.883	3016234	2.15	100	99.4	90	110	
Ag	107	1	nogas	99.919	0.744	1445304	0.87	100	99.9	90	110	
Cd	111	1	nogas	97.876	0.830	309507	1.55	100	97.9	90	110	
Sb	121	1	nogas	99.423	2.354	1367860	2.60	100	99.4	90	110	
Tl	205	1	nogas	95.707	1.610	2150890	1.79	100	95.7	90	110	
Pb	208	1	nogas	107.575	0.984	2966418	0.98	100	107.6	90	110	
U	238	1	nogas	105.111	3.469	3066942	3.64	100	105.1	90	110	
[Pb]	206	1	nogas	97.667	0.267	725053	0.28	100	97.7	90	110	
[Pb]	207	1	nogas	97.507	1.140	646531	1.34	100	97.5	90	110	
Na	23	2	He	10088.871	0.576	14121248	0.49	10000	100.9	90	110	
Mg	24	2	He	10215.256	0.494	7575356	1.25	10000	102.2	90	110	
Al	27	2	He	99.787	1.808	42665	0.93	100	99.8	90	110	
K	39	2	He	10482.512	1.770	8578021	1.74	10000	104.8	90	110	
Ca	43	2	He	10207.467	1.167	23809	1.96	10000	102.1	90	110	
Ca	44	2	He	10105.743	0.874	396126	1.29	10000	101.1	90	110	
V	51	2	He	101.079	0.765	574325	0.55	100	101.1	90	110	
Cr	52	2	He	103.177	0.955	624506	0.20	100	103.2	90	110	
Mn	55	2	He	102.869	1.038	455999	0.55	100	102.9	90	110	
Fe	56	2	He	10337.206	1.303	55278294	1.34	10000	103.4	90	110	
Co	59	2	He	102.144	2.143	840453	1.23	100	102.1	90	110	
Ni	60	2	He	103.994	1.737	211091	0.79	100	104.0	90	110	
Cu	63	2	He	104.005	0.360	530621	0.73	100	104.0	90	110	
Zn	66	2	He	102.921	0.513	128395	0.66	100	102.9	90	110	
As	75	2	He	100.631	0.989	121443	0.20	100	100.6	90	110	
Se	78	2	He	100.397	2.624	10137	1.93	100	100.4	90	110	
B	11	1	nogas	484.349	2.229	1970514	0.59	500	96.9	90	110	
Si	28	1	nogas	4667.669	0.138	6479301	0.16	5000	93.4	90	110	
Ca	43	1	nogas	9745.450	0.949	365936	1.18	10000	97.5	90	110	
Ca	44	1	nogas	9783.323	0.805	6004049	1.03	10000	97.8	90	110	
Fe	56	1	nogas	9827.455	1.269	237016072	1.27	10000	98.3	90	110	
Se	77	1	nogas	59.216	9.587	47649	2.59	100	59.2	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	96.916	0.200	25922	0.47	100	96.9	90	110	
Mo	95	1	nogas	98.916	1.331	600605	1.59	100	98.9	90	110	
Sn	118	1	nogas	95.845	1.081	829645	0.53	100	95.8	90	110	
Ba	137	1	nogas	97.702	2.249	457872	1.11	100	97.7	90	110	
Sb	121	2	He	103.185	1.655	542558	0.81	100	103.2	90	110	
Li	7	1	nogas	97.789	1.053	1804903	1.44	100	97.8	90	110	
P	31	1	nogas	466.081	0.828	758883	1.01	500	93.2	90	110	
La	139	1	nogas	124.512	12.767	557	9.89	100	124.5	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	278.513	19.022	33	17.32	100	278.5	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	nogas	1444770	1.97	1561049	92.55	70	125	
Ge	72	1	nogas	3664722	0.27	3727881	98.31	70	125	
In	115	1	nogas	3553395	1.32	3493076	101.73	70	125	
Bi	209	1	nogas	2716523	0.22	2658885	102.17	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	913436	0.97	913806	99.96	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	291_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T22:19:17-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	273CALB.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	0.088	21.0	717	14.0	1	
Na	23	1	nogas	-31.199	-39.6	2708905	4.5	100	
Mg	24	1	nogas	5.514	26.7	114528	13.0	100	
Al	27	1	nogas	0.414	33.4	33623	3.0	5	
K	39	1	nogas	-15.571	-152.4	6785357	2.8	100	
Ti	47	1	nogas	0.116	61.2	427	26.7	2.5	
V	51	1	nogas	-14.994	-5.6	443789	1.6	2.5	
Cr	52	1	nogas	-0.860	-5.6	48206	2.6	2.5	
Mn	55	1	nogas	0.010	722.5	19908	5.6	2.5	
Co	59	1	nogas	0.064	26.1	1853	16.5	2.5	
Ni	60	1	nogas	-0.731	-3.0	1657	7.5	2.5	
Cu	63	1	nogas	-0.044	-125.6	4751	8.8	2	
Zn	66	1	nogas	-0.409	-16.2	1687	11.7	2.5	
As	75	1	nogas	-9.560	-5.5	68986	3.8	2.5	
Sr	88	1	nogas	0.074	20.6	4967	9.5	2.5	
Ag	107	1	nogas	0.051	37.0	900	25.2	2.5	
Cd	111	1	nogas	0.055	26.1	210	21.8	1	
Sb	121	1	nogas	0.850	21.8	11938	16.5	2.5	
Tl	205	1	nogas	0.350	45.4	7996	38.1	1	
Pb	208	1	nogas	0.076	28.7	2390	25.0	2.5	
U	238	1	nogas	0.137	34.5	4061	27.5	2.5	
[Pb]	206	1	nogas	0.070	39.8	590	29.4	2.5	
[Pb]	207	1	nogas	0.066	44.1	527	30.4	2.5	
Na	23	2	He	-42.342	-5.9	164347	1.7	100	
Mg	24	2	He	4.120	8.7	4977	4.9	100	
Al	27	2	He	-0.389	-26.7	903	5.2	5	
K	39	2	He	-16.721	-14.4	147036	1.3	100	
Ca	43	2	He	20.591	81.2	73	55.1	100	
Ca	44	2	He	8.419	24.5	990	8.8	100	
V	51	2	He	-0.826	-3.6	5599	2.8	2.5	
Cr	52	2	He	0.021	272.1	3967	9.0	2.5	
Mn	55	2	He	0.041	27.5	1117	4.6	2.5	
Fe	56	2	He	5.347	7.0	43160	4.5	100	
Co	59	2	He	0.050	35.0	487	31.2	2.5	
Ni	60	2	He	-0.132	-15.6	343	13.1	2.5	
Cu	63	2	He	-0.116	-8.9	1500	3.1	2	
Zn	66	2	He	0.109	11.3	523	2.9	2.5	
As	75	2	He	-0.053	-42.8	296	9.1	2.5	
Se	78	2	He	0.077	125.2	136	6.7	2	
B	11	1	nogas	5.919	23.4	47385	8.1	10	
Si	28	1	nogas	-129.152	-57.5	1406622	1.3	5	
Ca	43	1	nogas	13.181	9.7	1000	0.0	100	
Ca	44	1	nogas	8.510	35.4	23755	3.8	100	
Fe	56	1	nogas	-23.630	-42.4	2855431	3.8	100	
Se	77	1	nogas	-55.038	-6.0	22027	1.4	2.5	
Se	82	1	nogas	0.352	77.3	233	27.6	2	
Mo	95	1	nogas	0.294	23.5	1910	16.8	2.5	
Sn	118	1	nogas	0.403	22.6	4574	10.5	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.074	12.0	587	2.6	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.583	2.9	3257	2.5	2.5	
P	31	1	nogas	2.497	120.7	85754	0.3	10	
La	139	1	nogas	30.809	18.5	197	17.9	2.5	CCB Main CR1 Failed
Au	197	1	nogas	63.080	144.3	10	100.0	2.5	CCB Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1559746	4.44	1561049	99.92	70	125	
Ge	72	1	nogas	3672855	4.68	3727881	98.52	70	125	
In	115	1	nogas	3638093	6.61	3493076	104.15	70	125	
Bi	209	1	nogas	2743448	6.17	2658885	103.18	70	125	
Ge	72	2	He	938641	0.62	913806	102.72	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	297_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T22:31:16-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	273CALB.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	94.413	3.076	643890	0.17	100	94.4	90	110	
Na	23	1	nogas	9752.621	3.283	247247581	1.35	10000	97.5	90	110	
Mg	24	1	nogas	9794.303	1.037	152091258	1.86	10000	97.9	90	110	
Al	27	1	nogas	101.562	2.175	1917300	0.56	100	101.6	90	110	
K	39	1	nogas	9800.960	3.382	219384013	0.73	10000	98.0	90	110	
Ti	47	1	nogas	97.628	2.638	182438	0.49	100	97.6	90	110	
V	51	1	nogas	85.926	3.052	3044540	0.48	100	85.9	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	97.898	2.904	2226172	0.20	100	97.9	90	110	
Mn	55	1	nogas	99.004	3.679	2825941	1.02	100	99.0	90	110	
Co	59	1	nogas	100.158	3.364	2314110	2.57	100	100.2	90	110	
Ni	60	1	nogas	98.848	2.138	504151	0.53	100	98.8	90	110	
Cu	63	1	nogas	100.036	1.339	1190177	2.08	100	100.0	90	110	
Zn	66	1	nogas	98.058	2.114	392735	1.72	100	98.1	90	110	
As	75	1	nogas	88.664	2.657	551922	0.55	100	88.7	90	110	CCV Main CR1-2 Failed
Sr	88	1	nogas	100.072	0.393	3137595	2.25	100	100.1	90	110	
Ag	107	1	nogas	100.093	0.807	1496428	3.21	100	100.1	90	110	
Cd	111	1	nogas	98.300	2.245	317603	1.75	100	98.3	90	110	
Sb	121	1	nogas	100.153	2.419	1423860	3.19	100	100.2	90	110	
Tl	205	1	nogas	95.276	2.732	2185260	0.40	100	95.3	90	110	
Pb	208	1	nogas	110.813	0.231	3055697	0.23	100	110.8	90	110	CCV Main CR1-2 Failed
U	238	1	nogas	105.654	3.474	3145891	1.51	100	105.7	90	110	
[Pb]	206	1	nogas	98.786	2.372	748516	0.79	100	98.8	90	110	
[Pb]	207	1	nogas	97.662	3.105	660846	0.77	100	97.7	90	110	
Na	23	2	He	10049.603	0.419	14690690	0.12	10000	100.5	90	110	
Mg	24	2	He	10094.908	0.570	7817608	0.45	10000	100.9	90	110	
Al	27	2	He	99.753	1.468	44546	1.75	100	99.8	90	110	
K	39	2	He	10933.021	1.091	8939784	1.07	10000	109.3	90	110	
Ca	43	2	He	9957.336	1.773	24253	1.43	10000	99.6	90	110	
Ca	44	2	He	10076.295	0.668	412465	0.28	10000	100.8	90	110	
V	51	2	He	100.723	0.295	597708	0.13	100	100.7	90	110	
Cr	52	2	He	101.635	0.466	642526	0.62	100	101.6	90	110	
Mn	55	2	He	102.706	0.725	475471	0.52	100	102.7	90	110	
Fe	56	2	He	10206.903	0.576	57001112	0.61	10000	102.1	90	110	
Co	59	2	He	101.412	0.297	871514	0.23	100	101.4	90	110	
Ni	60	2	He	102.312	0.175	216910	0.30	100	102.3	90	110	
Cu	63	2	He	102.699	1.251	547195	1.06	100	102.7	90	110	
Zn	66	2	He	101.270	1.001	131940	0.73	100	101.3	90	110	
As	75	2	He	99.625	0.418	125565	0.15	100	99.6	90	110	
Se	78	2	He	98.812	1.237	10422	1.42	100	98.8	90	110	
B	11	1	nogas	487.776	1.577	2011551	2.93	500	97.6	90	110	
Si	28	1	nogas	4687.903	3.727	6715075	0.20	5000	93.8	90	110	
Ca	43	1	nogas	9777.537	0.775	379377	1.84	10000	97.8	90	110	
Ca	44	1	nogas	9695.130	2.432	6146677	0.26	10000	97.0	90	110	
Fe	56	1	nogas	9816.197	4.173	244503764	1.54	10000	98.2	90	110	
Se	77	1	nogas	46.603	7.515	46322	3.44	100	46.6	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	96.067	1.658	26556	3.06	100	96.1	90	110	
Mo	95	1	nogas	98.678	1.026	619096	1.60	100	98.7	90	110	
Sn	118	1	nogas	97.039	3.249	858120	1.48	100	97.0	90	110	
Ba	137	1	nogas	97.287	4.142	465713	1.18	100	97.3	90	110	
Sb	121	2	He	99.957	1.337	548951	1.76	100	100.0	90	110	
Li	7	1	nogas	98.657	0.929	1844622	3.05	100	98.7	90	110	
P	31	1	nogas	465.451	2.707	783023	0.73	500	93.1	90	110	
La	139	1	nogas	105.025	20.143	490	14.29	100	105.0	90	110	
Au	197	1	nogas	149.834	57.254	20	50.00	100	149.8	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	nogas	1464294	2.87	1561049	93.80	70	125	
Ge	72	1	nogas	3787437	2.61	3727881	101.60	70	125	
In	115	1	nogas	3632501	3.67	3493076	103.99	70	125	
Bi	209	1	nogas	2773860	2.80	2658885	104.32	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	953904	0.42	913806	104.39	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	298_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T22:33:16-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	273CALB.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	0.089	3.4	750	3.5	1	
Na	23	1	nogas	-11.574	-193.1	3198581	5.5	100	
Mg	24	1	nogas	7.295	19.2	142516	3.8	100	
Al	27	1	nogas	0.444	15.3	34702	1.9	5	
K	39	1	nogas	-9.753	-145.5	7014125	1.1	100	
Ti	47	1	nogas	0.059	53.8	330	16.9	2.5	
V	51	1	nogas	-16.637	-2.4	409353	4.8	2.5	
Cr	52	1	nogas	-0.952	-9.0	46899	1.5	2.5	
Mn	55	1	nogas	0.005	946.0	20078	1.4	2.5	
Co	59	1	nogas	0.062	17.3	1837	8.1	2.5	
Ni	60	1	nogas	-0.714	-5.7	1760	8.9	2.5	
Cu	63	1	nogas	-0.019	-229.6	5121	6.9	2	
Zn	66	1	nogas	-0.400	-17.6	1743	10.1	2.5	
As	75	1	nogas	-10.467	-4.9	65706	7.5	2.5	
Sr	88	1	nogas	0.073	20.6	4981	5.2	2.5	
Ag	107	1	nogas	0.053	20.5	943	12.4	2.5	
Cd	111	1	nogas	0.076	35.1	273	29.3	1	
Sb	121	1	nogas	1.026	16.1	14570	10.2	2.5	
Tl	205	1	nogas	0.393	43.5	8986	36.5	1	
Pb	208	1	nogas	0.082	11.3	2573	9.9	2.5	
U	238	1	nogas	0.139	38.7	4114	31.8	2.5	
[Pb]	206	1	nogas	0.078	21.6	650	13.1	2.5	
[Pb]	207	1	nogas	0.080	14.0	630	8.8	2.5	
Na	23	2	He	-33.419	-4.6	183187	2.6	100	
Mg	24	2	He	5.972	5.3	6615	5.0	100	
Al	27	2	He	-0.392	-15.3	933	2.2	5	
K	39	2	He	-6.198	-29.3	155486	0.9	100	
Ca	43	2	He	39.449	111.7	123	90.4	100	
Ca	44	2	He	5.678	34.8	910	8.7	100	
V	51	2	He	-0.910	-2.5	5295	3.3	2.5	
Cr	52	2	He	-0.013	-182.5	3887	3.4	2.5	
Mn	55	2	He	0.081	42.8	1343	10.8	2.5	
Fe	56	2	He	6.372	1.9	50499	2.8	100	
Co	59	2	He	0.053	21.3	527	17.6	2.5	
Ni	60	2	He	-0.105	-16.3	413	7.8	2.5	
Cu	63	2	He	-0.094	-10.2	1673	2.1	2	
Zn	66	2	He	0.110	30.0	543	7.4	2.5	
As	75	2	He	-0.044	-25.7	318	4.2	2.5	
Se	78	2	He	0.094	149.8	143	11.8	2	
B	11	1	nogas	4.773	32.2	43526	9.7	10	
Si	28	1	nogas	-96.941	-105.8	1460834	3.3	5	
Ca	43	1	nogas	12.275	22.9	980	10.1	100	
Ca	44	1	nogas	9.772	37.0	24867	3.6	100	
Fe	56	1	nogas	-23.924	-44.2	2888754	3.3	100	
Se	77	1	nogas	-60.832	-1.3	21056	5.7	2.5	
Se	82	1	nogas	0.168	76.5	190	22.9	2	

Continuing Calibration Blank (CCB) Report

Mo	95	1	nogas	0.334	27.3	2177	19.9	2.5	
Sn	118	1	nogas	0.369	24.0	4231	6.5	5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Ba	137	1	nogas	0.109	30.9	743	10.8	2.5	
Sb	121	2	He	0.755	8.7	4334	9.2	2.5	
P	31	1	nogas	3.232	97.1	88087	1.5	10	
La	139	1	nogas	21.407	44.8	157	25.8	2.5	CCB Main CR1 Failed
Au	197	1	nogas	118.934	79.8	17	69.3	2.5	CCB Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1604293	5.81	1561049	102.77	70	125	
Ge	72	1	nogas	3727044	5.29	3727881	99.98	70	125	
In	115	1	nogas	3619291	10.75	3493076	103.61	70	125	
Bi	209	1	nogas	2751550	6.11	2658885	103.49	70	125	
Ge	72	2	He	971376	1.43	913806	106.30	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	309_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T22:55:09-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	273CALB.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	93.857	0.767	743570	1.41	100	93.9	90	110	
Na	23	1	nogas	9890.383	4.071	286632498	2.32	10000	98.9	90	110	
Mg	24	1	nogas	9824.437	3.346	174380458	1.58	10000	98.2	90	110	
Al	27	1	nogas	101.551	2.219	2153122	0.91	100	101.6	90	110	
K	39	1	nogas	10037.713	3.110	252169247	1.42	10000	100.4	90	110	
Ti	47	1	nogas	97.577	2.555	204797	0.93	100	97.6	90	110	
V	51	1	nogas	110.769	9.100	4132239	5.36	100	110.8	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	99.722	2.143	2545717	0.79	100	99.7	90	110	
Mn	55	1	nogas	101.615	2.234	3257799	0.65	100	101.6	90	110	
Co	59	1	nogas	100.151	2.908	2598655	1.39	100	100.2	90	110	
Ni	60	1	nogas	99.751	3.307	571256	1.53	100	99.8	90	110	
Cu	63	1	nogas	101.294	1.950	1353149	0.34	100	101.3	90	110	
Zn	66	1	nogas	98.705	2.645	443916	1.37	100	98.7	90	110	
As	75	1	nogas	99.980	4.667	681936	2.03	100	100.0	90	110	
Sr	88	1	nogas	96.172	2.125	3385737	1.20	100	96.2	90	110	
Ag	107	1	nogas	101.383	2.609	1701448	1.05	100	101.4	90	110	
Cd	111	1	nogas	98.437	0.611	356999	0.49	100	98.4	90	110	
Sb	121	1	nogas	95.652	0.158	1527256	1.82	100	95.7	90	110	
Tl	205	1	nogas	92.924	2.871	2391329	0.53	100	92.9	90	110	
Pb	208	1	nogas	120.128	2.116	3312540	2.12	100	120.1	90	110	CCV Main CR1-2 Failed
U	238	1	nogas	100.667	3.045	3363951	2.60	100	100.7	90	110	
[Pb]	206	1	nogas	95.345	4.912	810211	2.11	100	95.3	90	110	
[Pb]	207	1	nogas	94.287	4.742	715638	1.95	100	94.3	90	110	
Na	23	2	He	10262.171	1.560	16540718	1.17	10000	102.6	90	110	
Mg	24	2	He	10364.164	0.893	8852666	0.69	10000	103.6	90	110	
Al	27	2	He	101.718	1.751	50086	2.96	100	101.7	90	110	
K	39	2	He	12326.427	0.565	10058702	0.56	10000	123.3	90	110	CCV Main CR1-2 Failed
Ca	43	2	He	9954.949	3.274	26746	3.41	10000	99.5	90	110	
Ca	44	2	He	10090.655	0.439	455615	1.08	10000	100.9	90	110	
V	51	2	He	101.685	1.096	665434	0.23	100	101.7	90	110	
Cr	52	2	He	102.005	0.751	711254	0.58	100	102.0	90	110	
Mn	55	2	He	102.835	1.057	525088	0.32	100	102.8	90	110	
Fe	56	2	He	10296.154	1.738	63415629	0.48	10000	103.0	90	110	
Co	59	2	He	101.291	1.796	960035	0.52	100	101.3	90	110	
Ni	60	2	He	101.973	2.364	238426	1.08	100	102.0	90	110	
Cu	63	2	He	102.898	0.868	604731	0.89	100	102.9	90	110	
Zn	66	2	He	100.992	1.735	145129	1.48	100	101.0	90	110	
As	75	2	He	99.812	1.792	138745	0.50	100	99.8	90	110	
Se	78	2	He	102.354	1.293	11902	0.39	100	102.4	90	110	
B	11	1	nogas	479.347	1.210	2296012	2.94	500	95.9	90	110	
Si	28	1	nogas	4708.822	4.063	7567462	1.36	5000	94.2	90	110	
Ca	43	1	nogas	9823.500	1.830	427994	0.24	10000	98.2	90	110	
Ca	44	1	nogas	9939.000	3.439	7075890	1.89	10000	99.4	90	110	
Fe	56	1	nogas	9919.806	1.990	277565773	0.93	10000	99.2	90	110	
Se	77	1	nogas	122.248	14.497	71671	4.76	100	122.2	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	97.341	1.936	30209	0.48	100	97.3	90	110	
Mo	95	1	nogas	96.433	1.828	679493	2.10	100	96.4	90	110	
Sn	118	1	nogas	94.156	2.107	934740	1.11	100	94.2	90	110	
Ba	137	1	nogas	93.690	1.663	503728	2.57	100	93.7	90	110	
Sb	121	2	He	98.904	1.413	599049	0.12	100	98.9	90	110	
Li	7	1	nogas	99.423	2.817	2156852	2.34	100	99.4	90	110	
P	31	1	nogas	485.256	2.742	912782	0.78	500	97.1	90	110	
La	139	1	nogas	152.303	14.785	763	12.93	100	152.3	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	265.798	114.014	37	103.25	100	265.8	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	nogas	1700160	2.07	1561049	108.91	70	125	
Ge	72	1	nogas	4253169	1.76	3727881	114.09	70	125	
In	115	1	nogas	4075464	1.09	3493076	116.67	70	125	
Bi	209	1	nogas	3112354	2.83	2658885	117.05	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1052204	1.29	913806	115.15	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	310_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T22:57:08-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	273CALB.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	0.074	47.8	683	36.0	1	
Na	23	1	nogas	8.949	232.0	4214329	5.1	100	
Mg	24	1	nogas	7.510	32.1	164952	16.0	100	
Al	27	1	nogas	0.382	9.4	37370	3.7	5	
K	39	1	nogas	-20.855	-45.4	7542578	1.3	100	
Ti	47	1	nogas	0.080	109.8	407	39.5	2.5	
V	51	1	nogas	-10.402	-1.4	630285	4.1	2.5	
Cr	52	1	nogas	-0.737	-10.5	57369	1.9	2.5	
Mn	55	1	nogas	0.013	249.9	22611	0.9	2.5	
Co	59	1	nogas	0.053	37.8	1800	24.7	2.5	
Ni	60	1	nogas	-0.627	-4.2	2440	2.1	2.5	
Cu	63	1	nogas	0.009	582.4	6054	7.2	2	
Zn	66	1	nogas	-0.430	-0.3	1820	3.8	2.5	
As	75	1	nogas	-8.582	-5.5	83188	6.6	2.5	
Sr	88	1	nogas	0.091	18.0	6171	5.8	2.5	
Ag	107	1	nogas	0.045	25.4	917	16.6	2.5	
Cd	111	1	nogas	0.055	34.2	227	22.2	1	
Sb	121	1	nogas	0.777	20.5	12365	16.6	2.5	
Tl	205	1	nogas	0.299	47.3	7639	42.8	1	
Pb	208	1	nogas	0.075	21.9	2373	19.1	2.5	
U	238	1	nogas	0.126	39.4	4161	35.4	2.5	
[Pb]	206	1	nogas	0.056	27.9	540	20.9	2.5	
[Pb]	207	1	nogas	0.057	35.1	520	25.0	2.5	
Na	23	2	He	-7.348	-36.1	238257	1.1	100	
Mg	24	2	He	5.652	6.9	6845	4.6	100	
Al	27	2	He	-0.792	-18.6	813	7.9	5	
K	39	2	He	6.705	65.3	165847	2.1	100	
Ca	43	2	He	16.328	140.7	70	86.9	100	
Ca	44	2	He	4.802	59.5	940	13.1	100	
V	51	2	He	-0.556	-6.2	7962	2.0	2.5	
Cr	52	2	He	-0.001	-3874.2	4267	5.4	2.5	
Mn	55	2	He	0.092	15.9	1503	5.7	2.5	
Fe	56	2	He	5.033	5.2	46154	3.1	100	
Co	59	2	He	0.046	26.1	503	22.0	2.5	
Ni	60	2	He	-0.163	-11.3	310	14.1	2.5	
Cu	63	2	He	-0.071	-45.2	1937	9.3	2	
Zn	66	2	He	0.141	44.6	630	15.1	2.5	
As	75	2	He	-0.049	-37.1	336	8.3	2.5	
Se	78	2	He	-0.029	-454.2	139	10.4	2	
B	11	1	nogas	3.326	46.0	40473	13.0	10	
Si	28	1	nogas	-267.433	-18.9	1422949	0.8	5	
Ca	43	1	nogas	11.958	12.0	1077	1.9	100	
Ca	44	1	nogas	8.480	39.2	26786	4.8	100	
Fe	56	1	nogas	-13.845	-48.0	3488609	1.7	100	
Se	77	1	nogas	-46.089	-9.6	27174	7.5	2.5	
Se	82	1	nogas	0.221	37.0	227	14.2	2	
Mo	95	1	nogas	0.301	29.3	2200	23.9	2.5	
Sn	118	1	nogas	0.353	37.1	4544	21.1	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.070	27.9	623	10.7	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.530	5.7	3314	5.0	2.5	
P	31	1	nogas	2.521	91.4	96860	1.0	10	
La	139	1	nogas	28.263	37.3	203	18.6	2.5	CCB Main CR1 Failed
Au	197	1	nogas	80.369	119.4	13	86.6	2.5	CCB Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1750846	5.16	1561049	112.16	70	125	
Ge	72	1	nogas	4144033	3.67	3727881	111.16	70	125	
In	115	1	nogas	4020470	7.01	3493076	115.10	70	125	
Bi	209	1	nogas	3030652	3.45	2658885	113.98	70	125	
Ge	72	2	He	1045538	0.82	913806	114.42	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	321_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T23:18:51-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	273CALB.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	94.734	8.039	646058	1.38	100	94.7	90	110	
Na	23	1	nogas	10616.446	12.848	249209714	0.54	10000	106.2	90	110	
Mg	24	1	nogas	10657.109	13.589	153246628	1.53	10000	106.6	90	110	
Al	27	1	nogas	105.761	8.264	1902981	0.97	100	105.8	90	110	
K	39	1	nogas	10322.581	8.469	220014872	0.41	10000	103.2	90	110	
Ti	47	1	nogas	102.355	8.871	182344	1.01	100	102.4	90	110	
V	51	1	nogas	110.663	11.628	3506603	1.11	100	110.7	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	106.275	8.429	2299279	0.74	100	106.3	90	110	
Mn	55	1	nogas	104.986	8.216	2857385	0.57	100	105.0	90	110	
Co	59	1	nogas	104.090	8.311	2293325	0.41	100	104.1	90	110	
Ni	60	1	nogas	103.702	8.722	504017	0.72	100	103.7	90	110	
Cu	63	1	nogas	106.324	10.477	1204375	2.49	100	106.3	90	110	
Zn	66	1	nogas	104.407	8.766	398435	1.23	100	104.4	90	110	
As	75	1	nogas	103.783	9.863	596955	0.43	100	103.8	90	110	
Sr	88	1	nogas	104.964	7.582	3138413	1.28	100	105.0	90	110	
Ag	107	1	nogas	106.042	9.233	1510400	1.62	100	106.0	90	110	
Cd	111	1	nogas	106.672	12.479	324043	1.27	100	106.7	90	110	
Sb	121	1	nogas	104.102	10.038	1409684	2.23	100	104.1	90	110	
Tl	205	1	nogas	103.967	6.052	2275117	1.30	100	104.0	90	110	
Pb	208	1	nogas	112.537	1.461	3103214	1.46	100	112.5	90	110	CCV Main CR1-2 Failed
U	238	1	nogas	113.935	8.912	3232994	2.68	100	113.9	90	110	CCV Main CR1-2 Failed
[Pb]	206	1	nogas	104.885	4.595	758716	2.68	100	104.9	90	110	
[Pb]	207	1	nogas	104.874	5.066	677422	2.20	100	104.9	90	110	
Na	23	2	He	9954.337	1.150	14355296	0.75	10000	99.5	90	110	
Mg	24	2	He	10008.484	0.407	7645587	1.19	10000	100.1	90	110	
Al	27	2	He	98.591	1.513	43436	0.76	100	98.6	90	110	
K	39	2	He	10657.217	1.847	8718310	1.81	10000	106.6	90	110	
Ca	43	2	He	9802.358	3.161	23548	2.44	10000	98.0	90	110	
Ca	44	2	He	9875.563	1.432	398765	1.40	10000	98.8	90	110	
V	51	2	He	99.776	0.499	584132	0.34	100	99.8	90	110	
Cr	52	2	He	100.039	0.426	623884	0.37	100	100.0	90	110	
Mn	55	2	He	99.991	0.446	456632	0.58	100	100.0	90	110	
Fe	56	2	He	10095.805	1.198	55613954	1.27	10000	101.0	90	110	
Co	59	2	He	100.275	0.869	850007	0.57	100	100.3	90	110	
Ni	60	2	He	102.565	1.085	214480	0.48	100	102.6	90	110	
Cu	63	2	He	100.981	1.111	530752	0.80	100	101.0	90	110	
Zn	66	2	He	100.242	0.476	128831	0.76	100	100.2	90	110	
As	75	2	He	98.028	0.878	121878	0.96	100	98.0	90	110	
Se	78	2	He	96.749	1.267	10069	1.64	100	96.7	90	110	
B	11	1	nogas	494.134	9.510	2035063	2.52	500	98.8	90	110	
Si	28	1	nogas	4884.811	11.899	6606395	1.23	5000	97.7	90	110	
Ca	43	1	nogas	10210.973	8.953	377572	1.29	10000	102.1	90	110	
Ca	44	1	nogas	10256.647	8.129	6200654	0.29	10000	102.6	90	110	
Fe	56	1	nogas	10398.755	10.307	246639122	2.23	10000	104.0	90	110	
Se	77	1	nogas	118.786	10.741	60227	3.13	100	118.8	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	103.500	9.828	27244	2.39	100	103.5	90	110	
Mo	95	1	nogas	104.044	6.930	622774	1.06	100	104.0	90	110	
Sn	118	1	nogas	103.447	12.212	860384	0.95	100	103.4	90	110	
Ba	137	1	nogas	104.083	10.253	469426	1.36	100	104.1	90	110	
Sb	121	2	He	100.324	1.296	543438	1.07	100	100.3	90	110	
Li	7	1	nogas	99.418	8.277	1856929	1.15	100	99.4	90	110	
P	31	1	nogas	497.222	9.720	791973	0.81	500	99.4	90	110	
La	139	1	nogas	148.395	21.123	623	12.25	100	148.4	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	90.736	151.780	13	114.56	100	90.7	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	nogas	1468622	6.73	1561049	94.08	70	125	
Ge	72	1	nogas	3625448	7.57	3727881	97.25	70	125	
In	115	1	nogas	3444059	10.66	3493076	98.60	70	125	
Bi	209	1	nogas	2652726	7.04	2658885	99.77	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	940939	0.79	913806	102.97	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	322_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T23:20:50-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	273CALB.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	0.064	24.4	577	18.7	1	
Na	23	1	nogas	-33.614	-32.9	2757959	7.4	100	
Mg	24	1	nogas	6.015	29.4	127083	18.6	100	
Al	27	1	nogas	0.527	41.7	37763	12.5	5	
K	39	1	nogas	-30.473	-17.8	6847835	1.5	100	
Ti	47	1	nogas	0.193	76.3	603	48.4	2.5	
V	51	1	nogas	-9.934	-1.5	601950	1.9	2.5	
Cr	52	1	nogas	-0.693	-6.0	54697	0.9	2.5	
Mn	55	1	nogas	-0.002	-1969.8	20725	3.7	2.5	
Co	59	1	nogas	0.053	30.0	1703	20.8	2.5	
Ni	60	1	nogas	-0.803	-1.6	1377	5.2	2.5	
Cu	63	1	nogas	-0.018	-301.6	5351	11.0	2	
Zn	66	1	nogas	-0.444	-8.3	1647	7.8	2.5	
As	75	1	nogas	-7.444	-8.5	83504	5.2	2.5	
Sr	88	1	nogas	0.084	22.0	5568	9.6	2.5	
Ag	107	1	nogas	0.044	18.6	850	13.6	2.5	
Cd	111	1	nogas	0.062	47.5	240	39.7	1	
Sb	121	1	nogas	0.850	27.9	12645	26.0	2.5	
Tl	205	1	nogas	0.408	57.4	10361	58.3	1	
Pb	208	1	nogas	0.089	30.5	2770	27.1	2.5	
U	238	1	nogas	0.169	48.9	5528	50.2	2.5	
[Pb]	206	1	nogas	0.079	26.6	723	26.2	2.5	
[Pb]	207	1	nogas	0.079	25.2	677	23.8	2.5	
Na	23	2	He	-46.745	-3.6	159107	0.4	100	
Mg	24	2	He	4.838	1.6	5561	1.6	100	
Al	27	2	He	-0.670	-40.9	787	13.4	5	
K	39	2	He	-15.170	-6.0	148282	0.5	100	
Ca	43	2	He	14.907	27.3	60	16.7	100	
Ca	44	2	He	7.351	27.7	953	9.7	100	
V	51	2	He	-0.508	-9.3	7472	2.3	2.5	
Cr	52	2	He	-0.016	-85.4	3757	1.4	2.5	
Mn	55	2	He	0.041	50.0	1123	9.3	2.5	
Fe	56	2	He	5.968	3.8	46883	4.2	100	
Co	59	2	He	0.050	19.5	490	15.4	2.5	
Ni	60	2	He	-0.127	-42.8	357	33.4	2.5	
Cu	63	2	He	-0.098	-34.1	1607	12.6	2	
Zn	66	2	He	0.174	28.8	610	10.2	2.5	
As	75	2	He	0.005	399.3	370	8.0	2.5	
Se	78	2	He	0.132	60.4	143	6.9	2	
B	11	1	nogas	6.459	23.3	52358	10.5	10	
Si	28	1	nogas	-271.383	-16.3	1327775	2.4	5	
Ca	43	1	nogas	11.328	13.3	983	5.2	100	
Ca	44	1	nogas	7.655	28.3	24566	4.4	100	
Fe	56	1	nogas	-18.216	-56.3	3155986	7.0	100	
Se	77	1	nogas	-39.088	-7.9	27071	4.0	2.5	
Se	82	1	nogas	0.109	59.5	180	11.1	2	
Mo	95	1	nogas	0.409	47.8	2757	44.2	2.5	
Sn	118	1	nogas	0.377	33.2	4521	23.8	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.078	17.6	630	9.5	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.588	2.5	3307	3.1	2.5	
P	31	1	nogas	1.085	161.4	88473	1.7	10	
La	139	1	nogas	37.481	35.5	230	23.0	2.5	CCB Main CR1 Failed
Au	197	1	nogas	82.870	62.2	13	43.3	2.5	CCB Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1640311	3.20	1561049	105.08	70	125	
Ge	72	1	nogas	3877098	1.39	3727881	104.00	70	125	
In	115	1	nogas	3768632	1.43	3493076	107.89	70	125	
Bi	209	1	nogas	2984097	2.35	2658885	112.23	70	125	
Ge	72	2	He	944634	1.74	913806	103.37	70	125	

Sample Report

Sample Table

Sample Name	MBLK-136233
Data File Name	323SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T23:22:49-06:00
Sample Type	Sample
Dilution	1
Comment	TW B136233
ISTD Ref FileName	273CALB.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	0.018	0.018	30.68	223	0.01	2000	
Na	23	1	nogas	-44.340	-44.340	-15.42	2572131	0.00	200000	
Mg	24	1	nogas	11.166	11.166	1.33	214626	0.01	200000	
Al	27	1	nogas	4.528	4.528	4.67	115052	0.00	2000	
K	39	1	nogas	-34.845	-34.845	-14.46	6815723	0.00	200000	
Ti	47	1	nogas	0.039	0.039	49.91	310	0.01	2000	
V	51	1	nogas	-5.404	-5.404	-29.62	727391	0.00	2000	
Cr	52	1	nogas	-0.648	-0.648	-18.01	56228	0.00	2000	
Mn	55	1	nogas	0.841	0.841	4.26	45623	0.00	2000	
Co	59	1	nogas	0.010	0.010	3.68	687	0.00	2000	
Ni	60	1	nogas	-0.854	-0.854	-0.33	1123	-0.08	2000	
Cu	63	1	nogas	-0.201	-0.201	-7.89	3164	-0.01	2000	
Zn	66	1	nogas	-0.084	-0.084	-39.73	3140	0.00	2000	
As	75	1	nogas	-4.618	-4.618	-15.92	98551	0.00	2000	
Sr	88	1	nogas	0.017	0.017	57.76	3444	0.00	2000	
Ag	107	1	nogas	0.008	0.008	51.13	297	0.00	2000	
Cd	111	1	nogas	0.003	0.003	233.06	43	0.01	2000	
Sb	121	1	nogas	0.148	0.148	16.00	2487	0.01	2000	
Tl	205	1	nogas	0.026	0.026	26.08	920	0.00	2000	
Pb	208	1	nogas	0.017	0.017	38.57	763	0.00	2000	
U	238	1	nogas	0.015	0.015	34.44	610	0.00	2000	
[Pb]	206	1	nogas	0.016	0.016	18.67	217	0.01	2000	
[Pb]	207	1	nogas	0.008	0.008	12.28	167	0.00	2000	
Na	23	2	He	-52.917	-52.917	-2.21	151946	-0.03	200000	
Mg	24	2	He	10.717	10.717	7.96	10176	0.11	200000	
Al	27	2	He	3.918	3.918	10.95	2797	0.14	2000	
K	39	2	He	-16.031	-16.031	-29.75	147590	-0.01	200000	
Ca	43	2	He	6.434	6.434	63.89	40	16.09	200000	
Ca	44	2	He	0.104	0.104	1689.10	667	0.02	200000	
V	51	2	He	-0.209	-0.209	-126.39	9294	0.00	2000	
Cr	52	2	He	-0.150	-0.150	-41.17	2957	-0.01	2000	
Mn	55	2	He	1.085	1.085	1.28	5961	0.02	2000	
Fe	56	2	He	5.679	5.679	2.52	45757	0.01	200000	
Co	59	2	He	0.016	0.016	8.69	197	0.01	2000	
Ni	60	2	He	-0.196	-0.196	-7.77	213	-0.09	2000	
Cu	63	2	He	-0.234	-0.234	-4.01	900	-0.03	2000	
Zn	66	2	He	0.456	0.456	4.30	983	0.05	2000	
As	75	2	He	-0.039	-0.039	-43.69	319	-0.01	2000	
Se	78	2	He	0.099	0.099	100.27	141	0.07	2000	
B	11	1	nogas	3.013	3.013	2.00	36939	0.01	2000	

Sample Report

Si	28	1	nogas	788.988	788.988	2.90	2538771	0.03	2000	
Ca	43	1	nogas	4.024	4.024	48.13	700	0.57	200000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Ca	44	1	nogas	1.110	1.110	49.53	20538	0.01	200000	
Fe	56	1	nogas	-25.058	-25.058	-6.16	3014429	0.00	200000	
Se	77	1	nogas	-18.057	-18.057	-42.86	32353	-0.06	2000	
Se	82	1	nogas	0.058	0.058	419.72	167	0.04	2000	
Mo	95	1	nogas	0.060	0.060	16.70	530	0.01	2000	
Sn	118	1	nogas	0.062	0.062	12.37	1660	0.00	2000	
Ba	137	1	nogas	0.019	0.019	61.12	343	0.01	2000	
Sb	121	2	He	0.135	0.135	10.76	853	0.02	2000	
La	139	1	nogas	27.252	27.252	41.67	190	14.34	2000	
Au	197	1	nogas	49.638	49.638	169.71	10	496.38	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1649792	0.17	1561049	105.68	70	125	
Ge	72	1	nogas	3914459	1.28	3727881	105.00	70	125	
In	115	1	nogas	3813884	1.59	3493076	109.18	70	125	
Bi	209	1	nogas	3158532	9.47	2658885	118.79	70	125	
Ge	72	2	He	954731	0.12	913806	104.48	70	125	

Sample Report

Sample Table

Sample Name	LCS-136233
Data File Name	324SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T23:24:49-06:00
Sample Type	Sample
Dilution	1
Comment	TW B136233
ISTD Ref FileName	273CALB.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	51.951	51.951	4.43	367694	0.01	2000	
Na	23	1	nogas	5248.892	5248.892	13.93	140217353	0.00	200000	
Mg	24	1	nogas	5437.349	5437.349	14.72	87767835	0.01	200000	
Al	27	1	nogas	113.831	113.831	5.74	2123805	0.01	2000	
K	39	1	nogas	5528.379	5528.379	3.66	125732907	0.00	200000	
Ti	47	1	nogas	165.563	165.563	2.95	306263	0.05	2000	
V	51	1	nogas	51.363	51.363	3.17	2138262	0.00	2000	
Cr	52	1	nogas	56.122	56.122	3.25	1292982	0.00	2000	
Mn	55	1	nogas	58.217	58.217	4.08	1654032	0.00	2000	
Co	59	1	nogas	57.378	57.378	4.27	1312822	0.00	2000	
Ni	60	1	nogas	54.903	54.903	2.97	279689	0.02	2000	
Cu	63	1	nogas	56.526	56.526	3.08	668207	0.01	2000	
Zn	66	1	nogas	56.749	56.749	4.39	226421	0.03	2000	
As	75	1	nogas	49.967	49.967	4.13	359022	0.01	2000	
Sr	88	1	nogas	112.500	112.500	5.35	3490295	0.00	2000	
Ag	107	1	nogas	55.697	55.697	4.51	824074	0.01	2000	
Cd	111	1	nogas	56.222	56.222	7.71	179746	0.03	2000	
Sb	121	1	nogas	56.648	56.648	2.63	797510	0.01	2000	
Tl	205	1	nogas	51.810	51.810	2.77	1210639	0.00	2000	
Pb	208	1	nogas	63.341	63.341	1.08	1746772	0.00	2000	
U	238	1	nogas	114.868	114.868	3.36	3483134	0.00	2000	
[Pb]	206	1	nogas	55.866	55.866	3.16	431070	0.01	2000	
[Pb]	207	1	nogas	55.285	55.285	2.57	381045	0.01	2000	
Na	23	2	He	5563.022	5563.022	0.80	8107660	0.07	200000	
Mg	24	2	He	5685.758	5685.758	1.10	4336442	0.13	200000	
Al	27	2	He	113.641	113.641	0.47	49819	0.23	2000	
K	39	2	He	5937.741	5937.741	1.89	4928526	0.12	200000	
Ca	43	2	He	5594.763	5594.763	4.81	13428	41.66	200000	
Ca	44	2	He	5629.077	5629.077	0.14	227178	2.48	200000	
V	51	2	He	54.390	54.390	0.43	322569	0.02	2000	
Cr	52	2	He	56.534	56.534	2.02	353614	0.02	2000	
Mn	55	2	He	56.250	56.250	0.75	256833	0.02	2000	
Fe	56	2	He	5732.569	5732.569	0.37	31528791	0.02	200000	
Co	59	2	He	55.942	55.942	0.64	473407	0.01	2000	
Ni	60	2	He	57.088	57.088	2.25	119451	0.05	2000	
Cu	63	2	He	57.846	57.846	0.44	304411	0.02	2000	
Zn	66	2	He	56.601	56.601	1.41	72784	0.08	2000	
As	75	2	He	54.350	54.350	0.43	67615	0.08	2000	
Se	78	2	He	55.356	55.356	2.52	5806	0.95	2000	
B	11	1	nogas	532.823	532.823	3.38	2277495	0.02	2000	
Si	28	1	nogas	52570.447	52570.447	4.59	58447976	0.09	2000	>LDR
Ca	43	1	nogas	5605.244	5605.244	3.75	215521	2.60	200000	
Ca	44	1	nogas	5648.917	5648.917	2.42	3555514	0.16	200000	
Fe	56	1	nogas	5646.246	5646.246	4.68	140766761	0.00	200000	

Sample Report

Se	77	1	nogas	33.025	33.025	3.78	42754	0.08	2000	
Se	82	1	nogas	55.821	55.821	1.43	15343	0.36	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Mo	95	1	nogas	55.189	55.189	3.90	342838	0.02	2000	
Sn	118	1	nogas	114.035	114.035	4.57	998973	0.01	2000	
Ba	137	1	nogas	54.514	54.514	7.43	258449	0.02	2000	
Sb	121	2	He	56.819	56.819	1.39	307289	0.02	2000	
La	139	1	nogas	46.986	46.986	22.12	257	18.31	2000	
Au	197	1	nogas	268.397	268.397	52.94	33	805.19	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1519802	2.70	1561049	97.36	70	125	
Ge	72	1	nogas	3751467	2.83	3727881	100.63	70	125	
In	115	1	nogas	3602733	5.67	3493076	103.14	70	125	
Bi	209	1	nogas	2824299	1.71	2658885	106.22	70	125	
Ge	72	2	He	939268	0.13	913806	102.79	70	125	

Sample Report

Sample Table

Sample Name	HS18121325-04SD
Data File Name	326SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T23:28:41-06:00
Sample Type	Sample
Dilution	5
Comment	TW B136233
ISTD Ref FileName	273CALB.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	0.036	0.180	19.49	333	0.01	2000	
Na	23	1	nogas	171226.835	856134.174	6.46	4280788096	0.00	200000	
Mg	24	1	nogas	45757.666	228788.332	7.55	709673833	0.01	200000	
Al	27	1	nogas	6.380	31.899	6.17	144219	0.00	2000	
K	39	1	nogas	966.348	4831.739	5.53	27962865	0.00	200000	
Ti	47	1	nogas	0.634	3.169	13.72	1393	0.05	2000	
V	51	1	nogas	32.927	164.636	0.92	1670786	0.00	2000	
Cr	52	1	nogas	3.295	16.476	5.16	139908	0.00	2000	
Mn	55	1	nogas	518.129	2590.646	4.99	14549535	0.00	2000	
Co	59	1	nogas	3.722	18.610	5.28	85487	0.00	2000	
Ni	60	1	nogas	3.843	19.216	3.75	24557	0.02	2000	
Cu	63	1	nogas	1.182	5.912	4.33	19247	0.01	2000	
Zn	66	1	nogas	3.104	15.521	9.85	15513	0.02	2000	
As	75	1	nogas	16.863	84.315	6.41	198706	0.01	2000	
Sr	88	1	nogas	1732.170	8660.850	4.58	53674901	0.00	2000	
Ag	107	1	nogas	0.002	0.008	45.16	190	0.00	2000	
Cd	111	1	nogas	0.047	0.235	36.56	173	0.03	2000	
Sb	121	1	nogas	0.085	0.423	12.55	1493	0.01	2000	
Tl	205	1	nogas	0.095	0.476	20.64	2194	0.00	2000	
Pb	208	1	nogas	0.034	0.172	7.01	1257	0.00	2000	
U	238	1	nogas	2.575	12.874	3.87	71028	0.00	2000	
[Pb]	206	1	nogas	0.038	0.191	24.49	330	0.01	2000	
[Pb]	207	1	nogas	0.029	0.147	23.95	270	0.01	2000	
Na	23	2	He	177988.238	889941.188	0.47	252089476	0.07	200000	
Mg	24	2	He	47142.492	235712.459	0.95	35890050	0.13	200000	
Al	27	2	He	5.285	26.426	10.69	3334	0.16	2000	
K	39	2	He	1013.496	5067.481	0.88	974310	0.10	200000	
Ca	43	2	He	72728.566	363642.829	1.01	174034	41.79	200000	
Ca	44	2	He	73280.172	366400.860	0.58	2945486	2.49	200000	
V	51	2	He	1.554	7.768	2.23	19237	0.01	2000	
Cr	52	2	He	1.879	9.393	3.61	15440	0.01	2000	
Mn	55	2	He	525.337	2626.686	1.66	2387602	0.02	2000	
Fe	56	2	He	249.251	1246.255	4.14	1382190	0.02	200000	
Co	59	2	He	3.515	17.577	0.42	29764	0.01	2000	
Ni	60	2	He	3.174	15.868	3.04	7215	0.04	2000	
Cu	63	2	He	0.017	0.083	149.41	2193	0.00	2000	
Zn	66	2	He	3.815	19.077	1.29	5258	0.07	2000	
As	75	2	He	0.477	2.387	10.50	951	0.05	2000	
Se	78	2	He	0.058	0.292	158.56	134	0.04	2000	
B	11	1	nogas	8.744	43.721	7.01	57823	0.02	2000	
Si	28	1	nogas	36923.295	184616.477	4.92	41492228	0.09	2000	>LDR
Ca	43	1	nogas	68275.511	341377.556	5.52	2616638	2.61	200000	
Ca	44	1	nogas	67266.680	336333.399	5.09	42077373	0.16	200000	
Fe	56	1	nogas	278.981	1394.906	8.05	10269547	0.00	200000	

Sample Report

Se	77	1	nogas	122.642	613.209	3.40	63375	0.19	2000	
Se	82	1	nogas	4.379	21.893	8.88	1340	0.33	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Mo	95	1	nogas	0.140	0.700	11.80	1007	0.01	2000	
Sn	118	1	nogas	0.152	0.759	13.89	2267	0.01	2000	
Ba	137	1	nogas	142.441	712.205	8.76	650321	0.02	2000	
Sb	121	2	He	0.080	0.402	3.72	543	0.01	2000	
La	139	1	nogas	577.153	2885.763	4.48	2274	25.39	2000	
Au	197	1	nogas	204.464	1022.320	82.03	23	876.27	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1508548	3.43	1561049	96.64	70	125	
Ge	72	1	nogas	3751482	4.87	3727881	100.63	70	125	
In	115	1	nogas	3478163	8.46	3493076	99.57	70	125	
Bi	209	1	nogas	2569947	6.04	2658885	96.66	70	125	
Ge	72	2	He	937947	0.24	913806	102.64	70	125	

Sample Report

Sample Table

Sample Name	HS18121325-04MS
Data File Name	327SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T23:30:41-06:00
Sample Type	Sample
Dilution	1
Comment	TW B136233
ISTD Ref FileName	273CALB.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	54.183	54.183	1.51	331866	0.02	2000	
Na	23	1	nogas	OR	OR	#VALUE!	OR	#VALUE!	200000	
Mg	24	1	nogas	211901.722	211901.722	3.08	3253295673	0.01	200000	>LDR
Al	27	1	nogas	138.682	138.682	1.36	2413056	0.01	2000	
K	39	1	nogas	10049.784	10049.784	0.99	207997284	0.00	200000	
Ti	47	1	nogas	167.097	167.097	2.26	288767	0.06	2000	
V	51	1	nogas	87.884	87.884	3.71	2863191	0.00	2000	
Cr	52	1	nogas	64.436	64.436	2.42	1377500	0.00	2000	
Mn	55	1	nogas	2462.476	2462.476	0.54	64600816	0.00	2000	>LDR
Co	59	1	nogas	69.203	69.203	1.20	1479460	0.00	2000	
Ni	60	1	nogas	68.570	68.570	2.62	325089	0.02	2000	
Cu	63	1	nogas	57.466	57.466	2.62	634544	0.01	2000	
Zn	66	1	nogas	66.204	66.204	1.19	246313	0.03	2000	
As	75	1	nogas	87.531	87.531	4.32	505489	0.02	2000	
Sr	88	1	nogas	8299.310	8299.310	1.49	240461890	0.00	2000	>LDR
Ag	107	1	nogas	49.903	49.903	1.17	690027	0.01	2000	
Cd	111	1	nogas	53.679	53.679	2.77	152174	0.04	2000	
Sb	121	1	nogas	52.054	52.054	0.95	684629	0.01	2000	
Tl	205	1	nogas	47.888	47.888	9.36	951826	0.01	2000	
Pb	208	1	nogas	51.198	51.198	1.11	1411959	0.00	2000	
U	238	1	nogas	123.165	123.165	5.12	3183170	0.00	2000	
[Pb]	206	1	nogas	54.016	54.016	7.37	354924	0.02	2000	
[Pb]	207	1	nogas	52.719	52.719	6.62	309505	0.02	2000	
Na	23	2	He	885406.176	885406.176	2.35	1137232703	0.08	200000	>LDR
Mg	24	2	He	234651.956	234651.956	2.29	162116934	0.14	200000	>LDR
Al	27	2	He	142.608	142.608	1.22	56434	0.25	2000	
K	39	2	He	10253.224	10253.224	1.28	8393900	0.12	200000	
Ca	43	2	He	356253.551	356253.551	1.19	773781	46.04	200000	>LDR
Ca	44	2	He	357175.202	357175.202	1.20	13029132	2.74	200000	>LDR
V	51	2	He	58.557	58.557	2.82	313992	0.02	2000	
Cr	52	2	He	64.346	64.346	1.79	364296	0.02	2000	
Mn	55	2	He	2536.006	2536.006	1.37	10458617	0.02	2000	>LDR
Fe	56	2	He	6678.627	6678.627	1.47	33292793	0.02	200000	
Co	59	2	He	70.035	70.035	1.65	537152	0.01	2000	
Ni	60	2	He	68.431	68.431	2.93	129646	0.05	2000	
Cu	63	2	He	54.243	54.243	2.71	258785	0.02	2000	
Zn	66	2	He	69.125	69.125	1.56	80486	0.09	2000	
As	75	2	He	56.623	56.623	2.26	63831	0.09	2000	
Se	78	2	He	53.275	53.275	1.76	5069	1.05	2000	
B	11	1	nogas	590.538	590.538	1.90	2181876	0.03	2000	
Si	28	1	nogas	229617.081	229617.081	1.25	233602223	0.10	2000	>LDR
Ca	43	1	nogas	323232.528	323232.528	1.10	11585356	2.79	200000	>LDR
Ca	44	1	nogas	325145.779	325145.779	2.01	190152344	0.17	200000	>LDR
Fe	56	1	nogas	6379.587	6379.587	1.09	148210874	0.00	200000	
Se	77	1	nogas	291.816	291.816	6.57	95451	0.31	2000	
Se	82	1	nogas	70.576	70.576	3.26	18079	0.39	2000	

Sample Report

Mo	95	1	nogas	52.846	52.846	1.34	306753	0.02	2000	
Sn	118	1	nogas	108.114	108.114	2.00	839012	0.01	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Ba	137	1	nogas	736.512	736.512	5.92	3091748	0.02	2000	
Sb	121	2	He	53.573	53.573	1.27	262639	0.02	2000	
La	139	1	nogas	2870.331	2870.331	3.32	10116	28.37	2000	>LDR
Au	197	1	nogas	113.804	113.804	145.16	13	853.53	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1314314	1.15	1561049	84.19	70	125	
Ge	72	1	nogas	3502884	0.22	3727881	93.96	70	125	
In	115	1	nogas	3187436	3.89	3493076	91.25	70	125	
Bi	209	1	nogas	2411023	5.77	2658885	90.68	70	125	
Ge	72	2	He	851542	2.63	913806	93.19	70	125	

Sample Report

Sample Table

Sample Name	HS18121325-04MSD
Data File Name	328SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T23:32:37-06:00
Sample Type	Sample
Dilution	1
Comment	TW B136233
ISTD Ref FileName	273CALB.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	57.302	57.302	3.31	341596	0.02	2000	
Na	23	1	nogas	OR	OR	#VALUE!	OR	#VALUE!	200000	
Mg	24	1	nogas	222927.965	222927.965	9.46	3301974874	0.01	200000	>LDR
Al	27	1	nogas	145.528	145.528	3.68	2433989	0.01	2000	
K	39	1	nogas	10534.785	10534.785	2.77	209417051	0.01	200000	
Ti	47	1	nogas	175.838	175.838	3.59	292230	0.06	2000	
V	51	1	nogas	95.636	95.636	2.92	2932146	0.00	2000	
Cr	52	1	nogas	67.971	67.971	5.52	1393940	0.00	2000	
Mn	55	1	nogas	2594.216	2594.216	3.67	65450422	0.00	2000	>LDR
Co	59	1	nogas	73.894	73.894	4.31	1519002	0.00	2000	
Ni	60	1	nogas	73.096	73.096	3.12	333007	0.02	2000	
Cu	63	1	nogas	61.864	61.864	3.24	656716	0.01	2000	
Zn	66	1	nogas	69.739	69.739	3.81	249360	0.03	2000	
As	75	1	nogas	94.337	94.337	1.98	516118	0.02	2000	
Sr	88	1	nogas	8717.317	8717.317	2.48	242970383	0.00	2000	>LDR
Ag	107	1	nogas	52.036	52.036	3.66	691936	0.01	2000	
Cd	111	1	nogas	56.878	56.878	5.86	154646	0.04	2000	
Sb	121	1	nogas	54.938	54.938	3.70	694856	0.01	2000	
Tl	205	1	nogas	54.640	54.640	5.02	998494	0.01	2000	
Pb	208	1	nogas	50.761	50.761	0.29	1399924	0.00	2000	
U	238	1	nogas	134.127	134.127	6.68	3179414	0.00	2000	
[Pb]	206	1	nogas	58.367	58.367	5.71	352224	0.02	2000	
[Pb]	207	1	nogas	56.739	56.739	7.49	305565	0.02	2000	
Na	23	2	He	886617.422	886617.422	0.39	1115336943	0.08	200000	>LDR
Mg	24	2	He	234944.984	234944.984	1.07	158975271	0.15	200000	>LDR
Al	27	2	He	139.963	139.963	1.59	54237	0.26	2000	
K	39	2	He	10135.023	10135.023	1.32	8298983	0.12	200000	
Ca	43	2	He	360541.265	360541.265	1.36	766741	47.02	200000	>LDR
Ca	44	2	He	360755.821	360755.821	2.14	12886029	2.80	200000	>LDR
V	51	2	He	58.903	58.903	1.82	309291	0.02	2000	
Cr	52	2	He	65.168	65.168	0.58	361277	0.02	2000	
Mn	55	2	He	2531.860	2531.860	1.44	10224339	0.02	2000	>LDR
Fe	56	2	He	6767.924	6767.924	1.80	33036424	0.02	200000	
Co	59	2	He	69.874	69.874	1.20	524803	0.01	2000	
Ni	60	2	He	69.312	69.312	2.48	128602	0.05	2000	
Cu	63	2	He	54.430	54.430	1.61	254334	0.02	2000	
Zn	66	2	He	68.626	68.626	1.35	78249	0.09	2000	
As	75	2	He	56.789	56.789	1.84	62691	0.09	2000	
Se	78	2	He	54.593	54.593	2.91	5083	1.07	2000	
B	11	1	nogas	614.013	614.013	3.40	2207314	0.03	2000	
Si	28	1	nogas	241625.994	241625.994	4.64	236287290	0.10	2000	>LDR
Ca	43	1	nogas	343951.136	343951.136	3.78	11855401	2.90	200000	>LDR
Ca	44	1	nogas	339400.896	339400.896	2.55	190941550	0.18	200000	>LDR
Fe	56	1	nogas	6781.453	6781.453	3.62	151324799	0.00	200000	
Se	77	1	nogas	310.864	310.864	2.04	95795	0.32	2000	
Se	82	1	nogas	77.232	77.232	6.39	19007	0.41	2000	

Sample Report

Mo	95	1	nogas	55.243	55.243	3.25	308410	0.02	2000	
Sn	118	1	nogas	114.585	114.585	9.09	850798	0.01	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Ba	137	1	nogas	772.834	772.834	11.01	3102345	0.02	2000	
Sb	121	2	He	54.102	54.102	1.49	259695	0.02	2000	
La	139	1	nogas	3188.101	3188.101	8.87	10750	29.66	2000	>LDR
Au	197	1	nogas	264.518	264.518	107.09	27	991.94	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1280060	3.67	1561049	82.00	70	125	
Ge	72	1	nogas	3371910	4.01	3727881	90.45	70	125	
In	115	1	nogas	3067103	10.13	3493076	87.81	70	125	
Bi	209	1	nogas	2214014	7.09	2658885	83.27	70	125	
Ge	72	2	He	833660	0.21	913806	91.23	70	125	

Sample Report

Sample Table

Sample Name	HS18121325-04PDS
Data File Name	329SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T23:34:34-06:00
Sample Type	Sample
Dilution	1
Comment	TW B136233
ISTD Ref FileName	273CALB.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	109.043	109.043	1.99	650708	0.02	2000	
Na	23	1	nogas	OR	OR	#VALUE!	OR	#VALUE!	200000	
Mg	24	1	nogas	223167.168	223167.168	8.22	3093169869	0.01	200000	>LDR
Al	27	1	nogas	152.880	152.880	3.44	2356348	0.01	2000	
K	39	1	nogas	16392.200	16392.200	3.47	296973348	0.01	200000	
Ti	47	1	nogas	121.301	121.301	3.17	185915	0.07	2000	
V	51	1	nogas	155.930	155.930	3.14	3969726	0.00	2000	
Cr	52	1	nogas	125.835	125.835	4.48	2330546	0.01	2000	
Mn	55	1	nogas	2600.724	2600.724	3.64	60480547	0.00	2000	>LDR
Co	59	1	nogas	127.946	127.946	2.92	2425221	0.01	2000	
Ni	60	1	nogas	128.504	128.504	2.66	536462	0.02	2000	
Cu	63	1	nogas	122.952	122.952	1.60	1199463	0.01	2000	
Zn	66	1	nogas	125.991	125.991	3.49	413059	0.03	2000	
As	75	1	nogas	153.693	153.693	2.02	714142	0.02	2000	
Sr	88	1	nogas	8565.815	8565.815	3.10	220079403	0.00	2000	>LDR
Ag	107	1	nogas	101.908	101.908	4.16	1248856	0.01	2000	
Cd	111	1	nogas	112.329	112.329	5.93	287750	0.04	2000	
Sb	121	1	nogas	109.696	109.696	2.32	1279180	0.01	2000	
Tl	205	1	nogas	114.049	114.049	4.03	1908839	0.01	2000	
Pb	208	1	nogas	95.578	95.578	1.38	2635629	0.00	2000	
U	238	1	nogas	12.310	12.310	4.33	267501	0.00	2000	
[Pb]	206	1	nogas	118.537	118.537	3.24	655580	0.02	2000	
[Pb]	207	1	nogas	116.831	116.831	3.15	577097	0.02	2000	
Na	23	2	He	891631.479	891631.479	1.43	1044891264	0.09	200000	>LDR
Mg	24	2	He	240378.764	240378.764	0.15	151528164	0.16	200000	>LDR
Al	27	2	He	147.787	147.787	3.28	53308	0.28	2000	
K	39	2	He	14689.082	14689.082	0.68	11955936	0.12	200000	
Ca	43	2	He	358454.444	358454.444	0.46	710187	50.47	200000	>LDR
Ca	44	2	He	359609.017	359609.017	1.39	11967143	3.00	200000	>LDR
V	51	2	He	119.097	119.097	0.54	573860	0.02	2000	
Cr	52	2	He	124.974	124.974	1.74	642526	0.02	2000	
Mn	55	2	He	2614.568	2614.568	0.46	9836062	0.03	2000	>LDR
Fe	56	2	He	12700.598	12700.598	1.03	57747521	0.02	200000	
Co	59	2	He	127.532	127.532	0.89	892353	0.01	2000	
Ni	60	2	He	124.539	124.539	0.80	214867	0.06	2000	
Cu	63	2	He	110.714	110.714	0.27	480157	0.02	2000	
Zn	66	2	He	123.643	123.643	1.25	131095	0.09	2000	
As	75	2	He	113.131	113.131	0.10	116053	0.10	2000	
Se	78	2	He	107.730	107.730	0.49	9242	1.17	2000	
B	11	1	nogas	31.930	31.930	6.00	131853	0.02	2000	
Si	28	1	nogas	187792.551	187792.551	3.53	169607714	0.11	2000	>LDR
Ca	43	1	nogas	350127.079	350127.079	3.00	11126722	3.15	200000	>LDR
Ca	44	1	nogas	350796.550	350796.550	3.03	181899291	0.19	200000	>LDR
Fe	56	1	nogas	12556.105	12556.105	4.36	255732689	0.00	200000	
Se	77	1	nogas	392.262	392.262	4.74	103782	0.38	2000	
Se	82	1	nogas	125.854	125.854	1.97	28519	0.44	2000	

Sample Report

Mo	95	1	nogas	114.619	114.619	2.91	589817	0.02	2000	
Sn	118	1	nogas	0.737	0.737	10.56	5974	0.01	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Ba	137	1	nogas	802.409	802.409	3.96	3048180	0.03	2000	
Sb	121	2	He	106.616	106.616	0.95	476715	0.02	2000	
La	139	1	nogas	2939.541	2939.541	1.74	9379	31.34	2000	>LDR
Au	197	1	nogas	297.175	297.175	84.95	27	1114.41	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1280945	2.77	1561049	82.06	70	125	
Ge	72	1	nogas	3108499	4.44	3727881	83.39	70	125	
In	115	1	nogas	2886213	6.85	3493076	82.63	70	125	
Bi	209	1	nogas	2025936	5.29	2658885	76.19	70	125	
Ge	72	2	He	776651	0.67	913806	84.99	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	330_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T23:36:33-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	273CALB.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	97.622	9.969	618205	2.41	100	97.6	90	110	
Na	23	1	nogas	11522.028	15.037	247847139	1.96	10000	115.2	90	110	CCV Main CR1-2 Failed
Mg	24	1	nogas	11157.128	14.081	147367907	1.67	10000	111.6	90	110	CCV Main CR1-2 Failed
Al	27	1	nogas	111.801	12.876	1793107	3.46	100	111.8	90	110	CCV Main CR1-2 Failed
K	39	1	nogas	10864.536	12.538	206289513	2.17	10000	108.6	90	110	
Ti	47	1	nogas	108.349	12.072	172284	2.03	100	108.3	90	110	
V	51	1	nogas	127.299	15.245	3492962	2.30	100	127.3	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	110.932	11.481	2140260	1.53	100	110.9	90	110	CCV Main CR1-2 Failed
Mn	55	1	nogas	110.978	12.197	2694112	2.08	100	111.0	90	110	CCV Main CR1-2 Failed
Co	59	1	nogas	107.827	11.184	2121176	1.34	100	107.8	90	110	
Ni	60	1	nogas	110.397	11.682	478743	1.80	100	110.4	90	110	CCV Main CR1-2 Failed
Cu	63	1	nogas	111.525	11.700	1128648	2.29	100	111.5	90	110	CCV Main CR1-2 Failed
Zn	66	1	nogas	109.131	11.734	371673	1.74	100	109.1	90	110	
As	75	1	nogas	117.205	13.980	588691	1.54	100	117.2	90	110	CCV Main CR1-2 Failed
Sr	88	1	nogas	112.548	11.699	3002333	1.82	100	112.5	90	110	CCV Main CR1-2 Failed
Ag	107	1	nogas	107.262	9.324	1366304	0.68	100	107.3	90	110	
Cd	111	1	nogas	110.404	13.885	293033	2.01	100	110.4	90	110	CCV Main CR1-2 Failed
Sb	121	1	nogas	109.402	12.350	1323188	3.91	100	109.4	90	110	
Tl	205	1	nogas	107.180	11.217	2011295	2.52	100	107.2	90	110	
Pb	208	1	nogas	102.183	1.319	2817742	1.32	100	102.2	90	110	
U	238	1	nogas	118.486	12.006	2885239	2.89	100	118.5	90	110	CCV Main CR1-2 Failed
[Pb]	206	1	nogas	111.470	10.874	691071	1.48	100	111.5	90	110	CCV Main CR1-2 Failed
[Pb]	207	1	nogas	110.700	11.242	612852	2.17	100	110.7	90	110	CCV Main CR1-2 Failed
Na	23	2	He	10613.356	1.204	13787141	1.88	10000	106.1	90	110	
Mg	24	2	He	10445.022	1.468	7194386	2.53	10000	104.5	90	110	
Al	27	2	He	102.432	3.152	40647	2.48	100	102.4	90	110	
K	39	2	He	9751.749	1.932	7991211	1.89	10000	97.5	90	110	
Ca	43	2	He	10122.183	1.603	21930	2.88	10000	101.2	90	110	
Ca	44	2	He	10177.563	0.969	370510	1.49	10000	101.8	90	110	
V	51	2	He	101.724	1.061	536749	1.27	100	101.7	90	110	
Cr	52	2	He	101.395	1.243	570055	1.23	100	101.4	90	110	
Mn	55	2	He	103.077	0.869	424396	1.68	100	103.1	90	110	
Fe	56	2	He	10103.980	1.696	50184401	2.27	10000	101.0	90	110	
Co	59	2	He	100.267	0.714	766367	1.85	100	100.3	90	110	
Ni	60	2	He	101.826	0.971	192009	2.12	100	101.8	90	110	
Cu	63	2	He	104.042	0.486	493022	1.84	100	104.0	90	110	
Zn	66	2	He	101.494	1.702	117617	2.89	100	101.5	90	110	
As	75	2	He	97.437	0.759	109228	1.54	100	97.4	90	110	
Se	78	2	He	95.748	2.012	8986	2.61	100	95.7	90	110	
B	11	1	nogas	494.803	9.756	1893640	1.71	500	99.0	90	110	
Si	28	1	nogas	6950.119	29.677	7917792	29.93	5000	139.0	90	110	CCV Main CR1-2 Failed
Ca	43	1	nogas	11086.471	11.731	365979	1.79	10000	110.9	90	110	CCV Main CR1-2 Failed
Ca	44	1	nogas	11060.783	11.506	5967506	1.71	10000	110.6	90	110	CCV Main CR1-2 Failed
Fe	56	1	nogas	10923.055	13.267	231107472	3.15	10000	109.2	90	110	
Se	77	1	nogas	190.300	26.386	67649	4.61	100	190.3	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	105.110	14.333	24670	4.31	100	105.1	90	110	
Mo	95	1	nogas	109.294	11.951	583407	1.85	100	109.3	90	110	
Sn	118	1	nogas	110.506	15.385	801926	3.49	100	110.5	90	110	CCV Main CR1-2 Failed
Ba	137	1	nogas	110.882	13.746	436273	1.79	100	110.9	90	110	CCV Main CR1-2 Failed
Sb	121	2	He	98.380	0.803	480518	2.01	100	98.4	90	110	
Li	7	1	nogas	100.946	9.461	1749776	0.86	100	100.9	90	110	
P	31	1	nogas	522.259	11.694	739553	0.67	500	104.5	90	110	
La	139	1	nogas	143.324	7.735	533	9.62	100	143.3	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	197.497	67.264	20	50.00	100	197.5	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	nogas	1365732	7.68	1561049	87.49	70	125	
Ge	72	1	nogas	3246444	9.49	3727881	87.09	70	125	
In	115	1	nogas	3014246	11.39	3493076	86.29	70	125	
Bi	209	1	nogas	2283338	8.90	2658885	85.88	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	848367	1.41	913806	92.84	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	331_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-08T23:38:34-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	273CALB.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	0.116	18.8	847	17.2	1	
Na	23	1	nogas	104.731	26.1	5626085	6.0	100	CCB Main CR1 Failed
Mg	24	1	nogas	20.962	11.2	326331	10.3	100	
Al	27	1	nogas	0.501	43.5	32562	0.6	5	
K	39	1	nogas	4.726	650.8	6681472	1.6	100	
Ti	47	1	nogas	0.175	59.5	487	23.8	2.5	
V	51	1	nogas	-3.013	-150.4	683477	4.7	2.5	
Cr	52	1	nogas	-0.403	-73.3	53584	1.6	2.5	
Mn	55	1	nogas	0.181	51.5	22784	2.0	2.5	
Co	59	1	nogas	0.069	27.1	1843	25.3	2.5	
Ni	60	1	nogas	-0.398	-37.9	3014	13.5	2.5	
Cu	63	1	nogas	0.371	21.2	8822	5.2	2	
Zn	66	1	nogas	-0.406	-11.7	1583	11.9	2.5	
As	75	1	nogas	-2.675	-132.4	93592	6.3	2.5	
Sr	88	1	nogas	0.488	8.4	16244	5.1	2.5	
Ag	107	1	nogas	0.058	21.0	927	10.0	2.5	
Cd	111	1	nogas	0.060	39.7	203	38.2	1	
Sb	121	1	nogas	0.963	14.6	12718	22.6	2.5	
Tl	205	1	nogas	0.469	49.1	10398	56.3	1	
Pb	208	1	nogas	0.084	27.7	2613	24.4	2.5	
U	238	1	nogas	0.161	46.7	4591	54.1	2.5	
[Pb]	206	1	nogas	0.091	30.8	693	29.1	2.5	
[Pb]	207	1	nogas	0.077	18.0	563	18.0	2.5	
Na	23	2	He	82.269	5.3	321576	0.9	100	
Mg	24	2	He	20.151	2.2	16224	2.5	100	
Al	27	2	He	-0.794	-40.1	690	20.3	5	
K	39	2	He	-18.242	-13.7	145815	1.4	100	
Ca	43	2	He	41.642	5.8	117	4.9	100	
Ca	44	2	He	23.410	13.1	1503	8.4	100	
V	51	2	He	-0.314	-13.4	8061	4.4	2.5	
Cr	52	2	He	-0.019	-141.0	3507	3.4	2.5	
Mn	55	2	He	0.234	8.7	1880	5.1	2.5	
Fe	56	2	He	6.882	2.1	48684	1.0	100	
Co	59	2	He	0.056	16.1	503	14.1	2.5	
Ni	60	2	He	-0.124	-8.1	340	5.1	2.5	
Cu	63	2	He	0.133	18.5	2644	5.4	2	
Zn	66	2	He	0.116	63.9	503	19.1	2.5	
As	75	2	He	-0.008	-546.8	331	14.7	2.5	
Se	78	2	He	0.326	53.7	153	12.7	2	
B	11	1	nogas	8.412	11.4	53465	10.2	10	
Si	28	1	nogas	7.999	1914.3	1435858	2.0	5	CCB Main CR1 Failed
Ca	43	1	nogas	25.687	8.6	1370	12.8	100	
Ca	44	1	nogas	25.425	16.3	31637	3.6	100	
Fe	56	1	nogas	-3.546	-250.4	3096284	6.0	100	
Se	77	1	nogas	-6.160	-329.9	30463	4.6	2.5	
Se	82	1	nogas	0.434	82.1	233	26.2	2	

Continuing Calibration Blank (CCB) Report

Mo	95	1	nogas	0.419	34.5	2530	39.5	2.5	
Sn	118	1	nogas	0.456	20.9	4581	24.4	5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Ba	137	1	nogas	0.121	20.7	723	11.6	2.5	
Sb	121	2	He	0.685	6.8	3594	5.3	2.5	
P	31	1	nogas	2.079	246.9	78857	1.6	10	
La	139	1	nogas	24.012	35.0	150	20.0	2.5	CCB Main CR1 Failed
Au	197	1	nogas	38.664	157.6	7	86.6	2.5	CCB Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1427544	6.78	1561049	91.45	70	125	
Ge	72	1	nogas	3415863	9.88	3727881	91.63	70	125	
In	115	1	nogas	3258286	12.34	3493076	93.28	70	125	
Bi	209	1	nogas	2556748	12.81	2658885	96.16	70	125	
Ge	72	2	He	885782	1.58	913806	96.93	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	342_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T00:00:18-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	273CALB.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	101.611	7.967	654358	1.08	100	101.6	90	110	
Na	23	1	nogas	12074.111	13.724	270198631	0.50	10000	120.7	90	110	CCV Main CR1-2 Failed
Mg	24	1	nogas	11284.440	14.897	154877049	1.90	10000	112.8	90	110	CCV Main CR1-2 Failed
Al	27	1	nogas	113.985	12.576	1882984	1.60	100	114.0	90	110	CCV Main CR1-2 Failed
K	39	1	nogas	11089.214	11.707	216901555	0.97	10000	110.9	90	110	CCV Main CR1-2 Failed
Ti	47	1	nogas	108.174	11.713	177238	0.84	100	108.2	90	110	
V	51	1	nogas	137.417	20.633	3813646	6.02	100	137.4	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	112.815	10.294	2243104	0.85	100	112.8	90	110	CCV Main CR1-2 Failed
Mn	55	1	nogas	112.009	9.677	2805930	1.97	100	112.0	90	110	CCV Main CR1-2 Failed
Co	59	1	nogas	107.627	11.711	2180403	1.46	100	107.6	90	110	
Ni	60	1	nogas	108.580	11.845	485128	2.18	100	108.6	90	110	
Cu	63	1	nogas	109.570	10.698	1143142	0.37	100	109.6	90	110	
Zn	66	1	nogas	108.265	12.241	379745	1.22	100	108.3	90	110	
As	75	1	nogas	118.428	16.324	610875	2.70	100	118.4	90	110	CCV Main CR1-2 Failed
Sr	88	1	nogas	110.586	11.123	3040227	0.98	100	110.6	90	110	CCV Main CR1-2 Failed
Ag	107	1	nogas	104.451	10.818	1369458	0.50	100	104.5	90	110	
Cd	111	1	nogas	110.688	14.087	294742	1.52	100	110.7	90	110	CCV Main CR1-2 Failed
Sb	121	1	nogas	103.477	10.383	1290820	2.01	100	103.5	90	110	
Tl	205	1	nogas	106.359	10.640	1955163	0.53	100	106.4	90	110	
Pb	208	1	nogas	97.379	0.897	2685294	0.90	100	97.4	90	110	
U	238	1	nogas	114.695	10.624	2737490	0.63	100	114.7	90	110	CCV Main CR1-2 Failed
[Pb]	206	1	nogas	108.216	9.611	657618	0.87	100	108.2	90	110	
[Pb]	207	1	nogas	107.617	9.371	584212	1.32	100	107.6	90	110	
Na	23	2	He	11321.140	0.748	15460433	1.28	10000	113.2	90	110	CCV Main CR1-2 Failed
Mg	24	2	He	10546.991	1.016	7642937	0.13	10000	105.5	90	110	
Al	27	2	He	103.066	0.869	43036	1.19	100	103.1	90	110	
K	39	2	He	10479.383	1.031	8575507	1.01	10000	104.8	90	110	
Ca	43	2	He	10310.198	1.506	23498	0.73	10000	103.1	90	110	
Ca	44	2	He	10455.623	2.717	400494	2.72	10000	104.6	90	110	
V	51	2	He	102.622	2.141	569630	1.14	100	102.6	90	110	
Cr	52	2	He	102.316	1.428	605227	0.43	100	102.3	90	110	
Mn	55	2	He	101.658	1.798	440385	1.19	100	101.7	90	110	
Fe	56	2	He	10139.683	1.535	52986889	0.87	10000	101.4	90	110	
Co	59	2	He	100.637	1.706	809251	0.73	100	100.6	90	110	
Ni	60	2	He	102.106	0.526	202585	1.42	100	102.1	90	110	
Cu	63	2	He	101.704	0.748	507125	0.76	100	101.7	90	110	
Zn	66	2	He	99.894	1.045	121795	0.82	100	99.9	90	110	
As	75	2	He	97.611	1.318	115128	0.41	100	97.6	90	110	
Se	78	2	He	95.680	0.881	9448	1.78	100	95.7	90	110	
B	11	1	nogas	589.207	7.932	2289342	0.98	500	117.8	90	110	CCV Main CR1-2 Failed
Si	28	1	nogas	5828.307	15.207	6979013	1.22	5000	116.6	90	110	CCV Main CR1-2 Failed
Ca	43	1	nogas	11150.304	12.439	379007	1.84	10000	111.5	90	110	CCV Main CR1-2 Failed
Ca	44	1	nogas	11103.934	13.429	6163278	2.46	10000	111.0	90	110	CCV Main CR1-2 Failed
Fe	56	1	nogas	10860.935	10.151	237239897	1.72	10000	108.6	90	110	
Se	77	1	nogas	207.872	27.624	73178	4.89	100	207.9	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	103.338	11.166	25041	1.23	100	103.3	90	110	
Mo	95	1	nogas	104.495	11.391	574858	1.35	100	104.5	90	110	
Sn	118	1	nogas	108.722	13.810	792659	2.82	100	108.7	90	110	
Ba	137	1	nogas	112.381	12.674	444031	0.82	100	112.4	90	110	CCV Main CR1-2 Failed
Sb	121	2	He	94.216	0.866	484173	0.37	100	94.2	90	110	
Li	7	1	nogas	109.830	9.775	1923782	2.16	100	109.8	90	110	
P	31	1	nogas	527.474	13.319	768008	1.09	500	105.5	90	110	
La	139	1	nogas	173.773	19.472	630	6.92	100	173.8	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	185.500	90.830	20	86.60	100	185.5	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	nogas	1386829	6.73	1561049	88.84	70	125	
Ge	72	1	nogas	3346720	10.36	3727881	89.78	70	125	
In	115	1	nogas	3027012	12.33	3493076	86.66	70	125	
Bi	209	1	nogas	2237996	10.03	2658885	84.17	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	892677	1.00	913806	97.69	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	343_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T00:02:15-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	273CALB.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	0.091	31.1	770	27.6	1	
Na	23	1	nogas	440.439	4.0	14428566	0.9	100	CCB Main CR1 Failed
Mg	24	1	nogas	23.167	13.0	388198	9.7	100	
Al	27	1	nogas	0.472	19.2	35183	2.3	5	
K	39	1	nogas	-8.577	-101.4	7035792	1.4	100	
Ti	47	1	nogas	0.081	30.5	370	9.7	2.5	
V	51	1	nogas	-4.045	-28.7	725993	4.6	2.5	
Cr	52	1	nogas	-0.602	-19.5	54430	3.0	2.5	
Mn	55	1	nogas	0.070	64.8	21893	3.4	2.5	
Co	59	1	nogas	0.067	21.6	1953	14.5	2.5	
Ni	60	1	nogas	-0.184	-33.3	4391	7.0	2.5	
Cu	63	1	nogas	0.520	5.0	11400	1.9	2	
Zn	66	1	nogas	-0.366	-12.7	1880	7.2	2.5	
As	75	1	nogas	-4.379	-14.3	94837	3.0	2.5	
Sr	88	1	nogas	0.514	8.4	18563	5.7	2.5	
Ag	107	1	nogas	0.069	9.1	1173	10.1	2.5	
Cd	111	1	nogas	0.050	12.1	190	9.1	1	
Sb	121	1	nogas	0.726	20.5	10403	17.8	2.5	
Tl	205	1	nogas	0.395	52.0	8673	51.1	1	
Pb	208	1	nogas	0.079	30.2	2497	26.4	2.5	
U	238	1	nogas	0.149	39.1	4207	38.6	2.5	
[Pb]	206	1	nogas	0.079	22.7	627	20.6	2.5	
[Pb]	207	1	nogas	0.078	38.7	583	33.1	2.5	
Na	23	2	He	462.879	1.7	858978	0.3	100	CCB Main CR1 Failed
Mg	24	2	He	23.562	3.4	19323	3.3	100	
Al	27	2	He	-0.585	-26.3	800	7.6	5	
K	39	2	He	-4.111	-52.2	157162	1.1	100	
Ca	43	2	He	21.408	71.0	73	47.9	100	
Ca	44	2	He	30.250	9.7	1823	6.0	100	
V	51	2	He	-0.235	-6.0	8775	0.4	2.5	
Cr	52	2	He	0.057	61.0	4087	4.2	2.5	
Mn	55	2	He	0.157	18.3	1607	8.7	2.5	
Fe	56	2	He	7.663	4.7	54564	3.3	100	
Co	59	2	He	0.058	26.0	537	23.0	2.5	
Ni	60	2	He	-0.145	-22.7	310	22.6	2.5	
Cu	63	2	He	0.206	13.7	3107	4.3	2	
Zn	66	2	He	0.100	38.1	500	8.7	2.5	
As	75	2	He	0.017	112.9	373	6.7	2.5	
Se	78	2	He	0.184	151.3	143	18.6	2	
B	11	1	nogas	57.137	4.1	279747	3.8	10	CCB Main CR1 Failed
Si	28	1	nogas	7.354	859.5	1573108	2.5	5	CCB Main CR1 Failed
Ca	43	1	nogas	31.980	17.7	1727	10.0	100	
Ca	44	1	nogas	28.020	10.2	36212	2.6	100	
Fe	56	1	nogas	-6.608	-103.0	3308291	2.5	100	
Se	77	1	nogas	-19.114	-16.9	30529	3.7	2.5	
Se	82	1	nogas	0.357	41.3	240	18.2	2	
Mo	95	1	nogas	0.336	29.1	2200	25.1	2.5	
Sn	118	1	nogas	0.289	36.9	3510	24.8	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.532	9.7	2724	7.9	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.484	8.5	2657	7.3	2.5	
P	31	1	nogas	-4.110	-24.1	77260	2.1	10	
La	139	1	nogas	24.376	31.5	167	19.3	2.5	CCB Main CR1 Failed
Au	197	1	nogas	130.772	84.0	17	69.3	2.5	CCB Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1614401	0.17	1561049	103.42	70	125	
Ge	72	1	nogas	3721029	2.56	3727881	99.82	70	125	
In	115	1	nogas	3561546	1.40	3493076	101.96	70	125	
Bi	209	1	nogas	2593220	1.17	2658885	97.53	70	125	
Ge	72	2	He	916492	1.01	913806	100.29	70	125	

Sample Report

Sample Table

Sample Name	HS18121523-02
Data File Name	347SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T00:10:07-06:00
Sample Type	Sample
Dilution	1
Comment	TW B136233
ISTD Ref FileName	273CALB.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	0.149	0.149	9.35	1097	0.01	2000	
Na	23	1	nogas	OR	OR	#VALUE!	OR	#VALUE!	200000	
Mg	24	1	nogas	252022.628	252022.628	5.39	3710196483	0.01	200000	>LDR
Al	27	1	nogas	40.663	40.663	3.41	680466	0.01	2000	
K	39	1	nogas	6402.958	6402.958	3.59	126649049	0.01	200000	
Ti	47	1	nogas	3.804	3.804	15.15	6342	0.06	2000	
V	51	1	nogas	49.149	49.149	6.06	1824577	0.00	2000	
Cr	52	1	nogas	4.289	4.289	3.28	141752	0.00	2000	
Mn	55	1	nogas	621.743	621.743	3.94	15313476	0.00	2000	
Co	59	1	nogas	6.838	6.838	4.21	137475	0.00	2000	
Ni	60	1	nogas	14.291	14.291	1.77	67319	0.02	2000	
Cu	63	1	nogas	12.498	12.498	1.06	133377	0.01	2000	
Zn	66	1	nogas	6.464	6.464	6.56	25188	0.03	2000	
As	75	1	nogas	61.157	61.157	3.00	362380	0.02	2000	
Sr	88	1	nogas	9009.710	9009.710	5.46	244751756	0.00	2000	>LDR
Ag	107	1	nogas	0.020	0.020	15.51	407	0.00	2000	
Cd	111	1	nogas	0.484	0.484	12.76	1270	0.04	2000	
Sb	121	1	nogas	0.444	0.444	4.02	5738	0.01	2000	
Tl	205	1	nogas	0.014	0.014	9.41	377	0.00	2000	
Pb	208	1	nogas	0.114	0.114	9.24	3437	0.00	2000	
U	238	1	nogas	4.964	4.964	3.70	107654	0.00	2000	
[Pb]	206	1	nogas	0.154	0.154	15.45	903	0.02	2000	
[Pb]	207	1	nogas	0.150	0.150	17.60	810	0.02	2000	
Na	23	2	He	1126258.249	1126258.249	1.03	1436360939	0.08	200000	>LDR
Mg	24	2	He	274290.354	274290.354	0.73	188171611	0.15	200000	>LDR
Al	27	2	He	40.291	40.291	0.71	16517	0.24	2000	
K	39	2	He	6337.721	6337.721	0.85	5249714	0.12	200000	
Ca	43	2	He	479826.738	479826.738	0.97	1034557	46.38	200000	>LDR
Ca	44	2	He	482209.316	482209.316	0.66	17462683	2.76	200000	>LDR
V	51	2	He	3.067	3.067	1.98	25153	0.01	2000	
Cr	52	2	He	2.333	2.333	5.70	16441	0.01	2000	
Mn	55	2	He	635.148	635.148	1.43	2601134	0.02	2000	
Fe	56	2	He	11915.854	11915.854	1.33	58964607	0.02	200000	
Co	59	2	He	5.792	5.792	1.17	44160	0.01	2000	
Ni	60	2	He	7.705	7.705	4.93	14993	0.05	2000	
Cu	63	2	He	1.331	1.331	2.31	8155	0.02	2000	
Zn	66	2	He	7.430	7.430	5.12	8896	0.08	2000	
As	75	2	He	11.559	11.559	0.93	13197	0.09	2000	
Se	78	2	He	0.475	0.475	47.87	159	0.30	2000	
B	11	1	nogas	53.251	53.251	6.86	238362	0.02	2000	
Si	28	1	nogas	202963.636	202963.636	3.25	193904217	0.10	2000	>LDR
Ca	43	1	nogas	454808.150	454808.150	2.49	15299299	2.97	200000	>LDR
Ca	44	1	nogas	451453.254	451453.254	4.15	247645903	0.18	200000	>LDR
Fe	56	1	nogas	11793.481	11793.481	4.24	254400872	0.00	200000	
Se	77	1	nogas	349.314	349.314	2.71	101191	0.35	2000	
Se	82	1	nogas	22.505	22.505	2.24	5498	0.41	2000	
Mo	95	1	nogas	0.870	0.870	4.83	4854	0.02	2000	
Sn	118	1	nogas	0.236	0.236	2.02	2507	0.01	2000	
Ba	137	1	nogas	9310.724	9310.724	7.02	35602848	0.03	2000	>LDR

Sample Report

Sb	121	2	He	0.426	0.426	14.34	2170	0.02	2000	
La	139	1	nogas	2851.454	2851.454	9.09	9143	31.19	2000	>LDR
Au	197	1	nogas	175.016	175.016	35.77	17	1050.10	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1470669	5.46	1561049	94.21	70	125	
Ge	72	1	nogas	3290224	5.04	3727881	88.26	70	125	
In	115	1	nogas	2910408	7.72	3493076	83.32	70	125	
Bi	209	1	nogas	2020846	5.78	2658885	76.00	70	125	
Ge	72	2	He	845229	0.97	913806	92.50	70	125	

Sample Report

Sample Table

Sample Name	HS18121523-05
Data File Name	348SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T00:12:07-06:00
Sample Type	Sample
Dilution	1
Comment	TW B136233
ISTD Ref FileName	273CALB.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	0.045	0.045	1.68	450	0.01	2000	
Na	23	1	nogas	25039.707	25039.707	1.31	685822815	0.00	200000	
Mg	24	1	nogas	1528.670	1528.670	4.81	25889786	0.01	200000	
Al	27	1	nogas	563.920	563.920	1.69	10826760	0.01	2000	
K	39	1	nogas	2146.059	2146.059	0.72	55343578	0.00	200000	
Ti	47	1	nogas	10.114	10.114	1.38	19657	0.05	2000	
V	51	1	nogas	43.302	43.302	2.14	2008750	0.00	2000	
Cr	52	1	nogas	8.003	8.003	0.30	252193	0.00	2000	
Mn	55	1	nogas	103.389	103.389	2.08	3036378	0.00	2000	
Co	59	1	nogas	0.323	0.323	4.46	8119	0.00	2000	
Ni	60	1	nogas	4.689	4.689	0.98	29898	0.02	2000	
Cu	63	1	nogas	8.337	8.337	1.09	107180	0.01	2000	
Zn	66	1	nogas	4.834	4.834	1.80	23215	0.02	2000	
As	75	1	nogas	16.115	16.115	5.38	202546	0.01	2000	
Sr	88	1	nogas	83.878	83.878	1.75	2705472	0.00	2000	
Ag	107	1	nogas	0.069	0.069	1.83	1240	0.01	2000	
Cd	111	1	nogas	0.101	0.101	12.84	360	0.03	2000	
Sb	121	1	nogas	0.222	0.222	5.22	3560	0.01	2000	
Tl	205	1	nogas	0.010	0.010	2.40	410	0.00	2000	
Pb	208	1	nogas	1.301	1.301	2.85	36180	0.00	2000	
U	238	1	nogas	0.169	0.169	4.82	4911	0.00	2000	
[Pb]	206	1	nogas	1.285	1.285	4.76	9393	0.01	2000	
[Pb]	207	1	nogas	1.177	1.177	5.15	7722	0.02	2000	
Na	23	2	He	27049.948	27049.948	1.56	38711964	0.07	200000	
Mg	24	2	He	1694.974	1694.974	2.25	1299174	0.13	200000	
Al	27	2	He	580.638	580.638	3.06	251117	0.23	2000	
K	39	2	He	2431.517	2431.517	3.12	2112995	0.12	200000	
Ca	43	2	He	8802.723	8802.723	1.85	21199	41.52	200000	
Ca	44	2	He	8639.537	8639.537	1.44	349723	2.47	200000	
V	51	2	He	4.991	4.991	1.85	39155	0.01	2000	
Cr	52	2	He	7.256	7.256	4.59	48918	0.01	2000	
Mn	55	2	He	106.444	106.444	1.45	487136	0.02	2000	
Fe	56	2	He	2511.775	2511.775	3.02	13876167	0.02	200000	
Co	59	2	He	0.306	0.306	9.61	2664	0.01	2000	
Ni	60	2	He	4.203	4.203	3.35	9406	0.04	2000	
Cu	63	2	He	7.552	7.552	2.19	41751	0.02	2000	
Zn	66	2	He	5.447	5.447	5.02	7382	0.07	2000	
As	75	2	He	0.962	0.962	5.10	1559	0.06	2000	
Se	78	2	He	0.484	0.484	26.36	179	0.27	2000	
B	11	1	nogas	56.255	56.255	1.28	292716	0.02	2000	
Si	28	1	nogas	48406.756	48406.756	1.83	56061079	0.09	2000	>LDR
Ca	43	1	nogas	8431.014	8431.014	1.01	336596	2.50	200000	
Ca	44	1	nogas	8617.000	8617.000	1.37	5623657	0.15	200000	
Fe	56	1	nogas	2406.349	2406.349	2.34	64440201	0.00	200000	

Sample Report

Se	77	1	nogas	112.831	112.831	3.85	63458	0.18	2000	
Se	82	1	nogas	1.131	1.131	6.86	470	0.24	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Mo	95	1	nogas	1.478	1.478	2.49	9683	0.02	2000	
Sn	118	1	nogas	0.059	0.059	8.54	1573	0.00	2000	
Ba	137	1	nogas	53.197	53.197	3.25	257148	0.02	2000	
Sb	121	2	He	0.256	0.256	4.77	1500	0.02	2000	
La	139	1	nogas	13990.584	13990.584	1.32	56439	24.79	2000	>LDR
Au	197	1	nogas	65.983	65.983	145.41	10	659.83	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1713687	1.34	1561049	109.78	70	125	
Ge	72	1	nogas	3895932	1.12	3727881	104.51	70	125	
In	115	1	nogas	3664013	1.27	3493076	104.89	70	125	
Bi	209	1	nogas	2659065	3.19	2658885	100.01	70	125	
Ge	72	2	He	943132	1.16	913806	103.21	70	125	

Sample Report

Sample Table

Sample Name	HS18121523-06
Data File Name	349SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T00:14:04-06:00
Sample Type	Sample
Dilution	1
Comment	TW B136233
ISTD Ref FileName	273CALB.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	0.298	0.298	7.00	2317	0.01	2000	
Na	23	1	nogas	55094.090	55094.090	0.60	1488935200	0.00	200000	
Mg	24	1	nogas	2435.480	2435.480	1.21	40815789	0.01	200000	
Al	27	1	nogas	4063.528	4063.528	4.62	75222549	0.01	2000	>LDR
K	39	1	nogas	1378.215	1378.215	2.90	36968357	0.00	200000	
Ti	47	1	nogas	45.564	45.564	4.07	84785	0.05	2000	
V	51	1	nogas	48.875	48.875	2.62	2083859	0.00	2000	
Cr	52	1	nogas	8.063	8.063	4.99	245006	0.00	2000	
Mn	55	1	nogas	42.357	42.357	5.29	1213813	0.00	2000	
Co	59	1	nogas	2.233	2.233	4.01	51726	0.00	2000	
Ni	60	1	nogas	7.282	7.282	4.18	41908	0.02	2000	
Cu	63	1	nogas	5.285	5.285	3.33	67643	0.01	2000	
Zn	66	1	nogas	20.054	20.054	2.67	82545	0.02	2000	
As	75	1	nogas	17.841	17.841	16.28	204005	0.01	2000	
Sr	88	1	nogas	78.564	78.564	3.89	2449383	0.00	2000	
Ag	107	1	nogas	0.002	0.002	127.79	193	0.00	2000	
Cd	111	1	nogas	0.154	0.154	28.22	510	0.03	2000	
Sb	121	1	nogas	0.130	0.130	3.12	2134	0.01	2000	
Tl	205	1	nogas	0.061	0.061	25.63	1537	0.00	2000	
Pb	208	1	nogas	3.847	3.847	1.29	106380	0.00	2000	
U	238	1	nogas	0.448	0.448	10.74	13019	0.00	2000	
[Pb]	206	1	nogas	3.670	3.670	10.88	27016	0.01	2000	
[Pb]	207	1	nogas	3.449	3.449	7.59	22749	0.02	2000	
Na	23	2	He	61709.927	61709.927	0.64	85703025	0.07	200000	
Mg	24	2	He	2846.941	2846.941	0.99	2123315	0.13	200000	
Al	27	2	He	4325.663	4325.663	3.41	1814612	0.24	2000	>LDR
K	39	2	He	1535.862	1535.862	1.28	1393775	0.11	200000	
Ca	43	2	He	3324.999	3324.999	6.22	7808	42.58	200000	
Ca	44	2	He	3170.135	3170.135	1.25	125336	2.53	200000	
V	51	2	He	9.872	9.872	1.32	65506	0.02	2000	
Cr	52	2	He	7.525	7.525	1.02	49262	0.02	2000	
Mn	55	2	He	42.965	42.965	1.93	191955	0.02	2000	
Fe	56	2	He	6017.805	6017.805	1.31	32350403	0.02	200000	
Co	59	2	He	2.330	2.330	2.98	19330	0.01	2000	
Ni	60	2	He	7.494	7.494	1.18	15854	0.05	2000	
Cu	63	2	He	4.619	4.619	4.36	25648	0.02	2000	
Zn	66	2	He	20.861	20.861	0.91	26459	0.08	2000	
As	75	2	He	3.817	3.817	1.32	4972	0.08	2000	
Se	78	2	He	0.525	0.525	18.99	178	0.29	2000	
B	11	1	nogas	32.916	32.916	4.27	170227	0.02	2000	
Si	28	1	nogas	337903.063	337903.063	3.76	368713635	0.09	2000	>LDR
Ca	43	1	nogas	2923.714	2923.714	1.63	113193	2.58	200000	
Ca	44	1	nogas	3309.610	3309.610	4.33	2098842	0.16	200000	
Fe	56	1	nogas	5737.918	5737.918	4.50	143618687	0.00	200000	

Sample Report

Se	77	1	nogas	104.136	104.136	9.18	59307	0.18	2000	
Se	82	1	nogas	0.848	0.848	9.18	377	0.23	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Mo	95	1	nogas	0.115	0.115	9.42	853	0.01	2000	
Sn	118	1	nogas	0.264	0.264	7.54	3264	0.01	2000	
Ba	137	1	nogas	183.475	183.475	0.58	851088	0.02	2000	
Sb	121	2	He	0.121	0.121	5.16	747	0.02	2000	
La	139	1	nogas	65000.871	65000.871	1.32	251417	25.85	2000	>LDR
Au	197	1	nogas	339.681	339.681	20.47	40	849.20	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1610412	2.69	1561049	103.16	70	125	
Ge	72	1	nogas	3766871	2.49	3727881	101.05	70	125	
In	115	1	nogas	3517633	2.04	3493076	100.70	70	125	
Bi	209	1	nogas	2704039	8.65	2658885	101.70	70	125	
Ge	72	2	He	918212	1.64	913806	100.48	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	351_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T00:18:00-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	273CALB.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	89.125	1.922	644274	0.58	100	89.1	90	110	CCV Main CR1-2 Failed
Na	23	1	nogas	10031.334	6.667	254362906	0.39	10000	100.3	90	110	
Mg	24	1	nogas	9815.292	5.586	152522978	1.39	10000	98.2	90	110	
Al	27	1	nogas	98.703	2.084	1895449	2.84	100	98.7	90	110	
K	39	1	nogas	9820.681	2.893	223469247	0.64	10000	98.2	90	110	
Ti	47	1	nogas	96.342	2.764	183015	0.67	100	96.3	90	110	
V	51	1	nogas	106.456	3.000	3629865	1.06	100	106.5	90	110	
Cr	52	1	nogas	100.706	2.194	2326690	2.57	100	100.7	90	110	
Mn	55	1	nogas	99.361	2.930	2883400	0.35	100	99.4	90	110	
Co	59	1	nogas	96.855	1.413	2276208	3.87	100	96.9	90	110	
Ni	60	1	nogas	97.933	0.878	507972	2.51	100	97.9	90	110	
Cu	63	1	nogas	100.373	1.076	1214071	2.69	100	100.4	90	110	
Zn	66	1	nogas	98.311	2.078	400242	1.20	100	98.3	90	110	
As	75	1	nogas	98.723	2.465	611153	1.38	100	98.7	90	110	
Sr	88	1	nogas	97.897	0.476	3121106	3.61	100	97.9	90	110	
Ag	107	1	nogas	97.323	5.372	1477595	2.76	100	97.3	90	110	
Cd	111	1	nogas	100.442	4.464	319497	1.95	100	100.4	90	110	
Sb	121	1	nogas	94.428	0.563	1365128	3.66	100	94.4	90	110	
Tl	205	1	nogas	91.062	5.279	2107681	2.34	100	91.1	90	110	
Pb	208	1	nogas	108.440	0.727	2990258	0.73	100	108.4	90	110	
U	238	1	nogas	100.538	4.693	3021304	1.31	100	100.5	90	110	
[Pb]	206	1	nogas	95.756	4.102	732270	0.69	100	95.8	90	110	
[Pb]	207	1	nogas	94.719	3.805	646988	0.39	100	94.7	90	110	
Na	23	2	He	10339.292	1.132	14897336	1.22	10000	103.4	90	110	
Mg	24	2	He	10097.006	1.366	7710141	1.04	10000	101.0	90	110	
Al	27	2	He	98.885	0.844	43550	0.37	100	98.9	90	110	
K	39	2	He	10899.677	1.022	8913008	1.00	10000	109.0	90	110	
Ca	43	2	He	10062.950	2.527	24169	2.55	10000	100.6	90	110	
Ca	44	2	He	10157.896	1.285	410000	0.82	10000	101.6	90	110	
V	51	2	He	101.743	1.134	595242	0.90	100	101.7	90	110	
Cr	52	2	He	102.261	1.204	637429	0.77	100	102.3	90	110	
Mn	55	2	He	101.091	1.089	461481	0.70	100	101.1	90	110	
Fe	56	2	He	10110.496	0.812	55676139	0.77	10000	101.1	90	110	
Co	59	2	He	101.197	0.539	857560	0.80	100	101.2	90	110	
Ni	60	2	He	103.126	0.581	215589	0.84	100	103.1	90	110	
Cu	63	2	He	105.069	1.347	551965	0.88	100	105.1	90	110	
Zn	66	2	He	101.438	2.097	130312	1.63	100	101.4	90	110	
As	75	2	He	99.676	0.282	123880	0.35	100	99.7	90	110	
Se	78	2	He	100.592	2.920	10459	2.42	100	100.6	90	110	
B	11	1	nogas	480.855	1.129	2101652	2.31	500	96.2	90	110	
Si	28	1	nogas	4766.561	4.167	6913226	0.74	5000	95.3	90	110	
Ca	43	1	nogas	9691.220	1.836	382207	1.49	10000	96.9	90	110	
Ca	44	1	nogas	9821.271	2.002	6330186	1.26	10000	98.2	90	110	
Fe	56	1	nogas	9723.672	3.556	246265797	0.86	10000	97.2	90	110	
Se	77	1	nogas	121.484	5.302	64722	1.00	100	121.5	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	93.320	2.046	26223	2.07	100	93.3	90	110	
Mo	95	1	nogas	96.979	2.084	618424	1.18	100	97.0	90	110	
Sn	118	1	nogas	97.330	4.162	847647	2.24	100	97.3	90	110	
Ba	137	1	nogas	98.731	4.655	465535	2.71	100	98.7	90	110	
Sb	121	2	He	97.826	1.857	529723	1.53	100	97.8	90	110	
Li	7	1	nogas	96.213	1.530	1909058	1.32	100	96.2	90	110	
P	31	1	nogas	464.272	3.226	794117	0.54	500	92.9	90	110	
La	139	1	nogas	130.670	5.102	587	10.27	100	130.7	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	209.920	50.334	27	43.30	100	209.9	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	nogas	1551675	2.49	1561049	99.40	70	125	
Ge	72	1	nogas	3850588	3.21	3727881	103.29	70	125	
In	115	1	nogas	3581086	6.30	3493076	102.52	70	125	
Bi	209	1	nogas	2800951	3.46	2658885	105.34	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	940617	0.46	913806	102.93	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	352_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T00:19:59-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	273CALB.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	0.097	24.2	843	20.2	1	
Na	23	1	nogas	132.083	21.0	6848638	6.0	100	CCB Main CR1 Failed
Mg	24	1	nogas	17.249	17.2	299122	11.2	100	
Al	27	1	nogas	0.518	14.8	36743	2.5	5	
K	39	1	nogas	-10.423	-88.7	7136780	1.5	100	
Ti	47	1	nogas	0.124	46.0	460	24.2	2.5	
V	51	1	nogas	-4.043	-19.9	740364	1.8	2.5	
Cr	52	1	nogas	-0.439	-6.8	59154	1.3	2.5	
Mn	55	1	nogas	0.020	203.0	20902	4.6	2.5	
Co	59	1	nogas	0.083	24.1	2367	19.0	2.5	
Ni	60	1	nogas	-0.538	-9.9	2687	10.7	2.5	
Cu	63	1	nogas	0.847	16.9	15493	10.1	2	
Zn	66	1	nogas	-0.397	-10.4	1797	8.6	2.5	
As	75	1	nogas	-3.733	-18.3	99913	3.2	2.5	
Sr	88	1	nogas	0.277	19.3	11494	13.4	2.5	
Ag	107	1	nogas	0.073	22.6	1263	18.6	2.5	
Cd	111	1	nogas	0.076	47.8	280	37.8	1	
Sb	121	1	nogas	0.858	25.5	12521	24.4	2.5	
Tl	205	1	nogas	0.500	58.2	12233	62.6	1	
Pb	208	1	nogas	0.100	34.2	3074	30.8	2.5	
U	238	1	nogas	0.192	48.5	6038	53.4	2.5	
[Pb]	206	1	nogas	0.097	16.6	827	18.1	2.5	
[Pb]	207	1	nogas	0.092	35.0	747	36.3	2.5	
Na	23	2	He	115.492	1.9	386882	0.9	100	CCB Main CR1 Failed
Mg	24	2	He	14.609	7.9	12935	6.3	100	
Al	27	2	He	-0.240	-278.4	963	28.6	5	
K	39	2	He	-7.785	-25.2	154212	1.0	100	
Ca	43	2	He	16.622	54.5	63	32.9	100	
Ca	44	2	He	14.722	8.2	1240	3.7	100	
V	51	2	He	-0.229	-1.4	9001	1.8	2.5	
Cr	52	2	He	0.013	283.6	3904	5.2	2.5	
Mn	55	2	He	0.103	12.4	1397	5.8	2.5	
Fe	56	2	He	7.978	1.9	57483	3.1	100	
Co	59	2	He	0.055	11.3	530	11.3	2.5	
Ni	60	2	He	-0.095	-19.5	420	8.2	2.5	
Cu	63	2	He	0.546	4.5	4944	1.0	2	
Zn	66	2	He	0.092	53.6	500	11.1	2.5	
As	75	2	He	-0.001	-2585.9	359	8.8	2.5	
Se	78	2	He	0.183	59.4	147	9.3	2	
B	11	1	nogas	22.753	11.4	129948	5.9	10	CCB Main CR1 Failed
Si	28	1	nogas	-112.871	-41.7	1473432	2.7	5	
Ca	43	1	nogas	18.337	35.7	1233	19.5	100	
Ca	44	1	nogas	17.270	20.9	30135	6.5	100	
Fe	56	1	nogas	-1.475	-684.7	3500936	5.7	100	
Se	77	1	nogas	-17.498	-12.9	31508	1.1	2.5	
Se	82	1	nogas	0.375	56.4	250	25.0	2	
Mo	95	1	nogas	0.469	55.5	3077	52.0	2.5	
Sn	118	1	nogas	0.439	27.8	4988	17.1	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.321	26.2	1797	17.9	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.613	4.3	3410	2.5	2.5	
P	31	1	nogas	-2.434	-66.8	81314	1.8	10	
La	139	1	nogas	23.972	54.6	170	27.0	2.5	CCB Main CR1 Failed
Au	197	1	nogas	119.038	48.1	17	34.6	2.5	CCB Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1683073	5.17	1561049	107.82	70	125	
Ge	72	1	nogas	3795159	1.53	3727881	101.80	70	125	
In	115	1	nogas	3708595	4.67	3493076	106.17	70	125	
Bi	209	1	nogas	2848876	5.41	2658885	107.15	70	125	
Ge	72	2	He	936328	1.66	913806	102.46	70	125	

Low Level Initial Calibration Verification (LLICV) Report

Sample Table

Sample Name	LLCCV5
Data File Name	353LICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T00:21:57-06:00
Sample Type	LLICV
Dilution	1
Comment	
ISTD Ref File Name	273CALB.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	4.268	7.980	31596	1.38	5	85.4	70	130	
Na	23	1	nogas	585.975	6.196	17749542	1.02	500	117.2	70	130	
Mg	24	1	nogas	519.932	2.875	7894854	1.75	500	104.0	70	130	
Al	27	1	nogas	5.442	3.809	127266	1.63	5	108.8	70	130	
K	39	1	nogas	479.631	6.999	17572864	0.35	500	95.9	70	130	
Ti	47	1	nogas	4.916	4.361	9322	2.00	5	98.3	70	130	
V	51	1	nogas	6.353	24.947	996818	2.87	5	127.1	70	130	
Cr	52	1	nogas	4.766	5.694	172278	1.89	5	95.3	70	130	
Mn	55	1	nogas	5.113	4.511	163803	0.32	5	102.3	70	130	
Co	59	1	nogas	5.014	3.490	115287	1.60	5	100.3	70	130	
Ni	60	1	nogas	4.581	6.382	28255	1.72	5	91.6	70	130	
Cu	63	1	nogas	5.748	4.213	72880	1.89	5	115.0	70	130	
Zn	66	1	nogas	4.740	2.617	22020	4.11	5	94.8	70	130	
As	75	1	nogas	3.874	12.362	135862	3.79	5	77.5	70	130	
Sr	88	1	nogas	5.098	3.524	161081	1.32	5	102.0	70	130	
Ag	107	1	nogas	5.043	4.739	74858	0.77	5	100.9	70	130	
Cd	111	1	nogas	4.889	3.933	15434	1.77	5	97.8	70	130	
Sb	121	1	nogas	5.120	3.123	72453	1.15	5	102.4	70	130	
Tl	205	1	nogas	4.578	7.559	107345	4.29	5	91.6	70	130	
Pb	208	1	nogas	5.472	1.413	151170	1.41	5	109.4	70	130	
U	238	1	nogas	4.962	4.789	150940	1.47	5	99.2	70	130	
[Pb]	206	1	nogas	4.963	5.079	38469	3.71	5	99.3	70	130	
[Pb]	207	1	nogas	4.783	4.314	33141	0.19	5	95.7	70	130	
Na	23	2	He	582.491	2.236	1037210	0.69	500	116.5	70	130	
Mg	24	2	He	525.437	1.281	397567	0.77	500	105.1	70	130	
Al	27	2	He	4.806	13.802	3097	10.19	5	96.1	70	130	
K	39	2	He	516.973	0.405	575597	0.29	500	103.4	70	130	
Ca	43	2	He	508.546	13.399	1227	12.35	500	101.7	70	130	
Ca	44	2	He	507.679	3.198	20825	2.10	500	101.5	70	130	
V	51	2	He	4.957	1.329	38334	0.39	5	99.1	70	130	
Cr	52	2	He	5.154	1.334	35300	1.51	5	103.1	70	130	
Mn	55	2	He	5.268	2.878	24597	2.15	5	105.4	70	130	
Fe	56	2	He	519.939	0.459	2837818	1.11	500	104.0	70	130	
Co	59	2	He	5.143	1.772	43050	0.65	5	102.9	70	130	
Ni	60	2	He	5.018	5.893	10927	4.66	5	100.4	70	130	
Cu	63	2	He	5.657	6.087	31287	5.00	5	113.1	70	130	
Zn	66	2	He	5.507	3.264	7338	2.45	5	110.1	70	130	
As	75	2	He	5.033	2.262	6510	1.29	5	100.7	70	130	
Se	78	2	He	5.376	4.828	671	3.68	5	107.5	70	130	
B	11	1	nogas	40.109	9.516	199321	1.39	25	160.4	70	130	LLICV Main CR1 Failed
Si	28	1	nogas	76.639	71.363	1663677	3.35	25	306.6	70	130	LLICV Main CR1 Failed
Ca	43	1	nogas	512.646	5.178	20201	1.51	500	102.5	70	130	
Ca	44	1	nogas	493.343	3.200	328222	0.98	500	98.7	70	130	
Fe	56	1	nogas	482.828	4.634	15258147	1.33	500	96.6	70	130	
Se	77	1	nogas	8.729	63.200	37239	5.46	5	174.6	70	130	LLICV Main CR1 Failed
Se	82	1	nogas	5.338	9.906	1597	5.02	5	106.8	70	130	
Mo	95	1	nogas	4.914	2.789	30703	2.81	5	98.3	70	130	
Sn	118	1	nogas	4.879	6.592	43006	2.44	5	97.6	70	130	
Ba	137	1	nogas	5.092	1.424	24020	4.77	5	101.8	70	130	
Sb	121	2	He	5.231	2.572	28046	2.06	5	104.6	70	130	
Li	7	1	nogas	5.743	14.058	241071	1.48	5	114.9	70	130	
P	31	1	nogas	22.756	12.854	117918	0.59	25	91.0	70	130	
La	139	1	nogas	20.616	51.016	150	24.04	5	412.3	70	130	LLICV Main CR1 Failed
Au	197	1	nogas	175.414	73.411	23	65.47	5	3508.3	70	130	LLICV Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1590839	7.30	1561049	101.91	70	125	
Ge	72	1	nogas	3757426	3.92	3727881	100.79	70	125	
In	115	1	nogas	3543591	3.89	3493076	101.45	70	125	
Bi	209	1	nogas	2834193	4.06	2658885	106.59	70	125	

Low Level Initial Calibration Verification (LLICV) Report

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	2	He	928037	1.14	913806	101.56	70	125	

Sample Report

Sample Table

Sample Name	LLCCV2
Data File Name	354SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T00:23:55-06:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	273CALB.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	1.681	1.681	4.51	12237	0.01	2000	
Na	23	1	nogas	251.379	251.379	11.72	9808416	0.00	200000	
Mg	24	1	nogas	204.999	204.999	5.06	3198061	0.01	200000	
Al	27	1	nogas	2.205	2.205	5.00	67346	0.00	2000	
K	39	1	nogas	178.370	178.370	9.10	11085437	0.00	200000	
Ti	47	1	nogas	1.917	1.917	4.42	3764	0.05	2000	
V	51	1	nogas	1.109	1.109	252.80	862416	0.00	2000	
Cr	52	1	nogas	1.596	1.596	12.60	102725	0.00	2000	
Mn	55	1	nogas	1.940	1.940	5.28	74475	0.00	2000	
Co	59	1	nogas	1.973	1.973	1.10	45536	0.00	2000	
Ni	60	1	nogas	1.321	1.321	4.53	11934	0.01	2000	
Cu	63	1	nogas	2.400	2.400	4.74	33487	0.01	2000	
Zn	66	1	nogas	1.553	1.553	10.27	9429	0.02	2000	
As	75	1	nogas	-0.778	-0.778	-38.24	112991	0.00	2000	
Sr	88	1	nogas	2.041	2.041	3.21	66021	0.00	2000	
Ag	107	1	nogas	1.974	1.974	2.88	29355	0.01	2000	
Cd	111	1	nogas	1.980	1.980	6.41	6348	0.03	2000	
Sb	121	1	nogas	2.019	2.019	3.90	28677	0.01	2000	
Tl	205	1	nogas	1.867	1.867	4.85	43358	0.00	2000	
Pb	208	1	nogas	2.172	2.172	2.33	60188	0.00	2000	
U	238	1	nogas	1.957	1.957	5.82	58779	0.00	2000	
[Pb]	206	1	nogas	1.908	1.908	3.20	14640	0.01	2000	
[Pb]	207	1	nogas	1.920	1.920	3.19	13186	0.01	2000	
Na	23	2	He	250.746	250.746	1.23	572583	0.04	200000	
Mg	24	2	He	208.076	208.076	1.40	158473	0.13	200000	
Al	27	2	He	1.356	1.356	30.16	1633	0.08	2000	
K	39	2	He	191.156	191.156	1.60	313963	0.06	200000	
Ca	43	2	He	180.396	180.396	16.52	450	40.09	200000	
Ca	44	2	He	212.784	212.784	17.23	9104	2.34	200000	
V	51	2	He	1.761	1.761	1.39	20200	0.01	2000	
Cr	52	2	He	2.025	2.025	3.49	16164	0.01	2000	
Mn	55	2	He	2.147	2.147	0.66	10566	0.02	2000	
Fe	56	2	He	206.134	206.134	4.84	1132456	0.02	200000	
Co	59	2	He	2.006	2.006	2.94	16818	0.01	2000	
Ni	60	2	He	1.860	1.860	3.85	4434	0.04	2000	
Cu	63	2	He	2.318	2.318	3.21	14046	0.02	2000	
Zn	66	2	He	2.018	2.018	9.33	2930	0.07	2000	
As	75	2	He	1.927	1.927	4.80	2711	0.07	2000	
Se	78	2	He	1.639	1.639	13.61	293	0.56	2000	
B	11	1	nogas	25.920	25.920	2.76	133897	0.02	2000	
Si	28	1	nogas	-38.263	-38.263	-45.86	1535556	0.00	2000	
Ca	43	1	nogas	199.758	199.758	4.63	8172	2.44	200000	

Sample Report

Ca	44	1	nogas	192.243	192.243	2.73	139172	0.14	200000	
Fe	56	1	nogas	183.243	183.243	3.75	7945772	0.00	200000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Se	77	1	nogas	-7.990	-7.990	-50.80	33288	-0.02	2000	
Se	82	1	nogas	1.962	1.962	20.65	677	0.29	2000	
Mo	95	1	nogas	1.923	1.923	4.20	12064	0.02	2000	
Sn	118	1	nogas	1.928	1.928	1.41	17846	0.01	2000	
Ba	137	1	nogas	2.016	2.016	3.43	9766	0.02	2000	
Sb	121	2	He	2.033	2.033	1.45	10960	0.02	2000	
La	139	1	nogas	2.158	2.158	307.37	80	2.70	2000	
Au	197	1	nogas	240.131	240.131	110.07	30	800.44	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1553161	3.46	1561049	99.49	70	125	
Ge	72	1	nogas	3747428	3.02	3727881	100.52	70	125	
In	115	1	nogas	3586812	1.54	3493076	102.68	70	125	
Bi	209	1	nogas	2796455	3.99	2658885	105.17	70	125	
Ge	72	2	He	927628	1.06	913806	101.51	70	125	

Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	ICSA
Data File Name	355ICSA.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T00:25:53-06:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	273CALB.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	0.011	67.4	140	32.7	0	ICSA Main CR1 Failed
Na	23	1	nogas	105817.134	8.7	2296406985	0.7	0	
Mg	24	1	nogas	105511.159	8.0	1420939032	0.1	0	
Al	27	1	nogas	98836.200	6.4	1646791975	0.9	0	
K	39	1	nogas	104682.395	5.6	2034995245	0.3	0	
Ti	47	1	nogas	2316.706	7.7	3869689	2.4	0	
V	51	1	nogas	-4.609	-42.5	648248	1.4	0	ICSA Main CR1 Failed
Cr	52	1	nogas	0.591	39.4	73153	0.8	0	ICSA Main CR1 Failed
Mn	55	1	nogas	0.242	32.3	24296	2.6	0	ICSA Main CR1 Failed
Co	59	1	nogas	0.540	7.7	11554	2.9	0	ICSA Main CR1 Failed
Ni	60	1	nogas	0.829	15.1	8575	3.4	0	ICSA Main CR1 Failed
Cu	63	1	nogas	2.165	4.9	27851	3.5	0	
Zn	66	1	nogas	1.332	17.2	7752	8.7	0	ICSA Main CR1 Failed
As	75	1	nogas	0.191	624.1	106507	2.7	0	ICSA Main CR1 Failed
Sr	88	1	nogas	0.900	2.9	27805	5.0	0	ICSA Main CR1 Failed
Ag	107	1	nogas	0.013	86.1	323	45.9	0	ICSA Main CR1 Failed
Cd	111	1	nogas	2.533	7.1	7048	0.6	0	
Sb	121	1	nogas	0.238	12.1	3287	5.8	0	ICSA Main CR1 Failed
Tl	205	1	nogas	0.026	39.7	667	23.8	0	ICSA Main CR1 Failed
Pb	208	1	nogas	0.078	12.4	2453	10.9	0	ICSA Main CR1 Failed
[Pb]	206	1	nogas	0.093	17.8	657	20.8	0	ICSA Main CR1 Failed
[Pb]	207	1	nogas	0.073	20.3	497	19.8	0	ICSA Main CR1 Failed
Na	23	2	He	106696.426	1.6	133935405	0.2	0	
Mg	24	2	He	105277.205	0.7	70998657	0.8	0	
Al	27	2	He	100306.749	1.4	38061891	0.9	0	
K	39	2	He	100962.396	0.8	81234232	0.8	0	
Ca	43	2	He	103354.995	2.3	219055	1.3	0	
Ca	44	2	He	109024.745	0.6	3881773	1.1	0	
V	51	2	He	-0.377	-7.2	7237	0.6	0	ICSA Main CR1 Failed
Cr	52	2	He	0.275	23.0	4897	5.6	0	ICSA Main CR1 Failed
Mn	55	2	He	0.284	6.2	1963	2.5	0	ICSA Main CR1 Failed
Fe	56	2	He	107810.031	2.4	524224339	1.0	0	
Co	59	2	He	0.306	8.7	2340	7.1	0	ICSA Main CR1 Failed
Ni	60	2	He	0.174	43.1	867	15.3	0	ICSA Main CR1 Failed
Cu	63	2	He	0.492	6.5	4141	3.6	0	ICSA Main CR1 Failed
Zn	66	2	He	0.415	17.2	810	11.1	0	ICSA Main CR1 Failed
As	75	2	He	0.092	45.1	420	9.4	0	ICSA Main CR1 Failed
Se	78	2	He	0.041	575.7	117	19.8	0	ICSA Main CR1 Failed
B	11	1	nogas	16.489	7.0	82787	3.2	0	ICSA Main CR1 Failed
Si	28	1	nogas	408.719	14.1	1828547	2.4	0	
Ca	43	1	nogas	105103.767	7.5	3643910	2.0	0	
Ca	44	1	nogas	104821.583	6.7	59322176	1.3	0	
Fe	56	1	nogas	106515.597	6.3	2344856319	0.8	0	
Se	77	1	nogas	13.729	50.4	34653	1.4	0	
Se	82	1	nogas	0.346	47.4	217	21.8	0	ICSA Main CR1 Failed
Mo	95	1	nogas	2165.063	3.9	12165959	1.6	0	
Sn	118	1	nogas	0.063	10.1	1367	6.0	0	ICSA Main CR1 Failed
Ba	137	1	nogas	0.302	11.5	1440	3.7	0	ICSA Main CR1 Failed
Sb	121	2	He	0.243	10.8	1257	8.7	0	ICSA Main CR1 Failed

Interference Check Solution A (ICS-A) Report

P	31	1	nogas	96836.874	6.4	130126675	0.9	0	
La	139	1	nogas	59.734	9.6	267	2.2	0	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1381963	3.00	1561049	88.53	70	125	
Ge	72	1	nogas	3397067	5.35	3727881	91.13	70	125	
In	115	1	nogas	3125131	6.49	3493076	89.47	70	125	
Bi	209	1	nogas	2331255	5.24	2658885	87.68	70	125	
Ge	72	2	He	830939	1.50	913806	90.93	70	125	

Interference Check Solution AB (ICS-AB) Report

Sample Table

Sample Name	ICSAB
Data File Name	356ICSB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T00:27:55-06:00
Sample Type	ICSB
Dilution	1
Comment	
ISTD Ref File Name	273CALB.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	108.381	5.569	652898	0.45	100	108.4	80	120	
Na	23	1	nogas	122438.368	11.249	2497577856	0.78	100	122438.4	80	120	ICSB Main CR1 Failed
Mg	24	1	nogas	121738.136	12.681	1539016068	1.33	100	121738.1	80	120	ICSB Main CR1 Failed
Al	27	1	nogas	102898.400	7.712	1607512243	0.86	100	102898.4	80	120	ICSB Main CR1 Failed
K	39	1	nogas	121661.993	8.019	2215619050	1.48	100	121662.0	80	120	ICSB Main CR1 Failed
Ti	47	1	nogas	2537.730	9.509	3972185	1.30	100	2537.7	80	120	ICSB Main CR1 Failed
V	51	1	nogas	123.436	8.470	3364297	1.85	100	123.4	80	120	ICSB Main CR1 Failed
Cr	52	1	nogas	121.593	9.435	2305256	0.59	100	121.6	80	120	ICSB Main CR1 Failed
Mn	55	1	nogas	121.610	9.029	2908720	1.72	100	121.6	80	120	ICSB Main CR1 Failed
Co	59	1	nogas	121.885	8.964	2362145	1.38	100	121.9	80	120	ICSB Main CR1 Failed
Ni	60	1	nogas	120.988	9.065	516572	0.68	100	121.0	80	120	ICSB Main CR1 Failed
Cu	63	1	nogas	123.505	7.638	1232075	1.15	100	123.5	80	120	ICSB Main CR1 Failed
Zn	66	1	nogas	123.872	7.787	415643	0.99	100	123.9	80	120	ICSB Main CR1 Failed
As	75	1	nogas	124.953	8.594	612524	1.55	100	125.0	80	120	ICSB Main CR1 Failed
Sr	88	1	nogas	123.537	8.505	3248139	0.39	100	123.5	80	120	ICSB Main CR1 Failed
Ag	107	1	nogas	117.864	8.434	1477782	1.06	100	117.9	80	120	
Cd	111	1	nogas	127.873	11.183	333648	2.28	100	127.9	80	120	ICSB Main CR1 Failed
Sb	121	1	nogas	126.260	8.189	1505824	1.05	100	126.3	80	120	ICSB Main CR1 Failed
Tl	205	1	nogas	114.612	4.774	2147521	1.92	100	114.6	80	120	
Pb	208	1	nogas	112.910	0.960	3113507	0.96	100	112.9	80	120	
U	238	1	nogas	137.771	7.834	3347091	1.94	100	137.8	80	120	ICSB Main CR1 Failed
[Pb]	206	1	nogas	122.644	4.115	759308	2.29	100	122.6	80	120	ICSB Main CR1 Failed
[Pb]	207	1	nogas	123.589	5.952	682870	0.81	100	123.6	80	120	ICSB Main CR1 Failed
Na	23	2	He	114163.379	1.886	143566115	0.48	100	114163.4	80	120	ICSB Main CR1 Failed
Mg	24	2	He	113215.261	3.048	76479849	1.42	100	113215.3	80	120	ICSB Main CR1 Failed
Al	27	2	He	97397.833	2.696	37024066	1.45	100	97397.8	80	120	ICSB Main CR1 Failed
K	39	2	He	109193.581	1.704	87843952	1.70	100	109193.6	80	120	
Ca	43	2	He	110724.816	2.670	235107	1.19	100	110724.8	80	120	ICSB Main CR1 Failed
Ca	44	2	He	114296.788	3.378	4076140	1.95	100	114296.8	80	120	ICSB Main CR1 Failed
V	51	2	He	115.264	1.687	595552	0.15	100	115.3	80	120	
Cr	52	2	He	113.079	2.150	623395	0.57	100	113.1	80	120	
Mn	55	2	He	112.751	1.794	455409	0.53	100	112.8	80	120	
Fe	56	2	He	116161.241	2.871	565875738	1.17	100	116161.2	80	120	
Co	59	2	He	113.773	2.733	853099	1.17	100	113.8	80	120	
Ni	60	2	He	115.384	2.936	213366	1.28	100	115.4	80	120	
Cu	63	2	He	116.173	2.742	539858	1.38	100	116.2	80	120	
Zn	66	2	He	114.720	2.523	130369	0.85	100	114.7	80	120	
As	75	2	He	116.194	1.848	127740	0.56	100	116.2	80	120	
Se	78	2	He	114.967	2.859	10562	1.30	100	115.0	80	120	
B	11	1	nogas	562.709	5.695	2045895	0.29	100	562.7	80	120	
Si	28	1	nogas	6378.763	10.208	7185685	1.17	100	6378.8	80	120	ICSB Main CR1 Failed
Ca	43	1	nogas	122293.542	7.871	3976687	1.48	100	122293.5	80	120	ICSB Main CR1 Failed
Ca	44	1	nogas	121810.607	8.316	64617672	0.47	100	121810.6	80	120	ICSB Main CR1 Failed
Fe	56	1	nogas	122428.165	8.504	2525383590	0.34	100	122428.2	80	120	ICSB Main CR1 Failed
Se	77	1	nogas	152.211	12.687	59470	2.48	100	152.2	80	120	ICSB Main CR1 Failed
Se	82	1	nogas	124.856	9.906	28897	3.49	100	124.9	80	120	ICSB Main CR1 Failed
Mo	95	1	nogas	2392.037	7.067	12596027	1.49	100	2392.0	80	120	ICSB Main CR1 Failed
Sn	118	1	nogas	123.466	11.937	881122	1.12	100	123.5	80	120	ICSB Main CR1 Failed
Ba	137	1	nogas	124.702	12.427	481746	0.49	100	124.7	80	120	ICSB Main CR1 Failed
Sb	121	2	He	115.853	1.612	555168	0.08	100	115.9	80	120	
La	139	1	nogas	204.840	13.776	723	15.29	100	204.8	80	120	ICSB Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1295425	5.72	1561049	82.98	70	125	
Ge	72	1	nogas	3191339	8.22	3727881	85.61	70	125	
In	115	1	nogas	2959278	12.39	3493076	84.72	70	125	
Bi	209	1	nogas	2269507	6.42	2658885	85.36	70	125	
Ge	72	2	He	832550	1.68	913806	91.11	70	125	

Tune Report

Batch Folder C:\Agilent\ICPMH\1\DATA\010819B.b
Report Comment
Instrument Name G3281A JP11080910

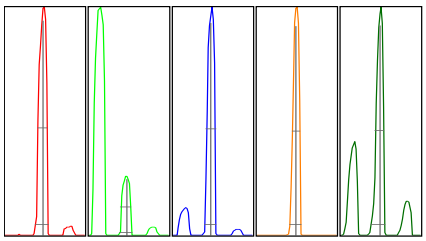
[nogas]

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		8830				NaN	-	
24		19492				NaN	-	
59		20225				NaN	-	
115		19661				NaN	-	
208		11949				NaN	-	

Mass	RSD% (Actual)	RSD% (Required)	RSD% (Flag)	Background (Actual)	Background (Required)	Background (Flag)
9	0.95	5.00				
24	0.80	5.00				
59	0.94	5.00				
115	1.36	5.00				
208	0.84	5.00				

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	8701	8836	8812	8874	8925
24	19369	19710	19556	19320	19505
59	20522	20294	20153	20035	20120
115	19410	19393	19656	20011	19837
208	11779	12002	12003	12024	11939

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	2470.94	8.95	8.9 - 9.1		0.37	0.470	0.750	
24	5420.88	23.95	23.9 - 24.1		0.37	0.454	0.750	
59	6047.90	58.95	58.9 - 59.1		0.33	0.440	0.750	
115	6148.94	115.00	114.9 - 115.1		0.31	0.444	0.750	
208	3516.20	208.00	207.9 - 208.1		0.33	0.524	0.750	

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	0.40 L/min	S/C Temp	2 ℃
RF Matching	1.70 V	Option Gas	0.0 %	Makeup/Dilution Gas	0.38 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	15.0 V
Extract 2	-200.0 V	Cell Entrance	-30 V	Plate Bias	-50 V
Omega Bias	-100 V	Cell Exit	-58 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	true	3rd Gas Flow	0 %		

[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		172				NaN	-	
24		1519				NaN	-	
59		9856				NaN	-	

Tune Report

Mass	RSD% (Actual)	RSD% (Required)	RSD% (Flag)	Background (Actual)	Background (Required)	Background (Flag)
9	7.23	5.00	[F]			
24	0.91	5.00				
59	0.84	5.00				

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	162	187	162	184	165
24	1536	1520	1522	1498	1519
59	9909	9903	9810	9732	9927

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	47.72	8.95	8.9 - 9.1		0.35	0.485	0.750	
24	421.45	23.95	23.9 - 24.1		0.37	0.445	0.750	
59	3057.46	58.95	58.9 - 59.1		0.32	0.433	0.750	

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	0.40 L/min	S/C Temp	2 ℃
RF Matching	1.70 V	Option Gas	0.0 %	Makeup/Dilution Gas	0.38 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	-32 V	Plate Bias	-60 V
Omega Bias	-100 V	Cell Exit	-70 V		

Cell Parameters

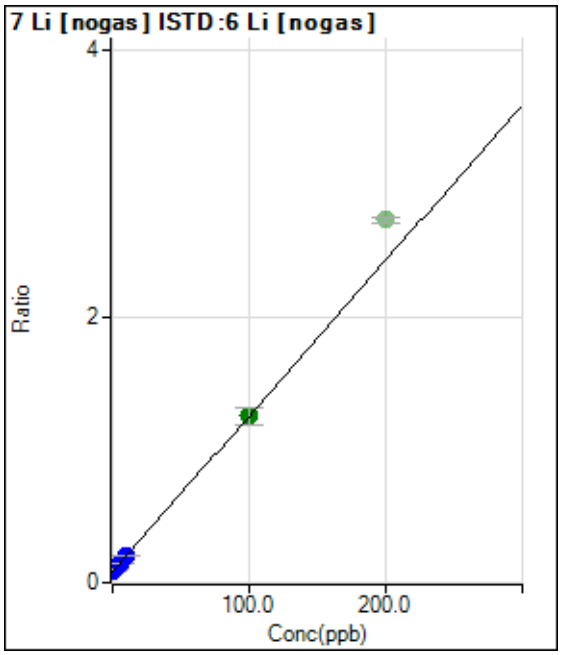
OctP Bias	-18.0 V	He Flow	4.0 mL/min	Energy Discrimination	5.0 V
OctP RF	190 V	H2 Flow	0.0 mL/min		
Use Gas	true	3rd Gas Flow	0 %		

Calibration for 028_ICV.d

Batch Folder: C:\Agilent\ICPMH\1\DATA\010919B.b\
Analysis File: 010919B.batch.bin
DA Date-Time: 2019-01-09 19:23:29
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	017CALB.d	CAL BLK	2019-01-09 11:53:39
2	018CALS.d	2/10/200	2019-01-09 11:55:37
3	019CALS.d	5/25/500	2019-01-09 11:57:36
4	020CALS.d	10/50/1000	2019-01-09 11:59:34
5	021CALS.d	100/500/10K	2019-01-09 12:01:32
6	022CALS.d	200/1000/20K	2019-01-09 12:03:29
7			

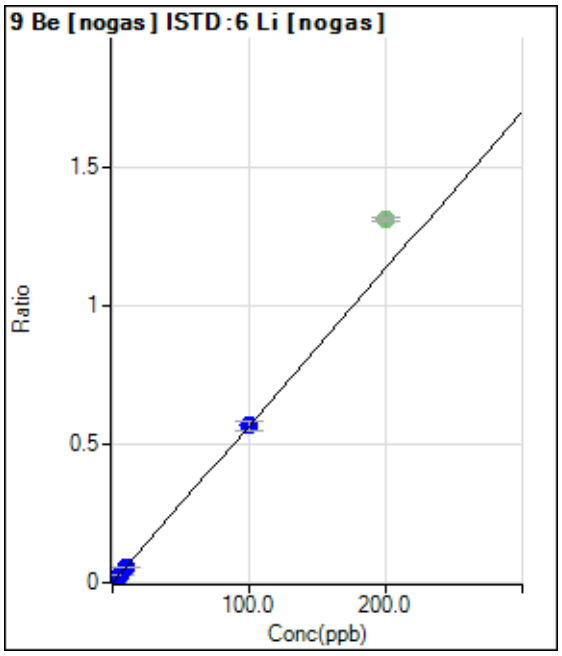
Calibration for 028_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	106994.00	0.0846	P	4.3
2	☐	2.000	2.035	137820.85	0.1084	P	2.5
3	☐	5.000	5.268	185173.66	0.1462	P	5.2
4	☐	10.000	10.366	265590.43	0.2058	P	1.4
5	☐	100.000	99.949	1556520.60	1.2535	A	10.2
6	☑	200.000		3018752.04	2.7281	A	1.4
7	☐	1.000					

y = 0.0117 * x + 0.0846
R = 1.0000
DL = 0.9363
BEC = 7.229

Weight: <None>
Min Conc: <None>

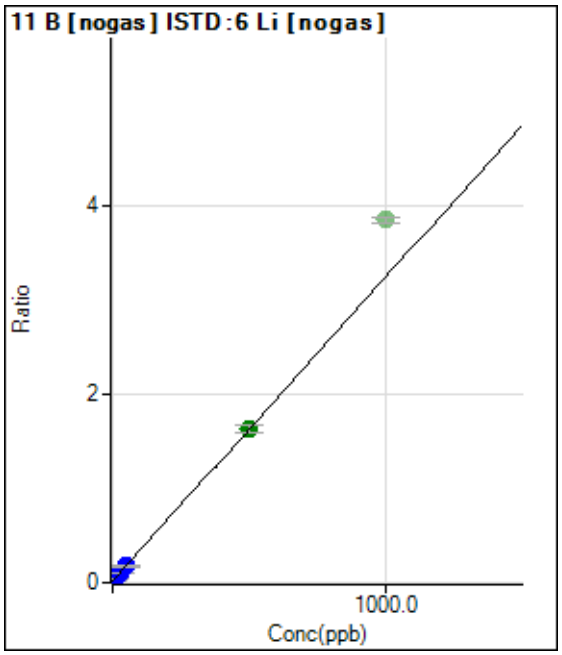


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	200.01	0.0002	P	62.7
2	☐	2.000	1.952	14235.48	0.0112	P	6.0
3	☐	5.000	5.044	36348.13	0.0287	P	8.0
4	☐	10.000	9.888	72463.63	0.0562	P	2.2
5	☐	100.000	100.010	704529.23	0.5665	P	5.4
6	☑	200.000		1447760.45	1.3083	A	1.2
7	☐	1.000					

y = 0.0057 * x + 1.5619E-004
R = 1.0000
DL = 0.05191
BEC = 0.02758

Weight: <None>
Min Conc: <None>

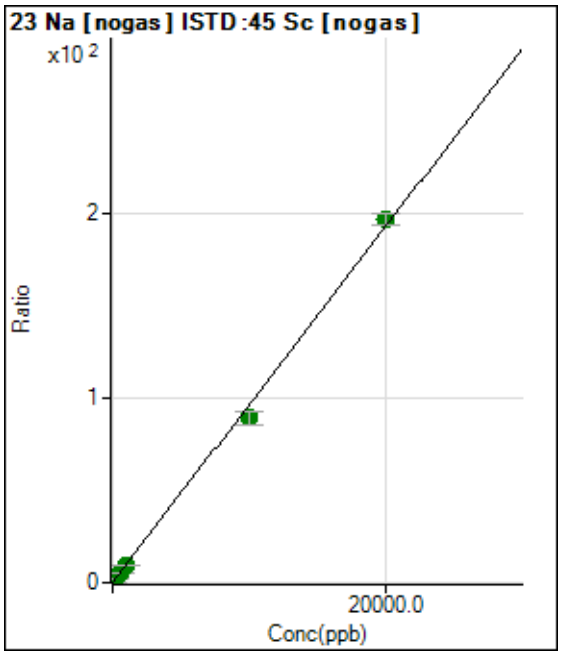
Calibration for 028_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	24339.13	0.0193	P	8.7
2	☐	10.000	9.715	64218.04	0.0506	P	5.0
3	☐	25.000	24.319	123613.63	0.0976	P	6.9
4	☐	50.000	48.300	225701.64	0.1749	P	4.8
5	☐	500.000	500.210	2027888.57	1.6312	A	5.7
6	☑	1000.000		4258091.92	3.8475	A	1.6
7	☐	5.000					

y = 0.0032 * x + 0.0193
R = 1.0000
DL = 1.561
BEC = 5.985

Weight: <None>
Min Conc: <None>

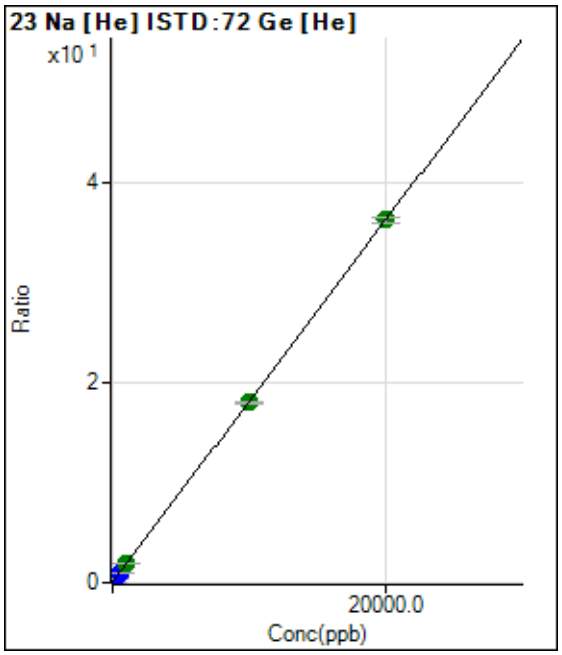


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	400158.56	0.1793	P	11.6
2	☐	200.000	207.888	4906227.58	2.1769	A	7.4
3	☐	500.000	506.242	11845798.18	5.0437	A	8.1
4	☐	1000.000	974.010	22632956.76	9.5385	A	2.5
5	☐	10000.00	9231.683	222214671.6	88.8859	A	8.2
6	☐	20000.00	20385.223	452199093.4	196.059	A	3.3
7	☐	100.000					

y = 0.0096 * x + 0.1793
R = 0.9990
DL = 6.494
BEC = 18.66

Weight: <None>
Min Conc: <None>

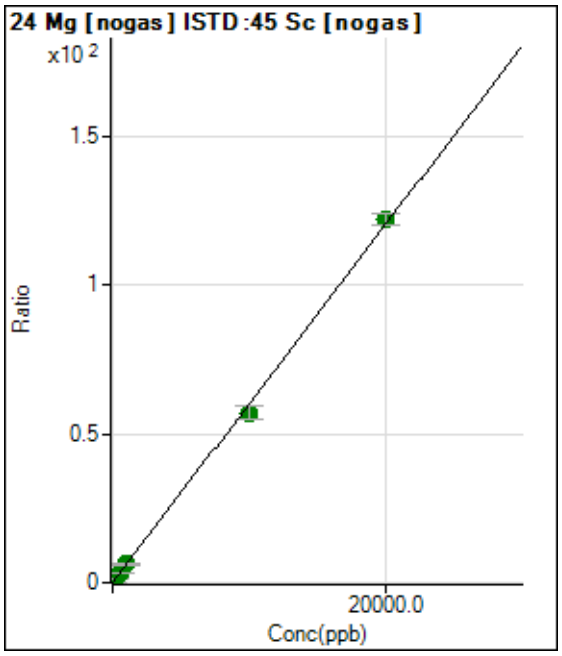
Calibration for 028_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	49474.50	0.0466	P	2.1
2	☐	200.000	200.750	435180.16	0.4093	P	2.3
3	☐	500.000	509.117	1025528.06	0.9666	P	0.2
4	☐	1000.000	1038.261	2032190.75	1.9228	A	1.8
5	☐	10000.00	9945.713	19203630.55	18.0191	A	1.4
6	☐	20000.00	20024.995	37686065.27	36.2329	A	1.6
7	☐	100.000					

y = 0.0018 * x + 0.0466
R = 1.0000
DL = 1.63
BEC = 25.77

Weight: <None>
Min Conc: <None>

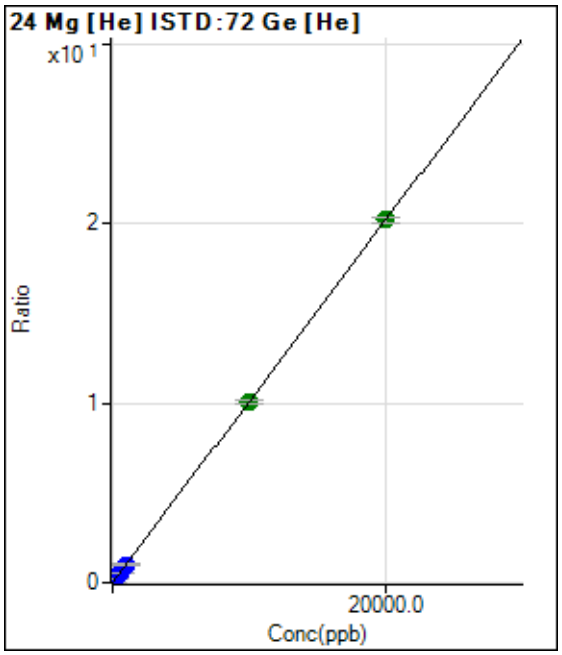


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	13941.15	0.0062	P	15.8
2	☐	200.000	224.218	3047284.83	1.3533	A	9.9
3	☐	500.000	541.055	7652662.67	3.2567	A	7.1
4	☐	1000.000	1024.165	14603968.56	6.1591	A	4.9
5	☐	10000.00	9458.330	142076244.8	56.8291	A	8.0
6	☐	20000.00	20268.358	280689981.2	121.772	A	3.2
7	☐	100.000					

y = 0.0060 * x + 0.0062
R = 0.9995
DL = 0.4925
BEC = 1.039

Weight: <None>
Min Conc: <None>

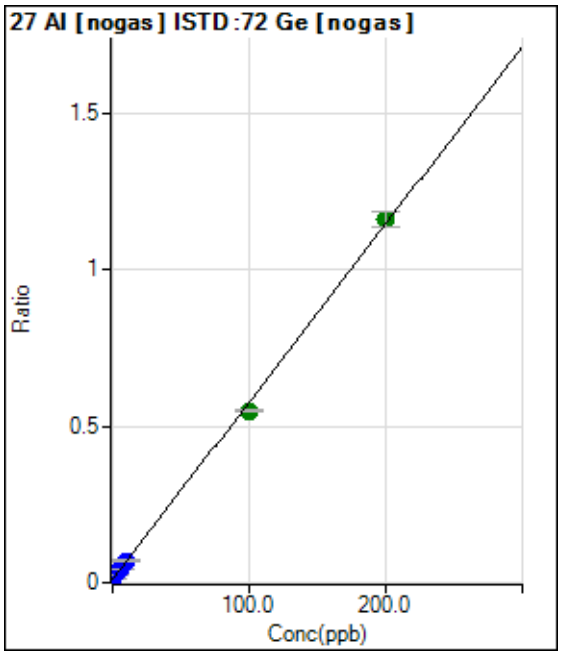
Calibration for 028_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1110.05	0.0010	P	15.8
2	☐	200.000	204.422	220412.04	0.2073	P	2.5
3	☐	500.000	506.450	543331.54	0.5121	P	0.4
4	☐	1000.000	1002.851	1070663.55	1.0130	P	1.4
5	☐	10000.00	9951.557	10702248.59	10.0429	A	2.3
6	☐	20000.00	20023.874	21017040.11	20.2065	A	1.7
7	☐	100.000					

y = 0.0010 * x + 0.0010
R = 1.0000
DL = 0.4921
BEC = 1.035

Weight: <None>
Min Conc: <None>

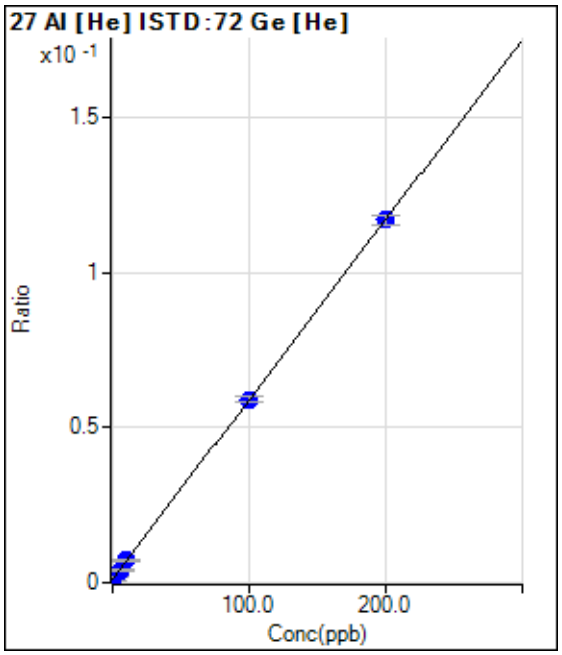


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	28508.35	0.0098	P	6.8
2	☐	2.000	2.398	68862.03	0.0234	P	7.0
3	☐	5.000	5.905	128951.61	0.0433	P	4.9
4	☐	10.000	10.535	216877.32	0.0696	P	3.1
5	☐	100.000	94.909	1634964.09	0.5482	A	1.5
6	☐	200.000	202.492	3427008.91	1.1584	A	4.1
7	☐	1.000					

y = 0.0057 * x + 0.0098
R = 0.9995
DL = 0.3549
BEC = 1.733

Weight: <None>
Min Conc: <None>

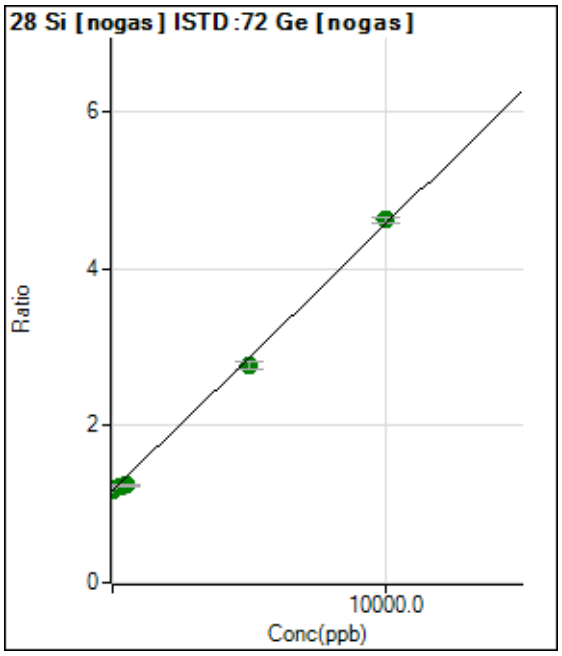
Calibration for 028_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.450	896.71	0.0008	P	9.2
2	☐	2.000	1.964	2383.52	0.0022	P	6.5
3	☐	5.000	5.007	4247.19	0.0040	P	5.3
4	☐	10.000	10.499	7591.66	0.0072	P	2.9
5	☐	100.000	100.010	62887.53	0.0590	P	3.2
6	☐	200.000	199.970	121580.96	0.1169	P	2.3
7	☐	1.000					

y = 5.7904E-004 * x + 0.0011
R = 1.0000
DL = 0.4003
BEC = 1.907

Weight: <None>
Min Conc: <None>

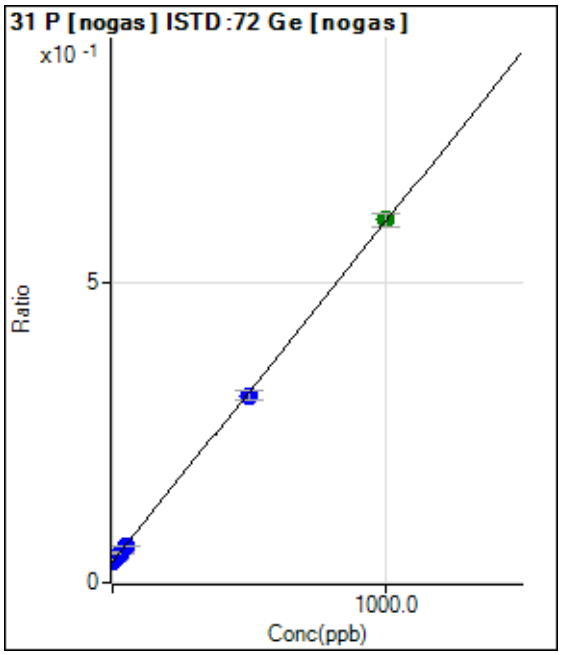


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3401955.99	1.1735	A	7.2
2	☐	100.000	74.335	3522573.38	1.1988	A	7.4
3	☐	250.000	171.864	3668181.30	1.2320	A	3.5
4	☐	500.000	217.159	3887677.75	1.2474	A	1.9
5	☐	5000.000	4717.310	8281308.42	2.7780	A	3.4
6	☐	10000.00	10157.697	13695396.88	4.6283	A	1.4
7	☐	5.000					

y = 3.4011E-004 * x + 1.1735
R = 0.9993
DL = 743.9
BEC = 3450

Weight: <None>
Min Conc: <None>

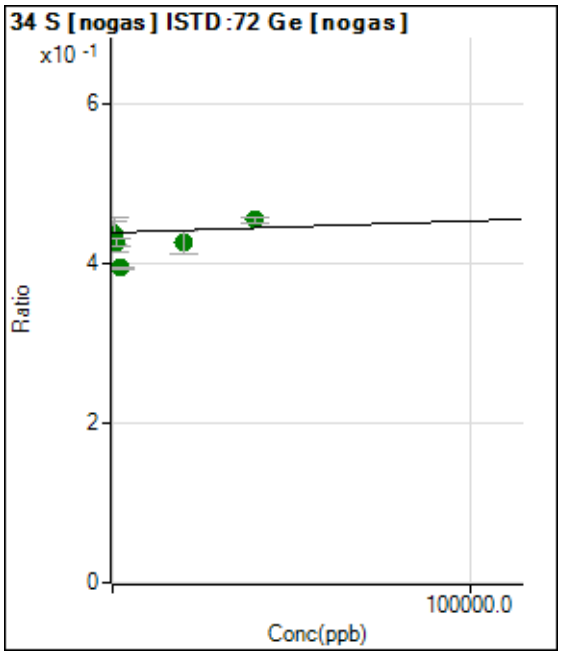
Calibration for 028_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	101148.91	0.0349	P	5.5
2	☐	10.000	9.138	117777.00	0.0401	P	5.9
3	☐	25.000	24.508	145211.68	0.0488	P	5.0
4	☐	50.000	45.071	188481.92	0.0605	P	2.0
5	☐	500.000	489.640	933041.16	0.3130	P	4.7
6	☐	1000.000	1005.447	1792962.37	0.6061	A	4.0
7	☐	5.000					

y = 5.6811E-004 * x + 0.0349
R = 0.9999
DL = 10.17
BEC = 61.38

Weight: <None>
Min Conc: <None>

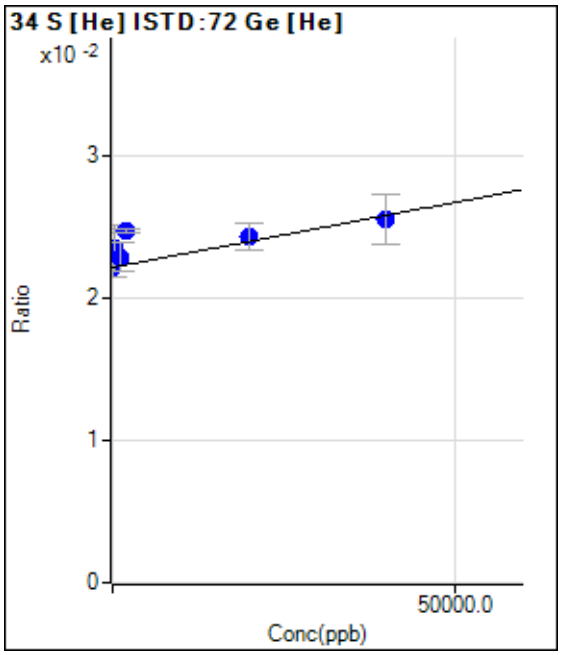


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1271822.81	0.4384	A	6.3
2	☐	400.000	-21304.000	1277741.86	0.4353	A	10.1
3	☐	1000.000	-77662.506	1272000.71	0.4270	A	2.1
4	☐	2000.000	-302025.08	1228202.79	0.3939	A	1.1
5	☐	20000.00	-80536.127	1272182.32	0.4266	A	6.4
6	☐	40000.00	107652.92	1344244.89	0.4543	A	1.6
7	☐	100.000					

y = 1.4726E-007 * x + 0.4384
R = 0.5360
DL = 5.652E+05
BEC = 2.977E+06

Weight: <None>
Min Conc: <None>

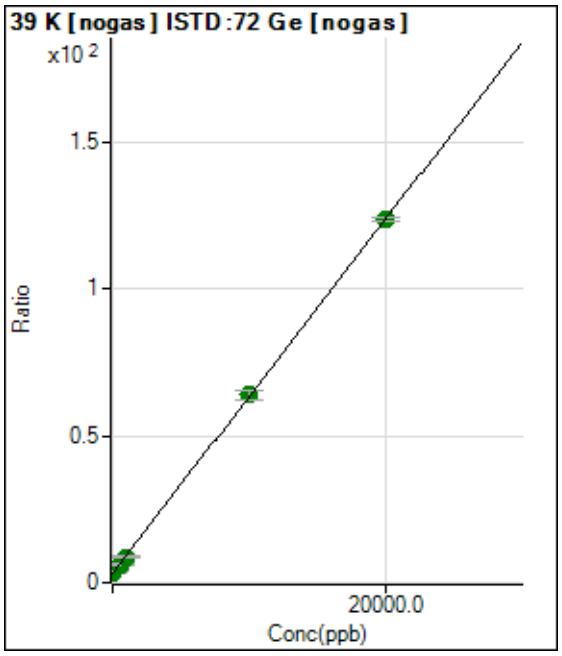
Calibration for 028_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	23585.07	0.0222	P	6.3
2	☐	400.000	14510.876	24988.03	0.0235	P	14.0
3	☐	1000.000	7967.978	24319.72	0.0229	P	8.9
4	☐	2000.000	28689.161	26222.72	0.0248	P	1.2
5	☐	20000.00	23590.425	25954.95	0.0243	P	7.3
6	☐	40000.00	36555.021	26524.06	0.0255	P	13.7
7	☐	100.000					

y = 9.1275E-008 * x + 0.0222
R = 0.7460
DL = 4.589E+04
BEC = 2.431E+05

Weight: <None>
Min Conc: <None>

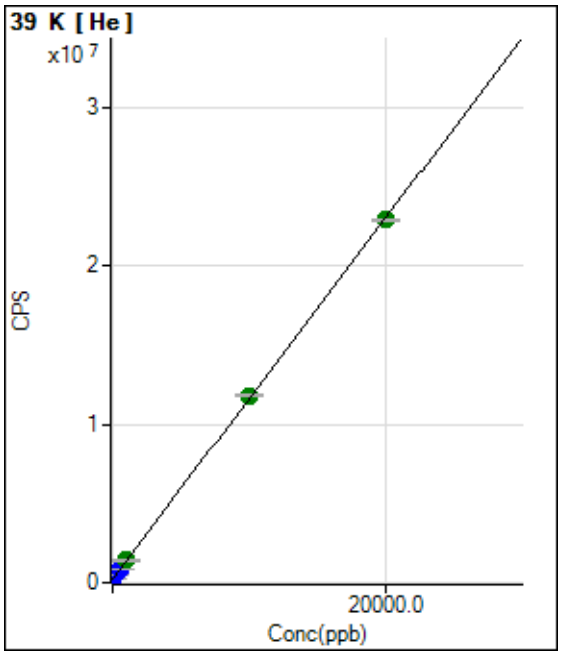


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	9182958.80	3.1668	A	6.4
2	☐	200.000	195.005	12758610.44	4.3425	A	7.6
3	☐	500.000	501.550	18431656.66	6.1908	A	3.7
4	☐	1000.000	921.686	27185956.86	8.7239	A	3.2
5	☐	10000.00	10075.649	190492687.5	63.9153	A	4.5
6	☐	20000.00	19966.102	365605774.8	123.547	A	1.2
7	☐	100.000					

y = 0.0060 * x + 3.1668
R = 1.0000
DL = 101.6
BEC = 525.2

Weight: <None>
Min Conc: <None>

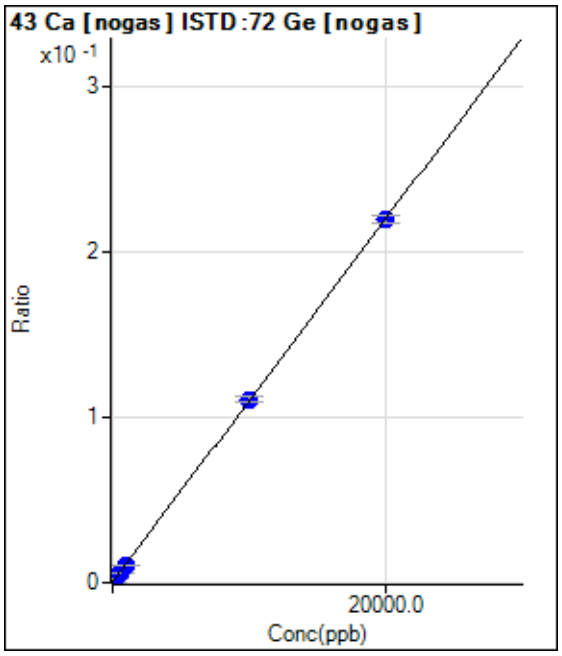
Calibration for 028_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	216445.12		P	1.6
2	☐	200.000	203.986	448890.76		P	0.4
3	☐	500.000	520.431	809486.63		P	1.1
4	☐	1000.000	1041.326	1403057.01		A	2.6
5	☐	10000.00	10187.092	11824843.16		A	0.8
6	☐	20000.00	19903.837	22897270.49		A	0.7
7	☐	100.000					

y = 1139.5203 * x + 216445.1233
R = 0.9999
DL = 8.84
BEC = 189.9

Weight: <None>
Min Conc: <None>

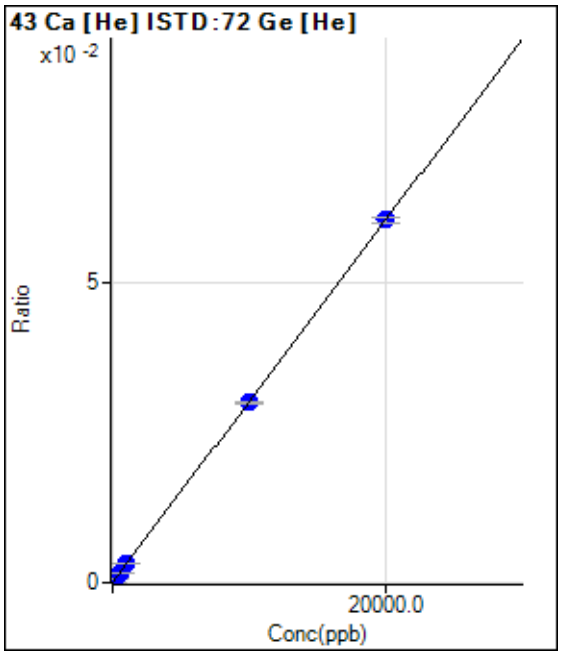


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1063.38	0.0004	P	5.4
2	☐	200.000	192.385	7288.20	0.0025	P	3.1
3	☐	500.000	499.616	17391.72	0.0058	P	7.0
4	☐	1000.000	932.927	33042.89	0.0106	P	2.3
5	☐	10000.00	10083.780	330952.75	0.1110	P	3.3
6	☐	20000.00	19961.549	649171.18	0.2194	P	2.1
7	☐	100.000					

y = 1.0973E-005 * x + 3.6506E-004
R = 1.0000
DL = 5.422
BEC = 33.27

Weight: <None>
Min Conc: <None>

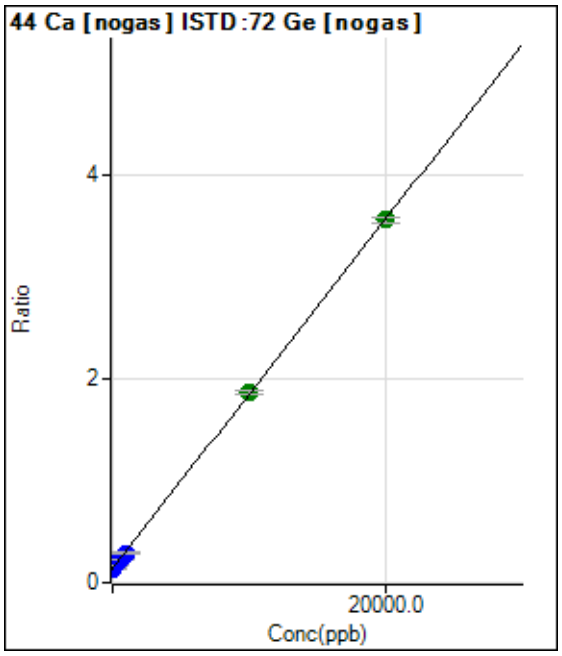
Calibration for 028_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	46.67	0.0000	P	12.8
2	☐	200.000	196.763	676.69	0.0006	P	17.0
3	☐	500.000	500.396	1646.76	0.0016	P	1.6
4	☐	1000.000	1052.981	3400.38	0.0032	P	3.3
5	☐	10000.00	9939.253	31977.57	0.0300	P	1.5
6	☐	20000.00	20027.747	62835.38	0.0604	P	1.8
7	☐	100.000					

y = 3.0140E-006 * x + 4.3930E-005
R = 1.0000
DL = 5.581
BEC = 14.57

Weight: <None>
Min Conc: <None>

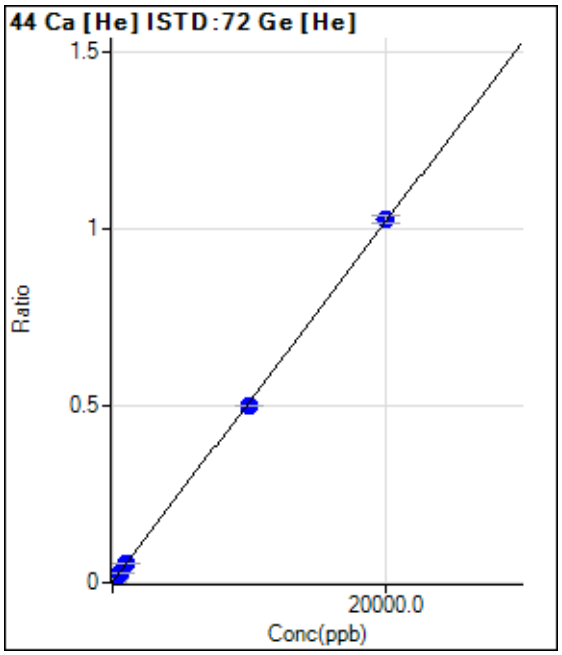


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	401093.39	0.1383	P	5.4
2	☐	200.000	186.838	500522.99	0.1702	P	5.3
3	☐	500.000	487.912	659911.34	0.2217	P	4.5
4	☐	1000.000	891.713	906184.86	0.2908	P	2.8
5	☐	10000.00	10083.886	5555000.75	1.8627	A	2.3
6	☐	20000.00	19963.905	10511568.17	3.5523	A	1.4
7	☐	100.000					

y = 1.7101E-004 * x + 0.1383
R = 1.0000
DL = 130.6
BEC = 808.5

Weight: <None>
Min Conc: <None>

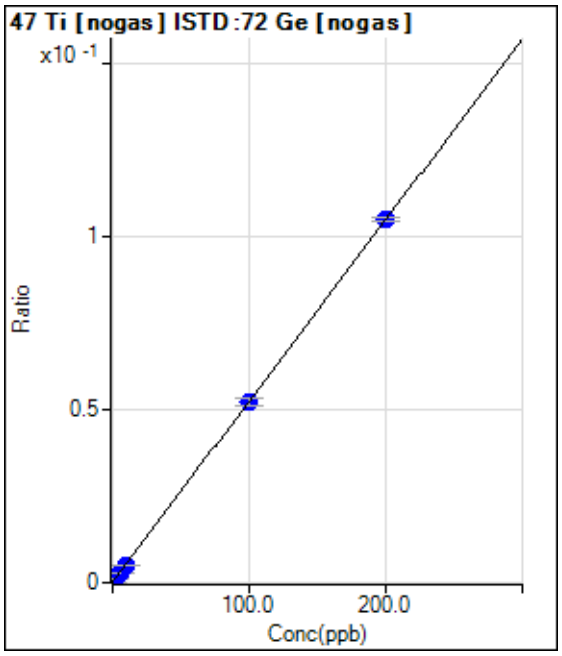
Calibration for 028_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2816.93	0.0027	P	5.5
2	☐	200.000	203.281	13818.70	0.0130	P	0.7
3	☐	500.000	512.650	30491.87	0.0287	P	4.7
4	☐	1000.000	999.769	56579.23	0.0535	P	1.5
5	☐	10000.00	9758.445	532138.54	0.4993	P	0.3
6	☐	20000.00	20120.440	1067785.30	1.0266	P	2.1
7	☐	100.000					

y = 5.0892E-005 * x + 0.0027
R = 0.9999
DL = 8.637
BEC = 52.1

Weight: <None>
Min Conc: <None>

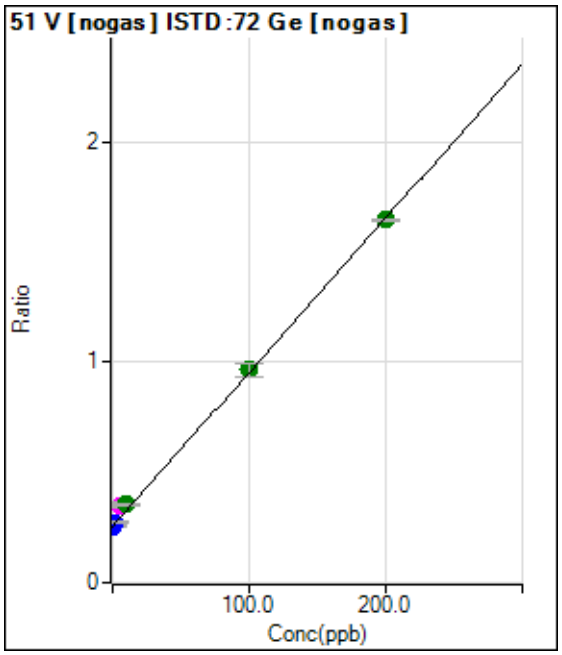


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	423.36	0.0001	P	28.3
2	☐	2.000	1.984	3467.04	0.0012	P	15.5
3	☐	5.000	5.183	8495.41	0.0029	P	4.3
4	☐	10.000	9.495	15923.70	0.0051	P	3.5
5	☐	100.000	99.816	155818.36	0.0523	P	3.9
6	☐	200.000	200.113	309703.23	0.1047	P	1.1
7	☐	1.000					

y = 5.2223E-004 * x + 1.4720E-004
R = 1.0000
DL = 0.2391
BEC = 0.2819

Weight: <None>
Min Conc: <None>

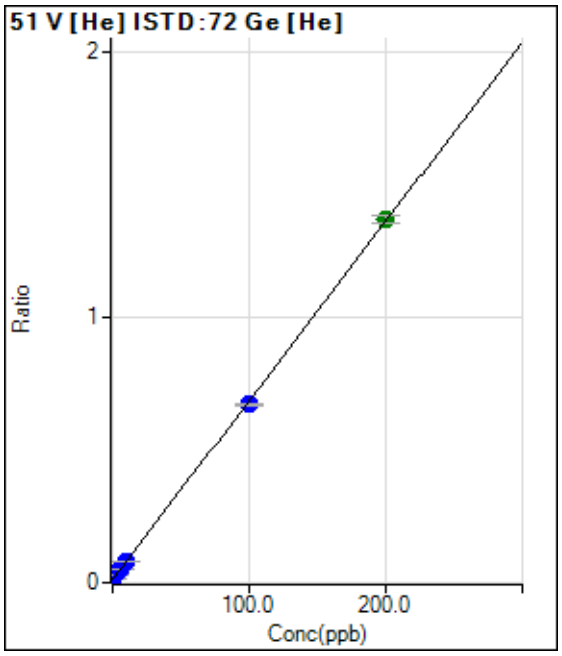
Calibration for 028_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	743041.29	0.2560	P	4.2
2	☐	2.000	2.613	807108.56	0.2743	P	3.7
3	☐	5.000	13.866	1051372.84	0.3530	M	6.3
4	☐	10.000	14.161	1106503.31	0.3551	A	3.9
5	☐	100.000	101.372	2875995.77	0.9653	A	6.2
6	☐	200.000	198.878	4875490.86	1.6475	A	0.3
7	☐	1.000					

y = 0.0070 * x + 0.2560
R = 0.9992
DL = 4.648
BEC = 36.59

Weight: <None>
Min Conc: <None>

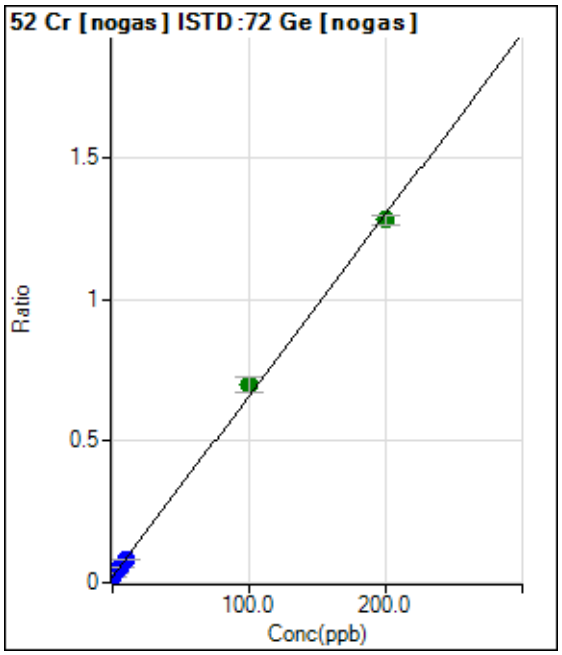


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.258	13795.11	0.0130	P	2.2
2	☐	2.000	2.285	28339.45	0.0267	P	1.6
3	☐	5.000	5.444	50891.64	0.0480	P	1.4
4	☐	10.000	10.020	83324.39	0.0788	P	2.4
5	☐	100.000	98.016	716682.94	0.6725	P	1.4
6	☐	200.000	200.977	1422120.42	1.3671	A	2.2
7	☐	1.000					

y = 0.0067 * x + 0.0112
R = 0.9999
DL = 0.1242
BEC = 1.666

Weight: <None>
Min Conc: <None>

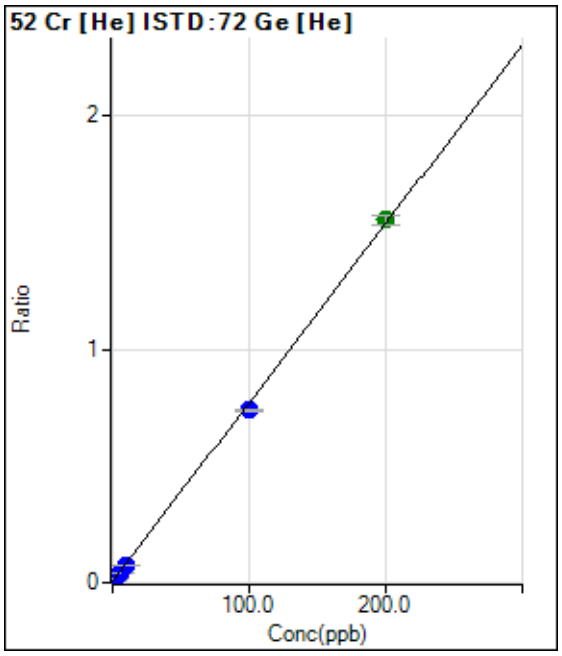
Calibration for 028_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	61113.98	0.0211	P	7.5
2	☐	2.000	1.818	96188.81	0.0327	P	5.0
3	☐	5.000	5.036	158516.98	0.0533	P	6.3
4	☐	10.000	9.214	249261.96	0.0800	P	2.5
5	☐	100.000	106.029	2081526.43	0.6989	A	7.9
6	☐	200.000	197.026	3789212.65	1.2806	A	2.7
7	☐	1.000					

y = 0.0064 * x + 0.0211
R = 0.9993
DL = 0.7438
BEC = 3.298

Weight: <None>
Min Conc: <None>

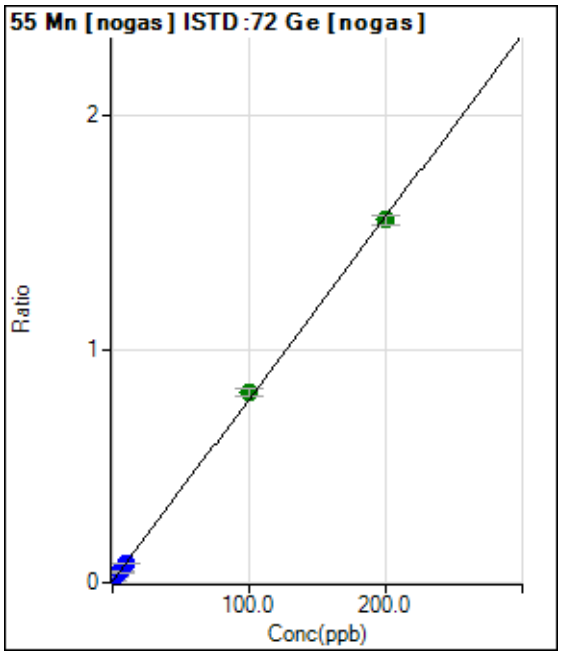


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	5257.49	0.0049	P	5.7
2	☐	2.000	1.935	21028.98	0.0198	P	1.9
3	☐	5.000	4.818	44413.48	0.0419	P	1.7
4	☐	10.000	9.482	82027.39	0.0776	P	0.6
5	☐	100.000	95.646	786313.09	0.7378	P	0.2
6	☐	200.000	202.208	1616576.07	1.5542	A	2.6
7	☐	1.000					

y = 0.0077 * x + 0.0049
R = 0.9997
DL = 0.1101
BEC = 0.6456

Weight: <None>
Min Conc: <None>

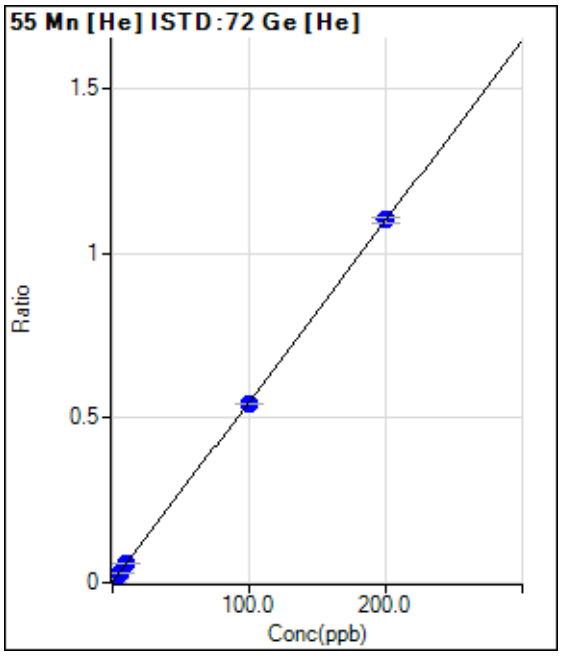
Calibration for 028_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	16514.24	0.0057	P	5.8
2	☐	2.000	2.045	63719.98	0.0217	P	6.1
3	☐	5.000	5.124	136115.59	0.0457	P	4.9
4	☐	10.000	9.680	253503.46	0.0813	P	2.3
5	☐	100.000	103.387	2424969.23	0.8136	A	4.3
6	☐	200.000	198.319	4602395.56	1.5555	A	2.7
7	☐	1.000					

y = 0.0078 * x + 0.0057
R = 0.9998
DL = 0.1276
BEC = 0.7285

Weight: <None>
Min Conc: <None>

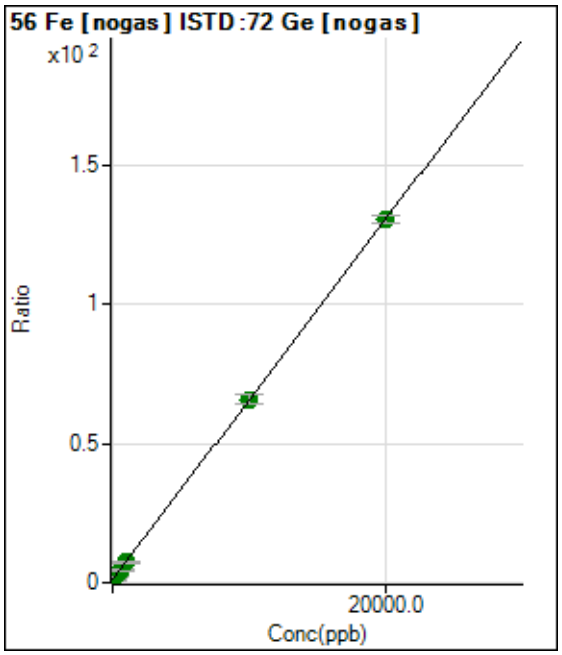


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1403.41	0.0013	P	6.5
2	☐	2.000	2.114	13748.59	0.0129	P	1.0
3	☐	5.000	5.215	31794.30	0.0300	P	2.0
4	☐	10.000	10.371	61599.44	0.0583	P	2.3
5	☐	100.000	98.766	579600.25	0.5438	P	1.0
6	☐	200.000	200.592	1147320.40	1.1031	P	1.6
7	☐	1.000					

y = 0.0055 * x + 0.0013
R = 1.0000
DL = 0.04656
BEC = 0.2404

Weight: <None>
Min Conc: <None>

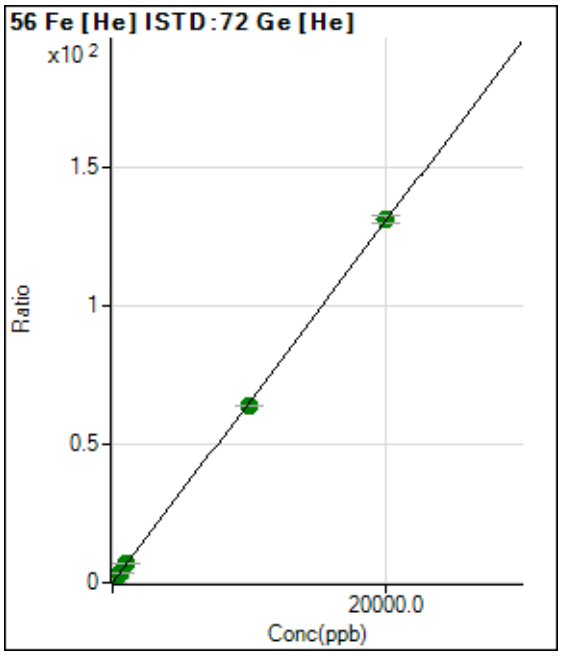
Calibration for 028_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3061494.79	1.0563	A	7.7
2	☐	200.000	208.935	7072857.19	2.4060	A	6.1
3	☐	500.000	521.216	13170591.44	4.4233	A	3.4
4	☐	1000.000	964.720	22713720.82	7.2882	A	2.5
5	☐	10000.00	10033.482	196313425.2	65.8708	A	5.6
6	☐	20000.00	19984.403	385151641.9	130.152	A	2.2
7	☐	100.000					

y = 0.0065 * x + 1.0563
R = 1.0000
DL = 37.65
BEC = 163.5

Weight: <None>
Min Conc: <None>

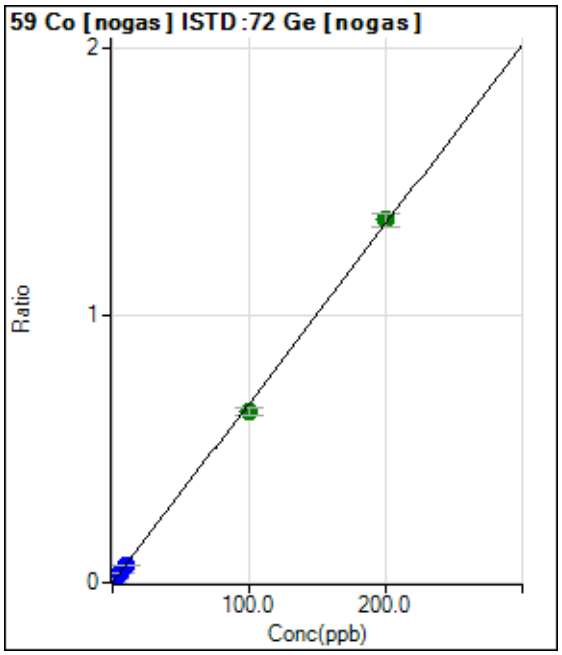


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	18970.02	0.0179	P	3.6
2	☐	200.000	207.057	1451797.58	1.3655	A	1.6
3	☐	500.000	509.489	3537292.76	3.3339	A	1.0
4	☐	1000.000	1023.752	7060975.73	6.6810	A	2.8
5	☐	10000.00	9803.739	68025277.32	63.8259	A	0.3
6	☐	20000.00	20096.635	136067977.9	130.817	A	2.0
7	☐	100.000					

y = 0.0065 * x + 0.0179
R = 0.9999
DL = 0.2941
BEC = 2.743

Weight: <None>
Min Conc: <None>

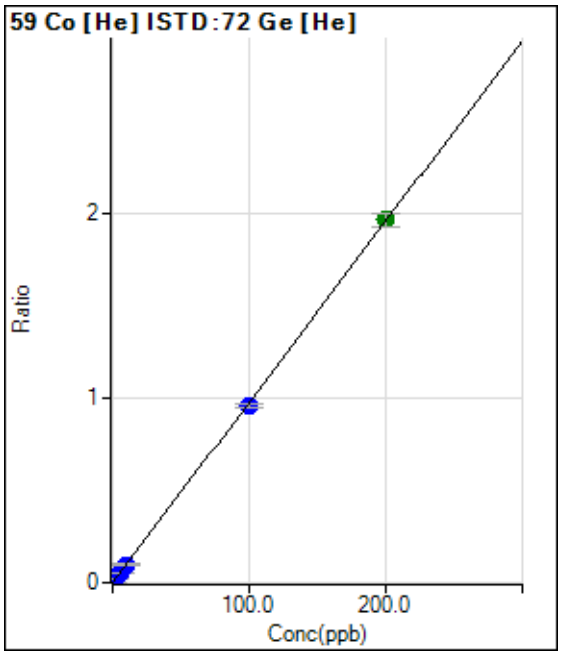
Calibration for 028_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	823.37	0.0003	P	11.2
2	☐	2.000	2.074	41781.19	0.0142	P	5.0
3	☐	5.000	5.127	103299.85	0.0347	P	4.5
4	☐	10.000	9.615	202014.35	0.0648	P	2.4
5	☐	100.000	95.399	1912202.32	0.6407	A	3.7
6	☐	200.000	202.316	4018670.04	1.3584	A	3.5
7	☐	1.000					

y = 0.0067 * x + 2.8259E-004
R = 0.9996
DL = 0.01419
BEC = 0.0421

Weight: <None>
Min Conc: <None>

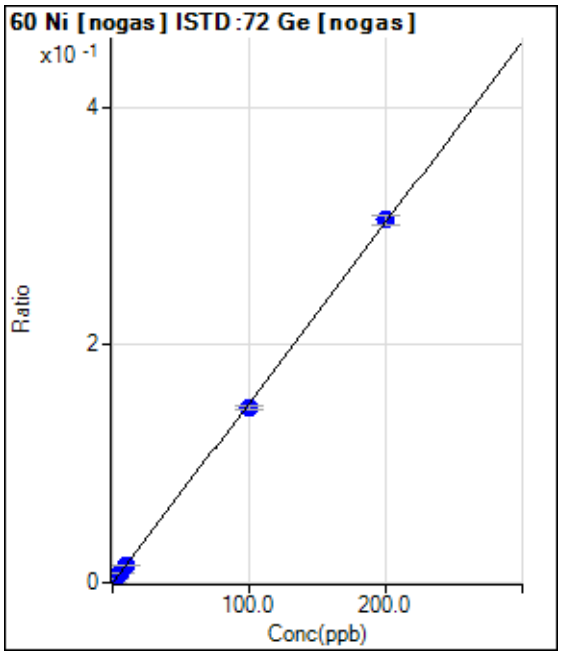


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	186.67	0.0002	P	5.9
2	☐	2.000	2.018	21215.88	0.0200	P	1.9
3	☐	5.000	4.997	52137.32	0.0491	P	1.9
4	☐	10.000	10.056	104317.43	0.0987	P	3.6
5	☐	100.000	98.093	1024543.92	0.9614	P	1.6
6	☐	200.000	200.951	2047924.76	1.9692	A	4.1
7	☐	1.000					

y = 0.0098 * x + 1.7564E-004
R = 0.9999
DL = 0.003194
BEC = 0.01792

Weight: <None>
Min Conc: <None>

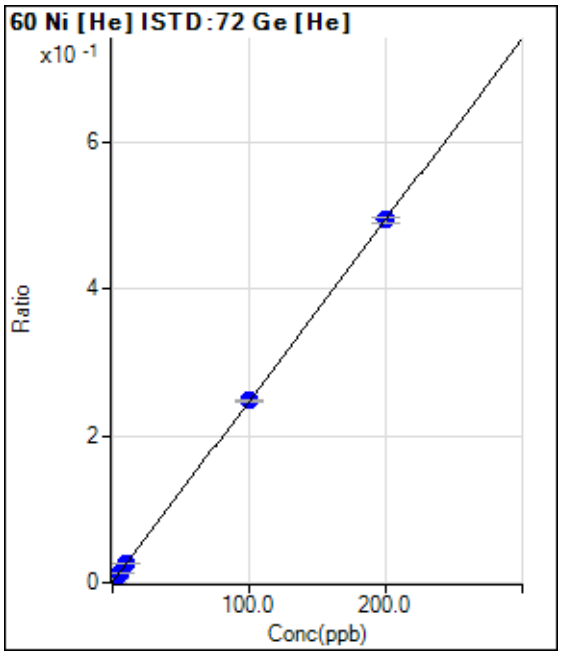
Calibration for 028_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.448	550.02	0.0002	P	25.5
2	☐	2.000	2.500	9719.39	0.0033	P	4.0
3	☐	5.000	5.742	24476.64	0.0082	P	2.9
4	☐	10.000	9.719	44410.78	0.0142	P	2.1
5	☐	100.000	97.202	438056.41	0.1469	P	2.8
6	☐	200.000	201.390	902154.28	0.3049	P	2.8
7	☐	1.000					

y = 0.0015 * x - 4.8842E-004
R = 0.9998
DL = 0.09622
BEC = -0.3221

Weight: <None>
Min Conc: <None>

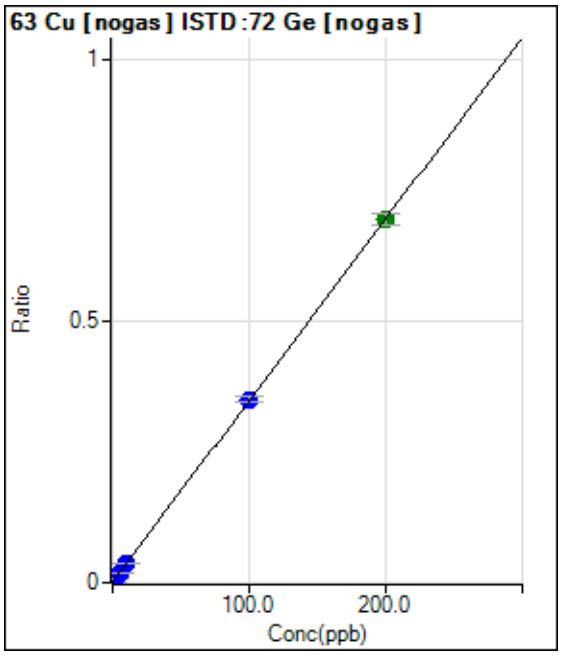


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.110	203.33	0.0002	P	18.0
2	☐	2.000	1.934	5564.25	0.0052	P	6.6
3	☐	5.000	5.116	13882.04	0.0131	P	0.9
4	☐	10.000	10.027	26629.64	0.0252	P	2.7
5	☐	100.000	100.073	263576.10	0.2473	P	2.0
6	☐	200.000	199.960	513546.32	0.4937	P	1.5
7	☐	1.000					

y = 0.0025 * x + 4.6217E-004
R = 1.0000
DL = 0.04196
BEC = 0.1874

Weight: <None>
Min Conc: <None>

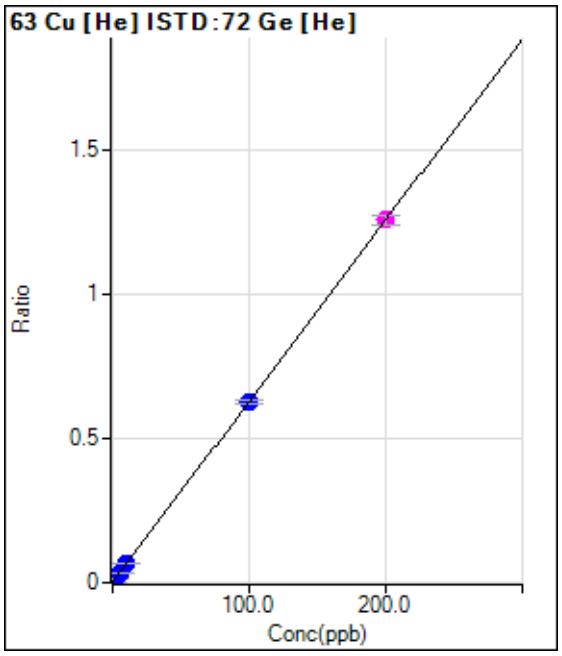
Calibration for 028_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2896.95	0.0010	P	10.6
2	☐	2.000	2.109	24416.61	0.0083	P	6.6
3	☐	5.000	5.382	58514.20	0.0196	P	3.1
4	☐	10.000	9.874	109741.63	0.0352	P	1.2
5	☐	100.000	100.803	1044266.55	0.3502	P	2.5
6	☐	200.000	199.594	2049869.97	0.6925	A	3.3
7	☐	1.000					

y = 0.0035 * x + 9.9924E-004
R = 1.0000
DL = 0.0921
BEC = 0.2884

Weight: <None>
Min Conc: <None>

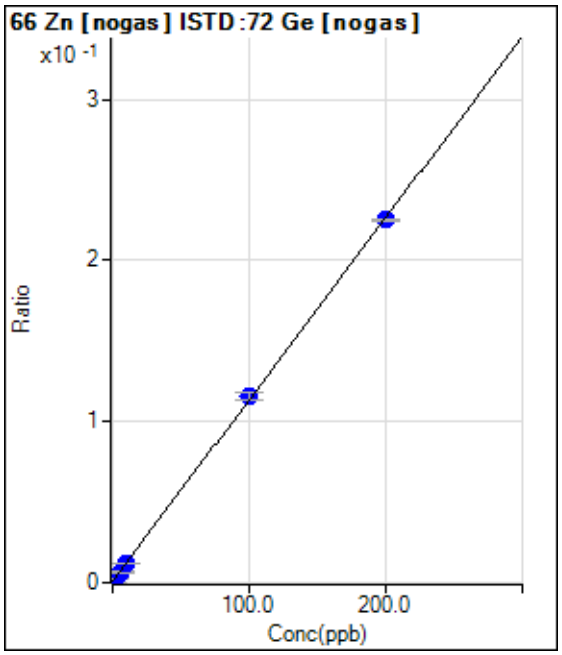


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.066	1036.71	0.0010	P	10.9
2	☐	2.000	1.984	14679.39	0.0138	P	1.0
3	☐	5.000	5.159	35735.11	0.0337	P	3.2
4	☐	10.000	10.229	69150.26	0.0654	P	1.8
5	☐	100.000	99.418	664732.91	0.6238	P	2.7
6	☐	200.000	200.276	1305411.47	1.2552	M	2.9
7	☐	1.000					

y = 0.0063 * x + 0.0014
R = 1.0000
DL = 0.05117
BEC = 0.2213

Weight: <None>
Min Conc: <None>

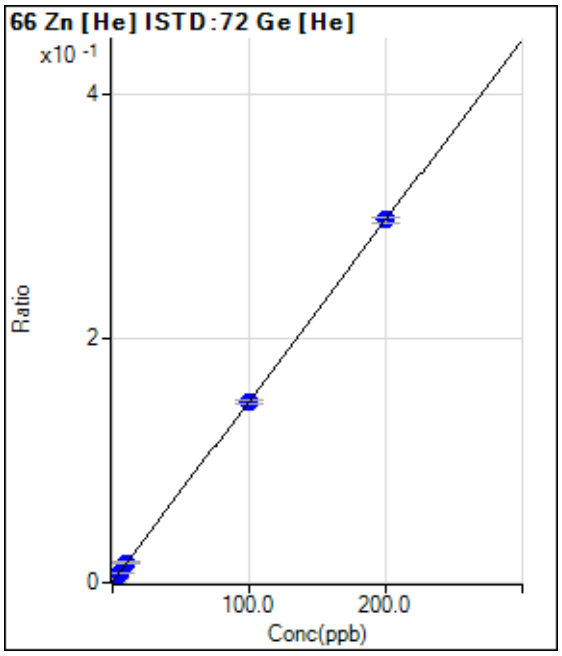
Calibration for 028_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.456	880.03	0.0003	P	3.5
2	☐	2.000	1.674	7955.18	0.0027	P	5.5
3	☐	5.000	5.053	19363.89	0.0065	P	7.8
4	☐	10.000	9.701	36633.65	0.0118	P	0.6
5	☐	100.000	102.022	345186.43	0.1158	P	3.7
6	☐	200.000	199.006	666163.86	0.2251	P	0.8
7	☐	1.000					

y = 0.0011 * x + 8.1705E-004
R = 0.9999
DL = 0.028
BEC = 0.725

Weight: <None>
Min Conc: <None>

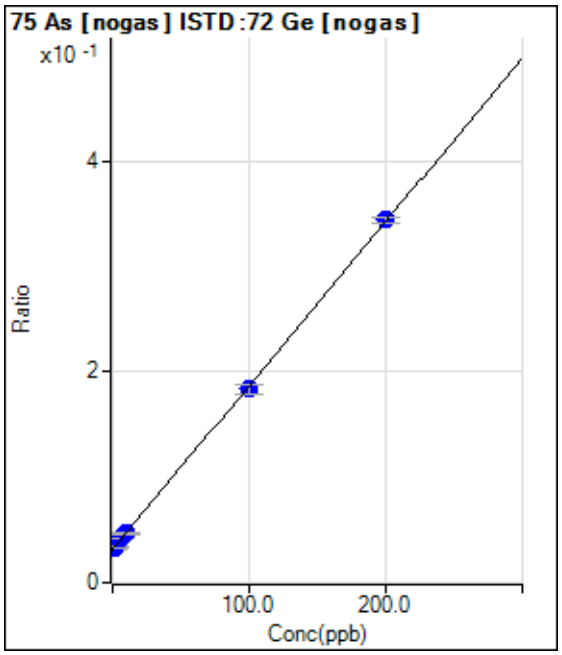


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.241	316.68	0.0003	P	20.5
2	☐	2.000	1.962	3787.11	0.0036	P	4.6
3	☐	5.000	5.014	8572.13	0.0081	P	8.4
4	☐	10.000	10.556	17215.01	0.0163	P	3.8
5	☐	100.000	99.473	157723.67	0.1480	P	1.6
6	☐	200.000	200.236	309181.40	0.2972	P	1.3
7	☐	1.000					

y = 0.0015 * x + 6.5435E-004
R = 1.0000
DL = 0.1235
BEC = 0.4418

Weight: <None>
Min Conc: <None>

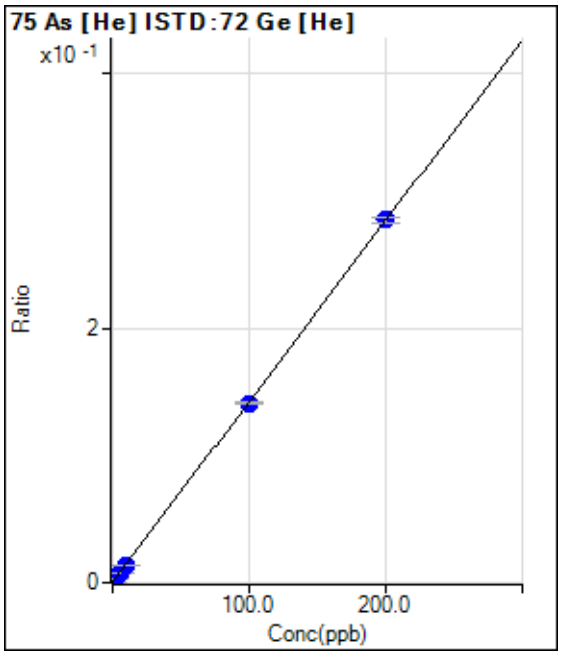
Calibration for 028_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.462	93833.47	0.0323	P	4.1
2	☐	2.000	1.178	98386.97	0.0334	P	4.0
3	☐	5.000	6.662	124890.53	0.0420	P	4.1
4	☐	10.000	9.903	146425.51	0.0470	P	2.2
5	☐	100.000	97.648	546018.13	0.1832	P	4.0
6	☐	200.000	201.147	1017420.11	0.3438	P	1.8
7	☐	1.000					

y = 0.0016 * x + 0.0316
R = 0.9998
DL = 2.554
BEC = 20.37

Weight: <None>
Min Conc: <None>

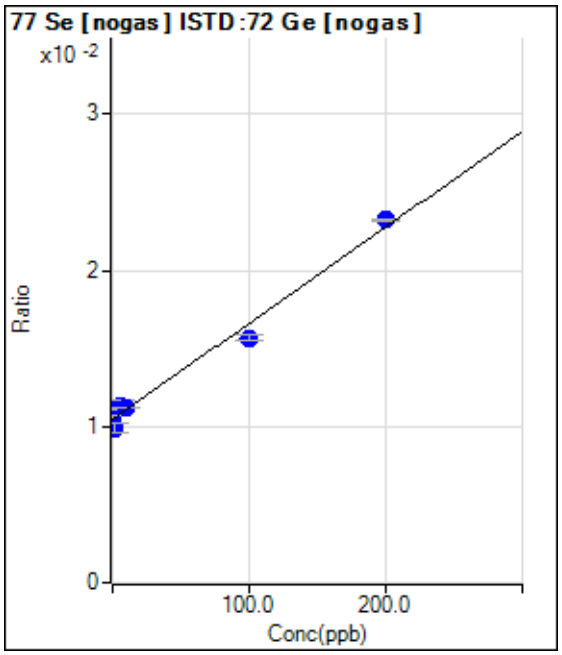


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	414.45	0.0004	P	11.8
2	☐	2.000	1.859	3216.97	0.0030	P	4.8
3	☐	5.000	4.983	7910.64	0.0075	P	2.7
4	☐	10.000	9.626	14837.16	0.0140	P	2.9
5	☐	100.000	98.917	149901.26	0.1407	P	0.9
6	☐	200.000	200.562	296210.76	0.2848	P	1.7
7	☐	1.000					

y = 0.0014 * x + 3.9011E-004
R = 1.0000
DL = 0.09721
BEC = 0.2751

Weight: <None>
Min Conc: <None>

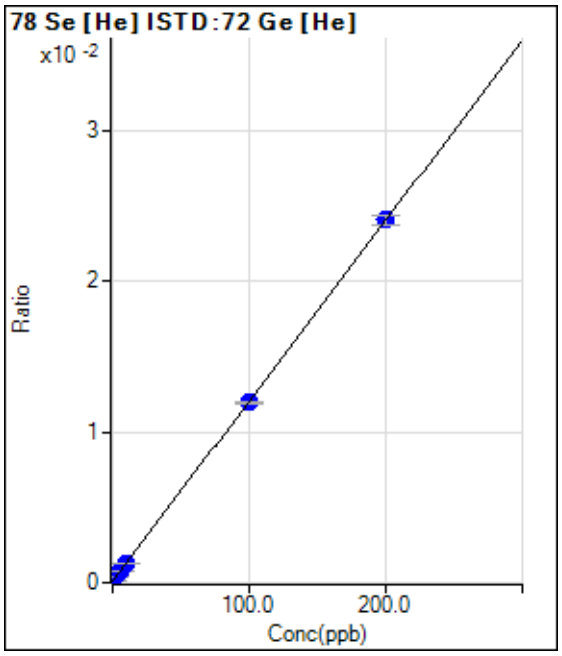
Calibration for 028_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	30408.91	0.0105	P	4.4
2	☐	2.000	-9.694	29049.99	0.0099	P	6.1
3	☐	5.000	14.352	33804.99	0.0114	P	5.5
4	☐	10.000	11.649	34896.99	0.0112	P	0.5
5	☐	100.000	84.579	46753.49	0.0157	P	2.2
6	☐	200.000	207.511	68783.13	0.0232	P	0.7
7	☐	1.000					

y = 6.1519E-005 * x + 0.0105
R = 0.9928
DL = 22.53
BEC = 170.3

Weight: <None>
Min Conc: <None>

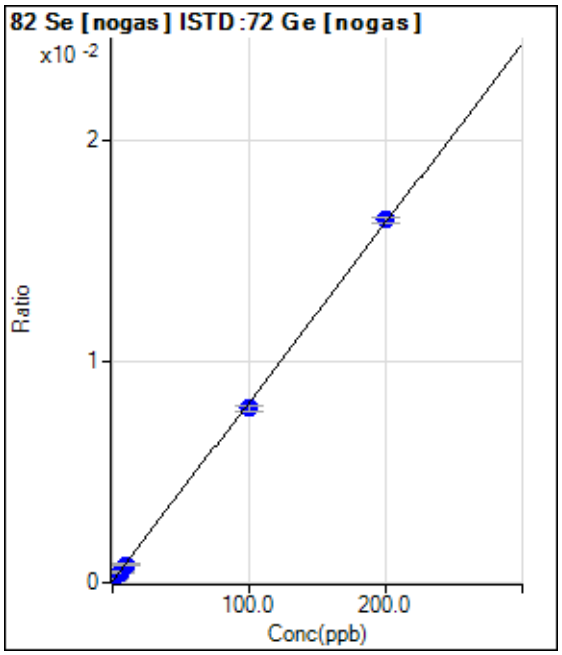


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.275	144.67	0.0001	P	12.2
2	☐	2.000	2.116	378.68	0.0004	P	3.3
3	☐	5.000	5.195	768.69	0.0007	P	5.5
4	☐	10.000	9.877	1357.39	0.0013	P	1.2
5	☐	100.000	99.076	12736.46	0.0120	P	0.8
6	☐	200.000	200.462	25037.16	0.0241	P	2.4
7	☐	1.000					

y = 1.1957E-004 * x + 1.0323E-004
R = 1.0000
DL = 0.417
BEC = 0.8633

Weight: <None>
Min Conc: <None>

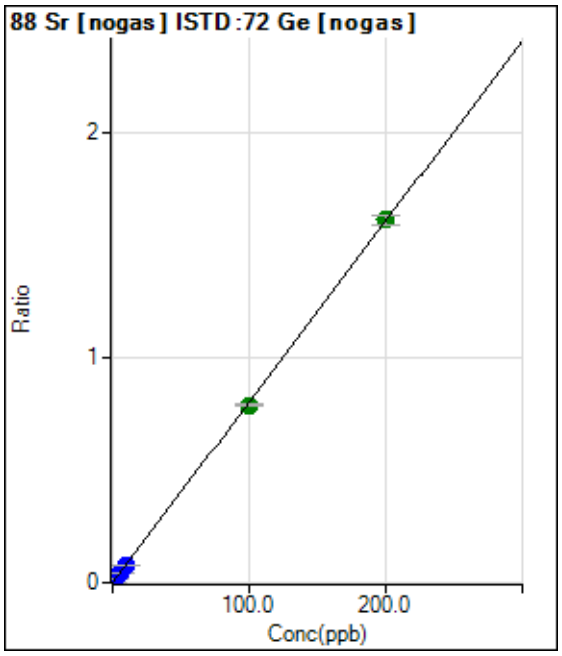
Calibration for 028_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	200.00	0.0001	P	12.8
2	☐	2.000	2.016	680.02	0.0002	P	19.3
3	☐	5.000	4.986	1406.74	0.0005	P	5.5
4	☐	10.000	9.286	2560.22	0.0008	P	3.4
5	☐	100.000	96.666	23535.57	0.0079	P	3.5
6	☐	200.000	201.703	48525.20	0.0164	P	1.8
7	☐	1.000					

y = 8.0959E-005 * x + 6.9048E-005
R = 0.9998
DL = 0.3285
BEC = 0.8529

Weight: <None>
Min Conc: <None>

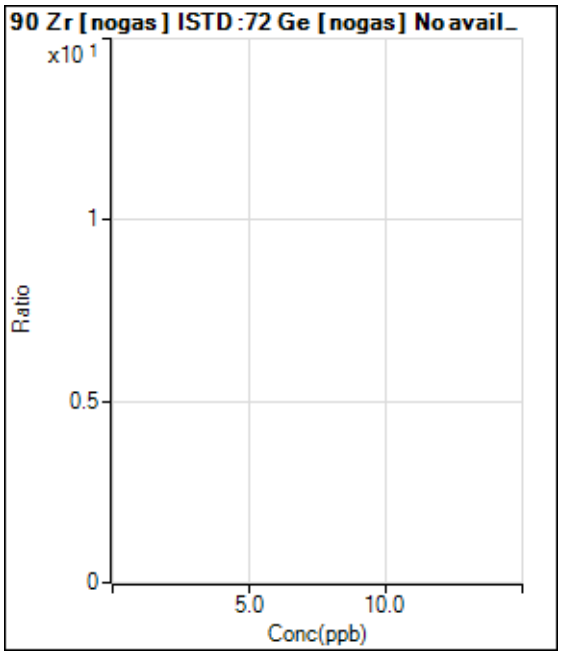


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1060.05	0.0004	P	4.6
2	☐	2.000	2.054	49388.07	0.0168	P	9.0
3	☐	5.000	5.059	121744.99	0.0409	P	3.7
4	☐	10.000	9.711	243564.64	0.0782	P	4.8
5	☐	100.000	98.374	2351530.75	0.7885	A	1.5
6	☐	200.000	200.825	4762020.24	1.6092	A	2.6
7	☐	1.000					

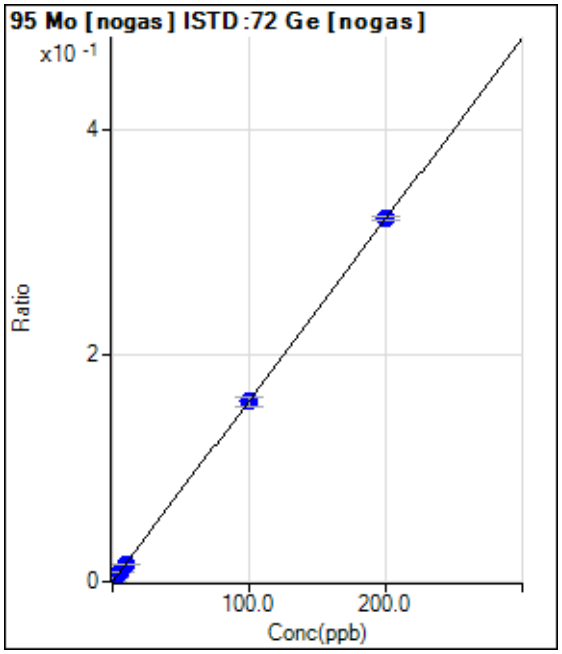
y = 0.0080 * x + 3.6512E-004
R = 1.0000
DL = 0.006337
BEC = 0.04558

Weight: <None>
Min Conc: <None>

Calibration for 028_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					

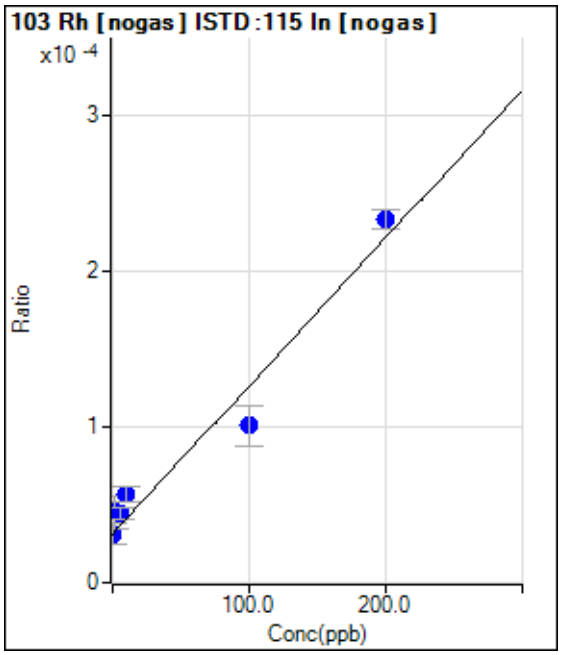


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	200.00	0.0001	P	26.1
2	☐	2.000	1.976	9519.37	0.0032	P	5.8
3	☐	5.000	4.905	23609.17	0.0079	P	4.7
4	☐	10.000	9.591	48125.25	0.0154	P	5.0
5	☐	100.000	99.646	476266.07	0.1598	P	5.4
6	☐	200.000	200.200	949882.62	0.3210	P	1.0
7	☐	1.000					

y = 0.0016 * x + 6.9519E-005
R = 1.0000
DL = 0.0339
BEC = 0.04337

Weight: <None>
Min Conc: <None>

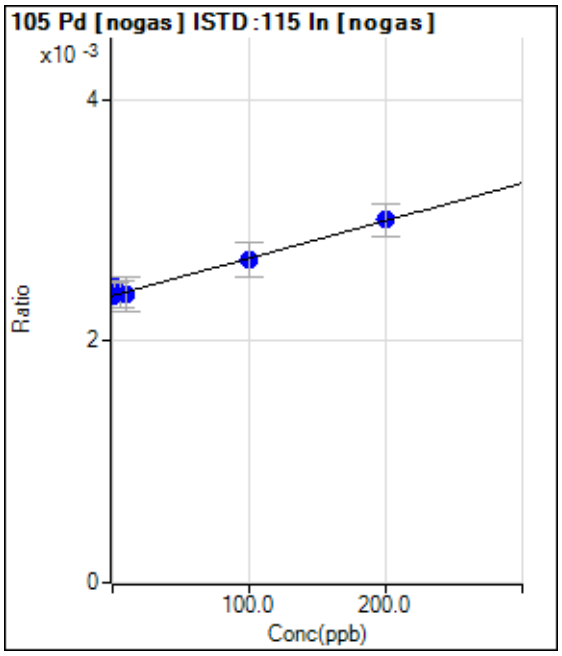
Calibration for 028_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	83.33	0.0000	P	43.7
2	☐	2.000	14.822	116.67	0.0000	P	46.4
3	☐	5.000	14.075	120.00	0.0000	P	17.7
4	☐	10.000	27.220	153.33	0.0001	P	17.8
5	☐	100.000	73.381	276.68	0.0001	P	25.5
6	☐	200.000	212.093	616.69	0.0002	P	5.4
7	☐	1.000					

y = 9.5145E-007 * x + 3.1397E-005
R = 0.9804
DL = 43.29
BEC = 33

Weight: <None>
Min Conc: <None>

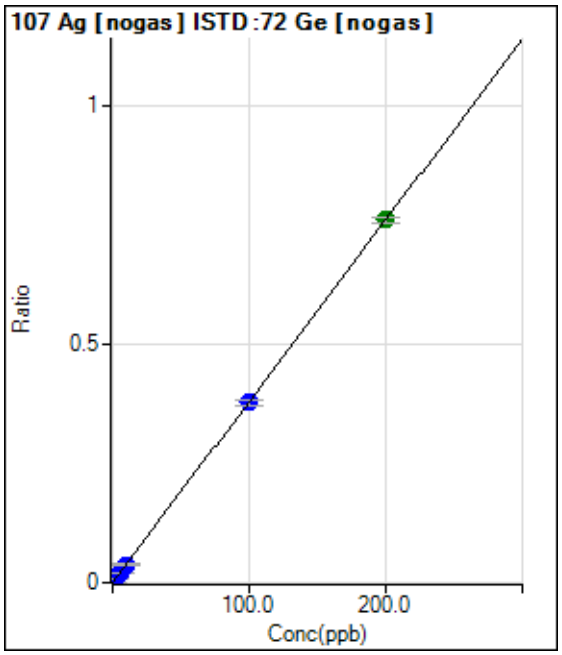


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6187.87	0.0024	P	2.1
2	☐	2.000	25.273	6477.98	0.0025	P	2.8
3	☐	5.000	3.684	6354.60	0.0024	P	8.9
4	☐	10.000	1.767	6384.60	0.0024	P	12.1
5	☐	100.000	96.564	7331.69	0.0027	P	10.7
6	☐	200.000	201.930	7951.97	0.0030	P	9.1
7	☐	1.000					

y = 3.1110E-006 * x + 0.0024
R = 0.9909
DL = 47.68
BEC = 764.4

Weight: <None>
Min Conc: <None>

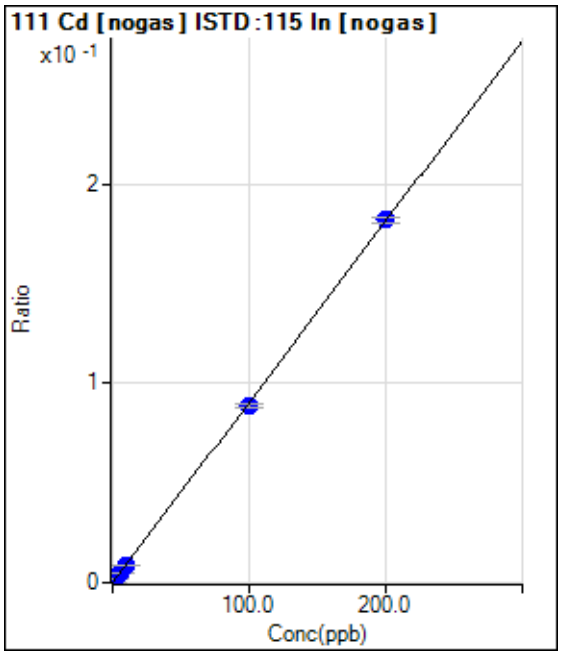
Calibration for 028_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	110.00	0.0000	P	34.1
2	☐	2.000	2.074	23345.66	0.0079	P	4.6
3	☐	5.000	5.242	59540.65	0.0200	P	4.1
4	☐	10.000	10.010	118894.83	0.0381	P	2.1
5	☐	100.000	99.568	1130301.21	0.3791	P	2.9
6	☐	200.000	200.209	2256172.52	0.7623	A	1.6
7	☐	1.000					

y = 0.0038 * x + 3.7764E-005
R = 1.0000
DL = 0.01013
BEC = 0.009919

Weight: <None>
Min Conc: <None>

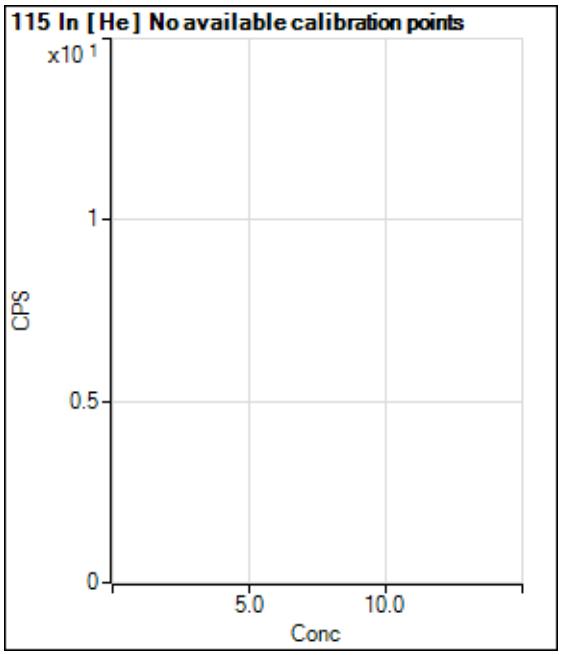


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	20.00	0.0000	P	43.9
2	☐	2.000	2.068	4947.44	0.0019	P	7.4
3	☐	5.000	5.237	12641.36	0.0048	P	8.5
4	☐	10.000	9.942	24173.58	0.0090	P	2.3
5	☐	100.000	98.139	243834.17	0.0889	P	2.8
6	☐	200.000	200.927	481596.95	0.1821	P	1.2
7	☐	1.000					

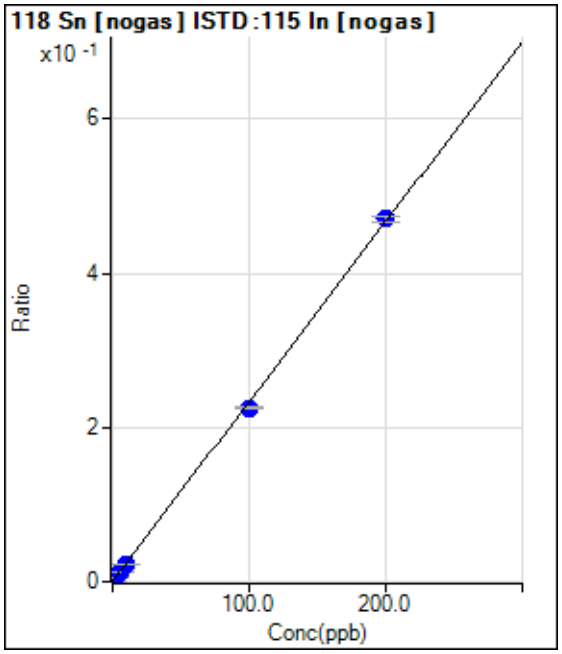
y = 9.0621E-004 * x + 7.5203E-006
R = 0.9999
DL = 0.01093
BEC = 0.008299

Weight: <None>
Min Conc: <None>

Calibration for 028_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			1484817.94		A	2.9
2	☐			1494913.49		A	2.7
3	☐			1473868.25		A	2.4
4	☐			1465491.49		A	2.2
5	☐			1420355.36		A	1.4
6	☐			1430930.30		A	2.7
7	☐						

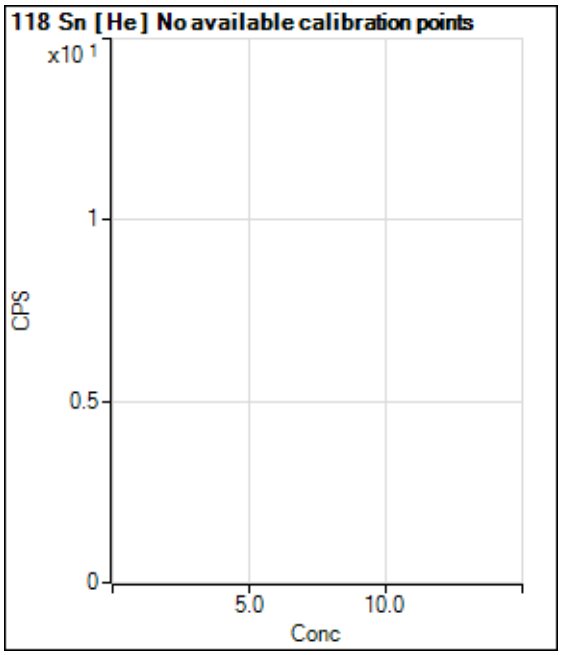


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1220.06	0.0005	P	6.8
2	☐	2.000	2.006	13508.77	0.0051	P	8.3
3	☐	5.000	5.109	32834.86	0.0124	P	11.6
4	☐	10.000	9.787	62374.77	0.0233	P	0.1
5	☐	100.000	96.626	618378.34	0.2256	P	1.6
6	☐	200.000	201.695	1243986.73	0.4703	P	1.5
7	☐	1.000					

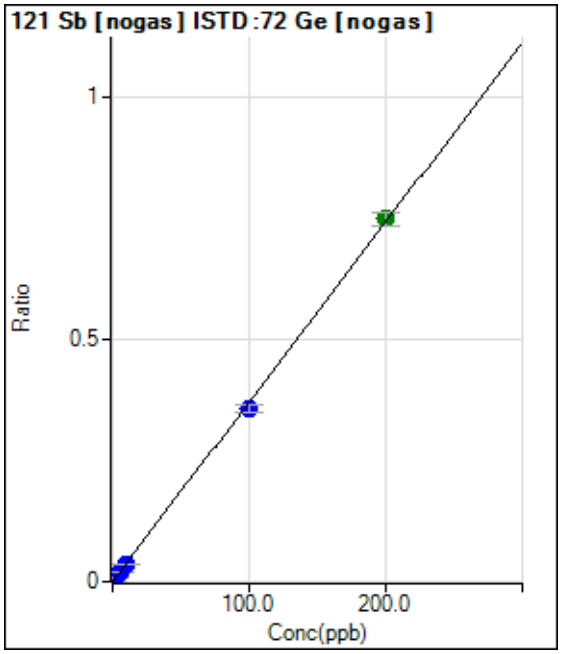
y = 0.0023 * x + 4.6988E-004
R = 0.9998
DL = 0.04096
BEC = 0.2017

Weight: <None>
Min Conc: <None>

Calibration for 028_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			606.69		P	14.9
2	☐			7695.14		P	1.9
3	☐			19003.86		P	2.3
4	☐			35479.57		P	0.2
5	☐			361784.55		P	1.1
6	☐			723545.04		P	1.0
7	☐						

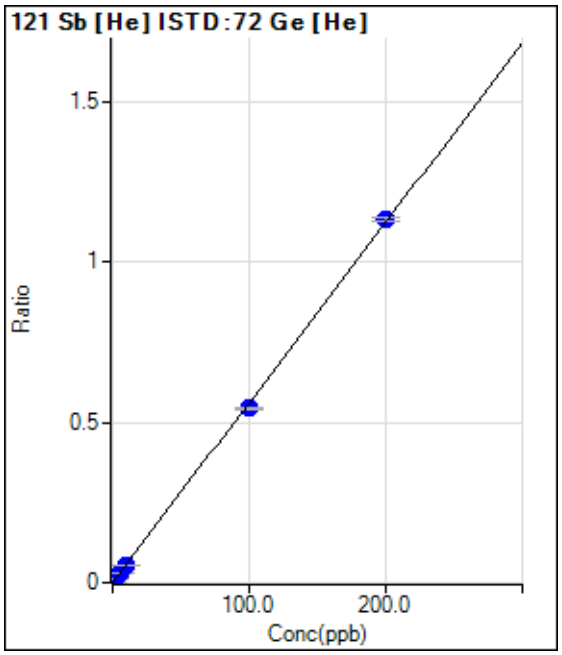


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	530.02	0.0002	P	16.0
2	☐	2.000	1.999	22291.06	0.0076	P	5.6
3	☐	5.000	4.958	55116.92	0.0185	P	6.4
4	☐	10.000	9.318	108006.59	0.0347	P	2.0
5	☐	100.000	96.148	1060601.47	0.3559	P	4.8
6	☐	200.000	201.961	2210877.62	0.7473	A	3.7
7	☐	1.000					

y = 0.0037 * x + 1.8343E-004
R = 0.9997
DL = 0.02381
BEC = 0.04958

Weight: <None>
Min Conc: <None>

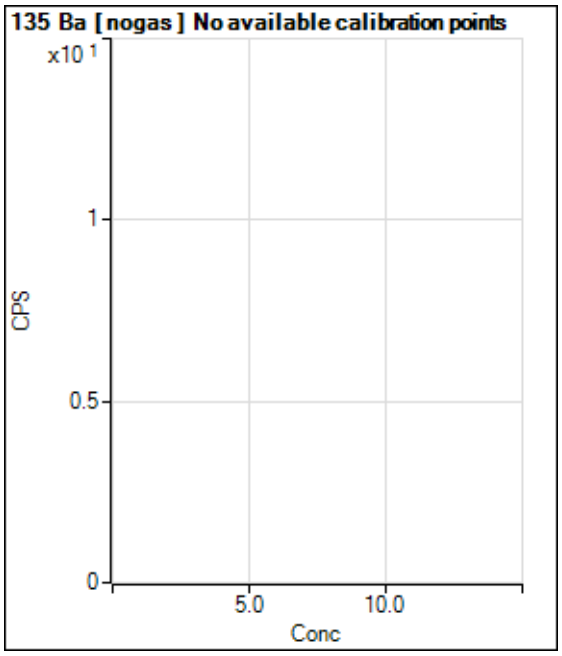
Calibration for 028_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	326.68	0.0003	P	9.5
2	☐	2.000	1.875	11497.28	0.0108	P	3.6
3	☐	5.000	4.925	29595.28	0.0279	P	2.0
4	☐	10.000	9.619	57277.15	0.0542	P	2.4
5	☐	100.000	96.788	578196.53	0.5425	P	1.2
6	☐	200.000	201.628	1175196.49	1.1298	P	1.2
7	☐	1.000					

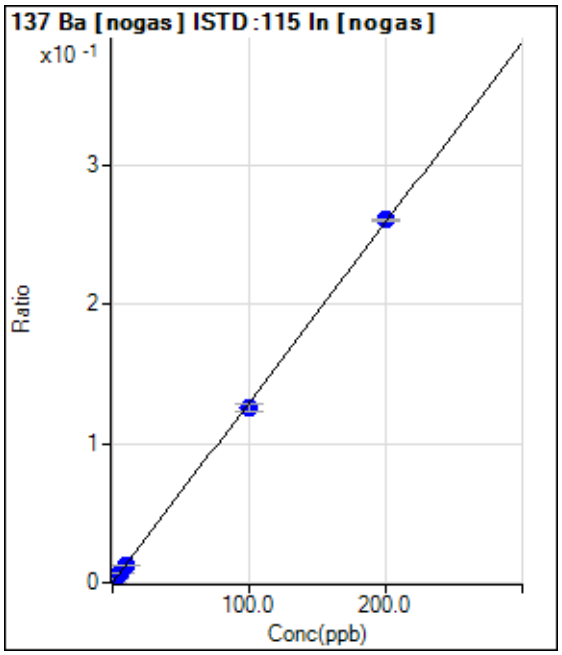
y = 0.0056 * x + 3.0753E-004
R = 0.9998
DL = 0.01572
BEC = 0.0549

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			143.33		P	10.7
2	☐			4390.64		P	2.2
3	☐			10163.17		P	2.2
4	☐			20375.64		P	2.1
5	☐			199174.44		P	3.1
6	☐			403355.81		P	1.2
7	☐						

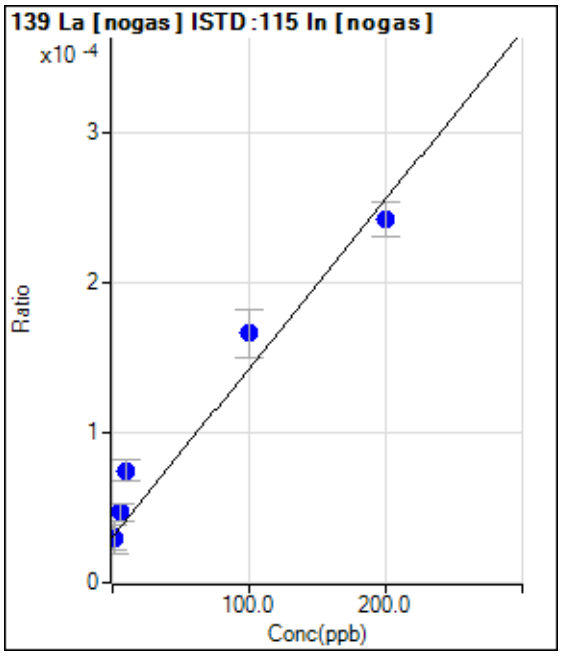
Calibration for 028_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	243.34	0.0001	P	7.3
2	☐	2.000	1.990	7001.54	0.0027	P	12.5
3	☐	5.000	5.347	18670.29	0.0070	P	8.6
4	☐	10.000	10.038	35113.01	0.0131	P	0.5
5	☐	100.000	97.166	345389.27	0.1260	P	4.3
6	☐	200.000	201.407	690463.69	0.2611	P	0.4
7	☐	1.000					

y = 0.0013 * x + 9.3240E-005
R = 0.9999
DL = 0.01566
BEC = 0.07196

Weight: <None>
Min Conc: <None>

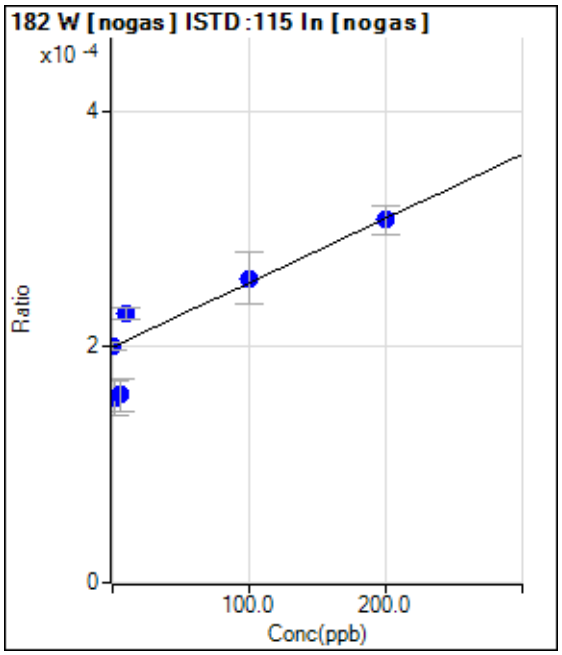


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	76.67	0.0000	P	53.5
2	☐	2.000	-0.229	80.00	0.0000	P	71.0
3	☐	5.000	14.601	123.33	0.0000	P	23.0
4	☐	10.000	39.420	200.00	0.0001	P	19.5
5	☐	100.000	120.630	456.68	0.0002	P	19.4
6	☐	200.000	187.996	640.02	0.0002	P	9.6
7	☐	1.000					

y = 1.1255E-006 * x + 3.0387E-005
R = 0.9828
DL = 43.36
BEC = 27

Weight: <None>
Min Conc: <None>

Calibration for 028_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	520.02	0.0002	P	3.2
2	☐	2.000	-78.769	410.01	0.0002	P	18.9
3	☐	5.000	-73.901	423.35	0.0002	P	17.2
4	☐	10.000	51.101	610.02	0.0002	P	4.1
5	☐	100.000	106.197	706.70	0.0003	P	17.0
6	☐	200.000	197.627	813.37	0.0003	P	7.9
7	☐	1.000					

y = 5.4533E-007 * x + 1.9972E-004

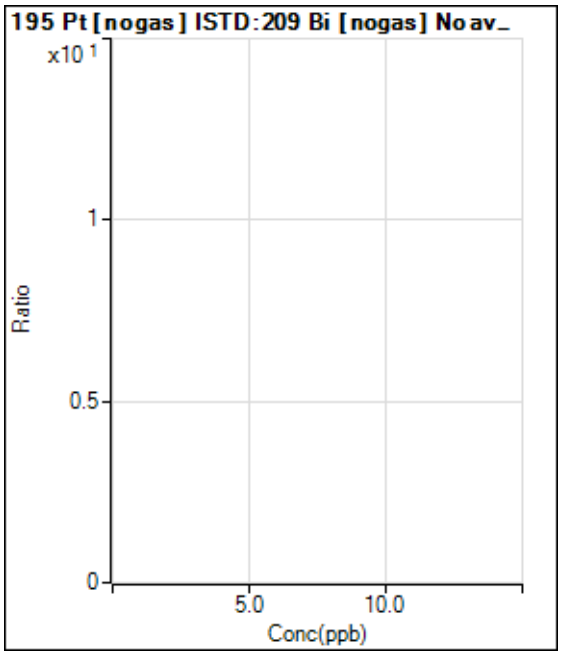
R = 0.8980

DL = 35.3

BEC = 366.2

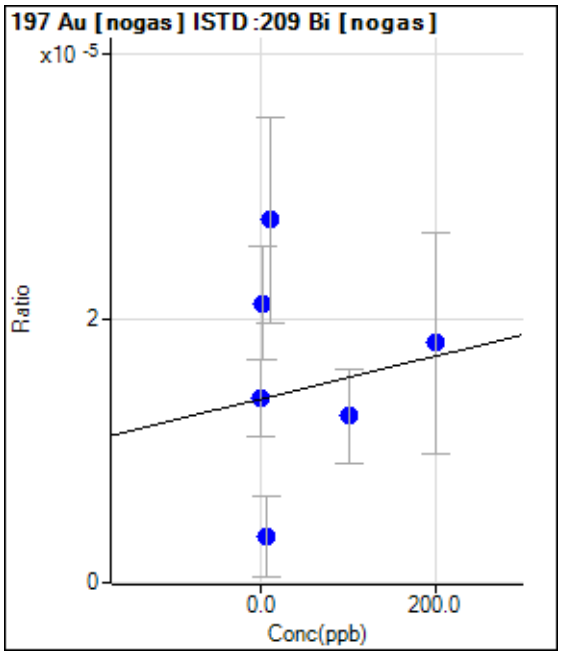
Weight: <None>

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					

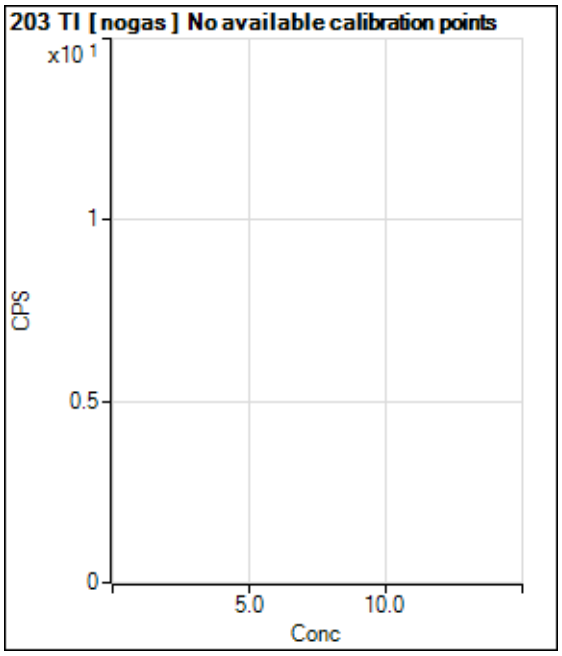
Calibration for 028_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	26.67	0.0000	P	41.7
2	☐	2.000	449.136	40.00	0.0000	P	41.0
3	☐	5.000	-643.164	6.67	0.0000	P	173.
4	☐	10.000	838.419	53.33	0.0000	P	56.8
5	☐	100.000	-80.228	26.67	0.0000	P	57.1
6	☐	200.000	260.426	33.33	0.0000	P	92.6
7	☐	1.000					

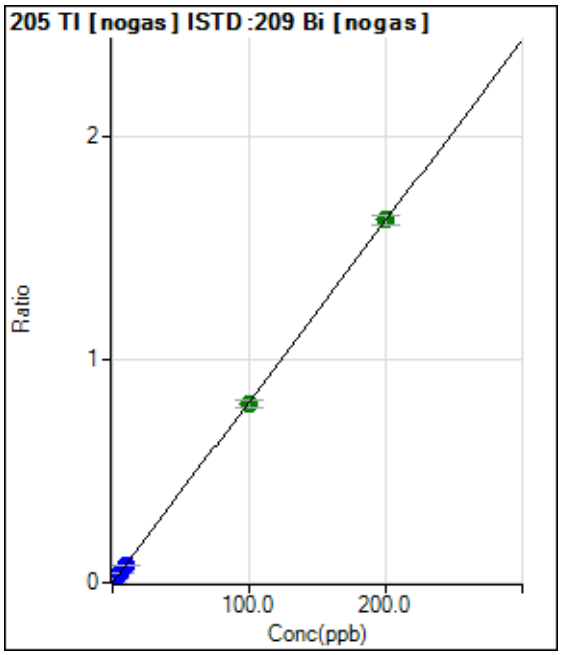
y = 1.6156E-008 * x + 1.3921E-005
R = 0.0318
DL = 1078
BEC = 861.7

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			170.00		P	45.9
2	☐			13325.67		P	5.2
3	☐			31791.39		P	3.4
4	☐			64043.33		P	4.1
5	☐			632547.80		P	2.9
6	☐			1274268.81		P	1.2
7	☐						

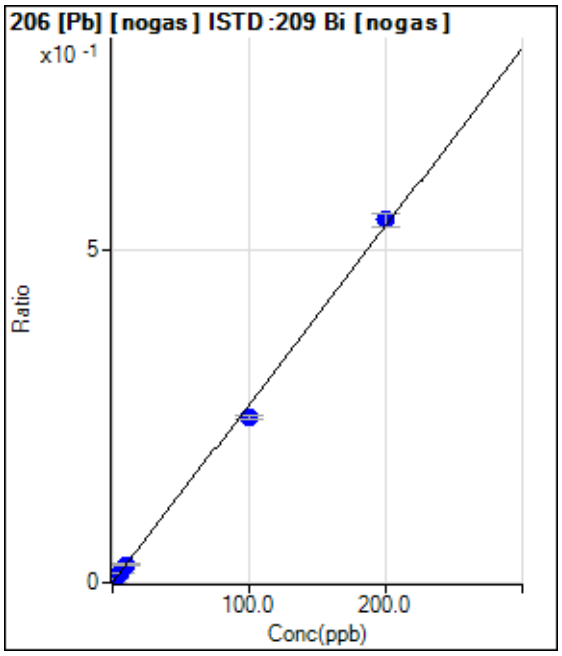
Calibration for 028_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	433.34	0.0002	P	11.0
2	☐	2.000	2.048	31577.73	0.0168	P	1.3
3	☐	5.000	5.076	77910.72	0.0413	P	7.0
4	☐	10.000	9.490	149757.25	0.0770	P	3.8
5	☐	100.000	98.987	1699141.64	0.8015	A	3.8
6	☐	200.000	200.530	3051749.22	1.6235	A	2.5
7	☐	1.000					

y = 0.0081 * x + 2.2746E-004
R = 1.0000
DL = 0.009277
BEC = 0.0281

Weight: <None>
Min Conc: <None>

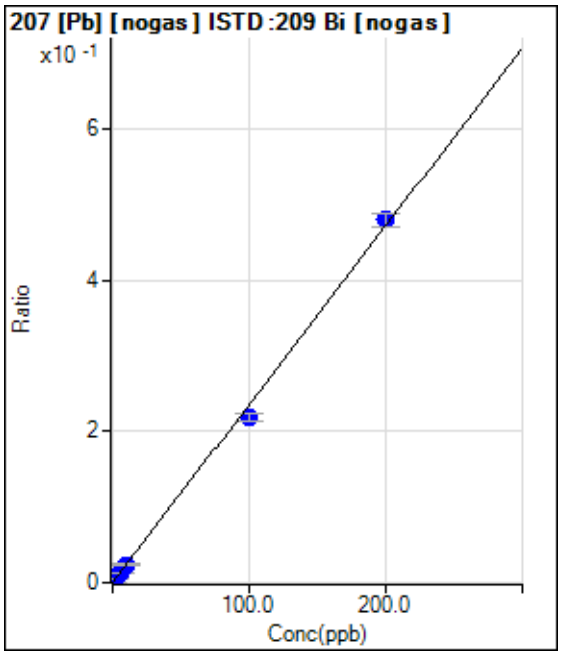


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	160.00	0.0001	P	14.5
2	☐	2.000	2.117	10817.12	0.0058	P	5.5
3	☐	5.000	5.416	27553.70	0.0146	P	7.5
4	☐	10.000	10.151	53090.45	0.0273	P	5.8
5	☐	100.000	92.786	527528.18	0.2491	P	3.4
6	☐	200.000	203.588	1026681.16	0.5464	P	4.1
7	☐	1.000					

y = 0.0027 * x + 8.3685E-005
R = 0.9991
DL = 0.01357
BEC = 0.03119

Weight: <None>
Min Conc: <None>

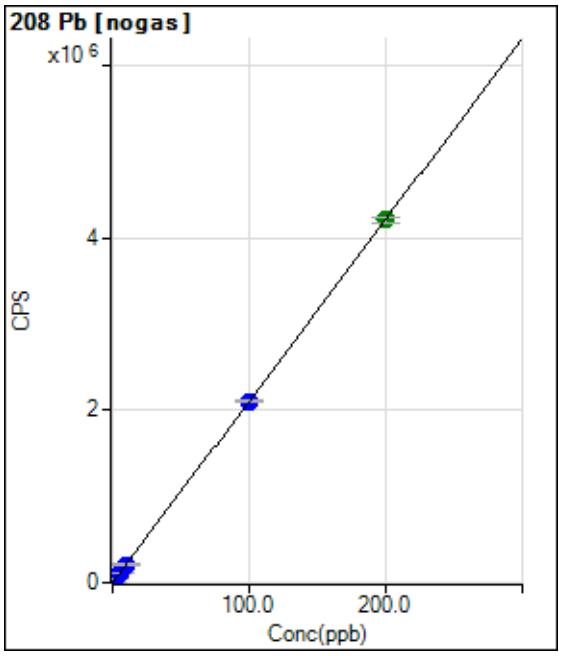
Calibration for 028_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	160.00	0.0001	P	21.7
2	☐	2.000	2.084	9386.16	0.0050	P	8.0
3	☐	5.000	5.312	23811.11	0.0126	P	6.7
4	☐	10.000	10.164	46794.67	0.0241	P	5.6
5	☐	100.000	92.907	464688.32	0.2195	P	4.3
6	☐	200.000	203.530	903392.70	0.4806	P	3.5
7	☐	1.000					

y = 0.0024 * x + 8.3802E-005
R = 0.9991
DL = 0.02316
BEC = 0.03549

Weight: <None>
Min Conc: <None>

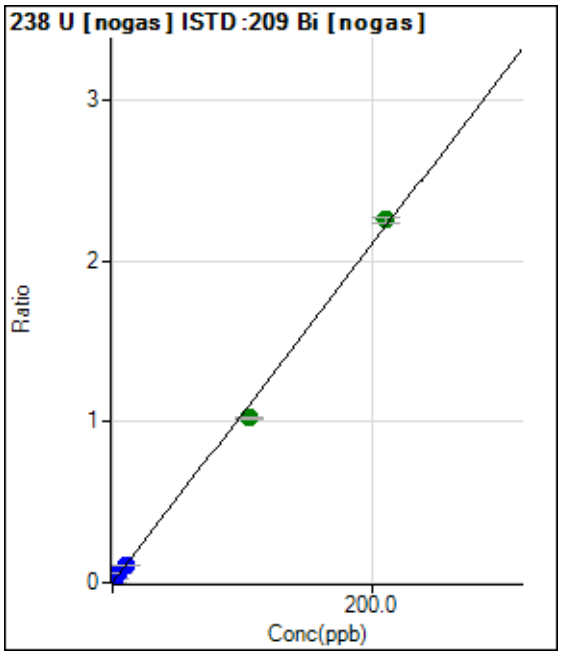


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	526.67		P	18.2
2	☐	2.000	2.023	43133.25		P	1.7
3	☐	5.000	5.104	108007.31		P	1.1
4	☐	10.000	10.043	212021.61		P	1.5
5	☐	100.000	100.057	2107554.67		P	1.8
6	☐	200.000	199.966	4211457.42		A	1.7
7	☐	1.000					

y = 21058.2001 * x + 526.6733
R = 1.0000
DL = 0.01369
BEC = 0.02501

Weight: <None>
Min Conc: <None>

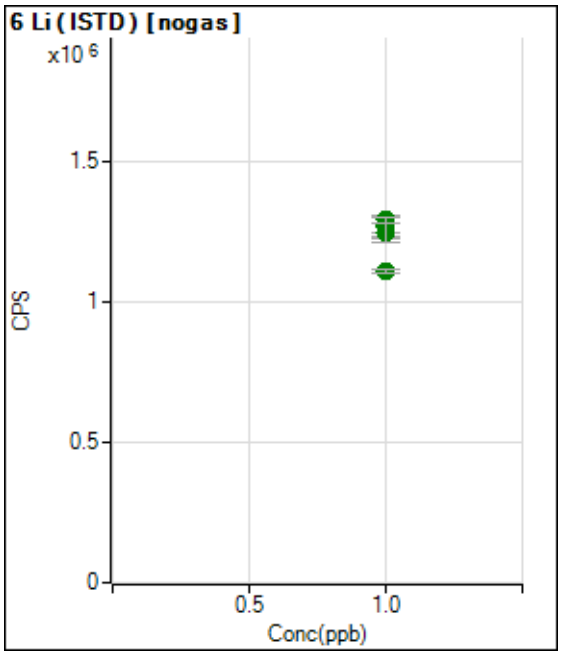
Calibration for 028_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	196.67	0.0001	P	18.1
2	☐	2.000	2.157	42848.15	0.0228	P	6.5
3	☐	5.000	5.268	105068.07	0.0556	P	3.5
4	☐	10.000	9.877	202710.24	0.1042	P	0.5
5	☐	105.000	96.992	2166271.27	1.0226	A	1.7
6	☐	210.000	214.002	4241301.50	2.2561	A	1.9
7	☐	1.000					

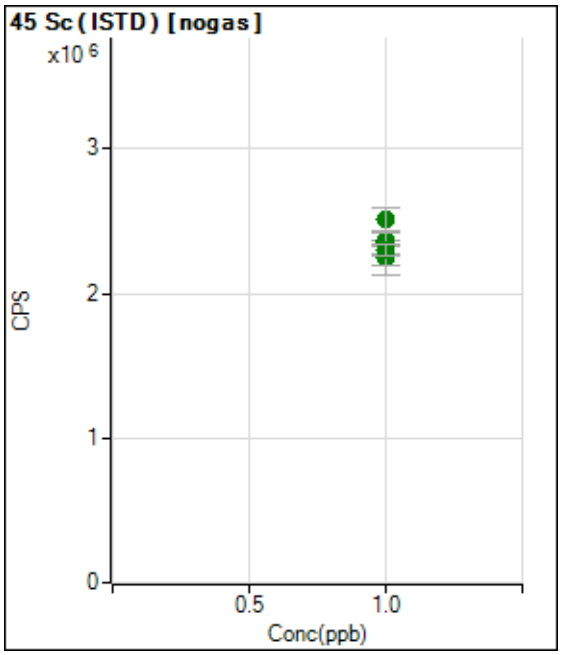
y = 0.0105 * x + 1.0343E-004
R = 0.9990
DL = 0.005314
BEC = 0.009811

Weight: <None>
Min Conc: <None>

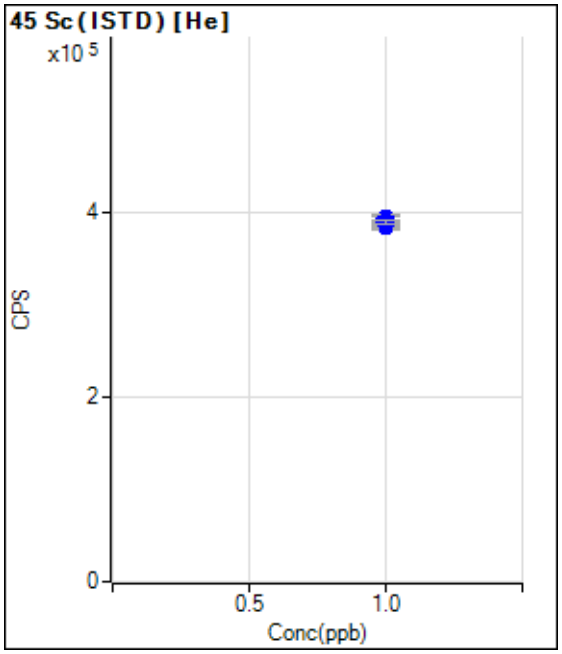


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1267062.36		A	6.8
2	☐	1.000		1271057.89		A	4.3
3	☐	1.000		1269593.34		A	6.3
4	☐	1.000		1290761.54		A	1.8
5	☐	1.000		1245616.57		A	5.1
6	☐	1.000		1106604.65		A	1.0
7	☐	1.000					

Calibration for 028_ICV.d

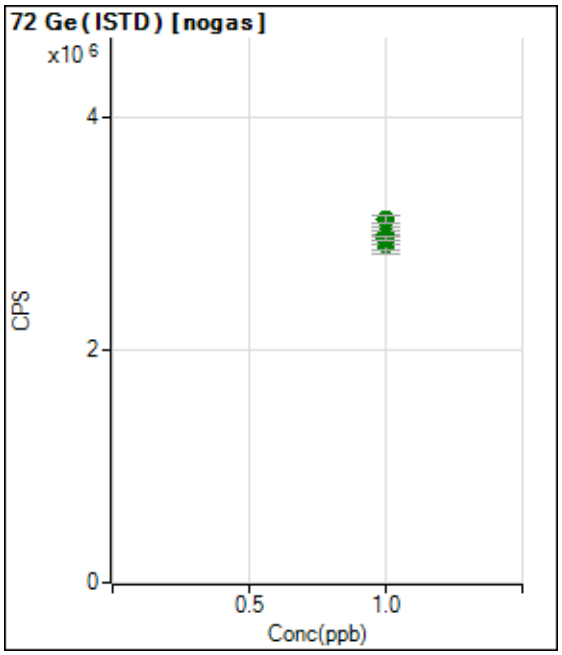


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		2250601.27		A	10.9
2	☐	1.000		2260091.11		A	5.6
3	☐	1.000		2357293.56		A	6.9
4	☐	1.000		2374087.15		A	3.8
5	☐	1.000		2509380.96		A	7.0
6	☐	1.000		2306574.76		A	3.4
7	☐	1.000					

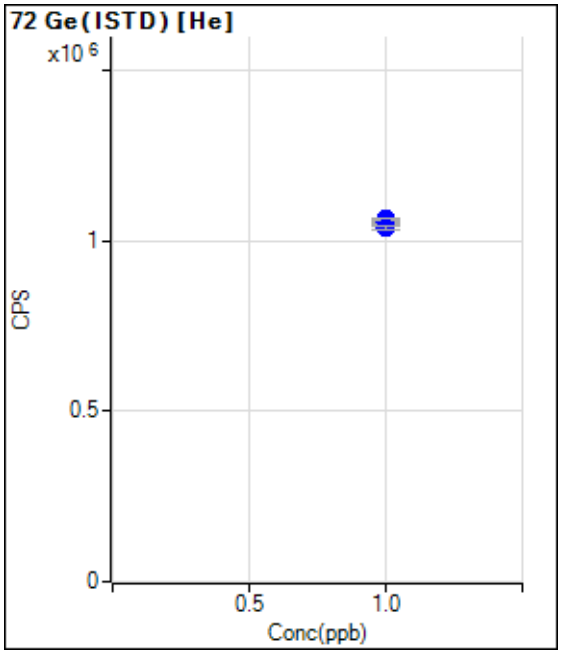


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		386126.10		P	2.1
2	☐	1.000		392737.56		P	2.0
3	☐	1.000		393297.70		P	2.5
4	☐	1.000		388638.34		P	1.3
5	☐	1.000		387218.05		P	1.9
6	☐	1.000		389969.96		P	1.0
7	☐	1.000					

Calibration for 028_ICV.d

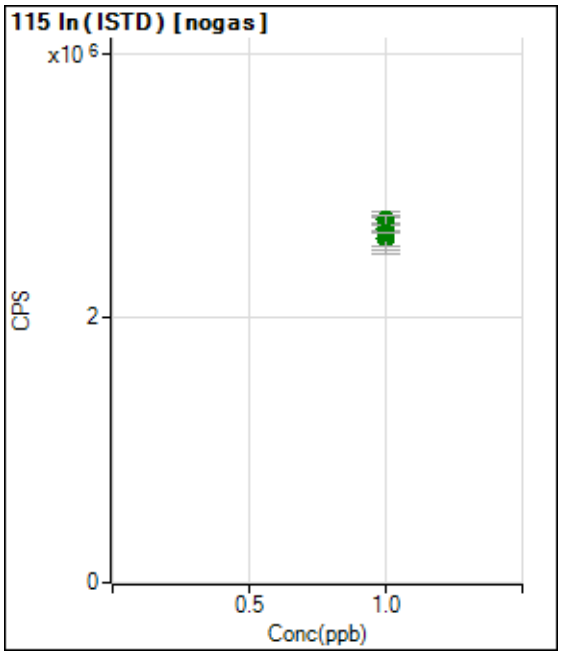


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		2907309.33		A	6.0
2	☐	1.000		2946465.58		A	5.6
3	☐	1.000		2980652.35		A	4.6
4	☐	1.000		3117445.37		A	2.1
5	☐	1.000		2982906.10		A	2.8
6	☐	1.000		2959445.06		A	1.4
7	☐	1.000					

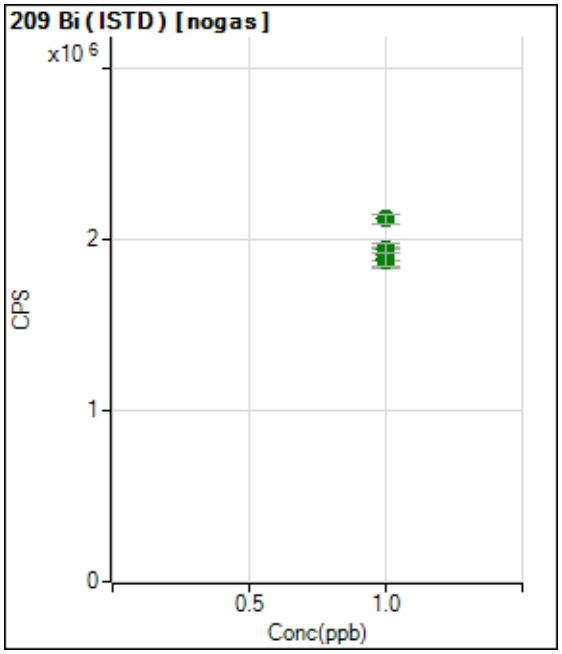


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1062701.31		P	0.7
2	☐	1.000		1063284.25		P	0.8
3	☐	1.000		1061003.50		P	0.4
4	☐	1.000		1057039.28		P	1.1
5	☐	1.000		1065790.98		P	0.8
6	☐	1.000		1040244.31		P	1.2
7	☐	1.000					

Calibration for 028_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		2598911.99		A	8.7
2	☐	1.000		2640658.23		A	9.4
3	☐	1.000		2674431.47		A	10.1
4	☐	1.000		2680380.57		A	1.4
5	☐	1.000		2742092.04		A	2.6
6	☐	1.000		2644771.13		A	0.3
7	☐	1.000					



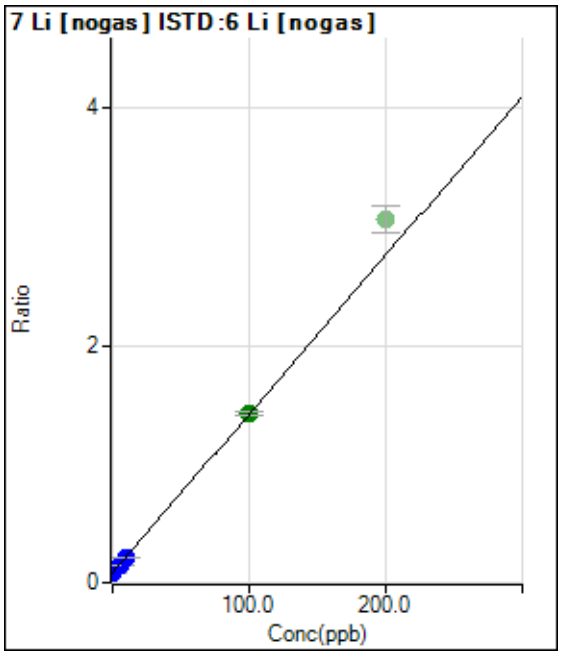
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1908674.66		A	3.1
2	☐	1.000		1879436.69		A	4.3
3	☐	1.000		1891457.58		A	6.9
4	☐	1.000		1945018.25		A	2.8
5	☐	1.000		2119037.31		A	2.5
6	☐	1.000		1880818.15		A	3.7
7	☐	1.000					

Calibration for 077_ICV.d

Batch Folder: C:\Agilent\ICPMH\1\DATA\010919B.b\
Analysis File: 010919B.batch.bin
DA Date-Time: 2019-01-09 19:23:30
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	070CALB.d	CAL BLK	2019-01-09 13:41:25
2	071CALS.d	2/10/200	2019-01-09 13:43:25
3	072CALS.d	5/25/500	2019-01-09 13:45:22
4	073CALS.d	10/50/1000	2019-01-09 13:47:20
5	074CALS.d	100/500/10K	2019-01-09 13:49:18
6	075CALS.d	200/1000/20K	2019-01-09 13:51:19
7			

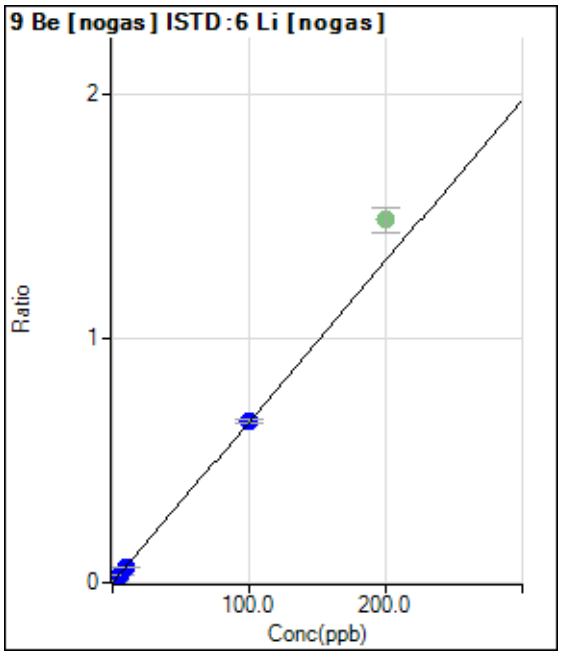
Calibration for 077_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	107910.50	0.0842	P	0.8
2	☐	2.000	1.743	137663.75	0.1075	P	0.5
3	☐	5.000	4.568	189211.91	0.1453	P	2.6
4	☐	10.000	9.383	263400.18	0.2098	P	2.4
5	☐	100.000	100.088	1635930.55	1.4241	A	2.7
6	☑	200.000		3075285.27	3.0601	A	7.3
7	☐	1.000					

y = 0.0134 * x + 0.0842
R = 1.0000
DL = 0.1423
BEC = 6.287

Weight: <None>
Min Conc: <None>

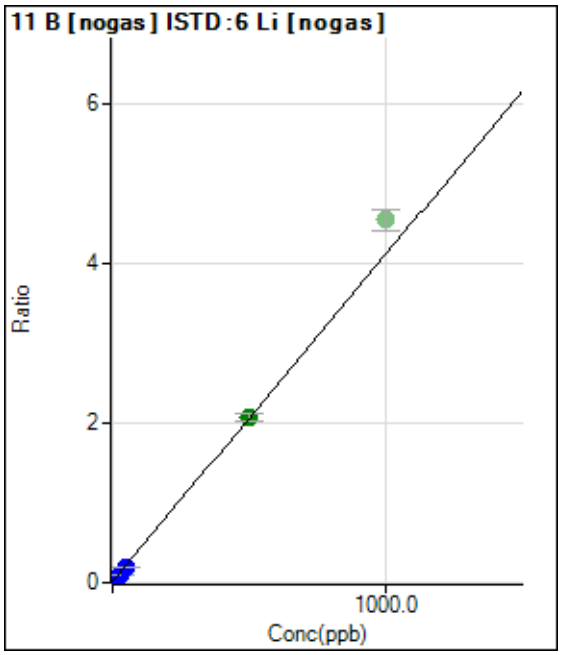


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	103.33	0.0001	P	7.0
2	☐	2.000	1.808	15363.06	0.0120	P	7.1
3	☐	5.000	4.399	37894.34	0.0291	P	1.9
4	☐	10.000	9.054	75120.63	0.0598	P	1.5
5	☐	100.000	100.129	759168.37	0.6608	P	2.3
6	☑	200.000		1495626.18	1.4880	A	6.9
7	☐	1.000					

y = 0.0066 * x + 8.0671E-005
R = 1.0000
DL = 0.002558
BEC = 0.01223

Weight: <None>
Min Conc: <None>

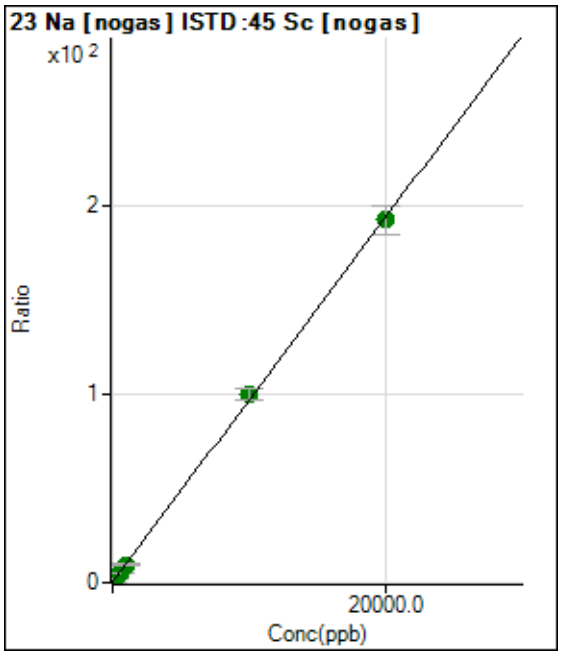
Calibration for 077_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	19226.65	0.0150	P	5.5
2	☐	10.000	8.420	63398.42	0.0495	P	2.9
3	☐	25.000	21.589	134752.51	0.1035	P	3.2
4	☐	50.000	44.837	249616.38	0.1988	P	2.0
5	☐	500.000	500.718	2374732.68	2.0679	A	5.0
6	☑	1000.000		4576882.33	4.5501	A	6.1
7	☐	5.000					

y = 0.0041 * x + 0.0150
R = 1.0000
DL = 0.6078
BEC = 3.661

Weight: <None>
Min Conc: <None>

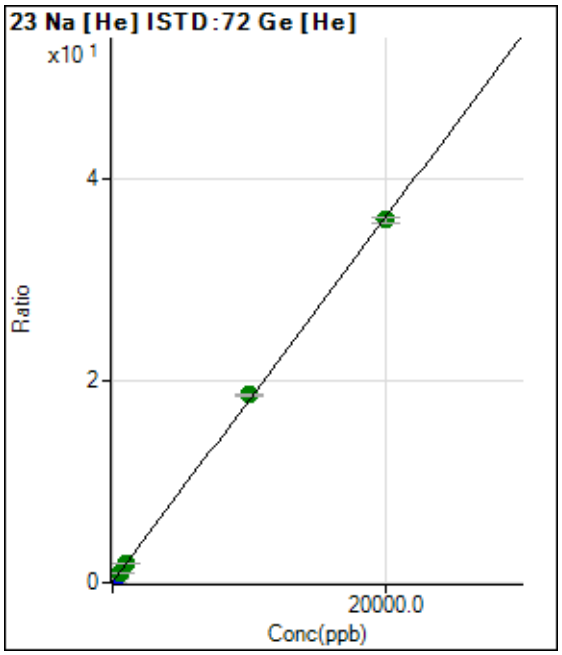


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	773666.70	0.2608	P	3.2
2	☐	200.000	217.621	6712318.38	2.3621	A	9.5
3	☐	500.000	485.533	14934755.54	4.9488	A	4.2
4	☐	1000.000	970.484	28015169.37	9.6312	A	3.1
5	☐	10000.00	10273.157	274654589.4	99.4521	A	6.4
6	☐	20000.00	19865.083	505797144.6	192.065	A	7.7
7	☐	100.000					

y = 0.0097 * x + 0.2608
R = 0.9999
DL = 2.572
BEC = 27.01

Weight: <None>
Min Conc: <None>

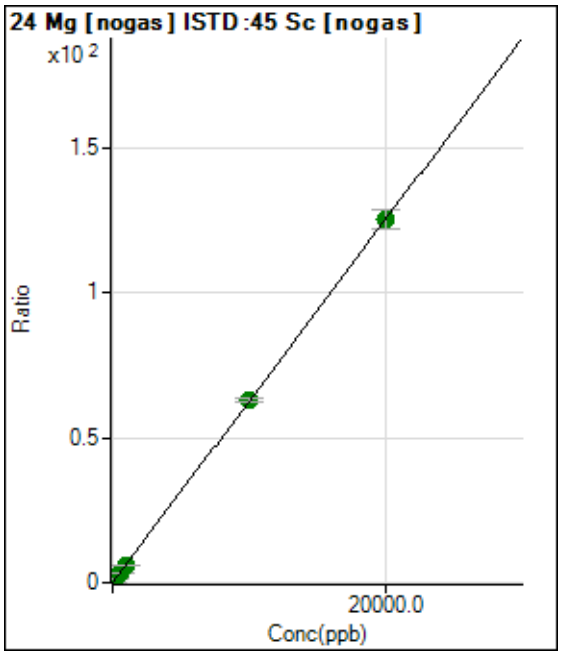
Calibration for 077_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	80114.44	0.0608	P	1.5
2	☐	200.000	211.205	589153.63	0.4420	P	2.6
3	☐	500.000	523.954	1305962.51	1.0064	A	4.0
4	☐	1000.000	1014.801	2392101.16	1.8921	A	2.2
5	☐	10000.00	10260.632	22733625.49	18.5770	A	1.6
6	☐	20000.00	19868.233	42820309.36	35.9147	A	1.8
7	☐	100.000					

y = 0.0018 * x + 0.0608
R = 0.9999
DL = 1.517
BEC = 33.72

Weight: <None>
Min Conc: <None>

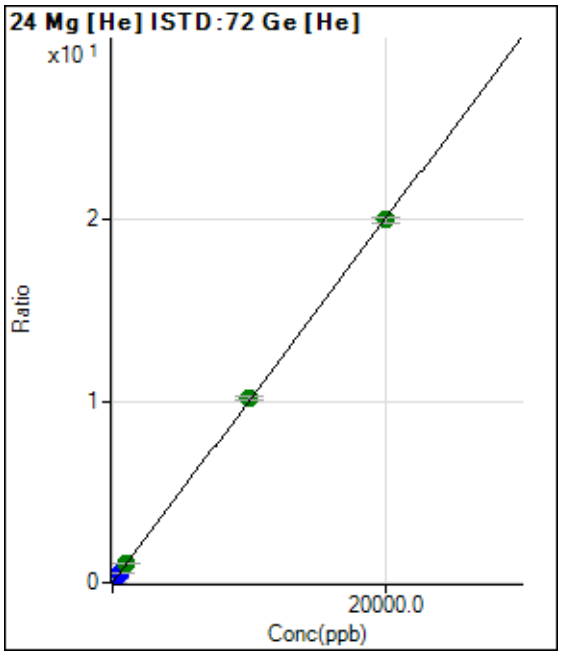


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	17578.36	0.0059	P	9.5
2	☐	200.000	209.505	3739704.51	1.3159	A	9.2
3	☐	500.000	490.476	9272721.56	3.0728	A	4.6
4	☐	1000.000	984.799	17926517.07	6.1637	A	4.0
5	☐	10000.00	10031.968	173502891.3	62.7339	A	2.2
6	☐	20000.00	19984.919	329468065.7	124.967	A	5.2
7	☐	100.000					

y = 0.0063 * x + 0.0059
R = 1.0000
DL = 0.2691
BEC = 0.9478

Weight: <None>
Min Conc: <None>

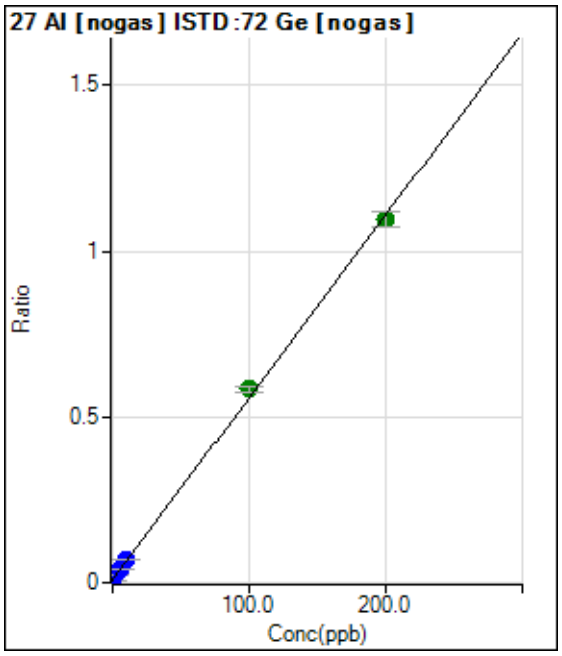
Calibration for 077_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1776.78	0.0013	P	13.5
2	☐	200.000	196.581	264699.65	0.1986	P	3.3
3	☐	500.000	514.441	671604.05	0.5175	P	3.6
4	☐	1000.000	1034.788	1314597.17	1.0397	A	1.7
5	☐	10000.00	10134.041	12446127.73	10.1698	A	1.8
6	☐	20000.00	19930.913	23846852.14	19.9999	A	1.9
7	☐	100.000					

y = 0.0010 * x + 0.0013
R = 1.0000
DL = 0.5458
BEC = 1.344

Weight: <None>
Min Conc: <None>

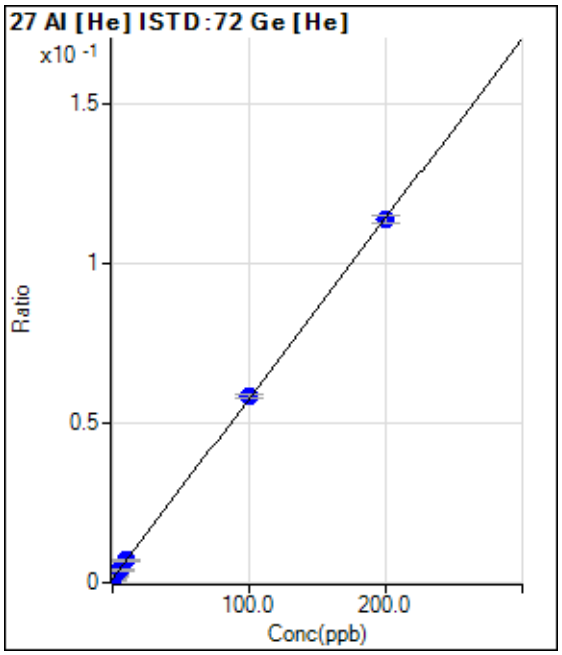


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	33062.73	0.0085	P	4.6
2	☐	2.000	2.740	88164.04	0.0236	P	8.6
3	☐	5.000	5.759	156311.26	0.0402	P	4.0
4	☐	10.000	11.162	257708.26	0.0699	P	3.4
5	☐	100.000	104.860	2112403.77	0.5849	A	3.0
6	☐	200.000	197.486	3851404.21	1.0941	A	4.2
7	☐	1.000					

y = 0.0055 * x + 0.0085
R = 0.9996
DL = 0.2137
BEC = 1.545

Weight: <None>
Min Conc: <None>

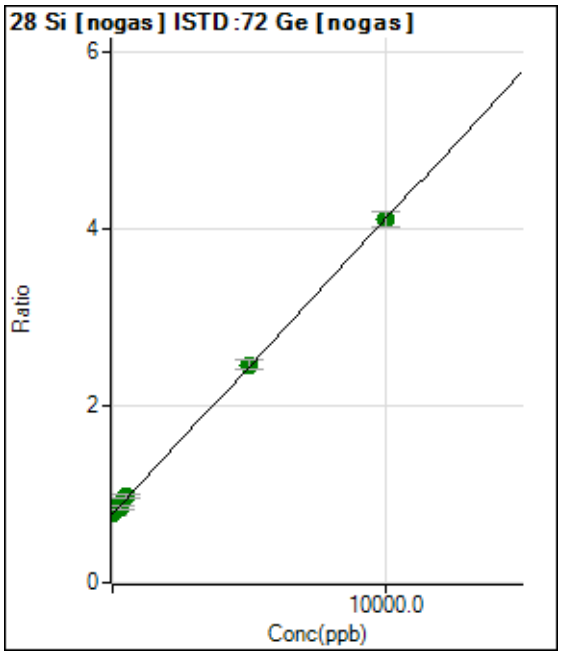
Calibration for 077_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.553	1186.72	0.0009	P	17.2
2	☐	2.000	1.682	2890.26	0.0022	P	5.6
3	☐	5.000	4.799	5097.43	0.0039	P	1.7
4	☐	10.000	10.281	8878.88	0.0070	P	5.5
5	☐	100.000	101.593	71735.52	0.0586	P	1.9
6	☐	200.000	199.198	135645.44	0.1138	P	2.2
7	☐	1.000					

y = 5.6504E-004 * x + 0.0012
R = 0.9999
DL = 0.8229
BEC = 2.151

Weight: <None>
Min Conc: <None>

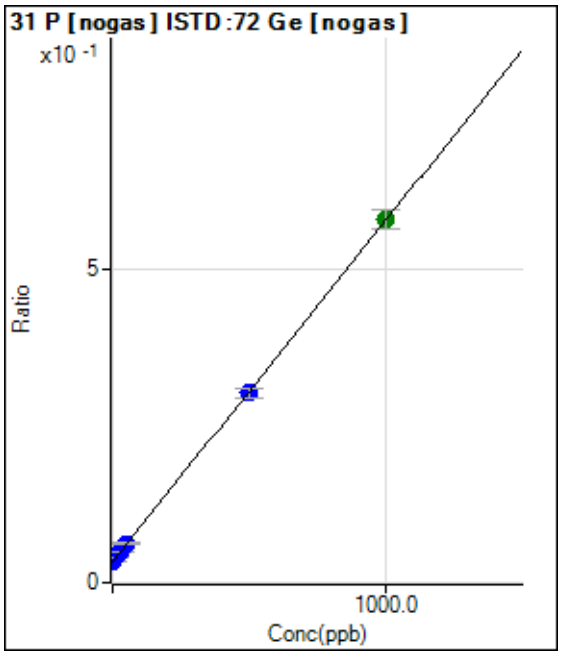


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3029602.77	0.7780	A	1.7
2	☐	100.000	195.426	3161212.45	0.8432	A	2.5
3	☐	250.000	231.403	3328855.58	0.8552	A	4.6
4	☐	500.000	588.199	3594030.99	0.9743	A	3.7
5	☐	5000.000	5058.342	8895870.08	2.4659	A	4.8
6	☐	10000.00	9965.930	14440967.29	4.1035	A	4.1
7	☐	5.000					

y = 3.3368E-004 * x + 0.7780
R = 0.9999
DL = 121.5
BEC = 2332

Weight: <None>
Min Conc: <None>

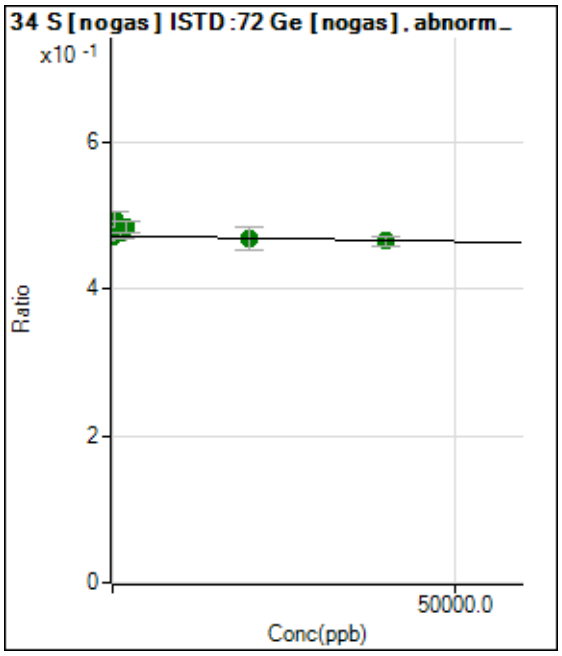
Calibration for 077_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	130238.79	0.0334	P	1.3
2	☐	10.000	11.880	149478.51	0.0399	P	6.2
3	☐	25.000	29.339	192523.35	0.0495	P	4.5
4	☐	50.000	53.547	231233.75	0.0627	P	2.4
5	☐	500.000	494.695	1094218.21	0.3034	P	5.8
6	☐	1000.000	1002.348	2042378.61	0.5805	A	5.3
7	☐	5.000					

y = 5.4575E-004 * x + 0.0334
R = 1.0000
DL = 2.434
BEC = 61.28

Weight: <None>
Min Conc: <None>

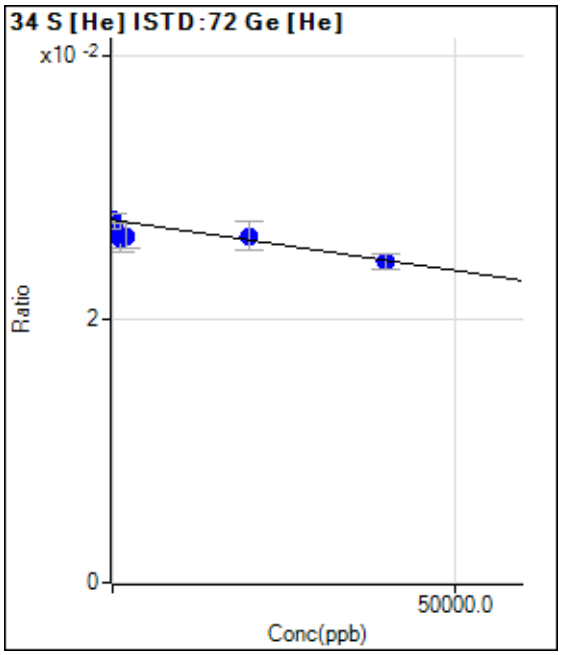


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1840899.45	0.4727	A	2.8
2	☐	400.000	-144565.88	1852452.19	0.4945	A	4.5
3	☐	1000.000	-23735.257	1854657.40	0.4763	A	3.3
4	☐	2000.000	-79647.947	1788187.73	0.4847	A	3.7
5	☐	20000.00	22967.931	1692000.56	0.4693	A	6.6
6	☐	40000.00	44666.472	1640322.92	0.4660	A	3.0
7	☐	100.000					

y = -1.5042E-007 * x + 0.4727
R = -0.6781
DL = -2.604E+05
BEC = -3.143E+06

Weight: <None>
Min Conc: <None>

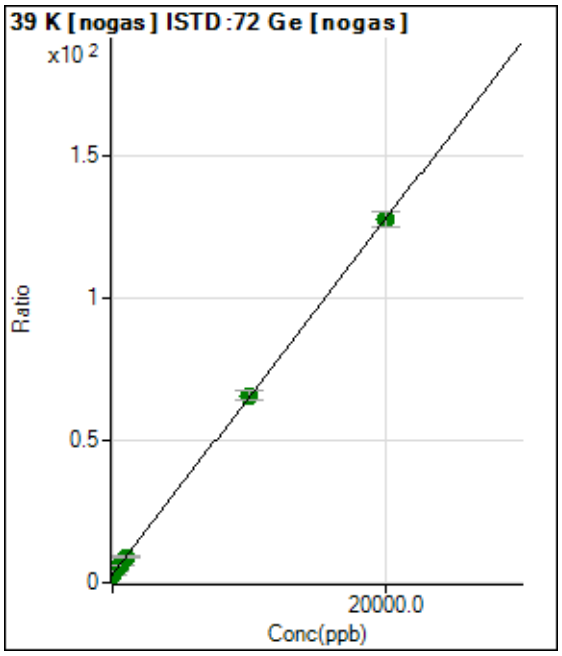
Calibration for 077_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	36307.91	0.0276	P	3.8
2	☐	400.000	5213.380	36209.18	0.0272	P	2.3
3	☐	1000.000	17578.832	34003.16	0.0262	P	8.8
4	☐	2000.000	15567.728	33335.91	0.0264	P	6.8
5	☐	20000.00	15878.700	32232.93	0.0263	P	8.7
6	☐	40000.00	40919.659	29127.89	0.0244	P	5.1
7	☐	100.000					

y = -7.6653E-008 * x + 0.0276
R = -0.8669
DL = -4.048E+04
BEC = -3.596E+05

Weight: <None>
Min Conc: <None>

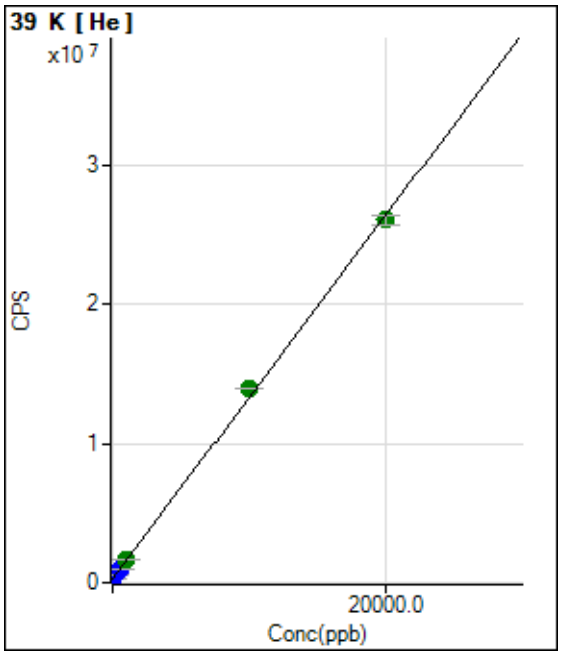


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	11181446.60	2.8714	A	1.5
2	☐	200.000	215.406	15790872.75	4.2159	A	4.9
3	☐	500.000	506.564	23486986.46	6.0332	A	4.1
4	☐	1000.000	993.539	33477730.96	9.0727	A	2.5
5	☐	10000.00	10077.022	237275705.3	65.7684	A	4.9
6	☐	20000.00	19961.494	448562160.0	127.463	A	4.1
7	☐	100.000					

y = 0.0062 * x + 2.8714
R = 1.0000
DL = 20.72
BEC = 460

Weight: <None>
Min Conc: <None>

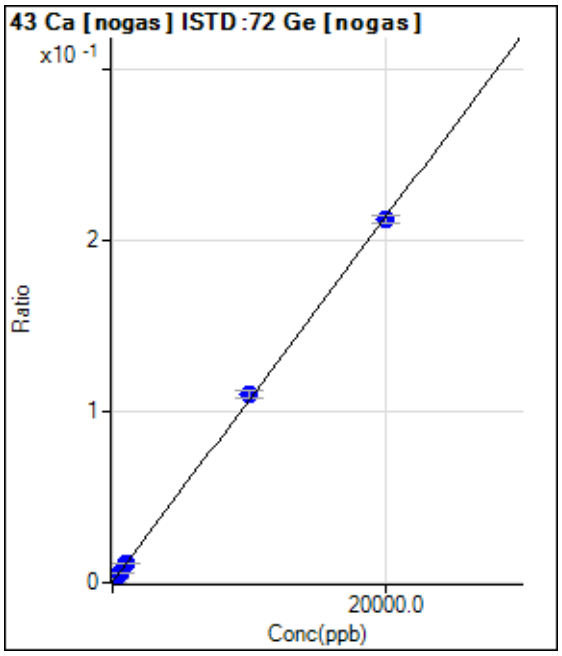
Calibration for 077_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	259703.25		P	0.5
2	☐	200.000	209.964	533829.22		P	0.6
3	☐	500.000	544.169	970162.30		P	0.1
4	☐	1000.000	1067.333	1653198.10		A	1.0
5	☐	10000.00	10473.080	13933214.37		A	0.7
6	☐	20000.00	19758.889	26056640.44		A	2.4
7	☐	100.000					

y = 1305.5864 * x + 259703.2500
R = 0.9996
DL = 2.837
BEC = 198.9

Weight: <None>
Min Conc: <None>

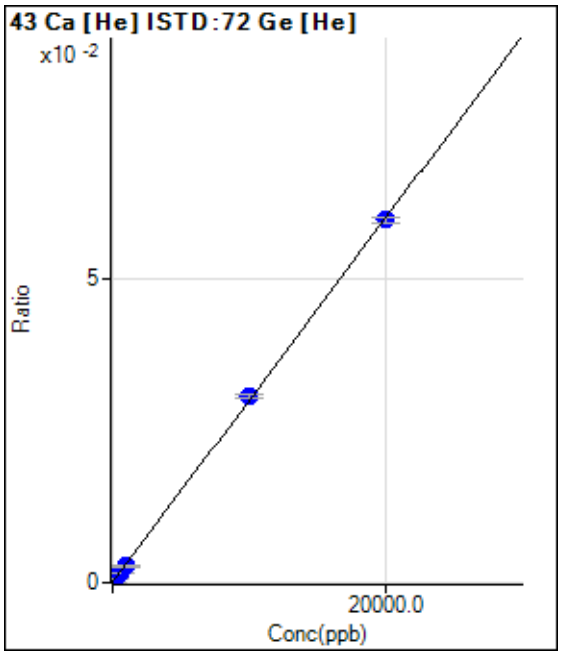


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1060.05	0.0003	P	4.0
2	☐	200.000	219.065	9779.38	0.0026	P	4.3
3	☐	500.000	498.967	21803.01	0.0056	P	2.4
4	☐	1000.000	1013.448	40876.06	0.0111	P	6.4
5	☐	10000.00	10281.623	397001.54	0.1100	P	4.3
6	☐	20000.00	19858.351	747071.71	0.2122	P	2.2
7	☐	100.000					

y = 1.0673E-005 * x + 2.7225E-004
R = 0.9999
DL = 3.057
BEC = 25.51

Weight: <None>
Min Conc: <None>

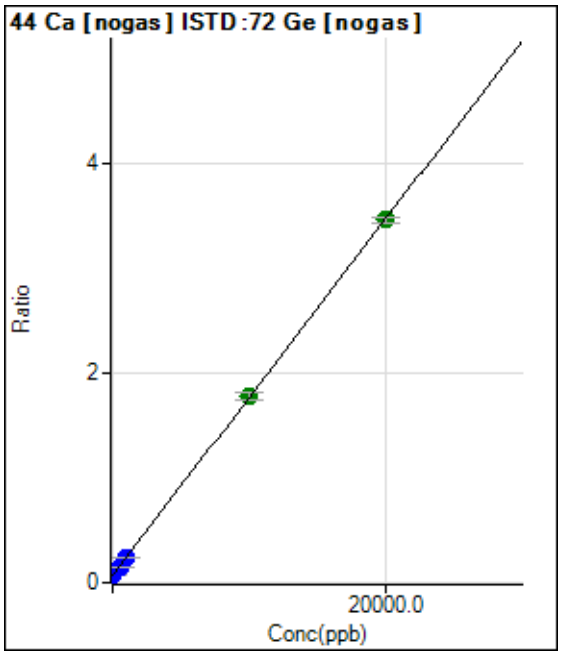
Calibration for 077_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	70.00	0.0001	P	36.5
2	☐	200.000	193.909	843.36	0.0006	P	5.9
3	☐	500.000	525.948	2110.15	0.0016	P	8.1
4	☐	1000.000	926.470	3567.07	0.0028	P	10.6
5	☐	10000.00	10197.339	37391.11	0.0306	P	2.0
6	☐	20000.00	19904.419	71038.43	0.0596	P	1.8
7	☐	100.000					

y = 2.9907E-006 * x + 5.2940E-005
R = 0.9999
DL = 19.37
BEC = 17.7

Weight: <None>
Min Conc: <None>

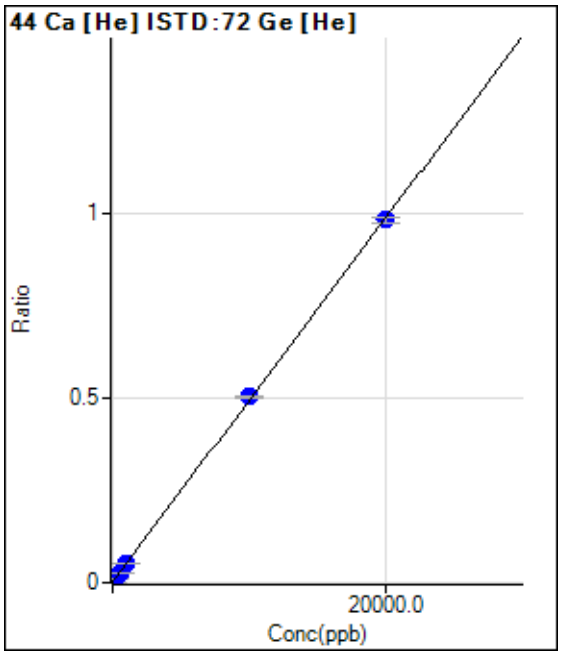


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	268025.19	0.0688	P	0.4
2	☐	200.000	216.856	395977.39	0.1057	P	3.9
3	☐	500.000	485.264	589260.67	0.1513	P	2.4
4	☐	1000.000	1023.446	895462.57	0.2428	P	4.0
5	☐	10000.00	10091.029	6438344.07	1.7839	A	4.1
6	☐	20000.00	19953.513	12181591.49	3.4601	A	1.9
7	☐	100.000					

y = 1.6996E-004 * x + 0.0688
R = 1.0000
DL = 5.347
BEC = 404.9

Weight: <None>
Min Conc: <None>

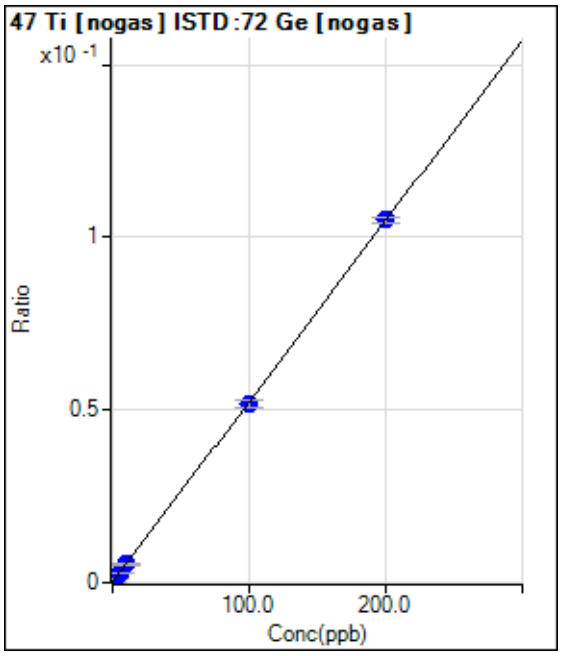
Calibration for 077_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2473.55	0.0019	P	7.2
2	☐	200.000	198.122	15513.32	0.0116	P	6.2
3	☐	500.000	513.295	35263.56	0.0272	P	4.5
4	☐	1000.000	992.988	64243.97	0.0508	P	0.8
5	☐	10000.00	10169.939	615610.68	0.5030	P	0.2
6	☐	20000.00	19915.068	1172323.16	0.9832	P	1.3
7	☐	100.000					

y = 4.9277E-005 * x + 0.0019
R = 0.9999
DL = 8.281
BEC = 38.15

Weight: <None>
Min Conc: <None>

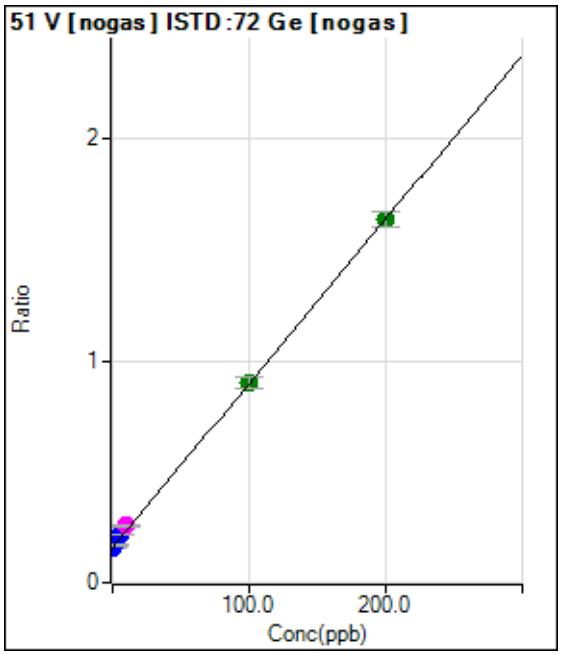


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	496.68	0.0001	P	8.7
2	☐	2.000	1.877	4153.87	0.0011	P	5.9
3	☐	5.000	4.811	10303.00	0.0026	P	0.9
4	☐	10.000	9.980	19724.07	0.0053	P	4.6
5	☐	100.000	98.848	187024.68	0.0518	P	4.4
6	☐	200.000	200.583	369920.21	0.1050	P	1.9
7	☐	1.000					

y = 5.2307E-004 * x + 1.2761E-004
R = 1.0000
DL = 0.06361
BEC = 0.244

Weight: <None>
Min Conc: <None>

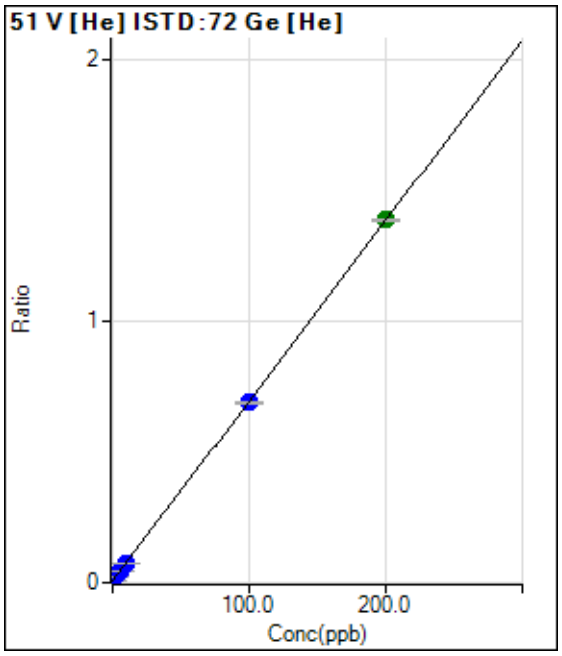
Calibration for 077_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	617617.80	0.1586	P	1.4
2	☐	2.000	1.575	638110.87	0.1702	P	4.4
3	☐	5.000	7.871	844415.94	0.2169	P	3.4
4	☐	10.000	13.538	955757.35	0.2588	M	2.8
5	☐	100.000	100.386	3253842.32	0.9020	A	5.0
6	☐	200.000	199.563	5759198.96	1.6365	A	4.2
7	☐	1.000					

y = 0.0074 * x + 0.1586
R = 0.9998
DL = 0.8745
BEC = 21.41

Weight: <None>
Min Conc: <None>

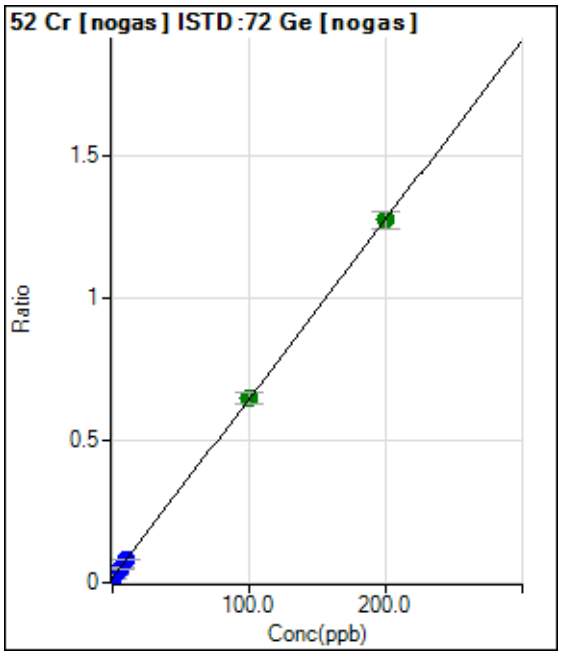


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.218	10333.54	0.0079	P	2.9
2	☐	2.000	1.983	26648.32	0.0200	P	0.5
3	☐	5.000	5.283	55399.89	0.0427	P	1.9
4	☐	10.000	9.964	94659.81	0.0749	P	1.7
5	☐	100.000	99.113	841917.40	0.6880	P	1.4
6	☐	200.000	200.438	1651182.46	1.3848	A	0.7
7	☐	1.000					

y = 0.0069 * x + 0.0063
R = 1.0000
DL = 0.09888
BEC = 0.9231

Weight: <None>
Min Conc: <None>

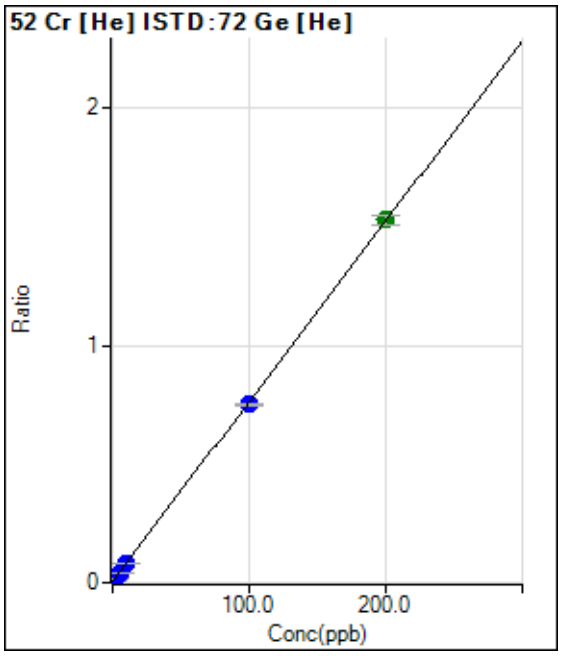
Calibration for 077_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	63455.38	0.0163	P	2.7
2	☐	2.000	2.040	109264.31	0.0292	P	5.9
3	☐	5.000	5.288	193262.71	0.0497	P	5.2
4	☐	10.000	10.055	294213.69	0.0797	P	3.4
5	☐	100.000	100.451	2345027.46	0.6502	A	5.5
6	☐	200.000	199.764	4493024.10	1.2769	A	5.0
7	☐	1.000					

y = 0.0063 * x + 0.0163
R = 1.0000
DL = 0.2111
BEC = 2.582

Weight: <None>
Min Conc: <None>

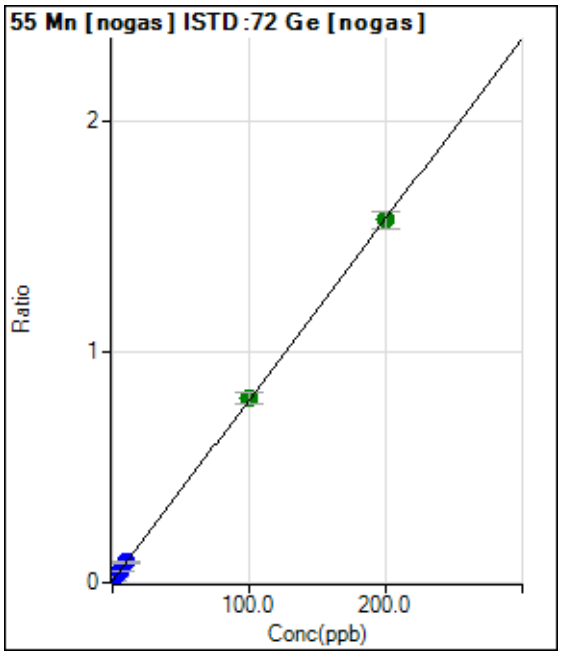


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6324.51	0.0048	P	5.0
2	☐	2.000	1.862	25267.53	0.0190	P	3.4
3	☐	5.000	5.093	56472.97	0.0435	P	2.7
4	☐	10.000	9.914	101316.34	0.0801	P	1.7
5	☐	100.000	98.399	920903.84	0.7525	P	1.6
6	☐	200.000	200.804	1824949.97	1.5307	A	2.5
7	☐	1.000					

y = 0.0076 * x + 0.0048
R = 1.0000
DL = 0.09571
BEC = 0.6322

Weight: <None>
Min Conc: <None>

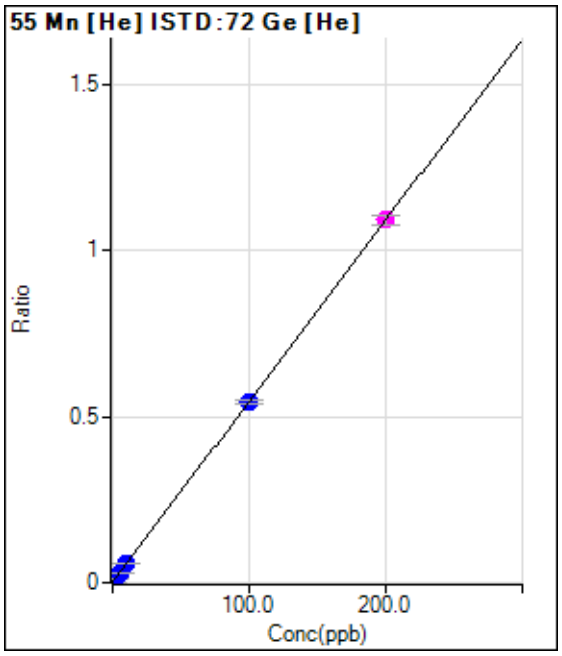
Calibration for 077_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	31330.00	0.0080	P	2.8
2	☐	2.000	2.161	93468.86	0.0250	P	4.8
3	☐	5.000	5.221	190276.90	0.0489	P	5.3
4	☐	10.000	10.248	325361.28	0.0882	P	4.8
5	☐	100.000	100.838	2874382.46	0.7969	A	6.6
6	☐	200.000	199.561	5522971.58	1.5693	A	4.8
7	☐	1.000					

y = 0.0078 * x + 0.0080
R = 1.0000
DL = 0.08573
BEC = 1.028

Weight: <None>
Min Conc: <None>

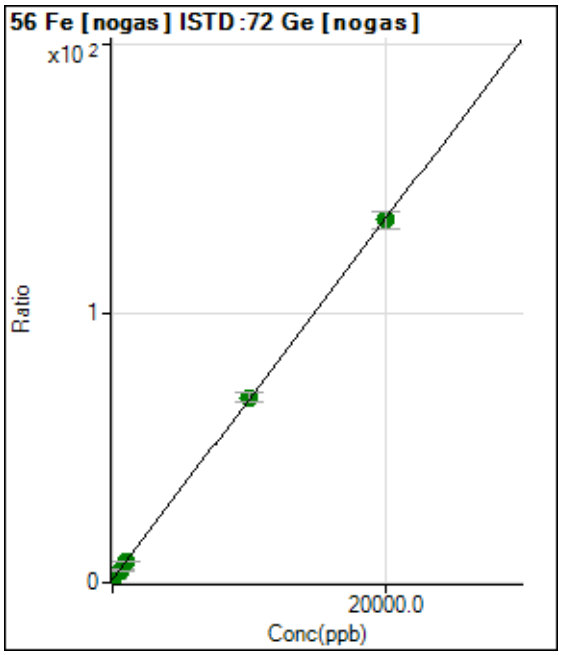


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1763.44	0.0013	P	4.2
2	☐	2.000	1.942	15887.08	0.0119	P	2.7
3	☐	5.000	5.233	38720.74	0.0298	P	3.1
4	☐	10.000	10.122	71371.29	0.0564	P	2.2
5	☐	100.000	99.385	663858.54	0.5424	P	1.7
6	☐	200.000	200.296	1301799.31	1.0919	M	2.9
7	☐	1.000					

y = 0.0054 * x + 0.0013
R = 1.0000
DL = 0.03116
BEC = 0.246

Weight: <None>
Min Conc: <None>

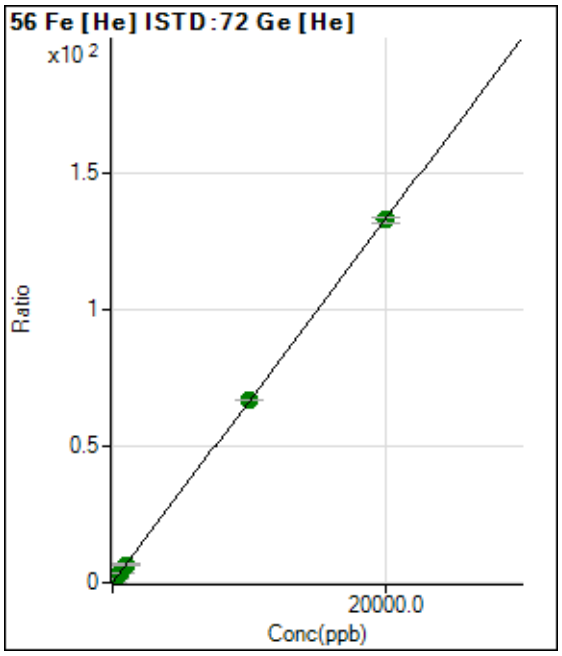
Calibration for 077_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4466501.66	1.1470	A	1.4
2	☐	200.000	223.778	9914939.28	2.6453	A	4.3
3	☐	500.000	514.628	17879960.30	4.5927	A	4.6
4	☐	1000.000	995.313	28815545.44	7.8111	A	3.5
5	☐	10000.00	10085.824	247743930.5	68.6769	A	4.9
6	☐	20000.00	19956.719	474237110.6	134.767	A	5.0
7	☐	100.000					

y = 0.0067 * x + 1.1470
R = 1.0000
DL = 7.309
BEC = 171.3

Weight: <None>
Min Conc: <None>

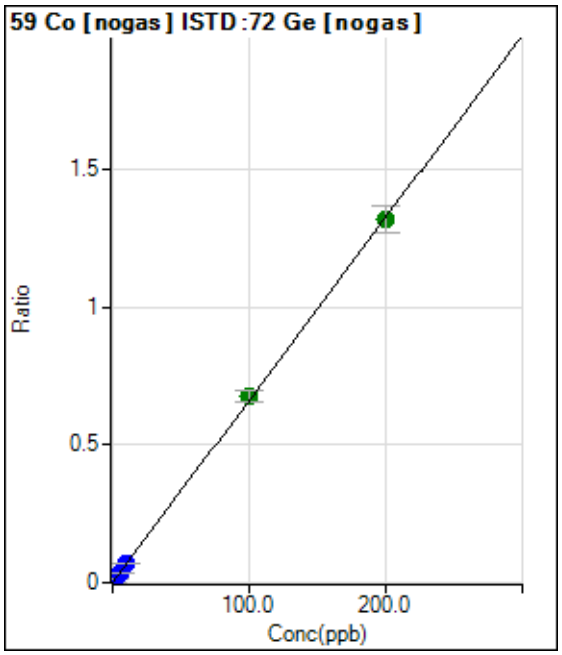


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	27263.59	0.0207	P	2.1
2	☐	200.000	198.350	1785923.77	1.3398	A	2.7
3	☐	500.000	508.488	4415974.20	3.4023	A	1.9
4	☐	1000.000	994.832	8390843.00	6.6367	A	3.2
5	☐	10000.00	10061.134	81910415.44	66.9305	A	0.5
6	☐	20000.00	19969.496	158366634.3	132.824	A	1.3
7	☐	100.000					

y = 0.0067 * x + 0.0207
R = 1.0000
DL = 0.197
BEC = 3.114

Weight: <None>
Min Conc: <None>

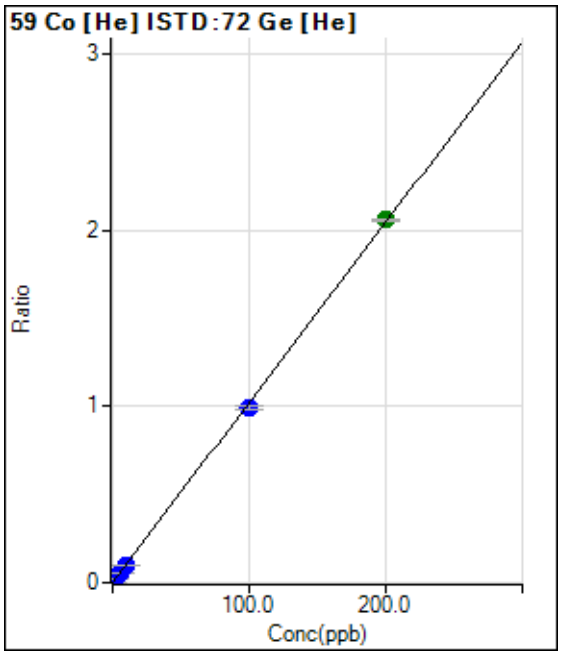
Calibration for 077_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	800.03	0.0002	P	20.6
2	☐	2.000	2.153	54217.48	0.0145	P	5.9
3	☐	5.000	5.170	134298.41	0.0345	P	2.7
4	☐	10.000	10.152	249051.50	0.0675	P	2.5
5	☐	100.000	102.259	2445519.44	0.6780	A	5.3
6	☐	200.000	198.857	4636870.14	1.3183	A	7.3
7	☐	1.000					

y = 0.0066 * x + 2.0568E-004
R = 0.9999
DL = 0.0192
BEC = 0.03103

Weight: <None>
Min Conc: <None>

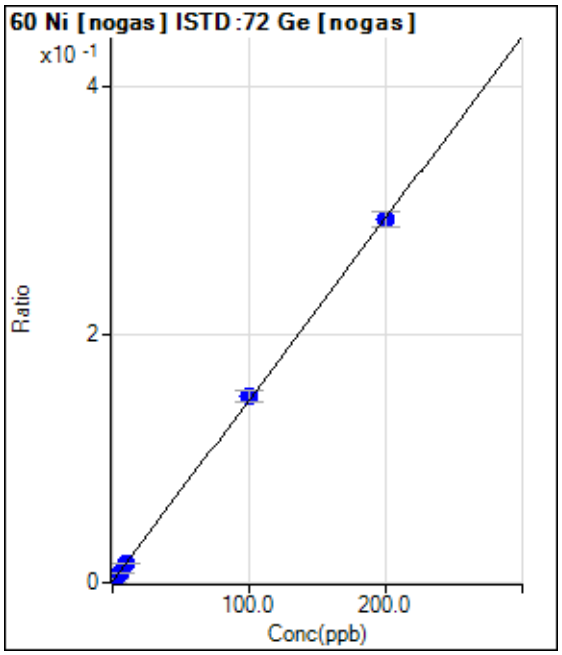


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	186.67	0.0001	P	25.3
2	☐	2.000	1.915	26278.96	0.0197	P	3.6
3	☐	5.000	5.066	67377.17	0.0519	P	1.9
4	☐	10.000	9.662	125015.46	0.0989	P	1.3
5	☐	100.000	97.213	1215961.80	0.9936	P	1.5
6	☐	200.000	201.410	2454301.47	2.0584	A	0.4
7	☐	1.000					

y = 0.0102 * x + 1.4142E-004
R = 0.9999
DL = 0.01049
BEC = 0.01384

Weight: <None>
Min Conc: <None>

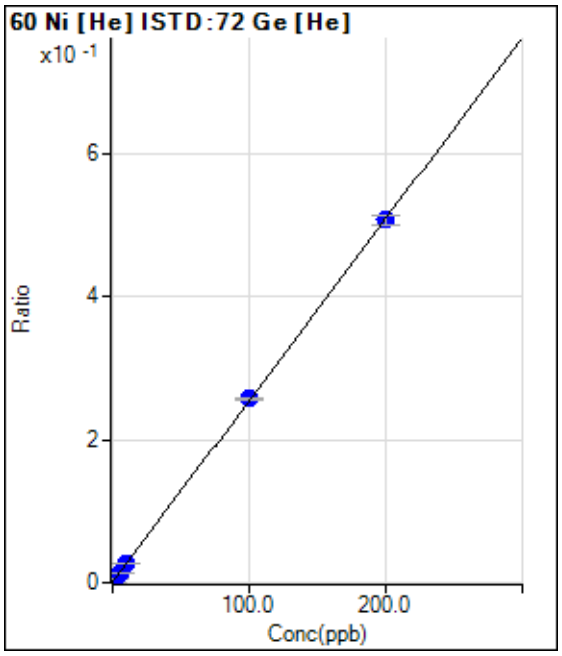
Calibration for 077_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.431	920.04	0.0002	P	5.3
2	☐	2.000	1.708	12627.88	0.0034	P	4.6
3	☐	5.000	4.897	31320.40	0.0080	P	4.1
4	☐	10.000	9.785	56119.35	0.0152	P	3.0
5	☐	100.000	102.049	542522.66	0.1504	P	6.1
6	☐	200.000	198.991	1029513.37	0.2925	P	4.2
7	☐	1.000					

y = 0.0015 * x + 8.6784E-004
R = 0.9999
DL = 0.02559
BEC = 0.5921

Weight: <None>
Min Conc: <None>

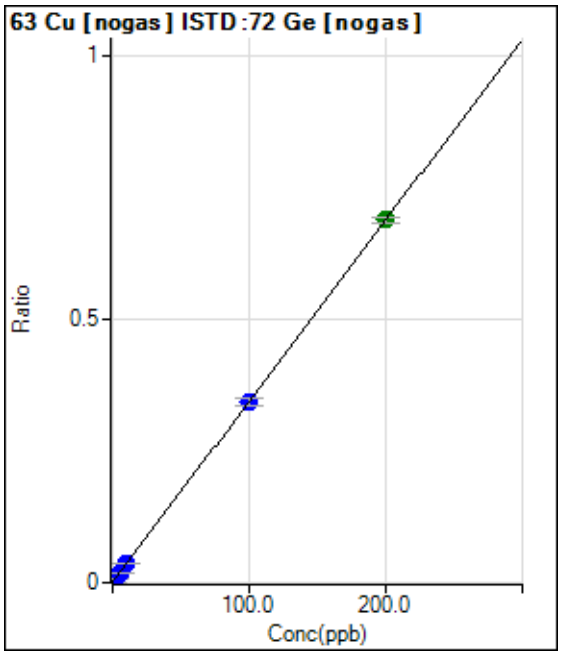


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.219	260.00	0.0002	P	17.2
2	☐	2.000	1.793	7068.14	0.0053	P	6.0
3	☐	5.000	5.009	17478.63	0.0135	P	4.7
4	☐	10.000	9.977	32976.61	0.0261	P	1.3
5	☐	100.000	100.875	314310.48	0.2568	P	0.5
6	☐	200.000	199.565	604889.20	0.5074	P	2.5
7	☐	1.000					

y = 0.0025 * x + 7.5337E-004
R = 1.0000
DL = 0.0402
BEC = 0.2968

Weight: <None>
Min Conc: <None>

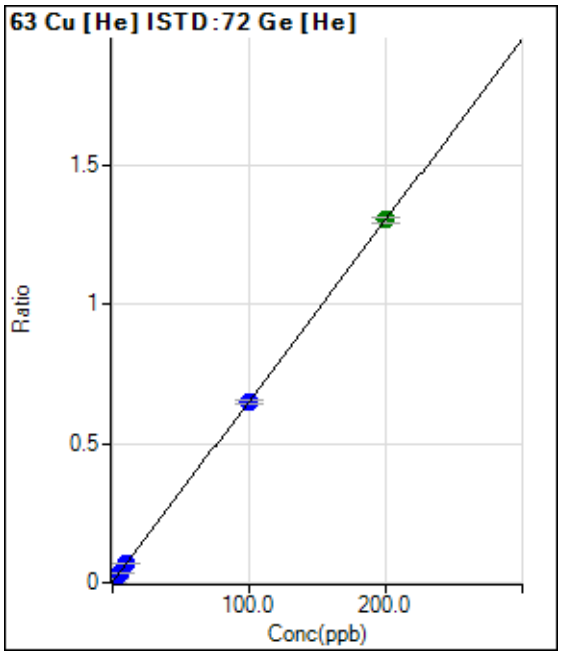
Calibration for 077_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3517.06	0.0009	P	4.1
2	☐	2.000	2.048	29671.07	0.0079	P	6.2
3	☐	5.000	5.181	72695.88	0.0187	P	2.8
4	☐	10.000	10.383	134733.00	0.0365	P	0.8
5	☐	100.000	99.362	1232660.55	0.3415	P	4.0
6	☐	200.000	200.295	2421020.17	0.6876	A	1.9
7	☐	1.000					

y = 0.0034 * x + 9.0284E-004
R = 1.0000
DL = 0.03256
BEC = 0.2633

Weight: <None>
Min Conc: <None>

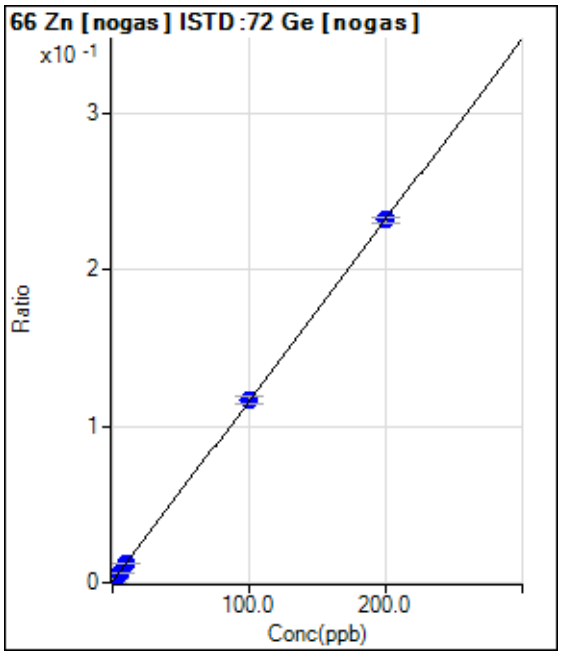


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.102	1390.08	0.0011	P	3.4
2	☐	2.000	1.799	17862.30	0.0134	P	6.4
3	☐	5.000	5.257	46562.78	0.0359	P	1.6
4	☐	10.000	10.203	85970.93	0.0680	P	3.3
5	☐	100.000	99.712	794865.82	0.6495	P	1.8
6	☐	200.000	200.129	1552361.07	1.3019	A	1.6
7	☐	1.000					

y = 0.0065 * x + 0.0017
R = 1.0000
DL = 0.01682
BEC = 0.2642

Weight: <None>
Min Conc: <None>

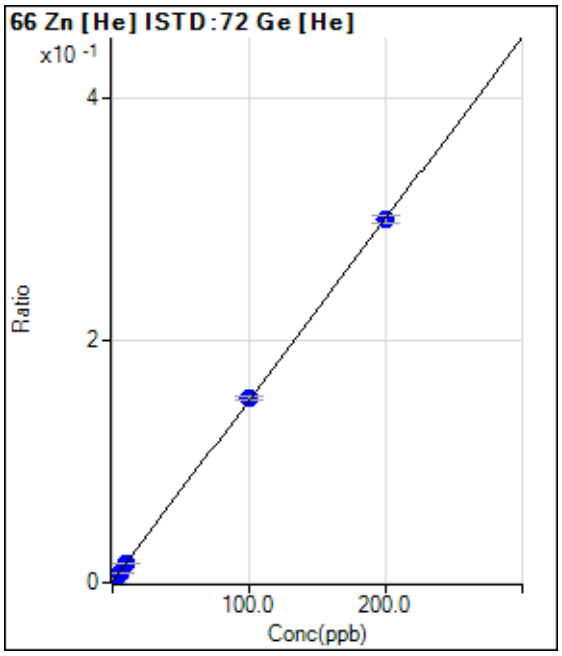
Calibration for 077_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.156	1690.10	0.0004	P	7.7
2	☐	2.000	2.103	11410.46	0.0030	P	4.5
3	☐	5.000	4.974	24763.84	0.0064	P	3.5
4	☐	10.000	9.997	44899.14	0.0122	P	1.1
5	☐	100.000	100.164	419829.46	0.1163	P	4.1
6	☐	200.000	199.918	815277.62	0.2316	P	1.5
7	☐	1.000					

y = 0.0012 * x + 6.1416E-004
R = 1.0000
DL = 0.08629
BEC = 0.5317

Weight: <None>
Min Conc: <None>

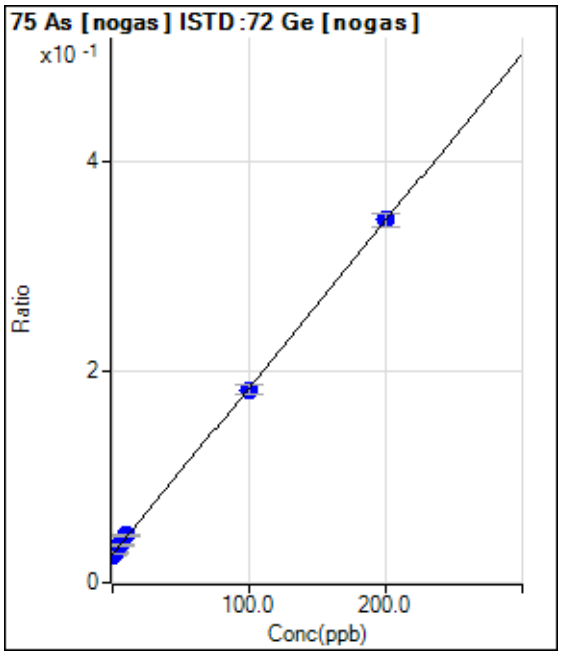


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.343	646.69	0.0005	P	14.8
2	☐	2.000	1.818	4967.42	0.0037	P	1.4
3	☐	5.000	4.941	10903.40	0.0084	P	3.8
4	☐	10.000	9.921	20047.89	0.0159	P	1.5
5	☐	100.000	101.312	186831.36	0.1527	P	2.5
6	☐	200.000	199.351	357024.02	0.2994	P	2.0
7	☐	1.000					

y = 0.0015 * x + 0.0010
R = 1.0000
DL = 0.1457
BEC = 0.6709

Weight: <None>
Min Conc: <None>

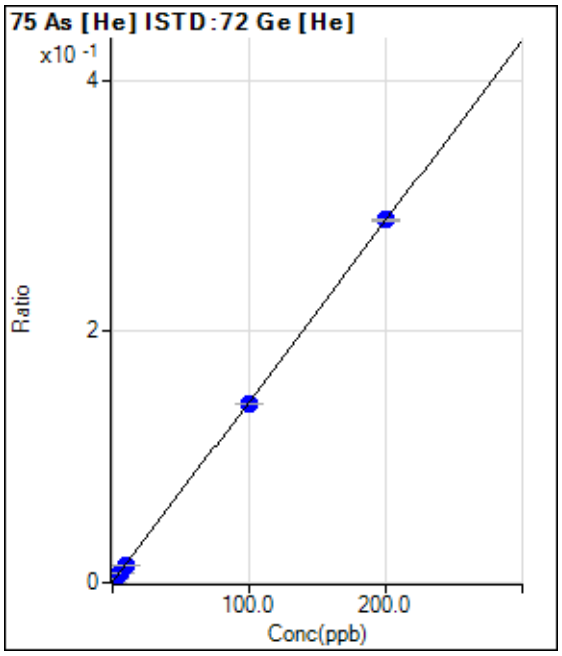
Calibration for 077_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.698	99889.22	0.0256	P	3.0
2	☐	2.000	0.888	105516.46	0.0282	P	4.1
3	☐	5.000	5.964	140913.10	0.0362	P	3.6
4	☐	10.000	11.499	165910.20	0.0450	P	1.9
5	☐	100.000	98.870	661229.59	0.1832	P	4.1
6	☐	200.000	200.477	1210986.70	0.3441	P	3.7
7	☐	1.000					

y = 0.0016 * x + 0.0268
R = 0.9999
DL = 1.482
BEC = 16.9

Weight: <None>
Min Conc: <None>

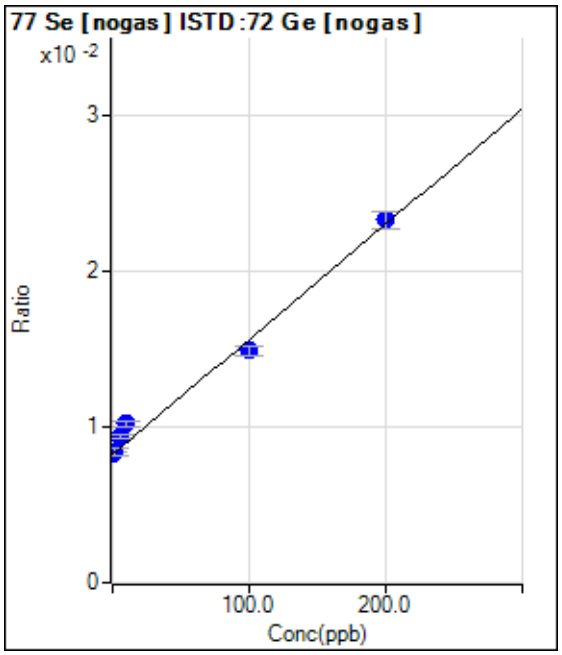


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	400.01	0.0003	P	4.0
2	☐	2.000	1.936	4113.81	0.0031	P	4.2
3	☐	5.000	4.929	9592.56	0.0074	P	1.4
4	☐	10.000	9.651	17928.83	0.0142	P	1.1
5	☐	100.000	98.849	174292.90	0.1424	P	0.8
6	☐	200.000	200.595	344224.69	0.2887	P	0.6
7	☐	1.000					

y = 0.0014 * x + 3.0386E-004
R = 1.0000
DL = 0.02512
BEC = 0.2114

Weight: <None>
Min Conc: <None>

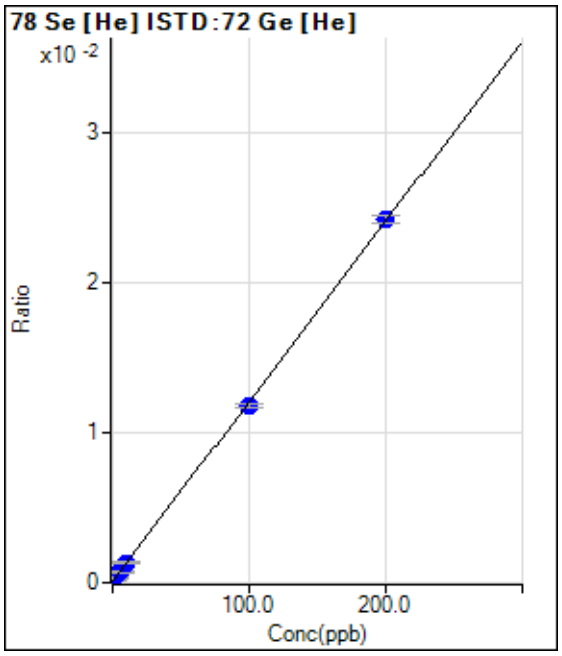
Calibration for 077_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	32128.59	0.0082	P	2.8
2	☐	2.000	1.578	31330.55	0.0084	P	5.9
3	☐	5.000	15.136	36496.76	0.0094	P	2.8
4	☐	10.000	26.870	37792.91	0.0102	P	3.3
5	☐	100.000	90.578	53993.51	0.0150	P	4.2
6	☐	200.000	203.618	82124.56	0.0233	P	5.0
7	☐	1.000					

y = 7.4112E-005 * x + 0.0082
R = 0.9939
DL = 9.508
BEC = 111.3

Weight: <None>
Min Conc: <None>

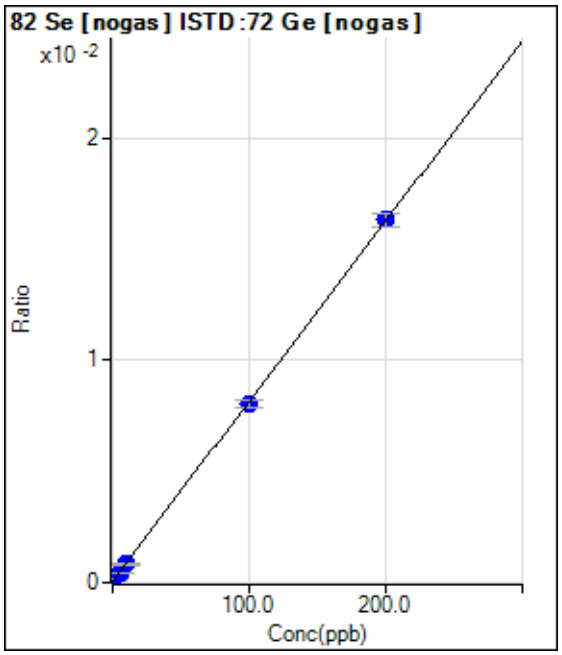


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.343	160.67	0.0001	P	24.3
2	☐	2.000	2.043	435.34	0.0003	P	12.3
3	☐	5.000	5.288	926.69	0.0007	P	11.6
4	☐	10.000	10.325	1666.08	0.0013	P	5.1
5	☐	100.000	98.050	14471.10	0.0118	P	2.3
6	☐	200.000	200.951	28791.30	0.0241	P	2.2
7	☐	1.000					

y = 1.1977E-004 * x + 8.1322E-005
R = 0.9999
DL = 0.7433
BEC = 0.679

Weight: <None>
Min Conc: <None>

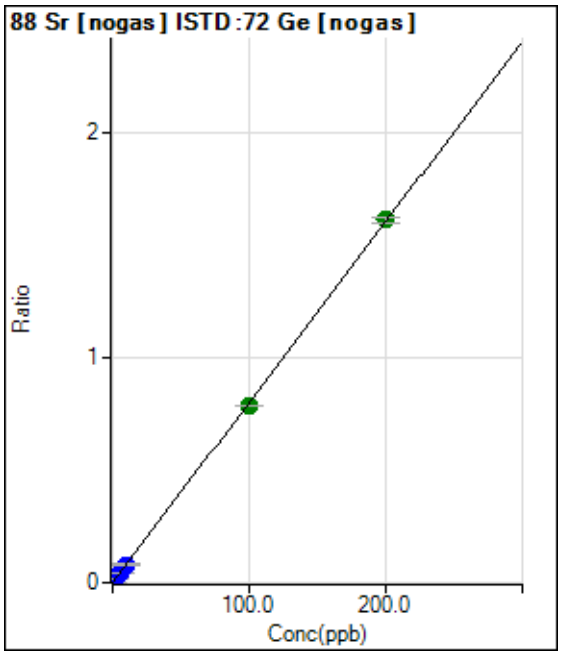
Calibration for 077_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	206.67	0.0001	P	20.6
2	☐	2.000	2.059	823.37	0.0002	P	8.6
3	☐	5.000	4.616	1666.77	0.0004	P	11.1
4	☐	10.000	9.772	3116.99	0.0008	P	7.0
5	☐	100.000	98.583	29043.71	0.0080	P	3.9
6	☐	200.000	200.729	57505.31	0.0163	P	3.7
7	☐	1.000					

y = 8.1102E-005 * x + 5.3141E-005
R = 1.0000
DL = 0.4052
BEC = 0.6552

Weight: <None>
Min Conc: <None>

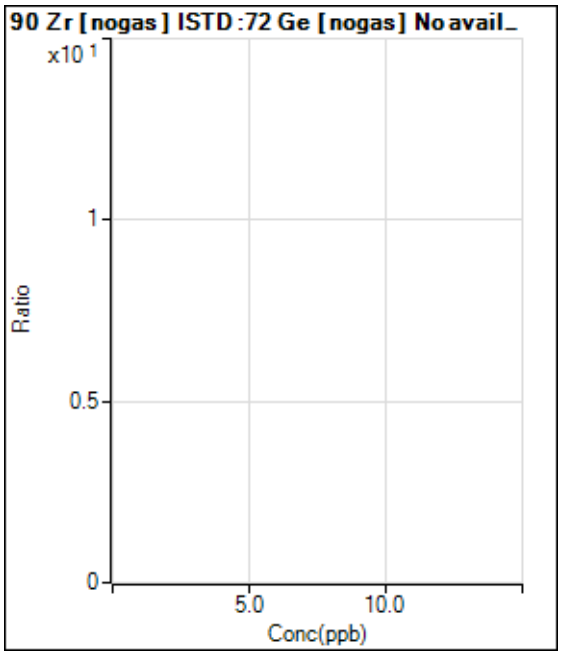


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1666.96	0.0004	P	34.0
2	☐	2.000	2.093	64407.22	0.0172	P	4.1
3	☐	5.000	4.972	156751.16	0.0403	P	3.2
4	☐	10.000	9.961	295819.14	0.0802	P	4.4
5	☐	100.000	97.762	2830311.41	0.7834	A	0.5
6	☐	200.000	201.121	5672429.29	1.6111	A	1.6
7	☐	1.000					

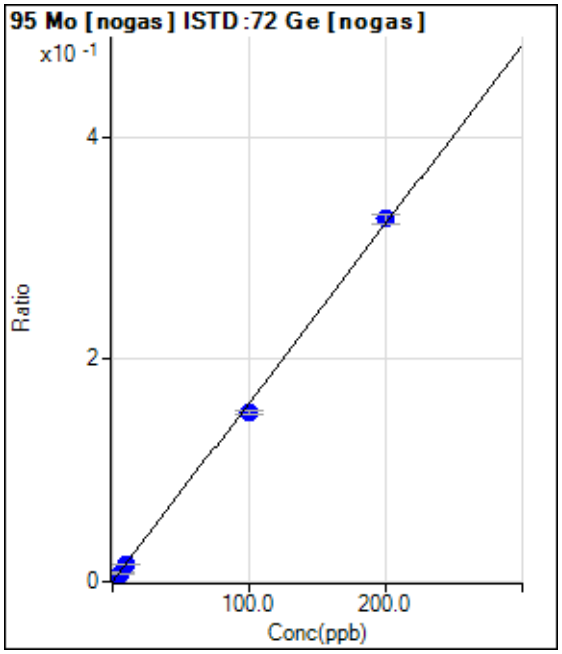
y = 0.0080 * x + 4.2898E-004
R = 0.9999
DL = 0.05464
BEC = 0.05356

Weight: <None>
Min Conc: <None>

Calibration for 077_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					

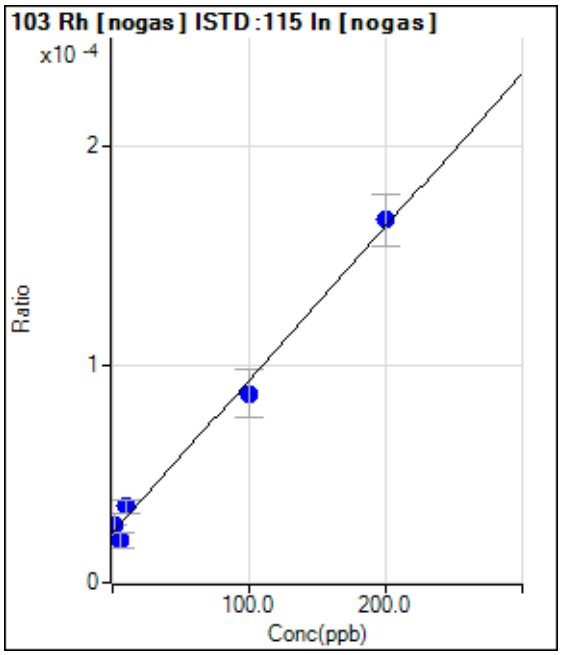


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	210.01	0.0001	P	26.3
2	☐	2.000	1.998	12247.69	0.0033	P	4.9
3	☐	5.000	4.742	29919.06	0.0077	P	3.2
4	☐	10.000	9.646	57433.05	0.0156	P	5.7
5	☐	100.000	94.402	548549.72	0.1520	P	2.7
6	☐	200.000	202.823	1149008.68	0.3264	P	2.9
7	☐	1.000					

y = 0.0016 * x + 5.4022E-005
R = 0.9995
DL = 0.0265
BEC = 0.03357

Weight: <None>
Min Conc: <None>

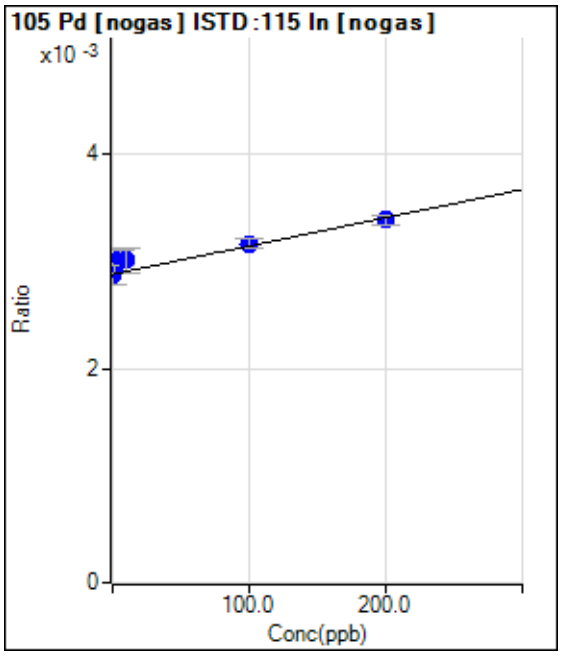
Calibration for 077_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	80.00	0.0000	P	30.2
2	☐	2.000	5.672	90.00	0.0000	P	34.6
3	☐	5.000	-5.172	70.00	0.0000	P	36.7
4	☐	10.000	17.214	116.67	0.0000	P	16.9
5	☐	100.000	91.036	270.01	0.0001	P	25.4
6	☐	200.000	204.339	500.02	0.0002	P	14.4
7	☐	1.000					

y = 7.0339E-007 * x + 2.2751E-005
R = 0.9961
DL = 29.26
BEC = 32.34

Weight: <None>
Min Conc: <None>

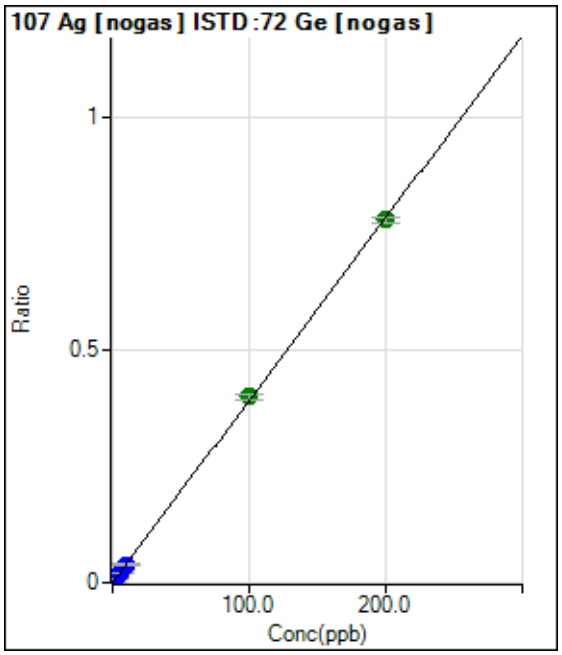


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	10026.36	0.0029	P	6.4
2	☐	2.000	19.822	9943.04	0.0029	P	3.2
3	☐	5.000	59.972	11063.67	0.0030	P	4.8
4	☐	10.000	48.919	10116.45	0.0030	P	7.7
5	☐	100.000	109.135	9896.29	0.0032	P	2.6
6	☐	200.000	191.934	10133.13	0.0034	P	3.0
7	☐	1.000					

y = 2.6420E-006 * x + 0.0029
R = 0.9619
DL = 209.2
BEC = 1090

Weight: <None>
Min Conc: <None>

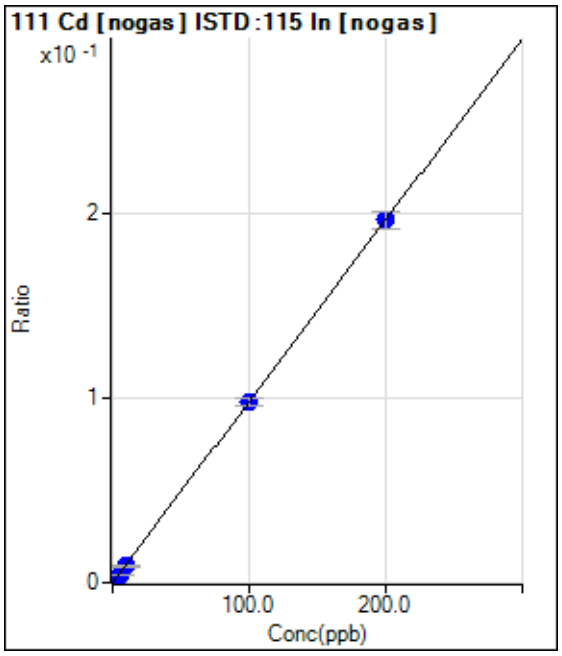
Calibration for 077_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	140.00	0.0000	P	39.8
2	☐	2.000	2.086	30703.83	0.0082	P	3.4
3	☐	5.000	5.042	76881.08	0.0198	P	5.3
4	☐	10.000	9.847	142197.06	0.0385	P	3.5
5	☐	100.000	101.985	1439920.92	0.3988	A	2.5
6	☐	200.000	199.013	2740582.56	0.7782	A	1.6
7	☐	1.000					

y = 0.0039 * x + 3.5983E-005
R = 0.9999
DL = 0.011
BEC = 0.009202

Weight: <None>
Min Conc: <None>

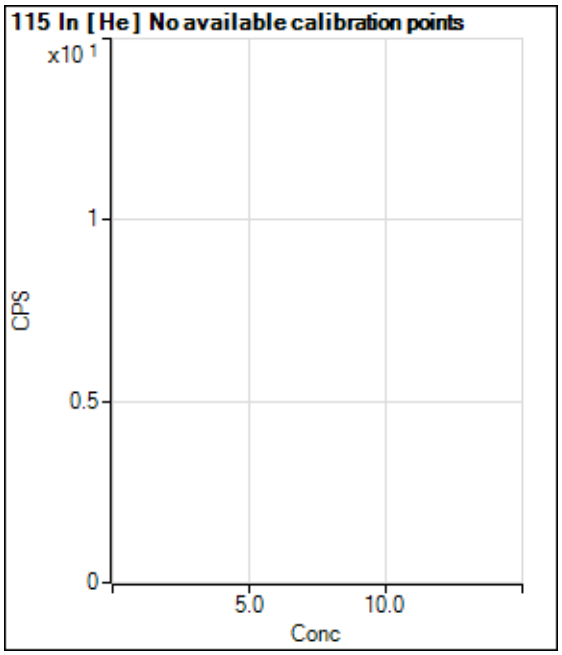


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	26.67	0.0000	P	56.2
2	☐	2.000	1.994	6648.04	0.0020	P	3.8
3	☐	5.000	4.511	16167.73	0.0044	P	1.1
4	☐	10.000	9.135	30129.43	0.0090	P	5.3
5	☐	100.000	99.847	305990.20	0.0980	P	4.4
6	☐	200.000	200.132	587523.79	0.1964	P	4.6
7	☐	1.000					

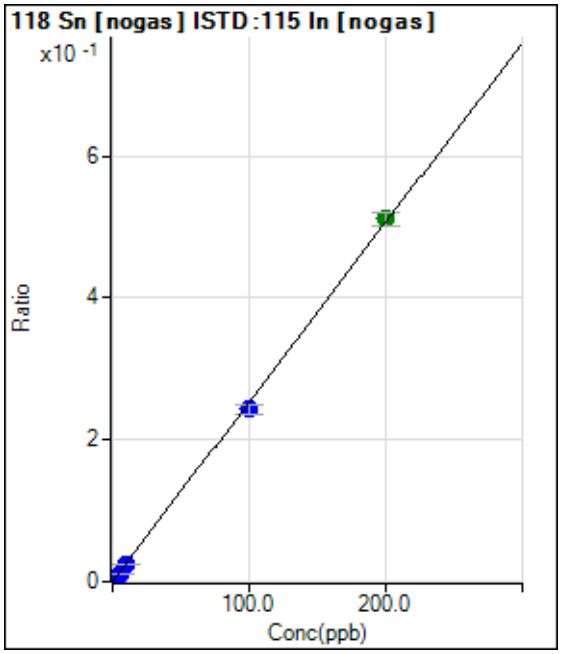
y = 9.8153E-004 * x + 7.5438E-006
R = 1.0000
DL = 0.01296
BEC = 0.007686

Weight: <None>
Min Conc: <None>

Calibration for 077_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			1813495.03		A	0.3
2	☐			1789090.96		A	1.2
3	☐			1802685.08		A	2.8
4	☐			1728779.80		A	3.5
5	☐			1641805.32		A	2.4
6	☐			1554824.85		A	2.2
7	☐						

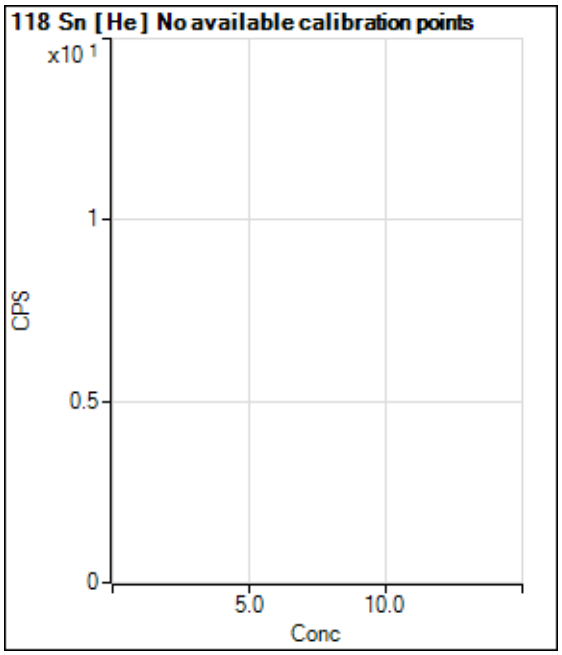


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1420.08	0.0004	P	6.4
2	☐	2.000	1.852	17218.72	0.0051	P	3.9
3	☐	5.000	4.413	42114.51	0.0116	P	4.0
4	☐	10.000	9.068	78386.11	0.0233	P	0.8
5	☐	100.000	95.965	758165.12	0.2429	P	4.9
6	☐	200.000	202.080	1528738.88	0.5111	A	4.0
7	☐	1.000					

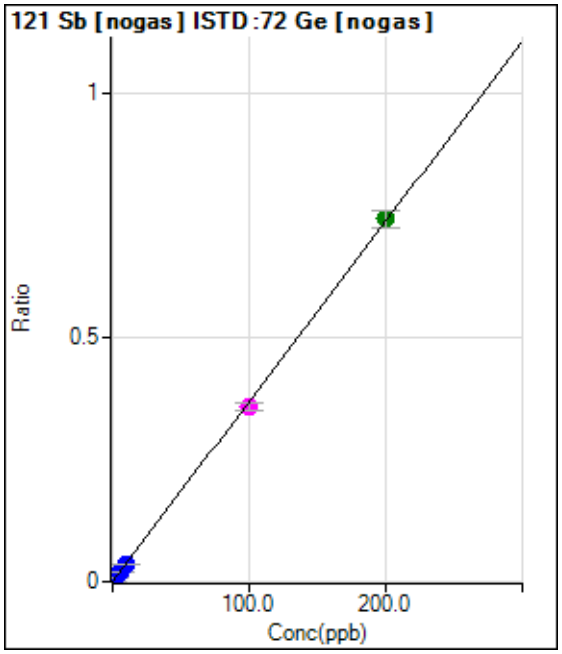
y = 0.0025 * x + 4.0806E-004
R = 0.9997
DL = 0.03084
BEC = 0.1615

Weight: <None>
Min Conc: <None>

Calibration for 077_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			740.03		P	8.9
2	☐			9252.57		P	7.3
3	☐			23359.19		P	2.1
4	☐			42799.21		P	1.5
5	☐			411337.12		P	2.1
6	☐			821307.88		P	1.8
7	☐						

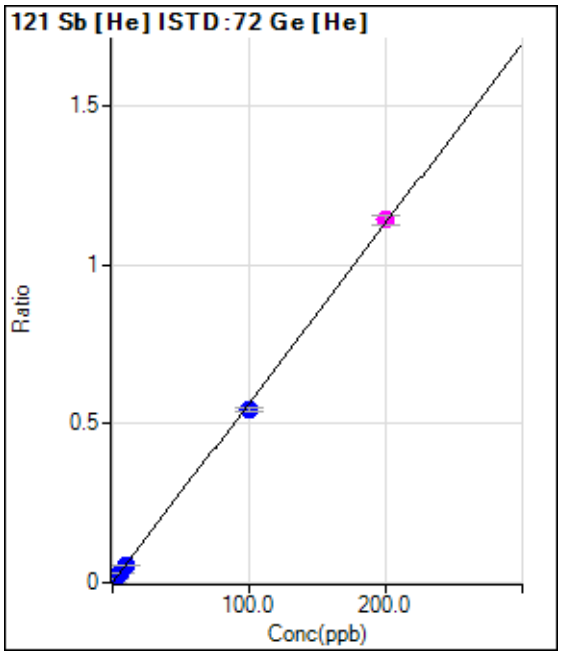


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1130.05	0.0003	P	2.2
2	☐	2.000	1.948	27989.43	0.0075	P	5.3
3	☐	5.000	4.841	70637.00	0.0181	P	2.6
4	☐	10.000	9.676	132758.70	0.0360	P	2.3
5	☐	100.000	97.091	1292480.92	0.3583	M	4.8
6	☐	200.000	201.475	2615017.56	0.7431	A	4.9
7	☐	1.000					

y = 0.0037 * x + 2.9013E-004
R = 0.9999
DL = 0.005155
BEC = 0.07869

Weight: <None>
Min Conc: <None>

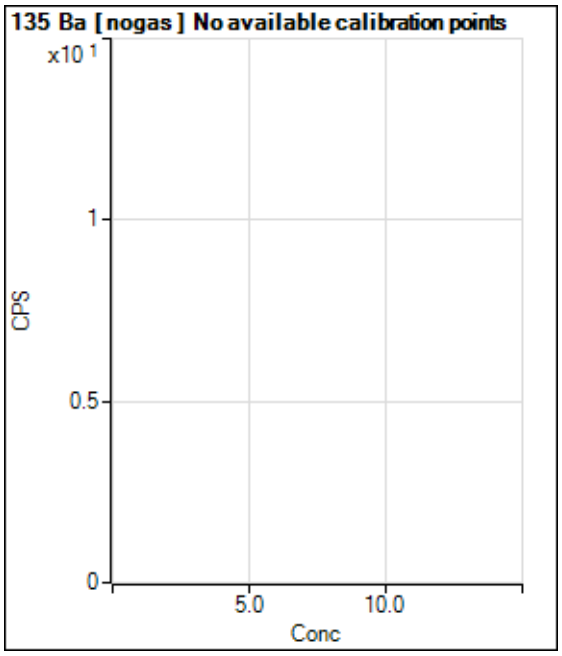
Calibration for 077_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	690.03	0.0005	P	9.0
2	☐	2.000	1.851	14649.68	0.0110	P	3.0
3	☐	5.000	4.834	36161.01	0.0279	P	2.9
4	☐	10.000	9.498	68561.03	0.0542	P	2.6
5	☐	100.000	96.105	665673.30	0.5440	P	1.9
6	☐	200.000	201.978	1362317.90	1.1426	M	3.0
7	☐	1.000					

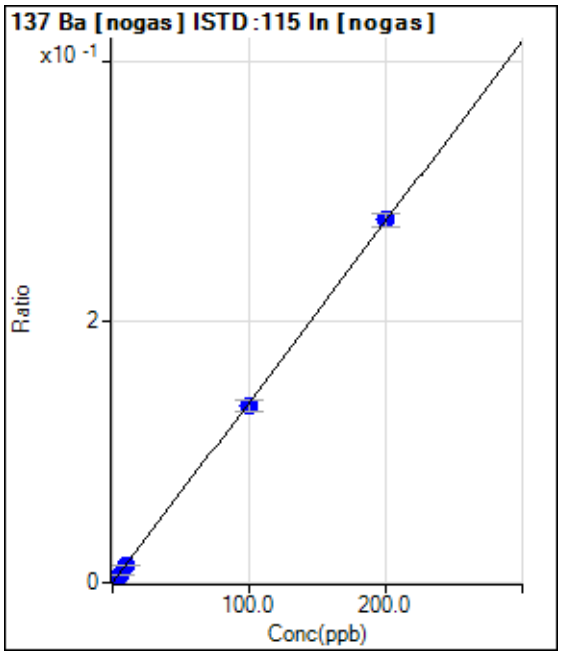
y = 0.0057 * x + 5.2453E-004
R = 0.9997
DL = 0.02505
BEC = 0.09276

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			206.67		P	36.3
2	☐			5170.87		P	3.3
3	☐			13588.89		P	2.0
4	☐			24884.92		P	0.9
5	☐			244431.33		P	2.9
6	☐			474808.48		P	0.5
7	☐						

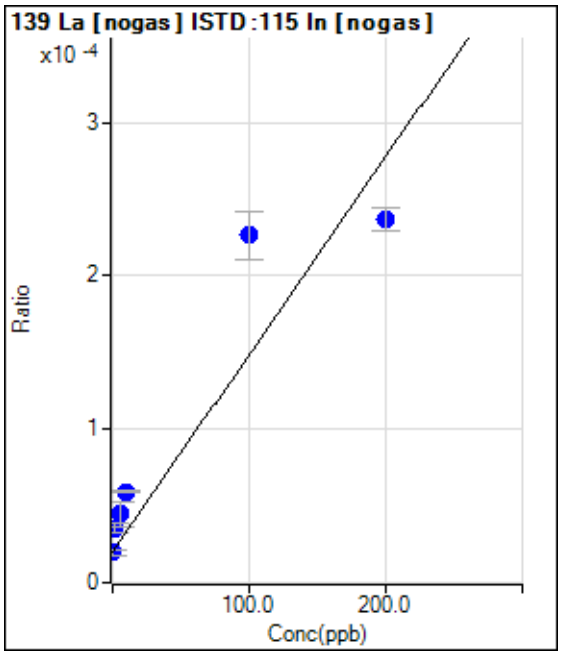
Calibration for 077_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	343.34	0.0001	P	18.0
2	☐	2.000	1.990	9646.20	0.0029	P	4.9
3	☐	5.000	4.549	23276.06	0.0064	P	4.6
4	☐	10.000	9.285	43452.07	0.0129	P	4.7
5	☐	100.000	98.139	423807.77	0.1359	P	5.9
6	☐	200.000	200.978	831970.59	0.2781	P	4.0
7	☐	1.000					

y = 0.0014 * x + 9.8721E-005
R = 0.9999
DL = 0.03857
BEC = 0.07136

Weight: <None>
Min Conc: <None>

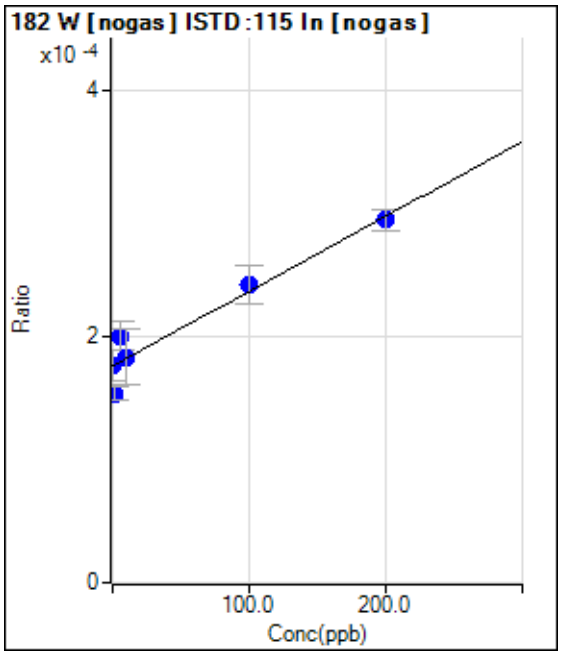


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	70.00	0.0000	P	19.3
2	☐	2.000	11.935	120.00	0.0000	P	18.2
3	☐	5.000	19.345	163.33	0.0000	P	36.2
4	☐	10.000	30.751	200.00	0.0001	P	2.9
5	☐	100.000	160.553	710.03	0.0002	P	13.9
6	☐	200.000	168.228	706.69	0.0002	P	6.4
7	☐	1.000					

y = 1.2864E-006 * x + 1.9944E-005
R = 0.9303
DL = 8.981
BEC = 15.5

Weight: <None>
Min Conc: <None>

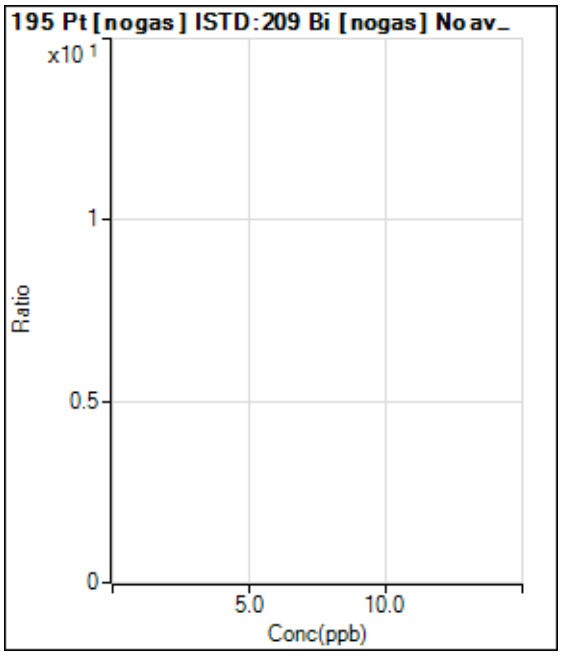
Calibration for 077_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	616.69	0.0002	P	14.0
2	☐	2.000	-37.149	520.01	0.0002	P	7.4
3	☐	5.000	40.423	733.36	0.0002	P	11.2
4	☐	10.000	11.984	613.36	0.0002	P	24.2
5	☐	100.000	108.583	753.36	0.0002	P	12.4
6	☐	200.000	195.115	883.37	0.0003	P	6.1
7	☐	1.000					

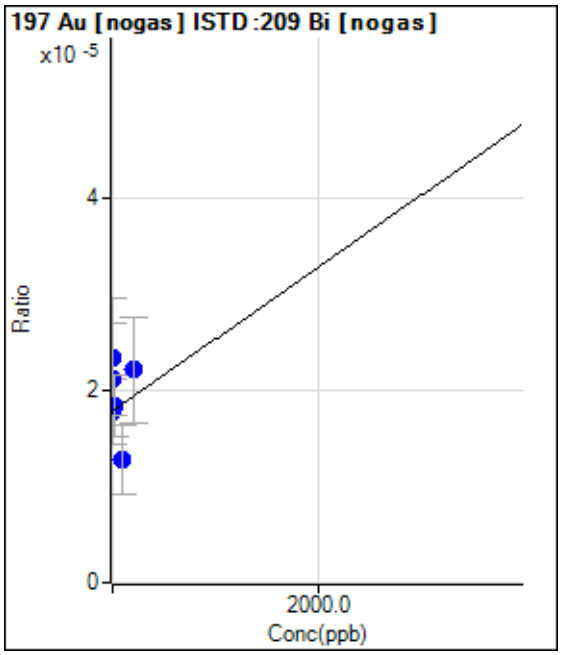
y = 6.0867E-007 * x + 1.7613E-004
R = 0.9591
DL = 121.6
BEC = 289.4

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					

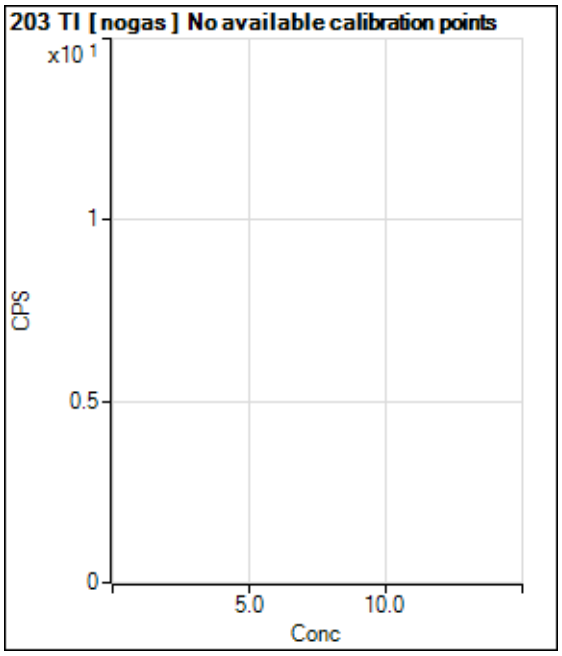
Calibration for 077_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	43.33	0.0000	P	38.2
2	☐	2.000	749.078	56.67	0.0000	P	52.3
3	☐	5.000	432.298	53.33	0.0000	P	56.4
4	☐	10.000	70.941	43.33	0.0000	P	34.3
5	☐	100.000	-678.351	30.00	0.0000	P	56.0
6	☐	200.000	567.975	46.67	0.0000	P	49.5
7	☐	1.000					

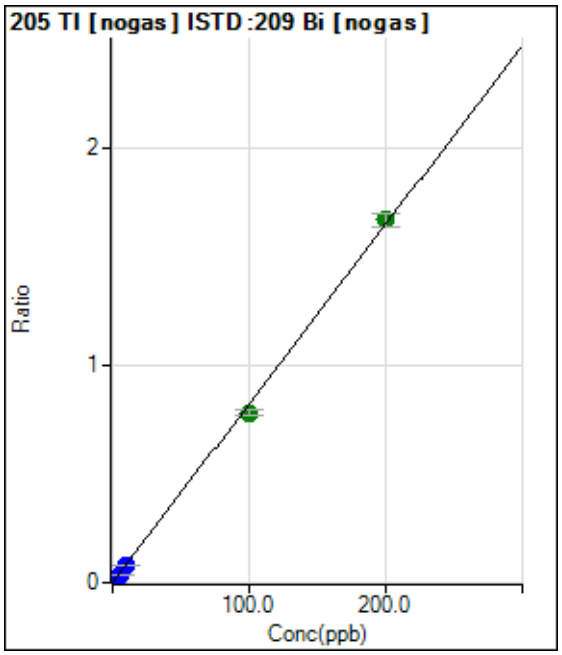
y = 7.4868E-009 * x + 1.7874E-005
R = -0.0486
DL = 2738
BEC = 2387

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			310.01		P	25.8
2	☐			16635.35		P	3.2
3	☐			39648.96		P	2.0
4	☐			75971.07		P	4.9
5	☐			772962.10		P	1.9
6	☐			1522149.66		A	3.6
7	☐						

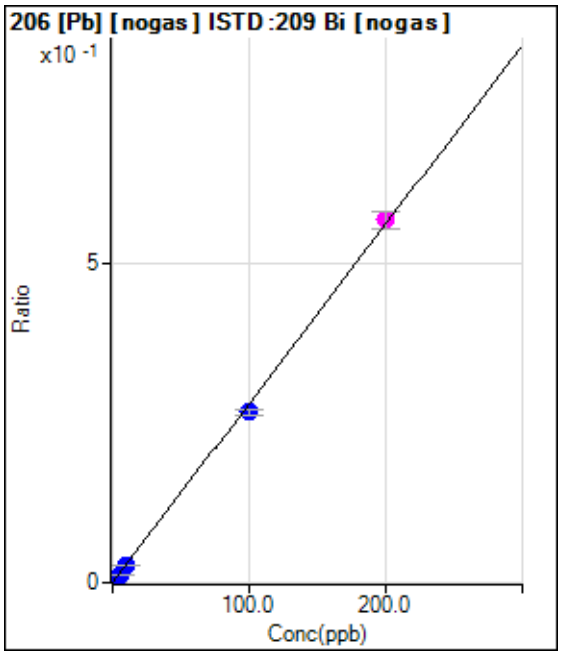
Calibration for 077_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	620.02	0.0003	P	24.1
2	☐	2.000	1.917	38426.03	0.0160	P	2.0
3	☐	5.000	4.563	94350.61	0.0378	P	4.8
4	☐	10.000	9.374	181730.20	0.0774	P	3.6
5	☐	100.000	94.758	1817947.84	0.7802	A	3.9
6	☐	200.000	202.664	3570214.22	1.6683	A	4.0
7	☐	1.000					

y = 0.0082 * x + 2.5432E-004
R = 0.9995
DL = 0.02234
BEC = 0.0309

Weight: <None>
Min Conc: <None>

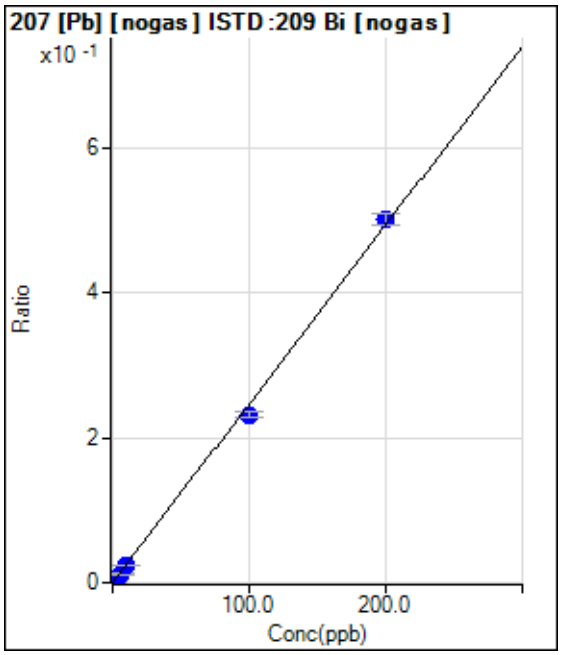


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	213.34	0.0001	P	22.6
2	☐	2.000	1.923	13142.23	0.0055	P	2.8
3	☐	5.000	4.600	32402.79	0.0130	P	7.4
4	☐	10.000	9.724	64284.04	0.0274	P	1.6
5	☐	100.000	94.997	621379.19	0.2667	P	4.1
6	☐	200.000	202.526	1216365.48	0.5684	M	4.5
7	☐	1.000					

y = 0.0028 * x + 8.7815E-005
R = 0.9996
DL = 0.02121
BEC = 0.03129

Weight: <None>
Min Conc: <None>

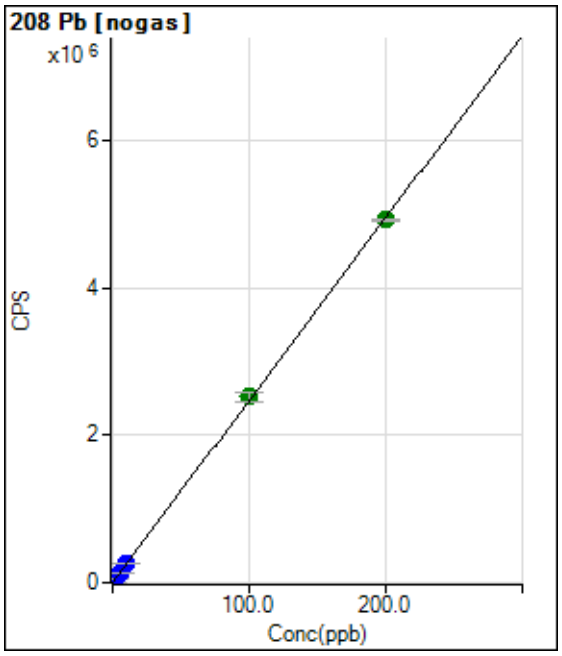
Calibration for 077_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	143.33	0.0001	P	14.4
2	☐	2.000	1.925	11520.97	0.0048	P	4.2
3	☐	5.000	4.641	28655.69	0.0115	P	8.9
4	☐	10.000	9.421	54679.41	0.0233	P	2.5
5	☐	100.000	94.013	540139.12	0.2318	P	3.9
6	☐	200.000	203.032	1071282.69	0.5006	P	3.3
7	☐	1.000					

y = 0.0025 * x + 5.8957E-005
R = 0.9994
DL = 0.01032
BEC = 0.02392

Weight: <None>
Min Conc: <None>

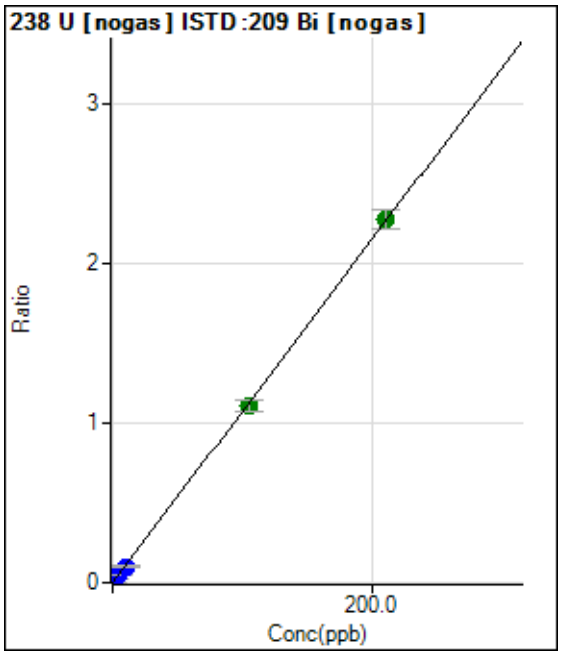


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	606.68		P	9.4
2	☐	2.000	2.118	52904.88		P	1.3
3	☐	5.000	5.300	131495.48		P	2.8
4	☐	10.000	10.140	251043.44		P	1.1
5	☐	100.000	101.876	2516640.03		A	4.5
6	☐	200.000	199.046	4916479.22		A	0.3
7	☐	1.000					

y = 24697.1065 * x + 606.6833
R = 0.9999
DL = 0.006908
BEC = 0.02456

Weight: <None>
Min Conc: <None>

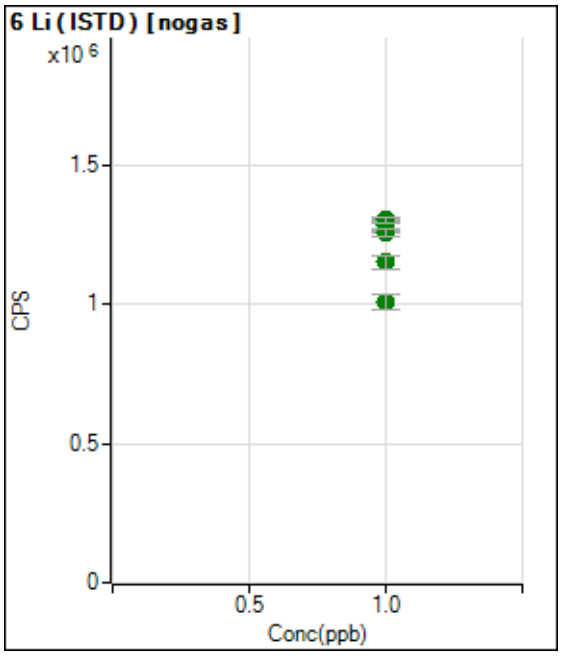
Calibration for 077_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	120.00	0.0000	P	15.1
2	☐	2.000	1.888	48910.04	0.0204	P	7.2
3	☐	5.000	4.911	132360.52	0.0530	P	3.9
4	☐	10.000	9.449	239305.43	0.1019	P	4.0
5	☐	105.000	103.001	2586883.19	1.1106	A	5.8
6	☐	210.000	211.029	4867270.45	2.2754	A	5.5
7	☐	1.000					

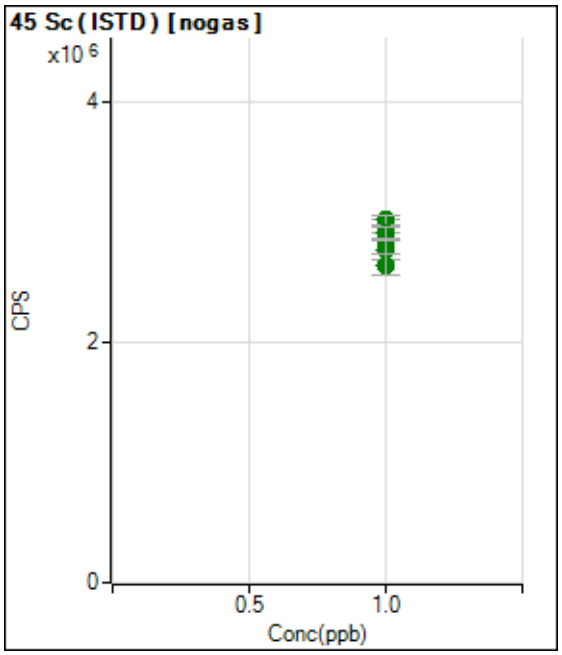
y = 0.0108 * x + 4.9243E-005
R = 0.9999
DL = 0.00207
BEC = 0.004567

Weight: <None>
Min Conc: <None>

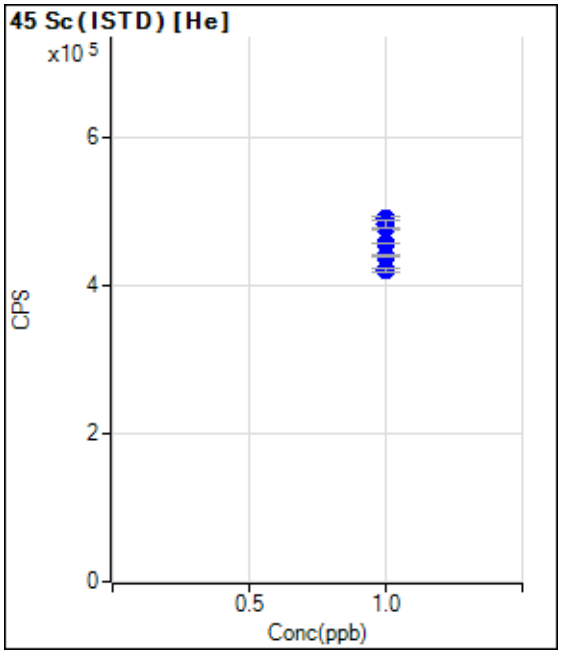


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1282255.12		A	3.6
2	☐	1.000		1280489.50		A	2.4
3	☐	1.000		1302121.40		A	1.7
4	☐	1.000		1255823.35		A	2.6
5	☐	1.000		1149486.02		A	4.2
6	☐	1.000		1007704.95		A	5.6
7	☐	1.000					

Calibration for 077_ICV.d

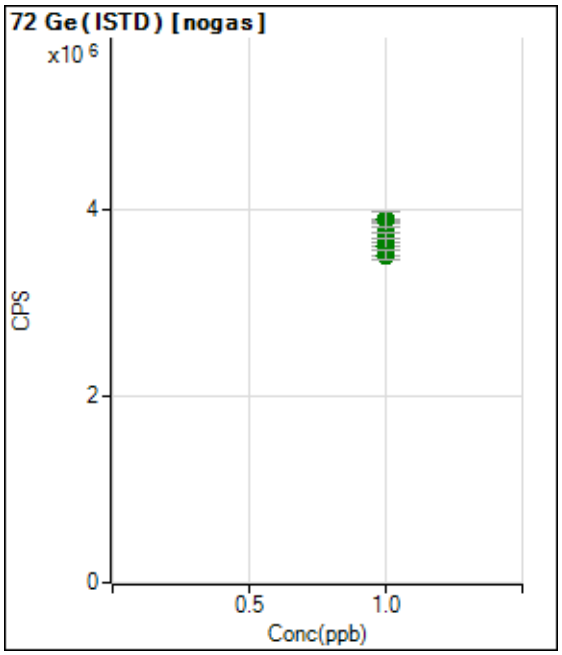


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		2968203.29		A	3.4
2	☐	1.000		2855821.52		A	8.0
3	☐	1.000		3019990.06		A	2.8
4	☐	1.000		2910610.79		A	3.0
5	☐	1.000		2767853.29		A	5.4
6	☐	1.000		2642384.49		A	6.7
7	☐	1.000					

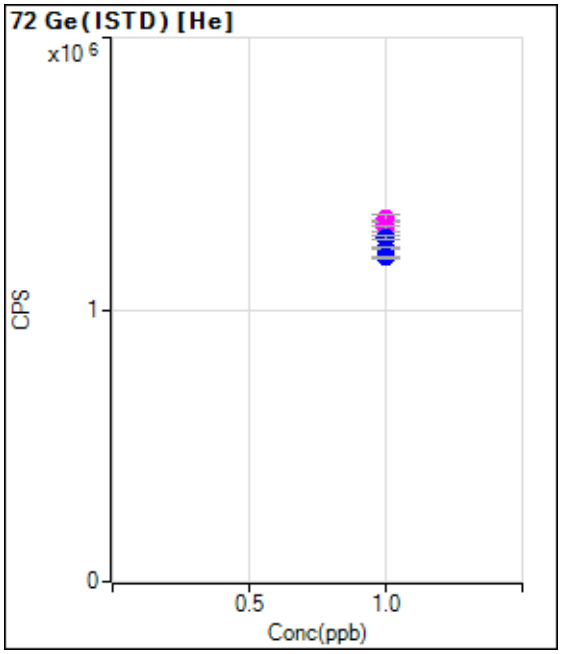


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		477492.30		P	0.7
2	☐	1.000		490555.23		P	1.0
3	☐	1.000		483264.12		P	2.5
4	☐	1.000		457424.08		P	0.3
5	☐	1.000		439891.84		P	0.7
6	☐	1.000		420289.21		P	1.2
7	☐	1.000					

Calibration for 077_ICV.d

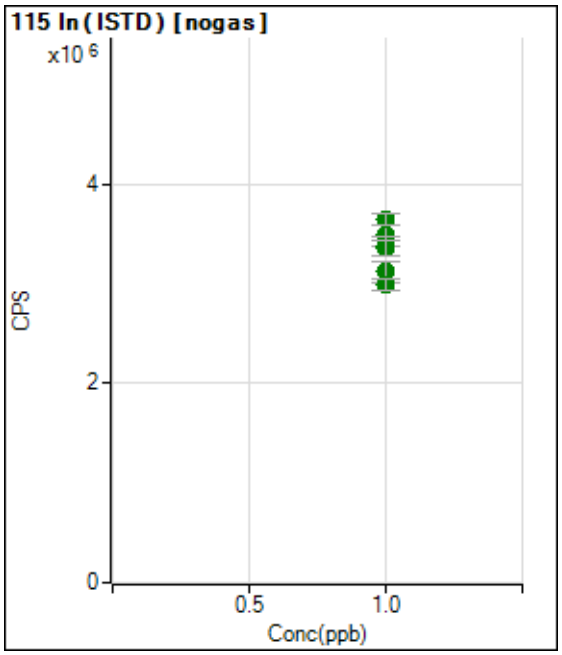


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3894466.92		A	1.0
2	☐	1.000		3752143.59		A	5.4
3	☐	1.000		3897281.92		A	4.1
4	☐	1.000		3692187.55		A	3.7
5	☐	1.000		3613377.44		A	5.1
6	☐	1.000		3521868.59		A	2.9
7	☐	1.000					

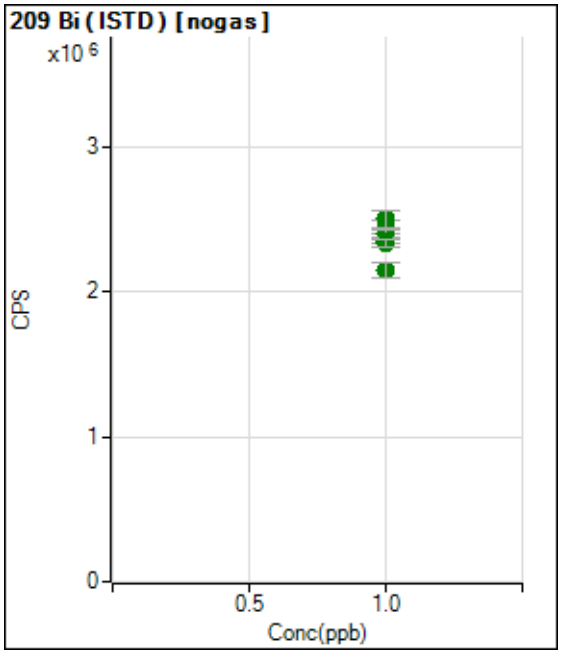


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1316691.70		M	1.8
2	☐	1.000		1333436.96		M	2.0
3	☐	1.000		1298118.16		M	1.4
4	☐	1.000		1264455.79		P	1.4
5	☐	1.000		1223833.89		P	0.7
6	☐	1.000		1192351.34		P	0.6
7	☐	1.000					

Calibration for 077_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3488791.32		A	5.9
2	☐	1.000		3388629.20		A	5.7
3	☐	1.000		3645641.59		A	3.3
4	☐	1.000		3361504.00		A	4.3
5	☐	1.000		3127838.66		A	6.9
6	☐	1.000		2994726.25		A	4.3
7	☐	1.000					



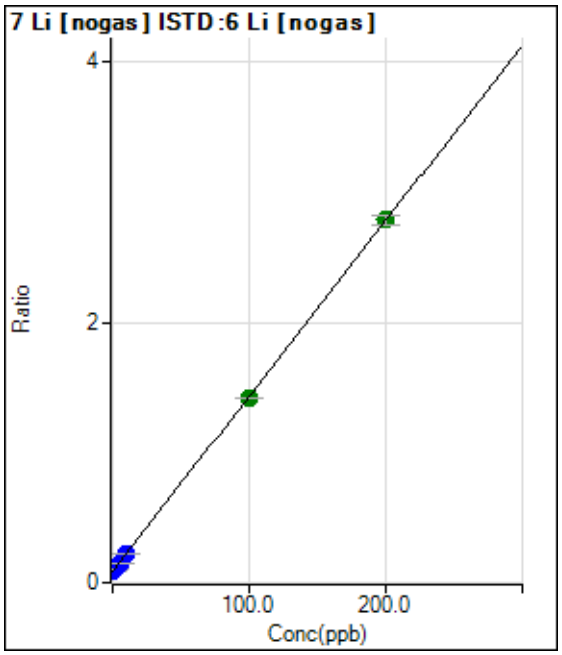
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		2439864.23		A	3.8
2	☐	1.000		2397681.37		A	2.0
3	☐	1.000		2499074.39		A	4.9
4	☐	1.000		2348628.51		A	1.8
5	☐	1.000		2331004.76		A	2.0
6	☐	1.000		2142228.62		A	4.7
7	☐	1.000					

Calibration for 229_ICV.d

Batch Folder: C:\Agilent\ICPMH\1\DATA\010919B.b\
Analysis File: 010919B.batch.bin
DA Date-Time: 2019-01-09 19:29:29
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	221CALB.d	CAL BLK	2019-01-09 19:12:49
2	222CALS.d	2/10/200	2019-01-09 19:14:47
3	223CALS.d	5/25/500	2019-01-09 19:16:46
4	224CALS.d	10/50/1000	2019-01-09 19:18:43
5	227CALS.d	100/500/10K	2019-01-09 19:24:37
6	226CALS.d	200/1000/20K	2019-01-09 19:22:39
7			

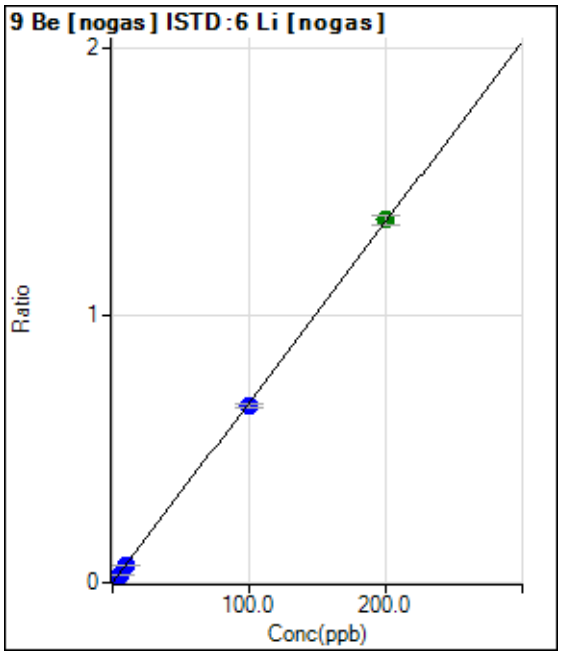
Calibration for 229_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	96916.32	0.0867	P	3.1
2	☐	2.000	1.748	124716.95	0.1102	P	3.0
3	☐	5.000	4.688	163138.42	0.1498	P	1.4
4	☐	10.000	10.131	228477.20	0.2231	P	5.2
5	☐	100.000	98.899	1482584.14	1.4187	A	0.5
6	☐	200.000	200.554	2884029.23	2.7878	A	2.3
7	☐	1.000					

y = 0.0135 * x + 0.0867
R = 1.0000
DL = 0.5973
BEC = 6.437

Weight: <None>
Min Conc: <None>

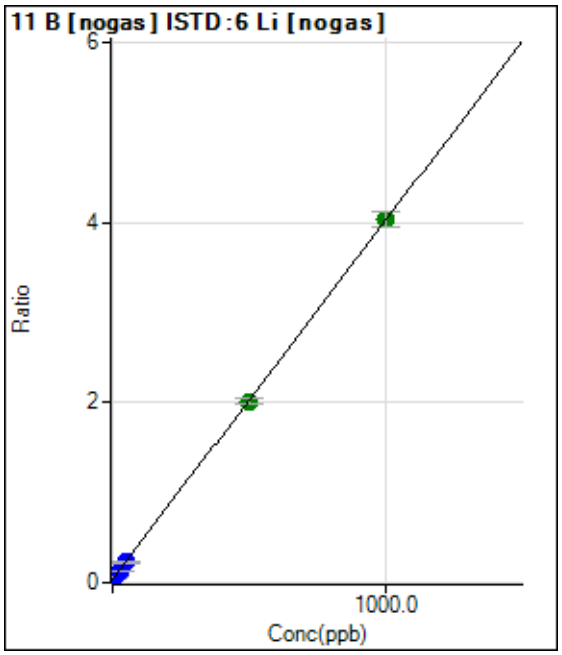


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	230.01	0.0002	P	13.2
2	☐	2.000	1.668	12951.20	0.0115	P	9.2
3	☐	5.000	4.386	32414.54	0.0298	P	1.1
4	☐	10.000	9.246	64063.68	0.0625	P	3.1
5	☐	100.000	97.634	687770.64	0.6583	P	2.2
6	☐	200.000	201.239	1403212.95	1.3566	A	2.6
7	☐	1.000					

y = 0.0067 * x + 2.0528E-004
R = 0.9999
DL = 0.01208
BEC = 0.03046

Weight: <None>
Min Conc: <None>

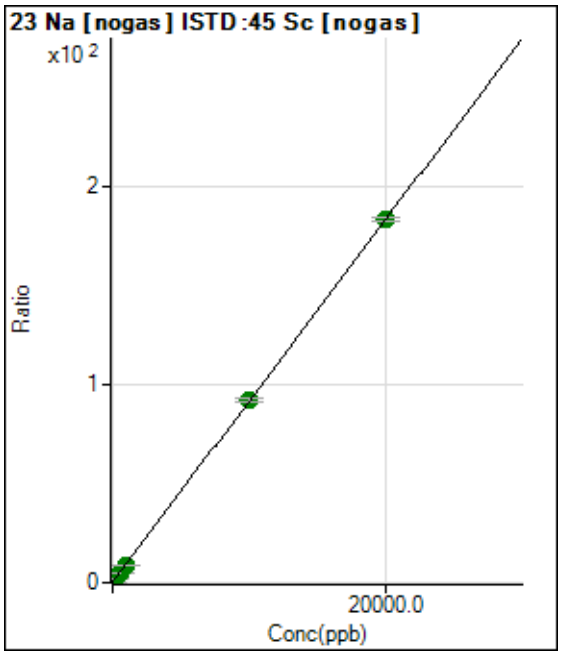
Calibration for 229_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	42865.14	0.0384	P	8.0
2	☐	10.000	7.566	77493.50	0.0685	P	3.9
3	☐	25.000	21.429	134649.52	0.1237	P	3.6
4	☐	50.000	47.008	230915.71	0.2255	P	4.6
5	☐	500.000	496.482	2104502.99	2.0143	A	2.7
6	☐	1000.000	1002.022	4165630.67	4.0264	A	4.1
7	☐	5.000					

y = 0.0040 * x + 0.0384
R = 1.0000
DL = 2.305
BEC = 9.645

Weight: <None>
Min Conc: <None>

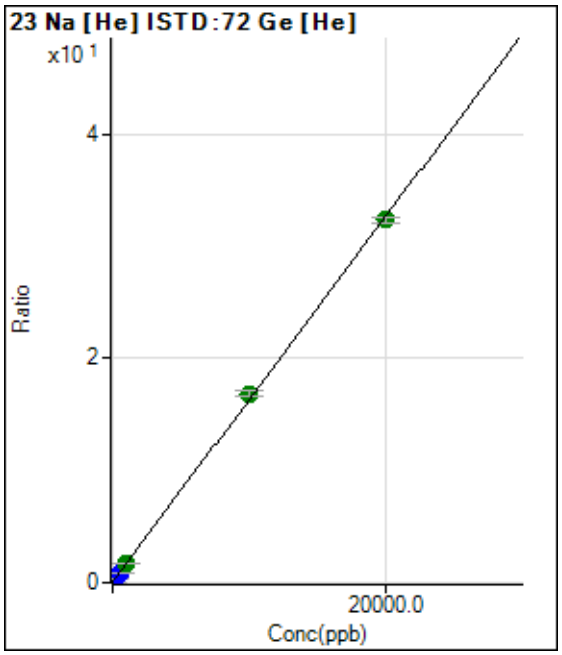


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	568424.57	0.2180	P	5.3
2	☐	200.000	191.118	5161578.63	1.9679	A	0.8
3	☐	500.000	473.619	12048278.65	4.5545	A	2.3
4	☐	1000.000	932.624	22966980.72	8.7572	A	4.3
5	☐	10000.00	10016.709	238148871.9	91.9315	A	2.2
6	☐	20000.00	19995.763	466021727.0	183.300	A	1.0
7	☐	100.000					

y = 0.0092 * x + 0.2180
R = 1.0000
DL = 3.807
BEC = 23.81

Weight: <None>
Min Conc: <None>

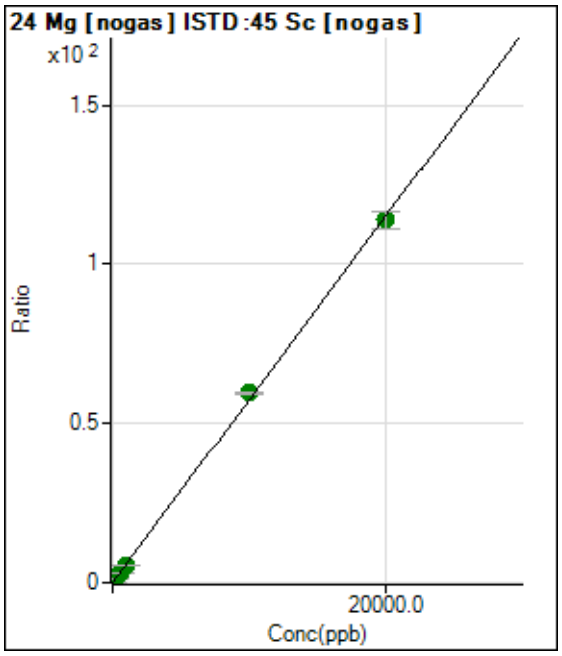
Calibration for 229_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	56680.95	0.0476	P	0.8
2	☐	200.000	201.698	454872.16	0.3762	P	0.9
3	☐	500.000	514.887	1064301.18	0.8865	P	1.1
4	☐	1000.000	1017.934	2003125.85	1.7060	A	0.7
5	☐	10000.00	10337.290	19792255.54	16.8887	A	3.1
6	☐	20000.00	19830.069	37186881.11	32.3539	A	1.8
7	☐	100.000					

y = 0.0016 * x + 0.0476
R = 0.9998
DL = 0.7166
BEC = 29.23

Weight: <None>
Min Conc: <None>

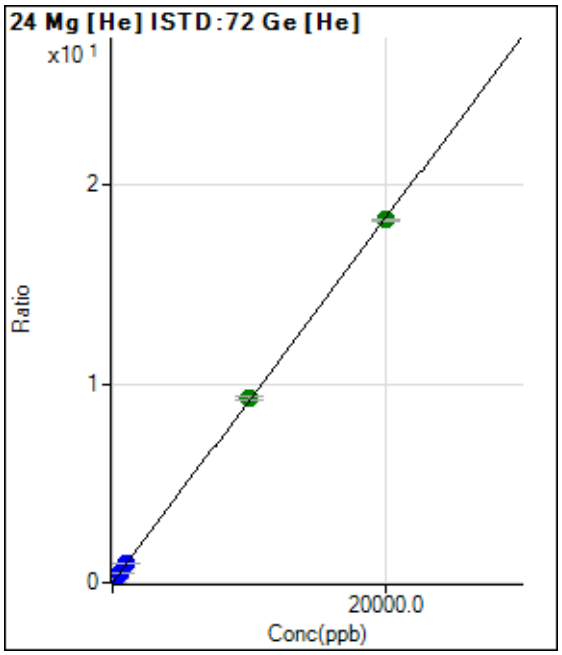


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	34770.78	0.0133	P	6.0
2	☐	200.000	200.811	3062202.80	1.1675	A	1.1
3	☐	500.000	493.571	7538755.64	2.8502	A	3.0
4	☐	1000.000	966.733	14609241.99	5.5697	A	3.6
5	☐	10000.00	10364.265	154345107.6	59.5831	A	0.4
6	☐	20000.00	19819.683	289321281.4	113.929	A	5.0
7	☐	100.000					

y = 0.0057 * x + 0.0133
R = 0.9998
DL = 0.4142
BEC = 2.32

Weight: <None>
Min Conc: <None>

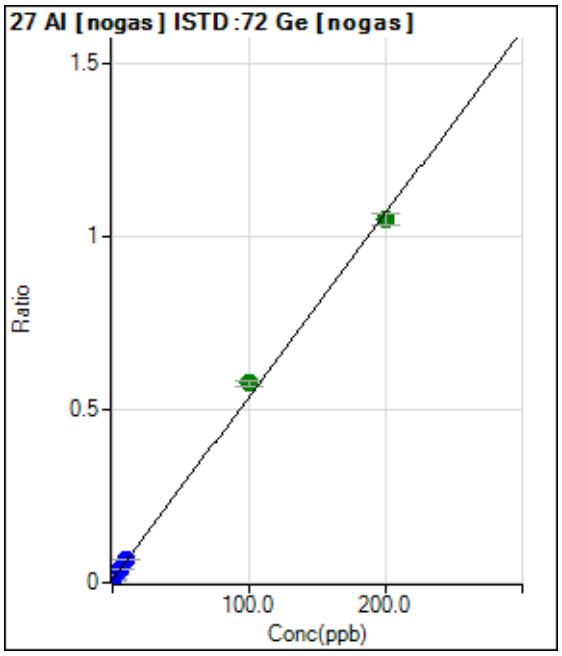
Calibration for 229_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2590.22	0.0022	P	2.1
2	☐	200.000	202.754	227154.01	0.1879	P	0.8
3	☐	500.000	519.712	574076.77	0.4782	P	1.5
4	☐	1000.000	1008.198	1086799.15	0.9256	P	0.5
5	☐	10000.00	10162.798	10911672.34	9.3103	A	1.8
6	☐	20000.00	19917.671	20972272.60	18.2449	A	0.8
7	☐	100.000					

y = 9.1591E-004 * x + 0.0022
R = 1.0000
DL = 0.1488
BEC = 2.377

Weight: <None>
Min Conc: <None>

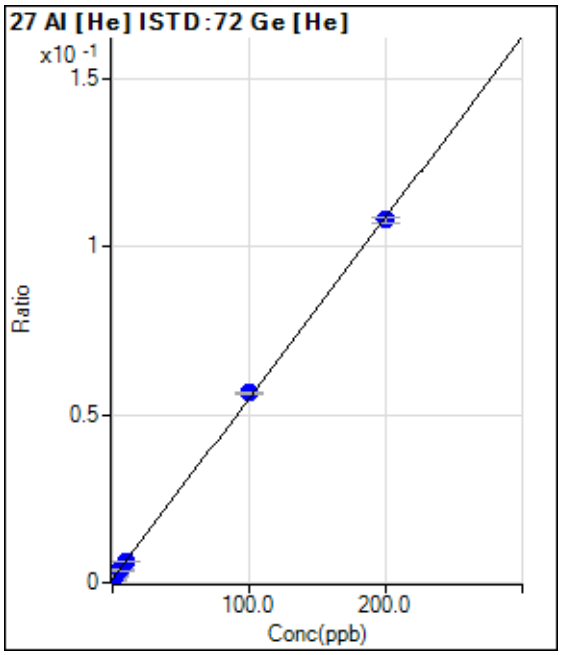


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	28582.11	0.0084	P	5.2
2	☐	2.000	2.245	70137.31	0.0203	P	2.7
3	☐	5.000	5.522	129950.90	0.0377	P	1.9
4	☐	10.000	10.617	217773.77	0.0647	P	0.5
5	☐	100.000	107.063	1929165.07	0.5762	A	3.1
6	☐	200.000	196.422	3519046.20	1.0500	A	3.2
7	☐	1.000					

y = 0.0053 * x + 0.0084
R = 0.9991
DL = 0.2494
BEC = 1.588

Weight: <None>
Min Conc: <None>

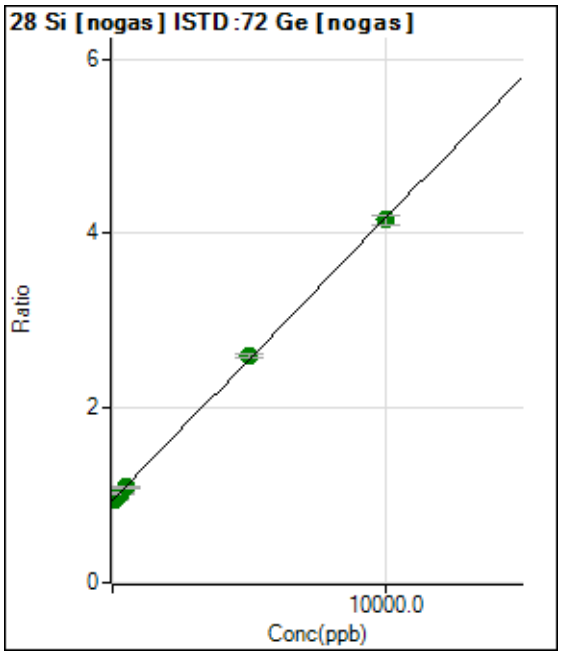
Calibration for 229_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.508	1026.71	0.0009	P	3.5
2	☐	2.000	1.590	2406.85	0.0020	P	4.2
3	☐	5.000	4.946	4560.63	0.0038	P	8.5
4	☐	10.000	9.573	7378.20	0.0063	P	2.4
5	☐	100.000	102.743	66091.91	0.0564	P	0.8
6	☐	200.000	198.655	124093.64	0.1080	P	1.9
7	☐	1.000					

y = 5.3778E-004 * x + 0.0011
R = 0.9999
DL = 0.1684
BEC = 2.111

Weight: <None>
Min Conc: <None>

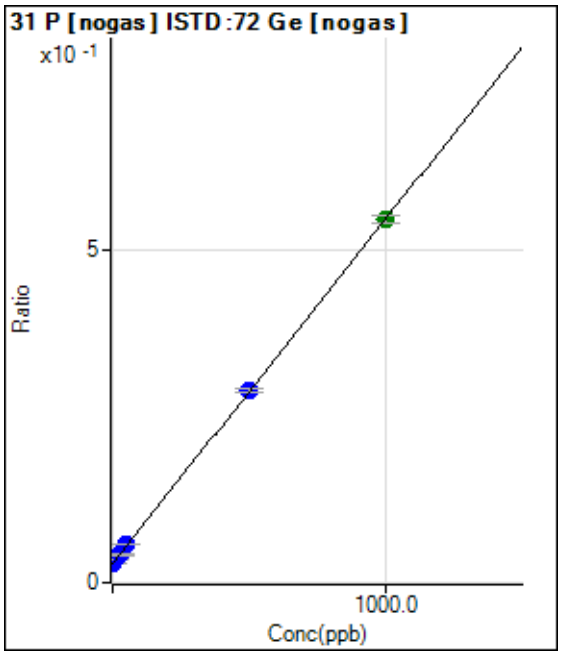


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3213274.12	0.9462	A	1.0
2	☐	100.000	28.030	3296194.12	0.9553	A	2.5
3	☐	250.000	226.115	3513153.07	1.0193	A	1.7
4	☐	500.000	475.811	3700907.34	1.1000	A	1.7
5	☐	5000.000	5137.412	8728679.87	2.6066	A	1.7
6	☐	10000.00	9933.820	13931646.88	4.1569	A	2.5
7	☐	5.000					

y = 3.2320E-004 * x + 0.9462
R = 0.9998
DL = 90.7
BEC = 2928

Weight: <None>
Min Conc: <None>

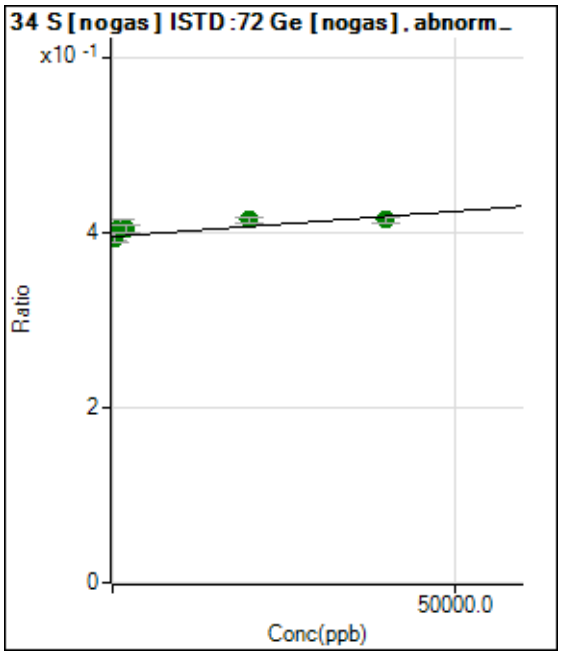
Calibration for 229_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	96779.74	0.0285	P	0.9
2	☐	10.000	9.973	116174.65	0.0337	P	2.0
3	☐	25.000	25.966	144588.14	0.0419	P	0.1
4	☐	50.000	54.416	190748.30	0.0567	P	0.9
5	☐	500.000	503.157	968398.58	0.2892	P	2.1
6	☐	1000.000	998.177	1828985.08	0.5456	A	2.0
7	☐	5.000					

y = 5.1807E-004 * x + 0.0285
R = 1.0000
DL = 1.507
BEC = 55.01

Weight: <None>
Min Conc: <None>

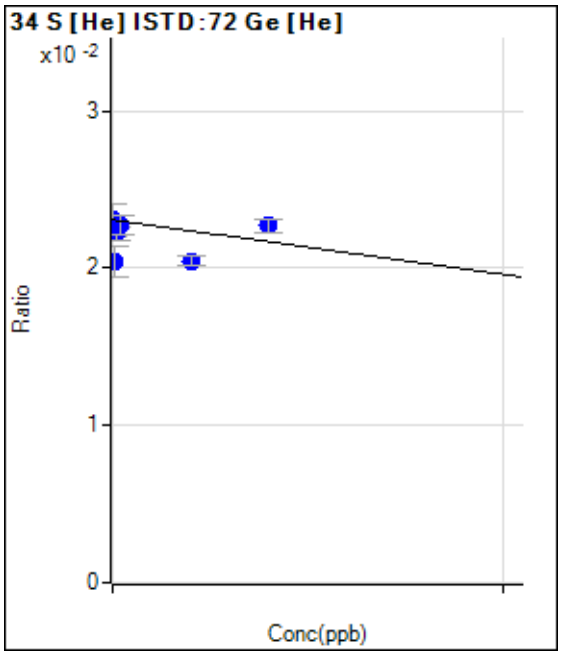


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1344045.80	0.3958	A	2.1
2	☐	400.000	-3333.139	1359273.63	0.3939	A	2.6
3	☐	1000.000	20834.498	1405675.58	0.4078	A	3.3
4	☐	2000.000	15752.616	1362181.38	0.4049	A	2.4
5	☐	20000.00	32942.259	1389118.00	0.4148	A	1.6
6	☐	40000.00	32382.708	1389784.73	0.4145	A	1.7
7	☐	100.000					

y = 5.7589E-007 * x + 0.3958
R = 0.7588
DL = 4.308E+04
BEC = 6.873E+05

Weight: <None>
Min Conc: <None>

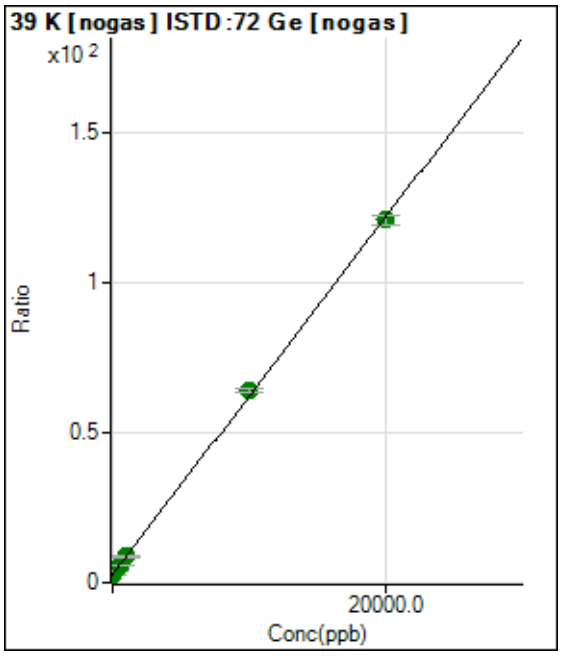
Calibration for 229_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	27458.02	0.0231	P	9.3
2	☐	400.000	76177.818	24686.98	0.0204	P	9.4
3	☐	1000.000	24785.165	26657.34	0.0222	P	3.8
4	☐	2000.000	9514.923	26690.27	0.0227	P	5.4
5	☐	20000.00	75871.909	23952.28	0.0204	P	3.0
6	☐	40000.00	10335.892	26089.91	0.0227	P	3.9
7	☐	100.000					

y = -3.4522E-008 * x + 0.0231
R = 0.0260
DL = -1.869E+05
BEC = -6.678E+05

Weight: <None>
Min Conc: <None>

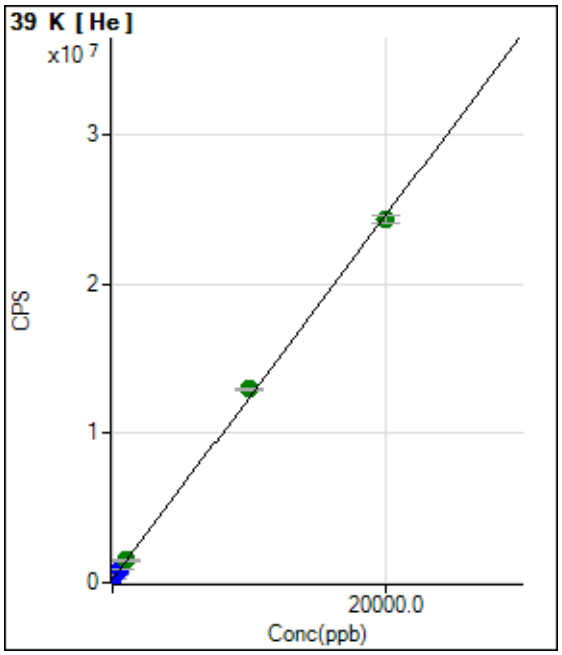


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	9206419.22	2.7109	A	0.7
2	☐	200.000	188.596	13234495.87	3.8348	A	1.0
3	☐	500.000	477.440	19150063.45	5.5561	A	1.5
4	☐	1000.000	1007.040	29317766.28	8.7122	A	1.9
5	☐	10000.00	10283.102	214283563.1	63.9916	A	1.8
6	☐	20000.00	19858.775	405749434.0	121.056	A	2.8
7	☐	100.000					

y = 0.0060 * x + 2.7109
R = 0.9999
DL = 9.994
BEC = 454.9

Weight: <None>
Min Conc: <None>

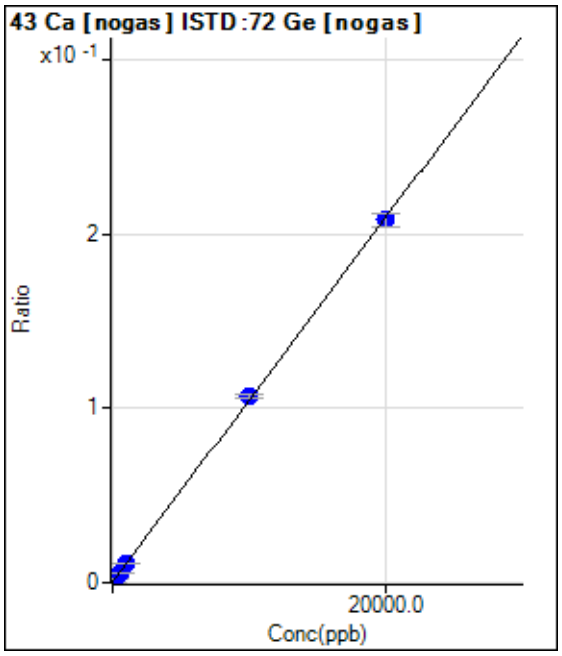
Calibration for 229_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	222826.97		P	1.2
2	☐	200.000	206.792	474435.02		P	1.3
3	☐	500.000	513.438	847538.87		P	0.8
4	☐	1000.000	1037.103	1484694.25		A	1.5
5	☐	10000.00	10457.977	12947290.64		A	0.9
6	☐	20000.00	19768.752	24275927.14		A	2.0
7	☐	100.000					

y = 1216.7232 * x + 222826.9700
R = 0.9996
DL = 6.343
BEC = 183.1

Weight: <None>
Min Conc: <None>

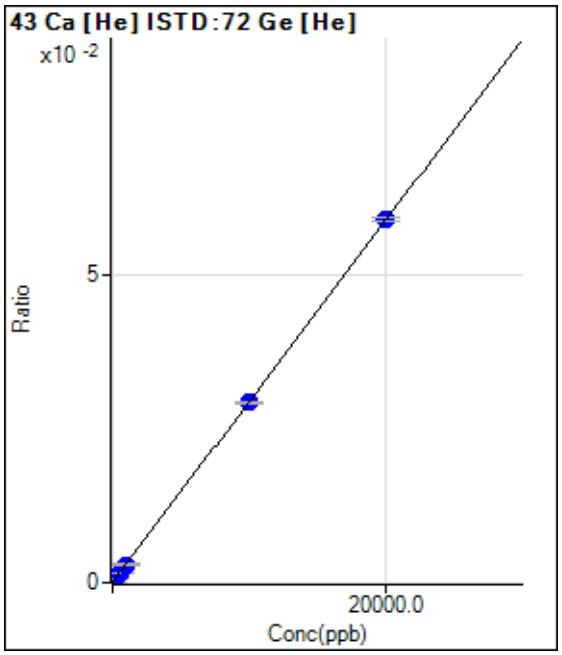


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1040.05	0.0003	P	5.5
2	☐	200.000	193.336	8028.52	0.0023	P	3.9
3	☐	500.000	499.488	19040.00	0.0055	P	1.2
4	☐	1000.000	988.644	35781.44	0.0106	P	2.7
5	☐	10000.00	10221.645	358579.49	0.1071	P	2.1
6	☐	20000.00	19889.825	697231.32	0.2081	P	3.5
7	☐	100.000					

y = 1.0446E-005 * x + 3.0642E-004
R = 0.9999
DL = 4.86
BEC = 29.33

Weight: <None>
Min Conc: <None>

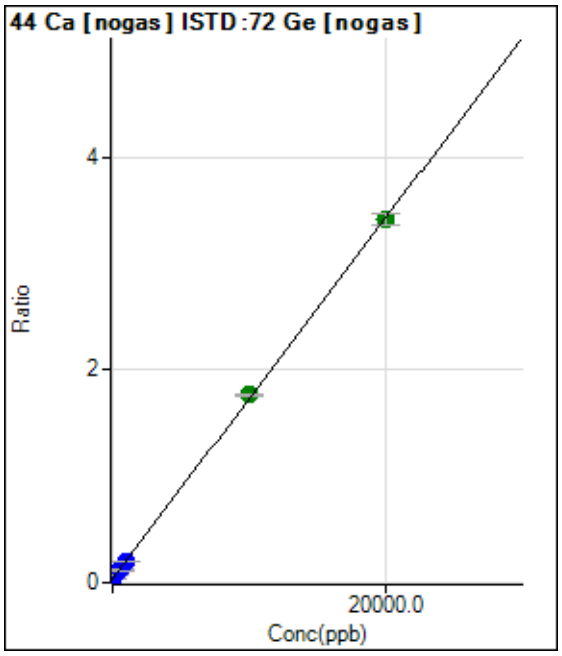
Calibration for 229_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	73.33	0.0001	P	31.0
2	☐	200.000	187.685	740.03	0.0006	P	16.4
3	☐	500.000	508.295	1866.79	0.0016	P	4.7
4	☐	1000.000	980.776	3453.70	0.0029	P	5.3
5	☐	10000.00	9924.529	34224.93	0.0292	P	0.7
6	☐	20000.00	20038.612	67699.41	0.0589	P	1.0
7	☐	100.000					

y = 2.9362E-006 * x + 6.1570E-005
R = 1.0000
DL = 19.48
BEC = 20.97

Weight: <None>
Min Conc: <None>

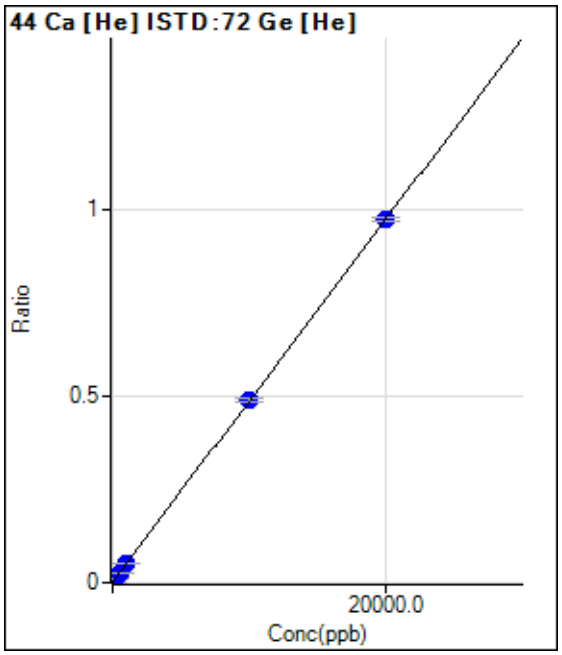


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	120199.39	0.0354	P	1.9
2	☐	200.000	187.757	231917.85	0.0672	P	2.0
3	☐	500.000	488.296	407153.00	0.1181	P	1.3
4	☐	1000.000	980.192	677819.99	0.2015	P	1.9
5	☐	10000.00	10190.039	5900134.70	1.7618	A	1.1
6	☐	20000.00	19906.386	11421220.66	3.4080	A	3.1
7	☐	100.000					

y = 1.6942E-004 * x + 0.0354
R = 0.9999
DL = 11.89
BEC = 208.9

Weight: <None>
Min Conc: <None>

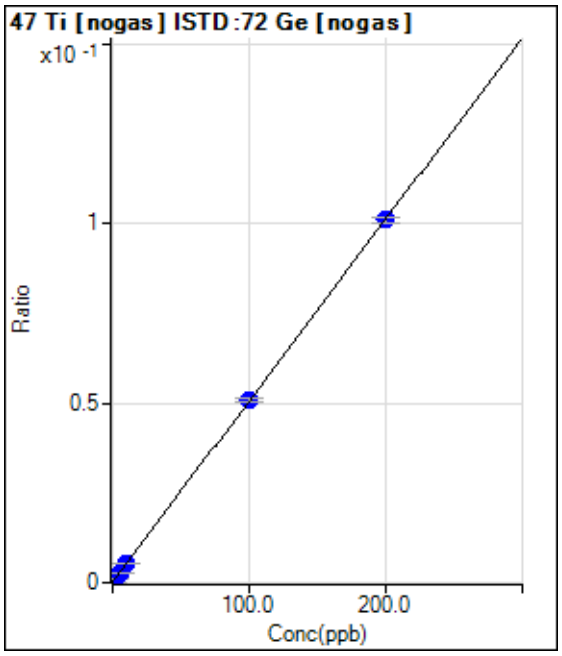
Calibration for 229_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1716.77	0.0014	P	3.9
2	☐	200.000	198.452	13395.03	0.0111	P	6.6
3	☐	500.000	498.689	30805.65	0.0257	P	3.2
4	☐	1000.000	1011.897	59394.50	0.0506	P	1.1
5	☐	10000.00	10015.897	571756.66	0.4879	P	2.2
6	☐	20000.00	19991.505	1117615.29	0.9723	P	1.1
7	☐	100.000					

y = 4.8566E-005 * x + 0.0014
R = 1.0000
DL = 3.473
BEC = 29.71

Weight: <None>
Min Conc: <None>

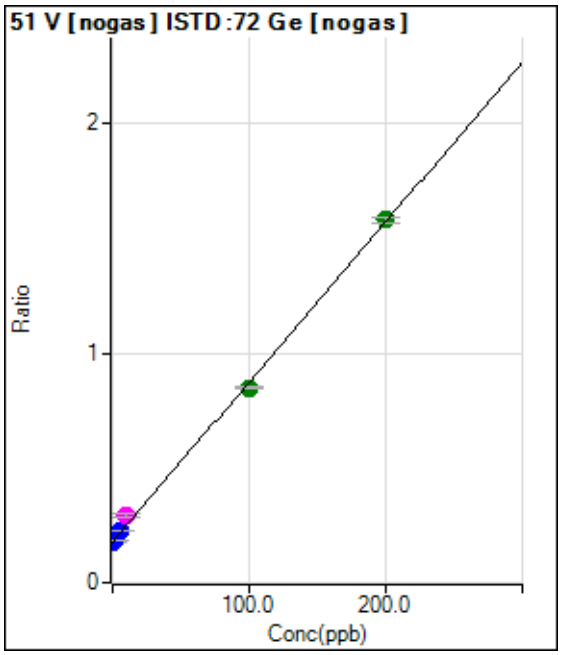


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	406.68	0.0001	P	36.4
2	☐	2.000	1.904	3723.77	0.0011	P	12.8
3	☐	5.000	4.984	9078.99	0.0026	P	7.9
4	☐	10.000	10.140	17618.63	0.0052	P	0.5
5	☐	100.000	100.436	170134.96	0.0508	P	1.2
6	☐	200.000	199.776	338296.69	0.1009	P	1.3
7	☐	1.000					

y = 5.0459E-004 * x + 1.1928E-004
R = 1.0000
DL = 0.2581
BEC = 0.2364

Weight: <None>
Min Conc: <None>

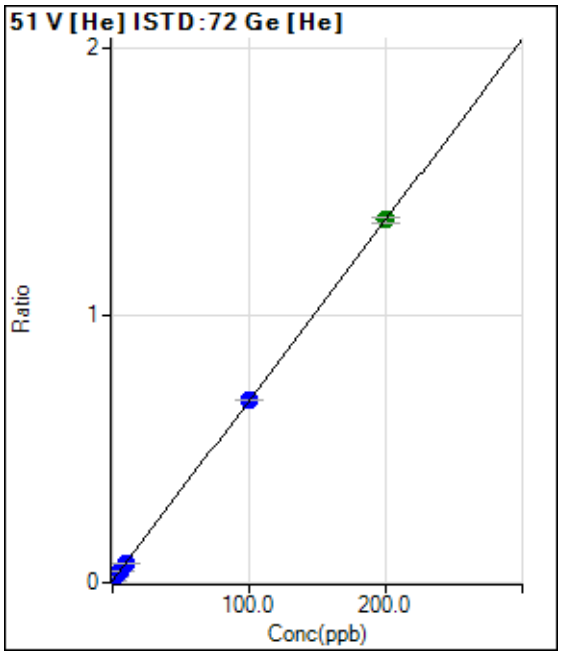
Calibration for 229_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	605010.33	0.1782	P	3.9
2	☐	2.000	0.519	627480.50	0.1818	P	1.0
3	☐	5.000	6.688	774816.93	0.2248	P	1.3
4	☐	10.000	16.546	988003.93	0.2935	M	6.1
5	☐	100.000	96.500	2848398.05	0.8505	A	1.3
6	☐	200.000	201.395	5299412.23	1.5812	A	1.5
7	☐	1.000					

y = 0.0070 * x + 0.1782
R = 0.9991
DL = 2.971
BEC = 25.58

Weight: <None>
Min Conc: <None>

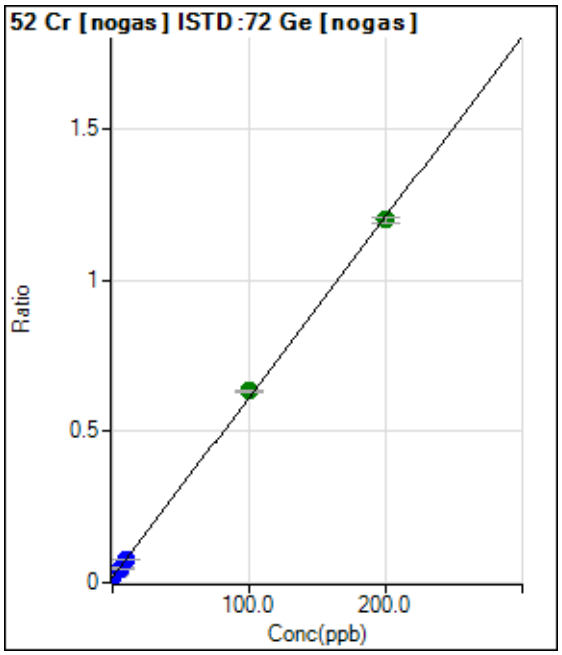


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.122	9695.20	0.0081	P	3.4
2	☐	2.000	1.919	24526.06	0.0203	P	1.9
3	☐	5.000	4.976	49152.37	0.0409	P	0.5
4	☐	10.000	9.959	87588.16	0.0746	P	0.7
5	☐	100.000	100.040	800663.75	0.6831	P	0.2
6	☐	200.000	199.983	1561300.83	1.3583	A	1.5
7	☐	1.000					

y = 0.0068 * x + 0.0073
R = 1.0000
DL = 0.1242
BEC = 1.084

Weight: <None>
Min Conc: <None>

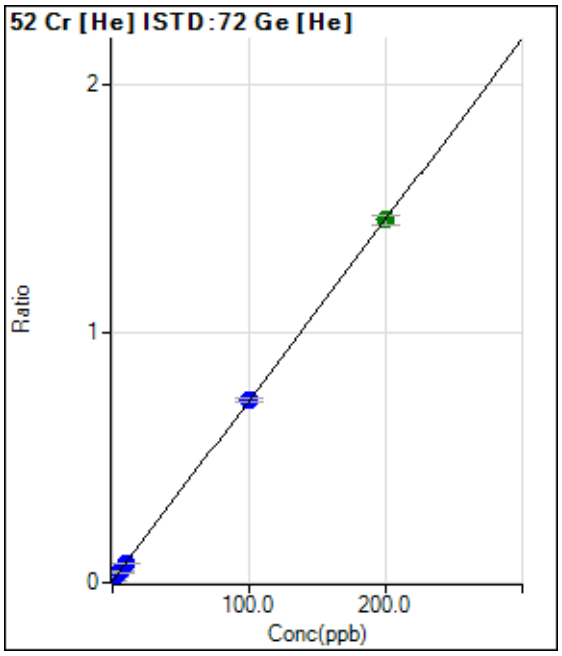
Calibration for 229_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	61174.23	0.0180	P	2.7
2	☐	2.000	1.795	99013.46	0.0287	P	2.4
3	☐	5.000	4.936	163293.84	0.0474	P	1.4
4	☐	10.000	10.181	264415.54	0.0786	P	0.4
5	☐	100.000	103.202	2116404.19	0.6319	A	1.8
6	☐	200.000	198.394	4015507.65	1.1981	A	1.5
7	☐	1.000					

y = 0.0059 * x + 0.0180
R = 0.9998
DL = 0.2409
BEC = 3.029

Weight: <None>
Min Conc: <None>

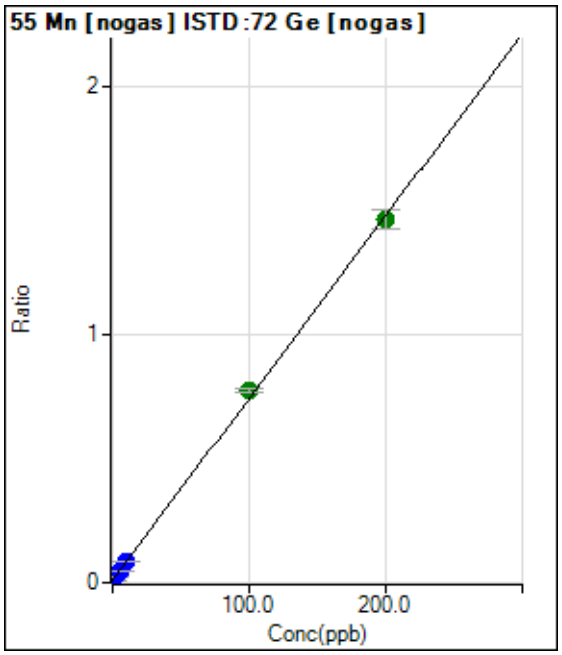


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	7561.66	0.0064	P	5.4
2	☐	2.000	1.993	25150.78	0.0208	P	0.9
3	☐	5.000	5.096	51963.27	0.0433	P	4.5
4	☐	10.000	9.854	91311.79	0.0778	P	1.7
5	☐	100.000	100.424	860412.72	0.7341	P	2.6
6	☐	200.000	199.793	1671404.82	1.4543	A	2.7
7	☐	1.000					

y = 0.0072 * x + 0.0064
R = 1.0000
DL = 0.1413
BEC = 0.8772

Weight: <None>
Min Conc: <None>

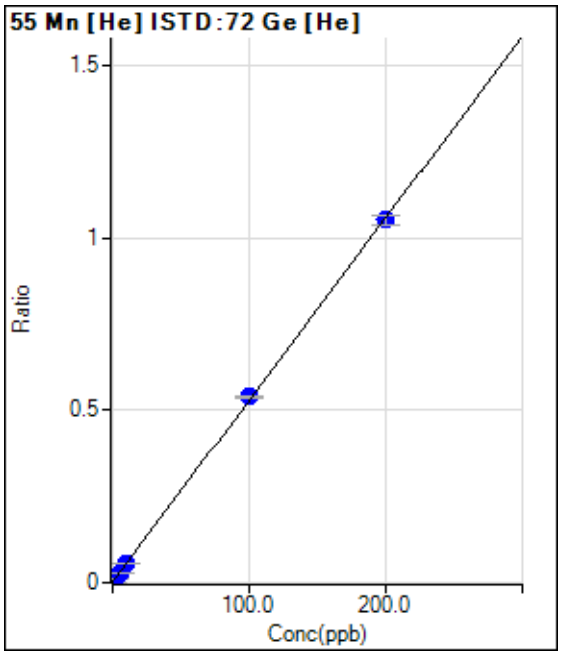
Calibration for 229_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	31847.65	0.0094	P	3.5
2	☐	2.000	1.931	81311.42	0.0236	P	1.9
3	☐	5.000	4.935	157221.41	0.0456	P	2.1
4	☐	10.000	10.463	290106.77	0.0862	P	2.2
5	☐	100.000	104.146	2592008.81	0.7740	A	1.7
6	☐	200.000	197.906	4899043.78	1.4625	A	5.3
7	☐	1.000					

y = 0.0073 * x + 0.0094
R = 0.9997
DL = 0.1351
BEC = 1.277

Weight: <None>
Min Conc: <None>

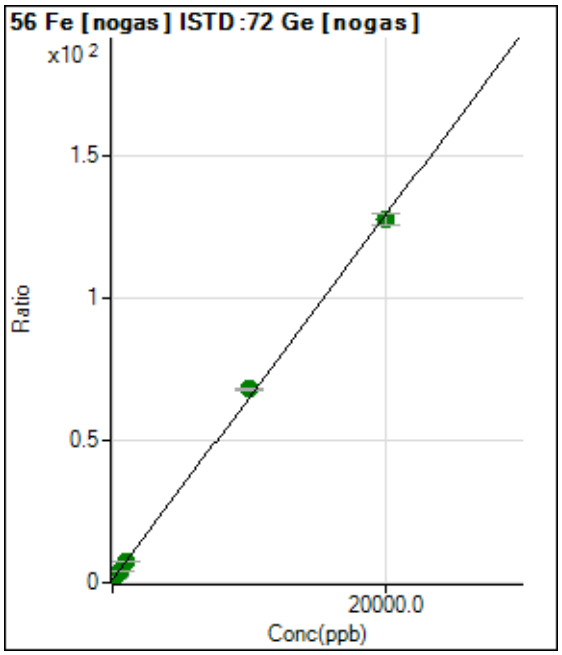


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2273.51	0.0019	P	2.4
2	☐	2.000	1.888	14352.43	0.0119	P	1.2
3	☐	5.000	4.912	33403.82	0.0278	P	2.0
4	☐	10.000	10.043	64448.93	0.0549	P	1.5
5	☐	100.000	101.779	631535.68	0.5389	P	0.8
6	☐	200.000	199.111	1209500.45	1.0523	P	2.4
7	☐	1.000					

y = 0.0053 * x + 0.0019
R = 0.9999
DL = 0.02566
BEC = 0.3622

Weight: <None>
Min Conc: <None>

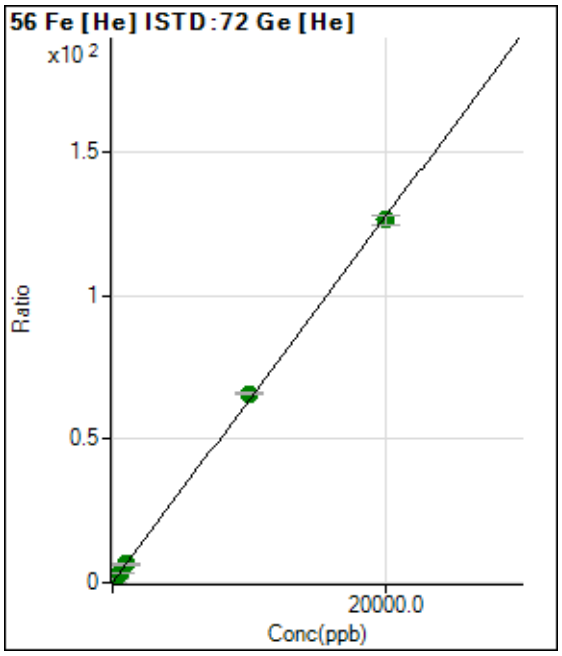
Calibration for 229_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3548189.01	1.0448	A	1.9
2	☐	200.000	200.513	8030861.12	2.3269	A	0.4
3	☐	500.000	481.332	14208574.80	4.1224	A	1.9
4	☐	1000.000	1019.209	25443533.38	7.5616	A	1.6
5	☐	10000.00	10494.586	228214013.4	68.1474	A	1.0
6	☐	20000.00	19752.208	426678526.2	127.340	A	3.3
7	☐	100.000					

y = 0.0064 * x + 1.0448
R = 0.9996
DL = 9.392
BEC = 163.4

Weight: <None>
Min Conc: <None>

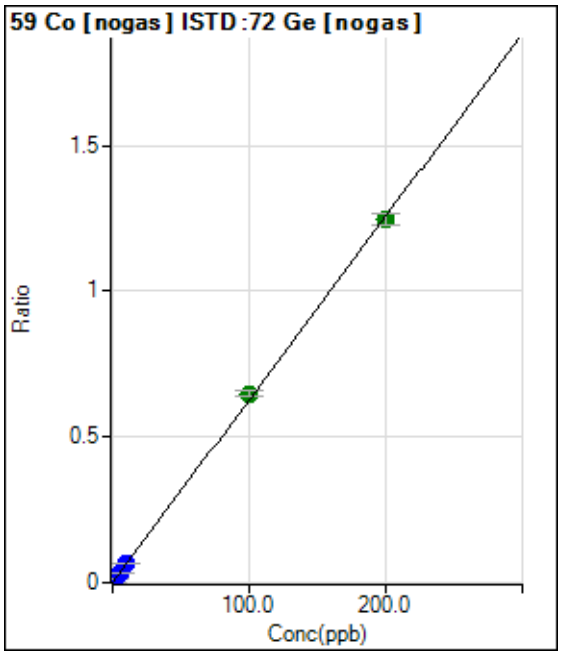


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	34034.87	0.0286	P	1.7
2	☐	200.000	198.939	1568239.77	1.2973	A	2.8
3	☐	500.000	496.120	3833080.36	3.1926	A	3.3
4	☐	1000.000	1002.159	7537682.18	6.4199	A	2.3
5	☐	10000.00	10330.848	77250812.18	65.9140	A	1.1
6	☐	20000.00	19834.576	145423011.1	126.524	A	2.5
7	☐	100.000					

y = 0.0064 * x + 0.0286
R = 0.9998
DL = 0.2337
BEC = 4.485

Weight: <None>
Min Conc: <None>

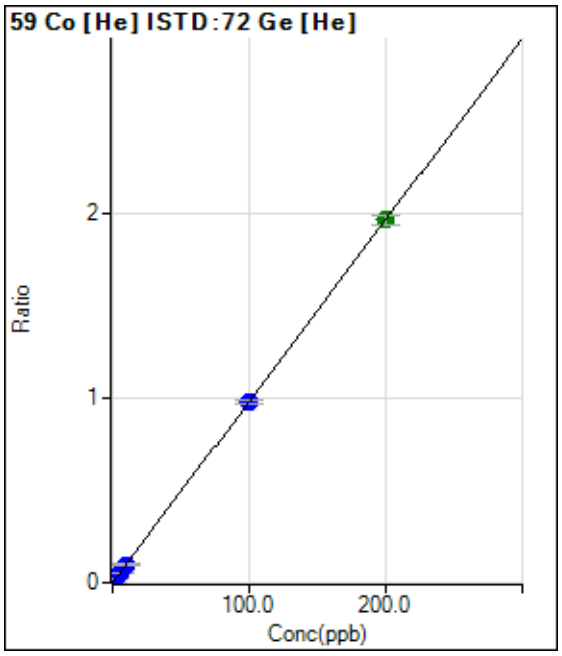
Calibration for 229_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	850.03	0.0003	P	3.9
2	☐	2.000	2.040	45032.09	0.0130	P	2.1
3	☐	5.000	5.063	110360.71	0.0320	P	0.4
4	☐	10.000	10.327	218864.92	0.0651	P	2.2
5	☐	100.000	103.375	2173098.51	0.6489	A	3.1
6	☐	200.000	198.294	4171223.06	1.2445	A	3.2
7	☐	1.000					

y = 0.0063 * x + 2.5038E-004
R = 0.9998
DL = 0.004609
BEC = 0.0399

Weight: <None>
Min Conc: <None>

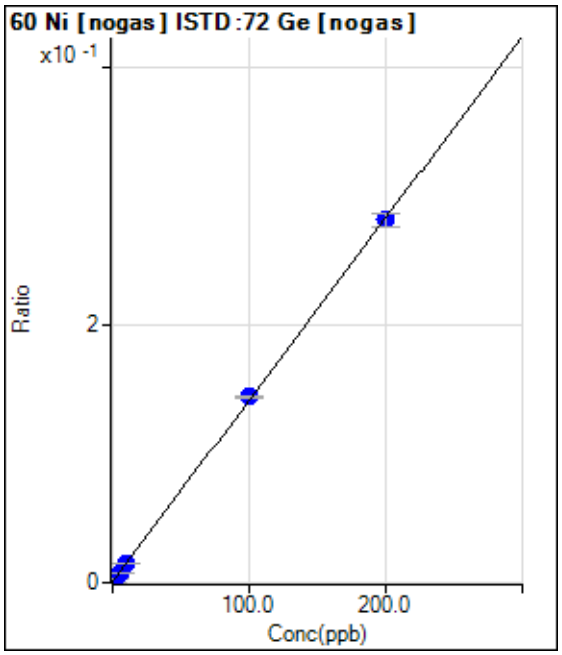


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	200.00	0.0002	P	38.5
2	☐	2.000	1.950	23368.39	0.0193	P	3.6
3	☐	5.000	4.959	58697.59	0.0489	P	3.8
4	☐	10.000	10.020	115806.88	0.0986	P	1.7
5	☐	100.000	99.852	1150183.24	0.9814	P	1.6
6	☐	200.000	200.075	2259984.13	1.9663	A	2.5
7	☐	1.000					

y = 0.0098 * x + 1.6785E-004
R = 1.0000
DL = 0.01972
BEC = 0.01708

Weight: <None>
Min Conc: <None>

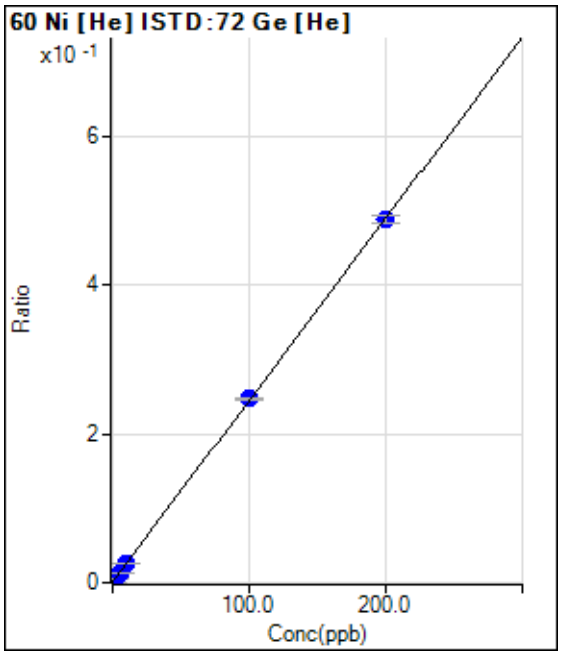
Calibration for 229_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.301	876.70	0.0003	P	19.8
2	☐	2.000	1.652	10399.77	0.0030	P	6.0
3	☐	5.000	4.814	25755.12	0.0075	P	3.2
4	☐	10.000	9.970	49600.76	0.0147	P	3.4
5	☐	100.000	101.712	482613.35	0.1441	P	1.3
6	☐	200.000	199.154	943418.01	0.2815	P	3.9
7	☐	1.000					

y = 0.0014 * x + 6.8356E-004
R = 0.9999
DL = 0.109
BEC = 0.4847

Weight: <None>
Min Conc: <None>

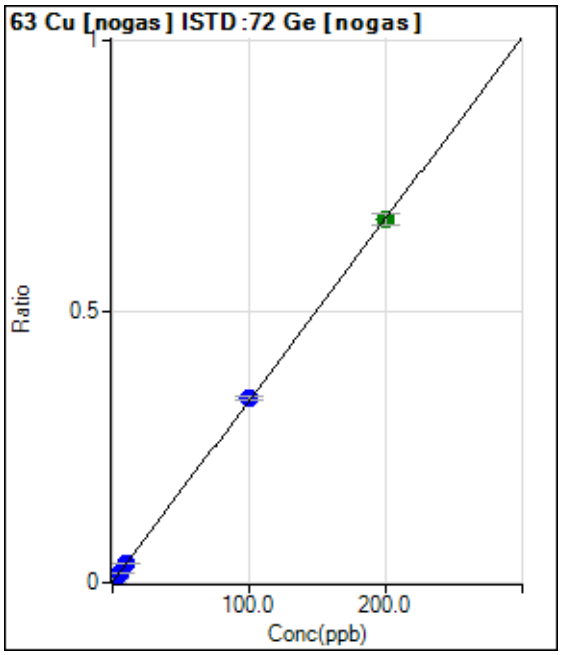


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.253	236.67	0.0002	P	26.1
2	☐	2.000	1.724	6081.10	0.0050	P	4.6
3	☐	5.000	4.958	15510.06	0.0129	P	4.7
4	☐	10.000	9.937	29447.33	0.0251	P	2.0
5	☐	100.000	101.255	290728.38	0.2481	P	1.1
6	☐	200.000	199.379	560479.47	0.4877	P	2.1
7	☐	1.000					

y = 0.0024 * x + 8.1781E-004
R = 1.0000
DL = 0.06381
BEC = 0.3349

Weight: <None>
Min Conc: <None>

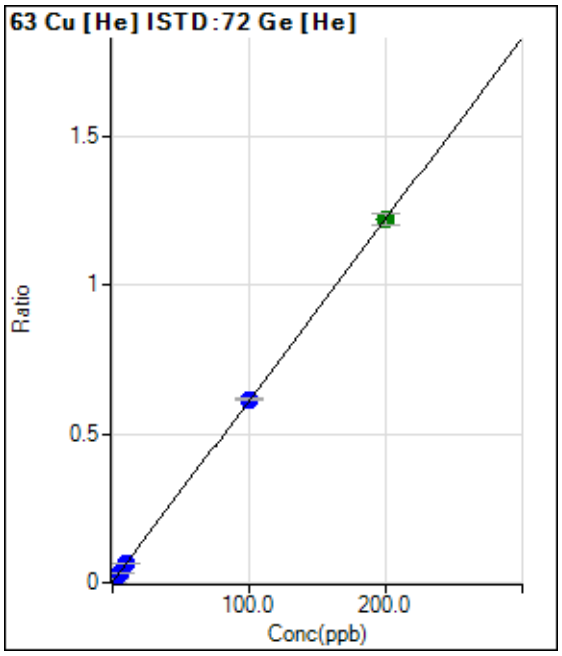
Calibration for 229_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2633.57	0.0008	P	6.6
2	☐	2.000	2.079	26676.46	0.0077	P	2.7
3	☐	5.000	5.251	63232.96	0.0183	P	2.1
4	☐	10.000	10.028	115481.81	0.0343	P	2.7
5	☐	100.000	101.144	1135761.88	0.3392	P	2.4
6	☐	200.000	199.419	2238243.66	0.6680	A	3.3
7	☐	1.000					

y = 0.0033 * x + 7.7595E-004
R = 1.0000
DL = 0.04602
BEC = 0.2319

Weight: <None>
Min Conc: <None>

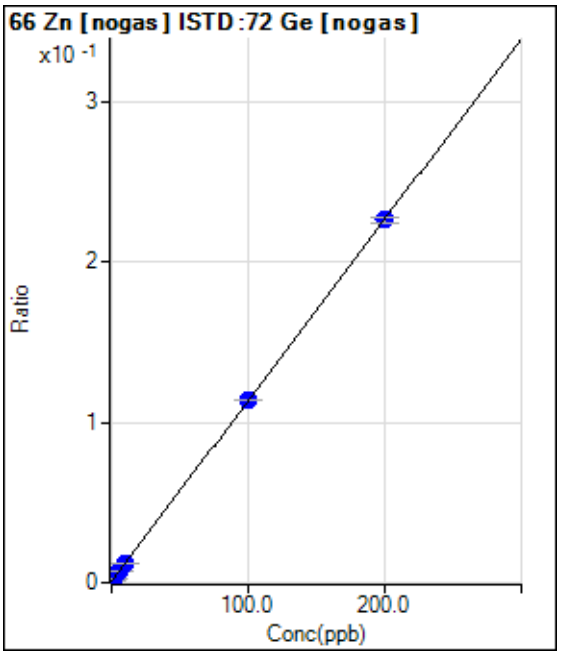


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.231	1466.75	0.0012	P	5.0
2	☐	2.000	1.888	17084.82	0.0141	P	2.7
3	☐	5.000	4.883	38851.62	0.0324	P	1.9
4	☐	10.000	10.085	75173.81	0.0640	P	1.1
5	☐	100.000	100.751	721750.72	0.6158	P	0.4
6	☐	200.000	199.624	1399280.40	1.2176	A	3.1
7	☐	1.000					

y = 0.0061 * x + 0.0026
R = 1.0000
DL = 0.03053
BEC = 0.4338

Weight: <None>
Min Conc: <None>

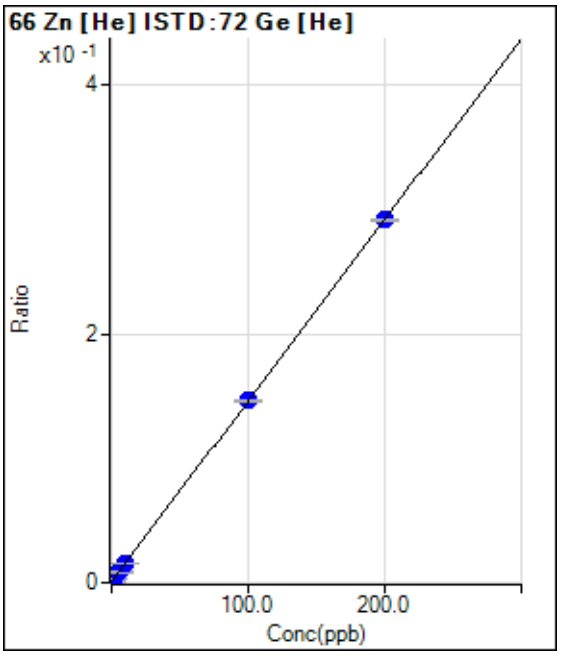
Calibration for 229_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.050	2586.89	0.0008	P	4.4
2	☐	2.000	1.725	9149.12	0.0027	P	4.5
3	☐	5.000	5.296	23024.90	0.0067	P	0.3
4	☐	10.000	9.849	39760.10	0.0118	P	0.8
5	☐	100.000	100.153	380747.35	0.1137	P	0.4
6	☐	200.000	199.926	758318.35	0.2262	P	1.4
7	☐	1.000					

y = 0.0011 * x + 7.0527E-004
R = 1.0000
DL = 0.08955
BEC = 0.6252

Weight: <None>
Min Conc: <None>

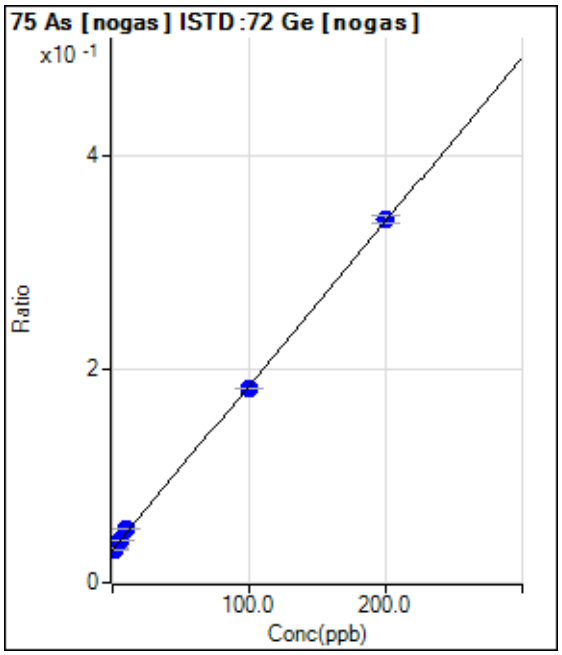


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.062	896.70	0.0008	P	14.6
2	☐	2.000	1.768	4127.20	0.0034	P	6.0
3	☐	5.000	5.424	10486.49	0.0087	P	7.2
4	☐	10.000	9.864	17825.55	0.0152	P	2.0
5	☐	100.000	100.015	171340.82	0.1462	P	1.5
6	☐	200.000	199.991	335066.83	0.2915	P	0.6
7	☐	1.000					

y = 0.0015 * x + 8.4457E-004
R = 1.0000
DL = 0.2272
BEC = 0.5811

Weight: <None>
Min Conc: <None>

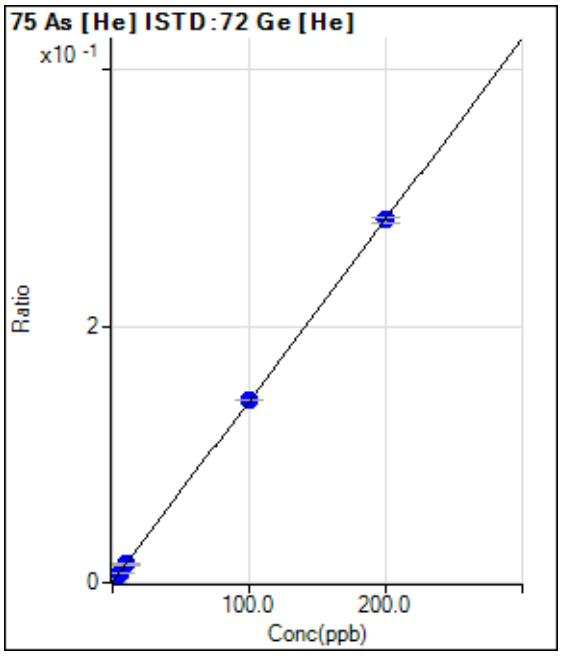
Calibration for 229_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.071	104709.27	0.0308	P	5.3
2	☐	2.000	0.200	107917.97	0.0313	P	1.6
3	☐	5.000	5.617	136418.51	0.0396	P	1.5
4	☐	10.000	12.378	168099.71	0.0500	P	0.5
5	☐	100.000	97.986	607323.13	0.1813	P	0.4
6	☐	200.000	200.890	1137029.36	0.3393	P	2.1
7	☐	1.000					

y = 0.0015 * x + 0.0310
R = 0.9998
DL = 3.199
BEC = 20.17

Weight: <None>
Min Conc: <None>

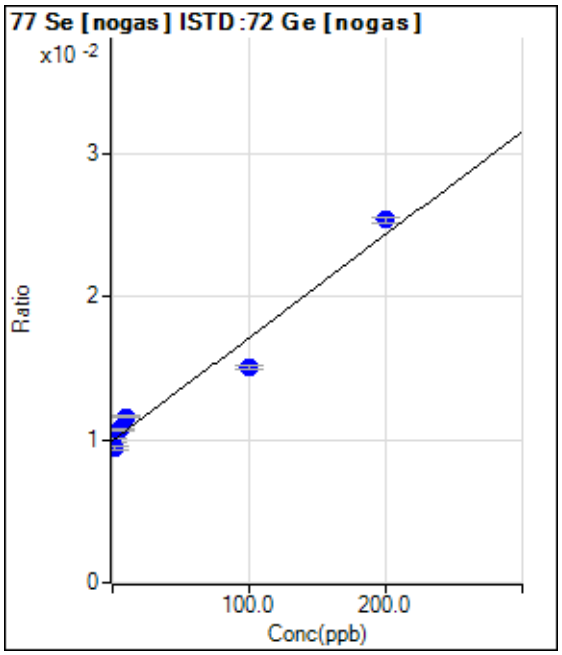


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	468.90	0.0004	P	15.8
2	☐	2.000	1.911	3740.41	0.0031	P	3.4
3	☐	5.000	4.960	8886.64	0.0074	P	3.5
4	☐	10.000	9.860	16823.34	0.0143	P	3.3
5	☐	100.000	100.215	166408.57	0.1420	P	0.1
6	☐	200.000	199.902	325080.89	0.2828	P	1.6
7	☐	1.000					

y = 0.0014 * x + 3.9448E-004
R = 1.0000
DL = 0.1321
BEC = 0.2792

Weight: <None>
Min Conc: <None>

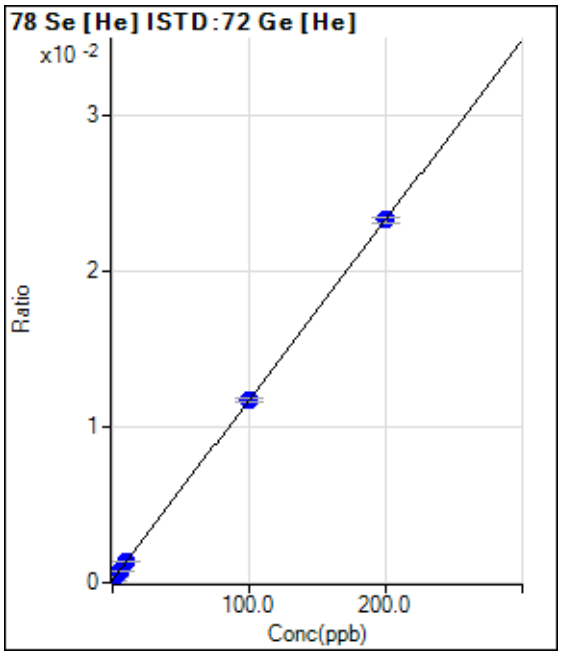
Calibration for 229_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	33758.32	0.0099	P	3.1
2	☐	2.000	-7.277	32509.45	0.0094	P	2.7
3	☐	5.000	10.692	36924.49	0.0107	P	1.1
4	☐	10.000	23.421	39138.92	0.0116	P	0.2
5	☐	100.000	70.454	50306.18	0.0150	P	1.6
6	☐	200.000	214.053	85051.33	0.0254	P	1.9
7	☐	1.000					

y = 7.2113E-005 * x + 0.0099
R = 0.9806
DL = 12.62
BEC = 137.9

Weight: <None>
Min Conc: <None>

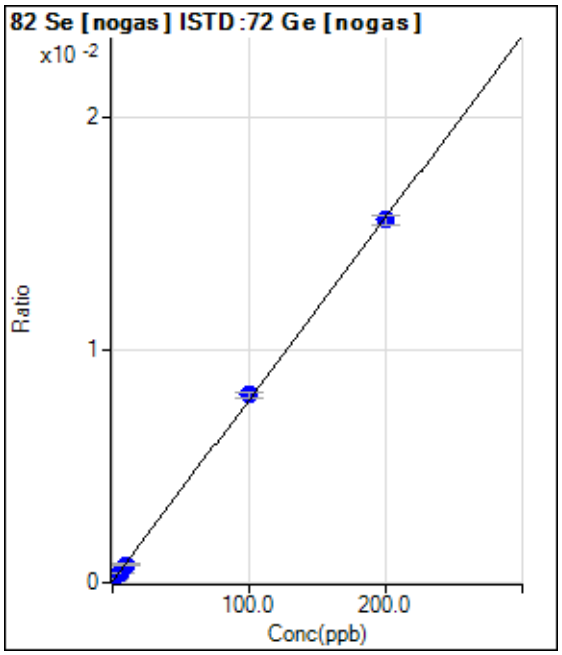


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.009	212.67	0.0002	P	6.3
2	☐	2.000	1.686	450.01	0.0004	P	13.5
3	☐	5.000	4.827	882.69	0.0007	P	8.3
4	☐	10.000	10.490	1632.08	0.0014	P	4.1
5	☐	100.000	100.010	13752.53	0.0117	P	2.0
6	☐	200.000	199.978	26765.58	0.0233	P	1.8
7	☐	1.000					

y = 1.1556E-004 * x + 1.7769E-004
R = 1.0000
DL = 0.2936
BEC = 1.538

Weight: <None>
Min Conc: <None>

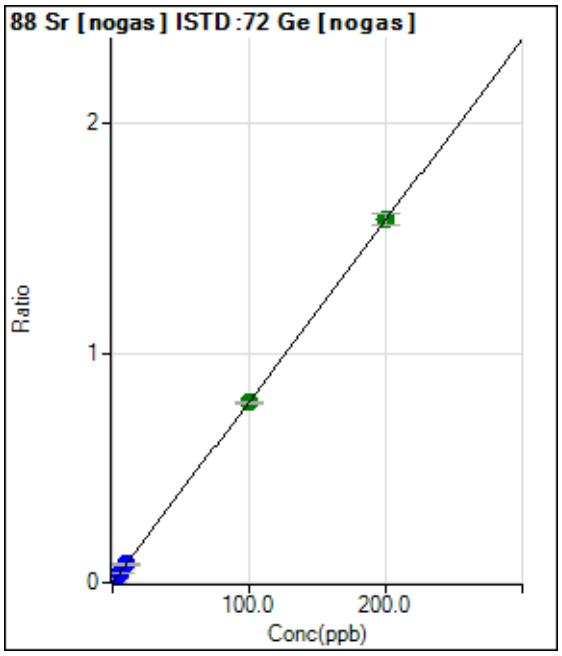
Calibration for 229_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	200.00	0.0001	P	14.9
2	☐	2.000	2.055	756.69	0.0002	P	13.9
3	☐	5.000	4.620	1446.75	0.0004	P	13.1
4	☐	10.000	9.128	2596.89	0.0008	P	4.8
5	☐	100.000	102.442	26990.46	0.0081	P	3.5
6	☐	200.000	198.832	52235.34	0.0156	P	2.9
7	☐	1.000					

y = 7.8104E-005 * x + 5.8881E-005
R = 0.9999
DL = 0.3378
BEC = 0.7539

Weight: <None>
Min Conc: <None>

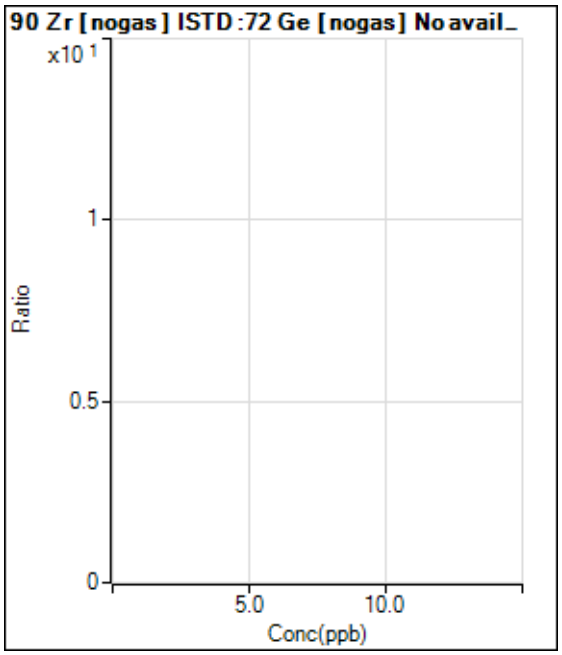


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1570.10	0.0005	P	6.1
2	☐	2.000	1.997	55907.66	0.0162	P	4.4
3	☐	5.000	4.935	135701.35	0.0394	P	1.2
4	☐	10.000	10.101	269473.84	0.0801	P	2.2
5	☐	100.000	99.388	2626097.10	0.7841	A	1.8
6	☐	200.000	200.303	5293077.21	1.5797	A	3.3
7	☐	1.000					

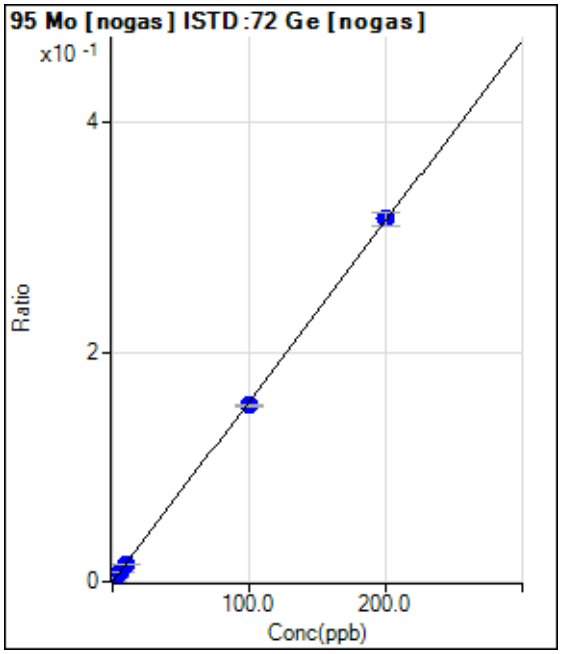
y = 0.0079 * x + 4.6256E-004
R = 1.0000
DL = 0.01077
BEC = 0.05867

Weight: <None>
Min Conc: <None>

Calibration for 229_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					

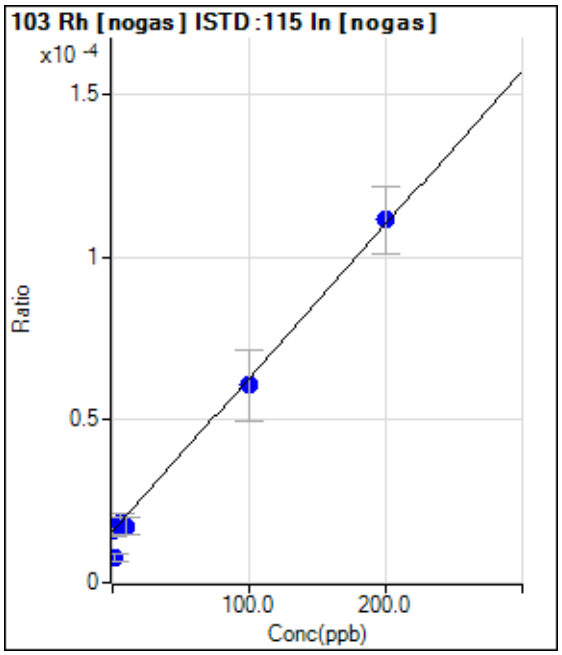


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	440.01	0.0001	P	27.4
2	☐	2.000	1.940	10966.87	0.0032	P	2.9
3	☐	5.000	4.861	26767.10	0.0078	P	2.1
4	☐	10.000	9.790	52173.96	0.0155	P	2.7
5	☐	100.000	97.685	514330.28	0.1536	P	1.8
6	☐	200.000	201.172	1059180.38	0.3161	P	3.9
7	☐	1.000					

y = 0.0016 * x + 1.2990E-004
R = 0.9999
DL = 0.06793
BEC = 0.0827

Weight: <None>
Min Conc: <None>

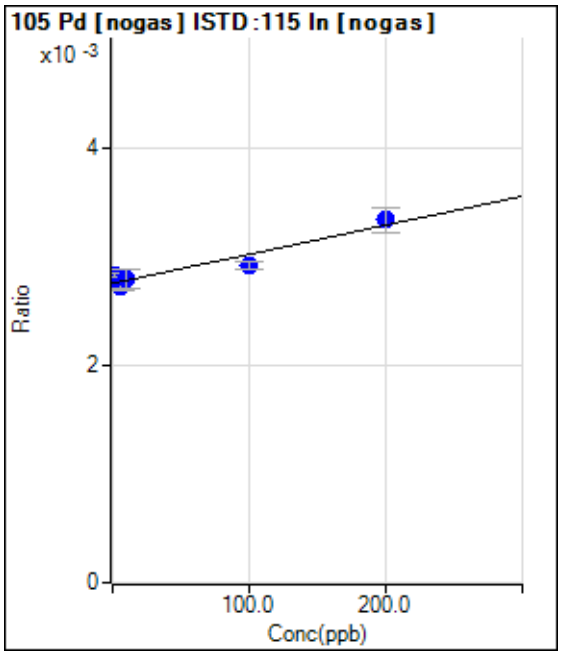
Calibration for 229_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	50.00	0.0000	P	18.3
2	☐	2.000	-17.181	23.33	0.0000	P	26.5
3	☐	5.000	5.035	56.67	0.0000	P	36.4
4	☐	10.000	3.403	53.33	0.0000	P	29.6
5	☐	100.000	95.361	186.67	0.0001	P	35.8
6	☐	200.000	202.840	336.68	0.0001	P	18.6
7	☐	1.000					

y = 4.7250E-007 * x + 1.5764E-005
R = 0.9966
DL = 18.33
BEC = 33.36

Weight: <None>
Min Conc: <None>

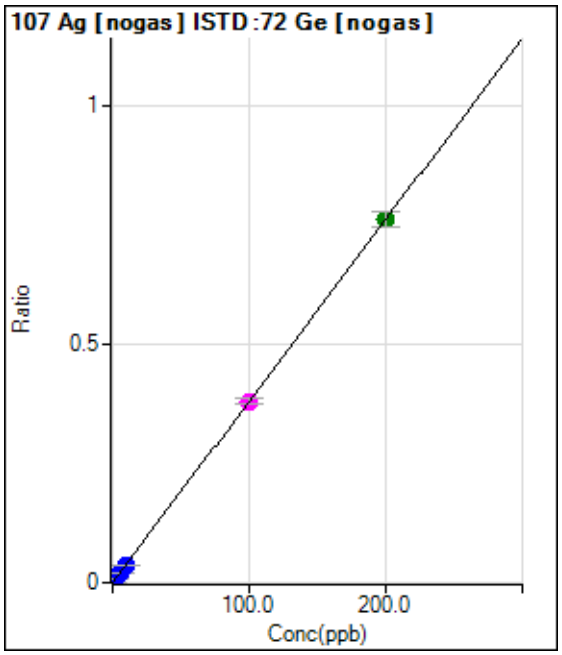


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	8705.61	0.0028	P	2.5
2	☐	2.000	29.473	8658.93	0.0028	P	1.1
3	☐	5.000	-13.329	8465.50	0.0027	P	2.6
4	☐	10.000	14.055	8575.57	0.0028	P	6.0
5	☐	100.000	63.961	8975.77	0.0029	P	2.3
6	☐	200.000	218.000	10013.02	0.0033	P	7.1
7	☐	1.000					

y = 2.6735E-006 * x + 0.0028
R = 0.9621
DL = 77.85
BEC = 1029

Weight: <None>
Min Conc: <None>

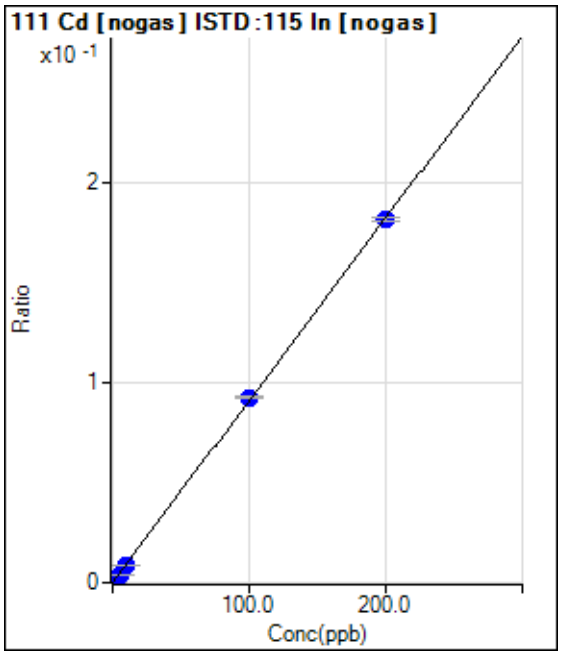
Calibration for 229_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	200.00	0.0001	P	11.3
2	☐	2.000	2.023	26723.95	0.0077	P	3.0
3	☐	5.000	4.929	64756.15	0.0188	P	0.9
4	☐	10.000	9.821	125791.82	0.0374	P	3.0
5	☐	100.000	100.095	1273754.17	0.3804	M	3.6
6	☐	200.000	199.963	2546001.26	0.7598	A	4.3
7	☐	1.000					

y = 0.0038 * x + 5.8952E-005
R = 1.0000
DL = 0.00527
BEC = 0.01552

Weight: <None>
Min Conc: <None>

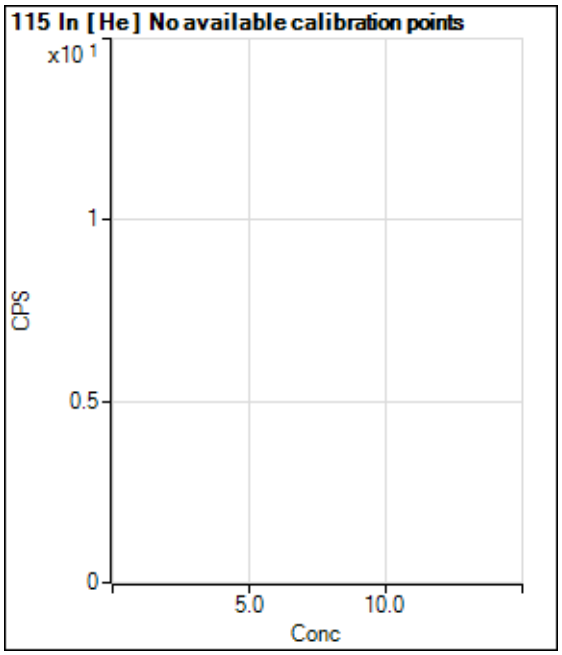


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	56.67	0.0000	P	26.1
2	☐	2.000	2.002	5634.34	0.0018	P	0.8
3	☐	5.000	4.581	13065.02	0.0042	P	2.9
4	☐	10.000	9.663	27121.38	0.0088	P	2.8
5	☐	100.000	101.727	284735.46	0.0927	P	1.3
6	☐	200.000	199.164	545439.64	0.1814	P	1.2
7	☐	1.000					

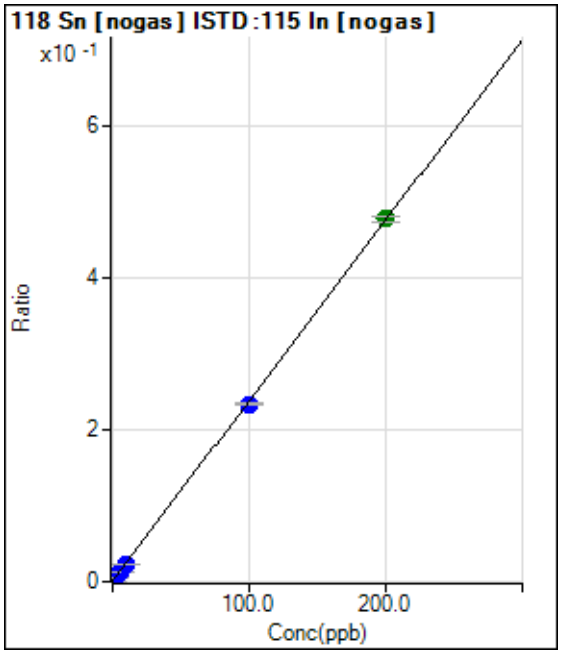
y = 9.1076E-004 * x + 1.7857E-005
R = 0.9999
DL = 0.01533
BEC = 0.01961

Weight: <None>
Min Conc: <None>

Calibration for 229_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			1649018.64		A	3.5
2	☐			1638547.48		A	6.3
3	☐			1630179.03		A	1.0
4	☐			1631832.54		A	0.8
5	☐			1592477.04		A	0.1
6	☐			1536279.75		A	0.3
7	☐						

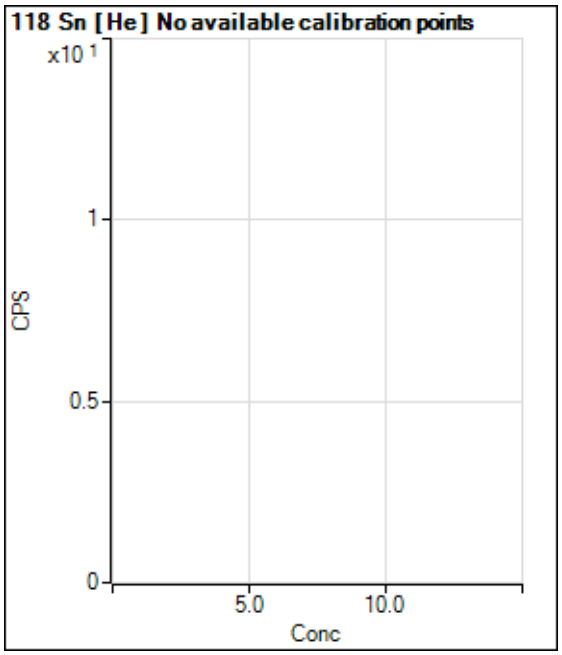


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1440.08	0.0005	P	14.4
2	☐	2.000	1.848	14799.75	0.0048	P	1.9
3	☐	5.000	4.941	37951.57	0.0122	P	3.5
4	☐	10.000	9.149	68110.64	0.0222	P	4.3
5	☐	100.000	98.300	717658.14	0.2336	P	0.8
6	☐	200.000	200.896	1433929.30	0.4769	A	1.4
7	☐	1.000					

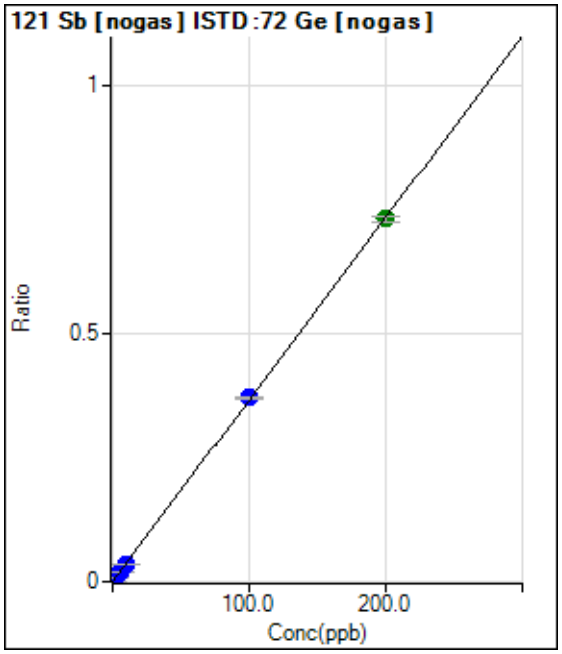
y = 0.0024 * x + 4.5583E-004
R = 0.9999
DL = 0.08294
BEC = 0.1922

Weight: <None>
Min Conc: <None>

Calibration for 229_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			810.03		P	7.7
2	☐			8708.97		P	5.1
3	☐			21339.93		P	4.1
4	☐			40396.95		P	0.6
5	☐			417720.67		P	0.4
6	☐			797679.73		P	1.2
7	☐						

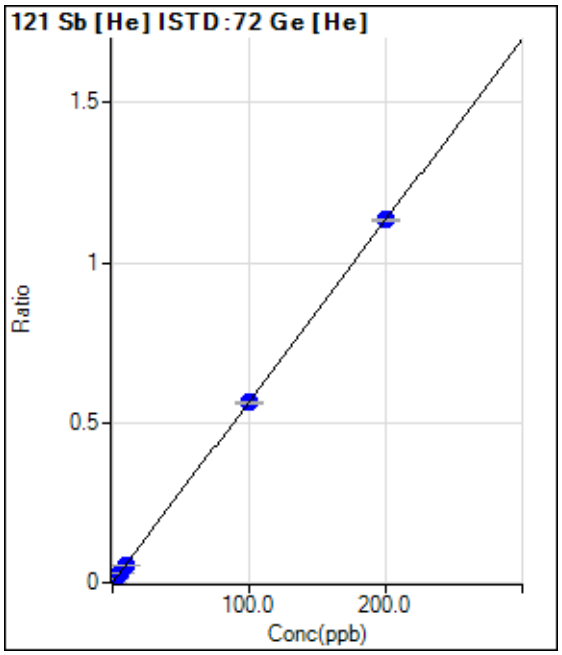


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	436.68	0.0001	P	11.9
2	☐	2.000	1.948	25091.65	0.0073	P	0.4
3	☐	5.000	4.921	62619.22	0.0182	P	2.6
4	☐	10.000	9.439	116824.32	0.0347	P	4.1
5	☐	100.000	101.035	1240755.06	0.3705	P	1.1
6	☐	200.000	199.513	2451600.69	0.7315	A	1.8
7	☐	1.000					

y = 0.0037 * x + 1.2859E-004
R = 1.0000
DL = 0.01253
BEC = 0.03508

Weight: <None>
Min Conc: <None>

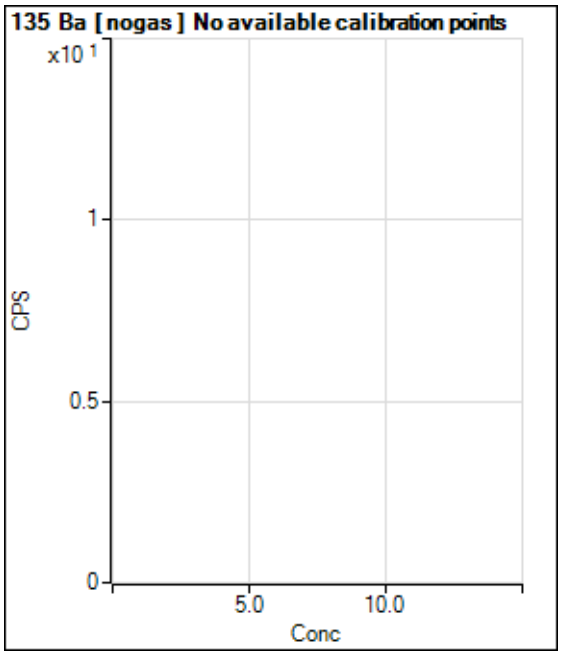
Calibration for 229_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	250.01	0.0002	P	18.2
2	☐	2.000	1.938	13512.11	0.0112	P	2.0
3	☐	5.000	4.847	33205.24	0.0276	P	4.0
4	☐	10.000	9.621	64181.04	0.0547	P	2.0
5	☐	100.000	99.664	661302.70	0.5643	P	1.2
6	☐	200.000	200.191	1302570.45	1.1332	P	0.7
7	☐	1.000					

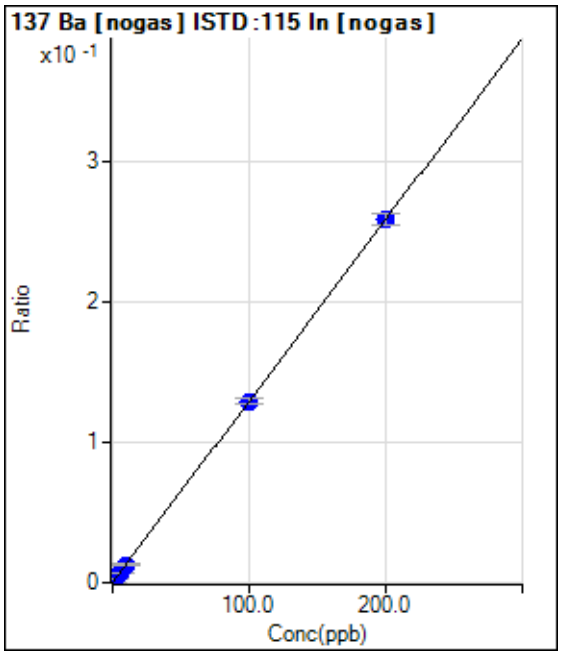
y = 0.0057 * x + 2.1011E-004
R = 1.0000
DL = 0.02028
BEC = 0.03712

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			236.67		P	35.9
2	☐			4860.75		P	2.0
3	☐			11991.01		P	1.4
4	☐			22945.56		P	2.2
5	☐			231224.19		P	1.3
6	☐			442596.22		P	1.1
7	☐						

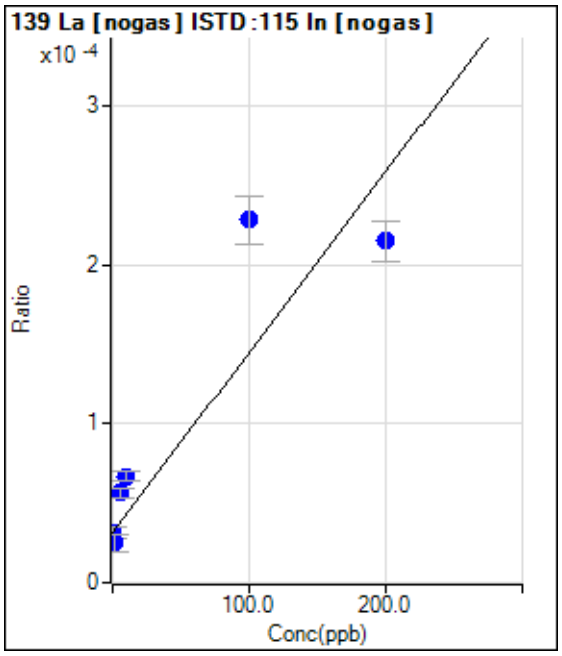
Calibration for 229_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	473.35	0.0001	P	25.0
2	☐	2.000	1.965	8232.10	0.0027	P	2.9
3	☐	5.000	5.083	20959.77	0.0067	P	4.0
4	☐	10.000	9.951	40040.45	0.0130	P	4.6
5	☐	100.000	100.076	397997.91	0.1296	P	2.5
6	☐	200.000	199.963	777655.53	0.2587	P	3.2
7	☐	1.000					

y = 0.0013 * x + 1.4884E-004
R = 1.0000
DL = 0.08627
BEC = 0.1151

Weight: <None>
Min Conc: <None>

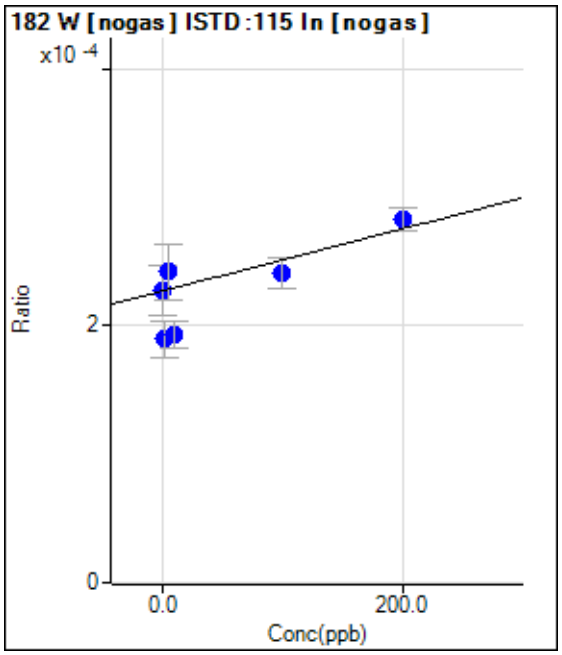


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	100.00	0.0000	P	24.4
2	☐	2.000	-5.652	76.67	0.0000	P	41.6
3	☐	5.000	22.051	176.67	0.0001	P	11.8
4	☐	10.000	31.450	206.67	0.0001	P	9.9
5	☐	100.000	173.505	703.36	0.0002	P	13.3
6	☐	200.000	161.825	646.69	0.0002	P	11.6
7	☐	1.000					

y = 1.1363E-006 * x + 3.1464E-005
R = 0.8960
DL = 20.3
BEC = 27.69

Weight: <None>
Min Conc: <None>

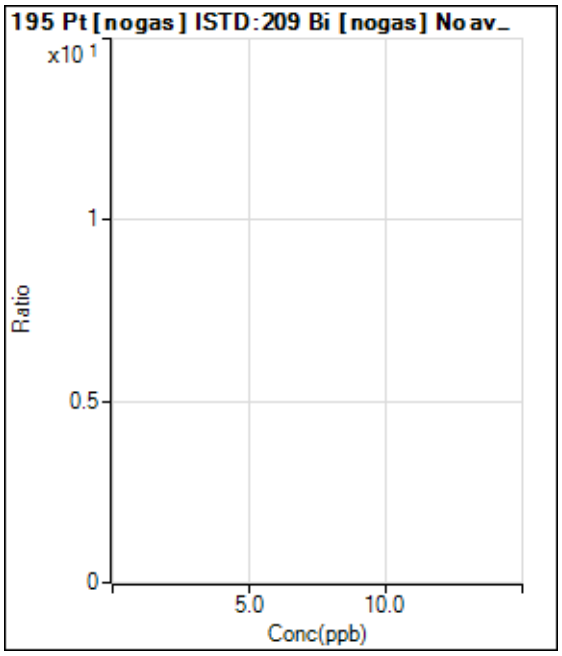
Calibration for 229_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	716.69	0.0002	P	17.2
2	☐	2.000	-154.819	580.02	0.0002	P	15.0
3	☐	5.000	62.739	753.36	0.0002	P	17.8
4	☐	10.000	-140.265	593.35	0.0002	P	11.2
5	☐	100.000	58.016	740.03	0.0002	P	9.7
6	☐	200.000	228.630	850.04	0.0003	P	6.4
7	☐	1.000					

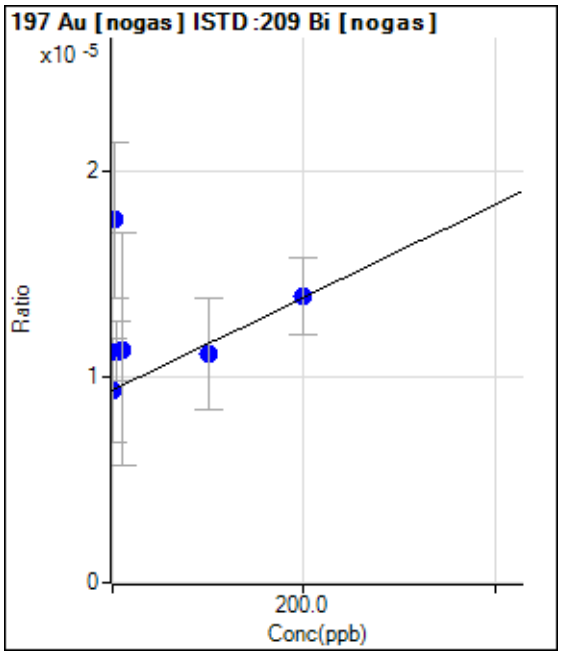
y = 2.4244E-007 * x + 2.2704E-004
R = 0.8071
DL = 483.8
BEC = 936.5

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					

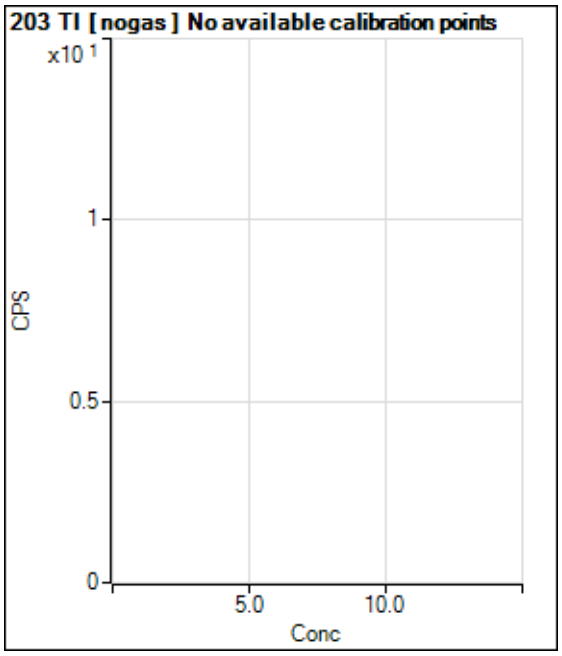
Calibration for 229_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	20.00	0.0000	P	53.2
2	☐	2.000	366.912	36.67	0.0000	P	43.1
3	☐	5.000	83.709	23.33	0.0000	P	25.8
4	☐	10.000	88.383	23.33	0.0000	P	99.1
5	☐	100.000	77.518	23.33	0.0000	P	48.9
6	☐	200.000	201.705	30.00	0.0000	P	27.2
7	☐	1.000					

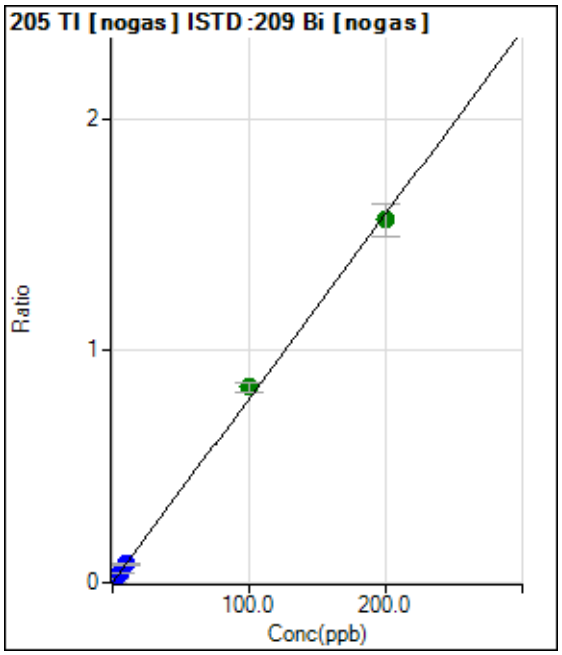
y = 2.2527E-008 * x + 9.3481E-006
R = 0.1299
DL = 662.5
BEC = 415

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			456.68		P	10.8
2	☐			14583.49		P	3.8
3	☐			35245.32		P	0.2
4	☐			69803.40		P	1.3
5	☐			749851.42		P	0.9
6	☐			1412990.35		A	0.6
7	☐						

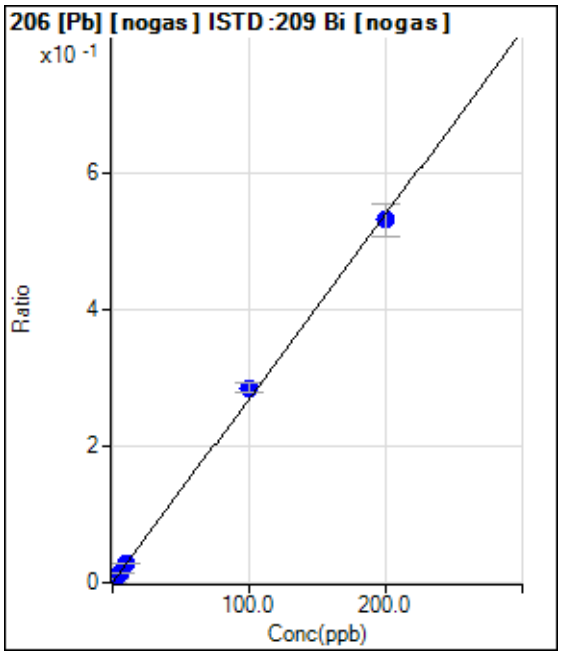
Calibration for 229_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	753.37	0.0003	P	8.7
2	☐	2.000	1.969	33284.63	0.0160	P	8.0
3	☐	5.000	5.119	85234.56	0.0410	P	1.8
4	☐	10.000	9.938	163093.01	0.0792	P	2.8
5	☐	100.000	106.015	1761425.96	0.8416	A	4.9
6	☐	200.000	196.993	3325558.39	1.5635	A	9.0
7	☐	1.000					

y = 0.0079 * x + 3.4980E-004
R = 0.9994
DL = 0.01144
BEC = 0.04408

Weight: <None>
Min Conc: <None>

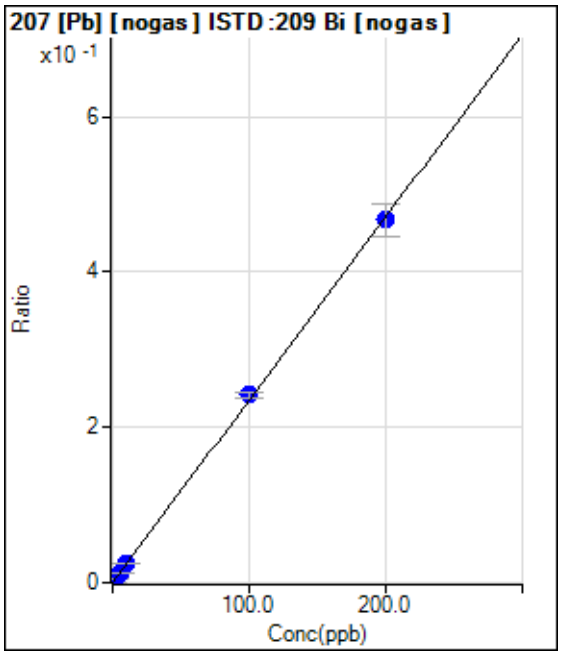


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	143.33	0.0001	P	30.2
2	☐	2.000	2.032	11584.34	0.0056	P	6.2
3	☐	5.000	5.165	29133.36	0.0140	P	4.5
4	☐	10.000	10.046	55979.97	0.0272	P	2.3
5	☐	100.000	105.665	597041.44	0.2853	P	5.0
6	☐	200.000	197.161	1132147.22	0.5323	P	8.9
7	☐	1.000					

y = 0.0027 * x + 6.6802E-005
R = 0.9994
DL = 0.0224
BEC = 0.02475

Weight: <None>
Min Conc: <None>

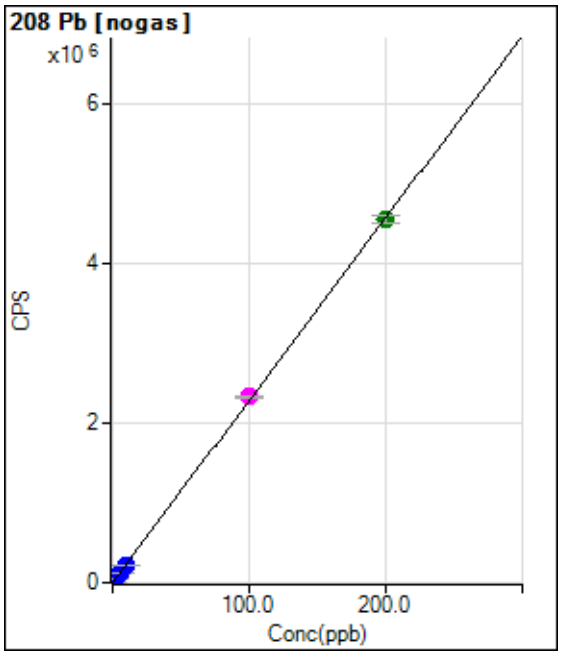
Calibration for 229_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	123.33	0.0001	P	14.1
2	☐	2.000	1.979	9826.48	0.0047	P	4.2
3	☐	5.000	5.216	25657.38	0.0123	P	4.2
4	☐	10.000	10.022	48653.66	0.0236	P	0.6
5	☐	100.000	102.780	506127.38	0.2418	P	3.4
6	☐	200.000	198.604	993724.28	0.4671	P	8.7
7	☐	1.000					

y = 0.0024 * x + 5.7260E-005
R = 0.9999
DL = 0.01027
BEC = 0.02435

Weight: <None>
Min Conc: <None>

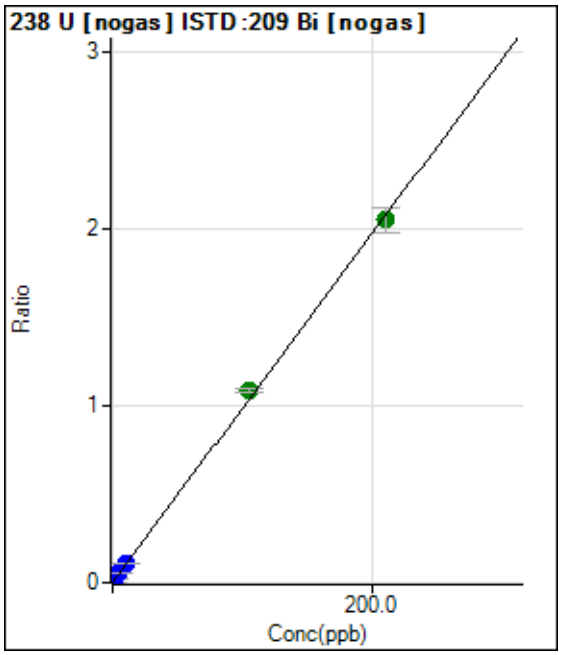


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	510.00		P	3.9
2	☐	2.000	1.976	45619.20		P	3.5
3	☐	5.000	5.054	115890.05		P	3.5
4	☐	10.000	9.833	224997.83		P	0.8
5	☐	100.000	101.873	2326179.24		M	1.4
6	☐	200.000	199.071	4545095.11		A	2.2
7	☐	1.000					

y = 22829.0200 * x + 510.0033
R = 0.9999
DL = 0.002628
BEC = 0.02234

Weight: <None>
Min Conc: <None>

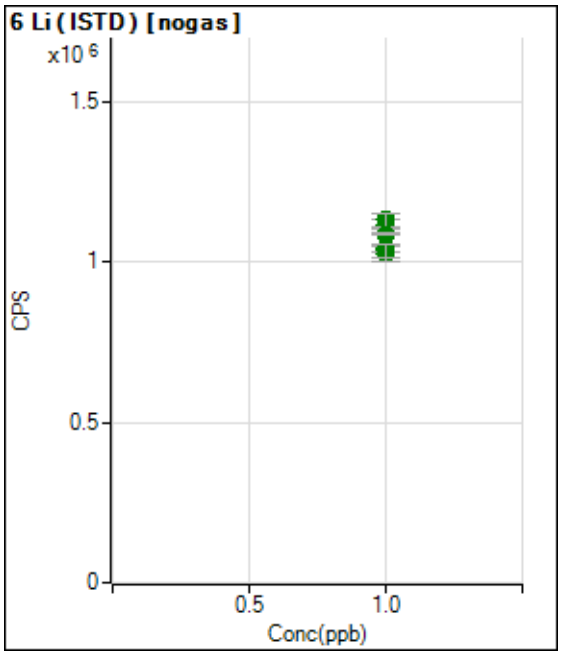
Calibration for 229_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	146.67	0.0001	P	13.4
2	☐	2.000	2.158	44653.46	0.0214	P	2.0
3	☐	5.000	5.177	106568.86	0.0512	P	3.7
4	☐	10.000	10.697	217864.80	0.1058	P	1.7
5	☐	105.000	109.889	2274671.32	1.0862	A	2.8
6	☐	210.000	207.516	4366426.29	2.0511	A	7.2
7	☐	1.000					

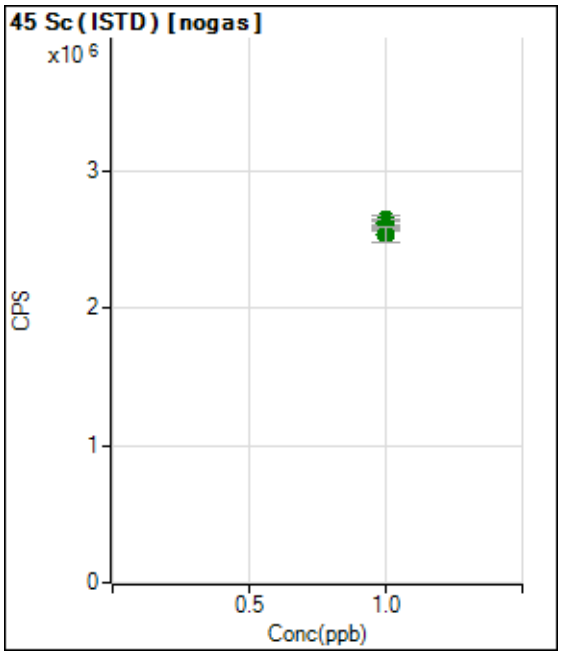
y = 0.0099 * x + 6.8151E-005
R = 0.9996
DL = 0.002766
BEC = 0.006895

Weight: <None>
Min Conc: <None>

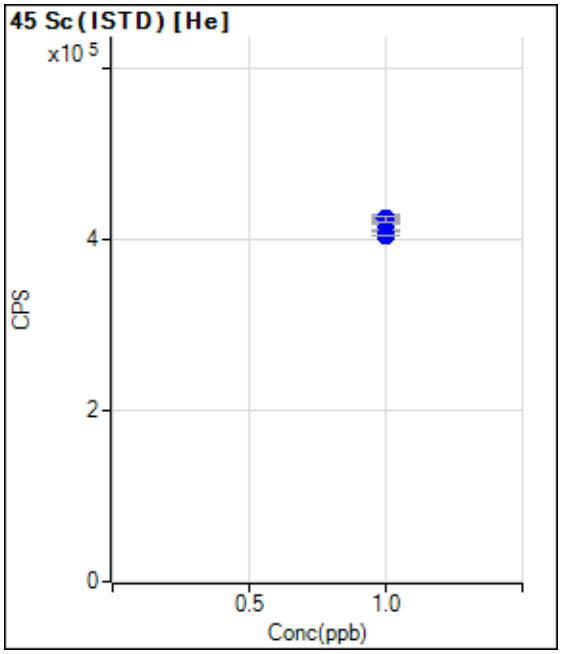


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1118107.82		A	2.4
2	☐	1.000		1132002.70		A	3.6
3	☐	1.000		1088809.33		A	0.9
4	☐	1.000		1025689.15		A	5.1
5	☐	1.000		1045106.71		A	2.0
6	☐	1.000		1035061.10		A	3.9
7	☐	1.000					

Calibration for 229_ICV.d

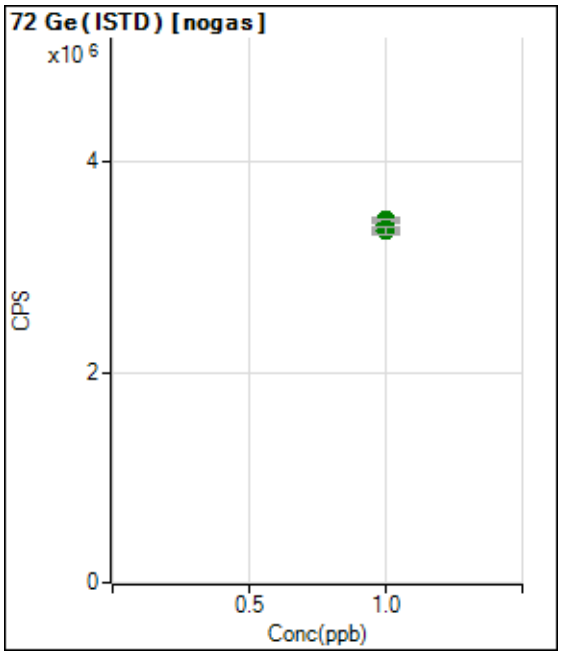


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		2610153.14		A	3.5
2	☐	1.000		2622962.88		A	1.0
3	☐	1.000		2646547.57		A	3.0
4	☐	1.000		2624362.93		A	2.3
5	☐	1.000		2590429.80		A	0.2
6	☐	1.000		2542686.78		A	4.2
7	☐	1.000					

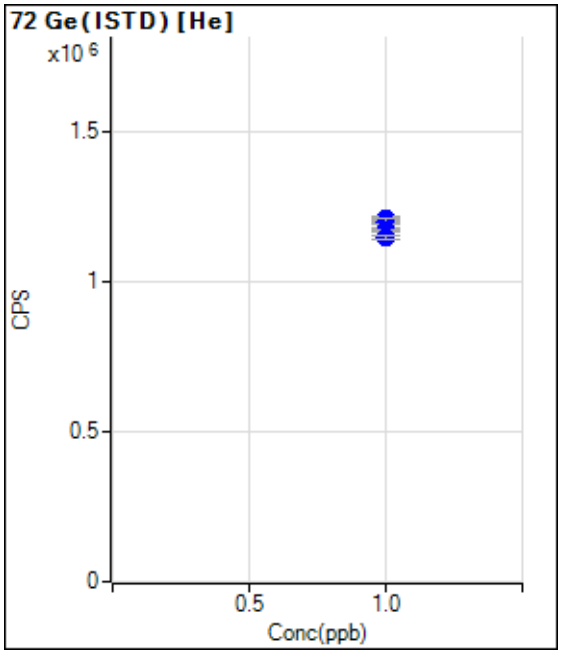


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		423249.89		P	2.9
2	☐	1.000		420397.44		P	1.9
3	☐	1.000		419873.33		P	1.1
4	☐	1.000		423041.48		P	1.2
5	☐	1.000		409286.99		P	0.3
6	☐	1.000		403557.49		P	0.4
7	☐	1.000					

Calibration for 229_ICV.d

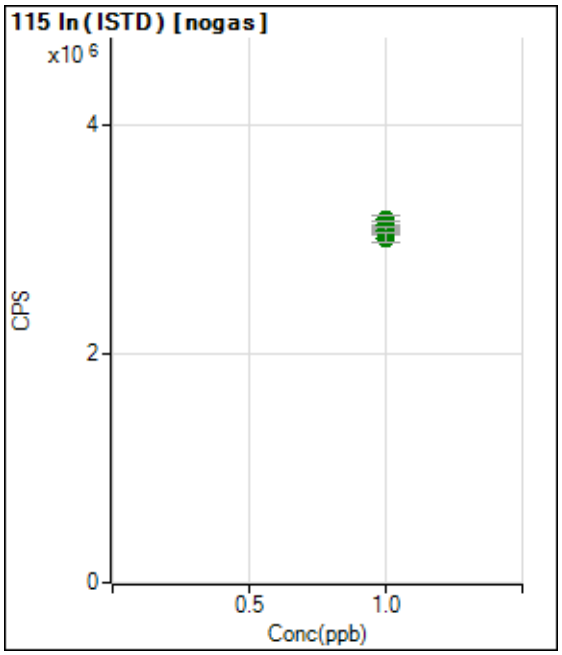


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3396393.49		A	1.8
2	☐	1.000		3451423.28		A	1.5
3	☐	1.000		3446696.83		A	0.2
4	☐	1.000		3365060.06		A	1.5
5	☐	1.000		3349000.16		A	1.0
6	☐	1.000		3352289.95		A	2.2
7	☐	1.000					

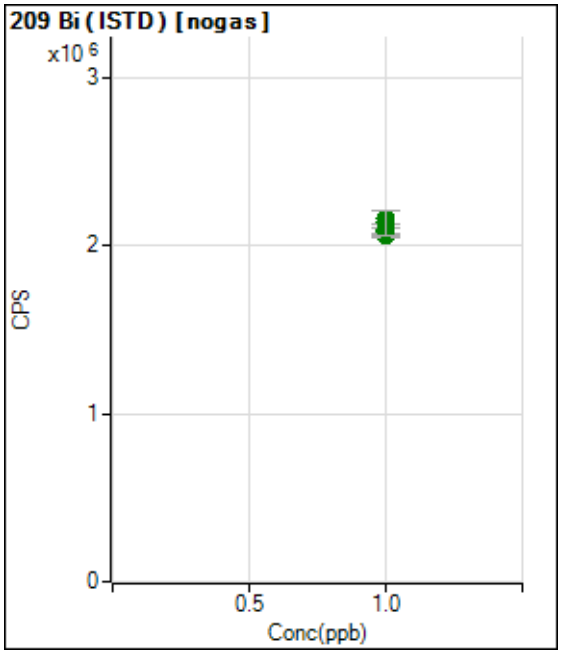


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1189985.92		P	1.3
2	☐	1.000		1209004.80		P	1.0
3	☐	1.000		1200717.82		P	1.5
4	☐	1.000		1174177.48		P	0.7
5	☐	1.000		1172038.42		P	0.6
6	☐	1.000		1149473.58		P	1.0
7	☐	1.000					

Calibration for 229_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3166421.36		A	2.7
2	☐	1.000		3060259.63		A	1.8
3	☐	1.000		3119463.11		A	2.6
4	☐	1.000		3075127.45		A	0.9
5	☐	1.000		3072752.95		A	2.0
6	☐	1.000		3007420.05		A	3.0
7	☐	1.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		2159119.29		A	4.4
2	☐	1.000		2087427.73		A	3.8
3	☐	1.000		2080979.71		A	2.6
4	☐	1.000		2059322.47		A	0.8
5	☐	1.000		2095006.90		A	3.5
6	☐	1.000		2135782.63		A	6.9
7	☐	1.000					

Calibration Blank Report

Sample Table

Sample Name	CAL BLK
Data File Name	017CALB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T11:53:39-06:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	200	33.64
Na	23	1	nogas	400159	0.00
Mg	24	1	nogas	13941	0.08
Al	27	1	nogas	28508	0.00
K	39	1	nogas	9182959	0.00
Ti	47	1	nogas	423	5.19
V	51	1	nogas	743041	0.00
Cr	52	1	nogas	61114	0.00
Mn	55	1	nogas	16514	0.01
Co	59	1	nogas	823	1.87
Ni	60	1	nogas	550	3.75
Cu	63	1	nogas	2897	0.28
Zn	66	1	nogas	880	0.47
As	75	1	nogas	93833	0.00
Sr	88	1	nogas	1060	0.39
Ag	107	1	nogas	110	33.06
Cd	111	1	nogas	20	250.00
Sb	121	1	nogas	530	1.88
Tl	205	1	nogas	433	2.02
Pb	208	1	nogas	527	3.46
[Pb]	206	1	nogas	160	10.34
[Pb]	207	1	nogas	160	14.08
Na	23	2	He	49475	0.00
Mg	24	2	He	1110	1.41
Al	27	2	He	897	1.09
K	39	2	He	216445	0.00
Ca	43	2	He	47	26.51
Ca	44	2	He	2817	0.18
V	51	2	He	13795	0.01
Cr	52	2	He	5257	0.12
Mn	55	2	He	1403	0.48
Fe	56	2	He	18970	0.02
Co	59	2	He	187	3.31
Ni	60	2	He	203	9.16
Cu	63	2	He	1037	1.09
Zn	66	2	He	317	6.64
As	75	2	He	414	2.76
Se	78	2	He	145	8.88
B	11	1	nogas	24339	0.01
Si	28	1	nogas	3401956	0.00
Ca	43	1	nogas	1063	1.03
Ca	44	1	nogas	401093	0.00

Calibration Blank Report

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	3061495	0.00
Se	77	1	nogas	30409	0.01
Se	82	1	nogas	200	5.00
Mo	95	1	nogas	200	10.00
Sn	118	1	nogas	1220	0.83
Ba	137	1	nogas	243	6.39
Sb	121	2	He	327	2.71
Li	7	1	nogas	106994	0.00
P	31	1	nogas	101149	0.00
La	139	1	nogas	77	59.75

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	6	1	nogas	1267062	6.78
Ge	72	1	nogas	2907309	6.05
In	115	1	nogas	2598912	8.71
Bi	209	1	nogas	1908675	3.11
Ge	72	2	He	1062701	0.68

Calibration Standard Report

Sample Table

Sample Name	2/10/200
Data File Name	018CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T11:55:37-06:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	017CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	14235	0.03
Na	23	1	nogas	4906228	0.00
Mg	24	1	nogas	3047285	0.00
Al	27	1	nogas	68862	0.00
K	39	1	nogas	12758610	0.00
Ti	47	1	nogas	3467	0.28
V	51	1	nogas	807109	0.00
Cr	52	1	nogas	96189	0.00
Mn	55	1	nogas	63720	0.00
Co	59	1	nogas	41781	0.00
Ni	60	1	nogas	9719	0.03
Cu	63	1	nogas	24417	0.01
Zn	66	1	nogas	7955	0.06
As	75	1	nogas	98387	0.00
Sr	88	1	nogas	49388	0.01
Ag	107	1	nogas	23346	0.01
Cd	111	1	nogas	4947	0.09
Sb	121	1	nogas	22291	0.01
Tl	205	1	nogas	31578	0.01
Pb	208	1	nogas	43133	0.00
[Pb]	206	1	nogas	10817	0.01
[Pb]	207	1	nogas	9386	0.04
Na	23	2	He	435180	0.00
Mg	24	2	He	220412	0.00
Al	27	2	He	2384	0.30
K	39	2	He	448891	0.00
Ca	43	2	He	677	2.41
Ca	44	2	He	13819	0.00
V	51	2	He	28339	0.00
Cr	52	2	He	21029	0.01
Mn	55	2	He	13749	0.01
Fe	56	2	He	1451798	0.00
Co	59	2	He	21216	0.01
Ni	60	2	He	5564	0.12
Cu	63	2	He	14679	0.01
Zn	66	2	He	3787	0.14
As	75	2	He	3217	0.14
Se	78	2	He	379	0.66
B	11	1	nogas	64218	0.00
Si	28	1	nogas	3522573	0.00

Calibration Standard Report

Ca	43	1	nogas	7288	0.05
Ca	44	1	nogas	500523	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	7072857	0.00
Se	77	1	nogas	29050	0.01
Se	82	1	nogas	680	2.06
Mo	95	1	nogas	9519	0.01
Sn	118	1	nogas	13509	0.01
Ba	137	1	nogas	7002	0.05
Sb	121	2	He	11497	0.03
P	31	1	nogas	117777	0.00
La	139	1	nogas	80	87.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1271058	4.26	1267062	100.32	70	125	
Ge	72	1	nogas	2946466	5.62	2907309	101.35	70	125	
In	115	1	nogas	2640658	9.45	2598912	101.61	70	125	
Bi	209	1	nogas	1879437	4.32	1908675	98.47	70	125	
Ge	72	2	He	1063284	0.79	1062701	100.05	70	125	

Calibration Standard Report

Sample Table

Sample Name	5/25/500
Data File Name	019CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T11:57:36-06:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	
ISTD Ref File Name	017CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	36348	0.01
Na	23	1	nogas	11845798	0.00
Mg	24	1	nogas	7652663	0.00
Al	27	1	nogas	128952	0.00
K	39	1	nogas	18431657	0.00
Ti	47	1	nogas	8495	0.00
V	51	1	nogas	1051373	0.00
Cr	52	1	nogas	158517	0.00
Mn	55	1	nogas	136116	0.00
Co	59	1	nogas	103300	0.00
Ni	60	1	nogas	24477	0.01
Cu	63	1	nogas	58514	0.01
Zn	66	1	nogas	19364	0.02
As	75	1	nogas	124891	0.00
Sr	88	1	nogas	121745	0.00
Ag	107	1	nogas	59541	0.00
Cd	111	1	nogas	12641	0.02
Sb	121	1	nogas	55117	0.00
Tl	205	1	nogas	77911	0.00
Pb	208	1	nogas	108007	0.00
[Pb]	206	1	nogas	27554	0.01
[Pb]	207	1	nogas	23811	0.01
Na	23	2	He	1025528	0.00
Mg	24	2	He	543332	0.00
Al	27	2	He	4247	0.12
K	39	2	He	809487	0.00
Ca	43	2	He	1647	0.08
Ca	44	2	He	30492	0.01
V	51	2	He	50892	0.00
Cr	52	2	He	44413	0.00
Mn	55	2	He	31794	0.01
Fe	56	2	He	3537293	0.00
Co	59	2	He	52137	0.00
Ni	60	2	He	13882	0.01
Cu	63	2	He	35735	0.01
Zn	66	2	He	8572	0.09
As	75	2	He	7911	0.04
Se	78	2	He	769	0.76
B	11	1	nogas	123614	0.00
Si	28	1	nogas	3668181	0.00

Calibration Standard Report

Ca	43	1	nogas	17392	0.01
Ca	44	1	nogas	659911	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	13170591	0.00
Se	77	1	nogas	33805	0.00
Se	82	1	nogas	1407	0.16
Mo	95	1	nogas	23609	0.01
Sn	118	1	nogas	32835	0.01
Ba	137	1	nogas	18670	0.01
Sb	121	2	He	29595	0.01
P	31	1	nogas	145212	0.00
La	139	1	nogas	123	10.04

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1269593	6.28	1267062	100.20	70	125	
Ge	72	1	nogas	2980652	4.58	2907309	102.52	70	125	
In	115	1	nogas	2674431	10.10	2598912	102.91	70	125	
Bi	209	1	nogas	1891458	6.91	1908675	99.10	70	125	
Ge	72	2	He	1061004	0.38	1062701	99.84	70	125	

Calibration Standard Report

Sample Table

Sample Name	10/50/1000
Data File Name	020CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T11:59:34-06:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	
ISTD Ref File Name	017CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	72464	0.00
Na	23	1	nogas	22632957	0.00
Mg	24	1	nogas	14603969	0.00
Al	27	1	nogas	216877	0.00
K	39	1	nogas	27185957	0.00
Ti	47	1	nogas	15924	0.03
V	51	1	nogas	1106503	0.00
Cr	52	1	nogas	249262	0.00
Mn	55	1	nogas	253503	0.00
Co	59	1	nogas	202014	0.00
Ni	60	1	nogas	44411	0.00
Cu	63	1	nogas	109742	0.00
Zn	66	1	nogas	36634	0.01
As	75	1	nogas	146426	0.00
Sr	88	1	nogas	243565	0.00
Ag	107	1	nogas	118895	0.00
Cd	111	1	nogas	24174	0.01
Sb	121	1	nogas	108007	0.00
Tl	205	1	nogas	149757	0.00
Pb	208	1	nogas	212022	0.00
[Pb]	206	1	nogas	53090	0.01
[Pb]	207	1	nogas	46795	0.01
Na	23	2	He	2032191	0.00
Mg	24	2	He	1070664	0.00
Al	27	2	He	7592	0.03
K	39	2	He	1403057	0.00
Ca	43	2	He	3400	0.07
Ca	44	2	He	56579	0.00
V	51	2	He	83324	0.00
Cr	52	2	He	82027	0.00
Mn	55	2	He	61599	0.00
Fe	56	2	He	7060976	0.00
Co	59	2	He	104317	0.00
Ni	60	2	He	26630	0.01
Cu	63	2	He	69150	0.00
Zn	66	2	He	17215	0.02
As	75	2	He	14837	0.01
Se	78	2	He	1357	0.08
B	11	1	nogas	225702	0.00
Si	28	1	nogas	3887678	0.00

Calibration Standard Report

Ca	43	1	nogas	33043	0.01
Ca	44	1	nogas	906185	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	22713721	0.00
Se	77	1	nogas	34897	0.01
Se	82	1	nogas	2560	0.21
Mo	95	1	nogas	48125	0.01
Sn	118	1	nogas	62375	0.00
Ba	137	1	nogas	35113	0.01
Sb	121	2	He	57277	0.00
P	31	1	nogas	188482	0.00
La	139	1	nogas	200	9.01

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1290762	1.80	1267062	101.87	70	125	
Ge	72	1	nogas	3117445	2.08	2907309	107.23	70	125	
In	115	1	nogas	2680381	1.44	2598912	103.13	70	125	
Bi	209	1	nogas	1945018	2.80	1908675	101.90	70	125	
Ge	72	2	He	1057039	1.10	1062701	99.47	70	125	

Calibration Standard Report

Sample Table

Sample Name	100/500/10K
Data File Name	021CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T12:01:32-06:00
Sample Type	CalStd
Level	5
Dilution	1
Comment	
ISTD Ref File Name	017CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	704529	0.00
Na	23	1	nogas	222214672	0.00
Mg	24	1	nogas	142076245	0.00
Al	27	1	nogas	1634964	0.00
K	39	1	nogas	190492688	0.00
Ti	47	1	nogas	155818	0.00
V	51	1	nogas	2875996	0.00
Cr	52	1	nogas	2081526	0.00
Mn	55	1	nogas	2424969	0.00
Co	59	1	nogas	1912202	0.00
Ni	60	1	nogas	438056	0.00
Cu	63	1	nogas	1044267	0.00
Zn	66	1	nogas	345186	0.00
As	75	1	nogas	546018	0.00
Sr	88	1	nogas	2351531	0.00
Ag	107	1	nogas	1130301	0.00
Cd	111	1	nogas	243834	0.00
Sb	121	1	nogas	1060601	0.00
Tl	205	1	nogas	1699142	0.00
Pb	208	1	nogas	2107555	0.00
[Pb]	206	1	nogas	527528	0.00
[Pb]	207	1	nogas	464688	0.00
Na	23	2	He	19203631	0.00
Mg	24	2	He	10702249	0.00
Al	27	2	He	62888	0.00
K	39	2	He	11824843	0.00
Ca	43	2	He	31978	0.01
Ca	44	2	He	532139	0.00
V	51	2	He	716683	0.00
Cr	52	2	He	786313	0.00
Mn	55	2	He	579600	0.00
Fe	56	2	He	68025277	0.00
Co	59	2	He	1024544	0.00
Ni	60	2	He	263576	0.00
Cu	63	2	He	664733	0.00
Zn	66	2	He	157724	0.00
As	75	2	He	149901	0.00
Se	78	2	He	12736	0.01
B	11	1	nogas	2027889	0.00
Si	28	1	nogas	8281308	0.00

Calibration Standard Report

Ca	43	1	nogas	330953	0.00
Ca	44	1	nogas	5555001	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	196313425	0.00
Se	77	1	nogas	46753	0.00
Se	82	1	nogas	23536	0.01
Mo	95	1	nogas	476266	0.00
Sn	118	1	nogas	618378	0.00
Ba	137	1	nogas	345389	0.00
Sb	121	2	He	578197	0.00
P	31	1	nogas	933041	0.00
La	139	1	nogas	457	4.71

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1245617	5.09	1267062	98.31	70	125	
Ge	72	1	nogas	2982906	2.85	2907309	102.60	70	125	
In	115	1	nogas	2742092	2.62	2598912	105.51	70	125	
Bi	209	1	nogas	2119037	2.49	1908675	111.02	70	125	
Ge	72	2	He	1065791	0.83	1062701	100.29	70	125	

Calibration Standard Report

Sample Table

Sample Name	200/1000/20K
Data File Name	022CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T12:03:29-06:00
Sample Type	CalStd
Level	6
Dilution	1
Comment	
ISTD Ref File Name	017CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	1447760	0.00
Na	23	1	nogas	452199093	0.00
Mg	24	1	nogas	280689981	0.00
Al	27	1	nogas	3427009	0.00
K	39	1	nogas	365605775	0.00
Ti	47	1	nogas	309703	0.00
V	51	1	nogas	4875491	0.00
Cr	52	1	nogas	3789213	0.00
Mn	55	1	nogas	4602396	0.00
Co	59	1	nogas	4018670	0.00
Ni	60	1	nogas	902154	0.00
Cu	63	1	nogas	2049870	0.00
Zn	66	1	nogas	666164	0.00
As	75	1	nogas	1017420	0.00
Sr	88	1	nogas	4762020	0.00
Ag	107	1	nogas	2256173	0.00
Cd	111	1	nogas	481597	0.00
Sb	121	1	nogas	2210878	0.00
Tl	205	1	nogas	3051749	0.00
Pb	208	1	nogas	4211457	0.00
[Pb]	206	1	nogas	1026681	0.00
[Pb]	207	1	nogas	903393	0.00
Na	23	2	He	37686065	0.00
Mg	24	2	He	21017040	0.00
Al	27	2	He	121581	0.00
K	39	2	He	22897270	0.00
Ca	43	2	He	62835	0.00
Ca	44	2	He	1067785	0.00
V	51	2	He	1422120	0.00
Cr	52	2	He	1616576	0.00
Mn	55	2	He	1147320	0.00
Fe	56	2	He	136067978	0.00
Co	59	2	He	2047925	0.00
Ni	60	2	He	513546	0.00
Cu	63	2	He	1305411	0.00
Zn	66	2	He	309181	0.00
As	75	2	He	296211	0.00
Se	78	2	He	25037	0.00
B	11	1	nogas	4258092	0.00
Si	28	1	nogas	13695397	0.00

Calibration Standard Report

Ca	43	1	nogas	649171	0.00
Ca	44	1	nogas	10511568	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	385151642	0.00
Se	77	1	nogas	68783	0.00
Se	82	1	nogas	48525	0.00
Mo	95	1	nogas	949883	0.00
Sn	118	1	nogas	1243987	0.00
Ba	137	1	nogas	690464	0.00
Sb	121	2	He	1175196	0.00
P	31	1	nogas	1792962	0.00
La	139	1	nogas	640	1.52

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1106605	0.98	1267062	87.34	70	125	
Ge	72	1	nogas	2959445	1.42	2907309	101.79	70	125	
In	115	1	nogas	2644771	0.34	2598912	101.76	70	125	
Bi	209	1	nogas	1880818	3.68	1908675	98.54	70	125	
Ge	72	2	He	1040244	1.21	1062701	97.89	70	125	

Sample Report

Sample Table

Sample Name	LLICV2
Data File Name	025SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T12:09:27-06:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	017CALB.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	1.778	1.778	9.69	14422	0.01	2000	
Na	23	1	nogas	197.825	197.825	2.77	4981130	0.00	200000	
Mg	24	1	nogas	208.445	208.445	2.29	3013980	0.01	200000	
Al	27	1	nogas	2.201	2.201	3.87	67775	0.00	2000	
K	39	1	nogas	188.555	188.555	6.22	13066669	0.00	200000	
Ti	47	1	nogas	1.881	1.881	3.43	3430	0.05	2000	
V	51	1	nogas	-13.404	-13.404	-3.79	492745	0.00	2000	
Cr	52	1	nogas	1.171	1.171	4.33	86745	0.00	2000	
Mn	55	1	nogas	2.004	2.004	2.14	64850	0.00	2000	
Co	59	1	nogas	2.043	2.043	1.26	42510	0.00	2000	
Ni	60	1	nogas	2.464	2.464	1.31	9863	0.02	2000	
Cu	63	1	nogas	2.095	2.095	2.12	25067	0.01	2000	
Zn	66	1	nogas	1.661	1.661	6.09	8162	0.02	2000	
As	75	1	nogas	-3.526	-3.526	-1.51	79375	0.00	2000	
Sr	88	1	nogas	2.038	2.038	3.80	50682	0.00	2000	
Ag	107	1	nogas	2.038	2.038	1.43	23673	0.01	2000	
Cd	111	1	nogas	1.948	1.948	1.43	4984	0.04	2000	
Sb	121	1	nogas	2.119	2.119	3.80	24357	0.01	2000	
Tl	205	1	nogas	2.582	2.582	13.07	42260	0.01	2000	
Pb	208	1	nogas	2.076	2.076	2.28	44244	0.00	2000	
U	238	1	nogas	2.095	2.095	1.46	44279	0.00	2000	
[Pb]	206	1	nogas	2.098	2.098	3.44	11394	0.02	2000	
[Pb]	207	1	nogas	2.028	2.028	2.84	9720	0.02	2000	
Na	23	2	He	204.670	204.670	2.23	445908	0.05	200000	
Mg	24	2	He	204.491	204.491	1.38	222097	0.09	200000	
Al	27	2	He	1.723	1.723	13.23	2250	0.08	2000	
K	39	2	He	211.581	211.581	0.62	457546	0.05	200000	
Ca	43	2	He	190.900	190.900	16.18	663	28.78	200000	
Ca	44	2	He	204.072	204.072	4.69	13959	1.46	200000	
V	51	2	He	1.456	1.456	2.63	22552	0.01	2000	
Cr	52	2	He	2.018	2.018	0.99	21853	0.01	2000	
Mn	55	2	He	1.978	1.978	4.35	13045	0.02	2000	
Fe	56	2	He	208.278	208.278	1.29	1470761	0.01	200000	
Co	59	2	He	2.023	2.023	2.79	21416	0.01	2000	
Ni	60	2	He	1.907	1.907	5.89	5534	0.03	2000	
Cu	63	2	He	2.019	2.019	1.53	15023	0.01	2000	
Zn	66	2	He	1.796	1.796	6.89	3550	0.05	2000	
As	75	2	He	1.938	1.938	3.53	3360	0.06	2000	
Se	78	2	He	2.268	2.268	18.53	401	0.57	2000	
B	11	1	nogas	19.322	19.322	15.33	114225	0.02	2000	
Si	28	1	nogas	-7.915	-7.915	-839.47	3554822	0.00	2000	
Ca	43	1	nogas	189.568	189.568	5.65	7422	2.55	200000	
Ca	44	1	nogas	80.751	80.751	9.60	461749	0.02	200000	
Fe	56	1	nogas	203.676	203.676	7.93	7199964	0.00	200000	
Se	77	1	nogas	-47.357	-47.357	-3.59	22968	-0.21	2000	
Se	82	1	nogas	1.912	1.912	16.50	680	0.28	2000	

Sample Report

Mo	95	1	nogas	2.431	2.431	7.94	12034	0.02	2000	
Sn	118	1	nogas	2.199	2.199	10.42	15684	0.01	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Ba	137	1	nogas	1.913	1.913	3.06	7225	0.03	2000	
Sb	121	2	He	2.066	2.066	2.55	12721	0.02	2000	
La	139	1	nogas	-0.462	-0.462	-2279.86	83	-0.55	2000	
Au	197	1	nogas	-244.365	-244.365	-121.45	20	-1221.82	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1261778	5.66	1267062	99.58	70	125	
Ge	72	1	nogas	3036671	1.44	2907309	104.45	70	125	
In	115	1	nogas	2812215	4.46	2598912	108.21	70	125	
Bi	209	1	nogas	1995306	2.68	1908675	104.54	70	125	
Ge	72	2	He	1070927	0.87	1062701	100.77	70	125	

Low Level Initial Calibration Verification (LLICV) Report

Sample Table

Sample Name	LLICV5
Data File Name	026LICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T12:11:28-06:00
Sample Type	LLICV
Dilution	1
Comment	
ISTD Ref File Name	017CALB.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	5.104	4.352	35540	3.83	5	102.1	70	130	
Na	23	1	nogas	525.237	13.151	11804103	3.34	500	105.0	70	130	
Mg	24	1	nogas	564.129	12.522	7669174	2.69	500	112.8	70	130	
Al	27	1	nogas	6.590	24.380	135815	10.27	5	131.8	70	130	LLICV Main CR1 Failed
K	39	1	nogas	536.827	16.219	18533396	0.53	500	107.4	70	130	
Ti	47	1	nogas	4.993	16.192	7942	6.44	5	99.9	70	130	
V	51	1	nogas	-1.920	-177.082	701486	1.19	5	-38.4	70	130	LLICV Main CR1 Failed
Cr	52	1	nogas	4.966	14.782	152839	0.74	5	99.3	70	130	
Mn	55	1	nogas	5.404	10.491	138641	1.23	5	108.1	70	130	
Co	59	1	nogas	5.318	7.925	104160	1.60	5	106.4	70	130	
Ni	60	1	nogas	5.824	6.702	24163	1.64	5	116.5	70	130	
Cu	63	1	nogas	5.563	10.362	58628	2.80	5	111.3	70	130	
Zn	66	1	nogas	5.276	7.407	19597	3.15	5	105.5	70	130	
As	75	1	nogas	3.494	50.873	107233	1.27	5	69.9	70	130	LLICV Main CR1 Failed
Sr	88	1	nogas	5.315	7.496	124336	1.18	5	106.3	70	130	
Ag	107	1	nogas	5.395	7.844	59564	0.79	5	107.9	70	130	
Cd	111	1	nogas	5.097	9.863	12328	0.95	5	101.9	70	130	
Sb	121	1	nogas	5.034	8.105	54449	2.60	5	100.7	70	130	
Tl	205	1	nogas	5.066	7.444	78164	1.29	5	101.3	70	130	
Pb	208	1	nogas	5.181	0.989	109626	0.98	5	103.6	70	130	
U	238	1	nogas	5.191	6.300	103980	1.41	5	103.8	70	130	
[Pb]	206	1	nogas	5.383	11.717	27480	5.09	5	107.7	70	130	
[Pb]	207	1	nogas	5.309	6.438	23938	3.19	5	106.2	70	130	
Na	23	2	He	510.344	1.904	1033291	1.13	500	102.1	70	130	
Mg	24	2	He	511.641	1.213	551785	0.18	500	102.3	70	130	
Al	27	2	He	5.826	17.326	4774	12.48	5	116.5	70	130	
K	39	2	He	516.101	0.356	804553	0.26	500	103.2	70	130	
Ca	43	2	He	505.847	1.993	1673	3.07	500	101.2	70	130	
Ca	44	2	He	510.478	1.978	30542	2.44	500	102.1	70	130	
V	51	2	He	4.642	2.737	45391	1.29	5	92.8	70	130	
Cr	52	2	He	4.974	2.750	45924	1.46	5	99.5	70	130	
Mn	55	2	He	5.008	3.923	30743	2.63	5	100.2	70	130	
Fe	56	2	He	502.559	4.746	3507079	3.79	500	100.5	70	130	
Co	59	2	He	5.017	2.545	52615	1.38	5	100.3	70	130	
Ni	60	2	He	5.038	4.694	13745	3.59	5	100.8	70	130	
Cu	63	2	He	5.071	3.474	35331	2.30	5	101.4	70	130	
Zn	66	2	He	4.864	2.163	8382	0.83	5	97.3	70	130	
As	75	2	He	4.870	1.037	7783	2.10	5	97.4	70	130	
Se	78	2	He	5.072	11.144	757	8.72	5	101.4	70	130	
B	11	1	nogas	30.915	7.284	145265	1.30	25	123.7	70	130	
Si	28	1	nogas	322.341	99.579	3713200	0.26	25	1289.4	70	130	LLICV Main CR1 Failed
Ca	43	1	nogas	525.180	12.718	17702	4.10	500	105.0	70	130	
Ca	44	1	nogas	430.970	23.080	613542	0.87	500	86.2	70	130	
Fe	56	1	nogas	526.785	12.271	12898371	1.19	500	105.4	70	130	
Se	77	1	nogas	-11.033	-140.967	28336	1.58	5	-220.7	70	130	LLICV Main CR1 Failed
Se	82	1	nogas	4.378	13.342	1237	17.65	5	87.6	70	130	
Mo	95	1	nogas	5.047	10.787	23586	2.07	5	100.9	70	130	
Sn	118	1	nogas	5.207	15.153	33462	3.75	5	104.1	70	130	
Ba	137	1	nogas	5.153	12.223	18013	2.62	5	103.1	70	130	
Sb	121	2	He	4.844	5.158	29262	3.98	5	96.9	70	130	
Li	7	1	nogas	5.421	5.761	181113	5.38	5	108.4	70	130	
P	31	1	nogas	26.763	24.478	144987	1.25	25	107.1	70	130	
La	139	1	nogas	16.844	40.232	133	22.91	5	336.9	70	130	LLICV Main CR1 Failed
Au	197	1	nogas	362.501	234.702	37	68.63	5	7250.0	70	130	LLICV Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1224352	5.41	1267062	96.63	70	125	
Ge	72	1	nogas	2907400	8.26	2907309	100.00	70	125	
In	115	1	nogas	2682214	10.11	2598912	103.21	70	125	
Bi	209	1	nogas	1902059	7.25	1908675	99.65	70	125	

Low Level Initial Calibration Verification (LLICV) Report

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	2	He	1066708	1.17	1062701	100.38	70	125	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	ICB
Data File Name	027_ICB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T12:13:25-06:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	017CALB.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	442.7	193	7.9	1	
Na	23	1	nogas	1.201	192.2	408732	1.0	100	
Mg	24	1	nogas	1.019	39.2	26389	10.4	100	
Al	27	1	nogas	0.552	35.8	36997	2.5	5	
K	39	1	nogas	6.244	621.4	9150573	0.5	100	
Ti	47	1	nogas	-0.046	-35.9	353	12.8	2.5	
V	51	1	nogas	-4.668	-34.6	638595	3.2	2.5	
Cr	52	1	nogas	-0.179	-99.8	56991	2.9	2.5	
Mn	55	1	nogas	0.104	78.7	18563	3.1	2.5	
Co	59	1	nogas	0.004	56.9	887	10.2	2.5	
Ni	60	1	nogas	0.471	2.9	643	3.2	2.5	
Cu	63	1	nogas	0.022	33.5	3077	7.0	1	
Zn	66	1	nogas	-0.152	-31.8	1843	3.5	2.5	
As	75	1	nogas	-0.695	-113.6	87335	3.7	2.5	
Sr	88	1	nogas	0.015	26.5	1380	4.4	2.5	
Ag	107	1	nogas	0.005	72.1	163	18.7	2.5	
Cd	111	1	nogas	0.016	89.5	53	57.3	1	
Sb	121	1	nogas	0.033	40.7	873	15.6	2.5	
Tl	205	1	nogas	0.074	52.9	1400	26.8	1	
Pb	208	1	nogas	0.003	150.0	600	18.3	2.5	
U	238	1	nogas	0.012	54.2	393	19.4	2.5	
[Pb]	206	1	nogas	0.001	1021.5	150	35.3	2.5	
[Pb]	207	1	nogas	-0.001	-2437.9	140	31.1	2.5	
Na	23	2	He	-0.330	-46.6	49130	1.1	100	
Mg	24	2	He	0.637	46.9	1807	19.1	100	
Al	27	2	He	0.047	334.2	1210	8.9	5	
K	39	2	He	2.050	74.5	218781	0.8	100	
Ca	43	2	He	-1.110	-176.7	43	13.3	100	
Ca	44	2	He	5.075	62.5	3110	5.9	100	
V	51	2	He	-0.006	-928.9	11971	2.3	2.5	
Cr	52	2	He	-0.042	-54.4	4941	2.7	2.5	
Mn	55	2	He	0.098	22.9	1987	7.9	2.5	
Fe	56	2	He	0.608	20.0	23322	4.6	100	
Co	59	2	He	0.002	150.2	213	17.7	2.5	
Ni	60	2	He	-0.086	-24.9	267	20.7	2.5	
Cu	63	2	He	-0.020	-101.6	1343	9.1	1	
Zn	66	2	He	0.061	29.1	797	3.8	2.5	
As	75	2	He	-0.012	-85.2	399	2.6	2.5	
Se	78	2	He	0.180	13.4	133	2.3	1	
B	11	1	nogas	3.440	23.2	36412	1.2	10	
Si	28	1	nogas	93.134	294.9	3440835	0.2	5	ICB Main CR1 Failed
Ca	43	1	nogas	2.265	317.1	1107	12.5	100	
Ca	44	1	nogas	-96.058	-49.5	348012	0.9	100	
Fe	56	1	nogas	1.282	1069.8	3038665	1.7	100	

Initial Calibration Blank (ICB) Report

Se	77	1	nogas	-6.613	-192.7	28750	0.6	2.5	
Se	82	1	nogas	0.144	92.3	230	7.5	1	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Mo	95	1	nogas	0.033	18.5	350	7.6	2.5	
Sn	118	1	nogas	0.024	52.0	1333	12.2	5	
Ba	137	1	nogas	0.021	101.0	300	10.0	2.5	
Sb	121	2	He	0.021	132.8	453	37.0	2.5	
P	31	1	nogas	0.309	1466.3	100076	1.4	10	
La	139	1	nogas	37.059	65.4	187	48.0	2.5	ICB Main CR1 Failed
Au	197	1	nogas	145.355	605.6	27	78.1	2.5	ICB Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1203664	7.05	1267062	95.00	70	125	
Ge	72	1	nogas	2865773	7.30	2907309	98.57	70	125	
In	115	1	nogas	2538431	12.98	2598912	97.67	70	125	
Bi	209	1	nogas	1749131	11.12	1908675	91.64	70	125	
Ge	72	2	He	1068926	1.28	1062701	100.59	70	125	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	ICV
Data File Name	028_ICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T12:15:26-06:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	017CALB.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	107.456	9.212	721308	3.60	100	107.5	90	110	
Na	23	1	nogas	9336.373	4.923	226365847	1.22	10000	93.4	90	110	
Mg	24	1	nogas	9535.292	3.426	144364487	2.86	10000	95.4	90	110	
Al	27	1	nogas	96.690	9.926	1638039	3.54	100	96.7	90	110	
K	39	1	nogas	10325.826	4.527	192415771	2.15	10000	103.3	90	110	
Ti	47	1	nogas	101.332	7.548	155848	1.24	100	101.3	90	110	
V	51	1	nogas	103.600	8.826	2882026	0.74	100	103.6	90	110	
Cr	52	1	nogas	112.488	9.516	2176673	8.03	100	112.5	90	110	ICV Main CR1 Failed
Mn	55	1	nogas	107.271	4.029	2486278	7.16	100	107.3	90	110	
Co	59	1	nogas	99.897	0.941	1977445	7.39	100	99.9	90	110	
Ni	60	1	nogas	102.211	8.346	453924	4.57	100	102.2	90	110	
Cu	63	1	nogas	103.461	6.994	1056067	2.23	100	103.5	90	110	
Zn	66	1	nogas	103.663	5.100	345912	1.90	100	103.7	90	110	
As	75	1	nogas	99.279	7.003	545872	1.19	100	99.3	90	110	
Sr	88	1	nogas	96.694	2.814	2283768	7.16	100	96.7	90	110	
Ag	107	1	nogas	102.390	6.946	1145252	0.72	100	102.4	90	110	
Cd	111	1	nogas	101.693	5.585	247176	2.85	100	101.7	90	110	
Sb	121	1	nogas	98.206	7.125	1067871	2.01	100	98.2	90	110	
Tl	205	1	nogas	99.521	6.436	1674291	8.14	100	99.5	90	110	
Pb	208	1	nogas	99.439	1.142	2094531	1.14	100	99.4	90	110	
U	238	1	nogas	100.292	6.392	2195626	7.12	100	100.3	90	110	
[Pb]	206	1	nogas	92.566	1.257	515792	0.81	100	92.6	90	110	
[Pb]	207	1	nogas	93.618	0.713	459069	1.85	100	93.6	90	110	
Na	23	2	He	10216.592	0.821	19504676	0.19	10000	102.2	90	110	
Mg	24	2	He	10244.397	0.838	10894927	0.71	10000	102.4	90	110	
Al	27	2	He	100.362	1.712	62402	0.99	100	100.4	90	110	
K	39	2	He	10207.821	1.400	11848464	1.37	10000	102.1	90	110	
Ca	43	2	He	9892.007	3.739	31464	3.35	10000	98.9	90	110	
Ca	44	2	He	10042.847	2.180	541372	1.49	10000	100.4	90	110	
V	51	2	He	100.559	2.062	726756	1.75	100	100.6	90	110	
Cr	52	2	He	97.863	0.815	795438	1.47	100	97.9	90	110	
Mn	55	2	He	101.241	1.146	587377	0.52	100	101.2	90	110	
Fe	56	2	He	10191.912	2.364	69918542	1.69	10000	101.9	90	110	
Co	59	2	He	100.513	2.910	1038018	2.33	100	100.5	90	110	
Ni	60	2	He	101.065	2.094	263205	1.52	100	101.1	90	110	
Cu	63	2	He	100.399	1.389	663812	0.71	100	100.4	90	110	
Zn	66	2	He	101.051	1.560	158419	0.91	100	101.1	90	110	
As	75	2	He	100.566	1.930	150682	1.54	100	100.6	90	110	
Se	78	2	He	100.196	2.515	12734	2.05	100	100.2	90	110	
B	11	1	nogas	516.550	6.670	1997507	2.12	500	103.3	90	110	
Si	28	1	nogas	4906.615	12.589	8348413	1.28	5000	98.1	90	110	
Ca	43	1	nogas	9993.614	6.232	323312	0.64	10000	99.9	90	110	
Ca	44	1	nogas	10061.783	9.187	5457448	2.39	10000	100.6	90	110	
Fe	56	1	nogas	10368.860	5.145	200043038	1.67	10000	103.7	90	110	
Se	77	1	nogas	86.921	22.064	46476	1.19	100	86.9	90	110	ICV Main CR1 Failed
Se	82	1	nogas	99.342	6.766	23833	0.86	100	99.3	90	110	
Mo	95	1	nogas	100.423	4.241	473854	4.07	100	100.4	90	110	
Sn	118	1	nogas	99.132	6.368	620422	2.69	100	99.1	90	110	
Ba	137	1	nogas	99.961	6.912	347412	2.40	100	100.0	90	110	
Sb	121	2	He	99.384	0.280	587061	0.56	100	99.4	90	110	
Li	7	1	nogas	103.464	0.517	1542193	9.26	100	103.5	90	110	
P	31	1	nogas	493.326	6.333	926316	1.24	500	98.7	90	110	
La	139	1	nogas	103.990	18.720	393	7.34	100	104.0	90	110	
Au	197	1	nogas	-170.826	-259.749	23	65.47	100	-170.8	90	110	ICV Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1191007	8.98	1267062	94.00	70	125	
Ge	72	1	nogas	2946601	6.56	2907309	101.35	70	125	
In	115	1	nogas	2690095	8.30	2598912	103.51	70	125	
Bi	209	1	nogas	2076069	1.86	1908675	108.77	70	125	

Initial Calibration Verification (ICV) Report

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	2	He	1053859	0.68	1062701	99.17	70	125	

Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	ICSA
Data File Name	029ICSA.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T12:17:24-06:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	017CALB.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	0.009	141.8	233	32.2	0	ICSA Main CR1 Failed
Na	23	1	nogas	108755.864	8.2	2228807916	2.3	0	
Mg	24	1	nogas	112175.931	8.8	1436329365	0.1	0	
Al	27	1	nogas	100286.944	5.0	1639173256	1.3	0	
K	39	1	nogas	105954.747	5.1	1849863841	1.4	0	
Ti	47	1	nogas	2263.513	6.0	3406188	3.2	0	
V	51	1	nogas	-12.703	-5.8	481846	1.0	0	ICSA Main CR1 Failed
Cr	52	1	nogas	0.784	38.2	75152	3.8	0	ICSA Main CR1 Failed
Mn	55	1	nogas	0.344	12.3	24153	2.1	0	ICSA Main CR1 Failed
Co	59	1	nogas	0.516	8.0	10783	3.7	0	ICSA Main CR1 Failed
Ni	60	1	nogas	1.603	3.9	5604	5.8	0	ICSA Main CR1 Failed
Cu	63	1	nogas	1.362	9.6	16528	11.6	0	ICSA Main CR1 Failed
Zn	66	1	nogas	1.382	12.0	6838	4.2	0	ICSA Main CR1 Failed
As	75	1	nogas	0.230	268.7	92165	0.9	0	ICSA Main CR1 Failed
Sr	88	1	nogas	0.933	2.9	22608	1.2	0	ICSA Main CR1 Failed
Ag	107	1	nogas	0.043	31.1	580	21.2	0	ICSA Main CR1 Failed
Cd	111	1	nogas	1.666	8.0	3800	11.6	0	ICSA Main CR1 Failed
Sb	121	1	nogas	0.552	13.9	6405	8.9	0	ICSA Main CR1 Failed
Tl	205	1	nogas	0.310	51.7	4631	44.2	0	ICSA Main CR1 Failed
Pb	208	1	nogas	0.093	11.5	2480	9.1	0	ICSA Main CR1 Failed
[Pb]	206	1	nogas	0.101	41.0	603	30.1	0	ICSA Main CR1 Failed
[Pb]	207	1	nogas	0.086	38.9	490	26.7	0	ICSA Main CR1 Failed
Na	23	2	He	106055.946	1.0	190350837	0.3	0	
Mg	24	2	He	104492.517	1.2	104703022	1.0	0	
Al	27	2	He	97585.015	0.5	56114292	1.1	0	
K	39	2	He	101456.944	0.3	115828688	0.3	0	
Ca	43	2	He	101679.810	1.6	304360	1.3	0	
Ca	44	2	He	101322.075	0.5	5123310	1.1	0	
V	51	2	He	-0.402	-5.5	8467	1.2	0	ICSA Main CR1 Failed
Cr	52	2	He	0.254	25.0	6845	7.3	0	ICSA Main CR1 Failed
Mn	55	2	He	0.306	11.0	2980	5.5	0	ICSA Main CR1 Failed
Fe	56	2	He	106096.337	1.0	685765750	1.7	0	
Co	59	2	He	0.317	2.4	3260	2.9	0	ICSA Main CR1 Failed
Ni	60	2	He	0.214	4.3	983	2.6	0	ICSA Main CR1 Failed
Cu	63	2	He	0.349	12.1	3544	7.5	0	ICSA Main CR1 Failed
Zn	66	2	He	0.236	23.1	997	8.1	0	ICSA Main CR1 Failed
As	75	2	He	0.126	31.0	564	9.6	0	ICSA Main CR1 Failed
Se	78	2	He	0.518	24.0	164	8.5	0	ICSA Main CR1 Failed
B	11	1	nogas	8.806	31.7	53373	15.2	0	ICSA Main CR1 Failed
Si	28	1	nogas	474.265	35.8	3847105	1.3	0	
Ca	43	1	nogas	104310.650	4.0	3300266	2.0	0	
Ca	44	1	nogas	103300.480	4.3	51330468	3.6	0	
Fe	56	1	nogas	107550.966	5.3	2004844911	1.6	0	
Se	77	1	nogas	1.428	251.6	30466	2.1	0	ICSA Main CR1 Failed
Se	82	1	nogas	0.528	30.4	323	14.6	0	ICSA Main CR1 Failed
Mo	95	1	nogas	2126.847	4.3	9825829	0.5	0	
Sn	118	1	nogas	0.260	32.1	2674	13.0	0	ICSA Main CR1 Failed
Ba	137	1	nogas	0.244	17.1	1020	11.0	0	ICSA Main CR1 Failed
Sb	121	2	He	0.428	11.2	2684	9.2	0	ICSA Main CR1 Failed

Interference Check Solution A (ICS-A) Report

P	31	1	nogas	98962.007	4.2	162138181	1.4	0	
La	139	1	nogas	45.749	45.8	203	24.8	0	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1124826	4.46	1267062	88.77	70	125	
Ge	72	1	nogas	2885116	3.81	2907309	99.24	70	125	
In	115	1	nogas	2501944	5.70	2598912	96.27	70	125	
Bi	209	1	nogas	1709165	3.29	1908675	89.55	70	125	
Ge	72	2	He	993030	0.68	1062701	93.44	70	125	

Interference Check Solution AB (ICS-AB) Report

Sample Table

Sample Name	ICSAB
Data File Name	030ICSB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T12:19:25-06:00
Sample Type	ICSB
Dilution	1
Comment	
ISTD Ref File Name	017CALB.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	134.339	4.719	807533	1.39	100	134.3	80	120	ICSB Main CR1 Failed
Na	23	1	nogas	118532.511	6.820	2526710256	1.59	100	118532.5	80	120	
Mg	24	1	nogas	122613.795	5.396	1634701770	0.69	100	122613.8	80	120	
Al	27	1	nogas	102502.331	3.323	1659433842	1.34	100	102502.3	80	120	ICSB Main CR1 Failed
K	39	1	nogas	122704.648	0.819	2121624514	2.67	100	122704.6	80	120	ICSB Main CR1 Failed
Ti	47	1	nogas	2426.506	2.058	3618911	3.21	100	2426.5	80	120	ICSB Main CR1 Failed
V	51	1	nogas	125.208	1.056	3233593	4.06	100	125.2	80	120	ICSB Main CR1 Failed
Cr	52	1	nogas	118.326	0.877	2220112	2.70	100	118.3	80	120	
Mn	55	1	nogas	117.685	2.851	2641384	1.63	100	117.7	80	120	
Co	59	1	nogas	117.674	3.300	2255472	2.15	100	117.7	80	120	
Ni	60	1	nogas	116.147	3.641	501263	1.29	100	116.1	80	120	
Cu	63	1	nogas	120.086	4.333	1189877	0.99	100	120.1	80	120	
Zn	66	1	nogas	122.033	3.622	394815	0.74	100	122.0	80	120	ICSB Main CR1 Failed
As	75	1	nogas	127.088	3.084	653337	1.38	100	127.1	80	120	ICSB Main CR1 Failed
Sr	88	1	nogas	120.909	4.877	2764665	2.05	100	120.9	80	120	
Ag	107	1	nogas	115.725	3.079	1257557	0.43	100	115.7	80	120	
Cd	111	1	nogas	126.019	5.671	281489	1.53	100	126.0	80	120	ICSB Main CR1 Failed
Sb	121	1	nogas	118.026	2.426	1246867	1.07	100	118.0	80	120	
Tl	205	1	nogas	119.595	4.600	1653933	2.63	100	119.6	80	120	
Pb	208	1	nogas	110.160	2.565	2320302	2.56	100	110.2	80	120	
U	238	1	nogas	131.219	6.895	2360269	0.73	100	131.2	80	120	ICSB Main CR1 Failed
[Pb]	206	1	nogas	125.064	5.040	573178	1.32	100	125.1	80	120	ICSB Main CR1 Failed
[Pb]	207	1	nogas	125.754	2.878	507562	3.26	100	125.8	80	120	ICSB Main CR1 Failed
Na	23	2	He	117208.862	0.742	214815683	0.78	100	117208.9	80	120	
Mg	24	2	He	115645.382	1.386	118323305	0.72	100	115645.4	80	120	
Al	27	2	He	99253.852	0.676	58277444	0.49	100	99253.9	80	120	ICSB Main CR1 Failed
K	39	2	He	116247.908	2.182	132683291	2.18	100	116247.9	80	120	ICSB Main CR1 Failed
Ca	43	2	He	115514.238	1.684	353064	1.12	100	115514.2	80	120	ICSB Main CR1 Failed
Ca	44	2	He	113319.150	1.445	5850221	0.85	100	113319.2	80	120	
V	51	2	He	118.031	0.703	818827	0.63	100	118.0	80	120	
Cr	52	2	He	115.304	1.083	900829	1.11	100	115.3	80	120	
Mn	55	2	He	116.417	0.292	649730	0.93	100	116.4	80	120	
Fe	56	2	He	119576.892	1.201	789165082	0.87	100	119576.9	80	120	ICSB Main CR1 Failed
Co	59	2	He	117.105	0.225	1163745	0.73	100	117.1	80	120	
Ni	60	2	He	117.031	1.101	293210	1.09	100	117.0	80	120	
Cu	63	2	He	115.783	1.245	736373	0.47	100	115.8	80	120	
Zn	66	2	He	116.040	1.236	174944	0.70	100	116.0	80	120	
As	75	2	He	119.601	1.031	172355	0.38	100	119.6	80	120	
Se	78	2	He	121.551	0.403	14843	0.89	100	121.6	80	120	ICSB Main CR1 Failed
B	11	1	nogas	680.302	7.357	2345148	2.84	100	680.3	80	120	ICSB Main CR1 Failed
Si	28	1	nogas	6373.412	5.699	9535092	1.27	100	6373.4	80	120	ICSB Main CR1 Failed
Ca	43	1	nogas	116091.366	5.017	3634941	1.57	100	116091.4	80	120	
Ca	44	1	nogas	117730.402	3.775	57847422	0.47	100	117730.4	80	120	ICSB Main CR1 Failed
Fe	56	1	nogas	121426.550	2.450	2242160850	1.61	100	121426.5	80	120	ICSB Main CR1 Failed
Se	77	1	nogas	178.613	5.035	61270	0.93	100	178.6	80	120	ICSB Main CR1 Failed
Se	82	1	nogas	116.665	3.696	27154	2.03	100	116.7	80	120	
Mo	95	1	nogas	2285.315	2.270	10457615	1.34	100	2285.3	80	120	ICSB Main CR1 Failed
Sn	118	1	nogas	122.980	6.015	707169	0.44	100	123.0	80	120	ICSB Main CR1 Failed
Ba	137	1	nogas	123.669	6.088	395102	0.59	100	123.7	80	120	ICSB Main CR1 Failed
Sb	121	2	He	117.432	1.468	667349	0.92	100	117.4	80	120	
La	139	1	nogas	197.302	19.371	627	21.67	100	197.3	80	120	ICSB Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1062780	4.60	1267062	83.88	70	125	
Ge	72	1	nogas	2856088	3.49	2907309	98.24	70	125	
In	115	1	nogas	2469610	5.41	2598912	95.02	70	125	
Bi	209	1	nogas	1710911	6.06	1908675	89.64	70	125	
Ge	72	2	He	1014018	0.77	1062701	95.42	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	042_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T12:43:06-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	017CALB.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	114.036	4.533	696997	1.48	100	114.0	90	110	CCV Main CR1-2 Failed
Na	23	1	nogas	10189.414	12.322	237554730	3.63	10000	101.9	90	110	
Mg	24	1	nogas	10304.164	11.286	150022228	1.74	10000	103.0	90	110	
Al	27	1	nogas	101.044	5.704	1870795	2.53	100	101.0	90	110	
K	39	1	nogas	10269.691	4.332	208916217	0.85	10000	102.7	90	110	
Ti	47	1	nogas	102.380	6.884	171974	3.06	100	102.4	90	110	
V	51	1	nogas	89.108	10.037	2821268	3.91	100	89.1	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	100.816	5.146	2135980	1.96	100	100.8	90	110	
Mn	55	1	nogas	103.455	4.732	2613241	2.10	100	103.5	90	110	
Co	59	1	nogas	98.190	4.956	2116634	2.98	100	98.2	90	110	
Ni	60	1	nogas	97.973	3.065	475468	1.11	100	98.0	90	110	
Cu	63	1	nogas	101.081	3.584	1127411	0.56	100	101.1	90	110	
Zn	66	1	nogas	104.805	4.781	381703	1.25	100	104.8	90	110	
As	75	1	nogas	97.046	5.147	585001	1.18	100	97.0	90	110	
Sr	88	1	nogas	104.607	7.294	2689019	3.42	100	104.6	90	110	
Ag	107	1	nogas	101.046	3.991	1234986	0.66	100	101.0	90	110	
Cd	111	1	nogas	106.128	7.571	267540	1.72	100	106.1	90	110	
Sb	121	1	nogas	100.587	5.199	1194700	1.52	100	100.6	90	110	
Tl	205	1	nogas	103.398	1.154	1608725	3.22	100	103.4	90	110	
Pb	208	1	nogas	104.140	0.492	2193530	0.49	100	104.1	90	110	
U	238	1	nogas	107.701	8.390	2177242	4.08	100	107.7	90	110	
[Pb]	206	1	nogas	105.704	2.641	544946	1.71	100	105.7	90	110	
[Pb]	207	1	nogas	105.825	3.702	479908	0.55	100	105.8	90	110	
Na	23	2	He	9956.132	1.426	20546781	1.33	10000	99.6	90	110	
Mg	24	2	He	9712.781	1.846	11164586	1.13	10000	97.1	90	110	
Al	27	2	He	96.337	2.244	64794	1.45	100	96.3	90	110	
K	39	2	He	10970.318	1.049	12717344	1.03	10000	109.7	90	110	
Ca	43	2	He	10102.690	2.229	34733	1.55	10000	101.0	90	110	
Ca	44	2	He	9873.160	2.093	575347	1.61	10000	98.7	90	110	
V	51	2	He	99.031	0.157	773859	0.96	100	99.0	90	110	
Cr	52	2	He	96.798	1.396	850411	0.51	100	96.8	90	110	
Mn	55	2	He	96.729	2.031	606634	1.14	100	96.7	90	110	
Fe	56	2	He	9835.915	0.887	72941047	0.36	10000	98.4	90	110	
Co	59	2	He	99.402	1.660	1109629	0.90	100	99.4	90	110	
Ni	60	2	He	101.720	0.141	286371	1.09	100	101.7	90	110	
Cu	63	2	He	101.312	0.356	724100	1.28	100	101.3	90	110	
Zn	66	2	He	100.880	1.376	170976	2.32	100	100.9	90	110	
As	75	2	He	99.002	1.566	160347	1.18	100	99.0	90	110	
Se	78	2	He	98.120	0.546	13482	0.90	100	98.1	90	110	
B	11	1	nogas	602.943	4.379	2118314	3.73	500	120.6	90	110	CCV Main CR1-2 Failed
Si	28	1	nogas	4324.831	9.058	8486721	1.62	5000	86.5	90	110	CCV Main CR1-2 Failed
Ca	43	1	nogas	9931.299	3.097	351072	1.76	10000	99.3	90	110	
Ca	44	1	nogas	9910.558	4.410	5884738	2.10	10000	99.1	90	110	
Fe	56	1	nogas	10275.139	2.089	216599488	3.01	10000	102.8	90	110	
Se	77	1	nogas	69.774	7.117	47435	2.30	100	69.8	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	100.338	4.653	26293	0.80	100	100.3	90	110	
Mo	95	1	nogas	101.142	4.236	520624	0.88	100	101.1	90	110	
Sn	118	1	nogas	103.879	6.006	675022	2.76	100	103.9	90	110	
Ba	137	1	nogas	103.791	5.440	374649	0.79	100	103.8	90	110	
Sb	121	2	He	98.245	1.274	627252	0.49	100	98.2	90	110	
Li	7	1	nogas	114.373	5.087	1534766	2.34	100	114.4	90	110	CCV Main CR1-2 Failed
P	31	1	nogas	473.621	4.065	975711	0.35	500	94.7	90	110	
La	139	1	nogas	84.499	32.809	347	18.32	100	84.5	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	102.565	296.393	30	33.33	100	102.6	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	nogas	1080128	3.33	1267062	85.25	70	125	
Ge	72	1	nogas	3213163	3.78	2907309	110.52	70	125	
In	115	1	nogas	2789924	6.01	2598912	107.35	70	125	
Bi	209	1	nogas	1922002	4.21	1908675	100.70	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1139134	0.95	1062701	107.19	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	043_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T12:45:04-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	017CALB.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	0.071	10.2	687	10.5	1	
Na	23	1	nogas	60.189	8.1	1964764	3.6	100	
Mg	24	1	nogas	8.630	20.4	150328	15.5	100	
Al	27	1	nogas	0.378	15.4	39178	3.3	5	
K	39	1	nogas	-40.473	-17.3	9557476	0.7	100	
Ti	47	1	nogas	0.118	49.4	683	14.7	2.5	
V	51	1	nogas	-21.679	-1.6	341228	2.8	2.5	
Cr	52	1	nogas	-1.067	-6.0	46635	2.2	2.5	
Mn	55	1	nogas	0.593	5.4	33774	1.7	2.5	
Co	59	1	nogas	0.062	26.6	2290	15.6	2.5	
Ni	60	1	nogas	0.673	5.3	1740	9.4	2.5	
Cu	63	1	nogas	0.192	20.6	5448	8.1	2	
Zn	66	1	nogas	-0.175	-29.0	2027	8.6	2.5	
As	75	1	nogas	-6.538	-5.9	70195	3.1	2.5	
Sr	88	1	nogas	0.126	9.4	4487	6.7	2.5	
Ag	107	1	nogas	0.065	35.6	927	30.6	2.5	
Cd	111	1	nogas	0.063	20.0	190	19.0	1	
Sb	121	1	nogas	0.836	13.7	10710	12.5	2.5	
Tl	205	1	nogas	0.622	56.6	11222	55.2	1	
Pb	208	1	nogas	0.080	42.2	2203	32.1	2.5	
U	238	1	nogas	0.147	46.3	3527	44.6	2.5	
[Pb]	206	1	nogas	0.084	46.4	657	34.9	2.5	
[Pb]	207	1	nogas	0.054	59.9	450	37.4	2.5	
Na	23	2	He	47.443	2.6	153612	2.5	100	
Mg	24	2	He	6.822	1.7	9206	1.5	100	
Al	27	2	He	-0.131	-83.4	1193	5.1	5	
K	39	2	He	12.682	29.9	230897	1.9	100	
Ca	43	2	He	6.399	138.5	73	41.7	100	
Ca	44	2	He	6.048	52.0	3434	3.7	100	
V	51	2	He	-0.843	-3.4	6446	3.7	2.5	
Cr	52	2	He	-0.023	-170.2	5534	5.4	2.5	
Mn	55	2	He	0.182	10.5	2690	2.8	2.5	
Fe	56	2	He	6.971	1.3	73409	1.8	100	
Co	59	2	He	0.047	19.4	740	15.3	2.5	
Ni	60	2	He	-0.059	-20.0	367	8.3	2.5	
Cu	63	2	He	0.067	27.1	2097	5.5	2	
Zn	66	2	He	-0.028	-277.4	710	17.6	2.5	
As	75	2	He	0.015	275.7	478	14.0	2.5	
Se	78	2	He	0.595	26.0	203	11.9	2	
B	11	1	nogas	12.947	10.3	74925	8.9	10	CCB Main CR1 Failed
Si	28	1	nogas	-659.686	-4.6	3103897	0.8	5	
Ca	43	1	nogas	10.844	39.0	1583	10.0	100	
Ca	44	1	nogas	-242.120	-2.5	316724	0.5	100	
Fe	56	1	nogas	-0.363	-2228.3	3446172	4.6	100	
Se	77	1	nogas	-58.483	-4.4	22494	1.7	2.5	
Se	82	1	nogas	0.255	29.7	293	7.1	2	
Mo	95	1	nogas	0.453	38.7	2597	34.9	2.5	
Sn	118	1	nogas	0.427	42.0	4321	27.2	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.216	33.1	1100	23.6	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.817	9.1	5668	7.0	2.5	
P	31	1	nogas	-8.028	-16.2	99108	2.0	10	
La	139	1	nogas	13.044	64.8	133	21.7	2.5	CCB Main CR1 Failed
Au	197	1	nogas	-281.838	-100.5	20	50.0	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	nogas	1227550	3.67	1267062	96.88	70	125	
Ge	72	1	nogas	3270250	0.77	2907309	112.48	70	125	
In	115	1	nogas	2955980	1.82	2598912	113.74	70	125	
Bi	209	1	nogas	2122741	2.17	1908675	111.22	70	125	
Ge	72	2	He	1161151	1.77	1062701	109.26	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	054_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T13:07:56-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	017CALB.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	115.401	5.714	697291	0.28	100	115.4	90	110	CCV Main CR1-2 Failed
Na	23	1	nogas	9748.090	3.231	246162714	0.97	10000	97.5	90	110	
Mg	24	1	nogas	9922.999	1.111	156440295	1.56	10000	99.2	90	110	
Al	27	1	nogas	96.785	2.390	1907202	4.49	100	96.8	90	110	
K	39	1	nogas	9964.169	0.882	215750788	1.68	10000	99.6	90	110	
Ti	47	1	nogas	97.503	2.499	174169	1.17	100	97.5	90	110	
V	51	1	nogas	89.851	2.793	3018461	3.30	100	89.9	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	94.628	3.986	2134715	2.46	100	94.6	90	110	
Mn	55	1	nogas	97.763	4.517	2624143	2.10	100	97.8	90	110	
Co	59	1	nogas	94.824	4.947	2171273	3.22	100	94.8	90	110	
Ni	60	1	nogas	94.845	3.124	488819	0.77	100	94.8	90	110	
Cu	63	1	nogas	98.132	1.167	1163132	1.41	100	98.1	90	110	
Zn	66	1	nogas	101.982	1.480	394925	2.77	100	102.0	90	110	
As	75	1	nogas	97.821	3.175	625674	0.96	100	97.8	90	110	
Sr	88	1	nogas	97.448	4.111	2663067	1.66	100	97.4	90	110	
Ag	107	1	nogas	97.790	1.801	1270007	0.69	100	97.8	90	110	
Cd	111	1	nogas	103.150	2.196	274528	0.53	100	103.1	90	110	
Sb	121	1	nogas	95.370	2.393	1203960	1.11	100	95.4	90	110	
Tl	205	1	nogas	98.103	8.497	1603087	4.55	100	98.1	90	110	
Pb	208	1	nogas	103.720	0.583	2184684	0.58	100	103.7	90	110	
U	238	1	nogas	101.195	2.014	2157655	4.18	100	101.2	90	110	
[Pb]	206	1	nogas	100.283	6.656	543434	2.18	100	100.3	90	110	
[Pb]	207	1	nogas	99.646	5.958	475258	1.86	100	99.6	90	110	
Na	23	2	He	10002.520	2.327	21285952	0.95	10000	100.0	90	110	
Mg	24	2	He	9810.133	2.074	11629044	0.64	10000	98.1	90	110	
Al	27	2	He	97.746	1.439	67785	0.46	100	97.7	90	110	
K	39	2	He	11212.557	1.068	12993381	1.05	10000	112.1	90	110	CCV Main CR1-2 Failed
Ca	43	2	He	9964.709	0.861	35337	1.54	10000	99.6	90	110	
Ca	44	2	He	9706.836	1.241	583438	0.55	10000	97.1	90	110	
V	51	2	He	99.208	2.497	799340	0.90	100	99.2	90	110	
Cr	52	2	He	97.119	1.803	879899	0.18	100	97.1	90	110	
Mn	55	2	He	97.121	1.968	628153	0.55	100	97.1	90	110	
Fe	56	2	He	9882.783	2.632	75571897	1.15	10000	98.8	90	110	
Co	59	2	He	99.196	3.713	1141768	2.29	100	99.2	90	110	
Ni	60	2	He	101.444	1.655	294505	0.05	100	101.4	90	110	
Cu	63	2	He	101.428	0.789	747675	1.96	100	101.4	90	110	
Zn	66	2	He	100.795	0.830	176172	1.46	100	100.8	90	110	
As	75	2	He	100.597	1.156	168027	0.53	100	100.6	90	110	
Se	78	2	He	98.479	2.689	13953	1.58	100	98.5	90	110	
B	11	1	nogas	613.525	4.844	2130279	0.66	500	122.7	90	110	CCV Main CR1-2 Failed
Si	28	1	nogas	4013.635	3.989	8658522	0.45	5000	80.3	90	110	CCV Main CR1-2 Failed
Ca	43	1	nogas	9483.037	2.611	356143	1.63	10000	94.8	90	110	
Ca	44	1	nogas	9387.748	1.671	5947809	1.06	10000	93.9	90	110	
Fe	56	1	nogas	9901.563	4.142	221688755	1.65	10000	99.0	90	110	
Se	77	1	nogas	103.943	7.078	57541	1.21	100	103.9	90	110	
Se	82	1	nogas	97.877	1.789	27264	0.99	100	97.9	90	110	
Mo	95	1	nogas	95.478	1.681	522295	1.06	100	95.5	90	110	
Sn	118	1	nogas	100.592	2.601	689807	3.52	100	100.6	90	110	
Ba	137	1	nogas	100.967	3.830	384401	2.11	100	101.0	90	110	
Sb	121	2	He	96.946	3.047	638243	1.63	100	96.9	90	110	
Li	7	1	nogas	113.464	7.155	1505336	1.34	100	113.5	90	110	CCV Main CR1-2 Failed
P	31	1	nogas	473.432	2.231	1036297	0.56	500	94.7	90	110	
La	139	1	nogas	99.847	23.361	420	19.49	100	99.8	90	110	
Au	197	1	nogas	-149.945	-232.810	23	49.49	100	-149.9	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	nogas	1068940	5.34	1267062	84.36	70	125	
Ge	72	1	nogas	3411913	2.50	2907309	117.36	70	125	
In	115	1	nogas	2937401	1.74	2598912	113.02	70	125	
Bi	209	1	nogas	2022928	4.65	1908675	105.99	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1174886	1.61	1062701	110.56	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	055_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T13:09:55-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	017CALB.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	0.040	60.8	460	37.1	1	
Na	23	1	nogas	55.145	4.6	1865889	3.3	100	
Mg	24	1	nogas	4.720	33.0	90975	26.5	100	
Al	27	1	nogas	-0.407	-11.3	25277	3.4	5	
K	39	1	nogas	-12.266	-48.1	10387861	0.4	100	
Ti	47	1	nogas	0.051	13.6	583	2.6	2.5	
V	51	1	nogas	-17.542	-2.4	447718	2.8	2.5	
Cr	52	1	nogas	-0.867	-4.4	52194	0.9	2.5	
Mn	55	1	nogas	0.571	7.1	34108	2.6	2.5	
Co	59	1	nogas	0.040	24.8	1860	11.4	2.5	
Ni	60	1	nogas	0.681	5.0	1830	10.1	2.5	
Cu	63	1	nogas	0.171	10.5	5344	3.6	2	
Zn	66	1	nogas	-0.423	-3.7	1143	4.5	2.5	
As	75	1	nogas	-3.617	-4.9	87318	0.4	2.5	
Sr	88	1	nogas	0.077	13.3	3307	8.2	2.5	
Ag	107	1	nogas	0.038	35.0	610	27.1	2.5	
Cd	111	1	nogas	0.068	8.5	220	4.5	1	
Sb	121	1	nogas	0.380	24.8	5338	21.3	2.5	
Tl	205	1	nogas	0.487	58.3	8703	53.6	1	
Pb	208	1	nogas	0.063	29.5	1850	21.1	2.5	
U	238	1	nogas	0.100	52.6	2407	46.3	2.5	
[Pb]	206	1	nogas	0.059	11.2	507	6.0	2.5	
[Pb]	207	1	nogas	0.045	49.0	400	26.3	2.5	
Na	23	2	He	46.992	1.6	155618	1.2	100	
Mg	24	2	He	3.548	5.8	5474	4.6	100	
Al	27	2	He	91.145	174.4	63740	170.8	5	CCB Main CR1 Failed
K	39	2	He	28.217	4.4	248599	0.6	100	
Ca	43	2	He	-0.562	-494.4	50	20.0	100	
Ca	44	2	He	-5.253	-95.0	2822	10.8	100	
V	51	2	He	-0.663	-2.1	8007	1.2	2.5	
Cr	52	2	He	0.014	400.7	5984	8.6	2.5	
Mn	55	2	He	0.096	15.7	2190	4.4	2.5	
Fe	56	2	He	3.560	7.5	48557	4.4	100	
Co	59	2	He	0.025	39.0	503	23.0	2.5	
Ni	60	2	He	-0.093	-8.5	277	8.3	2.5	
Cu	63	2	He	0.006	176.1	1687	5.0	2	
Zn	66	2	He	-0.183	-26.6	453	18.8	2.5	
As	75	2	He	0.003	52.4	467	0.7	2.5	
Se	78	2	He	0.338	39.8	170	11.2	2	
B	11	1	nogas	5.811	17.2	45832	9.1	10	
Si	28	1	nogas	-744.384	-5.3	3091330	1.5	5	
Ca	43	1	nogas	5.087	148.9	1413	19.7	100	
Ca	44	1	nogas	-273.427	-0.9	307333	0.3	100	
Fe	56	1	nogas	8.173	54.6	3724827	1.9	100	
Se	77	1	nogas	-32.578	-2.5	28459	1.1	2.5	
Se	82	1	nogas	0.152	145.9	273	22.4	2	
Mo	95	1	nogas	0.254	50.1	1597	42.1	2.5	
Sn	118	1	nogas	0.190	56.5	2884	24.1	5	
Ba	137	1	nogas	0.053	71.3	513	27.3	2.5	

Continuing Calibration Blank (CCB) Report

Sb	121	2	He	0.272	21.3	2167	17.9	2.5	
P	31	1	nogas	0.597	49.7	118260	1.1	10	
La	139	1	nogas	4.826	167.0	113	22.2	2.5	CCB Main CR1 Failed
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Au	197	1	nogas	-70.858	-502.2	27	43.3	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	nogas	1206025	3.90	1267062	95.18	70	125	
Ge	72	1	nogas	3358863	0.70	2907309	115.53	70	125	
In	115	1	nogas	3180305	3.04	2598912	122.37	70	125	
Bi	209	1	nogas	2096794	1.86	1908675	109.86	70	125	
Ge	72	2	He	1183602	0.17	1062701	111.38	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	064_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T13:27:44-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	017CALB.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
Be	9	1	nogas	118.954	0.880	808760	1.16	100	119.0	90	110	CCV Main CR1-2 Failed
Na	23	1	nogas	10478.573	6.206	288430548	2.22	10000	104.8	90	110	
Mg	24	1	nogas	10664.562	7.993	183050646	0.93	10000	106.6	90	110	
Al	27	1	nogas	96.634	2.427	2147620	2.76	100	96.6	90	110	
K	39	1	nogas	10069.903	2.695	245840422	2.07	10000	100.7	90	110	
Ti	47	1	nogas	101.265	1.993	204080	1.02	100	101.3	90	110	
V	51	1	nogas	96.614	1.844	3587143	1.94	100	96.6	90	110	
Cr	52	1	nogas	103.172	2.467	2619149	1.52	100	103.2	90	110	
Mn	55	1	nogas	103.506	3.244	3134559	2.43	100	103.5	90	110	
Co	59	1	nogas	99.518	3.481	2571674	2.55	100	99.5	90	110	
Ni	60	1	nogas	97.982	1.887	570003	1.97	100	98.0	90	110	
Cu	63	1	nogas	100.660	1.096	1345951	0.18	100	100.7	90	110	
Zn	66	1	nogas	118.192	3.068	515724	2.16	100	118.2	90	110	CCV Main CR1-2 Failed
As	75	1	nogas	99.513	1.220	716163	0.65	100	99.5	90	110	
Sr	88	1	nogas	102.674	1.504	3166993	0.61	100	102.7	90	110	
Ag	107	1	nogas	102.707	5.616	1504580	4.65	100	102.7	90	110	
Cd	111	1	nogas	103.886	2.988	315838	0.80	100	103.9	90	110	
Sb	121	1	nogas	103.298	5.338	1471005	4.36	100	103.3	90	110	
Tl	205	1	nogas	97.585	10.636	1938360	6.39	100	97.6	90	110	
Pb	208	1	nogas	130.492	5.378	2748450	5.38	100	130.5	90	110	CCV Main CR1-2 Failed
U	238	1	nogas	104.547	1.957	2711159	3.76	100	104.5	90	110	
[Pb]	206	1	nogas	100.098	5.183	660147	1.45	100	100.1	90	110	
[Pb]	207	1	nogas	102.584	3.110	595669	1.91	100	102.6	90	110	
Na	23	2	He	10032.393	4.321	23911679	1.06	10000	100.3	90	110	
Mg	24	2	He	9755.214	3.549	12956237	2.46	10000	97.6	90	110	
Al	27	2	He	99.620	7.568	77370	7.14	100	99.6	90	110	
K	39	2	He	12416.727	1.898	14365557	1.87	10000	124.2	90	110	CCV Main CR1-2 Failed
Ca	43	2	He	9973.428	8.187	39556	3.30	10000	99.7	90	110	
Ca	44	2	He	9755.502	4.541	656593	0.36	10000	97.6	90	110	
V	51	2	He	99.401	4.645	896921	0.36	100	99.4	90	110	
Cr	52	2	He	98.281	3.932	997340	1.73	100	98.3	90	110	
Mn	55	2	He	99.504	4.579	720703	1.46	100	99.5	90	110	
Fe	56	2	He	10147.913	4.593	86916345	2.05	10000	101.5	90	110	
Co	59	2	He	105.542	2.439	1361943	3.77	100	105.5	90	110	
Ni	60	2	He	103.892	5.605	337635	0.83	100	103.9	90	110	
Cu	63	2	He	102.311	3.050	844808	1.91	100	102.3	90	110	
Zn	66	2	He	111.322	2.760	217894	2.07	100	111.3	90	110	CCV Main CR1-2 Failed
As	75	2	He	100.158	4.478	187344	0.98	100	100.2	90	110	
Se	78	2	He	99.046	4.914	15713	0.08	100	99.0	90	110	
B	11	1	nogas	638.420	0.837	2492662	1.60	500	127.7	90	110	CCV Main CR1-2 Failed
Si	28	1	nogas	3649.368	0.428	9294002	1.05	5000	73.0	90	110	CCV Main CR1-2 Failed
Ca	43	1	nogas	9696.631	0.581	410914	1.25	10000	97.0	90	110	
Ca	44	1	nogas	9486.880	1.040	6776510	1.51	10000	94.9	90	110	
Fe	56	1	nogas	10368.868	2.979	261824581	2.19	10000	103.7	90	110	
Se	77	1	nogas	105.377	2.180	65273	0.92	100	105.4	90	110	
Se	82	1	nogas	99.989	0.924	31421	0.77	100	100.0	90	110	
Mo	95	1	nogas	100.455	0.532	620021	0.48	100	100.5	90	110	
Sn	118	1	nogas	103.454	2.035	810274	1.83	100	103.5	90	110	
Ba	137	1	nogas	103.396	3.704	449691	1.24	100	103.4	90	110	
Sb	121	2	He	98.080	4.173	723280	1.13	100	98.1	90	110	
Li	7	1	nogas	118.656	4.407	1767676	4.87	100	118.7	90	110	CCV Main CR1-2 Failed
P	31	1	nogas	471.210	1.065	1164463	0.30	500	94.2	90	110	
La	139	1	nogas	165.537	62.909	733	56.51	100	165.5	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	138.117	147.062	40	25.00	100	138.1	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	nogas	1200357	0.83	1267062	94.74	70	125	
Ge	72	1	nogas	3848848	0.97	2907309	132.39	70	125	ISTD Failed
In	115	1	nogas	3357044	3.66	2598912	129.17	70	125	ISTD Failed
Bi	209	1	nogas	2461000	5.09	1908675	128.94	70	125	ISTD Failed

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1317344	4.73	1062701	123.96	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	065_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T13:29:43-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	017CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	0.044	9.6	533	3.9	1	
Na	23	1	nogas	58.037	11.6	2193242	8.2	100	
Mg	24	1	nogas	6.323	14.3	131520	10.8	100	
Al	27	1	nogas	0.022	689.3	40086	7.7	5	
K	39	1	nogas	-43.646	-58.3	11684609	0.8	100	
Ti	47	1	nogas	0.065	25.2	730	1.4	2.5	
V	51	1	nogas	-16.811	-3.5	557341	2.3	2.5	
Cr	52	1	nogas	-0.799	-13.3	64315	2.5	2.5	
Mn	55	1	nogas	0.409	22.3	35748	3.7	2.5	
Co	59	1	nogas	0.039	17.4	2200	7.5	2.5	
Ni	60	1	nogas	0.711	1.8	2377	3.1	2.5	
Cu	63	1	nogas	0.145	5.1	6048	2.8	2	
Zn	66	1	nogas	0.676	19.4	6345	5.0	2.5	
As	75	1	nogas	-4.039	-12.0	102067	2.8	2.5	
Sr	88	1	nogas	0.151	35.2	6348	27.0	2.5	
Ag	107	1	nogas	0.040	29.4	760	22.1	2.5	
Cd	111	1	nogas	0.044	63.1	160	43.8	1	
Sb	121	1	nogas	0.391	19.9	6535	12.9	2.5	
Tl	205	1	nogas	0.452	53.7	9173	45.1	1	
Pb	208	1	nogas	0.068	18.3	1963	13.4	2.5	
U	238	1	nogas	0.111	51.2	3017	41.1	2.5	
[Pb]	206	1	nogas	0.043	31.1	473	12.2	2.5	
[Pb]	207	1	nogas	0.043	42.0	440	17.2	2.5	
Na	23	2	He	39.000	5.1	163957	0.9	100	
Mg	24	2	He	4.002	8.0	7118	4.2	100	
Al	27	2	He	-0.400	-72.2	1220	17.2	5	
K	39	2	He	41.631	10.3	263885	1.8	100	
Ca	43	2	He	2.813	136.6	73	20.8	100	
Ca	44	2	He	-9.555	-13.1	3034	2.4	100	
V	51	2	He	-0.665	-3.3	9465	0.7	2.5	
Cr	52	2	He	-0.037	-112.1	6538	8.6	2.5	
Mn	55	2	He	0.073	51.0	2410	10.1	2.5	
Fe	56	2	He	4.240	2.9	63706	3.1	100	
Co	59	2	He	0.022	27.2	553	13.3	2.5	
Ni	60	2	He	-0.092	-23.2	330	24.8	2.5	
Cu	63	2	He	0.015	147.3	2070	7.8	2	
Zn	66	2	He	0.702	6.0	2374	2.8	2.5	
As	75	2	He	-0.008	-141.9	531	6.3	2.5	
Se	78	2	He	-0.038	-325.7	139	17.2	2	
B	11	1	nogas	5.658	29.6	49562	11.3	10	
Si	28	1	nogas	-1254.766	-8.2	3005654	0.5	5	
Ca	43	1	nogas	2.372	144.0	1573	7.8	100	

Continuing Calibration Blank (CCB) Report

Ca	44	1	nogas	-370.138	-5.4	301724	0.5	100	
Fe	56	1	nogas	-0.092	-11409.7	4247062	2.1	100	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Se	77	1	nogas	-35.010	-7.1	33528	2.7	2.5	
Se	82	1	nogas	-0.097	-169.4	247	23.1	2	
Mo	95	1	nogas	0.273	37.9	2027	28.0	2.5	
Sn	118	1	nogas	0.262	45.3	3747	18.3	5	
Ba	137	1	nogas	0.094	3.3	757	10.3	2.5	
Sb	121	2	He	0.256	19.2	2444	18.0	2.5	
P	31	1	nogas	4.857	63.2	151450	0.5	10	
La	139	1	nogas	-0.960	-1267.8	100	36.1	2.5	
Au	197	1	nogas	-195.571	-248.6	27	78.1	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	nogas	1324835	2.96	1267062	104.56	70	125	
Ge	72	1	nogas	4030436	4.45	2907309	138.63	70	125	ISTD Failed
In	115	1	nogas	3515432	9.73	2598912	135.27	70	125	ISTD Failed
Bi	209	1	nogas	2408875	6.06	1908675	126.21	70	125	ISTD Failed
Ge	72	2	He	1401573	2.23	1062701	131.89	70	125	ISTD Failed

Calibration Blank Report

Sample Table

Sample Name	CAL BLK
Data File Name	070CALB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T13:41:25-06:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	103	5.41
Na	23	1	nogas	773667	0.00
Mg	24	1	nogas	17578	0.05
Al	27	1	nogas	33063	0.01
K	39	1	nogas	11181447	0.00
Ti	47	1	nogas	497	1.53
V	51	1	nogas	617618	0.00
Cr	52	1	nogas	63455	0.01
Mn	55	1	nogas	31330	0.01
Co	59	1	nogas	800	2.46
Ni	60	1	nogas	920	0.52
Cu	63	1	nogas	3517	0.15
Zn	66	1	nogas	1690	0.40
As	75	1	nogas	99889	0.00
Sr	88	1	nogas	1667	1.97
Ag	107	1	nogas	140	28.41
Cd	111	1	nogas	27	214.81
Sb	121	1	nogas	1130	0.28
Tl	205	1	nogas	620	3.83
Pb	208	1	nogas	607	1.55
[Pb]	206	1	nogas	213	9.15
[Pb]	207	1	nogas	143	7.44
Na	23	2	He	80114	0.00
Mg	24	2	He	1777	0.80
Al	27	2	He	1187	1.29
K	39	2	He	259703	0.00
Ca	43	2	He	70	53.99
Ca	44	2	He	2474	0.23
V	51	2	He	10334	0.01
Cr	52	2	He	6325	0.08
Mn	55	2	He	1763	0.27
Fe	56	2	He	27264	0.01
Co	59	2	He	187	14.16
Ni	60	2	He	260	5.92
Cu	63	2	He	1390	0.14
Zn	66	2	He	647	2.22
As	75	2	He	400	0.91
Se	78	2	He	161	13.95
B	11	1	nogas	19227	0.02
Si	28	1	nogas	3029603	0.00
Ca	43	1	nogas	1060	0.31
Ca	44	1	nogas	268025	0.00

Calibration Blank Report

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	4466502	0.00
Se	77	1	nogas	32129	0.01
Se	82	1	nogas	207	9.46
Mo	95	1	nogas	210	12.00
Sn	118	1	nogas	1420	0.05
Ba	137	1	nogas	343	4.67
Sb	121	2	He	690	1.11
Li	7	1	nogas	107910	0.00
P	31	1	nogas	130239	0.00
La	139	1	nogas	70	35.35

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	6	1	nogas	1282255	3.64
Ge	72	1	nogas	3894467	1.03
In	115	1	nogas	3488791	5.94
Bi	209	1	nogas	2439864	3.82
Ge	72	2	He	1316692	1.83

Calibration Standard Report

Sample Table

Sample Name	2/10/200
Data File Name	071CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T13:43:25-06:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	070CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	15363	0.04
Na	23	1	nogas	6712318	0.00
Mg	24	1	nogas	3739705	0.00
Al	27	1	nogas	88164	0.01
K	39	1	nogas	15790873	0.00
Ti	47	1	nogas	4154	0.02
V	51	1	nogas	638111	0.00
Cr	52	1	nogas	109264	0.00
Mn	55	1	nogas	93469	0.00
Co	59	1	nogas	54217	0.00
Ni	60	1	nogas	12628	0.01
Cu	63	1	nogas	29671	0.00
Zn	66	1	nogas	11410	0.04
As	75	1	nogas	105516	0.00
Sr	88	1	nogas	64407	0.00
Ag	107	1	nogas	30704	0.01
Cd	111	1	nogas	6648	0.03
Sb	121	1	nogas	27989	0.00
Tl	205	1	nogas	38426	0.00
Pb	208	1	nogas	52905	0.00
[Pb]	206	1	nogas	13142	0.01
[Pb]	207	1	nogas	11521	0.05
Na	23	2	He	589154	0.00
Mg	24	2	He	264700	0.00
Al	27	2	He	2890	0.25
K	39	2	He	533829	0.00
Ca	43	2	He	843	0.53
Ca	44	2	He	15513	0.03
V	51	2	He	26648	0.01
Cr	52	2	He	25268	0.01
Mn	55	2	He	15887	0.02
Fe	56	2	He	1785924	0.00
Co	59	2	He	26279	0.01
Ni	60	2	He	7068	0.07
Cu	63	2	He	17862	0.03
Zn	66	2	He	4967	0.02
As	75	2	He	4114	0.07
Se	78	2	He	435	3.17
B	11	1	nogas	63398	0.00
Si	28	1	nogas	3161212	0.00

Calibration Standard Report

Ca	43	1	nogas	9779	0.01
Ca	44	1	nogas	395977	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	9914939	0.00
Se	77	1	nogas	31331	0.01
Se	82	1	nogas	823	0.43
Mo	95	1	nogas	12248	0.01
Sn	118	1	nogas	17219	0.01
Ba	137	1	nogas	9646	0.03
Sb	121	2	He	14650	0.02
P	31	1	nogas	149479	0.00
La	139	1	nogas	120	18.37

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1280490	2.45	1282255	99.86	70	125	
Ge	72	1	nogas	3752144	5.37	3894467	96.35	70	125	
In	115	1	nogas	3388629	5.71	3488791	97.13	70	125	
Bi	209	1	nogas	2397681	2.05	2439864	98.27	70	125	
Ge	72	2	He	1333437	1.99	1316692	101.27	70	125	

Calibration Standard Report

Sample Table

Sample Name	5/25/500
Data File Name	072CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T13:45:22-06:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	
ISTD Ref File Name	070CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	37894	0.00
Na	23	1	nogas	14934756	0.00
Mg	24	1	nogas	9272722	0.00
Al	27	1	nogas	156311	0.00
K	39	1	nogas	23486986	0.00
Ti	47	1	nogas	10303	0.03
V	51	1	nogas	844416	0.00
Cr	52	1	nogas	193263	0.00
Mn	55	1	nogas	190277	0.00
Co	59	1	nogas	134298	0.00
Ni	60	1	nogas	31320	0.00
Cu	63	1	nogas	72696	0.00
Zn	66	1	nogas	24764	0.01
As	75	1	nogas	140913	0.00
Sr	88	1	nogas	156751	0.00
Ag	107	1	nogas	76881	0.00
Cd	111	1	nogas	16168	0.02
Sb	121	1	nogas	70637	0.00
Tl	205	1	nogas	94351	0.00
Pb	208	1	nogas	131495	0.00
[Pb]	206	1	nogas	32403	0.01
[Pb]	207	1	nogas	28656	0.02
Na	23	2	He	1305963	0.00
Mg	24	2	He	671604	0.00
Al	27	2	He	5097	0.03
K	39	2	He	970162	0.00
Ca	43	2	He	2110	0.37
Ca	44	2	He	35264	0.01
V	51	2	He	55400	0.00
Cr	52	2	He	56473	0.01
Mn	55	2	He	38721	0.01
Fe	56	2	He	4415974	0.00
Co	59	2	He	67377	0.00
Ni	60	2	He	17479	0.02
Cu	63	2	He	46563	0.00
Zn	66	2	He	10903	0.03
As	75	2	He	9593	0.01
Se	78	2	He	927	1.11
B	11	1	nogas	134753	0.00
Si	28	1	nogas	3328856	0.00

Calibration Standard Report

Ca	43	1	nogas	21803	0.01
Ca	44	1	nogas	589261	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	17879960	0.00
Se	77	1	nogas	36497	0.01
Se	82	1	nogas	1667	0.73
Mo	95	1	nogas	29919	0.00
Sn	118	1	nogas	42115	0.01
Ba	137	1	nogas	23276	0.01
Sb	121	2	He	36161	0.01
P	31	1	nogas	192523	0.00
La	139	1	nogas	163	21.96

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1302121	1.72	1282255	101.55	70	125	
Ge	72	1	nogas	3897282	4.14	3894467	100.07	70	125	
In	115	1	nogas	3645642	3.29	3488791	104.50	70	125	
Bi	209	1	nogas	2499074	4.90	2439864	102.43	70	125	
Ge	72	2	He	1298118	1.38	1316692	98.59	70	125	

Calibration Standard Report

Sample Table

Sample Name	10/50/1000
Data File Name	073CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T13:47:20-06:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	
ISTD Ref File Name	070CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	75121	0.00
Na	23	1	nogas	28015169	0.00
Mg	24	1	nogas	17926517	0.00
Al	27	1	nogas	257708	0.00
K	39	1	nogas	33477731	0.00
Ti	47	1	nogas	19724	0.01
V	51	1	nogas	955757	0.00
Cr	52	1	nogas	294214	0.00
Mn	55	1	nogas	325361	0.00
Co	59	1	nogas	249051	0.00
Ni	60	1	nogas	56119	0.00
Cu	63	1	nogas	134733	0.00
Zn	66	1	nogas	44899	0.01
As	75	1	nogas	165910	0.00
Sr	88	1	nogas	295819	0.00
Ag	107	1	nogas	142197	0.00
Cd	111	1	nogas	30129	0.01
Sb	121	1	nogas	132759	0.00
Tl	205	1	nogas	181730	0.00
Pb	208	1	nogas	251043	0.00
[Pb]	206	1	nogas	64284	0.00
[Pb]	207	1	nogas	54679	0.00
Na	23	2	He	2392101	0.00
Mg	24	2	He	1314597	0.00
Al	27	2	He	8879	0.05
K	39	2	He	1653198	0.00
Ca	43	2	He	3567	0.26
Ca	44	2	He	64244	0.00
V	51	2	He	94660	0.00
Cr	52	2	He	101316	0.00
Mn	55	2	He	71371	0.00
Fe	56	2	He	8390843	0.00
Co	59	2	He	125015	0.00
Ni	60	2	He	32977	0.01
Cu	63	2	He	85971	0.00
Zn	66	2	He	20048	0.00
As	75	2	He	17929	0.01
Se	78	2	He	1666	0.28
B	11	1	nogas	249616	0.00
Si	28	1	nogas	3594031	0.00

Calibration Standard Report

Ca	43	1	nogas	40876	0.01
Ca	44	1	nogas	895463	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	28815545	0.00
Se	77	1	nogas	37793	0.01
Se	82	1	nogas	3117	0.10
Mo	95	1	nogas	57433	0.01
Sn	118	1	nogas	78386	0.00
Ba	137	1	nogas	43452	0.00
Sb	121	2	He	68561	0.00
P	31	1	nogas	231234	0.00
La	139	1	nogas	200	2.50

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1255823	2.61	1282255	97.94	70	125	
Ge	72	1	nogas	3692188	3.69	3894467	94.81	70	125	
In	115	1	nogas	3361504	4.30	3488791	96.35	70	125	
Bi	209	1	nogas	2348629	1.83	2439864	96.26	70	125	
Ge	72	2	He	1264456	1.42	1316692	96.03	70	125	

Calibration Standard Report

Sample Table

Sample Name	100/500/10K
Data File Name	074CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T13:49:18-06:00
Sample Type	CalStd
Level	5
Dilution	1
Comment	
ISTD Ref File Name	070CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	759168	0.00
Na	23	1	nogas	274654589	0.00
Mg	24	1	nogas	173502891	0.00
Al	27	1	nogas	2112404	0.00
K	39	1	nogas	237275705	0.00
Ti	47	1	nogas	187025	0.00
V	51	1	nogas	3253842	0.00
Cr	52	1	nogas	2345027	0.00
Mn	55	1	nogas	2874382	0.00
Co	59	1	nogas	2445519	0.00
Ni	60	1	nogas	542523	0.00
Cu	63	1	nogas	1232661	0.00
Zn	66	1	nogas	419829	0.00
As	75	1	nogas	661230	0.00
Sr	88	1	nogas	2830311	0.00
Ag	107	1	nogas	1439921	0.00
Cd	111	1	nogas	305990	0.00
Sb	121	1	nogas	1292481	0.00
Tl	205	1	nogas	1817948	0.00
Pb	208	1	nogas	2516640	0.00
[Pb]	206	1	nogas	621379	0.00
[Pb]	207	1	nogas	540139	0.00
Na	23	2	He	22733625	0.00
Mg	24	2	He	12446128	0.00
Al	27	2	He	71736	0.00
K	39	2	He	13933214	0.00
Ca	43	2	He	37391	0.01
Ca	44	2	He	615611	0.00
V	51	2	He	841917	0.00
Cr	52	2	He	920904	0.00
Mn	55	2	He	663859	0.00
Fe	56	2	He	81910415	0.00
Co	59	2	He	1215962	0.00
Ni	60	2	He	314310	0.00
Cu	63	2	He	794866	0.00
Zn	66	2	He	186831	0.00
As	75	2	He	174293	0.00
Se	78	2	He	14471	0.02
B	11	1	nogas	2374733	0.00
Si	28	1	nogas	8895870	0.00

Calibration Standard Report

Ca	43	1	nogas	397002	0.00
Ca	44	1	nogas	6438344	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	247743931	0.00
Se	77	1	nogas	53994	0.00
Se	82	1	nogas	29044	0.00
Mo	95	1	nogas	548550	0.00
Sn	118	1	nogas	758165	0.00
Ba	137	1	nogas	423808	0.00
Sb	121	2	He	665673	0.00
P	31	1	nogas	1094218	0.00
La	139	1	nogas	710	2.49

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1149486	4.16	1282255	89.65	70	125	
Ge	72	1	nogas	3613377	5.09	3894467	92.78	70	125	
In	115	1	nogas	3127839	6.94	3488791	89.65	70	125	
Bi	209	1	nogas	2331005	2.01	2439864	95.54	70	125	
Ge	72	2	He	1223834	0.67	1316692	92.95	70	125	

Calibration Standard Report

Sample Table

Sample Name	200/1000/20K
Data File Name	075CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T13:51:19-06:00
Sample Type	CalStd
Level	6
Dilution	1
Comment	
ISTD Ref File Name	070CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	1495626	0.00
Na	23	1	nogas	505797145	0.00
Mg	24	1	nogas	329468066	0.00
Al	27	1	nogas	3851404	0.00
K	39	1	nogas	448562160	0.00
Ti	47	1	nogas	369920	0.00
V	51	1	nogas	5759199	0.00
Cr	52	1	nogas	4493024	0.00
Mn	55	1	nogas	5522972	0.00
Co	59	1	nogas	4636870	0.00
Ni	60	1	nogas	1029513	0.00
Cu	63	1	nogas	2421020	0.00
Zn	66	1	nogas	815278	0.00
As	75	1	nogas	1210987	0.00
Sr	88	1	nogas	5672429	0.00
Ag	107	1	nogas	2740583	0.00
Cd	111	1	nogas	587524	0.00
Sb	121	1	nogas	2615018	0.00
Tl	205	1	nogas	3570214	0.00
Pb	208	1	nogas	4916479	0.00
[Pb]	206	1	nogas	1216365	0.00
[Pb]	207	1	nogas	1071283	0.00
Na	23	2	He	42820309	0.00
Mg	24	2	He	23846852	0.00
Al	27	2	He	135645	0.00
K	39	2	He	26056640	0.00
Ca	43	2	He	71038	0.00
Ca	44	2	He	1172323	0.00
V	51	2	He	1651182	0.00
Cr	52	2	He	1824950	0.00
Mn	55	2	He	1301799	0.00
Fe	56	2	He	158366634	0.00
Co	59	2	He	2454301	0.00
Ni	60	2	He	604889	0.00
Cu	63	2	He	1552361	0.00
Zn	66	2	He	357024	0.00
As	75	2	He	344225	0.00
Se	78	2	He	28791	0.01
B	11	1	nogas	4576882	0.00
Si	28	1	nogas	14440967	0.00

Calibration Standard Report

Ca	43	1	nogas	747072	0.00
Ca	44	1	nogas	12181591	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	474237111	0.00
Se	77	1	nogas	82125	0.00
Se	82	1	nogas	57505	0.01
Mo	95	1	nogas	1149009	0.00
Sn	118	1	nogas	1528739	0.00
Ba	137	1	nogas	831971	0.00
Sb	121	2	He	1362318	0.00
P	31	1	nogas	2042379	0.00
La	139	1	nogas	707	0.50

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1007705	5.62	1282255	78.59	70	125	
Ge	72	1	nogas	3521869	2.85	3894467	90.43	70	125	
In	115	1	nogas	2994726	4.34	3488791	85.84	70	125	
Bi	209	1	nogas	2142229	4.73	2439864	87.80	70	125	
Ge	72	2	He	1192351	0.55	1316692	90.56	70	125	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	ICCV
Data File Name	077_ICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T13:55:17-06:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	070CALB.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	96.859	9.309	711637	1.36	100	96.9	90	110	
Na	23	1	nogas	10152.861	9.545	251025114	3.10	10000	101.5	90	110	
Mg	24	1	nogas	10033.193	8.081	160360841	2.86	10000	100.3	90	110	
Al	27	1	nogas	107.183	14.222	2001698	8.69	100	107.2	90	110	
K	39	1	nogas	10238.644	4.624	224473538	1.69	10000	102.4	90	110	
Ti	47	1	nogas	98.345	3.344	173434	2.92	100	98.3	90	110	
V	51	1	nogas	94.739	4.675	2896547	7.00	100	94.7	90	110	
Cr	52	1	nogas	99.826	6.816	2179396	11.21	100	99.8	90	110	
Mn	55	1	nogas	99.012	3.664	2637741	8.67	100	99.0	90	110	
Co	59	1	nogas	99.751	2.087	2225468	4.21	100	99.8	90	110	
Ni	60	1	nogas	101.535	6.643	502752	1.23	100	101.5	90	110	
Cu	63	1	nogas	97.487	9.388	1127647	9.77	100	97.5	90	110	
Zn	66	1	nogas	101.515	5.170	396184	1.92	100	101.5	90	110	
As	75	1	nogas	99.172	6.098	617398	1.01	100	99.2	90	110	
Sr	88	1	nogas	98.681	2.035	2660645	4.10	100	98.7	90	110	
Ag	107	1	nogas	96.579	7.031	1273014	10.54	100	96.6	90	110	
Cd	111	1	nogas	100.428	6.903	280463	0.98	100	100.4	90	110	
Sb	121	1	nogas	100.720	7.370	1249819	6.84	100	100.7	90	110	
Tl	205	1	nogas	102.259	6.164	1714080	7.24	100	102.3	90	110	
Pb	208	1	nogas	96.300	2.401	2378935	2.40	100	96.3	90	110	
U	238	1	nogas	98.673	6.435	2164791	6.05	100	98.7	90	110	
[Pb]	206	1	nogas	105.349	5.044	601325	1.35	100	105.3	90	110	
[Pb]	207	1	nogas	102.275	7.021	512546	3.06	100	102.3	90	110	
Na	23	2	He	10310.670	0.923	21519081	0.62	10000	103.1	90	110	
Mg	24	2	He	10158.446	1.469	11751535	1.17	10000	101.6	90	110	
Al	27	2	He	101.824	1.931	67725	1.69	100	101.8	90	110	
K	39	2	He	9913.009	1.443	13201993	1.41	10000	99.1	90	110	
Ca	43	2	He	10229.973	0.838	35331	0.99	10000	102.3	90	110	
Ca	44	2	He	10266.902	2.246	585410	2.50	10000	102.7	90	110	
V	51	2	He	98.683	0.356	789670	0.12	100	98.7	90	110	
Cr	52	2	He	98.043	0.715	864375	0.41	100	98.0	90	110	
Mn	55	2	He	101.359	0.960	637717	1.05	100	101.4	90	110	
Fe	56	2	He	10143.624	0.847	77789276	0.91	10000	101.4	90	110	
Co	59	2	He	98.867	0.674	1164871	0.43	100	98.9	90	110	
Ni	60	2	He	100.497	0.979	294966	1.26	100	100.5	90	110	
Cu	63	2	He	98.663	1.036	740911	1.04	100	98.7	90	110	
Zn	66	2	He	101.537	1.944	176398	2.17	100	101.5	90	110	
As	75	2	He	102.038	0.955	169466	1.27	100	102.0	90	110	
Se	78	2	He	102.099	0.325	14190	0.63	100	102.1	90	110	
B	11	1	nogas	488.438	13.148	2210271	9.26	500	97.7	90	110	
Si	28	1	nogas	5190.878	9.720	8429948	0.97	5000	103.8	90	110	
Ca	43	1	nogas	10393.633	8.337	373234	2.94	10000	103.9	90	110	
Ca	44	1	nogas	10432.843	8.459	6182452	2.46	10000	104.3	90	110	
Fe	56	1	nogas	10152.590	6.151	232260947	2.58	10000	101.5	90	110	
Se	77	1	nogas	86.771	14.049	49313	0.71	100	86.8	90	110	ICV Main CR1 Failed
Se	82	1	nogas	104.293	5.996	28596	1.69	100	104.3	90	110	
Mo	95	1	nogas	96.736	4.926	523295	0.97	100	96.7	90	110	
Sn	118	1	nogas	100.537	7.398	723774	1.06	100	100.5	90	110	
Ba	137	1	nogas	101.147	6.961	398419	2.11	100	101.1	90	110	
Sb	121	2	He	97.838	0.732	638380	1.05	100	97.8	90	110	
Li	7	1	nogas	93.710	8.589	1468418	6.34	100	93.7	90	110	
P	31	1	nogas	501.983	6.629	1032717	0.75	500	100.4	90	110	
La	139	1	nogas	158.873	26.130	633	18.16	100	158.9	90	110	ICV Main CR1 Failed
Au	197	1	nogas	2652.142	19.111	77	7.53	100	2652.1	90	110	ICV Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1015418	7.69	1282255	79.19	70	125	
Ge	72	1	nogas	3367443	6.04	3894467	86.47	70	125	
In	115	1	nogas	2855722	8.15	3488791	81.85	70	125	
Bi	209	1	nogas	2036073	3.85	2439864	83.45	70	125	

Initial Calibration Verification (ICV) Report

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	2	He	1152790	0.32	1316692	87.55	70	125	

Low Level Initial Calibration Verification (LLICV) Report

Sample Table

Sample Name	LLCCV5
Data File Name	078LICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T13:57:20-06:00
Sample Type	LLICV
Dilution	1
Comment	
ISTD Ref File Name	070CALB.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	4.637	2.787	35273	2.17	5	92.7	70	130	
Na	23	1	nogas	505.524	9.864	12468224	1.77	500	101.1	70	130	
Mg	24	1	nogas	519.324	9.409	7887976	1.37	500	103.9	70	130	
Al	27	1	nogas	5.749	9.770	130986	2.08	5	115.0	70	130	
K	39	1	nogas	533.888	13.780	20268785	0.70	500	106.8	70	130	
Ti	47	1	nogas	4.922	2.697	8849	4.74	5	98.4	70	130	
V	51	1	nogas	1.585	61.775	557310	3.09	5	31.7	70	130	LLICV Main CR1 Failed
Cr	52	1	nogas	4.777	8.186	151883	2.84	5	95.5	70	130	
Mn	55	1	nogas	5.237	10.406	160042	1.28	5	104.7	70	130	
Co	59	1	nogas	5.100	7.150	111120	0.62	5	102.0	70	130	
Ni	60	1	nogas	4.808	9.389	25849	1.18	5	96.2	70	130	
Cu	63	1	nogas	5.324	6.918	62621	2.79	5	106.5	70	130	
Zn	66	1	nogas	5.289	13.318	21920	4.68	5	105.8	70	130	
As	75	1	nogas	4.095	36.104	108597	0.41	5	81.9	70	130	
Sr	88	1	nogas	5.105	7.421	134976	0.53	5	102.1	70	130	
Ag	107	1	nogas	5.101	7.835	65278	1.12	5	102.0	70	130	
Cd	111	1	nogas	5.033	11.920	13902	2.49	5	100.7	70	130	
Sb	121	1	nogas	5.103	6.585	62446	1.53	5	102.1	70	130	
Tl	205	1	nogas	5.297	6.030	88206	2.12	5	105.9	70	130	
Pb	208	1	nogas	4.619	3.510	114675	3.49	5	92.4	70	130	
U	238	1	nogas	5.130	6.301	111347	1.93	5	102.6	70	130	
[Pb]	206	1	nogas	4.979	3.668	28312	3.27	5	99.6	70	130	
[Pb]	207	1	nogas	4.972	2.924	24803	3.62	5	99.4	70	130	
Na	23	2	He	489.716	0.873	1114820	0.52	500	97.9	70	130	
Mg	24	2	He	492.510	0.258	584860	0.88	500	98.5	70	130	
Al	27	2	He	4.357	10.341	4341	7.20	5	87.1	70	130	
K	39	2	He	461.404	0.884	862106	0.62	500	92.3	70	130	
Ca	43	2	He	537.525	3.397	1960	3.99	500	107.5	70	130	
Ca	44	2	He	492.246	1.486	30846	1.09	500	98.4	70	130	
V	51	2	He	4.862	2.004	46952	1.65	5	97.2	70	130	
Cr	52	2	He	4.899	4.342	49600	3.14	5	98.0	70	130	
Mn	55	2	He	4.858	0.821	32799	1.24	5	97.2	70	130	
Fe	56	2	He	491.641	0.821	3883242	0.24	500	98.3	70	130	
Co	59	2	He	4.824	0.559	58356	1.27	5	96.5	70	130	
Ni	60	2	He	4.854	1.093	15433	1.39	5	97.1	70	130	
Cu	63	2	He	4.923	0.504	39777	0.71	5	98.5	70	130	
Zn	66	2	He	4.851	4.740	9756	4.19	5	97.0	70	130	
As	75	2	He	4.993	1.328	8831	1.87	5	99.9	70	130	
Se	78	2	He	4.876	4.485	785	4.31	5	97.5	70	130	
B	11	1	nogas	29.754	2.348	153794	1.41	25	119.0	70	130	
Si	28	1	nogas	688.863	34.573	3292077	0.51	25	2755.5	70	130	LLICV Main CR1 Failed
Ca	43	1	nogas	533.695	9.045	19487	1.26	500	106.7	70	130	
Ca	44	1	nogas	544.802	13.509	527276	0.45	500	109.0	70	130	
Fe	56	1	nogas	478.369	10.723	14208240	0.58	500	95.7	70	130	
Se	77	1	nogas	2.794	141.340	27681	3.86	5	55.9	70	130	LLICV Main CR1 Failed
Se	82	1	nogas	5.591	12.344	1653	5.97	5	111.8	70	130	
Mo	95	1	nogas	5.197	6.846	27508	1.93	5	103.9	70	130	
Sn	118	1	nogas	5.093	13.952	37260	2.39	5	101.9	70	130	
Ba	137	1	nogas	5.067	9.951	20002	2.14	5	101.3	70	130	
Sb	121	2	He	4.920	0.622	33456	0.33	5	98.4	70	130	
Li	7	1	nogas	5.164	1.530	166458	0.41	5	103.3	70	130	
P	31	1	nogas	28.125	24.133	159392	0.20	25	112.5	70	130	
La	139	1	nogas	27.555	33.627	157	24.17	5	551.1	70	130	LLICV Main CR1 Failed
Au	197	1	nogas	667.093	231.422	47	53.93	5	13341.9	70	130	LLICV Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1043969	1.06	1282255	81.42	70	125	
Ge	72	1	nogas	3278794	7.23	3894467	84.19	70	125	
In	115	1	nogas	2832818	10.46	3488791	81.20	70	125	
Bi	209	1	nogas	2015193	4.83	2439864	82.59	70	125	

Low Level Initial Calibration Verification (LLICV) Report

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	2	He	1180261	0.71	1316692	89.64	70	125	

Sample Report

Sample Table

Sample Name	LLCCV2
Data File Name	079SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T13:59:19-06:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	070CALB.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	1.789	1.789	3.98	15253	0.01	2000	
Na	23	1	nogas	193.643	193.643	6.33	5689034	0.00	200000	
Mg	24	1	nogas	203.279	203.279	5.28	3410143	0.01	200000	
Al	27	1	nogas	2.515	2.515	16.24	78317	0.00	2000	
K	39	1	nogas	224.965	224.965	12.80	15024903	0.00	200000	
Ti	47	1	nogas	2.024	2.024	4.37	4171	0.05	2000	
V	51	1	nogas	-2.063	-2.063	-27.23	503897	0.00	2000	
Cr	52	1	nogas	1.766	1.766	6.41	96450	0.00	2000	
Mn	55	1	nogas	2.090	2.090	5.31	85745	0.00	2000	
Co	59	1	nogas	2.079	2.079	4.03	49156	0.00	2000	
Ni	60	1	nogas	1.638	1.638	5.12	11494	0.01	2000	
Cu	63	1	nogas	2.013	2.013	5.14	27431	0.01	2000	
Zn	66	1	nogas	1.741	1.741	4.70	9232	0.02	2000	
As	75	1	nogas	-0.532	-0.532	-13.27	91146	0.00	2000	
Sr	88	1	nogas	2.075	2.075	2.97	59934	0.00	2000	
Ag	107	1	nogas	2.046	2.046	5.92	28237	0.01	2000	
Cd	111	1	nogas	1.824	1.824	4.09	5871	0.03	2000	
Sb	121	1	nogas	2.008	2.008	4.48	27031	0.01	2000	
Tl	205	1	nogas	1.915	1.915	4.82	37627	0.01	2000	
Pb	208	1	nogas	1.990	1.990	0.92	49748	0.00	2000	
U	238	1	nogas	1.866	1.866	5.38	47382	0.00	2000	
[Pb]	206	1	nogas	1.778	1.778	3.01	11931	0.01	2000	
[Pb]	207	1	nogas	1.895	1.895	6.06	11111	0.02	2000	
Na	23	2	He	190.265	190.265	1.98	496008	0.04	200000	
Mg	24	2	He	197.385	197.385	2.35	244699	0.08	200000	
Al	27	2	He	1.834	1.834	36.20	2764	0.07	2000	
K	39	2	He	185.182	185.182	1.14	501474	0.04	200000	
Ca	43	2	He	191.245	191.245	10.40	767	24.94	200000	
Ca	44	2	He	197.796	197.796	3.29	14269	1.39	200000	
V	51	2	He	1.888	1.888	2.45	23728	0.01	2000	
Cr	52	2	He	1.978	1.978	3.46	24340	0.01	2000	
Mn	55	2	He	1.948	1.948	1.46	14659	0.01	2000	
Fe	56	2	He	202.338	202.338	0.80	1676715	0.01	200000	
Co	59	2	He	1.913	1.913	2.86	24163	0.01	2000	
Ni	60	2	He	1.742	1.742	4.43	6351	0.03	2000	
Cu	63	2	He	1.867	1.867	5.15	16995	0.01	2000	
Zn	66	2	He	1.671	1.671	8.51	4304	0.04	2000	
As	75	2	He	1.987	1.987	2.18	3878	0.05	2000	
Se	78	2	He	2.274	2.274	2.60	434	0.52	2000	
B	11	1	nogas	12.463	12.463	4.02	82022	0.02	2000	
Si	28	1	nogas	374.187	374.187	38.07	3172086	0.01	2000	
Ca	43	1	nogas	206.077	206.077	4.86	8685	2.37	200000	
Ca	44	1	nogas	198.527	198.527	11.08	360481	0.06	200000	
Fe	56	1	nogas	180.984	180.984	8.60	8289914	0.00	200000	

Sample Report

Se	77	1	nogas	-9.708	-9.708	-22.03	26476	-0.04	2000	
Se	82	1	nogas	2.301	2.301	9.46	843	0.27	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Mo	95	1	nogas	2.001	2.001	4.34	11504	0.02	2000	
Sn	118	1	nogas	1.850	1.850	3.11	16605	0.01	2000	
Ba	137	1	nogas	1.804	1.804	6.72	8469	0.02	2000	
Sb	121	2	He	1.859	1.859	1.58	13546	0.01	2000	
La	139	1	nogas	11.529	11.529	31.39	113	10.17	2000	
Au	197	1	nogas	-289.283	-289.283	-416.47	37	-788.95	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1165078	2.67	1282255	90.86	70	125	
Ge	72	1	nogas	3517994	3.91	3894467	90.33	70	125	
In	115	1	nogas	3269289	3.52	3488791	93.71	70	125	
Bi	209	1	nogas	2352887	5.33	2439864	96.44	70	125	
Ge	72	2	He	1227185	0.36	1316692	93.20	70	125	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	ICCB
Data File Name	080_ICB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T14:01:17-06:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	070CALB.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	0.007	59.0	143	21.3	1	
Na	23	1	nogas	-4.661	-19.5	557341	2.9	100	
Mg	24	1	nogas	1.156	38.1	33903	19.3	100	
Al	27	1	nogas	0.549	9.8	40380	1.5	5	
K	39	1	nogas	7.334	164.0	10231598	0.7	100	
Ti	47	1	nogas	0.002	1699.3	450	8.9	2.5	
V	51	1	nogas	-0.843	-21.4	534550	2.8	2.5	
Cr	52	1	nogas	-0.124	-14.9	54413	2.1	2.5	
Mn	55	1	nogas	0.125	25.6	31657	0.9	2.5	
Co	59	1	nogas	0.006	86.9	867	16.2	2.5	
Ni	60	1	nogas	-0.437	-5.1	797	13.4	2.5	
Cu	63	1	nogas	0.003	1128.3	3194	8.9	1	
Zn	66	1	nogas	0.121	94.7	2640	15.7	2.5	
As	75	1	nogas	-0.468	-106.7	91230	1.3	2.5	
Sr	88	1	nogas	0.004	78.6	1610	6.2	2.5	
Ag	107	1	nogas	0.007	51.1	227	24.3	2.5	
Cd	111	1	nogas	0.009	53.1	53	28.6	1	
Sb	121	1	nogas	-0.002	-221.2	993	7.3	2.5	
Tl	205	1	nogas	0.048	51.0	1450	32.5	1	
Pb	208	1	nogas	0.002	38.5	667	3.5	2.5	
U	238	1	nogas	0.009	49.0	337	34.3	2.5	
[Pb]	206	1	nogas	-0.001	-277.9	187	12.4	2.5	
[Pb]	207	1	nogas	0.000	2191.5	133	34.6	2.5	
Na	23	2	He	-7.571	-2.6	56383	1.1	100	
Mg	24	2	He	0.421	33.4	2117	8.1	100	
Al	27	2	He	-0.325	-40.2	1233	7.7	5	
K	39	2	He	-20.431	-18.8	233029	2.2	100	
Ca	43	2	He	0.946	445.6	67	22.9	100	
Ca	44	2	He	0.812	332.3	2294	6.4	100	
V	51	2	He	0.143	23.0	8764	2.7	2.5	
Cr	52	2	He	0.028	61.1	5994	2.9	2.5	
Mn	55	2	He	0.074	11.1	2080	2.2	2.5	
Fe	56	2	He	0.347	26.9	27504	2.1	100	
Co	59	2	He	0.001	201.4	187	18.8	2.5	
Ni	60	2	He	-0.228	-9.1	210	29.7	2.5	
Cu	63	2	He	-0.088	-12.7	1367	6.8	1	
Zn	66	2	He	-0.138	-17.0	953	4.2	2.5	
As	75	2	He	0.033	90.3	419	11.7	2.5	
Se	78	2	He	0.425	20.7	158	8.3	1	
B	11	1	nogas	2.857	9.9	30942	3.4	10	
Si	28	1	nogas	228.138	17.2	2996186	0.5	5	ICB Main CR1 Failed
Ca	43	1	nogas	5.805	94.5	1170	15.6	100	
Ca	44	1	nogas	-6.297	-113.0	237660	0.1	100	
Fe	56	1	nogas	-18.723	-20.9	3583504	1.7	100	
Se	77	1	nogas	2.984	142.6	29718	4.0	2.5	ICB Main CR1 Failed
Se	82	1	nogas	0.130	16.9	223	2.6	1	
Mo	95	1	nogas	0.036	19.2	393	10.3	2.5	
Sn	118	1	nogas	0.024	79.8	1497	8.8	5	

Initial Calibration Blank (ICB) Report

Ba	137	1	nogas	0.019	63.2	400	10.9	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	-0.014	-18.3	533	2.9	2.5	
P	31	1	nogas	-2.383	-69.1	112727	0.9	10	
La	139	1	nogas	24.307	31.6	163	18.7	2.5	ICB Main CR1 Failed
Au	197	1	nogas	-985.322	-71.2	23	49.5	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	nogas	1158152	0.95	1282255	90.32	70	125	
Ge	72	1	nogas	3508500	1.90	3894467	90.09	70	125	
In	115	1	nogas	3191457	3.04	3488791	91.48	70	125	
Bi	209	1	nogas	2230516	2.12	2439864	91.42	70	125	
Ge	72	2	He	1194902	0.59	1316692	90.75	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	090_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T14:21:01-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	070CALB.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	101.090	2.623	715181	3.58	100	101.1	90	110	
Na	23	1	nogas	10303.886	1.299	250718431	1.17	10000	103.0	90	110	
Mg	24	1	nogas	10135.441	2.181	159304391	1.97	10000	101.4	90	110	
Al	27	1	nogas	105.346	4.476	1949504	3.00	100	105.3	90	110	
K	39	1	nogas	10289.458	4.929	222519988	1.16	10000	102.9	90	110	
Ti	47	1	nogas	100.105	1.810	174214	2.25	100	100.1	90	110	
V	51	1	nogas	98.785	3.455	2953594	1.20	100	98.8	90	110	
Cr	52	1	nogas	102.484	4.033	2199245	0.10	100	102.5	90	110	
Mn	55	1	nogas	102.253	3.391	2680880	1.64	100	102.3	90	110	
Co	59	1	nogas	102.271	4.686	2248839	1.14	100	102.3	90	110	
Ni	60	1	nogas	101.268	4.460	495176	0.41	100	101.3	90	110	
Cu	63	1	nogas	101.927	2.745	1162509	1.54	100	101.9	90	110	
Zn	66	1	nogas	103.135	0.810	397570	3.25	100	103.1	90	110	
As	75	1	nogas	98.546	3.922	606261	1.25	100	98.5	90	110	
Sr	88	1	nogas	100.617	2.521	2675525	2.08	100	100.6	90	110	
Ag	107	1	nogas	101.009	4.205	1310223	0.26	100	101.0	90	110	
Cd	111	1	nogas	99.349	3.169	289080	1.20	100	99.3	90	110	
Sb	121	1	nogas	98.609	0.928	1208095	3.59	100	98.6	90	110	
Tl	205	1	nogas	103.622	7.146	1761948	3.69	100	103.6	90	110	
Pb	208	1	nogas	93.278	1.727	2304307	1.73	100	93.3	90	110	
U	238	1	nogas	105.670	5.306	2354076	1.78	100	105.7	90	110	
[Pb]	206	1	nogas	100.401	5.859	582152	1.73	100	100.4	90	110	
[Pb]	207	1	nogas	96.761	5.948	492825	1.86	100	96.8	90	110	
Na	23	2	He	10426.397	1.627	21268615	2.12	10000	104.3	90	110	
Mg	24	2	He	10430.643	1.955	11793301	1.89	10000	104.3	90	110	
Al	27	2	He	104.409	0.871	67841	1.41	100	104.4	90	110	
K	39	2	He	9704.498	0.841	12929764	0.82	10000	97.0	90	110	
Ca	43	2	He	10261.536	0.167	34639	1.50	10000	102.6	90	110	
Ca	44	2	He	10459.499	0.845	582838	1.26	10000	104.6	90	110	
V	51	2	He	101.295	2.454	791945	1.66	100	101.3	90	110	
Cr	52	2	He	100.982	0.073	870035	1.54	100	101.0	90	110	
Mn	55	2	He	104.221	1.107	640856	1.58	100	104.2	90	110	
Fe	56	2	He	10383.202	0.799	77829169	1.81	10000	103.8	90	110	
Co	59	2	He	100.562	0.335	1158066	1.25	100	100.6	90	110	
Ni	60	2	He	102.757	2.951	294728	2.65	100	102.8	90	110	
Cu	63	2	He	100.511	2.932	737696	3.18	100	100.5	90	110	
Zn	66	2	He	104.234	1.139	176963	2.07	100	104.2	90	110	
As	75	2	He	100.957	1.318	163870	1.12	100	101.0	90	110	
Se	78	2	He	98.599	1.266	13398	2.43	100	98.6	90	110	
B	11	1	nogas	479.938	4.039	2124448	2.74	500	96.0	90	110	
Si	28	1	nogas	5256.349	5.694	8398987	0.87	5000	105.1	90	110	
Ca	43	1	nogas	10442.212	3.109	370703	2.03	10000	104.4	90	110	
Ca	44	1	nogas	10289.247	4.074	6029071	0.30	10000	102.9	90	110	
Fe	56	1	nogas	10191.741	3.825	230182797	1.30	10000	101.9	90	110	
Se	77	1	nogas	85.764	9.980	48445	1.03	100	85.8	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	98.119	3.074	26580	1.44	100	98.1	90	110	
Mo	95	1	nogas	97.078	1.400	518677	2.64	100	97.1	90	110	
Sn	118	1	nogas	94.387	2.113	708537	3.00	100	94.4	90	110	
Ba	137	1	nogas	96.555	3.859	396160	0.48	100	96.6	90	110	
Sb	121	2	He	100.696	1.924	642170	2.46	100	100.7	90	110	
Li	7	1	nogas	101.273	5.917	1543498	5.75	100	101.3	90	110	
P	31	1	nogas	485.540	4.019	990029	0.91	500	97.1	90	110	
La	139	1	nogas	143.002	25.792	603	22.50	100	143.0	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	-1306.757	-57.928	17	69.28	100	-1306.8	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	nogas	1072050	2.59	1282255	83.61	70	125	
Ge	72	1	nogas	3320630	4.05	3894467	85.27	70	125	
In	115	1	nogas	2966861	4.17	3488791	85.04	70	125	
Bi	209	1	nogas	2069010	4.22	2439864	84.80	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1126760	1.49	1316692	85.58	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	091_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T14:23:03-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	070CALB.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	0.053	31.1	497	23.9	1	
Na	23	1	nogas	23.069	9.7	1211946	2.1	100	
Mg	24	1	nogas	5.635	21.8	103037	17.1	100	
Al	27	1	nogas	-0.140	-42.5	25418	3.1	5	
K	39	1	nogas	6.253	201.2	9577927	0.9	100	
Ti	47	1	nogas	0.089	62.4	573	17.2	2.5	
V	51	1	nogas	-5.604	-4.0	385461	2.7	2.5	
Cr	52	1	nogas	-0.267	-38.7	48066	3.6	2.5	
Mn	55	1	nogas	0.179	27.6	31086	2.8	2.5	
Co	59	1	nogas	0.062	31.0	2017	18.8	2.5	
Ni	60	1	nogas	-0.288	-3.7	1467	4.2	2.5	
Cu	63	1	nogas	0.072	21.4	3777	2.8	2	
Zn	66	1	nogas	0.523	6.8	4010	2.2	2.5	
As	75	1	nogas	-2.402	-2.9	75556	2.4	2.5	
Sr	88	1	nogas	0.057	26.4	2920	11.9	2.5	
Ag	107	1	nogas	0.042	9.8	657	6.2	2.5	
Cd	111	1	nogas	0.041	35.6	143	34.4	1	
Sb	121	1	nogas	0.291	24.5	4481	17.5	2.5	
Tl	205	1	nogas	0.643	65.8	11929	65.6	1	
Pb	208	1	nogas	0.052	22.6	1897	15.4	2.5	
U	238	1	nogas	0.152	53.7	3617	55.1	2.5	
[Pb]	206	1	nogas	0.050	19.1	487	12.4	2.5	
[Pb]	207	1	nogas	0.049	24.1	383	17.0	2.5	
Na	23	2	He	15.129	8.1	100948	3.1	100	
Mg	24	2	He	3.640	3.1	5728	3.2	100	
Al	27	2	He	-0.961	-4.5	770	2.2	5	
K	39	2	He	-21.439	-7.2	231713	0.9	100	
Ca	43	2	He	3.717	388.8	73	67.3	100	
Ca	44	2	He	4.022	22.3	2380	3.4	100	
V	51	2	He	-0.014	-39.2	7159	1.9	2.5	
Cr	52	2	He	0.053	127.3	5954	8.7	2.5	
Mn	55	2	He	0.061	23.7	1913	4.4	2.5	
Fe	56	2	He	4.688	5.8	59429	4.6	100	
Co	59	2	He	0.029	14.7	497	10.1	2.5	
Ni	60	2	He	-0.179	-9.2	343	13.1	2.5	
Cu	63	2	He	-0.043	-55.1	1650	12.1	2	
Zn	66	2	He	0.238	46.2	1560	13.5	2.5	
As	75	2	He	0.065	34.2	454	6.9	2.5	
Se	78	2	He	0.563	39.9	171	19.3	2	
B	11	1	nogas	7.588	18.0	53215	10.5	10	
Si	28	1	nogas	405.209	19.5	3005349	1.4	5	CCB Main CR1 Failed
Ca	43	1	nogas	3.177	125.3	1007	12.6	100	
Ca	44	1	nogas	-18.759	-34.9	216030	0.7	100	
Fe	56	1	nogas	-14.070	-62.9	3463700	4.1	100	
Se	77	1	nogas	-8.582	-25.1	25064	2.9	2.5	
Se	82	1	nogas	0.119	41.6	207	5.6	2	
Mo	95	1	nogas	0.401	50.7	2287	45.2	2.5	
Sn	118	1	nogas	0.343	38.7	3751	24.5	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.058	53.6	527	21.0	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.259	14.0	2277	9.0	2.5	
P	31	1	nogas	-1.593	-107.5	107195	1.6	10	
La	139	1	nogas	9.277	118.9	93	43.3	2.5	CCB Main CR1 Failed
Au	197	1	nogas	-298.434	-430.1	33	62.4	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	nogas	1155377	1.74	1282255	90.11	70	125	
Ge	72	1	nogas	3292046	1.99	3894467	84.53	70	125	
In	115	1	nogas	2953646	4.68	3488791	84.66	70	125	
Bi	209	1	nogas	2124593	3.03	2439864	87.08	70	125	
Ge	72	2	He	1145141	1.47	1316692	86.97	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	102_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T14:44:49-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	070CALB.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	112.020	11.904	725204	0.69	100	112.0	90	110	CCV Main CR1-2 Failed
Na	23	1	nogas	11728.643	16.197	257456731	1.49	10000	117.3	90	110	CCV Main CR1-2 Failed
Mg	24	1	nogas	11485.226	16.093	162914487	1.65	10000	114.9	90	110	CCV Main CR1-2 Failed
Al	27	1	nogas	116.791	10.555	1998979	2.86	100	116.8	90	110	CCV Main CR1-2 Failed
K	39	1	nogas	11127.141	7.132	222629238	1.60	10000	111.3	90	110	CCV Main CR1-2 Failed
Ti	47	1	nogas	109.459	7.957	176540	1.07	100	109.5	90	110	
V	51	1	nogas	111.521	10.559	3027448	1.72	100	111.5	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	113.502	9.691	2252149	2.65	100	113.5	90	110	CCV Main CR1-2 Failed
Mn	55	1	nogas	113.688	10.280	2758240	3.01	100	113.7	90	110	CCV Main CR1-2 Failed
Co	59	1	nogas	114.495	7.816	2335558	1.17	100	114.5	90	110	CCV Main CR1-2 Failed
Ni	60	1	nogas	114.362	8.214	518304	0.80	100	114.4	90	110	CCV Main CR1-2 Failed
Cu	63	1	nogas	114.232	5.870	1208812	1.70	100	114.2	90	110	CCV Main CR1-2 Failed
Zn	66	1	nogas	111.246	7.579	397349	1.65	100	111.2	90	110	CCV Main CR1-2 Failed
As	75	1	nogas	109.671	8.941	616408	0.53	100	109.7	90	110	
Sr	88	1	nogas	109.375	6.948	2697441	0.95	100	109.4	90	110	
Ag	107	1	nogas	111.017	10.762	1333863	3.22	100	111.0	90	110	CCV Main CR1-2 Failed
Cd	111	1	nogas	111.602	15.098	288988	0.90	100	111.6	90	110	CCV Main CR1-2 Failed
Sb	121	1	nogas	111.349	6.419	1264881	1.25	100	111.3	90	110	CCV Main CR1-2 Failed
Tl	205	1	nogas	118.095	11.485	1841688	1.20	100	118.1	90	110	CCV Main CR1-2 Failed
Pb	208	1	nogas	97.749	1.510	2414716	1.51	100	97.7	90	110	
U	238	1	nogas	115.542	10.730	2361146	0.82	100	115.5	90	110	CCV Main CR1-2 Failed
[Pb]	206	1	nogas	116.620	11.090	620210	0.56	100	116.6	90	110	CCV Main CR1-2 Failed
[Pb]	207	1	nogas	112.350	10.132	525227	1.58	100	112.3	90	110	CCV Main CR1-2 Failed
Na	23	2	He	10378.779	0.582	20919843	2.05	10000	103.8	90	110	
Mg	24	2	He	10416.445	1.146	11636533	1.30	10000	104.2	90	110	
Al	27	2	He	102.223	1.917	65654	2.14	100	102.2	90	110	
K	39	2	He	9537.676	2.114	12711963	2.07	10000	95.4	90	110	
Ca	43	2	He	10268.770	2.464	34245	2.27	10000	102.7	90	110	
Ca	44	2	He	10571.067	0.932	581988	1.42	10000	105.7	90	110	
V	51	2	He	101.404	0.482	783579	2.78	100	101.4	90	110	
Cr	52	2	He	100.066	2.481	851658	0.82	100	100.1	90	110	
Mn	55	2	He	102.179	3.252	620616	1.52	100	102.2	90	110	
Fe	56	2	He	10349.620	1.894	76634692	0.79	10000	103.5	90	110	
Co	59	2	He	101.200	1.378	1151486	1.98	100	101.2	90	110	
Ni	60	2	He	104.273	1.165	295528	2.02	100	104.3	90	110	
Cu	63	2	He	102.341	0.099	742203	2.38	100	102.3	90	110	
Zn	66	2	He	103.910	1.160	174311	2.32	100	103.9	90	110	
As	75	2	He	100.328	0.686	160927	2.14	100	100.3	90	110	
Se	78	2	He	99.390	1.219	13344	2.46	100	99.4	90	110	
B	11	1	nogas	540.174	12.088	2187268	1.06	500	108.0	90	110	
Si	28	1	nogas	5859.002	13.101	8402637	2.05	5000	117.2	90	110	CCV Main CR1-2 Failed
Ca	43	1	nogas	11635.389	6.744	383110	1.35	10000	116.4	90	110	CCV Main CR1-2 Failed
Ca	44	1	nogas	11418.046	8.531	6183035	3.47	10000	114.2	90	110	CCV Main CR1-2 Failed
Fe	56	1	nogas	11273.803	9.497	235596447	1.96	10000	112.7	90	110	CCV Main CR1-2 Failed
Se	77	1	nogas	111.029	18.463	50664	1.82	100	111.0	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	109.097	4.115	27434	3.24	100	109.1	90	110	
Mo	95	1	nogas	106.273	7.829	526299	1.46	100	106.3	90	110	
Sn	118	1	nogas	110.103	14.480	735426	0.88	100	110.1	90	110	CCV Main CR1-2 Failed
Ba	137	1	nogas	110.246	14.225	402892	0.79	100	110.2	90	110	CCV Main CR1-2 Failed
Sb	121	2	He	100.625	2.181	633898	0.70	100	100.6	90	110	
Li	7	1	nogas	110.195	8.310	1534955	4.87	100	110.2	90	110	CCV Main CR1-2 Failed
P	31	1	nogas	545.849	8.744	1019401	0.53	500	109.2	90	110	
La	139	1	nogas	165.855	4.908	623	13.64	100	165.9	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	-766.665	-126.540	23	65.47	100	-766.7	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	nogas	990519	12.12	1282255	77.25	70	125	
Ge	72	1	nogas	3088146	7.15	3894467	79.30	70	125	
In	115	1	nogas	2675231	13.91	3488791	76.68	70	125	
Bi	209	1	nogas	1908786	10.00	2439864	78.23	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1113395	2.33	1316692	84.56	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	103_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T14:46:50-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	070CALB.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	0.052	34.2	497	25.9	1	
Na	23	1	nogas	4.227	56.9	748809	4.1	100	
Mg	24	1	nogas	6.325	29.3	112358	21.4	100	
Al	27	1	nogas	-0.124	-76.6	26248	3.4	5	
K	39	1	nogas	5.949	297.2	9782568	0.6	100	
Ti	47	1	nogas	0.049	72.0	517	15.5	2.5	
V	51	1	nogas	-4.249	-11.8	427752	3.1	2.5	
Cr	52	1	nogas	-0.176	-36.4	51087	2.3	2.5	
Mn	55	1	nogas	0.110	39.8	29971	1.6	2.5	
Co	59	1	nogas	0.057	32.8	1960	18.0	2.5	
Ni	60	1	nogas	-0.380	-12.3	1040	19.3	2.5	
Cu	63	1	nogas	0.033	120.7	3407	10.1	2	
Zn	66	1	nogas	-0.042	-99.0	1900	5.2	2.5	
As	75	1	nogas	-1.283	-28.0	83243	4.9	2.5	
Sr	88	1	nogas	0.065	21.4	3197	8.4	2.5	
Ag	107	1	nogas	0.042	22.8	673	15.5	2.5	
Cd	111	1	nogas	0.048	52.8	163	46.0	1	
Sb	121	1	nogas	0.289	24.5	4547	16.0	2.5	
Tl	205	1	nogas	0.650	68.0	12220	66.2	1	
Pb	208	1	nogas	0.054	25.3	1930	17.4	2.5	
U	238	1	nogas	0.160	62.1	3871	61.7	2.5	
[Pb]	206	1	nogas	0.036	34.9	413	19.4	2.5	
[Pb]	207	1	nogas	0.058	6.1	440	3.9	2.5	
Na	23	2	He	0.509	102.0	68801	0.5	100	
Mg	24	2	He	4.406	10.2	6425	6.9	100	
Al	27	2	He	-0.744	-22.1	887	12.7	5	
K	39	2	He	-30.843	-7.8	219435	1.4	100	
Ca	43	2	He	-4.668	-208.7	43	74.2	100	
Ca	44	2	He	-3.603	-29.7	1897	4.0	100	
V	51	2	He	0.025	79.5	7261	3.0	2.5	
Cr	52	2	He	0.055	57.4	5814	4.4	2.5	
Mn	55	2	He	0.012	169.9	1563	8.7	2.5	
Fe	56	2	He	5.038	9.1	60379	5.0	100	
Co	59	2	He	0.039	20.6	600	14.5	2.5	
Ni	60	2	He	-0.181	-18.9	327	29.7	2.5	
Cu	63	2	He	-0.090	-7.8	1260	4.2	2	
Zn	66	2	He	-0.281	-15.0	650	11.6	2.5	
As	75	2	He	0.066	42.9	444	9.5	2.5	
Se	78	2	He	0.590	32.2	169	15.2	2	
B	11	1	nogas	7.276	19.8	52586	11.6	10	
Si	28	1	nogas	320.359	32.1	2976243	0.4	5	CCB Main CR1 Failed
Ca	43	1	nogas	9.209	76.7	1243	17.8	100	
Ca	44	1	nogas	-62.667	-20.9	195657	0.4	100	
Fe	56	1	nogas	-13.487	-79.0	3551535	3.3	100	
Se	77	1	nogas	-1.844	-210.9	27318	5.6	2.5	
Se	82	1	nogas	0.167	121.9	223	22.5	2	
Mo	95	1	nogas	0.393	49.4	2287	42.5	2.5	
Sn	118	1	nogas	0.317	37.8	3594	21.6	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.248	131.9	1289	99.3	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.283	6.5	2367	4.0	2.5	
P	31	1	nogas	3.914	224.1	119443	10.4	10	
La	139	1	nogas	13.145	53.6	110	24.1	2.5	CCB Main CR1 Failed
Au	197	1	nogas	-955.608	-97.9	23	65.5	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	nogas	1174372	2.29	1282255	91.59	70	125	
Ge	72	1	nogas	3366412	3.57	3894467	86.44	70	125	
In	115	1	nogas	2990085	3.50	3488791	85.71	70	125	
Bi	209	1	nogas	2171653	1.46	2439864	89.01	70	125	
Ge	72	2	He	1113970	1.01	1316692	84.60	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	105_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T14:51:45-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	070CALB.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	102.672	6.561	740690	2.00	100	102.7	90	110	
Na	23	1	nogas	11463.225	8.329	257648031	3.79	10000	114.6	90	110	CCV Main CR1-2 Failed
Mg	24	1	nogas	11110.950	9.046	161203737	0.85	10000	111.1	90	110	CCV Main CR1-2 Failed
Al	27	1	nogas	110.049	9.478	2005041	4.38	100	110.0	90	110	CCV Main CR1-2 Failed
K	39	1	nogas	10592.210	4.218	225907897	2.54	10000	105.9	90	110	
Ti	47	1	nogas	104.998	7.507	180010	1.13	100	105.0	90	110	
V	51	1	nogas	102.060	6.722	2992509	0.92	100	102.1	90	110	
Cr	52	1	nogas	105.724	5.474	2236878	1.12	100	105.7	90	110	
Mn	55	1	nogas	106.230	5.679	2746265	1.91	100	106.2	90	110	
Co	59	1	nogas	108.275	5.455	2349413	0.91	100	108.3	90	110	
Ni	60	1	nogas	107.125	7.939	516198	1.54	100	107.1	90	110	
Cu	63	1	nogas	105.732	7.943	1188168	2.56	100	105.7	90	110	
Zn	66	1	nogas	105.573	5.838	401156	2.64	100	105.6	90	110	
As	75	1	nogas	102.251	7.597	616969	0.82	100	102.3	90	110	
Sr	88	1	nogas	105.543	3.982	2769426	2.48	100	105.5	90	110	
Ag	107	1	nogas	103.332	5.602	1322430	0.72	100	103.3	90	110	
Cd	111	1	nogas	107.290	10.048	291765	0.53	100	107.3	90	110	
Sb	121	1	nogas	103.973	7.138	1254737	1.41	100	104.0	90	110	
Tl	205	1	nogas	112.573	10.677	1793622	3.75	100	112.6	90	110	CCV Main CR1-2 Failed
Pb	208	1	nogas	96.261	1.845	2377977	1.84	100	96.3	90	110	
U	238	1	nogas	115.321	10.660	2405433	2.81	100	115.3	90	110	CCV Main CR1-2 Failed
[Pb]	206	1	nogas	112.605	9.773	611749	1.12	100	112.6	90	110	CCV Main CR1-2 Failed
[Pb]	207	1	nogas	108.878	9.261	519772	1.34	100	108.9	90	110	
Na	23	2	He	10507.816	1.659	21406676	1.05	10000	105.1	90	110	
Mg	24	2	He	10434.217	1.329	11783366	1.00	10000	104.3	90	110	
Al	27	2	He	104.913	0.731	68079	0.57	100	104.9	90	110	
K	39	2	He	9805.563	0.792	13061714	0.78	10000	98.1	90	110	
Ca	43	2	He	10630.808	1.040	35838	0.42	10000	106.3	90	110	
Ca	44	2	He	10688.766	1.240	594850	1.15	10000	106.9	90	110	
V	51	2	He	101.666	0.523	793968	0.25	100	101.7	90	110	
Cr	52	2	He	103.097	0.442	887048	0.79	100	103.1	90	110	
Mn	55	2	He	104.495	0.415	641762	0.67	100	104.5	90	110	
Fe	56	2	He	10547.594	0.884	78961440	0.82	10000	105.5	90	110	
Co	59	2	He	101.018	0.958	1161924	1.20	100	101.0	90	110	
Ni	60	2	He	103.751	1.802	297238	1.74	100	103.8	90	110	
Cu	63	2	He	102.939	0.400	754560	0.78	100	102.9	90	110	
Zn	66	2	He	104.058	0.614	176445	0.80	100	104.1	90	110	
As	75	2	He	101.453	0.346	164485	0.57	100	101.5	90	110	
Se	78	2	He	100.630	1.711	13654	1.24	100	100.6	90	110	
B	11	1	nogas	501.427	4.075	2268320	6.32	500	100.3	90	110	
Si	28	1	nogas	5509.491	10.377	8556476	1.03	5000	110.2	90	110	CCV Main CR1-2 Failed
Ca	43	1	nogas	10858.714	7.638	379875	2.15	10000	108.6	90	110	
Ca	44	1	nogas	10688.747	8.779	6164252	3.19	10000	106.9	90	110	
Fe	56	1	nogas	10643.695	6.320	236977147	3.12	10000	106.4	90	110	
Se	77	1	nogas	95.893	13.622	50243	1.55	100	95.9	90	110	
Se	82	1	nogas	102.332	6.254	27328	1.04	100	102.3	90	110	
Mo	95	1	nogas	100.745	4.761	530860	1.67	100	100.7	90	110	
Sn	118	1	nogas	104.346	10.592	731355	0.39	100	104.3	90	110	
Ba	137	1	nogas	106.872	9.000	410174	1.67	100	106.9	90	110	
Sb	121	2	He	101.263	2.207	644995	2.38	100	101.3	90	110	
Li	7	1	nogas	104.898	7.540	1626814	2.05	100	104.9	90	110	
P	31	1	nogas	513.916	6.886	1027074	0.57	500	102.8	90	110	
La	139	1	nogas	163.159	17.114	637	12.79	100	163.2	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	-20.607	-7378.798	33	62.45	100	-20.6	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	nogas	1095989	6.19	1282255	85.47	70	125	
Ge	72	1	nogas	3280062	6.15	3894467	84.22	70	125	
In	115	1	nogas	2789604	10.30	3488791	79.96	70	125	
Bi	209	1	nogas	1948394	10.29	2439864	79.86	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1125377	0.63	1316692	85.47	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	115_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T15:12:10-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	070CALB.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	101.583	15.487	700377	2.22	100	101.6	90	110	
Na	23	1	nogas	10273.964	6.868	241202472	2.15	10000	102.7	90	110	
Mg	24	1	nogas	10387.349	3.423	157728254	2.98	10000	103.9	90	110	
Al	27	1	nogas	105.401	8.666	1880580	0.93	100	105.4	90	110	
K	39	1	nogas	10239.775	9.957	213499988	0.92	10000	102.4	90	110	
Ti	47	1	nogas	100.302	10.444	168056	2.11	100	100.3	90	110	
V	51	1	nogas	104.886	14.443	2986010	3.13	100	104.9	90	110	
Cr	52	1	nogas	107.047	12.521	2208249	3.39	100	107.0	90	110	
Mn	55	1	nogas	104.232	9.066	2633738	2.21	100	104.2	90	110	
Co	59	1	nogas	106.347	7.462	2256744	1.64	100	106.3	90	110	
Ni	60	1	nogas	103.712	8.023	489159	0.73	100	103.7	90	110	
Cu	63	1	nogas	103.040	9.605	1132173	1.25	100	103.0	90	110	
Zn	66	1	nogas	101.724	9.910	377559	1.38	100	101.7	90	110	
As	75	1	nogas	98.894	8.613	586664	1.78	100	98.9	90	110	
Sr	88	1	nogas	103.601	10.091	2652985	1.42	100	103.6	90	110	
Ag	107	1	nogas	101.041	9.076	1263529	0.37	100	101.0	90	110	
Cd	111	1	nogas	98.138	11.529	274641	1.89	100	98.1	90	110	
Sb	121	1	nogas	101.268	9.823	1194394	1.28	100	101.3	90	110	
Tl	205	1	nogas	106.559	6.617	1756712	1.41	100	106.6	90	110	
Pb	208	1	nogas	92.844	1.107	2293575	1.11	100	92.8	90	110	
U	238	1	nogas	106.866	9.079	2305198	3.19	100	106.9	90	110	
[Pb]	206	1	nogas	104.328	7.615	586076	0.27	100	104.3	90	110	
[Pb]	207	1	nogas	100.220	7.373	494689	1.75	100	100.2	90	110	
Na	23	2	He	10204.331	1.338	20016438	0.65	10000	102.0	90	110	
Mg	24	2	He	10242.226	1.231	11136196	1.25	10000	102.4	90	110	
Al	27	2	He	103.889	4.018	64898	2.45	100	103.9	90	110	
K	39	2	He	9209.655	1.588	12283704	1.55	10000	92.1	90	110	
Ca	43	2	He	10110.273	2.303	32813	0.69	10000	101.1	90	110	
Ca	44	2	He	10210.482	0.731	547176	0.93	10000	102.1	90	110	
V	51	2	He	100.036	1.691	752196	0.20	100	100.0	90	110	
Cr	52	2	He	100.084	1.273	829172	0.56	100	100.1	90	110	
Mn	55	2	He	100.462	1.087	594058	0.54	100	100.5	90	110	
Fe	56	2	He	10152.970	1.650	73171807	0.33	10000	101.5	90	110	
Co	59	2	He	98.483	3.062	1090323	1.54	100	98.5	90	110	
Ni	60	2	He	101.738	1.710	280616	1.00	100	101.7	90	110	
Cu	63	2	He	100.281	1.767	707676	0.43	100	100.3	90	110	
Zn	66	2	He	101.635	0.828	165945	1.01	100	101.6	90	110	
As	75	2	He	98.319	1.924	153461	0.69	100	98.3	90	110	
Se	78	2	He	96.899	1.642	12661	0.80	100	96.9	90	110	
B	11	1	nogas	472.385	13.597	2042523	0.50	500	94.5	90	110	
Si	28	1	nogas	5305.747	12.307	8151613	0.80	5000	106.1	90	110	
Ca	43	1	nogas	10529.401	9.429	360144	0.68	10000	105.3	90	110	
Ca	44	1	nogas	10286.728	10.975	5805725	1.75	10000	102.9	90	110	
Fe	56	1	nogas	10244.847	8.607	223086622	0.56	10000	102.4	90	110	
Se	77	1	nogas	91.206	17.403	48027	0.96	100	91.2	90	110	
Se	82	1	nogas	98.774	8.294	25799	1.39	100	98.8	90	110	
Mo	95	1	nogas	97.050	8.471	499746	2.13	100	97.0	90	110	
Sn	118	1	nogas	96.816	11.613	698687	2.82	100	96.8	90	110	
Ba	137	1	nogas	97.616	12.143	385084	0.89	100	97.6	90	110	
Sb	121	2	He	98.200	1.207	602187	1.05	100	98.2	90	110	
Li	7	1	nogas	105.855	13.475	1572132	1.14	100	105.9	90	110	
P	31	1	nogas	487.742	9.065	958666	0.93	500	97.5	90	110	
La	139	1	nogas	158.407	14.071	643	17.19	100	158.4	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	-1018.320	-75.000	20	50.00	100	-1018.3	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	nogas	1058388	12.51	1282255	82.54	70	125	
Ge	72	1	nogas	3213815	8.32	3894467	82.52	70	125	
In	115	1	nogas	2878319	12.38	3488791	82.50	70	125	
Bi	209	1	nogas	2009487	8.03	2439864	82.36	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1083554	1.61	1316692	82.29	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	116_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T15:14:12-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	070CALB.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	0.058	33.3	527	26.6	1	
Na	23	1	nogas	1.884	104.9	676192	4.2	100	
Mg	24	1	nogas	5.468	25.9	96975	19.4	100	
Al	27	1	nogas	-0.124	-71.5	24626	6.3	5	
K	39	1	nogas	12.255	76.7	9296411	0.4	100	
Ti	47	1	nogas	0.035	119.3	460	15.2	2.5	
V	51	1	nogas	-3.507	-2.6	418279	1.5	2.5	
Cr	52	1	nogas	-0.178	-21.9	47845	3.2	2.5	
Mn	55	1	nogas	0.145	15.3	28970	2.8	2.5	
Co	59	1	nogas	0.049	17.1	1663	8.7	2.5	
Ni	60	1	nogas	-0.408	-3.8	850	8.2	2.5	
Cu	63	1	nogas	-0.003	-347.0	2810	2.8	2	
Zn	66	1	nogas	-0.148	-59.4	1393	21.3	2.5	
As	75	1	nogas	-0.444	-101.0	82154	2.3	2.5	
Sr	88	1	nogas	0.066	25.3	3010	13.2	2.5	
Ag	107	1	nogas	0.036	27.1	553	19.9	2.5	
Cd	111	1	nogas	0.059	25.8	190	21.1	1	
Sb	121	1	nogas	0.191	21.9	3137	15.1	2.5	
Tl	205	1	nogas	0.584	65.6	10758	64.1	1	
Pb	208	1	nogas	0.050	44.5	1840	29.8	2.5	
U	238	1	nogas	0.160	48.2	3764	48.8	2.5	
[Pb]	206	1	nogas	0.043	28.1	440	18.0	2.5	
[Pb]	207	1	nogas	0.050	80.0	387	55.6	2.5	
Na	23	2	He	-1.647	-34.2	62910	1.6	100	
Mg	24	2	He	5.147	25.2	7081	20.1	100	
Al	27	2	He	-0.800	-29.9	830	17.8	5	
K	39	2	He	-34.791	-8.3	214280	1.8	100	
Ca	43	2	He	5.883	30.6	77	7.5	100	
Ca	44	2	He	-1.185	-250.5	1980	8.1	100	
V	51	2	He	0.045	50.9	7235	2.5	2.5	
Cr	52	2	He	0.034	135.6	5504	6.8	2.5	
Mn	55	2	He	-0.005	-254.4	1423	5.9	2.5	
Fe	56	2	He	4.999	7.7	58643	4.7	100	
Co	59	2	He	0.035	18.6	547	13.5	2.5	
Ni	60	2	He	-0.168	-16.7	357	21.8	2.5	
Cu	63	2	He	-0.084	-13.7	1273	6.4	2	
Zn	66	2	He	-0.296	-5.4	610	4.3	2.5	
As	75	2	He	0.076	33.4	449	9.0	2.5	
Se	78	2	He	0.376	61.7	137	21.9	2	
B	11	1	nogas	6.888	23.4	49204	11.4	10	
Si	28	1	nogas	482.068	10.3	2960897	0.4	5	CCB Main CR1 Failed
Ca	43	1	nogas	4.102	12.8	997	1.5	100	
Ca	44	1	nogas	-73.287	-8.8	177764	0.7	100	
Fe	56	1	nogas	-10.964	-95.1	3384551	5.3	100	
Se	77	1	nogas	2.743	146.6	26653	2.2	2.5	CCB Main CR1 Failed
Se	82	1	nogas	0.529	30.7	303	14.9	2	

Continuing Calibration Blank (CCB) Report

Mo	95	1	nogas	0.381	56.9	2094	50.8	2.5	
Sn	118	1	nogas	0.312	38.4	3480	23.6	5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Ba	137	1	nogas	0.065	21.2	550	8.3	2.5	
Sb	121	2	He	0.154	4.2	1517	2.5	2.5	
P	31	1	nogas	0.736	222.2	106722	1.4	10	
La	139	1	nogas	11.027	57.0	100	26.5	2.5	CCB Main CR1 Failed
Au	197	1	nogas	-42.630	-5259.7	37	95.8	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	nogas	1141888	3.74	1282255	89.05	70	125	
Ge	72	1	nogas	3154284	1.73	3894467	80.99	70	125	
In	115	1	nogas	2918242	2.58	3488791	83.65	70	125	
Bi	209	1	nogas	2108802	1.78	2439864	86.43	70	125	
Ge	72	2	He	1086993	0.13	1316692	82.55	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	127_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T15:35:56-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	070CALB.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	103.359	0.577	696780	1.04	100	103.4	90	110	
Na	23	1	nogas	10623.840	5.096	245421030	2.43	10000	106.2	90	110	
Mg	24	1	nogas	10548.063	2.655	157519537	2.71	10000	105.5	90	110	
Al	27	1	nogas	107.265	3.171	1921923	1.04	100	107.3	90	110	
K	39	1	nogas	10317.326	5.824	216027071	2.66	10000	103.2	90	110	
Ti	47	1	nogas	100.173	3.270	168767	1.50	100	100.2	90	110	
V	51	1	nogas	98.702	6.802	2857118	3.40	100	98.7	90	110	
Cr	52	1	nogas	104.216	5.866	2164809	3.92	100	104.2	90	110	
Mn	55	1	nogas	107.235	3.663	2721638	2.64	100	107.2	90	110	
Co	59	1	nogas	104.313	5.046	2222116	3.95	100	104.3	90	110	
Ni	60	1	nogas	104.756	3.806	496043	0.70	100	104.8	90	110	
Cu	63	1	nogas	104.816	3.544	1157399	1.47	100	104.8	90	110	
Zn	66	1	nogas	102.710	3.574	383144	0.52	100	102.7	90	110	
As	75	1	nogas	98.055	4.125	584562	0.17	100	98.1	90	110	
Sr	88	1	nogas	102.912	5.505	2648325	2.82	100	102.9	90	110	
Ag	107	1	nogas	101.173	3.020	1271473	2.34	100	101.2	90	110	
Cd	111	1	nogas	100.048	3.549	274385	1.50	100	100.0	90	110	
Sb	121	1	nogas	103.154	0.173	1223788	3.39	100	103.2	90	110	
Tl	205	1	nogas	105.014	3.080	1712688	2.79	100	105.0	90	110	
Pb	208	1	nogas	94.622	1.272	2337487	1.27	100	94.6	90	110	
U	238	1	nogas	108.471	3.060	2316719	2.27	100	108.5	90	110	
[Pb]	206	1	nogas	104.798	2.392	582770	2.57	100	104.8	90	110	
[Pb]	207	1	nogas	103.645	1.185	506280	1.30	100	103.6	90	110	
Na	23	2	He	10128.735	1.409	19980403	0.79	10000	101.3	90	110	
Mg	24	2	He	10365.725	1.819	11333127	1.19	10000	103.7	90	110	
Al	27	2	He	102.991	1.813	64727	1.31	100	103.0	90	110	
K	39	2	He	9262.504	2.423	12352702	2.37	10000	92.6	90	110	
Ca	43	2	He	10491.564	1.359	34245	1.43	10000	104.9	90	110	
Ca	44	2	He	10476.531	0.921	564545	1.24	10000	104.8	90	110	
V	51	2	He	100.177	1.748	757527	1.45	100	100.2	90	110	
Cr	52	2	He	100.737	1.055	839249	0.37	100	100.7	90	110	
Mn	55	2	He	103.266	1.197	614028	0.73	100	103.3	90	110	
Fe	56	2	He	10398.603	1.978	75364122	1.31	10000	104.0	90	110	
Co	59	2	He	100.112	3.340	1114717	2.82	100	100.1	90	110	
Ni	60	2	He	103.539	2.494	287176	2.04	100	103.5	90	110	
Cu	63	2	He	101.784	1.819	722315	1.17	100	101.8	90	110	
Zn	66	2	He	102.608	0.418	168463	0.28	100	102.6	90	110	
As	75	2	He	99.763	1.790	156596	1.36	100	99.8	90	110	
Se	78	2	He	97.290	3.233	12782	2.52	100	97.3	90	110	
B	11	1	nogas	487.425	1.746	2056530	1.00	500	97.5	90	110	
Si	28	1	nogas	5493.633	5.856	8388122	1.65	5000	109.9	90	110	
Ca	43	1	nogas	10581.544	4.458	363614	1.17	10000	105.8	90	110	
Ca	44	1	nogas	10242.715	5.316	5811591	1.69	10000	102.4	90	110	
Fe	56	1	nogas	10536.370	3.161	230352863	0.90	10000	105.4	90	110	
Se	77	1	nogas	83.967	9.077	46526	4.74	100	84.0	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	102.517	4.959	26874	1.70	100	102.5	90	110	
Mo	95	1	nogas	96.911	6.840	500879	4.26	100	96.9	90	110	
Sn	118	1	nogas	98.206	1.903	694716	1.69	100	98.2	90	110	
Ba	137	1	nogas	100.953	4.884	390415	3.03	100	101.0	90	110	
Sb	121	2	He	100.958	1.391	622546	0.72	100	101.0	90	110	
Li	7	1	nogas	103.718	1.779	1504238	0.31	100	103.7	90	110	
P	31	1	nogas	501.639	5.695	986623	1.74	500	100.3	90	110	
La	139	1	nogas	156.261	14.353	617	11.51	100	156.3	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	-812.561	-49.202	23	24.74	100	-812.6	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	nogas	1021571	1.51	1282255	79.67	70	125	
Ge	72	1	nogas	3215245	3.47	3894467	82.56	70	125	
In	115	1	nogas	2795315	2.12	3488791	80.12	70	125	
Bi	209	1	nogas	1981102	1.06	2439864	81.20	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1089571	0.69	1316692	82.75	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	128_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T15:37:56-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	070CALB.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	0.071	19.9	613	19.7	1	
Na	23	1	nogas	2.053	147.1	692988	6.8	100	
Mg	24	1	nogas	6.510	26.2	114808	19.2	100	
Al	27	1	nogas	-0.088	-64.3	26189	0.5	5	
K	39	1	nogas	-1.837	-885.1	9350668	1.0	100	
Ti	47	1	nogas	0.063	176.0	523	35.6	2.5	
V	51	1	nogas	-3.996	-7.9	421934	2.3	2.5	
Cr	52	1	nogas	-0.226	-17.0	48644	4.2	2.5	
Mn	55	1	nogas	0.106	37.3	29033	3.2	2.5	
Co	59	1	nogas	0.063	12.4	2043	9.4	2.5	
Ni	60	1	nogas	-0.352	-5.4	1150	8.6	2.5	
Cu	63	1	nogas	0.015	137.3	3114	3.5	2	
Zn	66	1	nogas	-0.175	-34.7	1343	15.7	2.5	
As	75	1	nogas	-1.514	-44.4	79637	2.8	2.5	
Sr	88	1	nogas	0.075	23.1	3374	12.6	2.5	
Ag	107	1	nogas	0.042	13.9	653	8.7	2.5	
Cd	111	1	nogas	0.062	10.2	200	8.7	1	
Sb	121	1	nogas	0.212	31.0	3504	21.8	2.5	
Tl	205	1	nogas	0.598	66.7	10775	62.5	1	
Pb	208	1	nogas	0.060	34.0	2090	24.2	2.5	
U	238	1	nogas	0.164	53.0	3804	50.6	2.5	
[Pb]	206	1	nogas	0.054	44.7	500	28.0	2.5	
[Pb]	207	1	nogas	0.083	51.4	550	38.7	2.5	
Na	23	2	He	-0.593	-109.4	65529	2.0	100	
Mg	24	2	He	5.048	5.9	7031	4.8	100	
Al	27	2	He	-0.757	-17.2	863	9.3	5	
K	39	2	He	-35.017	-1.1	213986	0.2	100	
Ca	43	2	He	-5.507	-146.3	40	66.1	100	
Ca	44	2	He	-1.127	-184.8	2000	5.9	100	
V	51	2	He	0.093	37.0	7659	3.6	2.5	
Cr	52	2	He	0.085	16.7	5971	2.0	2.5	
Mn	55	2	He	0.032	19.1	1657	2.4	2.5	
Fe	56	2	He	6.553	2.0	70474	1.1	100	
Co	59	2	He	0.045	21.1	660	16.4	2.5	
Ni	60	2	He	-0.131	-6.9	460	5.8	2.5	
Cu	63	2	He	-0.082	-18.5	1300	8.5	2	
Zn	66	2	He	-0.326	-12.3	567	11.7	2.5	
As	75	2	He	0.054	52.5	419	10.5	2.5	
Se	78	2	He	0.383	45.0	139	16.0	2	
B	11	1	nogas	8.287	19.6	54245	12.3	10	
Si	28	1	nogas	453.231	30.7	3037013	1.2	5	CCB Main CR1 Failed
Ca	43	1	nogas	8.080	27.8	1173	8.3	100	
Ca	44	1	nogas	-88.986	-14.2	175551	0.5	100	
Fe	56	1	nogas	-4.463	-155.9	3652537	2.7	100	
Se	77	1	nogas	-4.599	-111.1	25849	0.7	2.5	
Se	82	1	nogas	0.126	92.6	207	12.2	2	
Mo	95	1	nogas	0.386	47.6	2207	44.2	2.5	
Sn	118	1	nogas	0.308	30.8	3460	18.2	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.071	47.3	573	21.8	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.132	15.7	1393	9.4	2.5	
P	31	1	nogas	-1.415	-81.9	106867	2.6	10	
La	139	1	nogas	8.325	109.2	90	40.1	2.5	CCB Main CR1 Failed
Au	197	1	nogas	-461.611	-484.4	30	115.5	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	nogas	1109761	4.65	1282255	86.55	70	125	
Ge	72	1	nogas	3272594	4.04	3894467	84.03	70	125	
In	115	1	nogas	2924332	2.11	3488791	83.82	70	125	
Bi	209	1	nogas	2094853	1.99	2439864	85.86	70	125	
Ge	72	2	He	1096191	0.28	1316692	83.25	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	139_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T15:59:49-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	070CALB.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	102.288	5.040	838896	1.71	100	102.3	90	110	
Na	23	1	nogas	10772.460	4.223	304614982	2.49	10000	107.7	90	110	
Mg	24	1	nogas	10302.740	1.737	188288279	1.96	10000	103.0	90	110	
Al	27	1	nogas	103.717	2.108	2286895	0.51	100	103.7	90	110	
K	39	1	nogas	9992.751	3.494	257836422	2.57	10000	99.9	90	110	
Ti	47	1	nogas	98.260	2.825	203604	0.83	100	98.3	90	110	
V	51	1	nogas	98.761	6.320	3515902	3.46	100	98.8	90	110	
Cr	52	1	nogas	100.004	5.961	2557959	4.95	100	100.0	90	110	
Mn	55	1	nogas	99.499	4.027	3107318	2.04	100	99.5	90	110	
Co	59	1	nogas	101.823	2.960	2668751	3.55	100	101.8	90	110	
Ni	60	1	nogas	99.154	2.479	577796	1.50	100	99.2	90	110	
Cu	63	1	nogas	100.916	2.653	1370736	0.75	100	100.9	90	110	
Zn	66	1	nogas	101.124	2.002	464172	2.32	100	101.1	90	110	
As	75	1	nogas	97.437	3.928	715120	1.62	100	97.4	90	110	
Sr	88	1	nogas	101.976	1.511	3229905	2.07	100	102.0	90	110	
Ag	107	1	nogas	97.202	0.869	1502582	1.59	100	97.2	90	110	
Cd	111	1	nogas	99.252	3.259	332323	2.28	100	99.3	90	110	
Sb	121	1	nogas	102.159	3.048	1489559	1.24	100	102.2	90	110	
Tl	205	1	nogas	100.728	2.601	2022677	1.47	100	100.7	90	110	
Pb	208	1	nogas	111.586	2.283	2756461	2.28	100	111.6	90	110	CCV Main CR1-2 Failed
U	238	1	nogas	99.905	6.861	2625262	4.18	100	99.9	90	110	
[Pb]	206	1	nogas	100.403	4.056	687402	3.47	100	100.4	90	110	
[Pb]	207	1	nogas	97.999	4.725	589164	2.76	100	98.0	90	110	
Na	23	2	He	10279.956	0.753	25178104	1.03	10000	102.8	90	110	
Mg	24	2	He	10113.223	0.780	13728983	0.35	10000	101.1	90	110	
Al	27	2	He	103.851	9.301	81007	8.71	100	103.9	90	110	
K	39	2	He	11376.952	0.419	15113297	0.41	10000	113.8	90	110	CCV Main CR1-2 Failed
Ca	43	2	He	10117.767	3.153	41002	2.69	10000	101.2	90	110	
Ca	44	2	He	10307.000	2.017	689581	1.61	10000	103.1	90	110	
V	51	2	He	98.416	0.677	924200	0.98	100	98.4	90	110	
Cr	52	2	He	98.913	1.521	1023254	1.23	100	98.9	90	110	
Mn	55	2	He	100.552	1.753	742378	1.39	100	100.6	90	110	
Fe	56	2	He	10072.440	0.681	90642645	0.34	10000	100.7	90	110	
Co	59	2	He	100.585	1.486	1390790	1.93	100	100.6	90	110	
Ni	60	2	He	100.466	0.617	346025	0.59	100	100.5	90	110	
Cu	63	2	He	99.436	0.932	876246	1.01	100	99.4	90	110	
Zn	66	2	He	101.382	1.022	206687	1.47	100	101.4	90	110	
As	75	2	He	99.318	0.736	193571	0.84	100	99.3	90	110	
Se	78	2	He	100.097	1.215	16327	1.15	100	100.1	90	110	
B	11	1	nogas	496.325	5.337	2547122	1.00	500	99.3	90	110	
Si	28	1	nogas	4811.137	2.110	9420233	0.93	5000	96.2	90	110	
Ca	43	1	nogas	10112.800	2.223	427606	0.26	10000	101.1	90	110	
Ca	44	1	nogas	9778.321	1.893	6840026	0.24	10000	97.8	90	110	
Fe	56	1	nogas	9975.916	3.110	268465906	1.04	10000	99.8	90	110	
Se	77	1	nogas	93.417	3.208	59972	1.48	100	93.4	90	110	
Se	82	1	nogas	100.438	4.147	32393	2.11	100	100.4	90	110	
Mo	95	1	nogas	95.084	3.487	604759	1.93	100	95.1	90	110	
Sn	118	1	nogas	97.236	4.990	839033	1.40	100	97.2	90	110	
Ba	137	1	nogas	97.834	6.122	461563	2.21	100	97.8	90	110	
Sb	121	2	He	100.571	0.962	770012	0.79	100	100.6	90	110	
Li	7	1	nogas	100.429	3.440	1776770	3.00	100	100.4	90	110	
P	31	1	nogas	491.448	2.594	1192467	3.10	500	98.3	90	110	
La	139	1	nogas	178.045	14.208	847	8.71	100	178.0	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	-926.487	-92.104	27	57.28	100	-926.5	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	nogas	1245314	6.24	1282255	97.12	70	125	
Ge	72	1	nogas	3953111	2.06	3894467	101.51	70	125	
In	115	1	nogas	3414984	5.48	3488791	97.88	70	125	
Bi	209	1	nogas	2440379	3.56	2439864	100.02	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1352786	0.45	1316692	102.74	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	140_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T16:01:51-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	070CALB.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	0.058	24.7	597	20.0	1	
Na	23	1	nogas	80.669	30.2	2731682	8.9	100	
Mg	24	1	nogas	6.488	17.5	123223	7.4	100	
Al	27	1	nogas	-0.085	-158.0	28238	4.6	5	
K	39	1	nogas	15.747	401.9	10412308	1.0	100	
Ti	47	1	nogas	0.078	65.5	590	4.5	2.5	
V	51	1	nogas	-4.717	-41.6	434232	2.1	2.5	
Cr	52	1	nogas	-0.197	-163.7	52762	0.8	2.5	
Mn	55	1	nogas	0.096	161.7	30832	2.0	2.5	
Co	59	1	nogas	0.054	21.4	1990	12.6	2.5	
Ni	60	1	nogas	-0.151	-32.3	2274	3.1	2.5	
Cu	63	1	nogas	0.137	40.2	4817	3.2	2	
Zn	66	1	nogas	-0.103	-64.6	1737	7.2	2.5	
As	75	1	nogas	-1.025	-210.2	88102	2.0	2.5	
Sr	88	1	nogas	0.368	13.9	11861	2.3	2.5	
Ag	107	1	nogas	0.048	20.5	783	6.3	2.5	
Cd	111	1	nogas	0.050	25.0	177	14.2	1	
Sb	121	1	nogas	0.233	14.3	4054	10.4	2.5	
Tl	205	1	nogas	0.497	56.9	9854	48.7	1	
Pb	208	1	nogas	0.060	20.1	2083	14.3	2.5	
U	238	1	nogas	0.117	39.2	2980	34.2	2.5	
[Pb]	206	1	nogas	0.051	27.9	517	2.2	2.5	
[Pb]	207	1	nogas	0.072	32.3	527	12.2	2.5	
Na	23	2	He	45.736	14.7	177413	3.1	100	
Mg	24	2	He	4.574	8.6	7355	3.0	100	
Al	27	2	He	-0.810	-18.6	940	11.7	5	
K	39	2	He	-14.224	-2.1	241132	0.2	100	
Ca	43	2	He	6.118	202.5	90	57.7	100	
Ca	44	2	He	-1.095	-184.0	2264	4.5	100	
V	51	2	He	-0.049	-53.1	7454	3.2	2.5	
Cr	52	2	He	0.035	149.3	6298	10.8	2.5	
Mn	55	2	He	0.024	122.3	1817	7.3	2.5	
Fe	56	2	He	4.502	14.1	62688	4.4	100	
Co	59	2	He	0.032	12.9	583	14.6	2.5	
Ni	60	2	He	-0.205	-6.1	287	10.7	2.5	
Cu	63	2	He	-0.034	-91.0	1843	8.4	2	
Zn	66	2	He	-0.244	-45.3	787	21.4	2.5	
As	75	2	He	0.016	113.4	406	4.5	2.5	
Se	78	2	He	0.389	11.1	159	4.4	2	
B	11	1	nogas	5.700	26.1	49472	12.3	10	
Si	28	1	nogas	230.801	158.6	2995195	1.4	5	CCB Main CR1 Failed
Ca	43	1	nogas	8.668	59.3	1277	2.0	100	
Ca	44	1	nogas	-83.849	-50.1	191383	0.5	100	
Fe	56	1	nogas	-17.076	-119.8	3622405	3.6	100	
Se	77	1	nogas	-3.701	-359.7	27988	1.5	2.5	
Se	82	1	nogas	0.160	85.4	233	16.2	2	
Mo	95	1	nogas	0.310	31.9	1960	28.8	2.5	
Sn	118	1	nogas	0.258	37.1	3330	17.9	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.070	11.8	623	17.2	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.130	23.5	1557	8.5	2.5	
P	31	1	nogas	5.065	184.0	126858	1.1	10	
La	139	1	nogas	7.888	219.1	93	65.5	2.5	CCB Main CR1 Failed
Au	197	1	nogas	-61.212	-2611.2	37	63.0	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	nogas	1295944	8.88	1282255	101.07	70	125	
Ge	72	1	nogas	3551982	14.56	3894467	91.21	70	125	
In	115	1	nogas	3199514	21.25	3488791	91.71	70	125	
Bi	209	1	nogas	2294587	18.03	2439864	94.05	70	125	
Ge	72	2	He	1241188	5.52	1316692	94.27	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	152_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T16:25:41-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	070CALB.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	0.073	30.3	743	23.2	1	
Na	23	1	nogas	85.274	20.1	3108309	6.5	100	
Mg	24	1	nogas	7.659	20.2	154218	10.8	100	
Al	27	1	nogas	-0.178	-24.7	29056	3.4	5	
K	39	1	nogas	-11.804	-166.7	10814451	0.8	100	
Ti	47	1	nogas	0.081	51.0	657	9.2	2.5	
V	51	1	nogas	-4.294	-7.6	490405	2.3	2.5	
Cr	52	1	nogas	-0.187	-52.6	58422	0.8	2.5	
Mn	55	1	nogas	0.067	105.9	33106	2.8	2.5	
Co	59	1	nogas	0.055	31.2	2210	17.6	2.5	
Ni	60	1	nogas	-0.101	-26.4	2784	6.7	2.5	
Cu	63	1	nogas	0.146	20.5	5418	3.8	2	
Zn	66	1	nogas	-0.098	-37.8	1937	5.7	2.5	
As	75	1	nogas	-1.284	-8.4	95647	3.3	2.5	
Sr	88	1	nogas	0.129	14.8	5658	6.9	2.5	
Ag	107	1	nogas	0.051	23.0	913	16.6	2.5	
Cd	111	1	nogas	0.053	20.5	203	15.0	1	
Sb	121	1	nogas	0.540	13.1	8809	8.5	2.5	
Tl	205	1	nogas	0.428	42.8	9143	34.9	1	
Pb	208	1	nogas	0.070	10.8	2337	8.0	2.5	
U	238	1	nogas	0.107	38.8	2907	32.0	2.5	
[Pb]	206	1	nogas	0.061	30.9	630	16.7	2.5	
[Pb]	207	1	nogas	0.057	3.2	490	5.4	2.5	
Na	23	2	He	54.438	8.4	213996	3.5	100	
Mg	24	2	He	5.781	7.0	9619	5.1	100	
Al	27	2	He	-0.955	-3.5	910	4.4	5	
K	39	2	He	-8.645	-15.1	248416	0.7	100	
Ca	43	2	He	3.817	28.3	87	6.7	100	
Ca	44	2	He	-6.269	-38.2	2113	6.7	100	
V	51	2	He	-0.062	-13.4	7972	1.6	2.5	
Cr	52	2	He	0.015	227.1	6615	4.2	2.5	
Mn	55	2	He	-0.008	-122.1	1740	4.1	2.5	
Fe	56	2	He	4.905	3.8	71756	0.6	100	
Co	59	2	He	0.041	21.0	757	15.0	2.5	
Ni	60	2	He	-0.183	-20.1	390	33.5	2.5	
Cu	63	2	He	-0.038	-28.5	1977	5.7	2	
Zn	66	2	He	-0.290	-22.5	767	17.2	2.5	
As	75	2	He	0.040	33.8	487	3.8	2.5	
Se	78	2	He	0.321	28.7	161	10.7	2	
B	11	1	nogas	5.908	26.9	51614	13.2	10	
Si	28	1	nogas	-35.286	-289.3	2961846	0.9	5	
Ca	43	1	nogas	9.216	49.1	1430	9.8	100	
Ca	44	1	nogas	-112.080	-8.1	192462	0.6	100	
Fe	56	1	nogas	-20.287	-41.1	3907501	1.8	100	
Se	77	1	nogas	-0.985	-315.9	31618	0.8	2.5	
Se	82	1	nogas	0.399	36.0	330	10.9	2	
Mo	95	1	nogas	0.287	22.5	1990	17.3	2.5	
Sn	118	1	nogas	0.264	31.5	3694	14.6	5	
Ba	137	1	nogas	0.068	9.9	663	1.7	2.5	

Continuing Calibration Blank (CCB) Report

Sb	121	2	He	0.412	6.8	3840	6.0	2.5	
P	31	1	nogas	1.659	133.6	132796	0.6	10	
La	139	1	nogas	5.855	153.1	97	46.6	2.5	CCB Main CR1 Failed
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Au	197	1	nogas	-1484.582	-105.3	17	173.2	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	nogas	1321262	4.32	1282255	103.04	70	125	
Ge	72	1	nogas	3869467	3.56	3894467	99.36	70	125	
In	115	1	nogas	3458789	6.37	3488791	99.14	70	125	
Bi	209	1	nogas	2452585	5.21	2439864	100.52	70	125	
Ge	72	2	He	1345941	1.73	1316692	102.22	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	154_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T16:29:41-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	070CALB.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	103.684	5.038	850086	2.33	100	103.7	90	110	
Na	23	1	nogas	10436.162	10.369	295258315	3.39	10000	104.4	90	110	
Mg	24	1	nogas	10464.724	9.588	191314921	2.52	10000	104.6	90	110	
Al	27	1	nogas	110.438	7.290	2327262	2.30	100	110.4	90	110	CCV Main CR1-2 Failed
K	39	1	nogas	10483.343	4.669	258471606	2.07	10000	104.8	90	110	
Ti	47	1	nogas	103.747	6.901	205652	1.95	100	103.7	90	110	
V	51	1	nogas	101.731	5.747	3450274	0.59	100	101.7	90	110	
Cr	52	1	nogas	101.161	4.780	2476869	0.79	100	101.2	90	110	
Mn	55	1	nogas	104.378	6.184	3118725	2.06	100	104.4	90	110	
Co	59	1	nogas	108.536	7.368	2720205	2.46	100	108.5	90	110	
Ni	60	1	nogas	107.116	5.530	597127	0.58	100	107.1	90	110	
Cu	63	1	nogas	110.870	5.047	1441401	1.51	100	110.9	90	110	CCV Main CR1-2 Failed
Zn	66	1	nogas	105.018	4.929	461274	0.68	100	105.0	90	110	
As	75	1	nogas	100.617	7.227	703415	1.27	100	100.6	90	110	
Sr	88	1	nogas	107.073	5.440	3245115	0.68	100	107.1	90	110	
Ag	107	1	nogas	104.912	4.125	1552540	0.98	100	104.9	90	110	
Cd	111	1	nogas	101.814	7.753	340902	1.58	100	101.8	90	110	
Sb	121	1	nogas	105.323	6.271	1469601	1.66	100	105.3	90	110	
Tl	205	1	nogas	107.540	6.443	2082262	0.87	100	107.5	90	110	
Pb	208	1	nogas	113.251	1.687	2797574	1.69	100	113.3	90	110	CCV Main CR1-2 Failed
U	238	1	nogas	108.738	6.473	2757477	0.94	100	108.7	90	110	
[Pb]	206	1	nogas	107.201	7.258	707478	1.69	100	107.2	90	110	
[Pb]	207	1	nogas	104.602	7.062	606456	1.62	100	104.6	90	110	
Na	23	2	He	10004.697	1.338	24550530	1.31	10000	100.0	90	110	
Mg	24	2	He	10083.329	1.938	13713366	1.76	10000	100.8	90	110	
Al	27	2	He	100.271	2.394	78419	0.63	100	100.3	90	110	
K	39	2	He	11436.996	0.630	15191689	0.62	10000	114.4	90	110	CCV Main CR1-2 Failed
Ca	43	2	He	10016.144	0.695	40678	2.70	10000	100.2	90	110	
Ca	44	2	He	10157.609	0.538	680944	1.51	10000	101.6	90	110	
V	51	2	He	98.555	1.752	927143	1.46	100	98.6	90	110	
Cr	52	2	He	98.293	1.819	1018675	0.57	100	98.3	90	110	
Mn	55	2	He	99.216	3.799	733626	1.75	100	99.2	90	110	
Fe	56	2	He	9956.145	3.169	89735919	1.21	10000	99.6	90	110	
Co	59	2	He	98.439	0.311	1363726	2.08	100	98.4	90	110	
Ni	60	2	He	100.160	2.009	345561	0.35	100	100.2	90	110	
Cu	63	2	He	98.338	0.755	868212	1.34	100	98.3	90	110	
Zn	66	2	He	99.957	0.223	204193	2.04	100	100.0	90	110	
As	75	2	He	97.713	2.209	190768	0.39	100	97.7	90	110	
Se	78	2	He	98.741	1.976	16135	0.17	100	98.7	90	110	
B	11	1	nogas	503.239	8.445	2577821	1.09	500	100.6	90	110	
Si	28	1	nogas	5115.401	8.699	9397614	1.05	5000	102.3	90	110	
Ca	43	1	nogas	10945.184	5.082	442928	0.48	10000	109.5	90	110	
Ca	44	1	nogas	10651.003	6.445	7106238	2.09	10000	106.5	90	110	
Fe	56	1	nogas	10496.759	3.980	270328323	1.88	10000	105.0	90	110	
Se	77	1	nogas	98.590	11.210	58845	0.76	100	98.6	90	110	
Se	82	1	nogas	105.220	5.094	32483	0.16	100	105.2	90	110	
Mo	95	1	nogas	100.457	7.449	611231	2.67	100	100.5	90	110	
Sn	118	1	nogas	97.408	10.343	839776	1.57	100	97.4	90	110	
Ba	137	1	nogas	99.698	8.301	470697	1.89	100	99.7	90	110	
Sb	121	2	He	98.081	0.843	752381	1.44	100	98.1	90	110	
Li	7	1	nogas	105.034	5.361	1851523	2.30	100	105.0	90	110	
P	31	1	nogas	506.830	6.330	1172665	0.79	500	101.4	90	110	
La	139	1	nogas	199.304	7.858	943	4.78	100	199.3	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	-1269.046	-41.530	20	50.00	100	-1269.0	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	nogas	1245359	7.17	1282255	97.12	70	125	
Ge	72	1	nogas	3789019	4.77	3894467	97.29	70	125	
In	115	1	nogas	3426666	8.86	3488791	98.22	70	125	
Bi	209	1	nogas	2357286	5.41	2439864	96.62	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1355439	2.03	1316692	102.94	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	164_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T16:50:09-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	070CALB.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	100.838	3.379	703310	0.95	100	100.8	90	110	
Na	23	1	nogas	10168.551	1.064	250581739	1.95	10000	101.7	90	110	
Mg	24	1	nogas	9900.038	1.156	157582137	1.73	10000	99.0	90	110	
Al	27	1	nogas	102.126	0.219	1904828	1.75	100	102.1	90	110	
K	39	1	nogas	9864.149	2.681	215310846	0.79	10000	98.6	90	110	
Ti	47	1	nogas	98.186	1.878	172121	3.71	100	98.2	90	110	
V	51	1	nogas	123.507	9.420	3590782	10.01	100	123.5	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	99.055	1.872	2143310	1.35	100	99.1	90	110	
Mn	55	1	nogas	99.188	4.087	2619154	2.17	100	99.2	90	110	
Co	59	1	nogas	98.749	3.135	2187477	1.29	100	98.7	90	110	
Ni	60	1	nogas	98.306	1.826	484390	0.22	100	98.3	90	110	
Cu	63	1	nogas	100.508	2.389	1154424	1.46	100	100.5	90	110	
Zn	66	1	nogas	97.084	1.960	376826	1.38	100	97.1	90	110	
As	75	1	nogas	105.721	0.441	648744	2.22	100	105.7	90	110	
Sr	88	1	nogas	98.208	0.851	2630257	2.24	100	98.2	90	110	
Ag	107	1	nogas	95.181	1.753	1243868	0.80	100	95.2	90	110	
Cd	111	1	nogas	94.878	1.833	273646	0.95	100	94.9	90	110	
Sb	121	1	nogas	97.412	2.541	1201062	1.05	100	97.4	90	110	
Tl	205	1	nogas	101.395	2.541	1725064	0.40	100	101.4	90	110	
Pb	208	1	nogas	93.612	0.762	2312563	0.76	100	93.6	90	110	
U	238	1	nogas	97.741	0.587	2178505	1.74	100	97.7	90	110	
[Pb]	206	1	nogas	100.357	3.155	582083	1.24	100	100.4	90	110	
[Pb]	207	1	nogas	99.581	2.559	507398	0.56	100	99.6	90	110	
Na	23	2	He	10246.542	2.541	20872464	1.11	10000	102.5	90	110	
Mg	24	2	He	9932.043	3.091	11213447	1.67	10000	99.3	90	110	
Al	27	2	He	101.598	2.876	65958	1.84	100	101.6	90	110	
K	39	2	He	9356.604	1.484	12475558	1.45	10000	93.6	90	110	
Ca	43	2	He	9964.873	1.346	33594	0.27	10000	99.6	90	110	
Ca	44	2	He	10250.253	1.656	570475	1.06	10000	102.5	90	110	
V	51	2	He	100.053	2.541	781311	1.12	100	100.1	90	110	
Cr	52	2	He	97.628	3.253	840026	1.87	100	97.6	90	110	
Mn	55	2	He	99.245	1.325	609533	0.73	100	99.2	90	110	
Fe	56	2	He	9807.710	1.412	73425421	2.00	10000	98.1	90	110	
Co	59	2	He	96.968	0.113	1115334	1.35	100	97.0	90	110	
Ni	60	2	He	98.893	1.791	283317	0.48	100	98.9	90	110	
Cu	63	2	He	98.320	2.273	720638	1.02	100	98.3	90	110	
Zn	66	2	He	98.675	1.742	167358	1.33	100	98.7	90	110	
As	75	2	He	97.436	1.412	157971	1.00	100	97.4	90	110	
Se	78	2	He	96.445	0.955	13090	1.28	100	96.4	90	110	
B	11	1	nogas	482.500	5.535	2105715	2.81	500	96.5	90	110	
Si	28	1	nogas	5082.735	1.123	8268521	1.43	5000	101.7	90	110	
Ca	43	1	nogas	10093.904	2.189	360882	0.79	10000	100.9	90	110	
Ca	44	1	nogas	9918.439	1.536	5863497	1.36	10000	99.2	90	110	
Fe	56	1	nogas	9891.078	4.905	225048055	3.00	10000	98.9	90	110	
Se	77	1	nogas	163.700	11.808	68175	8.76	100	163.7	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	95.881	2.421	26163	1.79	100	95.9	90	110	
Mo	95	1	nogas	93.523	1.584	503047	0.38	100	93.5	90	110	
Sn	118	1	nogas	93.277	2.247	693729	1.00	100	93.3	90	110	
Ba	137	1	nogas	95.781	2.766	389595	2.00	100	95.8	90	110	
Sb	121	2	He	99.234	1.018	632033	1.06	100	99.2	90	110	
Li	7	1	nogas	99.299	3.817	1493957	1.57	100	99.3	90	110	
P	31	1	nogas	464.481	1.817	958898	1.39	500	92.9	90	110	
La	139	1	nogas	168.869	8.247	697	6.78	100	168.9	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	414.476	242.234	43	35.25	100	414.5	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	nogas	1057489	2.69	1282255	82.47	70	125	
Ge	72	1	nogas	3342371	1.96	3894467	85.82	70	125	
In	115	1	nogas	2938687	1.53	3488791	84.23	70	125	
Bi	209	1	nogas	2067199	2.21	2439864	84.73	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1125378	1.44	1316692	85.47	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	165_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T16:52:08-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	070CALB.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	0.059	36.9	520	28.3	1	
Na	23	1	nogas	153.119	23.7	4262362	5.7	100	CCB Main CR1 Failed
Mg	24	1	nogas	9.667	26.8	164299	25.3	100	
Al	27	1	nogas	-0.064	-264.7	25458	0.5	5	
K	39	1	nogas	22.896	249.3	9426530	0.1	100	
Ti	47	1	nogas	0.048	149.7	473	12.9	2.5	
V	51	1	nogas	1.234	161.1	525860	4.2	2.5	
Cr	52	1	nogas	0.031	968.2	51589	3.3	2.5	
Mn	55	1	nogas	0.226	73.6	30662	1.5	2.5	
Co	59	1	nogas	0.059	34.5	1857	10.4	2.5	
Ni	60	1	nogas	-0.071	-72.8	2390	1.9	2.5	
Cu	63	1	nogas	0.153	48.2	4441	6.4	2	
Zn	66	1	nogas	-0.054	-138.3	1723	8.5	2.5	
As	75	1	nogas	2.854	65.0	97982	3.1	2.5	CCB Main CR1 Failed
Sr	88	1	nogas	0.100	35.3	3804	11.0	2.5	
Ag	107	1	nogas	0.052	27.0	740	10.7	2.5	
Cd	111	1	nogas	0.051	55.3	160	34.8	1	
Sb	121	1	nogas	0.207	20.1	3284	3.3	2.5	
Tl	205	1	nogas	0.523	61.6	8713	49.1	1	
Pb	208	1	nogas	0.046	11.4	1753	7.4	2.5	
U	238	1	nogas	0.123	40.1	2674	28.8	2.5	
[Pb]	206	1	nogas	0.048	46.4	433	20.8	2.5	
[Pb]	207	1	nogas	0.060	37.4	403	16.9	2.5	
Na	23	2	He	108.831	3.2	298471	2.8	100	CCB Main CR1 Failed
Mg	24	2	He	18.825	117.1	23509	109.4	100	
Al	27	2	He	9.357	189.0	7558	153.7	5	CCB Main CR1 Failed
K	39	2	He	-30.974	-9.3	219265	1.7	100	
Ca	43	2	He	7.291	127.9	87	37.1	100	
Ca	44	2	He	-2.590	-106.2	2033	8.1	100	
V	51	2	He	0.098	22.3	8144	2.0	2.5	
Cr	52	2	He	0.017	181.3	5721	4.4	2.5	
Mn	55	2	He	-0.011	-209.8	1487	9.4	2.5	
Fe	56	2	He	5.168	20.2	63916	12.9	100	
Co	59	2	He	0.041	1.1	653	0.9	2.5	
Ni	60	2	He	-0.181	-6.9	340	10.6	2.5	
Cu	63	2	He	-0.025	-37.7	1807	4.3	2	
Zn	66	2	He	-0.272	-15.6	693	11.0	2.5	
As	75	2	He	0.044	37.5	426	6.1	2.5	
Se	78	2	He	0.708	11.0	193	5.2	2	
B	11	1	nogas	7.916	22.2	52252	9.9	10	
Si	28	1	nogas	533.877	65.1	2989479	0.3	5	CCB Main CR1 Failed
Ca	43	1	nogas	9.847	56.8	1177	4.3	100	
Ca	44	1	nogas	-95.075	-38.4	164703	0.5	100	
Fe	56	1	nogas	9.594	245.6	3784457	1.2	100	
Se	77	1	nogas	24.059	52.0	31441	3.4	2.5	CCB Main CR1 Failed
Se	82	1	nogas	0.335	56.5	250	8.0	2	
Mo	95	1	nogas	0.288	45.2	1583	27.8	2.5	
Sn	118	1	nogas	0.235	47.2	2810	14.3	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.065	75.6	527	24.0	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.135	26.2	1497	15.6	2.5	
P	31	1	nogas	-0.489	-1412.8	103790	1.4	10	
La	139	1	nogas	2.937	207.2	67	22.9	2.5	CCB Main CR1 Failed
Au	197	1	nogas	-1709.654	-3.9	10	0.0	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	nogas	1106923	6.55	1282255	86.33	70	125	
Ge	72	1	nogas	3154791	11.08	3894467	81.01	70	125	
In	115	1	nogas	2873466	12.73	3488791	82.36	70	125	
Bi	209	1	nogas	1983456	9.69	2439864	81.29	70	125	
Ge	72	2	He	1160200	0.45	1316692	88.11	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	176_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T17:14:03-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	070CALB.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	103.972	9.738	759622	1.33	100	104.0	90	110	
Na	23	1	nogas	11062.807	12.931	268029506	1.43	10000	110.6	90	110	CCV Main CR1-2 Failed
Mg	24	1	nogas	10614.219	13.302	166104304	1.24	10000	106.1	90	110	
Al	27	1	nogas	106.890	8.217	2037619	2.75	100	106.9	90	110	
K	39	1	nogas	10261.958	5.604	228970180	0.09	10000	102.6	90	110	
Ti	47	1	nogas	101.687	6.699	182397	3.55	100	101.7	90	110	
V	51	1	nogas	133.920	10.274	3931131	3.50	100	133.9	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	104.840	6.991	2318364	2.38	100	104.8	90	110	
Mn	55	1	nogas	101.962	6.882	2755426	1.65	100	102.0	90	110	
Co	59	1	nogas	105.268	3.520	2389597	2.18	100	105.3	90	110	
Ni	60	1	nogas	101.851	4.349	513974	2.05	100	101.9	90	110	
Cu	63	1	nogas	106.092	3.403	1248461	2.47	100	106.1	90	110	
Zn	66	1	nogas	103.299	5.618	410350	1.01	100	103.3	90	110	
As	75	1	nogas	109.921	8.041	686425	1.55	100	109.9	90	110	
Sr	88	1	nogas	106.490	5.977	2918736	0.63	100	106.5	90	110	
Ag	107	1	nogas	103.592	1.662	1388296	4.73	100	103.6	90	110	
Cd	111	1	nogas	100.226	9.794	296863	1.53	100	100.2	90	110	
Sb	121	1	nogas	103.760	5.100	1310139	1.56	100	103.8	90	110	
Tl	205	1	nogas	107.808	7.331	1918523	1.91	100	107.8	90	110	
Pb	208	1	nogas	103.350	1.948	2553051	1.95	100	103.3	90	110	
U	238	1	nogas	110.597	7.073	2578241	2.62	100	110.6	90	110	CCV Main CR1-2 Failed
[Pb]	206	1	nogas	106.158	12.423	642154	3.01	100	106.2	90	110	
[Pb]	207	1	nogas	102.581	10.960	545565	1.77	100	102.6	90	110	
Na	23	2	He	9661.529	3.170	20481524	1.70	10000	96.6	90	110	
Mg	24	2	He	9540.336	2.956	11208114	1.49	10000	95.4	90	110	
Al	27	2	He	97.506	0.944	65935	0.64	100	97.5	90	110	
K	39	2	He	9451.608	0.909	12599594	0.89	10000	94.5	90	110	
Ca	43	2	He	9756.209	4.585	34215	3.22	10000	97.6	90	110	
Ca	44	2	He	10022.023	2.834	580350	1.37	10000	100.2	90	110	
V	51	2	He	99.089	2.093	805271	0.87	100	99.1	90	110	
Cr	52	2	He	96.976	2.588	868339	1.16	100	97.0	90	110	
Mn	55	2	He	98.903	1.805	632030	0.56	100	98.9	90	110	
Fe	56	2	He	9791.807	1.886	76265224	0.52	10000	97.9	90	110	
Co	59	2	He	96.412	1.467	1153755	0.23	100	96.4	90	110	
Ni	60	2	He	98.542	0.729	293817	1.81	100	98.5	90	110	
Cu	63	2	He	97.089	2.673	740478	1.51	100	97.1	90	110	
Zn	66	2	He	98.815	2.167	174395	2.09	100	98.8	90	110	
As	75	2	He	97.502	2.356	164467	0.91	100	97.5	90	110	
Se	78	2	He	97.060	3.250	13704	2.07	100	97.1	90	110	
B	11	1	nogas	512.690	8.835	2346230	3.97	500	102.5	90	110	
Si	28	1	nogas	5173.665	7.984	8568595	1.38	5000	103.5	90	110	
Ca	43	1	nogas	10439.965	3.589	382390	1.77	10000	104.4	90	110	
Ca	44	1	nogas	10272.190	3.730	6212862	2.16	10000	102.7	90	110	
Fe	56	1	nogas	10161.073	5.614	236682947	0.12	10000	101.6	90	110	
Se	77	1	nogas	177.380	8.542	73210	1.35	100	177.4	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	99.568	2.752	27838	3.07	100	99.6	90	110	
Mo	95	1	nogas	98.150	6.659	540298	1.67	100	98.2	90	110	
Sn	118	1	nogas	98.241	11.212	749648	1.73	100	98.2	90	110	
Ba	137	1	nogas	100.668	10.314	420364	1.05	100	100.7	90	110	
Sb	121	2	He	101.007	2.577	669287	1.26	100	101.0	90	110	
Li	7	1	nogas	105.768	11.401	1660020	2.66	100	105.8	90	110	
P	31	1	nogas	484.046	5.844	1018319	0.33	500	96.8	90	110	
La	139	1	nogas	163.842	35.635	687	22.62	100	163.8	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	-107.919	-458.011	37	15.75	100	-107.9	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	nogas	1113379	8.83	1282255	86.83	70	125	
Ge	72	1	nogas	3427843	5.25	3894467	88.02	70	125	
In	115	1	nogas	3035013	8.97	3488791	86.99	70	125	
Bi	209	1	nogas	2170811	8.80	2439864	88.97	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1171015	1.48	1316692	88.94	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	177_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T17:16:04-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	070CALB.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	0.060	11.4	567	9.1	1	
Na	23	1	nogas	73.996	23.0	2434616	6.4	100	
Mg	24	1	nogas	7.157	20.7	126380	7.8	100	
Al	27	1	nogas	6.814	175.8	156779	143.8	5	CCB Main CR1 Failed
K	39	1	nogas	6.774	344.8	9849950	1.0	100	
Ti	47	1	nogas	0.081	55.8	573	11.2	2.5	
V	51	1	nogas	20.951	6.9	1062899	7.3	2.5	CCB Main CR1 Failed
Cr	52	1	nogas	0.652	30.5	68948	1.2	2.5	
Mn	55	1	nogas	0.218	28.5	32973	2.6	2.5	
Co	59	1	nogas	0.057	19.4	1973	9.0	2.5	
Ni	60	1	nogas	-0.241	-23.8	1733	12.8	2.5	
Cu	63	1	nogas	0.143	36.6	4697	9.5	2	
Zn	66	1	nogas	-0.137	-5.1	1543	5.2	2.5	
As	75	1	nogas	8.844	7.3	137870	2.4	2.5	CCB Main CR1 Failed
Sr	88	1	nogas	0.160	5.5	5774	2.4	2.5	
Ag	107	1	nogas	0.047	7.6	737	2.1	2.5	
Cd	111	1	nogas	0.058	19.4	197	17.9	1	
Sb	121	1	nogas	0.157	17.0	2937	6.8	2.5	
Tl	205	1	nogas	0.426	58.1	8143	50.4	1	
Pb	208	1	nogas	0.054	22.9	1950	15.8	2.5	
U	238	1	nogas	0.139	40.9	3367	35.7	2.5	
[Pb]	206	1	nogas	0.052	41.7	510	22.1	2.5	
[Pb]	207	1	nogas	0.057	53.3	437	36.7	2.5	
Na	23	2	He	49.172	6.0	176504	3.3	100	
Mg	24	2	He	5.323	6.0	7895	4.9	100	
Al	27	2	He	-0.907	-28.5	830	21.4	5	
K	39	2	He	-30.968	-9.0	219271	1.7	100	
Ca	43	2	He	1.229	937.1	67	60.6	100	
Ca	44	2	He	-2.427	-82.9	2077	5.0	100	
V	51	2	He	0.947	4.9	15173	1.8	2.5	
Cr	52	2	He	0.110	161.2	6665	24.5	2.5	
Mn	55	2	He	0.006	655.4	1620	16.3	2.5	
Fe	56	2	He	5.567	16.7	68149	11.2	100	
Co	59	2	He	0.044	21.6	700	16.5	2.5	
Ni	60	2	He	-0.156	-19.8	420	21.4	2.5	
Cu	63	2	He	-0.006	-148.6	1980	3.5	2	
Zn	66	2	He	-0.354	-19.7	560	22.3	2.5	
As	75	2	He	0.124	36.3	569	13.6	2.5	
Se	78	2	He	0.627	9.2	185	5.1	2	
B	11	1	nogas	12.854	11.2	80500	5.7	10	CCB Main CR1 Failed
Si	28	1	nogas	255.826	68.4	2917268	2.4	5	CCB Main CR1 Failed
Ca	43	1	nogas	12.129	24.2	1357	3.1	100	
Ca	44	1	nogas	-133.895	-7.3	155806	1.7	100	
Fe	56	1	nogas	0.755	1520.3	3892481	2.0	100	
Se	77	1	nogas	68.851	8.6	45163	1.9	2.5	CCB Main CR1 Failed
Se	82	1	nogas	0.206	108.8	237	26.8	2	
Mo	95	1	nogas	0.256	29.5	1563	20.9	2.5	
Sn	118	1	nogas	0.243	39.0	3094	16.5	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.110	39.8	760	18.1	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.117	17.3	1397	10.0	2.5	
P	31	1	nogas	0.576	543.5	114112	1.0	10	
La	139	1	nogas	12.249	76.0	110	36.4	2.5	CCB Main CR1 Failed
Au	197	1	nogas	486.884	286.2	47	44.6	2.5	CCB Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1191128	3.28	1282255	92.89	70	125	
Ge	72	1	nogas	3385953	4.87	3894467	86.94	70	125	
In	115	1	nogas	3056719	6.50	3488791	87.62	70	125	
Bi	209	1	nogas	2195685	3.93	2439864	89.99	70	125	
Ge	72	2	He	1180062	0.70	1316692	89.62	70	125	

Sample Report

Sample Table

Sample Name	MBLK-136233
Data File Name	181SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T17:24:02-06:00
Sample Type	Sample
Dilution	1
Comment	TW B136233 AlBaCdPb
ISTD Ref FileName	070CALB.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	-0.005	-0.005	-17.04	70	-0.01	2000	
Na	23	1	nogas	62.954	62.954	17.39	2558854	0.00	200000	
Mg	24	1	nogas	12.611	12.611	11.62	249860	0.01	200000	
Al	27	1	nogas	4.831	4.831	4.04	132507	0.00	2000	
K	39	1	nogas	-22.597	-22.597	-68.74	10319076	0.00	200000	
Ti	47	1	nogas	-0.052	-0.052	-54.47	380	-0.01	2000	
V	51	1	nogas	37.125	37.125	5.53	1638733	0.00	2000	
Cr	52	1	nogas	0.759	0.759	14.34	79667	0.00	2000	
Mn	55	1	nogas	0.822	0.822	12.22	54705	0.00	2000	
Co	59	1	nogas	-0.007	-0.007	-29.18	603	0.00	2000	
Ni	60	1	nogas	-0.333	-0.333	-10.95	1437	-0.02	2000	
Cu	63	1	nogas	-0.019	-0.019	-181.24	3164	0.00	2000	
Zn	66	1	nogas	0.276	0.276	37.94	3520	0.01	2000	
As	75	1	nogas	11.164	11.164	6.35	167936	0.01	2000	
Sr	88	1	nogas	0.135	0.135	19.28	5708	0.00	2000	
Ag	107	1	nogas	-0.002	-0.002	-161.11	100	0.00	2000	
Cd	111	1	nogas	-0.002	-0.002	-386.52	20	-0.01	2000	
Sb	121	1	nogas	-0.042	-0.042	-17.73	507	-0.01	2000	
Tl	205	1	nogas	-0.018	-0.018	-32.24	250	-0.01	2000	
Pb	208	1	nogas	-0.009	-0.009	-17.21	387	0.00	2000	
U	238	1	nogas	-0.001	-0.001	-248.76	103	0.00	2000	
[Pb]	206	1	nogas	-0.014	-0.014	-32.17	120	-0.01	2000	
[Pb]	207	1	nogas	-0.007	-0.007	-69.10	100	-0.01	2000	
Na	23	2	He	44.619	44.619	4.61	179916	0.02	200000	
Mg	24	2	He	13.292	13.292	5.85	18693	0.07	200000	
Al	27	2	He	3.559	3.559	16.37	4104	0.09	2000	
K	39	2	He	-22.755	-22.755	-1.03	229995	-0.01	200000	
Ca	43	2	He	15.643	15.643	77.13	127	12.35	200000	
Ca	44	2	He	2.707	2.707	257.40	2564	0.11	200000	
V	51	2	He	1.698	1.698	11.43	22934	0.01	2000	
Cr	52	2	He	-0.152	-0.152	-13.69	4647	0.00	2000	
Mn	55	2	He	1.006	1.006	0.43	8675	0.01	2000	
Fe	56	2	He	16.664	16.664	124.46	168357	0.01	200000	
Co	59	2	He	-0.006	-0.006	-25.16	100	-0.01	2000	
Ni	60	2	He	-0.230	-0.230	-11.34	217	-0.11	2000	
Cu	63	2	He	-0.099	-0.099	-8.14	1370	-0.01	2000	
Zn	66	2	He	0.067	0.067	67.04	1407	0.00	2000	
As	75	2	He	0.115	0.115	4.93	598	0.02	2000	
Se	78	2	He	0.380	0.380	13.36	161	0.24	2000	
B	11	1	nogas	2.880	2.880	20.16	37681	0.01	2000	
Si	28	1	nogas	948.419	948.419	11.09	4136780	0.02	2000	
Ca	43	1	nogas	11.108	11.108	14.59	1477	0.75	200000	
Ca	44	1	nogas	-167.633	-167.633	-3.54	152472	-0.11	200000	
Fe	56	1	nogas	8.458	8.458	69.38	4549333	0.00	200000	

Sample Report

Se	77	1	nogas	81.195	81.195	11.97	53907	0.15	2000	
Se	82	1	nogas	0.172	0.172	40.98	253	0.07	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Mo	95	1	nogas	0.016	0.016	31.28	303	0.01	2000	
Sn	118	1	nogas	-0.032	-0.032	-26.04	1123	0.00	2000	
Ba	137	1	nogas	0.055	0.055	38.26	597	0.01	2000	
Sb	121	2	He	-0.044	-0.044	-19.74	350	-0.01	2000	
La	139	1	nogas	45.406	45.406	44.27	270	16.82	2000	
Au	197	1	nogas	-0.622	-0.622	-135079.10	43	-1.44	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1408251	4.07	1282255	109.83	70	125	
Ge	72	1	nogas	3782384	3.39	3894467	97.12	70	125	
In	115	1	nogas	3426751	3.79	3488791	98.22	70	125	
Bi	209	1	nogas	2424702	0.28	2439864	99.38	70	125	
Ge	72	2	He	1272527	0.84	1316692	96.65	70	125	

Sample Report

Sample Table

Sample Name	LCS-136233
Data File Name	182SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T17:25:59-06:00
Sample Type	Sample
Dilution	1
Comment	TW B136233 AlBaCdPb
ISTD Ref FileName	070CALB.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	54.697	54.697	3.81	449704	0.01	2000	
Na	23	1	nogas	5417.310	5417.310	2.02	151241041	0.00	200000	
Mg	24	1	nogas	5400.807	5400.807	2.85	97162246	0.01	200000	
Al	27	1	nogas	114.683	114.683	3.13	2348244	0.00	2000	
K	39	1	nogas	5523.529	5523.529	4.22	137252220	0.00	200000	
Ti	47	1	nogas	168.240	168.240	2.73	324025	0.05	2000	
V	51	1	nogas	99.305	99.305	1.73	3287081	0.00	2000	
Cr	52	1	nogas	56.409	56.409	4.40	1368558	0.00	2000	
Mn	55	1	nogas	55.766	55.766	2.14	1633471	0.00	2000	
Co	59	1	nogas	52.637	52.637	3.06	1282998	0.00	2000	
Ni	60	1	nogas	54.282	54.282	0.08	295690	0.02	2000	
Cu	63	1	nogas	56.378	56.378	1.37	713783	0.01	2000	
Zn	66	1	nogas	55.282	55.282	2.12	236996	0.02	2000	
As	75	1	nogas	67.245	67.245	0.57	489671	0.01	2000	
Sr	88	1	nogas	115.400	115.400	0.75	3398948	0.00	2000	
Ag	107	1	nogas	55.412	55.412	0.80	796667	0.01	2000	
Cd	111	1	nogas	52.236	52.236	1.35	170527	0.03	2000	
Sb	121	1	nogas	55.952	55.952	2.08	759332	0.01	2000	
Tl	205	1	nogas	50.201	50.201	5.93	1030277	0.00	2000	
Pb	208	1	nogas	59.886	59.886	1.76	1479612	0.00	2000	
U	238	1	nogas	104.789	104.789	4.33	2817043	0.00	2000	
[Pb]	206	1	nogas	52.103	52.103	5.16	364614	0.01	2000	
[Pb]	207	1	nogas	52.526	52.526	4.98	322882	0.02	2000	
Na	23	2	He	5268.070	5268.070	1.03	11733328	0.04	200000	
Mg	24	2	He	5285.208	5285.208	2.42	6504688	0.08	200000	
Al	27	2	He	106.952	106.952	1.53	75600	0.14	2000	
K	39	2	He	5441.671	5441.671	1.61	7364275	0.07	200000	
Ca	43	2	He	5520.634	5520.634	0.75	20314	27.18	200000	
Ca	44	2	He	5509.068	5509.068	0.31	335247	1.64	200000	
V	51	2	He	54.564	54.564	1.55	467965	0.01	2000	
Cr	52	2	He	53.571	53.571	1.12	505125	0.01	2000	
Mn	55	2	He	55.444	55.444	1.00	371892	0.01	2000	
Fe	56	2	He	5479.537	5479.537	0.58	44719553	0.01	200000	
Co	59	2	He	53.432	53.432	0.63	669871	0.01	2000	
Ni	60	2	He	54.061	54.061	0.30	169233	0.03	2000	
Cu	63	2	He	53.744	53.744	0.56	430353	0.01	2000	
Zn	66	2	He	54.709	54.709	0.34	101684	0.05	2000	
As	75	2	He	52.782	52.782	1.07	93435	0.06	2000	
Se	78	2	He	53.753	53.753	1.00	7995	0.67	2000	
B	11	1	nogas	523.700	523.700	2.41	2693856	0.02	2000	
Si	28	1	nogas	51857.976	51857.976	1.38	66468697	0.08	2000	>LDR
Ca	43	1	nogas	5702.818	5702.818	1.18	224735	2.54	200000	
Ca	44	1	nogas	5527.006	5527.006	2.22	3706687	0.15	200000	
Fe	56	1	nogas	5394.110	5394.110	0.37	136991116	0.00	200000	
Se	77	1	nogas	151.228	151.228	2.56	71537	0.21	2000	
Se	82	1	nogas	54.942	54.942	4.90	16575	0.33	2000	

Sample Report

Mo	95	1	nogas	53.877	53.877	1.57	318851	0.02	2000	
Sn	118	1	nogas	106.956	106.956	2.20	900045	0.01	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Ba	137	1	nogas	52.241	52.241	2.95	240592	0.02	2000	
Sb	121	2	He	55.472	55.472	1.99	385302	0.01	2000	
La	139	1	nogas	27.376	27.376	64.35	183	14.93	2000	
Au	197	1	nogas	-1150.251	-1150.251	-51.38	23	-4929.65	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1246137	1.41	1282255	97.18	70	125	
Ge	72	1	nogas	3676384	1.71	3894467	94.40	70	125	
In	115	1	nogas	3326387	3.00	3488791	95.34	70	125	
Bi	209	1	nogas	2495216	3.42	2439864	102.27	70	125	
Ge	72	2	He	1226456	1.07	1316692	93.15	70	125	

Sample Report

Sample Table

Sample Name	HS18121325-04SD
Data File Name	184SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T17:29:54-06:00
Sample Type	Sample
Dilution	100
Comment	TW B136233 CaMgMnNa
ISTD Ref FileName	070CALB.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	0.000	-0.031	-723.69	97	0.00	2000	
Na	23	1	nogas	8860.473	886047.286	7.67	226521563	0.00	200000	
Mg	24	1	nogas	2347.225	234722.455	4.21	38804445	0.01	200000	
Al	27	1	nogas	1.015	101.479	52.73	51113	0.00	2000	
K	39	1	nogas	23.443	2344.287	90.78	11004653	0.00	200000	
Ti	47	1	nogas	-0.020	-2.016	-72.10	427	0.00	2000	
V	51	1	nogas	44.245	4424.478	7.12	1773003	0.00	2000	
Cr	52	1	nogas	1.420	141.963	8.07	92114	0.00	2000	
Mn	55	1	nogas	25.880	2587.950	4.27	767734	0.00	2000	
Co	59	1	nogas	0.173	17.332	1.05	4944	0.00	2000	
Ni	60	1	nogas	-0.158	-15.761	-9.70	2327	-0.01	2000	
Cu	63	1	nogas	0.050	5.000	12.03	3920	0.00	2000	
Zn	66	1	nogas	0.060	6.045	113.95	2490	0.00	2000	
As	75	1	nogas	14.118	1411.810	6.80	179138	0.01	2000	
Sr	88	1	nogas	89.525	8952.452	5.34	2615860	0.00	2000	
Ag	107	1	nogas	-0.004	-0.385	-24.68	77	-0.01	2000	
Cd	111	1	nogas	0.004	0.385	35.81	37	0.01	2000	
Sb	121	1	nogas	-0.033	-3.279	-26.33	620	-0.01	2000	
Tl	205	1	nogas	0.023	2.318	35.93	990	0.00	2000	
Pb	208	1	nogas	-0.009	-0.850	-5.50	397	0.00	2000	
U	238	1	nogas	0.132	13.196	7.48	3280	0.00	2000	
[Pb]	206	1	nogas	-0.014	-1.376	-7.24	110	-0.01	2000	
[Pb]	207	1	nogas	-0.009	-0.888	-43.69	83	-0.01	2000	
Na	23	2	He	8201.285	820128.526	3.94	18235236	0.04	200000	
Mg	24	2	He	2217.363	221736.256	2.71	2732207	0.08	200000	
Al	27	2	He	-0.002	-0.233	-9611.83	1490	0.00	2000	
K	39	2	He	15.855	1585.488	6.19	280403	0.01	200000	
Ca	43	2	He	3559.197	355919.698	1.41	13135	27.10	200000	
Ca	44	2	He	3418.740	341873.961	1.19	209103	1.63	200000	
V	51	2	He	1.842	184.179	5.32	23334	0.01	2000	
Cr	52	2	He	0.119	11.940	7.99	7011	0.00	2000	
Mn	55	2	He	25.466	2546.573	2.38	171813	0.01	2000	
Fe	56	2	He	11.575	1157.524	4.82	119873	0.01	200000	
Co	59	2	He	0.177	17.698	5.47	2394	0.01	2000	
Ni	60	2	He	0.005	0.484	2080.28	940	0.00	2000	
Cu	63	2	He	-0.087	-8.737	-17.48	1410	-0.01	2000	
Zn	66	2	He	-0.142	-14.232	-46.68	970	-0.01	2000	
As	75	2	He	0.121	12.108	17.83	587	0.02	2000	
Se	78	2	He	0.455	45.524	12.60	167	0.27	2000	
B	11	1	nogas	4.332	433.236	8.53	40139	0.01	2000	
Si	28	1	nogas	1842.518	184251.805	10.19	5079091	0.04	2000	>LDR
Ca	43	1	nogas	3312.636	331263.649	4.70	129914	2.55	200000	
Ca	44	1	nogas	3214.842	321484.171	4.88	2243520	0.14	200000	
Fe	56	1	nogas	48.008	4800.816	18.08	5355480	0.00	200000	
Se	77	1	nogas	103.131	10313.068	9.02	57969	0.18	2000	
Se	82	1	nogas	0.364	36.363	60.92	303	0.12	2000	

Sample Report

Mo	95	1	nogas	0.033	3.340	11.05	393	0.01	2000	
Sn	118	1	nogas	0.051	5.132	43.83	1730	0.00	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Ba	137	1	nogas	7.130	712.971	6.08	32121	0.02	2000	
Sb	121	2	He	-0.057	-5.668	-12.05	250	-0.02	2000	
La	139	1	nogas	21.489	2148.940	18.61	153	14.01	2000	
Au	197	1	nogas	-779.287	-77928.735	-94.96	27	-2922.33	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1225527	2.89	1282255	95.58	70	125	
Ge	72	1	nogas	3650787	3.85	3894467	93.74	70	125	
In	115	1	nogas	3226604	4.32	3488791	92.48	70	125	
Bi	209	1	nogas	2233204	4.69	2439864	91.53	70	125	
Ge	72	2	He	1227719	2.02	1316692	93.24	70	125	

Sample Report

Sample Table

Sample Name	HS18121325-04PDS
Data File Name	185SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T17:31:53-06:00
Sample Type	Sample
Dilution	20
Comment	TW B136233 CaMgMnNa
ISTD Ref FileName	070CALB.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	107.691	2153.822	3.95	845777	0.01	2000	
Na	23	1	nogas	52681.239	1053624.782	4.30	1277919362	0.00	200000	
Mg	24	1	nogas	22249.593	444991.851	6.04	349084216	0.01	200000	
Al	27	1	nogas	116.746	2334.924	10.28	2190853	0.01	2000	
K	39	1	nogas	11418.919	228378.377	5.09	250227406	0.00	200000	
Ti	47	1	nogas	119.147	2382.947	10.36	210380	0.06	2000	
V	51	1	nogas	143.788	2875.760	8.97	4124995	0.00	2000	
Cr	52	1	nogas	115.274	2305.483	7.91	2507960	0.00	2000	
Mn	55	1	nogas	235.387	4707.742	5.09	6242101	0.00	2000	
Co	59	1	nogas	116.100	2321.995	7.76	2595451	0.00	2000	
Ni	60	1	nogas	114.814	2296.272	5.47	570790	0.02	2000	
Cu	63	1	nogas	117.489	2349.778	5.46	1362373	0.01	2000	
Zn	66	1	nogas	115.114	2302.289	4.80	450895	0.03	2000	
As	75	1	nogas	125.518	2510.360	6.89	760531	0.02	2000	
Sr	88	1	nogas	430.486	8609.723	8.75	11621719	0.00	2000	
Ag	107	1	nogas	108.310	2166.200	5.29	1430651	0.01	2000	
Cd	111	1	nogas	112.722	2254.431	7.34	326676	0.03	2000	
Sb	121	1	nogas	112.770	2255.391	4.78	1404427	0.01	2000	
Tl	205	1	nogas	118.617	2372.347	11.55	2065461	0.01	2000	
Pb	208	1	nogas	114.152	2283.050	0.39	2819843	0.00	2000	
U	238	1	nogas	0.556	11.116	7.54	12809	0.00	2000	
[Pb]	206	1	nogas	115.770	2315.409	9.84	687951	0.02	2000	
[Pb]	207	1	nogas	114.916	2298.314	7.85	600542	0.02	2000	
Na	23	2	He	47314.457	946289.139	1.37	100119202	0.05	200000	
Mg	24	2	He	20245.647	404912.937	0.98	23804337	0.09	200000	
Al	27	2	He	105.110	2102.191	0.94	71016	0.15	2000	
K	39	2	He	10651.547	213030.940	0.19	14166218	0.08	200000	
Ca	43	2	He	26496.478	529929.551	0.36	92920	28.52	200000	
Ca	44	2	He	27075.150	541502.994	1.80	1565435	1.73	200000	
V	51	2	He	109.573	2191.456	1.00	890389	0.01	2000	
Cr	52	2	He	106.364	2127.289	1.26	952639	0.01	2000	
Mn	55	2	He	227.618	4552.351	2.19	1453598	0.02	2000	
Fe	56	2	He	10821.240	216424.808	2.17	84340064	0.01	200000	
Co	59	2	He	105.660	2113.203	1.47	1265394	0.01	2000	
Ni	60	2	He	107.812	2156.244	0.45	321591	0.03	2000	
Cu	63	2	He	106.274	2125.473	1.40	811057	0.01	2000	
Zn	66	2	He	110.063	2201.263	2.02	194264	0.06	2000	
As	75	2	He	107.491	2149.823	1.11	181435	0.06	2000	
Se	78	2	He	109.738	2194.760	1.72	15496	0.71	2000	
B	11	1	nogas	3.909	78.172	9.94	36926	0.01	2000	
Si	28	1	nogas	8801.508	176030.155	10.49	12524020	0.07	2000	>LDR
Ca	43	1	nogas	27734.136	554682.721	8.79	998614	2.78	200000	
Ca	44	1	nogas	27589.264	551785.271	10.18	16029884	0.17	200000	
Fe	56	1	nogas	11592.916	231858.327	4.10	265989814	0.00	200000	
Se	77	1	nogas	208.322	4166.438	8.11	79938	0.26	2000	
Se	82	1	nogas	113.837	2276.732	7.20	31314	0.36	2000	
Mo	95	1	nogas	113.930	2278.609	9.33	618020	0.02	2000	
Sn	118	1	nogas	0.065	1.308	19.52	1703	0.00	2000	

Sample Report

Ba	137	1	nogas	147.542	2950.838	9.71	602149	0.02	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Sb	121	2	He	107.926	2158.516	1.63	715718	0.02	2000	
La	139	1	nogas	208.053	4161.070	33.87	840	24.77	2000	
Au	197	1	nogas	-733.135	-14662.696	-84.01	27	-2749.26	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1191142	3.50	1282255	92.89	70	125	
Ge	72	1	nogas	3380414	5.01	3894467	86.80	70	125	
In	115	1	nogas	2963126	7.59	3488791	84.93	70	125	
Bi	209	1	nogas	2128923	8.51	2439864	87.26	70	125	
Ge	72	2	He	1171792	1.29	1316692	89.00	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	187_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T17:35:53-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	070CALB.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	101.764	2.583	822137	1.79	100	101.8	90	110	
Na	23	1	nogas	10285.583	7.018	282154848	2.32	10000	102.9	90	110	
Mg	24	1	nogas	10088.449	4.519	178973617	3.54	10000	100.9	90	110	
Al	27	1	nogas	104.821	1.875	2195362	3.44	100	104.8	90	110	
K	39	1	nogas	9899.892	5.999	242457930	1.28	10000	99.0	90	110	
Ti	47	1	nogas	99.465	3.812	195691	2.03	100	99.5	90	110	
V	51	1	nogas	114.421	6.476	3772206	1.48	100	114.4	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	102.964	7.173	2496219	2.00	100	103.0	90	110	
Mn	55	1	nogas	101.981	3.812	3023979	2.42	100	102.0	90	110	
Co	59	1	nogas	99.533	4.127	2475724	1.26	100	99.5	90	110	
Ni	60	1	nogas	100.208	5.770	554049	2.27	100	100.2	90	110	
Cu	63	1	nogas	101.174	4.107	1304630	1.30	100	101.2	90	110	
Zn	66	1	nogas	100.819	3.249	439349	2.07	100	100.8	90	110	
As	75	1	nogas	103.015	6.623	711712	1.32	100	103.0	90	110	
Sr	88	1	nogas	102.907	7.319	3089879	2.03	100	102.9	90	110	
Ag	107	1	nogas	100.427	5.461	1472882	1.97	100	100.4	90	110	
Cd	111	1	nogas	97.377	3.822	317189	0.40	100	97.4	90	110	
Sb	121	1	nogas	103.034	4.289	1426189	1.22	100	103.0	90	110	
Tl	205	1	nogas	106.360	4.235	2099581	1.24	100	106.4	90	110	
Pb	208	1	nogas	113.598	0.293	2806144	0.29	100	113.6	90	110	CCV Main CR1-2 Failed
U	238	1	nogas	104.729	6.570	2705933	2.71	100	104.7	90	110	
[Pb]	206	1	nogas	102.796	3.038	692057	1.41	100	102.8	90	110	
[Pb]	207	1	nogas	99.603	2.251	589246	2.88	100	99.6	90	110	
Na	23	2	He	9365.115	1.236	21439405	1.72	10000	93.7	90	110	
Mg	24	2	He	9507.859	0.911	12061203	1.77	10000	95.1	90	110	
Al	27	2	He	95.633	1.406	69845	2.22	100	95.6	90	110	
K	39	2	He	10282.540	3.038	13684447	2.98	10000	102.8	90	110	
Ca	43	2	He	9731.520	2.367	36860	3.24	10000	97.3	90	110	
Ca	44	2	He	9928.402	1.752	620723	0.94	10000	99.3	90	110	
V	51	2	He	97.256	1.368	853528	2.23	100	97.3	90	110	
Cr	52	2	He	95.098	0.851	919517	1.44	100	95.1	90	110	
Mn	55	2	He	98.695	0.736	680885	0.36	100	98.7	90	110	
Fe	56	2	He	9862.499	1.427	82927649	1.19	10000	98.6	90	110	
Co	59	2	He	96.201	1.008	1242765	0.49	100	96.2	90	110	
Ni	60	2	He	97.701	0.567	314437	0.35	100	97.7	90	110	
Cu	63	2	He	96.106	0.494	791382	0.43	100	96.1	90	110	
Zn	66	2	He	98.721	1.751	188065	0.96	100	98.7	90	110	
As	75	2	He	97.528	0.667	177624	1.54	100	97.5	90	110	
Se	78	2	He	97.546	0.330	14870	1.04	100	97.5	90	110	
B	11	1	nogas	477.435	3.083	2414326	1.44	500	95.5	90	110	
Si	28	1	nogas	4858.930	8.263	8996519	0.34	5000	97.2	90	110	
Ca	43	1	nogas	10122.982	6.678	405969	1.43	10000	101.2	90	110	
Ca	44	1	nogas	9984.792	7.091	6618989	2.73	10000	99.8	90	110	
Fe	56	1	nogas	9999.599	6.199	255341881	2.30	10000	100.0	90	110	
Se	77	1	nogas	143.152	11.852	70687	1.79	100	143.2	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	98.428	5.166	30139	1.97	100	98.4	90	110	
Mo	95	1	nogas	97.808	6.395	590202	2.44	100	97.8	90	110	
Sn	118	1	nogas	97.759	5.733	820675	1.46	100	97.8	90	110	
Ba	137	1	nogas	98.679	5.642	453094	1.40	100	98.7	90	110	
Sb	121	2	He	102.284	0.925	731716	0.70	100	102.3	90	110	
Li	7	1	nogas	100.620	6.713	1752642	6.68	100	100.6	90	110	
P	31	1	nogas	468.581	6.244	1084305	0.63	500	93.7	90	110	
La	139	1	nogas	171.191	8.022	797	5.66	100	171.2	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	-340.457	-107.750	37	15.75	100	-340.5	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	nogas	1225042	4.18	1282255	95.54	70	125	
Ge	72	1	nogas	3756868	5.24	3894467	96.47	70	125	
In	115	1	nogas	3321849	4.13	3488791	95.21	70	125	
Bi	209	1	nogas	2400134	3.79	2439864	98.37	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1264016	0.88	1316692	96.00	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	188_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T17:37:52-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	070CALB.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	0.061	29.2	620	17.4	1	
Na	23	1	nogas	34.587	30.8	1519927	4.9	100	
Mg	24	1	nogas	6.666	34.2	120482	17.0	100	
Al	27	1	nogas	-0.061	-268.9	27981	2.2	5	
K	39	1	nogas	9.972	407.9	10080521	0.5	100	
Ti	47	1	nogas	0.021	345.2	473	23.7	2.5	
V	51	1	nogas	8.096	25.7	751652	2.2	2.5	CCB Main CR1 Failed
Cr	52	1	nogas	0.469	44.5	66211	2.2	2.5	
Mn	55	1	nogas	0.126	78.3	31050	2.2	2.5	
Co	59	1	nogas	0.061	24.7	2077	7.3	2.5	
Ni	60	1	nogas	-0.342	-6.0	1263	9.8	2.5	
Cu	63	1	nogas	0.062	54.8	3824	1.7	2	
Zn	66	1	nogas	-0.090	-97.5	1743	11.8	2.5	
As	75	1	nogas	5.704	28.7	123066	2.7	2.5	CCB Main CR1 Failed
Sr	88	1	nogas	0.122	72.5	4711	40.7	2.5	
Ag	107	1	nogas	0.052	30.2	817	16.7	2.5	
Cd	111	1	nogas	0.057	21.4	200	8.7	1	
Sb	121	1	nogas	0.377	13.0	5764	1.8	2.5	
Tl	205	1	nogas	0.519	55.4	10348	49.0	1	
Pb	208	1	nogas	0.059	22.2	2070	15.7	2.5	
U	238	1	nogas	0.125	42.8	3190	38.2	2.5	
[Pb]	206	1	nogas	0.053	18.9	543	10.5	2.5	
[Pb]	207	1	nogas	0.057	16.5	460	15.2	2.5	
Na	23	2	He	14.843	1.5	110605	2.0	100	
Mg	24	2	He	4.782	6.8	7755	4.5	100	
Al	27	2	He	-0.946	-8.6	860	7.3	5	
K	39	2	He	-26.735	-5.6	224798	0.9	100	
Ca	43	2	He	-0.974	-375.1	63	24.1	100	
Ca	44	2	He	-6.969	-26.2	1940	7.1	100	
V	51	2	He	0.297	13.7	10582	1.2	2.5	
Cr	52	2	He	0.000	-31541.9	6061	0.6	2.5	
Mn	55	2	He	-0.020	-97.6	1553	6.2	2.5	
Fe	56	2	He	4.728	1.5	65834	3.1	100	
Co	59	2	He	0.045	5.7	757	2.8	2.5	
Ni	60	2	He	-0.195	-4.7	327	9.8	2.5	
Cu	63	2	He	-0.020	-121.5	2000	9.0	2	
Zn	66	2	He	-0.308	-7.0	687	8.0	2.5	
As	75	2	He	0.107	14.5	578	3.8	2.5	
Se	78	2	He	0.622	14.9	197	7.4	2	
B	11	1	nogas	7.338	30.2	58096	10.7	10	
Si	28	1	nogas	198.732	121.5	2899797	0.6	5	CCB Main CR1 Failed
Ca	43	1	nogas	6.635	81.1	1173	7.7	100	
Ca	44	1	nogas	-144.025	-14.7	152428	0.8	100	
Fe	56	1	nogas	-5.382	-276.9	3816707	0.3	100	
Se	77	1	nogas	41.355	28.1	38905	2.3	2.5	CCB Main CR1 Failed
Se	82	1	nogas	0.182	150.9	233	32.7	2	
Mo	95	1	nogas	0.321	38.1	1933	26.2	2.5	
Sn	118	1	nogas	0.255	44.2	3290	16.8	5	
Ba	137	1	nogas	0.054	59.2	543	12.5	2.5	

Continuing Calibration Blank (CCB) Report

Sb	121	2	He	0.322	14.9	2964	12.5	2.5	
P	31	1	nogas	5.795	91.2	125835	1.0	10	
La	139	1	nogas	0.970	992.3	70	65.5	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Au	197	1	nogas	-1802.184	-33.3	10	100.0	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	nogas	1303896	9.48	1282255	101.69	70	125	
Ge	72	1	nogas	3453187	8.54	3894467	88.67	70	125	
In	115	1	nogas	3189815	11.84	3488791	91.43	70	125	
Bi	209	1	nogas	2307547	4.04	2439864	94.58	70	125	
Ge	72	2	He	1262213	2.41	1316692	95.86	70	125	

Sample Report

Sample Table

Sample Name	HS18121523-02
Data File Name	193SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T17:47:51-06:00
Sample Type	Sample
Dilution	100
Comment	TW B136233 BaCaMgNa
ISTD Ref FileName	070CALB.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	0.003	0.279	28.12	130	0.00	2000	
Na	23	1	nogas	10382.408	1038240.751	1.53	269421448	0.00	200000	
Mg	24	1	nogas	2613.729	261372.873	0.99	43830001	0.01	200000	
Al	27	1	nogas	0.627	62.663	3.60	43841	0.00	2000	
K	39	1	nogas	27.242	2724.175	20.62	11170196	0.00	200000	
Ti	47	1	nogas	-0.015	-1.525	-180.67	440	0.00	2000	
V	51	1	nogas	30.899	3089.867	2.48	1423291	0.00	2000	
Cr	52	1	nogas	1.018	101.770	7.57	83407	0.00	2000	
Mn	55	1	nogas	6.116	611.633	2.71	205280	0.00	2000	
Co	59	1	nogas	0.067	6.662	13.19	2377	0.00	2000	
Ni	60	1	nogas	-0.306	-30.643	-5.73	1537	-0.02	2000	
Cu	63	1	nogas	-0.010	-1.015	-189.09	3190	0.00	2000	
Zn	66	1	nogas	-0.022	-2.184	-132.59	2164	0.00	2000	
As	75	1	nogas	12.434	1243.400	3.23	170583	0.01	2000	
Sr	88	1	nogas	94.875	9487.546	3.85	2791966	0.00	2000	
Ag	107	1	nogas	-0.002	-0.200	-73.79	103	0.00	2000	
Cd	111	1	nogas	0.012	1.236	89.62	63	0.02	2000	
Sb	121	1	nogas	-0.007	-0.739	-92.20	967	0.00	2000	
Tl	205	1	nogas	-0.017	-1.735	-24.04	260	-0.01	2000	
Pb	208	1	nogas	-0.011	-1.093	-9.32	337	0.00	2000	
U	238	1	nogas	0.045	4.471	3.22	1237	0.00	2000	
[Pb]	206	1	nogas	-0.020	-2.006	-11.77	73	-0.03	2000	
[Pb]	207	1	nogas	-0.006	-0.594	-117.18	103	-0.01	2000	
Na	23	2	He	9902.627	990262.731	1.93	22754931	0.04	200000	
Mg	24	2	He	2445.634	244563.431	1.34	3115402	0.08	200000	
Al	27	2	He	0.016	1.561	1069.98	1553	0.00	2000	
K	39	2	He	32.662	3266.179	9.28	302346	0.01	200000	
Ca	43	2	He	4470.753	447075.275	2.44	17031	26.25	200000	
Ca	44	2	He	4436.941	443694.087	0.90	279833	1.59	200000	
V	51	2	He	1.342	134.237	1.54	19770	0.01	2000	
Cr	52	2	He	0.051	5.051	56.17	6585	0.00	2000	
Mn	55	2	He	6.214	621.400	0.62	44631	0.01	2000	
Fe	56	2	He	114.906	11490.631	0.71	995944	0.01	200000	
Co	59	2	He	0.054	5.428	5.15	883	0.01	2000	
Ni	60	2	He	-0.174	-17.365	-7.21	397	-0.04	2000	
Cu	63	2	He	-0.125	-12.478	-10.10	1150	-0.01	2000	
Zn	66	2	He	-0.145	-14.452	-10.50	1000	-0.01	2000	
As	75	2	He	0.204	20.399	6.95	758	0.03	2000	
Se	78	2	He	0.431	43.063	10.95	169	0.26	2000	
B	11	1	nogas	0.603	60.336	51.69	22927	0.00	2000	
Si	28	1	nogas	1915.552	191555.238	0.44	5205797	0.04	2000	>LDR
Ca	43	1	nogas	4350.205	435020.479	1.81	171501	2.54	200000	
Ca	44	1	nogas	4163.562	416356.162	2.22	2851410	0.15	200000	
Fe	56	1	nogas	128.328	12832.758	1.37	7369681	0.00	200000	
Se	77	1	nogas	90.439	9043.927	6.61	54943	0.16	2000	
Se	82	1	nogas	0.292	29.230	105.58	283	0.10	2000	
Mo	95	1	nogas	0.001	0.076	1084.54	203	0.00	2000	
Sn	118	1	nogas	0.000	-0.044	-2543.39	1330	0.00	2000	

Sample Report

Ba	137	1	nogas	91.720	9172.023	4.62	414214	0.02	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Sb	121	2	He	-0.011	-1.099	-53.68	587	0.00	2000	
La	139	1	nogas	32.052	3205.249	7.24	200	16.03	2000	
Au	197	1	nogas	-1820.618	-182061.828	-30.54	10	-18206.18	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1314703	5.34	1282255	102.53	70	125	
Ge	72	1	nogas	3673207	1.91	3894467	94.32	70	125	
In	115	1	nogas	3265434	4.29	3488791	93.60	70	125	
Bi	209	1	nogas	2326119	3.02	2439864	95.34	70	125	
Ge	72	2	He	1268918	0.83	1316692	96.37	70	125	

Sample Report

Sample Table

Sample Name	HS18121523-06
Data File Name	194SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T17:49:50-06:00
Sample Type	Sample
Dilution	50
Comment	TW B136233 Al
ISTD Ref FileName	070CALB.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	0.006	0.307	89.78	163	0.00	2000	
Na	23	1	nogas	1200.572	60028.602	5.99	33344650	0.00	200000	
Mg	24	1	nogas	55.051	2752.567	4.17	985599	0.01	200000	
Al	27	1	nogas	91.647	4582.365	5.61	1875075	0.00	2000	
K	39	1	nogas	-0.119	-5.931	-9374.48	10512520	0.00	200000	
Ti	47	1	nogas	0.871	43.536	14.35	2133	0.04	2000	
V	51	1	nogas	36.676	1833.803	6.62	1575009	0.00	2000	
Cr	52	1	nogas	1.332	66.583	14.66	90406	0.00	2000	
Mn	55	1	nogas	5.585	279.231	3.18	189459	0.00	2000	
Co	59	1	nogas	0.047	2.338	11.51	1887	0.00	2000	
Ni	60	1	nogas	-0.288	-14.391	-2.70	1633	-0.02	2000	
Cu	63	1	nogas	0.035	1.766	12.87	3750	0.00	2000	
Zn	66	1	nogas	0.313	15.644	14.38	3577	0.01	2000	
As	75	1	nogas	13.758	687.900	10.15	177660	0.01	2000	
Sr	88	1	nogas	1.727	86.368	4.37	52233	0.00	2000	
Ag	107	1	nogas	-0.003	-0.169	-16.68	83	0.00	2000	
Cd	111	1	nogas	0.004	0.219	115.41	40	0.01	2000	
Sb	121	1	nogas	-0.014	-0.724	-39.60	867	0.00	2000	
Tl	205	1	nogas	-0.015	-0.771	-19.47	310	0.00	2000	
Pb	208	1	nogas	0.077	3.833	6.00	2500	0.00	2000	
U	238	1	nogas	0.006	0.324	35.82	290	0.00	2000	
[Pb]	206	1	nogas	0.057	2.853	34.03	603	0.01	2000	
[Pb]	207	1	nogas	0.068	3.422	14.13	553	0.01	2000	
Na	23	2	He	1170.556	58527.796	2.68	2746227	0.04	200000	
Mg	24	2	He	53.480	2674.022	1.23	69520	0.08	200000	
Al	27	2	He	83.960	4197.978	2.96	61500	0.14	2000	
K	39	2	He	-2.047	-102.349	-217.99	257031	0.00	200000	
Ca	43	2	He	53.664	2683.205	24.98	270	19.88	200000	
Ca	44	2	He	48.068	2403.394	12.42	5368	0.90	200000	
V	51	2	He	1.584	79.180	3.69	21789	0.01	2000	
Cr	52	2	He	0.208	10.400	9.06	8069	0.00	2000	
Mn	55	2	He	5.567	278.356	0.48	40000	0.01	2000	
Fe	56	2	He	129.096	6454.818	13.41	1111876	0.01	200000	
Co	59	2	He	0.069	3.442	68.31	1071	0.01	2000	
Ni	60	2	He	-0.068	-3.415	-69.54	733	-0.01	2000	
Cu	63	2	He	-0.046	-2.289	-32.34	1793	0.00	2000	
Zn	66	2	He	0.196	9.821	44.83	1640	0.01	2000	
As	75	2	He	0.182	9.123	5.79	716	0.03	2000	
Se	78	2	He	0.523	26.133	31.45	182	0.29	2000	
B	11	1	nogas	0.451	22.555	34.61	22794	0.00	2000	
Si	28	1	nogas	6961.279	348063.936	4.81	11353126	0.06	2000	>LDR
Ca	43	1	nogas	59.572	2978.609	9.34	3324	1.79	200000	
Ca	44	1	nogas	-103.989	-5199.427	-12.61	187252	-0.06	200000	
Fe	56	1	nogas	137.044	6852.187	4.82	7561296	0.00	200000	
Se	77	1	nogas	98.906	4945.318	7.37	57043	0.17	2000	
Se	82	1	nogas	0.133	6.644	119.60	233	0.06	2000	

Sample Report

Mo	95	1	nogas	-0.012	-0.578	-61.52	130	-0.01	2000	
Sn	118	1	nogas	0.015	0.750	41.72	1497	0.00	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Ba	137	1	nogas	3.695	184.759	2.93	17476	0.02	2000	
Sb	121	2	He	-0.021	-1.045	-49.34	513	0.00	2000	
La	139	1	nogas	1155.082	57754.098	8.80	5051	22.87	2000	
Au	197	1	nogas	-370.816	-18540.778	-227.28	37	-1011.32	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1352221	1.78	1282255	105.46	70	125	
Ge	72	1	nogas	3663531	2.60	3894467	94.07	70	125	
In	115	1	nogas	3355232	2.26	3488791	96.17	70	125	
Bi	209	1	nogas	2431310	0.83	2439864	99.65	70	125	
Ge	72	2	He	1263831	0.80	1316692	95.99	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	196_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T17:53:45-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	070CALB.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	100.385	5.187	804393	1.32	100	100.4	90	110	
Na	23	1	nogas	10728.841	6.562	275697789	1.93	10000	107.3	90	110	
Mg	24	1	nogas	10660.439	10.872	176566691	2.71	10000	106.6	90	110	
Al	27	1	nogas	102.718	5.758	2133353	1.10	100	102.7	90	110	
K	39	1	nogas	9812.289	5.986	238649264	1.92	10000	98.1	90	110	
Ti	47	1	nogas	98.281	6.683	191756	2.11	100	98.3	90	110	
V	51	1	nogas	116.181	6.769	3793067	2.44	100	116.2	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	101.175	4.342	2438017	0.54	100	101.2	90	110	
Mn	55	1	nogas	100.174	5.502	2947053	0.81	100	100.2	90	110	
Co	59	1	nogas	101.134	8.870	2493294	4.22	100	101.1	90	110	
Ni	60	1	nogas	98.225	7.558	538797	3.08	100	98.2	90	110	
Cu	63	1	nogas	99.808	5.047	1277178	0.98	100	99.8	90	110	
Zn	66	1	nogas	100.817	4.064	435969	0.62	100	100.8	90	110	
As	75	1	nogas	103.599	6.311	709951	0.80	100	103.6	90	110	
Sr	88	1	nogas	103.212	9.253	3074715	4.60	100	103.2	90	110	
Ag	107	1	nogas	100.318	6.310	1459934	1.78	100	100.3	90	110	
Cd	111	1	nogas	100.478	3.799	312976	0.47	100	100.5	90	110	
Sb	121	1	nogas	100.543	7.653	1380292	4.10	100	100.5	90	110	
Tl	205	1	nogas	104.160	2.974	1983450	2.83	100	104.2	90	110	
Pb	208	1	nogas	110.778	2.601	2736500	2.60	100	110.8	90	110	CCV Main CR1-2 Failed
U	238	1	nogas	107.095	4.968	2670509	4.41	100	107.1	90	110	
[Pb]	206	1	nogas	104.656	0.731	679484	0.91	100	104.7	90	110	
[Pb]	207	1	nogas	102.173	1.722	582700	1.50	100	102.2	90	110	
Na	23	2	He	9705.659	0.719	21415171	1.02	10000	97.1	90	110	
Mg	24	2	He	9879.341	1.666	12079742	1.49	10000	98.8	90	110	
Al	27	2	He	99.997	0.192	70328	0.71	100	100.0	90	110	
K	39	2	He	9993.036	0.934	13306476	0.92	10000	99.9	90	110	
Ca	43	2	He	9906.353	0.694	36165	1.39	10000	99.1	90	110	
Ca	44	2	He	10044.847	1.114	605437	1.81	10000	100.4	90	110	
V	51	2	He	98.917	1.592	836571	0.97	100	98.9	90	110	
Cr	52	2	He	97.104	1.732	904855	0.96	100	97.1	90	110	
Mn	55	2	He	99.834	0.301	663921	0.49	100	99.8	90	110	
Fe	56	2	He	10054.786	1.428	81504627	1.95	10000	100.5	90	110	
Co	59	2	He	98.116	1.281	1221823	0.59	100	98.1	90	110	
Ni	60	2	He	99.611	1.508	309005	0.86	100	99.6	90	110	
Cu	63	2	He	96.556	2.171	766364	1.41	100	96.6	90	110	
Zn	66	2	He	98.228	2.065	180389	1.44	100	98.2	90	110	
As	75	2	He	98.830	0.997	173495	1.03	100	98.8	90	110	
Se	78	2	He	96.679	2.776	14206	2.00	100	96.7	90	110	
B	11	1	nogas	471.321	4.129	2365242	0.29	500	94.3	90	110	
Si	28	1	nogas	4777.480	7.160	8831602	0.70	5000	95.5	90	110	
Ca	43	1	nogas	10035.484	6.378	399594	2.08	10000	100.4	90	110	
Ca	44	1	nogas	9841.129	6.887	6479651	2.02	10000	98.4	90	110	
Fe	56	1	nogas	10049.763	4.613	254808889	0.77	10000	100.5	90	110	
Se	77	1	nogas	149.018	10.717	71801	1.76	100	149.0	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	94.746	7.112	28790	3.14	100	94.7	90	110	
Mo	95	1	nogas	95.937	7.210	574493	2.80	100	95.9	90	110	
Sn	118	1	nogas	99.177	6.150	796123	2.64	100	99.2	90	110	
Ba	137	1	nogas	102.371	4.203	449659	0.63	100	102.4	90	110	
Sb	121	2	He	103.184	0.823	711553	0.60	100	103.2	90	110	
Li	7	1	nogas	99.628	3.027	1724125	4.85	100	99.6	90	110	
P	31	1	nogas	462.400	5.404	1064026	0.39	500	92.5	90	110	
La	139	1	nogas	175.938	12.345	780	7.69	100	175.9	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	-650.008	-156.472	30	57.74	100	-650.0	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	nogas	1215936	4.09	1282255	94.83	70	125	
Ge	72	1	nogas	3728420	4.58	3894467	95.74	70	125	
In	115	1	nogas	3176162	3.66	3488791	91.04	70	125	
Bi	209	1	nogas	2313005	0.73	2439864	94.80	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1218471	0.79	1316692	92.54	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	197_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T17:55:45-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	070CALB.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	0.057	47.9	563	32.7	1	
Na	23	1	nogas	17.096	51.4	1043759	7.6	100	
Mg	24	1	nogas	7.078	26.2	122725	10.9	100	
Al	27	1	nogas	-0.103	-143.5	26789	3.1	5	
K	39	1	nogas	6.451	565.3	9853289	0.6	100	
Ti	47	1	nogas	0.051	28.2	523	2.2	2.5	
V	51	1	nogas	9.990	19.4	787701	2.0	2.5	CCB Main CR1 Failed
Cr	52	1	nogas	0.501	40.1	65867	1.8	2.5	
Mn	55	1	nogas	0.122	99.7	30415	3.3	2.5	
Co	59	1	nogas	0.059	12.9	2017	2.0	2.5	
Ni	60	1	nogas	-0.388	-5.8	1013	9.4	2.5	
Cu	63	1	nogas	0.041	17.4	3547	7.1	2	
Zn	66	1	nogas	-0.142	-25.3	1523	3.0	2.5	
As	75	1	nogas	6.711	13.2	126758	4.6	2.5	CCB Main CR1 Failed
Sr	88	1	nogas	0.074	27.1	3450	8.3	2.5	
Ag	107	1	nogas	0.054	9.1	837	1.8	2.5	
Cd	111	1	nogas	0.048	39.3	163	25.5	1	
Sb	121	1	nogas	0.176	11.9	3174	1.0	2.5	
Tl	205	1	nogas	0.479	66.3	9204	56.8	1	
Pb	208	1	nogas	0.061	30.5	2110	21.8	2.5	
U	238	1	nogas	0.134	41.6	3304	34.2	2.5	
[Pb]	206	1	nogas	0.055	48.9	537	25.4	2.5	
[Pb]	207	1	nogas	0.067	63.4	493	41.0	2.5	
Na	23	2	He	2.593	63.9	81503	2.9	100	
Mg	24	2	He	6.774	56.4	10238	50.5	100	
Al	27	2	He	0.083	2108.6	1599	81.8	5	
K	39	2	He	-31.315	-6.5	218819	1.2	100	
Ca	43	2	He	0.341	1221.3	67	17.3	100	
Ca	44	2	He	-10.167	-16.5	1720	10.5	100	
V	51	2	He	0.377	28.9	11103	3.0	2.5	
Cr	52	2	He	0.017	234.3	6134	6.2	2.5	
Mn	55	2	He	-0.036	-15.5	1423	2.7	2.5	
Fe	56	2	He	4.931	8.2	66556	4.2	100	
Co	59	2	He	0.041	10.4	690	3.8	2.5	
Ni	60	2	He	-0.195	-4.3	323	9.9	2.5	
Cu	63	2	He	-0.067	-50.8	1603	22.0	2	
Zn	66	2	He	-0.317	-4.9	660	9.5	2.5	
As	75	2	He	0.110	30.8	573	5.2	2.5	
Se	78	2	He	0.667	28.5	200	10.4	2	
B	11	1	nogas	6.252	27.6	50320	9.2	10	
Si	28	1	nogas	236.291	72.7	2901203	0.6	5	CCB Main CR1 Failed
Ca	43	1	nogas	5.624	61.0	1123	5.7	100	
Ca	44	1	nogas	-145.209	-11.9	149471	1.1	100	
Fe	56	1	nogas	-9.108	-123.9	3676579	0.4	100	
Se	77	1	nogas	49.518	12.3	40412	3.3	2.5	CCB Main CR1 Failed
Se	82	1	nogas	0.116	164.0	210	17.2	2	
Mo	95	1	nogas	0.271	27.8	1647	17.1	2.5	
Sn	118	1	nogas	0.250	33.9	3114	11.4	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.079	59.5	620	23.3	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.089	17.9	1273	5.0	2.5	
P	31	1	nogas	5.437	85.1	123262	0.4	10	
La	139	1	nogas	10.316	70.6	100	26.5	2.5	CCB Main CR1 Failed
Au	197	1	nogas	31.291	3797.9	40	43.3	2.5	CCB Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1249703	8.20	1282255	97.46	70	125	
Ge	72	1	nogas	3396272	6.90	3894467	87.21	70	125	
In	115	1	nogas	3034418	9.11	3488791	86.98	70	125	
Bi	209	1	nogas	2248391	6.53	2439864	92.15	70	125	
Ge	72	2	He	1245471	5.23	1316692	94.59	70	125	

Sample Report

Sample Table

Sample Name	HS18121523-02
Data File Name	207SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T18:15:31-06:00
Sample Type	Sample
Dilution	2
Comment	TW B136233 AlBeCdK
ISTD Ref FileName	070CALB.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	0.091	0.181	9.11	797	0.01	2000	
Na	23	1	nogas	OR	OR	#VALUE!	OR	#VALUE!	200000	
Mg	24	1	nogas	124233.435	248466.871	7.31	2238987450	0.01	200000	
Al	27	1	nogas	21.270	42.539	4.03	468826	0.00	2000	
K	39	1	nogas	2941.664	5883.329	4.78	79356010	0.00	200000	
Ti	47	1	nogas	1.417	2.834	11.08	3240	0.04	2000	
V	51	1	nogas	70.641	141.283	6.24	2547352	0.00	2000	
Cr	52	1	nogas	3.426	6.853	6.23	141737	0.00	2000	
Mn	55	1	nogas	302.595	605.189	5.17	8874559	0.00	2000	
Co	59	1	nogas	3.304	6.609	4.35	82630	0.00	2000	
Ni	60	1	nogas	7.652	15.305	2.52	45199	0.02	2000	
Cu	63	1	nogas	3.992	7.985	3.14	54555	0.01	2000	
Zn	66	1	nogas	5.794	11.587	3.60	27327	0.02	2000	
As	75	1	nogas	43.839	87.679	5.53	359387	0.01	2000	
Sr	88	1	nogas	4620.540	9241.080	6.14	138200285	0.00	2000	>LDR
Ag	107	1	nogas	0.005	0.010	89.69	207	0.00	2000	
Cd	111	1	nogas	0.216	0.431	5.51	687	0.03	2000	
Sb	121	1	nogas	0.176	0.352	13.45	3510	0.01	2000	
Tl	205	1	nogas	-0.017	-0.033	-17.50	260	-0.01	2000	
Pb	208	1	nogas	0.070	0.141	6.36	2347	0.00	2000	
U	238	1	nogas	2.300	4.600	6.56	54461	0.00	2000	
[Pb]	206	1	nogas	0.057	0.113	25.20	540	0.01	2000	
[Pb]	207	1	nogas	0.074	0.147	32.15	527	0.01	2000	
Na	23	2	He	492651.756	985303.512	0.75	1128163023	0.04	200000	>LDR
Mg	24	2	He	118937.867	237875.733	1.37	151424201	0.08	200000	
Al	27	2	He	21.410	42.820	17.93	16921	0.13	2000	
K	39	2	He	3100.852	6201.705	2.48	4308134	0.07	200000	
Ca	43	2	He	223060.744	446121.488	0.91	846647	26.35	200000	>LDR
Ca	44	2	He	219315.582	438631.164	0.90	13716058	1.60	200000	>LDR
V	51	2	He	3.095	6.191	3.82	35058	0.01	2000	
Cr	52	2	He	1.084	2.167	1.94	16544	0.01	2000	
Mn	55	2	He	309.067	618.135	0.69	2137298	0.01	2000	
Fe	56	2	He	5590.494	11180.987	0.41	47205921	0.01	200000	
Co	59	2	He	2.734	5.467	0.69	35628	0.01	2000	
Ni	60	2	He	3.681	7.362	4.57	12821	0.03	2000	
Cu	63	2	He	0.663	1.325	13.66	7648	0.01	2000	
Zn	66	2	He	6.032	12.064	2.49	12738	0.05	2000	
As	75	2	He	5.906	11.812	1.02	11160	0.05	2000	
Se	78	2	He	0.581	1.163	37.95	192	0.30	2000	
B	11	1	nogas	9.682	19.364	3.89	64198	0.02	2000	
Si	28	1	nogas	94497.879	188995.758	4.45	120754222	0.08	2000	>LDR
Ca	43	1	nogas	219422.095	438844.190	5.11	8751970	2.51	200000	>LDR
Ca	44	1	nogas	219821.634	439643.269	3.59	139943855	0.16	200000	>LDR
Fe	56	1	nogas	5811.557	11623.114	6.61	149590962	0.00	200000	
Se	77	1	nogas	265.595	531.190	5.78	104404	0.25	2000	
Se	82	1	nogas	9.475	18.951	9.01	3067	0.31	2000	

Sample Report

Mo	95	1	nogas	0.427	0.854	7.43	2770	0.02	2000	
Sn	118	1	nogas	0.126	0.253	29.44	2274	0.01	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Ba	137	1	nogas	4819.001	9638.003	6.38	20882693	0.02	2000	>LDR
Sb	121	2	He	0.128	0.255	9.13	1580	0.01	2000	
La	139	1	nogas	1368.319	2736.637	8.05	5574	24.55	2000	
Au	197	1	nogas	461.237	922.473	96.19	47	988.36	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1174025	2.59	1282255	91.56	70	125	
Ge	72	1	nogas	3743346	5.64	3894467	96.12	70	125	
In	115	1	nogas	3140736	6.25	3488791	90.02	70	125	
Bi	209	1	nogas	2197149	5.63	2439864	90.05	70	125	
Ge	72	2	He	1269022	2.01	1316692	96.38	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	208_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T18:17:27-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	070CALB.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	98.037	5.381	838446	3.46	100	98.0	90	110	
Na	23	1	nogas	10880.408	7.348	307196899	1.87	10000	108.8	90	110	
Mg	24	1	nogas	10527.198	9.673	191831438	3.59	10000	105.3	90	110	
Al	27	1	nogas	105.602	6.508	2330140	3.65	100	105.6	90	110	
K	39	1	nogas	9877.857	5.006	255317914	1.50	10000	98.8	90	110	
Ti	47	1	nogas	97.907	4.917	203159	2.42	100	97.9	90	110	
V	51	1	nogas	126.907	9.511	4343235	4.86	100	126.9	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	102.711	4.062	2629576	0.82	100	102.7	90	110	
Mn	55	1	nogas	104.516	5.567	3266806	2.40	100	104.5	90	110	
Co	59	1	nogas	101.668	6.888	2666062	3.61	100	101.7	90	110	
Ni	60	1	nogas	100.070	5.312	583798	2.60	100	100.1	90	110	
Cu	63	1	nogas	101.845	7.053	1384481	3.79	100	101.8	90	110	
Zn	66	1	nogas	98.680	5.651	453404	2.32	100	98.7	90	110	
As	75	1	nogas	111.094	6.011	801641	2.62	100	111.1	90	110	CCV Main CR1-2 Failed
Sr	88	1	nogas	102.091	4.370	3237198	1.33	100	102.1	90	110	
Ag	107	1	nogas	98.957	5.390	1531554	3.76	100	99.0	90	110	
Cd	111	1	nogas	98.446	5.181	325935	0.79	100	98.4	90	110	
Sb	121	1	nogas	103.932	2.922	1518152	1.52	100	103.9	90	110	
Tl	205	1	nogas	98.445	3.412	2028629	0.90	100	98.4	90	110	
Pb	208	1	nogas	114.974	1.014	2840142	1.01	100	115.0	90	110	CCV Main CR1-2 Failed
U	238	1	nogas	105.985	4.754	2860067	3.00	100	106.0	90	110	
[Pb]	206	1	nogas	99.480	3.840	698816	0.18	100	99.5	90	110	
[Pb]	207	1	nogas	99.523	3.848	614119	0.38	100	99.5	90	110	
Na	23	2	He	9397.619	0.863	23336094	1.15	10000	94.0	90	110	
Mg	24	2	He	9335.668	0.168	12845536	0.45	10000	93.4	90	110	
Al	27	2	He	95.931	1.294	75989	1.49	100	95.9	90	110	
K	39	2	He	10952.987	2.644	14559774	2.60	10000	109.5	90	110	
Ca	43	2	He	9637.710	3.734	39595	4.00	10000	96.4	90	110	
Ca	44	2	He	9823.715	0.599	666303	0.57	10000	98.2	90	110	
V	51	2	He	95.588	1.385	910052	1.53	100	95.6	90	110	
Cr	52	2	He	92.815	1.028	973619	1.13	100	92.8	90	110	
Mn	55	2	He	96.696	0.433	723682	0.58	100	96.7	90	110	
Fe	56	2	He	9570.953	0.983	87300422	1.22	10000	95.7	90	110	
Co	59	2	He	94.917	2.947	1330182	3.14	100	94.9	90	110	
Ni	60	2	He	95.247	1.613	332557	1.88	100	95.2	90	110	
Cu	63	2	He	93.817	0.634	838069	0.78	100	93.8	90	110	
Zn	66	2	He	95.759	0.740	197941	1.00	100	95.8	90	110	
As	75	2	He	94.853	0.551	187394	0.69	100	94.9	90	110	
Se	78	2	He	93.526	1.248	15470	1.43	100	93.5	90	110	
B	11	1	nogas	462.074	7.368	2474037	5.51	500	92.4	90	110	
Si	28	1	nogas	4822.998	4.928	9450017	1.35	5000	96.5	90	110	
Ca	43	1	nogas	10198.852	6.236	431645	2.93	10000	102.0	90	110	
Ca	44	1	nogas	9921.436	5.415	6944019	2.11	10000	99.2	90	110	
Fe	56	1	nogas	10180.914	5.950	274202214	2.55	10000	101.8	90	110	
Se	77	1	nogas	178.339	12.929	84891	4.98	100	178.3	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	100.645	5.800	32503	2.82	100	100.6	90	110	
Mo	95	1	nogas	95.043	5.072	605302	1.81	100	95.0	90	110	
Sn	118	1	nogas	99.202	5.215	847034	2.66	100	99.2	90	110	
Ba	137	1	nogas	103.727	6.405	484133	1.73	100	103.7	90	110	
Sb	121	2	He	97.294	0.856	755041	0.72	100	97.3	90	110	
Li	7	1	nogas	98.537	4.913	1819643	4.62	100	98.5	90	110	
P	31	1	nogas	463.673	5.387	1133745	2.40	500	92.7	90	110	
La	139	1	nogas	185.573	17.988	870	13.06	100	185.6	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	-97.673	-1072.327	43	48.04	100	-97.7	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	nogas	1296953	2.59	1282255	101.15	70	125	
Ge	72	1	nogas	3960913	3.20	3894467	101.71	70	125	
In	115	1	nogas	3378141	4.59	3488791	96.83	70	125	
Bi	209	1	nogas	2504953	3.80	2439864	102.67	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1371106	0.31	1316692	104.13	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	209_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T18:19:25-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	070CALB.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	0.065	18.6	640	5.6	1	
Na	23	1	nogas	182.661	18.2	5341927	3.8	100	CCB Main CR1 Failed
Mg	24	1	nogas	15.477	19.7	270395	6.6	100	
Al	27	1	nogas	-0.120	-119.1	28178	2.0	5	
K	39	1	nogas	-4.019	-1373.0	10227416	1.4	100	
Ti	47	1	nogas	0.109	48.0	663	7.6	2.5	
V	51	1	nogas	7.201	26.3	764322	3.9	2.5	CCB Main CR1 Failed
Cr	52	1	nogas	0.333	75.8	66251	2.2	2.5	
Mn	55	1	nogas	0.103	115.7	31844	1.8	2.5	
Co	59	1	nogas	0.070	12.5	2424	3.7	2.5	
Ni	60	1	nogas	-0.006	-542.8	3107	7.6	2.5	
Cu	63	1	nogas	0.711	30.2	11921	11.8	2	
Zn	66	1	nogas	-0.069	-53.0	1927	2.7	2.5	
As	75	1	nogas	5.362	35.5	126935	2.5	2.5	CCB Main CR1 Failed
Sr	88	1	nogas	0.336	10.6	11230	1.8	2.5	
Ag	107	1	nogas	0.054	11.5	897	7.2	2.5	
Cd	111	1	nogas	0.064	20.3	227	17.8	1	
Sb	121	1	nogas	0.166	20.9	3244	3.4	2.5	
Tl	205	1	nogas	0.517	54.2	10004	41.9	1	
Pb	208	1	nogas	0.066	20.9	2237	15.2	2.5	
U	238	1	nogas	0.144	33.0	3604	23.5	2.5	
[Pb]	206	1	nogas	0.058	28.5	570	9.8	2.5	
[Pb]	207	1	nogas	0.064	34.4	490	16.7	2.5	
Na	23	2	He	128.052	1.6	367704	0.6	100	CCB Main CR1 Failed
Mg	24	2	He	11.715	1.1	16507	1.8	100	
Al	27	2	He	-0.948	-11.0	857	8.6	5	
K	39	2	He	-29.722	-1.0	220899	0.2	100	
Ca	43	2	He	18.614	42.7	137	21.1	100	
Ca	44	2	He	3.726	107.9	2600	10.2	100	
V	51	2	He	0.302	9.5	10611	2.6	2.5	
Cr	52	2	He	0.025	119.1	6288	4.3	2.5	
Mn	55	2	He	0.010	389.1	1753	14.7	2.5	
Fe	56	2	He	6.383	4.6	79547	2.5	100	
Co	59	2	He	0.048	13.9	790	10.0	2.5	
Ni	60	2	He	-0.160	-4.0	437	5.3	2.5	
Cu	63	2	He	0.259	17.8	4281	8.0	2	
Zn	66	2	He	-0.267	-26.6	760	16.8	2.5	
As	75	2	He	0.099	19.8	561	5.5	2.5	
Se	78	2	He	0.726	15.6	212	8.4	2	
B	11	1	nogas	6.262	35.3	51103	12.1	10	
Si	28	1	nogas	156.707	200.1	2982687	2.2	5	CCB Main CR1 Failed
Ca	43	1	nogas	15.250	5.4	1577	10.9	100	
Ca	44	1	nogas	-20.507	-1022.1	237312	57.0	100	
Fe	56	1	nogas	6.230	331.5	4272779	2.1	100	
Se	77	1	nogas	40.092	26.4	40479	5.1	2.5	CCB Main CR1 Failed
Se	82	1	nogas	0.180	123.3	243	25.1	2	
Mo	95	1	nogas	0.285	40.7	1810	25.2	2.5	
Sn	118	1	nogas	0.278	39.8	3547	16.6	5	
Ba	137	1	nogas	0.302	10.0	1667	2.4	2.5	

Continuing Calibration Blank (CCB) Report

Sb	121	2	He	0.086	4.5	1273	1.8	2.5	
P	31	1	nogas	1.675	462.6	123430	1.7	10	
La	139	1	nogas	17.102	29.3	137	22.4	2.5	CCB Main CR1 Failed
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Au	197	1	nogas	-1066.767	-73.1	23	65.5	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	nogas	1273668	9.68	1282255	99.33	70	125	
Ge	72	1	nogas	3623117	10.25	3894467	93.03	70	125	
In	115	1	nogas	3241182	10.03	3488791	92.90	70	125	
Bi	209	1	nogas	2287895	8.92	2439864	93.77	70	125	
Ge	72	2	He	1259650	0.90	1316692	95.67	70	125	

Sample Report

Sample Table

Sample Name	HS18121523-05
Data File Name	210SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T18:21:24-06:00
Sample Type	Sample
Dilution	1
Comment	TW B136233 AlBaBeCdKNa
ISTD Ref FileName	070CALB.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	0.072	0.072	13.78	680	0.01	2000	
Na	23	1	nogas	24594.793	24594.793	5.16	626124014	0.00	200000	
Mg	24	1	nogas	1460.985	1460.985	6.57	24054135	0.01	200000	
Al	27	1	nogas	556.337	556.337	0.56	10744944	0.01	2000	
K	39	1	nogas	2043.741	2043.741	2.46	54733518	0.00	200000	
Ti	47	1	nogas	9.690	9.690	0.29	18206	0.05	2000	
V	51	1	nogas	16.318	16.318	12.49	979399	0.00	2000	
Cr	52	1	nogas	7.411	7.411	2.50	220951	0.00	2000	
Mn	55	1	nogas	103.510	103.510	1.90	2865095	0.00	2000	
Co	59	1	nogas	0.316	0.316	6.63	8065	0.00	2000	
Ni	60	1	nogas	4.318	4.318	5.23	25218	0.02	2000	
Cu	63	1	nogas	7.095	7.095	3.06	88363	0.01	2000	
Zn	66	1	nogas	5.216	5.216	5.87	23238	0.02	2000	
As	75	1	nogas	8.809	8.809	14.87	142580	0.01	2000	
Sr	88	1	nogas	86.787	86.787	3.79	2437038	0.00	2000	
Ag	107	1	nogas	0.069	0.069	2.55	1070	0.01	2000	
Cd	111	1	nogas	0.094	0.094	15.06	307	0.03	2000	
Sb	121	1	nogas	0.205	0.205	3.27	3660	0.01	2000	
Tl	205	1	nogas	0.019	0.019	39.93	923	0.00	2000	
Pb	208	1	nogas	1.259	1.259	4.17	31689	0.00	2000	
U	238	1	nogas	0.154	0.154	8.22	3854	0.00	2000	
[Pb]	206	1	nogas	1.233	1.233	4.17	7985	0.02	2000	
[Pb]	207	1	nogas	1.206	1.206	4.15	6832	0.02	2000	
Na	23	2	He	22257.225	22257.225	0.71	47906533	0.05	200000	
Mg	24	2	He	1344.942	1344.942	3.66	1607509	0.08	200000	
Al	27	2	He	498.963	498.963	2.25	337139	0.15	2000	
K	39	2	He	1939.724	1939.724	0.92	2792180	0.07	200000	
Ca	43	2	He	7690.498	7690.498	4.14	27440	28.03	200000	
Ca	44	2	He	7814.319	7814.319	1.95	460657	1.70	200000	
V	51	2	He	3.440	3.440	2.84	35725	0.01	2000	
Cr	52	2	He	6.388	6.388	2.04	63542	0.01	2000	
Mn	55	2	He	96.040	96.040	0.64	624504	0.02	2000	
Fe	56	2	He	2205.138	2205.138	0.87	17490251	0.01	200000	
Co	59	2	He	0.273	0.273	8.50	3480	0.01	2000	
Ni	60	2	He	3.863	3.863	3.47	12568	0.03	2000	
Cu	63	2	He	6.346	6.346	2.32	51125	0.01	2000	
Zn	66	2	He	4.975	4.975	2.65	10070	0.05	2000	
As	75	2	He	0.827	0.827	8.69	1777	0.05	2000	
Se	78	2	He	1.013	1.013	2.59	241	0.42	2000	
B	11	1	nogas	32.156	32.156	2.10	179296	0.02	2000	
Si	28	1	nogas	46934.390	46934.390	0.87	57599257	0.08	2000	>LDR
Ca	43	1	nogas	8242.219	8242.219	2.69	309005	2.67	200000	
Ca	44	1	nogas	8026.951	8026.951	1.18	5020588	0.16	200000	
Fe	56	1	nogas	2409.206	2409.206	1.15	60523601	0.00	200000	
Se	77	1	nogas	60.363	60.363	11.17	44558	0.14	2000	
Se	82	1	nogas	0.460	0.460	14.64	317	0.15	2000	

Sample Report

Mo	95	1	nogas	1.538	1.538	8.10	8852	0.02	2000	
Sn	118	1	nogas	0.064	0.064	24.54	1750	0.00	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Ba	137	1	nogas	52.984	52.984	8.45	225040	0.02	2000	
Sb	121	2	He	0.174	0.174	8.24	1793	0.01	2000	
La	139	1	nogas	12734.409	12734.409	6.61	50321	25.31	2000	>LDR
Au	197	1	nogas	-996.201	-996.201	-39.15	23	-4269.43	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1221232	3.51	1282255	95.24	70	125	
Ge	72	1	nogas	3503585	2.65	3894467	89.96	70	125	
In	115	1	nogas	3077395	7.10	3488791	88.21	70	125	
Bi	209	1	nogas	2253652	4.22	2439864	92.37	70	125	
Ge	72	2	He	1191066	3.90	1316692	90.46	70	125	

Sample Report

Sample Table

Sample Name	HS18121523-06
Data File Name	211SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T18:23:22-06:00
Sample Type	Sample
Dilution	1
Comment	TW B136233 BaBeCdKNa^^Al
ISTD Ref FileName	070CALB.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	0.305	0.305	4.77	2707	0.01	2000	
Na	23	1	nogas	49425.892	49425.892	3.14	1530056801	0.00	200000	
Mg	24	1	nogas	2183.890	2183.890	1.04	43778848	0.00	200000	
Al	27	1	nogas	3850.451	3850.451	2.73	81427605	0.00	2000	>LDR
K	39	1	nogas	1242.907	1242.907	3.13	40872730	0.00	200000	
Ti	47	1	nogas	43.653	43.653	0.95	88311	0.05	2000	
V	51	1	nogas	43.938	43.938	3.04	1861630	0.00	2000	
Cr	52	1	nogas	7.336	7.336	1.99	240692	0.00	2000	
Mn	55	1	nogas	39.683	39.683	0.44	1225052	0.00	2000	
Co	59	1	nogas	2.105	2.105	4.27	54421	0.00	2000	
Ni	60	1	nogas	6.922	6.922	5.64	42333	0.02	2000	
Cu	63	1	nogas	4.191	4.191	2.18	58728	0.01	2000	
Zn	66	1	nogas	21.503	21.503	1.76	97888	0.02	2000	
As	75	1	nogas	14.827	14.827	4.88	193151	0.01	2000	
Sr	88	1	nogas	79.640	79.640	3.50	2453863	0.00	2000	
Ag	107	1	nogas	0.009	0.009	20.76	280	0.00	2000	
Cd	111	1	nogas	0.131	0.131	11.77	477	0.03	2000	
Sb	121	1	nogas	0.061	0.061	20.82	1973	0.00	2000	
Tl	205	1	nogas	0.046	0.046	21.07	1560	0.00	2000	
Pb	208	1	nogas	3.957	3.957	2.34	98338	0.00	2000	
U	238	1	nogas	0.429	0.429	6.57	11524	0.00	2000	
[Pb]	206	1	nogas	3.609	3.609	4.31	25217	0.01	2000	
[Pb]	207	1	nogas	3.479	3.479	5.65	21311	0.02	2000	
Na	23	2	He	57800.840	57800.840	11.16	122378012	0.05	200000	
Mg	24	2	He	2593.875	2593.875	12.80	3050130	0.09	200000	
Al	27	2	He	4134.171	4134.171	12.68	2737752	0.15	2000	>LDR
K	39	2	He	1429.992	1429.992	2.25	2126681	0.07	200000	
Ca	43	2	He	3160.485	3160.485	11.92	11140	28.37	200000	
Ca	44	2	He	3238.793	3238.793	10.44	189449	1.71	200000	
V	51	2	He	9.945	9.945	10.83	87716	0.01	2000	
Cr	52	2	He	7.631	7.631	10.97	73680	0.01	2000	
Mn	55	2	He	44.683	44.683	10.51	286977	0.02	2000	
Fe	56	2	He	6046.671	6046.671	9.80	47218454	0.01	200000	
Co	59	2	He	2.272	2.272	7.67	27451	0.01	2000	
Ni	60	2	He	7.612	7.612	13.01	23519	0.03	2000	
Cu	63	2	He	3.944	3.944	11.33	32078	0.01	2000	
Zn	66	2	He	23.270	23.270	10.93	42042	0.06	2000	
As	75	2	He	4.098	4.098	12.91	7260	0.06	2000	
Se	78	2	He	1.064	1.064	12.96	245	0.43	2000	
B	11	1	nogas	8.383	8.383	5.92	63870	0.01	2000	
Si	28	1	nogas	313245.714	313245.714	3.90	404845487	0.08	2000	>LDR
Ca	43	1	nogas	2834.936	2834.936	0.83	117429	2.41	200000	
Ca	44	1	nogas	2843.033	2843.033	2.23	2122842	0.13	200000	
Fe	56	1	nogas	5470.464	5470.464	1.11	145296474	0.00	200000	

Sample Report

Se	77	1	nogas	80.939	80.939	3.70	54809	0.15	2000	
Se	82	1	nogas	0.607	0.607	23.16	393	0.15	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Mo	95	1	nogas	0.128	0.128	17.00	997	0.01	2000	
Sn	118	1	nogas	0.289	0.289	10.92	3974	0.01	2000	
Ba	137	1	nogas	170.395	170.395	2.90	823549	0.02	2000	
Sb	121	2	He	0.057	0.057	26.25	997	0.01	2000	
La	139	1	nogas	53738.698	53738.698	2.00	241466	22.26	2000	>LDR
Au	197	1	nogas	-12.767	-12.767	-14302.44	43	-29.46	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1293492	2.62	1282255	100.88	70	125	
Ge	72	1	nogas	3846594	2.38	3894467	98.77	70	125	
In	115	1	nogas	3492448	1.19	3488791	100.10	70	125	
Bi	209	1	nogas	2469984	2.62	2439864	101.23	70	125	
Ge	72	2	He	1181271	9.91	1316692	89.72	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	213_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T18:27:19-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	070CALB.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	99.208	4.300	783290	1.63	100	99.2	90	110	
Na	23	1	nogas	9956.954	0.832	268644298	1.55	10000	99.6	90	110	
Mg	24	1	nogas	9985.212	3.382	173984100	2.89	10000	99.9	90	110	
Al	27	1	nogas	103.310	3.708	2125480	3.96	100	103.3	90	110	
K	39	1	nogas	9835.636	2.768	236922205	2.22	10000	98.4	90	110	
Ti	47	1	nogas	99.207	3.430	191758	2.14	100	99.2	90	110	
V	51	1	nogas	114.690	4.221	3715574	2.50	100	114.7	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	103.345	1.026	2464543	0.56	100	103.3	90	110	
Mn	55	1	nogas	101.960	2.480	2970768	2.52	100	102.0	90	110	
Co	59	1	nogas	103.228	1.026	2523550	1.24	100	103.2	90	110	
Ni	60	1	nogas	101.598	0.662	552269	0.91	100	101.6	90	110	
Cu	63	1	nogas	101.748	3.653	1289804	4.62	100	101.7	90	110	
Zn	66	1	nogas	98.265	0.861	420815	1.40	100	98.3	90	110	
As	75	1	nogas	103.954	1.301	705303	0.85	100	104.0	90	110	
Sr	88	1	nogas	103.350	1.364	3053460	1.76	100	103.4	90	110	
Ag	107	1	nogas	100.355	2.735	1446757	1.31	100	100.4	90	110	
Cd	111	1	nogas	95.369	1.287	313802	1.03	100	95.4	90	110	
Sb	121	1	nogas	102.796	2.462	1398349	1.41	100	102.8	90	110	
Tl	205	1	nogas	99.063	2.193	1923118	2.08	100	99.1	90	110	
Pb	208	1	nogas	107.143	1.535	2646722	1.53	100	107.1	90	110	
U	238	1	nogas	102.861	4.220	2613945	1.81	100	102.9	90	110	
[Pb]	206	1	nogas	100.005	4.772	661493	2.11	100	100.0	90	110	
[Pb]	207	1	nogas	97.580	4.373	567020	1.51	100	97.6	90	110	
Na	23	2	He	9378.091	1.567	21525486	0.64	10000	93.8	90	110	
Mg	24	2	He	9422.415	1.266	11984608	1.13	10000	94.2	90	110	
Al	27	2	He	95.962	1.162	70263	0.60	100	96.0	90	110	
K	39	2	He	10330.926	1.858	13747620	1.82	10000	103.3	90	110	
Ca	43	2	He	9685.007	1.951	36780	2.11	10000	96.9	90	110	
Ca	44	2	He	9972.782	0.538	625322	1.99	10000	99.7	90	110	
V	51	2	He	97.804	2.065	860441	0.40	100	97.8	90	110	
Cr	52	2	He	93.716	1.949	908618	1.16	100	93.7	90	110	
Mn	55	2	He	98.047	1.670	678259	1.14	100	98.0	90	110	
Fe	56	2	He	9870.355	1.062	83224274	1.22	10000	98.7	90	110	
Co	59	2	He	97.565	3.492	1263512	1.80	100	97.6	90	110	
Ni	60	2	He	98.417	1.659	317585	0.78	100	98.4	90	110	
Cu	63	2	He	96.476	1.197	796577	0.73	100	96.5	90	110	
Zn	66	2	He	99.094	0.850	189330	2.25	100	99.1	90	110	
As	75	2	He	97.743	1.443	178481	0.38	100	97.7	90	110	
Se	78	2	He	96.576	0.830	14763	1.03	100	96.6	90	110	
B	11	1	nogas	451.711	3.784	2234009	1.85	500	90.3	90	110	
Si	28	1	nogas	4912.676	1.576	8912951	1.28	5000	98.3	90	110	
Ca	43	1	nogas	10423.744	2.790	411160	2.41	10000	104.2	90	110	
Ca	44	1	nogas	10047.484	2.553	6549189	1.54	10000	100.5	90	110	
Fe	56	1	nogas	10165.844	1.359	255210897	1.96	10000	101.7	90	110	
Se	77	1	nogas	139.638	2.712	68572	1.16	100	139.6	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	99.032	0.619	29812	1.54	100	99.0	90	110	
Mo	95	1	nogas	96.496	1.054	572726	1.88	100	96.5	90	110	
Sn	118	1	nogas	93.788	1.117	795923	2.29	100	93.8	90	110	
Ba	137	1	nogas	96.679	1.274	448647	1.02	100	96.7	90	110	
Sb	121	2	He	99.553	0.898	714191	1.44	100	99.6	90	110	
Li	7	1	nogas	100.557	7.768	1709943	3.73	100	100.6	90	110	
P	31	1	nogas	459.621	1.780	1048173	1.58	500	91.9	90	110	
La	139	1	nogas	207.299	8.428	960	6.34	100	207.3	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	-1616.505	-55.998	13	114.56	100	-1616.5	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	nogas	1198015	4.94	1282255	93.43	70	125	
Ge	72	1	nogas	3687390	1.56	3894467	94.68	70	125	
In	115	1	nogas	3352680	2.27	3488791	96.10	70	125	
Bi	209	1	nogas	2359125	3.91	2439864	96.69	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1267581	1.73	1316692	96.27	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	214_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T18:29:19-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	070CALB.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	0.071	38.0	707	28.9	1	
Na	23	1	nogas	80.765	18.1	2909590	8.7	100	
Mg	24	1	nogas	8.408	21.5	163284	14.5	100	
Al	27	1	nogas	-0.156	-16.3	28802	2.1	5	
K	39	1	nogas	-44.026	-6.4	9795311	0.7	100	
Ti	47	1	nogas	0.072	102.0	623	22.5	2.5	
V	51	1	nogas	4.879	23.3	734625	4.7	2.5	CCB Main CR1 Failed
Cr	52	1	nogas	0.109	22.7	64044	1.9	2.5	
Mn	55	1	nogas	0.010	572.7	30642	5.0	2.5	
Co	59	1	nogas	0.068	6.3	2484	3.8	2.5	
Ni	60	1	nogas	-0.283	-10.9	1710	10.1	2.5	
Cu	63	1	nogas	0.174	12.0	5651	4.0	2	
Zn	66	1	nogas	-0.107	-33.4	1850	8.6	2.5	
As	75	1	nogas	3.495	29.3	121794	5.2	2.5	CCB Main CR1 Failed
Sr	88	1	nogas	0.103	10.9	4724	6.6	2.5	
Ag	107	1	nogas	0.059	10.4	1000	8.2	2.5	
Cd	111	1	nogas	0.069	9.7	257	2.2	1	
Sb	121	1	nogas	0.150	23.9	3180	15.4	2.5	
Tl	205	1	nogas	0.632	64.3	13661	65.9	1	
Pb	208	1	nogas	0.082	24.6	2637	18.9	2.5	
U	238	1	nogas	0.153	43.7	4227	46.8	2.5	
[Pb]	206	1	nogas	0.060	35.5	637	28.5	2.5	
[Pb]	207	1	nogas	0.074	16.2	597	13.5	2.5	
Na	23	2	He	50.767	5.9	197975	2.6	100	
Mg	24	2	He	6.064	7.2	9649	4.1	100	
Al	27	2	He	-0.971	-5.9	867	5.8	5	
K	39	2	He	-27.625	-5.6	223637	0.9	100	
Ca	43	2	He	-2.213	-243.4	60	33.3	100	
Ca	44	2	He	-6.334	-65.4	2040	15.1	100	
V	51	2	He	0.290	3.8	10835	2.5	2.5	
Cr	52	2	He	-0.031	-126.4	5941	8.6	2.5	
Mn	55	2	He	-0.025	-15.5	1560	1.3	2.5	
Fe	56	2	He	6.329	5.3	81532	1.5	100	
Co	59	2	He	0.051	8.4	857	7.9	2.5	
Ni	60	2	He	-0.187	-13.6	360	22.0	2.5	
Cu	63	2	He	0.049	63.9	2647	10.8	2	
Zn	66	2	He	-0.295	-9.8	730	6.0	2.5	
As	75	2	He	0.111	30.9	602	10.4	2.5	
Se	78	2	He	0.623	40.4	203	19.6	2	
B	11	1	nogas	6.200	20.8	52309	10.1	10	
Si	28	1	nogas	30.784	186.2	2973304	1.4	5	CCB Main CR1 Failed
Ca	43	1	nogas	4.549	11.5	1210	0.8	100	
Ca	44	1	nogas	-178.323	-1.9	145288	0.6	100	
Fe	56	1	nogas	-16.006	-45.0	3921997	4.1	100	
Se	77	1	nogas	28.069	11.8	38969	2.5	2.5	CCB Main CR1 Failed
Se	82	1	nogas	0.162	38.1	250	6.9	2	
Mo	95	1	nogas	0.388	46.7	2560	42.5	2.5	
Sn	118	1	nogas	0.316	49.2	4067	25.9	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.101	15.1	813	8.7	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.121	16.2	1570	8.1	2.5	
P	31	1	nogas	-5.978	-7.6	113843	0.3	10	
La	139	1	nogas	14.473	50.7	133	31.2	2.5	CCB Main CR1 Failed
Au	197	1	nogas	241.215	1088.0	50	103.9	2.5	CCB Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1297118	3.19	1282255	101.16	70	125	
Ge	72	1	nogas	3772455	1.01	3894467	96.87	70	125	
In	115	1	nogas	3421466	6.78	3488791	98.07	70	125	
Bi	209	1	nogas	2465753	5.10	2439864	101.06	70	125	
Ge	72	2	He	1298978	2.11	1316692	98.65	70	125	

Calibration Blank Report

Sample Table

Sample Name	CAL BLK
Data File Name	221CALB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T19:12:49-06:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	230	6.82
Na	23	1	nogas	568425	0.00
Mg	24	1	nogas	34771	0.01
Al	27	1	nogas	28582	0.01
K	39	1	nogas	9206419	0.00
Ti	47	1	nogas	407	9.39
V	51	1	nogas	605010	0.00
Cr	52	1	nogas	61174	0.00
Mn	55	1	nogas	31848	0.01
Co	59	1	nogas	850	0.28
Ni	60	1	nogas	877	2.15
Cu	63	1	nogas	2634	0.19
Zn	66	1	nogas	2587	0.22
As	75	1	nogas	104709	0.00
Sr	88	1	nogas	1570	0.31
Ag	107	1	nogas	200	5.00
Cd	111	1	nogas	57	47.57
Sb	121	1	nogas	437	2.69
Tl	205	1	nogas	753	0.57
Pb	208	1	nogas	510	0.77
[Pb]	206	1	nogas	143	19.67
[Pb]	207	1	nogas	123	10.04
Na	23	2	He	56681	0.00
Mg	24	2	He	2590	0.03
Al	27	2	He	1027	0.47
K	39	2	He	222827	0.00
Ca	43	2	He	73	42.94
Ca	44	2	He	1717	0.20
V	51	2	He	9695	0.03
Cr	52	2	He	7562	0.06
Mn	55	2	He	2274	0.04
Fe	56	2	He	34035	0.00
Co	59	2	He	200	19.53
Ni	60	2	He	237	10.91
Cu	63	2	He	1467	0.26
Zn	66	2	He	897	1.58
As	75	2	He	469	3.15
Se	78	2	He	213	3.14
B	11	1	nogas	42865	0.01
Si	28	1	nogas	3213274	0.00
Ca	43	1	nogas	1040	0.37
Ca	44	1	nogas	120199	0.00

Calibration Blank Report

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	3548189	0.00
Se	77	1	nogas	33758	0.01
Se	82	1	nogas	200	7.50
Mo	95	1	nogas	440	5.96
Sn	118	1	nogas	1440	0.86
Ba	137	1	nogas	473	5.81
Sb	121	2	He	250	7.33
Li	7	1	nogas	96916	0.00
P	31	1	nogas	96780	0.00
La	139	1	nogas	100	26.46

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	6	1	nogas	1118108	2.38
Ge	72	1	nogas	3396393	1.78
In	115	1	nogas	3166421	2.68
Bi	209	1	nogas	2159119	4.45
Ge	72	2	He	1189986	1.34

Calibration Standard Report

Sample Table

Sample Name	2/10/200
Data File Name	222CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T19:14:47-06:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	221CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	12951	0.07
Na	23	1	nogas	5161579	0.00
Mg	24	1	nogas	3062203	0.00
Al	27	1	nogas	70137	0.00
K	39	1	nogas	13234496	0.00
Ti	47	1	nogas	3724	0.31
V	51	1	nogas	627480	0.00
Cr	52	1	nogas	99013	0.00
Mn	55	1	nogas	81311	0.00
Co	59	1	nogas	45032	0.00
Ni	60	1	nogas	10400	0.06
Cu	63	1	nogas	26676	0.00
Zn	66	1	nogas	9149	0.04
As	75	1	nogas	107918	0.00
Sr	88	1	nogas	55908	0.01
Ag	107	1	nogas	26724	0.01
Cd	111	1	nogas	5634	0.03
Sb	121	1	nogas	25092	0.01
Tl	205	1	nogas	33285	0.01
Pb	208	1	nogas	45619	0.01
[Pb]	206	1	nogas	11584	0.05
[Pb]	207	1	nogas	9826	0.04
Na	23	2	He	454872	0.00
Mg	24	2	He	227154	0.00
Al	27	2	He	2407	0.18
K	39	2	He	474435	0.00
Ca	43	2	He	740	2.11
Ca	44	2	He	13395	0.05
V	51	2	He	24526	0.00
Cr	52	2	He	25151	0.00
Mn	55	2	He	14352	0.01
Fe	56	2	He	1568240	0.00
Co	59	2	He	23368	0.01
Ni	60	2	He	6081	0.09
Cu	63	2	He	17085	0.02
Zn	66	2	He	4127	0.14
As	75	2	He	3740	0.06
Se	78	2	He	450	2.77
B	11	1	nogas	77493	0.00
Si	28	1	nogas	3296194	0.00

Calibration Standard Report

Ca	43	1	nogas	8029	0.05
Ca	44	1	nogas	231918	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	8030861	0.00
Se	77	1	nogas	32509	0.01
Se	82	1	nogas	757	1.75
Mo	95	1	nogas	10967	0.04
Sn	118	1	nogas	14800	0.00
Ba	137	1	nogas	8232	0.03
Sb	121	2	He	13512	0.01
P	31	1	nogas	116175	0.00
La	139	1	nogas	77	54.69

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1132003	3.61	1118108	101.24	70	125	
Ge	72	1	nogas	3451423	1.51	3396393	101.62	70	125	
In	115	1	nogas	3060260	1.77	3166421	96.65	70	125	
Bi	209	1	nogas	2087428	3.76	2159119	96.68	70	125	
Ge	72	2	He	1209005	1.03	1189986	101.60	70	125	

Calibration Standard Report

Sample Table

Sample Name	5/25/500
Data File Name	223CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T19:16:46-06:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	
ISTD Ref File Name	221CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	32415	0.00
Na	23	1	nogas	12048279	0.00
Mg	24	1	nogas	7538756	0.00
Al	27	1	nogas	129951	0.00
K	39	1	nogas	19150063	0.00
Ti	47	1	nogas	9079	0.09
V	51	1	nogas	774817	0.00
Cr	52	1	nogas	163294	0.00
Mn	55	1	nogas	157221	0.00
Co	59	1	nogas	110361	0.00
Ni	60	1	nogas	25755	0.01
Cu	63	1	nogas	63233	0.00
Zn	66	1	nogas	23025	0.00
As	75	1	nogas	136419	0.00
Sr	88	1	nogas	135701	0.00
Ag	107	1	nogas	64756	0.00
Cd	111	1	nogas	13065	0.00
Sb	121	1	nogas	62619	0.00
Tl	205	1	nogas	85235	0.00
Pb	208	1	nogas	115890	0.00
[Pb]	206	1	nogas	29133	0.01
[Pb]	207	1	nogas	25657	0.02
Na	23	2	He	1064301	0.00
Mg	24	2	He	574077	0.00
Al	27	2	He	4561	0.22
K	39	2	He	847539	0.00
Ca	43	2	He	1867	0.33
Ca	44	2	He	30806	0.01
V	51	2	He	49152	0.00
Cr	52	2	He	51963	0.01
Mn	55	2	He	33404	0.00
Fe	56	2	He	3833080	0.00
Co	59	2	He	58698	0.00
Ni	60	2	He	15510	0.02
Cu	63	2	He	38852	0.00
Zn	66	2	He	10486	0.08
As	75	2	He	8887	0.03
Se	78	2	He	883	0.84
B	11	1	nogas	134650	0.00
Si	28	1	nogas	3513153	0.00

Calibration Standard Report

Ca	43	1	nogas	19040	0.01
Ca	44	1	nogas	407153	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	14208575	0.00
Se	77	1	nogas	36924	0.00
Se	82	1	nogas	1447	0.91
Mo	95	1	nogas	26767	0.01
Sn	118	1	nogas	37952	0.00
Ba	137	1	nogas	20960	0.01
Sb	121	2	He	33205	0.02
P	31	1	nogas	144588	0.00
La	139	1	nogas	177	8.06

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1088809	0.87	1118108	97.38	70	125	
Ge	72	1	nogas	3446697	0.22	3396393	101.48	70	125	
In	115	1	nogas	3119463	2.58	3166421	98.52	70	125	
Bi	209	1	nogas	2080980	2.61	2159119	96.38	70	125	
Ge	72	2	He	1200718	1.49	1189986	100.90	70	125	

Calibration Standard Report

Sample Table

Sample Name	10/50/1000
Data File Name	224CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T19:18:43-06:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	
ISTD Ref File Name	221CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	64064	0.00
Na	23	1	nogas	22966981	0.00
Mg	24	1	nogas	14609242	0.00
Al	27	1	nogas	217774	0.00
K	39	1	nogas	29317766	0.00
Ti	47	1	nogas	17619	0.01
V	51	1	nogas	988004	0.00
Cr	52	1	nogas	264416	0.00
Mn	55	1	nogas	290107	0.00
Co	59	1	nogas	218865	0.00
Ni	60	1	nogas	49601	0.01
Cu	63	1	nogas	115482	0.00
Zn	66	1	nogas	39760	0.00
As	75	1	nogas	168100	0.00
Sr	88	1	nogas	269474	0.00
Ag	107	1	nogas	125792	0.00
Cd	111	1	nogas	27121	0.01
Sb	121	1	nogas	116824	0.00
Tl	205	1	nogas	163093	0.00
Pb	208	1	nogas	224998	0.00
[Pb]	206	1	nogas	55980	0.00
[Pb]	207	1	nogas	48654	0.00
Na	23	2	He	2003126	0.00
Mg	24	2	He	1086799	0.00
Al	27	2	He	7378	0.03
K	39	2	He	1484694	0.00
Ca	43	2	He	3454	0.16
Ca	44	2	He	59395	0.00
V	51	2	He	87588	0.00
Cr	52	2	He	91312	0.00
Mn	55	2	He	64449	0.00
Fe	56	2	He	7537682	0.00
Co	59	2	He	115807	0.00
Ni	60	2	He	29447	0.00
Cu	63	2	He	75174	0.00
Zn	66	2	He	17826	0.01
As	75	2	He	16823	0.02
Se	78	2	He	1632	0.27
B	11	1	nogas	230916	0.00
Si	28	1	nogas	3700907	0.00

Calibration Standard Report

Ca	43	1	nogas	35781	0.01
Ca	44	1	nogas	677820	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	25443533	0.00
Se	77	1	nogas	39139	0.00
Se	82	1	nogas	2597	0.18
Mo	95	1	nogas	52174	0.00
Sn	118	1	nogas	68111	0.01
Ba	137	1	nogas	40040	0.01
Sb	121	2	He	64181	0.00
P	31	1	nogas	190748	0.00
La	139	1	nogas	207	4.87

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1025689	5.07	1118108	91.73	70	125	
Ge	72	1	nogas	3365060	1.54	3396393	99.08	70	125	
In	115	1	nogas	3075127	0.90	3166421	97.12	70	125	
Bi	209	1	nogas	2059322	0.85	2159119	95.38	70	125	
Ge	72	2	He	1174177	0.70	1189986	98.67	70	125	

Calibration Standard Report

Sample Table

Sample Name	200/1000/20K
Data File Name	226CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T19:22:39-06:00
Sample Type	CalStd
Level	6
Dilution	1
Comment	
ISTD Ref File Name	221CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	1403213	0.00
Na	23	1	nogas	466021727	0.00
Mg	24	1	nogas	289321281	0.00
Al	27	1	nogas	3519046	0.00
K	39	1	nogas	405749434	0.00
Ti	47	1	nogas	338297	0.00
V	51	1	nogas	5299412	0.00
Cr	52	1	nogas	4015508	0.00
Mn	55	1	nogas	4899044	0.00
Co	59	1	nogas	4171223	0.00
Ni	60	1	nogas	943418	0.00
Cu	63	1	nogas	2238244	0.00
Zn	66	1	nogas	758318	0.00
As	75	1	nogas	1137029	0.00
Sr	88	1	nogas	5293077	0.00
Ag	107	1	nogas	2546001	0.00
Cd	111	1	nogas	545440	0.00
Sb	121	1	nogas	2451601	0.00
Tl	205	1	nogas	3325558	0.00
Pb	208	1	nogas	4545095	0.00
[Pb]	206	1	nogas	1132147	0.00
[Pb]	207	1	nogas	993724	0.00
Na	23	2	He	37186881	0.00
Mg	24	2	He	20972273	0.00
Al	27	2	He	124094	0.00
K	39	2	He	24275927	0.00
Ca	43	2	He	67699	0.00
Ca	44	2	He	1117615	0.00
V	51	2	He	1561301	0.00
Cr	52	2	He	1671405	0.00
Mn	55	2	He	1209500	0.00
Fe	56	2	He	145423011	0.00
Co	59	2	He	2259984	0.00
Ni	60	2	He	560479	0.00
Cu	63	2	He	1399280	0.00
Zn	66	2	He	335067	0.00
As	75	2	He	325081	0.00
Se	78	2	He	26766	0.01
B	11	1	nogas	4165631	0.00
Si	28	1	nogas	13931647	0.00

Calibration Standard Report

Ca	43	1	nogas	697231	0.00
Ca	44	1	nogas	11421221	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	426678526	0.00
Se	77	1	nogas	85051	0.00
Se	82	1	nogas	52235	0.00
Mo	95	1	nogas	1059180	0.00
Sn	118	1	nogas	1433929	0.00
Ba	137	1	nogas	777656	0.00
Sb	121	2	He	1302570	0.00
P	31	1	nogas	1828985	0.00
La	139	1	nogas	647	1.54

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1035061	3.92	1118108	92.57	70	125	
Ge	72	1	nogas	3352290	2.22	3396393	98.70	70	125	
In	115	1	nogas	3007420	2.98	3166421	94.98	70	125	
Bi	209	1	nogas	2135783	6.85	2159119	98.92	70	125	
Ge	72	2	He	1149474	1.01	1189986	96.60	70	125	

Calibration Standard Report

Sample Table

Sample Name	100/500/10K
Data File Name	227CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T19:24:37-06:00
Sample Type	CalStd
Level	5
Dilution	1
Comment	
ISTD Ref File Name	221CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	687771	0.00
Na	23	1	nogas	238148872	0.00
Mg	24	1	nogas	154345108	0.00
Al	27	1	nogas	1929165	0.00
K	39	1	nogas	214283563	0.00
Ti	47	1	nogas	170135	0.00
V	51	1	nogas	2848398	0.00
Cr	52	1	nogas	2116404	0.00
Mn	55	1	nogas	2592009	0.00
Co	59	1	nogas	2173099	0.00
Ni	60	1	nogas	482613	0.00
Cu	63	1	nogas	1135762	0.00
Zn	66	1	nogas	380747	0.00
As	75	1	nogas	607323	0.00
Sr	88	1	nogas	2626097	0.00
Ag	107	1	nogas	1273754	0.00
Cd	111	1	nogas	284735	0.00
Sb	121	1	nogas	1240755	0.00
Tl	205	1	nogas	1761426	0.00
Pb	208	1	nogas	2326179	0.00
[Pb]	206	1	nogas	597041	0.00
[Pb]	207	1	nogas	506127	0.00
Na	23	2	He	19792256	0.00
Mg	24	2	He	10911672	0.00
Al	27	2	He	66092	0.00
K	39	2	He	12947291	0.00
Ca	43	2	He	34225	0.00
Ca	44	2	He	571757	0.00
V	51	2	He	800664	0.00
Cr	52	2	He	860413	0.00
Mn	55	2	He	631536	0.00
Fe	56	2	He	77250812	0.00
Co	59	2	He	1150183	0.00
Ni	60	2	He	290728	0.00
Cu	63	2	He	721751	0.00
Zn	66	2	He	171341	0.00
As	75	2	He	166409	0.00
Se	78	2	He	13753	0.01
B	11	1	nogas	2104503	0.00
Si	28	1	nogas	8728680	0.00

Calibration Standard Report

Ca	43	1	nogas	358579	0.00
Ca	44	1	nogas	5900135	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	228214013	0.00
Se	77	1	nogas	50306	0.00
Se	82	1	nogas	26990	0.01
Mo	95	1	nogas	514330	0.00
Sn	118	1	nogas	717658	0.00
Ba	137	1	nogas	397998	0.00
Sb	121	2	He	661303	0.00
P	31	1	nogas	968399	0.00
La	139	1	nogas	703	2.07

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1045107	2.00	1118108	93.47	70	125	
Ge	72	1	nogas	3349000	0.99	3396393	98.60	70	125	
In	115	1	nogas	3072753	2.02	3166421	97.04	70	125	
Bi	209	1	nogas	2095007	3.46	2159119	97.03	70	125	
Ge	72	2	He	1172038	0.59	1189986	98.49	70	125	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	ICCV
Data File Name	229_ICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T19:28:33-06:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	92.729	4.528	676655	2.61	100	92.7	90	110	
Na	23	1	nogas	10541.582	6.868	233990530	0.79	10000	105.4	90	110	
Mg	24	1	nogas	10895.691	7.181	151487349	1.01	10000	109.0	90	110	
Al	27	1	nogas	102.785	6.013	1899734	3.92	100	102.8	90	110	
K	39	1	nogas	9986.797	4.610	213617055	2.20	10000	99.9	90	110	
Ti	47	1	nogas	97.195	5.172	168727	2.00	100	97.2	90	110	
V	51	1	nogas	91.642	9.410	2802429	5.50	100	91.6	90	110	
Cr	52	1	nogas	101.742	5.520	2139847	4.50	100	101.7	90	110	
Mn	55	1	nogas	104.133	4.710	2656696	2.22	100	104.1	90	110	
Co	59	1	nogas	102.981	3.061	2219971	2.38	100	103.0	90	110	
Ni	60	1	nogas	100.250	5.363	487473	1.44	100	100.3	90	110	
Cu	63	1	nogas	98.736	5.138	1136420	1.99	100	98.7	90	110	
Zn	66	1	nogas	98.861	2.740	385403	1.54	100	98.9	90	110	
As	75	1	nogas	94.566	3.150	604789	2.24	100	94.6	90	110	
Sr	88	1	nogas	99.857	3.269	2705056	2.10	100	99.9	90	110	
Ag	107	1	nogas	101.880	1.481	1330006	2.83	100	101.9	90	110	
Cd	111	1	nogas	98.816	1.818	282030	1.23	100	98.8	90	110	
Sb	121	1	nogas	99.039	4.238	1246659	0.19	100	99.0	90	110	
Tl	205	1	nogas	103.503	6.858	1728249	5.96	100	103.5	90	110	
Pb	208	1	nogas	101.569	2.043	2319223	2.04	100	101.6	90	110	
U	238	1	nogas	110.997	2.706	2308936	3.30	100	111.0	90	110	ICV Main CR1 Failed
[Pb]	206	1	nogas	104.350	3.362	592748	2.60	100	104.4	90	110	
[Pb]	207	1	nogas	102.103	3.410	505312	2.56	100	102.1	90	110	
Na	23	2	He	10278.577	2.048	19793995	0.92	10000	102.8	90	110	
Mg	24	2	He	10280.681	2.424	11100969	1.21	10000	102.8	90	110	
Al	27	2	He	101.984	2.305	65985	1.41	100	102.0	90	110	
K	39	2	He	10426.376	0.775	12908841	0.76	10000	104.3	90	110	
Ca	43	2	He	9963.214	3.865	34556	3.60	10000	99.6	90	110	
Ca	44	2	He	10228.149	1.382	587248	0.82	10000	102.3	90	110	
V	51	2	He	100.624	1.725	809883	0.58	100	100.6	90	110	
Cr	52	2	He	101.630	2.237	875627	1.08	100	101.6	90	110	
Mn	55	2	He	100.801	1.725	629074	0.53	100	100.8	90	110	
Fe	56	2	He	10178.561	0.698	76556302	0.59	10000	101.8	90	110	
Co	59	2	He	97.927	1.547	1134520	0.49	100	97.9	90	110	
Ni	60	2	He	99.594	1.668	287618	0.57	100	99.6	90	110	
Cu	63	2	He	102.069	1.305	735378	0.75	100	102.1	90	110	
Zn	66	2	He	101.265	0.779	174480	0.47	100	101.3	90	110	
As	75	2	He	99.768	1.840	166615	0.85	100	99.8	90	110	
Se	78	2	He	100.050	2.433	13837	1.24	100	100.0	90	110	
B	11	1	nogas	479.142	3.203	2109948	7.74	500	95.8	90	110	
Si	28	1	nogas	4805.341	5.955	8580173	0.45	5000	96.1	90	110	
Ca	43	1	nogas	9970.126	4.413	358619	2.71	10000	99.7	90	110	
Ca	44	1	nogas	9700.981	4.956	5762692	1.96	10000	97.0	90	110	
Fe	56	1	nogas	10257.669	5.444	228646038	1.33	10000	102.6	90	110	
Se	77	1	nogas	67.903	13.541	50935	1.56	100	67.9	90	110	ICV Main CR1 Failed
Se	82	1	nogas	100.527	6.855	27134	2.83	100	100.5	90	110	
Mo	95	1	nogas	94.529	2.762	510332	1.34	100	94.5	90	110	
Sn	118	1	nogas	95.511	1.631	711077	0.96	100	95.5	90	110	
Ba	137	1	nogas	98.366	2.277	399020	1.77	100	98.4	90	110	
Sb	121	2	He	100.143	0.949	668339	0.30	100	100.1	90	110	
Li	7	1	nogas	102.449	3.826	1591252	8.64	100	102.4	90	110	
P	31	1	nogas	486.998	3.481	964125	0.94	500	97.4	90	110	
La	139	1	nogas	134.302	7.785	577	6.09	100	134.3	90	110	ICV Main CR1 Failed
Au	197	1	nogas	285.887	82.326	33	34.64	100	285.9	90	110	ICV Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1083938	5.62	1118108	96.94	70	125	
Ge	72	1	nogas	3436493	4.11	3396393	101.18	70	125	
In	115	1	nogas	3133575	1.59	3166421	98.96	70	125	
Bi	209	1	nogas	2104399	1.45	2159119	97.47	70	125	

Initial Calibration Verification (ICV) Report

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	2	He	1178892	1.23	1189986	99.07	70	125	

Low Level Initial Calibration Verification (LLICV) Report

Sample Table

Sample Name	LLCCV5
Data File Name	230LICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T19:30:31-06:00
Sample Type	LLICV
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	4.424	2.711	33740	3.79	5	88.5	70	130	
Na	23	1	nogas	480.985	3.264	12117002	1.65	500	96.2	70	130	
Mg	24	1	nogas	501.130	1.873	7587281	1.15	500	100.2	70	130	
Al	27	1	nogas	5.700	2.953	132051	2.22	5	114.0	70	130	
K	39	1	nogas	500.224	9.541	19435982	2.18	500	100.0	70	130	
Ti	47	1	nogas	4.940	8.117	8922	7.12	5	98.8	70	130	
V	51	1	nogas	-0.927	-45.948	586888	2.13	5	-18.5	70	130	LLICV Main CR1 Failed
Cr	52	1	nogas	4.347	3.616	149944	3.63	5	86.9	70	130	
Mn	55	1	nogas	5.042	1.079	158550	2.09	5	100.8	70	130	
Co	59	1	nogas	5.141	2.266	111068	1.10	5	102.8	70	130	
Ni	60	1	nogas	5.026	2.979	26549	1.14	5	100.5	70	130	
Cu	63	1	nogas	5.291	4.736	63099	1.62	5	105.8	70	130	
Zn	66	1	nogas	5.050	4.717	21867	2.20	5	101.0	70	130	
As	75	1	nogas	2.026	40.369	116358	0.82	5	40.5	70	130	LLICV Main CR1 Failed
Sr	88	1	nogas	5.110	3.085	139213	1.08	5	102.2	70	130	
Ag	107	1	nogas	5.006	3.200	65177	0.29	5	100.1	70	130	
Cd	111	1	nogas	4.758	3.689	13732	1.21	5	95.2	70	130	
Sb	121	1	nogas	5.080	1.844	64068	1.29	5	101.6	70	130	
Tl	205	1	nogas	5.496	7.158	95029	6.73	5	109.9	70	130	
Pb	208	1	nogas	5.156	2.670	118225	2.66	5	103.1	70	130	
U	238	1	nogas	5.346	2.886	114379	1.94	5	106.9	70	130	
[Pb]	206	1	nogas	4.914	5.374	28816	4.56	5	98.3	70	130	
[Pb]	207	1	nogas	5.085	4.466	25971	3.43	5	101.7	70	130	
Na	23	2	He	516.678	3.131	1052127	0.82	500	103.3	70	130	
Mg	24	2	He	513.430	2.087	558958	0.61	500	102.7	70	130	
Al	27	2	He	4.929	12.138	4477	7.31	5	98.6	70	130	
K	39	2	He	498.107	0.817	828885	0.60	500	99.6	70	130	
Ca	43	2	He	491.482	9.293	1780	8.65	500	98.3	70	130	
Ca	44	2	He	502.234	3.694	30559	0.95	500	100.4	70	130	
V	51	2	He	4.696	2.064	46197	0.96	5	93.9	70	130	
Cr	52	2	He	4.939	4.802	49858	2.42	5	98.8	70	130	
Mn	55	2	He	5.039	2.227	33711	0.61	5	100.8	70	130	
Fe	56	2	He	505.976	1.714	3852005	1.00	500	101.2	70	130	
Co	59	2	He	4.980	3.395	58089	1.00	5	99.6	70	130	
Ni	60	2	He	4.871	2.470	15046	3.36	5	97.4	70	130	
Cu	63	2	He	5.056	4.193	39523	1.56	5	101.1	70	130	
Zn	66	2	He	5.241	6.033	10010	4.87	5	104.8	70	130	
As	75	2	He	4.919	3.131	8689	0.64	5	98.4	70	130	
Se	78	2	He	5.056	10.347	902	8.78	5	101.1	70	130	
B	11	1	nogas	28.299	6.670	169662	4.63	25	113.2	70	130	
Si	28	1	nogas	202.569	54.380	3455527	1.08	25	810.3	70	130	LLICV Main CR1 Failed
Ca	43	1	nogas	512.401	8.092	19314	4.73	500	102.5	70	130	
Ca	44	1	nogas	500.535	3.257	410661	1.02	500	100.1	70	130	
Fe	56	1	nogas	490.756	0.969	14294640	2.43	500	98.2	70	130	
Se	77	1	nogas	-13.834	-43.226	30546	2.43	5	-276.7	70	130	LLICV Main CR1 Failed
Se	82	1	nogas	4.921	7.472	1517	9.36	5	98.4	70	130	
Mo	95	1	nogas	5.229	1.990	28517	3.41	5	104.6	70	130	
Sn	118	1	nogas	5.134	1.759	39876	1.31	5	102.7	70	130	
Ba	137	1	nogas	5.166	7.113	21554	5.95	5	103.3	70	130	
Sb	121	2	He	5.052	3.083	34070	1.52	5	101.0	70	130	
Li	7	1	nogas	4.734	3.753	169048	1.42	5	94.7	70	130	
P	31	1	nogas	26.660	5.898	144558	1.07	25	106.6	70	130	
La	139	1	nogas	24.377	30.793	187	13.48	5	487.5	70	130	LLICV Main CR1 Failed
Au	197	1	nogas	203.177	176.906	30	57.74	5	4063.5	70	130	LLICV Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1123701	1.52	1118108	100.50	70	125	
Ge	72	1	nogas	3417921	2.91	3396393	100.63	70	125	
In	115	1	nogas	3157998	2.63	3166421	99.73	70	125	
Bi	209	1	nogas	2162178	1.02	2159119	100.14	70	125	

Low Level Initial Calibration Verification (LLICV) Report

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	2	He	1183578	2.61	1189986	99.46	70	125	

Sample Report

Sample Table

Sample Name	LLCCV2
Data File Name	231SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T19:32:29-06:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	221CALB.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	1.730	1.730	5.49	13568	0.01	2000	
Na	23	1	nogas	183.674	183.674	3.31	5080891	0.00	200000	
Mg	24	1	nogas	203.660	203.660	1.93	3167524	0.01	200000	
Al	27	1	nogas	2.249	2.249	3.95	69766	0.00	2000	
K	39	1	nogas	186.288	186.288	7.51	13102989	0.00	200000	
Ti	47	1	nogas	2.036	2.036	3.17	3934	0.05	2000	
V	51	1	nogas	-5.515	-5.515	-3.88	479498	0.00	2000	
Cr	52	1	nogas	1.288	1.288	7.62	88069	0.00	2000	
Mn	55	1	nogas	1.833	1.833	6.47	78292	0.00	2000	
Co	59	1	nogas	2.039	2.039	2.86	44725	0.00	2000	
Ni	60	1	nogas	1.726	1.726	4.15	10690	0.02	2000	
Cu	63	1	nogas	1.998	1.998	2.10	25592	0.01	2000	
Zn	66	1	nogas	1.740	1.740	3.60	9152	0.02	2000	
As	75	1	nogas	-2.639	-2.639	-6.40	92299	0.00	2000	
Sr	88	1	nogas	1.969	1.969	2.36	54834	0.00	2000	
Ag	107	1	nogas	2.037	2.037	1.75	26744	0.01	2000	
Cd	111	1	nogas	1.901	1.901	4.11	5468	0.03	2000	
Sb	121	1	nogas	2.004	2.004	2.11	25639	0.01	2000	
Tl	205	1	nogas	2.062	2.062	4.02	36501	0.01	2000	
Pb	208	1	nogas	2.045	2.045	2.68	47188	0.00	2000	
U	238	1	nogas	2.068	2.068	0.77	44827	0.00	2000	
[Pb]	206	1	nogas	1.959	1.959	7.65	11688	0.02	2000	
[Pb]	207	1	nogas	2.028	2.028	9.97	10527	0.02	2000	
Na	23	2	He	198.032	198.032	1.70	443078	0.04	200000	
Mg	24	2	He	201.677	201.677	1.12	223664	0.09	200000	
Al	27	2	He	1.371	1.371	14.38	2240	0.06	2000	
K	39	2	He	194.109	194.109	0.15	459004	0.04	200000	
Ca	43	2	He	192.739	192.739	13.59	750	25.70	200000	
Ca	44	2	He	193.992	193.992	2.15	13001	1.49	200000	
V	51	2	He	1.684	1.684	1.10	22379	0.01	2000	
Cr	52	2	He	1.775	1.775	7.05	22995	0.01	2000	
Mn	55	2	He	1.831	1.831	1.87	13845	0.01	2000	
Fe	56	2	He	201.847	201.847	0.63	1575047	0.01	200000	
Co	59	2	He	1.978	1.978	1.72	23462	0.01	2000	
Ni	60	2	He	1.747	1.747	5.53	6081	0.03	2000	
Cu	63	2	He	1.723	1.723	2.64	15717	0.01	2000	
Zn	66	2	He	1.795	1.795	12.63	4134	0.04	2000	
As	75	2	He	1.829	1.829	6.99	3563	0.05	2000	
Se	78	2	He	1.606	1.606	12.10	435	0.37	2000	
B	11	1	nogas	10.219	10.219	10.02	90383	0.01	2000	
Si	28	1	nogas	67.879	67.879	39.38	3320765	0.00	2000	
Ca	43	1	nogas	195.947	195.947	5.64	8072	2.43	200000	

Sample Report

Ca	44	1	nogas	196.446	196.446	2.62	235576	0.08	200000	
Fe	56	1	nogas	173.428	173.428	9.48	7383343	0.00	200000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Se	77	1	nogas	-27.971	-27.971	-6.62	27181	-0.10	2000	
Se	82	1	nogas	1.811	1.811	13.05	687	0.26	2000	
Mo	95	1	nogas	1.980	1.980	3.57	11114	0.02	2000	
Sn	118	1	nogas	1.948	1.948	0.90	15868	0.01	2000	
Ba	137	1	nogas	1.996	1.996	3.61	8529	0.02	2000	
Sb	121	2	He	2.034	2.034	1.02	14029	0.01	2000	
La	139	1	nogas	2.248	2.248	559.36	107	2.11	2000	
Au	197	1	nogas	808.616	808.616	29.94	60	1347.69	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1145286	5.17	1118108	102.43	70	125	
Ge	72	1	nogas	3429968	1.61	3396393	100.99	70	125	
In	115	1	nogas	3126326	2.61	3166421	98.73	70	125	
Bi	209	1	nogas	2185811	3.15	2159119	101.24	70	125	
Ge	72	2	He	1196870	1.62	1189986	100.58	70	125	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	ICCB
Data File Name	232_ICB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T19:34:26-06:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	0.007	118.4	293	26.0	1	
Na	23	1	nogas	-2.204	-6.7	517542	1.0	100	
Mg	24	1	nogas	-0.102	-153.8	33334	6.4	100	
Al	27	1	nogas	1.740	4.4	59217	3.6	5	
K	39	1	nogas	0.798	1337.2	9109182	0.2	100	
Ti	47	1	nogas	-0.020	-289.2	367	25.3	2.5	
V	51	1	nogas	-2.754	-35.8	533287	2.5	2.5	
Cr	52	1	nogas	-0.354	-24.2	53377	2.3	2.5	
Mn	55	1	nogas	-0.074	-51.9	29627	1.1	2.5	
Co	59	1	nogas	0.008	70.1	1007	12.8	2.5	
Ni	60	1	nogas	-0.329	-8.3	737	19.5	2.5	
Cu	63	1	nogas	0.011	76.5	2730	2.4	1	
Zn	66	1	nogas	0.006	1189.0	2387	9.9	2.5	
As	75	1	nogas	-1.424	-47.6	96494	1.4	2.5	
Sr	88	1	nogas	0.005	75.7	1673	4.5	2.5	
Ag	107	1	nogas	0.004	101.8	247	18.3	2.5	
Cd	111	1	nogas	-0.006	-170.1	40	75.0	1	
Sb	121	1	nogas	0.030	10.2	807	5.9	2.5	
Tl	205	1	nogas	0.027	54.1	1223	20.3	1	
Pb	208	1	nogas	0.004	34.4	603	5.3	2.5	
U	238	1	nogas	0.013	12.7	420	8.2	2.5	
[Pb]	206	1	nogas	0.001	884.7	150	26.7	2.5	
[Pb]	207	1	nogas	0.005	81.7	150	13.3	2.5	
Na	23	2	He	-3.168	-8.6	50384	0.3	100	
Mg	24	2	He	-0.080	-151.6	2497	6.0	100	
Al	27	2	He	1.202	11.2	2113	3.2	5	
K	39	2	He	-8.326	-38.0	212696	1.8	100	
Ca	43	2	He	2.932	488.9	83	60.4	100	
Ca	44	2	He	1.843	230.0	1817	12.6	100	
V	51	2	He	-0.054	-23.1	8253	1.2	2.5	
Cr	52	2	He	-0.183	-23.4	5971	5.2	2.5	
Mn	55	2	He	-0.042	-46.6	2003	7.1	2.5	
Fe	56	2	He	-0.402	-11.3	30899	0.2	100	
Co	59	2	He	0.008	51.6	293	16.8	2.5	
Ni	60	2	He	-0.243	-4.0	267	11.5	2.5	
Cu	63	2	He	-0.225	-8.4	1510	9.4	1	
Zn	66	2	He	-0.057	-129.4	903	13.8	2.5	
As	75	2	He	-0.021	-158.2	433	11.9	2.5	
Se	78	2	He	-0.099	-160.0	197	11.4	1	
B	11	1	nogas	-0.261	-233.7	43069	1.9	10	
Si	28	1	nogas	-40.607	-136.0	3130058	0.3	5	
Ca	43	1	nogas	0.510	257.0	1047	6.5	100	
Ca	44	1	nogas	2.821	215.4	120333	1.0	100	
Fe	56	1	nogas	-11.795	-37.8	3251363	0.8	100	

Initial Calibration Blank (ICB) Report

Se	77	1	nogas	-7.214	-67.4	31601	2.2	2.5	
Se	82	1	nogas	0.038	530.1	207	22.9	1	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Mo	95	1	nogas	-0.011	-148.2	377	23.8	2.5	
Sn	118	1	nogas	0.004	595.3	1503	12.5	5	
Ba	137	1	nogas	-0.001	-1099.4	477	8.5	2.5	
Sb	121	2	He	0.019	53.2	377	18.1	2.5	
P	31	1	nogas	1.170	167.0	97610	1.5	10	
La	139	1	nogas	22.278	50.2	183	22.0	2.5	ICB Main CR1 Failed
Au	197	1	nogas	127.924	331.9	27	78.1	2.5	ICB Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1155604	4.68	1118108	103.35	70	125	
Ge	72	1	nogas	3355498	2.19	3396393	98.80	70	125	
In	115	1	nogas	3230501	0.68	3166421	102.02	70	125	
Bi	209	1	nogas	2179116	0.84	2159119	100.93	70	125	
Ge	72	2	He	1186499	0.95	1189986	99.71	70	125	

Sample Report

Sample Table

Sample Name	HS18121325-04SD
Data File Name	234SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T19:38:21-06:00
Sample Type	Sample
Dilution	10
Comment	TW B136233 AlBaCdPb
ISTD Ref FileName	221CALB.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	0.010	0.099	29.40	290	0.00	2000	
Na	23	1	nogas	82670.342	826703.417	3.75	1916811510	0.00	200000	
Mg	24	1	nogas	22900.601	229006.009	5.67	333081299	0.01	200000	
Al	27	1	nogas	4.109	41.093	8.55	100159	0.00	2000	
K	39	1	nogas	504.753	5047.527	11.79	18958835	0.00	200000	
Ti	47	1	nogas	0.227	2.273	3.45	777	0.03	2000	
V	51	1	nogas	56.790	567.903	7.36	1902979	0.00	2000	
Cr	52	1	nogas	2.195	21.949	9.89	103068	0.00	2000	
Mn	55	1	nogas	257.789	2577.892	0.99	6317371	0.00	2000	
Co	59	1	nogas	1.859	18.586	6.18	39493	0.00	2000	
Ni	60	1	nogas	1.973	19.728	8.99	11487	0.02	2000	
Cu	63	1	nogas	0.662	6.621	15.84	9903	0.01	2000	
Zn	66	1	nogas	2.075	20.753	11.28	10093	0.02	2000	
As	75	1	nogas	19.007	190.066	15.85	199230	0.01	2000	
Sr	88	1	nogas	836.913	8369.127	4.24	21889122	0.00	2000	
Ag	107	1	nogas	0.000	-0.001	-4063.74	193	0.00	2000	
Cd	111	1	nogas	0.020	0.201	36.13	103	0.02	2000	
Sb	121	1	nogas	0.026	0.258	17.91	740	0.00	2000	
Tl	205	1	nogas	0.000	-0.001	-1507.35	717	0.00	2000	
Pb	208	1	nogas	0.011	0.107	52.36	753	0.00	2000	
U	238	1	nogas	1.179	11.793	4.61	24055	0.00	2000	
[Pb]	206	1	nogas	0.009	0.088	66.42	187	0.00	2000	
[Pb]	207	1	nogas	0.008	0.083	149.58	157	0.01	2000	
Na	23	2	He	89849.695	898496.946	0.23	168565991	0.05	200000	
Mg	24	2	He	23225.932	232259.315	1.37	24489947	0.09	200000	
Al	27	2	He	3.590	35.902	5.26	3530	0.10	2000	
K	39	2	He	485.250	4852.500	1.72	813242	0.06	200000	
Ca	43	2	He	36133.943	361339.430	1.17	122197	29.57	200000	
Ca	44	2	He	36224.569	362245.695	1.52	2026821	1.79	200000	
V	51	2	He	2.669	26.692	4.14	29185	0.01	2000	
Cr	52	2	He	0.843	8.434	4.23	14352	0.01	2000	
Mn	55	2	He	263.028	2630.277	1.46	1599595	0.02	2000	
Fe	56	2	He	117.698	1176.975	2.25	896897	0.01	200000	
Co	59	2	He	1.709	17.091	2.44	19524	0.01	2000	
Ni	60	2	He	1.261	12.615	2.77	4487	0.03	2000	
Cu	63	2	He	-0.083	-0.831	-7.19	2457	0.00	2000	
Zn	66	2	He	2.179	21.789	13.66	4614	0.05	2000	
As	75	2	He	0.330	3.303	4.85	991	0.03	2000	
Se	78	2	He	0.081	0.812	46.29	215	0.04	2000	
B	11	1	nogas	1.784	17.838	38.58	48438	0.00	2000	
Si	28	1	nogas	18481.751	184817.513	5.88	22946452	0.08	2000	>LDR
Ca	43	1	nogas	33671.097	336710.972	6.18	1167219	2.88	200000	
Ca	44	1	nogas	33265.726	332657.255	5.96	18805580	0.18	200000	
Fe	56	1	nogas	211.439	2114.388	3.07	7957997	0.00	200000	

Sample Report

Se	77	1	nogas	130.453	1304.534	19.15	64079	0.20	2000	
Se	82	1	nogas	1.362	13.624	20.93	547	0.25	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Mo	95	1	nogas	0.005	0.047	398.20	453	0.00	2000	
Sn	118	1	nogas	0.014	0.137	93.73	1403	0.00	2000	
Ba	137	1	nogas	72.637	726.372	4.48	269902	0.03	2000	
Sb	121	2	He	0.021	0.206	89.76	377	0.01	2000	
La	139	1	nogas	269.908	2699.084	12.22	973	27.73	2000	
Au	197	1	nogas	91.650	916.495	361.53	23	392.78	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1065938	2.38	1118108	95.33	70	125	
Ge	72	1	nogas	3321634	4.88	3396393	97.80	70	125	
In	115	1	nogas	2871602	3.68	3166421	90.69	70	125	
Bi	209	1	nogas	2053437	2.93	2159119	95.11	70	125	
Ge	72	2	He	1151178	1.10	1189986	96.74	70	125	

Sample Report

Sample Table

Sample Name	HS18121325-04MS
Data File Name	235SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T19:40:21-06:00
Sample Type	Sample
Dilution	2
Comment	TW B136233 AlBaCdPb
ISTD Ref FileName	221CALB.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	27.341	54.683	1.53	184041	0.01	2000	
Na	23	1	nogas	OR	OR	#VALUE!	OR	#VALUE!	200000	
Mg	24	1	nogas	106568.323	213136.647	0.69	1616305303	0.01	200000	
Al	27	1	nogas	70.523	141.047	1.00	1252194	0.01	2000	
K	39	1	nogas	5043.860	10087.721	1.81	107301807	0.00	200000	
Ti	47	1	nogas	85.306	170.612	3.36	141327	0.06	2000	
V	51	1	nogas	92.779	185.559	1.93	2700051	0.00	2000	
Cr	52	1	nogas	32.101	64.202	0.26	684296	0.00	2000	
Mn	55	1	nogas	1248.961	2497.923	1.74	30064260	0.00	2000	
Co	59	1	nogas	35.464	70.928	1.62	729592	0.00	2000	
Ni	60	1	nogas	36.182	72.364	1.17	169324	0.02	2000	
Cu	63	1	nogas	29.376	58.751	2.89	324375	0.01	2000	
Zn	66	1	nogas	34.295	68.589	3.98	128997	0.03	2000	
As	75	1	nogas	56.223	112.447	2.79	383953	0.01	2000	
Sr	88	1	nogas	4166.611	8333.221	1.18	107575812	0.00	2000	>LDR
Ag	107	1	nogas	26.231	52.463	2.66	326549	0.01	2000	
Cd	111	1	nogas	27.132	54.263	1.42	70023	0.04	2000	
Sb	121	1	nogas	26.455	52.910	3.39	317985	0.01	2000	
Tl	205	1	nogas	26.302	52.605	5.83	409000	0.01	2000	
Pb	208	1	nogas	25.457	50.915	2.80	581676	0.00	2000	
U	238	1	nogas	63.962	127.924	2.01	1237520	0.01	2000	
[Pb]	206	1	nogas	27.471	54.942	6.38	145195	0.02	2000	
[Pb]	207	1	nogas	27.660	55.320	4.95	127388	0.02	2000	
Na	23	2	He	440119.028	880238.056	0.32	800230175	0.05	200000	>LDR
Mg	24	2	He	115318.643	230637.287	0.78	117876655	0.10	200000	
Al	27	2	He	70.154	140.308	1.53	43373	0.16	2000	
K	39	2	He	4986.887	9973.774	1.16	6290488	0.08	200000	
Ca	43	2	He	177020.116	354040.231	1.13	580091	30.52	200000	
Ca	44	2	He	174949.107	349898.215	1.26	9483578	1.84	200000	
V	51	2	He	30.019	60.039	0.75	234492	0.01	2000	
Cr	52	2	He	31.368	62.735	1.60	260768	0.01	2000	
Mn	55	2	He	1259.390	2518.781	1.36	7416470	0.02	2000	
Fe	56	2	He	3272.210	6544.421	0.95	23320180	0.01	200000	
Co	59	2	He	34.291	68.581	1.00	376225	0.01	2000	
Ni	60	2	He	33.406	66.812	0.73	91942	0.04	2000	
Cu	63	2	He	26.697	53.394	2.74	184261	0.01	2000	
Zn	66	2	He	34.064	68.127	0.34	56190	0.06	2000	
As	75	2	He	28.044	56.089	0.89	44658	0.06	2000	
Se	78	2	He	27.064	54.127	4.38	3689	0.73	2000	
B	11	1	nogas	280.817	561.634	3.43	1152896	0.02	2000	
Si	28	1	nogas	116430.618	232861.235	2.45	126315795	0.09	2000	>LDR
Ca	43	1	nogas	165474.918	330949.836	0.43	5661822	2.92	200000	
Ca	44	1	nogas	164942.084	329884.169	1.19	91628465	0.18	200000	
Fe	56	1	nogas	3316.124	6632.248	2.31	72866929	0.00	200000	
Se	77	1	nogas	226.306	452.613	6.88	85992	0.26	2000	
Se	82	1	nogas	33.971	67.943	5.83	8879	0.38	2000	

Sample Report

Mo	95	1	nogas	26.506	53.012	1.24	136776	0.02	2000	
Sn	118	1	nogas	55.789	111.578	3.38	375883	0.01	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Ba	137	1	nogas	388.997	777.994	1.79	1425177	0.03	2000	
Sb	121	2	He	26.753	53.506	1.74	169199	0.02	2000	
La	139	1	nogas	1384.815	2769.631	5.81	4544	30.48	2000	
Au	197	1	nogas	420.851	841.703	165.67	37	1147.78	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	997829	2.72	1118108	89.24	70	125	
Ge	72	1	nogas	3274810	0.98	3396393	96.42	70	125	
In	115	1	nogas	2831928	0.93	3166421	89.44	70	125	
Bi	209	1	nogas	1957778	1.84	2159119	90.67	70	125	
Ge	72	2	He	1115985	0.63	1189986	93.78	70	125	

Sample Report

Sample Table

Sample Name	HS18121325-04MSD
Data File Name	236SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T19:42:17-06:00
Sample Type	Sample
Dilution	2
Comment	TW B136233 AlBaCdPb
ISTD Ref FileName	221CALB.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	26.191	52.382	2.06	188085	0.01	2000	
Na	23	1	nogas	OR	OR	#VALUE!	OR	#VALUE!	200000	
Mg	24	1	nogas	109936.869	219873.739	2.07	1651467470	0.01	200000	
Al	27	1	nogas	69.521	139.042	3.54	1262130	0.01	2000	
K	39	1	nogas	4882.738	9765.476	1.15	106506852	0.00	200000	
Ti	47	1	nogas	85.154	170.308	1.18	144276	0.06	2000	
V	51	1	nogas	94.160	188.320	0.72	2793362	0.00	2000	
Cr	52	1	nogas	33.099	66.199	3.64	719318	0.00	2000	
Mn	55	1	nogas	1266.528	2533.057	3.25	31158491	0.00	2000	
Co	59	1	nogas	35.135	70.269	0.84	739052	0.00	2000	
Ni	60	1	nogas	35.944	71.888	0.22	172037	0.02	2000	
Cu	63	1	nogas	28.814	57.629	0.87	325421	0.01	2000	
Zn	66	1	nogas	33.181	66.361	1.00	127715	0.03	2000	
As	75	1	nogas	57.435	114.871	0.89	398844	0.01	2000	
Sr	88	1	nogas	4171.177	8342.354	1.07	110136892	0.00	2000	>LDR
Ag	107	1	nogas	25.774	51.549	2.18	328061	0.01	2000	
Cd	111	1	nogas	26.657	53.313	2.43	70257	0.04	2000	
Sb	121	1	nogas	26.363	52.726	1.67	324016	0.01	2000	
Tl	205	1	nogas	26.436	52.872	0.42	420899	0.01	2000	
Pb	208	1	nogas	26.291	52.581	2.91	600697	0.00	2000	
U	238	1	nogas	63.997	127.993	2.91	1267152	0.01	2000	
[Pb]	206	1	nogas	27.580	55.160	0.54	149254	0.02	2000	
[Pb]	207	1	nogas	28.296	56.591	1.23	133426	0.02	2000	
Na	23	2	He	422021.843	844043.686	0.47	784215855	0.05	200000	>LDR
Mg	24	2	He	111874.421	223748.842	0.83	116867308	0.10	200000	
Al	27	2	He	71.271	142.541	2.70	45007	0.16	2000	
K	39	2	He	4957.248	9914.496	0.61	6254426	0.08	200000	
Ca	43	2	He	170341.891	340683.782	0.56	570509	29.86	200000	
Ca	44	2	He	167996.046	335992.092	1.04	9306936	1.81	200000	
V	51	2	He	29.411	58.822	0.85	234953	0.01	2000	
Cr	52	2	He	30.551	61.102	0.88	259773	0.01	2000	
Mn	55	2	He	1210.707	2421.413	0.87	7286813	0.02	2000	
Fe	56	2	He	3240.872	6481.744	1.36	23605625	0.01	200000	
Co	59	2	He	33.930	67.861	1.61	380466	0.01	2000	
Ni	60	2	He	32.410	64.820	2.40	91189	0.04	2000	
Cu	63	2	He	26.170	52.339	0.86	184662	0.01	2000	
Zn	66	2	He	33.837	67.674	0.35	57049	0.06	2000	
As	75	2	He	27.777	55.553	1.31	45208	0.06	2000	
Se	78	2	He	26.203	52.407	1.92	3656	0.72	2000	
B	11	1	nogas	279.691	559.383	9.47	1223918	0.02	2000	
Si	28	1	nogas	115302.161	230604.321	4.01	127899538	0.09	2000	>LDR
Ca	43	1	nogas	158075.461	316150.922	1.14	5531687	2.86	200000	
Ca	44	1	nogas	159741.687	319483.375	2.72	90750369	0.18	200000	
Fe	56	1	nogas	3345.225	6690.450	4.21	75084885	0.00	200000	
Se	77	1	nogas	230.153	460.306	0.41	88872	0.26	2000	
Se	82	1	nogas	33.033	66.067	1.35	8836	0.37	2000	

Sample Report

Mo	95	1	nogas	26.511	53.022	0.88	139875	0.02	2000	
Sn	118	1	nogas	55.593	111.186	3.57	382428	0.01	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Ba	137	1	nogas	373.208	746.416	2.36	1397291	0.03	2000	
Sb	121	2	He	26.068	52.136	1.26	168501	0.02	2000	
La	139	1	nogas	1372.482	2744.965	0.94	4604	29.81	2000	
Au	197	1	nogas	471.814	943.629	93.31	40	1179.54	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1064596	2.76	1118108	95.21	70	125	
Ge	72	1	nogas	3348801	2.14	3396393	98.60	70	125	
In	115	1	nogas	2893494	4.06	3166421	91.38	70	125	
Bi	209	1	nogas	2003188	1.54	2159119	92.78	70	125	
Ge	72	2	He	1140540	0.36	1189986	95.84	70	125	

Sample Report

Sample Table

Sample Name	HS18121325-04PDS
Data File Name	237SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T19:44:14-06:00
Sample Type	Sample
Dilution	2
Comment	TW B136233 AlBaCdPb
ISTD Ref FileName	221CALB.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	110.248	220.496	1.82	801785	0.01	2000	
Na	23	1	nogas	OR	OR	#VALUE!	OR	#VALUE!	200000	
Mg	24	1	nogas	116974.381	233948.763	0.80	1766383373	0.01	200000	
Al	27	1	nogas	129.748	259.497	2.62	2298183	0.01	2000	
K	39	1	nogas	13895.057	27790.114	1.41	282172390	0.00	200000	
Ti	47	1	nogas	120.980	241.959	0.60	201824	0.06	2000	
V	51	1	nogas	176.542	353.085	0.63	4646153	0.00	2000	
Cr	52	1	nogas	124.381	248.761	2.04	2500648	0.00	2000	
Mn	55	1	nogas	1362.631	2725.262	0.59	33043795	0.00	2000	
Co	59	1	nogas	124.118	248.236	3.02	2570781	0.00	2000	
Ni	60	1	nogas	124.390	248.779	2.09	581098	0.02	2000	
Cu	63	1	nogas	115.729	231.459	1.14	1280210	0.01	2000	
Zn	66	1	nogas	122.175	244.351	2.66	457112	0.03	2000	
As	75	1	nogas	145.953	291.905	1.35	841332	0.02	2000	
Sr	88	1	nogas	4250.105	8500.210	0.21	110570848	0.00	2000	>LDR
Ag	107	1	nogas	105.976	211.953	1.78	1328940	0.01	2000	
Cd	111	1	nogas	116.116	232.232	4.13	305422	0.04	2000	
Sb	121	1	nogas	109.594	219.188	0.96	1326086	0.01	2000	
Tl	205	1	nogas	121.388	242.775	3.32	1929358	0.01	2000	
Pb	208	1	nogas	111.988	223.976	1.66	2557086	0.00	2000	
U	238	1	nogas	5.995	11.990	5.31	118730	0.01	2000	
[Pb]	206	1	nogas	118.644	237.289	3.12	641401	0.02	2000	
[Pb]	207	1	nogas	118.382	236.765	3.20	557584	0.02	2000	
Na	23	2	He	428871.267	857742.533	1.51	805253961	0.05	200000	>LDR
Mg	24	2	He	118484.929	236969.858	2.43	125056805	0.09	200000	
Al	27	2	He	127.925	255.850	1.50	80591	0.16	2000	
K	39	2	He	13843.319	27686.637	0.58	17066314	0.08	200000	
Ca	43	2	He	178256.231	356512.463	1.37	603256	29.55	200000	
Ca	44	2	He	176713.173	353426.346	1.64	9892704	1.79	200000	
V	51	2	He	116.457	232.914	1.62	915070	0.01	2000	
Cr	52	2	He	116.625	233.251	0.98	981405	0.01	2000	
Mn	55	2	He	1281.598	2563.196	1.00	7795828	0.02	2000	
Fe	56	2	He	11811.081	23622.162	1.35	86841375	0.01	200000	
Co	59	2	He	117.730	235.461	0.55	1333608	0.01	2000	
Ni	60	2	He	117.616	235.232	1.43	331915	0.04	2000	
Cu	63	2	He	112.900	225.801	1.46	794902	0.01	2000	
Zn	66	2	He	122.174	244.348	1.43	205597	0.06	2000	
As	75	2	He	114.695	229.390	2.20	187188	0.06	2000	
Se	78	2	He	113.179	226.358	1.59	15278	0.74	2000	
B	11	1	nogas	13.055	26.110	3.65	97445	0.01	2000	
Si	28	1	nogas	91094.656	182189.313	1.11	100274845	0.09	2000	>LDR
Ca	43	1	nogas	174424.883	348849.765	0.85	6013265	2.90	200000	
Ca	44	1	nogas	171788.305	343576.610	0.35	96154325	0.18	200000	
Fe	56	1	nogas	12387.310	24774.619	0.59	264802289	0.00	200000	
Se	77	1	nogas	325.490	650.981	1.58	110255	0.30	2000	
Se	82	1	nogas	124.952	249.904	3.56	32399	0.39	2000	

Sample Report

Mo	95	1	nogas	115.855	231.710	0.98	600940	0.02	2000	
Sn	118	1	nogas	0.364	0.728	13.81	3804	0.01	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Ba	137	1	nogas	473.289	946.579	6.13	1766376	0.03	2000	
Sb	121	2	He	106.937	213.873	0.82	697778	0.02	2000	
La	139	1	nogas	1483.580	2967.161	5.97	4961	29.91	2000	
Au	197	1	nogas	254.474	508.948	93.34	30	848.25	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1078668	0.91	1118108	96.47	70	125	
Ge	72	1	nogas	3299709	0.29	3396393	97.15	70	125	
In	115	1	nogas	2891313	5.29	3166421	91.31	70	125	
Bi	209	1	nogas	2004050	4.09	2159119	92.82	70	125	
Ge	72	2	He	1152599	1.52	1189986	96.86	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	238_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T19:46:13-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	94.652	3.331	735650	2.14	100	94.7	90	110	
Na	23	1	nogas	10208.475	0.389	255319539	1.35	10000	102.1	90	110	
Mg	24	1	nogas	10442.036	2.130	163635116	3.67	10000	104.4	90	110	
Al	27	1	nogas	111.617	6.209	2057688	5.75	100	111.6	90	110	CCV Main CR1-2 Failed
K	39	1	nogas	10467.954	1.234	223163572	1.17	10000	104.7	90	110	
Ti	47	1	nogas	101.615	1.881	176197	2.04	100	101.6	90	110	
V	51	1	nogas	115.340	2.349	3365509	1.66	100	115.3	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	101.227	3.844	2125256	1.55	100	101.2	90	110	
Mn	55	1	nogas	103.403	2.782	2634620	1.74	100	103.4	90	110	
Co	59	1	nogas	104.545	3.856	2249298	2.74	100	104.5	90	110	
Ni	60	1	nogas	104.443	4.889	507029	2.77	100	104.4	90	110	
Cu	63	1	nogas	103.953	3.256	1194695	0.93	100	104.0	90	110	
Zn	66	1	nogas	100.320	1.628	390391	0.75	100	100.3	90	110	
As	75	1	nogas	106.865	2.714	668335	0.38	100	106.9	90	110	
Sr	88	1	nogas	103.489	1.460	2799018	1.87	100	103.5	90	110	
Ag	107	1	nogas	98.488	2.213	1283066	1.63	100	98.5	90	110	
Cd	111	1	nogas	101.376	2.072	288732	1.23	100	101.4	90	110	
Sb	121	1	nogas	103.979	2.758	1306923	0.54	100	104.0	90	110	
Tl	205	1	nogas	105.357	1.343	1828832	1.46	100	105.4	90	110	
Pb	208	1	nogas	108.063	2.560	2467484	2.56	100	108.1	90	110	
U	238	1	nogas	109.886	3.267	2374269	0.62	100	109.9	90	110	
[Pb]	206	1	nogas	105.440	3.888	622204	1.13	100	105.4	90	110	
[Pb]	207	1	nogas	104.018	5.464	534638	2.71	100	104.0	90	110	
Na	23	2	He	10315.060	2.796	20495661	0.50	10000	103.2	90	110	
Mg	24	2	He	10275.773	2.435	11449612	0.56	10000	102.8	90	110	
Al	27	2	He	99.628	1.946	66553	1.16	100	99.6	90	110	
K	39	2	He	10588.129	2.068	13105649	2.03	10000	105.9	90	110	
Ca	43	2	He	9847.064	3.062	35240	1.96	10000	98.5	90	110	
Ca	44	2	He	10127.280	3.552	599846	1.10	10000	101.3	90	110	
V	51	2	He	97.583	2.019	810730	0.46	100	97.6	90	110	
Cr	52	2	He	99.086	1.922	881193	0.86	100	99.1	90	110	
Mn	55	2	He	100.897	1.834	649785	0.77	100	100.9	90	110	
Fe	56	2	He	9958.596	2.214	77284236	0.79	10000	99.6	90	110	
Co	59	2	He	96.771	2.872	1156727	0.74	100	96.8	90	110	
Ni	60	2	He	99.543	4.152	296565	2.37	100	99.5	90	110	
Cu	63	2	He	101.872	3.263	757185	0.82	100	101.9	90	110	
Zn	66	2	He	100.207	1.964	178163	0.48	100	100.2	90	110	
As	75	2	He	98.521	1.697	169795	0.76	100	98.5	90	110	
Se	78	2	He	99.147	3.810	14149	1.94	100	99.1	90	110	
B	11	1	nogas	459.328	3.486	2152130	3.58	500	91.9	90	110	
Si	28	1	nogas	5106.281	4.664	8899868	1.23	5000	102.1	90	110	
Ca	43	1	nogas	10595.018	1.601	380475	0.91	10000	106.0	90	110	
Ca	44	1	nogas	10533.076	1.632	6239089	0.84	10000	105.3	90	110	
Fe	56	1	nogas	10439.225	3.669	232355789	2.13	10000	104.4	90	110	
Se	77	1	nogas	142.768	1.089	69389	1.77	100	142.8	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	100.870	1.520	27214	2.16	100	100.9	90	110	
Mo	95	1	nogas	98.646	3.233	531526	1.22	100	98.6	90	110	
Sn	118	1	nogas	99.274	0.453	737594	1.12	100	99.3	90	110	
Ba	137	1	nogas	102.288	1.366	414073	0.94	100	102.3	90	110	
Sb	121	2	He	100.759	2.604	693791	0.35	100	100.8	90	110	
Li	7	1	nogas	97.384	1.608	1612301	2.00	100	97.4	90	110	
P	31	1	nogas	499.152	3.212	984022	1.04	500	99.8	90	110	
La	139	1	nogas	162.759	18.292	677	15.52	100	162.8	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	127.221	186.904	27	43.30	100	127.2	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	nogas	1153405	3.31	1118108	103.16	70	125	
Ge	72	1	nogas	3428974	2.28	3396393	100.96	70	125	
In	115	1	nogas	3127035	1.21	3166421	98.76	70	125	
Bi	209	1	nogas	2187241	2.80	2159119	101.30	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1216718	2.40	1189986	102.25	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	239_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T19:48:13-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	0.098	31.6	1030	22.4	1	
Na	23	1	nogas	138.195	8.1	4047730	7.6	100	CCB Main CR1 Failed
Mg	24	1	nogas	22.309	7.1	386287	7.2	100	
Al	27	1	nogas	-0.209	-23.5	26309	1.6	5	
K	39	1	nogas	-5.436	-201.0	9639916	0.7	100	
Ti	47	1	nogas	0.085	76.0	583	20.7	2.5	
V	51	1	nogas	-1.664	-68.8	599575	3.7	2.5	
Cr	52	1	nogas	-0.300	-35.0	58422	2.8	2.5	
Mn	55	1	nogas	-0.019	-154.3	33263	0.8	2.5	
Co	59	1	nogas	0.082	11.5	2764	8.9	2.5	
Ni	60	1	nogas	0.055	85.6	2740	8.0	2.5	
Cu	63	1	nogas	0.792	9.2	12328	6.3	2	
Zn	66	1	nogas	-0.188	-22.3	1777	10.5	2.5	
As	75	1	nogas	-0.119	-683.2	110762	3.2	2.5	
Sr	88	1	nogas	0.531	7.7	16721	4.7	2.5	
Ag	107	1	nogas	0.074	5.0	1230	5.1	2.5	
Cd	111	1	nogas	0.092	19.7	333	18.1	1	
Sb	121	1	nogas	0.598	12.0	8349	11.2	2.5	
Tl	205	1	nogas	0.646	58.9	12460	57.3	1	
Pb	208	1	nogas	0.112	15.9	3064	13.2	2.5	
U	238	1	nogas	0.194	41.5	4504	42.2	2.5	
[Pb]	206	1	nogas	0.096	22.3	737	19.8	2.5	
[Pb]	207	1	nogas	0.102	25.8	673	21.0	2.5	
Na	23	2	He	112.861	4.7	282389	2.9	100	CCB Main CR1 Failed
Mg	24	2	He	19.484	5.5	24419	3.5	100	
Al	27	2	He	-0.703	-56.0	923	27.2	5	
K	39	2	He	3.215	98.9	226739	1.7	100	
Ca	43	2	He	16.285	23.1	133	8.7	100	
Ca	44	2	He	19.195	15.6	2897	5.2	100	
V	51	2	He	0.021	169.4	9104	2.3	2.5	
Cr	52	2	He	-0.122	-13.0	6678	3.0	2.5	
Mn	55	2	He	0.015	90.9	2427	4.5	2.5	
Fe	56	2	He	8.140	5.6	98210	2.2	100	
Co	59	2	He	0.066	8.5	997	8.4	2.5	
Ni	60	2	He	-0.193	-5.4	423	8.3	2.5	
Cu	63	2	He	0.252	15.0	5094	4.2	2	
Zn	66	2	He	-0.229	-21.0	623	13.0	2.5	
As	75	2	He	0.073	17.7	607	4.1	2.5	
Se	78	2	He	0.026	359.0	221	7.6	2	
B	11	1	nogas	3.783	48.9	63713	9.7	10	
Si	28	1	nogas	-263.182	-20.5	3099425	0.6	5	
Ca	43	1	nogas	18.042	21.9	1780	6.9	100	
Ca	44	1	nogas	14.260	48.9	136084	1.5	100	
Fe	56	1	nogas	7.823	41.0	3941620	2.9	100	
Se	77	1	nogas	-4.068	-123.0	34730	3.5	2.5	
Se	82	1	nogas	0.280	64.3	290	15.0	2	
Mo	95	1	nogas	0.417	36.8	2827	31.5	2.5	
Sn	118	1	nogas	0.313	28.5	3931	19.0	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.106	36.7	937	19.2	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.509	5.1	3770	3.7	2.5	
P	31	1	nogas	3.697	26.8	109468	0.6	10	
La	139	1	nogas	-5.258	-109.6	83	25.0	2.5	
Au	197	1	nogas	44.743	272.8	23	24.7	2.5	CCB Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1196659	4.17	1118108	107.03	70	125	
Ge	72	1	nogas	3600273	2.25	3396393	106.00	70	125	
In	115	1	nogas	3275886	2.42	3166421	103.46	70	125	
Bi	209	1	nogas	2259851	2.21	2159119	104.67	70	125	
Ge	72	2	He	1220192	1.62	1189986	102.54	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	246_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T20:02:21-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	99.917	4.209	706690	3.82	100	99.9	90	110	
Na	23	1	nogas	10593.080	1.583	252514347	1.49	10000	105.9	90	110	
Mg	24	1	nogas	10587.152	1.252	158106241	1.32	10000	105.9	90	110	
Al	27	1	nogas	106.960	3.883	1984379	3.57	100	107.0	90	110	
K	39	1	nogas	10236.100	0.655	219671980	1.60	10000	102.4	90	110	
Ti	47	1	nogas	99.882	1.385	174179	1.79	100	99.9	90	110	
V	51	1	nogas	127.120	6.631	3667580	5.55	100	127.1	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	101.483	5.604	2143673	5.92	100	101.5	90	110	
Mn	55	1	nogas	104.487	3.477	2677054	3.00	100	104.5	90	110	
Co	59	1	nogas	103.742	2.859	2244727	1.56	100	103.7	90	110	
Ni	60	1	nogas	103.841	2.396	507152	1.14	100	103.8	90	110	
Cu	63	1	nogas	102.505	0.848	1185128	1.17	100	102.5	90	110	
Zn	66	1	nogas	100.911	1.104	394920	1.36	100	100.9	90	110	
As	75	1	nogas	110.268	1.004	690211	0.62	100	110.3	90	110	CCV Main CR1-2 Failed
Sr	88	1	nogas	99.789	2.722	2713595	1.42	100	99.8	90	110	
Ag	107	1	nogas	99.131	0.875	1298791	0.47	100	99.1	90	110	
Cd	111	1	nogas	101.474	1.665	279034	1.45	100	101.5	90	110	
Sb	121	1	nogas	101.095	0.364	1278229	1.36	100	101.1	90	110	
Tl	205	1	nogas	101.430	2.602	1690234	3.14	100	101.4	90	110	
Pb	208	1	nogas	100.542	3.195	2295780	3.19	100	100.5	90	110	
U	238	1	nogas	107.882	3.257	2237655	1.66	100	107.9	90	110	
[Pb]	206	1	nogas	103.076	4.287	583799	1.32	100	103.1	90	110	
[Pb]	207	1	nogas	102.881	2.796	507843	0.79	100	102.9	90	110	
Na	23	2	He	10540.021	3.280	20651744	2.14	10000	105.4	90	110	
Mg	24	2	He	10407.417	3.182	11435130	1.99	10000	104.1	90	110	
Al	27	2	He	103.255	3.755	67962	2.84	100	103.3	90	110	
K	39	2	He	10720.535	1.076	13266751	1.06	10000	107.2	90	110	
Ca	43	2	He	10166.824	2.076	35881	1.48	10000	101.7	90	110	
Ca	44	2	He	10259.221	1.416	599404	0.90	10000	102.6	90	110	
V	51	2	He	99.629	2.566	816029	1.36	100	99.6	90	110	
Cr	52	2	He	100.024	1.489	877143	0.65	100	100.0	90	110	
Mn	55	2	He	101.852	1.038	646873	1.15	100	101.9	90	110	
Fe	56	2	He	10233.399	1.789	78318219	0.82	10000	102.3	90	110	
Co	59	2	He	98.425	0.877	1160496	1.36	100	98.4	90	110	
Ni	60	2	He	99.302	1.947	291827	0.99	100	99.3	90	110	
Cu	63	2	He	100.321	1.773	735548	1.06	100	100.3	90	110	
Zn	66	2	He	99.717	1.861	174853	1.64	100	99.7	90	110	
As	75	2	He	99.069	2.086	168361	0.89	100	99.1	90	110	
Se	78	2	He	98.405	1.714	13853	0.68	100	98.4	90	110	
B	11	1	nogas	534.380	5.299	2272329	6.13	500	106.9	90	110	
Si	28	1	nogas	4913.260	3.771	8735726	1.04	5000	98.3	90	110	
Ca	43	1	nogas	10402.272	1.502	375711	1.82	10000	104.0	90	110	
Ca	44	1	nogas	10159.118	1.020	6056514	1.66	10000	101.6	90	110	
Fe	56	1	nogas	10469.533	0.470	234402214	0.90	10000	104.7	90	110	
Se	77	1	nogas	164.591	3.704	75195	1.64	100	164.6	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	101.812	5.653	27615	5.18	100	101.8	90	110	
Mo	95	1	nogas	95.487	1.944	517545	1.50	100	95.5	90	110	
Sn	118	1	nogas	102.037	0.782	731823	0.48	100	102.0	90	110	
Ba	137	1	nogas	103.636	1.982	405011	1.60	100	103.6	90	110	
Sb	121	2	He	97.931	2.211	665050	1.41	100	97.9	90	110	
Li	7	1	nogas	100.178	2.004	1506911	3.63	100	100.2	90	110	
P	31	1	nogas	491.601	2.179	976255	1.42	500	98.3	90	110	
La	139	1	nogas	159.831	12.938	643	11.25	100	159.8	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	294.783	88.299	33	34.64	100	294.8	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	nogas	1049407	2.88	1118108	93.86	70	125	
Ge	72	1	nogas	3447881	1.35	3396393	101.52	70	125	
In	115	1	nogas	3018746	0.38	3166421	95.34	70	125	
Bi	209	1	nogas	2099593	3.04	2159119	97.24	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1199655	1.18	1189986	100.81	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	247_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T20:04:22-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	0.082	7.9	880	5.2	1	
Na	23	1	nogas	190.857	3.5	5366463	4.5	100	CCB Main CR1 Failed
Mg	24	1	nogas	9.941	5.6	192583	7.7	100	
Al	27	1	nogas	-0.176	-9.0	26175	1.5	5	
K	39	1	nogas	-2.925	-379.5	9413407	0.4	100	
Ti	47	1	nogas	0.040	54.5	487	6.3	2.5	
V	51	1	nogas	4.084	26.9	722390	3.7	2.5	CCB Main CR1 Failed
Cr	52	1	nogas	-0.197	-30.5	58863	1.0	2.5	
Mn	55	1	nogas	-0.071	-48.2	30946	0.9	2.5	
Co	59	1	nogas	0.076	0.4	2550	2.4	2.5	
Ni	60	1	nogas	-0.015	-202.4	2314	6.8	2.5	
Cu	63	1	nogas	0.352	16.7	6825	9.8	2	
Zn	66	1	nogas	-0.072	-101.8	2177	11.4	2.5	
As	75	1	nogas	2.337	43.3	120720	3.2	2.5	
Sr	88	1	nogas	0.221	5.6	7708	3.1	2.5	
Ag	107	1	nogas	0.072	22.4	1163	17.9	2.5	
Cd	111	1	nogas	0.063	18.8	243	17.1	1	
Sb	121	1	nogas	0.201	8.3	3027	7.2	2.5	
Tl	205	1	nogas	0.518	59.7	10121	57.0	1	
Pb	208	1	nogas	0.106	24.3	2920	20.1	2.5	
U	238	1	nogas	0.167	27.8	3881	28.9	2.5	
[Pb]	206	1	nogas	0.094	21.3	723	19.2	2.5	
[Pb]	207	1	nogas	0.100	15.3	657	13.8	2.5	
Na	23	2	He	193.051	3.3	431356	1.8	100	CCB Main CR1 Failed
Mg	24	2	He	9.786	4.0	13271	3.1	100	
Al	27	2	He	-0.733	-14.4	883	7.5	5	
K	39	2	He	1.813	120.5	225033	1.2	100	
Ca	43	2	He	1.982	510.3	80	43.3	100	
Ca	44	2	He	4.683	50.4	1990	7.0	100	
V	51	2	He	0.289	3.2	11054	1.6	2.5	
Cr	52	2	He	-0.121	-18.0	6531	3.5	2.5	
Mn	55	2	He	-0.102	-19.6	1633	6.7	2.5	
Fe	56	2	He	6.421	5.9	82848	2.6	100	
Co	59	2	He	0.059	4.7	890	3.0	2.5	
Ni	60	2	He	-0.201	-2.2	390	4.4	2.5	
Cu	63	2	He	-0.010	-248.9	3070	4.6	2	
Zn	66	2	He	-0.177	-48.9	700	22.5	2.5	
As	75	2	He	0.109	48.9	653	12.4	2.5	
Se	78	2	He	0.153	105.0	233	8.8	2	
B	11	1	nogas	27.114	4.1	170239	4.1	10	CCB Main CR1 Failed
Si	28	1	nogas	-148.260	-54.2	3139247	0.8	5	
Ca	43	1	nogas	7.934	52.4	1360	10.3	100	
Ca	44	1	nogas	2.749	215.4	125336	0.7	100	
Fe	56	1	nogas	10.976	43.7	3897080	2.0	100	
Se	77	1	nogas	12.356	44.2	37863	2.9	2.5	CCB Main CR1 Failed
Se	82	1	nogas	0.137	119.5	243	19.0	2	
Mo	95	1	nogas	0.296	43.7	2077	33.3	2.5	
Sn	118	1	nogas	0.235	20.1	3254	8.2	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.072	23.9	780	9.2	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.159	4.5	1323	4.2	2.5	
P	31	1	nogas	2.024	97.3	103250	1.5	10	
La	139	1	nogas	-2.891	-356.5	90	38.5	2.5	
Au	197	1	nogas	188.116	376.1	30	115.5	2.5	CCB Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1163440	1.31	1118108	104.05	70	125	
Ge	72	1	nogas	3496133	2.09	3396393	102.94	70	125	
In	115	1	nogas	3218222	2.95	3166421	101.64	70	125	
Bi	209	1	nogas	2250216	2.49	2159119	104.22	70	125	
Ge	72	2	He	1191431	1.46	1189986	100.12	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	258_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T20:25:53-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	99.648	1.767	676172	0.58	100	99.6	90	110	
Na	23	1	nogas	10356.154	6.539	237940397	2.12	10000	103.6	90	110	
Mg	24	1	nogas	10676.284	5.550	153719808	2.30	10000	106.8	90	110	
Al	27	1	nogas	105.347	3.508	1862793	1.36	100	105.3	90	110	
K	39	1	nogas	10499.409	2.872	214471188	0.63	10000	105.0	90	110	
Ti	47	1	nogas	103.361	2.751	171864	4.75	100	103.4	90	110	
V	51	1	nogas	108.131	1.375	3061942	3.27	100	108.1	90	110	
Cr	52	1	nogas	106.329	0.213	2137956	2.24	100	106.3	90	110	
Mn	55	1	nogas	105.837	2.458	2584866	3.24	100	105.8	90	110	
Co	59	1	nogas	105.096	4.327	2166958	2.34	100	105.1	90	110	
Ni	60	1	nogas	102.808	3.917	478564	2.81	100	102.8	90	110	
Cu	63	1	nogas	103.755	1.675	1143343	1.78	100	103.8	90	110	
Zn	66	1	nogas	101.466	1.129	378467	1.02	100	101.5	90	110	
As	75	1	nogas	101.191	1.983	612052	0.57	100	101.2	90	110	
Sr	88	1	nogas	102.542	1.195	2658332	1.49	100	102.5	90	110	
Ag	107	1	nogas	106.727	3.265	1332409	1.34	100	106.7	90	110	
Cd	111	1	nogas	103.384	3.237	277022	0.85	100	103.4	90	110	
Sb	121	1	nogas	104.494	3.072	1258879	1.14	100	104.5	90	110	
Tl	205	1	nogas	102.321	3.960	1708194	1.39	100	102.3	90	110	
Pb	208	1	nogas	104.106	1.232	2377154	1.23	100	104.1	90	110	
U	238	1	nogas	112.060	6.799	2327415	2.79	100	112.1	90	110	CCV Main CR1-2 Failed
[Pb]	206	1	nogas	102.553	5.924	581900	1.25	100	102.6	90	110	
[Pb]	207	1	nogas	103.741	3.984	513197	1.19	100	103.7	90	110	
Na	23	2	He	10351.401	0.528	19372984	1.35	10000	103.5	90	110	
Mg	24	2	He	10318.546	0.701	10828367	0.98	10000	103.2	90	110	
Al	27	2	He	100.008	2.419	62911	2.69	100	100.0	90	110	
K	39	2	He	10087.386	0.712	12496384	0.70	10000	100.9	90	110	
Ca	43	2	He	10020.185	3.501	33771	3.38	10000	100.2	90	110	
Ca	44	2	He	10157.713	1.336	566721	0.95	10000	101.6	90	110	
V	51	2	He	98.883	0.762	773561	0.75	100	98.9	90	110	
Cr	52	2	He	99.165	0.606	830503	0.84	100	99.2	90	110	
Mn	55	2	He	100.508	0.214	609573	0.73	100	100.5	90	110	
Fe	56	2	He	10091.526	0.327	73755922	0.77	10000	100.9	90	110	
Co	59	2	He	99.654	0.115	1121957	0.72	100	99.7	90	110	
Ni	60	2	He	101.690	0.315	285372	0.85	100	101.7	90	110	
Cu	63	2	He	102.145	0.656	715118	0.29	100	102.1	90	110	
Zn	66	2	He	100.158	1.459	167700	1.29	100	100.2	90	110	
As	75	2	He	99.323	0.680	161194	0.49	100	99.3	90	110	
Se	78	2	He	99.208	1.543	13335	0.79	100	99.2	90	110	
B	11	1	nogas	509.907	2.898	2080982	2.01	500	102.0	90	110	
Si	28	1	nogas	5236.491	3.246	8669852	0.40	5000	104.7	90	110	
Ca	43	1	nogas	10457.184	3.790	359856	1.99	10000	104.6	90	110	
Ca	44	1	nogas	10336.334	1.871	5870482	0.34	10000	103.4	90	110	
Fe	56	1	nogas	10547.435	0.639	225072288	1.68	10000	105.5	90	110	
Se	77	1	nogas	98.319	4.269	55966	0.75	100	98.3	90	110	
Se	82	1	nogas	102.492	3.268	26496	2.59	100	102.5	90	110	
Mo	95	1	nogas	96.915	1.133	500745	2.08	100	96.9	90	110	
Sn	118	1	nogas	102.086	3.294	713573	2.31	100	102.1	90	110	
Ba	137	1	nogas	104.257	4.589	396921	1.69	100	104.3	90	110	
Sb	121	2	He	101.192	2.493	656316	3.02	100	101.2	90	110	
Li	7	1	nogas	100.116	1.361	1444368	0.48	100	100.1	90	110	
P	31	1	nogas	493.206	1.708	933269	1.03	500	98.6	90	110	
La	139	1	nogas	159.773	11.246	627	9.21	100	159.8	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	799.033	107.581	57	66.81	100	799.0	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	nogas	1006618	1.69	1118108	90.03	70	125	
Ge	72	1	nogas	3286668	2.15	3396393	96.77	70	125	
In	115	1	nogas	2943483	3.17	3166421	92.96	70	125	
Bi	209	1	nogas	2105666	4.89	2159119	97.52	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1145505	0.83	1189986	96.26	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	259_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T20:27:50-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	0.090	23.2	940	16.7	1	
Na	23	1	nogas	69.729	4.6	2242653	3.2	100	
Mg	24	1	nogas	11.126	14.8	202383	12.4	100	
Al	27	1	nogas	-0.052	-184.7	27641	5.8	5	
K	39	1	nogas	9.201	34.8	9389066	0.6	100	
Ti	47	1	nogas	0.153	51.1	667	20.4	2.5	
V	51	1	nogas	-1.479	-84.7	570106	5.7	2.5	
Cr	52	1	nogas	-0.336	-23.4	54370	3.2	2.5	
Mn	55	1	nogas	-0.087	-29.2	29661	2.0	2.5	
Co	59	1	nogas	0.094	5.2	2844	3.1	2.5	
Ni	60	1	nogas	-0.171	-18.1	1503	10.2	2.5	
Cu	63	1	nogas	0.385	23.2	7001	13.9	2	
Zn	66	1	nogas	-0.163	-7.2	1770	2.0	2.5	
As	75	1	nogas	-0.499	-127.1	102510	3.7	2.5	
Sr	88	1	nogas	0.204	1.2	7041	0.4	2.5	
Ag	107	1	nogas	0.090	13.4	1360	10.9	2.5	
Cd	111	1	nogas	0.057	17.9	217	9.6	1	
Sb	121	1	nogas	0.235	16.5	3360	13.8	2.5	
Tl	205	1	nogas	0.626	59.4	11485	56.4	1	
Pb	208	1	nogas	0.112	13.5	3067	11.3	2.5	
U	238	1	nogas	0.193	34.0	4264	33.6	2.5	
[Pb]	206	1	nogas	0.126	17.5	877	11.2	2.5	
[Pb]	207	1	nogas	0.090	18.0	580	14.1	2.5	
Na	23	2	He	59.701	1.0	170692	1.5	100	
Mg	24	2	He	8.690	1.9	11941	0.8	100	
Al	27	2	He	-0.681	-7.9	907	5.4	5	
K	39	2	He	-5.179	-15.5	216525	0.5	100	
Ca	43	2	He	5.109	155.4	90	29.4	100	
Ca	44	2	He	5.273	102.4	2000	14.9	100	
V	51	2	He	0.052	59.5	9041	1.0	2.5	
Cr	52	2	He	-0.137	-15.6	6321	4.0	2.5	
Mn	55	2	He	-0.113	-14.5	1547	7.9	2.5	
Fe	56	2	He	7.346	3.1	88903	3.0	100	
Co	59	2	He	0.071	10.7	1023	8.9	2.5	
Ni	60	2	He	-0.200	-18.7	387	25.9	2.5	
Cu	63	2	He	0.012	265.8	3194	7.1	2	
Zn	66	2	He	-0.157	-26.0	727	11.0	2.5	
As	75	2	He	0.032	45.8	518	6.1	2.5	
Se	78	2	He	0.158	116.1	231	9.5	2	
B	11	1	nogas	14.308	16.0	109970	6.7	10	CCB Main CR1 Failed
Si	28	1	nogas	-78.025	-51.4	3126748	1.9	5	
Ca	43	1	nogas	10.349	55.8	1407	14.2	100	
Ca	44	1	nogas	3.621	60.1	122253	1.1	100	
Fe	56	1	nogas	7.478	50.1	3708975	1.6	100	
Se	77	1	nogas	-4.943	-92.8	32546	4.0	2.5	
Se	82	1	nogas	0.177	90.4	247	16.9	2	
Mo	95	1	nogas	0.360	42.0	2357	33.6	2.5	
Sn	118	1	nogas	0.404	36.2	4404	21.0	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.096	27.4	850	8.9	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.178	4.5	1437	5.4	2.5	
P	31	1	nogas	2.753	11.0	101588	0.6	10	
La	139	1	nogas	3.166	155.0	110	18.2	2.5	CCB Main CR1 Failed
Au	197	1	nogas	-212.757	-95.4	10	100.0	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	nogas	1156022	4.35	1118108	103.39	70	125	
Ge	72	1	nogas	3394857	0.55	3396393	99.95	70	125	
In	115	1	nogas	3129690	3.49	3166421	98.84	70	125	
Bi	209	1	nogas	2160310	3.23	2159119	100.06	70	125	
Ge	72	2	He	1178134	1.74	1189986	99.00	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	267_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T20:43:40-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	97.132	1.476	675697	2.40	100	97.1	90	110	
Na	23	1	nogas	10025.169	0.918	237562555	0.44	10000	100.3	90	110	
Mg	24	1	nogas	10185.742	1.214	151187803	0.35	10000	101.9	90	110	
Al	27	1	nogas	109.389	2.858	1939926	2.46	100	109.4	90	110	
K	39	1	nogas	10147.861	0.698	208328417	2.01	10000	101.5	90	110	
Ti	47	1	nogas	100.572	4.419	167618	2.50	100	100.6	90	110	
V	51	1	nogas	109.875	1.261	3110919	1.35	100	109.9	90	110	
Cr	52	1	nogas	104.096	1.244	2101087	2.71	100	104.1	90	110	
Mn	55	1	nogas	104.810	1.613	2568685	3.46	100	104.8	90	110	
Co	59	1	nogas	100.919	3.252	2087858	1.40	100	100.9	90	110	
Ni	60	1	nogas	101.223	2.444	472767	1.05	100	101.2	90	110	
Cu	63	1	nogas	102.059	2.157	1128192	1.54	100	102.1	90	110	
Zn	66	1	nogas	101.377	0.501	379413	2.21	100	101.4	90	110	
As	75	1	nogas	99.350	1.628	604808	2.19	100	99.4	90	110	
Sr	88	1	nogas	99.913	3.208	2597743	1.47	100	99.9	90	110	
Ag	107	1	nogas	100.539	1.489	1259761	2.58	100	100.5	90	110	
Cd	111	1	nogas	101.516	2.980	276645	2.08	100	101.5	90	110	
Sb	121	1	nogas	100.369	1.294	1213369	0.81	100	100.4	90	110	
Tl	205	1	nogas	103.269	10.451	1749616	6.38	100	103.3	90	110	
Pb	208	1	nogas	102.612	0.976	2343044	0.98	100	102.6	90	110	
U	238	1	nogas	108.827	4.051	2299693	0.23	100	108.8	90	110	
[Pb]	206	1	nogas	102.938	7.101	593659	2.94	100	102.9	90	110	
[Pb]	207	1	nogas	100.663	5.971	505966	1.88	100	100.7	90	110	
Na	23	2	He	10045.106	1.367	18895103	1.21	10000	100.5	90	110	
Mg	24	2	He	9990.473	1.434	10536822	1.29	10000	99.9	90	110	
Al	27	2	He	98.107	1.071	62048	1.08	100	98.1	90	110	
K	39	2	He	9726.480	2.002	12057261	1.96	10000	97.3	90	110	
Ca	43	2	He	9828.264	0.898	33293	0.79	10000	98.3	90	110	
Ca	44	2	He	9861.936	1.572	553071	1.70	10000	98.6	90	110	
V	51	2	He	97.196	1.232	764342	1.08	100	97.2	90	110	
Cr	52	2	He	99.103	0.823	834175	0.85	100	99.1	90	110	
Mn	55	2	He	98.924	1.095	603016	0.96	100	98.9	90	110	
Fe	56	2	He	9957.163	2.428	73139074	2.28	10000	99.6	90	110	
Co	59	2	He	97.036	1.993	1097962	1.84	100	97.0	90	110	
Ni	60	2	He	97.856	1.556	276027	1.42	100	97.9	90	110	
Cu	63	2	He	98.606	1.463	693941	1.51	100	98.6	90	110	
Zn	66	2	He	100.162	1.553	168554	1.43	100	100.2	90	110	
As	75	2	He	97.758	2.017	159461	1.87	100	97.8	90	110	
Se	78	2	He	95.633	1.432	12927	1.40	100	95.6	90	110	
B	11	1	nogas	483.195	3.421	2022916	1.39	500	96.6	90	110	
Si	28	1	nogas	5071.221	2.754	8522085	0.85	5000	101.4	90	110	
Ca	43	1	nogas	10326.702	1.490	356618	0.50	10000	103.3	90	110	
Ca	44	1	nogas	10177.069	4.136	5798728	2.15	10000	101.8	90	110	
Fe	56	1	nogas	10536.171	3.039	225564038	3.56	10000	105.4	90	110	
Se	77	1	nogas	94.251	5.585	55197	3.58	100	94.3	90	110	
Se	82	1	nogas	100.542	3.433	26076	2.05	100	100.5	90	110	
Mo	95	1	nogas	97.603	1.397	505839	0.84	100	97.6	90	110	
Sn	118	1	nogas	98.875	1.005	702921	0.90	100	98.9	90	110	
Ba	137	1	nogas	102.724	2.932	397862	2.06	100	102.7	90	110	
Sb	121	2	He	100.452	1.403	654729	1.25	100	100.5	90	110	
Li	7	1	nogas	96.688	3.893	1432505	2.39	100	96.7	90	110	
P	31	1	nogas	497.225	0.683	943222	1.50	500	99.4	90	110	
La	139	1	nogas	188.898	27.309	737	23.91	100	188.9	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	556.734	60.593	47	32.73	100	556.7	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	nogas	1031893	2.64	1118108	92.29	70	125	
Ge	72	1	nogas	3297088	1.89	3396393	97.08	70	125	
In	115	1	nogas	2992173	1.15	3166421	94.50	70	125	
Bi	209	1	nogas	2140292	4.20	2159119	99.13	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1151266	0.16	1189986	96.75	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	268_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T20:45:39-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	0.079	16.1	863	8.7	1	
Na	23	1	nogas	37.360	5.7	1428686	4.6	100	
Mg	24	1	nogas	9.413	8.1	172045	7.4	100	
Al	27	1	nogas	-0.061	-163.7	26924	7.0	5	
K	39	1	nogas	13.779	40.9	9282423	0.3	100	
Ti	47	1	nogas	0.109	63.2	580	21.0	2.5	
V	51	1	nogas	-0.376	-395.1	583572	5.9	2.5	
Cr	52	1	nogas	-0.317	-28.8	53624	3.8	2.5	
Mn	55	1	nogas	-0.061	-15.6	29684	0.9	2.5	
Co	59	1	nogas	0.083	10.5	2574	7.8	2.5	
Ni	60	1	nogas	-0.210	-14.1	1287	11.9	2.5	
Cu	63	1	nogas	0.226	31.7	5091	16.0	2	
Zn	66	1	nogas	-0.108	-51.4	1937	10.3	2.5	
As	75	1	nogas	-0.307	-365.5	101314	5.3	2.5	
Sr	88	1	nogas	0.159	4.2	5714	3.2	2.5	
Ag	107	1	nogas	0.187	104.0	2566	96.7	2.5	
Cd	111	1	nogas	0.079	4.9	277	2.1	1	
Sb	121	1	nogas	0.290	14.8	3964	12.9	2.5	
Tl	205	1	nogas	0.562	57.7	10568	54.6	1	
Pb	208	1	nogas	0.107	7.4	2963	6.1	2.5	
U	238	1	nogas	0.154	26.6	3484	26.4	2.5	
[Pb]	206	1	nogas	0.083	15.8	640	13.6	2.5	
[Pb]	207	1	nogas	0.103	22.1	657	16.8	2.5	
Na	23	2	He	27.784	5.0	106301	3.3	100	
Mg	24	2	He	7.531	2.6	10383	2.2	100	
Al	27	2	He	-0.639	-22.8	907	10.6	5	
K	39	2	He	-7.333	-50.0	213904	2.1	100	
Ca	43	2	He	-0.094	-17791.0	70	79.5	100	
Ca	44	2	He	6.105	21.8	1990	3.5	100	
V	51	2	He	0.074	11.4	8947	0.8	2.5	
Cr	52	2	He	-0.128	-24.7	6214	3.6	2.5	
Mn	55	2	He	-0.088	-36.1	1657	11.4	2.5	
Fe	56	2	He	7.030	4.0	84041	3.3	100	
Co	59	2	He	0.069	17.4	973	14.2	2.5	
Ni	60	2	He	-0.183	-5.0	423	5.5	2.5	
Cu	63	2	He	-0.063	-36.8	2584	7.0	2	
Zn	66	2	He	-0.056	-16.1	873	2.4	2.5	
As	75	2	He	0.059	69.7	547	13.0	2.5	
Se	78	2	He	-0.041	-431.5	198	12.2	2	
B	11	1	nogas	6.154	14.4	73498	4.7	10	
Si	28	1	nogas	-88.730	-35.6	3049377	0.2	5	
Ca	43	1	nogas	10.041	13.3	1367	2.2	100	
Ca	44	1	nogas	-4.753	-82.3	114974	2.0	100	
Fe	56	1	nogas	7.310	38.0	3627654	1.0	100	
Se	77	1	nogas	-4.188	-228.0	32032	6.6	2.5	
Se	82	1	nogas	0.123	374.0	227	51.1	2	

Continuing Calibration Blank (CCB) Report

Mo	95	1	nogas	0.260	42.0	1790	32.2	2.5	
Sn	118	1	nogas	0.240	18.4	3150	11.4	5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Ba	137	1	nogas	0.092	0.8	823	2.5	2.5	
Sb	121	2	He	0.220	15.6	1667	14.1	2.5	
P	31	1	nogas	4.520	17.4	102496	1.0	10	
La	139	1	nogas	0.861	818.9	100	26.5	2.5	
Au	197	1	nogas	333.816	133.1	37	56.8	2.5	CCB Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1169668	3.38	1118108	104.61	70	125	
Ge	72	1	nogas	3323785	1.20	3396393	97.86	70	125	
In	115	1	nogas	3073916	2.19	3166421	97.08	70	125	
Bi	209	1	nogas	2194286	2.41	2159119	101.63	70	125	
Ge	72	2	He	1144195	0.85	1189986	96.15	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	276_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T21:01:30-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	97.341	3.307	678450	2.01	100	97.3	90	110	
Na	23	1	nogas	9914.967	2.048	234715330	0.70	10000	99.1	90	110	
Mg	24	1	nogas	10151.362	4.783	150457095	2.40	10000	101.5	90	110	
Al	27	1	nogas	105.572	3.035	1901029	0.32	100	105.6	90	110	
K	39	1	nogas	10179.711	2.022	212067380	1.38	10000	101.8	90	110	
Ti	47	1	nogas	100.155	3.180	169464	0.81	100	100.2	90	110	
V	51	1	nogas	96.833	1.694	2853916	1.94	100	96.8	90	110	
Cr	52	1	nogas	101.813	3.614	2086132	1.19	100	101.8	90	110	
Mn	55	1	nogas	105.017	1.419	2611898	2.07	100	105.0	90	110	
Co	59	1	nogas	106.064	5.150	2226288	2.03	100	106.1	90	110	
Ni	60	1	nogas	103.277	4.221	489400	1.23	100	103.3	90	110	
Cu	63	1	nogas	101.077	3.529	1133856	0.76	100	101.1	90	110	
Zn	66	1	nogas	99.365	2.514	377442	1.84	100	99.4	90	110	
As	75	1	nogas	96.386	1.809	598683	2.05	100	96.4	90	110	
Sr	88	1	nogas	98.542	4.459	2600145	2.16	100	98.5	90	110	
Ag	107	1	nogas	101.128	2.226	1285891	1.04	100	101.1	90	110	
Cd	111	1	nogas	100.923	0.948	276908	2.81	100	100.9	90	110	
Sb	121	1	nogas	104.809	5.975	1284978	2.88	100	104.8	90	110	
Tl	205	1	nogas	104.426	3.417	1752107	2.56	100	104.4	90	110	
Pb	208	1	nogas	105.215	2.387	2402457	2.39	100	105.2	90	110	
U	238	1	nogas	111.336	0.449	2326875	2.40	100	111.3	90	110	CCV Main CR1-2 Failed
[Pb]	206	1	nogas	106.652	4.329	608433	2.20	100	106.7	90	110	
[Pb]	207	1	nogas	104.159	4.918	517631	2.25	100	104.2	90	110	
Na	23	2	He	10058.463	0.858	18956786	0.57	10000	100.6	90	110	
Mg	24	2	He	9971.526	0.747	10537148	0.10	10000	99.7	90	110	
Al	27	2	He	100.767	0.707	63817	0.17	100	100.8	90	110	
K	39	2	He	9959.561	1.315	12340856	1.29	10000	99.6	90	110	
Ca	43	2	He	9924.528	3.134	33681	2.62	10000	99.2	90	110	
Ca	44	2	He	9864.749	2.873	554221	2.09	10000	98.6	90	110	
V	51	2	He	97.433	0.319	767678	0.48	100	97.4	90	110	
Cr	52	2	He	98.974	1.045	834716	1.20	100	99.0	90	110	
Mn	55	2	He	99.143	0.929	605502	0.21	100	99.1	90	110	
Fe	56	2	He	9982.886	2.133	73465362	1.42	10000	99.8	90	110	
Co	59	2	He	98.078	2.068	1111841	1.37	100	98.1	90	110	
Ni	60	2	He	100.388	1.715	283681	1.16	100	100.4	90	110	
Cu	63	2	He	101.048	1.543	712386	0.76	100	101.0	90	110	
Zn	66	2	He	100.701	1.640	169779	1.16	100	100.7	90	110	
As	75	2	He	98.290	1.094	160633	0.31	100	98.3	90	110	
Se	78	2	He	97.681	2.176	13224	1.38	100	97.7	90	110	
B	11	1	nogas	479.555	4.535	2012145	2.14	500	95.9	90	110	
Si	28	1	nogas	5094.853	6.788	8671812	1.21	5000	101.9	90	110	
Ca	43	1	nogas	10167.768	3.559	356315	0.38	10000	101.7	90	110	
Ca	44	1	nogas	9966.350	4.029	5766141	0.94	10000	99.7	90	110	
Fe	56	1	nogas	10347.555	2.145	224879272	1.12	10000	103.5	90	110	
Se	77	1	nogas	79.456	7.154	52439	1.84	100	79.5	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	102.058	2.540	26870	2.13	100	102.1	90	110	
Mo	95	1	nogas	96.652	3.588	508281	0.77	100	96.7	90	110	
Sn	118	1	nogas	99.820	2.871	714040	1.14	100	99.8	90	110	
Ba	137	1	nogas	101.556	0.977	396015	2.69	100	101.6	90	110	
Sb	121	2	He	102.564	0.558	669788	0.28	100	102.6	90	110	
Li	7	1	nogas	95.747	3.631	1422571	1.62	100	95.7	90	110	
P	31	1	nogas	488.312	3.780	941572	0.28	500	97.7	90	110	
La	139	1	nogas	153.625	7.227	620	4.27	100	153.6	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	219.918	198.577	30	66.67	100	219.9	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	nogas	1034848	5.02	1118108	92.55	70	125	
Ge	72	1	nogas	3347572	3.24	3396393	98.56	70	125	
In	115	1	nogas	3011679	1.93	3166421	95.11	70	125	
Bi	209	1	nogas	2114562	2.82	2159119	97.94	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1153517	0.78	1189986	96.94	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	277_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T21:03:32-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	0.113	2.3	1103	5.2	1	
Na	23	1	nogas	19.891	14.7	1016459	2.8	100	
Mg	24	1	nogas	9.912	7.9	178601	2.4	100	
Al	27	1	nogas	-0.119	-90.5	26636	6.2	5	
K	39	1	nogas	-2.516	-357.8	9222153	0.3	100	
Ti	47	1	nogas	0.079	75.8	543	17.5	2.5	
V	51	1	nogas	-5.200	-17.6	485592	3.3	2.5	
Cr	52	1	nogas	-0.505	-11.7	51355	0.9	2.5	
Mn	55	1	nogas	-0.118	-60.2	29106	4.3	2.5	
Co	59	1	nogas	0.092	17.6	2820	11.9	2.5	
Ni	60	1	nogas	-0.222	-11.2	1267	9.7	2.5	
Cu	63	1	nogas	0.173	12.6	4631	3.4	2	
Zn	66	1	nogas	-0.150	-18.4	1837	7.8	2.5	
As	75	1	nogas	-2.645	-21.5	92035	3.6	2.5	
Sr	88	1	nogas	0.118	4.5	4761	1.7	2.5	
Ag	107	1	nogas	0.089	28.8	1360	24.5	2.5	
Cd	111	1	nogas	0.098	12.9	330	8.0	1	
Sb	121	1	nogas	0.677	11.7	8922	10.5	2.5	
Tl	205	1	nogas	0.619	40.0	11632	42.1	1	
Pb	208	1	nogas	0.112	9.5	3070	7.9	2.5	
U	238	1	nogas	0.176	30.5	3994	34.5	2.5	
[Pb]	206	1	nogas	0.111	12.1	800	7.8	2.5	
[Pb]	207	1	nogas	0.111	6.1	697	2.2	2.5	
Na	23	2	He	15.996	6.2	84148	1.4	100	
Mg	24	2	He	8.751	6.0	11637	3.8	100	
Al	27	2	He	-0.726	-22.6	850	10.5	5	
K	39	2	He	-9.377	-10.6	211418	0.6	100	
Ca	43	2	He	-1.202	-975.9	67	60.6	100	
Ca	44	2	He	6.576	43.8	2013	8.7	100	
V	51	2	He	-0.088	-42.1	7680	2.3	2.5	
Cr	52	2	He	-0.103	-21.4	6405	1.6	2.5	
Mn	55	2	He	-0.087	-16.9	1660	5.5	2.5	
Fe	56	2	He	8.303	7.8	93113	3.9	100	
Co	59	2	He	0.074	15.5	1017	12.3	2.5	
Ni	60	2	He	-0.181	-9.8	430	10.1	2.5	
Cu	63	2	He	-0.118	-25.2	2194	8.5	2	
Zn	66	2	He	-0.157	-55.7	703	19.9	2.5	
As	75	2	He	0.030	90.2	500	9.9	2.5	
Se	78	2	He	0.139	128.3	221	10.9	2	
B	11	1	nogas	6.570	31.8	73475	7.5	10	
Si	28	1	nogas	-101.452	-29.9	3125024	1.1	5	
Ca	43	1	nogas	3.592	23.5	1177	2.6	100	
Ca	44	1	nogas	-12.199	-34.6	114021	1.0	100	
Fe	56	1	nogas	-2.852	-198.9	3511218	2.2	100	
Se	77	1	nogas	-18.159	-30.6	29524	3.2	2.5	
Se	82	1	nogas	0.294	7.4	280	0.0	2	
Mo	95	1	nogas	0.331	31.8	2224	25.3	2.5	
Sn	118	1	nogas	0.326	24.3	3790	12.0	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.117	9.1	927	1.6	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.562	7.8	3870	6.2	2.5	
P	31	1	nogas	1.365	119.6	99899	1.6	10	
La	139	1	nogas	-9.646	-36.7	63	18.2	2.5	
Au	197	1	nogas	124.647	85.9	27	21.7	2.5	CCB Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1143537	5.14	1118108	102.27	70	125	
Ge	72	1	nogas	3421762	2.07	3396393	100.75	70	125	
In	115	1	nogas	3095910	3.27	3166421	97.77	70	125	
Bi	209	1	nogas	2188409	4.77	2159119	101.36	70	125	
Ge	72	2	He	1142138	1.44	1189986	95.98	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	288_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T21:25:12-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	105.039	2.889	676915	2.63	100	105.0	90	110	
Na	23	1	nogas	9923.560	3.089	233046922	3.45	10000	99.2	90	110	
Mg	24	1	nogas	10344.017	2.621	152118712	1.14	10000	103.4	90	110	
Al	27	1	nogas	105.947	3.481	1924446	2.20	100	105.9	90	110	
K	39	1	nogas	10220.885	1.757	214739505	0.40	10000	102.2	90	110	
Ti	47	1	nogas	99.461	2.362	169834	3.05	100	99.5	90	110	
V	51	1	nogas	103.160	4.783	3028251	4.79	100	103.2	90	110	
Cr	52	1	nogas	101.493	3.154	2099279	4.22	100	101.5	90	110	
Mn	55	1	nogas	103.190	3.698	2590124	4.93	100	103.2	90	110	
Co	59	1	nogas	100.415	1.207	2127851	1.64	100	100.4	90	110	
Ni	60	1	nogas	99.434	0.836	475684	1.81	100	99.4	90	110	
Cu	63	1	nogas	99.805	2.328	1129687	1.19	100	99.8	90	110	
Zn	66	1	nogas	99.777	2.132	382315	1.55	100	99.8	90	110	
As	75	1	nogas	95.795	1.881	600854	2.18	100	95.8	90	110	
Sr	88	1	nogas	99.775	0.665	2656996	0.78	100	99.8	90	110	
Ag	107	1	nogas	99.617	3.590	1277680	2.79	100	99.6	90	110	
Cd	111	1	nogas	99.370	1.651	275101	0.96	100	99.4	90	110	
Sb	121	1	nogas	100.849	0.804	1248462	1.51	100	100.8	90	110	
Tl	205	1	nogas	103.208	3.078	1743242	3.22	100	103.2	90	110	
Pb	208	1	nogas	102.614	1.962	2343086	1.96	100	102.6	90	110	
U	238	1	nogas	107.207	7.295	2252593	5.21	100	107.2	90	110	
[Pb]	206	1	nogas	102.688	3.198	589695	0.55	100	102.7	90	110	
[Pb]	207	1	nogas	101.147	3.758	506043	1.53	100	101.1	90	110	
Na	23	2	He	10106.073	1.151	18805815	0.86	10000	101.1	90	110	
Mg	24	2	He	10131.170	2.127	10569694	1.04	10000	101.3	90	110	
Al	27	2	He	101.323	1.597	63367	2.95	100	101.3	90	110	
K	39	2	He	9906.095	0.389	12275803	0.38	10000	99.1	90	110	
Ca	43	2	He	9916.612	2.013	33230	1.26	10000	99.2	90	110	
Ca	44	2	He	10053.895	1.220	557741	0.71	10000	100.5	90	110	
V	51	2	He	98.617	2.289	766990	0.91	100	98.6	90	110	
Cr	52	2	He	99.784	0.494	830901	1.37	100	99.8	90	110	
Mn	55	2	He	100.188	1.186	604152	1.04	100	100.2	90	110	
Fe	56	2	He	10152.078	1.623	73768219	0.71	10000	101.5	90	110	
Co	59	2	He	99.884	2.744	1117870	1.14	100	99.9	90	110	
Ni	60	2	He	100.217	3.409	279559	1.71	100	100.2	90	110	
Cu	63	2	He	101.665	1.554	707661	0.53	100	101.7	90	110	
Zn	66	2	He	102.594	1.659	170775	1.52	100	102.6	90	110	
As	75	2	He	99.908	2.094	161194	0.42	100	99.9	90	110	
Se	78	2	He	98.214	2.026	13129	2.02	100	98.2	90	110	
B	11	1	nogas	519.856	1.232	2014710	2.45	500	104.0	90	110	
Si	28	1	nogas	4908.468	2.243	8548625	0.07	5000	98.2	90	110	
Ca	43	1	nogas	10178.338	1.711	359937	1.43	10000	101.8	90	110	
Ca	44	1	nogas	10020.153	0.924	5850183	1.14	10000	100.2	90	110	
Fe	56	1	nogas	10201.190	1.238	223710713	1.45	10000	102.0	90	110	
Se	77	1	nogas	73.463	3.064	51443	0.84	100	73.5	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	102.660	1.261	27264	0.76	100	102.7	90	110	
Mo	95	1	nogas	96.379	0.244	511512	1.36	100	96.4	90	110	
Sn	118	1	nogas	98.361	0.151	710346	0.91	100	98.4	90	110	
Ba	137	1	nogas	100.112	1.981	393916	1.55	100	100.1	90	110	
Sb	121	2	He	100.710	2.343	649309	1.28	100	100.7	90	110	
Li	7	1	nogas	103.575	4.448	1416448	4.52	100	103.6	90	110	
P	31	1	nogas	482.088	1.650	939242	1.16	500	96.4	90	110	
La	139	1	nogas	165.375	9.064	667	7.55	100	165.4	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	544.790	138.459	47	81.13	100	544.8	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	nogas	956088	2.53	1118108	85.51	70	125	
Ge	72	1	nogas	3375815	1.37	3396393	99.39	70	125	
In	115	1	nogas	3039351	0.80	3166421	95.99	70	125	
Bi	209	1	nogas	2128241	2.85	2159119	98.57	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1139069	1.86	1189986	95.72	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	289_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T21:27:12-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	0.100	28.7	970	22.5	1	
Na	23	1	nogas	23.345	12.8	1109265	7.3	100	
Mg	24	1	nogas	12.518	10.9	219040	9.5	100	
Al	27	1	nogas	0.348	28.4	35084	7.0	5	
K	39	1	nogas	4.209	233.1	9343065	0.6	100	
Ti	47	1	nogas	0.067	100.8	523	22.4	2.5	
V	51	1	nogas	-4.679	-15.1	497164	1.4	2.5	
Cr	52	1	nogas	-0.503	-6.1	51311	0.8	2.5	
Mn	55	1	nogas	-0.086	-10.1	29868	1.6	2.5	
Co	59	1	nogas	0.111	4.0	3227	2.9	2.5	
Ni	60	1	nogas	-0.187	-14.1	1437	10.3	2.5	
Cu	63	1	nogas	0.161	9.2	4494	5.5	2	
Zn	66	1	nogas	-0.112	-53.1	1973	10.3	2.5	
As	75	1	nogas	-2.300	-36.1	93639	3.1	2.5	
Sr	88	1	nogas	0.148	15.3	5554	9.7	2.5	
Ag	107	1	nogas	0.095	4.7	1440	5.9	2.5	
Cd	111	1	nogas	0.099	25.7	337	22.3	1	
Sb	121	1	nogas	0.262	20.9	3724	20.2	2.5	
Tl	205	1	nogas	0.585	54.7	10898	54.7	1	
Pb	208	1	nogas	0.133	19.0	3537	16.2	2.5	
U	238	1	nogas	0.182	26.9	4051	29.8	2.5	
[Pb]	206	1	nogas	0.123	11.9	863	12.8	2.5	
[Pb]	207	1	nogas	0.121	22.7	740	22.7	2.5	
Na	23	2	He	16.402	5.2	85404	3.0	100	
Mg	24	2	He	9.511	6.4	12508	5.8	100	
Al	27	2	He	-0.380	-77.6	1070	17.8	5	
K	39	2	He	-6.971	-22.8	214345	0.9	100	
Ca	43	2	He	9.594	122.4	103	39.1	100	
Ca	44	2	He	10.153	11.3	2224	3.0	100	
V	51	2	He	-0.023	-27.5	8231	1.4	2.5	
Cr	52	2	He	-0.166	-16.6	5918	3.6	2.5	
Mn	55	2	He	-0.092	-36.2	1637	13.2	2.5	
Fe	56	2	He	9.623	7.8	103383	6.5	100	
Co	59	2	He	0.090	12.4	1210	10.7	2.5	
Ni	60	2	He	-0.149	-6.2	520	3.8	2.5	
Cu	63	2	He	-0.113	-18.9	2240	5.4	2	
Zn	66	2	He	-0.118	-48.7	773	12.4	2.5	
As	75	2	He	0.037	70.4	513	8.7	2.5	
Se	78	2	He	-0.046	-137.8	198	5.3	2	
B	11	1	nogas	2.263	42.6	52433	8.9	10	
Si	28	1	nogas	-119.035	-31.6	3100191	1.1	5	
Ca	43	1	nogas	11.707	41.2	1463	11.0	100	
Ca	44	1	nogas	-15.477	-9.3	111949	1.5	100	
Fe	56	1	nogas	0.028	6515.3	3569323	2.0	100	
Se	77	1	nogas	-15.916	-17.4	30032	0.7	2.5	
Se	82	1	nogas	-0.031	-421.4	193	19.6	2	
Mo	95	1	nogas	0.303	43.3	2070	34.7	2.5	
Sn	118	1	nogas	0.257	35.0	3330	21.3	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.128	17.6	980	10.6	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.203	13.8	1560	12.2	2.5	
P	31	1	nogas	1.271	109.4	99561	0.5	10	
La	139	1	nogas	12.712	54.5	143	17.6	2.5	CCB Main CR1 Failed
Au	197	1	nogas	421.858	133.7	40	66.1	2.5	CCB Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1106025	1.71	1118108	98.92	70	125	
Ge	72	1	nogas	3415815	1.93	3396393	100.57	70	125	
In	115	1	nogas	3120508	1.51	3166421	98.55	70	125	
Bi	209	1	nogas	2157146	3.70	2159119	99.91	70	125	
Ge	72	2	He	1148523	1.19	1189986	96.52	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	298_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T21:44:59-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	97.137	7.435	688737	0.91	100	97.1	90	110	
Na	23	1	nogas	9979.681	0.618	236170780	1.77	10000	99.8	90	110	
Mg	24	1	nogas	10091.735	1.952	149563528	0.19	10000	100.9	90	110	
Al	27	1	nogas	104.055	5.185	1941578	3.62	100	104.1	90	110	
K	39	1	nogas	9996.165	2.851	215912146	1.45	10000	100.0	90	110	
Ti	47	1	nogas	95.708	2.826	167858	2.74	100	95.7	90	110	
V	51	1	nogas	91.487	1.715	2827578	0.79	100	91.5	90	110	
Cr	52	1	nogas	97.273	1.768	2069187	3.22	100	97.3	90	110	
Mn	55	1	nogas	98.552	3.092	2542299	4.40	100	98.6	90	110	
Co	59	1	nogas	99.647	5.342	2169608	6.27	100	99.6	90	110	
Ni	60	1	nogas	98.247	1.038	482803	1.87	100	98.2	90	110	
Cu	63	1	nogas	99.411	0.544	1156114	2.06	100	99.4	90	110	
Zn	66	1	nogas	99.106	1.129	390129	1.85	100	99.1	90	110	
As	75	1	nogas	95.259	3.034	614173	1.08	100	95.3	90	110	
Sr	88	1	nogas	99.071	3.731	2710896	5.01	100	99.1	90	110	
Ag	107	1	nogas	99.231	3.095	1307477	2.90	100	99.2	90	110	
Cd	111	1	nogas	100.384	2.564	283137	0.45	100	100.4	90	110	
Sb	121	1	nogas	102.098	3.840	1298724	5.23	100	102.1	90	110	
Tl	205	1	nogas	102.087	4.697	1738327	4.30	100	102.1	90	110	
Pb	208	1	nogas	104.202	0.927	2379330	0.93	100	104.2	90	110	
U	238	1	nogas	110.505	2.611	2342953	1.80	100	110.5	90	110	CCV Main CR1-2 Failed
[Pb]	206	1	nogas	103.337	2.397	598487	1.89	100	103.3	90	110	
[Pb]	207	1	nogas	101.420	2.172	511758	1.37	100	101.4	90	110	
Na	23	2	He	10081.074	1.451	19037937	0.57	10000	100.8	90	110	
Mg	24	2	He	9851.863	1.884	10431819	1.17	10000	98.5	90	110	
Al	27	2	He	99.584	2.036	63222	2.62	100	99.6	90	110	
K	39	2	He	10066.119	0.514	12470508	0.50	10000	100.7	90	110	
Ca	43	2	He	9872.997	2.019	33577	1.52	10000	98.7	90	110	
Ca	44	2	He	10080.228	2.396	567507	1.99	10000	100.8	90	110	
V	51	2	He	99.987	1.298	789189	0.80	100	100.0	90	110	
Cr	52	2	He	100.243	1.329	847029	0.47	100	100.2	90	110	
Mn	55	2	He	101.296	0.858	619893	0.04	100	101.3	90	110	
Fe	56	2	He	10225.236	1.360	75409177	1.07	10000	102.3	90	110	
Co	59	2	He	100.557	1.457	1142358	1.07	100	100.6	90	110	
Ni	60	2	He	101.902	1.185	288554	0.80	100	101.9	90	110	
Cu	63	2	He	101.715	1.316	718562	0.44	100	101.7	90	110	
Zn	66	2	He	101.879	0.208	172122	0.74	100	101.9	90	110	
As	75	2	He	100.698	0.715	164904	0.61	100	100.7	90	110	
Se	78	2	He	99.385	1.611	13480	0.74	100	99.4	90	110	
B	11	1	nogas	484.296	6.709	2068945	3.36	500	96.9	90	110	
Si	28	1	nogas	4694.455	5.079	8539584	1.61	5000	93.9	90	110	
Ca	43	1	nogas	10181.486	1.341	369833	1.08	10000	101.8	90	110	
Ca	44	1	nogas	9906.968	1.323	5942288	0.63	10000	99.1	90	110	
Fe	56	1	nogas	9943.565	2.523	224045672	1.59	10000	99.4	90	110	
Se	77	1	nogas	67.672	5.138	51396	2.15	100	67.7	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	99.336	1.745	27104	1.01	100	99.3	90	110	
Mo	95	1	nogas	95.901	1.697	522744	1.11	100	95.9	90	110	
Sn	118	1	nogas	97.370	3.470	716474	3.08	100	97.4	90	110	
Ba	137	1	nogas	100.080	2.336	401238	1.41	100	100.1	90	110	
Sb	121	2	He	103.561	0.795	677746	1.47	100	103.6	90	110	
Li	7	1	nogas	100.133	5.414	1511363	3.27	100	100.1	90	110	
P	31	1	nogas	474.868	3.668	951581	1.81	500	95.0	90	110	
La	139	1	nogas	139.353	26.435	587	20.83	100	139.4	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	619.406	100.599	50	60.00	100	619.4	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	nogas	1055890	8.21	1118108	94.44	70	125	
Ge	72	1	nogas	3467583	1.52	3396393	102.10	70	125	
In	115	1	nogas	3097507	2.30	3166421	97.82	70	125	
Bi	209	1	nogas	2145313	0.83	2159119	99.36	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1155922	0.87	1189986	97.14	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	299_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T21:46:59-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	0.124	21.6	1150	14.0	1	
Na	23	1	nogas	15.817	8.6	943674	3.5	100	
Mg	24	1	nogas	9.979	15.3	183629	10.8	100	
Al	27	1	nogas	-0.064	-99.6	27654	2.9	5	
K	39	1	nogas	2.050	305.3	9318032	0.3	100	
Ti	47	1	nogas	0.179	18.8	717	8.9	2.5	
V	51	1	nogas	-5.489	-4.8	478977	1.4	2.5	
Cr	52	1	nogas	-0.517	-6.2	51134	1.8	2.5	
Mn	55	1	nogas	-0.121	-9.9	29067	2.3	2.5	
Co	59	1	nogas	0.095	19.9	2904	12.8	2.5	
Ni	60	1	nogas	-0.233	-17.3	1213	15.2	2.5	
Cu	63	1	nogas	0.137	33.7	4221	11.3	2	
Zn	66	1	nogas	-0.184	-19.6	1703	9.1	2.5	
As	75	1	nogas	-3.228	-10.9	89006	3.3	2.5	
Sr	88	1	nogas	0.128	14.7	5037	9.6	2.5	
Ag	107	1	nogas	0.088	10.9	1343	8.6	2.5	
Cd	111	1	nogas	0.062	37.1	237	25.5	1	
Sb	121	1	nogas	0.664	13.3	8766	11.3	2.5	
Tl	205	1	nogas	0.666	52.0	12593	47.8	1	
Pb	208	1	nogas	0.121	27.3	3270	23.0	2.5	
U	238	1	nogas	0.178	34.9	4084	32.6	2.5	
[Pb]	206	1	nogas	0.117	41.4	860	33.4	2.5	
[Pb]	207	1	nogas	0.123	29.8	777	23.9	2.5	
Na	23	2	He	11.575	5.8	77433	2.5	100	
Mg	24	2	He	8.036	4.7	11103	2.0	100	
Al	27	2	He	-0.705	-15.3	880	6.3	5	
K	39	2	He	-6.846	-18.1	214498	0.7	100	
Ca	43	2	He	2.413	320.5	80	33.1	100	
Ca	44	2	He	3.167	19.3	1860	3.8	100	
V	51	2	He	-0.110	-25.2	7661	1.8	2.5	
Cr	52	2	He	-0.151	-30.8	6128	4.7	2.5	
Mn	55	2	He	-0.098	-13.4	1623	3.6	2.5	
Fe	56	2	He	7.718	2.9	90635	2.2	100	
Co	59	2	He	0.072	13.4	1020	12.2	2.5	
Ni	60	2	He	-0.160	-26.2	497	22.3	2.5	
Cu	63	2	He	-0.114	-21.4	2267	8.6	2	
Zn	66	2	He	-0.227	-18.6	600	13.2	2.5	
As	75	2	He	0.016	75.5	486	5.5	2.5	
Se	78	2	He	0.019	751.8	209	7.8	2	
B	11	1	nogas	4.059	36.7	60163	7.5	10	
Si	28	1	nogas	-82.336	-59.2	3146625	0.6	5	
Ca	43	1	nogas	4.624	47.2	1213	5.4	100	
Ca	44	1	nogas	-18.439	-7.1	110443	0.6	100	
Fe	56	1	nogas	-0.822	-732.6	3556492	2.5	100	
Se	77	1	nogas	-24.721	-3.1	27925	1.9	2.5	
Se	82	1	nogas	0.382	26.4	303	7.6	2	

Continuing Calibration Blank (CCB) Report

Mo	95	1	nogas	0.391	45.0	2540	35.9	2.5	
Sn	118	1	nogas	0.318	24.3	3847	11.9	5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Ba	137	1	nogas	0.108	29.0	917	10.9	2.5	
Sb	121	2	He	0.516	9.1	3650	10.0	2.5	
P	31	1	nogas	2.170	14.9	101370	0.7	10	
La	139	1	nogas	0.655	1165.4	103	29.6	2.5	
Au	197	1	nogas	244.429	48.9	33	17.3	2.5	CCB Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1105831	3.53	1118108	98.90	70	125	
Ge	72	1	nogas	3422241	1.24	3396393	100.76	70	125	
In	115	1	nogas	3190685	3.07	3166421	100.77	70	125	
Bi	209	1	nogas	2247073	3.49	2159119	104.07	70	125	
Ge	72	2	He	1164676	1.89	1189986	97.87	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	309_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T22:06:54-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	96.812	9.299	686240	1.86	100	96.8	90	110	
Na	23	1	nogas	9730.935	4.491	237579239	1.50	10000	97.3	90	110	
Mg	24	1	nogas	10008.832	6.297	152961574	1.89	10000	100.1	90	110	
Al	27	1	nogas	101.513	13.919	1841873	7.27	100	101.5	90	110	
K	39	1	nogas	10122.589	7.424	212999884	2.69	10000	101.2	90	110	
Ti	47	1	nogas	98.508	6.209	168400	1.37	100	98.5	90	110	
V	51	1	nogas	109.698	9.531	3183278	2.34	100	109.7	90	110	
Cr	52	1	nogas	105.537	4.740	2184914	4.15	100	105.5	90	110	
Mn	55	1	nogas	104.174	3.016	2622954	6.57	100	104.2	90	110	
Co	59	1	nogas	101.542	1.826	2162545	8.88	100	101.5	90	110	
Ni	60	1	nogas	100.698	10.654	481255	3.17	100	100.7	90	110	
Cu	63	1	nogas	100.433	9.589	1136632	2.82	100	100.4	90	110	
Zn	66	1	nogas	99.789	6.856	382765	1.32	100	99.8	90	110	
As	75	1	nogas	97.557	8.262	610507	0.89	100	97.6	90	110	
Sr	88	1	nogas	102.154	2.136	2732624	8.12	100	102.2	90	110	
Ag	107	1	nogas	97.083	2.783	1249384	5.50	100	97.1	90	110	
Cd	111	1	nogas	97.394	5.632	278445	3.82	100	97.4	90	110	
Sb	121	1	nogas	100.688	7.996	1246876	0.59	100	100.7	90	110	
Tl	205	1	nogas	102.580	1.545	1822321	7.63	100	102.6	90	110	
Pb	208	1	nogas	106.776	5.003	2438107	5.00	100	106.8	90	110	
U	238	1	nogas	104.990	1.019	2324615	9.14	100	105.0	90	110	
[Pb]	206	1	nogas	99.496	9.214	598425	1.47	100	99.5	90	110	
[Pb]	207	1	nogas	98.091	8.681	514229	2.20	100	98.1	90	110	
Na	23	2	He	9993.583	3.808	18517911	2.05	10000	99.9	90	110	
Mg	24	2	He	9962.643	2.411	10352254	0.49	10000	99.6	90	110	
Al	27	2	He	98.056	2.209	61102	0.50	100	98.1	90	110	
K	39	2	He	9827.826	2.474	12180571	2.43	10000	98.3	90	110	
Ca	43	2	He	9707.852	2.987	32398	1.24	10000	97.1	90	110	
Ca	44	2	He	9939.622	2.419	549161	0.20	10000	99.4	90	110	
V	51	2	He	98.800	2.389	765361	0.97	100	98.8	90	110	
Cr	52	2	He	98.764	1.223	819215	1.36	100	98.8	90	110	
Mn	55	2	He	99.976	1.538	600484	1.02	100	100.0	90	110	
Fe	56	2	He	10159.367	1.571	73533726	1.27	10000	101.6	90	110	
Co	59	2	He	99.503	1.321	1109438	1.14	100	99.5	90	110	
Ni	60	2	He	101.629	1.539	282440	1.04	100	101.6	90	110	
Cu	63	2	He	101.734	2.752	705237	0.67	100	101.7	90	110	
Zn	66	2	He	99.936	0.786	165736	1.68	100	99.9	90	110	
As	75	2	He	99.153	1.776	159365	1.40	100	99.2	90	110	
Se	78	2	He	96.824	4.233	12890	2.47	100	96.8	90	110	
B	11	1	nogas	473.502	9.289	2021495	0.99	500	94.7	90	110	
Si	28	1	nogas	4821.182	13.926	8454652	1.57	5000	96.4	90	110	
Ca	43	1	nogas	10110.793	9.760	357417	2.43	10000	101.1	90	110	
Ca	44	1	nogas	9988.479	12.832	5822387	5.44	10000	99.9	90	110	
Fe	56	1	nogas	10158.262	9.370	222750488	2.30	10000	101.6	90	110	
Se	77	1	nogas	85.770	23.841	54461	4.67	100	85.8	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	100.120	7.205	26620	2.29	100	100.1	90	110	
Mo	95	1	nogas	96.739	7.226	513780	0.68	100	96.7	90	110	
Sn	118	1	nogas	96.312	7.909	717226	1.26	100	96.3	90	110	
Ba	137	1	nogas	98.295	9.699	398433	0.87	100	98.3	90	110	
Sb	121	2	He	101.667	3.425	652774	1.53	100	101.7	90	110	
Li	7	1	nogas	92.161	4.975	1400456	5.79	100	92.2	90	110	
P	31	1	nogas	486.397	8.581	947299	0.70	500	97.3	90	110	
La	139	1	nogas	155.760	10.912	653	5.38	100	155.8	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	255.715	69.629	33	17.32	100	255.7	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	nogas	1056734	8.51	1118108	94.51	70	125	
Ge	72	1	nogas	3389787	7.14	3396393	99.81	70	125	
In	115	1	nogas	3147909	8.44	3166421	99.42	70	125	
Bi	209	1	nogas	2238956	8.32	2159119	103.70	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1134661	2.34	1189986	95.35	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	310_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T22:08:54-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	0.100	26.4	1000	19.7	1	
Na	23	1	nogas	30.764	4.5	1289399	3.7	100	
Mg	24	1	nogas	11.072	6.7	198666	6.8	100	
Al	27	1	nogas	-0.062	-34.3	27140	2.4	5	
K	39	1	nogas	19.461	35.7	9479028	0.5	100	
Ti	47	1	nogas	0.194	39.9	730	19.2	2.5	
V	51	1	nogas	-0.329	-564.2	589645	6.4	2.5	
Cr	52	1	nogas	-0.352	-38.2	53380	3.8	2.5	
Mn	55	1	nogas	-0.114	-37.3	28629	2.8	2.5	
Co	59	1	nogas	0.100	15.6	2937	11.3	2.5	
Ni	60	1	nogas	-0.194	-20.6	1377	14.9	2.5	
Cu	63	1	nogas	0.162	24.6	4417	8.7	2	
Zn	66	1	nogas	-0.155	-4.7	1780	1.9	2.5	
As	75	1	nogas	-0.733	-155.0	100007	4.7	2.5	
Sr	88	1	nogas	0.151	11.4	5534	7.6	2.5	
Ag	107	1	nogas	0.079	13.4	1200	12.4	2.5	
Cd	111	1	nogas	0.098	6.3	330	6.1	1	
Sb	121	1	nogas	0.251	7.1	3514	7.4	2.5	
Tl	205	1	nogas	0.672	54.5	12656	53.3	1	
Pb	208	1	nogas	0.121	11.6	3274	9.8	2.5	
U	238	1	nogas	0.189	32.9	4291	34.1	2.5	
[Pb]	206	1	nogas	0.114	1.4	827	2.5	2.5	
[Pb]	207	1	nogas	0.117	12.9	737	11.7	2.5	
Na	23	2	He	22.456	1.5	95143	2.4	100	
Mg	24	2	He	8.675	2.6	11437	3.4	100	
Al	27	2	He	-0.685	-10.1	867	4.8	5	
K	39	2	He	-7.461	-32.5	213749	1.4	100	
Ca	43	2	He	2.248	634.5	77	60.2	100	
Ca	44	2	He	4.547	46.5	1880	7.0	100	
V	51	2	He	0.052	92.0	8667	2.4	2.5	
Cr	52	2	He	-0.154	-25.5	5914	3.7	2.5	
Mn	55	2	He	-0.101	-25.8	1560	11.9	2.5	
Fe	56	2	He	8.137	1.8	90956	3.0	100	
Co	59	2	He	0.070	9.8	970	9.8	2.5	
Ni	60	2	He	-0.182	-13.0	423	15.7	2.5	
Cu	63	2	He	-0.110	-7.1	2224	1.6	2	
Zn	66	2	He	-0.147	-24.9	713	8.5	2.5	
As	75	2	He	0.063	50.0	547	9.1	2.5	
Se	78	2	He	0.193	62.6	226	7.2	2	
B	11	1	nogas	2.131	52.8	53255	9.1	10	
Si	28	1	nogas	-82.255	-105.4	3083233	1.8	5	
Ca	43	1	nogas	9.200	5.8	1350	2.7	100	
Ca	44	1	nogas	-20.309	-24.7	107151	1.7	100	
Fe	56	1	nogas	9.549	55.9	3708993	3.8	100	
Se	77	1	nogas	-3.437	-229.7	32499	5.0	2.5	
Se	82	1	nogas	0.279	65.0	270	16.1	2	

Continuing Calibration Blank (CCB) Report

Mo	95	1	nogas	0.305	41.8	2047	33.5	2.5	
Sn	118	1	nogas	0.255	30.9	3270	18.6	5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Ba	137	1	nogas	0.112	33.3	903	16.7	2.5	
Sb	121	2	He	0.169	1.5	1320	0.8	2.5	
P	31	1	nogas	5.251	26.6	104678	1.6	10	
La	139	1	nogas	9.409	101.0	130	26.6	2.5	CCB Main CR1 Failed
Au	197	1	nogas	-10.580	-3780.4	20	100.0	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	nogas	1136659	0.61	1118108	101.66	70	125	
Ge	72	1	nogas	3353618	1.31	3396393	98.74	70	125	
In	115	1	nogas	3078991	0.93	3166421	97.24	70	125	
Bi	209	1	nogas	2209346	2.59	2159119	102.33	70	125	
Ge	72	2	He	1129734	1.87	1189986	94.94	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	316_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T22:20:48-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	100.213	1.797	690086	2.73	100	100.2	90	110	
Na	23	1	nogas	9990.652	3.857	240538755	2.57	10000	99.9	90	110	
Mg	24	1	nogas	10312.386	3.286	155584162	3.80	10000	103.1	90	110	
Al	27	1	nogas	106.793	5.885	1947739	4.35	100	106.8	90	110	
K	39	1	nogas	10076.388	3.446	212750480	2.19	10000	100.8	90	110	
Ti	47	1	nogas	99.231	1.079	170216	2.91	100	99.2	90	110	
V	51	1	nogas	103.176	1.386	3041892	2.77	100	103.2	90	110	
Cr	52	1	nogas	100.604	2.249	2089776	0.42	100	100.6	90	110	
Mn	55	1	nogas	102.223	1.909	2576536	1.49	100	102.2	90	110	
Co	59	1	nogas	100.741	1.765	2143960	0.30	100	100.7	90	110	
Ni	60	1	nogas	100.138	3.311	480995	1.65	100	100.1	90	110	
Cu	63	1	nogas	101.868	4.379	1157772	2.52	100	101.9	90	110	
Zn	66	1	nogas	100.597	2.461	387125	1.39	100	100.6	90	110	
As	75	1	nogas	95.603	2.361	602425	1.06	100	95.6	90	110	
Sr	88	1	nogas	98.831	1.609	2643438	1.06	100	98.8	90	110	
Ag	107	1	nogas	100.994	2.350	1301792	4.07	100	101.0	90	110	
Cd	111	1	nogas	100.494	3.411	275948	1.64	100	100.5	90	110	
Sb	121	1	nogas	101.229	4.500	1258114	2.67	100	101.2	90	110	
Tl	205	1	nogas	101.273	4.753	1750249	2.81	100	101.3	90	110	
Pb	208	1	nogas	104.433	1.979	2384602	1.98	100	104.4	90	110	
U	238	1	nogas	106.582	1.549	2294568	0.74	100	106.6	90	110	
[Pb]	206	1	nogas	101.800	4.110	598512	2.99	100	101.8	90	110	
[Pb]	207	1	nogas	100.324	2.807	514002	2.42	100	100.3	90	110	
Na	23	2	He	9924.536	0.894	18569955	0.44	10000	99.2	90	110	
Mg	24	2	He	9893.091	0.906	10378731	0.21	10000	98.9	90	110	
Al	27	2	He	97.594	1.601	61403	1.37	100	97.6	90	110	
K	39	2	He	9574.033	1.809	11871776	1.77	10000	95.7	90	110	
Ca	43	2	He	9416.240	1.735	31734	2.27	10000	94.2	90	110	
Ca	44	2	He	9881.678	2.135	551261	2.47	10000	98.8	90	110	
V	51	2	He	96.622	1.578	755842	1.32	100	96.6	90	110	
Cr	52	2	He	98.377	1.218	823753	1.59	100	98.4	90	110	
Mn	55	2	He	99.099	0.879	600899	1.29	100	99.1	90	110	
Fe	56	2	He	10037.055	1.412	73333172	0.72	10000	100.4	90	110	
Co	59	2	He	98.481	3.498	1108293	2.90	100	98.5	90	110	
Ni	60	2	He	99.672	3.958	279614	3.46	100	99.7	90	110	
Cu	63	2	He	100.369	1.721	702511	1.10	100	100.4	90	110	
Zn	66	2	He	99.167	1.420	166013	1.75	100	99.2	90	110	
As	75	2	He	98.493	1.787	159804	1.53	100	98.5	90	110	
Se	78	2	He	95.886	1.838	12893	1.91	100	95.9	90	110	
B	11	1	nogas	493.126	1.180	2043622	2.00	500	98.6	90	110	
Si	28	1	nogas	4769.024	3.865	8433348	1.37	5000	95.4	90	110	
Ca	43	1	nogas	10153.873	2.571	360647	1.93	10000	101.5	90	110	
Ca	44	1	nogas	9963.711	1.066	5845108	2.90	10000	99.6	90	110	
Fe	56	1	nogas	10217.729	3.412	225014488	2.25	10000	102.2	90	110	
Se	77	1	nogas	89.480	9.671	55572	2.28	100	89.5	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	98.213	1.234	26213	2.48	100	98.2	90	110	
Mo	95	1	nogas	95.730	1.330	510293	1.19	100	95.7	90	110	
Sn	118	1	nogas	98.071	1.449	702699	2.22	100	98.1	90	110	
Ba	137	1	nogas	103.642	5.918	404242	3.01	100	103.6	90	110	
Sb	121	2	He	98.891	1.414	641175	1.72	100	98.9	90	110	
Li	7	1	nogas	100.490	2.710	1470662	2.51	100	100.5	90	110	
P	31	1	nogas	485.191	2.886	948722	1.04	500	97.0	90	110	
La	139	1	nogas	150.750	20.119	613	19.72	100	150.8	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	466.074	65.252	43	35.25	100	466.1	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	nogas	1021243	0.93	1118108	91.34	70	125	
Ge	72	1	nogas	3391016	1.86	3396393	99.84	70	125	
In	115	1	nogas	3016115	2.90	3166421	95.25	70	125	
Bi	209	1	nogas	2178522	2.22	2159119	100.90	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1145187	0.73	1189986	96.24	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	317_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T22:22:48-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	0.053	33.0	637	20.9	1	
Na	23	1	nogas	7.588	21.4	751217	3.7	100	
Mg	24	1	nogas	5.122	24.7	111620	15.4	100	
Al	27	1	nogas	-0.630	-5.5	16995	2.0	5	
K	39	1	nogas	11.731	81.0	9308573	0.4	100	
Ti	47	1	nogas	0.076	37.1	527	7.9	2.5	
V	51	1	nogas	-1.397	-66.1	563973	3.4	2.5	
Cr	52	1	nogas	-0.356	-15.7	53216	0.6	2.5	
Mn	55	1	nogas	-0.205	-2.8	26356	1.8	2.5	
Co	59	1	nogas	0.053	19.2	1957	12.0	2.5	
Ni	60	1	nogas	-0.286	-5.7	940	9.7	2.5	
Cu	63	1	nogas	0.047	72.4	3127	12.3	2	
Zn	66	1	nogas	-0.354	-5.5	1023	7.6	2.5	
As	75	1	nogas	-0.701	-101.5	100043	3.6	2.5	
Sr	88	1	nogas	0.031	14.5	2367	4.1	2.5	
Ag	107	1	nogas	0.042	8.1	733	7.5	2.5	
Cd	111	1	nogas	0.061	71.8	227	55.5	1	
Sb	121	1	nogas	0.173	26.1	2550	21.0	2.5	
Tl	205	1	nogas	0.605	66.9	11422	60.9	1	
Pb	208	1	nogas	0.071	34.1	2140	25.9	2.5	
U	238	1	nogas	0.150	48.9	3444	45.2	2.5	
[Pb]	206	1	nogas	0.064	47.9	530	33.2	2.5	
[Pb]	207	1	nogas	0.075	44.9	517	31.9	2.5	
Na	23	2	He	2.678	59.8	59032	4.3	100	
Mg	24	2	He	2.429	16.8	4997	7.9	100	
Al	27	2	He	-1.325	-8.7	480	14.6	5	
K	39	2	He	-14.956	-7.2	204629	0.6	100	
Ca	43	2	He	-8.934	-59.3	40	43.3	100	
Ca	44	2	He	-6.132	-26.7	1300	6.2	100	
V	51	2	He	-0.026	-87.3	8115	0.9	2.5	
Cr	52	2	He	-0.204	-32.7	5541	8.8	2.5	
Mn	55	2	He	-0.207	-7.7	930	9.7	2.5	
Fe	56	2	He	3.020	19.3	54340	7.0	100	
Co	59	2	He	0.033	20.1	557	13.2	2.5	
Ni	60	2	He	-0.252	-19.0	230	57.5	2.5	
Cu	63	2	He	-0.230	-5.8	1407	7.8	2	
Zn	66	2	He	-0.356	-17.0	370	25.8	2.5	
As	75	2	He	0.017	93.6	476	5.1	2.5	
Se	78	2	He	-0.084	-112.4	191	5.3	2	
B	11	1	nogas	0.169	673.7	44115	10.5	10	
Si	28	1	nogas	-90.753	-45.6	3069462	0.9	5	
Ca	43	1	nogas	-4.272	-48.3	877	8.7	100	
Ca	44	1	nogas	-32.448	-3.0	100110	1.4	100	
Fe	56	1	nogas	1.495	329.2	3529618	2.6	100	
Se	77	1	nogas	-1.329	-337.9	32964	3.2	2.5	
Se	82	1	nogas	0.112	87.6	227	12.7	2	

Continuing Calibration Blank (CCB) Report

Mo	95	1	nogas	0.227	56.8	1630	41.6	2.5	
Sn	118	1	nogas	0.257	51.8	3277	25.5	5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Ba	137	1	nogas	-0.016	-189.0	393	27.2	2.5	
Sb	121	2	He	0.119	10.1	1003	7.1	2.5	
P	31	1	nogas	4.797	28.3	103713	0.7	10	
La	139	1	nogas	-11.618	-9.3	57	10.2	2.5	
Au	197	1	nogas	651.402	79.7	53	47.2	2.5	CCB Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1130560	2.74	1118108	101.11	70	125	
Ge	72	1	nogas	3348205	1.64	3396393	98.58	70	125	
In	115	1	nogas	3098047	3.66	3166421	97.84	70	125	
Bi	209	1	nogas	2226338	3.30	2159119	103.11	70	125	
Ge	72	2	He	1135739	1.25	1189986	95.44	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	327_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T22:42:44-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	0.089	16.1	857	14.7	1	
Na	23	1	nogas	35.394	16.4	1295654	5.2	100	
Mg	24	1	nogas	7.655	19.9	136998	12.2	100	
Al	27	1	nogas	0.995	252.7	42195	96.1	5	
K	39	1	nogas	63.032	25.0	9591475	1.3	100	
Ti	47	1	nogas	0.159	144.8	617	56.7	2.5	
V	51	1	nogas	-2.422	-46.4	501556	5.3	2.5	
Cr	52	1	nogas	-0.300	-20.5	50442	0.5	2.5	
Mn	55	1	nogas	-0.109	-23.7	26666	1.2	2.5	
Co	59	1	nogas	0.078	3.1	2304	2.5	2.5	
Ni	60	1	nogas	-0.199	-9.2	1253	5.6	2.5	
Cu	63	1	nogas	0.300	29.2	5524	15.2	2	
Zn	66	1	nogas	-0.344	-15.2	983	16.9	2.5	
As	75	1	nogas	-0.619	-132.9	93271	4.1	2.5	
Sr	88	1	nogas	0.101	8.8	3917	7.3	2.5	
Ag	107	1	nogas	0.064	31.8	937	24.3	2.5	
Cd	111	1	nogas	0.064	26.0	217	17.5	1	
Sb	121	1	nogas	0.550	5.1	6675	6.3	2.5	
Tl	205	1	nogas	0.695	41.8	11692	40.8	1	
Pb	208	1	nogas	0.079	26.6	2323	20.8	2.5	
U	238	1	nogas	0.160	18.5	3287	19.2	2.5	
[Pb]	206	1	nogas	0.095	30.4	640	24.6	2.5	
[Pb]	207	1	nogas	0.080	24.3	490	20.1	2.5	
Na	23	2	He	22.585	9.5	96801	4.6	100	
Mg	24	2	He	4.406	11.4	7125	8.1	100	
Al	27	2	He	-0.654	-134.5	901	60.8	5	
K	39	2	He	6.924	29.2	231251	1.1	100	
Ca	43	2	He	-5.118	-35.8	53	10.8	100	
Ca	44	2	He	-4.273	-31.3	1417	5.9	100	
V	51	2	He	-0.131	-14.3	7379	1.8	2.5	
Cr	52	2	He	-0.194	-4.7	5678	1.2	2.5	
Mn	55	2	He	-0.183	-8.4	1083	9.2	2.5	
Fe	56	2	He	4.380	5.5	64827	3.4	100	
Co	59	2	He	0.099	90.2	1301	76.2	2.5	
Ni	60	2	He	-0.241	-9.0	263	22.9	2.5	
Cu	63	2	He	-0.104	-46.7	2304	14.6	2	
Zn	66	2	He	-0.399	-10.4	303	21.9	2.5	
As	75	2	He	0.009	98.5	467	3.7	2.5	
Se	78	2	He	-0.159	-77.6	183	8.8	2	
B	11	1	nogas	4.618	44.4	59999	11.2	10	
Si	28	1	nogas	319.892	39.4	3261441	2.3	5	CCB Main CR1 Failed
Ca	43	1	nogas	4.422	160.3	1093	19.3	100	
Ca	44	1	nogas	-12.185	-51.3	103585	1.4	100	
Fe	56	1	nogas	12.480	23.1	3495780	2.0	100	
Se	77	1	nogas	-5.478	-131.1	29675	5.3	2.5	
Se	82	1	nogas	0.470	53.2	297	19.2	2	

Continuing Calibration Blank (CCB) Report

Mo	95	1	nogas	0.340	29.1	2063	22.5	2.5	
Sn	118	1	nogas	0.322	14.6	3480	7.1	5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Ba	137	1	nogas	0.027	18.0	523	1.1	2.5	
Sb	121	2	He	0.430	7.4	3034	7.0	2.5	
P	31	1	nogas	9.017	12.7	103093	0.8	10	
La	139	1	nogas	-6.133	-85.4	70	24.7	2.5	
Au	197	1	nogas	555.922	103.1	43	58.1	2.5	CCB Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1060079	3.39	1118108	94.81	70	125	
Ge	72	1	nogas	3108690	1.81	3396393	91.53	70	125	
In	115	1	nogas	2855647	2.97	3166421	90.19	70	125	
Bi	209	1	nogas	1985683	1.50	2159119	91.97	70	125	
Ge	72	2	He	1146487	0.71	1189986	96.34	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	329_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T22:47:49-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	96.973	1.909	681280	2.43	100	97.0	90	110	
Na	23	1	nogas	10232.894	4.055	228941513	0.85	10000	102.3	90	110	
Mg	24	1	nogas	10680.283	3.513	149701958	0.70	10000	106.8	90	110	
Al	27	1	nogas	103.687	2.972	1870117	0.33	100	103.7	90	110	
K	39	1	nogas	10203.661	3.512	212784205	1.71	10000	102.0	90	110	
Ti	47	1	nogas	99.499	2.469	168626	2.09	100	99.5	90	110	
V	51	1	nogas	99.787	3.872	2925601	0.45	100	99.8	90	110	
Cr	52	1	nogas	101.752	4.464	2087282	1.25	100	101.8	90	110	
Mn	55	1	nogas	102.263	3.379	2546512	0.55	100	102.3	90	110	
Co	59	1	nogas	103.183	2.317	2170241	1.76	100	103.2	90	110	
Ni	60	1	nogas	101.499	3.522	481738	0.91	100	101.5	90	110	
Cu	63	1	nogas	101.392	2.634	1139135	1.04	100	101.4	90	110	
Zn	66	1	nogas	101.039	1.986	384298	1.61	100	101.0	90	110	
As	75	1	nogas	99.849	3.096	617146	0.99	100	99.8	90	110	
Sr	88	1	nogas	100.220	3.544	2648231	0.66	100	100.2	90	110	
Ag	107	1	nogas	104.406	1.972	1329447	1.47	100	104.4	90	110	
Cd	111	1	nogas	104.303	2.074	283538	0.99	100	104.3	90	110	
Sb	121	1	nogas	101.752	3.979	1249716	0.86	100	101.8	90	110	
Tl	205	1	nogas	101.427	8.319	1702340	3.20	100	101.4	90	110	
Pb	208	1	nogas	104.149	1.287	2378128	1.29	100	104.1	90	110	
U	238	1	nogas	111.041	3.914	2325190	4.24	100	111.0	90	110	CCV Main CR1-2 Failed
[Pb]	206	1	nogas	102.819	7.620	586991	1.88	100	102.8	90	110	
[Pb]	207	1	nogas	103.914	7.768	516845	2.18	100	103.9	90	110	
Na	23	2	He	9886.342	0.552	18301841	0.58	10000	98.9	90	110	
Mg	24	2	He	9983.728	0.530	10362768	1.18	10000	99.8	90	110	
Al	27	2	He	101.077	1.103	62874	1.61	100	101.1	90	110	
K	39	2	He	9929.403	0.544	12304162	0.53	10000	99.3	90	110	
Ca	43	2	He	10004.720	1.187	33353	1.86	10000	100.0	90	110	
Ca	44	2	He	10120.019	0.636	558485	1.14	10000	101.2	90	110	
V	51	2	He	100.968	1.000	781073	1.17	100	101.0	90	110	
Cr	52	2	He	100.417	2.059	831648	1.57	100	100.4	90	110	
Mn	55	2	He	101.650	2.994	609681	2.64	100	101.6	90	110	
Fe	56	2	He	10123.778	2.304	73177429	1.92	10000	101.2	90	110	
Co	59	2	He	102.173	1.268	1137690	0.85	100	102.2	90	110	
Ni	60	2	He	103.963	0.779	288539	0.94	100	104.0	90	110	
Cu	63	2	He	104.419	0.876	722980	0.73	100	104.4	90	110	
Zn	66	2	He	102.635	0.854	169956	1.38	100	102.6	90	110	
As	75	2	He	102.213	1.063	164053	0.50	100	102.2	90	110	
Se	78	2	He	101.380	1.498	13474	1.06	100	101.4	90	110	
B	11	1	nogas	477.850	3.503	2020817	1.03	500	95.6	90	110	
Si	28	1	nogas	5047.704	5.718	8633740	0.50	5000	101.0	90	110	
Ca	43	1	nogas	10202.026	2.578	358108	1.89	10000	102.0	90	110	
Ca	44	1	nogas	9808.907	2.387	5686925	1.74	10000	98.1	90	110	
Fe	56	1	nogas	10320.344	3.675	224526280	0.52	10000	103.2	90	110	
Se	77	1	nogas	85.550	8.290	53984	2.74	100	85.5	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	101.904	2.642	26864	1.41	100	101.9	90	110	
Mo	95	1	nogas	98.644	3.630	519480	1.62	100	98.6	90	110	
Sn	118	1	nogas	100.116	1.969	709862	0.64	100	100.1	90	110	
Ba	137	1	nogas	105.249	1.773	406737	2.89	100	105.2	90	110	
Sb	121	2	He	105.513	1.322	676798	1.56	100	105.5	90	110	
Li	7	1	nogas	100.001	3.965	1493508	3.39	100	100.0	90	110	
P	31	1	nogas	492.105	3.760	949514	1.68	500	98.4	90	110	
La	139	1	nogas	137.386	2.033	560	3.57	100	137.4	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	294.149	123.589	33	45.83	100	294.1	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	nogas	1042462	3.94	1118108	93.23	70	125	
Ge	72	1	nogas	3352046	3.18	3396393	98.69	70	125	
In	115	1	nogas	2984897	1.95	3166421	94.27	70	125	
Bi	209	1	nogas	2120533	5.59	2159119	98.21	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1132975	0.71	1189986	95.21	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	339_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T23:07:32-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	106.777	12.612	807001	1.50	100	106.8	90	110	
Na	23	1	nogas	11097.102	12.256	291707040	1.17	10000	111.0	90	110	CCV Main CR1-2 Failed
Mg	24	1	nogas	11052.733	13.641	181826987	2.34	10000	110.5	90	110	CCV Main CR1-2 Failed
Al	27	1	nogas	111.836	12.563	2308108	2.61	100	111.8	90	110	CCV Main CR1-2 Failed
K	39	1	nogas	10770.566	8.707	257389797	2.50	10000	107.7	90	110	
Ti	47	1	nogas	105.936	11.219	205722	0.89	100	105.9	90	110	
V	51	1	nogas	118.689	14.102	3858634	1.89	100	118.7	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	107.002	12.459	2511724	1.81	100	107.0	90	110	
Mn	55	1	nogas	109.444	12.112	3120142	1.67	100	109.4	90	110	
Co	59	1	nogas	112.285	11.197	2706559	1.37	100	112.3	90	110	CCV Main CR1-2 Failed
Ni	60	1	nogas	110.801	10.735	602842	0.63	100	110.8	90	110	CCV Main CR1-2 Failed
Cu	63	1	nogas	110.034	10.901	1417020	1.32	100	110.0	90	110	CCV Main CR1-2 Failed
Zn	66	1	nogas	108.047	11.710	470650	2.12	100	108.0	90	110	
As	75	1	nogas	110.358	12.784	769550	2.02	100	110.4	90	110	CCV Main CR1-2 Failed
Sr	88	1	nogas	110.021	11.683	3331717	1.30	100	110.0	90	110	CCV Main CR1-2 Failed
Ag	107	1	nogas	108.918	14.160	1586387	4.14	100	108.9	90	110	
Cd	111	1	nogas	110.405	14.805	352527	3.04	100	110.4	90	110	CCV Main CR1-2 Failed
Sb	121	1	nogas	109.189	10.550	1538327	1.41	100	109.2	90	110	
Tl	205	1	nogas	114.833	16.566	2128710	3.55	100	114.8	90	110	CCV Main CR1-2 Failed
Pb	208	1	nogas	128.012	1.601	2922887	1.60	100	128.0	90	110	CCV Main CR1-2 Failed
U	238	1	nogas	119.683	14.343	2768723	0.49	100	119.7	90	110	CCV Main CR1-2 Failed
[Pb]	206	1	nogas	115.252	16.141	726936	2.80	100	115.3	90	110	CCV Main CR1-2 Failed
[Pb]	207	1	nogas	114.398	14.500	629674	0.71	100	114.4	90	110	CCV Main CR1-2 Failed
Na	23	2	He	10147.585	2.272	22396617	1.87	10000	101.5	90	110	
Mg	24	2	He	9808.598	1.356	12138869	0.86	10000	98.1	90	110	
Al	27	2	He	97.813	2.414	72595	2.34	100	97.8	90	110	
K	39	2	He	11556.491	1.200	14283878	1.18	10000	115.6	90	110	CCV Main CR1-2 Failed
Ca	43	2	He	9851.025	2.059	39155	1.35	10000	98.5	90	110	
Ca	44	2	He	9929.514	2.006	653389	1.70	10000	99.3	90	110	
V	51	2	He	100.971	0.968	931341	0.50	100	101.0	90	110	
Cr	52	2	He	101.102	2.453	998347	1.99	100	101.1	90	110	
Mn	55	2	He	100.931	2.571	721911	2.59	100	100.9	90	110	
Fe	56	2	He	10154.344	3.081	87522175	2.96	10000	101.5	90	110	
Co	59	2	He	101.797	2.038	1351716	2.55	100	101.8	90	110	
Ni	60	2	He	103.581	0.647	342783	0.10	100	103.6	90	110	
Cu	63	2	He	105.184	2.057	868304	1.33	100	105.2	90	110	
Zn	66	2	He	103.940	1.950	205194	1.40	100	103.9	90	110	
As	75	2	He	102.454	0.875	196078	0.28	100	102.5	90	110	
Se	78	2	He	103.971	2.307	16471	2.49	100	104.0	90	110	
B	11	1	nogas	545.165	11.570	2477654	2.23	500	109.0	90	110	
Si	28	1	nogas	6053.276	44.752	11008871	19.18	5000	121.1	90	110	CCV Main CR1-2 Failed
Ca	43	1	nogas	11031.305	13.297	443086	3.06	10000	110.3	90	110	CCV Main CR1-2 Failed
Ca	44	1	nogas	10769.038	13.183	7133973	2.53	10000	107.7	90	110	
Fe	56	1	nogas	10693.060	10.987	266629014	1.07	10000	106.9	90	110	
Se	77	1	nogas	126.644	22.369	73284	2.79	100	126.6	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	108.530	9.165	32823	1.88	100	108.5	90	110	
Mo	95	1	nogas	110.031	9.385	665009	1.15	100	110.0	90	110	CCV Main CR1-2 Failed
Sn	118	1	nogas	106.786	12.826	890834	1.07	100	106.8	90	110	
Ba	137	1	nogas	108.091	14.592	490604	3.16	100	108.1	90	110	
Sb	121	2	He	104.505	1.137	799250	0.42	100	104.5	90	110	
Li	7	1	nogas	110.536	14.154	1765439	2.93	100	110.5	90	110	CCV Main CR1-2 Failed
P	31	1	nogas	535.963	11.770	1176078	0.77	500	107.2	90	110	
La	139	1	nogas	178.509	20.102	837	26.48	100	178.5	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	387.947	53.216	43	35.25	100	387.9	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	nogas	1131622	11.23	1118108	101.21	70	125	
Ge	72	1	nogas	3868365	9.82	3396393	113.90	70	125	
In	115	1	nogas	3548100	12.23	3166421	112.05	70	125	
Bi	209	1	nogas	2372635	14.27	2159119	109.89	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1350949	0.72	1189986	113.53	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	340_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T23:09:31-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	0.077	23.6	877	19.4	1	
Na	23	1	nogas	91.294	5.9	3203718	4.0	100	
Mg	24	1	nogas	22.853	116.0	440011	105.4	100	
Al	27	1	nogas	-0.273	-215.1	27869	42.7	5	
K	39	1	nogas	29.893	45.8	11605451	0.9	100	
Ti	47	1	nogas	0.091	77.5	663	20.5	2.5	
V	51	1	nogas	4.144	13.9	832326	3.8	2.5	CCB Main CR1 Failed
Cr	52	1	nogas	-0.077	-18.3	70554	1.5	2.5	
Mn	55	1	nogas	-0.284	-5.1	29310	1.6	2.5	
Co	59	1	nogas	0.047	26.4	2193	12.6	2.5	
Ni	60	1	nogas	-0.035	-145.4	2547	9.3	2.5	
Cu	63	1	nogas	0.979	25.4	16238	18.6	2	
Zn	66	1	nogas	-0.231	-16.3	1790	10.9	2.5	
As	75	1	nogas	0.446	42.0	127164	2.3	2.5	
Sr	88	1	nogas	0.181	4.3	7595	4.4	2.5	
Ag	107	1	nogas	0.046	18.5	940	11.8	2.5	
Cd	111	1	nogas	0.059	38.9	270	30.3	1	
Sb	121	1	nogas	0.196	13.1	3397	10.2	2.5	
Tl	205	1	nogas	0.642	54.8	14358	52.9	1	
Pb	208	1	nogas	0.091	9.6	2583	7.7	2.5	
U	238	1	nogas	0.132	38.5	3607	38.1	2.5	
[Pb]	206	1	nogas	0.069	5.1	663	5.7	2.5	
[Pb]	207	1	nogas	0.069	23.5	573	15.6	2.5	
Na	23	2	He	66.788	4.8	218288	2.6	100	
Mg	24	2	He	4.623	10.3	8942	5.4	100	
Al	27	2	He	-1.241	-10.6	653	15.3	5	
K	39	2	He	28.897	1.0	257986	0.1	100	
Ca	43	2	He	4.303	126.3	103	20.1	100	
Ca	44	2	He	7.496	43.9	2520	7.8	100	
V	51	2	He	0.210	11.2	12195	0.4	2.5	
Cr	52	2	He	-0.212	-3.0	6725	1.5	2.5	
Mn	55	2	He	-0.196	-12.8	1227	16.5	2.5	
Fe	56	2	He	3.650	14.2	72388	5.7	100	
Co	59	2	He	0.036	7.3	727	3.5	2.5	
Ni	60	2	He	-0.219	-5.9	397	12.7	2.5	
Cu	63	2	He	0.179	6.9	5208	3.1	2	
Zn	66	2	He	-0.338	-13.8	493	19.5	2.5	
As	75	2	He	-0.013	-96.8	526	3.8	2.5	
Se	78	2	He	-0.005	-6047.9	247	20.1	2	
B	11	1	nogas	1.192	26.6	52099	4.0	10	
Si	28	1	nogas	-503.908	-14.5	3146659	1.1	5	
Ca	43	1	nogas	12.489	37.2	1753	9.4	100	
Ca	44	1	nogas	-35.021	-15.3	118368	2.0	100	
Fe	56	1	nogas	13.630	39.2	4547106	1.4	100	
Se	77	1	nogas	0.451	1056.6	40095	4.8	2.5	
Se	82	1	nogas	0.001	14925.4	237	12.9	2	
Mo	95	1	nogas	0.901	21.5	6195	17.8	2.5	
Sn	118	1	nogas	0.213	44.5	3594	21.8	5	
Ba	137	1	nogas	0.038	48.8	740	10.7	2.5	

Continuing Calibration Blank (CCB) Report

Sb	121	2	He	0.125	14.7	1283	11.9	2.5	
P	31	1	nogas	8.867	14.7	132947	0.5	10	
La	139	1	nogas	-14.386	-46.9	57	50.9	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Au	197	1	nogas	90.963	317.6	30	57.7	2.5	CCB Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1208004	2.88	1118108	108.04	70	125	
Ge	72	1	nogas	4018562	1.95	3396393	118.32	70	125	
In	115	1	nogas	3746906	1.54	3166421	118.33	70	125	
Bi	209	1	nogas	2627176	2.33	2159119	121.68	70	125	
Ge	72	2	He	1395681	1.56	1189986	117.29	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	350_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T23:29:04-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	99.570	2.088	796412	1.30	100	99.6	90	110	
Na	23	1	nogas	9591.486	2.827	273205998	1.72	10000	95.9	90	110	
Mg	24	1	nogas	9711.585	0.972	173290433	0.99	10000	97.1	90	110	
Al	27	1	nogas	101.501	3.067	2173427	3.80	100	101.5	90	110	
K	39	1	nogas	10251.203	2.435	253575689	0.85	10000	102.5	90	110	
Ti	47	1	nogas	100.295	2.455	201646	2.52	100	100.3	90	110	
V	51	1	nogas	103.521	5.057	3574261	3.16	100	103.5	90	110	
Cr	52	1	nogas	101.507	7.010	2470077	5.19	100	101.5	90	110	
Mn	55	1	nogas	104.384	6.242	3082355	4.86	100	104.4	90	110	
Co	59	1	nogas	101.589	3.320	2534080	1.10	100	101.6	90	110	
Ni	60	1	nogas	102.871	4.568	579086	2.37	100	102.9	90	110	
Cu	63	1	nogas	105.000	2.982	1399190	0.88	100	105.0	90	110	
Zn	66	1	nogas	101.294	2.185	456987	1.06	100	101.3	90	110	
As	75	1	nogas	101.050	3.664	739384	1.42	100	101.1	90	110	
Sr	88	1	nogas	102.191	1.223	3204509	1.10	100	102.2	90	110	
Ag	107	1	nogas	103.479	3.836	1562577	1.87	100	103.5	90	110	
Cd	111	1	nogas	104.482	2.208	339184	1.85	100	104.5	90	110	
Sb	121	1	nogas	107.518	1.370	1567402	2.09	100	107.5	90	110	
Tl	205	1	nogas	104.118	3.231	2077019	2.72	100	104.1	90	110	
Pb	208	1	nogas	124.083	0.248	2833208	0.25	100	124.1	90	110	CCV Main CR1-2 Failed
U	238	1	nogas	111.798	3.324	2776870	2.55	100	111.8	90	110	CCV Main CR1-2 Failed
[Pb]	206	1	nogas	104.647	0.952	710060	0.17	100	104.6	90	110	
[Pb]	207	1	nogas	102.976	1.865	608752	1.21	100	103.0	90	110	
Na	23	2	He	9315.504	1.645	21618214	0.43	10000	93.2	90	110	
Mg	24	2	He	9243.573	0.658	12026642	1.25	10000	92.4	90	110	
Al	27	2	He	93.327	4.167	72863	2.53	100	93.3	90	110	
K	39	2	He	11531.417	1.121	14253370	1.10	10000	115.3	90	110	CCV Main CR1-2 Failed
Ca	43	2	He	9219.603	2.799	38527	2.16	10000	92.2	90	110	
Ca	44	2	He	9421.036	1.729	651752	0.45	10000	94.2	90	110	
V	51	2	He	94.239	2.156	914387	1.20	100	94.2	90	110	
Cr	52	2	He	93.955	2.027	975882	0.74	100	94.0	90	110	
Mn	55	2	He	95.064	2.632	714795	1.18	100	95.1	90	110	
Fe	56	2	He	9523.691	2.117	86283399	0.53	10000	95.2	90	110	
Co	59	2	He	94.746	1.526	1322548	2.18	100	94.7	90	110	
Ni	60	2	He	96.683	2.887	336413	2.68	100	96.7	90	110	
Cu	63	2	He	98.128	2.181	851803	1.57	100	98.1	90	110	
Zn	66	2	He	98.396	0.673	204298	1.94	100	98.4	90	110	
As	75	2	He	97.672	2.409	196498	0.89	100	97.7	90	110	
Se	78	2	He	97.290	2.600	16215	0.98	100	97.3	90	110	
B	11	1	nogas	490.973	4.374	2362823	2.18	500	98.2	90	110	
Si	28	1	nogas	4668.054	4.217	9757269	1.65	5000	93.4	90	110	
Ca	43	1	nogas	10297.046	3.151	428769	2.75	10000	103.0	90	110	
Ca	44	1	nogas	10111.583	2.220	6950257	1.81	10000	101.1	90	110	
Fe	56	1	nogas	10390.836	5.841	268123673	4.32	10000	103.9	90	110	
Se	77	1	nogas	90.094	11.977	65310	2.46	100	90.1	90	110	
Se	82	1	nogas	106.457	2.472	33281	1.22	100	106.5	90	110	
Mo	95	1	nogas	99.000	1.965	618624	1.00	100	99.0	90	110	
Sn	118	1	nogas	99.775	1.278	844914	1.56	100	99.8	90	110	
Ba	137	1	nogas	105.870	1.243	488464	0.93	100	105.9	90	110	
Sb	121	2	He	101.330	2.487	814557	1.02	100	101.3	90	110	
Li	7	1	nogas	103.294	2.234	1753292	1.56	100	103.3	90	110	
P	31	1	nogas	508.793	5.217	1161034	4.57	500	101.8	90	110	
La	139	1	nogas	127.049	2.563	627	2.44	100	127.0	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	-179.073	-151.630	13	114.56	100	-179.1	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	nogas	1186832	3.15	1118108	106.15	70	125	
Ge	72	1	nogas	3975796	2.34	3396393	117.06	70	125	
In	115	1	nogas	3563934	0.36	3166421	112.55	70	125	
Bi	209	1	nogas	2513303	0.82	2159119	116.40	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1420244	1.60	1189986	119.35	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	351_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T23:31:02-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	0.100	31.6	1100	23.7	1	
Na	23	1	nogas	66.171	8.5	2476278	5.2	100	
Mg	24	1	nogas	10.204	29.6	215904	22.7	100	
Al	27	1	nogas	-0.561	-7.2	21854	3.5	5	
K	39	1	nogas	-0.364	-3283.4	10868386	1.1	100	
Ti	47	1	nogas	0.095	50.7	670	13.3	2.5	
V	51	1	nogas	-1.676	-35.5	668368	2.9	2.5	
Cr	52	1	nogas	-0.359	-26.6	63706	2.4	2.5	
Mn	55	1	nogas	-0.231	-28.0	30809	4.8	2.5	
Co	59	1	nogas	0.076	34.2	2910	21.1	2.5	
Ni	60	1	nogas	-0.059	-62.5	2407	7.7	2.5	
Cu	63	1	nogas	0.438	31.5	8989	19.5	2	
Zn	66	1	nogas	-0.329	-18.4	1340	19.4	2.5	
As	75	1	nogas	-2.345	-22.1	109788	2.5	2.5	
Sr	88	1	nogas	0.074	29.8	4194	15.4	2.5	
Ag	107	1	nogas	0.064	21.9	1213	16.2	2.5	
Cd	111	1	nogas	0.090	17.0	373	12.1	1	
Sb	121	1	nogas	0.630	12.0	9773	10.3	2.5	
Tl	205	1	nogas	0.754	52.4	16283	51.8	1	
Pb	208	1	nogas	0.108	31.3	2980	25.9	2.5	
U	238	1	nogas	0.147	44.6	3911	44.7	2.5	
[Pb]	206	1	nogas	0.077	20.3	700	17.6	2.5	
[Pb]	207	1	nogas	0.107	36.2	790	31.8	2.5	
Na	23	2	He	44.423	8.1	165874	2.9	100	
Mg	24	2	He	4.109	7.2	8215	4.5	100	
Al	27	2	He	-1.051	-7.7	790	10.8	5	
K	39	2	He	14.045	16.8	239915	1.2	100	
Ca	43	2	He	4.450	112.8	103	20.1	100	
Ca	44	2	He	1.027	92.1	2067	6.6	100	
V	51	2	He	-0.026	-90.6	9886	2.7	2.5	
Cr	52	2	He	-0.268	-2.5	6111	2.7	2.5	
Mn	55	2	He	-0.164	-20.0	1447	14.8	2.5	
Fe	56	2	He	4.369	14.5	78045	5.5	100	
Co	59	2	He	0.049	18.1	897	11.0	2.5	
Ni	60	2	He	-0.216	-10.1	400	17.5	2.5	
Cu	63	2	He	-0.068	-23.3	3084	4.6	2	
Zn	66	2	He	-0.317	-16.1	530	16.8	2.5	
As	75	2	He	-0.018	-106.6	511	9.7	2.5	
Se	78	2	He	-0.234	-47.7	208	5.8	2	
B	11	1	nogas	1.287	66.4	54382	6.8	10	
Si	28	1	nogas	-464.509	-12.6	3194539	1.9	5	
Ca	43	1	nogas	118.205	151.9	6259	122.8	100	CCB Main CR1 Failed
Ca	44	1	nogas	-43.144	-14.5	112687	2.2	100	
Fe	56	1	nogas	-7.105	-106.0	4008925	3.3	100	
Se	77	1	nogas	-15.013	-35.8	35552	4.1	2.5	
Se	82	1	nogas	-0.137	-73.9	193	15.8	2	
Mo	95	1	nogas	0.382	31.2	2927	24.5	2.5	
Sn	118	1	nogas	0.283	33.2	4214	18.1	5	
Ba	137	1	nogas	0.003	1142.6	570	26.0	2.5	

Continuing Calibration Blank (CCB) Report

Sb	121	2	He	0.546	8.8	4561	7.8	2.5	
P	31	1	nogas	6.374	15.1	127608	0.1	10	
La	139	1	nogas	-5.024	-103.3	97	23.9	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Au	197	1	nogas	158.571	242.0	33	69.3	2.5	CCB Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1250742	2.19	1118108	111.86	70	125	
Ge	72	1	nogas	4013510	1.66	3396393	118.17	70	125	
In	115	1	nogas	3746751	2.14	3166421	118.33	70	125	
Bi	209	1	nogas	2554870	2.33	2159119	118.33	70	125	
Ge	72	2	He	1383631	3.76	1189986	116.27	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	362_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T23:52:46-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	99.164	3.211	812200	1.92	100	99.2	90	110	
Na	23	1	nogas	10267.875	3.027	277980990	2.46	10000	102.7	90	110	
Mg	24	1	nogas	10394.068	0.619	176302646	1.45	10000	103.9	90	110	
Al	27	1	nogas	105.472	1.931	2176232	2.43	100	105.5	90	110	
K	39	1	nogas	10117.880	2.233	241509047	2.23	10000	101.2	90	110	
Ti	47	1	nogas	103.192	2.057	200031	1.80	100	103.2	90	110	
V	51	1	nogas	114.413	3.231	3737998	2.52	100	114.4	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	102.280	2.441	2400938	2.23	100	102.3	90	110	
Mn	55	1	nogas	102.174	2.191	2911441	2.15	100	102.2	90	110	
Co	59	1	nogas	102.466	1.287	2465313	0.73	100	102.5	90	110	
Ni	60	1	nogas	103.358	1.306	561304	1.30	100	103.4	90	110	
Cu	63	1	nogas	103.687	1.297	1332690	1.17	100	103.7	90	110	
Zn	66	1	nogas	102.286	1.579	444975	0.99	100	102.3	90	110	
As	75	1	nogas	102.840	1.678	723693	1.82	100	102.8	90	110	
Sr	88	1	nogas	102.636	2.709	3103199	2.20	100	102.6	90	110	
Ag	107	1	nogas	100.632	1.447	1465940	2.05	100	100.6	90	110	
Cd	111	1	nogas	102.952	2.251	322850	0.06	100	103.0	90	110	
Sb	121	1	nogas	104.000	0.761	1461881	1.34	100	104.0	90	110	
Tl	205	1	nogas	103.233	3.217	2018237	1.04	100	103.2	90	110	
Pb	208	1	nogas	120.568	1.583	2752966	1.58	100	120.6	90	110	CCV Main CR1-2 Failed
U	238	1	nogas	108.853	4.497	2649137	1.73	100	108.9	90	110	
[Pb]	206	1	nogas	103.885	2.874	690795	0.47	100	103.9	90	110	
[Pb]	207	1	nogas	103.256	4.066	598075	1.12	100	103.3	90	110	
Na	23	2	He	9763.152	0.727	20528010	0.68	10000	97.6	90	110	
Mg	24	2	He	9676.989	0.494	11407557	0.44	10000	96.8	90	110	
Al	27	2	He	97.816	1.179	69149	1.14	100	97.8	90	110	
K	39	2	He	11022.359	2.203	13633988	2.17	10000	110.2	90	110	CCV Main CR1-2 Failed
Ca	43	2	He	9719.431	3.248	36800	3.13	10000	97.2	90	110	
Ca	44	2	He	9934.975	0.897	622717	0.92	10000	99.3	90	110	
V	51	2	He	99.495	0.886	874287	0.96	100	99.5	90	110	
Cr	52	2	He	99.036	1.252	931720	1.25	100	99.0	90	110	
Mn	55	2	He	101.389	0.735	690721	0.69	100	101.4	90	110	
Fe	56	2	He	10075.935	1.937	82722370	1.85	10000	100.8	90	110	
Co	59	2	He	102.486	3.252	1296133	3.28	100	102.5	90	110	
Ni	60	2	He	101.702	1.060	320597	0.97	100	101.7	90	110	
Cu	63	2	He	102.974	0.888	809810	0.77	100	103.0	90	110	
Zn	66	2	He	101.593	0.731	191069	0.67	100	101.6	90	110	
As	75	2	He	101.181	0.785	184453	0.68	100	101.2	90	110	
Se	78	2	He	102.124	0.814	15414	0.80	100	102.1	90	110	
B	11	1	nogas	494.233	3.419	2435903	1.27	500	98.8	90	110	
Si	28	1	nogas	4808.788	0.755	9584087	0.34	5000	96.2	90	110	
Ca	43	1	nogas	10290.364	2.359	413246	2.91	10000	102.9	90	110	
Ca	44	1	nogas	10049.989	3.761	6663164	4.27	10000	100.5	90	110	
Fe	56	1	nogas	10212.984	2.111	254301931	1.91	10000	102.1	90	110	
Se	77	1	nogas	112.371	8.487	69174	4.12	100	112.4	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	103.043	2.571	31074	2.47	100	103.0	90	110	
Mo	95	1	nogas	100.594	1.818	606127	1.26	100	100.6	90	110	
Sn	118	1	nogas	99.885	2.434	817181	2.70	100	99.9	90	110	
Ba	137	1	nogas	104.916	1.878	467733	2.82	100	104.9	90	110	
Sb	121	2	He	103.958	0.627	757322	0.51	100	104.0	90	110	
Li	7	1	nogas	101.395	3.411	1764448	2.62	100	101.4	90	110	
P	31	1	nogas	518.693	0.887	1139205	0.21	500	103.7	90	110	
La	139	1	nogas	124.688	6.909	597	7.56	100	124.7	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	-237.187	-73.407	10	100.00	100	-237.2	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	nogas	1215471	3.20	1118108	108.71	70	125	
Ge	72	1	nogas	3833046	0.60	3396393	112.86	70	125	
In	115	1	nogas	3443670	2.21	3166421	108.76	70	125	
Bi	209	1	nogas	2464423	3.23	2159119	114.14	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1286756	0.11	1189986	108.13	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	363_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-09T23:54:46-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	0.075	15.2	920	10.0	1	
Na	23	1	nogas	59.257	11.1	2251309	5.9	100	
Mg	24	1	nogas	6.143	20.8	143814	12.9	100	
Al	27	1	nogas	-0.590	-12.4	20318	4.5	5	
K	39	1	nogas	15.409	90.2	10769915	0.2	100	
Ti	47	1	nogas	0.090	64.8	633	18.2	2.5	
V	51	1	nogas	1.615	67.6	728193	3.8	2.5	
Cr	52	1	nogas	-0.102	-78.1	66890	0.6	2.5	
Mn	55	1	nogas	-0.204	-17.3	30272	0.9	2.5	
Co	59	1	nogas	0.057	28.3	2334	16.6	2.5	
Ni	60	1	nogas	-0.052	-19.9	2347	4.7	2.5	
Cu	63	1	nogas	0.350	30.5	7462	15.9	2	
Zn	66	1	nogas	-0.316	-8.4	1340	6.4	2.5	
As	75	1	nogas	0.611	151.7	122580	3.7	2.5	
Sr	88	1	nogas	0.060	21.8	3584	8.9	2.5	
Ag	107	1	nogas	0.048	29.2	930	19.9	2.5	
Cd	111	1	nogas	0.039	54.2	190	36.8	1	
Sb	121	1	nogas	0.190	24.3	3167	18.5	2.5	
Tl	205	1	nogas	0.724	59.5	15413	57.7	1	
Pb	208	1	nogas	0.095	18.3	2670	14.8	2.5	
U	238	1	nogas	0.138	38.0	3627	37.8	2.5	
[Pb]	206	1	nogas	0.071	22.5	653	17.9	2.5	
[Pb]	207	1	nogas	0.071	5.9	567	5.7	2.5	
Na	23	2	He	49.073	2.3	165067	0.9	100	
Mg	24	2	He	3.200	5.5	6608	2.4	100	
Al	27	2	He	-1.117	-30.2	693	34.7	5	
K	39	2	He	7.531	52.5	231990	2.1	100	
Ca	43	2	He	-3.421	-44.7	67	8.7	100	
Ca	44	2	He	-2.910	-105.8	1683	11.0	100	
V	51	2	He	0.066	69.0	10051	4.0	2.5	
Cr	52	2	He	-0.236	-10.9	6011	4.7	2.5	
Mn	55	2	He	-0.138	-4.4	1533	2.9	2.5	
Fe	56	2	He	3.361	10.3	64750	4.6	100	
Co	59	2	He	0.036	14.7	677	9.8	2.5	
Ni	60	2	He	-0.243	-5.7	290	15.0	2.5	
Cu	63	2	He	-0.128	-12.9	2410	4.7	2	
Zn	66	2	He	-0.293	-22.4	543	23.5	2.5	
As	75	2	He	0.009	249.2	527	7.8	2.5	
Se	78	2	He	-0.079	-243.6	218	12.3	2	
B	11	1	nogas	-0.593	-148.5	46507	8.7	10	
Si	28	1	nogas	-395.443	-28.8	3143986	2.0	5	
Ca	43	1	nogas	2.905	90.9	1297	11.1	100	
Ca	44	1	nogas	-47.502	-12.1	105087	0.8	100	
Fe	56	1	nogas	4.153	167.0	4116333	2.1	100	
Se	77	1	nogas	3.776	241.5	39259	6.2	2.5	CCB Main CR1 Failed
Se	82	1	nogas	-0.022	-1430.7	220	43.4	2	
Mo	95	1	nogas	0.255	51.9	2033	37.1	2.5	
Sn	118	1	nogas	0.181	45.0	3150	21.4	5	
Ba	137	1	nogas	0.010	98.7	577	6.6	2.5	

Continuing Calibration Blank (CCB) Report

Sb	121	2	He	0.153	8.5	1390	6.9	2.5	
P	31	1	nogas	11.684	13.1	132802	2.0	10	CCB Main CR1 Failed
La	139	1	nogas	-11.198	-34.7	67	22.9	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Au	197	1	nogas	584.523	34.7	57	20.4	2.5	CCB Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1291863	1.99	1118108	115.54	70	125	
Ge	72	1	nogas	3845084	3.16	3396393	113.21	70	125	
In	115	1	nogas	3560316	2.86	3166421	112.44	70	125	
Bi	209	1	nogas	2516914	1.82	2159119	116.57	70	125	
Ge	72	2	He	1293958	0.87	1189986	108.74	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	374_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-10T00:16:31-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	96.531	3.865	800431	0.98	100	96.5	90	110	
Na	23	1	nogas	10097.510	0.723	267885756	2.28	10000	101.0	90	110	
Mg	24	1	nogas	10251.142	1.206	170325937	0.72	10000	102.5	90	110	
Al	27	1	nogas	102.180	5.095	2103016	3.82	100	102.2	90	110	
K	39	1	nogas	10116.051	1.777	240829530	0.92	10000	101.2	90	110	
Ti	47	1	nogas	99.843	2.210	193037	0.73	100	99.8	90	110	
V	51	1	nogas	109.866	3.532	3606659	1.44	100	109.9	90	110	
Cr	52	1	nogas	102.134	0.890	2391665	1.56	100	102.1	90	110	
Mn	55	1	nogas	101.166	0.823	2875841	1.55	100	101.2	90	110	
Co	59	1	nogas	100.698	3.269	2416323	2.52	100	100.7	90	110	
Ni	60	1	nogas	101.500	4.155	549744	3.35	100	101.5	90	110	
Cu	63	1	nogas	100.370	3.018	1286701	2.26	100	100.4	90	110	
Zn	66	1	nogas	99.834	1.957	433256	1.38	100	99.8	90	110	
As	75	1	nogas	102.220	1.885	718159	1.40	100	102.2	90	110	
Sr	88	1	nogas	100.843	3.097	3040723	1.51	100	100.8	90	110	
Ag	107	1	nogas	101.330	2.193	1472169	1.92	100	101.3	90	110	
Cd	111	1	nogas	99.188	0.350	315190	1.45	100	99.2	90	110	
Sb	121	1	nogas	103.386	2.238	1449257	0.69	100	103.4	90	110	
Tl	205	1	nogas	101.673	2.144	2011365	2.12	100	101.7	90	110	
Pb	208	1	nogas	122.167	2.838	2789474	2.84	100	122.2	90	110	CCV Main CR1-2 Failed
U	238	1	nogas	108.017	1.718	2660707	1.65	100	108.0	90	110	
[Pb]	206	1	nogas	103.617	2.642	697107	2.13	100	103.6	90	110	
[Pb]	207	1	nogas	104.006	3.775	609624	3.26	100	104.0	90	110	
Na	23	2	He	9415.681	0.823	19930945	0.89	10000	94.2	90	110	
Mg	24	2	He	9515.161	1.287	11291279	1.37	10000	95.2	90	110	
Al	27	2	He	93.676	1.016	66724	0.96	100	93.7	90	110	
K	39	2	He	10550.869	2.077	13060315	2.04	10000	105.5	90	110	
Ca	43	2	He	9462.835	1.638	36068	1.59	10000	94.6	90	110	
Ca	44	2	He	9576.692	1.397	604301	1.32	10000	95.8	90	110	
V	51	2	He	96.948	0.608	857794	0.52	100	96.9	90	110	
Cr	52	2	He	96.933	1.571	918156	1.57	100	96.9	90	110	
Mn	55	2	He	97.967	1.165	671911	1.09	100	98.0	90	110	
Fe	56	2	He	9777.644	1.658	80807135	1.63	10000	97.8	90	110	
Co	59	2	He	97.868	0.844	1245928	0.78	100	97.9	90	110	
Ni	60	2	He	98.523	0.984	312670	0.94	100	98.5	90	110	
Cu	63	2	He	99.631	0.910	788829	0.89	100	99.6	90	110	
Zn	66	2	He	98.585	0.995	186673	0.95	100	98.6	90	110	
As	75	2	He	98.001	0.282	179856	0.33	100	98.0	90	110	
Se	78	2	He	99.298	2.107	15093	2.00	100	99.3	90	110	
B	11	1	nogas	479.484	3.862	2394268	1.39	500	95.9	90	110	
Si	28	1	nogas	4597.885	3.275	9297839	0.56	5000	92.0	90	110	
Ca	43	1	nogas	10077.340	2.530	403566	0.94	10000	100.8	90	110	
Ca	44	1	nogas	9795.146	3.867	6478131	2.39	10000	98.0	90	110	
Fe	56	1	nogas	10314.699	0.944	256144014	0.99	10000	103.1	90	110	
Se	77	1	nogas	110.736	9.481	68542	4.27	100	110.7	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	99.776	1.362	30019	1.14	100	99.8	90	110	
Mo	95	1	nogas	100.142	2.244	601821	1.04	100	100.1	90	110	
Sn	118	1	nogas	100.183	1.928	830247	1.38	100	100.2	90	110	
Ba	137	1	nogas	100.141	0.598	452245	0.63	100	100.1	90	110	
Sb	121	2	He	102.725	0.562	753305	0.51	100	102.7	90	110	
Li	7	1	nogas	96.686	4.802	1707868	1.57	100	96.7	90	110	
P	31	1	nogas	504.114	2.107	1107311	0.48	500	100.8	90	110	
La	139	1	nogas	112.733	22.655	557	18.44	100	112.7	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	178.559	56.329	33	17.32	100	178.6	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	nogas	1230797	3.04	1118108	110.08	70	125	
Ge	72	1	nogas	3823584	1.76	3396393	112.58	70	125	
In	115	1	nogas	3488291	1.13	3166421	110.17	70	125	
Bi	209	1	nogas	2492069	0.52	2159119	115.42	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1295284	0.08	1189986	108.85	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	375_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-10T00:18:29-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	0.071	39.5	957	29.8	1	
Na	23	1	nogas	57.186	5.9	2215212	4.1	100	
Mg	24	1	nogas	7.044	34.0	160743	25.7	100	
Al	27	1	nogas	-0.574	-10.6	21459	4.2	5	
K	39	1	nogas	2.124	459.0	10875165	0.6	100	
Ti	47	1	nogas	0.070	84.3	617	17.3	2.5	
V	51	1	nogas	2.034	39.6	768686	5.0	2.5	
Cr	52	1	nogas	-0.124	-34.0	69015	1.9	2.5	
Mn	55	1	nogas	-0.248	-22.4	30162	3.3	2.5	
Co	59	1	nogas	0.062	34.6	2537	19.3	2.5	
Ni	60	1	nogas	-0.121	-19.4	2050	7.0	2.5	
Cu	63	1	nogas	0.409	37.0	8542	21.7	2	
Zn	66	1	nogas	-0.335	-1.7	1307	4.2	2.5	
As	75	1	nogas	-0.011	-2493.5	123601	3.2	2.5	
Sr	88	1	nogas	0.060	40.5	3720	18.5	2.5	
Ag	107	1	nogas	0.059	29.4	1123	21.4	2.5	
Cd	111	1	nogas	0.052	56.6	240	39.7	1	
Sb	121	1	nogas	0.185	16.6	3224	12.1	2.5	
Tl	205	1	nogas	0.754	60.3	16564	58.0	1	
Pb	208	1	nogas	0.105	29.7	2900	24.5	2.5	
U	238	1	nogas	0.177	48.2	4751	47.5	2.5	
[Pb]	206	1	nogas	0.081	46.6	743	36.9	2.5	
[Pb]	207	1	nogas	0.080	26.8	643	21.0	2.5	
Na	23	2	He	40.470	7.7	153484	1.3	100	
Mg	24	2	He	3.540	12.5	7322	5.0	100	
Al	27	2	He	-0.688	-115.4	1031	54.7	5	
K	39	2	He	5.610	70.1	229652	2.1	100	
Ca	43	2	He	-4.232	-239.3	67	60.6	100	
Ca	44	2	He	-5.843	-31.4	1567	6.4	100	
V	51	2	He	0.040	103.0	10267	0.8	2.5	
Cr	52	2	He	-0.092	-269.2	7648	27.9	2.5	
Mn	55	2	He	0.050	658.8	3002	83.5	2.5	
Fe	56	2	He	4.383	22.4	76768	15.4	100	
Co	59	2	He	0.045	8.4	823	3.1	2.5	
Ni	60	2	He	-0.234	-4.6	333	11.4	2.5	
Cu	63	2	He	-0.133	-20.6	2484	11.7	2	
Zn	66	2	He	-0.321	-14.8	510	16.1	2.5	
As	75	2	He	0.021	186.6	571	8.9	2.5	
Se	78	2	He	-0.172	-29.7	213	0.5	2	
B	11	1	nogas	-1.457	-41.9	45281	9.8	10	
Si	28	1	nogas	-512.477	-10.4	3116810	0.7	5	
Ca	43	1	nogas	-2.923	-157.2	1100	15.9	100	
Ca	44	1	nogas	-63.774	-9.6	98169	2.0	100	
Fe	56	1	nogas	3.821	165.1	4268363	1.6	100	
Se	77	1	nogas	1.593	374.1	40188	6.0	2.5	
Se	82	1	nogas	0.049	303.8	250	17.4	2	
Mo	95	1	nogas	0.289	51.5	2320	38.2	2.5	
Sn	118	1	nogas	0.201	34.4	3450	16.5	5	
Ba	137	1	nogas	0.007	330.9	583	18.2	2.5	

Continuing Calibration Blank (CCB) Report

Sb	121	2	He	0.128	14.1	1263	7.1	2.5	
P	31	1	nogas	11.552	15.8	137677	0.6	10	CCB Main CR1 Failed
La	139	1	nogas	-9.471	-39.2	77	19.9	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Au	197	1	nogas	547.375	62.9	57	36.7	2.5	CCB Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1388223	3.75	1118108	124.16	70	125	
Ge	72	1	nogas	3994259	2.24	3396393	117.60	70	125	
In	115	1	nogas	3706785	1.20	3166421	117.07	70	125	
Bi	209	1	nogas	2609786	1.76	2159119	120.87	70	125	
Ge	72	2	He	1353196	4.18	1189986	113.72	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	383_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-10T00:34:19-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	93.688	2.173	769239	2.67	100	93.7	90	110	
Na	23	1	nogas	9961.182	5.916	261454564	1.98	10000	99.6	90	110	
Mg	24	1	nogas	10085.439	1.420	166060475	3.86	10000	100.9	90	110	
Al	27	1	nogas	101.979	1.285	2087976	2.55	100	102.0	90	110	
K	39	1	nogas	10031.458	3.641	237479072	1.85	10000	100.3	90	110	
Ti	47	1	nogas	99.264	1.420	190895	3.09	100	99.3	90	110	
V	51	1	nogas	102.093	1.928	3381091	2.03	100	102.1	90	110	
Cr	52	1	nogas	98.472	0.170	2295232	1.71	100	98.5	90	110	
Mn	55	1	nogas	102.036	3.112	2882763	1.42	100	102.0	90	110	
Co	59	1	nogas	97.988	1.657	2337984	0.35	100	98.0	90	110	
Ni	60	1	nogas	98.529	2.927	530680	1.85	100	98.5	90	110	
Cu	63	1	nogas	98.134	5.031	1250565	3.73	100	98.1	90	110	
Zn	66	1	nogas	98.043	1.511	423088	0.35	100	98.0	90	110	
As	75	1	nogas	97.961	0.823	689280	1.98	100	98.0	90	110	
Sr	88	1	nogas	101.839	1.792	3054345	2.80	100	101.8	90	110	
Ag	107	1	nogas	101.014	2.451	1459010	1.37	100	101.0	90	110	
Cd	111	1	nogas	100.339	3.110	319696	0.35	100	100.3	90	110	
Sb	121	1	nogas	103.598	1.654	1444120	1.65	100	103.6	90	110	
Tl	205	1	nogas	102.424	3.719	1982499	1.63	100	102.4	90	110	
Pb	208	1	nogas	117.829	0.759	2690423	0.76	100	117.8	90	110	CCV Main CR1-2 Failed
U	238	1	nogas	106.277	2.076	2561968	0.35	100	106.3	90	110	
[Pb]	206	1	nogas	103.243	4.125	679611	1.96	100	103.2	90	110	
[Pb]	207	1	nogas	101.778	4.092	583729	1.97	100	101.8	90	110	
Na	23	2	He	9210.560	0.445	19246415	0.77	10000	92.1	90	110	
Mg	24	2	He	9122.884	1.873	10685964	1.86	10000	91.2	90	110	
Al	27	2	He	91.467	0.579	64342	0.12	100	91.5	90	110	
K	39	2	He	10379.387	1.716	12851669	1.69	10000	103.8	90	110	
Ca	43	2	He	9196.918	3.673	34602	3.40	10000	92.0	90	110	
Ca	44	2	He	9544.392	1.242	594494	1.24	10000	95.4	90	110	
V	51	2	He	94.335	1.014	824172	1.35	100	94.3	90	110	
Cr	52	2	He	94.917	1.502	887652	1.91	100	94.9	90	110	
Mn	55	2	He	97.629	0.934	660972	1.24	100	97.6	90	110	
Fe	56	2	He	9669.032	1.313	78879230	1.48	10000	96.7	90	110	
Co	59	2	He	96.864	2.217	1217194	2.07	100	96.9	90	110	
Ni	60	2	He	97.627	1.007	305831	0.79	100	97.6	90	110	
Cu	63	2	He	99.058	1.169	774209	1.58	100	99.1	90	110	
Zn	66	2	He	96.972	1.324	181274	1.76	100	97.0	90	110	
As	75	2	He	96.542	0.939	174903	1.36	100	96.5	90	110	
Se	78	2	He	98.094	0.931	14721	1.29	100	98.1	90	110	
B	11	1	nogas	463.372	1.293	2292391	1.47	500	92.7	90	110	
Si	28	1	nogas	4705.135	2.957	9377162	1.56	5000	94.1	90	110	
Ca	43	1	nogas	10009.533	1.755	398627	1.60	10000	100.1	90	110	
Ca	44	1	nogas	9868.402	0.416	6490694	1.77	10000	98.7	90	110	
Fe	56	1	nogas	10220.557	3.154	252322664	1.48	10000	102.2	90	110	
Se	77	1	nogas	91.539	6.770	62889	2.94	100	91.5	90	110	
Se	82	1	nogas	101.998	1.096	30506	0.78	100	102.0	90	110	
Mo	95	1	nogas	97.959	0.727	585512	2.40	100	98.0	90	110	
Sn	118	1	nogas	96.570	3.858	802555	1.89	100	96.6	90	110	
Ba	137	1	nogas	98.973	1.237	448378	2.03	100	99.0	90	110	
Sb	121	2	He	102.942	1.225	745157	1.39	100	102.9	90	110	
Li	7	1	nogas	99.146	4.040	1731136	2.78	100	99.1	90	110	
P	31	1	nogas	490.130	2.867	1073357	1.17	500	98.0	90	110	
La	139	1	nogas	115.384	11.399	570	12.28	100	115.4	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	73.052	303.396	27	43.30	100	73.1	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	nogas	1217901	2.39	1118108	108.93	70	125	
Ge	72	1	nogas	3801632	1.69	3396393	111.93	70	125	
In	115	1	nogas	3499841	3.04	3166421	110.53	70	125	
Bi	209	1	nogas	2439559	2.17	2159119	112.99	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1278561	0.46	1189986	107.44	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	384_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-10T00:36:18-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	0.111	13.9	1180	14.4	1	
Na	23	1	nogas	54.767	14.0	2074385	7.6	100	
Mg	24	1	nogas	8.454	29.8	178328	22.0	100	
Al	27	1	nogas	-0.487	-16.6	22334	5.2	5	
K	39	1	nogas	-12.110	-90.7	10101036	0.3	100	
Ti	47	1	nogas	0.107	7.8	663	3.1	2.5	
V	51	1	nogas	-1.803	-70.4	633932	3.8	2.5	
Cr	52	1	nogas	-0.296	-37.8	62217	2.1	2.5	
Mn	55	1	nogas	-0.292	-10.4	27694	2.1	2.5	
Co	59	1	nogas	0.075	30.5	2770	19.8	2.5	
Ni	60	1	nogas	-0.132	-6.0	1907	3.5	2.5	
Cu	63	1	nogas	0.259	38.4	6298	20.9	2	
Zn	66	1	nogas	-0.314	-11.9	1343	9.6	2.5	
As	75	1	nogas	-2.066	-42.5	106355	3.4	2.5	
Sr	88	1	nogas	0.097	23.6	4717	15.5	2.5	
Ag	107	1	nogas	0.051	23.9	973	19.0	2.5	
Cd	111	1	nogas	0.065	30.7	270	23.1	1	
Sb	121	1	nogas	0.625	8.2	9266	8.7	2.5	
Tl	205	1	nogas	0.783	57.8	16514	53.5	1	
Pb	208	1	nogas	0.099	33.4	2767	27.3	2.5	
U	238	1	nogas	0.161	43.4	4181	40.4	2.5	
[Pb]	206	1	nogas	0.090	25.8	783	19.2	2.5	
[Pb]	207	1	nogas	0.084	34.1	643	25.2	2.5	
Na	23	2	He	39.582	4.2	144328	1.3	100	
Mg	24	2	He	4.617	1.4	8249	2.1	100	
Al	27	2	He	-1.198	-19.4	633	26.2	5	
K	39	2	He	-2.189	-163.7	220164	2.0	100	
Ca	43	2	He	-5.072	-190.0	60	60.1	100	
Ca	44	2	He	-8.821	-11.2	1307	5.7	100	
V	51	2	He	-0.028	-99.5	9188	1.7	2.5	
Cr	52	2	He	-0.247	-15.5	5881	7.2	2.5	
Mn	55	2	He	-0.166	-8.2	1330	6.0	2.5	
Fe	56	2	He	4.259	5.7	71813	3.7	100	
Co	59	2	He	0.052	13.6	877	9.7	2.5	
Ni	60	2	He	-0.209	-21.0	397	35.0	2.5	
Cu	63	2	He	-0.145	-8.3	2264	4.1	2	
Zn	66	2	He	-0.332	-14.2	467	19.3	2.5	
As	75	2	He	-0.028	-55.4	457	5.1	2.5	
Se	78	2	He	-0.213	-102.5	197	17.2	2	
B	11	1	nogas	2.113	15.0	57620	5.5	10	
Si	28	1	nogas	-343.431	-28.7	3196873	2.3	5	
Ca	43	1	nogas	2.858	54.9	1287	2.4	100	
Ca	44	1	nogas	-72.143	-7.7	88703	2.6	100	
Fe	56	1	nogas	-0.452	-762.8	3989701	2.8	100	
Se	77	1	nogas	-14.252	-44.3	34126	4.5	2.5	
Se	82	1	nogas	-0.008	-1006.7	223	12.9	2	
Mo	95	1	nogas	0.334	33.0	2510	26.8	2.5	
Sn	118	1	nogas	0.244	40.0	3617	21.1	5	
Ba	137	1	nogas	0.020	96.6	613	14.6	2.5	

Continuing Calibration Blank (CCB) Report

Sb	121	2	He	0.534	4.6	4164	5.5	2.5	
P	31	1	nogas	5.255	19.0	119528	0.9	10	
La	139	1	nogas	-17.621	-14.9	40	25.0	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Au	197	1	nogas	117.992	658.2	30	145.3	2.5	CCB Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1230863	3.57	1118108	110.08	70	125	
Ge	72	1	nogas	3829630	2.55	3396393	112.76	70	125	
In	115	1	nogas	3501645	1.77	3166421	110.59	70	125	
Bi	209	1	nogas	2526667	1.14	2159119	117.02	70	125	
Ge	72	2	He	1287566	1.20	1189986	108.20	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	395_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-10T00:58:06-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	99.873	0.747	743836	2.72	100	99.9	90	110	
Na	23	1	nogas	9694.940	1.436	249922389	0.38	10000	96.9	90	110	
Mg	24	1	nogas	9838.528	4.049	158806958	2.29	10000	98.4	90	110	
Al	27	1	nogas	101.835	4.566	2021439	3.65	100	101.8	90	110	
K	39	1	nogas	9819.289	4.119	225652255	2.30	10000	98.2	90	110	
Ti	47	1	nogas	98.607	2.450	183874	2.45	100	98.6	90	110	
V	51	1	nogas	105.614	5.985	3367406	2.37	100	105.6	90	110	
Cr	52	1	nogas	96.404	2.749	2180323	2.17	100	96.4	90	110	
Mn	55	1	nogas	95.435	5.851	2615448	2.35	100	95.4	90	110	
Co	59	1	nogas	97.297	4.805	2250877	3.49	100	97.3	90	110	
Ni	60	1	nogas	97.536	5.796	509075	1.13	100	97.5	90	110	
Cu	63	1	nogas	98.426	4.017	1216323	0.70	100	98.4	90	110	
Zn	66	1	nogas	98.382	1.915	411868	3.23	100	98.4	90	110	
As	75	1	nogas	98.595	4.508	671754	1.49	100	98.6	90	110	
Sr	88	1	nogas	97.542	5.773	2834078	1.47	100	97.5	90	110	
Ag	107	1	nogas	98.698	5.766	1382504	5.29	100	98.7	90	110	
Cd	111	1	nogas	99.488	0.473	299056	1.29	100	99.5	90	110	
Sb	121	1	nogas	98.698	5.433	1333177	1.67	100	98.7	90	110	
Tl	205	1	nogas	96.613	5.817	1843799	1.83	100	96.6	90	110	
Pb	208	1	nogas	114.031	1.987	2603734	1.99	100	114.0	90	110	CCV Main CR1-2 Failed
U	238	1	nogas	108.078	7.496	2568284	5.16	100	108.1	90	110	
[Pb]	206	1	nogas	100.187	8.089	649663	2.41	100	100.2	90	110	
[Pb]	207	1	nogas	100.840	5.799	570238	1.49	100	100.8	90	110	
Na	23	2	He	8995.108	1.484	18034046	0.73	10000	90.0	90	110	CCV Main CR1-2 Failed
Mg	24	2	He	8898.645	2.191	10000021	1.69	10000	89.0	90	110	CCV Main CR1-2 Failed
Al	27	2	He	91.923	1.301	62032	0.62	100	91.9	90	110	
K	39	2	He	9631.473	2.866	11941664	2.81	10000	96.3	90	110	
Ca	43	2	He	9249.971	1.499	33390	0.71	10000	92.5	90	110	
Ca	44	2	He	9313.558	1.282	556606	0.49	10000	93.1	90	110	
V	51	2	He	94.043	1.763	788269	1.31	100	94.0	90	110	
Cr	52	2	He	94.175	2.198	844945	1.47	100	94.2	90	110	
Mn	55	2	He	95.250	1.575	618718	0.90	100	95.2	90	110	
Fe	56	2	He	9454.776	2.554	73994434	1.77	10000	94.5	90	110	
Co	59	2	He	95.155	1.319	1147216	0.75	100	95.2	90	110	
Ni	60	2	He	96.509	1.702	290072	1.35	100	96.5	90	110	
Cu	63	2	He	97.945	0.265	734480	0.55	100	97.9	90	110	
Zn	66	2	He	96.719	0.192	173467	0.78	100	96.7	90	110	
As	75	2	He	95.443	1.242	165895	0.85	100	95.4	90	110	
Se	78	2	He	96.128	2.279	13845	2.28	100	96.1	90	110	
B	11	1	nogas	497.534	2.608	2229693	3.49	500	99.5	90	110	
Si	28	1	nogas	4585.382	8.658	8944611	1.48	5000	91.7	90	110	
Ca	43	1	nogas	10086.355	5.762	389192	1.84	10000	100.9	90	110	
Ca	44	1	nogas	9730.553	7.403	6199013	2.59	10000	97.3	90	110	
Fe	56	1	nogas	9825.808	3.467	235397689	1.31	10000	98.3	90	110	
Se	77	1	nogas	98.467	8.188	62815	1.86	100	98.5	90	110	
Se	82	1	nogas	99.294	6.032	28777	1.32	100	99.3	90	110	
Mo	95	1	nogas	96.920	2.202	561777	2.44	100	96.9	90	110	
Sn	118	1	nogas	99.060	1.688	776618	1.37	100	99.1	90	110	
Ba	137	1	nogas	103.875	2.704	443738	2.65	100	103.9	90	110	
Sb	121	2	He	101.257	1.200	703258	1.62	100	101.3	90	110	
Li	7	1	nogas	104.515	3.463	1651204	5.16	100	104.5	90	110	
P	31	1	nogas	481.683	4.640	1024515	1.19	500	96.3	90	110	
La	139	1	nogas	145.091	19.548	647	14.70	100	145.1	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	20.053	673.284	23	24.74	100	20.1	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	nogas	1104559	2.05	1118108	98.79	70	125	
Ge	72	1	nogas	3689339	4.60	3396393	108.63	70	125	
In	115	1	nogas	3300004	1.76	3166421	104.22	70	125	
Bi	209	1	nogas	2409369	6.05	2159119	111.59	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1226726	0.80	1189986	103.09	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	396_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-10T01:00:06-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	0.074	24.9	867	21.3	1	
Na	23	1	nogas	31.812	19.7	1446649	8.7	100	
Mg	24	1	nogas	7.133	35.2	153933	24.0	100	
Al	27	1	nogas	-0.603	-4.6	19534	4.6	5	
K	39	1	nogas	-0.256	-2007.5	10128145	0.8	100	
Ti	47	1	nogas	0.067	55.1	573	13.3	2.5	
V	51	1	nogas	2.513	48.5	731353	2.8	2.5	CCB Main CR1 Failed
Cr	52	1	nogas	-0.274	-34.7	61231	2.0	2.5	
Mn	55	1	nogas	-0.274	-5.9	27544	2.6	2.5	
Co	59	1	nogas	0.068	39.7	2534	26.9	2.5	
Ni	60	1	nogas	-0.274	-2.6	1110	3.9	2.5	
Cu	63	1	nogas	0.544	38.1	9736	28.4	2	
Zn	66	1	nogas	-0.321	-16.5	1287	18.7	2.5	
As	75	1	nogas	-0.982	-108.2	110037	3.9	2.5	
Sr	88	1	nogas	0.075	21.1	3957	13.3	2.5	
Ag	107	1	nogas	0.061	13.7	1083	11.5	2.5	
Cd	111	1	nogas	0.074	47.8	297	37.1	1	
Sb	121	1	nogas	0.186	24.9	3040	22.6	2.5	
Tl	205	1	nogas	0.726	54.8	15363	53.9	1	
Pb	208	1	nogas	0.096	14.6	2710	11.9	2.5	
U	238	1	nogas	0.153	47.7	3961	48.0	2.5	
[Pb]	206	1	nogas	0.088	32.0	763	27.2	2.5	
[Pb]	207	1	nogas	0.079	8.4	607	8.5	2.5	
Na	23	2	He	18.947	1.6	97206	1.3	100	
Mg	24	2	He	5.433	47.6	8871	33.9	100	
Al	27	2	He	-1.186	-11.5	617	15.1	5	
K	39	2	He	-8.426	-15.1	212574	0.7	100	
Ca	43	2	He	-5.369	-208.5	57	71.3	100	
Ca	44	2	He	-10.372	-23.7	1163	13.0	100	
V	51	2	He	0.119	12.1	10059	1.1	2.5	
Cr	52	2	He	-0.273	-14.3	5421	5.8	2.5	
Mn	55	2	He	-0.182	-9.9	1177	9.4	2.5	
Fe	56	2	He	3.771	9.4	65215	4.7	100	
Co	59	2	He	0.043	29.0	737	21.3	2.5	
Ni	60	2	He	-0.250	-7.7	257	22.8	2.5	
Cu	63	2	He	-0.102	-6.2	2504	2.2	2	
Zn	66	2	He	-0.296	-11.5	513	11.4	2.5	
As	75	2	He	-0.002	-1599.5	486	9.3	2.5	
Se	78	2	He	-0.172	-176.1	195	21.6	2	
B	11	1	nogas	-0.238	-155.5	45912	7.4	10	
Si	28	1	nogas	-337.529	-16.8	3128917	0.7	5	
Ca	43	1	nogas	-3.902	-43.6	993	7.3	100	
Ca	44	1	nogas	-82.896	-1.8	79826	1.3	100	
Fe	56	1	nogas	7.838	28.5	4093623	2.3	100	
Se	77	1	nogas	-6.114	-123.6	35502	4.3	2.5	
Se	82	1	nogas	0.009	2104.6	223	26.2	2	
Mo	95	1	nogas	0.280	58.5	2137	46.7	2.5	
Sn	118	1	nogas	0.197	45.6	3220	22.4	5	
Ba	137	1	nogas	0.008	477.2	553	29.0	2.5	

Continuing Calibration Blank (CCB) Report

Sb	121	2	He	0.158	15.5	1367	12.3	2.5	
P	31	1	nogas	6.668	17.8	119434	0.6	10	
La	139	1	nogas	-16.769	-23.1	43	35.3	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Au	197	1	nogas	178.689	64.1	33	17.3	2.5	CCB Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1225555	4.68	1118108	109.61	70	125	
Ge	72	1	nogas	3738676	1.72	3396393	110.08	70	125	
In	115	1	nogas	3492581	1.29	3166421	110.30	70	125	
Bi	209	1	nogas	2498589	2.37	2159119	115.72	70	125	
Ge	72	2	He	1238329	0.69	1189986	104.06	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	397_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-10T01:02:05-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	94.814	3.270	738444	2.63	100	94.8	90	110	
Na	23	1	nogas	9829.590	1.329	249609206	1.84	10000	98.3	90	110	
Mg	24	1	nogas	10151.150	1.421	161450241	1.27	10000	101.5	90	110	
Al	27	1	nogas	101.032	2.616	1994329	2.39	100	101.0	90	110	
K	39	1	nogas	9948.937	0.922	227233222	1.01	10000	99.5	90	110	
Ti	47	1	nogas	97.638	0.902	181003	1.10	100	97.6	90	110	
V	51	1	nogas	102.335	3.403	3265981	2.89	100	102.3	90	110	
Cr	52	1	nogas	97.355	2.126	2188445	2.23	100	97.4	90	110	
Mn	55	1	nogas	99.658	2.488	2716169	2.56	100	99.7	90	110	
Co	59	1	nogas	98.663	2.041	2269913	2.13	100	98.7	90	110	
Ni	60	1	nogas	98.746	0.266	512867	0.04	100	98.7	90	110	
Cu	63	1	nogas	98.538	2.217	1211168	2.29	100	98.5	90	110	
Zn	66	1	nogas	97.812	3.097	406996	3.11	100	97.8	90	110	
As	75	1	nogas	97.630	1.193	662639	1.01	100	97.6	90	110	
Sr	88	1	nogas	101.197	0.383	2925891	0.61	100	101.2	90	110	
Ag	107	1	nogas	101.846	1.677	1418469	1.50	100	101.8	90	110	
Cd	111	1	nogas	99.382	2.797	301433	1.77	100	99.4	90	110	
Sb	121	1	nogas	100.920	0.615	1356389	0.81	100	100.9	90	110	
Tl	205	1	nogas	99.279	4.674	1892328	2.12	100	99.3	90	110	
Pb	208	1	nogas	113.797	2.054	2598377	2.05	100	113.8	90	110	CCV Main CR1-2 Failed
U	238	1	nogas	108.518	2.706	2576726	2.21	100	108.5	90	110	
[Pb]	206	1	nogas	100.195	2.718	649754	0.63	100	100.2	90	110	
[Pb]	207	1	nogas	100.148	2.881	565834	0.96	100	100.1	90	110	
Na	23	2	He	8935.714	0.792	18046205	1.06	10000	89.4	90	110	CCV Main CR1-2 Failed
Mg	24	2	He	8872.234	2.462	10046110	3.88	10000	88.7	90	110	CCV Main CR1-2 Failed
Al	27	2	He	91.653	3.179	62289	1.68	100	91.7	90	110	
K	39	2	He	9629.782	1.378	11939606	1.35	10000	96.3	90	110	
Ca	43	2	He	9232.172	2.395	33564	0.96	10000	92.3	90	110	
Ca	44	2	He	9567.336	6.636	575569	5.19	10000	95.7	90	110	
V	51	2	He	93.542	1.114	789801	0.59	100	93.5	90	110	
Cr	52	2	He	93.515	1.614	845181	1.08	100	93.5	90	110	
Mn	55	2	He	94.643	1.034	619272	1.00	100	94.6	90	110	
Fe	56	2	He	9415.832	1.073	74233237	1.41	10000	94.2	90	110	
Co	59	2	He	95.402	1.462	1158543	1.35	100	95.4	90	110	
Ni	60	2	He	96.517	2.032	292180	1.24	100	96.5	90	110	
Cu	63	2	He	97.484	2.193	736221	0.86	100	97.5	90	110	
Zn	66	2	He	95.854	2.425	173141	1.28	100	95.9	90	110	
As	75	2	He	95.693	0.954	167532	0.53	100	95.7	90	110	
Se	78	2	He	95.105	0.940	13799	1.45	100	95.1	90	110	
B	11	1	nogas	467.081	4.500	2190669	1.19	500	93.4	90	110	
Si	28	1	nogas	4603.558	0.161	8920981	0.19	5000	92.1	90	110	
Ca	43	1	nogas	9800.471	0.704	376344	0.88	10000	98.0	90	110	
Ca	44	1	nogas	9661.553	0.515	6129037	0.74	10000	96.6	90	110	
Fe	56	1	nogas	9791.171	2.028	233277655	2.01	10000	97.9	90	110	
Se	77	1	nogas	95.101	9.376	61571	3.68	100	95.1	90	110	
Se	82	1	nogas	99.912	2.885	28817	2.98	100	99.9	90	110	
Mo	95	1	nogas	96.863	2.611	558096	2.37	100	96.9	90	110	
Sn	118	1	nogas	96.381	1.201	762896	3.30	100	96.4	90	110	
Ba	137	1	nogas	102.056	5.091	439749	2.99	100	102.1	90	110	
Sb	121	2	He	101.530	1.914	710145	0.52	100	101.5	90	110	
Li	7	1	nogas	96.560	4.069	1601919	1.36	100	96.6	90	110	
P	31	1	nogas	484.537	0.483	1024447	0.48	500	96.9	90	110	
La	139	1	nogas	117.604	5.224	550	5.45	100	117.6	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	144.883	233.888	30	57.74	100	144.9	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	nogas	1156058	4.45	1118108	103.39	70	125	
Ge	72	1	nogas	3665019	0.24	3396393	107.91	70	125	
In	115	1	nogas	3331011	2.81	3166421	105.20	70	125	
Bi	209	1	nogas	2402943	2.50	2159119	111.29	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	1235655	1.43	1189986	103.84	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	398_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-10T01:04:05-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	0.089	23.9	1037	13.9	1	
Na	23	1	nogas	26.031	8.7	1306350	5.2	100	
Mg	24	1	nogas	6.840	20.6	150764	16.0	100	
Al	27	1	nogas	-0.569	-5.7	20028	2.2	5	
K	39	1	nogas	0.812	730.5	10069029	0.4	100	
Ti	47	1	nogas	0.052	56.3	540	9.3	2.5	
V	51	1	nogas	-0.446	-156.2	649385	3.8	2.5	
Cr	52	1	nogas	-0.342	-19.0	59261	2.2	2.5	
Mn	55	1	nogas	-0.301	-1.2	26569	0.6	2.5	
Co	59	1	nogas	0.074	21.1	2657	12.9	2.5	
Ni	60	1	nogas	-0.230	-7.2	1330	6.0	2.5	
Cu	63	1	nogas	0.164	46.7	4901	18.3	2	
Zn	66	1	nogas	-0.366	-8.7	1083	11.6	2.5	
As	75	1	nogas	-1.245	-21.5	107716	2.4	2.5	
Sr	88	1	nogas	0.073	26.8	3850	13.9	2.5	
Ag	107	1	nogas	0.065	18.3	1127	13.8	2.5	
Cd	111	1	nogas	0.060	28.4	253	19.9	1	
Sb	121	1	nogas	0.203	19.8	3227	16.0	2.5	
Tl	205	1	nogas	0.684	50.1	14742	52.2	1	
Pb	208	1	nogas	0.101	17.4	2817	14.3	2.5	
U	238	1	nogas	0.153	43.7	4037	47.3	2.5	
[Pb]	206	1	nogas	0.081	22.0	717	19.6	2.5	
[Pb]	207	1	nogas	0.092	26.4	693	26.0	2.5	
Na	23	2	He	16.832	5.5	93166	1.9	100	
Mg	24	2	He	3.811	8.8	7038	6.1	100	
Al	27	2	He	-1.279	-13.0	557	21.3	5	
K	39	2	He	-9.469	-16.9	211306	0.9	100	
Ca	43	2	He	-5.457	-101.2	57	36.7	100	
Ca	44	2	He	-10.687	-5.7	1147	2.2	100	
V	51	2	He	-0.003	-1236.6	9064	2.0	2.5	
Cr	52	2	He	-0.256	-14.7	5591	7.6	2.5	
Mn	55	2	He	-0.181	-14.8	1190	16.2	2.5	
Fe	56	2	He	4.028	8.0	67436	5.4	100	
Co	59	2	He	0.051	7.7	830	4.3	2.5	
Ni	60	2	He	-0.228	-16.3	323	33.1	2.5	
Cu	63	2	He	-0.184	-7.4	1890	6.9	2	
Zn	66	2	He	-0.330	-10.3	453	14.7	2.5	
As	75	2	He	-0.020	-87.6	456	8.2	2.5	
Se	78	2	He	-0.014	-2327.3	219	20.8	2	
B	11	1	nogas	-0.382	-392.6	47453	10.3	10	
Si	28	1	nogas	-317.130	-17.1	3128020	1.1	5	
Ca	43	1	nogas	-3.134	-187.8	1013	21.4	100	
Ca	44	1	nogas	-82.732	-2.3	79274	0.6	100	
Fe	56	1	nogas	-3.275	-208.8	3795403	3.3	100	
Se	77	1	nogas	-8.714	-72.0	34547	5.8	2.5	
Se	82	1	nogas	0.006	1010.5	220	7.9	2	
Mo	95	1	nogas	0.251	53.1	1937	39.0	2.5	
Sn	118	1	nogas	0.230	42.7	3517	22.2	5	
Ba	137	1	nogas	0.017	128.8	600	15.3	2.5	

Continuing Calibration Blank (CCB) Report

Sb	121	2	He	0.156	20.4	1353	15.0	2.5	
P	31	1	nogas	7.901	14.4	120833	0.8	10	
La	139	1	nogas	-11.036	-23.2	67	17.3	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Au	197	1	nogas	351.276	57.7	43	26.6	2.5	CCB Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1294828	5.55	1118108	115.81	70	125	
Ge	72	1	nogas	3708002	0.99	3396393	109.17	70	125	
In	115	1	nogas	3516489	1.83	3166421	111.06	70	125	
Bi	209	1	nogas	2510267	5.23	2159119	116.26	70	125	
Ge	72	2	He	1241509	1.60	1189986	104.33	70	125	

Low Level Initial Calibration Verification (LLICV) Report

Sample Table

Sample Name	LLCCV5
Data File Name	399LICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-10T01:06:03-06:00
Sample Type	LLICV
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	4.174	6.282	36004	3.38	5	83.5	70	130	
Na	23	1	nogas	480.603	4.755	13163745	0.25	500	96.1	70	130	
Mg	24	1	nogas	488.426	3.786	8042383	2.07	500	97.7	70	130	
Al	27	1	nogas	6.121	20.483	153387	14.47	5	122.4	70	130	
K	39	1	nogas	466.024	7.625	20621796	2.66	500	93.2	70	130	
Ti	47	1	nogas	4.931	2.715	9799	2.01	5	98.6	70	130	
V	51	1	nogas	5.712	14.050	819363	2.78	5	114.2	70	130	
Cr	52	1	nogas	4.392	4.729	165879	2.38	5	87.8	70	130	
Mn	55	1	nogas	4.845	1.583	168960	1.30	5	96.9	70	130	
Co	59	1	nogas	5.060	1.997	120270	1.21	5	101.2	70	130	
Ni	60	1	nogas	4.714	4.329	27544	1.87	5	94.3	70	130	
Cu	63	1	nogas	5.039	3.639	66264	1.65	5	100.8	70	130	
Zn	66	1	nogas	4.918	4.070	23499	2.11	5	98.4	70	130	
As	75	1	nogas	3.214	17.185	134881	1.31	5	64.3	70	130	LLICV Main CR1 Failed
Sr	88	1	nogas	5.076	3.865	152105	1.99	5	101.5	70	130	
Ag	107	1	nogas	5.028	3.788	72011	2.53	5	100.6	70	130	
Cd	111	1	nogas	4.716	5.009	15210	4.94	5	94.3	70	130	
Sb	121	1	nogas	4.837	5.559	67119	4.79	5	96.7	70	130	
Tl	205	1	nogas	4.824	2.897	93990	2.01	5	96.5	70	130	
Pb	208	1	nogas	5.731	2.153	131345	2.15	5	114.6	70	130	
U	238	1	nogas	5.183	1.671	124829	0.66	5	103.7	70	130	
[Pb]	206	1	nogas	5.012	3.174	33081	2.60	5	100.2	70	130	
[Pb]	207	1	nogas	5.052	2.880	29050	1.90	5	101.0	70	130	
Na	23	2	He	471.264	0.261	1014247	0.82	500	94.3	70	130	
Mg	24	2	He	465.144	0.385	532650	1.30	500	93.0	70	130	
Al	27	2	He	4.268	1.856	4267	0.98	5	85.4	70	130	
K	39	2	He	472.159	1.195	797314	0.86	500	94.4	70	130	
Ca	43	2	He	456.270	5.850	1743	6.32	500	91.3	70	130	
Ca	44	2	He	458.949	3.525	29517	2.92	500	91.8	70	130	
V	51	2	He	4.587	1.311	47652	0.51	5	91.7	70	130	
Cr	52	2	He	4.363	1.238	47237	0.27	5	87.3	70	130	
Mn	55	2	He	4.710	1.380	33290	2.19	5	94.2	70	130	
Fe	56	2	He	469.787	1.597	3762733	2.51	500	94.0	70	130	
Co	59	2	He	4.773	0.990	58550	1.40	5	95.5	70	130	
Ni	60	2	He	4.692	2.564	15267	1.48	5	93.8	70	130	
Cu	63	2	He	4.844	4.020	39944	2.85	5	96.9	70	130	
Zn	66	2	He	5.023	2.002	10130	0.85	5	100.5	70	130	
As	75	2	He	4.498	3.708	8395	2.99	5	90.0	70	130	
Se	78	2	He	4.464	4.697	863	3.59	5	89.3	70	130	
B	11	1	nogas	17.332	9.445	136404	2.99	25	69.3	70	130	LLICV Main CR1 Failed
Si	28	1	nogas	-49.732	-171.332	3495080	1.31	25	-198.9	70	130	LLICV Main CR1 Failed
Ca	43	1	nogas	468.726	4.723	19547	2.75	500	93.7	70	130	
Ca	44	1	nogas	396.289	1.490	385397	1.10	500	79.3	70	130	
Fe	56	1	nogas	490.209	2.997	15705144	0.64	500	98.0	70	130	
Se	77	1	nogas	-3.042	-70.450	36540	0.49	5	-60.8	70	130	LLICV Main CR1 Failed
Se	82	1	nogas	4.755	14.959	1617	12.52	5	95.1	70	130	
Mo	95	1	nogas	4.733	2.353	28440	3.72	5	94.7	70	130	
Sn	118	1	nogas	4.806	0.110	41797	0.49	5	96.1	70	130	
Ba	137	1	nogas	5.152	4.520	24021	4.10	5	103.0	70	130	
Sb	121	2	He	5.019	3.488	35590	2.64	5	100.4	70	130	
Li	7	1	nogas	4.813	5.328	192669	1.76	5	96.3	70	130	
P	31	1	nogas	28.416	10.550	162386	1.73	25	113.7	70	130	
La	139	1	nogas	21.416	48.084	197	20.55	5	428.3	70	130	LLICV Main CR1 Failed
Au	197	1	nogas	255.307	85.606	37	31.49	5	5106.1	70	130	LLICV Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1272160	3.45	1118108	113.78	70	125	
Ge	72	1	nogas	3759055	2.08	3396393	110.68	70	125	
In	115	1	nogas	3526537	0.44	3166421	111.37	70	125	
Bi	209	1	nogas	2433603	1.02	2159119	112.71	70	125	

Low Level Initial Calibration Verification (LLICV) Report

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	2	He	1243887	0.94	1189986	104.53	70	125	

Sample Report

Sample Table

Sample Name	LLCCV2
Data File Name	400SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-10T01:08:01-06:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	221CALB.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	1.793	1.793	4.69	15059	0.01	2000	
Na	23	1	nogas	201.251	201.251	4.83	5820482	0.00	200000	
Mg	24	1	nogas	194.261	194.261	5.61	3190878	0.01	200000	
Al	27	1	nogas	2.054	2.054	3.91	73086	0.00	2000	
K	39	1	nogas	172.522	172.522	3.99	14148749	0.00	200000	
Ti	47	1	nogas	1.838	1.838	14.11	3960	0.05	2000	
V	51	1	nogas	0.354	0.354	170.55	683669	0.00	2000	
Cr	52	1	nogas	1.373	1.373	7.33	99064	0.00	2000	
Mn	55	1	nogas	1.661	1.661	3.13	81633	0.00	2000	
Co	59	1	nogas	4.932	4.932	104.05	118167	0.00	2000	
Ni	60	1	nogas	1.782	1.782	11.98	12098	0.01	2000	
Cu	63	1	nogas	1.928	1.928	4.03	27351	0.01	2000	
Zn	66	1	nogas	1.773	1.773	0.51	10236	0.02	2000	
As	75	1	nogas	-1.474	-1.474	-47.47	108585	0.00	2000	
Sr	88	1	nogas	1.998	1.998	1.26	61362	0.00	2000	
Ag	107	1	nogas	2.013	2.013	3.48	29171	0.01	2000	
Cd	111	1	nogas	1.864	1.864	5.61	5861	0.03	2000	
Sb	121	1	nogas	1.949	1.949	2.30	27525	0.01	2000	
Tl	205	1	nogas	2.026	2.026	2.32	39505	0.01	2000	
Pb	208	1	nogas	2.314	2.314	3.27	53339	0.00	2000	
U	238	1	nogas	2.058	2.058	1.68	49093	0.00	2000	
[Pb]	206	1	nogas	2.059	2.059	2.91	13526	0.02	2000	
[Pb]	207	1	nogas	2.013	2.013	6.42	11531	0.02	2000	
Na	23	2	He	194.223	194.223	3.13	452627	0.04	200000	
Mg	24	2	He	186.117	186.117	2.09	214645	0.09	200000	
Al	27	2	He	1.353	1.353	20.89	2314	0.06	2000	
K	39	2	He	182.712	182.712	0.58	445137	0.04	200000	
Ca	43	2	He	170.415	170.415	9.75	700	24.34	200000	
Ca	44	2	He	172.236	172.236	5.27	12191	1.41	200000	
V	51	2	He	1.731	1.731	4.52	23636	0.01	2000	
Cr	52	2	He	1.555	1.555	12.62	21890	0.01	2000	
Mn	55	2	He	1.712	1.712	4.68	13602	0.01	2000	
Fe	56	2	He	193.627	193.627	3.58	1570444	0.01	200000	
Co	59	2	He	1.971	1.971	1.88	24296	0.01	2000	
Ni	60	2	He	1.731	1.731	11.87	6264	0.03	2000	
Cu	63	2	He	1.766	1.766	5.27	16641	0.01	2000	
Zn	66	2	He	1.730	1.730	6.33	4174	0.04	2000	
As	75	2	He	1.848	1.848	10.02	3733	0.05	2000	
Se	78	2	He	1.697	1.697	6.92	465	0.37	2000	
B	11	1	nogas	4.966	4.966	10.25	71287	0.01	2000	
Si	28	1	nogas	-300.186	-300.186	-11.45	3213379	-0.01	2000	
Ca	43	1	nogas	188.775	188.775	1.72	8622	2.19	200000	
Ca	44	1	nogas	106.372	106.372	3.86	202152	0.05	200000	
Fe	56	1	nogas	187.453	187.453	3.26	8489433	0.00	200000	

Sample Report

Se	77	1	nogas	-19.416	-19.416	-26.32	32322	-0.06	2000	
Se	82	1	nogas	1.716	1.716	20.69	730	0.24	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Mo	95	1	nogas	1.981	1.981	2.22	12268	0.02	2000	
Sn	118	1	nogas	1.945	1.945	2.38	17336	0.01	2000	
Ba	137	1	nogas	2.105	2.105	4.57	9816	0.02	2000	
Sb	121	2	He	1.996	1.996	4.70	14299	0.01	2000	
La	139	1	nogas	1.454	1.454	542.99	113	1.28	2000	
Au	197	1	nogas	136.003	136.003	227.90	30	453.34	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1227017	3.83	1118108	109.74	70	125	
Ge	72	1	nogas	3784180	0.29	3396393	111.42	70	125	
In	115	1	nogas	3421235	3.37	3166421	108.05	70	125	
Bi	209	1	nogas	2405558	2.50	2159119	111.41	70	125	
Ge	72	2	He	1243762	2.80	1189986	104.52	70	125	

Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	ICSA
Data File Name	401ICSA.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-10T01:10:00-06:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	-0.012	-38.5	140	25.8	0	ICSA Main CR1 Failed
Na	23	1	nogas	100489.350	4.4	2511571189	2.0	0	
Mg	24	1	nogas	101904.760	3.3	1598832002	1.5	0	
Al	27	1	nogas	98077.453	2.8	1885985412	1.7	0	
K	39	1	nogas	103628.580	1.1	2249893117	2.2	0	
Ti	47	1	nogas	2208.152	1.2	4041507	1.2	0	
V	51	1	nogas	5.300	6.2	780387	2.7	0	
Cr	52	1	nogas	0.998	2.2	86863	1.3	0	ICSA Main CR1 Failed
Mn	55	1	nogas	0.079	65.5	36112	3.2	0	ICSA Main CR1 Failed
Co	59	1	nogas	0.485	1.9	11947	3.5	0	ICSA Main CR1 Failed
Ni	60	1	nogas	0.916	4.3	7165	4.1	0	ICSA Main CR1 Failed
Cu	63	1	nogas	1.816	9.5	24867	9.8	0	ICSA Main CR1 Failed
Zn	66	1	nogas	1.346	3.1	8065	0.5	0	ICSA Main CR1 Failed
As	75	1	nogas	2.852	5.9	128160	1.3	0	ICSA Main CR1 Failed
Sr	88	1	nogas	7.768	133.4	227090	133.2	0	
Ag	107	1	nogas	0.013	50.9	400	25.4	0	ICSA Main CR1 Failed
Cd	111	1	nogas	2.027	2.4	5984	2.3	0	
Sb	121	1	nogas	0.182	11.6	2890	11.4	0	ICSA Main CR1 Failed
Tl	205	1	nogas	0.014	136.2	1027	32.5	0	ICSA Main CR1 Failed
Pb	208	1	nogas	0.076	12.2	2240	9.4	0	ICSA Main CR1 Failed
[Pb]	206	1	nogas	0.068	16.0	563	11.3	0	ICSA Main CR1 Failed
[Pb]	207	1	nogas	0.071	11.6	500	9.2	0	ICSA Main CR1 Failed
Na	23	2	He	96516.591	0.8	189425544	0.7	0	
Mg	24	2	He	94552.800	1.6	104297625	1.5	0	
Al	27	2	He	90569.867	2.5	58661654	2.6	0	
K	39	2	He	101950.212	1.1	124268018	1.1	0	
Ca	43	2	He	93906.066	1.0	332137	1.1	0	
Ca	44	2	He	95718.098	0.5	5600152	0.1	0	
V	51	2	He	0.263	14.8	10960	2.5	0	ICSA Main CR1 Failed
Cr	52	2	He	-0.017	-378.9	7508	7.1	0	ICSA Main CR1 Failed
Mn	55	2	He	0.070	7.5	2744	1.1	0	ICSA Main CR1 Failed
Fe	56	2	He	101523.895	0.5	779806362	0.7	0	
Co	59	2	He	0.282	7.1	3540	7.0	0	ICSA Main CR1 Failed
Ni	60	2	He	0.028	41.6	1067	3.0	0	ICSA Main CR1 Failed
Cu	63	2	He	0.270	18.4	5161	6.7	0	ICSA Main CR1 Failed
Zn	66	2	He	0.127	31.1	1240	5.8	0	ICSA Main CR1 Failed
As	75	2	He	0.066	25.6	588	4.9	0	ICSA Main CR1 Failed
Se	78	2	He	0.201	68.0	242	7.6	0	ICSA Main CR1 Failed
B	11	1	nogas	-3.550	-5.6	27574	2.2	0	ICSA Main CR1 Failed
Si	28	1	nogas	225.948	11.9	3696596	0.9	0	
Ca	43	1	nogas	98943.545	2.6	3750650	3.7	0	
Ca	44	1	nogas	99289.900	3.3	61162547	4.7	0	
Fe	56	1	nogas	106113.896	2.2	2464789322	2.7	0	
Se	77	1	nogas	19.103	4.0	41060	2.0	0	
Se	82	1	nogas	-0.002	-6236.6	213	17.7	0	ICSA Main CR1 Failed
Mo	95	1	nogas	2109.646	3.6	12015571	1.9	0	
Sn	118	1	nogas	0.048	22.5	1827	4.4	0	ICSA Main CR1 Failed
Ba	137	1	nogas	0.156	22.0	1127	13.0	0	ICSA Main CR1 Failed
Sb	121	2	He	0.199	7.6	1607	6.3	0	ICSA Main CR1 Failed

Interference Check Solution A (ICS-A) Report

P	31	1	nogas	96201.637	2.0	180845531	1.1	0	
La	139	1	nogas	41.790	42.8	253	25.4	0	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1136970	1.17	1118108	101.69	70	125	
Ge	72	1	nogas	3627214	1.72	3396393	106.80	70	125	
In	115	1	nogas	3211330	0.45	3166421	101.42	70	125	
Bi	209	1	nogas	2240668	0.83	2159119	103.78	70	125	
Ge	72	2	He	1204330	0.37	1189986	101.21	70	125	

Interference Check Solution AB (ICS-AB) Report

Sample Table

Sample Name	ICSAB
Data File Name	402ICSB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2019-01-10T01:12:04-06:00
Sample Type	ICSB
Dilution	1
Comment	
ISTD Ref File Name	221CALB.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	115.467	2.386	808297	1.35	100	115.5	80	120	
Na	23	1	nogas	111243.922	1.821	2822944263	1.60	100	111243.9	80	120	
Mg	24	1	nogas	113444.526	5.447	1805471307	2.61	100	113444.5	80	120	
Al	27	1	nogas	97556.589	0.713	1896704985	1.77	100	97556.6	80	120	ICSB Main CR1 Failed
K	39	1	nogas	115218.523	1.018	2527124723	1.01	100	115218.5	80	120	
Ti	47	1	nogas	2385.589	1.168	4413249	0.87	100	2385.6	80	120	ICSB Main CR1 Failed
V	51	1	nogas	128.410	1.937	3932410	0.62	100	128.4	80	120	ICSB Main CR1 Failed
Cr	52	1	nogas	117.428	2.201	2626324	0.44	100	117.4	80	120	
Mn	55	1	nogas	116.616	2.877	3172755	1.62	100	116.6	80	120	
Co	59	1	nogas	116.619	1.551	2683699	1.99	100	116.6	80	120	
Ni	60	1	nogas	114.576	2.726	594719	0.95	100	114.6	80	120	
Cu	63	1	nogas	114.269	0.283	1404606	1.90	100	114.3	80	120	
Zn	66	1	nogas	115.499	1.074	480307	2.12	100	115.5	80	120	
As	75	1	nogas	119.246	0.983	784519	1.89	100	119.2	80	120	
Sr	88	1	nogas	115.028	2.072	3326319	1.86	100	115.0	80	120	
Ag	107	1	nogas	113.854	2.375	1586209	2.61	100	113.9	80	120	
Cd	111	1	nogas	118.253	2.948	351458	0.94	100	118.3	80	120	
Sb	121	1	nogas	118.110	3.745	1587186	1.78	100	118.1	80	120	
Tl	205	1	nogas	116.860	3.329	2091082	2.28	100	116.9	80	120	
Pb	208	1	nogas	127.731	0.610	2916478	0.61	100	127.7	80	120	ICSB Main CR1 Failed
U	238	1	nogas	130.147	1.034	2900391	0.43	100	130.1	80	120	ICSB Main CR1 Failed
[Pb]	206	1	nogas	118.058	1.237	718621	0.71	100	118.1	80	120	
[Pb]	207	1	nogas	119.552	2.382	633957	1.03	100	119.6	80	120	
Na	23	2	He	105934.603	0.945	211759004	2.76	100	105934.6	80	120	
Mg	24	2	He	103869.316	0.610	116692162	2.28	100	103869.3	80	120	
Al	27	2	He	88339.673	0.901	58269912	2.03	100	88339.7	80	120	ICSB Main CR1 Failed
K	39	2	He	113250.265	0.723	138017055	0.72	100	113250.3	80	120	
Ca	43	2	He	104401.214	1.629	375978	0.27	100	104401.2	80	120	
Ca	44	2	He	107639.714	3.016	6411179	1.26	100	107639.7	80	120	
V	51	2	He	111.421	1.331	932086	1.53	100	111.4	80	120	
Cr	52	2	He	109.776	1.445	983393	0.44	100	109.8	80	120	
Mn	55	2	He	108.636	0.324	705304	2.16	100	108.6	80	120	
Fe	56	2	He	109119.037	0.585	853527374	1.35	100	109119.0	80	120	ICSB Main CR1 Failed
Co	59	2	He	111.889	0.899	1348873	2.50	100	111.9	80	120	
Ni	60	2	He	110.554	4.400	332025	3.94	100	110.6	80	120	
Cu	63	2	He	115.072	3.030	861930	1.65	100	115.1	80	120	
Zn	66	2	He	114.768	1.839	205567	0.74	100	114.8	80	120	
As	75	2	He	113.390	0.956	196955	1.14	100	113.4	80	120	
Se	78	2	He	115.017	2.287	16516	1.44	100	115.0	80	120	
B	11	1	nogas	574.328	4.707	2412098	1.97	100	574.3	80	120	
Si	28	1	nogas	5950.627	2.678	10518442	0.42	100	5950.6	80	120	ICSB Main CR1 Failed
Ca	43	1	nogas	111096.631	2.591	4254893	1.09	100	111096.6	80	120	ICSB Main CR1 Failed
Ca	44	1	nogas	113432.259	1.990	70575976	0.87	100	113432.3	80	120	ICSB Main CR1 Failed
Fe	56	1	nogas	118212.531	1.983	2774440062	0.28	100	118212.5	80	120	ICSB Main CR1 Failed
Se	77	1	nogas	149.517	3.613	75991	3.10	100	149.5	80	120	ICSB Main CR1 Failed
Se	82	1	nogas	121.709	1.295	35065	1.14	100	121.7	80	120	ICSB Main CR1 Failed
Mo	95	1	nogas	2228.594	1.811	12832846	0.73	100	2228.6	80	120	
Sn	118	1	nogas	114.743	1.897	889704	3.03	100	114.7	80	120	
Ba	137	1	nogas	119.087	4.904	502762	2.04	100	119.1	80	120	
Sb	121	2	He	117.359	1.443	814773	0.95	100	117.4	80	120	
La	139	1	nogas	183.816	17.393	787	17.86	100	183.8	80	120	ICSB Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1038910	3.66	1118108	92.92	70	125	
Ge	72	1	nogas	3666483	1.97	3396393	107.95	70	125	
In	115	1	nogas	3265183	3.84	3166421	103.12	70	125	
Bi	209	1	nogas	2254821	1.34	2159119	104.43	70	125	
Ge	72	2	He	1226516	1.83	1189986	103.07	70	125	

Tune Report

Batch Folder C:\Agilent\ICPMH\1\DATA\010919B.b
Report Comment
Instrument Name G3281A JP11080910

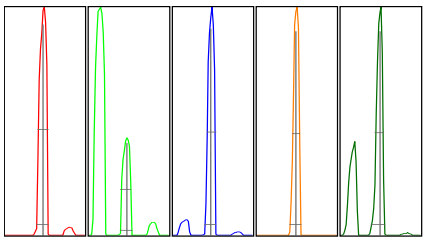
[nogas]

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		20613				NaN	-	
24		43768				NaN	-	
59		43814				NaN	-	
115		45963				NaN	-	
208		22219				NaN	-	

Mass	RSD% (Actual)	RSD% (Required)	RSD% (Flag)	Background (Actual)	Background (Required)	Background (Flag)
9	1.71	5.00				
24	1.63	5.00				
59	0.95	5.00				
115	1.80	5.00				
208	1.62	5.00				

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	20032	20766	20736	20576	20955
24	42525	44209	43795	44150	44161
59	43227	43917	44210	43563	44154
115	44616	46127	46820	45901	46351
208	21838	22109	22719	21979	22452

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	5934.71	8.95	8.9 - 9.1		0.35	0.444	0.750	
24	12416.60	23.95	23.9 - 24.1		0.37	0.443	0.750	
59	13588.52	58.95	58.9 - 59.1		0.32	0.432	0.750	
115	15304.89	115.00	114.9 - 115.1		0.28	0.433	0.750	
208	7019.43	208.00	207.9 - 208.1		0.30	0.507	0.750	

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	0.40 L/min	S/C Temp	2 ℃
RF Matching	1.70 V	Option Gas	0.0 %	Makeup/Dilution Gas	0.40 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	15.0 V
Extract 2	-200.0 V	Cell Entrance	-30 V	Plate Bias	-50 V
Omega Bias	-100 V	Cell Exit	-58 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	true	3rd Gas Flow	0 %		

[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		461				NaN	-	
24		3449				NaN	-	
59		23338				NaN	-	

Tune Report

Mass	RSD% (Actual)	RSD% (Required)	RSD% (Flag)	Background (Actual)	Background (Required)	Background (Flag)
9	5.24	5.00 [F]				
24	6.59	5.00 [F]				
59	0.76	5.00				

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	493	464	441	434	474
24	3385	3310	3448	3266	3836
59	23502	23391	23090	23226	23483

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	131.53	8.95	8.9 - 9.1		0.36	0.452	0.750	
24	952.59	23.95	23.9 - 24.1		0.38	0.443	0.750	
59	7429.48	58.95	58.9 - 59.1		0.31	0.422	0.750	

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	0.40 L/min	S/C Temp	2 ℃
RF Matching	1.70 V	Option Gas	0.0 %	Makeup/Dilution Gas	0.45 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	-32 V	Plate Bias	-60 V
Omega Bias	-100 V	Cell Exit	-70 V		

Cell Parameters

OctP Bias	-18.0 V	He Flow	4.0 mL/min	Energy Discrimination	5.0 V
OctP RF	190 V	H2 Flow	0.0 mL/min		
Use Gas	true	3rd Gas Flow	0 %		

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

Work Order: HS18121558

LHAAP 18 / 24

BHATE Environmental

Marcia Olive
445 Union Blvd Ste 129
Lakewood CO 80228

10450 Stancliff Rd. Suite 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887

January 11, 2019

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

Work Order: **HS18121558**

Laboratory Results for: **LHAAP 18/24**

Dear Marcia,

ALS Environmental received 4 sample(s) on Dec 29, 2018 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: DAYNA.FISHER
RJ Modashia
Project Manager

ALS Houston, US Date: 11-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
Work Order: HS18121558

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS18121558-01	18CPTMW07_122818	Groundwater		28-Dec-2018 09:00	29-Dec-2018 09:50	☐
HS18121558-02	MW21_122818	Groundwater		28-Dec-2018 10:25	29-Dec-2018 09:50	☐
HS18121558-03	MW3_122818	Groundwater		28-Dec-2018 11:45	29-Dec-2018 09:50	☐
HS18121558-04	TRIP BLANK	Water	ALS-112818-52	28-Dec-2018 00:00	29-Dec-2018 09:50	☐

ALS Houston, US Date: 11-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
Work Order: HS18121558

CASE NARRATIVE

Work Order Comments

- The analysis for Perchlorate was subcontracted to ALS in Salt Lake City, UT. Final report attached.

GCMS Volatiles by Method SW8260

Batch ID: R330796

Sample ID: 18CPTMW07_122818 (HS18121558-01MS)

- MS/MSD failed QC limits for select target compounds; suspect matrix effect.

Metals by Method SW7470

Batch ID: 136505

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

Metals by Method SW6020

Batch ID: 136231

Sample ID: HS18121117-01MS

- MS/MSD and DUPs are for an unrelated sample.

ALS Houston, US Date: 11-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
Sample ID: 18CPTMW07_122818
Collection Date: 28-Dec-2018 09:00

ANALYTICAL REPORT
WorkOrder:HS18121558
Lab ID:HS18121558-01
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: AKP
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 14:14
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 14:14
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	UG/L	1	10-Jan-2019 14:14
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 14:14
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 14:14
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 14:14
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 14:14
1,2,3-Trichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	10-Jan-2019 14:14
1,2,3-Trichloropropane	0.50	U	0.50	0.50	1.0	UG/L	1	10-Jan-2019 14:14
1,2,4-Trichlorobenzene	0.50	U	0.50	0.50	1.0	UG/L	1	10-Jan-2019 14:14
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 14:14
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 14:14
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 14:14
1,2-Dichlorobenzene	0.50	U	0.50	0.50	1.0	UG/L	1	10-Jan-2019 14:14
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 14:14
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	UG/L	1	10-Jan-2019 14:14
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 14:14
1,3-Dichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	10-Jan-2019 14:14
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 14:14
1,4-Dichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	10-Jan-2019 14:14
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 14:14
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	10-Jan-2019 14:14
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 14:14
2-Hexanone	1.0	U	1.0	1.0	2.0	UG/L	1	10-Jan-2019 14:14
4-Chlorotoluene	0.50	U	0.40	0.50	1.0	UG/L	1	10-Jan-2019 14:14
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 14:14
4-Methyl-2-pentanone	1.0	U	0.70	1.0	2.0	UG/L	1	10-Jan-2019 14:14
Acetone	2.0	U	0.40	2.0	2.0	UG/L	1	10-Jan-2019 14:14
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 14:14
Bromobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	10-Jan-2019 14:14
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 14:14
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 14:14
Bromoform	0.50	U	0.40	0.50	1.0	UG/L	1	10-Jan-2019 14:14
Bromomethane	0.50	U	0.40	0.50	1.0	UG/L	1	10-Jan-2019 14:14
Carbon disulfide	1.0	U	0.60	1.0	2.0	UG/L	1	10-Jan-2019 14:14
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	UG/L	1	10-Jan-2019 14:14
Chlorobenzene	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 14:14
Chloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 14:14
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 14:14

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

ALS Houston, US Date: 11-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
Sample ID: 18CPTMW07_122818
Collection Date: 28-Dec-2018 09:00

ANALYTICAL REPORT
WorkOrder:HS18121558
Lab ID:HS18121558-01
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: AKP
Chloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 14:14
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 14:14
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	10-Jan-2019 14:14
Dibromochloromethane	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 14:14
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 14:14
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 14:14
Ethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 14:14
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	10-Jan-2019 14:14
Isopropylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 14:14
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	10-Jan-2019 14:14
Methylene chloride	0.50	U	0.40	0.50	2.0	UG/L	1	10-Jan-2019 14:14
n-Butylbenzene	0.50	U	0.40	0.50	1.0	UG/L	1	10-Jan-2019 14:14
n-Propylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 14:14
Naphthalene	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 14:14
o-Xylene	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 14:14
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 14:14
Styrene	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 14:14
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 14:14
Tetrachloroethene	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 14:14
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 14:14
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 14:14
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 14:14
Trichloroethene	**0.55**	J	**0.20**	**0.50**	**1.0**	**UG/L**	1	10-Jan-2019 14:14
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 14:14
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 14:14
Surr: 1,2-Dichloroethane-d4	*100*			**0**	*81-118*	*%REC*	*1*	*10-Jan-2019 14:14*
Surr: 4-Bromofluorobenzene	*102*			**0**	*85-114*	*%REC*	*1*	*10-Jan-2019 14:14*
Surr: Dibromofluoromethane	*93.2*			**0**	*80-119*	*%REC*	*1*	*10-Jan-2019 14:14*
Surr: Toluene-d8	*105*			**0**	*89-112*	*%REC*	*1*	*10-Jan-2019 14:14*
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: SUB
Subcontract Analysis	See Attached		0	0		NA	1	10-Jan-2019 16:18

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

ALS Houston, US Date: 11-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
Sample ID: MW21_122818
Collection Date: 28-Dec-2018 10:25

ANALYTICAL REPORT
WorkOrder:HS18121558
Lab ID:HS18121558-02
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: AKP
1,1,1,2-Tetrachloroethane	5.0	U	3.0	5.0	10	UG/L	10	10-Jan-2019 15:33
1,1,1-Trichloroethane	5.0	U	2.0	5.0	10	UG/L	10	10-Jan-2019 15:33
1,1,2,2-Tetrachloroethane	5.0	U	5.0	5.0	10	UG/L	10	10-Jan-2019 15:33
1,1,2-Trichloroethane	**14**		**3.0**	**5.0**	**10**	**UG/L**	10	10-Jan-2019 15:33
1,1-Dichloroethane	**4.4**	J	**2.0**	**5.0**	**10**	**UG/L**	10	10-Jan-2019 15:33
1,1-Dichloroethene	5.0	U	2.0	5.0	10	UG/L	10	10-Jan-2019 15:33
1,1-Dichloropropene	5.0	U	3.0	5.0	10	UG/L	10	10-Jan-2019 15:33
1,2,3-Trichlorobenzene	5.0	U	4.0	5.0	10	UG/L	10	10-Jan-2019 15:33
1,2,3-Trichloropropane	5.0	U	5.0	5.0	10	UG/L	10	10-Jan-2019 15:33
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	10	UG/L	10	10-Jan-2019 15:33
1,2,4-Trimethylbenzene	5.0	U	3.0	5.0	10	UG/L	10	10-Jan-2019 15:33
1,2-Dibromo-3-chloropropane	5.0	U	2.0	5.0	10	UG/L	10	10-Jan-2019 15:33
1,2-Dibromoethane	5.0	U	2.0	5.0	10	UG/L	10	10-Jan-2019 15:33
1,2-Dichlorobenzene	5.0	U	5.0	5.0	10	UG/L	10	10-Jan-2019 15:33
1,2-Dichloroethane	**47**		**2.0**	**5.0**	**10**	**UG/L**	10	10-Jan-2019 15:33
1,2-Dichloropropane	5.0	U	5.0	5.0	10	UG/L	10	10-Jan-2019 15:33
1,3,5-Trimethylbenzene	5.0	U	3.0	5.0	10	UG/L	10	10-Jan-2019 15:33
1,3-Dichlorobenzene	5.0	U	4.0	5.0	10	UG/L	10	10-Jan-2019 15:33
1,3-Dichloropropane	5.0	U	3.0	5.0	10	UG/L	10	10-Jan-2019 15:33
1,4-Dichlorobenzene	5.0	U	4.0	5.0	10	UG/L	10	10-Jan-2019 15:33
2,2-Dichloropropane	5.0	U	2.0	5.0	10	UG/L	10	10-Jan-2019 15:33
2-Butanone	10	U	5.0	10	20	UG/L	10	10-Jan-2019 15:33
2-Chlorotoluene	5.0	U	3.0	5.0	10	UG/L	10	10-Jan-2019 15:33
2-Hexanone	10	U	10	10	20	UG/L	10	10-Jan-2019 15:33
4-Chlorotoluene	5.0	U	4.0	5.0	10	UG/L	10	10-Jan-2019 15:33
4-Isopropyltoluene	5.0	U	3.0	5.0	10	UG/L	10	10-Jan-2019 15:33
4-Methyl-2-pentanone	10	U	7.0	10	20	UG/L	10	10-Jan-2019 15:33
Acetone	20	U	4.0	20	20	UG/L	10	10-Jan-2019 15:33
Benzene	5.0	U	2.0	5.0	10	UG/L	10	10-Jan-2019 15:33
Bromobenzene	5.0	U	4.0	5.0	10	UG/L	10	10-Jan-2019 15:33
Bromochloromethane	5.0	U	2.0	5.0	10	UG/L	10	10-Jan-2019 15:33
Bromodichloromethane	5.0	U	2.0	5.0	10	UG/L	10	10-Jan-2019 15:33
Bromoform	5.0	U	4.0	5.0	10	UG/L	10	10-Jan-2019 15:33
Bromomethane	5.0	U	4.0	5.0	10	UG/L	10	10-Jan-2019 15:33
Carbon disulfide	10	U	6.0	10	20	UG/L	10	10-Jan-2019 15:33
Carbon tetrachloride	5.0	U	5.0	5.0	10	UG/L	10	10-Jan-2019 15:33
Chlorobenzene	5.0	U	3.0	5.0	10	UG/L	10	10-Jan-2019 15:33
Chloroethane	5.0	U	3.0	5.0	10	UG/L	10	10-Jan-2019 15:33
Chloroform	**18**		**2.0**	**5.0**	**10**	**UG/L**	10	10-Jan-2019 15:33

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

ALS Houston, US Date: 11-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
Sample ID: MW21_122818
Collection Date: 28-Dec-2018 10:25

ANALYTICAL REPORT
WorkOrder:HS18121558
Lab ID:HS18121558-02
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: AKP
Chloromethane	5.0	U	2.0	5.0	10	UG/L	10	10-Jan-2019 15:33
cis-1,2-Dichloroethene	**490**		**2.0**	**5.0**	**10**	**UG/L**	10	10-Jan-2019 15:33
cis-1,3-Dichloropropene	5.0	U	1.0	5.0	10	UG/L	10	10-Jan-2019 15:33
Dibromochloromethane	5.0	U	3.0	5.0	10	UG/L	10	10-Jan-2019 15:33
Dibromomethane	5.0	U	2.0	5.0	10	UG/L	10	10-Jan-2019 15:33
Dichlorodifluoromethane	5.0	U	3.0	5.0	10	UG/L	10	10-Jan-2019 15:33
Ethylbenzene	5.0	U	3.0	5.0	10	UG/L	10	10-Jan-2019 15:33
Hexachlorobutadiene	10	U	10	10	10	UG/L	10	10-Jan-2019 15:33
Isopropylbenzene	5.0	U	3.0	5.0	10	UG/L	10	10-Jan-2019 15:33
m,p-Xylene	10	U	5.0	10	20	UG/L	10	10-Jan-2019 15:33
Methylene chloride	5.0	U	4.0	5.0	20	UG/L	10	10-Jan-2019 15:33
n-Butylbenzene	5.0	U	4.0	5.0	10	UG/L	10	10-Jan-2019 15:33
n-Propylbenzene	5.0	U	3.0	5.0	10	UG/L	10	10-Jan-2019 15:33
Naphthalene	5.0	U	3.0	5.0	10	UG/L	10	10-Jan-2019 15:33
o-Xylene	5.0	U	3.0	5.0	10	UG/L	10	10-Jan-2019 15:33
sec-Butylbenzene	5.0	U	3.0	5.0	10	UG/L	10	10-Jan-2019 15:33
Styrene	5.0	U	3.0	5.0	10	UG/L	10	10-Jan-2019 15:33
tert-Butylbenzene	5.0	U	3.0	5.0	10	UG/L	10	10-Jan-2019 15:33
Tetrachloroethene	5.0	U	3.0	5.0	10	UG/L	10	10-Jan-2019 15:33
Toluene	5.0	U	2.0	5.0	10	UG/L	10	10-Jan-2019 15:33
trans-1,2-Dichloroethene	**9.4**	J	**2.0**	**5.0**	**10**	**UG/L**	10	10-Jan-2019 15:33
trans-1,3-Dichloropropene	5.0	U	2.0	5.0	10	UG/L	10	10-Jan-2019 15:33
Trichloroethene	**9,800**		**20**	**50**	**100**	**UG/L**	100	10-Jan-2019 16:01
Trichlorofluoromethane	5.0	U	3.0	5.0	10	UG/L	10	10-Jan-2019 15:33
Vinyl chloride	**42**		**2.0**	**5.0**	**10**	**UG/L**	10	10-Jan-2019 15:33
Surr: 1,2-Dichloroethane-d4	*108*			**0**	*81-118*	*%REC*	*100*	*10-Jan-2019 16:01*
Surr: 1,2-Dichloroethane-d4	*108*			**0**	*81-118*	*%REC*	*10*	*10-Jan-2019 15:33*
Surr: 4-Bromofluorobenzene	*100*			**0**	*85-114*	*%REC*	*10*	*10-Jan-2019 15:33*
Surr: 4-Bromofluorobenzene	*98.3*			**0**	*85-114*	*%REC*	*100*	*10-Jan-2019 16:01*
Surr: Dibromofluoromethane	*95.6*			**0**	*80-119*	*%REC*	*10*	*10-Jan-2019 15:33*
Surr: Dibromofluoromethane	*96.7*			**0**	*80-119*	*%REC*	*100*	*10-Jan-2019 16:01*
Surr: Toluene-d8	*105*			**0**	*89-112*	*%REC*	*100*	*10-Jan-2019 16:01*
Surr: Toluene-d8	*106*			**0**	*89-112*	*%REC*	*10*	*10-Jan-2019 15:33*

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

ALS Houston, US Date: 11-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
Sample ID: MW21_122818
Collection Date: 28-Dec-2018 10:25

ANALYTICAL REPORT
WorkOrder:HS18121558
Lab ID:HS18121558-02
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		**Method:SW6020**				Prep:SW3010A / 02-Jan-2019		Analyst: RPM
Aluminum	**0.0276**		**0.00180**	**0.00500**	**0.0100**	**mg/L**	1	08-Jan-2019 17:37
Antimony	**0.000449**	J	**0.000400**	**0.00100**	**0.00200**	**mg/L**	1	08-Jan-2019 17:37
Arsenic	**0.00116**	J	**0.000400**	**0.00100**	**0.00200**	**mg/L**	1	08-Jan-2019 17:37
Barium	**7.53**		**0.0950**	**0.125**	**0.200**	**mg/L**	50	09-Jan-2019 15:18
Beryllium	**0.000305**	J	**0.000200**	**0.00100**	**0.00200**	**mg/L**	1	08-Jan-2019 17:37
Cadmium	**0.000669**	J	**0.000200**	**0.00100**	**0.00200**	**mg/L**	1	08-Jan-2019 17:37
Calcium	**222**		**1.70**	**5.00**	**25.0**	**mg/L**	50	09-Jan-2019 15:18
Chromium	**0.552**		**0.000400**	**0.00100**	**0.00400**	**mg/L**	1	08-Jan-2019 17:37
Cobalt	**0.0753**		**0.000200**	**0.00100**	**0.00500**	**mg/L**	1	08-Jan-2019 17:37
Copper	**0.0700**		**0.00100**	**0.00100**	**0.00200**	**mg/L**	1	08-Jan-2019 17:37
Iron	**5.25**		**0.0120**	**0.100**	**0.200**	**mg/L**	1	08-Jan-2019 17:37
Lead	0.00100	U	0.000600	0.00100	0.00200	mg/L	1	08-Jan-2019 17:37
Magnesium	**167**		**0.0100**	**0.100**	**0.200**	**mg/L**	1	08-Jan-2019 17:37
Manganese	**2.13**		**0.0350**	**0.0500**	**0.250**	**mg/L**	50	09-Jan-2019 15:18
Nickel	**0.609**		**0.000600**	**0.00100**	**0.00200**	**mg/L**	1	08-Jan-2019 17:37
Potassium	**2.51**		**0.0180**	**0.100**	**0.200**	**mg/L**	1	08-Jan-2019 17:37
Selenium	0.00100	U	0.00110	0.00100	0.00200	mg/L	1	08-Jan-2019 17:37
Silver	0.00100	U	0.000200	0.00100	0.00200	mg/L	1	08-Jan-2019 17:37
Sodium	**603**		**0.700**	**5.00**	**10.0**	**mg/L**	50	09-Jan-2019 15:18
Thallium	0.00100	U	0.000200	0.00100	0.00200	mg/L	1	08-Jan-2019 17:37
Vanadium	**0.00284**	J	**0.000600**	**0.00100**	**0.00500**	**mg/L**	1	08-Jan-2019 17:37
Zinc	**0.0265**		**0.00200**	**0.00250**	**0.00400**	**mg/L**	1	08-Jan-2019 17:37
MERCURY BY SW7470A		**Method:SW7470**				Prep:SW7470 / 10-Jan-2019		Analyst: OFO
Mercury	**0.0000420**	J	**0.0000300**	**0.000100**	**0.000200**	**mg/L**	1	10-Jan-2019 19:16
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: SUB
Subcontract Analysis	See Attached		0	0		NA	1	10-Jan-2019 16:18

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

ALS Houston, US Date: 11-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
Sample ID: MW3_122818
Collection Date: 28-Dec-2018 11:45

ANALYTICAL REPORT
WorkOrder:HS18121558
Lab ID:HS18121558-03
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: AKP
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 14:39
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 14:39
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	UG/L	1	10-Jan-2019 14:39
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 14:39
1,1-Dichloroethane	**6.4**		**0.20**	**0.50**	**1.0**	**UG/L**	1	10-Jan-2019 14:39
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 14:39
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 14:39
1,2,3-Trichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	10-Jan-2019 14:39
1,2,3-Trichloropropane	0.50	U	0.50	0.50	1.0	UG/L	1	10-Jan-2019 14:39
1,2,4-Trichlorobenzene	0.50	U	0.50	0.50	1.0	UG/L	1	10-Jan-2019 14:39
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 14:39
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 14:39
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 14:39
1,2-Dichlorobenzene	0.50	U	0.50	0.50	1.0	UG/L	1	10-Jan-2019 14:39
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 14:39
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	UG/L	1	10-Jan-2019 14:39
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 14:39
1,3-Dichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	10-Jan-2019 14:39
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 14:39
1,4-Dichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	10-Jan-2019 14:39
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 14:39
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	10-Jan-2019 14:39
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 14:39
2-Hexanone	1.0	U	1.0	1.0	2.0	UG/L	1	10-Jan-2019 14:39
4-Chlorotoluene	0.50	U	0.40	0.50	1.0	UG/L	1	10-Jan-2019 14:39
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 14:39
4-Methyl-2-pentanone	1.0	U	0.70	1.0	2.0	UG/L	1	10-Jan-2019 14:39
Acetone	2.0	U	0.40	2.0	2.0	UG/L	1	10-Jan-2019 14:39
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 14:39
Bromobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	10-Jan-2019 14:39
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 14:39
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 14:39
Bromoform	0.50	U	0.40	0.50	1.0	UG/L	1	10-Jan-2019 14:39
Bromomethane	0.50	U	0.40	0.50	1.0	UG/L	1	10-Jan-2019 14:39
Carbon disulfide	1.0	U	0.60	1.0	2.0	UG/L	1	10-Jan-2019 14:39
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	UG/L	1	10-Jan-2019 14:39
Chlorobenzene	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 14:39
Chloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 14:39
Chloroform	**2.0**		**0.20**	**0.50**	**1.0**	**UG/L**	1	10-Jan-2019 14:39

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

ALS Houston, US Date: 11-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
Sample ID: MW3_122818
Collection Date: 28-Dec-2018 11:45

ANALYTICAL REPORT
WorkOrder:HS18121558
Lab ID:HS18121558-03
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: AKP
Chloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 14:39
cis-1,2-Dichloroethene	**97**		**0.20**	**0.50**	**1.0**	**UG/L**	1	10-Jan-2019 14:39
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	10-Jan-2019 14:39
Dibromochloromethane	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 14:39
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 14:39
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 14:39
Ethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 14:39
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	10-Jan-2019 14:39
Isopropylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 14:39
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	10-Jan-2019 14:39
Methylene chloride	0.50	U	0.40	0.50	2.0	UG/L	1	10-Jan-2019 14:39
n-Butylbenzene	0.50	U	0.40	0.50	1.0	UG/L	1	10-Jan-2019 14:39
n-Propylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 14:39
Naphthalene	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 14:39
o-Xylene	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 14:39
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 14:39
Styrene	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 14:39
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 14:39
Tetrachloroethene	**1.7**		**0.30**	**0.50**	**1.0**	**UG/L**	1	10-Jan-2019 14:39
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 14:39
trans-1,2-Dichloroethene	**4.6**		**0.20**	**0.50**	**1.0**	**UG/L**	1	10-Jan-2019 14:39
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 14:39
Trichloroethene	**600**		**1.0**	**2.5**	**5.0**	**UG/L**	5	10-Jan-2019 15:06
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 14:39
Vinyl chloride	**36**		**0.20**	**0.50**	**1.0**	**UG/L**	1	10-Jan-2019 14:39
Surr: 1,2-Dichloroethane-d4	*100*			**0**	*81-118*	*%REC*	*5*	*10-Jan-2019 15:06*
Surr: 1,2-Dichloroethane-d4	*97.8*			**0**	*81-118*	*%REC*	*1*	*10-Jan-2019 14:39*
Surr: 4-Bromofluorobenzene	*101*			**0**	*85-114*	*%REC*	*5*	*10-Jan-2019 15:06*
Surr: 4-Bromofluorobenzene	*101*			**0**	*85-114*	*%REC*	*1*	*10-Jan-2019 14:39*
Surr: Dibromofluoromethane	*91.5*			**0**	*80-119*	*%REC*	*1*	*10-Jan-2019 14:39*
Surr: Dibromofluoromethane	*92.8*			**0**	*80-119*	*%REC*	*5*	*10-Jan-2019 15:06*
Surr: Toluene-d8	*107*			**0**	*89-112*	*%REC*	*5*	*10-Jan-2019 15:06*
Surr: Toluene-d8	*106*			**0**	*89-112*	*%REC*	*1*	*10-Jan-2019 14:39*

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

ALS Houston, US Date: 11-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
Sample ID: MW3_122818
Collection Date: 28-Dec-2018 11:45

ANALYTICAL REPORT
WorkOrder:HS18121558
Lab ID:HS18121558-03
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		**Method:SW6020**				Prep:SW3010A / 02-Jan-2019		Analyst: RPM
Aluminum	**0.00670**	J	**0.00180**	**0.00500**	**0.0100**	**mg/L**	1	08-Jan-2019 17:39
Antimony	0.00100	U	0.000400	0.00100	0.00200	mg/L	1	08-Jan-2019 17:39
Arsenic	**0.000445**	J	**0.000400**	**0.00100**	**0.00200**	**mg/L**	1	08-Jan-2019 17:39
Barium	**0.484**		**0.00190**	**0.00250**	**0.00400**	**mg/L**	1	08-Jan-2019 17:39
Beryllium	0.00100	U	0.000200	0.00100	0.00200	mg/L	1	08-Jan-2019 17:39
Cadmium	**0.000236**	J	**0.000200**	**0.00100**	**0.00200**	**mg/L**	1	08-Jan-2019 17:39
Calcium	**30.5**		**0.0340**	**0.100**	**0.500**	**mg/L**	1	08-Jan-2019 17:39
Chromium	0.00100	U	0.000400	0.00100	0.00400	mg/L	1	08-Jan-2019 17:39
Cobalt	**0.00789**		**0.000200**	**0.00100**	**0.00500**	**mg/L**	1	08-Jan-2019 17:39
Copper	0.00100	U	0.00100	0.00100	0.00200	mg/L	1	08-Jan-2019 17:39
Iron	**0.421**		**0.0120**	**0.100**	**0.200**	**mg/L**	1	08-Jan-2019 17:39
Lead	0.00100	U	0.000600	0.00100	0.00200	mg/L	1	08-Jan-2019 17:39
Magnesium	**17.4**		**0.0100**	**0.100**	**0.200**	**mg/L**	1	08-Jan-2019 17:39
Manganese	**2.03**		**0.0140**	**0.0200**	**0.100**	**mg/L**	20	09-Jan-2019 15:20
Nickel	**0.00506**		**0.000600**	**0.00100**	**0.00200**	**mg/L**	1	08-Jan-2019 17:39
Potassium	**1.68**		**0.0180**	**0.100**	**0.200**	**mg/L**	1	08-Jan-2019 17:39
Selenium	0.00100	U	0.00110	0.00100	0.00200	mg/L	1	08-Jan-2019 17:39
Silver	0.00100	U	0.000200	0.00100	0.00200	mg/L	1	08-Jan-2019 17:39
Sodium	**240**		**0.280**	**2.00**	**4.00**	**mg/L**	20	09-Jan-2019 15:20
Thallium	0.00100	U	0.000200	0.00100	0.00200	mg/L	1	08-Jan-2019 17:39
Vanadium	**0.00130**	J	**0.000600**	**0.00100**	**0.00500**	**mg/L**	1	08-Jan-2019 17:39
Zinc	**0.00661**		**0.00200**	**0.00250**	**0.00400**	**mg/L**	1	08-Jan-2019 17:39
MERCURY BY SW7470A		**Method:SW7470**				Prep:SW7470 / 10-Jan-2019		Analyst: OFO
Mercury	**0.0000300**	J	**0.0000300**	**0.000100**	**0.000200**	**mg/L**	1	10-Jan-2019 19:18
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: SUB
Subcontract Analysis	See Attached		0	0		NA	1	10-Jan-2019 16:18

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

ALS Houston, US Date: 11-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
Sample ID: TRIP BLANK
Collection Date: 28-Dec-2018 00:00

ANALYTICAL REPORT
WorkOrder:HS18121558
Lab ID:HS18121558-04
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: AKP
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 13:25
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 13:25
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	UG/L	1	10-Jan-2019 13:25
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 13:25
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 13:25
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 13:25
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 13:25
1,2,3-Trichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	10-Jan-2019 13:25
1,2,3-Trichloropropane	0.50	U	0.50	0.50	1.0	UG/L	1	10-Jan-2019 13:25
1,2,4-Trichlorobenzene	0.50	U	0.50	0.50	1.0	UG/L	1	10-Jan-2019 13:25
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 13:25
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 13:25
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 13:25
1,2-Dichlorobenzene	0.50	U	0.50	0.50	1.0	UG/L	1	10-Jan-2019 13:25
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 13:25
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	UG/L	1	10-Jan-2019 13:25
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 13:25
1,3-Dichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	10-Jan-2019 13:25
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 13:25
1,4-Dichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	10-Jan-2019 13:25
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 13:25
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	10-Jan-2019 13:25
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 13:25
2-Hexanone	1.0	U	1.0	1.0	2.0	UG/L	1	10-Jan-2019 13:25
4-Chlorotoluene	0.50	U	0.40	0.50	1.0	UG/L	1	10-Jan-2019 13:25
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 13:25
4-Methyl-2-pentanone	1.0	U	0.70	1.0	2.0	UG/L	1	10-Jan-2019 13:25
Acetone	2.0	U	0.40	2.0	2.0	UG/L	1	10-Jan-2019 13:25
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 13:25
Bromobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	10-Jan-2019 13:25
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 13:25
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 13:25
Bromoform	0.50	U	0.40	0.50	1.0	UG/L	1	10-Jan-2019 13:25
Bromomethane	0.50	U	0.40	0.50	1.0	UG/L	1	10-Jan-2019 13:25
Carbon disulfide	1.0	U	0.60	1.0	2.0	UG/L	1	10-Jan-2019 13:25
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	UG/L	1	10-Jan-2019 13:25
Chlorobenzene	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 13:25
Chloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 13:25
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 13:25

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

ALS Houston, US Date: 11-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
Sample ID: TRIP BLANK
Collection Date: 28-Dec-2018 00:00

ANALYTICAL REPORT
WorkOrder:HS18121558
Lab ID:HS18121558-04
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: AKP
Chloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 13:25
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 13:25
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	10-Jan-2019 13:25
Dibromochloromethane	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 13:25
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 13:25
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 13:25
Ethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 13:25
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	10-Jan-2019 13:25
Isopropylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 13:25
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	10-Jan-2019 13:25
Methylene chloride	0.50	U	0.40	0.50	2.0	UG/L	1	10-Jan-2019 13:25
n-Butylbenzene	0.50	U	0.40	0.50	1.0	UG/L	1	10-Jan-2019 13:25
n-Propylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 13:25
Naphthalene	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 13:25
o-Xylene	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 13:25
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 13:25
Styrene	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 13:25
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 13:25
Tetrachloroethene	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 13:25
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 13:25
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 13:25
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 13:25
Trichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 13:25
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	10-Jan-2019 13:25
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jan-2019 13:25
Surr: 1,2-Dichloroethane-d4	*100*			**0**	*81-118*	*%REC*	*1*	*10-Jan-2019 13:25*
Surr: 4-Bromofluorobenzene	*102*			**0**	*85-114*	*%REC*	*1*	*10-Jan-2019 13:25*
Surr: Dibromofluoromethane	*91.6*			**0**	*80-119*	*%REC*	*1*	*10-Jan-2019 13:25*
Surr: Toluene-d8	*106*			**0**	*89-112*	*%REC*	*1*	*10-Jan-2019 13:25*

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

ALS Houston, US Date: 11-Jan-19

WEIGHT LOG

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121558

Batch ID: 136231 **Method:** ICP-MS METALS BY SW6020A **Prep:** 3010A

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS18121558-02	1	10	10 (mL)	1
HS18121558-03	1	10	10 (mL)	1

Batch ID: 136505 **Method:** MERCURY BY SW7470A **Prep:** HG_WPR

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS18121558-02	1	10 (mL)	10 (mL)	1
HS18121558-03	1	10 (mL)	10 (mL)	1

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121558

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID 136231	**Test Name :** ICP-MS METALS BY SW6020A			**Matrix:** Groundwater		
HS18121558-02	MW21_122818	28 Dec 2018 10:25		02 Jan 2019 13:00	09 Jan 2019 15:18	50
HS18121558-02	MW21_122818	28 Dec 2018 10:25		02 Jan 2019 13:00	08 Jan 2019 17:37	1
HS18121558-03	MW3_122818	28 Dec 2018 11:45		02 Jan 2019 13:00	09 Jan 2019 15:20	20
HS18121558-03	MW3_122818	28 Dec 2018 11:45		02 Jan 2019 13:00	08 Jan 2019 17:39	1
Batch ID 136505	**Test Name :** MERCURY BY SW7470A			**Matrix:** Groundwater		
HS18121558-02	MW21_122818	28 Dec 2018 10:25		10 Jan 2019 13:30	10 Jan 2019 19:16	1
HS18121558-03	MW3_122818	28 Dec 2018 11:45		10 Jan 2019 13:30	10 Jan 2019 19:18	1
Batch ID R330796	**Test Name :** VOLATILES ORGANICS BY METHOD 8260C			**Matrix:** Water		
HS18121558-04	TRIP BLANK	28 Dec 2018 00:00			10 Jan 2019 13:25	1
Batch ID R330796	**Test Name :** VOLATILES ORGANICS BY METHOD 8260C			**Matrix:** Groundwater		
HS18121558-01	18CPTMW07_122818	28 Dec 2018 09:00			10 Jan 2019 14:14	1
HS18121558-02	MW21_122818	28 Dec 2018 10:25			10 Jan 2019 16:01	100
HS18121558-02	MW21_122818	28 Dec 2018 10:25			10 Jan 2019 15:33	10
HS18121558-03	MW3_122818	28 Dec 2018 11:45			10 Jan 2019 15:06	5
HS18121558-03	MW3_122818	28 Dec 2018 11:45			10 Jan 2019 14:39	1
Batch ID R330810	**Test Name :** SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)			**Matrix:** Groundwater		
HS18121558-01	18CPTMW07_122818	28 Dec 2018 09:00			10 Jan 2019 16:18	1
HS18121558-02	MW21_122818	28 Dec 2018 10:25			10 Jan 2019 16:18	1
HS18121558-03	MW3_122818	28 Dec 2018 11:45			10 Jan 2019 16:18	1

ALS Houston, US Date: 11-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121558

QC BATCH REPORT

Batch ID: 136231 **Instrument: ICPMS05** **Method: SW6020**

MBLK Sample ID: **MBLK-136231** Units: **mg/L** Analysis Date: **08-Jan-2019 16:34**
Client ID: Run ID: **ICPMS05_330637** SeqNo: **4899851** PrepDate: **02-Jan-2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.004269	0.0100								J
Antimony	0.00100	0.00200								U
Arsenic	0.00100	0.00200								U
Barium	0.00250	0.00400								U
Beryllium	0.00100	0.00200								U
Cadmium	0.00100	0.00200								U
Calcium	0.100	0.500								U
Chromium	0.00100	0.00400								U
Cobalt	0.00100	0.00500								U
Copper	0.00100	0.00200								U
Iron	0.100	0.200								U
Lead	0.00100	0.00200								U
Magnesium	0.01138	0.200								J
Manganese	0.000911	0.00500								J
Nickel	0.00100	0.00200								U
Potassium	0.100	0.200								U
Selenium	0.00100	0.00200								U
Silver	0.00100	0.00200								U
Sodium	0.100	0.200								U
Thallium	0.00100	0.00200								U
Vanadium	0.00100	0.00500								U
Zinc	0.00250	0.00400								U

ALS Houston, US Date: 11-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121558

QC BATCH REPORT

Batch ID: 136231 **Instrument: ICPMS05** **Method: SW6020**

LCS Sample ID: **LCS-136231** Units: **mg/L** Analysis Date: **08-Jan-2019 16:36**
Client ID: Run ID: **ICPMS05_330637** SeqNo: **4899857** PrepDate: **02-Jan-2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Aluminum	0.1157	0.0100	0.1	0	116	80 - 120			
Antimony	0.05835	0.00200	0.05	0	117	80 - 120			
Arsenic	0.05551	0.00200	0.05	0	111	80 - 120			
Barium	0.0549	0.00400	0.05	0	110	80 - 120			
Beryllium	0.05764	0.00200	0.05	0	115	80 - 120			
Cadmium	0.05438	0.00200	0.05	0	109	80 - 120			
Chromium	0.05622	0.00400	0.05	0	112	80 - 120			
Cobalt	0.05735	0.00500	0.05	0	115	80 - 120			
Copper	0.05638	0.00200	0.05	0	113	80 - 120			
Iron	5.789	0.200	5	0	116	80 - 120			
Lead	0.05941	0.00200	0.05	0	119	80 - 120			
Magnesium	5.938	0.200	5	0	119	80 - 120			
Manganese	0.05543	0.00500	0.05	0	111	80 - 120			
Nickel	0.05726	0.00200	0.05	0	115	80 - 120			
Potassium	5.839	0.200	5	0	117	80 - 120			
Selenium	0.05585	0.00200	0.05	0	112	80 - 120			
Silver	0.05781	0.00200	0.05	0	116	80 - 120			
Sodium	5.817	0.200	5	0	116	80 - 120			
Thallium	0.05507	0.00200	0.05	0	110	80 - 120			
Vanadium	0.0562	0.00500	0.05	0	112	80 - 120			
Zinc	0.05915	0.00400	0.05	0	118	80 - 120			

LCS Sample ID: **LCS-136231** Units: **mg/L** Analysis Date: **09-Jan-2019 14:34**
Client ID: Run ID: **ICPMS05_330716** SeqNo: **4901335** PrepDate: **02-Jan-2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Calcium	5.955	0.500	5	0	119	80 - 120			

ALS Houston, US Date: 11-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121558

QC BATCH REPORT

Batch ID: 136231 **Instrument: ICPMS05** **Method: SW6020**

MS Sample ID: **HS18121117-01MS** Units: **mg/L** Analysis Date: **08-Jan-2019 16:49**
Client ID: Run ID: **ICPMS05_330637** SeqNo: **4899863** PrepDate: **02-Jan-2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Aluminum	0.1631	0.0100	0.1	0.0248	138	80 - 120			S
Antimony	0.05656	0.00200	0.05	0.000228	113	80 - 120			
Arsenic	0.05399	0.00200	0.05	0.001232	106	80 - 120			
Barium	0.8334	0.00400	0.05	0.784	98.8	80 - 120			O
Beryllium	0.06061	0.00200	0.05	0.000054	121	80 - 120			S
Cadmium	0.04854	0.00200	0.05	0.000194	96.7	80 - 120			
Calcium	68.51	0.500	5	65.42	61.8	80 - 120			SO
Chromium	0.06241	0.00400	0.05	0.01131	102	80 - 120			
Cobalt	0.05552	0.00500	0.05	0.003152	105	80 - 120			
Copper	0.05205	0.00200	0.05	-0.000224	105	80 - 120			
Iron	7.021	0.200	5	1.744	106	80 - 120			
Lead	0.05116	0.00200	0.05	0.000073	102	80 - 120			
Magnesium	45.43	0.200	5	42.08	67.0	80 - 120			SO
Manganese	0.6414	0.00500	0.05	0.6013	80.1	80 - 120			O
Nickel	0.06054	0.00200	0.05	0.008904	103	80 - 120			
Potassium	57.38	0.200	5	49.19	164	80 - 120			SO
Selenium	0.05416	0.00200	0.05	-0.000445	109	80 - 120			
Silver	0.05182	0.00200	0.05	0.00002	104	80 - 120			
Sodium	276.7	0.200	5	272.5	84.0	80 - 120			EO
Thallium	0.04394	0.00200	0.05	0.000707	86.5	80 - 120			
Vanadium	0.05251	0.00500	0.05	-0.000276	106	80 - 120			
Zinc	0.0654	0.00400	0.05	0.01371	103	80 - 120			

ALS Houston, US Date: 11-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121558

QC BATCH REPORT

Batch ID: 136231 **Instrument: ICPMS05** **Method: SW6020**

MSD Sample ID: **HS18121117-01MSD** Units: **mg/L** Analysis Date: **08-Jan-2019 16:51**
Client ID: Run ID: **ICPMS05_330637** SeqNo: **4899864** PrepDate: **02-Jan-2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.1654	0.0100	0.1	0.0248	141	80 - 120	0.1631	1.42	20	S
Antimony	0.05807	0.00200	0.05	0.000228	116	80 - 120	0.05656	2.63	20	
Arsenic	0.0571	0.00200	0.05	0.001232	112	80 - 120	0.05399	5.59	20	
Barium	0.8559	0.00400	0.05	0.784	144	80 - 120	0.8334	2.67	20	SO
Beryllium	0.06062	0.00200	0.05	0.000054	121	80 - 120	0.06061	0.0099	20	S
Cadmium	0.04975	0.00200	0.05	0.000194	99.1	80 - 120	0.04854	2.46	20	
Calcium	72.35	0.500	5	65.42	139	80 - 120	68.51	5.46	20	SO
Chromium	0.06518	0.00400	0.05	0.01131	108	80 - 120	0.06241	4.34	20	
Cobalt	0.05702	0.00500	0.05	0.003152	108	80 - 120	0.05552	2.67	20	
Copper	0.05376	0.00200	0.05	-0.000224	108	80 - 120	0.05205	3.24	20	
Iron	7.316	0.200	5	1.744	111	80 - 120	7.021	4.11	20	
Lead	0.05134	0.00200	0.05	0.000073	103	80 - 120	0.05116	0.361	20	
Magnesium	46.67	0.200	5	42.08	91.8	80 - 120	45.43	2.69	20	O
Manganese	0.6587	0.00500	0.05	0.6013	115	80 - 120	0.6414	2.67	20	O
Nickel	0.06305	0.00200	0.05	0.008904	108	80 - 120	0.06054	4.05	20	
Potassium	52.46	0.200	5	49.19	65.5	80 - 120	57.38	8.96	20	SO
Selenium	0.05498	0.00200	0.05	-0.000445	111	80 - 120	0.05416	1.5	20	
Silver	0.04894	0.00200	0.05	0.00002	97.8	80 - 120	0.05182	5.72	20	
Sodium	277.8	0.200	5	272.5	107	80 - 120	276.7	0.408	20	EO
Thallium	0.04992	0.00200	0.05	0.000707	98.4	80 - 120	0.04394	12.7	20	
Vanadium	0.05622	0.00500	0.05	-0.000276	113	80 - 120	0.05251	6.84	20	
Zinc	0.06188	0.00400	0.05	0.01371	96.3	80 - 120	0.0654	5.52	20	

ALS Houston, US Date: 11-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121558

QC BATCH REPORT

Batch ID: 136231 **Instrument: ICPMS05** **Method: SW6020**

PDS Sample ID: **HS18121117-01PDS** Units: **mg/L** Analysis Date: **08-Jan-2019 16:53**
Client ID: Run ID: **ICPMS05_330637** SeqNo: **4899865** PrepDate: **02-Jan-2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Aluminum	0.143	0.0100	0.1	0.0248	118	75 - 125			
Antimony	0.121	0.00200	0.1	0.000228	121	75 - 125			
Arsenic	0.1227	0.00200	0.1	0.001232	121	75 - 125			
Barium	0.9239	0.00400	0.1	0.784	140	75 - 125			SO
Beryllium	0.1343	0.00200	0.1	0.000054	134	75 - 125			S
Cadmium	0.1136	0.00200	0.1	0.000194	113	75 - 125			
Calcium	76.72	0.500	10	65.42	113	75 - 125			O
Chromium	0.1312	0.00400	0.1	0.01131	120	75 - 125			
Cobalt	0.124	0.00500	0.1	0.003152	121	75 - 125			
Copper	0.1171	0.00200	0.1	-0.000224	117	75 - 125			
Iron	14.31	0.200	10	1.744	126	75 - 125			S
Lead	0.11	0.00200	0.1	0.000073	110	75 - 125			
Magnesium	52.7	0.200	10	42.08	106	75 - 125			O
Manganese	0.7496	0.00500	0.1	0.6013	148	75 - 125			SO
Nickel	0.1275	0.00200	0.1	0.008904	119	75 - 125			
Potassium	60.42	0.200	10	49.19	112	75 - 125			O
Selenium	0.1257	0.00200	0.1	-0.000445	126	75 - 125			S
Silver	0.107	0.00200	0.1	0.00002	107	75 - 125			
Thallium	0.1147	0.00200	0.1	0.000707	114	75 - 125			
Vanadium	0.1225	0.00500	0.1	-0.000276	123	75 - 125			
Zinc	0.124	0.00400	0.1	0.01371	110	75 - 125			

PDS Sample ID: **HS18121117-01PDS** Units: **mg/L** Analysis Date: **09-Jan-2019 15:53**
Client ID: Run ID: **ICPMS05_330716** SeqNo: **4901515** PrepDate: **02-Jan-2019** DF: **20**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Sodium	477.9	4.00	200	248.9	115	75 - 125			

ALS Houston, US Date: 11-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121558

QC BATCH REPORT

Batch ID: 136231 **Instrument: ICPMS05** **Method: SW6020**

SD Sample ID: **HS18121117-01SD** Units: **mg/L** Analysis Date: **08-Jan-2019 16:40**
Client ID: Run ID: **ICPMS05_330637** SeqNo: **4899859** PrepDate: **02-Jan-2019** DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual
Aluminum	0.03248	0.0500					0.0248	0	10	J
Antimony	0.00500	0.0100					0.000228	0	10	U
Arsenic	0.00500	0.0100					0.001232	0	10	U
Barium	0.7567	0.0200					0.784	3.48	10	
Beryllium	0.00500	0.0100					0.000054	0	10	U
Cadmium	0.00500	0.0100					0.000194	0	10	U
Calcium	61.97	2.50					65.42	5.27	10	
Chromium	0.01108	0.0200					0.01131	0	10	J
Cobalt	0.003171	0.0250					0.003152	0	10	J
Copper	0.00500	0.0100					-0.000224	0	10	U
Iron	1.587	1.00					1.744	8.99	10	
Lead	0.00500	0.0100					0.000073	0	10	U
Magnesium	39.2	1.00					42.08	6.84	10	
Manganese	0.5658	0.0250					0.6013	5.9	10	
Nickel	0.005621	0.0100					0.008904	0	10	J
Potassium	50.6	1.00					49.19	2.87	10	
Selenium	0.00500	0.0100					-0.000445	0	10	U
Silver	0.00500	0.0100					0.00002	0	10	U
Thallium	0.00500	0.0100					0.000707	0	10	U
Vanadium	0.00500	0.0250					-0.000276	0	10	U
Zinc	0.01887	0.0200					0.01371	0	10	J

SD Sample ID: **HS18121117-01SD** Units: **mg/L** Analysis Date: **09-Jan-2019 14:38**
Client ID: Run ID: **ICPMS05_330716** SeqNo: **4901337** PrepDate: **02-Jan-2019** DF: **100**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual
Sodium	270.3	20.0					248.9	8.6	10	

The following samples were analyzed in this batch: HS18121558-02 HS18121558-03

ALS Houston, US Date: 11-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121558

QC BATCH REPORT

Batch ID: 136505 **Instrument: HG03** **Method: SW7470**

MBLK Sample ID: **MBLK-136505** Units: **mg/L** Analysis Date: **10-Jan-2019 18:52**
Client ID: Run ID: **HG03_330807** SeqNo: **4903867** PrepDate: **10-Jan-2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.000043	0.000200								J

LCS Sample ID: **LCS-136505** Units: **mg/L** Analysis Date: **10-Jan-2019 18:54**
Client ID: Run ID: **HG03_330807** SeqNo: **4903868** PrepDate: **10-Jan-2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00509	0.000200	0.005	0	102	80 - 120				

MS Sample ID: **HS19010248-03MS** Units: **mg/L** Analysis Date: **10-Jan-2019 18:57**
Client ID: Run ID: **HG03_330807** SeqNo: **4903870** PrepDate: **10-Jan-2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00513	0.000200	0.005	0.000032	102	75 - 125				

MSD Sample ID: **HS19010248-03MSD** Units: **mg/L** Analysis Date: **10-Jan-2019 18:59**
Client ID: Run ID: **HG03_330807** SeqNo: **4903871** PrepDate: **10-Jan-2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00506	0.000200	0.005	0.000032	101	75 - 125	0.00513	1.37	20	

The following samples were analyzed in this batch: HS18121558-02 HS18121558-03

ALS Houston, US Date: 11-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121558

QC BATCH REPORT

Batch ID: R330796 **Instrument: VOA9** **Method: SW8260**

MBLK Sample ID: **VBLKW-190108** Units: **UG/L** Analysis Date: **10-Jan-2019 13:00**
Client ID: Run ID: **VOA9_330796** SeqNo: **4903250** 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	0.50	1.0								U
1,1,1-Trichloroethane	0.50	1.0								U
1,1,2,2-Tetrachloroethane	0.50	1.0								U
1,1,2-Trichloroethane	0.50	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	0.50	1.0								U
1,2,3-Trichloropropane	0.50	1.0								U
1,2,4-Trichlorobenzene	0.50	1.0								U
1,2,4-Trimethylbenzene	0.50	1.0								U
1,2-Dibromo-3-chloropropane	0.50	1.0								U
1,2-Dibromoethane	0.50	1.0								U
1,2-Dichlorobenzene	0.50	1.0								U
1,2-Dichloroethane	0.50	1.0								U
1,2-Dichloropropane	0.50	1.0								U
1,3,5-Trimethylbenzene	0.50	1.0								U
1,3-Dichlorobenzene	0.50	1.0								U
1,3-Dichloropropane	0.50	1.0								U
1,4-Dichlorobenzene	0.50	1.0								U
2,2-Dichloropropane	0.50	1.0								U
2-Butanone	1.0	2.0								U
2-Chlorotoluene	0.50	1.0								U
2-Hexanone	1.0	2.0								U
4-Chlorotoluene	0.50	1.0								U
4-Isopropyltoluene	0.50	1.0								U
4-Methyl-2-pentanone	1.0	2.0								U
Acetone	2.0	2.0								U
Benzene	0.50	1.0								U
Bromobenzene	0.50	1.0								U
Bromochloromethane	0.50	1.0								U
Bromodichloromethane	0.50	1.0								U
Bromoform	0.50	1.0								U
Bromomethane	0.50	1.0								U

ALS Houston, US Date: 11-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121558

QC BATCH REPORT

Batch ID: R330796 **Instrument: VOA9** **Method: SW8260**

MBLK Sample ID: **VBLKW-190108** Units: **UG/L** Analysis Date: **10-Jan-2019 13:00**
Client ID: Run ID: **VOA9_330796** SeqNo: **4903250** 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	0.50	1.0								U
Chlorobenzene	0.50	1.0								U
Chloroethane	0.50	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	0.50	1.0								U
Dibromomethane	0.50	1.0								U
Dichlorodifluoromethane	0.50	1.0								U
Ethylbenzene	0.50	1.0								U
Hexachlorobutadiene	1.0	1.0								U
Isopropylbenzene	0.50	1.0								U
m,p-Xylene	1.0	2.0								U
Methylene chloride	0.50	2.0								U
Naphthalene	0.50	1.0								U
n-Butylbenzene	0.50	1.0								U
n-Propylbenzene	0.50	1.0								U
o-Xylene	0.50	1.0								U
sec-Butylbenzene	0.50	1.0								U
Styrene	0.50	1.0								U
tert-Butylbenzene	0.50	1.0								U
Tetrachloroethene	0.50	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	0.50	1.0								U
Vinyl chloride	0.50	1.0								U
Surr: 1,2-Dichloroethane-d4	*49*	*1.0*	*50*	*0*	*98.0*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*51.26*	*1.0*	*50*	*0*	*103*	*85 - 114*				
Surr: Dibromofluoromethane	*46.01*	*1.0*	*50*	*0*	*92.0*	*80 - 119*				
Surr: Toluene-d8	*53.03*	*1.0*	*50*	*0*	*106*	*89 - 112*				

ALS Houston, US Date: 11-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121558

QC BATCH REPORT

Batch ID: R330796 **Instrument: VOA9** **Method: SW8260**

LCS Sample ID: **VLCSW-190108** Units: **UG/L** Analysis Date: **10-Jan-2019 11:47**
Client ID: Run ID: **VOA9_330796** SeqNo: **4903249** 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	22.56	1.0	20	0	113	78 - 124				
1,1,1-Trichloroethane	22.49	1.0	20	0	112	74 - 131				
1,1,2,2-Tetrachloroethane	21.05	1.0	20	0	105	71 - 121				
1,1,2-Trichloroethane	21.85	1.0	20	0	109	80 - 119				
1,1-Dichloroethane	22.15	1.0	20	0	111	77 - 125				
1,1-Dichloroethene	22.16	1.0	20	0	111	71 - 131				
1,1-Dichloropropene	22.02	1.0	20	0	110	78 - 125				
1,2,3-Trichlorobenzene	21.65	1.0	20	0	108	69 - 129				
1,2,3-Trichloropropane	20.84	1.0	20	0	104	73 - 122				
1,2,4-Trichlorobenzene	22.13	1.0	20	0	111	69 - 130				
1,2,4-Trimethylbenzene	23.98	1.0	20	0	120	76 - 124				
1,2-Dibromo-3-chloropropane	18.45	1.0	20	0	92.2	62 - 128				
1,2-Dibromoethane	22	1.0	20	0	110	77 - 121				
1,2-Dichlorobenzene	21.58	1.0	20	0	108	80 - 119				
1,2-Dichloroethane	22.65	1.0	20	0	113	73 - 128				
1,2-Dichloropropane	22.43	1.0	20	0	112	78 - 122				
1,3,5-Trimethylbenzene	23.68	1.0	20	0	118	75 - 124				
1,3-Dichlorobenzene	21.86	1.0	20	0	109	80 - 119				
1,3-Dichloropropane	22.22	1.0	20	0	111	80 - 119				
1,4-Dichlorobenzene	21.31	1.0	20	0	107	79 - 118				
2,2-Dichloropropane	22.93	1.0	20	0	115	60 - 139				
2-Butanone	41.39	2.0	40	0	103	56 - 143				
2-Chlorotoluene	23.15	1.0	20	0	116	79 - 122				
2-Hexanone	43.76	2.0	40	0	109	57 - 139				
4-Chlorotoluene	23.12	1.0	20	0	116	78 - 122				
4-Isopropyltoluene	23.98	1.0	20	0	120	77 - 127				
4-Methyl-2-pentanone	43.82	2.0	40	0	110	67 - 130				
Acetone	39.98	2.0	40	0	99.9	39 - 160				
Benzene	21.74	1.0	20	0	109	79 - 120				
Bromobenzene	21.3	1.0	20	0	106	80 - 120				
Bromochloromethane	23.57	1.0	20	0	118	78 - 123				
Bromodichloromethane	22.62	1.0	20	0	113	79 - 125				
Bromoform	19.11	1.0	20	0	95.5	66 - 130				
Bromomethane	23.69	1.0	20	0	118	53 - 141				

ALS Houston, US Date: 11-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121558

QC BATCH REPORT

Batch ID: R330796 **Instrument: VOA9** **Method: SW8260**

LCS Sample ID: **VLCSW-190108** Units: **UG/L** Analysis Date: **10-Jan-2019 11:47**
Client ID: Run ID: **VOA9_330796** SeqNo: **4903249** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	45.66	2.0	40	0	114	64 - 133				
Carbon tetrachloride	22.52	1.0	20	0	113	72 - 136				
Chlorobenzene	21.57	1.0	20	0	108	82 - 118				
Chloroethane	23.01	1.0	20	0	115	60 - 138				
Chloroform	22.01	1.0	20	0	110	79 - 124				
Chloromethane	25.3	1.0	20	0	126	50 - 139				
cis-1,2-Dichloroethene	21.56	1.0	20	0	108	78 - 123				
cis-1,3-Dichloropropene	21.14	1.0	20	0	106	75 - 124				
Dibromochloromethane	20.72	1.0	20	0	104	74 - 126				
Dibromomethane	21.71	1.0	20	0	109	79 - 123				
Dichlorodifluoromethane	23.35	1.0	20	0	117	32 - 152				
Ethylbenzene	22.13	1.0	20	0	111	79 - 121				
Hexachlorobutadiene	23.36	1.0	20	0	117	66 - 134				
Isopropylbenzene	23.42	1.0	20	0	117	72 - 131				
m,p-Xylene	45.71	2.0	40	0	114	80 - 121				
Methylene chloride	22.58	2.0	20	0	113	74 - 124				
Naphthalene	20.14	1.0	20	0	101	61 - 128				
n-Butylbenzene	23.72	1.0	20	0	119	75 - 128				
n-Propylbenzene	23.76	1.0	20	0	119	76 - 126				
o-Xylene	22.24	1.0	20	0	111	78 - 122				
sec-Butylbenzene	24.05	1.0	20	0	120	77 - 126				
Styrene	23.19	1.0	20	0	116	78 - 123				
tert-Butylbenzene	23.17	1.0	20	0	116	78 - 124				
Tetrachloroethene	20.22	1.0	20	0	101	74 - 129				
Toluene	22.44	1.0	20	0	112	80 - 121				
trans-1,2-Dichloroethene	21.39	1.0	20	0	107	75 - 124				
trans-1,3-Dichloropropene	20.85	1.0	20	0	104	73 - 127				
Trichloroethene	21.11	1.0	20	0	106	79 - 123				
Trichlorofluoromethane	22.52	1.0	20	0	113	65 - 141				
Vinyl chloride	21.91	1.0	20	0	110	58 - 137				
Surr: 1,2-Dichloroethane-d4	*52.27*	*1.0*	*50*	*0*	*105*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*53*	*1.0*	*50*	*0*	*106*	*85 - 114*				
Surr: Dibromofluoromethane	*49.73*	*1.0*	*50*	*0*	*99.5*	*80 - 119*				
Surr: Toluene-d8	*52.32*	*1.0*	*50*	*0*	*105*	*89 - 112*				

ALS Houston, US Date: 11-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121558

QC BATCH REPORT

Batch ID: R330796 **Instrument: VOA9** **Method: SW8260**

MS Sample ID: **HS18121558-01MS** Units: **UG/L** Analysis Date: **10-Jan-2019 16:25**
Client ID: **18CPTMW07_122818** Run ID: **VOA9_330796** SeqNo: **4904251** 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	27.23	1.0	20	0	136	78 - 124			S
1,1,1-Trichloroethane	28.81	1.0	20	0	144	74 - 131			S
1,1,2,2-Tetrachloroethane	27.29	1.0	20	0	136	71 - 121			S
1,1,2-Trichloroethane	27.55	1.0	20	0	138	80 - 119			S
1,1-Dichloroethane	26.65	1.0	20	0	133	77 - 125			S
1,1-Dichloroethene	28.67	1.0	20	0	143	71 - 131			S
1,1-Dichloropropene	29.47	1.0	20	0	147	78 - 125			S
1,2,3-Trichlorobenzene	25.17	1.0	20	0	126	69 - 129			
1,2,3-Trichloropropane	26.13	1.0	20	0	131	73 - 122			S
1,2,4-Trichlorobenzene	25.42	1.0	20	0	127	69 - 130			
1,2,4-Trimethylbenzene	29.08	1.0	20	0	145	76 - 124			S
1,2-Dibromo-3-chloropropane	21.87	1.0	20	0	109	62 - 128			
1,2-Dibromoethane	27.41	1.0	20	0	137	77 - 121			S
1,2-Dichlorobenzene	25.75	1.0	20	0	129	80 - 119			S
1,2-Dichloroethane	28.93	1.0	20	0	145	73 - 128			S
1,2-Dichloropropane	29.07	1.0	20	0	145	78 - 122			S
1,3,5-Trimethylbenzene	28.84	1.0	20	0	144	75 - 124			S
1,3-Dichlorobenzene	25.97	1.0	20	0	130	80 - 119			S
1,3-Dichloropropane	27.9	1.0	20	0	139	80 - 119			S
1,4-Dichlorobenzene	25.31	1.0	20	0	127	79 - 118			S
2,2-Dichloropropane	25.26	1.0	20	0	126	60 - 139			
2-Butanone	50.78	2.0	40	0	127	56 - 143			
2-Chlorotoluene	28.39	1.0	20	0	142	79 - 122			S
2-Hexanone	55.48	2.0	40	0	139	57 - 139			
4-Chlorotoluene	28.64	1.0	20	0	143	78 - 122			S
4-Isopropyltoluene	28.92	1.0	20	0	145	77 - 127			S
4-Methyl-2-pentanone	56.27	2.0	40	0	141	67 - 130			S
Acetone	54.91	2.0	40	0	137	39 - 160			
Benzene	28.68	1.0	20	0	143	79 - 120			S
Bromobenzene	25.96	1.0	20	0	130	80 - 120			S
Bromochloromethane	28.15	1.0	20	0	141	78 - 123			S
Bromodichloromethane	28.03	1.0	20	0	140	79 - 125			S
Bromoform	22.87	1.0	20	0	114	66 - 130			
Bromomethane	31.26	1.0	20	0	156	53 - 141			S

ALS Houston, US Date: 11-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121558

QC BATCH REPORT

Batch ID: R330796 **Instrument: VOA9** **Method: SW8260**

MS Sample ID: **HS18121558-01MS** Units: **UG/L** Analysis Date: **10-Jan-2019 16:25**
Client ID: **18CPTMW07_122818** Run ID: **VOA9_330796** SeqNo: **4904251** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Carbon disulfide	52.39	2.0	40	0	131	64 - 133			
Carbon tetrachloride	29.98	1.0	20	0	150	72 - 136			S
Chlorobenzene	26.84	1.0	20	0	134	82 - 118			S
Chloroethane	34.9	1.0	20	0	175	60 - 138			S
Chloroform	27.02	1.0	20	0	135	79 - 124			S
Chloromethane	29.94	1.0	20	0	150	50 - 139			S
cis-1,2-Dichloroethene	26.39	1.0	20	0	132	78 - 123			S
cis-1,3-Dichloropropene	24.98	1.0	20	0	125	75 - 124			S
Dibromochloromethane	24.7	1.0	20	0	123	74 - 126			
Dibromomethane	27.86	1.0	20	0	139	79 - 123			S
Dichlorodifluoromethane	26.28	1.0	20	0	131	32 - 152			
Ethylbenzene	28.05	1.0	20	0	140	79 - 121			S
Hexachlorobutadiene	24.88	1.0	20	0	124	66 - 134			
Isopropylbenzene	29.42	1.0	20	0	147	72 - 131			S
m,p-Xylene	57.06	2.0	40	0	143	80 - 121			S
Methylene chloride	26.33	2.0	20	0	132	74 - 124			S
Naphthalene	24.3	1.0	20	0	121	61 - 128			
n-Butylbenzene	28.92	1.0	20	0	145	75 - 128			S
n-Propylbenzene	29.46	1.0	20	0	147	76 - 126			S
o-Xylene	28.4	1.0	20	0	142	78 - 122			S
sec-Butylbenzene	29.62	1.0	20	0	148	77 - 126			S
Styrene	28.5	1.0	20	0	143	78 - 123			S
tert-Butylbenzene	28.57	1.0	20	0	143	78 - 124			S
Tetrachloroethene	25.23	1.0	20	0	126	74 - 129			
Toluene	28.57	1.0	20	0	143	80 - 121			S
trans-1,2-Dichloroethene	26.39	1.0	20	0	132	75 - 124			S
trans-1,3-Dichloropropene	24.85	1.0	20	0	124	73 - 127			
Trichloroethene	45.2	1.0	20	0.5483	223	79 - 123			S
Trichlorofluoromethane	28.88	1.0	20	0	144	65 - 141			S
Vinyl chloride	28.42	1.0	20	0	142	58 - 137			S
Surr: 1,2-Dichloroethane-d4	*53.69*	*1.0*	*50*	*0*	*107*	*81 - 118*			
Surr: 4-Bromofluorobenzene	*53.26*	*1.0*	*50*	*0*	*107*	*85 - 114*			
Surr: Dibromofluoromethane	*48.63*	*1.0*	*50*	*0*	*97.3*	*80 - 119*			
Surr: Toluene-d8	*53.35*	*1.0*	*50*	*0*	*107*	*89 - 112*			

ALS Houston, US Date: 11-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121558

QC BATCH REPORT

Batch ID: R330796 **Instrument: VOA9** **Method: SW8260**

MSD Sample ID: **HS18121558-01MSD** Units: **UG/L** Analysis Date: **10-Jan-2019 16:50**
Client ID: **18CPTMW07_122818** Run ID: **VOA9_330796** SeqNo: **4904252** 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	25.72	1.0	20	0	129	78 - 124	27.23	5.7	20	S
1,1,1-Trichloroethane	26.63	1.0	20	0	133	74 - 131	28.81	7.87	20	S
1,1,2,2-Tetrachloroethane	25.93	1.0	20	0	130	71 - 121	27.29	5.12	20	S
1,1,2-Trichloroethane	26.38	1.0	20	0	132	80 - 119	27.55	4.35	20	S
1,1-Dichloroethane	26.43	1.0	20	0	132	77 - 125	26.65	0.846	20	S
1,1-Dichloroethene	27.3	1.0	20	0	136	71 - 131	28.67	4.89	20	S
1,1-Dichloropropene	27.53	1.0	20	0	138	78 - 125	29.47	6.82	20	S
1,2,3-Trichlorobenzene	24.06	1.0	20	0	120	69 - 129	25.17	4.49	20	
1,2,3-Trichloropropane	25.47	1.0	20	0	127	73 - 122	26.13	2.56	20	S
1,2,4-Trichlorobenzene	24.4	1.0	20	0	122	69 - 130	25.42	4.09	20	
1,2,4-Trimethylbenzene	27.5	1.0	20	0	138	76 - 124	29.08	5.58	20	S
1,2-Dibromo-3-chloropropane	20.9	1.0	20	0	105	62 - 128	21.87	4.54	20	
1,2-Dibromoethane	26.03	1.0	20	0	130	77 - 121	27.41	5.15	20	S
1,2-Dichlorobenzene	24.43	1.0	20	0	122	80 - 119	25.75	5.25	20	S
1,2-Dichloroethane	27.66	1.0	20	0	138	73 - 128	28.93	4.48	20	S
1,2-Dichloropropane	27.55	1.0	20	0	138	78 - 122	29.07	5.39	20	S
1,3,5-Trimethylbenzene	27.43	1.0	20	0	137	75 - 124	28.84	5.01	20	S
1,3-Dichlorobenzene	24.3	1.0	20	0	122	80 - 119	25.97	6.64	20	S
1,3-Dichloropropane	26.75	1.0	20	0	134	80 - 119	27.9	4.2	20	S
1,4-Dichlorobenzene	24.06	1.0	20	0	120	79 - 118	25.31	5.07	20	S
2,2-Dichloropropane	24.29	1.0	20	0	121	60 - 139	25.26	3.93	20	
2-Butanone	50.82	2.0	40	0	127	56 - 143	50.78	0.0829	20	
2-Chlorotoluene	26.68	1.0	20	0	133	79 - 122	28.39	6.2	20	S
2-Hexanone	53.57	2.0	40	0	134	57 - 139	55.48	3.52	20	
4-Chlorotoluene	27.13	1.0	20	0	136	78 - 122	28.64	5.39	20	S
4-Isopropyltoluene	27.3	1.0	20	0	136	77 - 127	28.92	5.78	20	S
4-Methyl-2-pentanone	53.61	2.0	40	0	134	67 - 130	56.27	4.84	20	S
Acetone	52.41	2.0	40	0	131	39 - 160	54.91	4.65	20	
Benzene	26.49	1.0	20	0	132	79 - 120	28.68	7.94	20	S
Bromobenzene	24.67	1.0	20	0	123	80 - 120	25.96	5.1	20	S
Bromochloromethane	27.03	1.0	20	0	135	78 - 123	28.15	4.06	20	S
Bromodichloromethane	26.93	1.0	20	0	135	79 - 125	28.03	4	20	S
Bromoform	21.53	1.0	20	0	108	66 - 130	22.87	6.06	20	
Bromomethane	27	1.0	20	0	135	53 - 141	31.26	14.6	20	

ALS Houston, US Date: 11-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121558

QC BATCH REPORT

Batch ID: R330796 **Instrument: VOA9** **Method: SW8260**

MSD Sample ID: **HS18121558-01MSD** Units: **UG/L** Analysis Date: **10-Jan-2019 16:50**
Client ID: **18CPTMW07_122818** Run ID: **VOA9_330796** SeqNo: **4904252** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Carbon disulfide	52.33	2.0	40	0	131	64 - 133	52.39	0.127	20	
Carbon tetrachloride	27.96	1.0	20	0	140	72 - 136	29.98	7	20	S
Chlorobenzene	25.09	1.0	20	0	125	82 - 118	26.84	6.72	20	S
Chloroethane	10.21	1.0	20	0	51.1	60 - 138	34.9	109	20	SR
Chloroform	26.08	1.0	20	0	130	79 - 124	27.02	3.53	20	S
Chloromethane	27.15	1.0	20	0	136	50 - 139	29.94	9.75	20	
cis-1,2-Dichloroethene	25.61	1.0	20	0	128	78 - 123	26.39	3	20	S
cis-1,3-Dichloropropene	23.94	1.0	20	0	120	75 - 124	24.98	4.24	20	
Dibromochloromethane	23.81	1.0	20	0	119	74 - 126	24.7	3.68	20	
Dibromomethane	26.32	1.0	20	0	132	79 - 123	27.86	5.69	20	S
Dichlorodifluoromethane	23.8	1.0	20	0	119	32 - 152	26.28	9.88	20	
Ethylbenzene	26.65	1.0	20	0	133	79 - 121	28.05	5.11	20	S
Hexachlorobutadiene	24.66	1.0	20	0	123	66 - 134	24.88	0.856	20	
Isopropylbenzene	27.76	1.0	20	0	139	72 - 131	29.42	5.81	20	S
m,p-Xylene	53.72	2.0	40	0	134	80 - 121	57.06	6.04	20	S
Methylene chloride	26.28	2.0	20	0	131	74 - 124	26.33	0.2	20	S
Naphthalene	23.36	1.0	20	0	117	61 - 128	24.3	3.94	20	
n-Butylbenzene	27.66	1.0	20	0	138	75 - 128	28.92	4.44	20	S
n-Propylbenzene	27.78	1.0	20	0	139	76 - 126	29.46	5.86	20	S
o-Xylene	26.43	1.0	20	0	132	78 - 122	28.4	7.18	20	S
sec-Butylbenzene	28.07	1.0	20	0	140	77 - 126	29.62	5.38	20	S
Styrene	26.95	1.0	20	0	135	78 - 123	28.5	5.58	20	S
tert-Butylbenzene	27.02	1.0	20	0	135	78 - 124	28.57	5.59	20	S
Tetrachloroethene	23.97	1.0	20	0	120	74 - 129	25.23	5.12	20	
Toluene	26.89	1.0	20	0	134	80 - 121	28.57	6.07	20	S
trans-1,2-Dichloroethene	25.23	1.0	20	0	126	75 - 124	26.39	4.48	20	S
trans-1,3-Dichloropropene	24.11	1.0	20	0	121	73 - 127	24.85	3.04	20	
Trichloroethene	34.11	1.0	20	0.5483	168	79 - 123	45.2	28	20	SR
Trichlorofluoromethane	27.58	1.0	20	0	138	65 - 141	28.88	4.6	20	
Vinyl chloride	26.03	1.0	20	0	130	58 - 137	28.42	8.76	20	
Surr: 1,2-Dichloroethane-d4	*51.88*	*1.0*	*50*	*0*	*104*	*81 - 118*	*53.69*	*3.42*	*20*	
Surr: 4-Bromofluorobenzene	*53.52*	*1.0*	*50*	*0*	*107*	*85 - 114*	*53.26*	*0.484*	*20*	
Surr: Dibromofluoromethane	*48.56*	*1.0*	*50*	*0*	*97.1*	*80 - 119*	*48.63*	*0.134*	*20*	
Surr: Toluene-d8	*53.46*	*1.0*	*50*	*0*	*107*	*89 - 112*	*53.35*	*0.204*	*20*	

ALS Houston, US Date: 11-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121558

QC BATCH REPORT

Batch ID: R330796 **Instrument: VOA9** **Method: SW8260**

The following samples were analyzed in this batch:	HS18121558-01	HS18121558-02	HS18121558-03	HS18121558-04

ALS Houston, US Date: 11-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: **HS18121558**

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
Arkansas	88-0356	27-Mar-2019
Texas	T10470231-18-21	30-Apr-2019
North Dakota	R193 2018-2019	30-Apr-2019
Illinois	004438	29-Jun-2019
Louisiana	03087	30-Jun-2019
Kentucky	123043 - 2018	30-Apr-2019
Kansas	E-10352 2018-2019	31-Jul-2019
Oklahoma	2018-156	31-Aug-2019

ALS Houston, US Date: 11-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
Work Order: HS18121558

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS18121558-01	18CPTMW07_122818	Login	12/29/2018 11:55:20 AM	NDR	Sub
HS18121558-01	18CPTMW07_122818	Login	12/29/2018 11:55:20 AM	NDR	VOA044
HS18121558-02	MW21_122818	Login	12/29/2018 11:55:20 AM	NDR	Sub
HS18121558-02	MW21_122818	Login	12/29/2018 11:55:20 AM	NDR	MET018
HS18121558-02	MW21_122818	Login	12/29/2018 11:55:20 AM	NDR	VOA044
HS18121558-03	MW3_122818	Login	12/29/2018 11:55:20 AM	NDR	Sub
HS18121558-03	MW3_122818	Login	12/29/2018 11:55:20 AM	NDR	VOA044

ALS Houston, US Date: 11-Jan-19

Sample Receipt Checklist

Client Name: Bhate Environmental
Work Order: HS18121558
Date/Time Received: **29-Dec-2018 09:50**
Received by: **NDR**

Checklist completed by: *Nilesh D. Ranchod* eSignature 29-Dec-2018 Date
Reviewed by: *Corey Grandits* eSignature 31-Dec-2018 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 ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
TX1005 solids received in hermetically sealed vials?	Yes ☐	No ☐	N/A ☑
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):	0.5c/0.9c UC/C	IR11	
Cooler(s)/Kit(s):	43176		
Date/Time sample(s) sent to storage:	12/29/2018 13:00		
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:

bhate ENVIRONMENTAL ASSOCIATES, INC.

1608 13th Avenue South, Suite 300
Birmingham Alabama 35205
Tel: 205-918-4000
Fax: 205-918-4050

Chain of Custody and Analytical Request

Page: ____ of ____

Project/Phase No: NWO1312.0150

COC Number(1): ____

LIMS Number: ____

Facility/Base I.D.: LHAAP

Project/Site Name: LHAAP / Site 18/24

Client Name:

Collected by: Scott Beesinger

Field Sample ID (30 Characters Max)	ERPIMS LOCID (15 Characters Max)	Date Collected (dd-mmm-yyyy)	Time Collected (Military) (hhmm)	Sample Depth (beginning - ending)	SA Code (2)	Sample Number (3)	Sample Matrix (4)	Number of containers	VOC	PERCHLORATE	TOTAL METALS								Ambient Blank Lot Control Number	Equipment Blank Lot Control Number
18CPT MW17_122818		28 DEC 2018	0900	-		N	WG	4	X	X										
MW21_122818		28 DEC 2018	1025	-		N	WG	5	X	X	X									
MW3_122818		28 DEC 2018	1145	-		N	WG	5	X	X	X									
Trip Blank		28 DEC 2018				TB	W	2	X											
				-																
				-																
				-																
				-																
				-																
				-																
				-																

Sample Analysis Requested (1) | Quality Assurance Samples (6)

HS18121558

Bhate Environmental Associates, Inc.
LHAAP 18/24

COMMENTS:

Custody Transfers Prior to Receipt by Laboratory

Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
Scott Beesinger	12/28/18	1330	1. NL	12/29/18	0745
2.			2.		
3.			3.		

Sample Delivery Details / Laboratory Receipt

Delivered Directly to Lab: ____ Shipped ____ No.:

Method of Shipment: ____

____ Fed Ex ____ Airbill Number:

____ Analytical Lab: ALS 10450 Stanciff Rd. Suite 210 Houston, TX 77099 (281) 530-5656

ATTN: SONIA WEST Lab Recipient: Delivery Date/Time:

1.) Chain of Custody Number = date collected + custody number (e.g. 09-02-1999-01)

2.) Sample Type (SA) Codes: N = Normal Sample, TB = Trip Blank (-c) Sample, FD = Field Duplicate (-a) Samples, FR = Field Replicate (-b) Samples, EB = Equipment Blank (-d) Samples, MS = Matrix Spike, SD = Matrix Spike Duplicate, AB = Ambient Blank (-e)

3.) Sample Number: Unique sample number collected from a particular location per day. (e.g. Groundwater sample collected from MW-1 on 10/10/99 = 01, if sampled again on 10/10/99 = 02, etc.)

4.) Matrix Codes: GS = Soil Gas, WG = Groundwater, WS = Surface Water, SO = Soil, SE = Sediment, SL = Sludge, SS = Surface Soil Samples, WQ = Aqueous Blank Samples (trip, equipment, ambient, etc), SQ = Soil Blanks

5.) Sample Analysis Requested: Analytical method requested and number of containers provided for each.

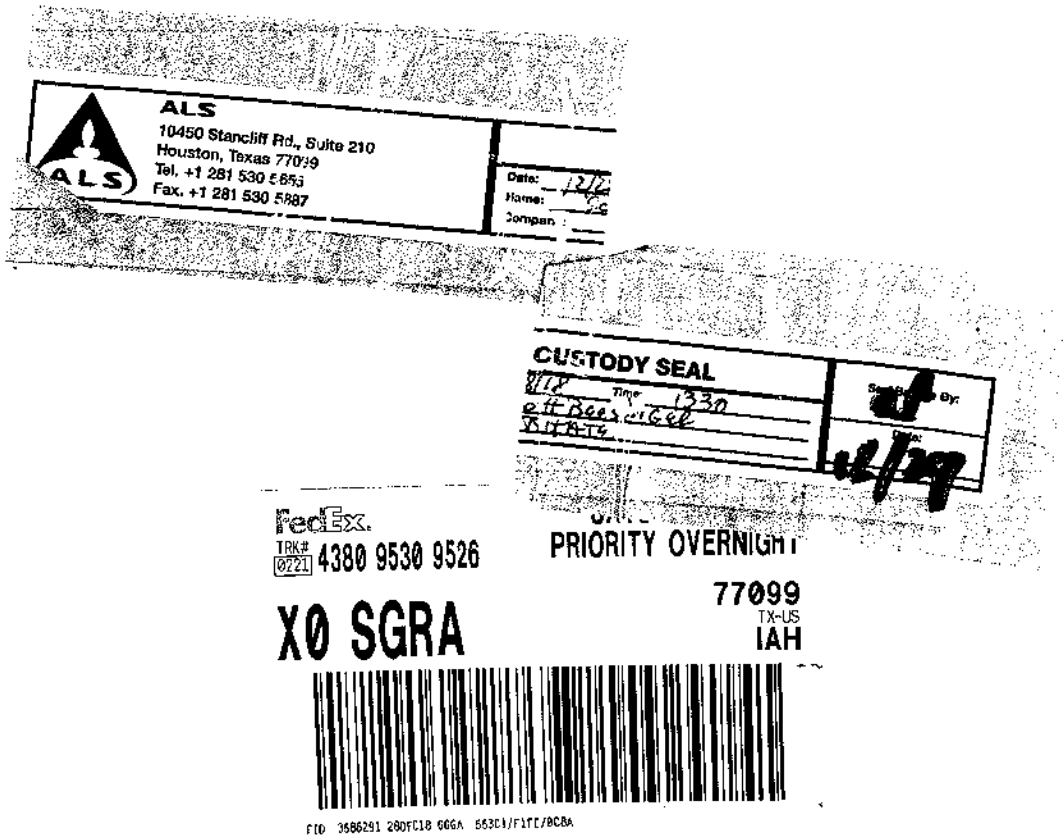
6.) Quality assurance samples are assigned by date (ddmmyy) and the sample number associated with the sample (01, 02, etc) (e.g. Equipment blank collected in association with MW-1 on 10/10/99 will be designated 10109901 in the Equipment Blank Lot Control

4 3°C Temp. w/c 0.5 IR # 11 c/c + 0.4

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

Date: 12/2
Name:
Company:

CUSTODY SEAL
8/18 Time 1330
Jeff Beeson Gel
VOHATS



Sent By:
Date: 12/29

FedEx.
TRK# 0221 4380 9530 9526

PRIORITY OVERNIGHT

77099
TX-US
IAH

X0 SGRA

FID 3586291 280FC18 GGGA 553C1/F1FE/0CBA

Case Narrative

Method: 6850
Analysis: Perchlorate
Analysis SOP: LC-MS-CLO4
ALS WO ID(s): 1836506; 1900327

Client: ALS Laboratories (Houston, TX)
Matrix: Water
ELMS Batch (HBN): 2194 (230622)

General Set Information: There were twelve field samples in these Work Orders. The samples were analyzed for perchlorate.

Method Summary: Each sample was prepared as noted below and analyzed using an Agilent 1100 LC/MSD system in select ion monitoring (SIM) mode at m/z 83 and 85, which corresponds to the loss of one oxygen atom from the perchlorate molecule. ChemStation software was used for instrument control and data analysis. The ion ratio of m/z 83 to 85 was used to positively identify the response peak as perchlorate. Quantitation was performed using the m/z 83 peak area. An internal standard (ISTD) of ^{18}O labeled perchlorate was added to each sample to establish the perchlorate peak retention time and used in quantitation.

Sample Preparation: A 10.0mL aliquot of each sample was transferred into a 15-mL centrifuge tube. 50µL of an ^{18}O labeled perchlorate solution was added to each sample as an internal standard. The samples were then capped, vortexed, and filtered into autosampler vial using Phenex PES membrane 0.45µm Syringe filters.

Holding Times: Holding times were met for all analyses.

Dilutions: Sample 1836506001 failed the 50-150% method requirement for ISTD recovery. This sample was re-analyzed and reported from a 1:5 dilution. Field sample 1836506006 was analyzed and reported from a 1:10 dilution. Field samples 1900327002/03 were analyzed and reported from 1:1,000 dilutions. Field samples 1836506008-11 were analyzed and reported from 1:10,000 dilutions. The reporting limits have been adjusted accordingly.

Method QC data: The method blank (LMB 635254) was less than 1/2 the CRDL. The recovery for the LCS (635255) was within acceptable parameters.

MS/MSD Analysis: MS/MSD was performed on samples 1836506010/11 (Client ID: HS18121520-09). 5.0µl of Working Standard Solution Horizon ID 43701 was added to 10.0mL of sample preparation. The spike target was 5.µg/L. The parent sample and the MS/MSD were analyzed and reported from 1:10,000 dilutions. The effective spike target was 50,000.µg/L. The MS/MSD percent recoveries and relative percent difference (RPD) were within the performance limits, except for the following. The Matrix Spike (MS – 1836506010) failed QC acceptance criteria for percent recovery. The Matrix Spike and Matrix Spike duplicate is reported for the clients' information only. The sample matrix may be inappropriate for the method selected.

Instrument QC: Instrument initial and continuing calibrations were performed in accordance with published procedures.

NC/CAR(s): NA

Sample Calculation: Samples were reported in µg/L. Results were calculated in µg/L by the equation (A)x(B),

where: A = Analyte concentration from the standard curve (µg/L)
B = Dilution performed at time of analysis

Miscellaneous Comments: These samples were analyzed in accordance with the requirements found in the DOD QSM Version 5.1.1.

Thomas Bosch January 09, 2019
Analyst Date

ANALYTICAL REPORT

Report Date: January 10, 2019

RJ Modashia
ALS Environmental (Houston)
10450 Stancliff Road
Suite 210
Houston, TX 77099

Phone: 281 530-5656

E-mail: RJ.Modashia@ALSGlobal.com

Workorder: **34-1900327**
Project ID: 10531 122818
Purchase Order: 10531
Project Manager Kevin W. Griffiths

Client Sample ID	Lab ID	Collect Date	Receive Date	Sampling Site
18CPTMW07_122818	1900327001	12/28/18	01/03/19	10531
MW-21_122818	1900327002	12/28/18	01/03/19	10531
MW3_122818	1900327003	12/28/18	01/03/19	10531

ANALYTICAL REPORT

Workorder: 34-1900327
Client: ALS Environmental (Houston)
Project Manager: Kevin W. Griffiths

Analytical Results

Sample ID: **18CPTMW07_122818** | Sampling Site: 10531 | Collected: 12/28/2018
Lab ID: 1900327001 | Media: 125 mL Nalgene | Received: 01/03/2019
Matrix: Water | Sampling Parameter: NA

Analysis Method - EPA 6850, DoD QSM

Preparation: Not Applicable
Analysis: EPA 6850, DoD QSM Water | **Instrument ID:** LCMS04
Batch: ELMS/2194 (HBN: 230622) | **Percent Solid:** NA
Analyzed: 01/07/2019 12:36 | **Report Basis:** Wet

Analyte	Result (ug/L)	DL (ug/L)	LOD (ug/L)	LOQ (ug/L)	Dilution	Qual
Perchlorate	ND	1.0	2.0	4.0	1	U

Sample ID: **MW-21_122818** | Sampling Site: 10531 | Collected: 12/28/2018
Lab ID: 1900327002 | Media: 125 mL Nalgene | Received: 01/03/2019
Matrix: Water | Sampling Parameter: NA

Analysis Method - EPA 6850, DoD QSM

Preparation: Not Applicable
Analysis: EPA 6850, DoD QSM Water | **Instrument ID:** LCMS04
Batch: ELMS/2194 (HBN: 230622) | **Percent Solid:** NA
Analyzed: 01/07/2019 12:51 | **Report Basis:** Wet

Analyte	Result (ug/L)	DL (ug/L)	LOD (ug/L)	LOQ (ug/L)	Dilution	Qual
Perchlorate	**23000**	1000	2000	4000	1000	

Sample ID: **MW3_122818** | Sampling Site: 10531 | Collected: 12/28/2018
Lab ID: 1900327003 | Media: 125 mL Nalgene | Received: 01/03/2019
Matrix: Water | Sampling Parameter: NA

Analysis Method - EPA 6850, DoD QSM

Preparation: Not Applicable
Analysis: EPA 6850, DoD QSM Water | **Instrument ID:** LCMS04
Batch: ELMS/2194 (HBN: 230622) | **Percent Solid:** NA
Analyzed: 01/07/2019 13:05 | **Report Basis:** Wet

Analyte	Result (ug/L)	DL (ug/L)	LOD (ug/L)	LOQ (ug/L)	Dilution	Qual
Perchlorate	**12000**	1000	2000	4000	1000	

Comments

Quality Control: **EPA 6850, DoD QSM - (HBN: 230622)**

Sample 1836506001 failed the 50-150% method requirement for ISTD recovery. This sample was re-analyzed and reported from a 1:5 dilution. Field sample 1836506006 was analyzed and reported from a 1:10 dilution. Field samples 1900327002/03 were analyzed and reported from 1:1,000 dilutions. Field samples 1836506008-11 were analyzed and reported from 1:10,000 dilutions. The reporting limits have been adjusted accordingly.

Report Authorization (/S/ is an electronic signature that complies with 21 CFR Part 11)

Method	Analyst	Peer Review
EPA 6850, DoD QSM	/S/ Thomas Bosch 01/09/2019 13:16	/S/ Stephen Brose 01/10/2019 13:42

ANALYTICAL REPORT

Workorder: 34-1900327
Client: ALS Environmental (Houston)
Project Manager: Kevin W. Griffiths

Laboratory Contact Information

ALS Environmental
960 W Levoy Drive
Salt Lake City, Utah 84123

Phone: (801) 266-7700
Email: alslt.lab@ALSGlobal.com
Web: www.alsslc.com

General Lab Comments

The results provided in this report relate only to the items tested.
Samples were received in acceptable condition unless otherwise noted.
Samples have not been blank corrected unless otherwise noted.
This test report shall not be reproduced, except in full, without written approval of ALS.

ALS provides professional analytical services for all samples submitted. ALS is not in a position to interpret the data and assumes no responsibility for the quality of the samples submitted.

All quality control samples processed with the samples in this report yielded acceptable results unless otherwise noted.

ALS is accredited for specific fields of testing (scopes) in the following testing sectors. The quality system implemented at ALS conforms to accreditation requirements and is applied to all analytical testing performed by ALS. The following table lists testing sector, accreditation body, accreditation number and website. Please contact these accrediting bodies or your ALS project manager for the current scope of accreditation that applies to your analytical testing.

Testing Sector	Accreditation Body	Certificate Number	Website
Environmental	PJLA (DoD ELAP)		
	Utah (TNI)		
	Nevada		
	Oklahoma		
	Iowa		

ANALYTICAL REPORT

Workorder: 34-1900327
Client: ALS Environmental (Houston)
Project Manager: Kevin W. Griffiths

Result Symbol Definitions

MDL = Method Detection Limit, a statistical estimate of method/media/instrument sensitivity.
RL = Reporting Limit, a verified value of method/media/instrument sensitivity.
CRDL = Contract Required Detection Limit
Reg. Limit = Regulatory Limit.
ND = Not Detected, testing result not detected above the MDL or RL.
< This testing result is less than the numerical value.
** No result could be reported, see sample comments for details.

Qualifier Symbol Definitions

U = Qualifier indicates that the analyte was not detected above the MDL.
J = Qualifier Indicates that the analyte value is between the MDL and the RL. It is also used to indicate an estimated value for tentatively identified compounds in mass spectrometry where a 1:1 response is assumed.
B = Qualifier indicates that the analyte was detected in the blank.
E = Qualifier indicates that the analyte result exceeds calibration range.
P = Qualifier indicates that the RPD between the two columns is greater than 40%.

Quality Control Sample
Batch Report

Analysis Information

Workorder: 1900327

Limits:	Client SOW/Contract Specified	**Preparation:**	NA	**Analysis:**	EPA 6850, DoD QSM
Basis:	DoD QSM	**Batch:**	NA	**Batch:**	ELMS/2194 (HBN: 230622)
		Prepared By:	NA	**Analyzed By:**	Thomas Bosch

Blank

LMB: 635254
Analyzed: 01/07/2019 09:07
Units: ug/L

Analyte	Result	MDL	RL
Perchlorate	ND	1	2.00

Laboratory Control Sample

LCS: 635255
Analyzed: 01/07/2019 09:21
Dilution: 1
Units: ug/L

Analyte	Result	Target	% Rec	QC Limits	
Perchlorate	4.79	5.00	95.8	78.8	123.8

Matrix Spike - Matrix Spike Duplicate

Sample: 1836506009	**MS:** 1836506010	**MSD:** 1836506011
Analyzed: 01/07/2019 11:28	**Analyzed:** 01/07/2019 11:41	**Analyzed:** 01/07/2019 11:55
Dilution: 10000	**Dilution:** 10000	**Dilution:** 10000
Units: ug/L	**Units:** ug/L	**Units:** ug/L

Analyte	Result	Result	Target	% Rec		QC Limits		Result	% Rec	RPD	QC Limits	
Perchlorate	52000	120000	50000	#	143	78.8	123.8	110000	117	8.7	0.0	20.0

Continuing Calibration Verification

CCV: 635251	**CCV:** 635256	**CCV:** 635258
Analyzed: 01/07/2019 08:25	**Analyzed:** 01/07/2019 12:09	**Analyzed:** 01/07/2019 13:33
Units: ug/L	**Units:** ug/L	**Units:** ug/L
Criteria: ± 15%	**Criteria:** ± 15%	**Criteria:** ± 15%

Analyte	Result	Target	% Rec.	Result	Target	% Rec.	Result	Target	% Rec.
Perchlorate	25.3	25.0	101	25.9	25.0	103	26.1	25.0	104

Interference Check Sample

ICSA: 635253
Analyzed: 01/07/2019 08:54
Units: ug/L
Criteria: ± 30%

Analyte	Result	Target	% Rec.
Perchlorate	1.16	1.00	116

Limit of Detection Verification

LODV: 635252	**LODV:** 635257	**LODV:** 635259
Analyzed: 01/07/2019 08:40	**Analyzed:** 01/07/2019 12:23	**Analyzed:** 01/07/2019 13:47
Units: ug/L	**Units:** ug/L	**Units:** ug/L
Criteria: ± 50%	**Criteria:** ± 50%	**Criteria:** ± 50%

Analyte	Result	Target	% Rec.	Result	Target	% Rec.	Result	Target	% Rec.
Perchlorate	1.13	1.00	113	1.14	1.00	114	1.08	1.00	108

Quality Control Sample Batch Report

Analysis Information

Workorder: **1900327**

Limits:	Client SOW/Contract Specified	**Preparation:**	NA	**Analysis:**	EPA 6850, DoD QSM
Basis:	DoD QSM	**Batch:**	NA	**Batch:**	ELMS/2194 (HBN: 230622)
		Prepared By:	NA	**Analyzed By:**	Thomas Bosch

Comments

Sample 1836506001 failed the 50-150% method requirement for ISTD recovery. This sample was re-analyzed and reported from a 1:5 dilution. Field sample 1836506006 was analyzed and reported from a 1:10 dilution. Field samples 1900327002/03 were analyzed and reported from 1:1,000 dilutions. Field samples 1836506008-11 were analyzed and reported from 1:10,000 dilutions. The reporting limits have been adjusted accordingly.

QC Report Authorization (/S/ is an electronic signature that complies with 21 CFR Part 11)

Analyst	Peer Review
/S/ Thomas Bosch	/S/ Stephen Brose
01/09/2019 13:17	01/10/2019 13:42

Symbols and Definitions

- * - Analyte above reporting limit or outside of control limits
- ▲ - Sample result is greater than 4 times the spike added
- ◆ - Sample and Matrix Duplicate less than 5 times the reporting limit
- ● - Result is above the calibration range
- # - The Matrix Spike, Matrix Spike duplicate or Matrix Duplicate is reported for your information only. The sample matrix may be inappropriate for the method selected.

RPD - Relative % Difference (Spike / Spike Duplicate)
ND - Not Detected (U - Qualifier also flags analyte as not detected)
NA - Not Applicable
QC results are not adjusted for moisture correction, where applicable



W 1900327

18698/#2 1900327

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

COC ID: 10531

SUBCONTRACT TO:

ALS Laboratory Group
960 LeVoy Dr
Salt Lake City, UT 84123

Phone: +1 801 266 7700

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:	HS18121558
TSR:	Danielle Winnings

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS18121558-01**	**18CPTMW07_122818**	**Groundwater**	**28 Dec 2018 09:00**
	SUB_Perch-6850			15 Jan 2019
2.	**HS18121558-02**	**MW-21_122818**	**Groundwater**	**28 Dec 2018 10:25**
	SUB_Perch-6850			15 Jan 2019
3.	**HS18121558-03**	**MW3_122818**	**Groundwater**	**28 Dec 2018 11:45**
	SUB_Perch-6850			15 Jan 2019

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. Mauran	Date/Time:	01/02/19 18:00
Received By:	Alsue Hall	Date/Time:	01/03/2019 10:00
Cooler ID(s):		Temperature(s):	

PCL XL error

Warning: IllegalMediaSize

ALS-SALT LAKE CITY-RELATED INFORMATION REPORT (CRIR)

COOLER OR CONTAINER INFORMATION CHECKLIST (Fill In or Circle)

Client Name: ALS HOUSTON

Project/Task/Site: HS18125558 / 10531

Date/Time of Receipt: 01/03/2019 10:00

Number of Coolers Received: 1

Condition of Coolers:	Acceptable/Unacceptable	Temperature Control:	Present/Not Included
Cooler Custody Seals:	Present/Absent/NA		
	Intact/Broken/NA	Location Temp Taken:	Control/Between Samples
Container Custody Seals:	Present/Absent/NA		
	Intact/Broken/NA	Are all temperatures within project specific guidelines?	Yes/No/NA
Ice Present:	Yes/No/NA		
	Frozen/Melted/NA	VOA Headspace Present?	Yes/No/NA

pH Check Performed:							
	Metals	Yes/No/NA	Total Phenolics	Yes/No/NA	NO3/NO2	Yes/No/NA
	Cyanide	Yes/No/NA	TPH – 418.1	Yes/No/NA	Oil & Grease	Yes/No/NA
	Sulfide	Yes/No/NA	COD	Yes/No/NA	Total Phosphorous	Yes/No/NA
	Ammonia	Yes/No/NA	TKN	Yes/No/NA	Gross A.B, Gamma Spec	Yes/No/NA

Cooler Received	DCL Cooler No.	Temp.	Cooler Received	DCL Cooler No.	Temp.	Cooler Received	DCL Cooler No.	Temp.
1	C18 9007	1 °C	4	C18	°C	7	C18	°C
2	C18	°C	5	C18	°C	8	C18	°C
3	C18	°C	6	C18	°C	9	C18	°C

Taken By: [signature] (Signature) [illegible] (Printed Name) 01/03/2019 (Date)

CLIENT-RELATED INFORMATION

☐ Missing Cooler	☐ Missing Samples/Bottles	☐ Incorrect Preservation	☐ Insufficient Sample Volume
☐ Cooler Conditions	☐ Broken/Leaking Samples	☐ pH Criteria Not Met	☐ Chain of Custody Problems
☐ Missing Paperwork	☐ Incorrect Bottle Type	☐ Residual Chlorine Present	☐ Other:
☐ Missing/Incorrect Bottle Labels	☐ Cooler Temperatures Out of Range	☐ Head Space in Bottles	

BRIEFLY DESCRIBE THE PROBLEM AND THE ACTION TAKEN:

Client Notified? YES ☐ NO ☐

Response Required Within 24 Hours

PROJECT MANAGEMENT

PROJECT MANAGER COMMENTS:

ALS Project Manager: _____ (Printed Name) Returned to Sample Receipt by: _____ (Signature) Date: _____

CRIR.doc Revised 01/01/2018

ORIGIN ID:SGRA (281) 530-5656
SHIPPING DEPT
ALS LABORATORY GROUP
10450 STANCLIFF RD
SUITE 210
HOUSTON, TX 77099
UNITED STATES US

SHIP DATE: 02JAN19
ACTWGT: 11.40 LB
CAD: 300130/CAFE3211
DIMS: 14x11x10 IN

BILL THIRD PARTY

TO SAMPLE RECEIVING
ALS ENVIRONMENTAL
960 W. LEVOY DRIVE

SALT LAKE CITY UT 84123
(801) 266-7700
REF: HS18121558 RJ

FedEx Express

THU - 03 JAN 3:00P
STANDARD OVERNIGHT

TRK# 0201 4380 9535 9715

AX BTFA

84123
UT-US SLC

Date:

ALS Environmental

CHAIN-OF-CUSTODY

Project / Job / Task: 10531	***Split:***	**Workorder ID:** 1900327	**Level:** ENV_LVL4	**Requested Analysis**	
Client: ALS Environmental (Houston)		**Account:** 8101	**Type:** 125Poly		
Comments:			**Preservatives**		
			COOL		
			Containers		

Item	Collect Date/Time	Sample ID	Lab ID	QC	Matrix	ID(s)	Count	EPA 6850, DoD QSM
1	12/28/2018 09:00	18CPTMW07_122818	1900327001		Water	A	1	A
2	12/28/2018 10:25	MW-21_122818	1900327002		Water	A	1	A
3	12/28/2018 11:45	MW3_122818	1900327003		Water	A	1	A
4								
5								
6								
7								
8								
9								
10								

51 of 1112

ORIGINAL FIELD SAMPLE CHAIN-OF-CUSTODY

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Reason for Transfer / Storage Location
VanTassell, Tami	01/03/2019 10:00	ALS Sample Receiving	Sample Login
Tami VanTassell	01-03-19 11:50	4C	Storage
R.33.1	01-03-19/12:45	T. Bach	6850

SAMPLE PREPARATION / ANALYSIS CHAIN-OF-CUSTODY

Sample Prep / Analysis for: _____ Lab Notebook No.: _____

Prepared / Analyzed by: _____ Date / Time: _____

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Reason for Transfer / Storage Location

00931892

Batch Worklist

Batch: ELMS/ 2194 **Created:** 1/6/2019 13:20 **Instrument:** **HBN:** 230622
Rule: EPA 6850, DoD QSM Water **Analyst:** T. Bosch **Status:** WP

Workorder: 1836506 [ENV_LVL4]
Workorder: 1900327 [ENV_LVL4]

Pos	Lab ID	Sample ID	Prep Initial	Prep Final	Dust Weight	Type	Mx	Container	Procedure	Mgr	Expire Date	Due Date	Run Date
1	635251	CCV for HBN 230622 [ELMS/2194]				CCV	3		E685041C3Q	5311		1/11/2019	
2	635252	LODV for HBN 230622 [ELMS/2194				LODV	3		E6850..D3Q	5311		1/11/2019	
3	635253	ICS for HBN 230622 [ELMS/2194]				ICS	3		E6850..D3Q	5311		1/11/2019	
4	635254	LMB for HBN 230622 [ELMS/2194]				LMB	3		E6850Q413Q	5311		1/11/2019	
5	635255	LCS for HBN 230622 [ELMS/2194]				LCS	3		E6850Q413Q	5311		1/11/2019	
6	1836506001	HS18121520-01				SAMPLE	3	1836506001-A	E6850Q41.3	5480	1/23/2019	1/11/2019	
7	1836506002	HS18121520-02				SAMPLE	3	1836506002-A	E6850Q41.3	5480	1/23/2019	1/11/2019	
8	1836506003	HS18121520-03				SAMPLE	3	1836506003-A	E6850Q41.3	5480	1/23/2019	1/11/2019	
9	1836506004	HS18121520-04				SAMPLE	3	1836506004-A	E6850Q41.3	5480	1/23/2019	1/11/2019	
10	1836506005	HS18121520-05				SAMPLE	3	1836506005-A	E6850Q41.3	5480	1/23/2019	1/11/2019	
11	1836506006	HS18121520-06				SAMPLE	3	1836506006-A	E6850Q41.3	5480	1/23/2019	1/11/2019	
12	1836506007	HS18121520-07				SAMPLE	3	1836506007-A	E6850Q41.3	5480	1/23/2019	1/11/2019	
13	1836506008	HS18121520-08				SAMPLE	3	1836506008-A	E6850Q41.3	5480	1/23/2019	1/11/2019	
14	1836506009	HS18121520-09				SAMPLE	3	1836506009-A	E6850Q41.3	5480	1/23/2019	1/11/2019	
15	1836506010	HS18121520-09MS				MS	3	1836506010-A	E6850Q41.3	5480	1/23/2019	1/11/2019	
16	1836506011	HS18121520-09MSD				MSD	3	1836506011-A	E6850Q41.3	5480	1/23/2019	1/11/2019	
17	635256	CCV for HBN 230622 [ELMS/2194]				CCV	3		E685041C3Q	5311		1/11/2019	
18	635257	LODV for HBN 230622 [ELMS/2194				LODV	3		E6850..D3Q	5311		1/11/2019	
19	1900327001	18CPTMW07_122818				SAMPLE	3	1900327001-A	E6850Q41.3	5480	1/25/2019	1/16/2019	
20	1900327002	MW-21_122818				SAMPLE	3	1900327002-A	E6850Q41.3	5480	1/25/2019	1/16/2019	
21	1900327003	MW3_122818				SAMPLE	3	1900327003-A	E6850Q41.3	5480	1/25/2019	1/16/2019	
22	635258	CCV for HBN 230622 [ELMS/2194]				CCV	3		E685041C3Q	5311		1/11/2019	
23	635259	LODV for HBN 230622 [ELMS/2194				LODV	3		E6850..D3Q	5311		1/11/2019	

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ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

Analytical Documentation

ALS Work Order #'s & Sample #( )'s: 1836506 (001-09); 1900327 (001-03)
ELMS Batch/HBN ID: 2194 (230622)
Prep Date: 01/03/2019 Analysis Date: 01/07/2019 Analyst: T. Bosch
Analyte: **Perchlorate** Matrix: **Water** Method: **6850**
Sequence: \\HPCHEM\1\SEQUENCE\CLO4\2019\JAN\07JAN19D.s
Reported DL: **1.0µg/L** Reported LOD: **2.0µg/L** Reported LOQ: **4.0µg/L**

SAMPLE PREPARATION/ANALYSIS:

Water: Samples were prepared by TNB. 10.0mL of each sample was pipetted into a 15-mL centrifuge tube, and 50µL of an oxygen-18 labeled perchlorate solution was added as an internal standard. The samples were capped, vortexed, and filtered with Phenex PES membrane 0.45µm Syringe filters prior to analysis.

REAGENTS: Eluent A1: 95% ASTM Type II water (ALS)/ 5% ACN (B&J Lot AH015-4)/0.1% glacial acetic acid (JT-Baker Lot 04802).
Eluent B1: 95% ACN (B&J Lot AH015-4)/ 5% ASTM Type II water (ALS)/0.1% glacial acetic acid (JT-Baker Lot 04802).

STANDARDS: Internal Standard Spiking Solution Horizon# 43730. Dilutions of Working Standard Solution ID 43702 used for CCV's, LODV's, RLVS and IPC.

CALIBRATION CURVE: Used curve from 10/08/2018, sequence 08OCT18D.s Offline Quantitation Method: CLO4-DPR.M

INSTRUMENT CONDITIONS: Samples were analyzed with an Agilent 1100 LC/MSD system, in negative SIM mode, monitoring m/z 83, 85, and 89.
Instrument ID: LCMS04 Online Acquisition Method: CLO4-AQN.M Fragmentor: 160 Output Gain: 3 Injection Volume: 30µL
Column: KP-RPPX C8 separator, 250mm Mobile Phase: 70% Eluent A1; 30% Eluent B1

FLOW GRADIENT:

Time (min.)	Flow (mL/min)
0	0.50
5.0	0.50
5.3	0.25
10.0	0.25
10.5	0.50
12.0	0.50

QC DATA: 5.0µL of QC Solution Horizon ID 41830 was used for LCS 635255; Target = 5.0µg/L. ASTM type II water was used for LMB 635254.

MS/MSD: MS/MSD were performed on samples 1836506010/11 (Client ID's: HS18121520-09). 5.0µl of Working Standard Solution Horizon ID 43701 was added to 10.0mL of sample preparation. Spike target = 5.0µg/L. The parent sample and the MS/MSD were analyzed and reported from 1:10,000 dilutions. The effective spike target was 50,000.µg/L.

COMMENTS:

1) Results reported in µg/L. Sample 1836506001 failed the 50-150% method requirement for ISTD recovery. This sample was re-analyzed and reported from a 1:5 dilution. Field sample 1836506006 was analyzed and reported from a 1:10 dilution. Field samples 1900327002/03 were analyzed and reported from 1:1,000 dilutions. Field samples 1836506008-11 were analyzed and reported from 1:10,000 dilutions. The reporting limits have been adjusted accordingly.
2) All QC, Blank, CCV, and MS/MSD results were within method parameters, except for the following. The Matrix Spike (MS – 1836506010) failed QC acceptance criteria for percent recovery. The Matrix Spike and Matrix Spike duplicate is reported for the clients' information only. The sample matrix may be inappropriate for the method selected.
3) Sample data can be viewed at two directories within the ALS system: \\ALSLTWS013\LCMS\LCMS04\2019\JAN\HBN# or through NuGenesis\Tree\PrintData\LCMS\DefaultView.
4) Notebook: \\alsltws013\ORGANIC\BOSCH\LCMS\Perchlorates\Waters\2019\230622-DoD-ALS-Hstn LCMS4 or through \\ALSLTWS013\DATAREVIEW\HBN#

5.5 Chromatography (GC, HPLC and LC/MS) Technical Review

Note: It is the peer reviewer's responsibility to ensure that appropriate criteria are used as defined in the HORIZON PROFILE. The evaluation criteria are prioritized as per Section 2.2 of this SOP. These items must be checked for all projects. The following checklist will be completed by both the analyst and the peer reviewer and scanned into the HBN folder with the raw data.

Chromatography (GC, HPLC, LC/MS) Technical Review Criteria **Batch(es)/SDG:** ELMS: 2194 HBN: 230622 **Sample Set IDs if Applicable:** 1835606/1900327	**Analyst Initials**	**Reviewer Initials**
Calibration standards analyzed and meets criteria	TB	SB
Standards traceability checked and meets criteria	TB	SB
Standard curve coefficients evaluated and meet criteria	TB	SB
ICVs analyzed and meet acceptance criteria	TB	SB
CCVs analyzed and meet acceptance criteria	TB	SB
Method Blanks analyzed and meet acceptance criteria	TB	SB
Retention Time Windows checked	TB	SB
For method 8081A, Endrin/DDT Breakdown is checked for compliance	—	—
Surrogate recoveries checked and appropriately addressed	—	—
Method Preparation Blanks analyzed and meet acceptance criteria	TB	SB
MSs, MSDs, and/or MDs analyzed and calculations checked; applicable flags applied on QC reports; LCSs analyzed and meet acceptance criteria when performed	TB	SB
RLVS analyzed	TB	SB
Preparation and analysis hold times met	TB	SB
Preparation deviations and re-preparations noted when performed	TB	SB
Analysis deviations and re-analyses noted when performed	TB	SB
Sample dilution factors noted on reports	TB	SB
Electronic records in HBN transcription accuracy and completeness checked	TB	SB
Preparation and analysis calculations checked	TB	SB
NCRs are completed as necessary NC/CAR#	—	—
Report forms are complete and accurate	TB	SB
Manual integrations checked	TB	SB

STANDARD REPORT

Working Standard - CLO4 WRK

CLO4 WRK — **Description - 6850 WKG Std 100.ug/L**

Standard: 43702
MFG: ALS/SLC
MFG Lot: TNB: 09/18/2018
Pipette ID: Not Provided

Created By: Thomas Bosch
Create Date: 09/18/2018 02:09PM

Amount: 10 mL
Expires: 09/18/2019
Usable: Yes
Lab Lot: CLO4 WRK

Pos.	Analyte	Name	Concentration
1	14797-73-0	Perchlorate	0.1 ug/mL

Composition

Standard	Standard ID	Description	Lab Lot ID	Volume	Expires
109	ASTM H2O	ASTM Type II Water	LAB 109	9.9 mL	11/07/2025
43701	CLO4 INT	6850 Intermdt AccStd 10.ug/mL	CLO4 INT	0.1 mL	09/18/2019

STANDARD REPORT

Constituent

Stock Standard - CLO4 STOCK

CLO4 STOCK	Description - 6850 Stock AccStd 1,000ug/mL

Standard: 43659
MFG: AccuStandard
MFG Lot: 218065075
Part ID: IC-PER-10X-1

Created By: Thomas Bosch
Create Date: 09/17/2018 09:09AM

Amount: 100 mL
Expires: 07/25/2020
Usable: No
Lab Lot: CLO4 STOCK

Pos.	Analyte	Name	Concentration
1	14797-73-0	Perchlorate	1000 ug/mL

STANDARD REPORT

Constituent

Solvent Standard - ASTM H2O

ASTM H2O		Description - ASTM Type II Water
Standard: 109	**Created By:** ALS Support (Lims)	**Amount:** 1000 L
MFG: DCL In House	**Create Date:** 10/06/2005 09:10AM	**Expires:** 11/07/2025
MFG Lot: Not Provided		**Usable:** Yes
Part ID: Not Provided		**Lab Lot:** LAB 109

Pos.	Analyte	Name	Concentration
Solvent - Analyte(s) not applicable			

STANDARD REPORT

Constituent

Working Standard - CLO4 INT

CLO4 INT — Description - 6850 Intermdt AccStd 10.ug/mL

Standard: 43701
MFG: ALS/SLC
MFG Lot: TNB: 09/18/2018
Pipette ID: Not Provided

Created By: Thomas Bosch
Create Date: 09/18/2018 02:09PM

Amount: 10 mL
Expires: 09/18/2019
Usable: Yes
Lab Lot: CLO4 INT

Pos.	Analyte	Name	Concentration
1	14797-73-0	Perchlorate	10 ug/mL

Composition

Standard	Standard ID	Description	Lab Lot ID	Volume	Expires
109	ASTM H2O	ASTM Type II Water	LAB 109	9.9 mL	11/07/2025
43659	CLO4 STOCK	6850 Stock AccStd 1,000ug/mL	CLO4 STOCK	0.1 mL	07/25/2020

STANDARD REPORT

Working Standard - CLO4 QC WRK

CLO4 QC WRK — **Description - 6850 QC WKG STD 100ug/L**

Standard: 41831
MFG: ALS/SLC
MFG Lot: TNB: 05/09/2018
Pipette ID: Not Provided

Created By: Thomas Bosch
Create Date: 05/09/2018 10:05AM

Amount: 10 mL
Expires: 05/09/2019
Usable: Yes
Lab Lot: CLO4 QC WRK 100.ug/L

Pos.	Analyte	Name	Concentration
1	14797-73-0	Perchlorate	100 ug/L

Composition

Standard	Standard ID	Description	Lab Lot ID	Volume	Expires
109	ASTM H2O	ASTM Type II Water	LAB 109	9.9 mL	11/07/2025
41830	CLO4 QC INT	6850 QC Intrmdt Std-QC 10ug/mL	CLO4 QC INT 10.ug/mL	0.1 mL	05/09/2019

STANDARD REPORT

Constituent

Working Standard - CLO4 QC INT

CLO4 QC INT — **Description** - 6850 QC Intrmdt Std-QC 10ug/mL

Standard: 41830
MFG: ALS/SLC
MFG Lot: TNB: 05/09/2018
Pipette ID: Not Provided

Created By: Thomas Bosch
Create Date: 05/09/2018 10:05AM

Amount: 10 mL
Expires: 05/09/2019
Usable: Yes
Lab Lot: CLO4 QC INT 10.ug/mL

Pos.	Analyte	Name	Concentration
1	14797-73-0	Perchlorate	10 ug/mL

Composition

Standard	Standard ID	Description	Lab Lot ID	Volume	Expires
109	ASTM H2O	ASTM Type II Water	LAB 109	9.9 mL	11/07/2025
36748	CLO4 QCSTOCK	6850 QC Stock STD 1,000ug/mL	CLO4 QC STOCK	0.1 mL	03/31/2020

STANDARD REPORT

Constituent

Solvent Standard - ASTM H2O

ASTM H2O		Description - ASTM Type II Water
Standard: 109	Created By: ALS Support (Lims)	Amount: 1000 L
MFG: DCL In House	Create Date: 10/06/2005 09:10AM	Expires: 11/07/2025
MFG Lot: Not Provided		Usable: Yes
Part ID: Not Provided		Lab Lot: LAB 109

Pos.	Analyte	Name	Concentration
Solvent - Analyte(s) not applicable			

STANDARD REPORT

Constituent

Stock Standard - CLO4 QCSTOCK

CLO4 QCSTOCK — **Description** - 6850 QC Stock STD 1,000ug/mL

Standard: 36748
MFG: Ultra Scientific
MFG Lot: CP-0860
Part ID: ICC-013

Created By: Thomas Bosch
Create Date: 05/11/2017 01:05PM

Amount: 100 mL
Expires: 03/31/2020
Usable: Yes
Lab Lot: CLO4 QC STOCK

Pos.	Analyte	Name	Concentration
1	14797-73-0	Perchlorate	1000 ug/mL

STANDARD REPORT

Working Standard - CLO4ISTDWRK

CLO4ISTDWRK		Description - Perchlorate ISTD Wrk 1,000ug/L
Standard: 43730	**Created By:** Thomas Bosch	**Amount:** 25 mL
MFG: ALS/SLC	**Create Date:** 09/20/2018 09:09AM	**Expires:** 09/20/2019
MFG Lot: TNB: 05/09/2018	**Verified By:** Thomas Bosch	**Usable:** Yes
Pipette ID: Not Provided	**Verify Date:**	**Lab Lot:** CLO4ISTDWRK

Pos.	Analyte	Name	Concentration
1	14797-73-0-8385	Perchlorate 83:85 Ratio	1000 ug/L
2	14797-73-0-89	Perchlorate 89	1000 ug/L

Composition

Standard	Standard ID	Description	Lab Lot ID	Volume	Expires
43729	CLO4ISTDSTK	Perchlorate ISTD Stock	CLO4ISTDSTK	0.25 mL	04/28/2026

STANDARD REPORT

Constituent

Stock Standard - CLO4ISTDSTK

CLO4ISTDSTK		Description - Perchlorate ISTD Stock
Standard: 43729	**Created By:** Thomas Bosch	**Amount:** 1 mL
MFG: Cambridge Isotope	**Create Date:** 09/20/2018 09:09AM	**Expires:** 04/28/2026
MFG Lot: SDFF-012A	**Verified By:** Thomas Bosch	**Usable:** Yes
Part ID: OLM-7310-S	**Verify Date:**	**Lab Lot:** CLO4ISTDSTK

Pos.	Analyte	Name	Concentration
1	14797-73-0-8385	Perchlorate 83:85 Ratio	100 ug/mL
2	14797-73-0-89	Perchlorate 89	100 ug/mL

ULTRA SCIENTIFIC
Analytical Solutions

Certificate of Analysis

ISO Guide 34 Reference Material

Lot Issue Date: 29-Feb 2016
Expiration Date: 31-Mar 2020

Product Number: ICC-013
Lot Number: CP-0860

Product Name: Perchlorate IC Standard

Description:
This Reference Material (RM) was gravimetrically prepared in accordance with ISO Guide 34 and under ULTRA Scientific's ISO 9001 registered quality system. The neat materials used for this product have been verified by ULTRA's ISO 17025 laboratory and under ULTRA's ISO Guide 34 accreditation. The analyte concentrations were verified by ULTRA's ISO 17025 accredited laboratory. For each analyte, the true value, with its uncertainty value calculated at the 95% confidence level, is reported below.

Analyte	Starting Material	Lot Number	Purity (%)	Calculated Value	True Value	Traceability & Method
perchlorate	potassium perchlorate	RM07987	100	1001 ± 5 µg/mL	976 ± 6 µg/mL	NIST SRM 3141A; ICP-OES

Solvent: water (low TOC, < 50 ppb)

Storage: Store at Room Temperature (15° to 30°C).

Traceability:
Traceability has been established through an unbroken chain of comparisons, each having stated uncertainties. Comparisons are based on appropriate physical or chemical measurements, including gravimetric or volumetric dilution, where the mass or volume of a solution before and after dilution is measured. The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z-540-1, ISO 9001, ISO 17025, and ISO Guide 34. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 819.

Estimation of Uncertainties:
The true value is reported, with its uncertainty value calculated at the 95% confidence level.

Homogeneity:
This RM was formulated and unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

Intended Use:
This RM is intended for the preparation of working reference samples for use in routine laboratory analyses, calibration of instruments, validation of analytical methods, assessments of measurement methods and continuing calibration verification.

Instructions for Use:
Sample aliquots for analysis should be withdrawn at 20°C to 25°C immediately after opening and should be processed without delay for the true value to be valid within the stated uncertainties. Do not pipet from the bottle. Do not return any material removed for pipetting to the bottle. Tightly cap the bottle after removing any material and store according to the instructions noted above.

Hazards:
Refer to the Safety Data Sheet for information regarding this RM.

Expiration of Certification:
The certification of this RM is valid, within the measurement uncertainty specified, until the expiration date specified above, provided the RM is handled and stored in accordance with the instructions given in this certificate. This certification is nullified if the RM is damaged, contaminated, or otherwise modified.

ULTRA SCIENTIFIC
Analytical Solutions

Certificate of Analysis

ISO Guide 34 Reference Material

Product Number: ICC-013
Lot Number: CP-0860

Lot Issue Date: 29-Feb 2016
Expiration Date: 31-Mar 2020

Maintenance of Certification:
The real-time, long term stability of the RM may be monitored over the lifetime of the certification. If substantive changes occur that affect the certification before the expiration of this certificate, ULTRA Scientific will notify the purchaser.

Peter A. King, Ph.D.
VP, Technical Operations

Daniel J. Lamendola
Director of QA/RA

125 Market Street
New Haven, CT 06513
USA

AccuStandard®

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

CERTIFICATE OF ANALYSIS

S 43659

AccuTrace™ Reference Standard

Catalog No: IC-PER-10X-1
Description: Perchlorate Standard
Element: Perchlorate (ClO_4)
SRM: Ind. Std.
Lot: 218065075
Matrix: Water
Hazards: *Refer to SDS for complete safety information*

Signal Word: None

Date Certified: Jun 25, 2018
Expiration: Jul 25, 2020
Sample Size: 100 mL
Components: 1
Storage Condition: Ambient (>5 °C)

Included on ISO/IEC 17025 Scope of Accreditation: Yes

Included on ISO 17034 Scope of Accreditation: Yes

Component		SRM #	Prepared Concentration (µg/mL)
ClO_4	Perchlorate	Ind. Std.	1000

Unstandard

The gravimetric uncertainty for this product is ±0.24%.
The final solution was checked against an independent standard to verify its concentration.
We use the highest purity raw materials available to minimize impurity levels in the final solution. Typically 99.999%+ pure starting materials are used as well as ASTM Type I 18 megohm deionized water.
All solutions are filtered through a 0.2 µm filter prior to being bottled.
All glassware used in preparation is Class A and calibrated regularly.
All weights are traceable through NIST, Test No. 822-275872-11
All bottles are triple rinsed with deionized water prior to use.
Shake bottle prior to use and do not pipette directly out of the bottle. Use only cleaned Class A volumetric glassware.
We certify the accuracy of this standard to be ±0.5% of the stated value until its expiration date provided it is kept tightly capped and stored under the conditions stated above.

Certified By: Meigan O'Leary
Meigan O'Leary, Inorganic QC Manager

For use in routine laboratory analysis.

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

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

Cambridge Isotope Laboratories, Inc.

Certificate of Analysis

Quality Standards:
ISO Guide 34 • ISO/IEC 17025 • ISO 13485 • cGMP

23118

Product Name: (Isotopic Label & Enrichment Specification)	PERCHLORIC ACID, SODIUM SALT (1804, 90%+) 100 UG/ML IN WATER
Lot Number:	SDDG-013
Catalog Number:	OLM-7310-S

Product Information

Chemical Purity Specification:	≥98%
Labeled CAS Number:	NA
Unlabeled CAS Number:	7601-89-0
MW*:	130.4
Chemical Formula:	NaCl*O4
Storage:	Store at room temperature away from light and moisture.
Stability:	See storage and expiration date.

Certification

Cambridge Isotope Laboratories, Inc. guarantees that this material meets or exceeds the specifications stated. Absolute identity as well as chemical and isotopic purities are assured by the use of unambiguous synthetic routes and multiple chemical analyses whenever possible. Results are representative of QC testing at time of release from Quality Control unless otherwise stated.

Volumetric measurements were made with Class A glassware. Gravimetry is traceable to the NIST through calibrated balances and certified, calibrated, standard weights. The calibrations are traceable to the NIST under Test No. 822/270236-04. The calibrations also meet specifications outlined in ISO 9001, ISO/IEC 17025, ANSI/NSCL Z540-1-1994, NCR Document 10CFR50 Appendix B, and applicable subdocuments.

This COA references the bulk catalog number before packaging. The COA also applies to the CIL finished good catalog number. Some possible packaging sizes and their corresponding suffix are -1.2, -1, -0.5, -10, or -0.1.

* *For isotopically labeled compounds, MW listed is for the fully enriched product.*

Approved by: T. J. Eckersley

Timothy J. Eckersley, Ph.D., Quality Assurance

Quality Control Tests and Results

QC Release Date	2/27/2014
Expiration Date	2/27/2024
Concentration Based on Gravimetry	102 µg/mL
Chemical Purity of Neat Material(s)	98%
LC/MS for Concentration	109.4 ± 2.8 µg/mL (k=2)

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

Raw Data

Batch Report: C:\HPCHEM\1\DATA\07AN19D\07JAN19S.B

Batch Review Method:
C:\HPCHEM\1\METHODS\CLO4-DPR.M

['#' ==> Run has not been reprocessed with Batch Review Method
'*' ==> Run has been saved with batch file]

#*	Sample	Location	Inj	SampleType	Run	Perchlorate Area	Perchlorate RT	Perchlorate Amount
*	635251 C	Vial 71	1	Control	1	2.81722e6	8.882	25.29130
*	635252 L	Vial 72	1	Control	2	9.64351e4	8.912	1.13393
*	635253 I	Vial 73	1	Control	3	1.02007e5	8.891	1.16157
*	635254 L	Vial 74	1	Control	4	0.00000	0.000	0.00000
*	635255 Q	Vial 75	1	Control	5	5.18263e5	8.933	4.78748
*	1836506001	Vial 76	1	Sample	6	0.00000	0.000	0.00000
*	1836506002	Vial 77	1	Sample	7	0.00000	0.000	0.00000
*	1836506003	Vial 78	1	Sample	8	0.00000	0.000	0.00000
*	1836506004	Vial 79	1	Sample	9	0.00000	0.000	0.00000
*	1836506005	Vial 80	1	Sample	10	0.00000	0.000	0.00000
*	1836506006	Vial 81	1	Sample	11	1.30429e6	8.884	89.78600
*	1836506007	Vial 82	1	Sample	12	0.00000	0.000	0.00000
*	1836506008	Vial 83	1	Sample	13	1.05017e6	8.923	7.30371e4
*	1836506009	Vial 84	1	Sample	14	7.94477e5	8.941	5.15660e4
*	1836506010	Vial 85	1	Sample	15	1.40333e6	8.918	1.23189e5
*	1836506011	Vial 86	1	Sample	16	1.36243e6	8.976	1.09943e5
*	635256 C	Vial 71	1	Control	17	2.51592e6	8.884	25.85267
*	635257 L	Vial 72	1	Control	18	8.86272e4	8.909	1.14033
*	1900327001	Vial 87	1	Sample	19	0.00000	0.000	0.00000
*	1900327002	Vial 88	1	Sample	20	3.10488e6	8.901	2.27958e4
*	1900327003	Vial 89	1	Sample	21	1.42997e6	8.916	1.17337e4
*	1836506001	Vial 90	1	Sample	22	0.00000	0.000	0.00000
*	635258 CC	Vial 71	1	Control	23	3.42861e6	8.865	26.10462
*	635259 L	Vial 72	1	Control	24	1.06627e5	8.878	1.07746

#*	Sample	Location	Inj	SampleType	Run	CLO4-85 Area	CLO4-85 RT	CLO4-85 Amount
*	635251 C	Vial 71	1	Control	1	8.18585e5	8.899	24.38873
*	635252 L	Vial 72	1	Control	2	3.30575e4	8.917	1.15876
*	635253 I	Vial 73	1	Control	3	4.23005e4	8.907	1.42179
*	635254 L	Vial 74	1	Control	4	0.00000	0.000	0.00000
*	635255 Q	Vial 75	1	Control	5	1.63428e5	8.949	4.95579
*	1836506001	Vial 76	1	Sample	6	0.00000	0.000	0.00000
*	1836506002	Vial 77	1	Sample	7	0.00000	0.000	0.00000
*	1836506003	Vial 78	1	Sample	8	0.00000	0.000	0.00000
*	1836506004	Vial 79	1	Sample	9	0.00000	0.000	0.00000
*	1836506005	Vial 80	1	Sample	10	0.00000	0.000	0.00000
*	1836506006	Vial 81	1	Sample	11	3.92248e5	8.903	89.59468
*	1836506007	Vial 82	1	Sample	12	0.00000	0.000	0.00000
*	1836506008	Vial 83	1	Sample	13	3.21962e5	8.941	7.41057e4
*	1836506009	Vial 84	1	Sample	14	2.43261e5	8.957	5.19604e4
*	1836506010	Vial 85	1	Sample	15	4.18150e5	8.934	1.22013e5
*	1836506011	Vial 86	1	Sample	16	3.98753e5	8.992	1.06988e5
*	635256 C	Vial 71	1	Control	17	7.24371e5	8.898	24.71100
*	635257 L	Vial 72	1	Control	18	3.00657e4	8.927	1.15499
*	1900327001	Vial 87	1	Sample	19	0.00000	0.000	0.00000
*	1900327002	Vial 88	1	Sample	20	9.09411e5	8.916	2.21684e4
*	1900327003	Vial 89	1	Sample	21	4.19513e5	8.937	1.14473e4
*	1836506001	Vial 90	1	Sample	22	0.00000	0.000	0.00000
*	635258 CC	Vial 71	1	Control	23	9.87175e5	8.881	24.95024
*	635259 L	Vial 72	1	Control	24	3.72217e4	8.899	1.11177

Batch Report: C:\HPCHEM\1\DATA\07AN19D\07JAN19S.B

#*	Sample	Location	Inj	SampleType	Run	CLO4-89-ISTD Area	CLO4-89-ISTD RT	CLO4-89-ISTD Amount
*	635251 C	Vial 71	1	Control	1	3.32279e5	8.904	5.00000
*	635252 L	Vial 72	1	Control	2	3.21653e5	8.939	5.00000
*	635253 I	Vial 73	1	Control	3	3.30352e5	8.920	5.00000
*	635254 L	Vial 74	1	Control	4	3.40423e5	8.979	5.00000
*	635255 Q	Vial 75	1	Control	5	3.47093e5	8.958	5.00000
*	1836506001	Vial 76	1	Sample	6	8.64742e4	8.729	5.00000
*	1836506002	Vial 77	1	Sample	7	2.42412e5	8.829	5.00000
*	1836506003	Vial 78	1	Sample	8	4.44775e5	8.941	5.00000
*	1836506004	Vial 79	1	Sample	9	3.06340e5	8.791	5.00000
*	1836506005	Vial 80	1	Sample	10	2.84043e5	8.817	5.00000
*	1836506006	Vial 81	1	Sample	11	4.52687e5	8.911	50.00000
*	1836506007	Vial 82	1	Sample	12	2.20183e5	8.810	5.00000
*	1836506008	Vial 83	1	Sample	13	4.51871e5	8.951	5.00000e4
*	1836506009	Vial 84	1	Sample	14	4.92062e5	8.965	5.00000e4
*	1836506010	Vial 85	1	Sample	15	3.50646e5	8.943	5.00000e4
*	1836506011	Vial 86	1	Sample	16	3.83129e5	9.003	5.00000e4
*	635256 C	Vial 71	1	Control	17	2.89965e5	8.911	5.00000
*	635257 L	Vial 72	1	Control	18	2.93576e5	8.933	5.00000
*	1900327001	Vial 87	1	Sample	19	2.88001e5	8.806	5.00000
*	1900327002	Vial 88	1	Sample	20	4.08421e5	8.925	5000.00000
*	1900327003	Vial 89	1	Sample	21	3.75830e5	8.943	5000.00000
*	1836506001	Vial 90	1	Sample	22	3.76393e5	8.780	25.00000
*	635258 CC	Vial 71	1	Control	23	3.91141e5	8.887	5.00000
*	635259 L	Vial 72	1	Control	24	3.78796e5	8.903	5.00000

*** End of Report ***

Sequence: C:\HPCHEM\1\SEQUENCE\CLO4\2019\JAN\07JAN19D.S

Sequence Table:

Method and Injection Info Part:

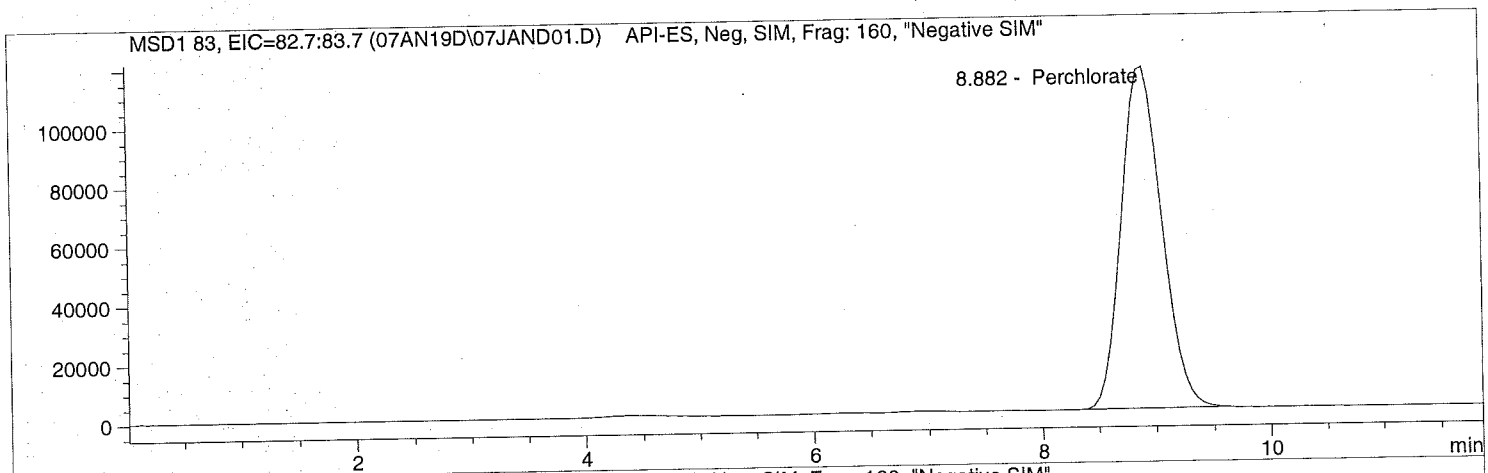
Line	Location	SampleName		Method	Inj	SampleType	InjVolume	DataFile
1	Vial 71	635251	CCV@25	CLO4-AQN	1	Ctrl Samp		
2	Vial 72	635252	LODV@1.	CLO4-AQN	1	Ctrl Samp		
3	Vial 73	635253	ICS@1.0	CLO4-AQN	1	Ctrl Samp		
4	Vial 74	635254	LMB	CLO4-AQN	1	Ctrl Samp		
5	Vial 75	635255	QC@5.0	CLO4-AQN	1	Ctrl Samp		
6	Vial 76	1836506001		CLO4-AQN	1	Sample		
7	Vial 77	1836506002		CLO4-AQN	1	Sample		
8	Vial 78	1836506003		CLO4-AQN	1	Sample		
9	Vial 79	1836506004		CLO4-AQN	1	Sample		
10	Vial 80	1836506005		CLO4-AQN	1	Sample		
11	Vial 81	1836506006	10X	CLO4-AQN	1	Sample		
12	Vial 82	1836506007		CLO4-AQN	1	Sample		
13	Vial 83	1836506008	10K	CLO4-AQN	1	Sample		
14	Vial 84	1836506009	10K	CLO4-AQN	1	Sample		
15	Vial 85	1836506010	MS	CLO4-AQN	1	Sample		
16	Vial 86	1836506011	MSD	CLO4-AQN	1	Sample		
17	Vial 71	635256	CCV@25	CLO4-AQN	1	Ctrl Samp		
18	Vial 72	635257	LODV@1.	CLO4-AQN	1	Ctrl Samp		
19	Vial 87	1900327001		CLO4-AQN	1	Sample		
20	Vial 88	1900327002	1K	CLO4-AQN	1	Sample		
21	Vial 89	1900327003	1K	CLO4-AQN	1	Sample		
22	Vial 90	1836506001	5X	CLO4-AQN	1	Sample		
23	Vial 71	635258	CCV@25	CLO4-AQN	1	Ctrl Samp		
24	Vial 72	635259	LODV@1.	CLO4-AQN	1	Ctrl Samp		

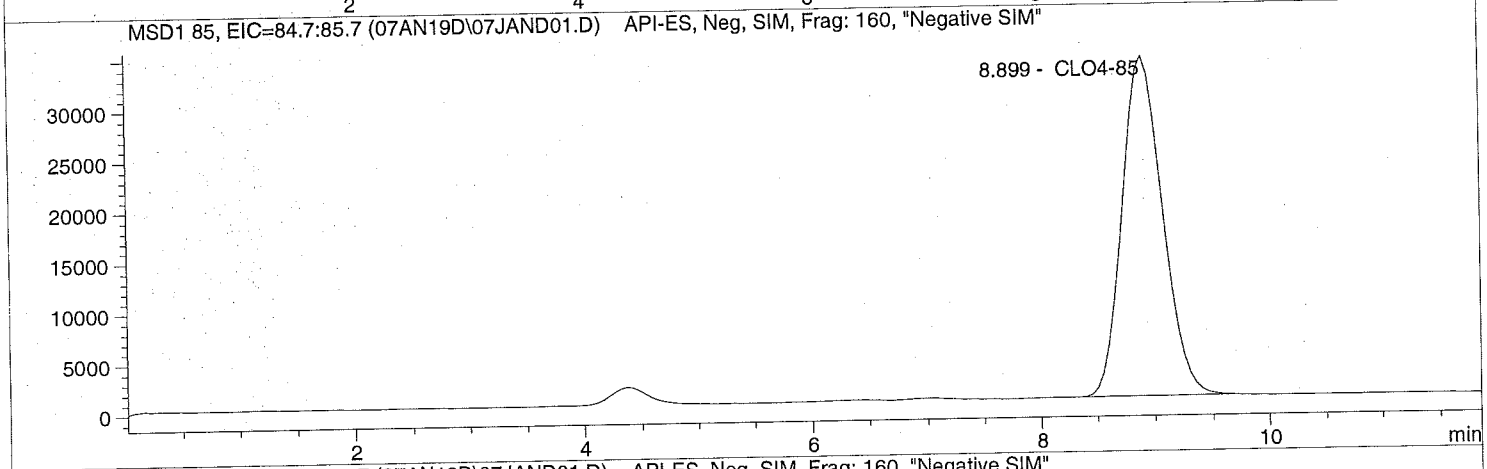
Data file: C:\HPCHEM\1\DATA\07AN19D\07JAND01.D Sample Name: 635251 CCV@25

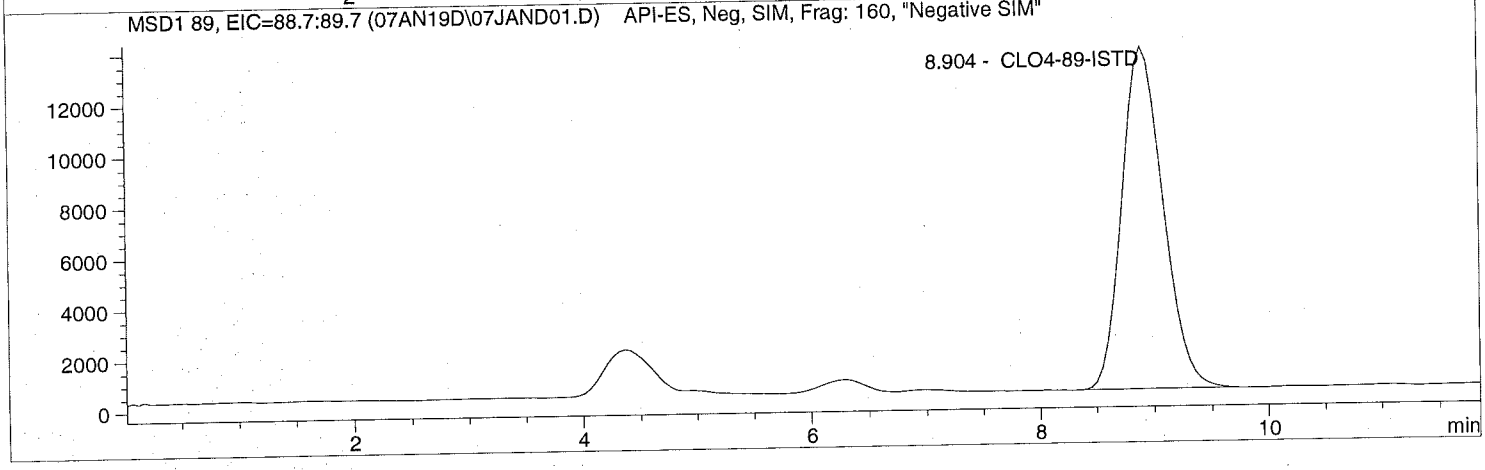
Injection Date:	1/07/2019 08:25:21	Seq Line:	1
Sample Name:	635251 CCV@25	Location:	Vial 71
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis







Data file: C:\HPCHEM\1\DATA\07AN19D\07JAND01.D Sample Name: 635251 CCV@25

Injection Date:	1/07/2019 08:25:21	Seq Line:	1
Sample Name:	635251 CCV@25	Location:	Vial 71
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 3. Dec. 2018, 00:29:27 pm
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	25.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.882	PBA	2817223.0	25.2913	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.899	BBA	818585.3	24.3887	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.904	PBA	332279.4	5.0000	CLO4-89-ISTD

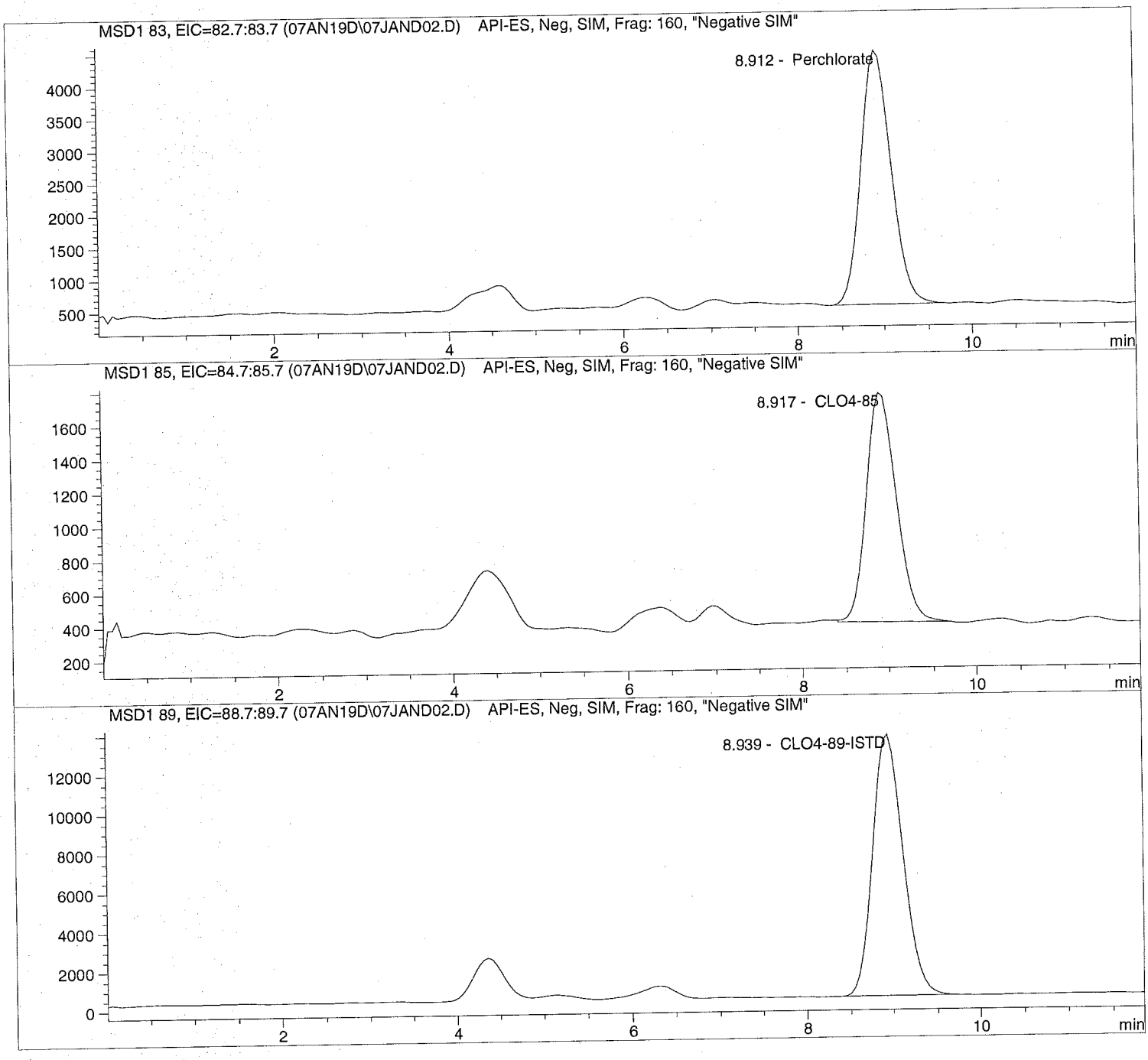
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\07AN19D\07JAND02.D Sample Name: 635252 LODV@1.

Injection Date:	1/07/2019 08:40:16	Seq Line:	2
Sample Name:	635252 LODV@1.	Location:	Vial 72
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\07AN19D\07JAND02.D Sample Name: 635252 LODV@1.

Injection Date:	1/07/2019 08:40:16	Seq Line:	2
Sample Name:	635252 LODV@1.	Location:	Vial 72
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 3. Dec. 2018, 00:29:27 pm
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	1.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.912	PBA	96435.1	1.1339	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.917	BBA	33057.5	1.1588	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.939	PBA	321652.7	5.0000	CLO4-89-ISTD

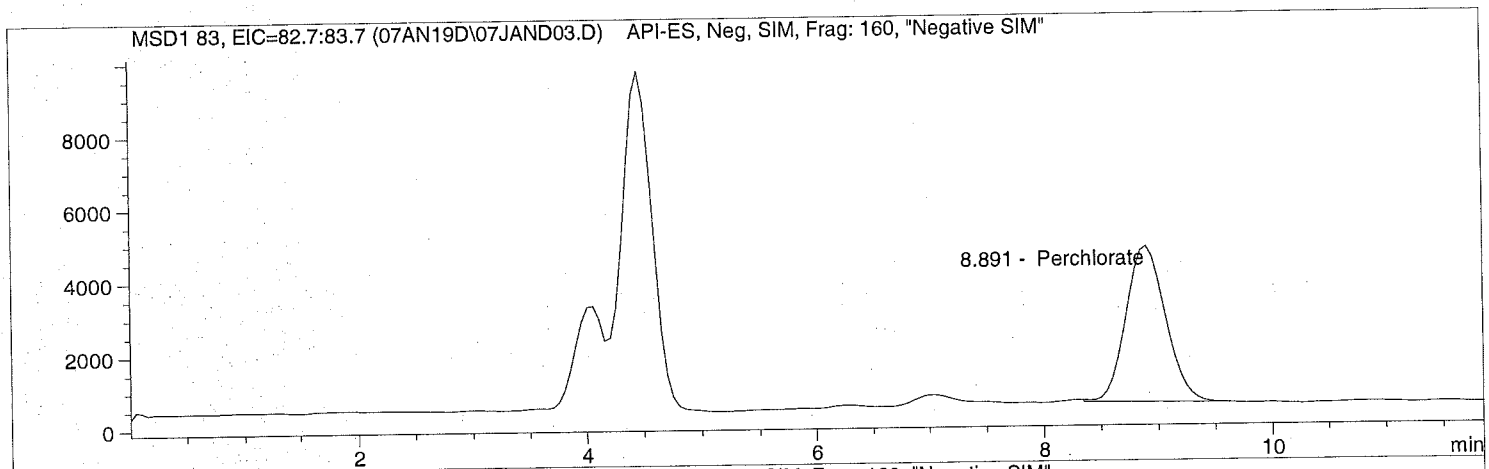
*** End of Report ***

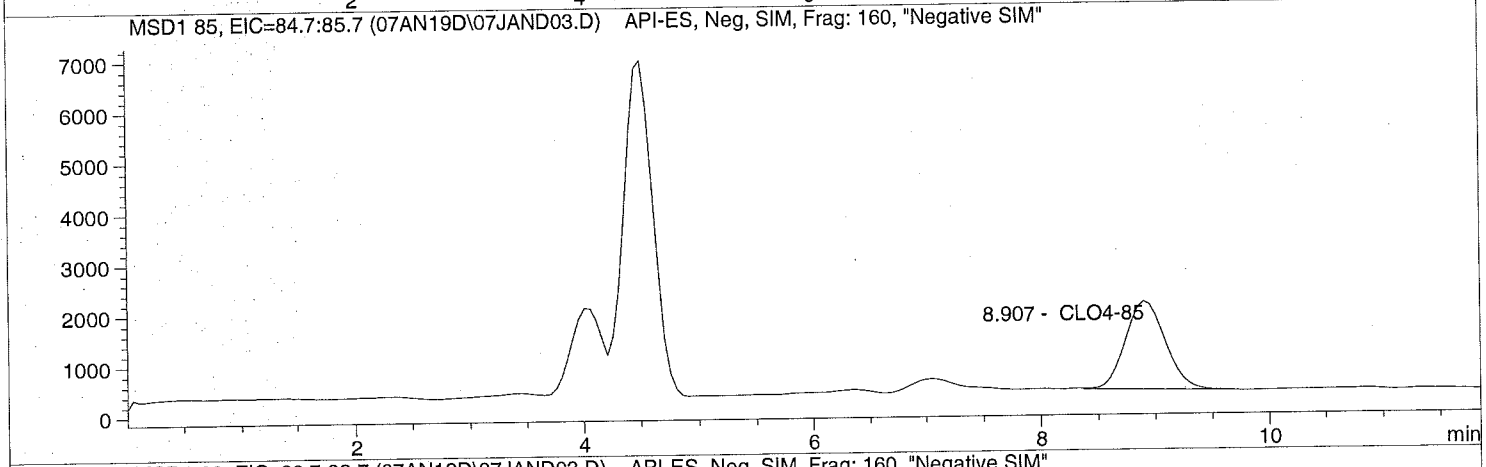
Data file: C:\HPCHEM\1\DATA\07AN19D\07JAND03.D Sample Name: 635253 ICS@1.0

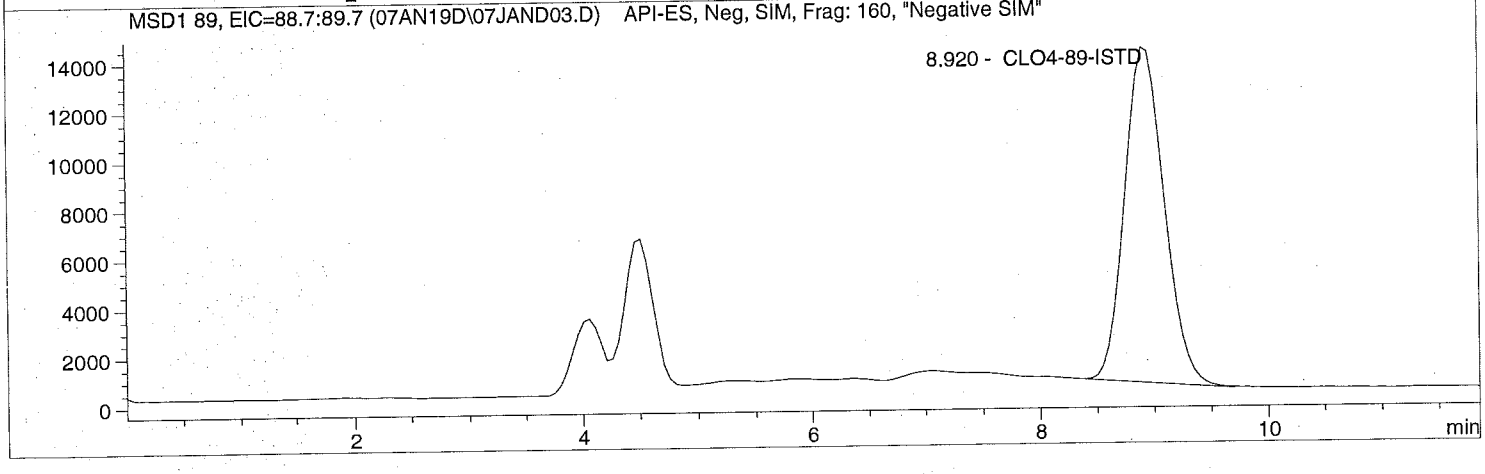
Injection Date:	1/07/2019 08:54:02	Seq Line:	3
Sample Name:	635253 ICS@1.0	Location:	Vial 73
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis







Data file: C:\HPCHEM\1\DATA\07AN19D\07JAND03.D Sample Name: 635253 ICS@1.0

Injection Date:	1/07/2019 08:54:02	Seq Line:	3
Sample Name:	635253 ICS@1.0	Location:	Vial 73
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 3. Dec. 2018, 00:29:27 pm
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	1.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.891	BBA	102006.5	1.1616	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.907	BBA	42300.5	1.4218	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.920	BBA	330351.9	5.0000	CLO4-89-ISTD

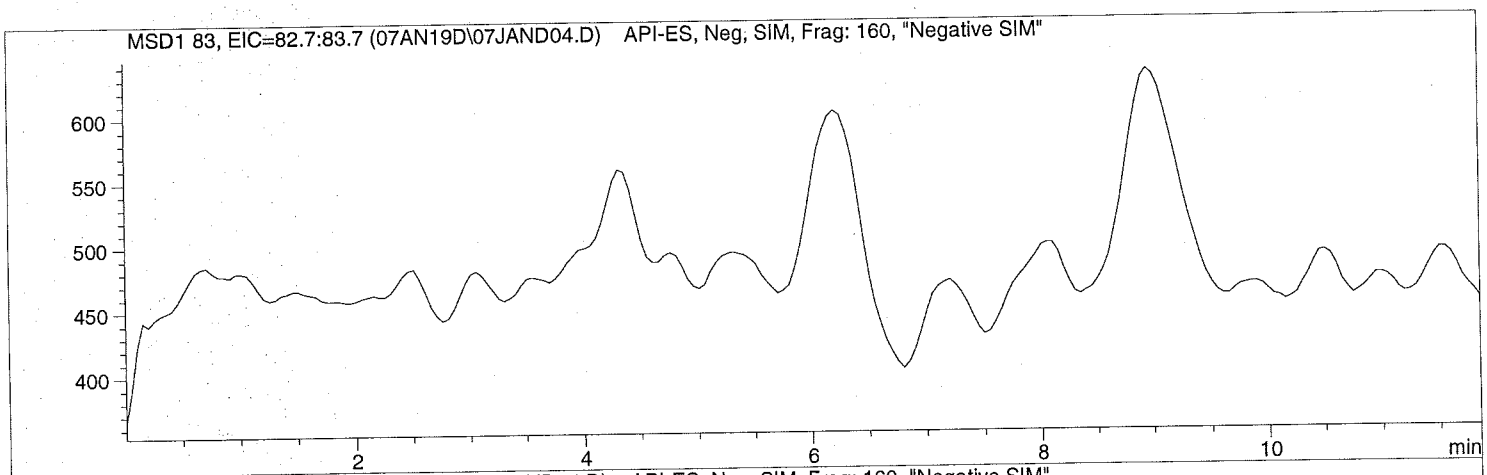
*** End of Report ***

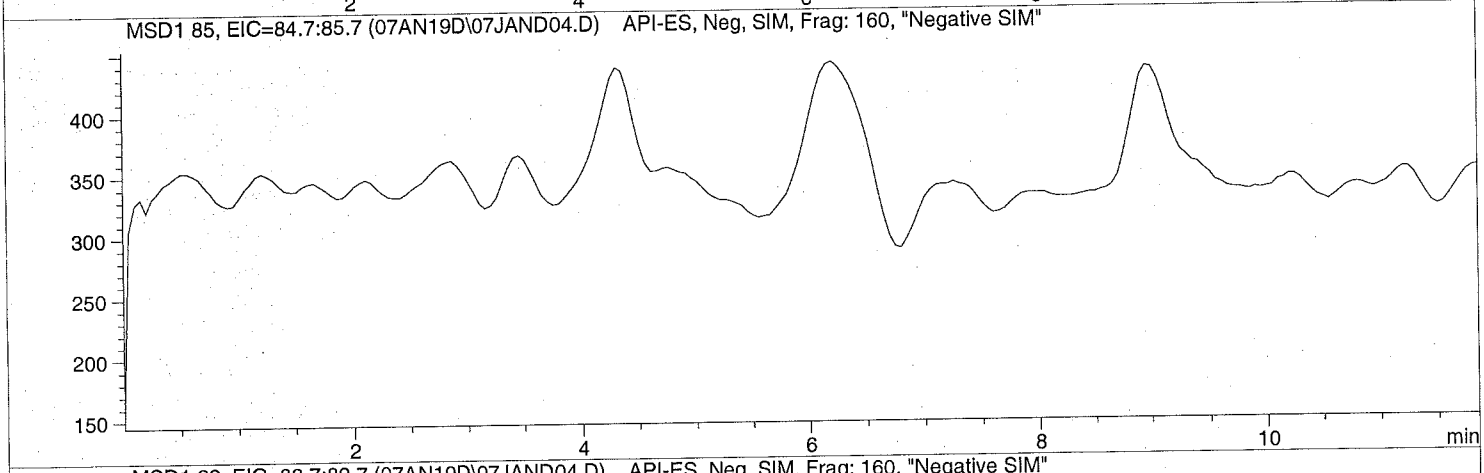
Data file: C:\HPCHEM\1\DATA\07AN19D\07JAND04.D Sample Name: 635254 LMB

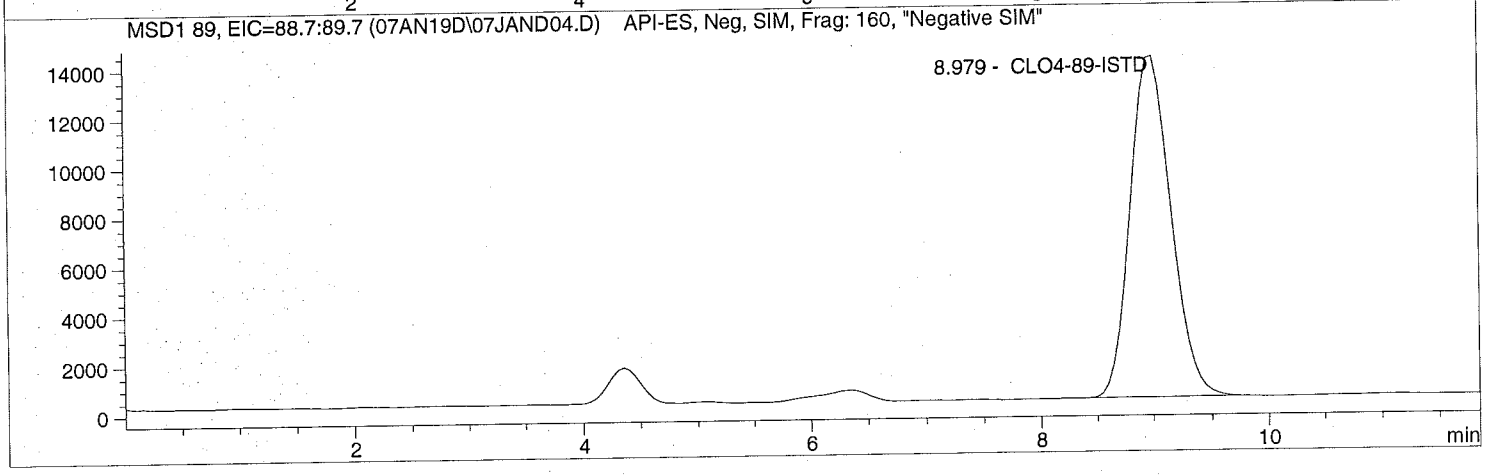
Injection Date:	1/07/2019 09:07:52	Seq Line:	4
Sample Name:	635254 LMB	Location:	Vial 74
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis







Data file: C:\HPCHEM\1\DATA\07AN19D\07JAND04.D Sample Name: 635254 LMB

Injection Date:	1/07/2019 09:07:52	Seq Line:	4
Sample Name:	635254 LMB	Location:	Vial 74
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 3. Dec. 2018, 00:29:27 pm
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	0.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
0.000		0.0	0.0000	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
0.000		0.0	0.0000	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.979	BBA	340422.6	5.0000	CLO4-89-ISTD

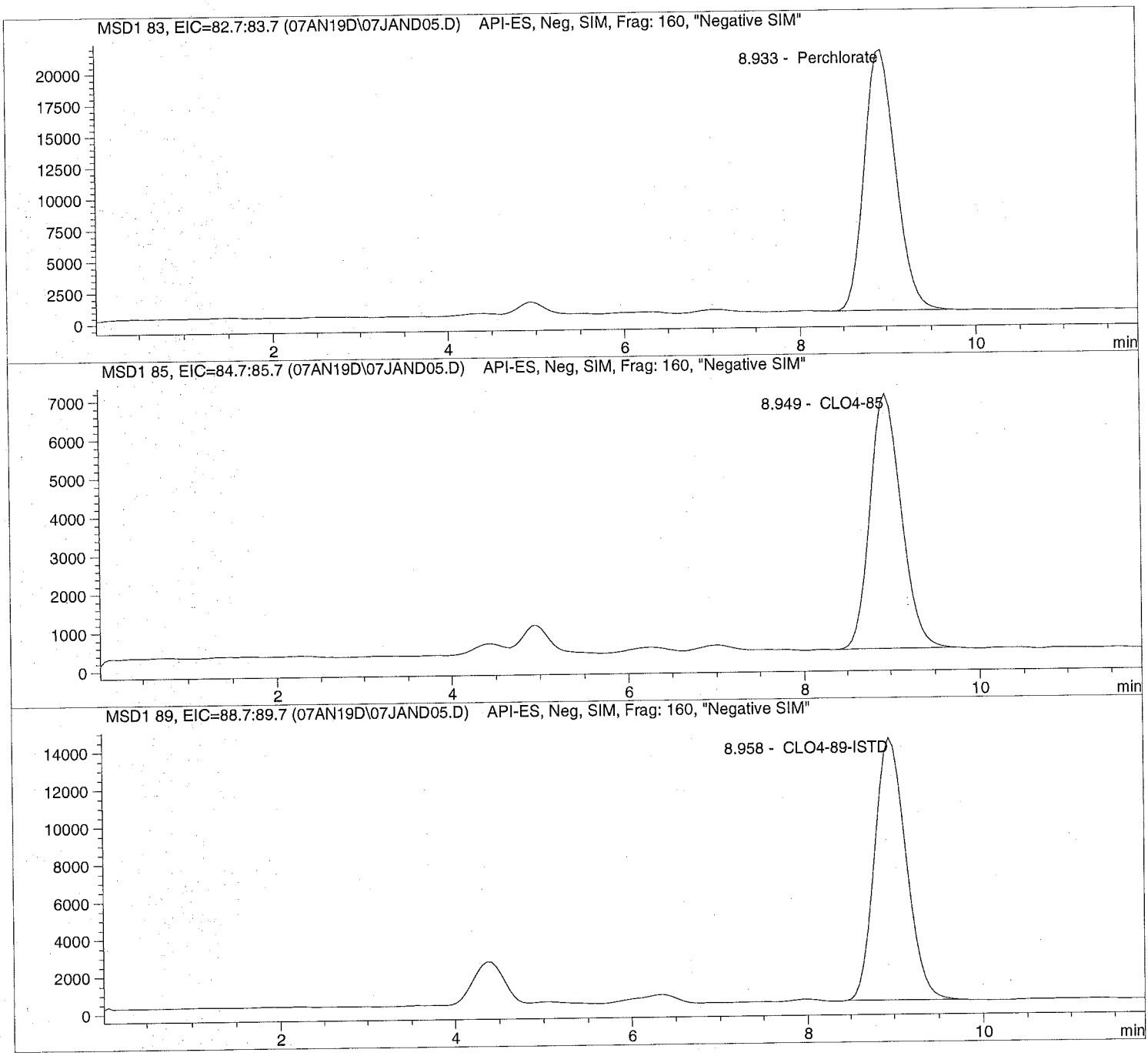
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\07AN19D\07JAND05.D Sample Name: 635255 QC@5.0

Injection Date:	1/07/2019 09:21:39	Seq Line:	5
Sample Name:	635255 QC@5.0	Location:	Vial 75
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\07AN19D\07JAND05.D Sample Name: 635255 QC@5.0

Injection Date:	1/07/2019 09:21:39	Seq Line:	5
Sample Name:	635255 QC@5.0	Location:	Vial 75
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 3. Dec. 2018, 00:29:27 pm
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	5.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.933	PBA	518263.4	4.7875	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.949	BBA	163427.7	4.9558	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.958	PBA	347092.8	5.0000	CLO4-89-ISTD

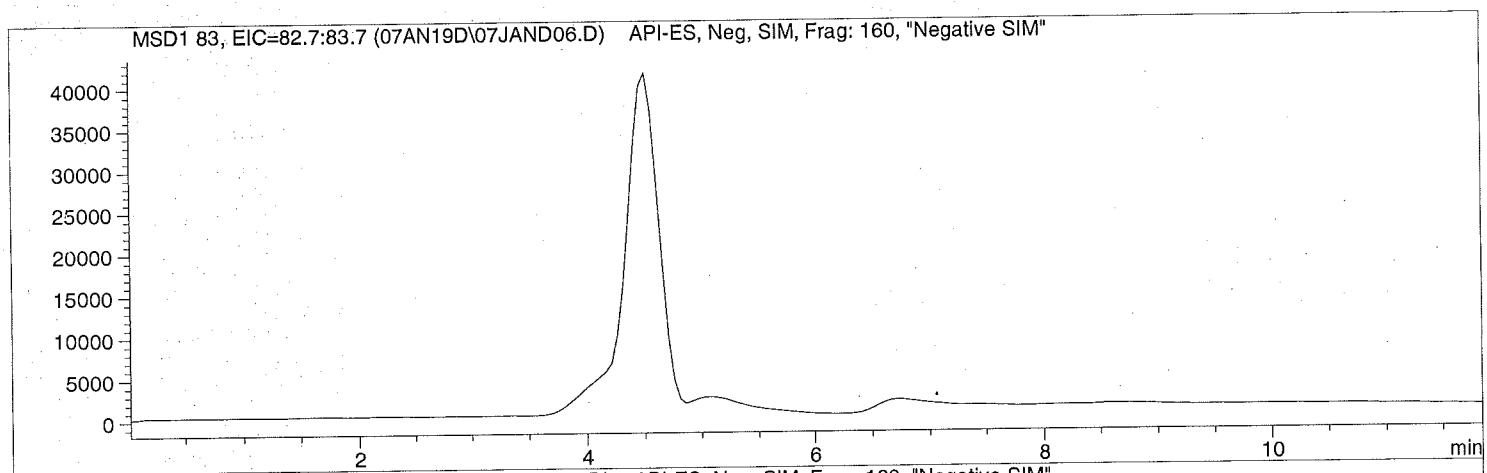
*** End of Report ***

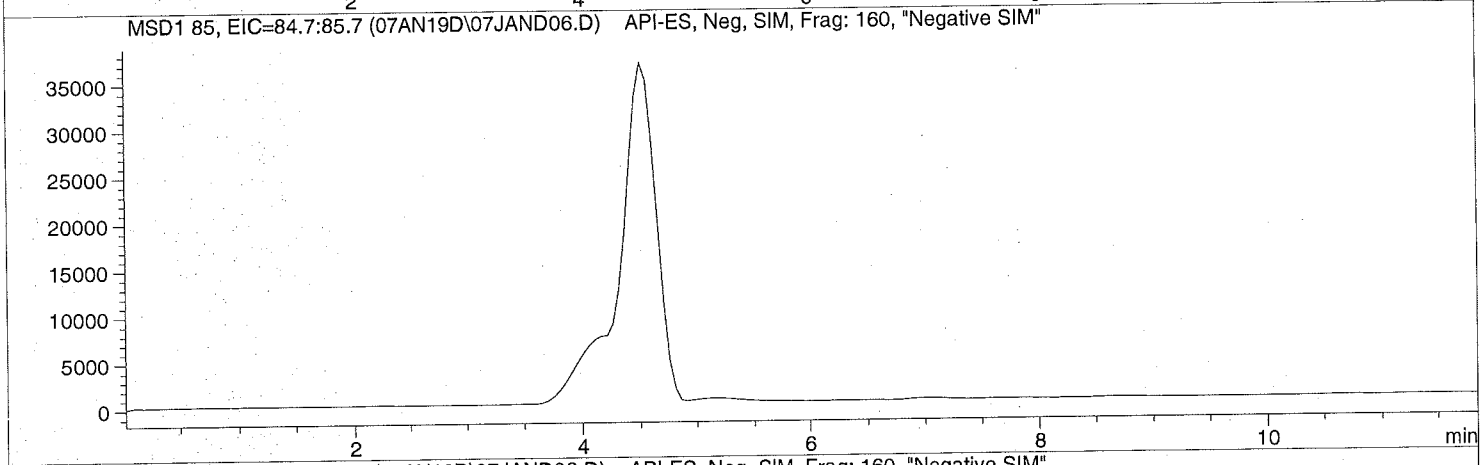
Data file: C:\HPCHEM\1\DATA\07AN19D\07JAND06.D Sample Name: 1836506001

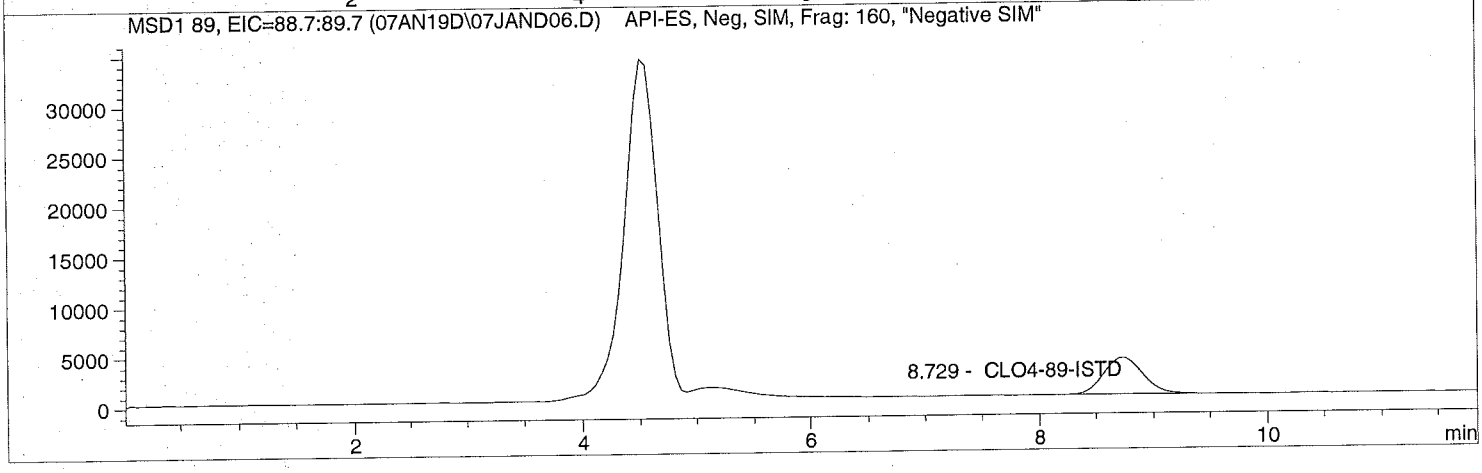
Injection Date:	1/07/2019 09:37:59	Seq Line:	6
Sample Name:	1836506001	Location:	Vial 76
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis







Data file: C:\HPCHEM\1\DATA\07AN19D\07JAND06.D Sample Name: 1836506001

Injection Date:	1/07/2019 09:37:59	Seq Line:	6
Sample Name:	1836506001	Location:	Vial 76
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 3. Dec. 2018, 00:29:27 pm
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	0.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
0.000		0.0	0.0000	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
0.000		0.0	0.0000	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.729	PBA	86474.2	5.0000	CLO4-89-ISTD

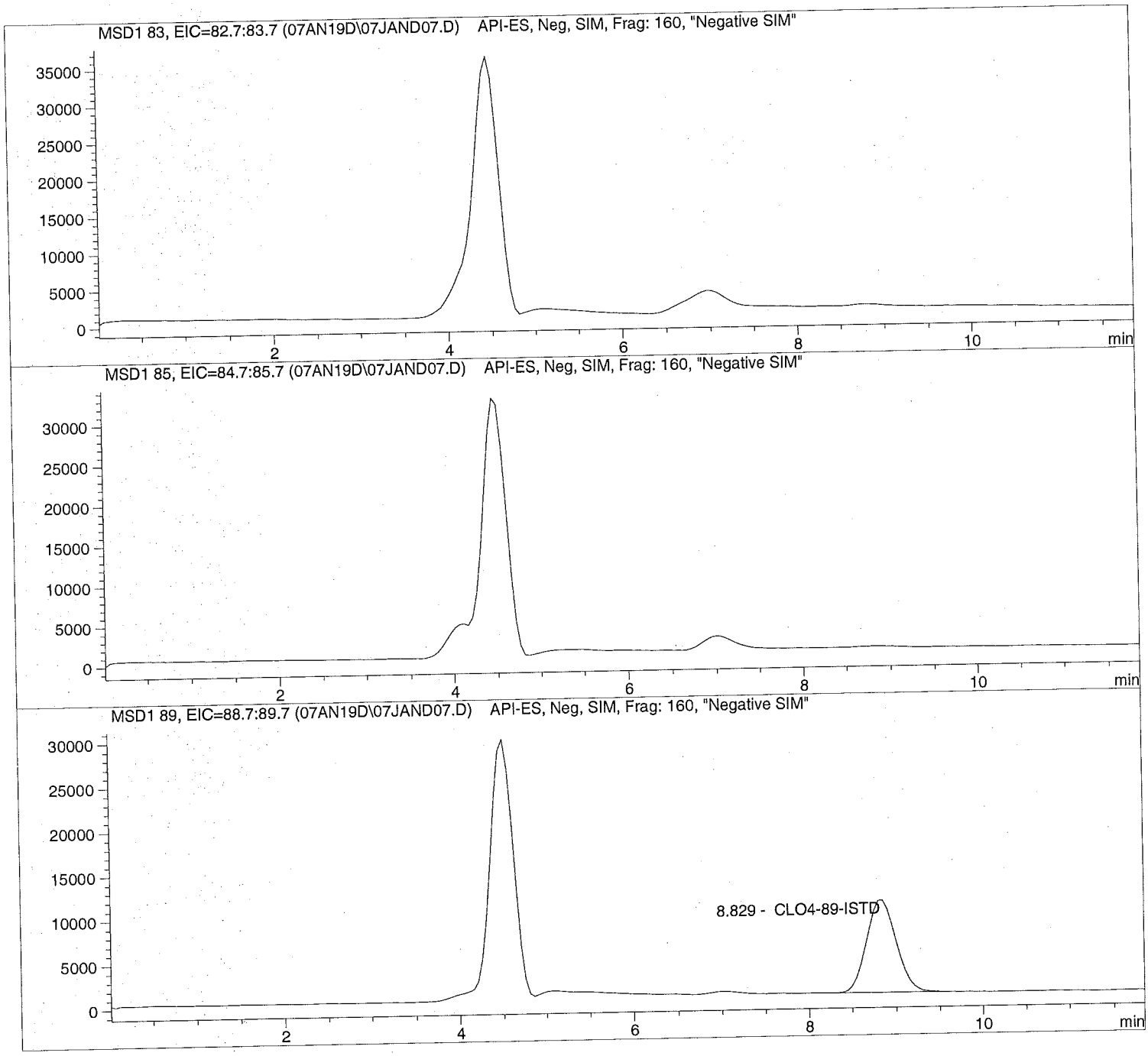
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\07AN19D\07JAND07.D Sample Name: 1836506002

Injection Date:	1/07/2019 09:51:46	Seq Line:	7
Sample Name:	1836506002	Location:	Vial 77
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\07AN19D\07JAND07.D Sample Name: 1836506002

Injection Date:	1/07/2019 09:51:46	Seq Line:	7
Sample Name:	1836506002	Location:	Vial 77
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 3. Dec. 2018, 00:29:27 pm
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	0.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
0.000		0.0	0.0000	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
0.000		0.0	0.0000	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.829	PBA	242412.2	5.0000	CLO4-89-ISTD

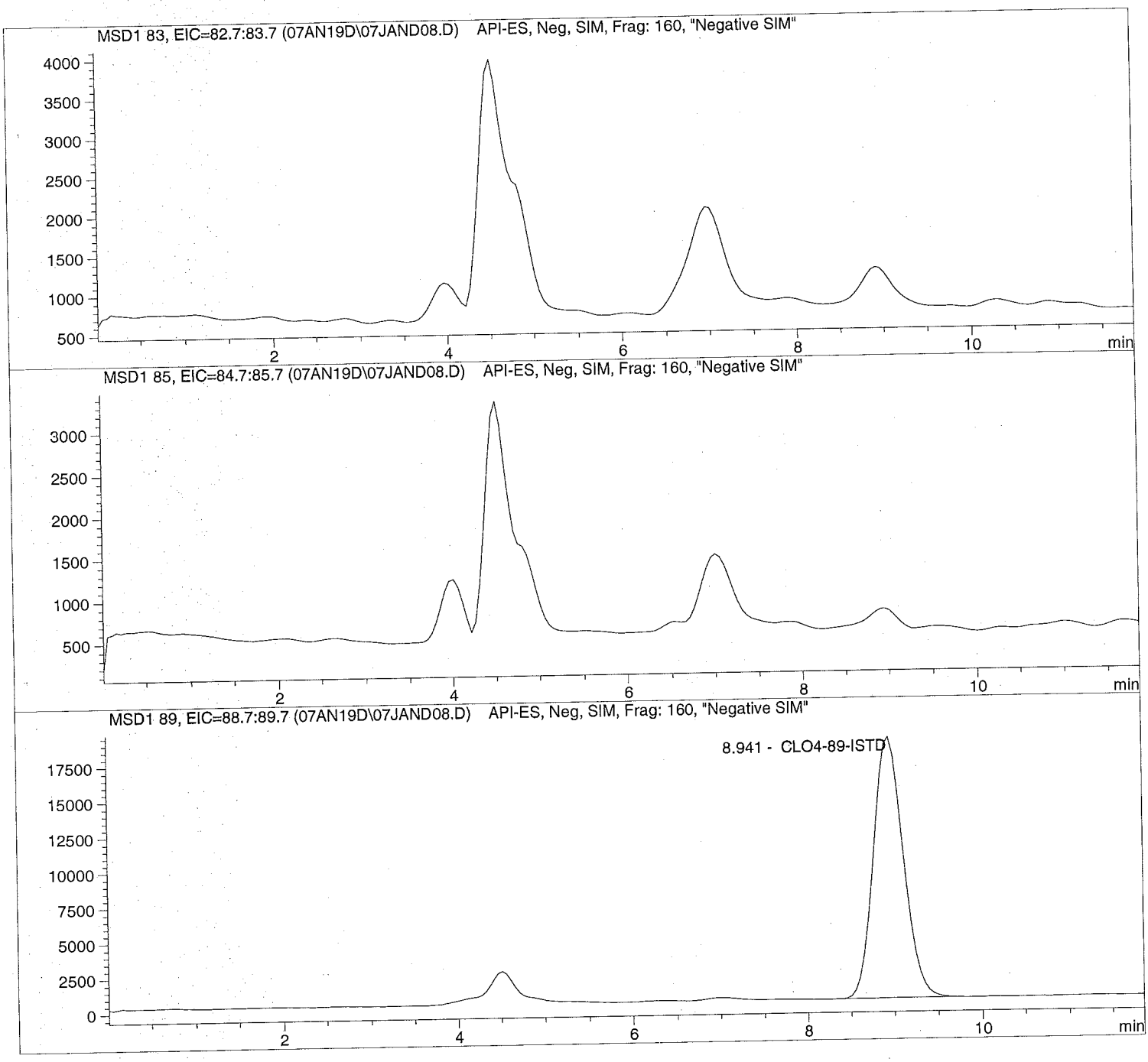
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\07AN19D\07JAND08.D Sample Name: 1836506003

Injection Date:	1/07/2019 10:05:33	Seq Line:	8
Sample Name:	1836506003	Location:	Vial 78
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\07AN19D\07JAND08.D Sample Name: 1836506003

Injection Date:	1/07/2019 10:05:33	Seq Line:	8
Sample Name:	1836506003	Location:	Vial 78
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 3. Dec. 2018, 00:29:27 pm
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	0.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
0.000		0.0	0.0000	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
0.000		0.0	0.0000	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.941	BBA	444775.2	5.0000	CLO4-89-ISTD

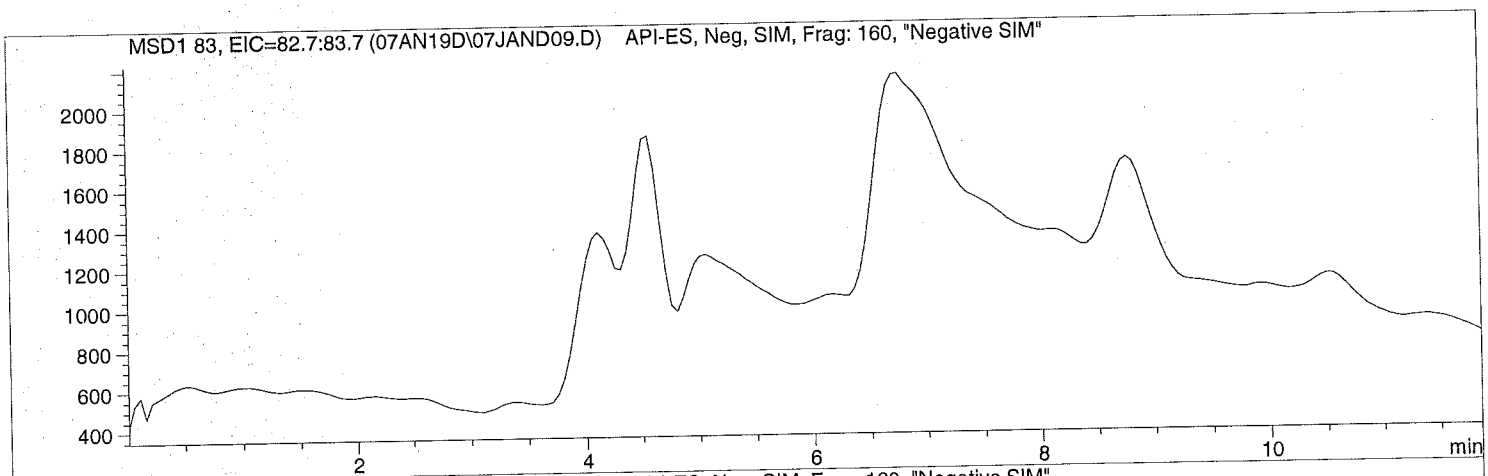
*** End of Report ***

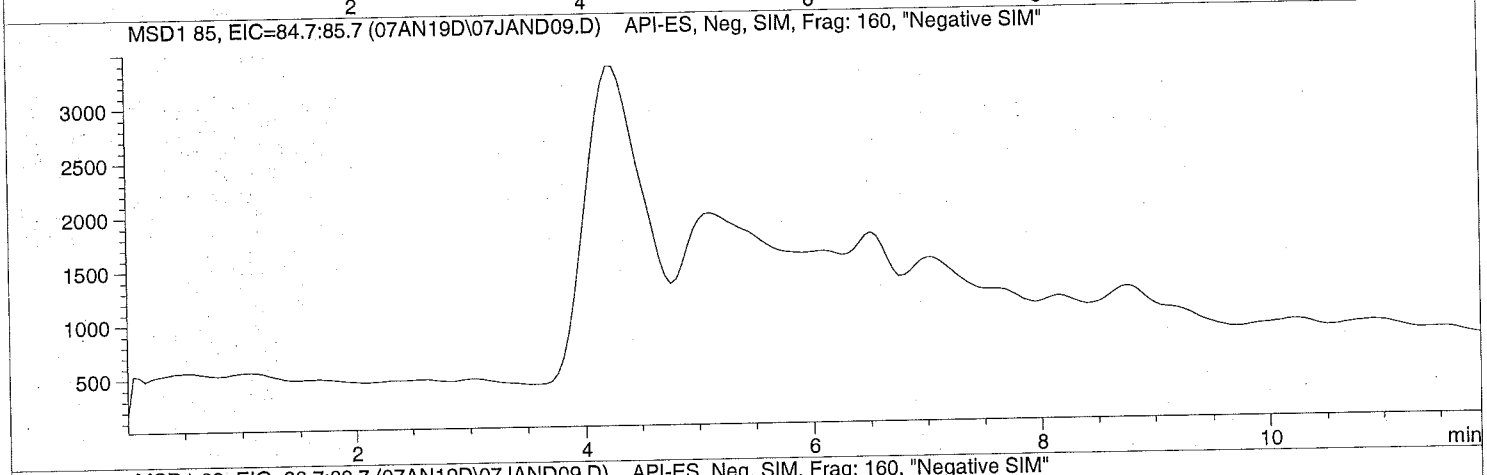
Data file: C:\HPCHEM\1\DATA\07AN19D\07JAND09.D Sample Name: 1836506004

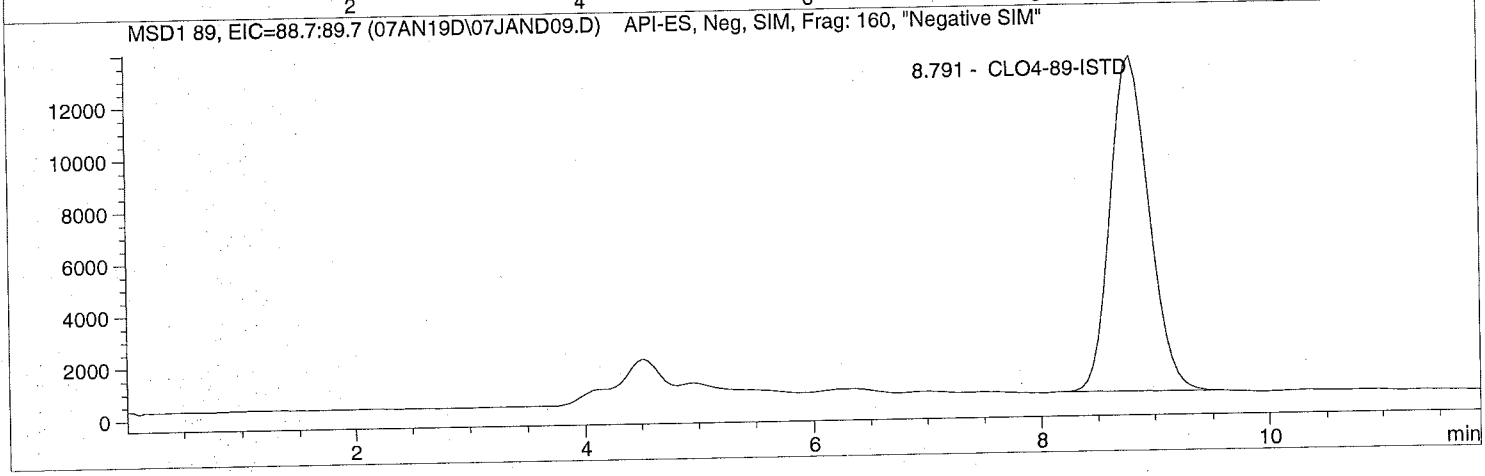
Injection Date:	1/07/2019 10:19:23	Seq Line:	9
Sample Name:	1836506004	Location:	Vial 79
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis







Data file: C:\HPCHEM\1\DATA\07AN19D\07JAND09.D Sample Name: 1836506004

Injection Date:	1/07/2019 10:19:23	Seq Line:	9
Sample Name:	1836506004	Location:	Vial 79
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 3. Dec. 2018, 00:29:27 pm
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	0.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
0.000		0.0	0.0000	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
0.000		0.0	0.0000	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.791	BBA	306339.7	5.0000	CLO4-89-ISTD

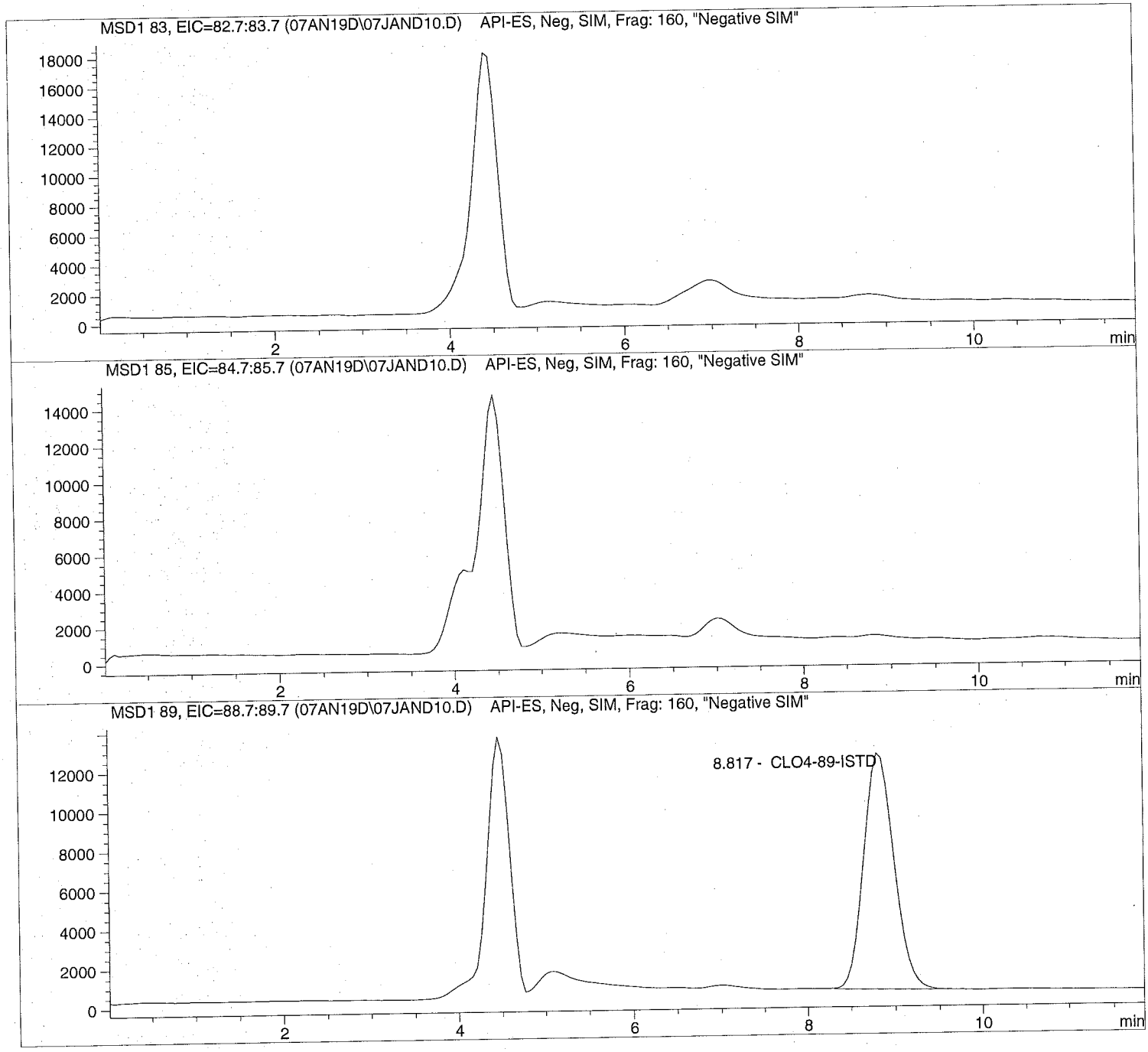
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\07AN19D\07JAND10.D Sample Name: 1836506005

Injection Date:	1/07/2019 10:33:10	Seq Line:	10
Sample Name:	1836506005	Location:	Vial 80
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\07AN19D\07JAND10.D Sample Name: 1836506005

Injection Date:	1/07/2019 10:33:10	Seq Line:	10
Sample Name:	1836506005	Location:	Vial 80
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 3. Dec. 2018, 00:29:27 pm
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	0.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
0.000		0.0	0.0000	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
0.000		0.0	0.0000	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.817	BBA	284042.6	5.0000	CLO4-89-ISTD

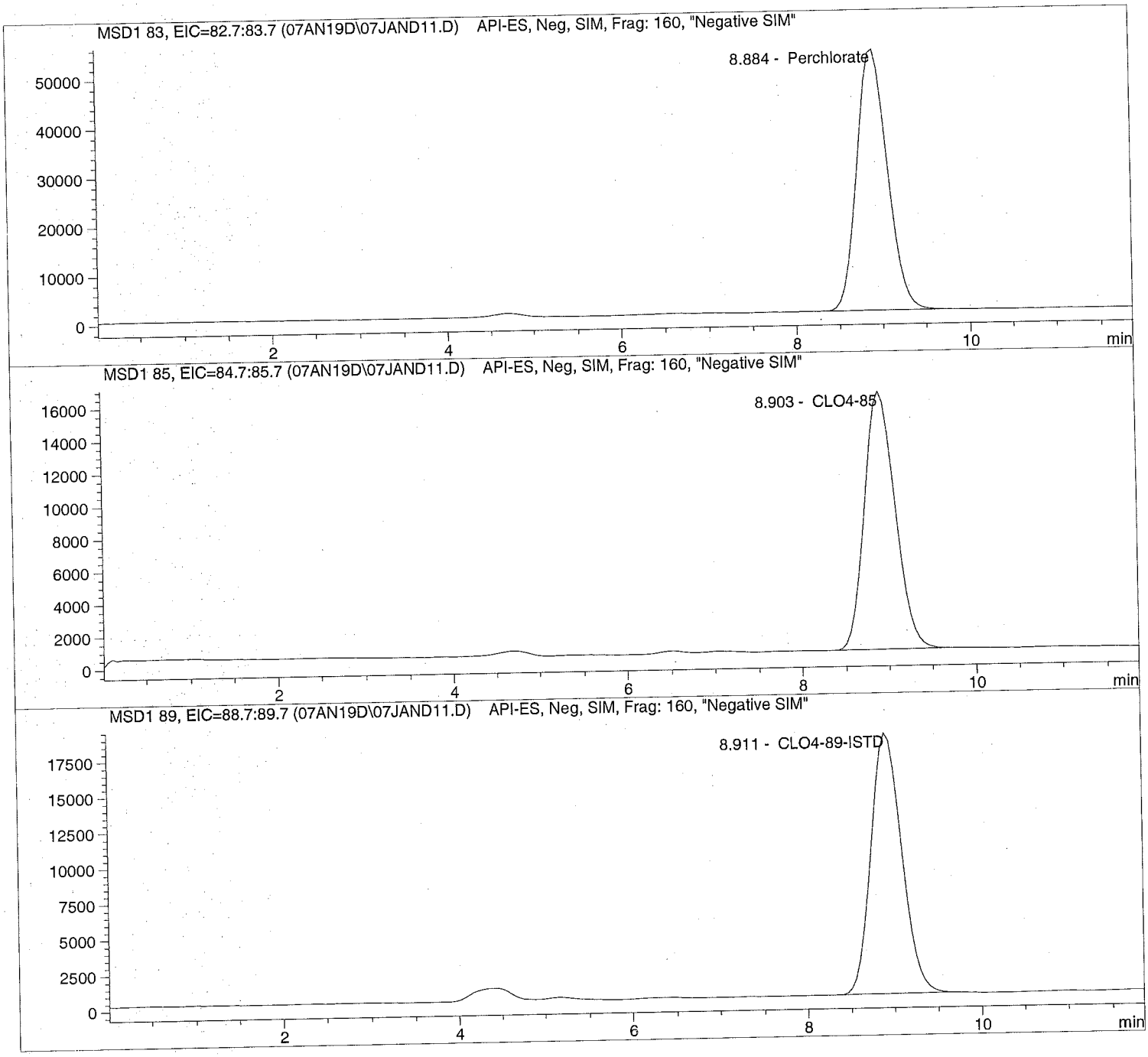
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\07AN19D\07JAND11.D Sample Name: 1836506006 10X

Injection Date:	1/07/2019 10:46:56	Seq Line:	11
Sample Name:	1836506006 10X	Location:	Vial 81
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\07AN19D\07JAND11.D Sample Name: 1836506006 10X

Injection Date:	1/07/2019 10:46:56	Seq Line:	11
Sample Name:	1836506006 10X	Location:	Vial 81
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 3. Dec. 2018, 00:29:27 pm
Multiplier:	1.000000
Dilution:	10.000000
Sample Amount:	0.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.884	PBA	1304290.7	89.7860	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.903	PBA	392248.2	89.5947	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.911	PBA	452687.3	50.0000	CLO4-89-ISTD

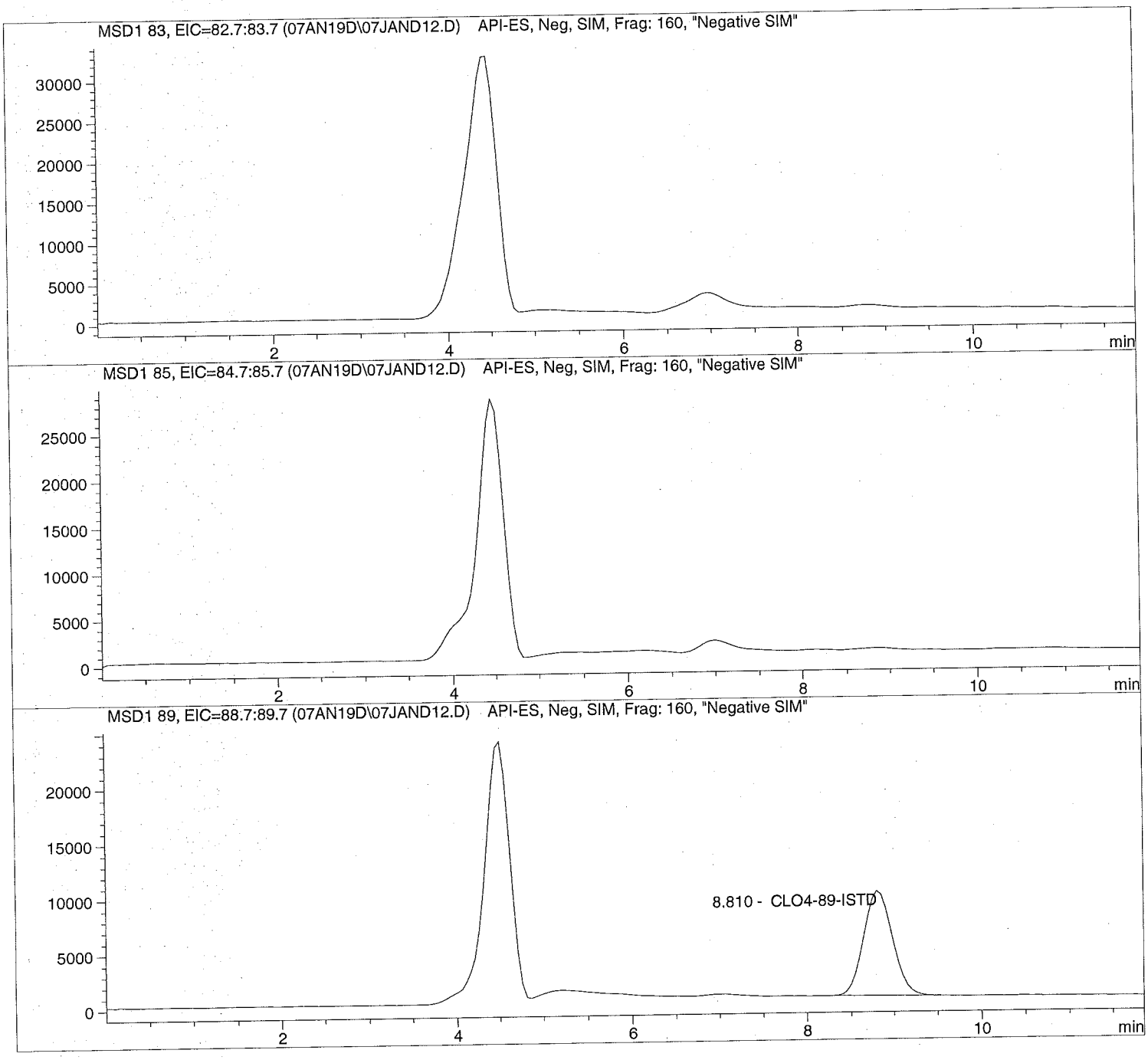
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\07AN19D\07JAND12.D Sample Name: 1836506007

Injection Date:	1/07/2019 11:00:39	Seq Line:	12
Sample Name:	1836506007	Location:	Vial 82
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\07AN19D\07JAND12.D Sample Name: 1836506007

Injection Date:	1/07/2019 11:00:39	Seq Line:	12
Sample Name:	1836506007	Location:	Vial 82
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method:	CLO4-AQN.M
Analysis Method:	C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed:	12/3/2018 12:46:06

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 3. Dec. 2018, 00:29:27 pm
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	0.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
0.000		0.0	0.0000	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
0.000		0.0	0.0000	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.810	BBA	220183.2	5.0000	CLO4-89-ISTD

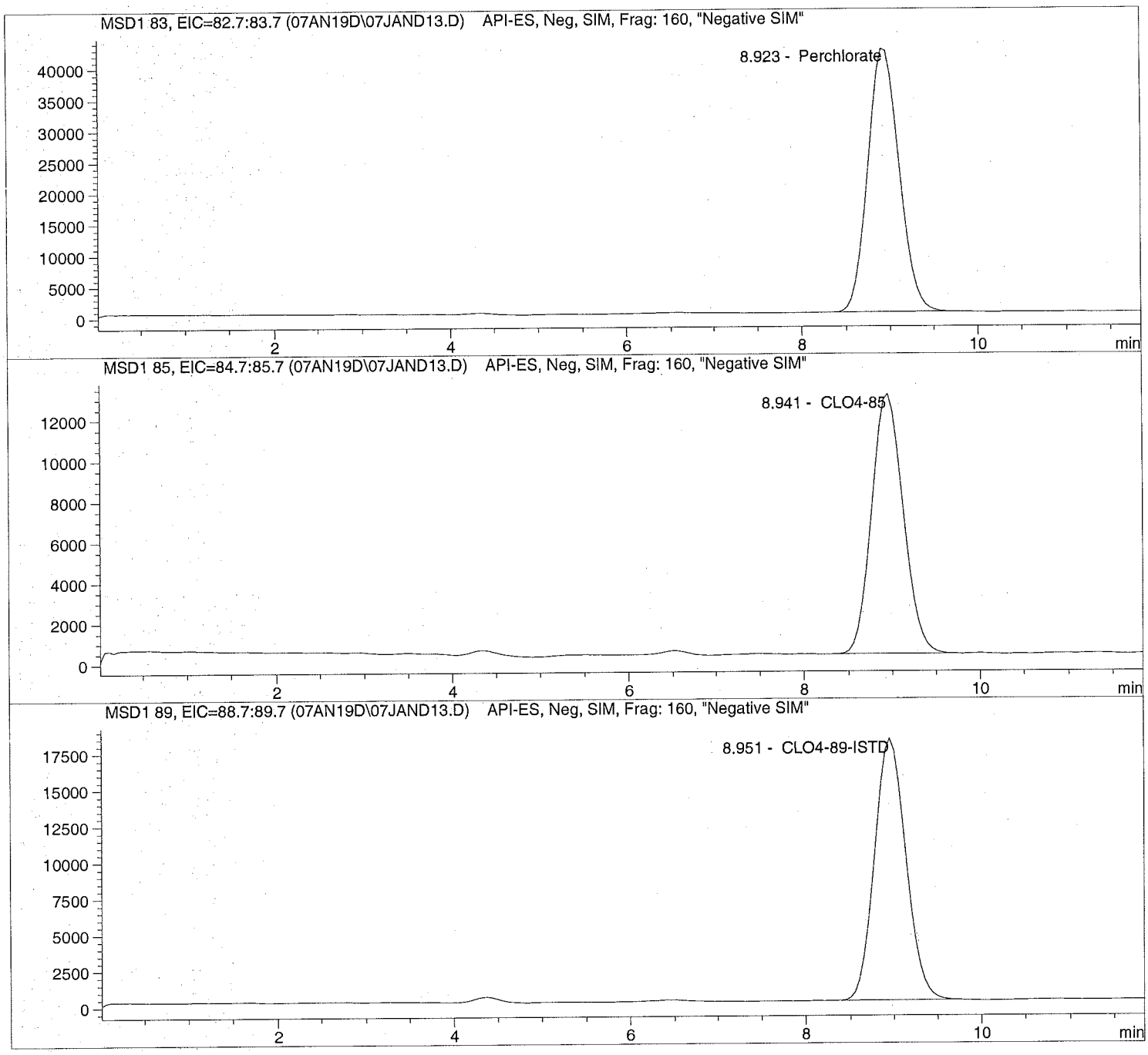
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\07AN19D\07JAND13.D Sample Name: 1836506008 10K

Injection Date:	1/07/2019 11:14:24	Seq Line:	13
Sample Name:	1836506008 10K	Location:	Vial 83
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\07AN19D\07JAND13.D Sample Name: 1836506008 10K

Injection Date:	1/07/2019 11:14:24	Seq Line:	13
Sample Name:	1836506008 10K	Location:	Vial 83
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 3. Dec. 2018, 00:29:27 pm
Multiplier:	1.000000
Dilution:	10000.000000
Sample Amount:	0.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.923	BBA	1050173.8	73037.1336	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.941	PBA	321962.4	74105.7355	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.951	BBA	451870.7	50000.0000	CLO4-89-ISTD

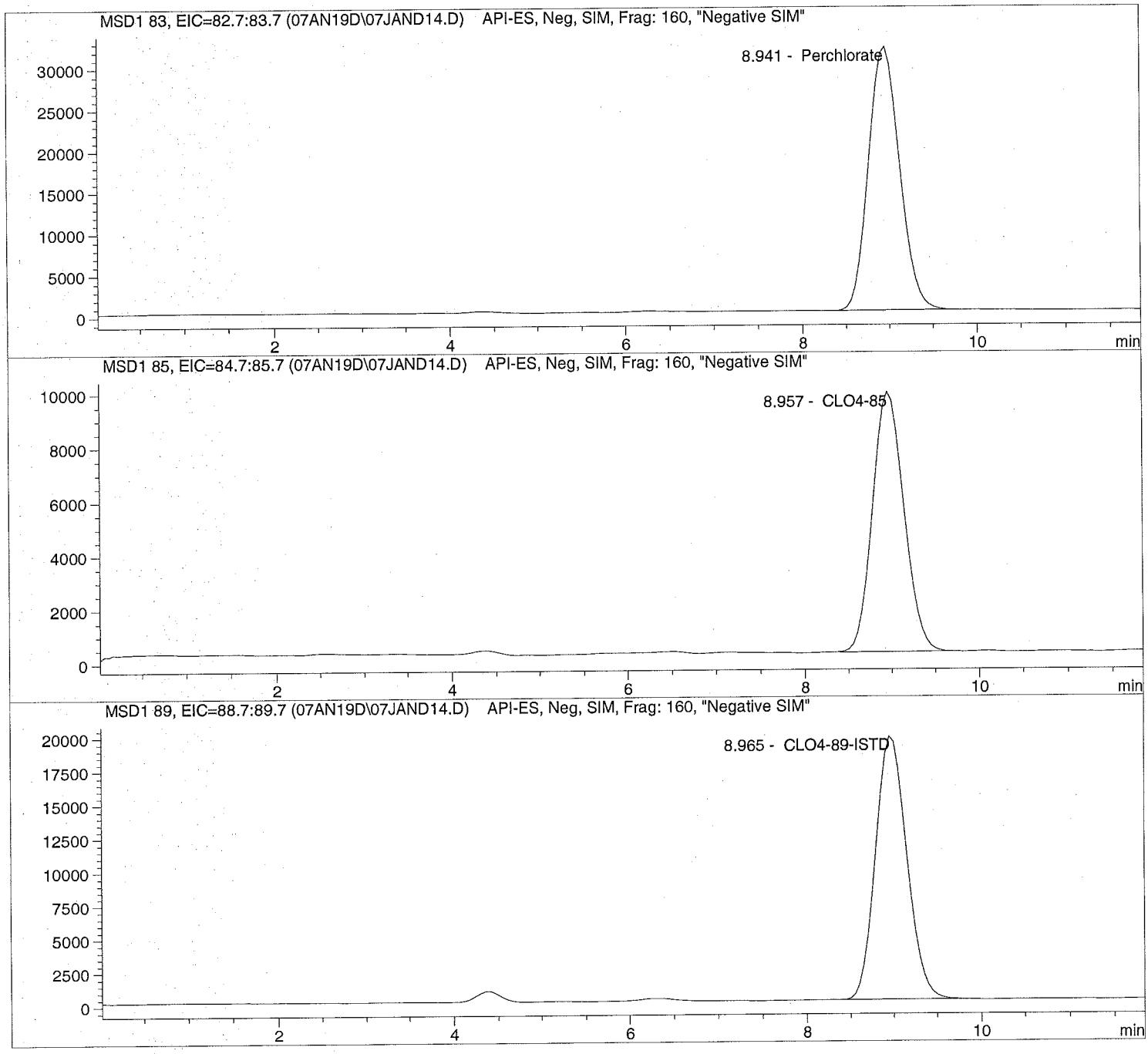
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\07AN19D\07JAND14.D Sample Name: 1836506009 10K

Injection Date:	1/07/2019 11:28:09	Seq Line:	14
Sample Name:	1836506009 10K	Location:	Vial 84
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\07AN19D\07JAND14.D Sample Name: 1836506009 10K

Injection Date:	1/07/2019 11:28:09	Seq Line:	14
Sample Name:	1836506009 10K	Location:	Vial 84
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method:	CLO4-AQN.M
Analysis Method:	C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed:	12/3/2018 12:46:06

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 3. Dec. 2018, 00:29:27 pm
Multiplier:	1.000000
Dilution:	10000.000000
Sample Amount:	0.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.941	PBA	794476.7	51566.0063	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.957	BBA	243261.0	51960.3712	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.965	PBA	492062.5	50000.0000	CLO4-89-ISTD

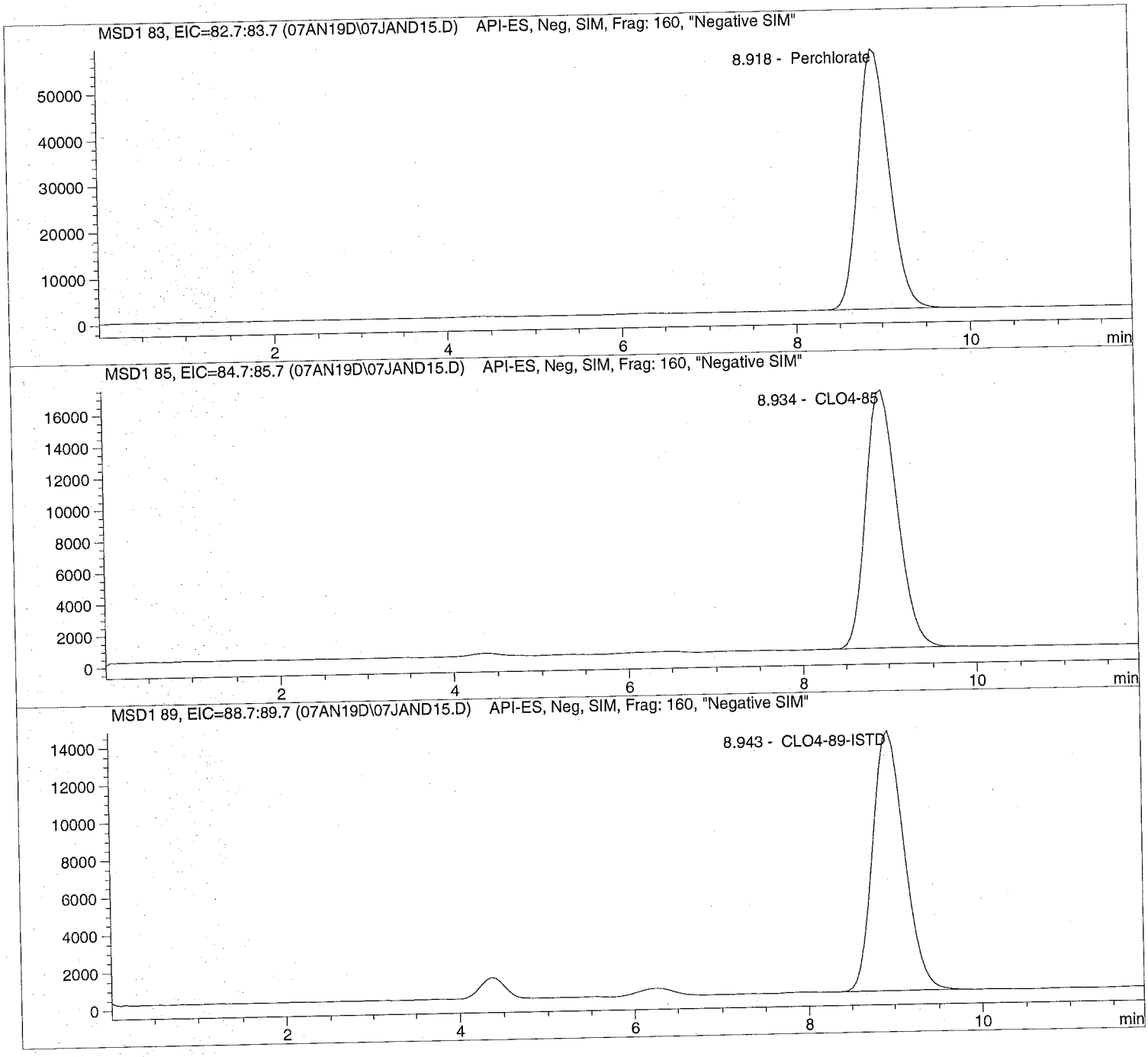
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\07AN19D\07JAND15.D Sample Name: 1836506010 MS

Injection Date:	1/07/2019 11:41:53	Seq Line:	15
Sample Name:	1836506010 MS	Location:	Vial 85
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\07AN19D\07JAND15.D Sample Name: 1836506010 MS

Injection Date:	1/07/2019 11:41:53	Seq Line:	15
Sample Name:	1836506010 MS	Location:	Vial 85
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 3. Dec. 2018, 00:29:27 pm
Multiplier:	1.000000
Dilution:	10000.000000
Sample Amount:	0.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.918	PBA	1403328.9	123188.5778	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.934	BBA	418150.3	122013.1384	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.943	PBA	350646.3	50000.0000	CLO4-89-ISTD

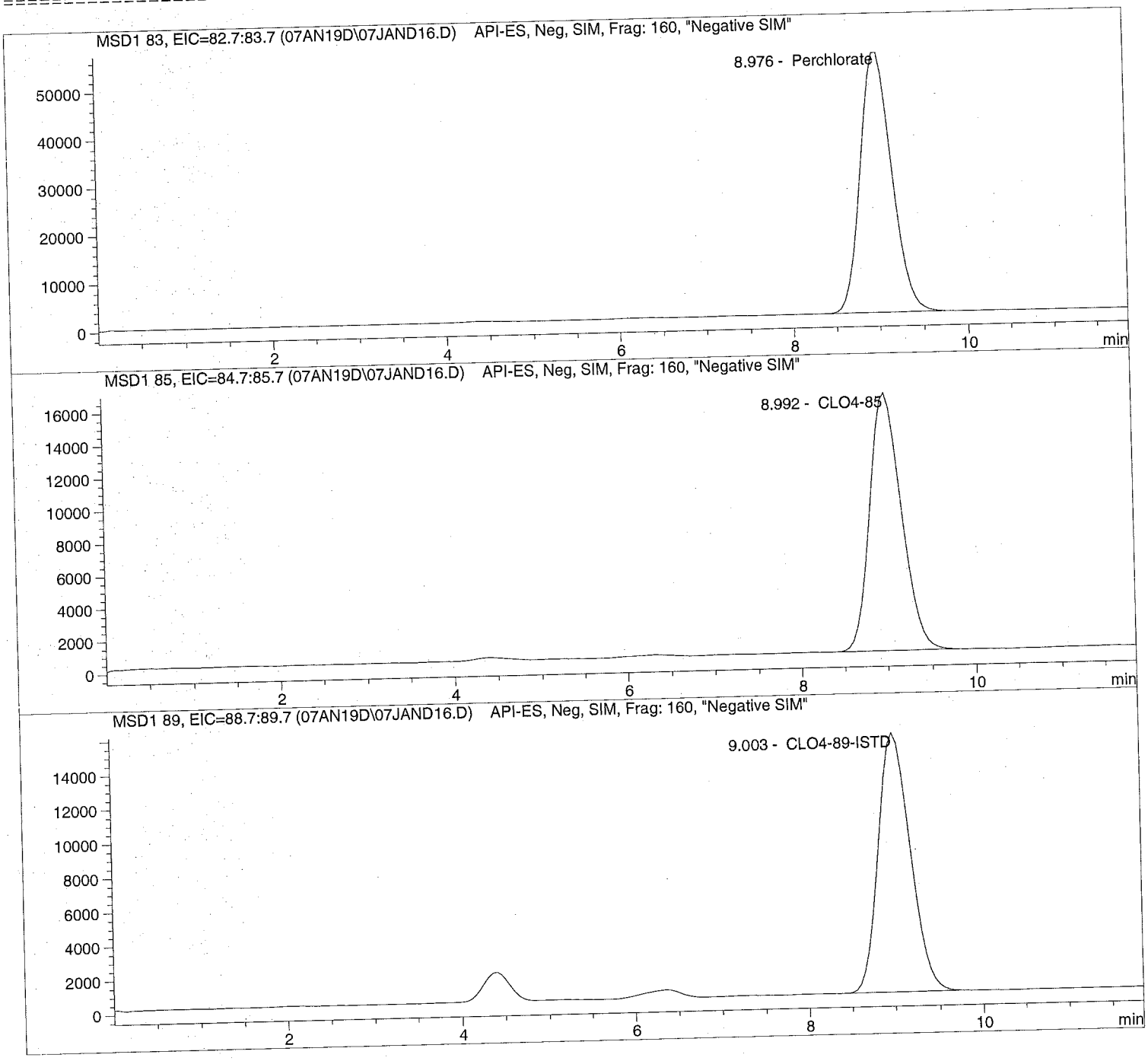
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\07AN19D\07JAND16.D Sample Name: 1836506011 MSD

Injection Date:	1/07/2019 11:55:38	Seq Line:	16
Sample Name:	1836506011 MSD	Location:	Vial 86
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\07AN19D\07JAND16.D Sample Name: 1836506011 MSD

Injection Date:	1/07/2019 11:55:38	Seq Line:	16
Sample Name:	1836506011 MSD	Location:	Vial 86
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 3. Dec. 2018, 00:29:27 pm
Multiplier:	1.000000
Dilution:	10000.000000
Sample Amount:	0.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.976	PBA	1362432.0	109942.6281	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.992	PBA	398752.8	106988.1758	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
9.003	PBA	383128.8	50000.0000	CLO4-89-ISTD

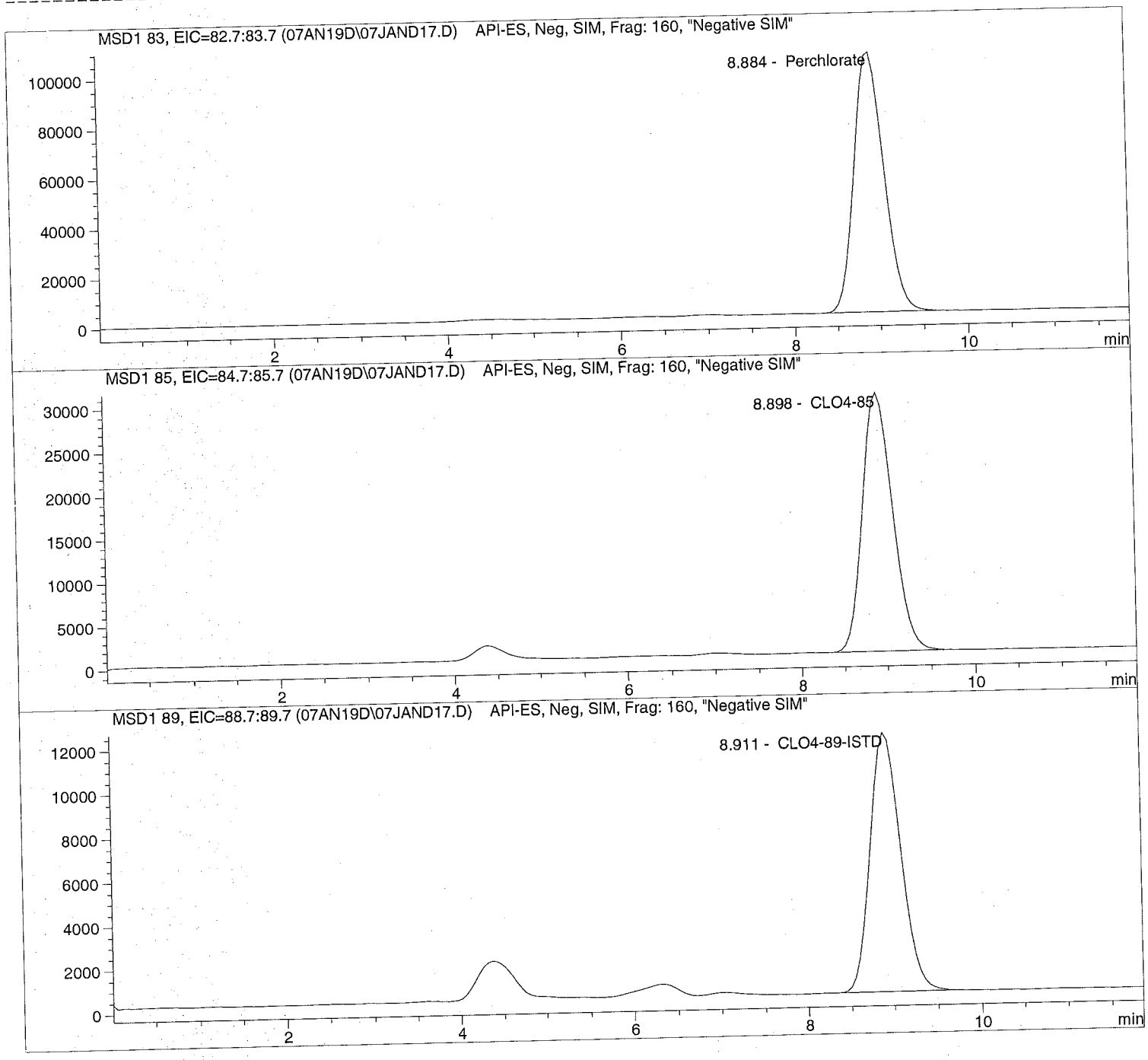
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\07AN19D\07JAND17.D Sample Name: 635256 CCV@25

Injection Date:	1/07/2019 12:09:23	Seq Line:	17
Sample Name:	635256 CCV@25	Location:	Vial 71
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\07AN19D\07JAND17.D Sample Name: 635256 CCV@25

Injection Date:	1/07/2019 12:09:23	Seq Line:	17
Sample Name:	635256 CCV@25	Location:	Vial 71
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 3. Dec. 2018, 00:29:27 pm
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	25.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.884	PBA	2515917.3	25.8527	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.898	PBA	724370.7	24.7110	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.911	BBA	289965.5	5.0000	CLO4-89-ISTD

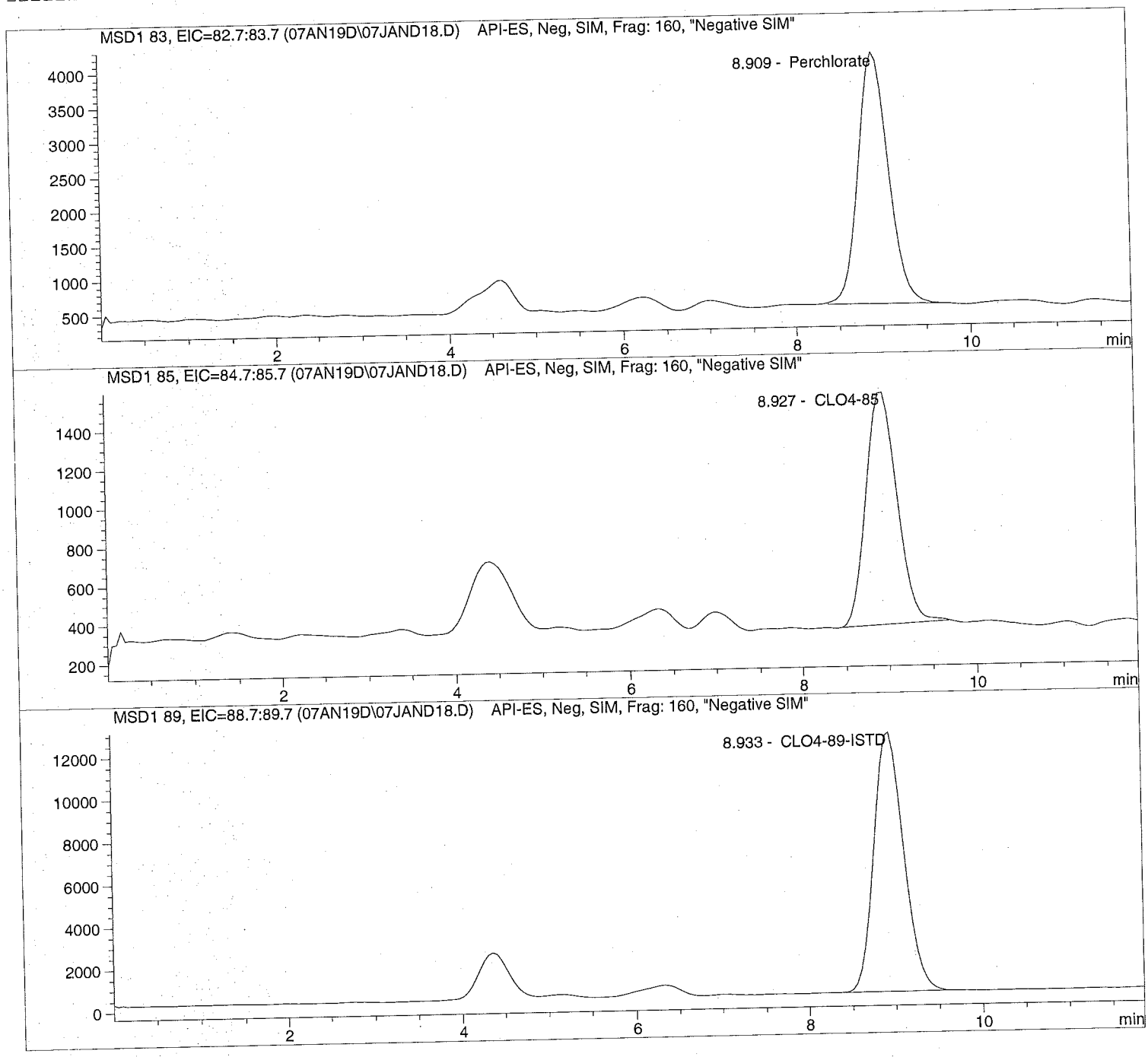
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\07AN19D\07JAND18.D Sample Name: 635257 LODV@1.

Injection Date:	1/07/2019 12:23:07	Seq Line:	18
Sample Name:	635257 LODV@1.	Location:	Vial 72
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis



Injection Date:	1/07/2019 12:23:07	Seq Line:	18
Sample Name:	635257 LODV@1.	Location:	Vial 72
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method:	CLO4-AQN.M
Analysis Method:	C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed:	12/3/2018 12:46:06

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 3. Dec. 2018, 00:29:27 pm
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	1.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.909	BBA	88627.2	1.1403	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.927	PBA	30065.7	1.1550	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.933	BBA	293575.6	5.0000	CLO4-89-ISTD

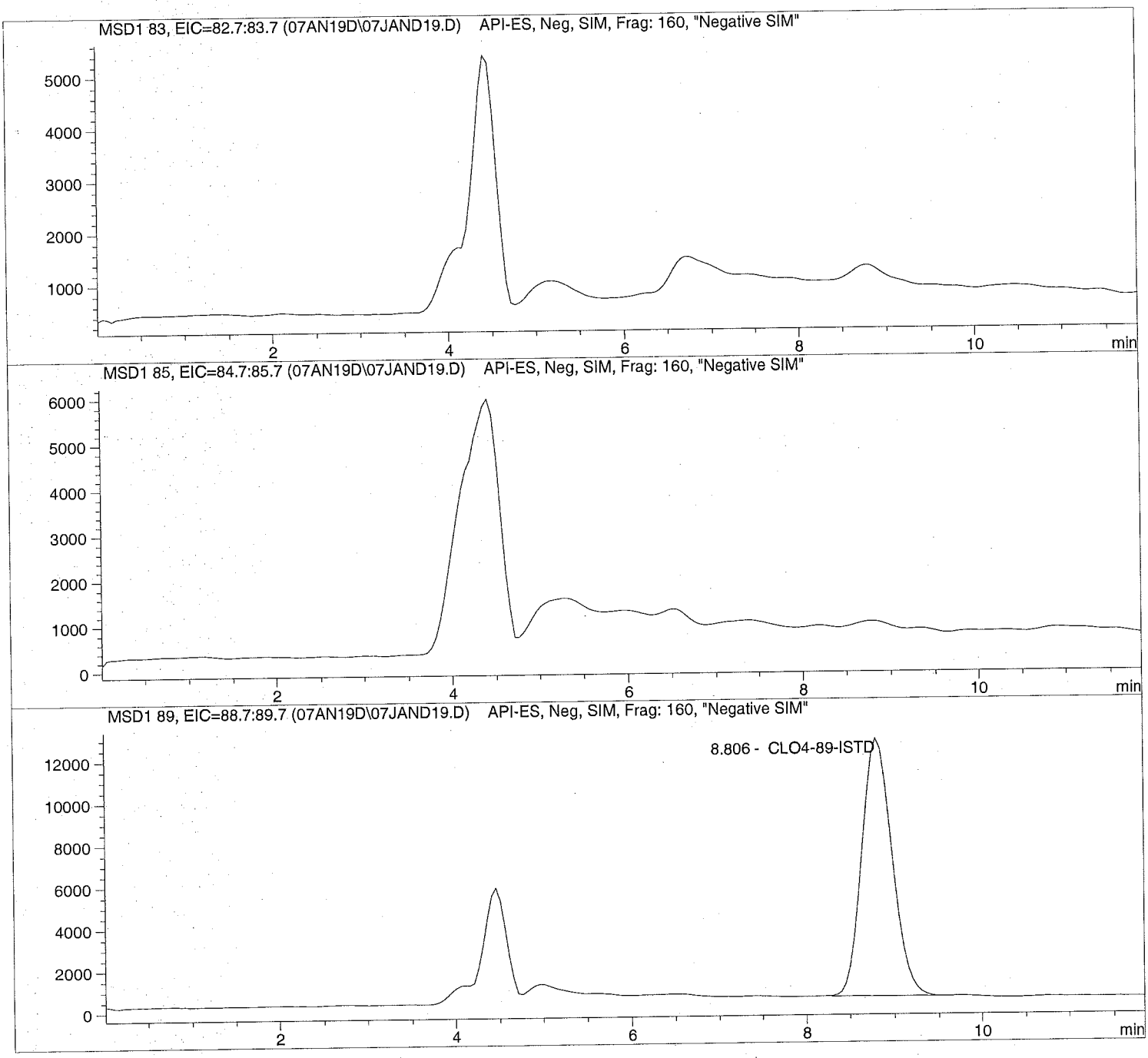
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\07AN19D\07JAND19.D Sample Name: 1900327001

Injection Date:	1/07/2019 12:36:54	Seq Line:	19
Sample Name:	1900327001	Location:	Vial 87
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method:	CLO4-AQN.M
Analysis Method:	C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed:	12/3/2018 12:46:06

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\07AN19D\07JAND19.D Sample Name: 1900327001

Injection Date:	1/07/2019 12:36:54	Seq Line:	19
Sample Name:	1900327001	Location:	Vial 87
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 3. Dec. 2018, 00:29:27 pm
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	0.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
0.000		0.0	0.0000	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
0.000		0.0	0.0000	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.806	BBA	288001.4	5.0000	CLO4-89-ISTD

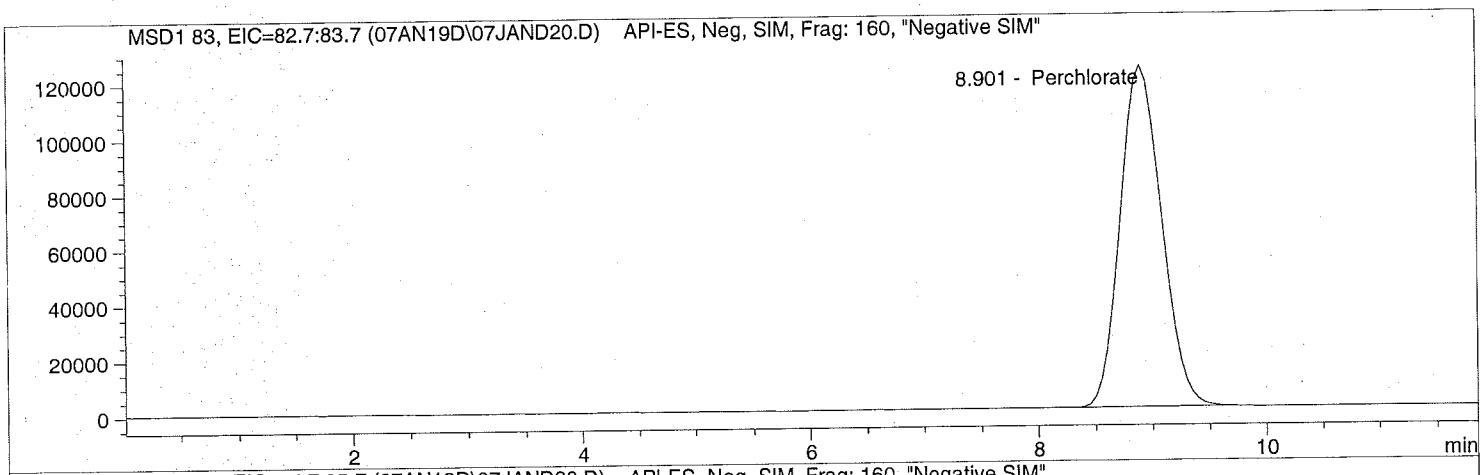
*** End of Report ***

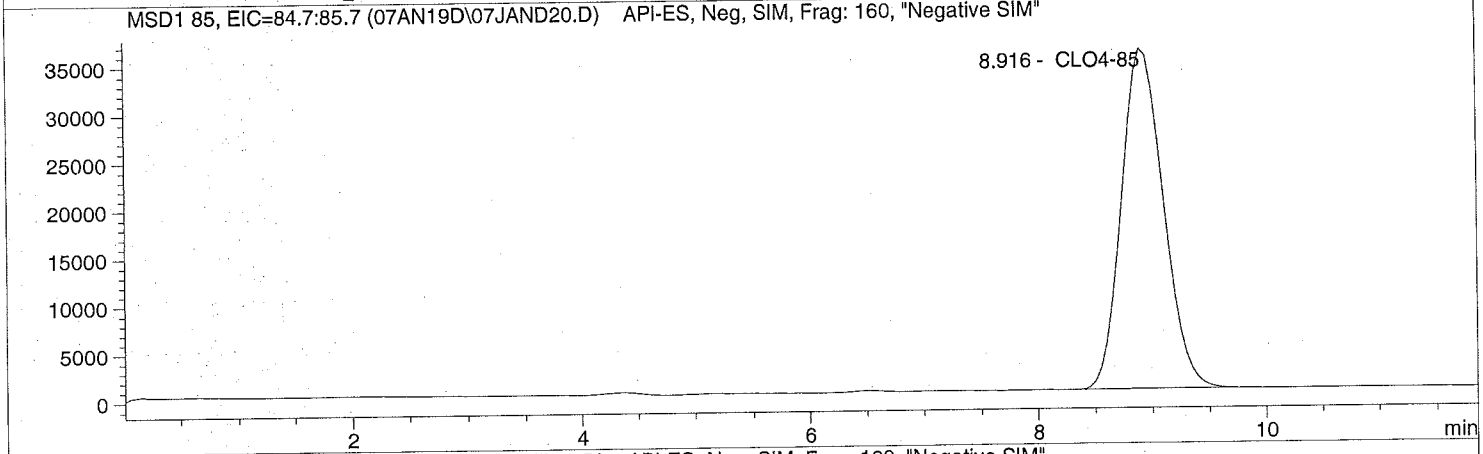
Data file: C:\HPCHEM\1\DATA\07AN19D\07JAND20.D Sample Name: 1900327002 1K

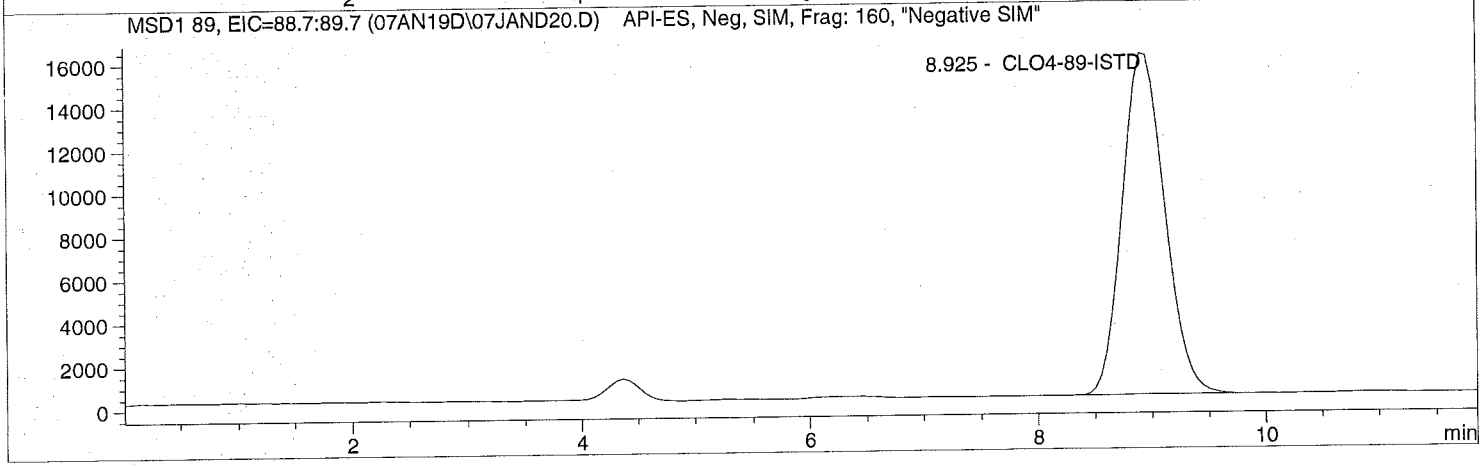
Injection Date:	1/07/2019 12:51:29	Seq Line:	20
Sample Name:	1900327002 1K	Location:	Vial 88
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis







Data file: C:\HPCHEM\1\DATA\07AN19D\07JAND20.D Sample Name: 1900327002 1K

Injection Date:	1/07/2019 12:51:29	Seq Line:	20
Sample Name:	1900327002 1K	Location:	Vial 88
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 3. Dec. 2018, 00:29:27 pm
Multiplier:	1.000000
Dilution:	1000.000000
Sample Amount:	0.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.901	PBA	3104877.3	22795.7909	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.916	PBA	909410.9	22168.4358	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.925	PBA	408421.2	5000.0000	CLO4-89-ISTD

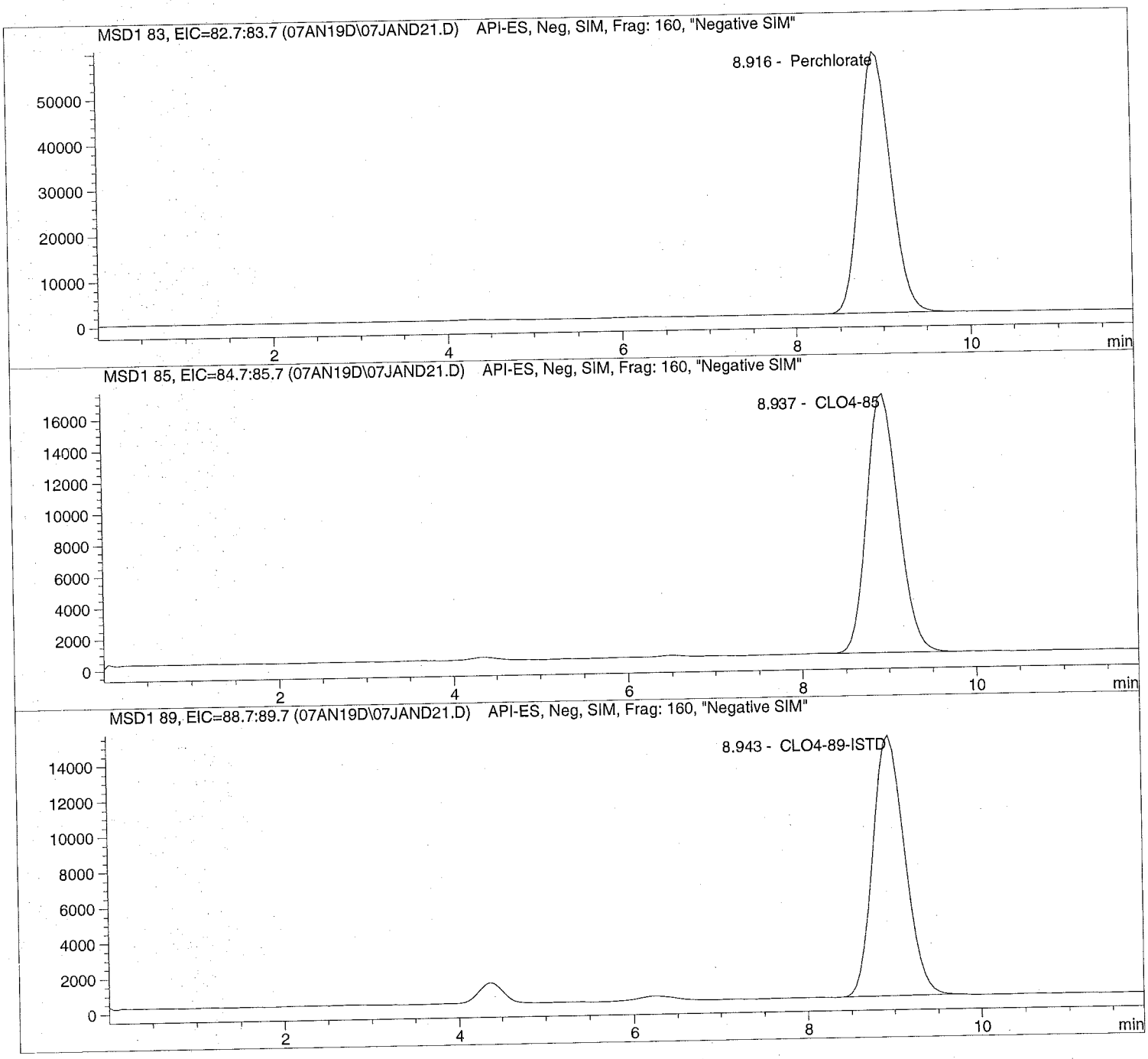
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\07AN19D\07JAND21.D Sample Name: 1900327003 1K

Injection Date:	1/07/2019 13:05:18	Seq Line:	21
Sample Name:	1900327003 1K	Location:	Vial 89
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\07AN19D\07JAND21.D Sample Name: 1900327003 1K

Injection Date:	1/07/2019 13:05:18	Seq Line:	21
Sample Name:	1900327003 1K	Location:	Vial 89
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 3. Dec. 2018, 00:29:27 pm
Multiplier:	1.000000
Dilution:	1000.000000
Sample Amount:	0.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.916	PBA	1429965.6	11733.6918	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.937	BBA	419512.5	11447.2725	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.943	PBA	375830.4	5000.0000	CLO4-89-ISTD

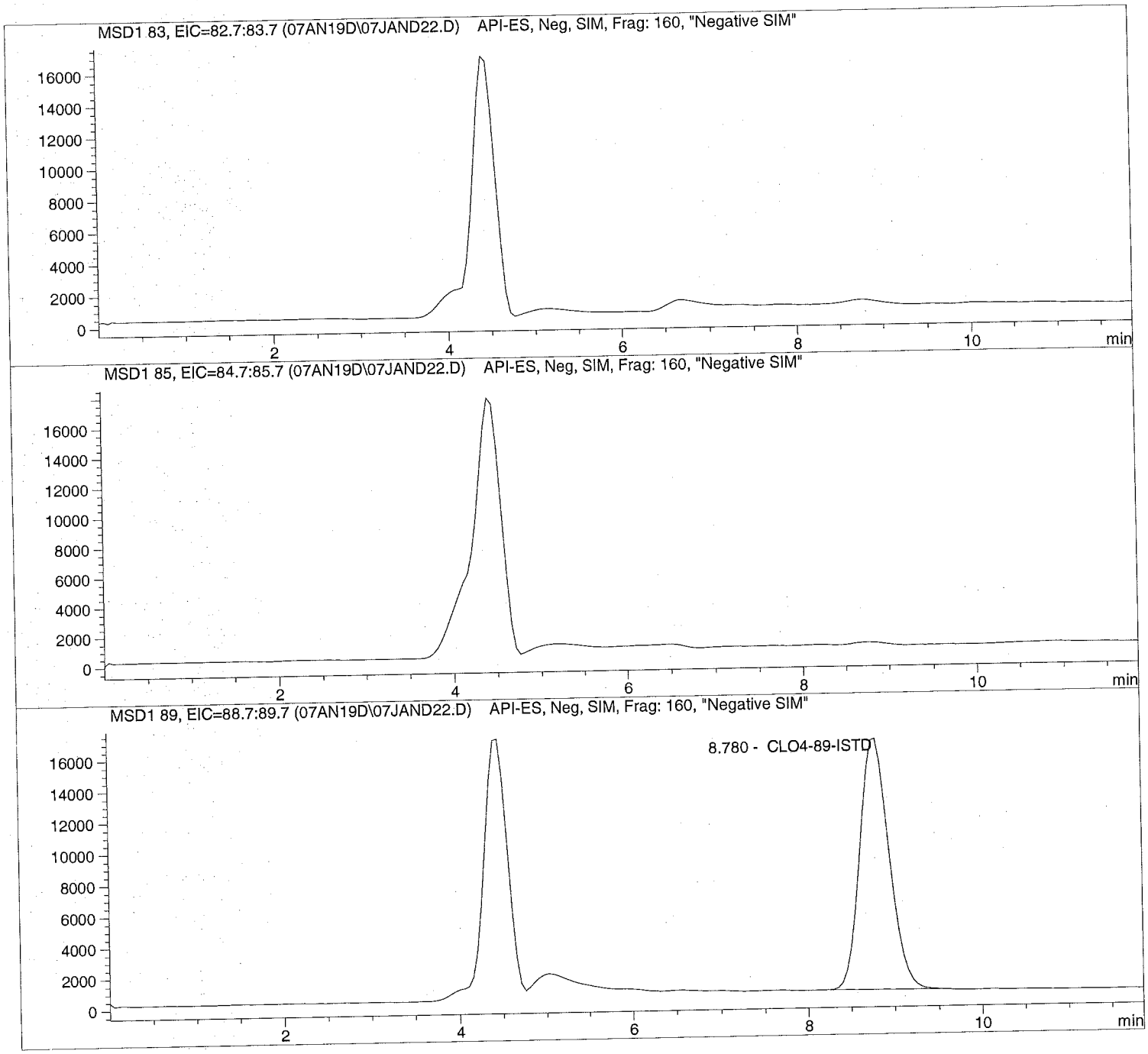
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\07AN19D\07JAND22.D Sample Name: 1836506001 5X

Injection Date:	1/07/2019 13:19:06	Seq Line:	22
Sample Name:	1836506001 5X	Location:	Vial 90
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method:	CLO4-AQN.M
Analysis Method:	C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed:	12/3/2018 12:46:06

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\07AN19D\07JAND22.D Sample Name: 1836506001 5X

Injection Date:	1/07/2019 13:19:06	Seq Line:	22
Sample Name:	1836506001 5X	Location:	Vial 90
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 3. Dec. 2018, 00:29:27 pm
Multiplier:	1.000000
Dilution:	5.000000
Sample Amount:	0.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
0.000		0.0	0.0000	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
0.000		0.0	0.0000	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.780	PBA	376393.2	25.0000	CLO4-89-ISTD

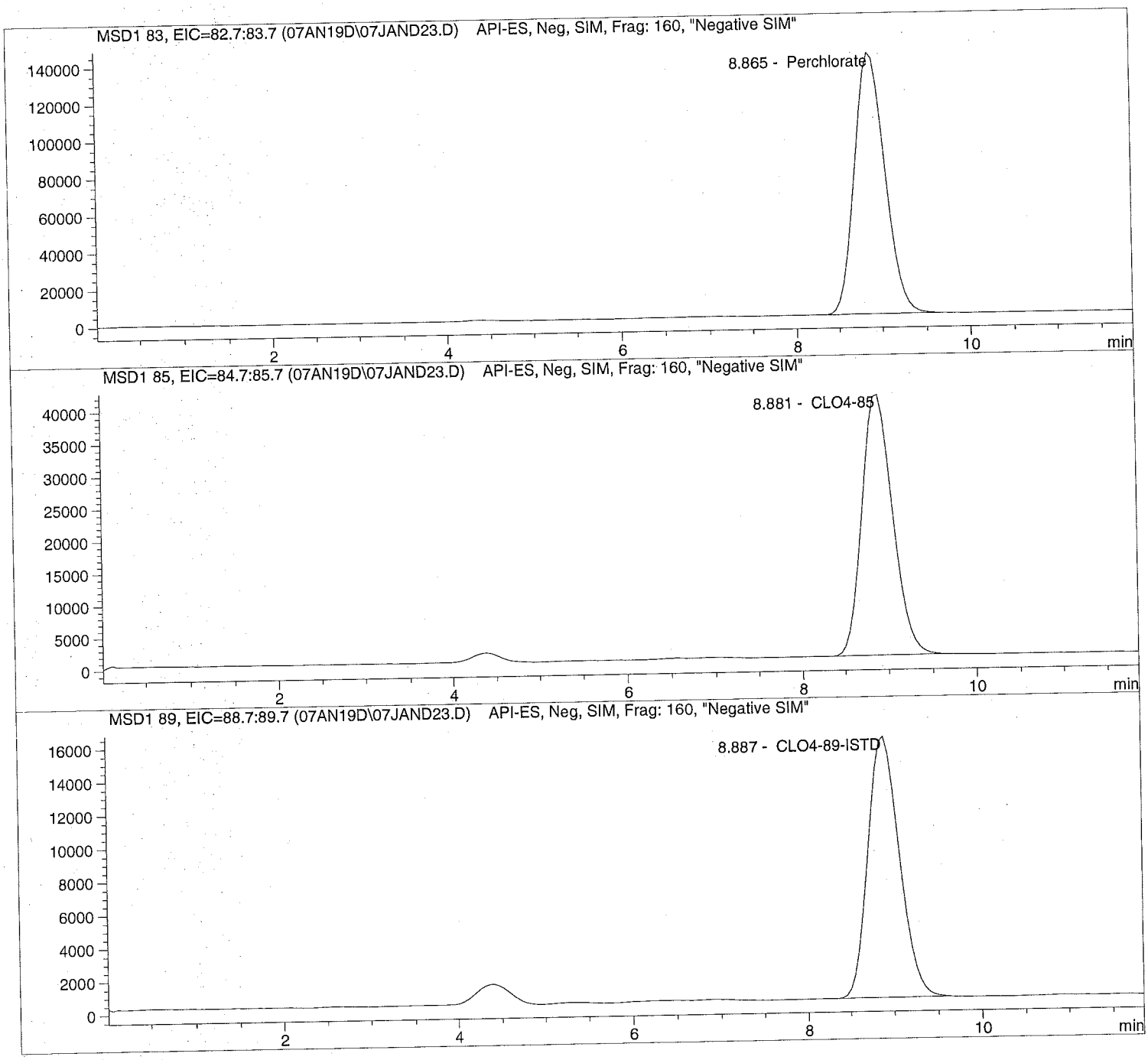
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\07AN19D\07JAND23.D Sample Name: 635258 CCV@25

Injection Date:	1/07/2019 13:33:51	Seq Line:	23
Sample Name:	635258 CCV@25	Location:	Vial 71
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method:	CLO4-AQN.M
Analysis Method:	C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed:	12/3/2018 12:46:06

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\07AN19D\07JAND23.D Sample Name: 635258 CCV@25

Injection Date:	1/07/2019 13:33:51	Seq Line:	23
Sample Name:	635258 CCV@25	Location:	Vial 71
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method:	CLO4-AQN.M
Analysis Method:	C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed:	12/3/2018 12:46:06

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 3. Dec. 2018, 00:29:27 pm
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	25.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.865	PBA	3428608.5	26.1046	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.881	PBA	987175.3	24.9502	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.887	BBA	391141.4	5.0000	CLO4-89-ISTD

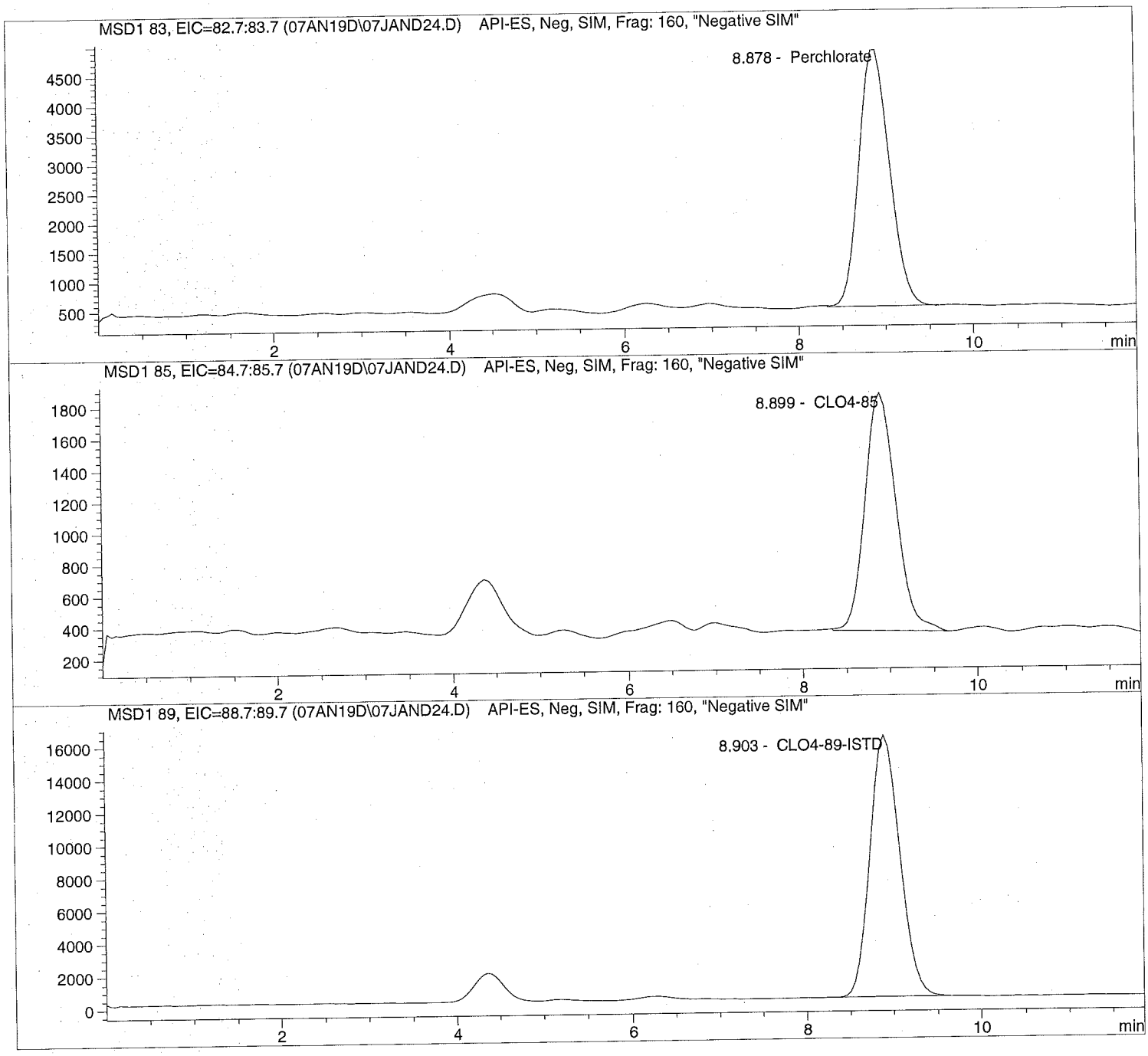
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\07AN19D\07JAND24.D Sample Name: 635259 LODV@1.

Injection Date:	1/07/2019 13:47:37	Seq Line:	24
Sample Name:	635259 LODV@1.	Location:	Vial 72
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\07AN19D\07JAND24.D Sample Name: 635259 LODV@1.

Injection Date:	1/07/2019 13:47:37	Seq Line:	24
Sample Name:	635259 LODV@1.	Location:	Vial 72
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2018 12:46:06

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 3. Dec. 2018, 00:29:27 pm
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	1.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.878	BBA	106627.0	1.0775	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.899	BBA	37221.7	1.1118	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.903	BBA	378796.4	5.0000	CLO4-89-ISTD

*** End of Report ***

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

Raw Data

Initial Calibration

Batch Report: C:\HPCHEM\1\DATA\08OCT18I\08OCT18D.B

Batch Review Method:
C:\HPCHEM\1\METHODS\CLO4-DPR.M

['#' ==> Run has not been reprocessed with Batch Review Method
'*' ==> Run has been saved with batch file]

#	Sample	Location	Inj	SampleType	Run	Perchlorate Area	Perchlorate RT	Perchlorate Amount
#*	CLO4@ 1.0u	Vial 74	1	Control	4	9.40790e4	9.287	9.73826e-1
#*	CLO4@ 2.0u	Vial 75	1	Control	5	2.26957e5	9.259	2.19167
#*	CLO4@ 5.0u	Vial 76	1	Control	6	5.50307e5	9.208	4.80912
#*	CLO4@ 10.u	Vial 77	1	Control	7	1.07623e6	9.246	9.38291
#*	CLO4@ 25.u	Vial 78	1	Control	8	2.88097e6	9.175	25.83039
#*	CLO4@ 50.u	Vial 79	1	Control	9	6.29507e6	9.261	49.91981
#*	CLO4@ 75.u	Vial 80	1	Control	10	9.45737e6	9.236	74.88523
*	ICAL Verf@	Vial 81	1	Control	11	1.10069e6	9.244	9.38952

#	Sample	Location	Inj	SampleType	Run	CLO4-89-ISTD Area	CLO4-89-ISTD RT	CLO4-89-ISTD Amount
#*	CLO4@ 1.0u	Vial 74	1	Control	4	3.79545e5	9.314	5.00000
#*	CLO4@ 2.0u	Vial 75	1	Control	5	3.52582e5	9.297	5.00000
#*	CLO4@ 5.0u	Vial 76	1	Control	6	3.66805e5	9.223	5.00000
#*	CLO4@ 10.u	Vial 77	1	Control	7	3.56815e5	9.266	5.00000
#*	CLO4@ 25.u	Vial 78	1	Control	8	3.32340e5	9.196	5.00000
#*	CLO4@ 50.u	Vial 79	1	Control	9	3.59393e5	9.277	5.00000
#*	CLO4@ 75.u	Vial 80	1	Control	10	3.45193e5	9.253	5.00000
*	ICAL Verf@	Vial 81	1	Control	11	3.64657e5	9.264	5.00000

#	Sample	Location	Inj	SampleType	Run	CLO4-85 Area	CLO4-85 RT	CLO4-85 Amount
#*	CLO4@ 1.0u	Vial 74	1	Control	4	3.17987e4	9.316	9.60861e-1
#*	CLO4@ 2.0u	Vial 75	1	Control	5	7.05436e4	9.273	2.16955
#*	CLO4@ 5.0u	Vial 76	1	Control	6	1.69833e5	9.217	4.87565
#*	CLO4@ 10.u	Vial 77	1	Control	7	3.31565e5	9.259	9.58732
#*	CLO4@ 25.u	Vial 78	1	Control	8	8.62978e5	9.187	25.62680
#*	CLO4@ 50.u	Vial 79	1	Control	9	1.91847e6	9.278	49.74848
#*	CLO4@ 75.u	Vial 80	1	Control	10	2.93835e6	9.251	75.02646
*	ICAL Verf@	Vial 81	1	Control	11	3.27974e5	9.261	9.28908

*** End of Report ***

Method C:\HPCHEM\1\METHODS\CLO4-DPR.M

Calibration Table

Perchlorate

Calib. Data Modified : 10/9/2018 8:01:57 AM

Calculate : Internal Standard
Based on : Peak Area

Rel. Reference Window : 20.000 %
Abs. Reference Window : 0.000 min
Rel. Non-ref. Window : 20.000 %
Abs. Non-ref. Window : 0.000 min
Use Multiplier & Dilution Factor with ISTDs
Uncalibrated Peaks : not reported
Partial Calibration : No recalibration if peaks missing

Curve Type : Quadratic (some peaks differ, see below)
Origin : Ignored (some peaks differ, see below)
Weight : Linear (Amnt) (some peaks differ, see below)

Recalibration Settings:
Average Response : Average all calibrations
Average Retention Time: Floating Average New 75%

Calibration Report Options :
Printout of recalibrations within a sequence:
Calibration Table after Recalibration
Normal Report after Recalibration
If the sequence is done with bracketing:
Results of first cycle (ending previous bracket)

Default Sample ISTD Information (if not set in sample table):

ISTD #	ISTD Amount	Name
1	5.00000	CLO4-89-ISTD

Signal 1: MSD1 83, EIC=82.7:83.7
Signal 2: MSD1 85, EIC=84.7:85.7
Signal 3: MSD1 89, EIC=88.7:89.7

RetTime [min]	Sig	Lvl	Amount	Area	Amt/Area	Ref	Grp	Name
9.287	1	1	1.00000	9.40790e4	1.06294e-5		1	Perchlorate
		2	2.00000	2.26957e5	8.81224e-6			
		3	5.00000	5.50307e5	9.08584e-6			
		4	10.00000	1.07623e6	9.29172e-6			
		5	25.00000	2.88097e6	8.67764e-6			
		6	50.00000	6.29507e6	7.94272e-6			
		7	75.00000	9.45737e6	7.93033e-6			
9.314	3	1	5.00000	3.79545e5	1.31737e-5	+I1		CLO4-89-ISTD
		2	5.00000	3.52582e5	1.41811e-5			
		3	5.00000	3.66805e5	1.36312e-5			
		4	5.00000	3.56815e5	1.40129e-5			
		5	5.00000	3.32340e5	1.50448e-5			
		6	5.00000	3.59393e5	1.39124e-5			
		7	5.00000	3.45193e5	1.44847e-5			
9.316	2	1	1.00000	3.17987e4	3.14479e-5		1	CLO4-85
		2	2.00000	7.05436e4	2.83513e-5			
		3	5.00000	1.69833e5	2.94406e-5			
		4	10.00000	3.31565e5	3.01600e-5			
		5	25.00000	8.62978e5	2.89695e-5			
		6	50.00000	1.91847e6	2.60625e-5			

Method C:\HPCHEM\1\METHODS\CLO4-DPR.M

RetTime [min]	Sig	Lvl	Amount	Area	Amt/Area	Ref	Grp	Name
		7	75.00000	2.93835e6	2.55246e-5			

More compound-specific settings:

Compound: Perchlorate
- Time Window : From 7.196 min To 11.196 min
- Curve Type : Quadratic
- Origin : Ignored
- Calibration Level Weights:/
  - Level 1 : 1
  - Level 2 : 0.5
  - Level 3 : 0.2
  - Level 4 : 0.1
  - Level 5 : 0.04
  - Level 6 : 0.02
  - Level 7 : 0.013333

Compound: CLO4-89-ISTD
- Time Window : From 7.207 min To 11.192 min
- Curve Type : Linear
- Origin : Included
- Calibration Level Weights:/
  - Level 1 : 1
  - Level 2 : 1
  - Level 3 : 1
  - Level 4 : 1
  - Level 5 : 1
  - Level 6 : 1
  - Level 7 : 1

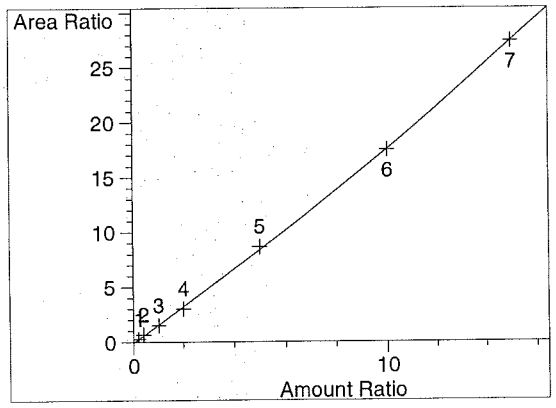
Compound: CLO4-85
- Time Window : From 7.211 min To 11.211 min
- Curve Type : Quadratic
- Origin : Ignored
- Calibration Level Weights:/
  - Level 1 : 1
  - Level 2 : 0.5
  - Level 3 : 0.2
  - Level 4 : 0.1
  - Level 5 : 0.04
  - Level 6 : 0.02
  - Level 7 : 0.013333

Peak Sum Table

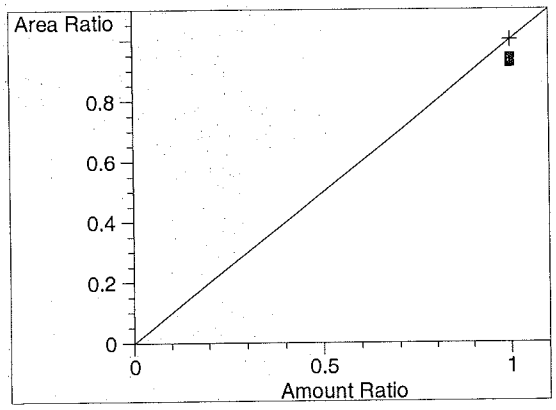
No Entries in table

Method C:\HPCHEM\1\METHODS\CLO4-DPR.M

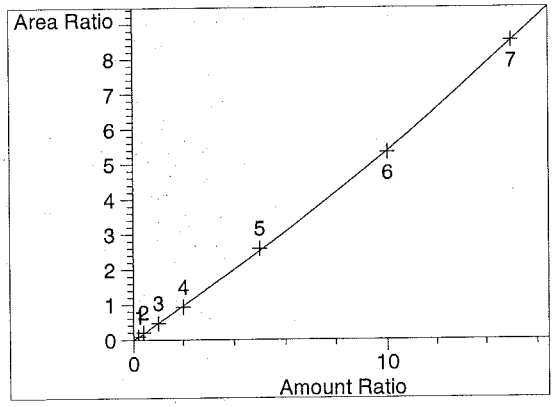
Calibration Curves



Perchlorate at exp. RT: 9.287
MSD1 83, EIC=82.7:83.7
Correlation: 0.99971
Residual Std. Dev.: 0.16701
Formula: $y = ax^2 + bx + c$
a: 1.45482e-2
b: 1.61590
c: -6.73998e-2
x: Amount Ratio
y: Area Ratio
Calibration Level Weights:
Level 1 : 1
Level 2 : 0.5
Level 3 : 0.2
Level 4 : 0.1
Level 5 : 0.04
Level 6 : 0.02
Level 7 : 0.013333



CLO4-89-ISTD at exp. RT: 9.314
MSD1 89, EIC=88.7:89.7
Correlation: 1.00000
Residual Std. Dev.: 0.00000
Formula: $y = mx + b$
m: 1.00000
b: 0.00000
x: Amount Ratio
y: Area Ratio
Calibration Level Weights:
Level 1 : 1
Level 2 : 1
Level 3 : 1
Level 4 : 1
Level 5 : 1
Level 6 : 1
Level 7 : 1



CLO4-85 at exp. RT: 9.316
MSD1 85, EIC=84.7:85.7
Correlation: 0.99984
Residual Std. Dev.: 0.03901
Formula: $y = ax^2 + bx + c$
a: 6.03220e-3
b: 4.77309e-1
c: -8.16718e-3
x: Amount Ratio
y: Area Ratio
Calibration Level Weights:
Level 1 : 1
Level 2 : 0.5
Level 3 : 0.2
Level 4 : 0.1
Level 5 : 0.04
Level 6 : 0.02
Level 7 : 0.013333

Sequence: C:\HPCHEM\1\SEQUENCE\CLO4\2018\OCT\08OCT18I.S

Sequence Table:

Method and Injection Info Part:

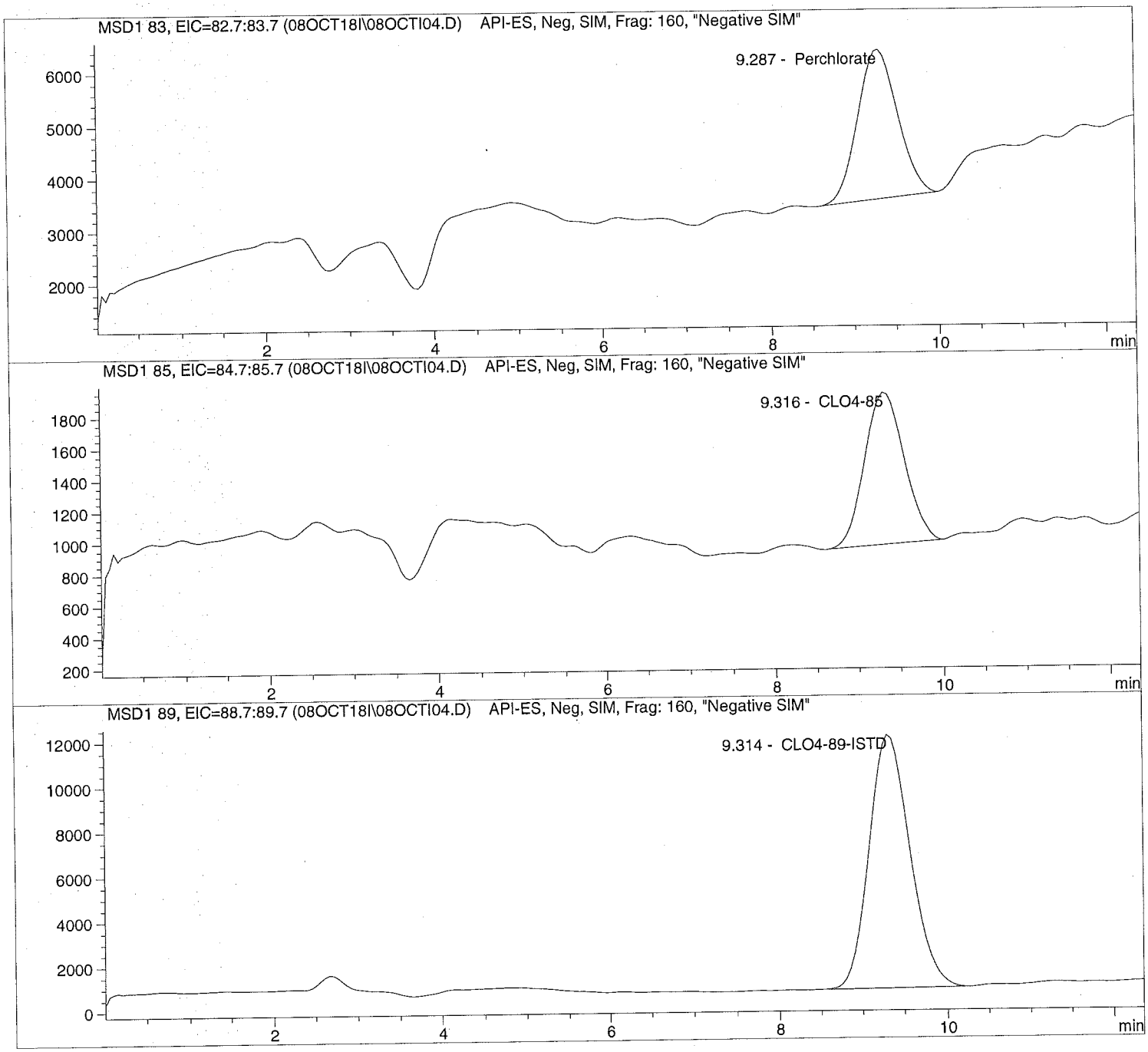
Line	Location	SampleName	Method	Inj	SampleType	InjVolume	DataFile
1	Vial 71	CLO4@ .10ug/L	CLO4-AQN	1	Ctrl Samp		
2	Vial 72	CLO4@ .20ug/L	CLO4-AQN	1	Ctrl Samp		
3	Vial 73	CLO4@ 0.5ug/L	CLO4-AQN	1	Ctrl Samp		
4	Vial 74	CLO4@ 1.0ug/L	CLO4-AQN	1	Ctrl Samp		
5	Vial 75	CLO4@ 2.0ug/L	CLO4-AQN	1	Ctrl Samp		
6	Vial 76	CLO4@ 5.0ug/L	CLO4-AQN	1	Ctrl Samp		
7	Vial 77	CLO4@ 10.ug/L	CLO4-AQN	1	Ctrl Samp		
8	Vial 78	CLO4@ 25.ug/L	CLO4-AQN	1	Ctrl Samp		
9	Vial 79	CLO4@ 50.ug/L	CLO4-AQN	1	Ctrl Samp		
10	Vial 80	CLO4@ 75.ug/L	CLO4-AQN	1	Ctrl Samp		
11	Vial 81	ICAL Verf@10ug/L	CLO4-AQN	1	Ctrl Samp		

Data file: C:\HPCHEM\1\DATA\08OCT18I\08OCTI04.D Sample Name: CLO4@ 1.0ug/L

Injection Date:	10/08/2018 11:37:35	Seq Line:	4
Sample Name:	CLO4@ 1.0ug/L	Location:	Vial 74
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method:	CLO4-AQN.M
Analysis Method:	C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed:	10/9/2018 08:22:51

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\08OCT18I\08OCTI04.D Sample Name: CLO4@ 1.0ug/L

Injection Date:	10/08/2018 11:37:35	Seq Line:	4
Sample Name:	CLO4@ 1.0ug/L	Location:	Vial 74
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 10/9/2018 08:22:51

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Tue, 9. Oct. 2018, 08:01:57 am
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	1.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
9.287	PBA	94079.0	0.9738	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
9.316	PBA	31798.7	0.9609	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
9.314	PBA	379544.7	5.0000	CLO4-89-ISTD

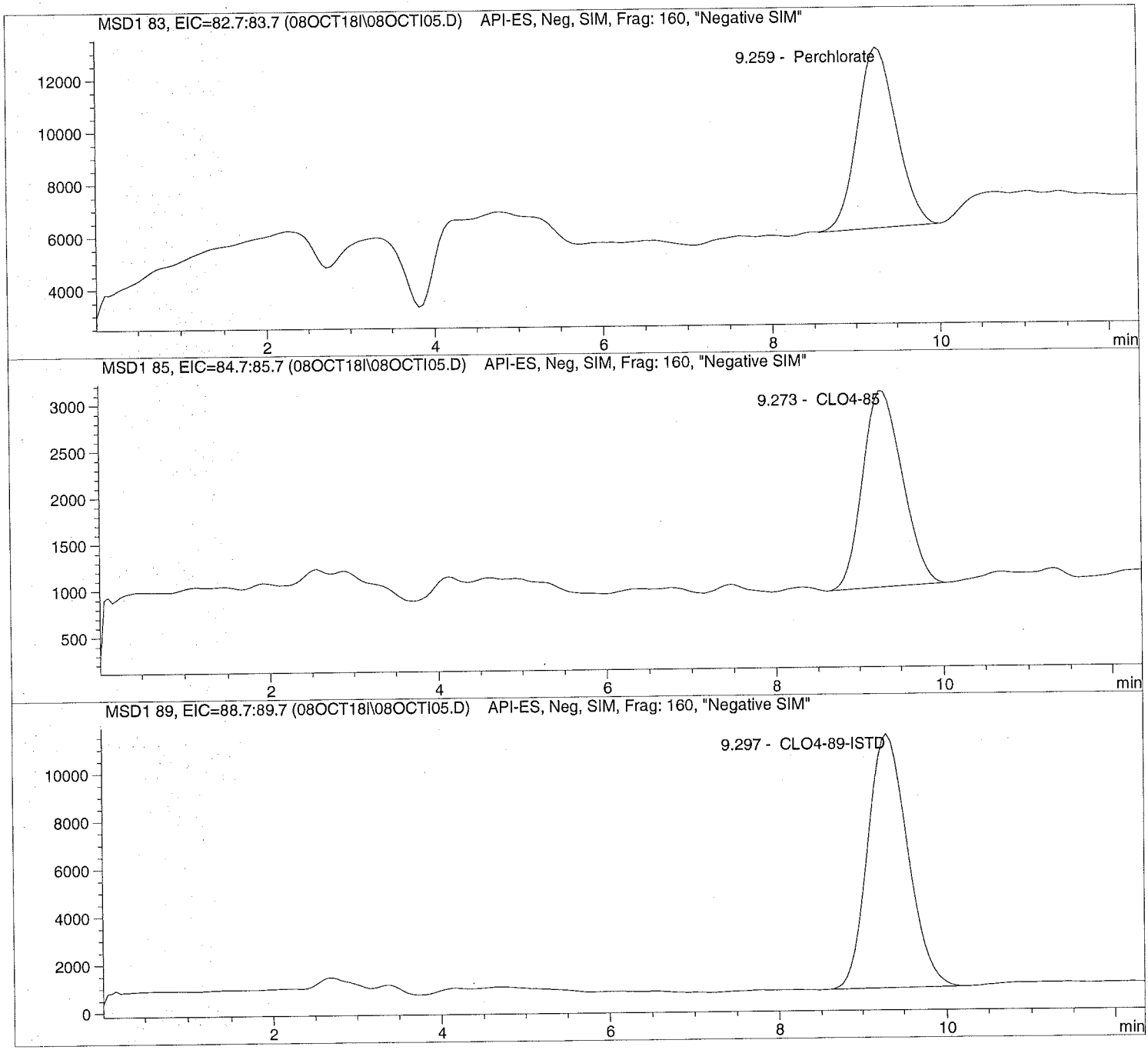
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\08OCT18I\08OCTI05.D Sample Name: CLO4@ 2.0ug/L

Injection Date:	10/08/2018 11:51:45	Seq Line:	5
Sample Name:	CLO4@ 2.0ug/L	Location:	Vial 75
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 10/9/2018 08:22:51

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\08OCT18I\08OCTI05.D Sample Name: CLO4@ 2.0ug/L

Injection Date:	10/08/2018 11:51:45	Seq Line:	5
Sample Name:	CLO4@ 2.0ug/L	Location:	Vial 75
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 10/9/2018 08:22:51

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Tue, 9. Oct. 2018, 08:01:57 am
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	2.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
9.259	BBA	226957.1	2.1917	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
9.273	PBA	70543.6	2.1695	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
9.297	PBA	352581.8	5.0000	CLO4-89-ISTD

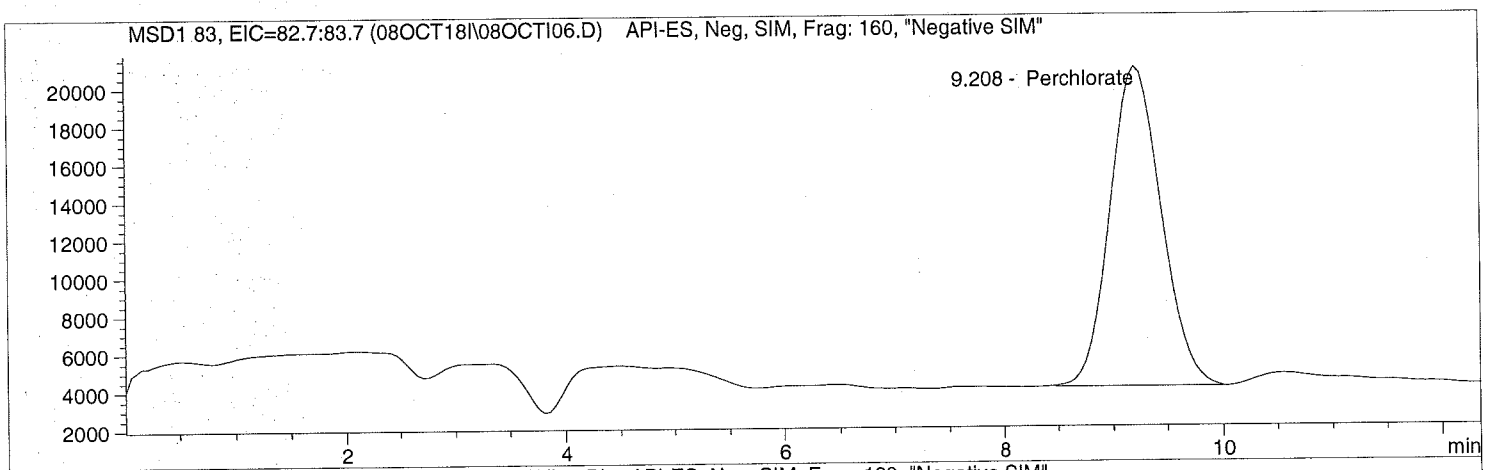
*** End of Report ***

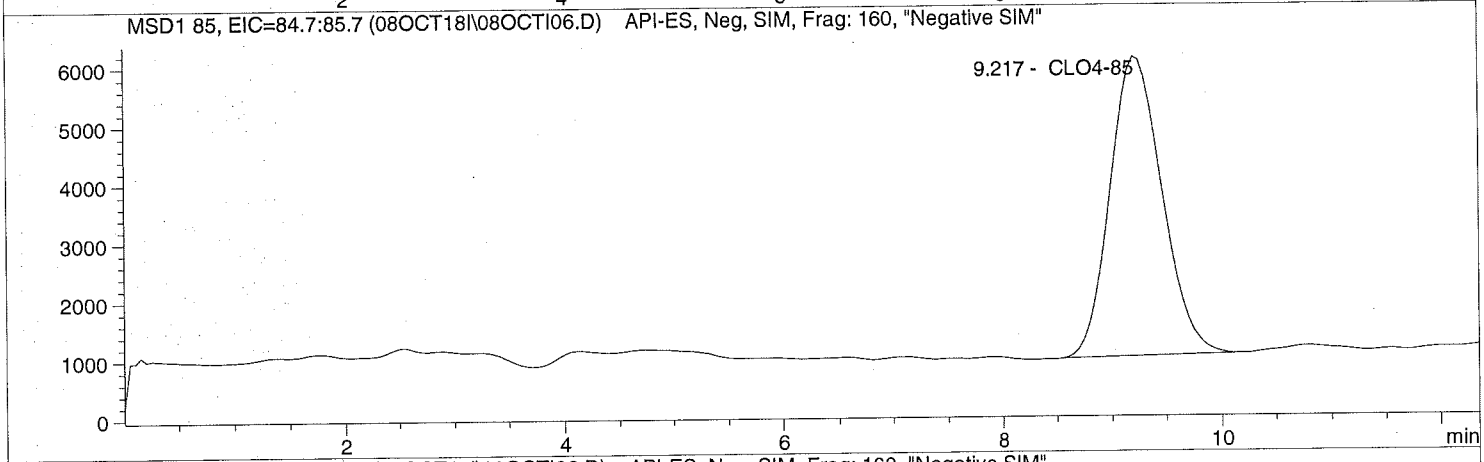
Data file: C:\HPCHEM\1\DATA\08OCT18I\08OCTI06.D Sample Name: CLO4@ 5.0ug/L

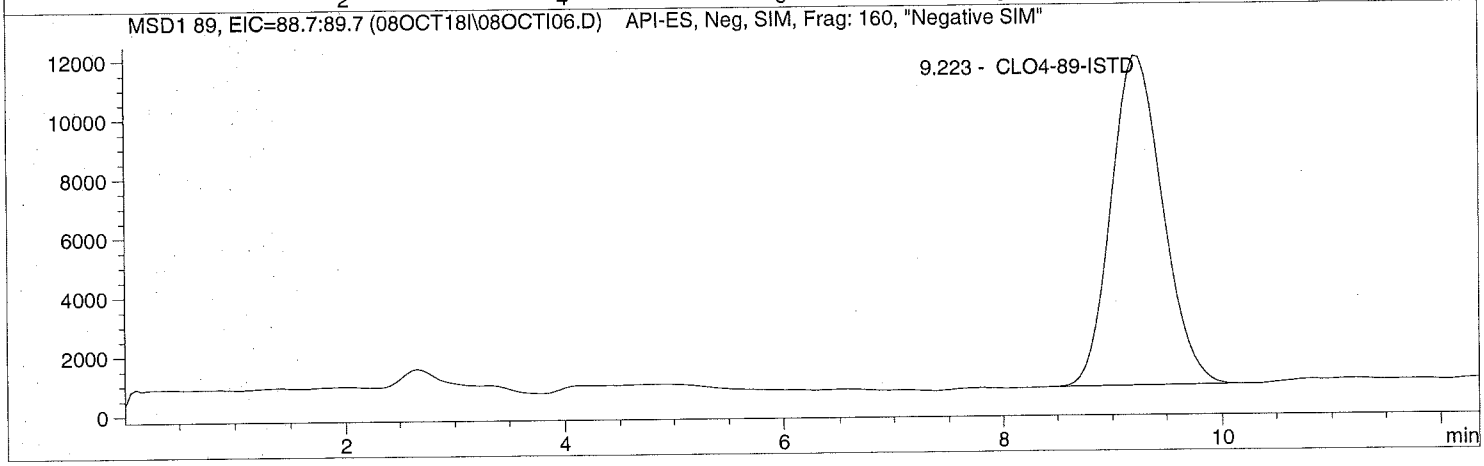
Injection Date:	10/08/2018 12:05:59	Seq Line:	6
Sample Name:	CLO4@ 5.0ug/L	Location:	Vial 76
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 10/9/2018 08:22:51

Perchlorate analysis







Data file: C:\HPCHEM\1\DATA\08OCT18I\08OCTI06.D Sample Name: CLO4@ 5.0ug/L

Injection Date:	10/08/2018 12:05:59	Seq Line:	6
Sample Name:	CLO4@ 5.0ug/L	Location:	Vial 76
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 10/9/2018 08:22:51

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Tue, 9. Oct. 2018, 08:01:57 am
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	5.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
9.208	BBA	550306.9	4.8091	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
9.217	PBA	169833.3	4.8757	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
9.223	PBA	366804.8	5.0000	CLO4-89-ISTD

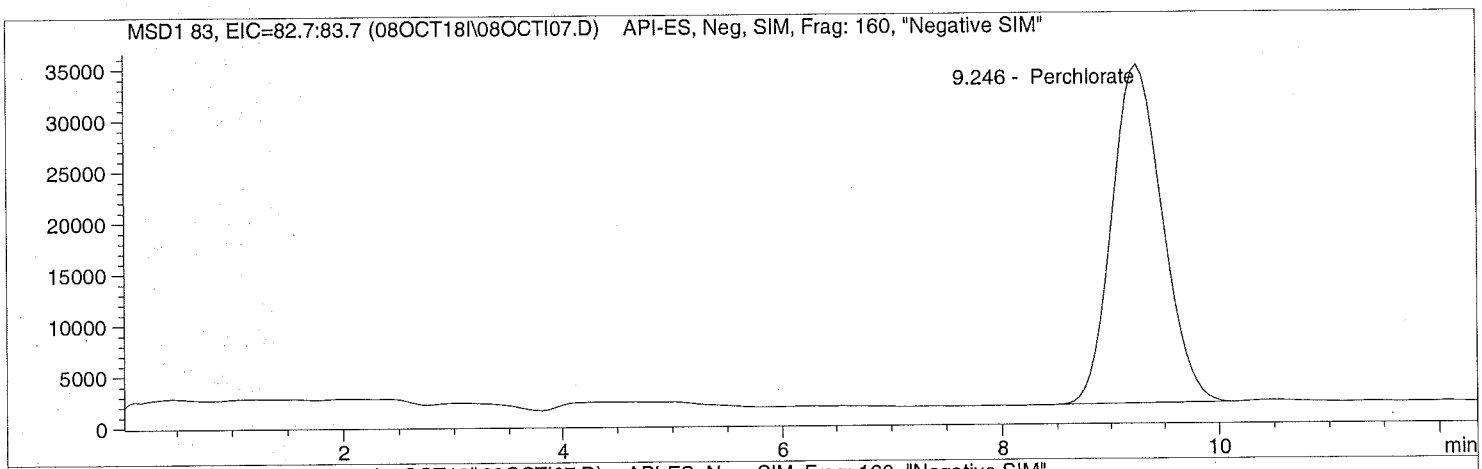
*** End of Report ***

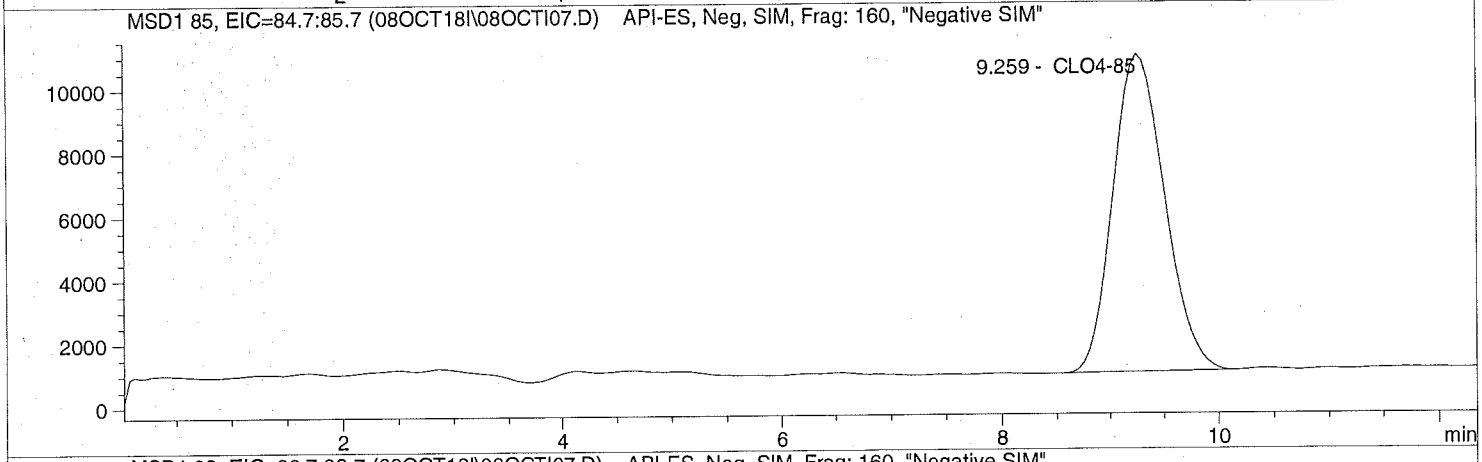
Data file: C:\HPCHEM\1\DATA\08OCT18I\08OCTI07.D Sample Name: CLO4@ 10.ug/L

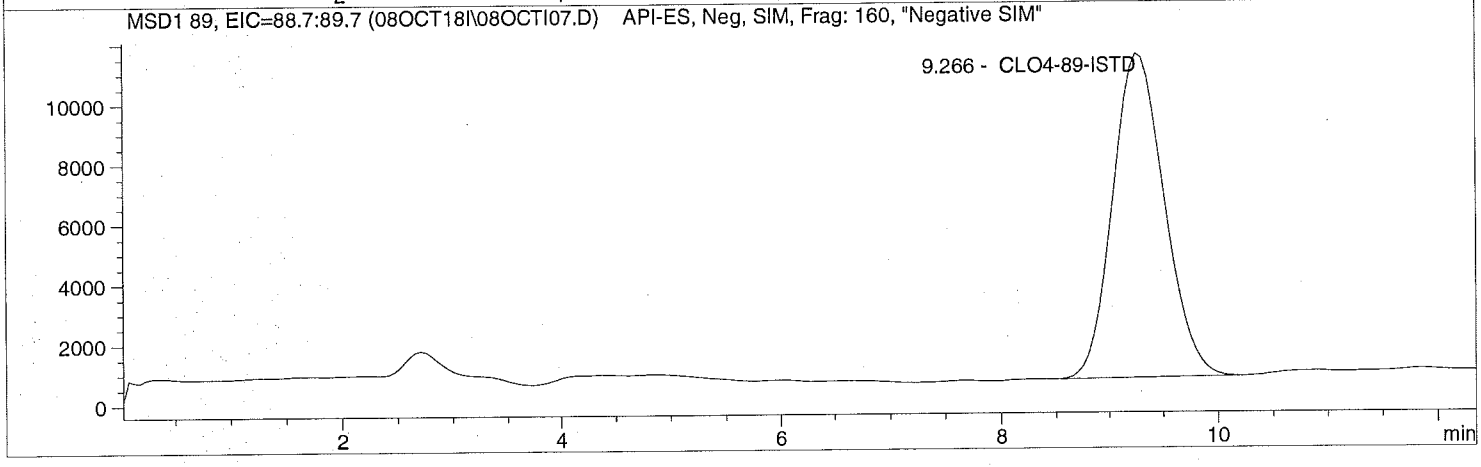
Injection Date:	10/08/2018 12:20:10	Seq Line:	7
Sample Name:	CLO4@ 10.ug/L	Location:	Vial 77
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 10/9/2018 08:22:51

Perchlorate analysis







Data file: C:\HPCHEM\1\DATA\08OCT18I\08OCTI07.D Sample Name: CLO4@ 10.ug/L

Injection Date:	10/08/2018 12:20:10	Seq Line:	7
Sample Name:	CLO4@ 10.ug/L	Location:	Vial 77
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 10/9/2018 08:22:51

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Tue, 9. Oct. 2018, 08:01:57 am
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	10.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
9.246	PBA	1076227.4	9.3829	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
9.259	PBA	331564.9	9.5873	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
9.266	PBA	356815.3	5.0000	CLO4-89-ISTD

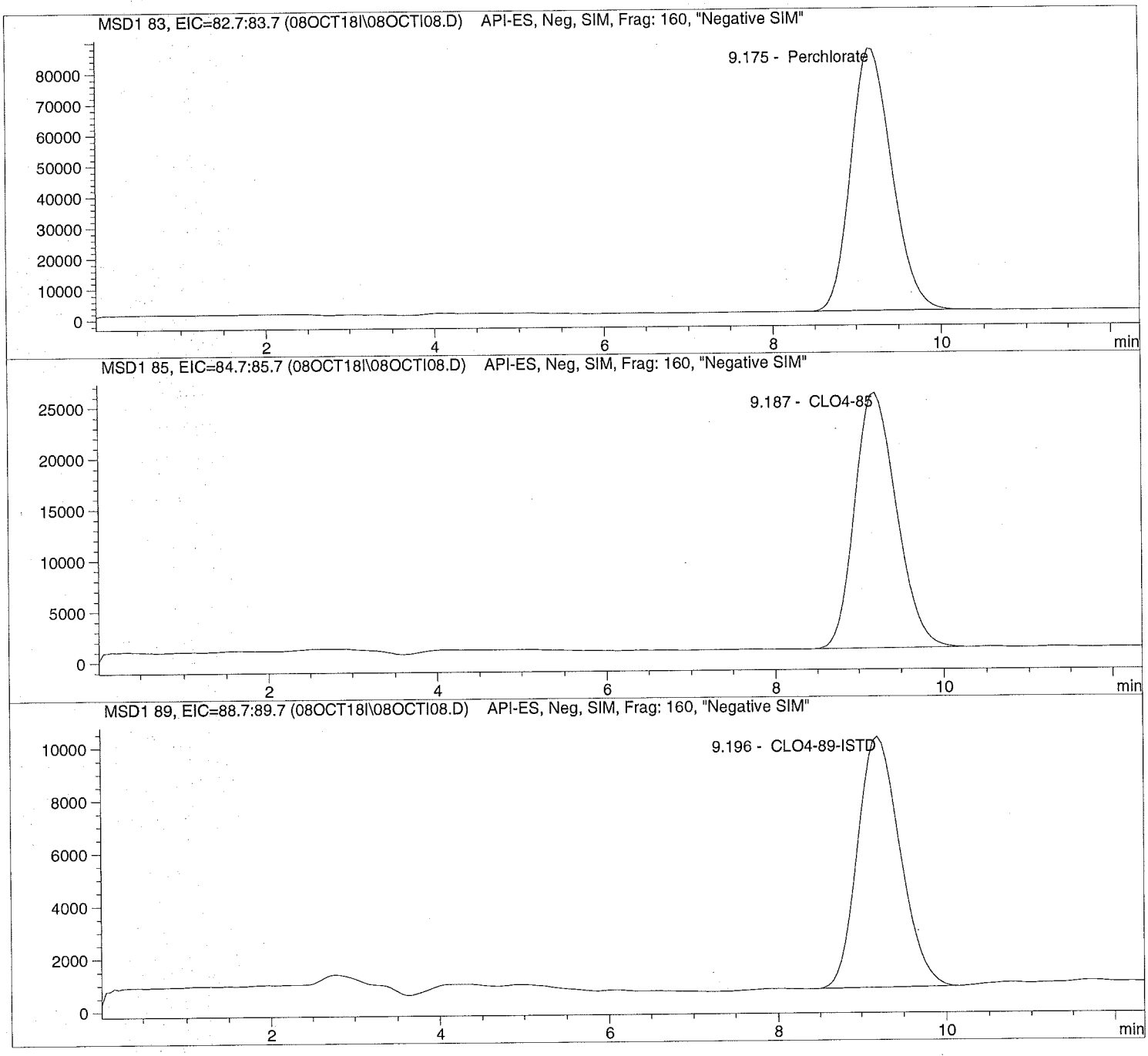
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\08OCT18I\08OCTI08.D Sample Name: CLO4@ 25.ug/L

Injection Date:	10/08/2018 12:34:24	Seq Line:	8
Sample Name:	CLO4@ 25.ug/L	Location:	Vial 78
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 10/9/2018 08:22:51

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\08OCT18I\08OCTI08.D Sample Name: CLO4@ 25.ug/L

Injection Date:	10/08/2018 12:34:24	Seq Line:	8
Sample Name:	CLO4@ 25.ug/L	Location:	Vial 78
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 10/9/2018 08:22:51

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Tue, 9. Oct. 2018, 08:01:57 am
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	25.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
9.175	PBA	2880966.0	25.8304	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
9.187	PBA	862978.0	25.6268	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
9.196	PBA	332339.7	5.0000	CLO4-89-ISTD

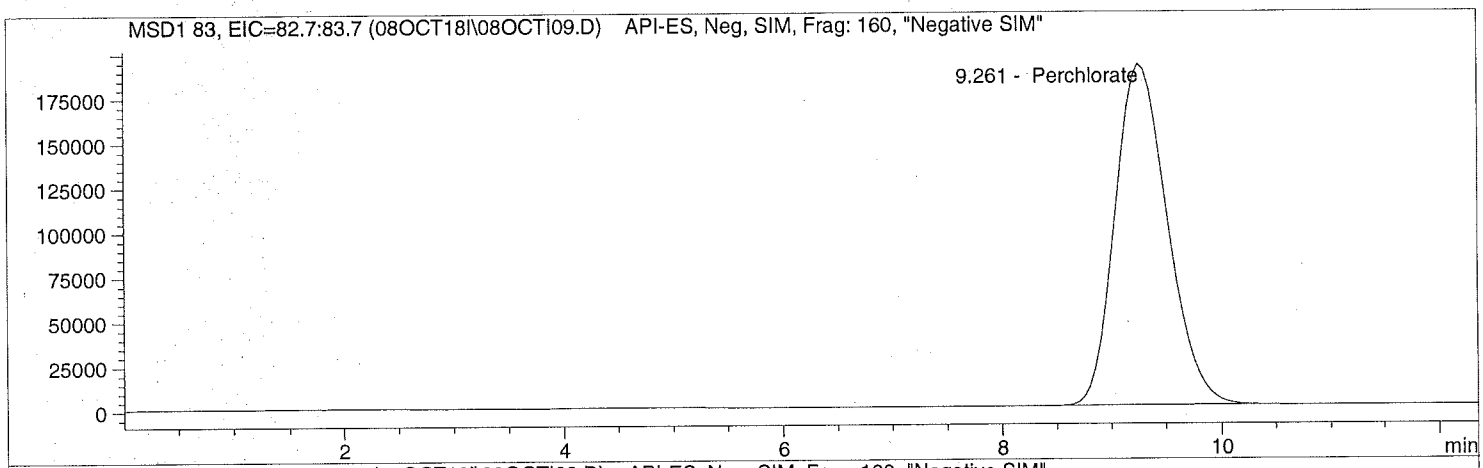
*** End of Report ***

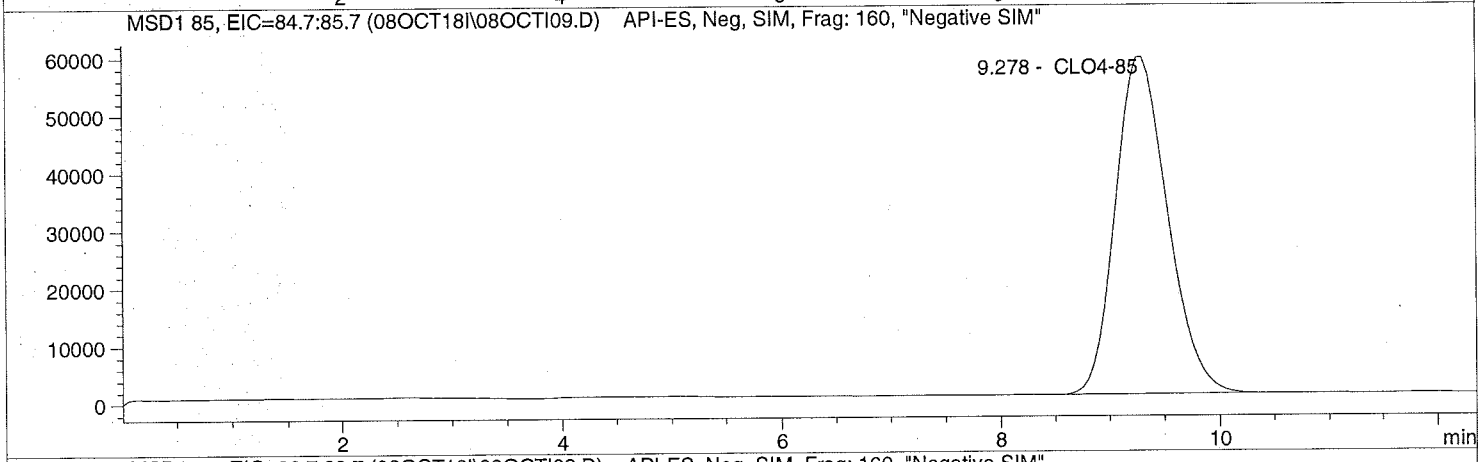
Data file: C:\HPCHEM\1\DATA\08OCT18I\08OCTI09.D Sample Name: CLO4@ 50.ug/L

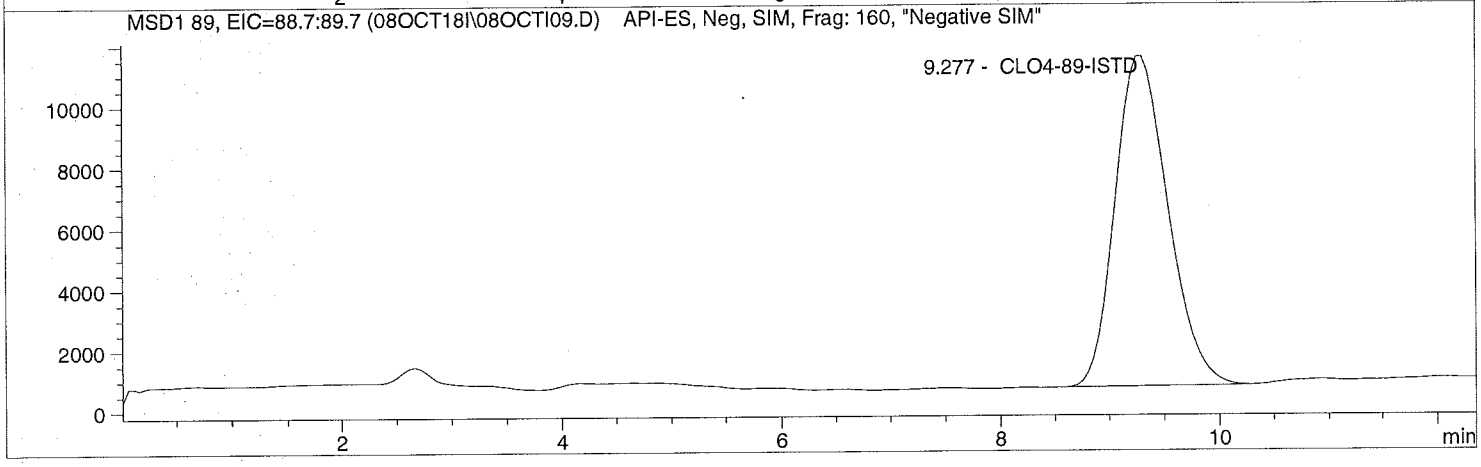
Injection Date:	10/08/2018 12:48:34	Seq Line:	9
Sample Name:	CLO4@ 50.ug/L	Location:	Vial 79
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 10/9/2018 08:22:51

Perchlorate analysis







Data file: C:\HPCHEM\1\DATA\08OCT18I\08OCTI09.D Sample Name: CLO4@ 50.ug/L

Injection Date:	10/08/2018 12:48:34	Seq Line:	9
Sample Name:	CLO4@ 50.ug/L	Location:	Vial 79
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 10/9/2018 08:22:51

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Tue, 9. Oct. 2018, 08:01:57 am
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	50.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
9.261	PBA	6295070.5	49.9198	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
9.278	PBA	1918466.9	49.7485	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
9.277	PBA	359392.8	5.0000	CLO4-89-ISTD

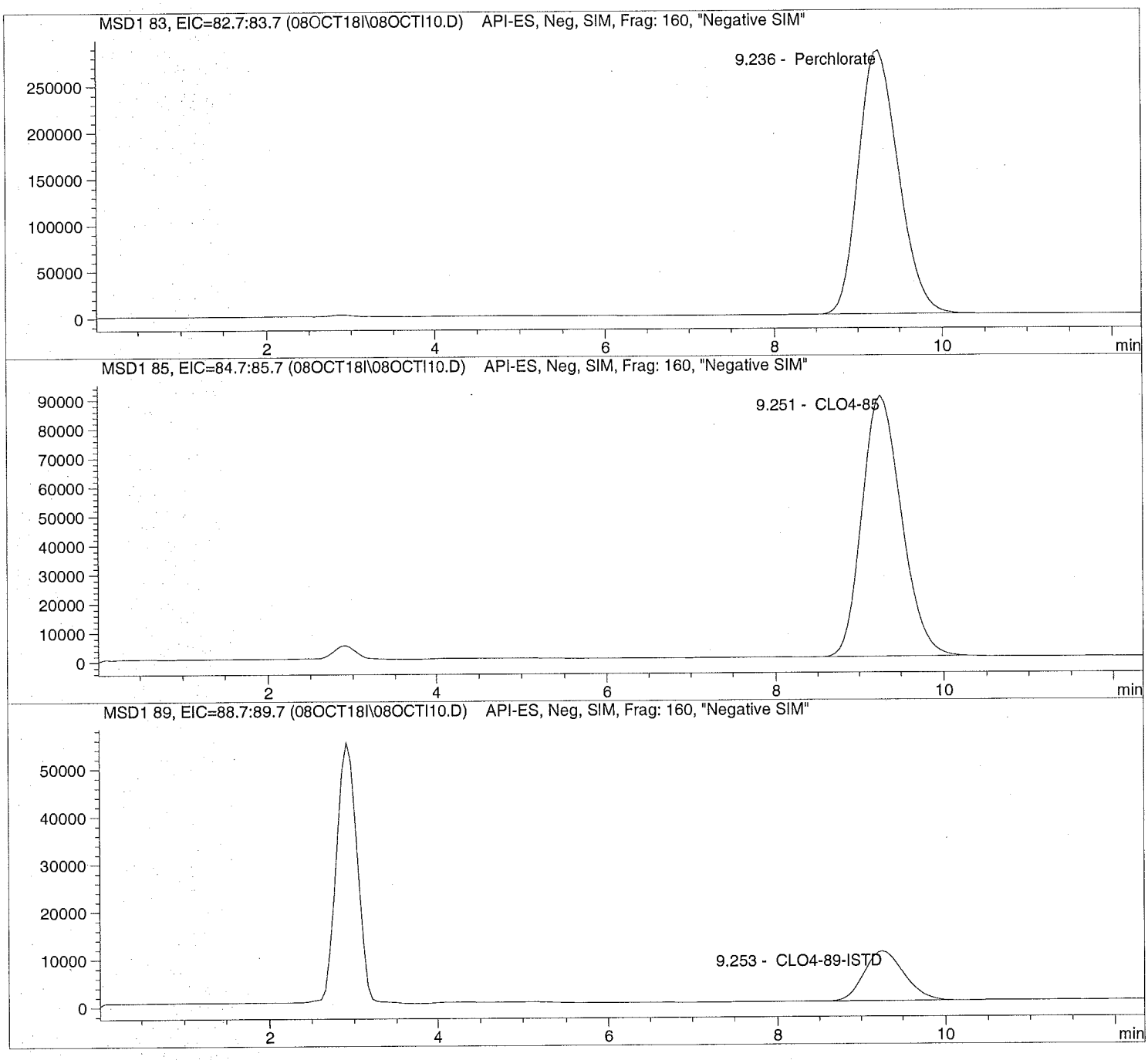
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\08OCT18I\08OCTI10.D Sample Name: CLO4@ 75.ug/L

Injection Date:	10/08/2018 13:02:48	Seq Line:	10
Sample Name:	CLO4@ 75.ug/L	Location:	Vial 80
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 10/9/2018 08:22:51

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\08OCT18I\08OCTI10.D Sample Name: CLO4@ 75.ug/L

Injection Date:	10/08/2018 13:02:48	Seq Line:	10
Sample Name:	CLO4@ 75.ug/L	Location:	Vial 80
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 10/9/2018 08:22:51

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Tue, 9. Oct. 2018, 08:01:57 am
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	75.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
9.236	PBA	9457367.0	74.8852	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
9.251	PBA	2938347.5	75.0265	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
9.253	PBA	345192.7	5.0000	CLO4-89-ISTD

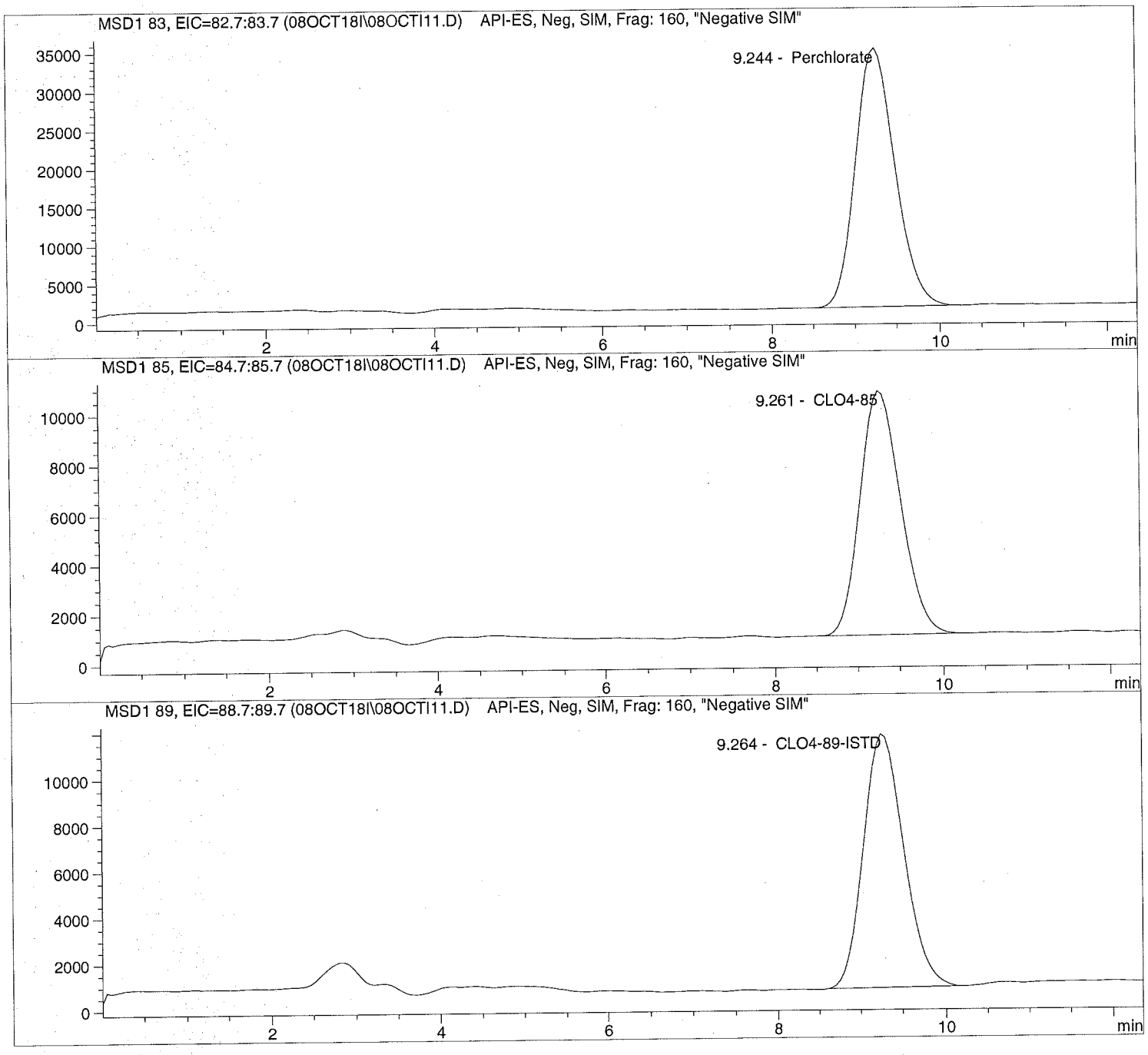
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\08OCT18I\08OCTI11.D Sample Name: ICAL Verf@10ug/L

Injection Date:	10/08/2018 13:17:00	Seq Line:	11
Sample Name:	ICAL Verf@10ug/L	Location:	Vial 81
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 10/9/2018 08:22:51

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\08OCT18I\08OCTI11.D Sample Name: ICAL Verf@10ug/L

Injection Date:	10/08/2018 13:17:00	Seq Line:	11
Sample Name:	ICAL Verf@10ug/L	Location:	Vial 81
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 10/9/2018 08:22:51

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Tue, 9. Oct. 2018, 08:01:57 am
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	10.000

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
9.244	PBA	1100685.7	9.3895	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
9.261	PBA	327974.4	9.2891	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
9.264	PBA	364657.2	5.0000	CLO4-89-ISTD

*** End of Report ***

HS18121558 Volatiles Raw Data

ALS WO# HS18121558

MSVOA09 -Logbook

Batch: 34078
Date: 01-08-2019
Method: 8260
Comments:

Analyst: Presenta Cabascango
Reviewer:
Laboratory: Houston

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	E
1	BFB	TUNE	01-08-2019 10:29 am	1.00	50 mL	50 mL	U010801.D	Liquid	Y	N
2	*Auto find/ purged* VSTD000.25	ICAL1	01-08-2019 10:54 am	1.00	50 mL	50 mL	U010802.D	Liquid	Y	N
3	*0.1 uL cal std/100 mL DI* VSTD000.5	ICAL2	01-08-2019 11:18 am	1.00	50 mL	50 mL	U010803.D	Liquid	Y	N
4	*0.1 uL cal std/50 mL DI* VSTD001	ICAL3	01-08-2019 12:07 pm	1.00	50 mL	50 mL	U010804.D	Liquid	Y	N
5	*0.2 uL cal std/50 mL DI* VSTD002	ICAL4	01-08-2019 12:32 pm	1.00	50 mL	50 mL	U010805.D	Liquid	Y	N
6	*0.4 uL cal std/50 mL DI* VSTD005	ICAL5	01-08-2019 12:56 pm	1.00	50 mL	50 mL	U010806.D	Liquid	Y	N
7	*1.0 uL cal std/50 mL DI* VSTD020	ICAL6	01-08-2019 01:21 pm	1.00	50 mL	50 mL	U010807.D	Liquid	Y	N
8	*4.0 uL cal std/50 mL DI* VSTD050	ICAL7	01-08-2019 01:45 pm	1.00	50 mL	50 mL	U010808.D	Liquid	Y	N
9	*10 uL cal std/50 mL DI* VSTD100	ICAL8	01-08-2019 02:10 pm	1.00	50 mL	50 mL	U010809.D	Liquid	Y	N
10	*20 uL cal std/50 mL DI* VSTD150	ICAL9	01-08-2019 02:34 pm	1.00	50 mL	50 mL	U010810.D	Liquid	Y	N
11	*30 uL cal std/50 mL DI* VSTD200	ICAL	01-08-2019 02:59 pm	1.00	50 mL	50 mL	U010811.D	Liquid	Y	N
12	*40 uL cal std/50 mL DI* BLANK	SAMP	01-08-2019 03:24 pm	1.00	50 mL	50 mL	U010812.D	Liquid	Y	N
13	*clean up blank* VSTD050	ICV	01-08-2019 03:48 pm	1.00	50 mL	50 mL	U010813.D	Liquid	Y	N
14	*10 uL ical std/50 mL DI* Blank	SAMP	01-08-2019 04:13 pm	1.00	50 mL	50 mL	U010814.D	Liquid	Y	N
15	BFB	TUNE	01-08-2019 04:38 pm	1.00	50 mL	50 mL	V010801.D	Liquid	Y	N
16	*Auto find/ purged* VSTD050	CCV	01-08-2019 05:03 pm	1.00	50 mL	50 mL	V010802.D	Liquid	Y	r
17	*10 uL cal std/50 mL DI* VSTD050	CCV	01-08-2019 05:27 pm	1.00	50 mL	50 mL	V010803.D	Liquid	Y	r
18	*10 uL cal std/50 mL DI* VLCSW-190108	LCS	01-08-2019 05:52 pm	1.00	50 mL	50 mL	V010804.D	Liquid	Y	r
19	*4.0 uL cal std/50 mL DI* BLANK	SAMP	01-08-2019 06:17 pm	1.00	50 mL	50 mL	V010805.D	Liquid	Y	r
20	BLANK	SAMP	01-08-2019 06:42 pm	1.00	50 mL	50 mL	V010806.D	Liquid	Y	r
21	VBLKW-190108	MBLK	01-08-2019 07:06 pm	1.00	50 mL	50 mL	V010807.D	Liquid	Y	r
22	HS18121523-07	SAMP	01-08-2019 07:31 pm	1.00	50 mL	50 mL	V010808.D	Liquid	Y	>
23	HS18121520-09	SAMP	01-08-2019 07:56 pm	5.00	10 mL	50 mL	V010809.D	Liquid	Y	>
24	HS18121520-09DL	SAMP	01-08-2019 08:21 pm	50.00	1 mL	50 mL	V010810.D	Liquid	Y	>
25	HS18121520-09MS	MS	01-08-2019 08:46 pm	1.00	50 mL	50 mL	V010811.D	Liquid	Y	>
26	*305 uL cal std/43 mL samp* HS18121520-09MSD	MSD	01-08-2019 09:10 pm	1.00	50 mL	50 mL	V010812.D	Liquid	Y	>
27	*305 uL cal std/43 mL samp* HS18121520-06DL	SAMP	01-08-2019 09:35 pm	25.00	2 mL	50 mL	V010813.D	Liquid	Y	>
28	BLANK	SAMP	01-08-2019 10:00 pm	1.00	50 mL	50 mL	V010814.D	Liquid	Y	r
29	BLANK	SAMP	01-08-2019 10:24 pm	1.00	50 mL	50 mL	V010815.D	Liquid	Y	r
30	HS18121520-05	SAMP	01-08-2019 10:49 pm	1.00	50 mL	50 mL	V010816.D	Liquid	Y	>
31	HS18121520-07	SAMP	01-08-2019 11:14 pm	1.00	50 mL	50 mL	V010817.D	Liquid	Y	>

MSVOA09 -Logbook

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	E
32	HS18121520-08	SAMP	01-08-2019 11:39 pm	1.00	50 mL	50 mL	V010818.D	Liquid	Y	>
33	HS18121523-03	SAMP	01-09-2019 12:03 am	1.00	50 mL	50 mL	V010819.D	Liquid	Y	>
34	HS18121523-04	SAMP	01-09-2019 12:28 am	1.00	50 mL	50 mL	V010820.D	Liquid	Y	>
35	HS18121523-05	SAMP	01-09-2019 12:53 am	1.00	50 mL	50 mL	V010821.D	Liquid	Y	>
36	HS18121523-02	SAMP	01-09-2019 01:17 am	1.00	50 mL	50 mL	V010822.D	Liquid	Y	>
37	HS18121523-06	SAMP	01-09-2019 01:42 am	5.00	10 mL	50 mL	V010823.D	Liquid	Y	>
38	HS18121523-01	SAMP	01-09-2019 02:07 am	1.00	50 mL	50 mL	V010824.D	Liquid	Y	>
39	HS18121523-01DL	SAMP	01-09-2019 02:31 am	5.00	10 mL	50 mL	V010825.D	Liquid	Y	>
40	VSTD050-END	CCV	01-09-2019 02:56 am	1.00	50 mL	50 mL	V010826.D	Liquid	Y	>
41	VSTD050-END	CCV	01-09-2019 03:20 am	1.00	50 mL	50 mL	V010827.D	Liquid	Y	r
42	*10 uL cal std/50 mL DI* BLANK	SAMP	01-09-2019 03:45 am	1.00	50 mL	50 mL	V010828.D	Liquid	Y	>

Chemical	Value
SURR SPK ID	30502-57-03
IS ID	30502-57-04
ICV STD ID	30603-49-01
LCS/MS ID	30603-49-01
CAL STD ID	30502-59-01/02
BFB ID	30502-57-03
pH Paper	634-40-13

FORM 3
WATER VOLATILE METHOD SPIKE RECOVERY

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS18121558

Matrix Spike - Sample No.: VSTD050

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE AMOUNT ()	% REC #	QC. LIMITS REC.
cis-1,3-Dichloropropene	50.00	48.85	98	80-120
trans-1,3-Dichloroprope	50.00	48.64	97	80-120
1,3-Dichlorobenzene	50.00	48.15	96	80-120
2,2-Dichloropropane	50.00	52.14	104	80-120
1,1-Dichloropropene	50.00	45.73	91	80-120
Dibromomethane	50.00	49.36	99	80-120
1,2-Dibromoethane	50.00	51.06	102	80-120
trans-1,2-Dichloroethen	50.00	45.90	92	80-120
1,1,1,2-Tetrachloroetha	50.00	50.80	102	80-120
1,1,1-Trichloroethane	50.00	47.80	96	80-120
1,1,2,2-Tetrachloroetha	50.00	51.77	104	80-120
1,1,2-Trichloroethane	50.00	49.48	99	80-120
1,1-Dichloroethane	50.00	46.80	94	80-120
1,1-Dichloroethene	50.00	45.10	90	80-120
Trichloroethene	50.00	48.66	97	80-120
1,2,3-Trichlorobenzene	50.00	50.15	100	80-120
Trichlorofluoromethane	50.00	43.08	86	80-120
1,2,4-Trichlorobenzene	50.00	51.40	103	80-120
1,2,4-Trimethylbenzene	50.00	50.60	101	80-120
Tetrachloroethene	50.00	44.07	88	80-120
1,2-Dichlorobenzene	50.00	47.83	96	80-120
1,2-Dichloroethane	50.00	47.94	96	80-120
1,2-Dichloropropane	50.00	49.18	98	80-120
1,3,5-Trimethylbenzene	50.00	49.19	98	80-120
1,3-Dichloropropane	50.00	49.47	99	80-120
1,4-Dichlorobenzene	50.00	46.68	93	80-120
Toluene	50.00	48.36	97	80-120
2-Butanone	100.00	105.08	105	80-120

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

COMMENTS: _____

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FORM 3
WATER VOLATILE METHOD SPIKE RECOVERY

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS18121558

Matrix Spike - Sample No.: VSTD050

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE AMOUNT ()	% REC #	QC. LIMITS REC.
2-Chlorotoluene	50.00	48.79	98	80-120
2-Hexanone	100.00	111.71	112	80-120
4-Chlorotoluene	50.00	48.74	97	80-120
tert-Butylbenzene	50.00	47.06	94	80-120
4-Methyl-2-Pentanone	100.00	109.48	109	80-120
Acetone	100.00	100.19	100	80-120
Benzene	50.00	47.48	95	80-120
Bromobenzene	50.00	49.99	100	80-120
Bromochloromethane	50.00	52.99	106	80-120
Bromodichloromethane	50.00	50.72	101	80-120
Bromoform	50.00	47.88	96	80-120
Bromomethane	50.00	51.16	102	80-120
Carbon Disulfide	100.00	94.41	94	80-120
Carbon Tetrachloride	50.00	48.74	97	80-120
Chlorobenzene	50.00	47.26	94	80-120
Chloroethane	50.00	44.17	88	80-120
Chloroform	50.00	47.20	94	80-120
Chloromethane	50.00	46.70	93	80-120
cis-1,2-Dichloroethene	50.00	47.17	94	80-120
Dibromochloromethane	50.00	48.38	97	80-120
Dichlorodifluoromethane	50.00	44.03	88	80-120
Ethylbenzene	50.00	47.26	94	80-120
Hexachlorobutadiene	50.00	47.27	94	80-120
Isopropylbenzene	50.00	48.47	97	80-120
m,p-Xylenes	100.00	98.32	98	80-120
Methylene Chloride	50.00	48.39	97	80-120
n-Butylbenzene	50.00	45.95	92	80-120
n-Propylbenzene	50.00	48.01	96	80-120

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

COMMENTS: _____

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FORM 3
WATER VOLATILE METHOD SPIKE RECOVERY

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS18121558

Matrix Spike - Sample No.: VSTD050

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE AMOUNT ()	% REC #	QC. LIMITS REC.
Naphthalene	50.00	50.80	102	80-120
o-Xylene	50.00	49.04	98	80-120
sec-Butylbenzene	50.00	46.44	93	80-120
Styrene	50.00	51.17	102	80-120
Vinyl Chloride	50.00	44.45	89	80-120
1,2,3-Trichloropropane	50.00	53.93	108	80-120
p-Isopropyltoluene	50.00	48.38	97	80-120
1,2-Dibromo-3-Chloropro	50.00	50.11	100	80-120

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

COMMENTS: _____

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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.: HS18121558

Lab File ID: U010801 BFB Injection Date: 01/08/19

Instrument ID: VOA9 BFB Injection Time: 1029

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	19.4
75	30.0 - 60.0% of mass 95	50.1
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	0.6 (0.9)1
174	Greater than 50.0% of mass 95	65.9
175	5.0 - 9.0% of mass 174	5.0 (7.6)1
176	95.0 - 101.0% of mass 174	63.3 (96.1)1
177	5.0 - 9.0% of mass 176	4.5 (7.1)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	U010802	01/08/19	1054
02	VSTD000.5	VSTD000.5	U010803	01/08/19	1118
03	VSTD001	VSTD001	U010804	01/08/19	1207
04	VSTD002	VSTD002	U010805	01/08/19	1232
05	VSTD005	VSTD005	U010806	01/08/19	1256
06	VSTD020	VSTD020	U010807	01/08/19	1321
07	VSTD050	VSTD050	U010808	01/08/19	1345
08	VSTD100	VSTD100	U010809	01/08/19	1410
09	VSTD150	VSTD150	U010810	01/08/19	1434
10	VSTD200	VSTD200	U010811	01/08/19	1459
11	VSTD050	VSTD050	U010813	01/08/19	1548
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.: HS18121558

Instrument ID: VOA9 Calibration Date(s): 01/08/19 01/08/19

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1054 1459

LAB FILE ID: RF0.25: U010802 RF0.5: U010803 RF1: U010804
RF2: U010805 RF5: U010806 RF20: U010807

COMPOUND	RF0.25	RF0.5	RF1	RF2	RF5	RF20
cis-1,3-Dichloropropene		2839	7156	13084	36876	160416
trans-1,3-Dichloropropene		2396	5824	10454	29527	135765
1,3-Dichlorobenzene		1.485	1.765	1.463	1.506	1.470
2,2-Dichloropropane		0.630	0.745	0.645	0.630	0.652
1,1-Dichloropropene		0.465	0.547	0.450	0.447	0.448
Dibromomethane		0.194	0.236	0.195	0.218	0.211
1,2-Dibromoethane		0.308	0.377	0.342	0.349	0.358
trans-1,2-Dichloroethene		0.618	0.718	0.580	0.617	0.595
1,1,1,2-Tetrachloroethane		0.254	0.315	0.286	0.279	0.304
1,1,1-Trichloroethane		0.669	0.912	0.753	0.801	0.808
1,1,2,2-Tetrachloroethane		3672	8453	15238	38499	157201
1,1,2-Trichloroethane		0.281	0.353	0.304	0.316	0.309
1,1-Dichloroethane		1.123	1.292	1.102	1.150	1.120
1,1-Dichloroethene		0.463	0.588	0.492	0.484	0.447
Trichloroethene		0.240	0.397	0.319	0.323	0.316
1,2,3-Trichlorobenzene		0.830	0.876	0.847	0.856	0.897
Trichlorofluoromethane		0.904	0.976	0.813	0.799	0.796
1,2,4-Trichlorobenzene		0.692	0.939	0.825	0.901	0.912
1,2,4-Trimethylbenzene		2.218	2.812	2.468	2.657	2.745
Tetrachloroethene		0.288	0.316	0.269	0.258	0.244
1,2-Dichlorobenzene		1.582	1.739	1.523	1.511	1.482
1,2-Dichloroethane		0.472	0.566	0.490	0.490	0.486
1,2-Dichloropropane		0.327	0.409	0.350	0.359	0.362
1,3,5-Trimethylbenzene		2.249	2.729	2.376	2.553	2.649
1,3-Dichloropropane		0.611	0.761	0.647	0.679	0.670
1,4-Dichlorobenzene		1.748	1.936	1.587	1.570	1.533
Toluene		1.519	1.744	1.509	1.547	1.548
2-Butanone		0.320	0.369	0.324	0.341	0.355
2-Chlorotoluene		2.260	2.752	2.294	2.388	2.385
2-Hexanone		0.233	0.261	0.258	0.275	0.314
4-Chlorotoluene		2.613	3.163	2.676	2.793	2.805
tert-Butylbenzene		2.045	2.428	2.162	2.181	2.254
4-Methyl-2-Pentanone		0.337	0.405	0.381	0.406	0.446
Acetone		3350	5926	8715	20388	79871
Benzene		1.297	1.632	1.365	1.387	1.365
Bromobenzene		0.727	0.836	0.760	0.775	0.772
Bromochloromethane		0.218	0.252	0.291	0.315	0.298
Bromodichloromethane		0.330	0.403	0.356	0.368	0.387
Bromoform		1047	2493	4283	11809	53545
Bromomethane		2378	5371	8201	18180	59235
Carbon Disulfide		1.730	2.003	1.667	1.660	1.690
Carbon Tetrachloride		0.287	0.345	0.298	0.308	0.335
Chlorobenzene		0.999	1.207	0.997	1.001	0.974
Chloroethane		0.445	0.508	0.511	0.429	0.432

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS1812155

Instrument ID: VOA9 Calibration Date(s): 01/08/19 01/08/19

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1054 1459

LAB FILE ID: RF0.25: U010802 RF0.5: U010803 RF1: U010804
RF2: U010805 RF5: U010806 RF20: U010807

COMPOUND	RF0.25	RF0.5	RF1	RF2	RF5	RF20
Chloroform		1.007	1.256	1.064	1.108	1.082
Chloromethane		3056	6743	11251	26856	106870
cis-1,2-Dichloroethene		0.660	0.797	0.657	0.679	0.678
Dibromochloromethane		1574	3605	6755	19557	85941
Dichlorodifluoromethane		0.643	0.820	0.668	0.621	0.622
Ethylbenzene		0.477	0.571	0.476	0.501	0.496
Hexachlorobutadiene		1632	2244	4288	10485	43278
Isopropylbenzene		1.262	1.534	1.375	1.455	1.498
m,p-Xylenes		0.548	0.688	0.580	0.612	0.629
Methylene Chloride		3706	7653	11877	29083	108486
n-Butylbenzene		2.580	2.776	2.511	2.570	2.608
n-Propylbenzene		3.605	4.306	3.698	3.837	3.950
Naphthalene		5534	13707	27018	81349	393536
o-Xylene		0.597	0.676	0.600	0.621	0.640
sec-Butylbenzene		2.751	3.371	3.064	3.143	3.239
Styrene		0.892	1.099	0.954	1.038	1.088
Vinyl Chloride		0.753	0.880	0.712	0.708	0.711
1,2,3-Trichloropropane		1.074	1.253	1.071	1.144	1.220
p-Isopropyltoluene		2.346	2.770	2.478	2.573	2.782
1,2-Dibromo-3-Chloropropane		320	881	1607	4313	21582
1,2-Dichloroethane-d4		14011	17198	22691	40286	129430
Dibromofluoromethane		9792	12087	16204	29602	96372
Toluene-d8		40255	48097	65875	119933	399583
4-Bromofluorobenzene		13542	17004	23062	43652	148618

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.: HS1812155

Instrument ID: VOA9 Calibration Date(s): 01/08/19 01/08/19

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1054 1459

LAB FILE ID: RF50: U010808 RF100: U010809 RF150: U010810
RF200: U010811

COMPOUND	RF50	RF100	RF150	RF200
cis-1,3-Dichloropropene	428865	926076	1431850	1921305
trans-1,3-Dichloropropene	367494	801236	1237749	1672981
1,3-Dichlorobenzene	1.437	1.480	1.492	1.476
2,2-Dichloropropane	0.658	0.716	0.733	0.717
1,1-Dichloropropene	0.430	0.459	0.461	0.453
Dibromomethane	0.208	0.210	0.211	0.208
1,2-Dibromoethane	0.353	0.351	0.352	0.346
trans-1,2-Dichloroethene	0.573	0.597	0.604	0.588
1,1,1,2-Tetrachloroethane	0.310	0.321	0.328	0.323
1,1,1-Trichloroethane	0.801	0.861	0.889	0.875
1,1,2,2-Tetrachloroethane	386140	791393	1181566	1597058
1,1,2-Trichloroethane	0.301	0.298	0.298	0.294
1,1-Dichloroethane	1.089	1.119	1.136	1.099
1,1-Dichloroethene	0.440	0.468	0.479	0.479
Trichloroethene	0.308	0.309	0.327	0.326
1,2,3-Trichlorobenzene	0.890	0.931	0.945	0.948
Trichlorofluoromethane	0.761	0.821	0.830	0.827
1,2,4-Trichlorobenzene	0.908	0.964	0.983	0.982
1,2,4-Trimethylbenzene	2.648	2.685	2.728	2.671
Tetrachloroethene	0.233	0.251	0.254	0.251
1,2-Dichlorobenzene	1.447	1.464	1.468	1.448
1,2-Dichloroethane	0.468	0.465	0.462	0.454
1,2-Dichloropropane	0.355	0.361	0.363	0.355
1,3,5-Trimethylbenzene	2.533	2.676	2.684	2.633
1,3-Dichloropropane	0.649	0.647	0.645	0.631
1,4-Dichlorobenzene	1.474	1.511	1.523	1.505
Toluene	1.506	1.515	1.502	1.444
2-Butanone	0.352	0.354	0.346	0.354
2-Chlorotoluene	2.301	2.345	2.351	2.317
2-Hexanone	0.307	0.316	0.313	0.318
4-Chlorotoluene	2.673	2.736	2.736	2.689
tert-Butylbenzene	2.115	2.198	2.267	2.224
4-Methyl-2-Pentanone	0.437	0.446	0.440	0.444
Acetone	179800	376346	504121	752770
Benzene	1.326	1.348	1.350	1.313
Bromobenzene	0.769	0.787	0.798	0.793
Bromochloromethane	0.296	0.278	0.270	0.256
Bromodichloromethane	0.395	0.411	0.420	0.417
Bromoform	144409	321354	502752	687286
Bromomethane	136129	307120	488763	
Carbon Disulfide	1.663	1.737	1.576	1.670
Carbon Tetrachloride	0.326	0.367	0.374	0.372
Chlorobenzene	0.950	0.955	0.957	0.932
Chloroethane	0.413	0.434	0.445	0.438

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS1812155

Instrument ID: VOA9 Calibration Date(s): 01/08/19 01/08/19

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1054 1459

LAB FILE ID: RF50: U010808 RF100: U010809 RF150: U010810
RF200: U010811

COMPOUND	RF50	RF100	RF150	RF200
Chloroform	1.040	1.058	1.069	1.032
Chloromethane	245400	515965	861673	1231855
cis-1,2-Dichloroethene	0.661	0.674	0.684	0.666
Dibromochloromethane	229139	491650	772060	1039615
Dichlorodifluoromethane	0.604	0.648	0.660	0.660
Ethylbenzene	0.486	0.508	0.508	0.502
Hexachlorobutadiene	101106	235659	361569	491406
Isopropylbenzene	1.406	1.486	1.474	1.434
m,p-Xylenes	0.605	0.628	0.624	0.609
Methylene Chloride	264627	540514	814401	1093304
n-Butylbenzene	2.448	2.619	2.606	2.569
n-Propylbenzene	3.747	3.942	3.893	3.804
Naphthalene	1013970	2158340	3241704	4364184
o-Xylene	0.616	0.632	0.634	0.620
sec-Butylbenzene	3.066	3.311	3.282	3.222
Styrene	1.074	1.092	1.088	1.058
Vinyl Chloride	0.676	0.738	0.755	0.744
1,2,3-Trichloropropane	1.248	1.264	1.289	1.314
p-Isopropyltoluene	2.630	2.828	2.807	2.754
1,2-Dibromo-3-Chloropropane	55985	123999	188865	267735
1,2-Dichloroethane-d4	310401	607717	910863	1222427
Dibromofluoromethane	233946	464059	699083	938870
Toluene-d8	963061	1896057	2828636	3786858
4-Bromofluorobenzene	358290	714768	1067232	1452643

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.: HS1812155

Instrument ID: VOA9 Calibration Date(s): 01/08/19 01/08/19

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1054 1459

COMPOUND	CURVE	COEFFICENTS A0	A1	A2	%RSD OR R^2	MAX %RSD OR R^2
cis-1,3-Dichloropropene	LINR	2.618e-002	1.67366707		0.9997199	0.9900000
trans-1,3-Dichloropropene	LINR	3.204e-002	1.92505347		0.9996270	0.9900000
1,3-Dichlorobenzene	AVRG		1.50827962		6.499	20.000
2,2-Dichloropropane	AVRG		0.68064032		6.802	20.000
1,1-Dichloropropene	AVRG		0.46230796		7.217	20.000
Dibromomethane	AVRG		0.21003901		5.832	20.000
1,2-Dibromoethane	AVRG		0.34854004		5.196	20.000
trans-1,2-Dichloroethene	AVRG		0.60995415		7.097	20.000
1,1,1,2-Tetrachloroethane	AVRG		0.30208673		8.145	20.000
1,1,1-Trichloroethane	AVRG		0.81887889		9.270	20.000
1,1,2,2-Tetrachloroethane	LINR	-7.28e-003	0.89245816		0.9999625	0.9900000
1,1,2-Trichloroethane	AVRG		0.30600009		6.601	20.000
1,1-Dichloroethane	AVRG		1.13654996		5.390	20.000
1,1-Dichloroethene	AVRG		0.48231156		8.974	20.000
Trichloroethene	AVRG		0.31833521		12.546	20.000
1,2,3-Trichlorobenzene	AVRG		0.89097608		4.832	20.000
Trichlorofluoromethane	AVRG		0.83648482		7.776	20.000
1,2,4-Trichlorobenzene	AVRG		0.90081437		10.269	20.000
1,2,4-Trimethylbenzene	AVRG		2.62584086		6.832	20.000
Tetrachloroethene	AVRG		0.26264510		9.628	20.000
1,2-Dichlorobenzene	AVRG		1.51815666		6.146	20.000
1,2-Dichloroethane	AVRG		0.48381139		6.925	20.000
1,2-Dichloropropane	AVRG		0.35996009		5.952	20.000
1,3,5-Trimethylbenzene	AVRG		2.56461066		6.180	20.000
1,3-Dichloropropane	AVRG		0.66011231		6.457	20.000
1,4-Dichlorobenzene	AVRG		1.59871556		9.361	20.000
Toluene	AVRG		1.53711184		5.415	20.000
2-Butanone	AVRG		0.34599533		4.487	20.000
2-Chlorotoluene	AVRG		2.37703625		6.178	20.000
2-Hexanone	AVRG		0.28836532		11.101	20.000
4-Chlorotoluene	AVRG		2.76503221		5.822	20.000
tert-Butylbenzene	AVRG		2.20853232		4.867	20.000
4-Methyl-2-Pentanone	AVRG		0.41583873		8.982	20.000
Acetone	LINR	-3.28e-002	4.69723658		0.9965084	0.9900000
Benzene	AVRG		1.37594921		7.265	20.000
Bromobenzene	AVRG		0.77966353		3.820	20.000
Bromochloromethane	AVRG		0.27483919		10.753	20.000
Bromodichloromethane	AVRG		0.38760640		7.866	20.000
Bromoform	LINR	3.586e-002	4.42000955		0.9994245	0.9900000
Bromomethane	LINR	1.517e-002	2.63724913		0.9970358	0.9900000
Carbon Disulfide	AVRG		1.71083309		6.962	20.000
Carbon Tetrachloride	AVRG		0.33479382		9.693	20.000
Chlorobenzene	AVRG		0.99683220		8.270	20.000
Chloroethane	AVRG		0.45067377		7.732	20.000

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS1812155

Instrument ID: VOA9 Calibration Date(s): 01/08/19 01/08/19

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1054 1459

COMPOUND	CURVE	COEFFICENTS A0	A1	A2	%RSD OR R^2	MAX %RSD OR R^2
Chloroform	AVRG		1.07966958		6.700	20.000
Chloromethane	LINR	4.919e-002	1.42548161		0.9953511	0.9900000
cis-1,2-Dichloroethene	AVRG		0.68388027		6.359	20.000
Dibromochloromethane	LINR	2.459e-002	2.91148315		0.9997087	0.9900000
Dichlorodifluoromethane	AVRG		0.66073584		9.597	20.000
Ethylbenzene	AVRG		0.50282436		5.670	20.000
Hexachlorobutadiene	2ORDR	6.967e-003	3.11700195	-0.1728941	0.9995370	0.9900000
Isopropylbenzene	AVRG		1.43626598		5.658	20.000
m,p-Xylenes	AVRG		0.61382645		6.203	20.000
Methylene Chloride	LINR	-1.01e-002	1.57011846		0.9999481	0.9900000
n-Butylbenzene	AVRG		2.58768821		3.438	20.000
n-Propylbenzene	AVRG		3.86471690		5.193	20.000
Naphthalene	2ORDR	1.418e-002	0.32320338	1.226e-004	0.9999571	0.9900000
o-Xylene	AVRG		0.62619866		3.785	20.000
sec-Butylbenzene	AVRG		3.16121754		5.894	20.000
Styrene	AVRG		1.04267437		6.920	20.000
Vinyl Chloride	AVRG		0.74200768		7.796	20.000
1,2,3-Trichloropropane	AVRG		1.20856468		7.494	20.000
p-Isopropyltoluene	AVRG		2.66323199		6.305	20.000
1,2-Dibromo-3-Chloropropane	LINR	4.165e-002	5.38034837		0.9986325	0.9900000
1,2-Dichloroethane-d4	LINR	-4.46e-002	1.41695556		0.9999507	0.9900000
Dibromofluoromethane	2ORDR	-3.27e-002	1.82520597	8.571e-003	0.9999773	0.9900000
Toluene-d8	LINR	-4.91e-002	0.80738118		0.9997380	0.9900000
4-Bromofluorobenzene	LINR	-3.73e-002	2.11447014		0.9999203	0.9900000

FORM VI VOA

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010801.D

Date : 08-JAN-2019 10:29

Client ID: BFB

Instrument: VOA9.i

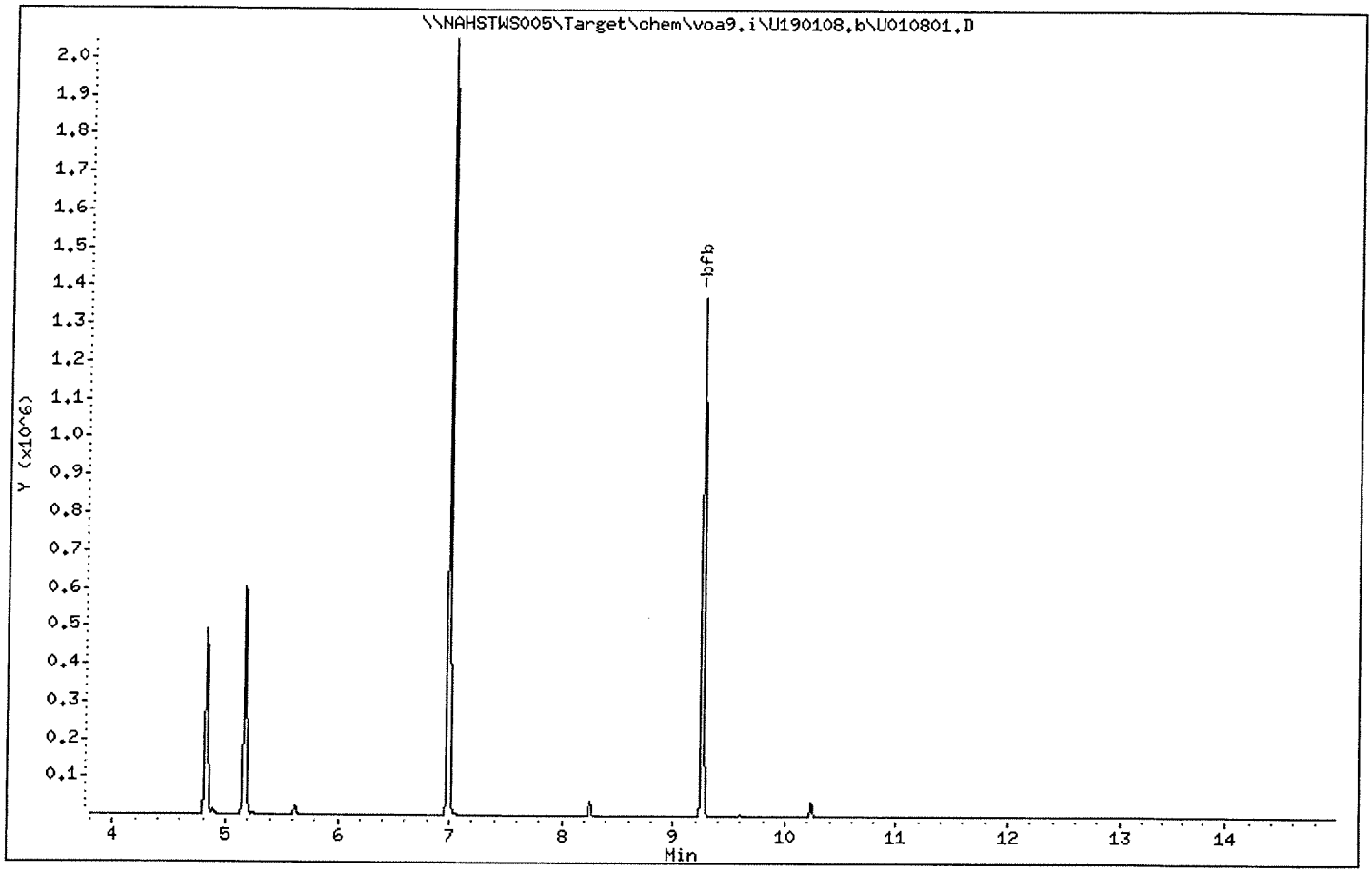
Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25



Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010801.D

Date : 08-JAN-2019 10:29

Client ID: BFB

Instrument: VOA9.i

Sample Info: BFB;BFB;3;;BFB

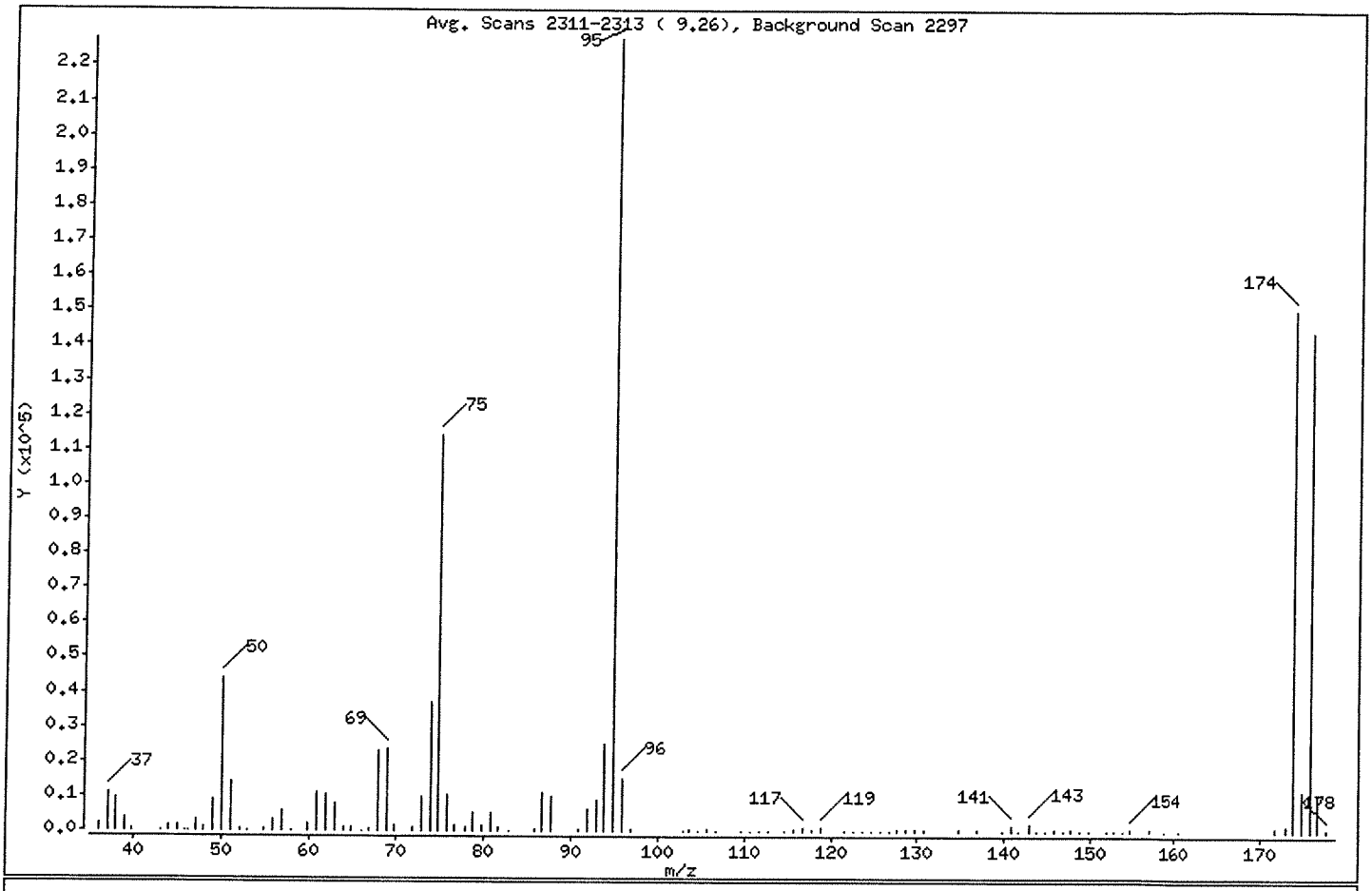
Volume Injected (uL): 2.0

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	19.39
75	30.00 - 60.00% of mass 95	50.13
96	5.00 - 9.00% of mass 95	6.68
173	Less than 2.00% of mass 174	0.60 (0.92)
174	Greater than 50.00% of mass 95	65.89
175	5.00 - 9.00% of mass 174	4.99 (7.58)
176	95.00 - 101.00% of mass 174	63.30 (96.07)
177	5.00 - 9.00% of mass 176	4.50 (7.11)

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010801.D

Date : 08-JAN-2019 10:29

Client ID: BFB Instrument: VOA9.i

Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0 Operator: PC

Column phase: DB624 Column diameter: 0.25

Data File: U010801.D

Spectrum: Avg. Scans 2311-2313 (9.26), Background Scan 2297

Location of Maximum: 94.90

Number of points: 105

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1986	66.00	138	103.00	68	140.70	1551
37.00	10801	66.90	527	103.70	735	141.60	240
38.00	9538	67.90	22840	104.70	257	142.80	1891
39.00	3843	68.90	23312	105.70	768	143.70	108
39.90	449	69.90	1766	106.80	205	144.70	247
43.10	127	71.90	1182	109.60	57	145.70	284
43.90	1449	72.90	10041	110.80	122	146.70	122
45.00	1813	73.90	36984	111.70	120	147.70	349
45.80	151	74.90	114080	112.70	98	148.60	105
46.20	155	75.90	10414	114.70	153	149.70	200
47.00	2935	76.80	1428	115.70	663	151.70	84
47.90	1253	77.90	1020	116.80	1034	152.60	159
49.00	9128	78.80	5133	117.70	610	153.70	83
50.00	44128	79.90	1706	118.80	1033	154.60	412
51.00	14080	80.80	4985	121.60	57	156.70	332
52.00	563	81.80	1126	122.60	101	158.70	186
52.90	96	82.90	83	123.70	95	160.60	183
54.90	552	85.90	288	124.70	60	171.70	931
55.90	3174	86.80	10773	125.70	88	172.80	1375
57.00	5880	87.80	10129	126.80	56	173.70	149952
57.90	256	90.80	703	127.70	648	174.70	11366
59.90	2096	91.90	6061	128.70	324	175.70	144064
60.90	10835	92.90	9060	129.70	662	176.70	10245
61.90	10429	93.90	24920	130.70	275	177.70	362
63.00	7875	94.90	227584	134.70	277		
63.90	878	95.90	15199	136.70	280		
64.90	939	96.90	450	139.70	138		

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010802.D
Lab Smp Id: VSTD000.25 Client Smp ID: VSTD000.25
Inj Date : 08-JAN-2019 10:54
Operator : PC Inst ID: VOA9.i
Smp Info : VSTD000.25;VSTD000.25;1;1;
Misc Info : 180315V9;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa9.i\U190108.b\8260C.m
Meth Date : 01-Feb-2019 15:44 VOA9.i Quant Type: ISTD
Cal Date : 08-JAN-2019 10:54 Cal File: U010802.D
Als bottle: 2 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAPb.sub
Target Version: 4.14

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

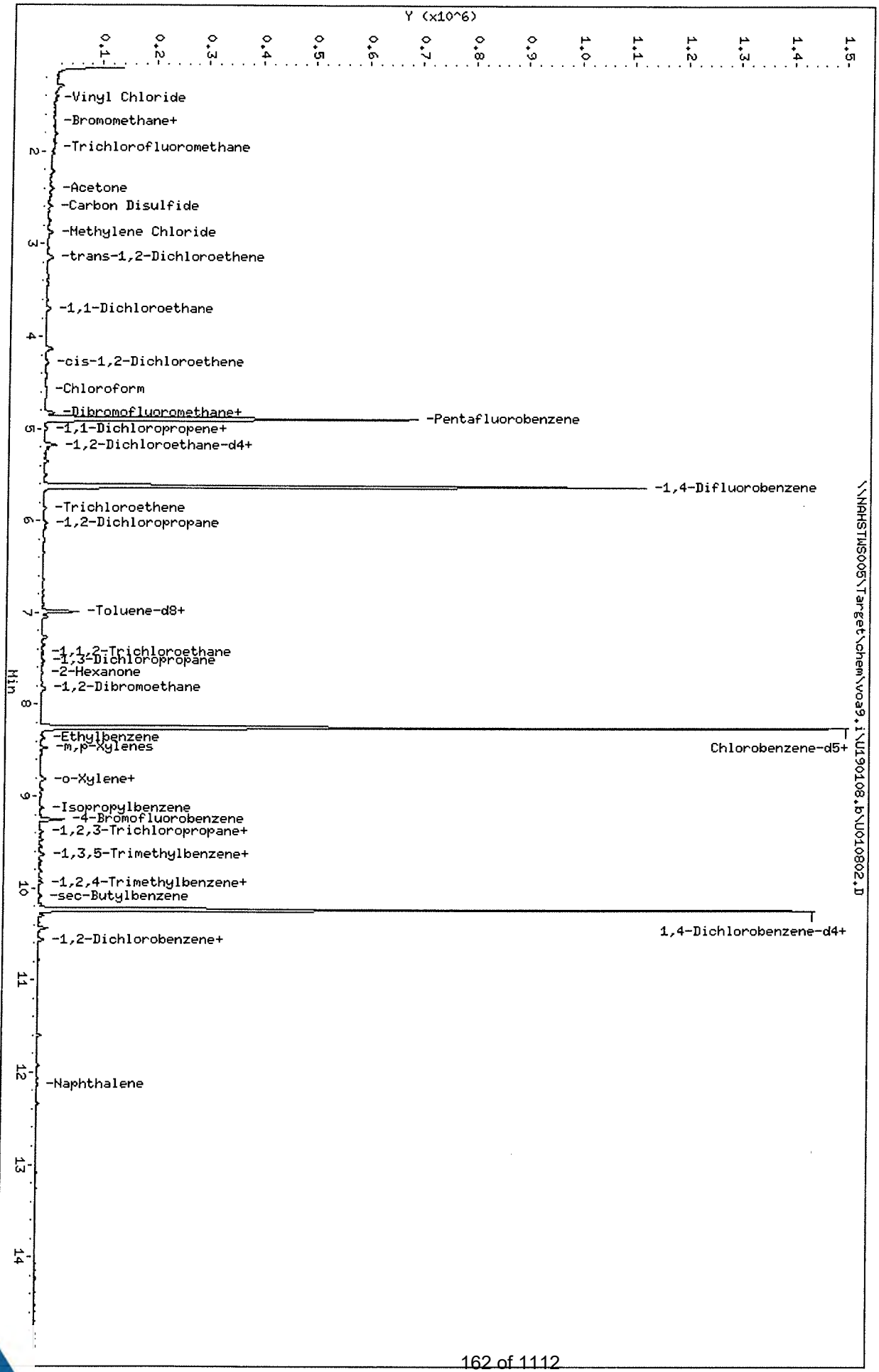
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.894	4.898	(1.000)	424745	50.0000	
* 36 1,4-Difluorobenzene	114	5.624	5.629	(1.000)	798067	50.0000	
* 47 Chlorobenzene-d5	117	8.249	8.249	(1.000)	719919	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.235	10.236	(1.000)	320219	50.0000	
$ 30 Dibromofluoromethane	113	4.830	4.830	(0.987)	9655	0.25000	0.43(a)
$ 35 1,2-Dichloroethane-d4	65	5.175	5.175	(1.057)	13907	0.25000	0.09(a)
$ 48 Toluene-d8	98	6.989	6.989	(0.847)	38067	0.25000	(a)
$ 69 4-Bromofluorobenzene	95	9.257	9.257	(1.122)	14081	0.25000	0.20(a)
31 1,1,1-Trichloroethane	97	4.826	4.830	(0.986)	1231	0.25000	0.17(a)
53 1,1,2-Trichloroethane	83	7.424	7.421	(0.900)	788	0.25000	0.17(a)
22 1,1-Dichloroethane	63	3.604	3.608	(0.737)	1975	0.25000	0.20(Ta)
32 1,1-Dichloropropene	75	5.002	5.006	(0.889)	1755	0.25000	0.23(a)
71 1,2,3-Trichloropropane	75	9.426	9.426	(0.921)	1231	0.25000	0.15(a)
79 1,2,4-Trimethylbenzene	105	9.943	9.943	(0.971)	3167	0.25000	0.18(a)
57 1,2-Dibromoethane	107	7.851	7.852	(0.952)	1065	0.25000	0.21(a)
88 1,2-Dichlorobenzene	146	10.569	10.569	(1.033)	2083	0.25000	0.21(a)
33 1,2-Dichloroethane	62	5.253	5.254	(0.934)	1729	0.25000	0.22(a)
42 1,2-Dichloropropane	63	6.078	6.082	(1.081)	1106	0.25000	0.19(a)
75 1,3,5-Trimethylbenzene	105	9.624	9.625	(0.940)	3077	0.25000	0.18(a)
83 1,3-Dichlorobenzene	146	10.179	10.180	(0.995)	2239	0.25000	0.23(a)
54 1,3-Dichloropropane	76	7.563	7.563	(0.917)	1921	0.25000	0.20(a)
84 1,4-Dichlorobenzene	146	10.254	10.255	(1.002)	2639	0.25000	0.25(a)
76 2-Chlorotoluene	91	9.546	9.546	(0.933)	3069	0.25000	0.20(a)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
52 2-Hexanone	43	7.653	7.649	(0.928)	1351	0.50000	0.32(a)
77 4-Chlorotoluene	91	9.639	9.640	(0.942)	3693	0.25000	0.20(a)
82 p-Isopropyltoluene	119	10.209	10.210	(0.997)	3183	0.25000	0.18(a)
45 4-Methyl-2-Pentanone	43	6.914	6.914	(0.838)	1899	0.50000	0.31(a)
10 Acetone	43	2.479	2.483	(0.507)	2084	0.50000	(a)
37 Benzene	78	5.216	5.220	(0.927)	4558	0.25000	0.20(a)
6 Bromomethane	94	1.673	1.670	(0.342)	1077	0.25000	1.09(a)
19 Carbon Disulfide	76	2.588	2.596	(0.529)	7148	0.50000	0.49(a)
34 Carbon Tetrachloride	117	4.995	4.999	(0.888)	888	0.25000	0.16(a)
59 Chlorobenzene	112	8.275	8.275	(1.003)	3240	0.25000	0.22(a)
7 Chloroethane	64	1.756	1.756	(0.359)	1803	0.25000	0.47(a)
28 Chloroform	83	4.657	4.661	(0.952)	1851	0.25000	0.20(a)
27 cis-1,2-Dichloroethene	96	4.286	4.290	(0.876)	1161	0.25000	0.19(a)
61 Ethylbenzene	106	8.372	8.369	(1.015)	1453	0.25000	0.20(a)
67 Isopropylbenzene	105	9.126	9.126	(1.106)	3728	0.25000	0.18(a)
62 m,p-Xylenes	106	8.470	8.474	(1.027)	3376	0.50000	0.38(a)
17 Methylene Chloride	84	2.873	2.877	(0.587)	2013	0.25000	(a)
87 n-Butylbenzene	91	10.554	10.554	(1.031)	3517	0.25000	0.21(a)
73 n-Propylbenzene	91	9.474	9.475	(0.926)	4941	0.25000	0.19(a)
92 Naphthalene	128	12.132	12.133	(1.185)	1922	0.25000	0.80(a)
63 o-Xylene	106	8.811	8.811	(1.068)	1707	0.25000	0.18(a)
81 sec-Butylbenzene	105	10.085	10.086	(0.985)	3564	0.25000	0.17(a)
64 Styrene	104	8.826	8.826	(1.070)	2965	0.25000	0.19(a)
78 tert-Butylbenzene	119	9.902	9.902	(0.967)	2365	0.25000	0.16(a)
50 Toluene	91	7.049	7.049	(0.855)	4622	0.25000	0.20(a)
20 trans-1,2-Dichloroethene	96	3.143	3.147	(0.642)	977	0.25000	0.18(a)
38 Trichloroethene	130	5.861	5.865	(1.042)	931	0.25000	0.18(a)
8 Trichlorofluoromethane	101	1.955	1.959	(0.399)	1385	0.25000	0.19(a)
5 Vinyl Chloride	62	1.422	1.423	(0.291)	1416	0.25000	0.22(a)

QC Flag Legend

T - Target compound detected outside RT window.
a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).



Data File: \\NAHSTWS005\Target\chem\voa9,i\U190108,b\U010802.D
Date : 08-JAN-2019 10:54
Client ID: VSTD000.25
Sample Info: VSTD000.25;VSTD000.25;1;1;
Purge Volume: 5.0
Column phase: DB624

Instrument: VOA9.i
Operator: PC
Column diameter: 0.18

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010803.D
Lab Smp Id: VSTD000.5 Client Smp ID: VSTD000.5
Inj Date : 08-JAN-2019 11:18
Operator : PC Inst ID: VOA9.i
Smp Info : VSTD000.5;VSTD000.5;1;2;
Misc Info : 180315V9;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa9.i\U190108.b\8260C.m
Meth Date : 01-Feb-2019 15:43 VOA9.i Quant Type: ISTD
Cal Date : 08-JAN-2019 10:54 Cal File: U010802.D
Als bottle: 3 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAPb.sub
Target Version: 4.14
Processing Host: NAHSTW7087

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

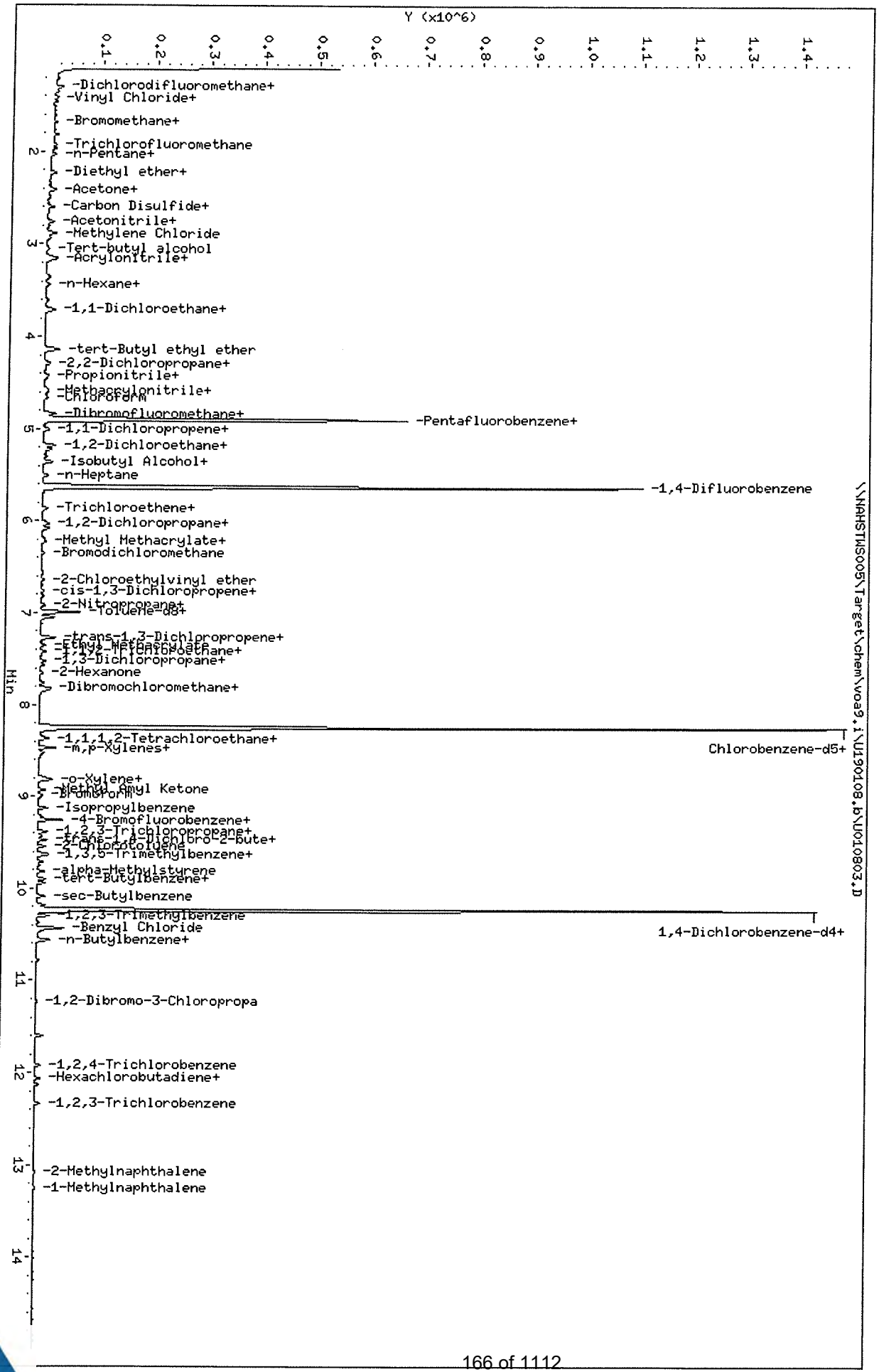
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.898	4.898	(1.000)	406983	50.0000	
* 36 1,4-Difluorobenzene	114	5.629	5.629	(1.000)	776981	50.0000	
* 47 Chlorobenzene-d5	117	8.249	8.249	(1.000)	707085	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	318699	50.0000	
$ 30 Dibromofluoromethane	113	4.834	4.834	(0.987)	9792	0.50000	0.56(a)
$ 35 1,2-Dichloroethane-d4	65	5.179	5.179	(1.057)	14011	0.50000	0.20(a)
$ 48 Toluene-d8	98	6.989	6.989	(0.847)	40255	0.50000	(a)
$ 69 4-Bromofluorobenzene	95	9.257	9.257	(1.122)	13542	0.50000	0.15(a)
60 1,1,1,2-Tetrachloroethane	131	8.350	8.350	(1.012)	1793	0.50000	0.41(a)
31 1,1,1-Trichloroethane	97	4.830	4.830	(0.986)	2722	0.50000	0.40(a)
68 1,1,2,2-Tetrachloroethane	83	9.392	9.392	(0.918)	3672	0.50000	0.15(aM)
53 1,1,2-Trichloroethane	83	7.421	7.421	(0.900)	1988	0.50000	0.45(a)
22 1,1-Dichloroethane	63	3.612	3.612	(0.737)	4569	0.50000	0.49(Ta)
11 1,1-Dichloroethene	96	2.412	2.412	(0.493)	1886	0.50000	0.48(a)
32 1,1-Dichloropropene	75	5.010	5.010	(0.890)	3611	0.50000	0.50(a)
93 1,2,3-Trichlorobenzene	180	12.339	12.339	(1.205)	2646	0.50000	0.46(a)
71 1,2,3-Trichloropropane	75	9.426	9.426	(0.921)	3423	0.50000	0.44(a)
90 1,2,4-Trichlorobenzene	180	11.923	11.923	(1.165)	2205	0.50000	0.38(aM)
79 1,2,4-Trimethylbenzene	105	9.940	9.940	(0.971)	7070	0.50000	0.42(a)
89 1,2-Dibromo-3-Chloropropane	155	11.233	11.233	(1.097)	320	0.50000	2.35(aM)
57 1,2-Dibromoethane	107	7.852	7.852	(0.952)	2180	0.50000	0.44(a)
88 1,2-Dichlorobenzene	146	10.573	10.573	(1.033)	5041	0.50000	0.52(a)

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010803.D Page 2
Report Date: 01-Feb-2019 15:43

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	5.258	5.258	(0.934)	3672	0.50000	0.48(a)
42 1,2-Dichloropropane	63	6.082	6.082	(1.081)	2540	0.50000	0.45(a)
75 1,3,5-Trimethylbenzene	105	9.625	9.625	(0.940)	7169	0.50000	0.43(a)
83 1,3-Dichlorobenzene	146	10.180	10.180	(0.995)	4734	0.50000	0.49(a)
54 1,3-Dichloropropane	76	7.563	7.563	(0.917)	4321	0.50000	0.46(a)
84 1,4-Dichlorobenzene	146	10.255	10.255	(1.002)	5570	0.50000	0.54(a)
26 2,2-Dichloropropane	77	4.283	4.283	(0.874)	2565	0.50000	0.46(a)
24 2-Butanone	43	4.358	4.358	(0.890)	2603	1.00000	0.92(a)
76 2-Chlorotoluene	91	9.546	9.546	(0.933)	7203	0.50000	0.47(a)
52 2-Hexanone	43	7.653	7.653	(0.928)	3297	1.00000	0.80(a)
77 4-Chlorotoluene	91	9.640	9.640	(0.942)	8328	0.50000	0.47(a)
82 p-Isopropyltoluene	119	10.210	10.210	(0.997)	7478	0.50000	0.44(a)
45 4-Methyl-2-Pentanone	43	6.915	6.915	(0.838)	4770	1.00000	0.81(a)
10 Acetone	43	2.491	2.491	(0.509)	3350	1.00000	0.29(a)
37 Benzene	78	5.224	5.224	(0.928)	10081	0.50000	0.47(a)
74 Bromobenzene	156	9.381	9.381	(0.917)	2317	0.50000	0.46(a)
29 Bromochloromethane	128	4.557	4.557	(0.930)	887	0.50000	0.39(a)
39 Bromodichloromethane	83	6.348	6.348	(1.128)	2566	0.50000	0.42(aM)
66 Bromoform	173	8.984	8.984	(1.089)	1047	0.50000	2.12(TaM)
6 Bromomethane	94	1.681	1.681	(0.343)	2378	0.50000	1.52(a)
19 Carbon Disulfide	76	2.600	2.600	(0.531)	14084	1.00000	1.01(a)
34 Carbon Tetrachloride	117	4.999	4.999	(0.888)	2233	0.50000	0.42(a)
59 Chlorobenzene	112	8.275	8.275	(1.003)	7063	0.50000	0.50(a)
7 Chloroethane	64	1.764	1.764	(0.360)	1812	0.50000	0.49(aM)
28 Chloroform	83	4.662	4.662	(0.952)	4099	0.50000	0.46(a)
3 Chloromethane	50	1.351	1.351	(0.276)	3056	0.50000	2.99(a)
27 cis-1,2-Dichloroethene	96	4.294	4.294	(0.877)	2685	0.50000	0.48(a)
46 cis-1,3-Dichloropropene	75	6.761	6.761	(1.201)	2839	0.50000	1.61(a)
55 Dibromochloromethane	129	7.758	7.758	(0.940)	1574	0.50000	1.55(a)
44 Dibromomethane	93	6.195	6.195	(1.101)	1505	0.50000	0.46(aM)
2 Dichlorodifluoromethane	85	1.217	1.217	(0.248)	2617	0.50000	0.48(a)
61 Ethylbenzene	106	8.369	8.369	(1.015)	3370	0.50000	0.47(a)
91 Hexachlorobutadiene	225	12.065	12.065	(1.179)	1632	0.50000	1.14(a)
67 Isopropylbenzene	105	9.126	9.126	(1.106)	8923	0.50000	0.43(a)
62 m,p-Xylenes	106	8.474	8.474	(1.027)	7756	1.00000	0.89(a)
17 Methylene Chloride	84	2.881	2.881	(0.588)	3706	0.50000	0.21(a)
87 n-Butylbenzene	91	10.554	10.554	(1.031)	8223	0.50000	0.49(a)
73 n-Propylbenzene	91	9.475	9.475	(0.926)	11489	0.50000	0.46(a)
92 Naphthalene	128	12.133	12.133	(1.185)	5534	0.50000	0.98(a)
63 o-Xylene	106	8.811	8.811	(1.068)	4219	0.50000	0.47(a)
81 sec-Butylbenzene	105	10.086	10.086	(0.985)	8769	0.50000	0.43(a)
64 Styrene	104	8.826	8.826	(1.070)	6305	0.50000	0.42(a)
78 tert-Butylbenzene	119	9.898	9.898	(0.967)	6518	0.50000	0.46(a)
56 Tetrachloroethene	164	7.526	7.526	(0.912)	2039	0.50000	0.54(a)
50 Toluene	91	7.049	7.049	(0.855)	10739	0.50000	0.49(a)
20 trans-1,2-Dichloroethene	96	3.151	3.151	(0.643)	2514	0.50000	0.50(a)
51 trans-1,3-Dichloropropene	75	7.263	7.263	(1.290)	2396	0.50000	1.89(a)
38 Trichloroethene	130	5.865	5.865	(1.042)	1862	0.50000	0.37(aM)
8 Trichlorofluoromethane	101	1.966	1.966	(0.402)	3681	0.50000	0.54(a)
5 Vinyl Chloride	62	1.430	1.430	(0.292)	3065	0.50000	0.50(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.



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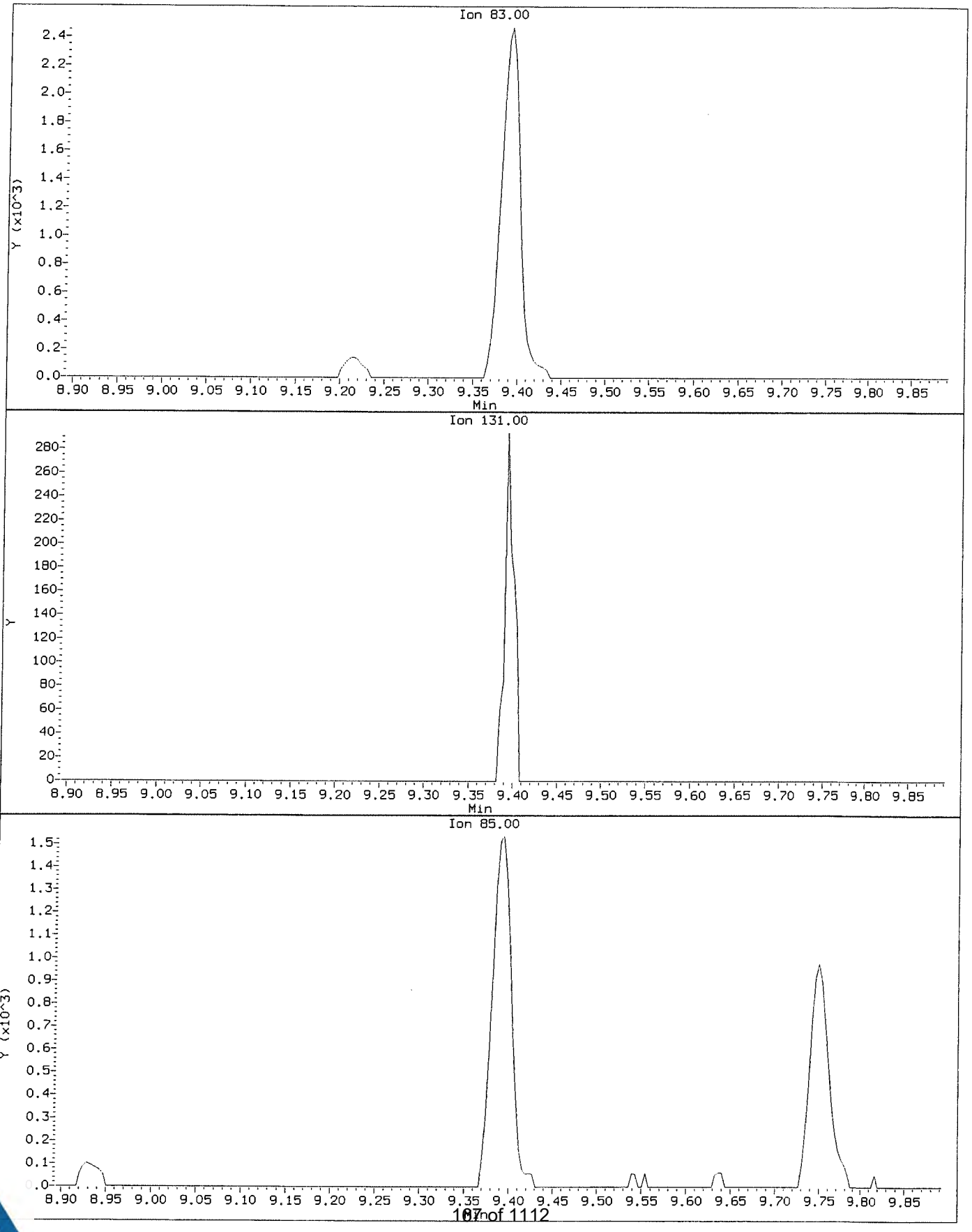
Sample Info: VSTD000.5;VSTD000.5;1;2;
Purge Volume: 5.0
Column phase: DB624

Instrument: VOA9,i
Operator: PC
Column diameter: 0.18

\\NAHSTWS005\Target\chem\voa9,i\U190108,b\U010803,D

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\Before\U010803.D
Injection Date: 08-JAN-2019 11:18
Instrument: VOA9.i
Client Sample ID: VSTD000.5

Compound: 1,1,2,2-Tetrachloroethane
CAS Number: 79-34-5



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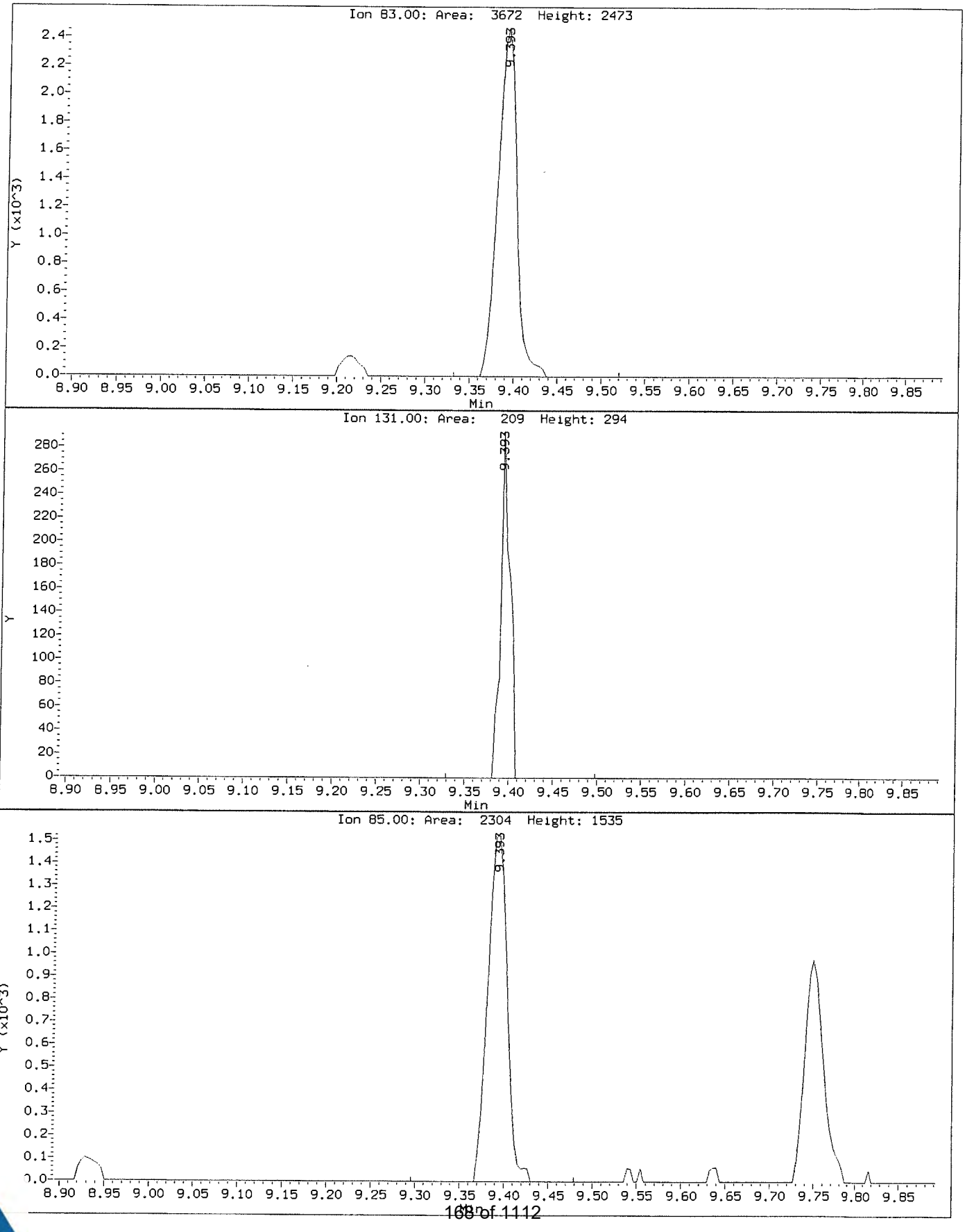
Compound: 1,1,2,2-Tetrachloroethane
CAS Number: 79-34-5



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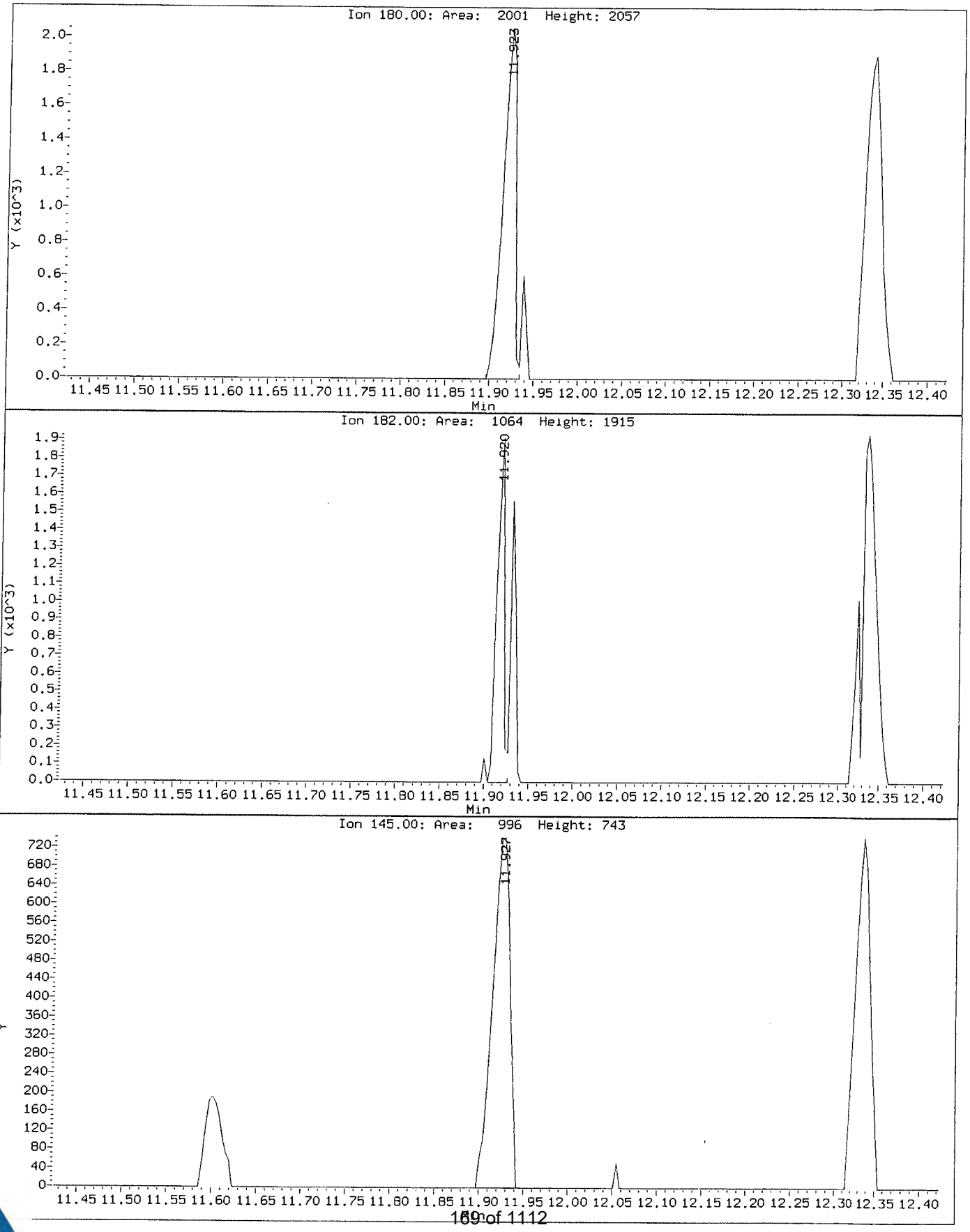
Client Sample ID: VSTD000.5

Compound: 1,2,4-Trichlorobenzene
CAS Number: 120-82-1



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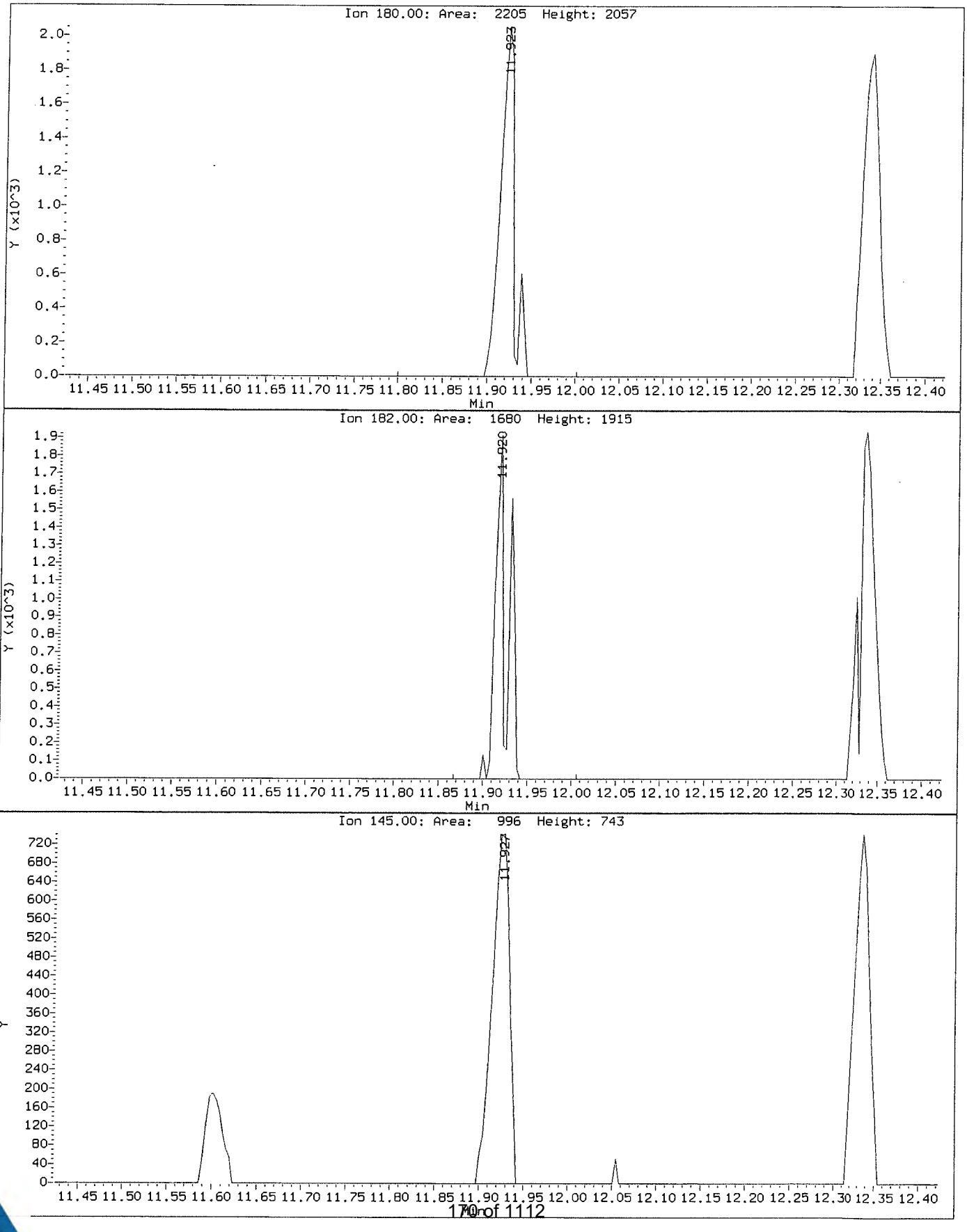
Compound: 1,2,4-Trichlorobenzene
CAS Number: 120-82-1



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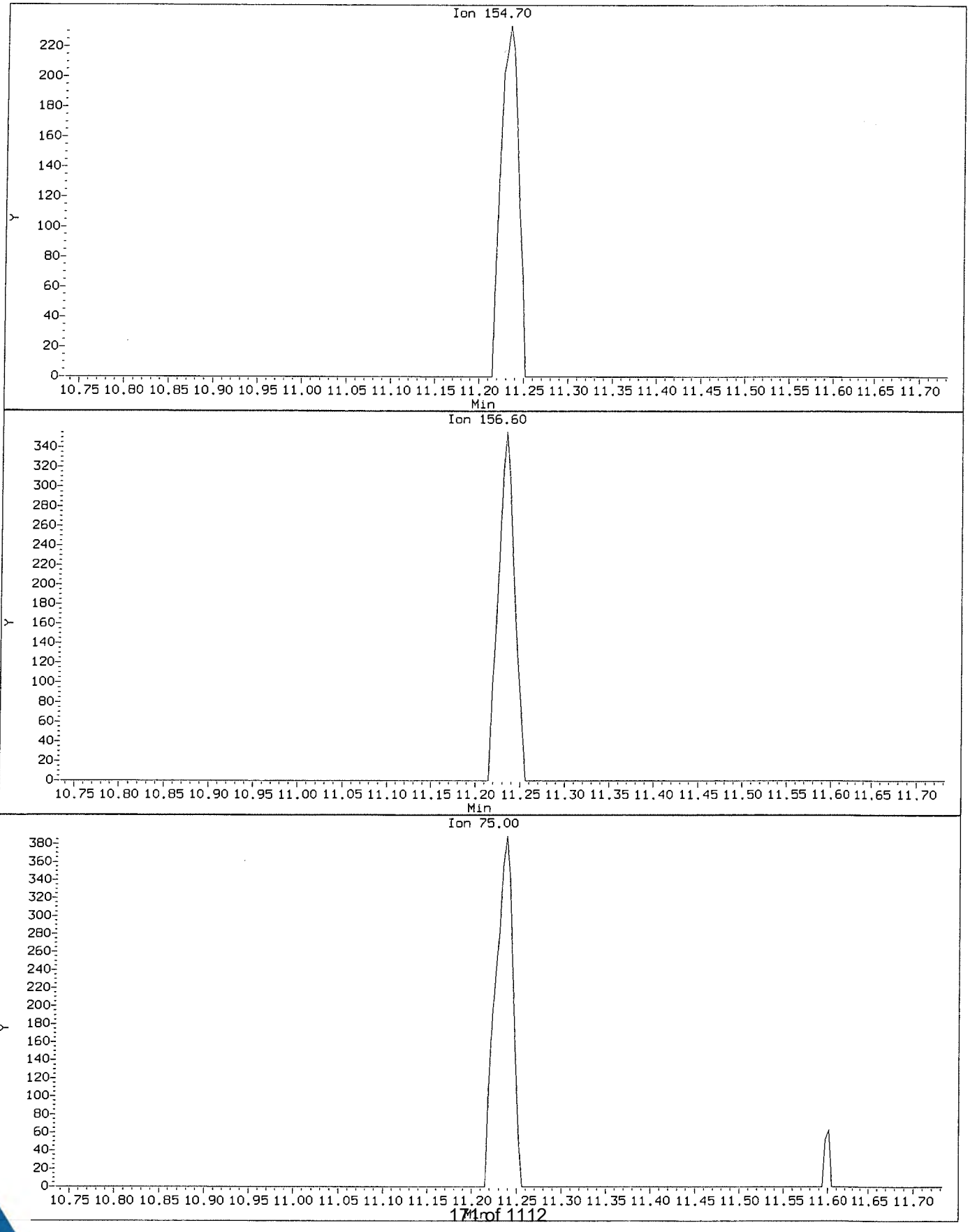
Compound: 1,2-Dibromo-3-Chloropropane
CAS Number: 96-12-8



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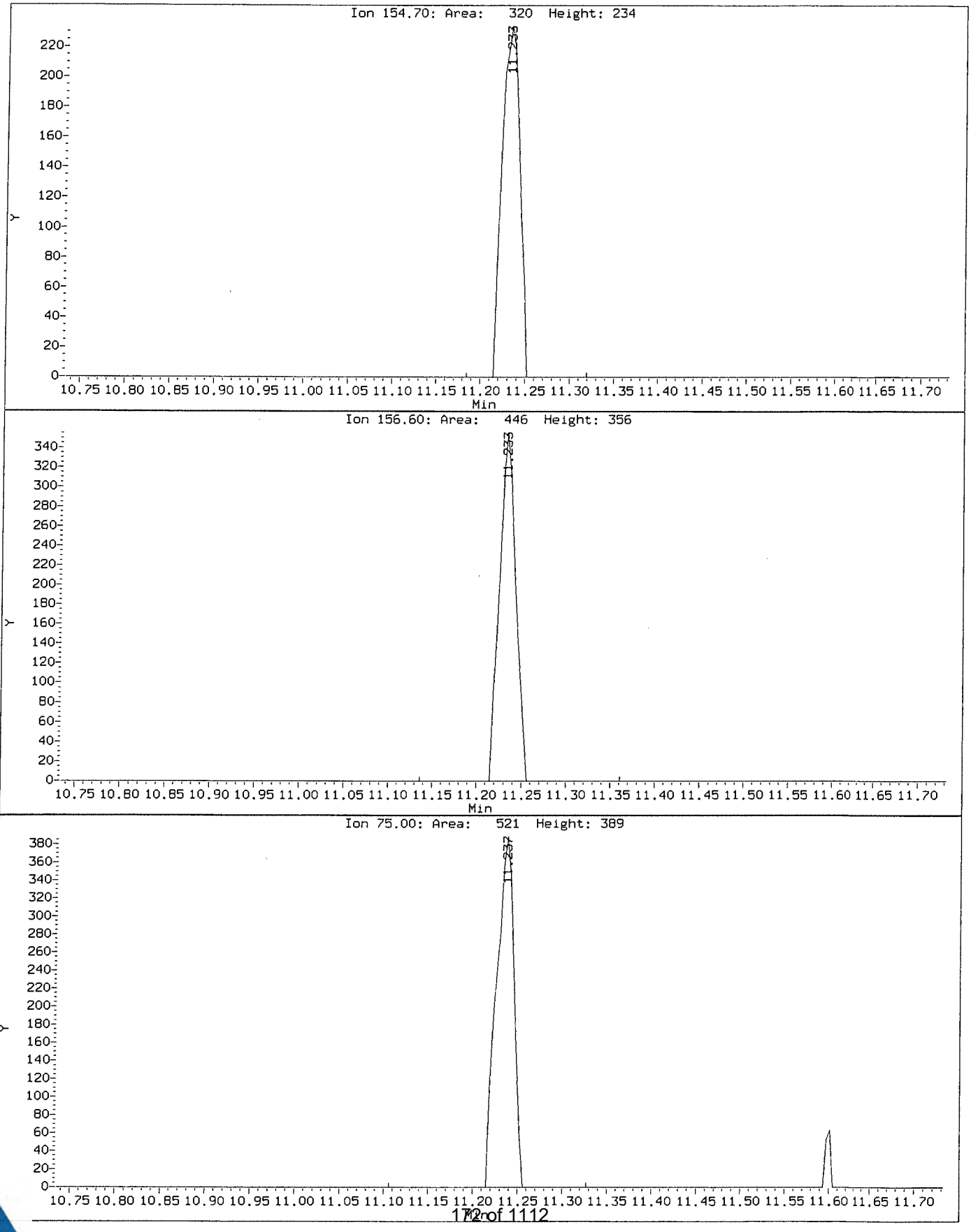
Client Sample ID: VSTD000.5

Compound: 1,2-Dibromo-3-Chloropropane
CAS Number: 96-12-8



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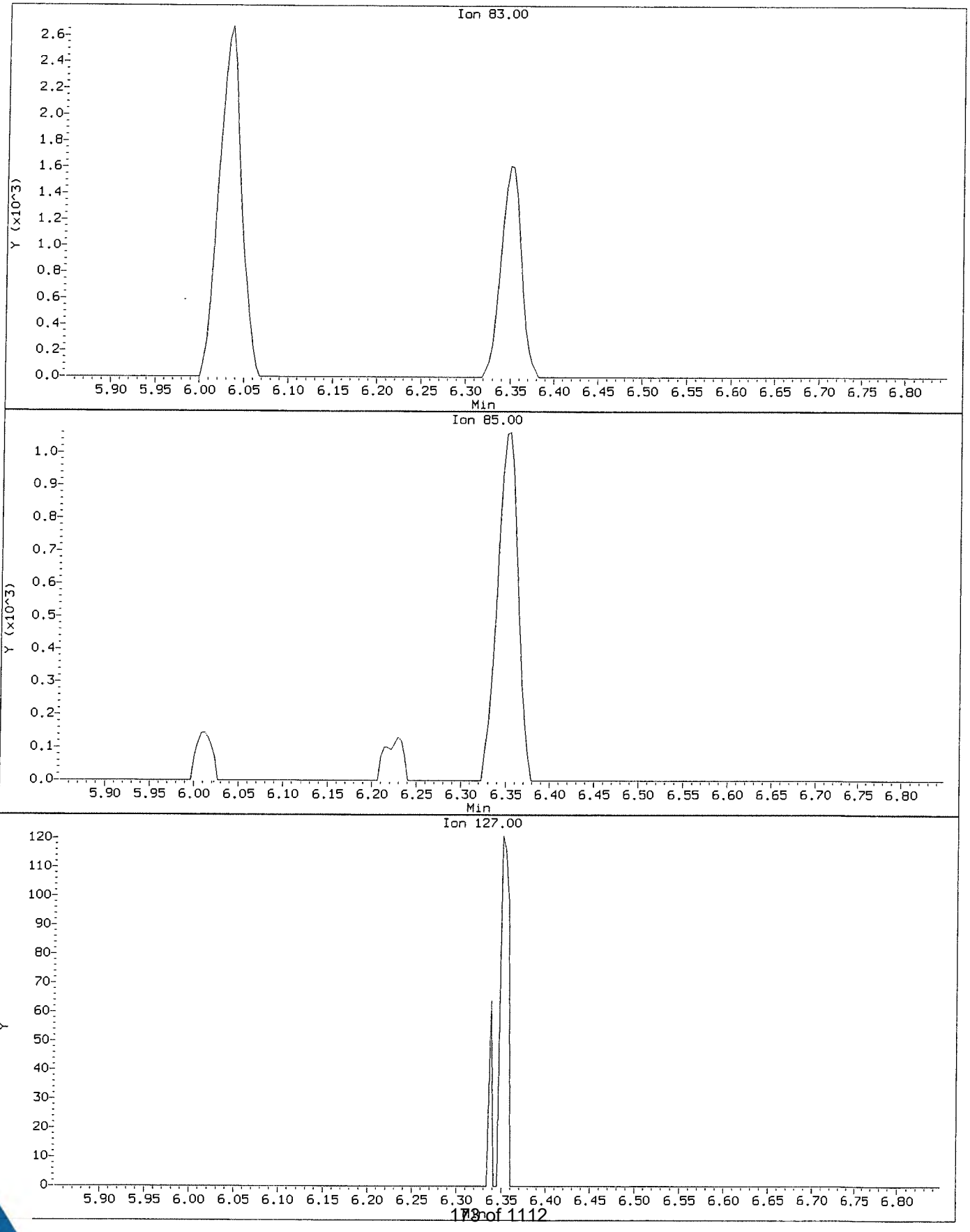
Instrument: VOA9.i
Client Sample ID: VSTD000.5

Compound: Bromodichloromethane
CAS Number: 75-27-4



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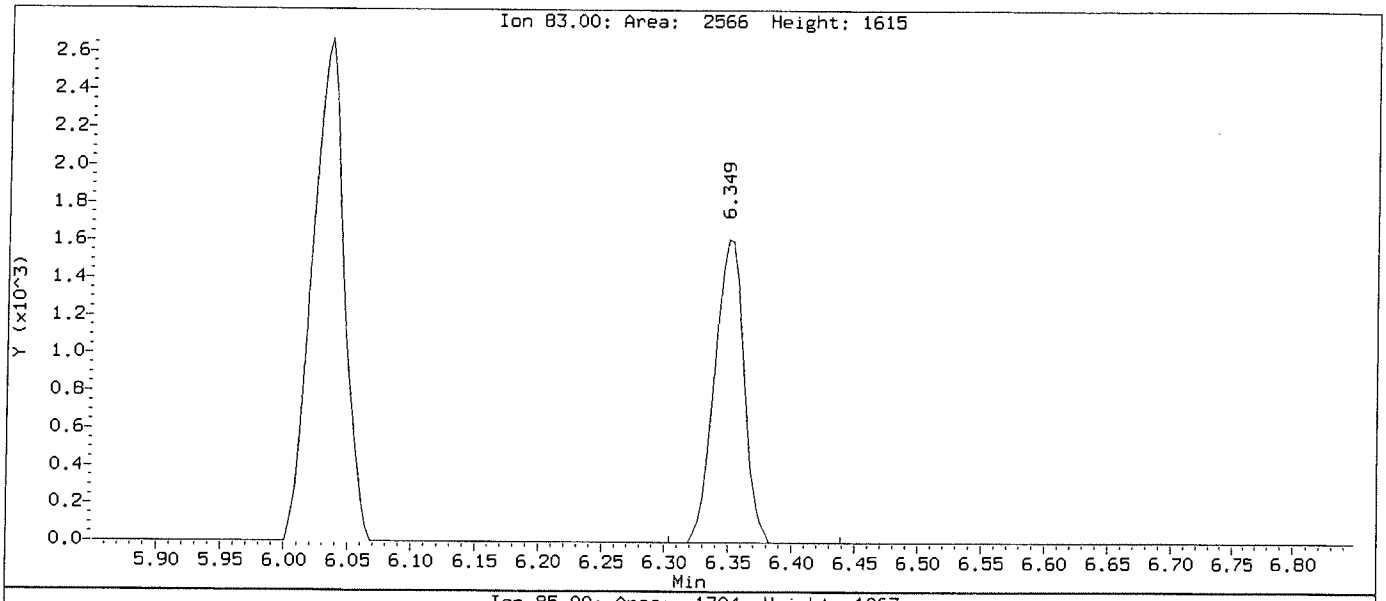
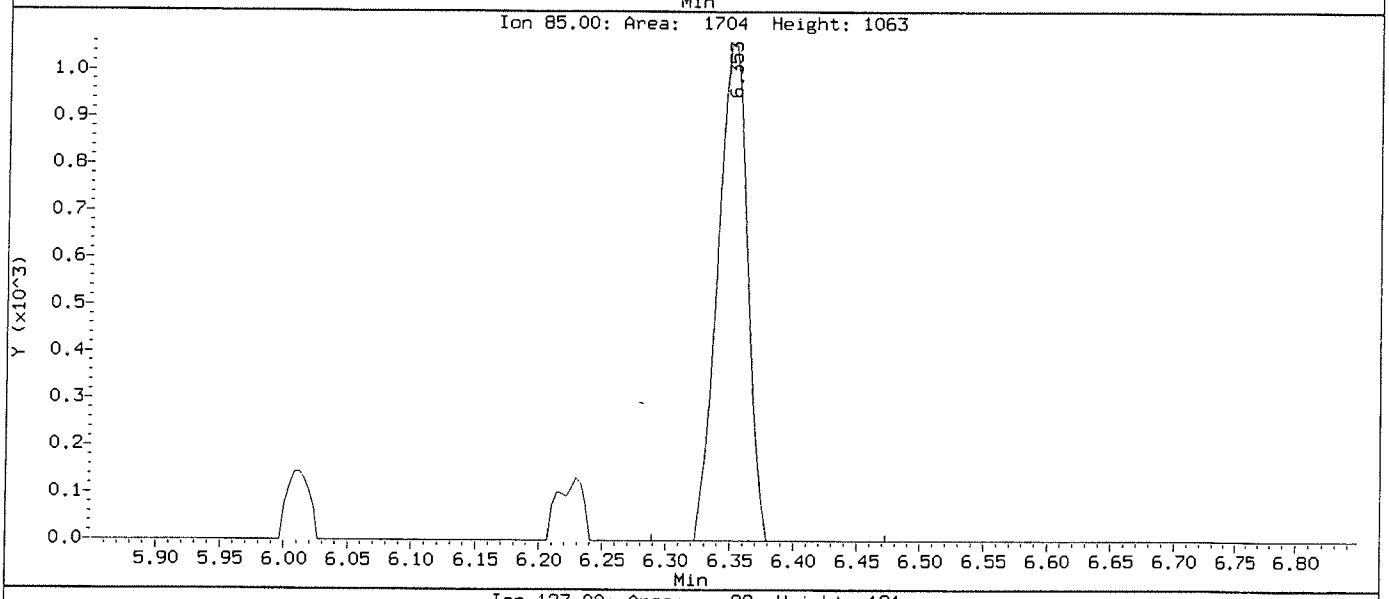
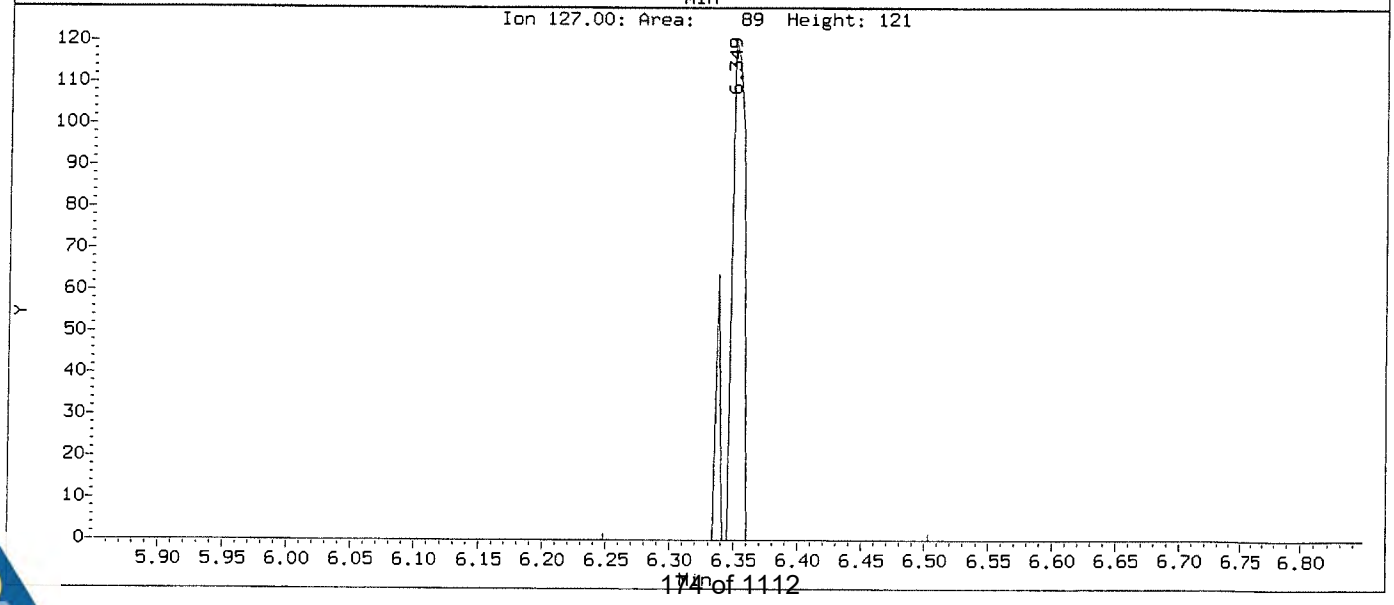
Client Sample ID: VSTD000.5

Compound: Bromodichloromethane
CAS Number: 75-27-4







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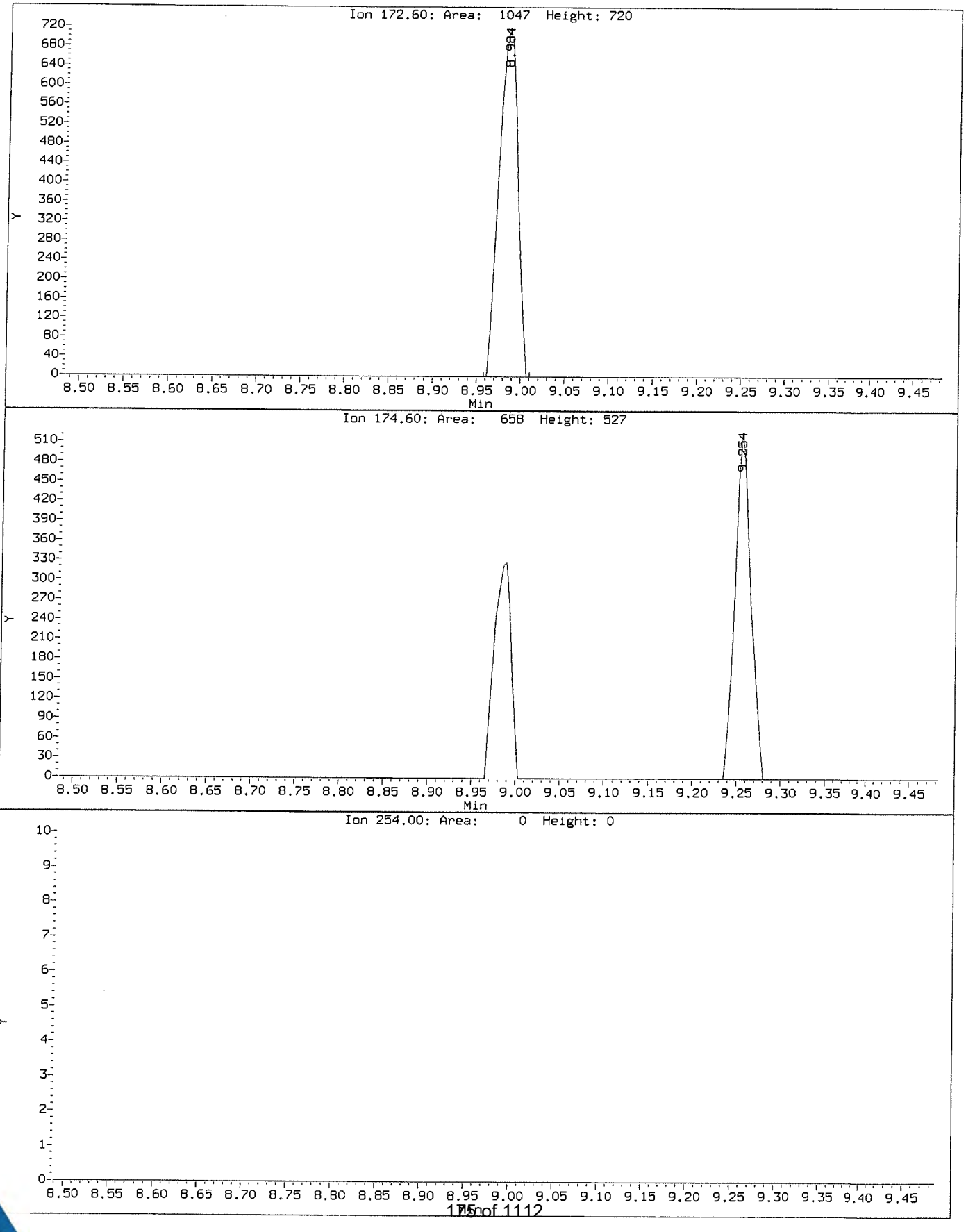
Instrument: VOA9.i
Client Sample ID: VSTD000.5

Compound: Bromoform
CAS Number: 75-25-2



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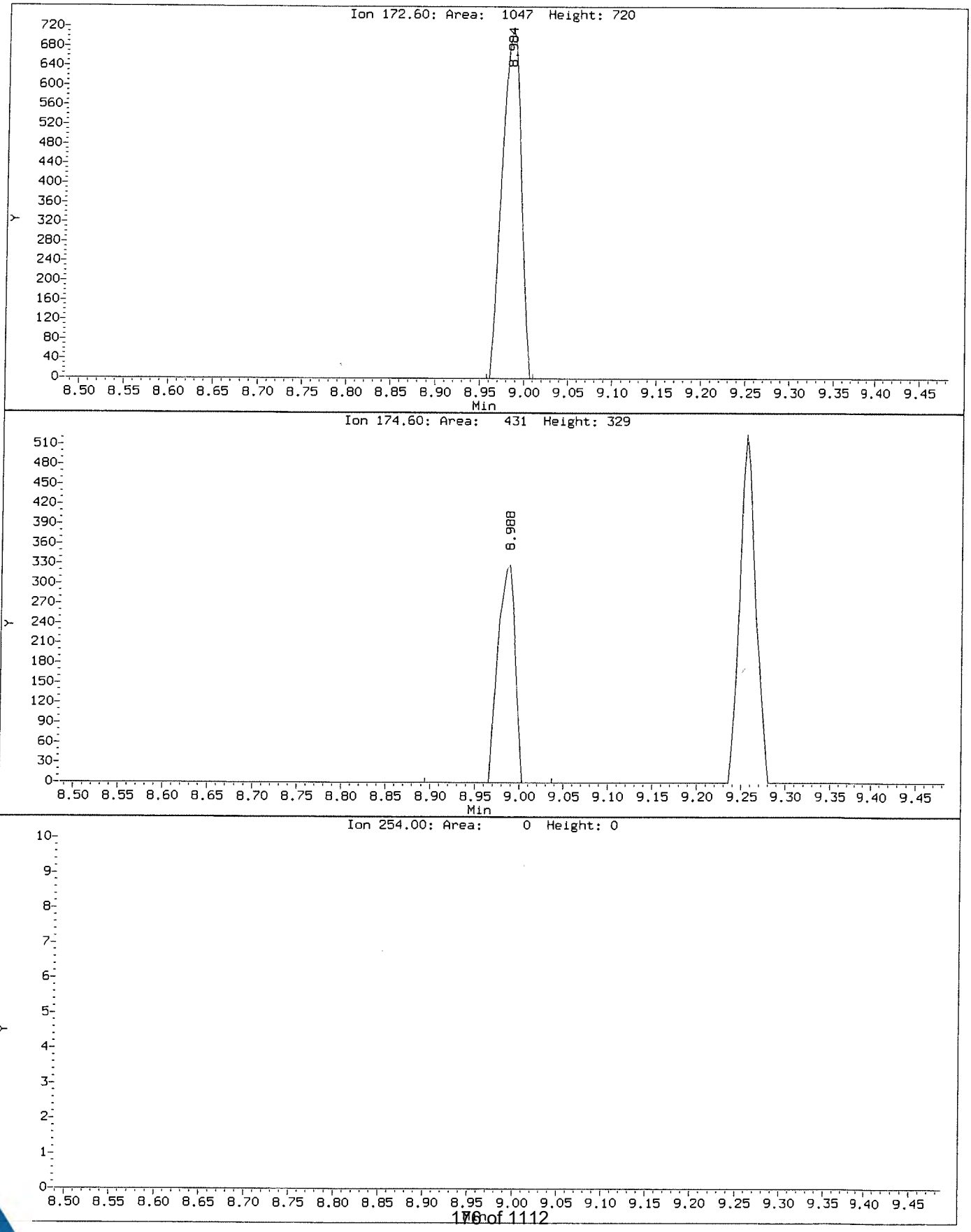
Instrument: VOA9.i
Client Sample ID: VSTD000.5

Compound: Bromoform
CAS Number: 75-25-2



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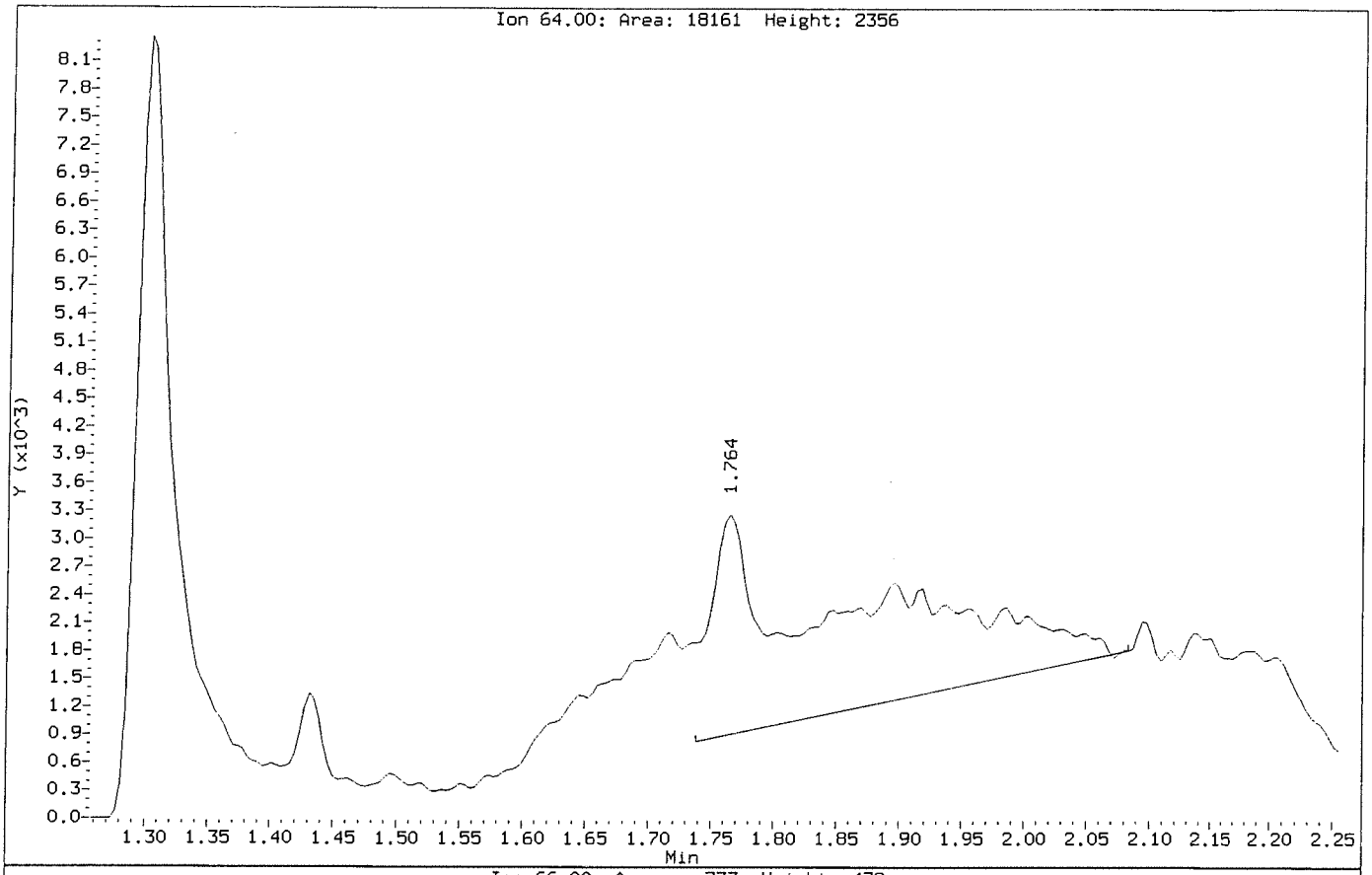
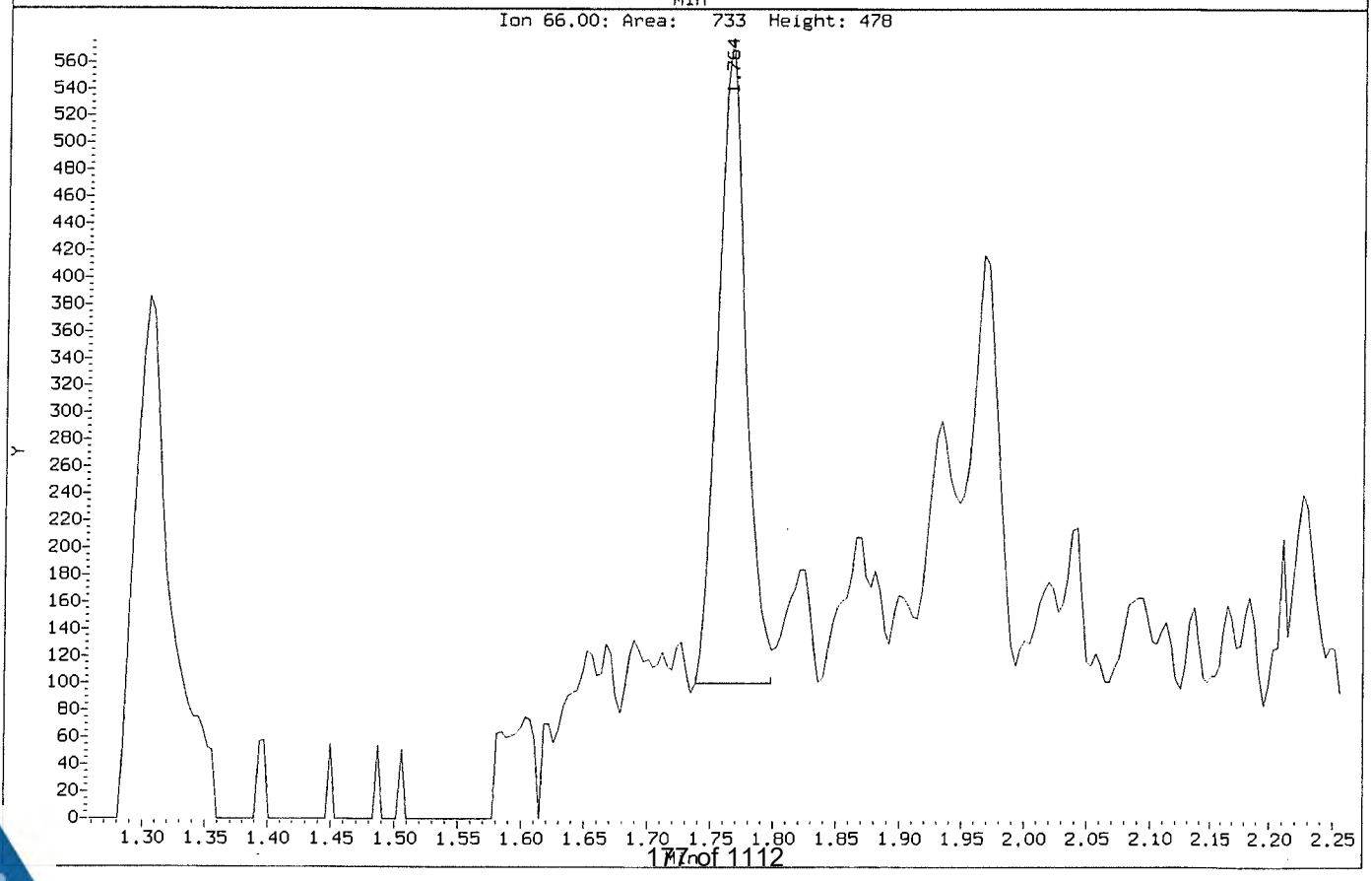
Instrument: VOA9.i
Client Sample ID: VSTD000.5

Compound: Chloroethane
CAS Number: 75-00-3





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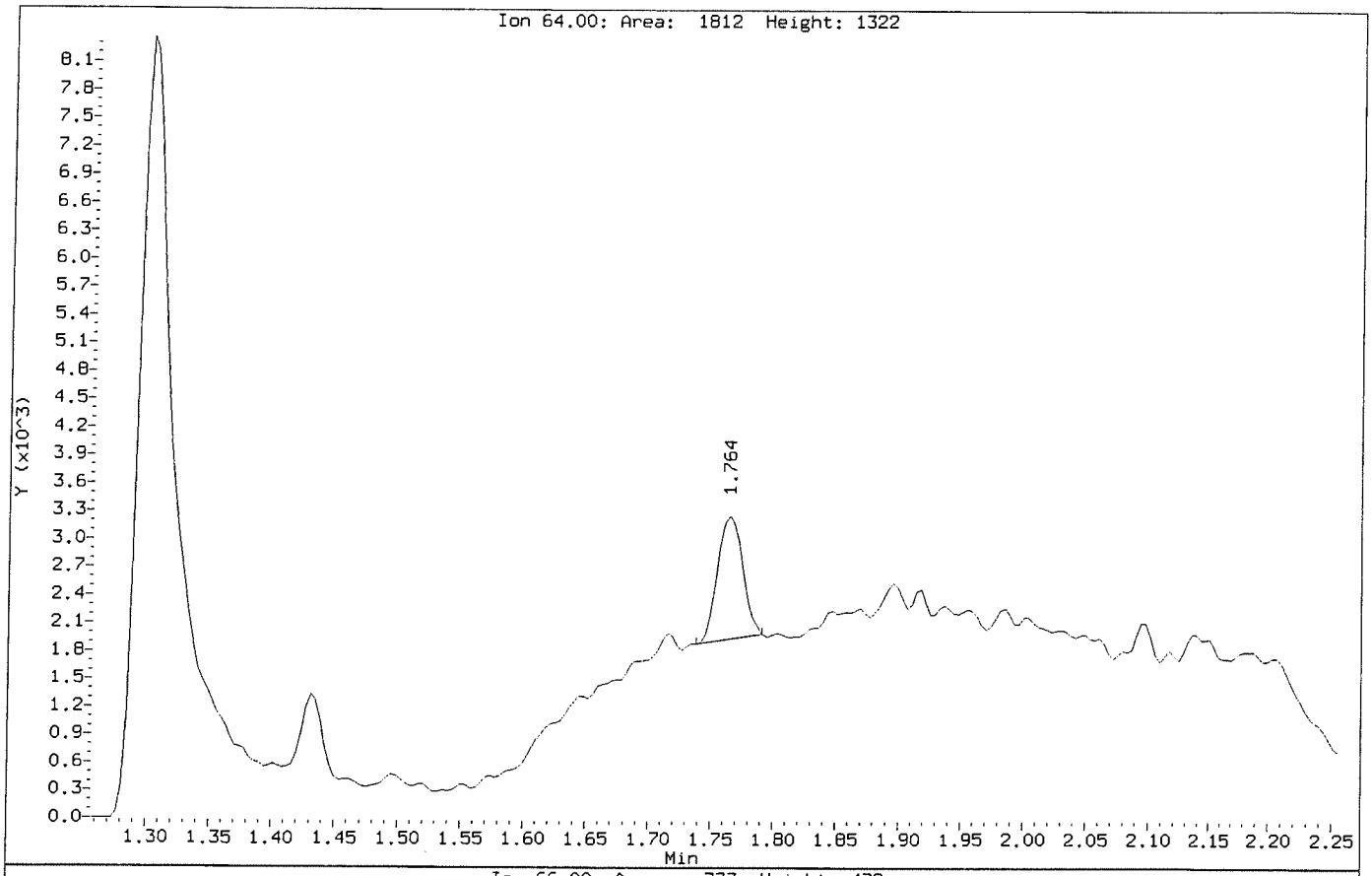
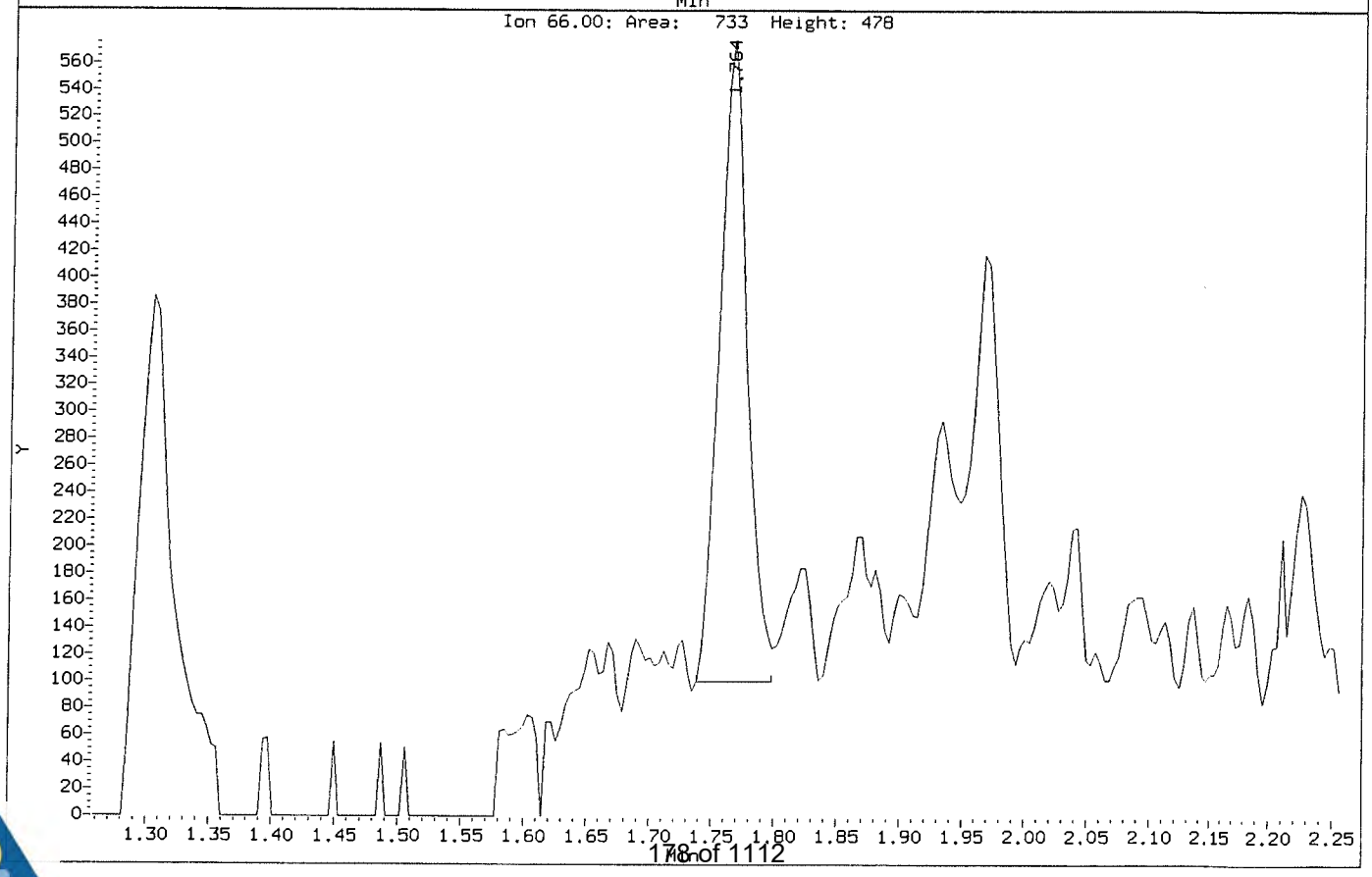
Instrument: VOA9.i
Client Sample ID: VSTD000.5

Compound: Chloroethane
CAS Number: 75-00-3





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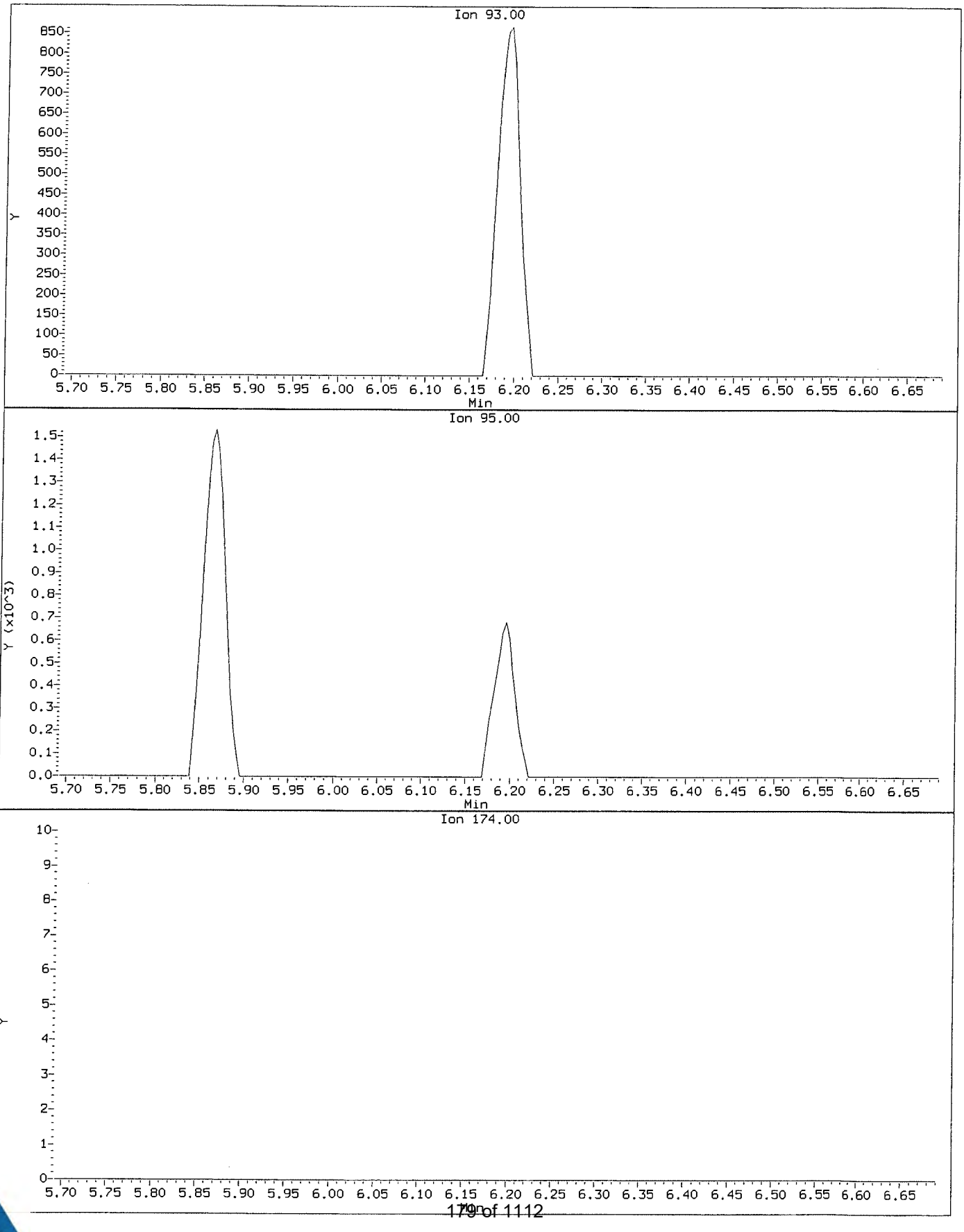
Client Sample ID: VSTD000.5

Compound: Dibromomethane
CAS Number: 74-95-3



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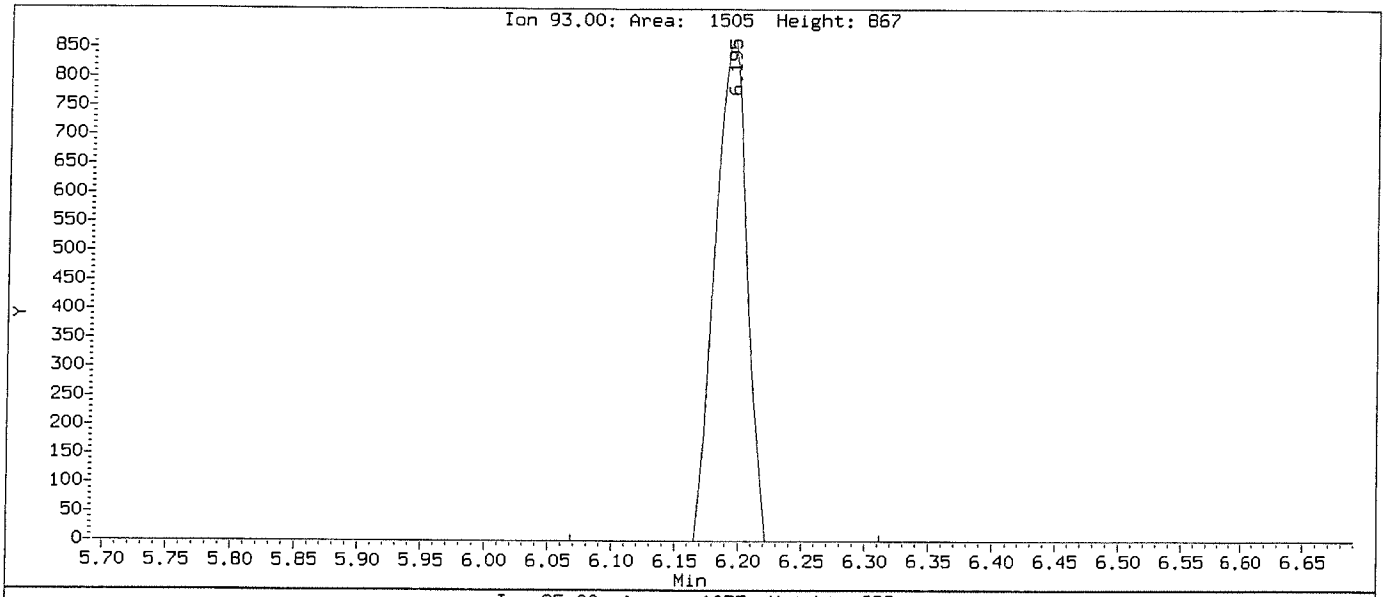
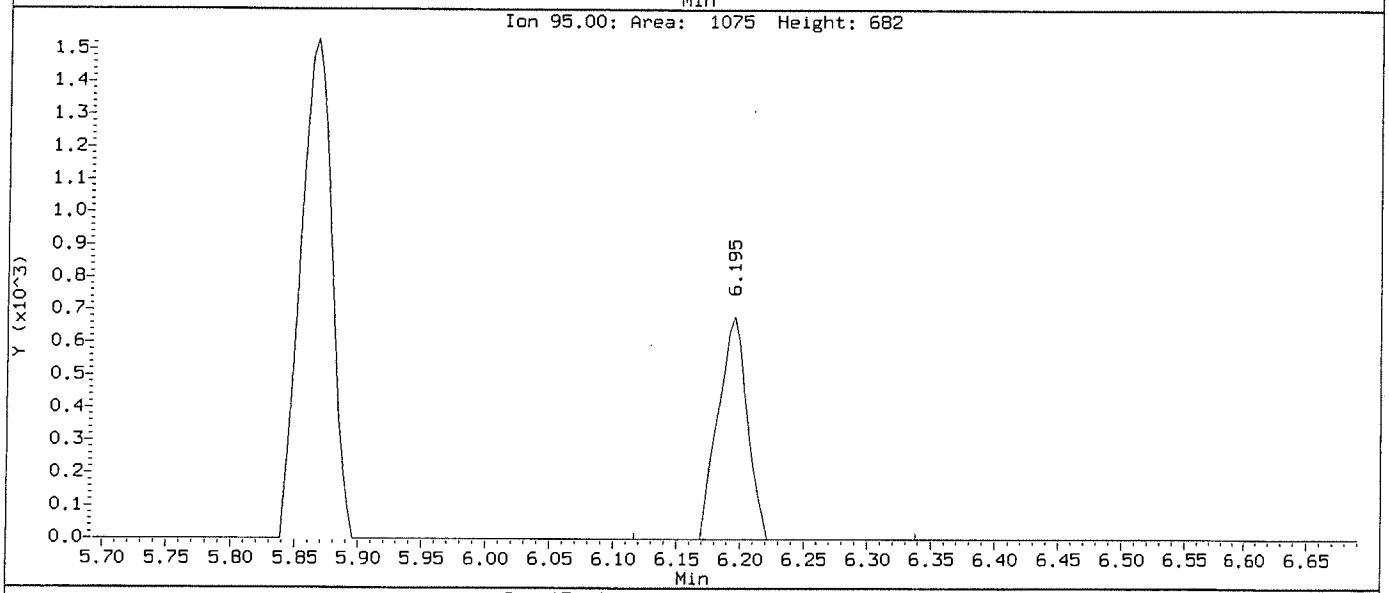
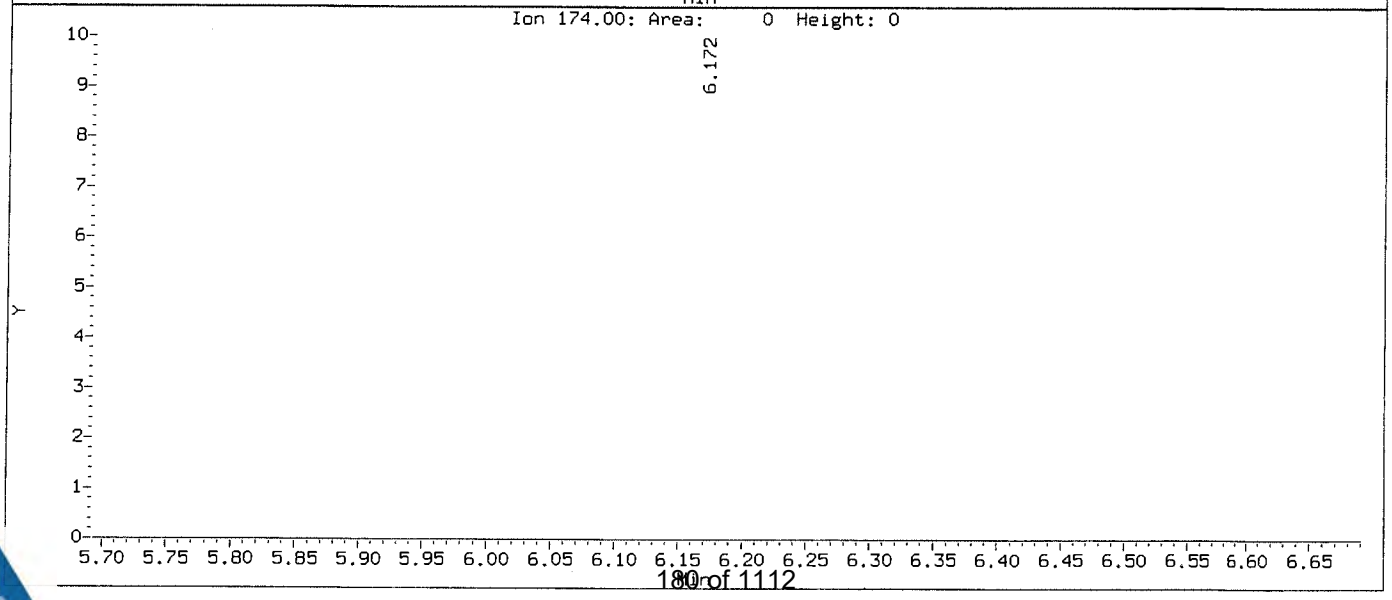
Compound: Dibromomethane
CAS Number: 74-95-3







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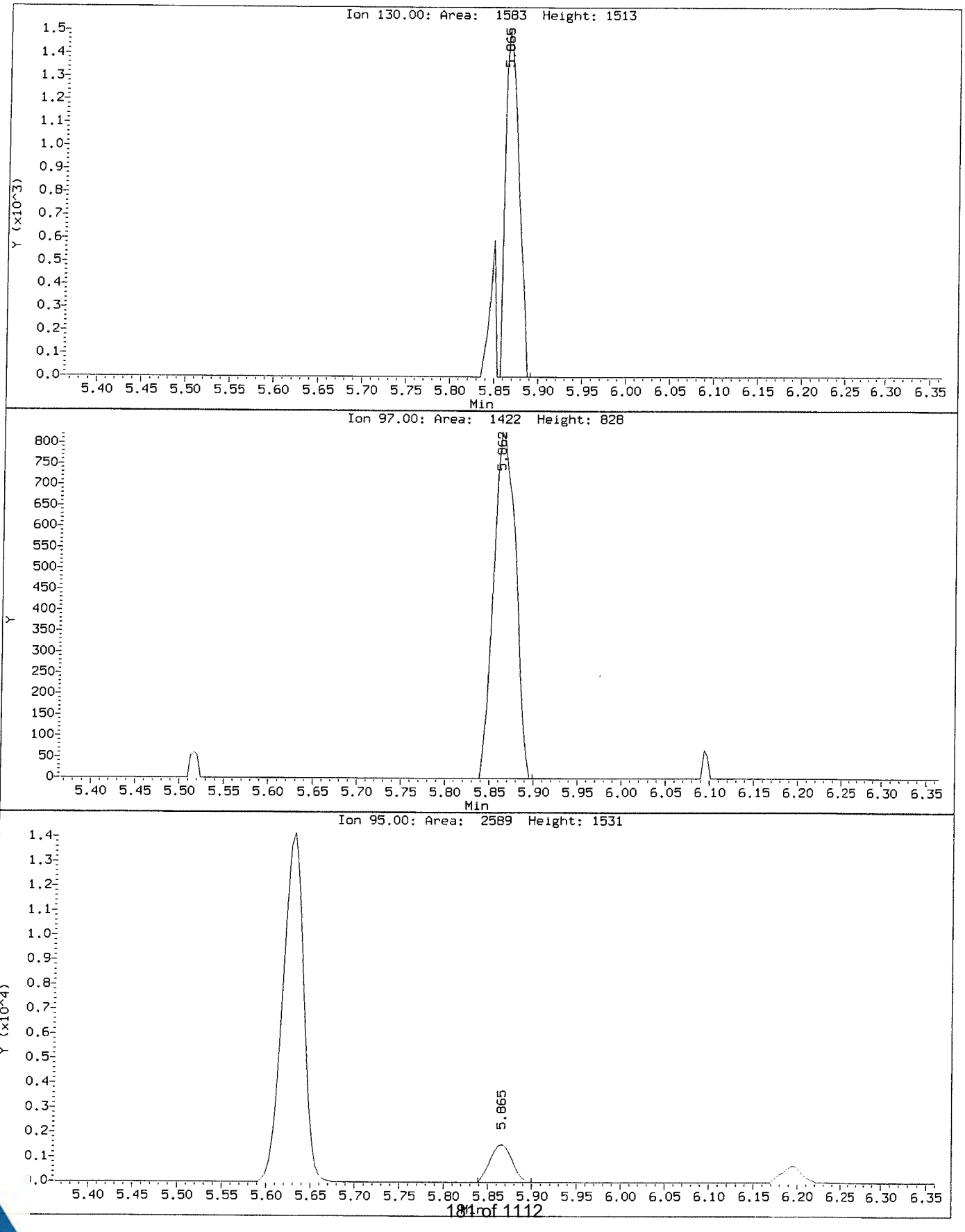
Injection Date: 08-JAN-2019 11:18
Instrument: VOA9.i
Client Sample ID: VSTD000.5

Compound: Trichloroethene
CAS Number: 79-01-6



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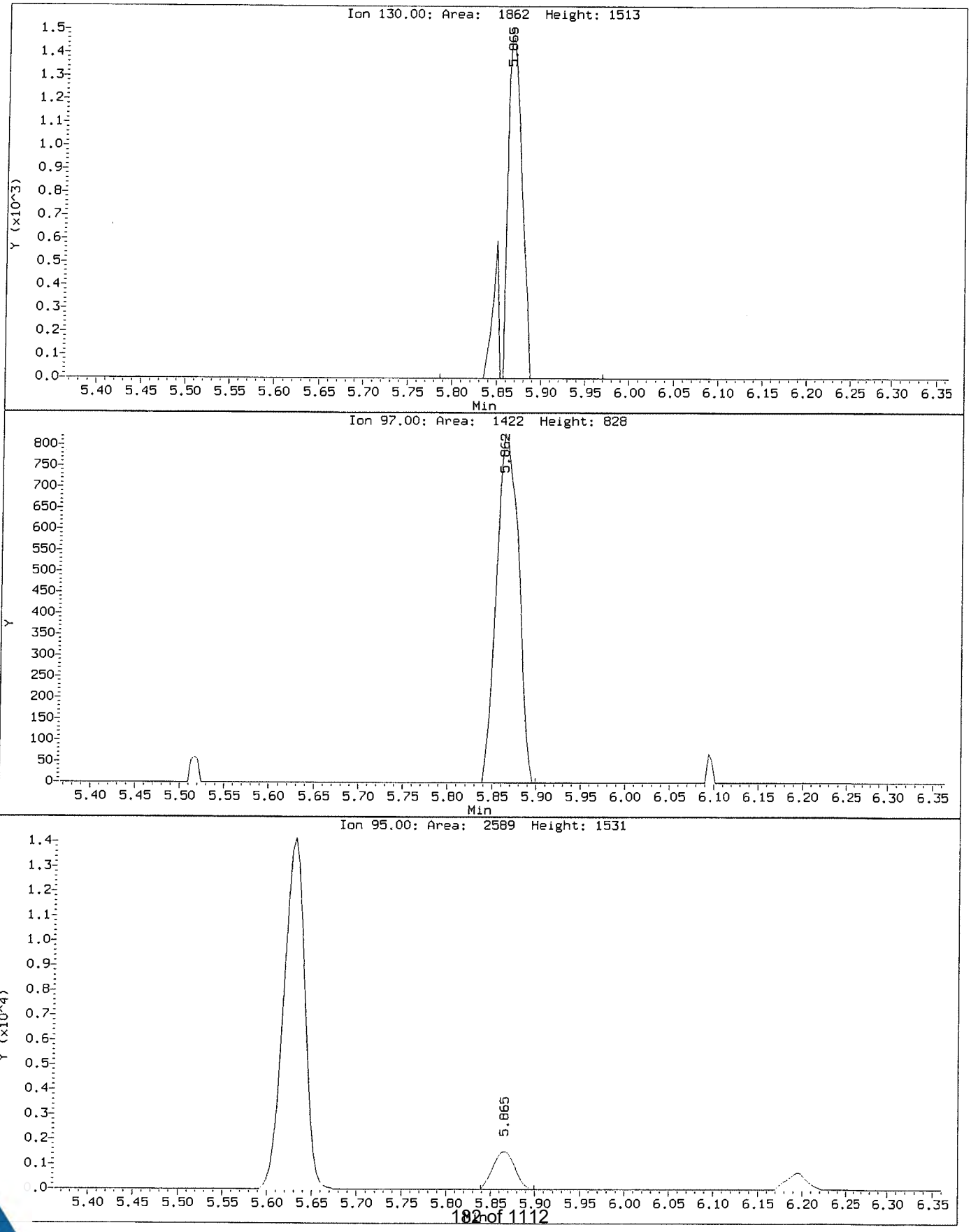
Instrument: VOA9.i
Client Sample ID: VSTD000.5

Compound: Trichloroethene
CAS Number: 79-01-6



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Report Date: 01-Feb-2019 15:43

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010804.D
Lab Smp Id: VSTD001 Client Smp ID: VSTD001
Inj Date : 08-JAN-2019 12:07
Operator : PC Inst ID: VOA9.i
Smp Info : VSTD001;VSTD001;1;3;
Misc Info : 180315V9;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa9.i\U190108.b\8260C.m
Meth Date : 01-Feb-2019 15:43 VOA9.i Quant Type: ISTD
Cal Date : 08-JAN-2019 11:18 Cal File: U010803.D
Als bottle: 5 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LHAAPb.sub
Target Version: 4.14
Processing Host: NAHSTW7087

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

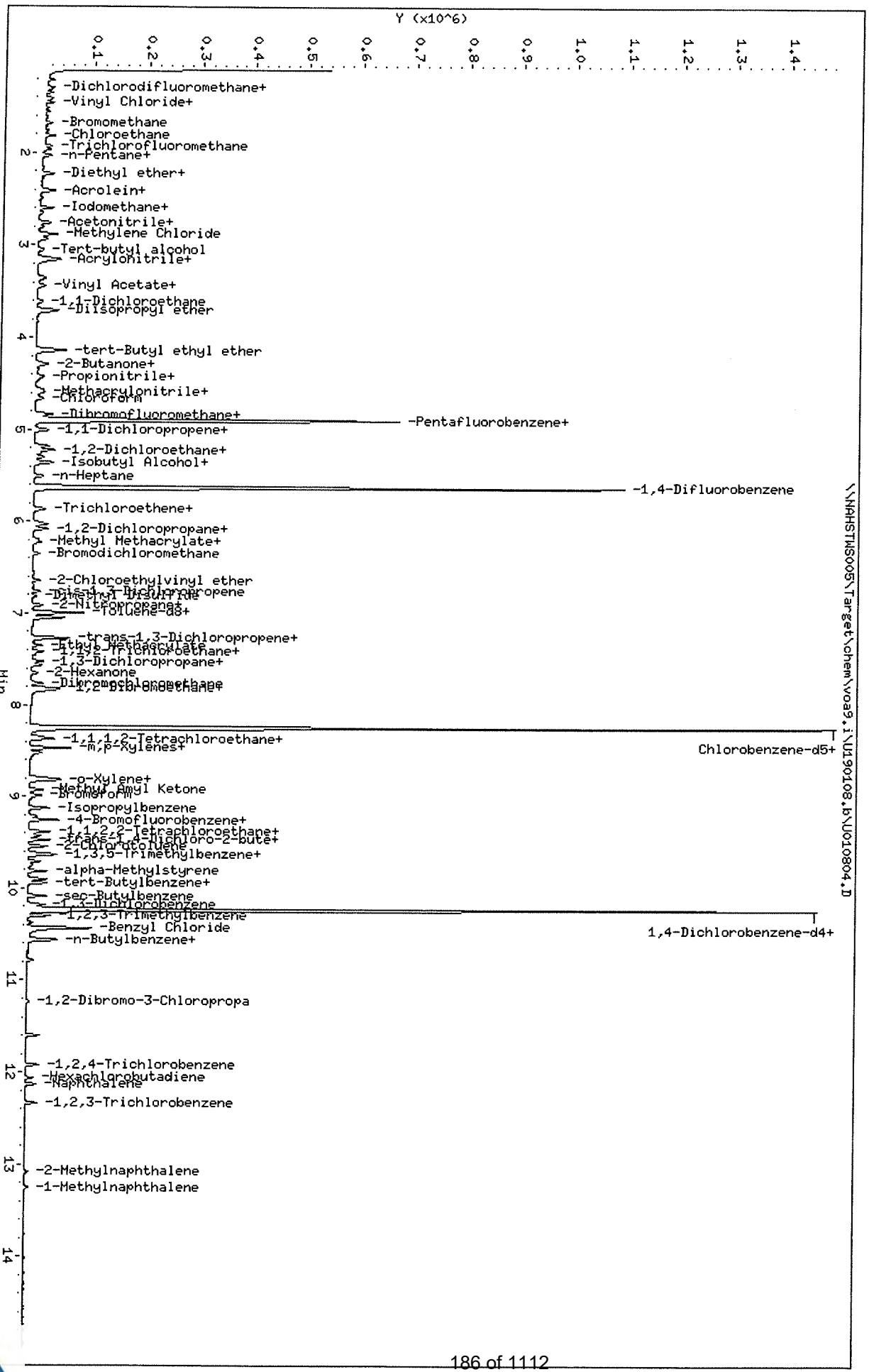
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.898	4.898	(1.000)	404016	50.0000	
* 36 1,4-Difluorobenzene	114	5.629	5.629	(1.000)	770704	50.0000	
* 47 Chlorobenzene-d5	117	8.249	8.249	(1.000)	704578	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	321134	50.0000	
$ 30 Dibromofluoromethane	113	4.834	4.834	(0.987)	12087	1.00000	1.09(a)
$ 35 1,2-Dichloroethane-d4	65	5.179	5.179	(1.057)	17198	1.00000	0.78(a)
$ 48 Toluene-d8	98	6.989	6.989	(0.847)	48097	1.00000	0.29(a)
$ 69 4-Bromofluorobenzene	95	9.257	9.257	(1.122)	17004	1.00000	0.68(a)
60 1,1,1,2-Tetrachloroethane	131	8.350	8.350	(1.012)	4435	1.00000	1.04(a)
31 1,1,1-Trichloroethane	97	4.834	4.834	(0.987)	7366	1.00000	1.11(a)
68 1,1,2,2-Tetrachloroethane	83	9.389	9.389	(0.917)	8453	1.00000	0.81(a)
53 1,1,2-Trichloroethane	83	7.421	7.421	(0.900)	4979	1.00000	1.15(a)
22 1,1-Dichloroethane	63	3.612	3.612	(0.737)	10439	1.00000	1.13(a)
11 1,1-Dichloroethene	96	2.412	2.412	(0.493)	4754	1.00000	1.21(a)
32 1,1-Dichloropropene	75	5.010	5.010	(0.890)	8431	1.00000	1.18(a)
93 1,2,3-Trichlorobenzene	180	12.335	12.335	(1.205)	5627	1.00000	0.98(a)
71 1,2,3-Trichloropropane	75	9.426	9.426	(0.921)	8049	1.00000	1.03(a)
90 1,2,4-Trichlorobenzene	180	11.923	11.923	(1.165)	6029	1.00000	1.04(a)
79 1,2,4-Trimethylbenzene	105	9.940	9.940	(0.971)	18064	1.00000	1.07(a)
89 1,2-Dibromo-3-Chloropropane	155	11.233	11.233	(1.097)	881	1.00000	2.82(a)
57 1,2-Dibromoethane	107	7.852	7.852	(0.952)	5312	1.00000	1.08(a)
88 1,2-Dichlorobenzene	146	10.569	10.569	(1.033)	11168	1.00000	1.14(a)

Data File: \\NAHSTWS005\Target\chem\voa9.i\U190108.b\U010804.D Page 2
Report Date: 01-Feb-2019 15:43

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
33 1,2-Dichloroethane	62	5.258	5.258	(0.934)	8732	1.00000	1.17(a)
42 1,2-Dichloropropane	63	6.082	6.082	(1.081)	6305	1.00000	1.13(a)
75 1,3,5-Trimethylbenzene	105	9.625	9.625	(0.940)	17525	1.00000	1.06(a)
83 1,3-Dichlorobenzene	146	10.180	10.180	(0.995)	11334	1.00000	1.17(a)
54 1,3-Dichloropropane	76	7.563	7.563	(0.917)	10722	1.00000	1.15(a)
84 1,4-Dichlorobenzene	146	10.255	10.255	(1.002)	12438	1.00000	1.21(a)
26 2,2-Dichloropropane	77	4.279	4.279	(0.874)	6018	1.00000	1.09(a)
24 2-Butanone	43	4.350	4.350	(0.888)	5959	2.00000	2.13(a)
76 2-Chlorotoluene	91	9.546	9.546	(0.933)	17676	1.00000	1.15(a)
52 2-Hexanone	43	7.653	7.653	(0.928)	7345	2.00000	1.80(a)
77 4-Chlorotoluene	91	9.640	9.640	(0.942)	20313	1.00000	1.14(a)
82 p-Isopropyltoluene	119	10.210	10.210	(0.997)	17792	1.00000	1.04(a)
45 4-Methyl-2-Pentanone	43	6.915	6.915	(0.838)	11419	2.00000	1.94(a)
10 Acetone	43	2.491	2.491	(0.509)	5926	2.00000	1.80(a)
37 Benzene	78	5.220	5.220	(0.927)	25155	1.00000	1.18(a)
74 Bromobenzene	156	9.381	9.381	(0.917)	5368	1.00000	1.07(a)
29 Bromochloromethane	128	4.560	4.560	(0.931)	2036	1.00000	0.91(a)
39 Bromodichloromethane	83	6.348	6.348	(1.128)	6215	1.00000	1.04(aM)
66 Bromoform	173	8.984	8.984	(1.089)	2493	1.00000	2.57(Ta)
6 Bromomethane	94	1.681	1.681	(0.343)	5371	1.00000	2.51(a)
19 Carbon Disulfide	76	2.600	2.600	(0.531)	32370	2.00000	2.34(a)
34 Carbon Tetrachloride	117	5.003	5.003	(0.889)	5317	1.00000	1.03(a)
59 Chlorobenzene	112	8.275	8.275	(1.003)	17004	1.00000	1.21(a)
7 Chloroethane	64	1.764	1.764	(0.360)	4108	1.00000	1.12(aM)
28 Chloroform	83	4.662	4.662	(0.952)	10150	1.00000	1.16(a)
3 Chloromethane	50	1.348	1.348	(0.275)	6743	1.00000	3.64(a)
27 cis-1,2-Dichloroethene	96	4.294	4.294	(0.877)	6440	1.00000	1.16(a)
46 cis-1,3-Dichloropropene	75	6.761	6.761	(1.201)	7156	1.00000	2.08(a)
55 Dibromochloromethane	129	7.758	7.758	(0.940)	3605	1.00000	1.97(a)
44 Dibromomethane	93	6.191	6.191	(1.100)	3631	1.00000	1.12(aM)
2 Dichlorodifluoromethane	85	1.217	1.217	(0.248)	6627	1.00000	1.24(a)
61 Ethylbenzene	106	8.373	8.373	(1.015)	8053	1.00000	1.13(a)
91 Hexachlorobutadiene	225	12.065	12.065	(1.179)	2244	1.00000	1.43(a)
67 Isopropylbenzene	105	9.126	9.126	(1.106)	21622	1.00000	1.06(a)
62 m,p-Xylenes	106	8.470	8.470	(1.027)	19399	2.00000	2.24(a)
17 Methylene Chloride	84	2.881	2.881	(0.588)	7653	1.00000	0.98(a)
87 n-Butylbenzene	91	10.555	10.555	(1.031)	17832	1.00000	1.07(a)
73 n-Propylbenzene	91	9.475	9.475	(0.926)	27656	1.00000	1.11(a)
92 Naphthalene	128	12.133	12.133	(1.185)	13707	1.00000	1.39(a)
63 o-Xylene	106	8.811	8.811	(1.068)	9528	1.00000	1.07(a)
81 sec-Butylbenzene	105	10.086	10.086	(0.985)	21651	1.00000	1.06(a)
64 Styrene	104	8.826	8.826	(1.070)	15486	1.00000	1.05(a)
78 tert-Butylbenzene	119	9.902	9.902	(0.967)	15596	1.00000	1.09(a)
56 Tetrachloroethene	164	7.526	7.526	(0.912)	4447	1.00000	1.20(a)
50 Toluene	91	7.049	7.049	(0.855)	24575	1.00000	1.13(a)
20 trans-1,2-Dichloroethene	96	3.151	3.151	(0.643)	5803	1.00000	1.17(a)
51 trans-1,3-Dichloropropene	75	7.263	7.263	(1.290)	5824	1.00000	2.32(a)
38 Trichloroethene	130	5.865	5.865	(1.042)	6121	1.00000	1.24(a)
8 Trichlorofluoromethane	101	1.966	1.966	(0.402)	7890	1.00000	1.16(a)
5 Vinyl Chloride	62	1.430	1.430	(0.292)	7112	1.00000	1.18(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.



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Sample Info: VSTD001;VSTD001;1;3;
Purge Volume: 5.0
Column phase: DB624

Instrument: VOA9.i
Operator: PC
Column diameter: 0.18

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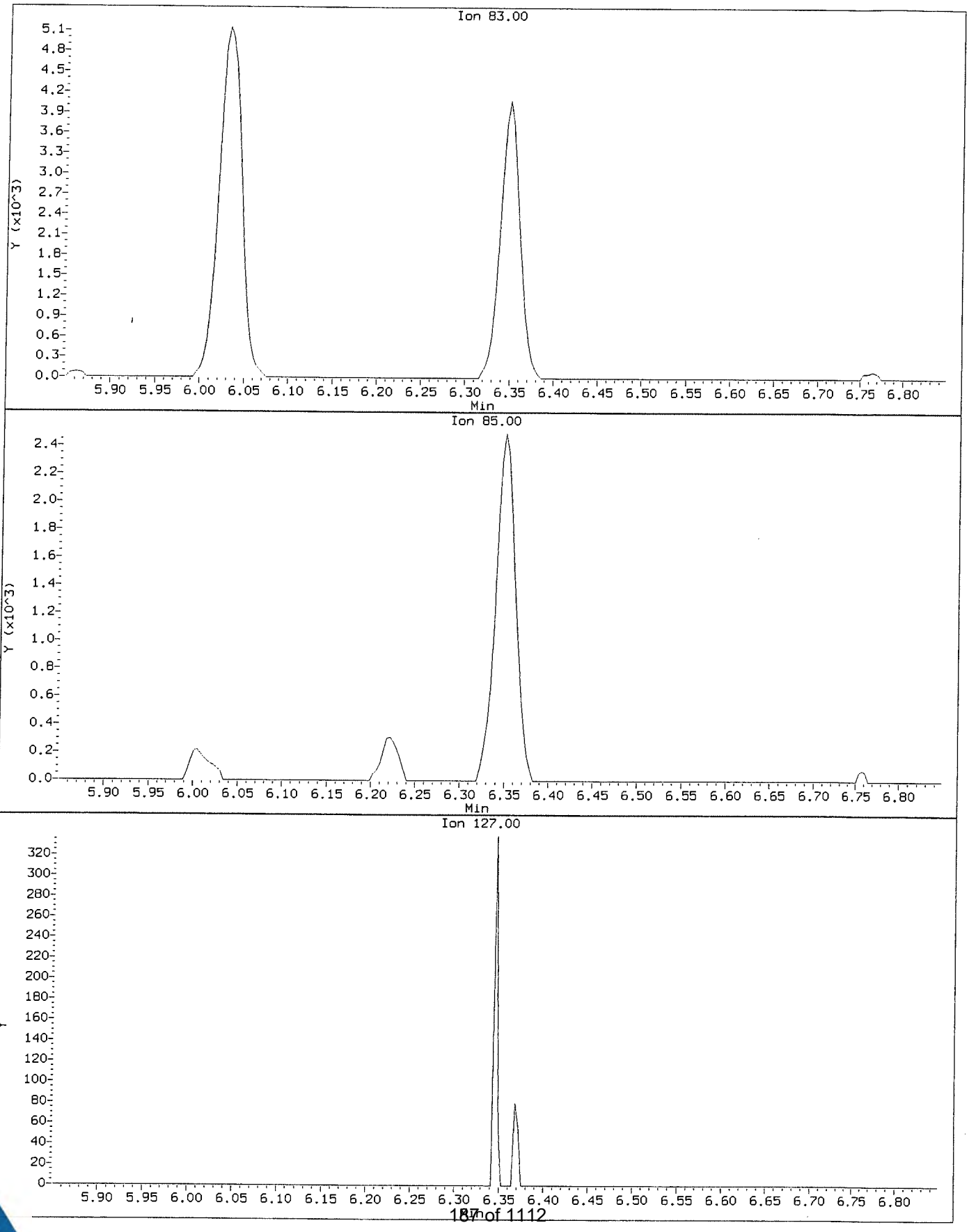
Instrument: VOA9.i
Client Sample ID: VSTD001

Compound: Bromodichloromethane
CAS Number: 75-27-4



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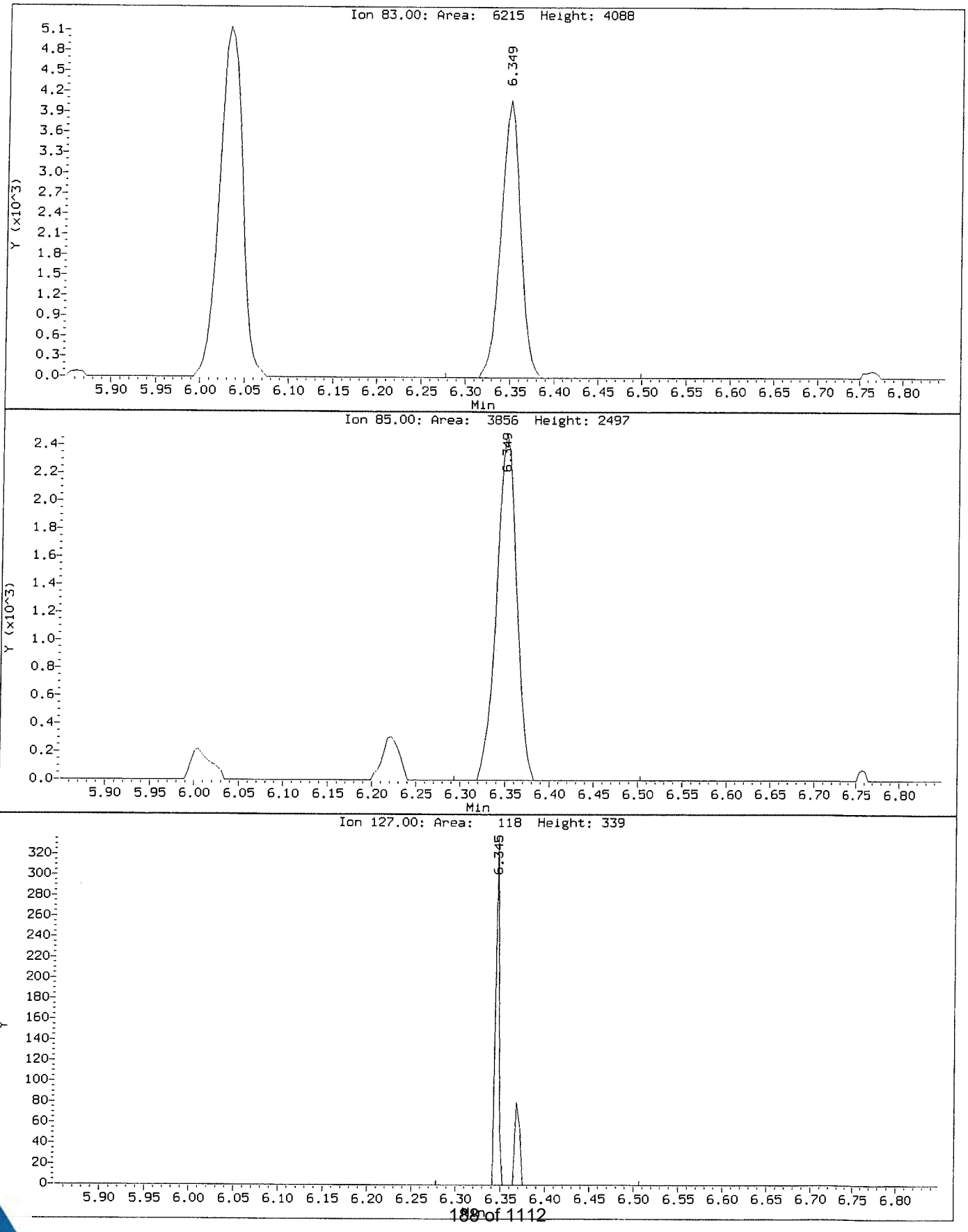
CAS Number: 75-27-4



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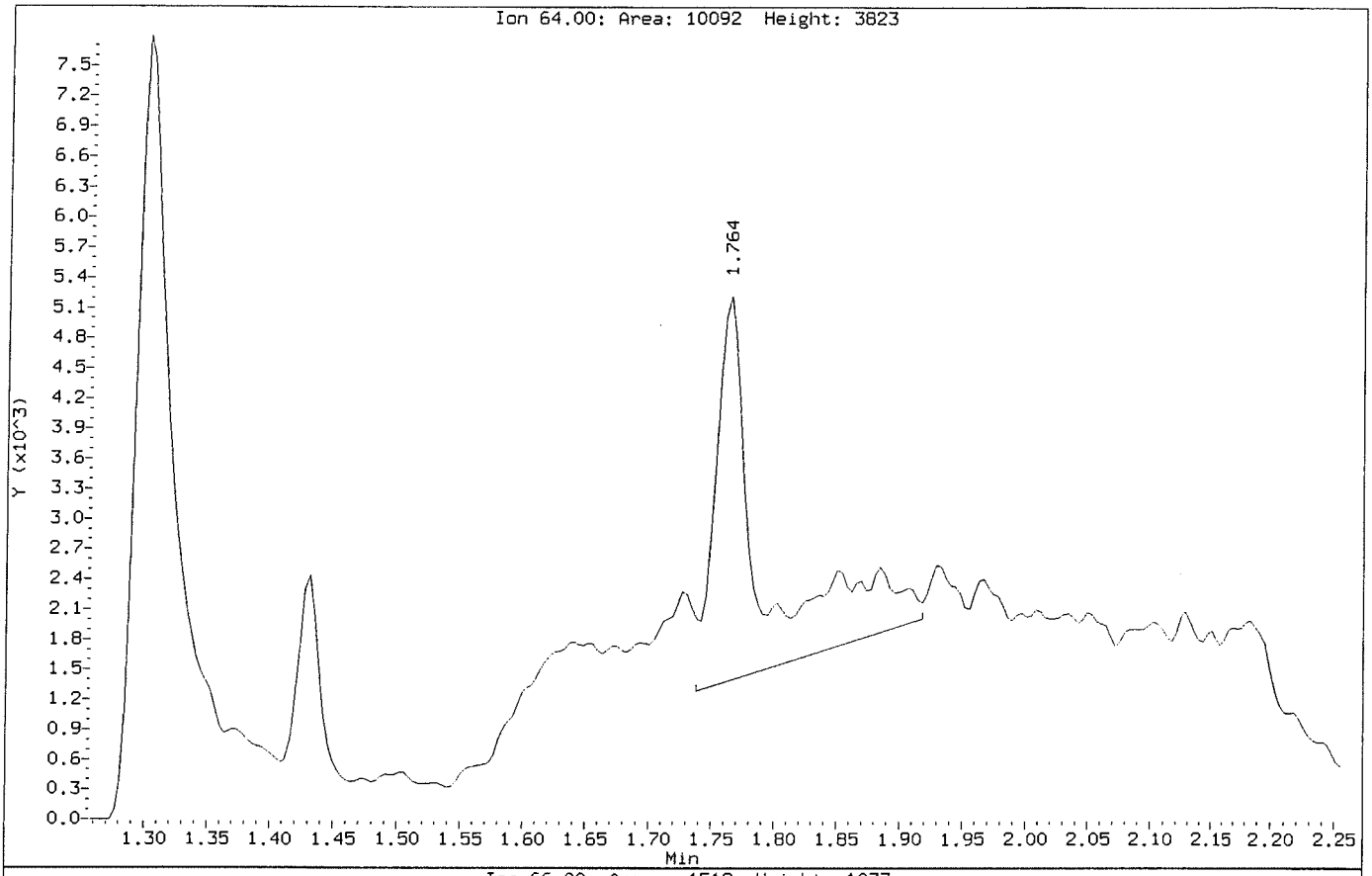
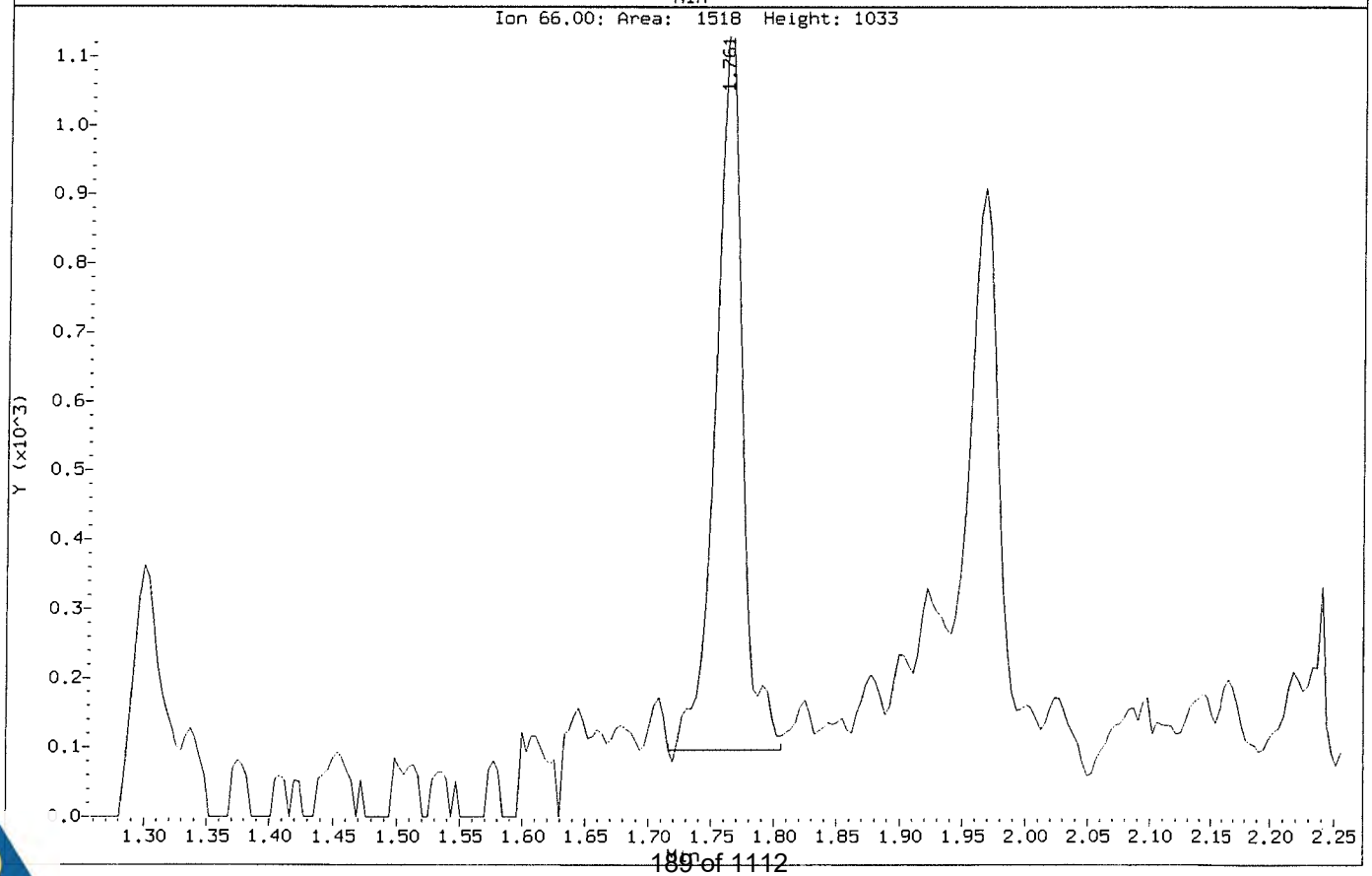
Compound: Chloroethane
CAS Number: 75-00-3





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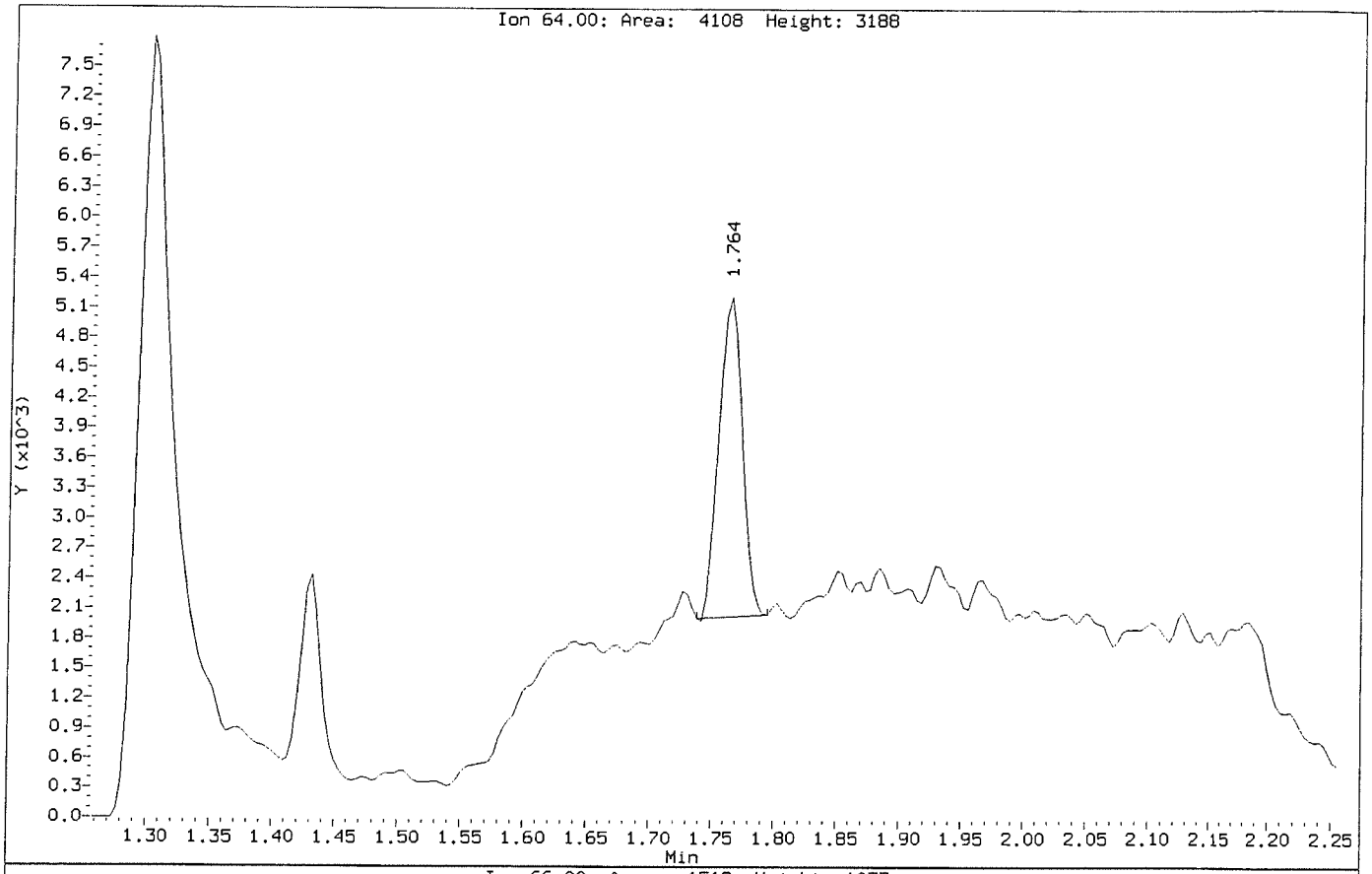
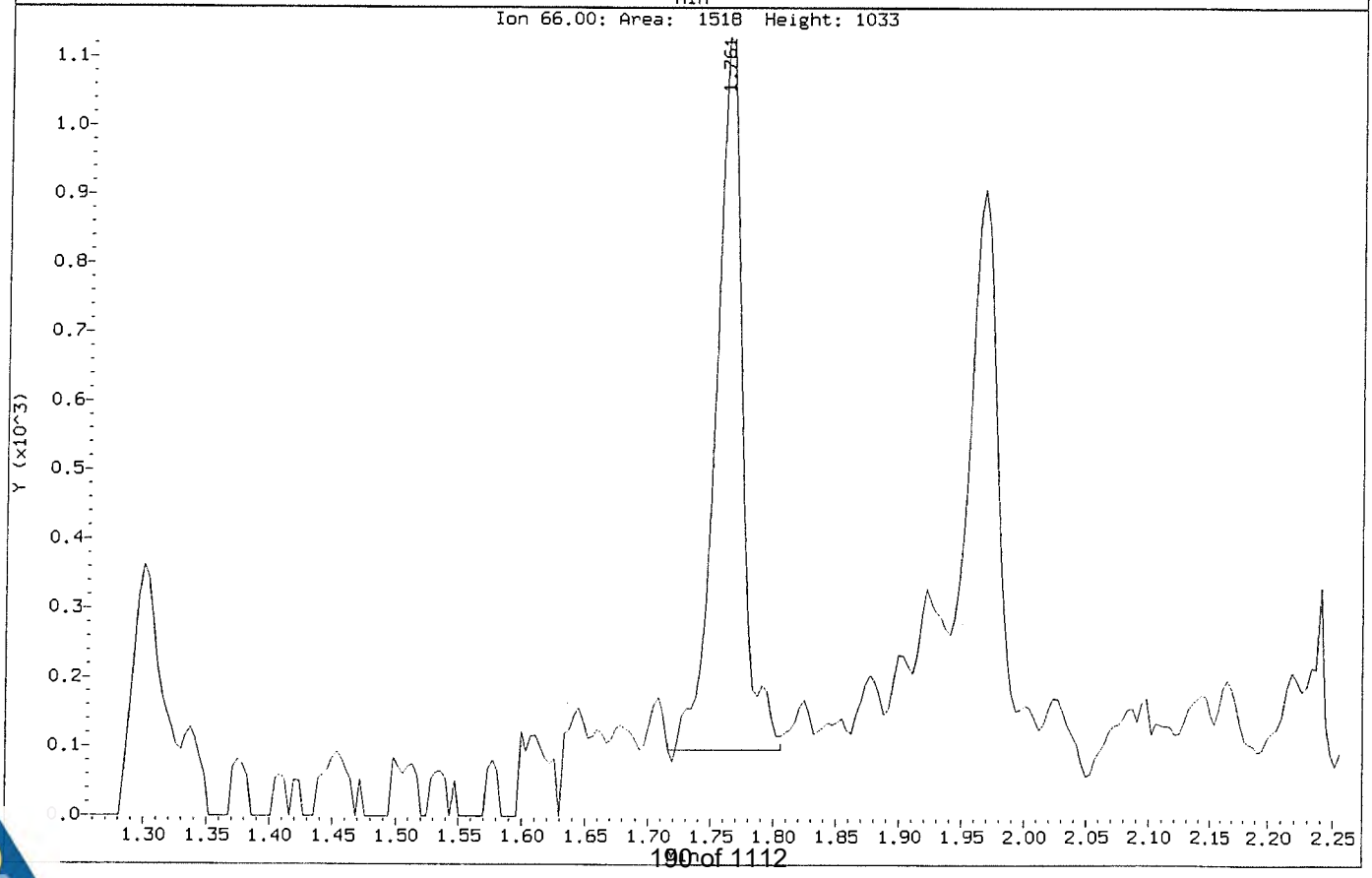
Client Sample ID: VSTD001

Compound: Chloroethane
CAS Number: 75-00-3





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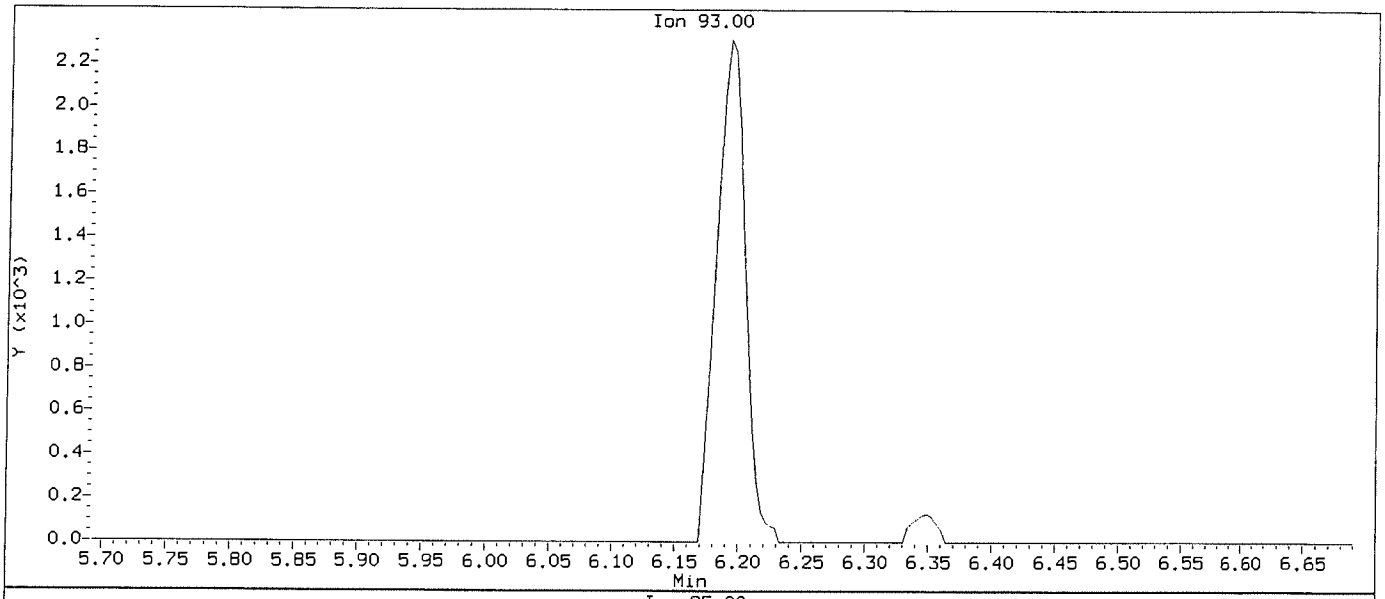
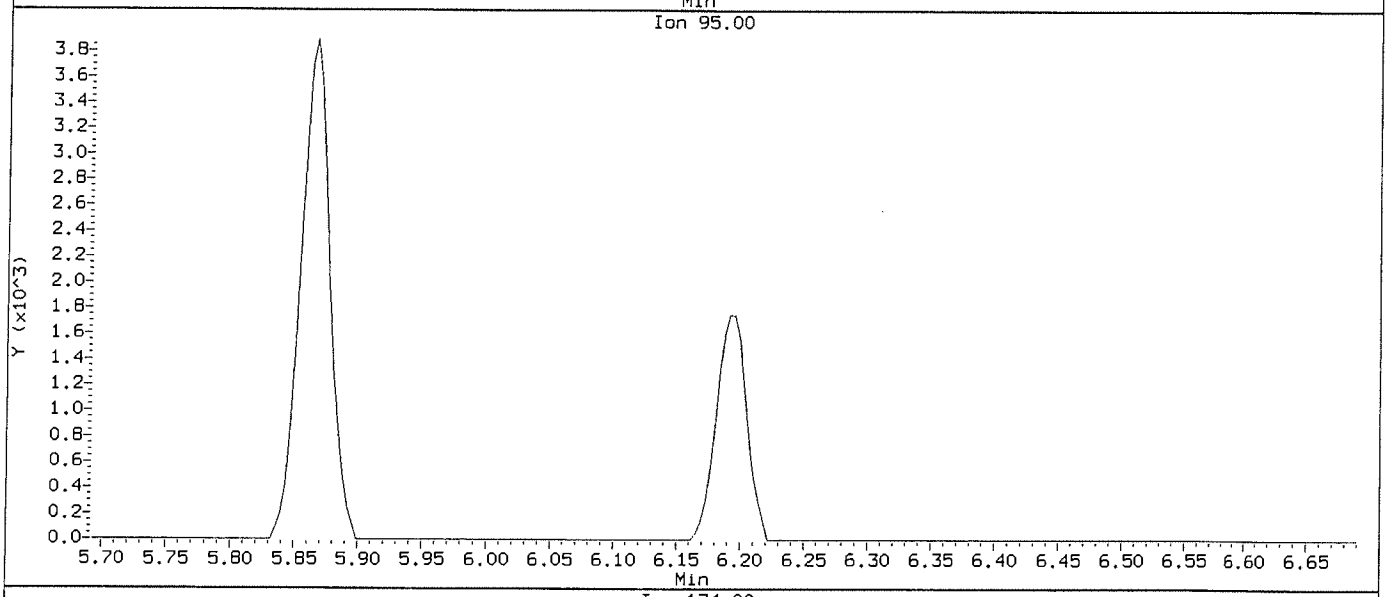
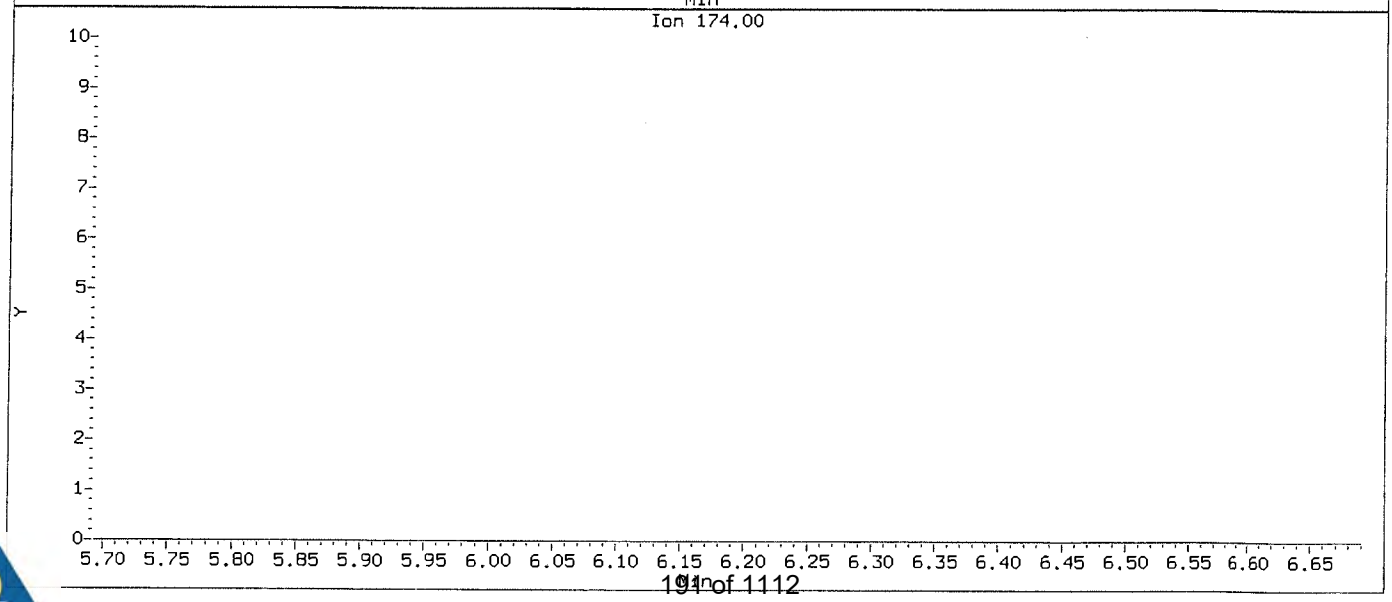
Instrument: VOA9.i
Client Sample ID: VSTD001

Compound: Dibromomethane
CAS Number: 74-95-3







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Instrument: VOA9.i
Client Sample ID: VSTD001

Compound: Dibromomethane
CAS Number: 74-95-3

