

**LONGHORN ARMY
AMMUNITION PLANT
KARNACK, TEXAS**

**ADMINISTRATIVE
RECORD**

Volume 9

2019

Bate Stamp Numbers

00924394 – 00925901

Prepared for

**Department of the Army
Longhorn Army Ammunition Plant**

1976 – 2019

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

VOLUME 9

2019

- 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: 00924394 – 00925901

Interference Check Solution AB (ICS-AB) Report

Sample Table

Sample Name ICSAB
 Data File Name 4021CSB.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

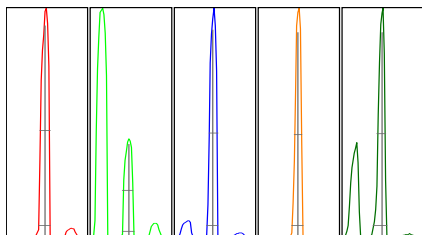
[nogas]

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 Parameters

RF Power 1600 W Carrier Gas 0.40 L/min S/C Temp 2 °C
 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 Parameters

RF Power	1600 W	Carrier Gas	0.40 L/min	S/C Temp	2 °C
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 %		

HS18121123 Cover Page

ALS WO# HS18121123





ALS Environmental
ALS Group USA, Corp
1317 South 13th Avenue
Kelso, WA 98626
T : +1 360 577 7222
F : +1 360 636 1068
www.alsglobal.com

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

WorkOrder: HS18121123

LHAAP /Site 18 /24

Bhate Environmental Associates, Inc.

Marcia Olive
445 Union Blvd Ste 129
Lakewood CO 80228

03-Feb-2019



HS18121123 LHAAP Site 18 24 Final

ALS WO# HS18121123





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

January 09, 2019

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

Work Order: **HS18121123**

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

Dear Marcia,

ALS Environmental received 4 sample(s) on Dec 19, 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,

A handwritten signature in black ink, appearing to read "Raj. P. Modashia", enclosed in a simple black oval.

Generated By: JUMOKE.LAWAL
RJ Modashia
Project Manager



ALS Houston, US

Date: 09-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP /Site 18 /24
Work Order: HS18121123

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS18121123-01	AWD3_121718	Groundwater		17-Dec-2018 13:15	19-Dec-2018 11:00	<input type="checkbox"/>
HS18121123-02	AWD1_121818	Groundwater		18-Dec-2018 09:30	19-Dec-2018 11:00	<input type="checkbox"/>
HS18121123-03	18CPTMW04SW_121818	Groundwater		18-Dec-2018 10:55	19-Dec-2018 11:00	<input type="checkbox"/>
HS18121123-04	18CPTMW04_121818	Groundwater		18-Dec-2018 12:15	19-Dec-2018 11:00	<input type="checkbox"/>



ALS Houston, US

Date: 09-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP /Site 18 /24
Work Order: HS18121123

CASE NARRATIVE**Work Order Comments**

- The analysis for Perchlorate was subcontracted to ALS Salt Lake City, UT. Final report attached. Trip blank listed on the COC however was not received upon cooler receipt.

GCMS Volatiles by Method SW8260**Batch ID: R330193****Sample ID: 18CPTMW04SW_121818 (HS18121123-03MS)**

- MS/MSD failed QC limits for select target compounds.

Sample ID: VSTD050

- Bromochloromethane exceeded %D limits for CCV; associated samples are non-detect for this compound.

Sample ID: 18CPTMW04SW_121818 (HS18121123-03MSD)

- The RPD between the MS and MSD was outside of the control limit

Metals by Method SW6020**Batch ID: 136231****Sample ID: HS18121117-01MS**

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

Metals by Method SW7470**Batch ID: 136208**

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



ALS Houston, US

Date: 09-Jan-19

Client: Bhate Environmental Associates, Inc.
 Project: LHAAP /Site 18 /24
 Sample ID: AWD3_121718
 Collection Date: 17-Dec-2018 13:15

ANALYTICAL REPORT
 WorkOrder:HS18121123
 Lab ID:HS18121123-01
 Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD		Method:SW8260						
8260C								Analyst: PC
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	28-Dec-2018 13:05
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	28-Dec-2018 13:05
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	UG/L	1	28-Dec-2018 13:05
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	28-Dec-2018 13:05
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	28-Dec-2018 13:05
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	28-Dec-2018 13:05
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	UG/L	1	28-Dec-2018 13:05
1,2,3-Trichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	28-Dec-2018 13:05
1,2,3-Trichloropropane	0.50	U	0.50	0.50	1.0	UG/L	1	28-Dec-2018 13:05
1,2,4-Trichlorobenzene	0.50	U	0.50	0.50	1.0	UG/L	1	28-Dec-2018 13:05
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	28-Dec-2018 13:05
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	28-Dec-2018 13:05
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	28-Dec-2018 13:05
1,2-Dichlorobenzene	0.50	U	0.50	0.50	1.0	UG/L	1	28-Dec-2018 13:05
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	28-Dec-2018 13:05
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	UG/L	1	28-Dec-2018 13:05
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	28-Dec-2018 13:05
1,3-Dichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	28-Dec-2018 13:05
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	UG/L	1	28-Dec-2018 13:05
1,4-Dichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	28-Dec-2018 13:05
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	28-Dec-2018 13:05
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	28-Dec-2018 13:05
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	UG/L	1	28-Dec-2018 13:05
2-Hexanone	1.0	U	1.0	1.0	2.0	UG/L	1	28-Dec-2018 13:05
4-Chlorotoluene	0.50	U	0.40	0.50	1.0	UG/L	1	28-Dec-2018 13:05
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	UG/L	1	28-Dec-2018 13:05
4-Methyl-2-pentanone	1.0	U	0.70	1.0	2.0	UG/L	1	28-Dec-2018 13:05
Acetone	2.0	U	0.40	2.0	2.0	UG/L	1	28-Dec-2018 13:05
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	28-Dec-2018 13:05
Bromobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	28-Dec-2018 13:05
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	28-Dec-2018 13:05
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	28-Dec-2018 13:05
Bromoform	0.50	U	0.40	0.50	1.0	UG/L	1	28-Dec-2018 13:05
Bromomethane	0.50	U	0.40	0.50	1.0	UG/L	1	28-Dec-2018 13:05
Carbon disulfide	1.0	U	0.60	1.0	2.0	UG/L	1	28-Dec-2018 13:05
Carbon tetrachloride	5.7		0.50	0.50	1.0	UG/L	1	28-Dec-2018 13:05
Chlorobenzene	0.50	U	0.30	0.50	1.0	UG/L	1	28-Dec-2018 13:05
Chloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	28-Dec-2018 13:05
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	28-Dec-2018 13:05

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



ALS Houston, US

Date: 09-Jan-19

Client: Bhate Environmental Associates, Inc.
 Project: LHAAP /Site 18 /24
 Sample ID: AWD3_121718
 Collection Date: 17-Dec-2018 13:15

ANALYTICAL REPORT

WorkOrder:HS18121123
 Lab ID:HS18121123-01
 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	28-Dec-2018 13:05
cis-1,2-Dichloroethene	1.8		0.20	0.50	1.0	UG/L	1	28-Dec-2018 13:05
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	28-Dec-2018 13:05
Dibromochloromethane	0.50	U	0.30	0.50	1.0	UG/L	1	28-Dec-2018 13:05
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	28-Dec-2018 13:05
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	28-Dec-2018 13:05
Ethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	28-Dec-2018 13:05
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	28-Dec-2018 13:05
Isopropylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	28-Dec-2018 13:05
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	28-Dec-2018 13:05
Methylene chloride	0.50	U	0.40	0.50	2.0	UG/L	1	28-Dec-2018 13:05
n-Butylbenzene	0.50	U	0.40	0.50	1.0	UG/L	1	28-Dec-2018 13:05
n-Propylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	28-Dec-2018 13:05
Naphthalene	0.50	U	0.30	0.50	1.0	UG/L	1	28-Dec-2018 13:05
o-Xylene	0.50	U	0.30	0.50	1.0	UG/L	1	28-Dec-2018 13:05
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	28-Dec-2018 13:05
Styrene	0.50	U	0.30	0.50	1.0	UG/L	1	28-Dec-2018 13:05
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	28-Dec-2018 13:05
Tetrachloroethene	1.3		0.30	0.50	1.0	UG/L	1	28-Dec-2018 13:05
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	28-Dec-2018 13:05
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	28-Dec-2018 13:05
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	28-Dec-2018 13:05
Trichloroethene	160		0.20	0.50	1.0	UG/L	1	28-Dec-2018 13:05
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	28-Dec-2018 13:05
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	28-Dec-2018 13:05
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>100</i>			0	<i>81-118</i>	%REC	<i>1</i>	<i>28-Dec-2018 13:05</i>
<i>Surr: 4-Bromofluorobenzene</i>	<i>96.0</i>			0	<i>85-114</i>	%REC	<i>1</i>	<i>28-Dec-2018 13:05</i>
<i>Surr: Dibromofluoromethane</i>	<i>93.3</i>			0	<i>80-119</i>	%REC	<i>1</i>	<i>28-Dec-2018 13:05</i>
<i>Surr: Toluene-d8</i>	<i>105</i>			0	<i>89-112</i>	%REC	<i>1</i>	<i>28-Dec-2018 13:05</i>

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



ALS Houston, US

Date: 09-Jan-19

Client: Bhate Environmental Associates, Inc.
 Project: LHAAP /Site 18 /24
 Sample ID: AWD3_121718
 Collection Date: 17-Dec-2018 13:15

ANALYTICAL REPORT

WorkOrder:HS18121123
 Lab ID:HS18121123-01
 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	0.247		0.00180	0.00500	0.0100	mg/L	1	08-Jan-2019 17:07
Antimony	0.00100	U	0.000400	0.00100	0.00200	mg/L	1	08-Jan-2019 17:07
Arsenic	0.00100	U	0.000400	0.00100	0.00200	mg/L	1	08-Jan-2019 17:07
Barium	0.0240		0.00190	0.00250	0.00400	mg/L	1	08-Jan-2019 17:07
Beryllium	0.00100	U	0.000200	0.00100	0.00200	mg/L	1	08-Jan-2019 17:07
Cadmium	0.00100	U	0.000200	0.00100	0.00200	mg/L	1	08-Jan-2019 17:07
Calcium	0.645		0.0340	0.100	0.500	mg/L	1	08-Jan-2019 17:07
Chromium	0.0533		0.000400	0.00100	0.00400	mg/L	1	08-Jan-2019 17:07
Cobalt	0.000380	J	0.000200	0.00100	0.00500	mg/L	1	08-Jan-2019 17:07
Copper	0.00100	U	0.00100	0.00100	0.00200	mg/L	1	08-Jan-2019 17:07
Iron	0.459		0.0120	0.100	0.200	mg/L	1	08-Jan-2019 17:07
Lead	0.00100	U	0.000600	0.00100	0.00200	mg/L	1	08-Jan-2019 17:07
Magnesium	0.411		0.0100	0.100	0.200	mg/L	1	08-Jan-2019 17:07
Manganese	0.00633		0.000700	0.00100	0.00500	mg/L	1	08-Jan-2019 17:07
Nickel	0.00771		0.000600	0.00100	0.00200	mg/L	1	08-Jan-2019 17:07
Potassium	0.482		0.0180	0.100	0.200	mg/L	1	08-Jan-2019 17:07
Selenium	0.00467		0.00110	0.00100	0.00200	mg/L	1	08-Jan-2019 17:07
Silver	0.00100	U	0.000200	0.00100	0.00200	mg/L	1	08-Jan-2019 17:07
Sodium	29.4		0.0140	0.100	0.200	mg/L	1	08-Jan-2019 17:07
Thallium	0.00100	U	0.000200	0.00100	0.00200	mg/L	1	08-Jan-2019 17:07
Vanadium	0.00209	J	0.000600	0.00100	0.00500	mg/L	1	08-Jan-2019 17:07
Zinc	0.00582		0.00200	0.00250	0.00400	mg/L	1	08-Jan-2019 17:07
MERCURY BY SW7470A		Method:SW7470				Prep:SW7470 / 02-Jan-2019		Analyst: OFO
Mercury	0.000100	U	0.0000300	0.000100	0.000200	mg/L	1	02-Jan-2019 17:06
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		Method:NA						Analyst: SUB
Subcontract Analysis	See Attached		0	0		NA	1	04-Jan-2019 09:11

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



ALS Houston, US

Date: 09-Jan-19

Client: Bhate Environmental Associates, Inc.
 Project: LHAAP /Site 18 /24
 Sample ID: AWD1_121818
 Collection Date: 18-Dec-2018 09:30

ANALYTICAL REPORT

WorkOrder:HS18121123
 Lab ID:HS18121123-02
 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	1.39		0.0360	0.100	0.200	mg/L	20	09-Jan-2019 15:00
Antimony	0.00150	J	0.000400	0.00100	0.00200	mg/L	1	08-Jan-2019 17:13
Arsenic	0.0155		0.000400	0.00100	0.00200	mg/L	1	08-Jan-2019 17:13
Barium	0.406		0.00190	0.00250	0.00400	mg/L	1	08-Jan-2019 17:13
Beryllium	0.000576	J	0.000200	0.00100	0.00200	mg/L	1	08-Jan-2019 17:13
Cadmium	0.00100	U	0.000200	0.00100	0.00200	mg/L	1	08-Jan-2019 17:13
Calcium	3.69		0.0340	0.100	0.500	mg/L	1	08-Jan-2019 17:13
Chromium	0.0127		0.000400	0.00100	0.00400	mg/L	1	08-Jan-2019 17:13
Cobalt	0.0119		0.000200	0.00100	0.00500	mg/L	1	08-Jan-2019 17:13
Copper	0.00329		0.00100	0.00100	0.00200	mg/L	1	08-Jan-2019 17:13
Iron	9.78		0.0120	0.100	0.200	mg/L	1	08-Jan-2019 17:13
Lead	0.00368		0.000600	0.00100	0.00200	mg/L	1	08-Jan-2019 17:13
Magnesium	4.43		0.0100	0.100	0.200	mg/L	1	08-Jan-2019 17:13
Manganese	0.346		0.000700	0.00100	0.00500	mg/L	1	08-Jan-2019 17:13
Nickel	0.0227		0.000600	0.00100	0.00200	mg/L	1	08-Jan-2019 17:13
Potassium	3.51		0.0180	0.100	0.200	mg/L	1	08-Jan-2019 17:13
Selenium	0.00380		0.00110	0.00100	0.00200	mg/L	1	08-Jan-2019 17:13
Silver	0.00100	U	0.000200	0.00100	0.00200	mg/L	1	08-Jan-2019 17:13
Sodium	107		0.0140	0.100	0.200	mg/L	1	08-Jan-2019 17:13
Thallium	0.00100	U	0.000200	0.00100	0.00200	mg/L	1	08-Jan-2019 17:13
Vanadium	0.0124		0.000600	0.00100	0.00500	mg/L	1	08-Jan-2019 17:13
Zinc	0.0244		0.00200	0.00250	0.00400	mg/L	1	08-Jan-2019 17:13
MERCURY BY SW7470A			Method:SW7470			Prep:SW7470 / 02-Jan-2019		Analyst: OFO
Mercury	0.000100	U	0.0000300	0.000100	0.000200	mg/L	1	02-Jan-2019 17:07
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)			Method:NA			Analyst: SUB		
Subcontract Analysis	See Attached		0	0		NA	1	04-Jan-2019 09:11

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



ALS Houston, US

Date: 09-Jan-19

Client: Bhate Environmental Associates, Inc.
 Project: LHAAP /Site 18 /24
 Sample ID: 18CPTMW04SW_121818
 Collection Date: 18-Dec-2018 10:55

ANALYTICAL REPORT

WorkOrder:HS18121123
 Lab ID:HS18121123-03
 Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD		Method:SW8260						
8260C								Analyst: PC
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	28-Dec-2018 13:30
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	28-Dec-2018 13:30
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	UG/L	1	28-Dec-2018 13:30
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	28-Dec-2018 13:30
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	28-Dec-2018 13:30
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	28-Dec-2018 13:30
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	UG/L	1	28-Dec-2018 13:30
1,2,3-Trichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	28-Dec-2018 13:30
1,2,3-Trichloropropane	0.50	U	0.50	0.50	1.0	UG/L	1	28-Dec-2018 13:30
1,2,4-Trichlorobenzene	0.50	U	0.50	0.50	1.0	UG/L	1	28-Dec-2018 13:30
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	28-Dec-2018 13:30
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	28-Dec-2018 13:30
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	28-Dec-2018 13:30
1,2-Dichlorobenzene	0.50	U	0.50	0.50	1.0	UG/L	1	28-Dec-2018 13:30
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	28-Dec-2018 13:30
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	UG/L	1	28-Dec-2018 13:30
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	28-Dec-2018 13:30
1,3-Dichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	28-Dec-2018 13:30
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	UG/L	1	28-Dec-2018 13:30
1,4-Dichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	28-Dec-2018 13:30
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	28-Dec-2018 13:30
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	28-Dec-2018 13:30
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	UG/L	1	28-Dec-2018 13:30
2-Hexanone	1.0	U	1.0	1.0	2.0	UG/L	1	28-Dec-2018 13:30
4-Chlorotoluene	0.50	U	0.40	0.50	1.0	UG/L	1	28-Dec-2018 13:30
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	UG/L	1	28-Dec-2018 13:30
4-Methyl-2-pentanone	1.0	U	0.70	1.0	2.0	UG/L	1	28-Dec-2018 13:30
Acetone	2.0	U	0.40	2.0	2.0	UG/L	1	28-Dec-2018 13:30
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	28-Dec-2018 13:30
Bromobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	28-Dec-2018 13:30
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	28-Dec-2018 13:30
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	28-Dec-2018 13:30
Bromoform	0.50	U	0.40	0.50	1.0	UG/L	1	28-Dec-2018 13:30
Bromomethane	0.50	U	0.40	0.50	1.0	UG/L	1	28-Dec-2018 13:30
Carbon disulfide	1.0	U	0.60	1.0	2.0	UG/L	1	28-Dec-2018 13:30
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	UG/L	1	28-Dec-2018 13:30
Chlorobenzene	0.50	U	0.30	0.50	1.0	UG/L	1	28-Dec-2018 13:30
Chloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	28-Dec-2018 13:30
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	28-Dec-2018 13:30

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



ALS Houston, US

Date: 09-Jan-19

Client: Bhate Environmental Associates, Inc.
 Project: LHAAP /Site 18 /24
 Sample ID: 18CPTMW04SW_121818
 Collection Date: 18-Dec-2018 10:55

ANALYTICAL REPORT
 WorkOrder:HS18121123
 Lab ID:HS18121123-03
 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	28-Dec-2018 13:30	
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	28-Dec-2018 13:30	
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	28-Dec-2018 13:30	
Dibromochloromethane	0.50	U	0.30	0.50	1.0	UG/L	1	28-Dec-2018 13:30	
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	28-Dec-2018 13:30	
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	28-Dec-2018 13:30	
Ethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	28-Dec-2018 13:30	
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	28-Dec-2018 13:30	
Isopropylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	28-Dec-2018 13:30	
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	28-Dec-2018 13:30	
Methylene chloride	0.50	U	0.40	0.50	2.0	UG/L	1	28-Dec-2018 13:30	
n-Butylbenzene	0.50	U	0.40	0.50	1.0	UG/L	1	28-Dec-2018 13:30	
n-Propylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	28-Dec-2018 13:30	
Naphthalene	0.50	U	0.30	0.50	1.0	UG/L	1	28-Dec-2018 13:30	
o-Xylene	0.50	U	0.30	0.50	1.0	UG/L	1	28-Dec-2018 13:30	
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	28-Dec-2018 13:30	
Styrene	0.50	U	0.30	0.50	1.0	UG/L	1	28-Dec-2018 13:30	
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	28-Dec-2018 13:30	
Tetrachloroethene	0.50	U	0.30	0.50	1.0	UG/L	1	28-Dec-2018 13:30	
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	28-Dec-2018 13:30	
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	28-Dec-2018 13:30	
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	28-Dec-2018 13:30	
Trichloroethene	1.0		0.20	0.50	1.0	UG/L	1	28-Dec-2018 13:30	
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	28-Dec-2018 13:30	
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	28-Dec-2018 13:30	
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>101</i>			0	<i>81-118</i>	%REC	1	28-Dec-2018 13:30	
<i>Surr: 4-Bromofluorobenzene</i>	<i>96.3</i>			0	<i>85-114</i>	%REC	1	28-Dec-2018 13:30	
<i>Surr: Dibromofluoromethane</i>	<i>92.8</i>			0	<i>80-119</i>	%REC	1	28-Dec-2018 13:30	
<i>Surr: Toluene-d8</i>	<i>105</i>			0	<i>89-112</i>	%REC	1	28-Dec-2018 13:30	

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



ALS Houston, US

Date: 09-Jan-19

Client: Bhate Environmental Associates, Inc.
 Project: LHAAP /Site 18 /24
 Sample ID: 18CPTMW04SW_121818
 Collection Date: 18-Dec-2018 10:55

ANALYTICAL REPORT
 WorkOrder:HS18121123
 Lab ID:HS18121123-03
 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	0.0834		0.00180	0.00500	0.0100	mg/L	1	08-Jan-2019 17:15
Antimony	0.00100	U	0.000400	0.00100	0.00200	mg/L	1	08-Jan-2019 17:15
Arsenic	0.00429		0.000400	0.00100	0.00200	mg/L	1	08-Jan-2019 17:15
Barium	0.977		0.00190	0.00250	0.00400	mg/L	1	08-Jan-2019 17:15
Beryllium	0.00100	U	0.000200	0.00100	0.00200	mg/L	1	08-Jan-2019 17:15
Cadmium	0.00100	U	0.000200	0.00100	0.00200	mg/L	1	08-Jan-2019 17:15
Calcium	34.8		0.0340	0.100	0.500	mg/L	1	08-Jan-2019 17:15
Chromium	0.00781		0.000400	0.00100	0.00400	mg/L	1	08-Jan-2019 17:15
Cobalt	0.0146		0.000200	0.00100	0.00500	mg/L	1	08-Jan-2019 17:15
Copper	0.00100	U	0.00100	0.00100	0.00200	mg/L	1	08-Jan-2019 17:15
Iron	19.9		0.0120	0.100	0.200	mg/L	1	08-Jan-2019 17:15
Lead	0.00100	U	0.000600	0.00100	0.00200	mg/L	1	08-Jan-2019 17:15
Magnesium	20.0		0.0100	0.100	0.200	mg/L	1	08-Jan-2019 17:15
Manganese	0.750		0.000700	0.00100	0.00500	mg/L	1	08-Jan-2019 17:15
Nickel	0.00974		0.000600	0.00100	0.00200	mg/L	1	08-Jan-2019 17:15
Potassium	44.7		0.0180	0.100	0.200	mg/L	1	08-Jan-2019 17:15
Selenium	0.00100	U	0.00110	0.00100	0.00200	mg/L	1	08-Jan-2019 17:15
Silver	0.00100	U	0.000200	0.00100	0.00200	mg/L	1	08-Jan-2019 17:15
Sodium	118		0.0140	0.100	0.200	mg/L	1	08-Jan-2019 17:15
Thallium	0.00100	U	0.000200	0.00100	0.00200	mg/L	1	08-Jan-2019 17:15
Vanadium	0.00100	U	0.000600	0.00100	0.00500	mg/L	1	08-Jan-2019 17:15
Zinc	0.0382		0.00200	0.00250	0.00400	mg/L	1	08-Jan-2019 17:15
MERCURY BY SW7470A		Method:SW7470				Prep:SW7470 / 02-Jan-2019		Analyst: OFO
Mercury	0.000100	U	0.0000300	0.000100	0.000200	mg/L	1	02-Jan-2019 17:09
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		Method:NA						Analyst: SUB
Subcontract Analysis	See Attached		0	0		NA	1	04-Jan-2019 09:11

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



ALS Houston, US

Date: 09-Jan-19

Client: Bhate Environmental Associates, Inc.
 Project: LHAAP /Site 18 /24
 Sample ID: 18CPTMW04_121818
 Collection Date: 18-Dec-2018 12:15

ANALYTICAL REPORT

WorkOrder:HS18121123
 Lab ID:HS18121123-04
 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	2.5	U	1.5	2.5	5.0	UG/L	5	28-Dec-2018 13:54	
1,1,1-Trichloroethane	2.5	U	1.0	2.5	5.0	UG/L	5	28-Dec-2018 13:54	
1,1,2,2-Tetrachloroethane	2.5	U	2.5	2.5	5.0	UG/L	5	28-Dec-2018 13:54	
1,1,2-Trichloroethane	2.5	U	1.5	2.5	5.0	UG/L	5	28-Dec-2018 13:54	
1,1-Dichloroethane	2.5	U	1.0	2.5	5.0	UG/L	5	28-Dec-2018 13:54	
1,1-Dichloroethene	2.5	U	1.0	2.5	5.0	UG/L	5	28-Dec-2018 13:54	
1,1-Dichloropropene	2.5	U	1.5	2.5	5.0	UG/L	5	28-Dec-2018 13:54	
1,2,3-Trichlorobenzene	2.5	U	2.0	2.5	5.0	UG/L	5	28-Dec-2018 13:54	
1,2,3-Trichloropropane	2.5	U	2.5	2.5	5.0	UG/L	5	28-Dec-2018 13:54	
1,2,4-Trichlorobenzene	2.5	U	2.5	2.5	5.0	UG/L	5	28-Dec-2018 13:54	
1,2,4-Trimethylbenzene	2.5	U	1.5	2.5	5.0	UG/L	5	28-Dec-2018 13:54	
1,2-Dibromo-3-chloropropane	2.5	U	1.0	2.5	5.0	UG/L	5	28-Dec-2018 13:54	
1,2-Dibromoethane	2.5	U	1.0	2.5	5.0	UG/L	5	28-Dec-2018 13:54	
1,2-Dichlorobenzene	2.5	U	2.5	2.5	5.0	UG/L	5	28-Dec-2018 13:54	
1,2-Dichloroethane	5.6		1.0	2.5	5.0	UG/L	5	28-Dec-2018 13:54	
1,2-Dichloropropane	2.5	U	2.5	2.5	5.0	UG/L	5	28-Dec-2018 13:54	
1,3,5-Trimethylbenzene	2.5	U	1.5	2.5	5.0	UG/L	5	28-Dec-2018 13:54	
1,3-Dichlorobenzene	2.5	U	2.0	2.5	5.0	UG/L	5	28-Dec-2018 13:54	
1,3-Dichloropropane	2.5	U	1.5	2.5	5.0	UG/L	5	28-Dec-2018 13:54	
1,4-Dichlorobenzene	2.5	U	2.0	2.5	5.0	UG/L	5	28-Dec-2018 13:54	
2,2-Dichloropropane	2.5	U	1.0	2.5	5.0	UG/L	5	28-Dec-2018 13:54	
2-Butanone	5.0	U	2.5	5.0	10	UG/L	5	28-Dec-2018 13:54	
2-Chlorotoluene	2.5	U	1.5	2.5	5.0	UG/L	5	28-Dec-2018 13:54	
2-Hexanone	5.0	U	5.0	5.0	10	UG/L	5	28-Dec-2018 13:54	
4-Chlorotoluene	2.5	U	2.0	2.5	5.0	UG/L	5	28-Dec-2018 13:54	
4-Isopropyltoluene	2.5	U	1.5	2.5	5.0	UG/L	5	28-Dec-2018 13:54	
4-Methyl-2-pentanone	5.0	U	3.5	5.0	10	UG/L	5	28-Dec-2018 13:54	
Acetone	10	U	2.0	10	10	UG/L	5	28-Dec-2018 13:54	
Benzene	2.5	U	1.0	2.5	5.0	UG/L	5	28-Dec-2018 13:54	
Bromobenzene	2.5	U	2.0	2.5	5.0	UG/L	5	28-Dec-2018 13:54	
Bromochloromethane	2.5	U	1.0	2.5	5.0	UG/L	5	28-Dec-2018 13:54	
Bromodichloromethane	2.5	U	1.0	2.5	5.0	UG/L	5	28-Dec-2018 13:54	
Bromoform	2.5	U	2.0	2.5	5.0	UG/L	5	28-Dec-2018 13:54	
Bromomethane	2.5	U	2.0	2.5	5.0	UG/L	5	28-Dec-2018 13:54	
Carbon disulfide	5.0	U	3.0	5.0	10	UG/L	5	28-Dec-2018 13:54	
Carbon tetrachloride	2.5	U	2.5	2.5	5.0	UG/L	5	28-Dec-2018 13:54	
Chlorobenzene	2.5	U	1.5	2.5	5.0	UG/L	5	28-Dec-2018 13:54	
Chloroethane	2.5	U	1.5	2.5	5.0	UG/L	5	28-Dec-2018 13:54	
Chloroform	3.3	J	1.0	2.5	5.0	UG/L	5	28-Dec-2018 13:54	

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



ALS Houston, US

Date: 09-Jan-19

Client: Bhate Environmental Associates, Inc.
 Project: LHAAP /Site 18 /24
 Sample ID: 18CPTMW04_121818
 Collection Date: 18-Dec-2018 12:15

ANALYTICAL REPORT

WorkOrder:HS18121123
 Lab ID:HS18121123-04
 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	28-Dec-2018 13:54	
cis-1,2-Dichloroethene	110		1.0	2.5	5.0	UG/L	5	28-Dec-2018 13:54	
cis-1,3-Dichloropropene	2.5	U	0.50	2.5	5.0	UG/L	5	28-Dec-2018 13:54	
Dibromochloromethane	2.5	U	1.5	2.5	5.0	UG/L	5	28-Dec-2018 13:54	
Dibromomethane	2.5	U	1.0	2.5	5.0	UG/L	5	28-Dec-2018 13:54	
Dichlorodifluoromethane	2.5	U	1.5	2.5	5.0	UG/L	5	28-Dec-2018 13:54	
Ethylbenzene	2.5	U	1.5	2.5	5.0	UG/L	5	28-Dec-2018 13:54	
Hexachlorobutadiene	5.0	U	5.0	5.0	5.0	UG/L	5	28-Dec-2018 13:54	
Isopropylbenzene	2.5	U	1.5	2.5	5.0	UG/L	5	28-Dec-2018 13:54	
m,p-Xylene	5.0	U	2.5	5.0	10	UG/L	5	28-Dec-2018 13:54	
Methylene chloride	2.5	U	2.0	2.5	10	UG/L	5	28-Dec-2018 13:54	
n-Butylbenzene	2.5	U	2.0	2.5	5.0	UG/L	5	28-Dec-2018 13:54	
n-Propylbenzene	2.5	U	1.5	2.5	5.0	UG/L	5	28-Dec-2018 13:54	
Naphthalene	2.5	U	1.5	2.5	5.0	UG/L	5	28-Dec-2018 13:54	
o-Xylene	2.5	U	1.5	2.5	5.0	UG/L	5	28-Dec-2018 13:54	
sec-Butylbenzene	2.5	U	1.5	2.5	5.0	UG/L	5	28-Dec-2018 13:54	
Styrene	2.5	U	1.5	2.5	5.0	UG/L	5	28-Dec-2018 13:54	
tert-Butylbenzene	2.5	U	1.5	2.5	5.0	UG/L	5	28-Dec-2018 13:54	
Tetrachloroethene	2.5	U	1.5	2.5	5.0	UG/L	5	28-Dec-2018 13:54	
Toluene	2.5	U	1.0	2.5	5.0	UG/L	5	28-Dec-2018 13:54	
trans-1,2-Dichloroethene	2.5	U	1.0	2.5	5.0	UG/L	5	28-Dec-2018 13:54	
trans-1,3-Dichloropropene	2.5	U	1.0	2.5	5.0	UG/L	5	28-Dec-2018 13:54	
Trichloroethene	2,500		10	25	50	UG/L	50	28-Dec-2018 15:09	
Trichlorofluoromethane	2.5	U	1.5	2.5	5.0	UG/L	5	28-Dec-2018 13:54	
Vinyl chloride	7.3		1.0	2.5	5.0	UG/L	5	28-Dec-2018 13:54	
Surr: 1,2-Dichloroethane-d4	99.2			0	81-118	%REC	50	28-Dec-2018 15:09	
Surr: 1,2-Dichloroethane-d4	101			0	81-118	%REC	5	28-Dec-2018 13:54	
Surr: 4-Bromofluorobenzene	98.5			0	85-114	%REC	50	28-Dec-2018 15:09	
Surr: 4-Bromofluorobenzene	97.0			0	85-114	%REC	5	28-Dec-2018 13:54	
Surr: Dibromofluoromethane	93.0			0	80-119	%REC	5	28-Dec-2018 13:54	
Surr: Dibromofluoromethane	92.0			0	80-119	%REC	50	28-Dec-2018 15:09	
Surr: Toluene-d8	108			0	89-112	%REC	50	28-Dec-2018 15:09	
Surr: Toluene-d8	105			0	89-112	%REC	5	28-Dec-2018 13:54	
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		Method:NA						Analyst: SUB	
Subcontract Analysis	See Attached		0	0		NA	1	04-Jan-2019 09:11	

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



WEIGHT LOG

Client: Bhate Environmental Associates, Inc.
Project: LHAAP /Site 18 /24
WorkOrder: HS18121123

Batch ID: 136208 **Method:** MERCURY BY SW7470A **Prep:** HG_WPR

SamplID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS18121123-01	1	10 (mL)	10 (mL)	1
HS18121123-02	1	10 (mL)	10 (mL)	1
HS18121123-03	1	10 (mL)	10 (mL)	1

Batch ID: 136231 **Method:** ICP-MS METALS BY SW6020A **Prep:** 3010A

SamplID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS18121123-01	1	10	10 (mL)	1
HS18121123-02	1	10	10 (mL)	1
HS18121123-03	1	10	10 (mL)	1



ALS Houston, US

Date: 09-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP /Site 18 /24
WorkOrder: HS18121123

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID 136208 Test Name : MERCURY BY SW7470A Matrix: Groundwater						
HS18121123-01	AWD3_121718	17 Dec 2018 13:15		02 Jan 2019 11:00	02 Jan 2019 17:06	1
HS18121123-02	AWD1_121818	18 Dec 2018 09:30		02 Jan 2019 11:00	02 Jan 2019 17:07	1
HS18121123-03	18CPTMW04SW_121818	18 Dec 2018 10:55		02 Jan 2019 11:00	02 Jan 2019 17:09	1
Batch ID 136231 Test Name : ICP-MS METALS BY SW6020A Matrix: Groundwater						
HS18121123-01	AWD3_121718	17 Dec 2018 13:15		02 Jan 2019 13:00	08 Jan 2019 17:07	1
HS18121123-02	AWD1_121818	18 Dec 2018 09:30		02 Jan 2019 13:00	09 Jan 2019 15:00	20
HS18121123-02	AWD1_121818	18 Dec 2018 09:30		02 Jan 2019 13:00	08 Jan 2019 17:13	1
HS18121123-03	18CPTMW04SW_121818	18 Dec 2018 10:55		02 Jan 2019 13:00	08 Jan 2019 17:15	1
Batch ID R330193 Test Name : VOLATILES ORGANICS BY METHOD 8260C Matrix: Groundwater						
HS18121123-01	AWD3_121718	17 Dec 2018 13:15			28 Dec 2018 13:05	1
HS18121123-03	18CPTMW04SW_121818	18 Dec 2018 10:55			28 Dec 2018 13:30	1
HS18121123-04	18CPTMW04_121818	18 Dec 2018 12:15			28 Dec 2018 15:09	50
HS18121123-04	18CPTMW04_121818	18 Dec 2018 12:15			28 Dec 2018 13:54	5
Batch ID R330449 Test Name : SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850) Matrix: Groundwater						
HS18121123-01	AWD3_121718	17 Dec 2018 13:15			04 Jan 2019 09:11	1
HS18121123-02	AWD1_121818	18 Dec 2018 09:30			04 Jan 2019 09:11	1
HS18121123-03	18CPTMW04SW_121818	18 Dec 2018 10:55			04 Jan 2019 09:11	1
HS18121123-04	18CPTMW04_121818	18 Dec 2018 12:15			04 Jan 2019 09:11	1



ALS Houston, US

Date: 09-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP /Site 18 /24
WorkOrder: HS18121123

QC BATCH REPORT

Batch ID: 136208		Instrument: HG03		Method: SW7470						
MBLK	Sample ID: MBLK-136208	Units: mg/L		Analysis Date: 02-Jan-2019 16:31						
Client ID:	Run ID: HG03_330358	SeqNo: 4891529		PrepDate: 02-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-136208	Units: mg/L		Analysis Date: 02-Jan-2019 16:33						
Client ID:	Run ID: HG03_330358	SeqNo: 4891530		PrepDate: 02-Jan-2019		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual	
Mercury	0.00519	0.000200	0.005	0	104	80 - 120				
MS	Sample ID: HS18121093-01MS	Units: mg/L		Analysis Date: 02-Jan-2019 16:36						
Client ID:	Run ID: HG03_330358	SeqNo: 4891532		PrepDate: 02-Jan-2019		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual	
Mercury	0.00521	0.000200	0.005	0.000012	104	75 - 125				
MSD	Sample ID: HS18121093-01MSD	Units: mg/L		Analysis Date: 02-Jan-2019 16:38						
Client ID:	Run ID: HG03_330358	SeqNo: 4891533		PrepDate: 02-Jan-2019		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual	
Mercury	0.00526	0.000200	0.005	0.000012	105	75 - 125	0.00521	0.955	20	
The following samples were analyzed in this batch:										
HS18121123-01 HS18121123-02 HS18121123-03										



ALS Houston, US

Date: 09-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP /Site 18 /24
WorkOrder: HS18121123

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: 09-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP /Site 18 /24
WorkOrder: HS18121123

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: 09-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP /Site 18 /24
WorkOrder: HS18121123

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: 09-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP /Site 18 /24
WorkOrder: HS18121123

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: 09-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP /Site 18 /24
WorkOrder: HS18121123

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				



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Date: 09-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP /Site 18 /24
WorkOrder: HS18121123

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: HS18121123-01 HS18121123-02 HS18121123-03



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Date: 09-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP /Site 18 /24
WorkOrder: HS18121123

QC BATCH REPORT

Batch ID: R330193		Instrument: VOA9		Method: SW8260						
MBLK	Sample ID: VBLKW-181228	Units: UG/L			Analysis Date: 28-Dec-2018 12:16					
Client ID:	Run ID: VOA9_330193	SeqNo: 4887347	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



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Client: Bhate Environmental Associates, Inc.
Project: LHAAP /Site 18 /24
WorkOrder: HS18121123

QC BATCH REPORT

Batch ID: R330193		Instrument: VOA9		Method: SW8260						
MBLK	Sample ID: VBLKW-181228	Units: UG/L			Analysis Date: 28-Dec-2018 12:16					
Client ID:	Run ID: VOA9_330193	SeqNo: 4887347	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	50.11	1.0	50	0	100	81 - 118				
Surr: 4-Bromofluorobenzene	48.61	1.0	50	0	97.2	85 - 114				
Surr: Dibromofluoromethane	45.98	1.0	50	0	92.0	80 - 119				
Surr: Toluene-d8	52.95	1.0	50	0	106	89 - 112				



ALS Houston, US

Date: 09-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP /Site 18 /24
WorkOrder: HS18121123

QC BATCH REPORT

Batch ID: R330193		Instrument: VOA9		Method: SW8260						
LCS	Sample ID: VLCSW-1812028	Units: UG/L			Analysis Date: 28-Dec-2018 11:26					
Client ID:	Run ID: VOA9_330193	SeqNo: 4887346	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	20.87	1.0	20	0	104	78 - 124				
1,1,1-Trichloroethane	21.66	1.0	20	0	108	74 - 131				
1,1,2,2-Tetrachloroethane	20.36	1.0	20	0	102	71 - 121				
1,1,2-Trichloroethane	21.9	1.0	20	0	109	80 - 119				
1,1-Dichloroethane	22.16	1.0	20	0	111	77 - 125				
1,1-Dichloroethene	20.27	1.0	20	0	101	71 - 131				
1,1-Dichloropropene	22.3	1.0	20	0	112	78 - 125				
1,2,3-Trichlorobenzene	19.66	1.0	20	0	98.3	69 - 129				
1,2,3-Trichloropropane	20.28	1.0	20	0	101	73 - 122				
1,2,4-Trichlorobenzene	20.24	1.0	20	0	101	69 - 130				
1,2,4-Trimethylbenzene	21.85	1.0	20	0	109	76 - 124				
1,2-Dibromo-3-chloropropane	17.45	1.0	20	0	87.3	62 - 128				
1,2-Dibromoethane	21.92	1.0	20	0	110	77 - 121				
1,2-Dichlorobenzene	20.64	1.0	20	0	103	80 - 119				
1,2-Dichloroethane	23.09	1.0	20	0	115	73 - 128				
1,2-Dichloropropane	22.67	1.0	20	0	113	78 - 122				
1,3,5-Trimethylbenzene	21.66	1.0	20	0	108	75 - 124				
1,3-Dichlorobenzene	20.82	1.0	20	0	104	80 - 119				
1,3-Dichloropropane	21.89	1.0	20	0	109	80 - 119				
1,4-Dichlorobenzene	20.34	1.0	20	0	102	79 - 118				
2,2-Dichloropropane	22.86	1.0	20	0	114	60 - 139				
2-Butanone	39.79	2.0	40	0	99.5	56 - 143				
2-Chlorotoluene	21.37	1.0	20	0	107	79 - 122				
2-Hexanone	42.53	2.0	40	0	106	57 - 139				
4-Chlorotoluene	21.82	1.0	20	0	109	78 - 122				
4-Isopropyltoluene	21.41	1.0	20	0	107	77 - 127				
4-Methyl-2-pentanone	42.25	2.0	40	0	106	67 - 130				
Acetone	40.81	2.0	40	0	102	39 - 160				
Benzene	22.63	1.0	20	0	113	79 - 120				
Bromobenzene	20.98	1.0	20	0	105	80 - 120				
Bromochloromethane	22.84	1.0	20	0	114	78 - 123				
Bromodichloromethane	22.92	1.0	20	0	115	79 - 125				
Bromoform	19.23	1.0	20	0	96.1	66 - 130				
Bromomethane	22.3	1.0	20	0	112	53 - 141				



ALS Houston, US

Date: 09-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP /Site 18 /24
WorkOrder: HS18121123

QC BATCH REPORT

Batch ID: R330193		Instrument: VOA9		Method: SW8260						
LCS	Sample ID: VLCSW-1812028	Units: UG/L			Analysis Date: 28-Dec-2018 11:26					
Client ID:	Run ID: VOA9_330193	SeqNo: 4887346	PrepDate:	DF: 1						
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	43.74	2.0	40	0	109	64 - 133				
Carbon tetrachloride	20.57	1.0	20	0	103	72 - 136				
Chlorobenzene	21.96	1.0	20	0	110	82 - 118				
Chloroethane	21.92	1.0	20	0	110	60 - 138				
Chloroform	21.94	1.0	20	0	110	79 - 124				
Chloromethane	23.22	1.0	20	0	116	50 - 139				
cis-1,2-Dichloroethene	22.17	1.0	20	0	111	78 - 123				
cis-1,3-Dichloropropene	21.38	1.0	20	0	107	75 - 124				
Dibromochloromethane	20.25	1.0	20	0	101	74 - 126				
Dibromomethane	22.22	1.0	20	0	111	79 - 123				
Dichlorodifluoromethane	19.8	1.0	20	0	99.0	32 - 152				
Ethylbenzene	21.59	1.0	20	0	108	79 - 121				
Hexachlorobutadiene	20.05	1.0	20	0	100	66 - 134				
Isopropylbenzene	21.93	1.0	20	0	110	72 - 131				
m,p-Xylene	44.7	2.0	40	0	112	80 - 121				
Methylene chloride	22.09	2.0	20	0	110	74 - 124				
Naphthalene	18.61	1.0	20	0	93.0	61 - 128				
n-Butylbenzene	21.51	1.0	20	0	108	75 - 128				
n-Propylbenzene	21.64	1.0	20	0	108	76 - 126				
o-Xylene	22.31	1.0	20	0	112	78 - 122				
sec-Butylbenzene	20.89	1.0	20	0	104	77 - 126				
Styrene	23.24	1.0	20	0	116	78 - 123				
tert-Butylbenzene	20.94	1.0	20	0	105	78 - 124				
Tetrachloroethene	20.17	1.0	20	0	101	74 - 129				
Toluene	22.53	1.0	20	0	113	80 - 121				
trans-1,2-Dichloroethene	21.67	1.0	20	0	108	75 - 124				
trans-1,3-Dichloropropene	21.02	1.0	20	0	105	73 - 127				
Trichloroethene	22.27	1.0	20	0	111	79 - 123				
Trichlorofluoromethane	21.36	1.0	20	0	107	65 - 141				
Vinyl chloride	22.34	1.0	20	0	112	58 - 137				
Surr: 1,2-Dichloroethane-d4	51.74	1.0	50	0	103	81 - 118				
Surr: 4-Bromofluorobenzene	53.25	1.0	50	0	106	85 - 114				
Surr: Dibromofluoromethane	51.05	1.0	50	0	102	80 - 119				
Surr: Toluene-d8	49.8	1.0	50	0	99.6	89 - 112				



ALS Houston, US

Date: 09-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP /Site 18 /24
WorkOrder: HS18121123

QC BATCH REPORT

Batch ID: R330193		Instrument: VOA9		Method: SW8260						
MS		Sample ID: HS18121123-03MS		Units: UG/L		Analysis Date: 28-Dec-2018 14:19				
Client ID: 18CPTMW04SW_121818		Run ID: VOA9_330193		SeqNo: 4887352		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	26.8	1.0	20	0	134	78 - 124			S	
1,1,1-Trichloroethane	27.62	1.0	20	0	138	74 - 131			S	
1,1,2,2-Tetrachloroethane	27.1	1.0	20	0	135	71 - 121			S	
1,1,2-Trichloroethane	28.36	1.0	20	0	142	80 - 119			S	
1,1-Dichloroethane	27.14	1.0	20	0	136	77 - 125			S	
1,1-Dichloroethene	26.45	1.0	20	0	132	71 - 131			S	
1,1-Dichloropropene	29.4	1.0	20	0	147	78 - 125			S	
1,2,3-Trichlorobenzene	25.64	1.0	20	0	128	69 - 129			S	
1,2,3-Trichloropropane	26.59	1.0	20	0	133	73 - 122			S	
1,2,4-Trichlorobenzene	26.85	1.0	20	0	134	69 - 130			S	
1,2,4-Trimethylbenzene	29.78	1.0	20	0	149	76 - 124			S	
1,2-Dibromo-3-chloropropane	22.43	1.0	20	0	112	62 - 128			S	
1,2-Dibromoethane	28.07	1.0	20	0	140	77 - 121			S	
1,2-Dichlorobenzene	27.42	1.0	20	0	137	80 - 119			S	
1,2-Dichloroethane	29.11	1.0	20	0	146	73 - 128			S	
1,2-Dichloropropane	28.31	1.0	20	0	142	78 - 122			S	
1,3,5-Trimethylbenzene	30.11	1.0	20	0	151	75 - 124			S	
1,3-Dichlorobenzene	27.55	1.0	20	0	138	80 - 119			S	
1,3-Dichloropropane	28.62	1.0	20	0	143	80 - 119			S	
1,4-Dichlorobenzene	26.85	1.0	20	0	134	79 - 118			S	
2,2-Dichloropropane	27.74	1.0	20	0	139	60 - 139			S	
2-Butanone	48.52	2.0	40	0	121	56 - 143			S	
2-Chlorotoluene	29.28	1.0	20	0	146	79 - 122			S	
2-Hexanone	53.8	2.0	40	0	134	57 - 139			S	
4-Chlorotoluene	29.54	1.0	20	0	148	78 - 122			S	
4-Isopropyltoluene	30.58	1.0	20	0	153	77 - 127			S	
4-Methyl-2-pentanone	55.01	2.0	40	0	138	67 - 130			S	
Acetone	39.92	2.0	40	0	99.8	39 - 160			S	
Benzene	28.78	1.0	20	0	144	79 - 120			S	
Bromobenzene	27.38	1.0	20	0	137	80 - 120			S	
Bromochloromethane	28.73	1.0	20	0	144	78 - 123			S	
Bromodichloromethane	27.85	1.0	20	0	139	79 - 125			S	
Bromoform	23.57	1.0	20	0	118	66 - 130			S	
Bromomethane	26.49	1.0	20	0	132	53 - 141			S	



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Date: 09-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP /Site 18 /24
WorkOrder: HS18121123

QC BATCH REPORT

Batch ID: R330193		Instrument: VOA9		Method: SW8260						
MS		Sample ID: HS18121123-03MS		Units: UG/L		Analysis Date: 28-Dec-2018 14:19				
Client ID: 18CPTMW04SW_121818		Run ID: VOA9_330193		SeqNo: 4887352		PrepDate:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	39.68	2.0	40	0	99.2	64 - 133				
Carbon tetrachloride	27.41	1.0	20	0	137	72 - 136				S
Chlorobenzene	28.62	1.0	20	0	143	82 - 118				S
Chloroethane	25.59	1.0	20	0	128	60 - 138				
Chloroform	27.14	1.0	20	0	136	79 - 124				S
Chloromethane	23.61	1.0	20	0	118	50 - 139				
cis-1,2-Dichloroethene	27.5	1.0	20	0	138	78 - 123				S
cis-1,3-Dichloropropene	24.93	1.0	20	0	125	75 - 124				S
Dibromochloromethane	25.42	1.0	20	0	127	74 - 126				S
Dibromomethane	27.79	1.0	20	0	139	79 - 123				S
Dichlorodifluoromethane	16.16	1.0	20	0	80.8	32 - 152				
Ethylbenzene	29.3	1.0	20	0	147	79 - 121				S
Hexachlorobutadiene	26.64	1.0	20	0	133	66 - 134				
Isopropylbenzene	30.57	1.0	20	0	153	72 - 131				S
m,p-Xylene	59.65	2.0	40	0	149	80 - 121				S
Methylene chloride	27.26	2.0	20	0	136	74 - 124				S
Naphthalene	24.88	1.0	20	0	124	61 - 128				
n-Butylbenzene	30.1	1.0	20	0	151	75 - 128				S
n-Propylbenzene	30.62	1.0	20	0	153	76 - 126				S
o-Xylene	29.44	1.0	20	0	147	78 - 122				S
sec-Butylbenzene	30.71	1.0	20	0	154	77 - 126				S
Styrene	29.98	1.0	20	0	150	78 - 123				S
tert-Butylbenzene	30.08	1.0	20	0	150	78 - 124				S
Tetrachloroethene	28.01	1.0	20	0	140	74 - 129				S
Toluene	29.77	1.0	20	0	149	80 - 121				S
trans-1,2-Dichloroethene	26.75	1.0	20	0	134	75 - 124				S
trans-1,3-Dichloropropene	24.69	1.0	20	0	123	73 - 127				
Trichloroethene	29.69	1.0	20	1.003	143	79 - 123				S
Trichlorofluoromethane	26.41	1.0	20	0	132	65 - 141				
Vinyl chloride	24.22	1.0	20	0	121	58 - 137				
Surr: 1,2-Dichloroethane-d4	48.71	1.0	50	0	97.4	81 - 118				
Surr: 4-Bromofluorobenzene	52.25	1.0	50	0	105	85 - 114				
Surr: Dibromofluoromethane	46.81	1.0	50	0	93.6	80 - 119				
Surr: Toluene-d8	53.68	1.0	50	0	107	89 - 112				



ALS Houston, US

Date: 09-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP /Site 18 /24
WorkOrder: HS18121123

QC BATCH REPORT

Batch ID: R330193		Instrument: VOA9		Method: SW8260							
MSD		Sample ID: HS18121123-03MSD		Units: UG/L		Analysis Date: 28-Dec-2018 14:44					
Client ID: 18CPTMW04SW_121818		Run ID: VOA9_330193		SeqNo: 4887353		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	25.66	1.0	20	0	128	78 - 124	26.8	4.36	20	S	
1,1,1-Trichloroethane	26.56	1.0	20	0	133	74 - 131	27.62	3.91	20	S	
1,1,2,2-Tetrachloroethane	25.66	1.0	20	0	128	71 - 121	27.1	5.43	20	S	
1,1,2-Trichloroethane	27.44	1.0	20	0	137	80 - 119	28.36	3.29	20	S	
1,1-Dichloroethane	25.84	1.0	20	0	129	77 - 125	27.14	4.89	20	S	
1,1-Dichloroethene	24.7	1.0	20	0	123	71 - 131	26.45	6.86	20		
1,1-Dichloropropene	29	1.0	20	0	145	78 - 125	29.4	1.39	20	S	
1,2,3-Trichlorobenzene	25.14	1.0	20	0	126	69 - 129	25.64	1.98	20		
1,2,3-Trichloropropane	24.98	1.0	20	0	125	73 - 122	26.59	6.25	20	S	
1,2,4-Trichlorobenzene	26.21	1.0	20	0	131	69 - 130	26.85	2.43	20	S	
1,2,4-Trimethylbenzene	28.81	1.0	20	0	144	76 - 124	29.78	3.32	20	S	
1,2-Dibromo-3-chloropropane	21.76	1.0	20	0	109	62 - 128	22.43	3.05	20		
1,2-Dibromoethane	27.26	1.0	20	0	136	77 - 121	28.07	2.93	20	S	
1,2-Dichlorobenzene	26.61	1.0	20	0	133	80 - 119	27.42	3	20	S	
1,2-Dichloroethane	28.49	1.0	20	0	142	73 - 128	29.11	2.14	20	S	
1,2-Dichloropropane	27.52	1.0	20	0	138	78 - 122	28.31	2.82	20	S	
1,3,5-Trimethylbenzene	29.06	1.0	20	0	145	75 - 124	30.11	3.56	20	S	
1,3-Dichlorobenzene	26.91	1.0	20	0	135	80 - 119	27.55	2.38	20	S	
1,3-Dichloropropane	27.4	1.0	20	0	137	80 - 119	28.62	4.36	20	S	
1,4-Dichlorobenzene	25.85	1.0	20	0	129	79 - 118	26.85	3.79	20	S	
2,2-Dichloropropane	26.65	1.0	20	0	133	60 - 139	27.74	3.97	20		
2-Butanone	46.22	2.0	40	0	116	56 - 143	48.52	4.86	20		
2-Chlorotoluene	28.06	1.0	20	0	140	79 - 122	29.28	4.26	20	S	
2-Hexanone	52.01	2.0	40	0	130	57 - 139	53.8	3.38	20		
4-Chlorotoluene	28.47	1.0	20	0	142	78 - 122	29.54	3.68	20	S	
4-Isopropyltoluene	29.22	1.0	20	0	146	77 - 127	30.58	4.54	20	S	
4-Methyl-2-pentanone	52.98	2.0	40	0	132	67 - 130	55.01	3.77	20	S	
Acetone	38.74	2.0	40	0	96.8	39 - 160	39.92	3	20		
Benzene	28.34	1.0	20	0	142	79 - 120	28.78	1.54	20	S	
Bromobenzene	26.73	1.0	20	0	134	80 - 120	27.38	2.39	20	S	
Bromochloromethane	26.96	1.0	20	0	135	78 - 123	28.73	6.38	20	S	
Bromodichloromethane	27.24	1.0	20	0	136	79 - 125	27.85	2.21	20	S	
Bromoform	22.71	1.0	20	0	114	66 - 130	23.57	3.72	20		
Bromomethane	25.7	1.0	20	0	128	53 - 141	26.49	3.02	20		



ALS Houston, US

Date: 09-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP /Site 18 /24
WorkOrder: HS18121123

QC BATCH REPORT

Batch ID: R330193		Instrument: VOA9		Method: SW8260							
MSD	Sample ID: HS18121123-03MSD	Units: UG/L			Analysis Date: 28-Dec-2018 14:44						
Client ID: 18CPTMW04SW_121818	Run ID: VOA9_330193	SeqNo: 4887353	PrepDate:	DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Carbon disulfide	49.93	2.0	40	0	125	64 - 133	39.68	22.9	20	R	
Carbon tetrachloride	27.02	1.0	20	0	135	72 - 136	27.41	1.44	20		
Chlorobenzene	27.77	1.0	20	0	139	82 - 118	28.62	3	20	S	
Chloroethane	24.32	1.0	20	0	122	60 - 138	25.59	5.08	20		
Chloroform	25.9	1.0	20	0	129	79 - 124	27.14	4.69	20	S	
Chloromethane	22.36	1.0	20	0	112	50 - 139	23.61	5.44	20		
cis-1,2-Dichloroethene	26.17	1.0	20	0	131	78 - 123	27.5	4.97	20	S	
cis-1,3-Dichloropropene	24.77	1.0	20	0	124	75 - 124	24.93	0.645	20		
Dibromochloromethane	24.74	1.0	20	0	124	74 - 126	25.42	2.71	20		
Dibromomethane	27.33	1.0	20	0	137	79 - 123	27.79	1.67	20	S	
Dichlorodifluoromethane	15.53	1.0	20	0	77.6	32 - 152	16.16	4.01	20		
Ethylbenzene	28.3	1.0	20	0	142	79 - 121	29.3	3.47	20	S	
Hexachlorobutadiene	25.19	1.0	20	0	126	66 - 134	26.64	5.62	20		
Isopropylbenzene	29.53	1.0	20	0	148	72 - 131	30.57	3.47	20	S	
m,p-Xylene	58.07	2.0	40	0	145	80 - 121	59.65	2.68	20	S	
Methylene chloride	26.11	2.0	20	0	131	74 - 124	27.26	4.32	20	S	
Naphthalene	24.29	1.0	20	0	121	61 - 128	24.88	2.37	20		
n-Butylbenzene	29.03	1.0	20	0	145	75 - 128	30.1	3.63	20	S	
n-Propylbenzene	29.38	1.0	20	0	147	76 - 126	30.62	4.13	20	S	
o-Xylene	28.8	1.0	20	0	144	78 - 122	29.44	2.21	20	S	
sec-Butylbenzene	29.48	1.0	20	0	147	77 - 126	30.71	4.09	20	S	
Styrene	29.21	1.0	20	0	146	78 - 123	29.98	2.61	20	S	
tert-Butylbenzene	29.08	1.0	20	0	145	78 - 124	30.08	3.38	20	S	
Tetrachloroethene	27.43	1.0	20	0	137	74 - 129	28.01	2.1	20	S	
Toluene	28.91	1.0	20	0	145	80 - 121	29.77	2.93	20	S	
trans-1,2-Dichloroethene	25.96	1.0	20	0	130	75 - 124	26.75	3.01	20	S	
trans-1,3-Dichloropropene	24.19	1.0	20	0	121	73 - 127	24.69	2.02	20		
Trichloroethene	28.21	1.0	20	1.003	136	79 - 123	29.69	5.14	20	S	
Trichlorofluoromethane	24.78	1.0	20	0	124	65 - 141	26.41	6.37	20		
Vinyl chloride	23.05	1.0	20	0	115	58 - 137	24.22	4.97	20		
Surr: 1,2-Dichloroethane-d4	47.93	1.0	50	0	95.9	81 - 118	48.71	1.61	20		
Surr: 4-Bromofluorobenzene	51.71	1.0	50	0	103	85 - 114	52.25	1.04	20		
Surr: Dibromofluoromethane	46.6	1.0	50	0	93.2	80 - 119	46.81	0.454	20		
Surr: Toluene-d8	52.83	1.0	50	0	106	89 - 112	53.68	1.59	20		



ALS Houston, US

Date: 09-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP /Site 18 /24
WorkOrder: HS18121123

QC BATCH REPORT

Batch ID: R330193	Instrument: VOA9	Method: SW8260
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The following samples were analyzed in this batch:

HS18121123-01	HS18121123-03	HS18121123-04
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ALS Houston, US

Date: 09-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP /Site 18 /24
WorkOrder: HS18121123

**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 Quantitation 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: 09-Jan-19

Client: Bhate Environmental Associates, Inc.**Project:** LHAAP /Site 18 /24**Work Order:** HS18121123**SAMPLE TRACKING**

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS18121123-01	AWD3_121718	Login	12/20/2018 10:14:57 AM	NDR	Sub
HS18121123-01	AWD3_121718	Login	12/20/2018 10:14:57 AM	NDR	MET103
HS18121123-01	AWD3_121718	Login	12/20/2018 10:14:57 AM	NDR	VOA166



Sample Receipt Checklist

Client Name: Bhate Environmental
 Work Order: HS18121123

Date/Time Received: **19-Dec-2018 11:00**
 Received by: **JRM**

Checklist completed by: Nilesh D. Ranchod 20-Dec-2018 Reviewed by: RJ Modashia 20-Dec-2018
 eSignature Date eSignature Date

Matrices: **Water** Carrier name: **ALS Courier**

- 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): 0.1C /0.4C UC/C IR # 25
 Cooler(s)/Kit(s): 44337
 Date/Time sample(s) sent to storage: 12/19/2018 18:00

- 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: **No Trip blank received**

Client Contacted: _____ Date Contacted: _____ Person Contacted: _____

Contacted By: _____ Regarding: _____

Comments:

Corrective Action:





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-mm-yyyy)	Time Collected (Military) (hhmm)	Sample Depth (beginning - ending)	SA Code (1)	Sample Number (2)	Sample Matrix (3)	Number of containers	Sample Analysis Requested ⁽⁵⁾					Quality Assurance Samples ⁽⁶⁾			Cooler ID	
									VOC	PERCHLORATE	TOTAL METALS				Ambient Blank Lot Control Number	Equipment Blank Lot Control Number		Trip Blank Lot Control Number
AWD3_121718		17 DEC 2018	1315	-	N	WG	5	X	X	X								
AWD1_121818		18 DEC 2018	0930	-	N	WG	2		X	X								
18CPTMW04SW_121818	121818	18 DEC 2018	1055	-	N	WG	5	X	X	X								
18CPTMW04_121818		18 DEC 2018	1215	-	N	WG	4	X	X									
Trip Blank		18 DEC 2018			TB	W	2	X										

HS18121123
 Bhate Environmental Associates, Inc.
 LHAAP / Site 18 / 24

COMMENTS:

Custody Transfers Prior to Receipt by Laboratory

Relinquished By (Signed) Scott Beesinger Date 12/18/18 Time 1430

Received by (Signed) JM Date 12-14-18 Time 11:00

2. _____
 3. _____

Sample Delivery Details / Laboratory Receipt

Delivered Directly to Lab: _____ Shipped _____ No. _____

Method of Shipment: _____

Fed _____ Ex _____ Airbill _____ Number: _____


Analytical Lab: ALS 10450 Stanfield Rd. Suite 210 Houston, TX 77059 (281) 530-5656

ATTN: SQINIA 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

44337 UC IR CF
 0.1C 25 +0.3



 ALS 10450 Stancliff Rd., Suite 210 Houston, Texas 77099 Tel. +1 281 530 5856 Fax. +1 281 530 5887	CUSTODY SEAL		Seal Broken By:
	Date: 12/18/18	Time: 1430	Date: 12/19/18
	Name: Scott Beestiner	Company: BHA Environmental Associates	

44337 DEC 19 2018

Must Deliver Next Business Day
Time and Temperature Sensitive!



44337

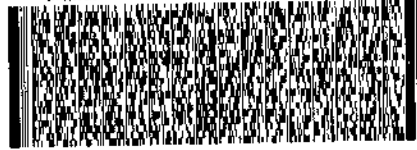
ORIGIN ID: SGRA (903) 930-6193
SCOTT BEESTINER
BHA ENVIRONMENTAL ASSOCIATES
1209-B EAST GRAND AVE. PNB202

SHIP DATE: 04DEC18
ACTWGT: 1.00 LB MAX
DPO: 300130/CAFE3211
DIMS: 26x14x14 IN

MARSHALL, TX 75670
UNITED STATES US

TO **CLIENT SERVICES**
ALS LABORATORY GROUP
10450 STANCLIFF ROAD
SUITE 210
HOUSTON TX 77099
(281) 530-5858
REF: LHAAP-RJ

RMA: 11111111

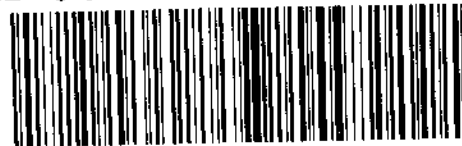


FedEx
TAKE
8221 4380 9535 2559

WED - 19 DEC 10:30A
PRIORITY OVERNIGHT

AB SGRA

77099
TX-US
IAH



F13 162785 18DEC18 00GA 553C1/F1FE/0CBA





Case Narrative

Method: 6850

Analysis: Perchlorate

Analysis SOP: LC-MS-CLO4

ALS WO ID(s): 1835578; 1835582; 1835584;
1835586; 1835589

Client: ALS Laboratories (Houston, TX)

Matrix: Water

ELMS Batch (HBN): 2189 (230318)

General Set Information: There were sixteen 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. 50 μL 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 0.45 μm Syringe filters.

Holding Times: Holding times were met for all analyses.

Dilutions: Field samples 1835578001 and 1835586003/04/06 were analyzed and reported from 1:1,000 dilutions. Field samples 1835586005/07 were analyzed and reported from 1:100 dilutions. Field sample 1835589004 was analyzed and reported from a 1:10 dilution. The reporting limits have been adjusted accordingly.

Method QC data: The method blank (LMB 634659) was less than 1/2 the CRDL. The recovery for the LCS (634660) was within acceptable parameters.





MS/MSD Analysis: MS/MSD was performed on sample 1835582001 (Client ID: LH18/24-SP650_121818_BIX). 5.0 μ l of Working Standard Solution Horizon ID 43701 was added to 10.0mL of sample preparation. The spike target was 5. μ g/L. The MS/MSD percent recoveries and relative percent difference (RPD) were within the performance limits.

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

NC/CAR(s): NA

Sample Calculation: Samples were reported in μ g/L. Results were calculated in μ g/L by the equation $(A) \times (B)$,

where: A = Analyte concentration from the standard curve (μ g/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 02, 2019
Analyst Date





ANALYTICAL REPORT

Report Date: January 03, 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: **34-1835589**

Project ID: HS18121123

Purchase Order: HS18121123

Project Manager Kevin W. Griffiths

Client Sample ID	Lab ID	Collect Date	Receive Date	Sampling Site
AWD3_121718	1835589001	12/17/18	12/21/18	
AWD1_121818	1835589002	12/18/18	12/21/18	
18CPTMW04SW_121818	1835589003	12/18/18	12/21/18	
18CPTMW04_121818	1835589004	12/18/18	12/21/18	



ANALYTICAL REPORT

Workorder: **34-1835589**Client: ALS Environmental
(Houston)

Project Manager: Kevin W. Griffiths

Analytical Results

Sample ID: AWD3_121718	Sampling Site: NA	Collected: 12/17/2018
Lab ID: 1835589001	Media: 125 mL Nalgene	Received: 12/21/2018
Matrix: Water	Sampling Parameter: NA	
Analysis Method - EPA 6850, DoD QSM		
Preparation: Not Applicable	Analysis: EPA 6850, DoD QSM Water Batch: ELMS/2189 (HBN: 230318) Analyzed: 12/31/2018 13:25	Instrument ID: LCMS04 Percent Solid: NA Report Basis: Wet
Analyte	Result (ug/L)	DL (ug/L)
Perchlorate	6.9	1.0

Sample ID: AWD1_121818	Sampling Site: NA	Collected: 12/18/2018
Lab ID: 1835589002	Media: 125 mL Nalgene	Received: 12/21/2018
Matrix: Water	Sampling Parameter: NA	
Analysis Method - EPA 6850, DoD QSM		
Preparation: Not Applicable	Analysis: EPA 6850, DoD QSM Water Batch: ELMS/2189 (HBN: 230318) Analyzed: 12/31/2018 13:39	Instrument ID: LCMS04 Percent Solid: NA Report Basis: Wet
Analyte	Result (ug/L)	DL (ug/L)
Perchlorate	1.2	1.0

Sample ID: 18CPTMW04SW_121818	Sampling Site: NA	Collected: 12/18/2018
Lab ID: 1835589003	Media: 125 mL Nalgene	Received: 12/21/2018
Matrix: Water	Sampling Parameter: NA	
Analysis Method - EPA 6850, DoD QSM		
Preparation: Not Applicable	Analysis: EPA 6850, DoD QSM Water Batch: ELMS/2189 (HBN: 230318) Analyzed: 12/31/2018 13:53	Instrument ID: LCMS04 Percent Solid: NA Report Basis: Wet
Analyte	Result (ug/L)	DL (ug/L)
Perchlorate	ND	1.0

Sample ID: 18CPTMW04_121818	Sampling Site: NA	Collected: 12/18/2018
Lab ID: 1835589004	Media: 125 mL Nalgene	Received: 12/21/2018
Matrix: Water	Sampling Parameter: NA	
Analysis Method - EPA 6850, DoD QSM		
Preparation: Not Applicable	Analysis: EPA 6850, DoD QSM Water Batch: ELMS/2189 (HBN: 230318) Analyzed: 12/31/2018 14:07	Instrument ID: LCMS04 Percent Solid: NA Report Basis: Wet
Analyte	Result (ug/L)	DL (ug/L)
Perchlorate	220	10





ANALYTICAL REPORT

Workorder: 34-1835589

Client: ALS Environmental
(Houston)

Project Manager: Kevin W. Griffiths

Comments

Workorder: 1835589

Field sample 1835589004 was analyzed and reported from a 1:10 dilution. The reporting limit has 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 01/02/2019 10:42	/S/ Stephen Brose 01/03/2019 07:49

Laboratory Contact Information

ALS Environmental
960 W Levoy Drive
Salt Lake City, Utah 84123Phone: (801) 266-7700
Email: als.lt.lab@ALSGlobal.com
Web: www.alssl.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: 34-1835589

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

00924444

Analysis Information

Workorder: 1835589

Limits: Client SOW/Contract Specified
Basis: DoD QSM

Preparation: NA
Batch: NA
Prepared By: NA

Analysis: EPA 6850, DoD QSM
Batch: ELMS/2189 (HBN: 230318)
Analyzed By: Thomas Bosch

Blank

LMB: 634659 Analyzed: 12/31/2018 09:04 Units: ug/L			
Analyte	Result	MDL	RL
Perchlorate	ND	1	2.00

Laboratory Control Sample

LCS: 634660 Analyzed: 12/31/2018 09:17 Dilution: 1 Units: ug/L				
Analyte	Result	Target	% Rec	QC Limits
Perchlorate	4.78	5.00	95.7	78.8 123.8

Matrix Spike - Matrix Spike Duplicate

Sample: 1835582001 Analyzed: 12/31/2018 09:45 Dilution: 1 Units: ug/L			MS: 634661 Analyzed: 12/31/2018 09:59 Dilution: 1 Units: ug/L			MSD: 634662 Analyzed: 12/31/2018 10:13 Dilution: 1 Units: ug/L			
Analyte	Result	Result	Target	% Rec	QC Limits	Result	% Rec	RPD	QC Limits
Perchlorate	ND	4.67	5	93.4	78.8 123.8	4.82	96.3	3.06	0.0 20.0

Continuing Calibration Verification

CCV: 634656 Analyzed: 12/31/2018 08:20 Units: ug/L Criteria: ± 15%			CCV: 634663 Analyzed: 12/31/2018 12:30 Units: ug/L Criteria: ± 15%			CCV: 634665 Analyzed: 12/31/2018 14:20 Units: ug/L Criteria: ± 15%			
Analyte	Result	Target	% Rec.	Result	Target	% Rec.	Result	Target	% Rec.
Perchlorate	25.8	25.0	103	25.7	25.0	103	26.2	25.0	105

Interference Check Sample

ICSA: 634658 Analyzed: 12/31/2018 08:50 Units: ug/L Criteria: ± 30%			
Analyte	Result	Target	% Rec.
Perchlorate	1.07	1.00	107

Limit of Detection Verification

LODV: 634657 Analyzed: 12/31/2018 08:36 Units: ug/L Criteria: ± 50%			LODV: 634664 Analyzed: 12/31/2018 12:44 Units: ug/L Criteria: ± 50%			LODV: 634666 Analyzed: 12/31/2018 14:34 Units: ug/L Criteria: ± 50%			
Analyte	Result	Target	% Rec.	Result	Target	% Rec.	Result	Target	% Rec.
Perchlorate	1.08	1.00	108	1.09	1.00	109	1.08	1.00	108



Quality Control Sample Batch Report

00924445

Analysis Information

Workorder: 1835589

Limits: Client SOW/Contract Specified

Preparation: NA

Analysis: EPA 6850, DoD QSM

Basis: DoD QSM

Batch: NA

Batch: ELMS/2189 (HBN: 230318)

Prepared By: NA

Analyzed By: Thomas Bosch

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

Analyst	Peer Review
/S/ Thomas Bosch 01/02/2019 10:42	/S/ Stephen Brose 01/03/2019 07:49

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



Subcontract Chain of Custody

COC ID: 10491

1835589

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: HS18121123
TSR: Danielle Winnings

LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
ANALYSIS REQUESTED			DUE DATE
1. HS18121123-01 / AWD3_121718 SUB_Perch-6850		Groundwater	17 Dec 2018 13:15 04 Jan 2019
2. HS18121123-02 / AWD1_121818 SUB_Perch-6850		Groundwater	18 Dec 2018 09:30 04 Jan 2019
3. HS18121123-03 / 18CPTMW04SW_121818 SUB_Perch-6850		Groundwater	18 Dec 2018 10:55 04 Jan 2019
4. HS18121123-04 / 18CPTMW04_121818 SUB_Perch-6850		Groundwater	18 Dec 2018 12:15 04 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: Pats Mearns
Received By: M. Schwartz
Cooler ID(s): _____

Date/Time: 12.20.18 18:00
Date/Time: 12/21/18 10:50
Temperature(s): _____

RIGHT SOLUTIONS | RIGHT PARTNER

20 Dec 2018

Page 1 of 1



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

COOLER OR CONTAINER INFORMATION CHECKLIST (Fill In or Circle)

Client Name: <u>ALS HOUSTON</u>		Project/Task/Site: <u>1835589</u>	
Date/Time of Receipt: <u>12/21/2018 10:50</u>		Number of Coolers Received: <u>1</u>	
Condition of Coolers: <u>Acceptable/Unacceptable</u>	Temperature Control: <u>Present/Not Included</u>		
Cooler Custody Seals: <u>Present/Absent/NA</u>	Location Temp Taken: <u>Control/Between Samples</u>		
Container Custody Seals: <u>Present/Absent/NA</u>	Are all temperatures within project specific guidelines? <u>Yes/No/NA</u>		
Ice Present: <u>Yes/No/NA</u>	VOA Headspace Present? <u>Yes/No/NA</u>		
pH Check Performed:	Metals: <u>Yes/No/NA</u>	Total Phenolics: <u>Yes/No/NA</u>	NO3/NO2: <u>Yes/No/NA</u>
	Cyanide: <u>Yes/No/NA</u>	TPH - 418.1: <u>Yes/No/NA</u>	Oil & Grease: <u>Yes/No/NA</u>
	Sulfide: <u>Yes/No/NA</u>	COD: <u>Yes/No/NA</u>	Total Phosphorous: <u>Yes/No/NA</u>
	Ammonia: <u>Yes/No/NA</u>	TKN: <u>Yes/No/NA</u>	Gross A.B, Gamma Spec: <u>Yes/No/NA</u>
Cooler Received	DCL Cooler No.	Temp.	Cooler Received
1	C18 <u>9051</u>	<u>2</u> °C	4
2	C18	°C	5
3	C18	°C	6
Taken By: <u>M. Schmith</u> <u>M. Schmith</u>		Date: <u>12/21/2018</u>	

CLIENT-RELATED INFORMATION

- | | | | |
|--|---|--|---|
| <input type="checkbox"/> Missing Cooler | <input type="checkbox"/> Missing Samples/Bottles | <input type="checkbox"/> Incorrect Preservation | <input type="checkbox"/> Insufficient Sample Volume |
| <input type="checkbox"/> Cooler Conditions | <input type="checkbox"/> Broken/Leaking Samples | <input type="checkbox"/> pH Criteria Not Met | <input type="checkbox"/> Chain of Custody Problems |
| <input type="checkbox"/> Missing Paperwork | <input type="checkbox"/> Incorrect Bottle Type | <input type="checkbox"/> Residual Chlorine Present | <input type="checkbox"/> Other: |
| <input type="checkbox"/> Missing/Incorrect Bottle Labels | <input type="checkbox"/> Cooler Temperatures Out of Range | <input type="checkbox"/> 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: _____ Returned to Sample Receipt by: _____ Date: _____





FORM 911504039-432 RITZ EXP NS119 Jan

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

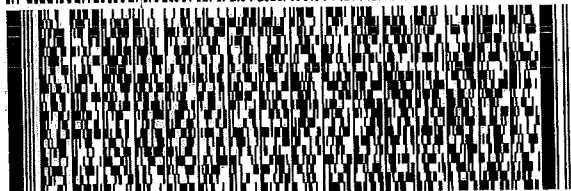
SHIP DATE: 20DEC18
ACTWGT: 22.75 LB
CAD: 300130/CAFE9211
DIMS: 19x16x13 IN
BILL THIRD PARTY

TO **SAMPLE RECEIVING
ALS ENVIRONMENTAL
960 W. LEVOY DRIVE**

SALT LAKE CITY UT 84123

(801) 266-7700

REF: HS19120737/123/117/078/094/093 DW/RM



FedEx
Express



J1811160605010101

TRK# 4380 9535 7837
0201

**FRI - 21 DEC 10:30A
PRIORITY OVERNIGHT**

AX BTFA

**84123
UT-US SLC**



ALS Environmental CHAIN-OF-CUSTODY

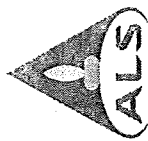
Project / Job / Task: HS18121123			Split:			Workorder ID: 1835589			Level: ENV_LVL4		
Client: ALS Environmental (Houston)						Account: 8101			Type: 125Poly		
Comments:											
Item	Collect Date/Time	Sample ID	Lab ID	QC	Matrix	ID(s)	Containers Count	Requested Analysis			
1	12/17/2018 13:15	AWD3_121718	1835589001		Water	A	1	EPA 6850, DOD QSM			
2	12/18/2018 09:30	AWD1_121818	1835589002		Water	A	1				
3	12/18/2018 10:55	18CPTMW04SW_121818	1835589003		Water	A	1				
4	12/18/2018 12:15	18CPTMW04_121818	1835589004		Water	A	1				
5											
6											
7											
8											
9											
10											

ORIGINAL FIELD SAMPLE CHAIN-OF-CUSTODY

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Date / Time	Reason for Transfer / Storage Location
<i>Warath Lijie</i>	12/21/2018 10:50	ALS Sample Receiving		Sample Login
<i>Arden Warratt</i>	12/21/18 1400	<i>ISC</i>		<i>storage</i>
<i>R-33-1</i>	12/28/18 09:00	<i>T. Beard</i>		<i>6850</i>

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)	Date / Time	Reason for Transfer / Storage Location



Batch Worklist

HBN: 230318



Instrument: WP

Status: WP

Created: 12/31/2018 08:14

Analyst: T. Bosch

Batch: ELMS/2189

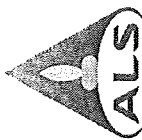
Rule: EPA 6850, DoD QSM Water

- Workorder: 1835578 [ENV_LVL4]
- Workorder: 1835582 [ENV_LVL4]
- Workorder: 1835584 [ENV_LVL4]
- Workorder: 1835586 [ENV_LVL4]
- Workorder: 1835589 [ENV_LVL4]

Pos	Lab ID	Sample ID	Prep Initial	Prep Final	Dist Wt	Type	Mx Container	Procedure	Mgr	Expire Date	Due Date	Run Date
1	634656	CCV for HBN 230318 [ELMS/2189]				CCV	3	E685041C3Q	5311		17/2019	17/2019
2	634657	LODV for HBN 230318 [ELMS/2189]				LODV	3	E6850..D3Q	5311		17/2019	17/2019
3	634658	ICS for HBN 230318 [ELMS/2189]				ICS	3	E6850..D3Q	5311		17/2019	17/2019
4	634659	LMB for HBN 230318 [ELMS/2189]				LMB	3	E6850Q413Q	5311		17/2019	17/2019
5	634660	LCS for HBN 230318 [ELMS/2189]				LCS	3	E6850Q413Q	5311		17/2019	17/2019
6	1835578001	LH18/24-SP140_121818				SAMPLE	3	1835578001-A E6850Q41.3	5480	1/15/2019	1/15/2019	17/2019
7	1835582001	LH18/24-SP650_121818_BOX				SAMPLE	3	1835582001-A E6850Q41.3	5480	1/15/2019	1/15/2019	17/2019
8	634661	LH18/24-SP650..(1835582001MS)				MS	3	E6850Q413Q	5311		17/2019	17/2019
9	634662	LH18/24-SP65..(1835582001MSD)				MSD	3	E6850Q413Q	5311		17/2019	17/2019
10	1835584001	LH18/24-SP650_121818_BOX				SAMPLE	3	1835584001-A E6850Q41.3	5480	1/15/2019	1/15/2019	17/2019
11	1835586001	18CPTMW12SW_121718				SAMPLE	3	1835586001-A E6850Q41.3	5480	1/14/2019	1/14/2019	17/2019
12	1835586002	18CPTMW12DW_121718				SAMPLE	3	1835586002-A E6850Q41.3	5480	1/14/2019	1/14/2019	17/2019
13	1835586003	MW7_121718				SAMPLE	3	1835586003-A E6850Q41.3	5480	1/14/2019	1/14/2019	17/2019
14	1835586004	18CPTMW08SW_121818				SAMPLE	3	1835586004-A E6850Q41.3	5480	1/15/2019	1/15/2019	17/2019
15	1835586005	18CPTMW08DW_121818				SAMPLE	3	1835586005-A E6850Q41.3	5480	1/15/2019	1/15/2019	17/2019
16	1835586006	MW5_121818				SAMPLE	3	1835586006-A E6850Q41.3	5480	1/15/2019	1/15/2019	17/2019
17	1835586007	MW9_121818				SAMPLE	3	1835586007-A E6850Q41.3	5480	1/15/2019	1/15/2019	17/2019
18	634663	CCV for HBN 230318 [ELMS/2189]				CCV	3	E685041C3Q	5311		17/2019	17/2019
19	634664	LODV for HBN 230318 [ELMS/2189]				LODV	3	E6850..D3Q	5311		17/2019	17/2019
20	1835586008	18CPTMW10SW_121818				SAMPLE	3	1835586008-A E6850Q41.3	5480	1/15/2019	1/15/2019	17/2019
21	1835586009	18CPTMW10DW_121818				SAMPLE	3	1835586009-A E6850Q41.3	5480	1/15/2019	1/15/2019	17/2019
22	1835589001	AWD3_121718				SAMPLE	3	1835589001-A E6850Q41.3	5480	1/14/2019	1/14/2019	17/2019
23	1835589002	AWD1_121818				SAMPLE	3	1835589002-A E6850Q41.3	5480	1/15/2019	1/15/2019	17/2019
24	1835589003	18CPTMW04SW_121818				SAMPLE	3	1835589003-A E6850Q41.3	5480	1/15/2019	1/15/2019	17/2019
25	1835589004	18CPTMW04_121818				SAMPLE	3	1835589004-A E6850Q41.3	5480	1/15/2019	1/15/2019	17/2019



Batch Worklist



Pos	Lab ID	Sample ID	Prep Initial	Prep Final	Dust Weight	Type	Mx	Container	Procedure	Mgr	Expire Date	Due Date	Run Date
26	634665	CCV for HBN 230318 [ELMS/2189]				CCV	3		E685041C3Q	5311		17/2019	
27	634666	LODY for HBN 230318 [ELMS/2189]				LODY	3		E6850..D3Q	5311		17/2019	



ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

Analytical Documentation



ALS Work Order #'s & Sample #'s: 1835578 (001); 1835582 (001); 1835584 (001); 1835586 (001-09);
 1835589 (001-04) ELMS Batch/HBN ID: 2189 (230318)
 Prep Date: 12/28/2018 Analysis Date: 12/31/2018 Analyst: T. Bosch
 Analyte: **Perchlorate** Matrix: **Water** Method: **6850**
 Sequence: \\HPCHEM\1\SEQUENCE\CLO4\2018\DEC\31DEC18D.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 634660; Target = 5.0µg/L. ASTM type II water was used for LMB 634659.

MS/MSD: MS/MSD was performed on sample 1835582001 (Client ID: LH18/24-SP650_121818_BIX). 5.0µl of Working Standard Solution Horizon ID 43701 was added to 10.0mL of sample preparation. Spike target = 5.0µg/L.

COMMENTS:

- 1) Results reported in µg/L. Field samples 1835578001 and 1835586003/04/06 were analyzed and reported from 1:1,000 dilutions. Field samples 1835586005/07 were analyzed and reported from 1:100 dilutions. Field sample 1835589004 was analyzed and reported from a 1:10 dilution. The reporting limits have been adjusted accordingly.
- 2) All QC, Blank, CCV, and MS/MSD results were within method parameters.
- 3) Sample data can be viewed at two directories within the ALS system: \\ALS\TWS013\LCMS\LCMS04\2018\DEC\HBN# or through NuGenesis\Tree\PrintData\LCMS\DefaultView.
- 4) Notebook: \\als\TWS013\ORGANIC\BOSCH\LCMS\Perchlorates\Waters\2018\230318-DoD-ALS-Hstn LCMS4 or through \\ALS\TWS013\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.

<u>Chromatography (GC, HPLC, LC/MS) Technical Review Criteria</u>	<u>Analyst Initials</u>	<u>Reviewer Initials</u>
Batch(es)/SDG: <u>ELMS: 2189 HBN: 230318</u>		
<u>Sample Set IDs if Applicable: 1835586/1835589</u>		
<u>1835576/1835582/1835584</u>		
<u>Calibration standards analyzed and meets criteria</u>	TB	SB
<u>Standards traceability checked and meets criteria</u>	TB	SB
<u>Standard curve coefficients evaluated and meet criteria</u>	TB	SB
<u>ICVs analyzed and meet acceptance criteria</u>	TB	SB
<u>CCVs analyzed and meet acceptance criteria</u>	TB	SB
<u>Method Blanks analyzed and meet acceptance criteria</u>	TB	SB
<u>Retention Time Windows checked</u>	TB	SB
<u>For method 8081A, Endrin/DDT Breakdown is checked for compliance</u>	—	—
<u>Surrogate recoveries checked and appropriately addressed</u>	—	—
<u>Method Preparation Blanks analyzed and meet acceptance criteria</u>	TB	SB
<u>MSs, MSDs, and/or MDs analyzed and calculations checked; applicable flags applied on QC reports; LCSs analyzed and meet acceptance criteria when performed</u>	TB	SB
<u>RLVS analyzed</u>	TB	SB
<u>Preparation and analysis hold times met</u>	TB	SB
<u>Preparation deviations and re-preparations noted when performed</u>	TB	SB
<u>Analysis deviations and re-analyses noted when performed</u>	TB	SB
<u>Sample dilution factors noted on reports</u>	TB	SB
<u>Electronic records in HBN transcription accuracy and completeness checked</u>	TB	SB
<u>Preparation and analysis calculations checked</u>	TB	SB
<u>NCRs are completed as necessary NC/CAR#</u>	—	—
<u>Report forms are complete and accurate</u>	TB	SB
<u>Manual integrations checked</u>	TB	SB





STANDARD REPORT

Working Standard - CLO4 WRK

CLO4 WRK		Description - 6850 WKG Std 100.ug/L			
Standard: 43702		Created By: Thomas Bosch		Amount: 10 mL	
MFG: ALS/SLC		Create Date: 09/18/2018 02:09PM		Expires: 09/18/2019	
MFG Lot: TNB: 09/18/2018				Usable: Yes	
Pipette ID: Not Provided				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	Created By: Thomas Bosch	Amount: 100 mL	
MFG: AccuStandard	Create Date: 09/17/2018 09:09AM	Expires: 07/25/2020	
MFG Lot: 218065075		Usable: No	
Part ID: IC-PER-10X-1		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	Created By: Thomas Bosch	Amount: 10 mL			
MFG: ALS/SLC	Create Date: 09/18/2018 02:09PM	Expires: 09/18/2019			
MFG Lot: TNB: 09/18/2018		Usable: Yes			
Pipette ID: Not Provided		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		Created By: Thomas Bosch		Amount: 10 mL	
MFG: ALS/SLC		Create Date: 05/09/2018 10:05AM		Expires: 05/09/2019	
MFG Lot: TNB: 05/09/2018				Usable: Yes	
Pipette ID: Not Provided				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 Intrmdf Std-QC 10ug/mL			
Standard: 41830		Created By: Thomas Bosch		Amount: 10 mL	
MFG: ALS/SLC		Create Date: 05/09/2018 10:05AM		Expires: 05/09/2019	
MFG Lot: TNB: 05/09/2018				Usable: Yes	
Pipette ID: Not Provided				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	Created By: Thomas Bosch	Amount: 100 mL	
MFG: Ultra Scientific	Create Date: 05/11/2017 01:05PM	Expires: 03/31/2020	
MFG Lot: CP-0860		Usable: Yes	
Part ID: ICC-013		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





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

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/NCCL Z-540-1, ISO 9001, ISO 17025, and ISO Guide 34. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 819.

Estimation of Uncertainties:

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

Homogeneity:

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

Intended Use:

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

Instructions for Use:

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

Hazards:

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

Expiration of Certification:

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





Certificate of Analysis



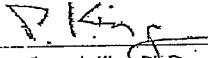
ISO Guide 34 Reference Material

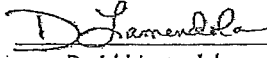
Product Number: ICC-013
Lot Number: CP-0860

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



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

CERTIFICATE OF ANALYSIS



43659

AccuTrace™ Reference Standard

Catalog No: IC-PER-10X-1
Description: Perchlorate Standard
Element: Perchlorate (ClO₄)
SRM: Ind. Std.
Lot: 218065075
Matrix: Water
Hazards: Refer to SDS for complete safety information

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



Signal Word: None

Component	SRM #	Prepared Concentration (µg/mL)
ClO ₄ Perchlorate	Ind. Std.	1000

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, Inorganic QC Manager

Page 1 of 1

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

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Cambridge Isotope Laboratories, Inc.

Certificate of Analysis

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



23118

Product Name: PERCHLORIC ACID, SODIUM SALT
(Isotopic Label & Enrichment Specification) (18O4, 90%+) 100 UG/ML IN WATER

Lot Number: SDDG-013

Catalog Number: OLM-7310-S

Product Information

Chemical Purity Specification: $\geq 98\%$

Labeled CAS Number: NA

Unlabeled CAS Number: 7601-89-0

MW*: 130.4

Chemical Formula: $\text{NaCl}^+\text{O}_4^-$

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 $\mu\text{g/mL}$
Chemical Purity of Neat Material(s)	98%
LC/MS for Concentration	109.4 \pm 2.8 $\mu\text{g/mL}$ (k=2)





ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

Raw Data



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	
#*	634656	C	Vial 71	1	Control	1	3.38486e6	8.717	25.82627
#*	634657	L	Vial 72	1	Control	2	1.09751e5	8.784	1.07661
#*	634658	I	Vial 73	1	Control	3	8.96540e4	8.767	1.06520
#*	634659	L	Vial 74	1	Control	4	0.00000	0.000	0.00000
#*	634660	Q	Vial 75	1	Control	5	5.99223e5	8.831	4.78394
#*	1835578001		Vial 76	1	Sample	6	7.14567e5	8.842	5739.33673
#*	1835582001		Vial 77	1	Sample	7	0.00000	0.000	0.00000
#*	634661	3	Vial 78	1	Sample	8	3.56092e5	8.670	4.67205
#*	634662	3	Vial 79	1	Sample	9	4.10282e5	8.663	4.81700
#*	1835584001		Vial 80	1	Sample	10	0.00000	0.000	0.00000
#*	1835586001		Vial 81	1	Sample	11	6.39972e4	8.610	1.07753
#*	1835586002		Vial 82	1	Sample	12	4.44404e4	8.730	5.58335e-1
#*	1835586003		Vial 83	1	Sample	13	1.93254e6	8.819	1.35147e4
#*	1835586004		Vial 84	1	Sample	14	2.75640e6	8.814	2.19010e4
#*	1835586005		Vial 85	1	Sample	15	3.72005e6	8.819	3303.36411
#*	1835586007		Vial 87	1	Sample	17	7.32888e5	8.821	569.32373
#*	1835586006		Vial 86	1	Sample	18	3.14221e6	8.818	2.73281e4
#*	634663	C	Vial 71	1	Control	19	2.70207e6	8.778	25.72516
#*	634664	L	Vial 72	1	Control	20	1.02100e5	8.801	1.08980
#*	1835586008		Vial 88	1	Sample	21	0.00000	0.000	0.00000
#*	1835586009		Vial 89	1	Sample	22	4.33757e5	8.714	3.38575
#*	1835589001		Vial 90	1	Sample	23	8.62875e5	8.797	6.91698
#*	1835589002		Vial 91	1	Sample	24	1.46153e5	8.783	1.23214
#*	1835589003		Vial 92	1	Sample	25	0.00000	0.000	0.00000
#*	1835589004		Vial 93	1	Sample	26	3.25431e6	8.794	221.52674
#*	634665	C	Vial 71	1	Control	27	3.22313e6	8.805	26.21087
*	634666	L	Vial 72	1	Control	28	1.07063e5	8.812	1.07853

#*	Sample	Location	Inj	SampleType	Run	CLO4-85 Area	CLO4-85 RT	CLO4-85 Amount	
#*	634656	C	Vial 71	1	Control	1	9.90849e5	8.735	25.07424
#*	634657	L	Vial 72	1	Control	2	4.07296e4	8.805	1.17529
#*	634658	I	Vial 73	1	Control	3	3.99010e4	8.779	1.37458
#*	634659	L	Vial 74	1	Control	4	0.00000	0.000	0.00000
#*	634660	Q	Vial 75	1	Control	5	1.88568e5	8.848	4.94214
#*	1835578001		Vial 76	1	Sample	6	2.19904e5	8.859	5823.86471
#*	1835582001		Vial 77	1	Sample	7	0.00000	0.000	0.00000
#*	634661	3	Vial 78	1	Sample	8	1.26371e5	8.688	5.42112
#*	634662	3	Vial 79	1	Sample	9	1.38404e5	8.679	5.32464
#*	1835584001		Vial 80	1	Sample	10	0.00000	0.000	0.00000
#*	1835586001		Vial 81	1	Sample	11	2.78012e4	8.630	1.36193
#*	1835586002		Vial 82	1	Sample	12	1.56699e4	8.746	5.03128e-1
#*	1835586003		Vial 83	1	Sample	13	5.60856e5	8.836	1.30516e4
#*	1835586004		Vial 84	1	Sample	14	8.06830e5	8.828	2.12919e4
#*	1835586005		Vial 85	1	Sample	15	1.07822e6	8.833	3168.51355
#*	1835586007		Vial 87	1	Sample	17	2.20861e5	8.835	565.97425
#*	1835586006		Vial 86	1	Sample	18	9.00319e5	8.835	2.59890e4
#*	634663	C	Vial 71	1	Control	19	7.81696e5	8.795	24.70120
#*	634664	L	Vial 72	1	Control	20	3.57379e4	8.816	1.12914
#*	1835586008		Vial 88	1	Sample	21	0.00000	0.000	0.00000
#*	1835586009		Vial 89	1	Sample	22	1.41589e5	8.729	3.58693
#*	1835589001		Vial 90	1	Sample	23	2.57706e5	8.812	6.83735
#*	1835589002		Vial 91	1	Sample	24	5.03445e4	8.794	1.27829
#*	1835589003		Vial 92	1	Sample	25	0.00000	0.000	0.00000
#*	1835589004		Vial 93	1	Sample	26	9.35943e5	8.810	211.78317
#*	634665	C	Vial 71	1	Control	27	9.26681e5	8.823	25.01704



#*	Sample	Location	Inj	SampleType	Run	CLO4-85 Area	CLO4-85 RT	CLO4-85 Amount	
*	634666	L	Vial 72	1	Control	28	3.60965e4	8.828	1.07802

#*	Sample	Location	Inj	SampleType	Run	CLO4-89-ISTD Area	CLO4-89-ISTD RT	CLO4-89-ISTD Amount	
#*	634656	C	Vial 71	1	Control	1	3.90534e5	8.742	5.00000
#*	634657	L	Vial 72	1	Control	2	3.90274e5	8.810	5.00000
#*	634658	I	Vial 73	1	Control	3	3.23063e5	8.795	5.00000
#*	634659	L	Vial 74	1	Control	4	3.95061e5	8.849	5.00000
#*	634660	Q	Vial 75	1	Control	5	4.01626e5	8.856	5.00000
#*	1835578001		Vial 76	1	Sample	6	3.95530e5	8.870	5000.00000
#*	1835582001		Vial 77	1	Sample	7	2.58532e5	8.707	5.00000
#*	634661	3	Vial 78	1	Sample	8	2.44700e5	8.696	5.00000
#*	634662	3	Vial 79	1	Sample	9	2.73000e5	8.693	5.00000
#*	1835584001		Vial 80	1	Sample	10	2.42637e5	8.698	5.00000
#*	1835586001		Vial 81	1	Sample	11	2.27333e5	8.645	5.00000
#*	1835586002		Vial 82	1	Sample	12	3.92498e5	8.760	5.00000
#*	1835586003		Vial 83	1	Sample	13	4.38558e5	8.843	5000.00000
#*	1835586004		Vial 84	1	Sample	14	3.78123e5	8.839	5000.00000
#*	1835586005		Vial 85	1	Sample	15	3.30865e5	8.841	500.00000
#*	1835586007		Vial 87	1	Sample	17	4.09114e5	8.845	500.00000
#*	1835586006		Vial 86	1	Sample	18	3.41579e5	8.843	5000.00000
#*	634663	C	Vial 71	1	Control	19	3.13045e5	8.804	5.00000
#*	634664	L	Vial 72	1	Control	20	3.57627e5	8.826	5.00000
#*	1835586008		Vial 88	1	Sample	21	2.49985e5	8.685	5.00000
#*	1835586009		Vial 89	1	Sample	22	4.19706e5	8.740	5.00000
#*	1835589001		Vial 90	1	Sample	23	3.92953e5	8.820	5.00000
#*	1835589002		Vial 91	1	Sample	24	4.40634e5	8.806	5.00000
#*	1835589003		Vial 92	1	Sample	25	2.63354e5	8.709	5.00000
#*	1835589004		Vial 93	1	Sample	26	4.41113e5	8.820	50.00000
#*	634665	C	Vial 71	1	Control	27	3.66130e5	8.833	5.00000
*	634666	L	Vial 72	1	Control	28	3.79873e5	8.839	5.00000

*** End of Report ***



Sequence Table:

Method and Injection Info Part:

Line	Location	SampleName	Method	Inj	SampleType	InjVolume	DataFile
====	=====	=====	=====	===	=====	=====	=====
1	Vial 71	634656	CCV@25	CLO4-AQN	1	Ctrl Samp	
2	Vial 72	634657	LODV@1.	CLO4-AQN	1	Ctrl Samp	
3	Vial 73	634658	ICS@1.0	CLO4-AQN	1	Ctrl Samp	
4	Vial 74	634659	LMB	CLO4-AQN	1	Ctrl Samp	
5	Vial 75	634660	QC@5.0	CLO4-AQN	1	Ctrl Samp	
6	Vial 76	1835578001	1K	CLO4-AQN	1	Sample	
7	Vial 77	1835582001		CLO4-AQN	1	Sample	
8	Vial 78	634661	355821S	CLO4-AQN	1	Sample	
9	Vial 79	634662	355821D	CLO4-AQN	1	Sample	
10	Vial 80	1835584001		CLO4-AQN	1	Sample	
11	Vial 81	1835586001		CLO4-AQN	1	Sample	
12	Vial 82	1835586002		CLO4-AQN	1	Sample	
13	Vial 83	1835586003	1K	CLO4-AQN	1	Sample	
14	Vial 84	1835586004	1K	CLO4-AQN	1	Sample	
15	Vial 85	1835586005	100	CLO4-AQN	1	Sample	
16	Vial 86	1835586006	1K	CLO4-AQN	1	Sample	
17	Vial 87	1835586007	100	CLO4-AQN	1	Sample	
18	Vial 86	1835586006	1K	CLO4-AQN	1	Sample	
19	Vial 71	634663	CCV@25	CLO4-AQN	1	Ctrl Samp	
20	Vial 72	634664	LODV@1.	CLO4-AQN	1	Ctrl Samp	
21	Vial 88	1835586008		CLO4-AQN	1	Sample	
22	Vial 89	1835586009		CLO4-AQN	1	Sample	
23	Vial 90	1835589001		CLO4-AQN	1	Sample	
24	Vial 91	1835589002		CLO4-AQN	1	Sample	
25	Vial 92	1835589003		CLO4-AQN	1	Sample	
26	Vial 93	1835589004	10X	CLO4-AQN	1	Sample	
27	Vial 71	634665	CCV@25	CLO4-AQN	1	Ctrl Samp	
28	Vial 72	634666	LODV@1.	CLO4-AQN	1	Ctrl Samp	

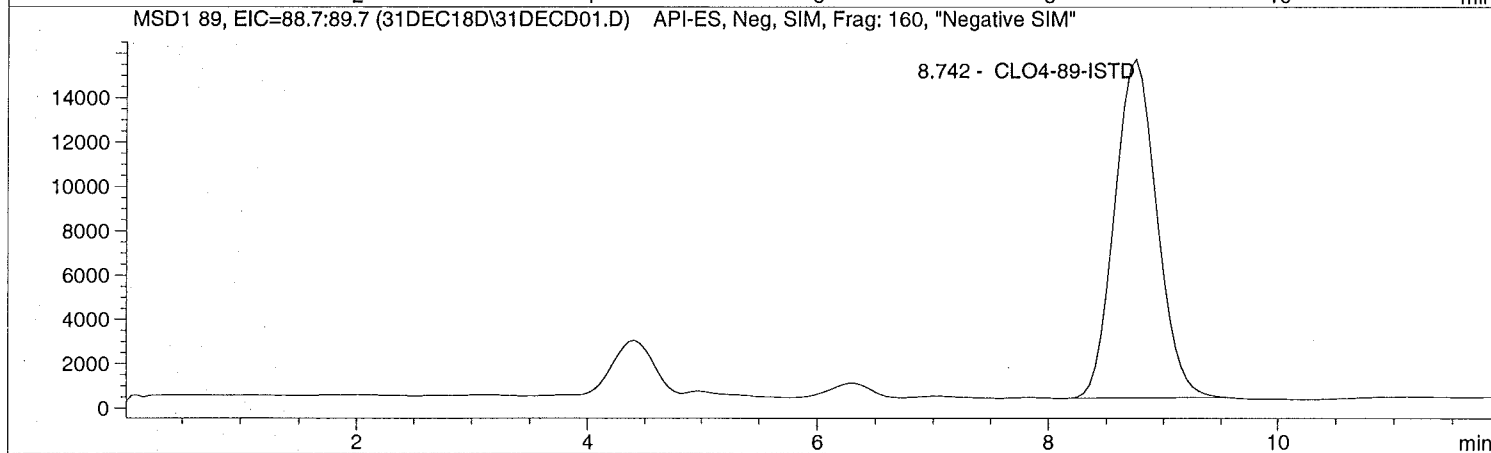
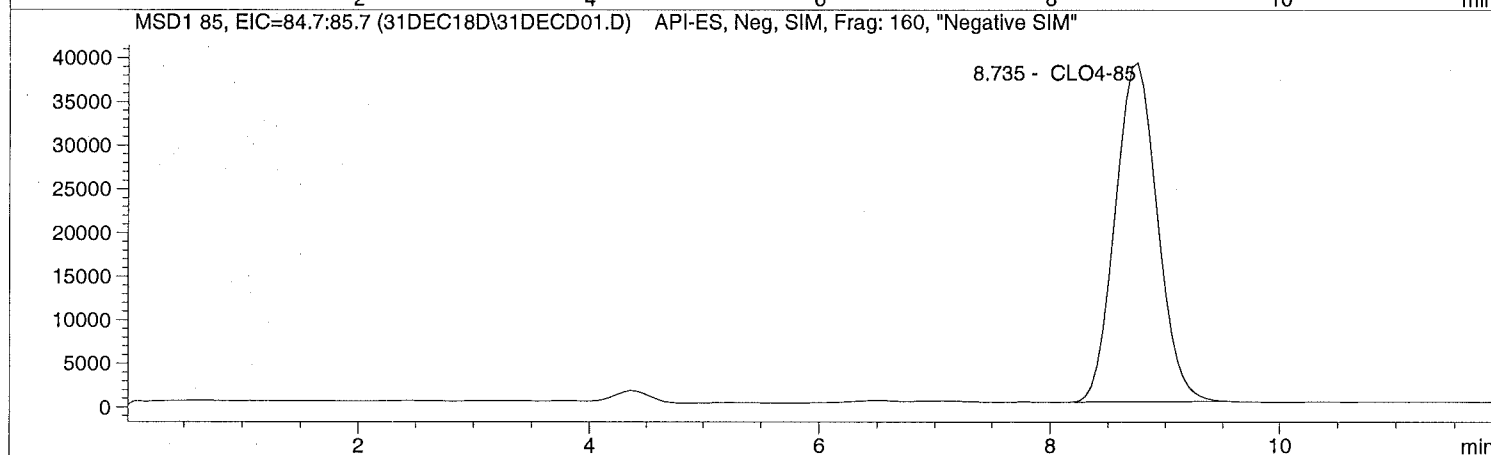
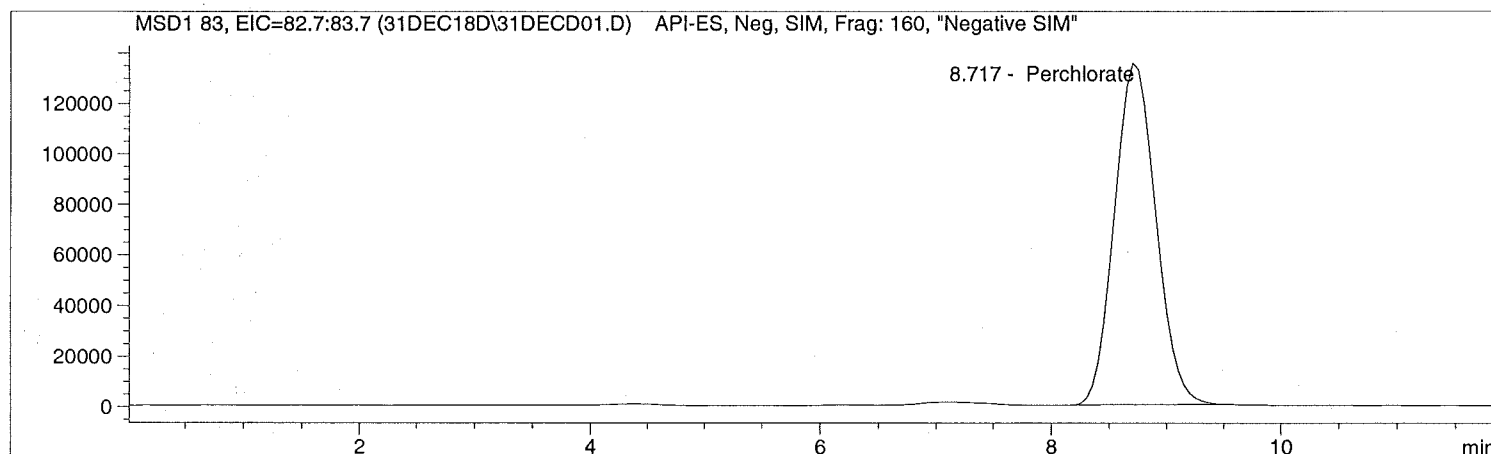


Injection Date: 12/31/2018 08:20:48
Sample Name: 634656 CCV@25
Acq Operator: TNB

Seq Line: 1
Location: Vial 71
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\31DEC18D\31DECD01.D Sample Name: 634656 CCV@25

```

=====
Injection Date: 12/31/2018 08:20:48      Seq Line:          1
Sample Name:    634656   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
8.717	PBA	3384864.3	25.8263	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.735	PBA	990848.8	25.0742	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.742	PBA	390533.6	5.0000	CLO4-89-ISTD

```

=====
*** End of Report ***
=====

```

Data file: C:\HPCHEM\1\DATA\31DEC18D\31DECD02.D

Sample Name: 634657 LODV@1.

Injection Date: 12/31/2018 08:36:24

Seq Line: 2

Sample Name: 634657 LODV@1.

Location: Vial 72

Acq Operator: TNB

Inj. No.: 1

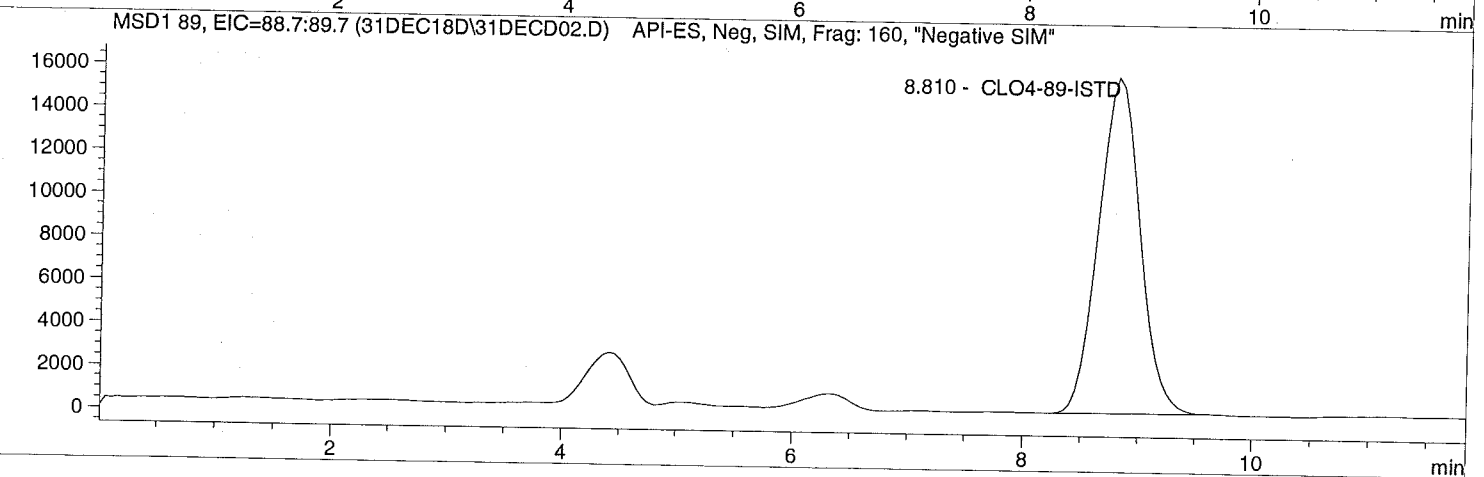
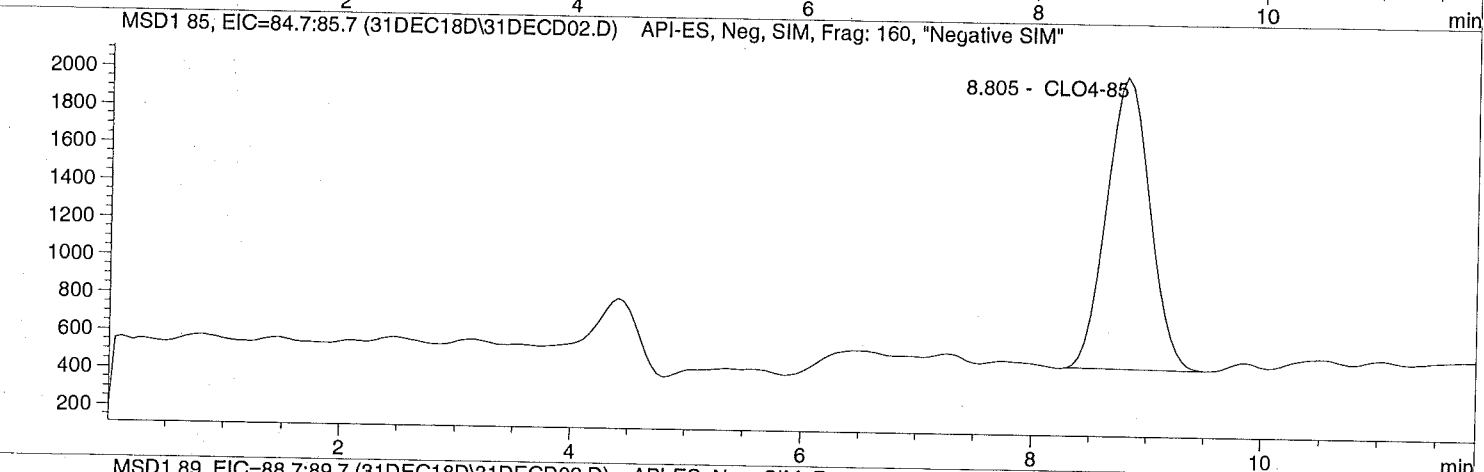
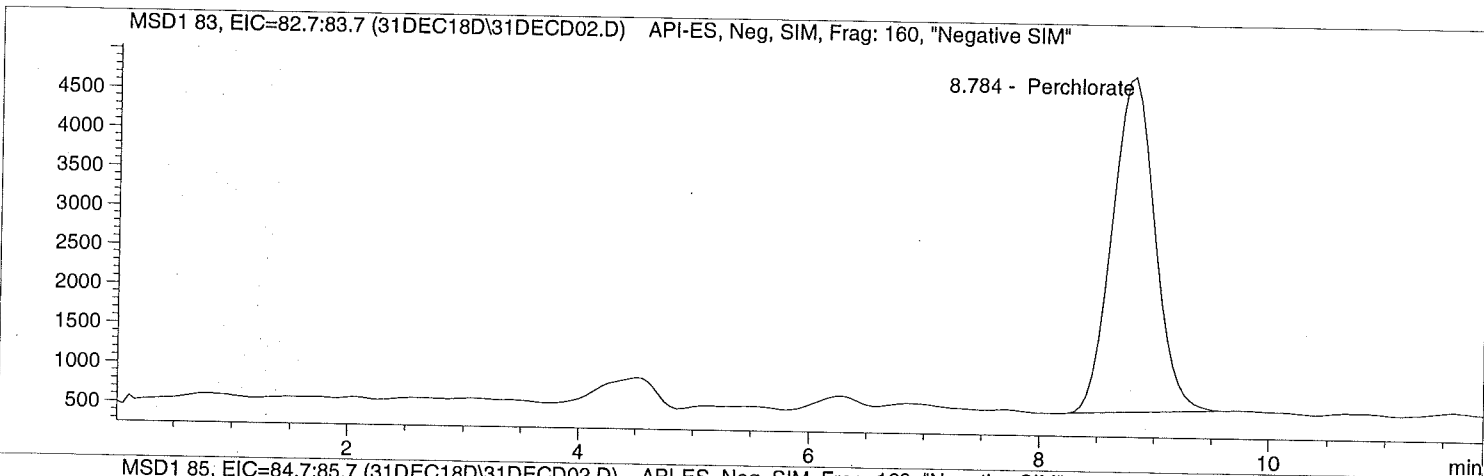
Inj. Vol.: 30 µl

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\31DEC18D\31DECD02.D Sample Name: 634657 LODV@1.

```

=====
Injection Date: 12/31/2018 08:36:24      Seq Line:          2
Sample Name:   634657  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
8.784	PBA	109750.7	1.0766	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.805	PBA	40729.6	1.1753	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.810	PBA	390274.2	5.0000	CLO4-89-ISTD

```

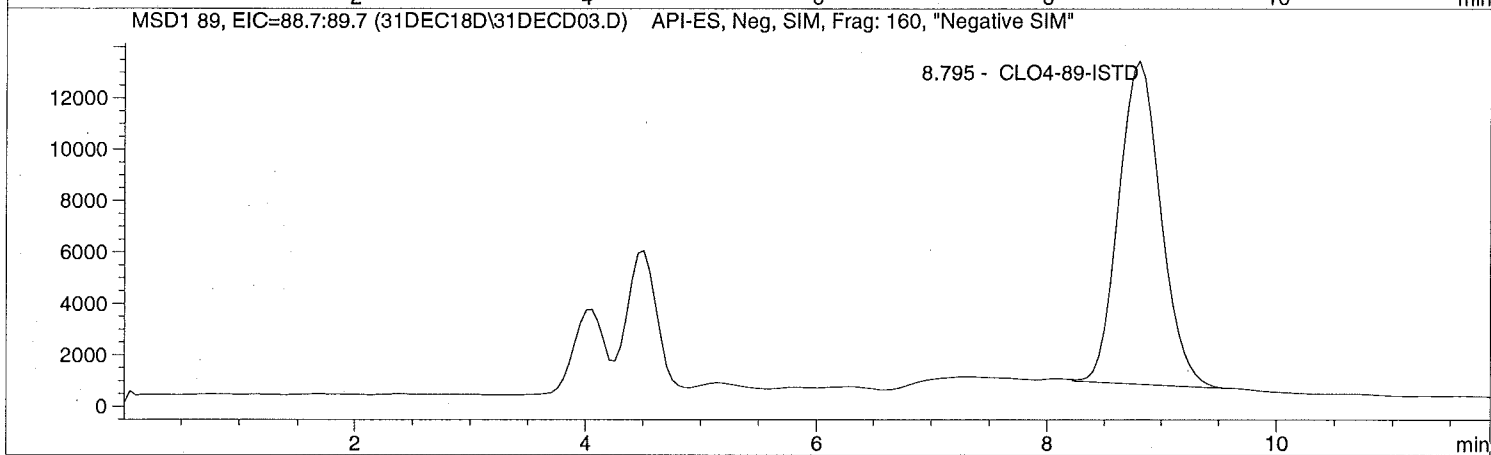
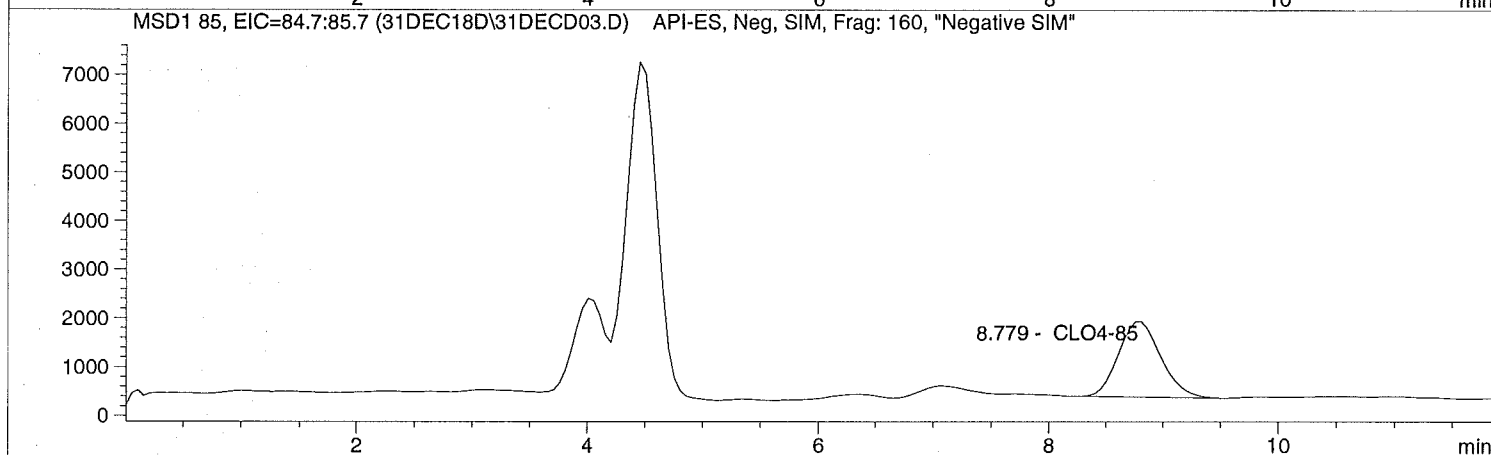
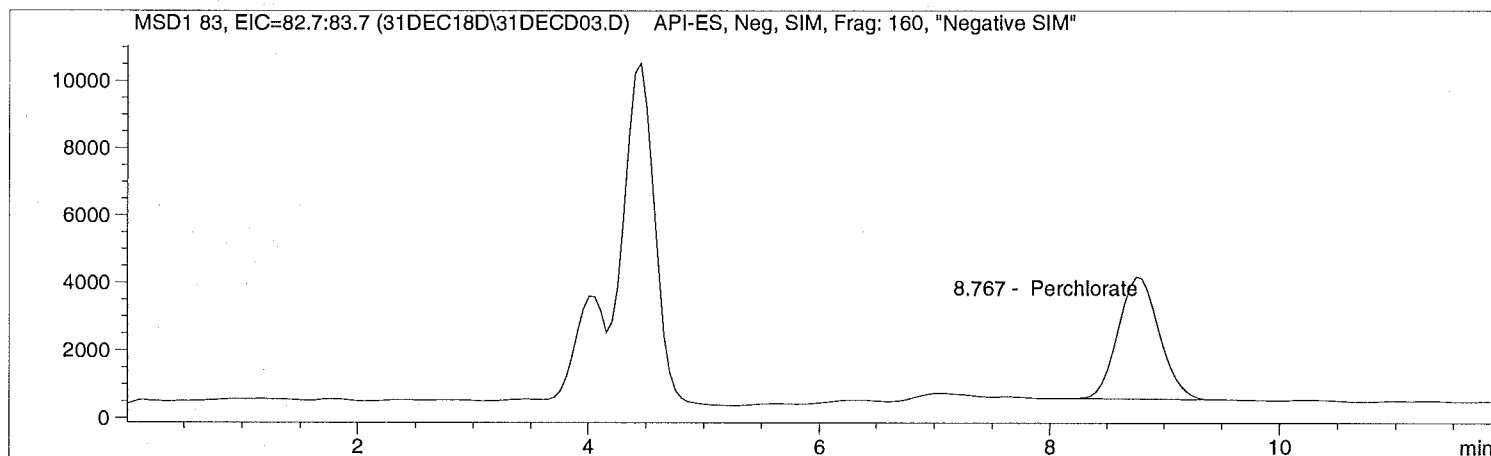
=====
*** End of Report ***
=====

```

Injection Date: 12/31/2018 08:50:13 Seq Line: 3
Sample Name: 634658 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\31DEC18D\31DECD03.D Sample Name: 634658 ICS@1.0

```

=====
Injection Date: 12/31/2018 08:50:13      Seq Line: 3
Sample Name:    634658 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
8.767	PBA	89654.0	1.0652	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.779	PBA	39901.0	1.3746	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.795	BBA	323062.8	5.0000	CLO4-89-ISTD

```

=====
*** End of Report ***
=====

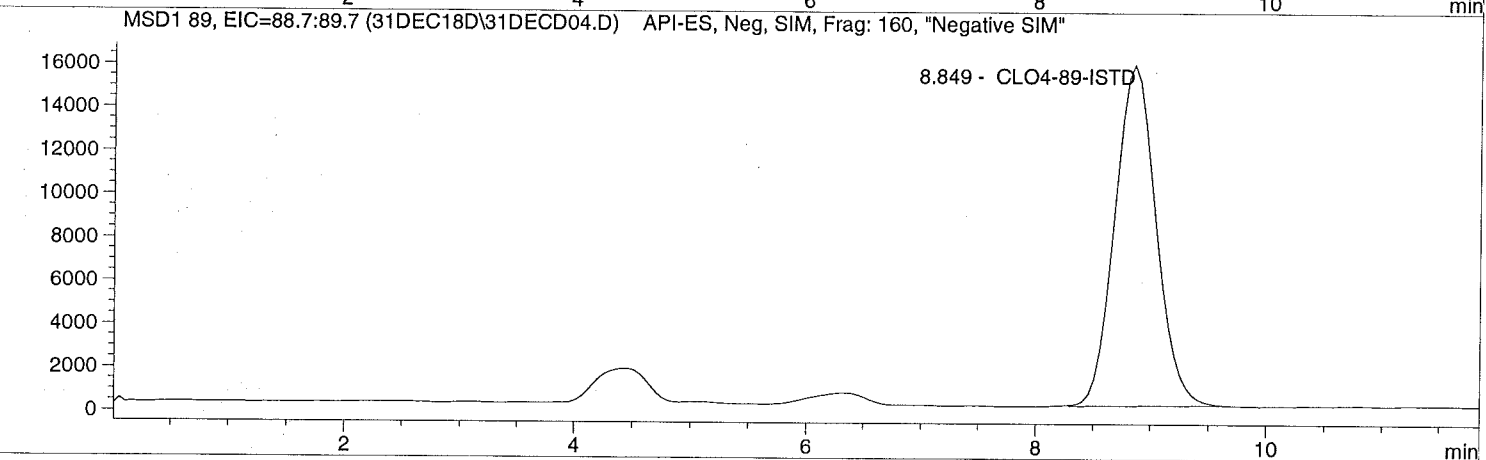
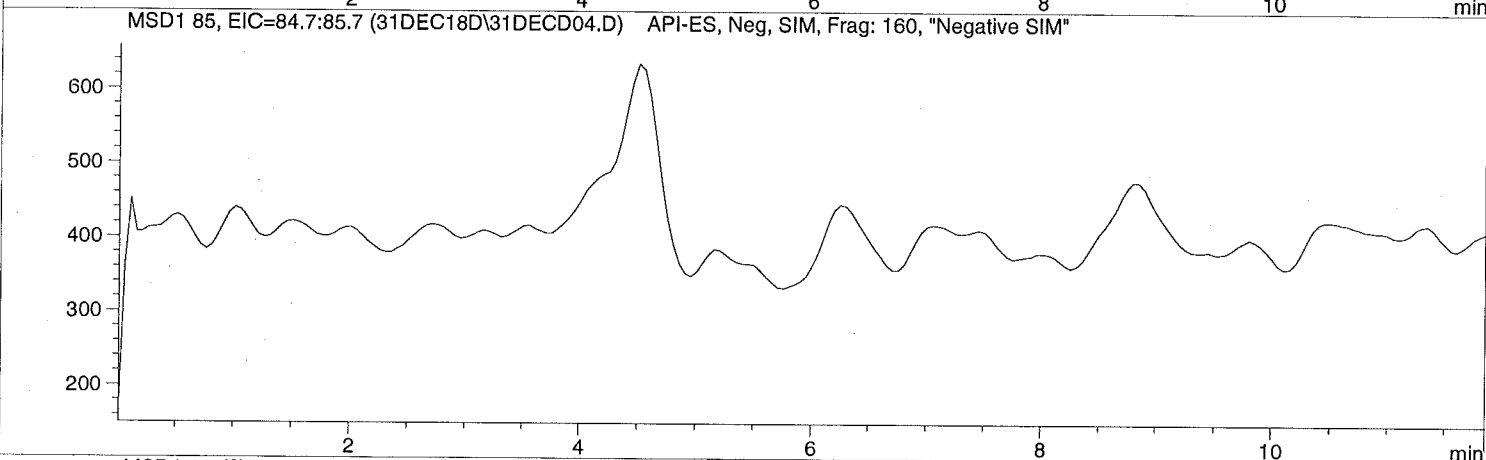
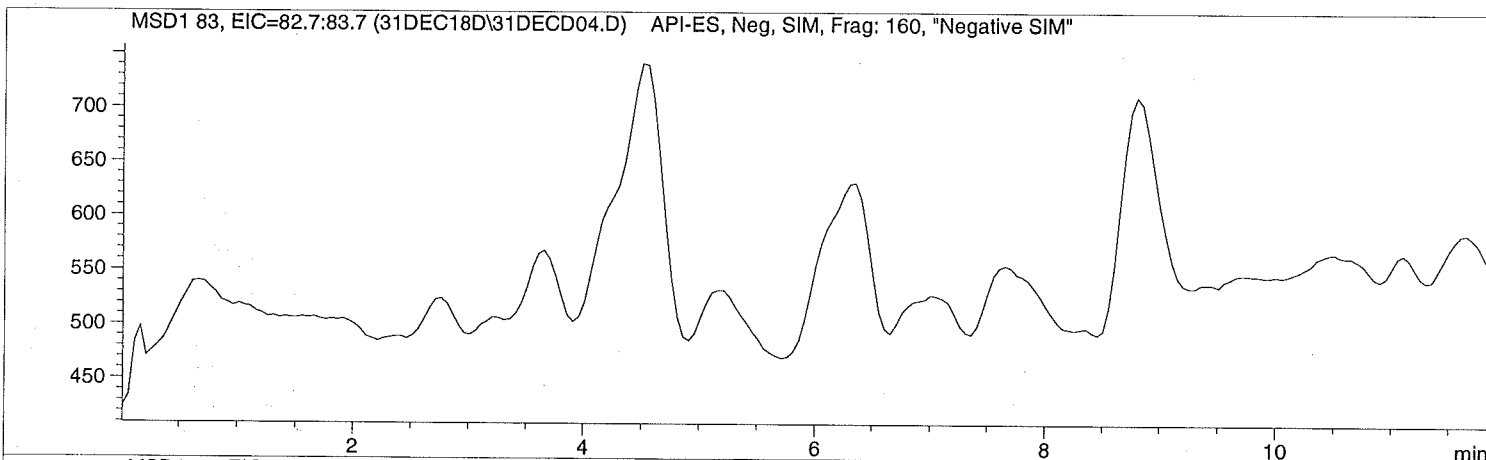
```

Injection Date: 12/31/2018 09:04:02
Sample Name: 634659 LMB
Acq Operator: TNB

Seq Line: 4
Location: Vial 74
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\31DEC18D\31DECD04.D Sample Name: 634659 LMB

```

=====
Injection Date: 12/31/2018 09:04:02      Seq Line:          4
Sample Name:    634659 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
8.849	BBA	395060.9	5.0000	CLO4-89-ISTD

```

=====
*** End of Report ***
=====

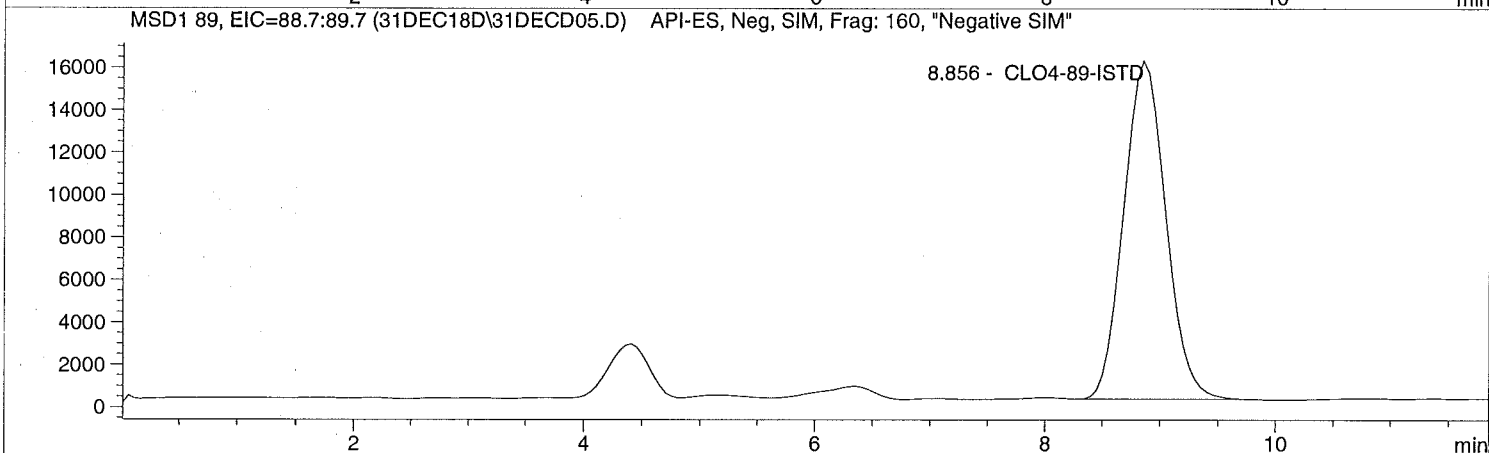
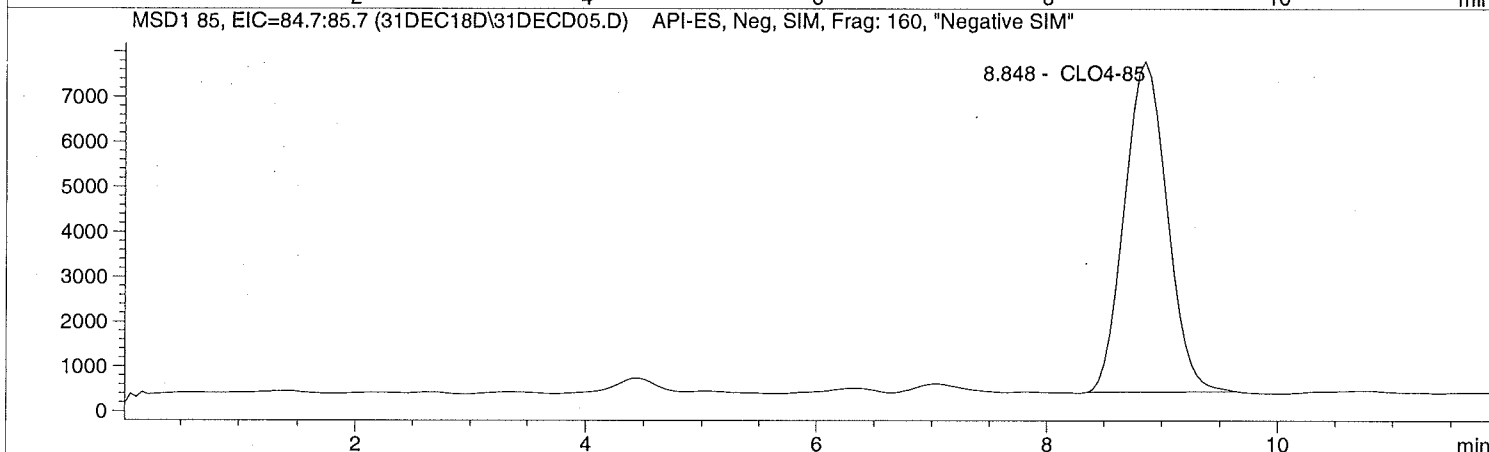
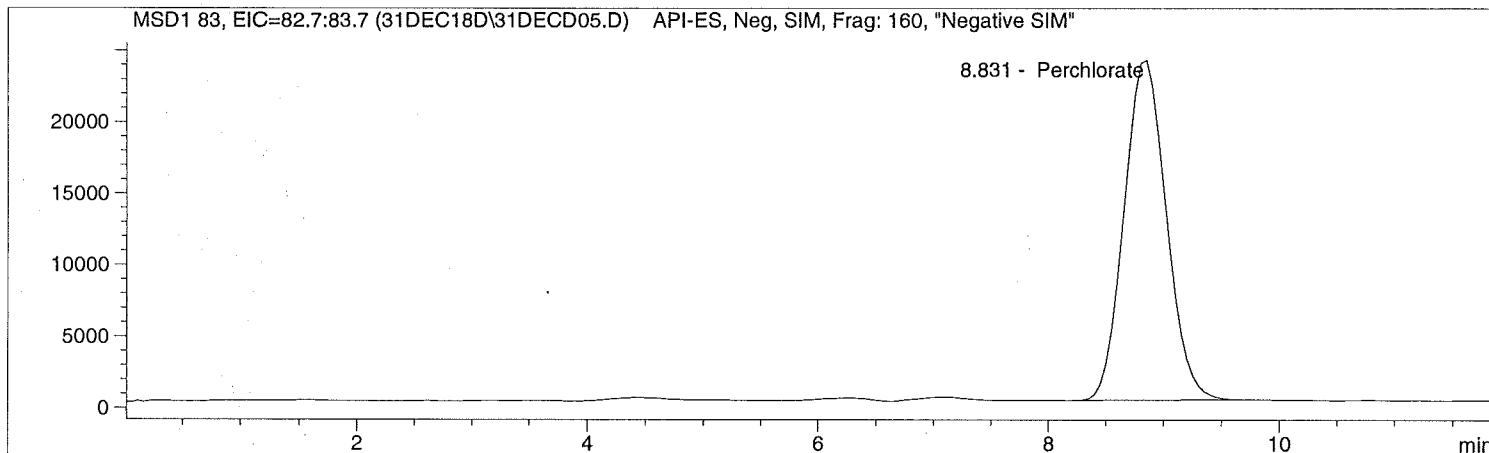
```

Data file: C:\HPCHEM\1\DATA\31DEC18D\31DECD05.D Sample Name: 634660 QC@5.0

Injection Date: 12/31/2018 09:17:46 Seq Line: 5
Sample Name: 634660 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\31DEC18D\31DECD05.D Sample Name: 634660 QC@5.0

```

=====
Injection Date: 12/31/2018 09:17:46      Seq Line: 5
Sample Name:    634660 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
8.831	PBA	599222.9	4.7839	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.848	PBA	188568.1	4.9421	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.856	PBA	401626.1	5.0000	CLO4-89-ISTD

```

=====
*** End of Report ***
=====

```

Data file: C:\HPCHEM\1\DATA\31DEC18D\31DECD06.D

Sample Name: 1835578001 1K

Injection Date: 12/31/2018 09:31:52

Seq Line: 6

Sample Name: 1835578001 1K

Location: Vial 76

Acq Operator: TNB

Inj. No.: 1

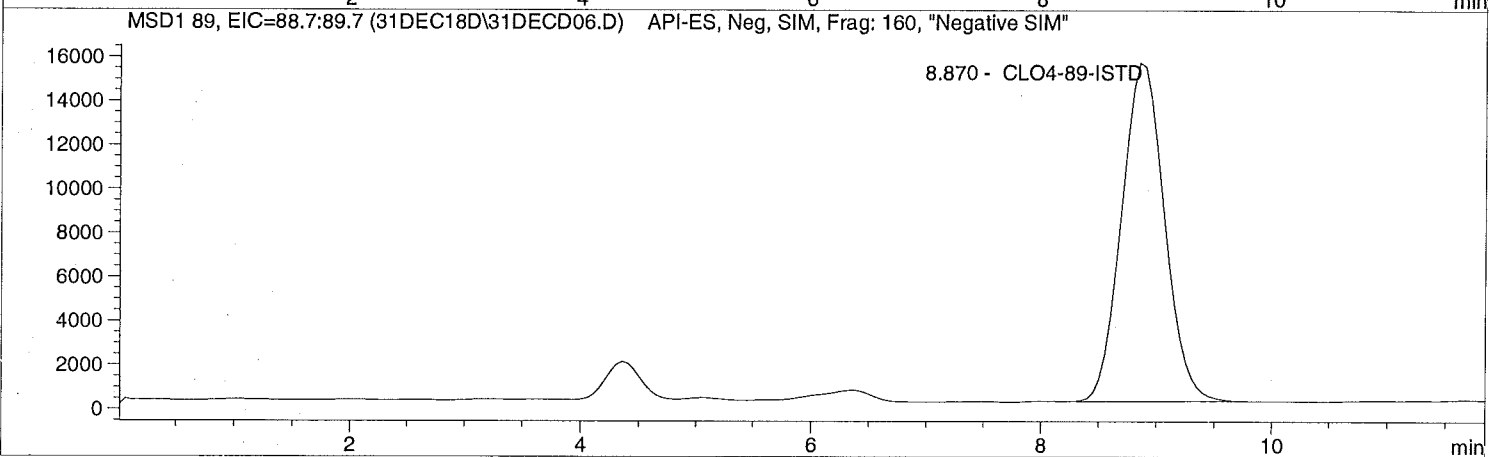
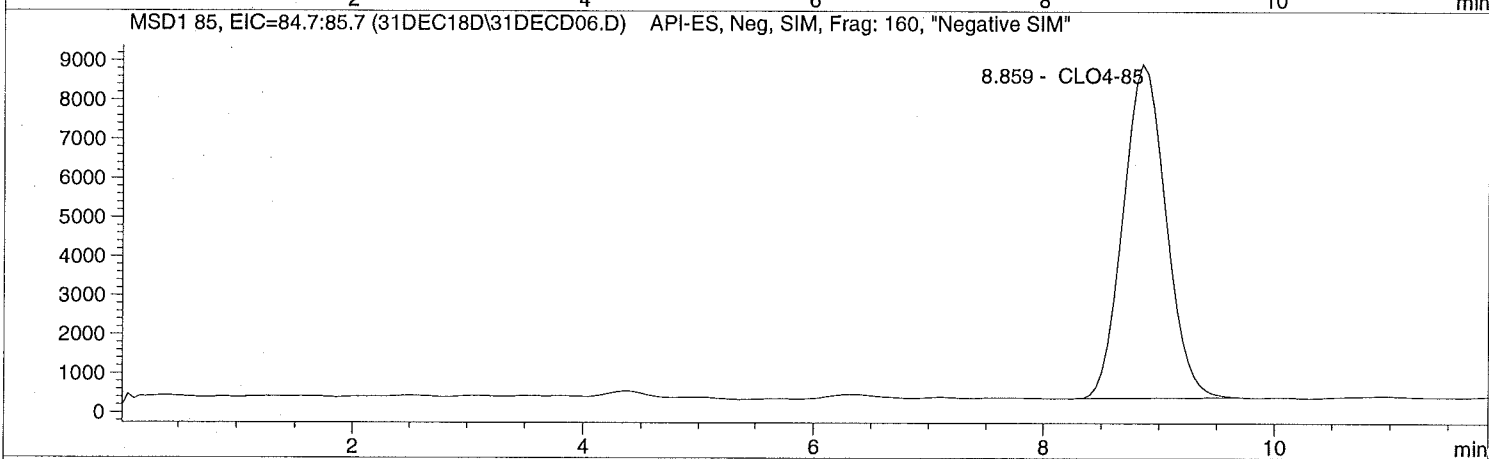
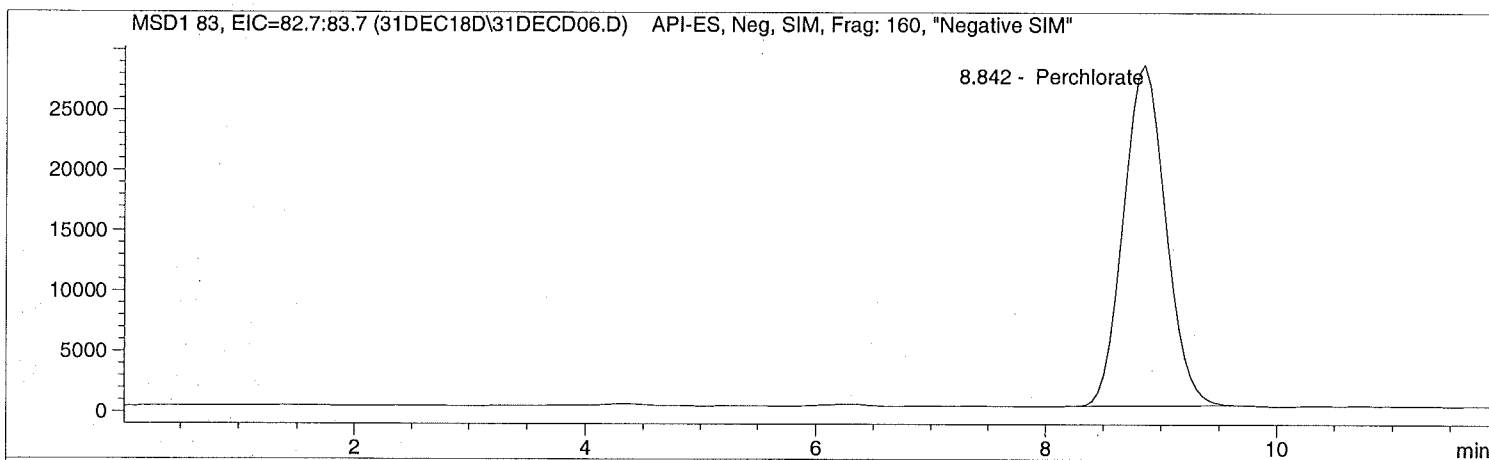
Inj. Vol.: 30 µl

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\31DEC18D\31DECD06.D Sample Name: 1835578001 1K

```

=====
Injection Date: 12/31/2018 09:31:52      Seq Line: 6
Sample Name: 1835578001 1K              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: 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
8.842	BBA	714567.3	5739.3367	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.859	PBA	219903.9	5823.8647	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.870	BBA	395529.7	5000.0000	CLO4-89-ISTD

```

=====
*** End of Report ***
=====

```

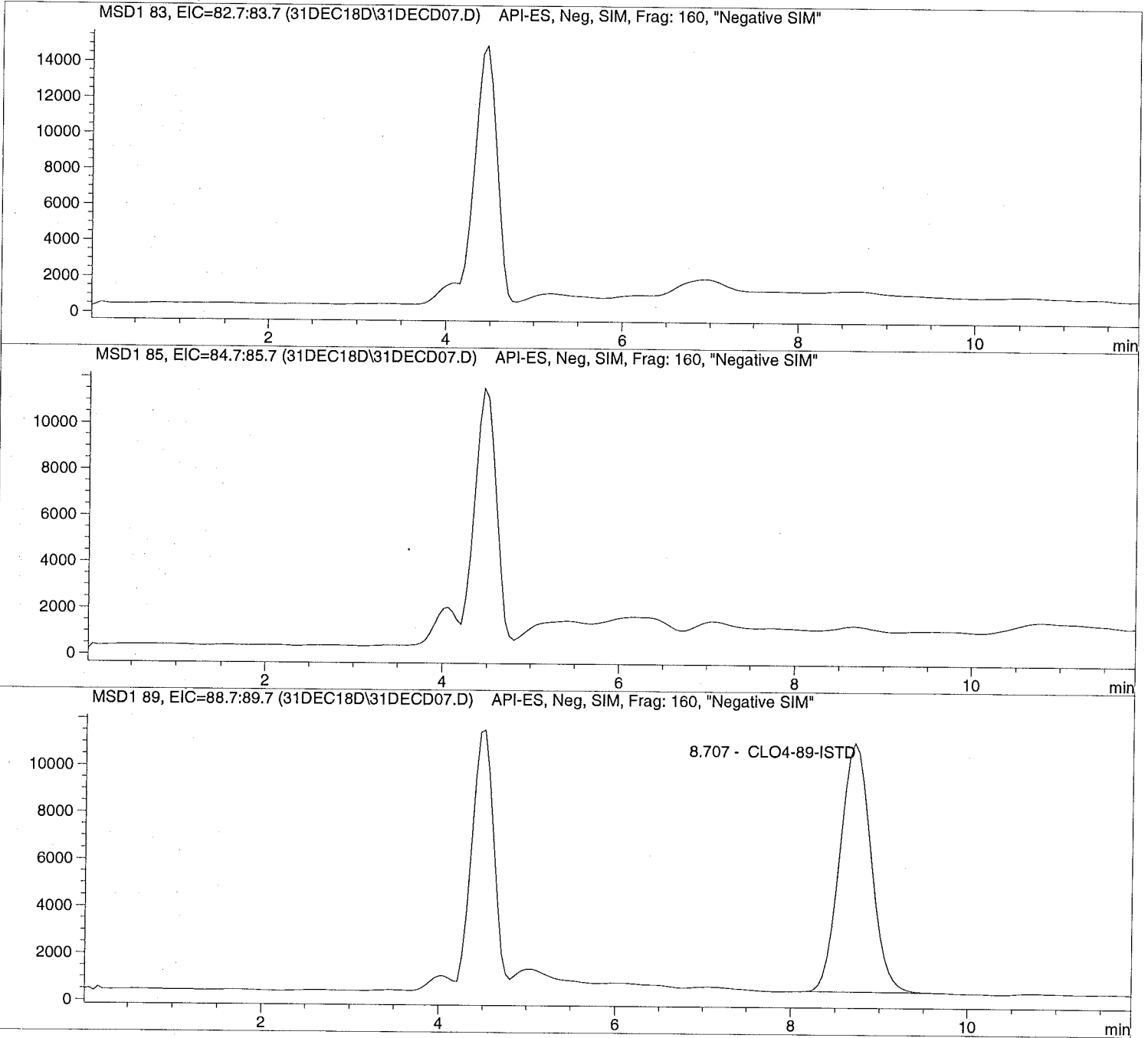


Injection Date: 12/31/2018 09:45:43
Sample Name: 1835582001
Acq Operator: TNB

Seq Line: 7
Location: Vial 77
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\31DEC18D\31DECD07.D

Sample Name: 1835582001

```

=====
Injection Date: 12/31/2018 09:45:43      Seq Line: 7
Sample Name:    1835582001                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
8.707	PBA	258531.5	5.0000	CLO4-89-ISTD

```

=====
*** End of Report ***
=====

```

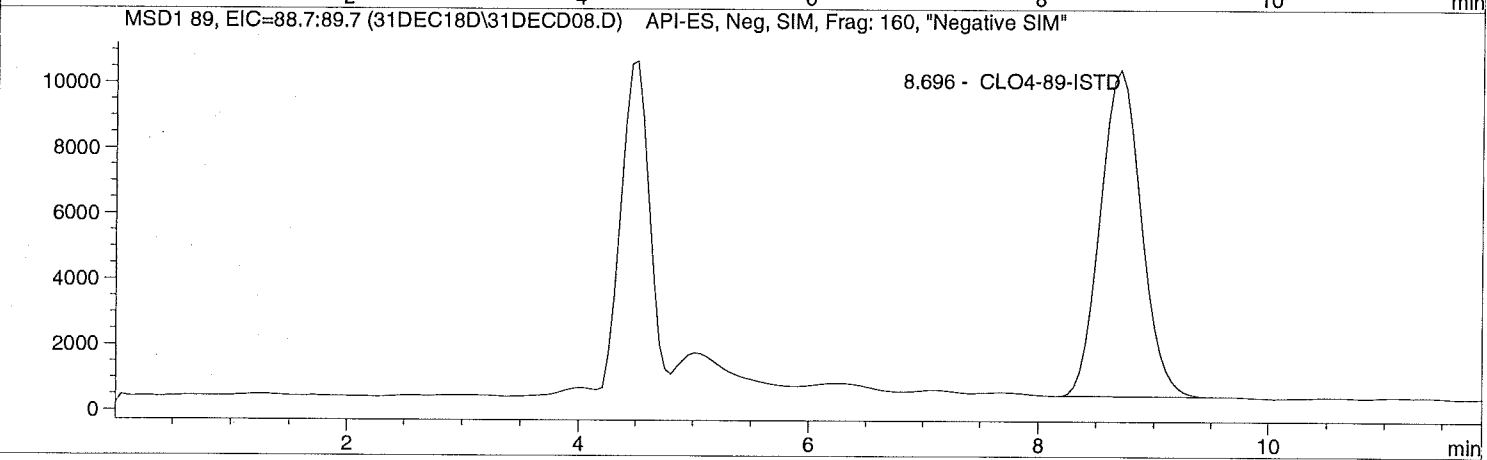
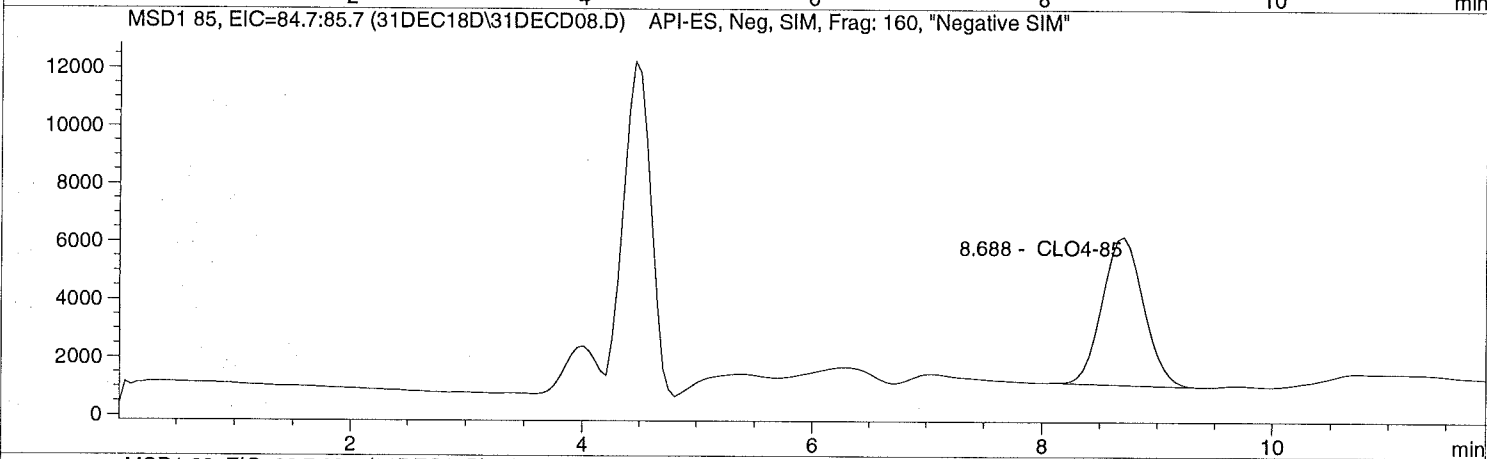
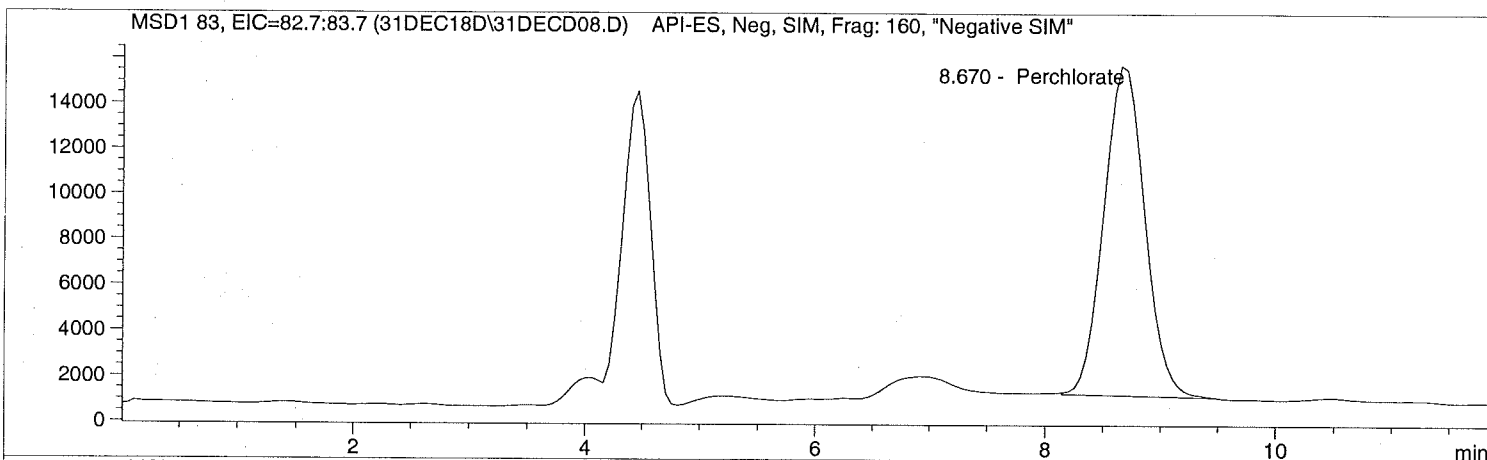


Injection Date: 12/31/2018 09:59:29
Sample Name: 634661 355821S
Acq Operator: TNB

Seq Line: 8
Location: Vial 78
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: 12/31/2018 09:59:29      Seq Line:      8
Sample Name:    634661 355821S           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
8.670	BBA	356092.0	4.6720	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.688	BBA	126371.5	5.4211	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.696	PBA	244700.5	5.0000	CLO4-89-ISTD

=====
*** End of Report ***



Data file: C:\HPCHEM\1\DATA\31DEC18D\31DECD09.D

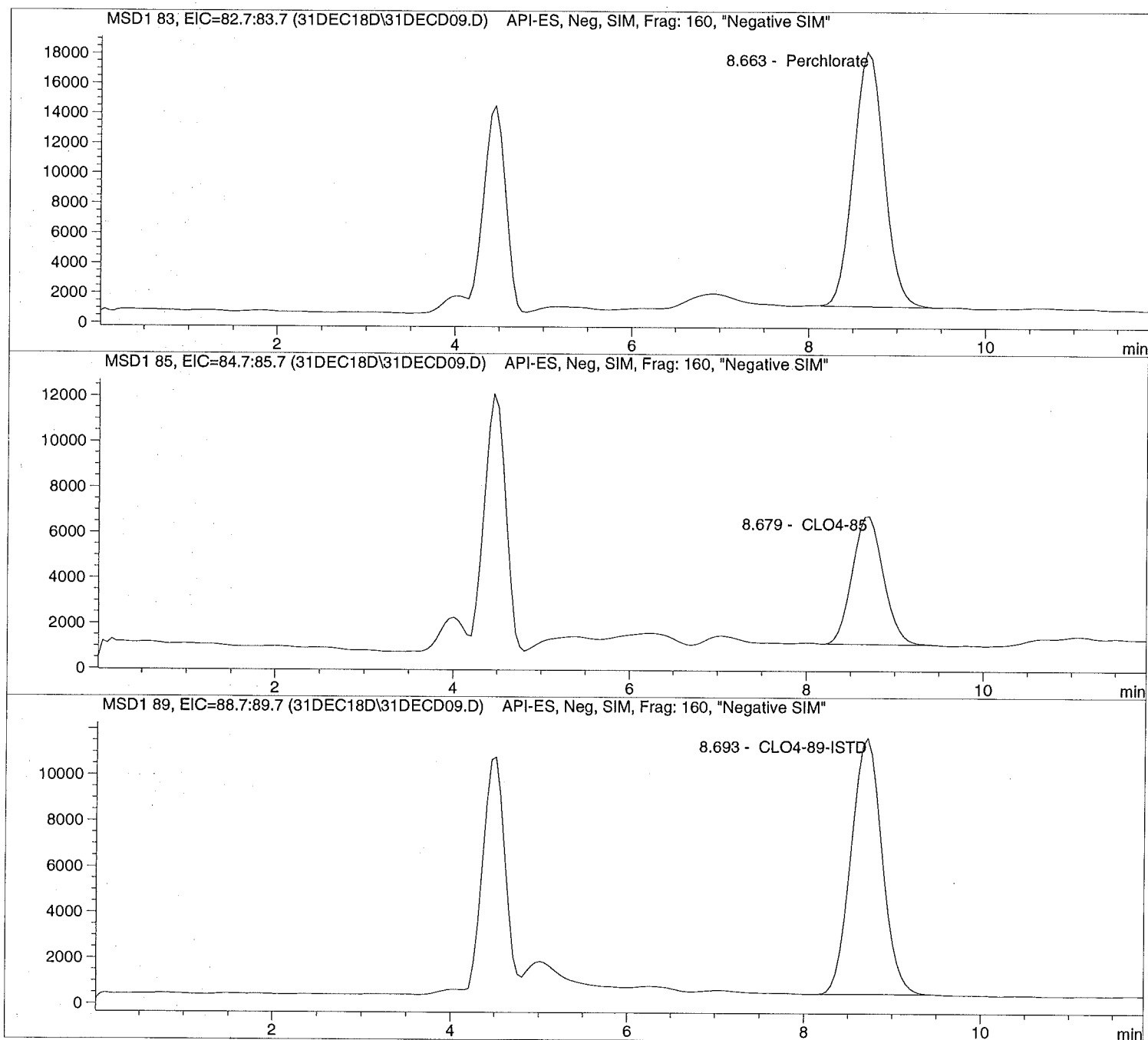
Sample Name: 634662 355821D

Injection Date: 12/31/2018 10:13:16
Sample Name: 634662 355821D
Acq Operator: TNB

Seq Line: 9
Location: Vial 79
Inj. No.: 1
Inj. Vol.: 30 μ l

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\31DEC18D\31DECD09.D Sample Name: 634662 355821D

```

=====
Injection Date: 12/31/2018 10:13:16      Seq Line:          9
Sample Name:    634662 355821D           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
8.663	BBA	410281.9	4.8170	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.679	PBA	138404.0	5.3246	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.693	PBA	273000.3	5.0000	CLO4-89-ISTD

```

=====
*** End of Report ***
=====

```

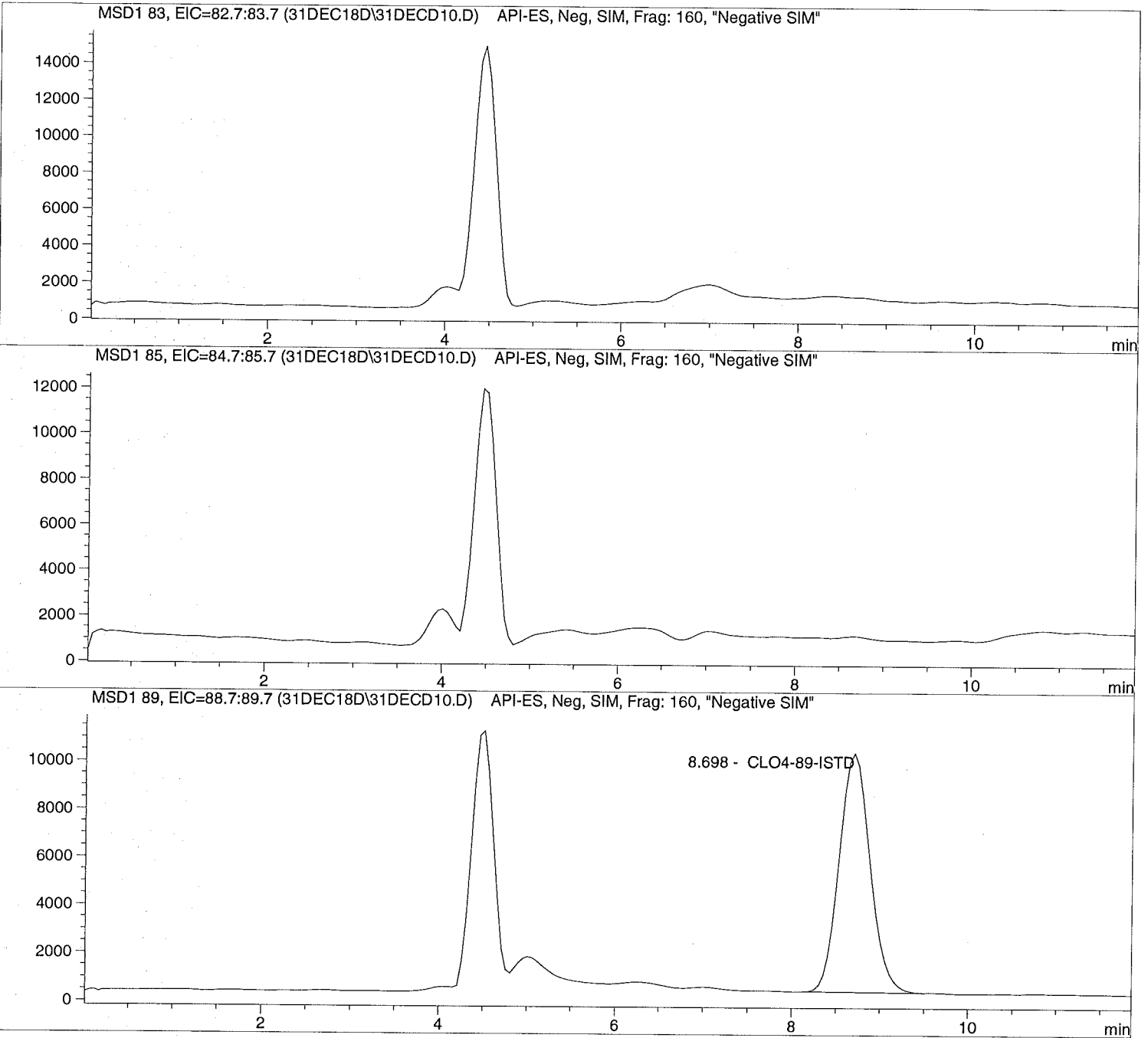


Injection Date: 12/31/2018 10:27:06
Sample Name: 1835584001
Acq Operator: TNB

Seq Line: 10
Location: Vial 80
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\31DEC18D\31DECD10.D

Sample Name: 1835584001

```

=====
Injection Date: 12/31/2018 10:27:06      Seq Line:          10
Sample Name:    1835584001                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
8.698	PBA	242636.8	5.0000	CLO4-89-ISTD

```

=====
*** End of Report ***
=====

```



Data file: C:\HPCHEM\1\DATA\31DEC18D\31DECD11.D

Sample Name: 1835586001

Injection Date: 12/31/2018 10:40:55

Seq Line: 11

Sample Name: 1835586001

Location: Vial 81

Acq Operator: TNB

Inj. No.: 1

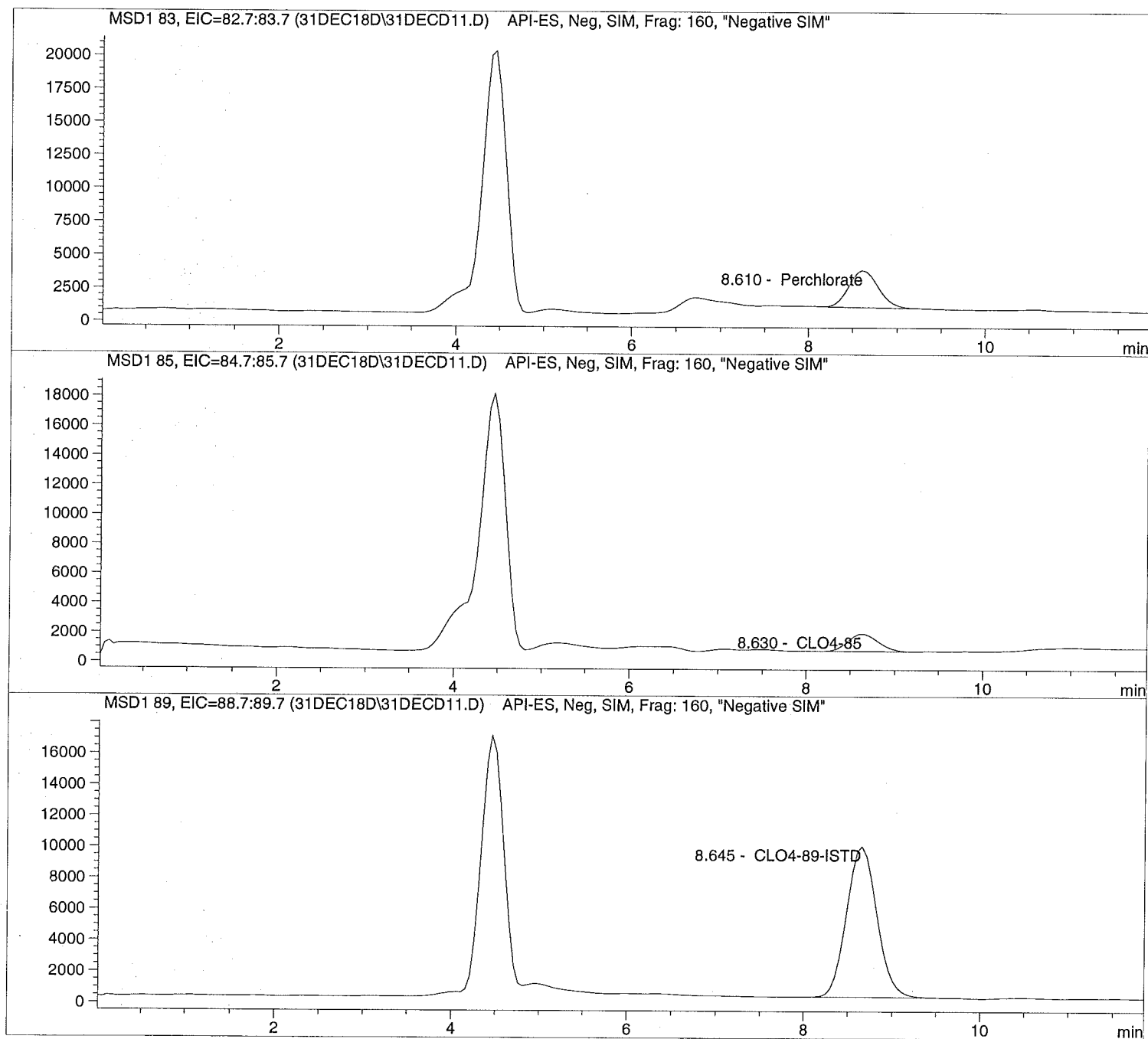
Inj. Vol.: 30 μ l

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\31DEC18D\31DECD11.D

Sample Name: 1835586001

```

=====
Injection Date: 12/31/2018 10:40:55      Seq Line:          11
Sample Name:   1835586001                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
8.610	BBA	63997.2	1.0775	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.630	PBA	27801.2	1.3619	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.645	BBA	227333.3	5.0000	CLO4-89-ISTD

```

=====
*** End of Report ***
=====

```

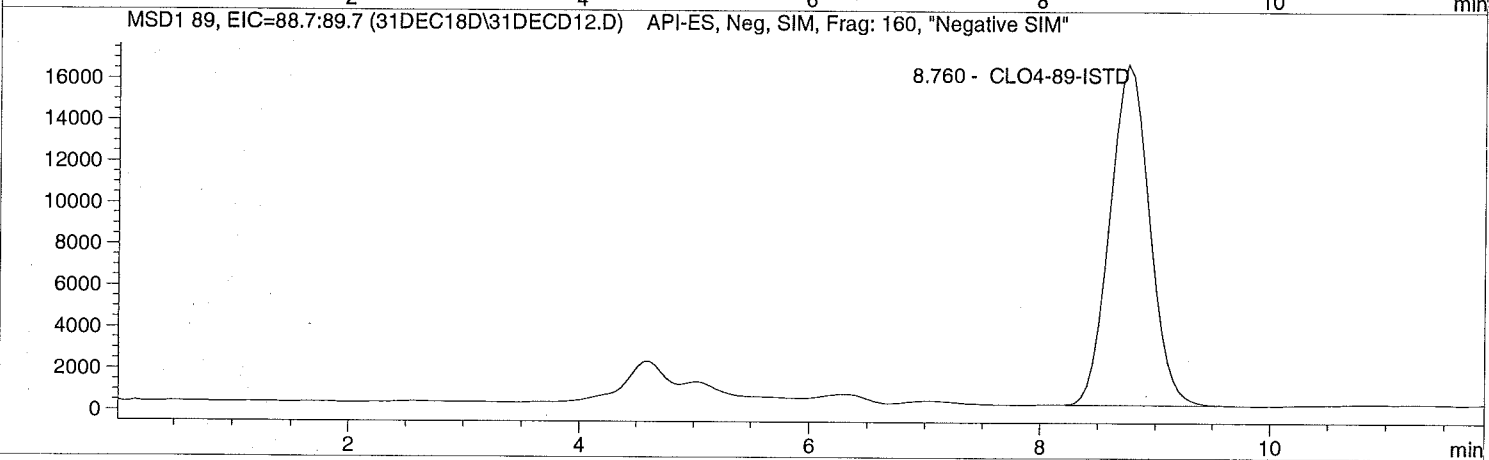
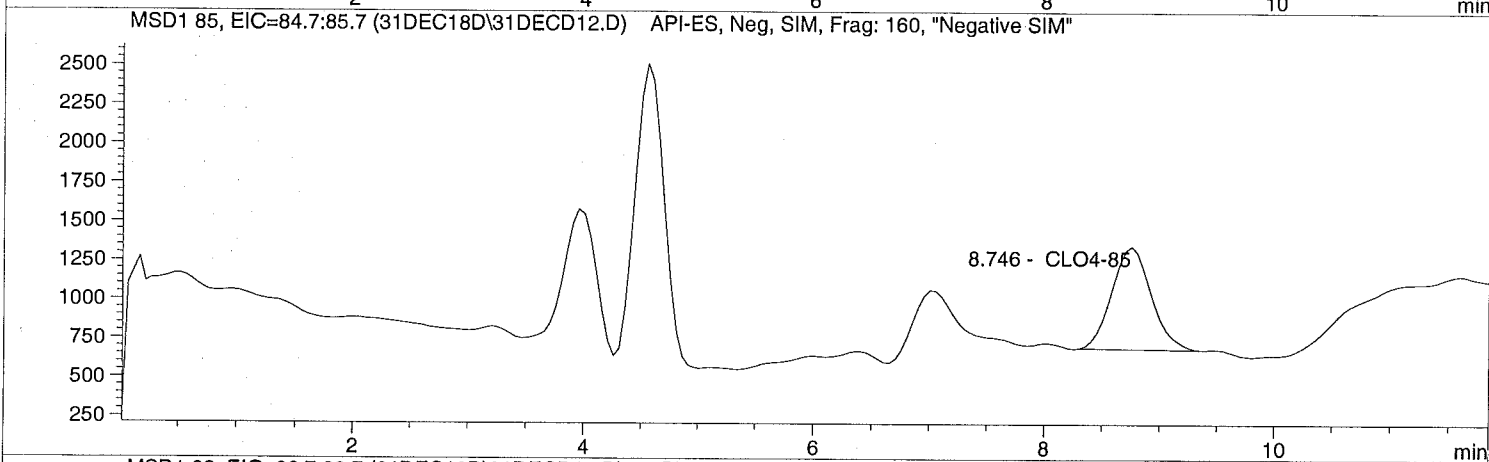
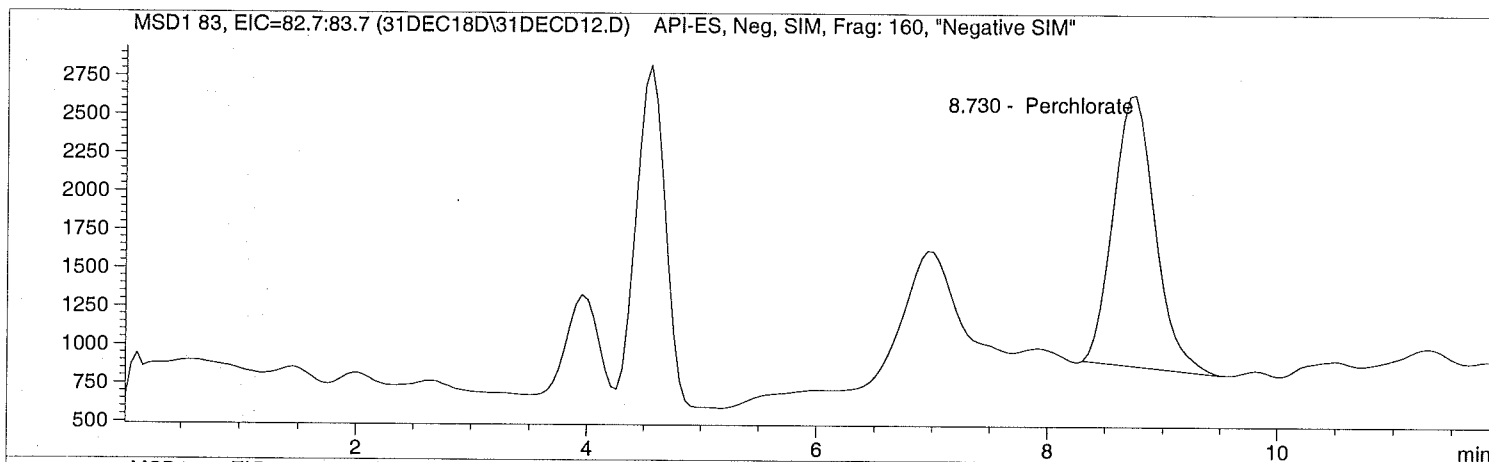


Injection Date: 12/31/2018 10:54:40
Sample Name: 1835586002
Acq Operator: TNB

Seq Line: 12
Location: Vial 82
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\31DEC18D\31DECD12.D

Sample Name: 1835586002

```

=====
Injection Date: 12/31/2018 10:54:40      Seq Line:          12
Sample Name:    1835586002                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
8.730	PBA	44440.4	0.5583	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.746	PBA	15669.9	0.5031	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.760	BBA	392498.0	5.0000	CLO4-89-ISTD

```

=====
*** End of Report ***
=====

```

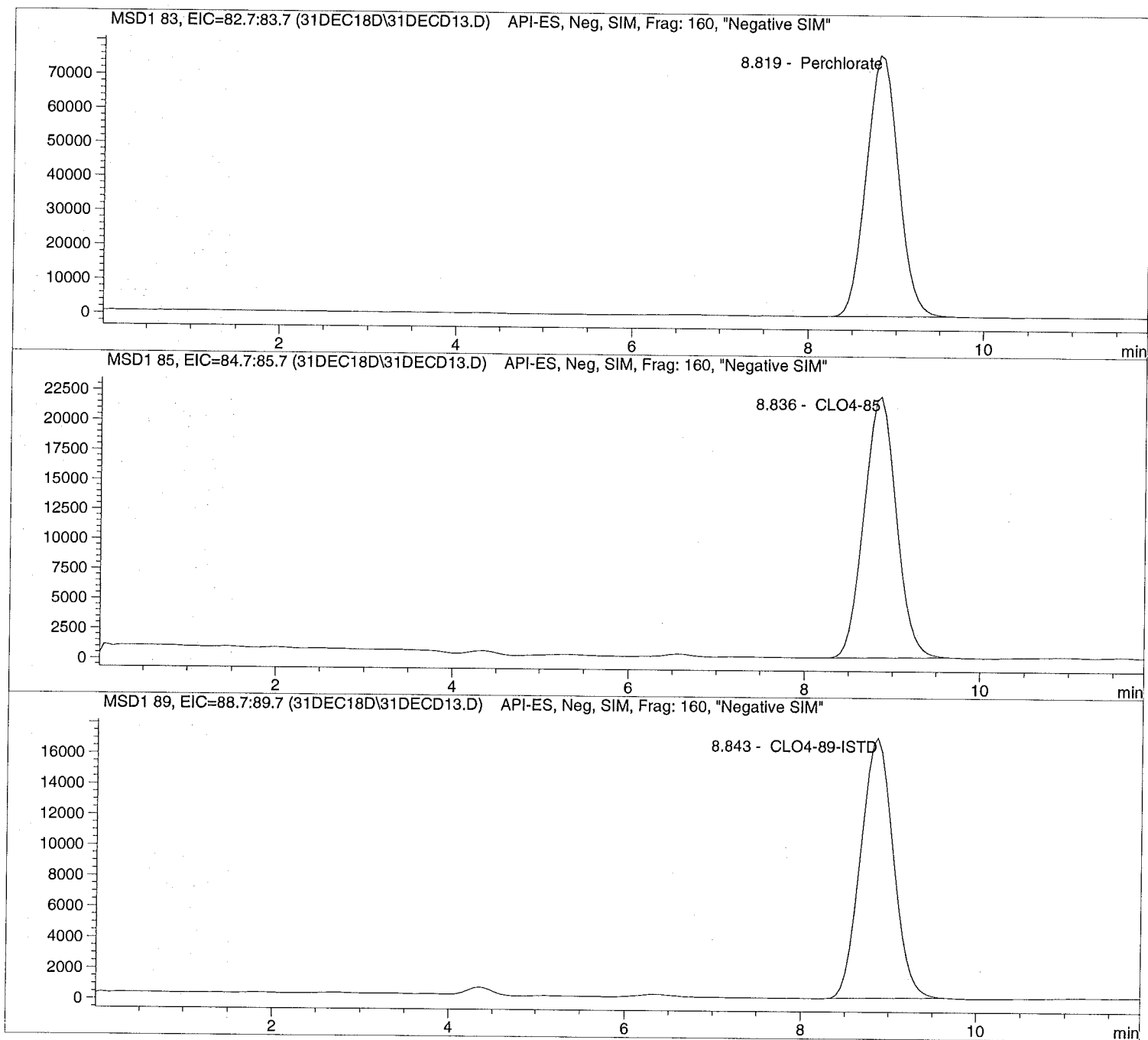


Data file: C:\HPCHEM\1\DATA\31DEC18D\31DECD13.D Sample Name: 1835586003 1K

```
=====
Injection Date: 12/31/2018 11:08:25      Seq Line:          13
Sample Name:    1835586003 1K            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\31DEC18D\31DECD13.D Sample Name: 1835586003 1K

```

=====
Injection Date: 12/31/2018 11:08:25      Seq Line:          13
Sample Name:   1835586003 1K             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:       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
8.819	PBA	1932537.0	13514.6911	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.836	PBA	560856.3	13051.5983	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.843	PBA	438558.3	5000.0000	CLO4-89-ISTD

```

=====
*** End of Report ***
=====

```

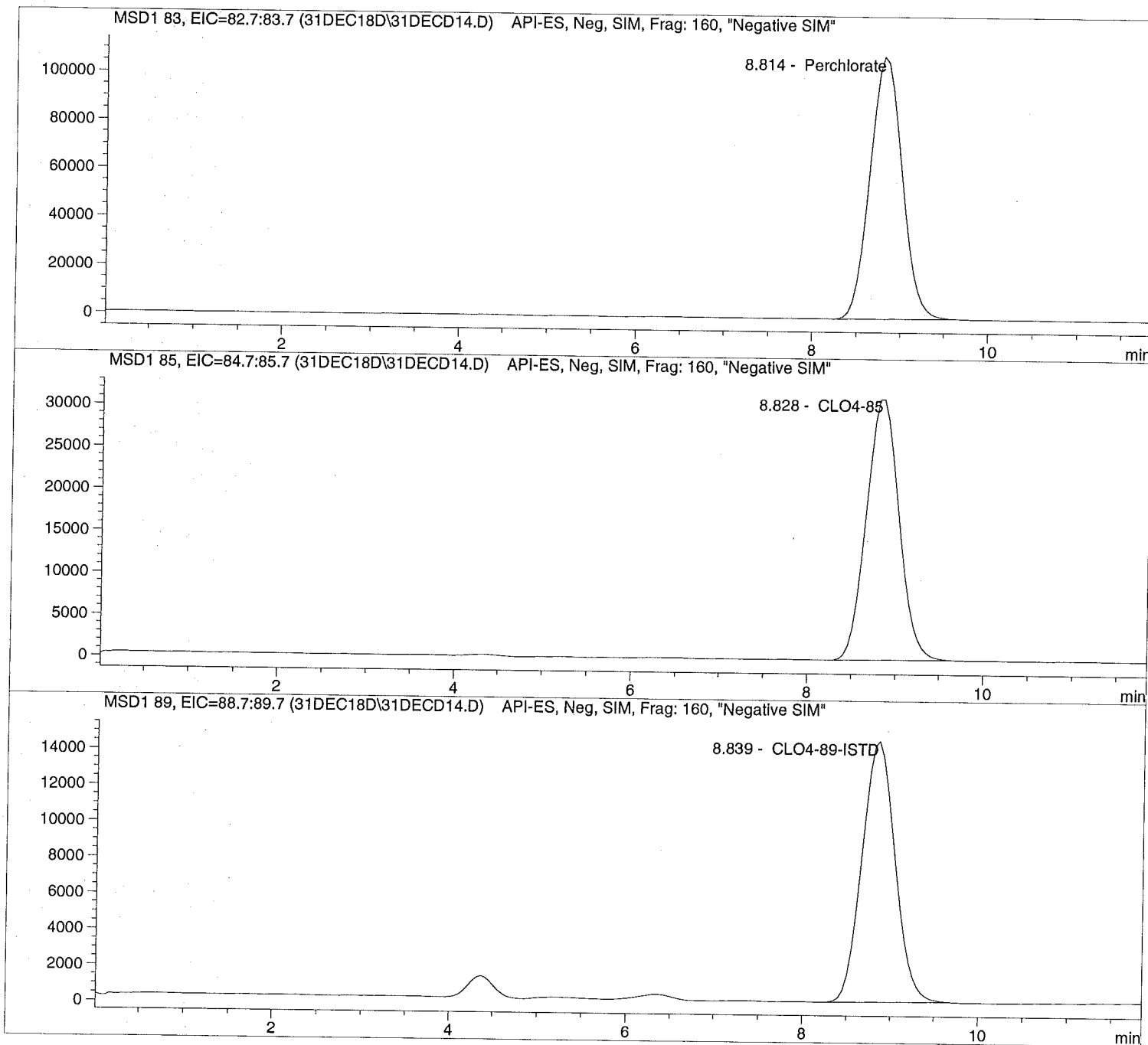


Injection Date: 12/31/2018 11:22:09
Sample Name: 1835586004 1K
Acq Operator: TNB

Seq Line: 14
Location: Vial 84
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\31DEC18D\31DECD14.D Sample Name: 1835586004 1K

```

=====
Injection Date: 12/31/2018 11:22:09      Seq Line:          14
Sample Name:    1835586004 1K            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:       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
8.814	PBA	2756395.0	21900.9544	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.828	PBA	806830.3	21291.8515	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.839	PBA	378123.1	5000.0000	CLO4-89-ISTD

```

=====
*** End of Report ***
=====

```

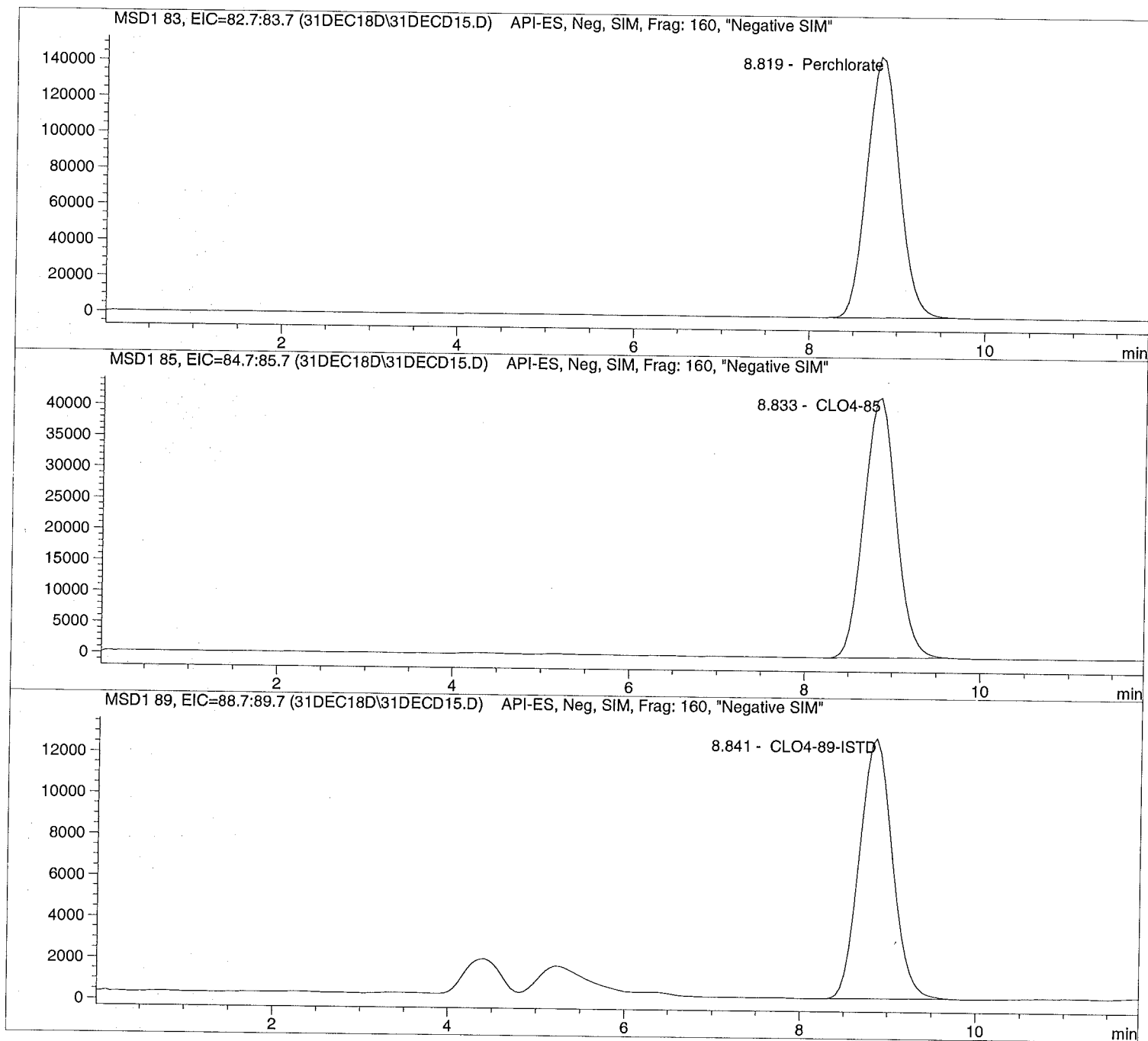


Data file: C:\HPCHEM\1\DATA\31DEC18D\31DECD15.D Sample Name: 1835586005 100

=====
Injection Date: 12/31/2018 11:35:53 Seq Line: 15
Sample Name: 1835586005 100 Location: Vial 85
Acq Operator: TNB Inj. No.: 1
Inj. Vol.: 30 μ l
=====

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\31DEC18D\31DECD15.D Sample Name: 1835586005 100

```

=====
Injection Date: 12/31/2018 11:35:53      Seq Line:          15
Sample Name:   1835586005 100           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:      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
8.819	PBA	3720053.2	3303.3641	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.833	PBA	1078219.3	3168.5135	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.841	PBA	330864.6	500.0000	CLO4-89-ISTD

```

=====
*** End of Report ***
=====

```

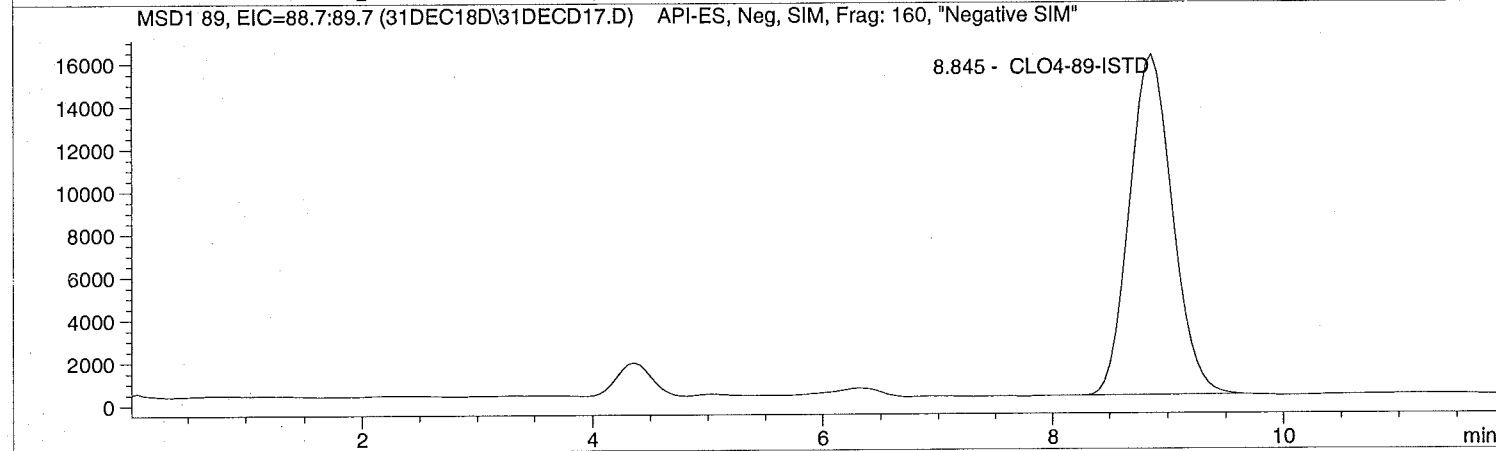
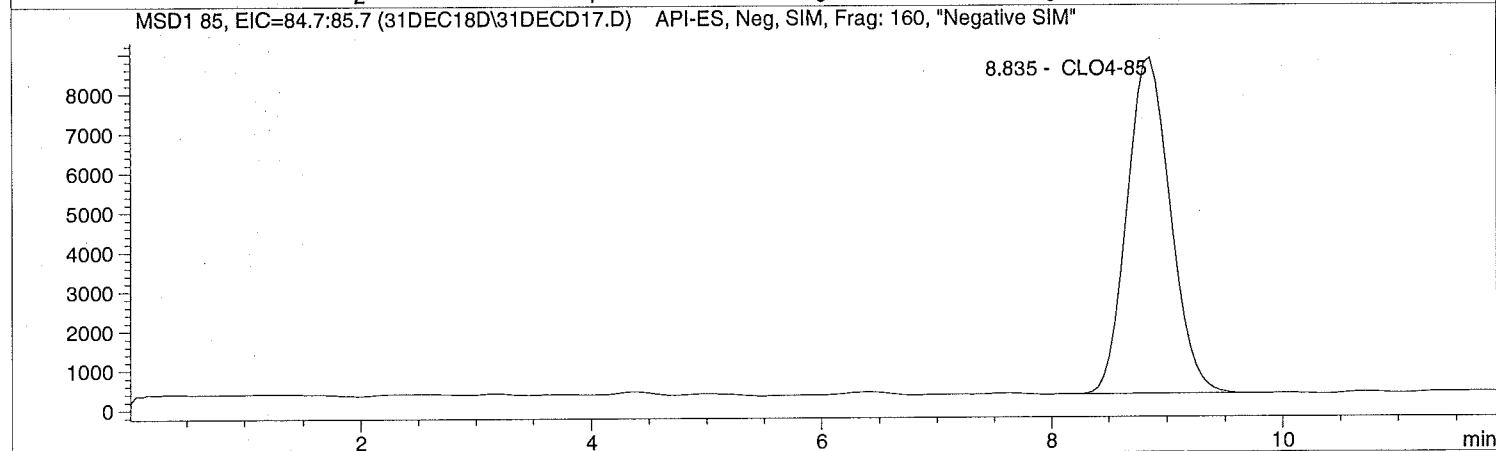
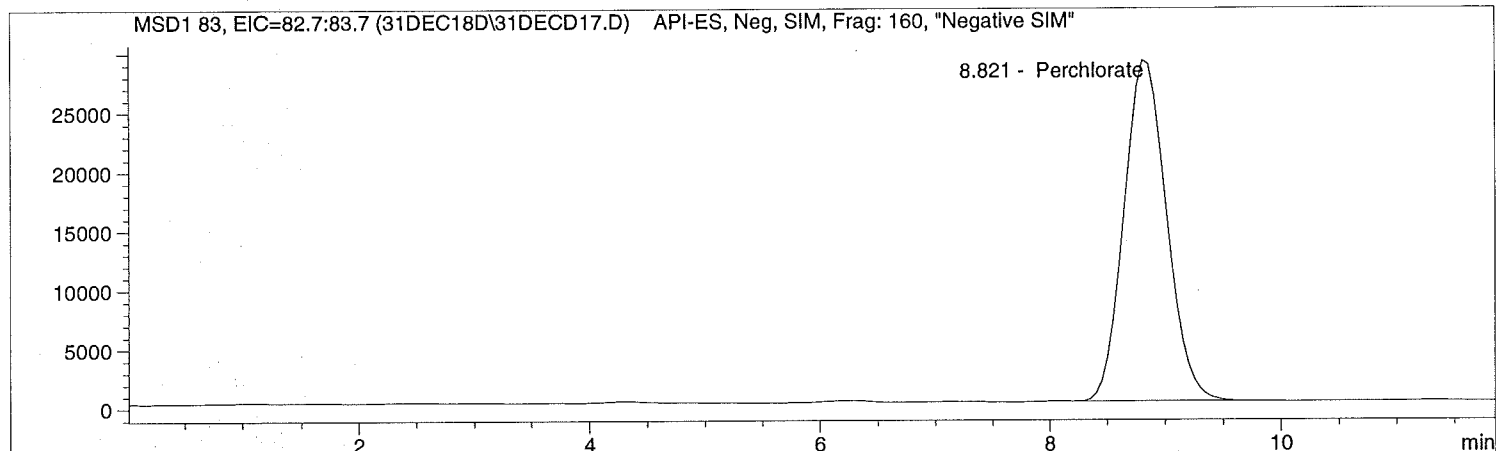


Injection Date: 12/31/2018 12:03:10
Sample Name: 1835586007 100
Acq Operator: TNB

Seq Line: 17
Location: Vial 87
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: 12/31/2018 12:03:10      Seq Line:          17
Sample Name:    1835586007 100           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:       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
8.821	BBA	732888.5	569.3237	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.835	PBA	220860.7	565.9742	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.845	PBA	409114.1	500.0000	CLO4-89-ISTD

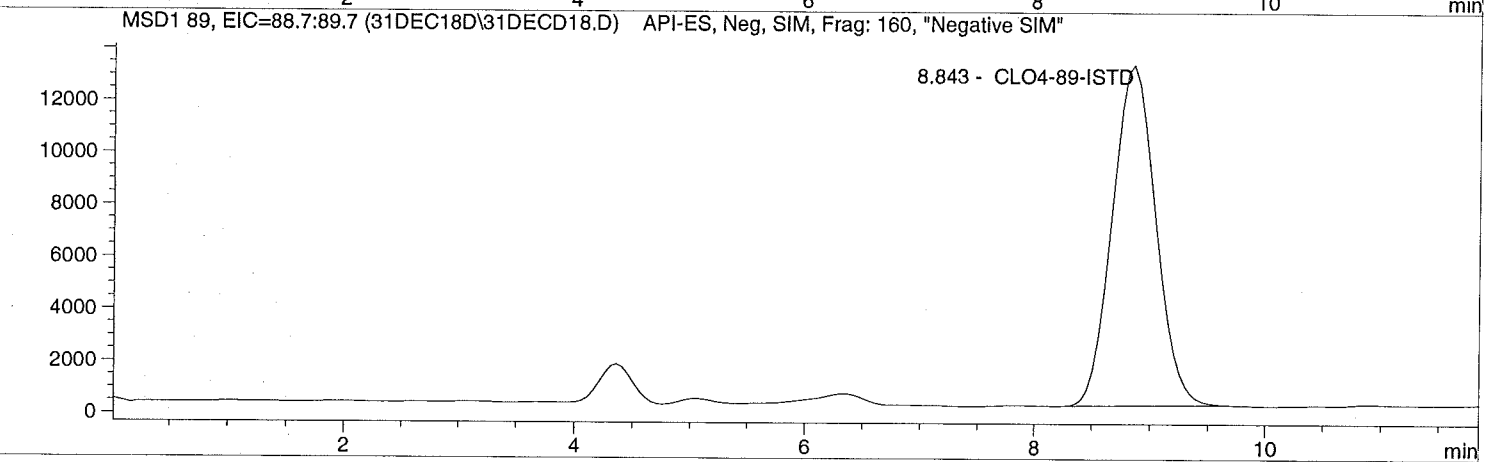
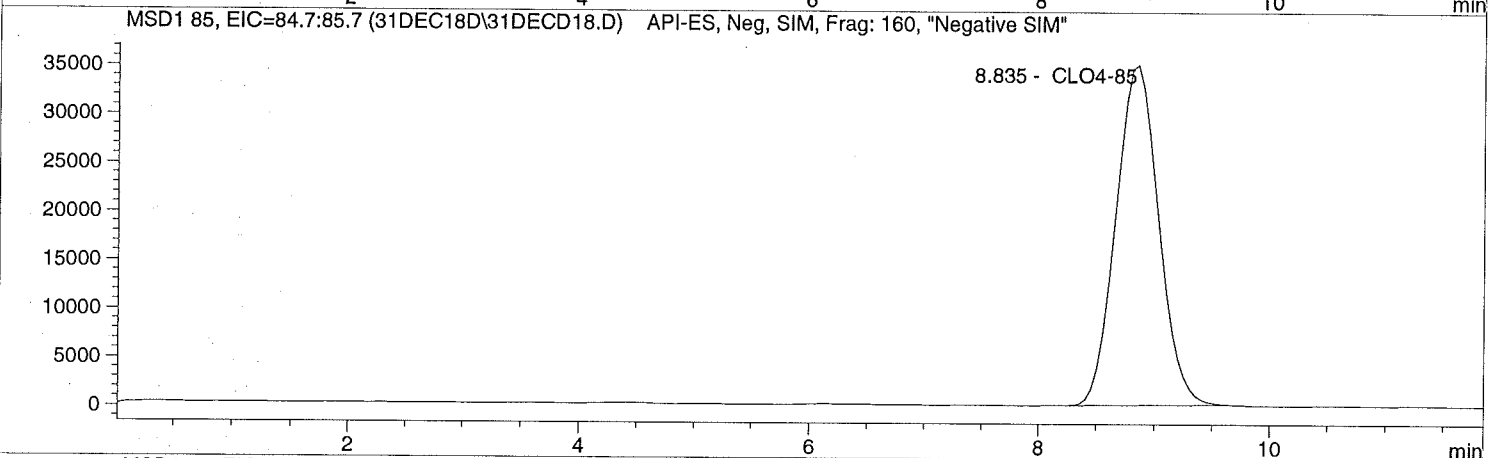
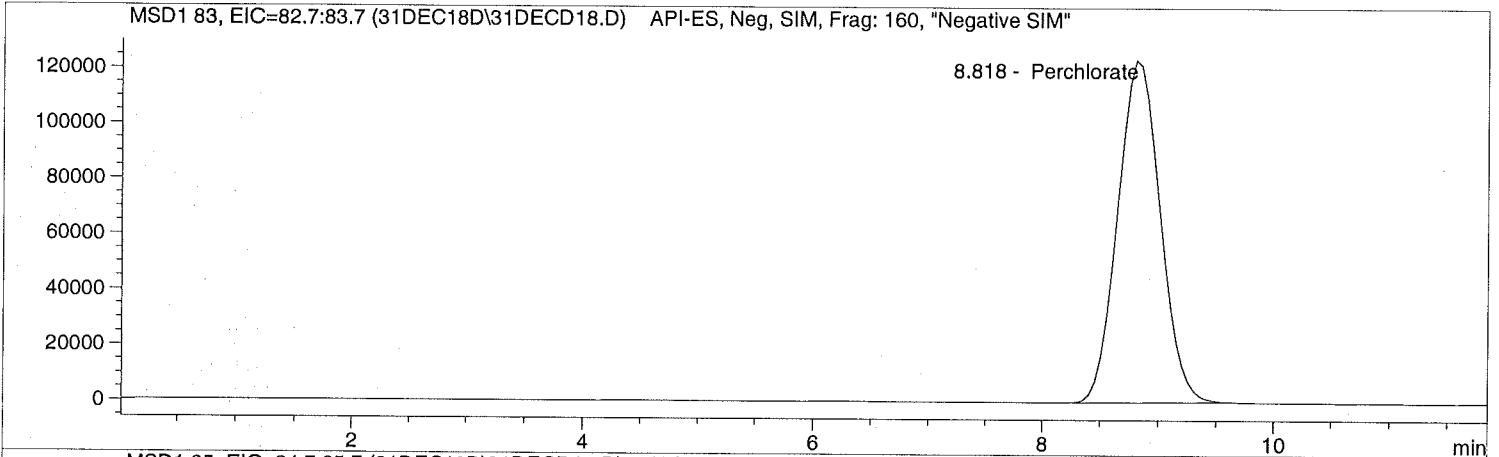
*** End of Report ***

=====

Injection Date:	12/31/2018 12:16:57	Seq Line:	18
Sample Name:	1835586006 1K	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



```

=====
Injection Date: 12/31/2018 12:16:57      Seq Line:          18
Sample Name:    1835586006 1K            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:       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
8.818	PBA	3142211.0	27328.0709	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.835	PBA	900319.0	25988.9835	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.843	PBA	341578.5	5000.0000	CLO4-89-ISTD

```

=====
*** End of Report ***
=====

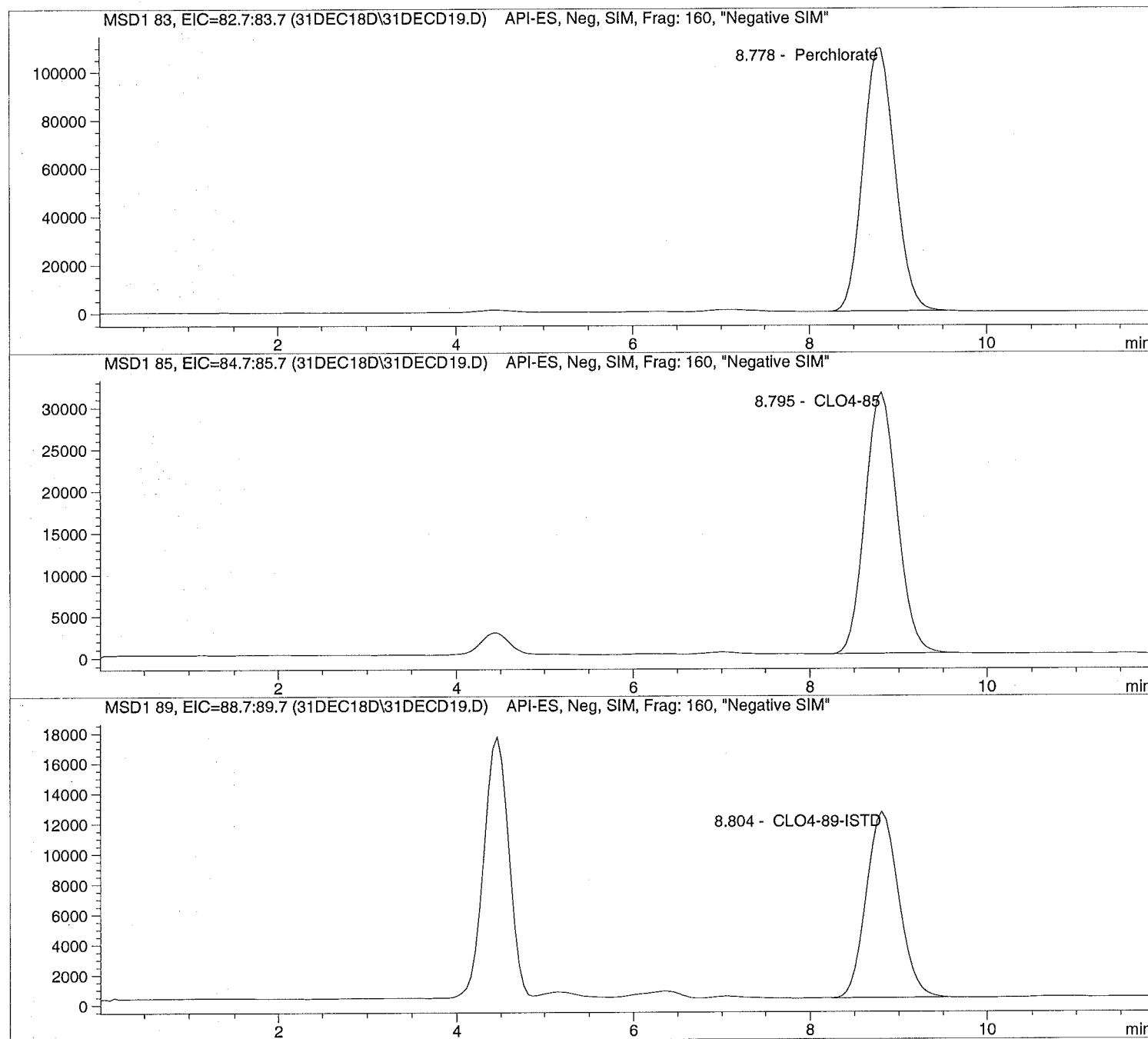
```

Injection Date: 12/31/2018 12:30:43
Sample Name: 634663 CCV@25
Acq Operator: TNB

Seq Line: 19
Location: Vial 71
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: 12/31/2018 12:30:43 Seq Line: 19
Sample Name: 634663 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
8.778	PBA	2702067.8	25.7252	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.795	PBA	781696.0	24.7012	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.804	BBA	313044.7	5.0000	CLO4-89-ISTD

*** End of Report ***

Injection Date: 12/31/2018 12:44:27

Seq Line: 20

Sample Name: 634664 LODV@1.

Location: Vial 72

Acq Operator: TNB

Inj. No.: 1

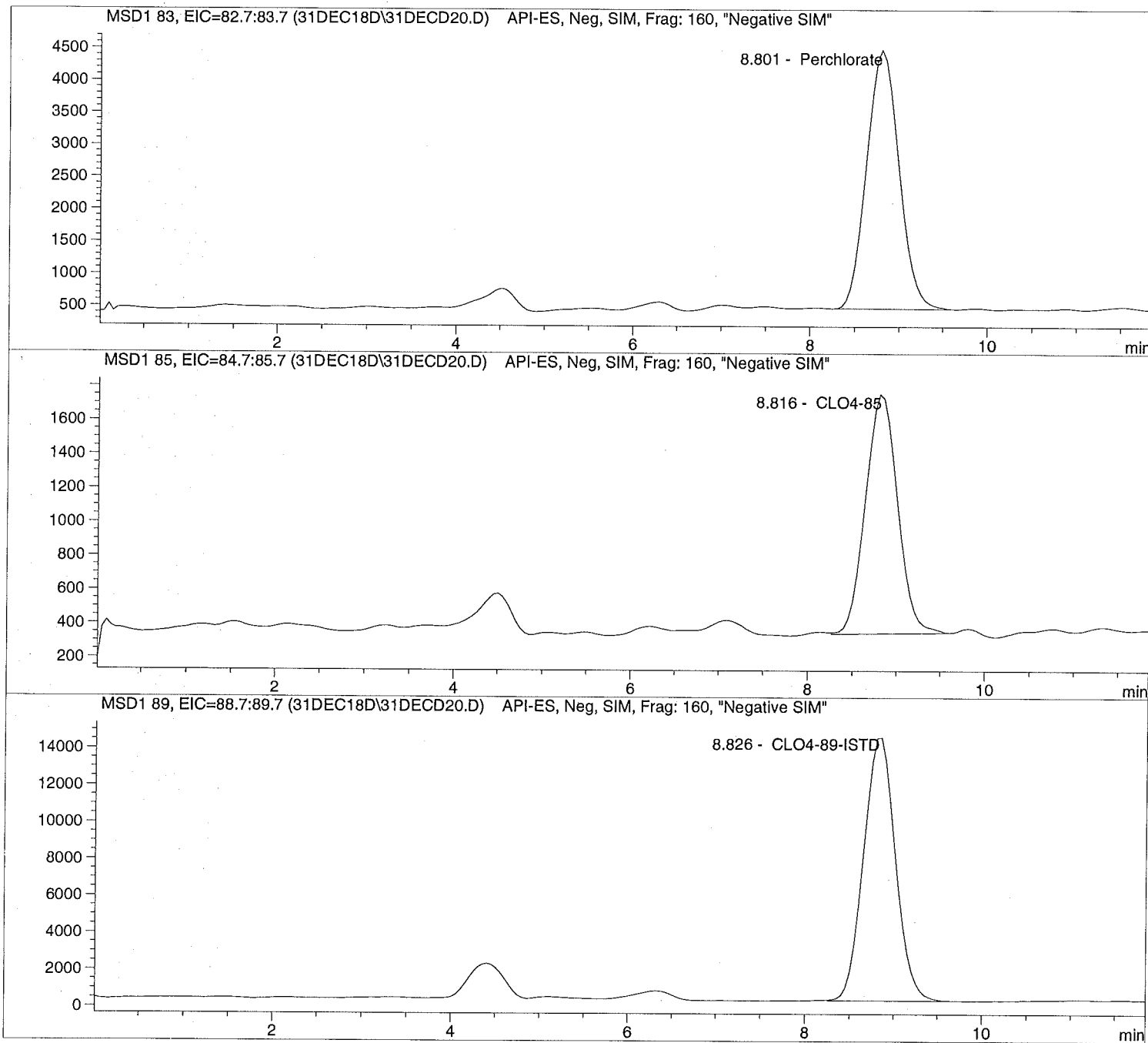
Inj. Vol.: 30 µl

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: 12/31/2018 12:44:27      Seq Line:          20
Sample Name:    634664  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
8.801	PBA	102099.9	1.0898	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.816	BBA	35737.9	1.1291	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.826	BBA	357627.3	5.0000	CLO4-89-ISTD

```

=====
*** End of Report ***
=====

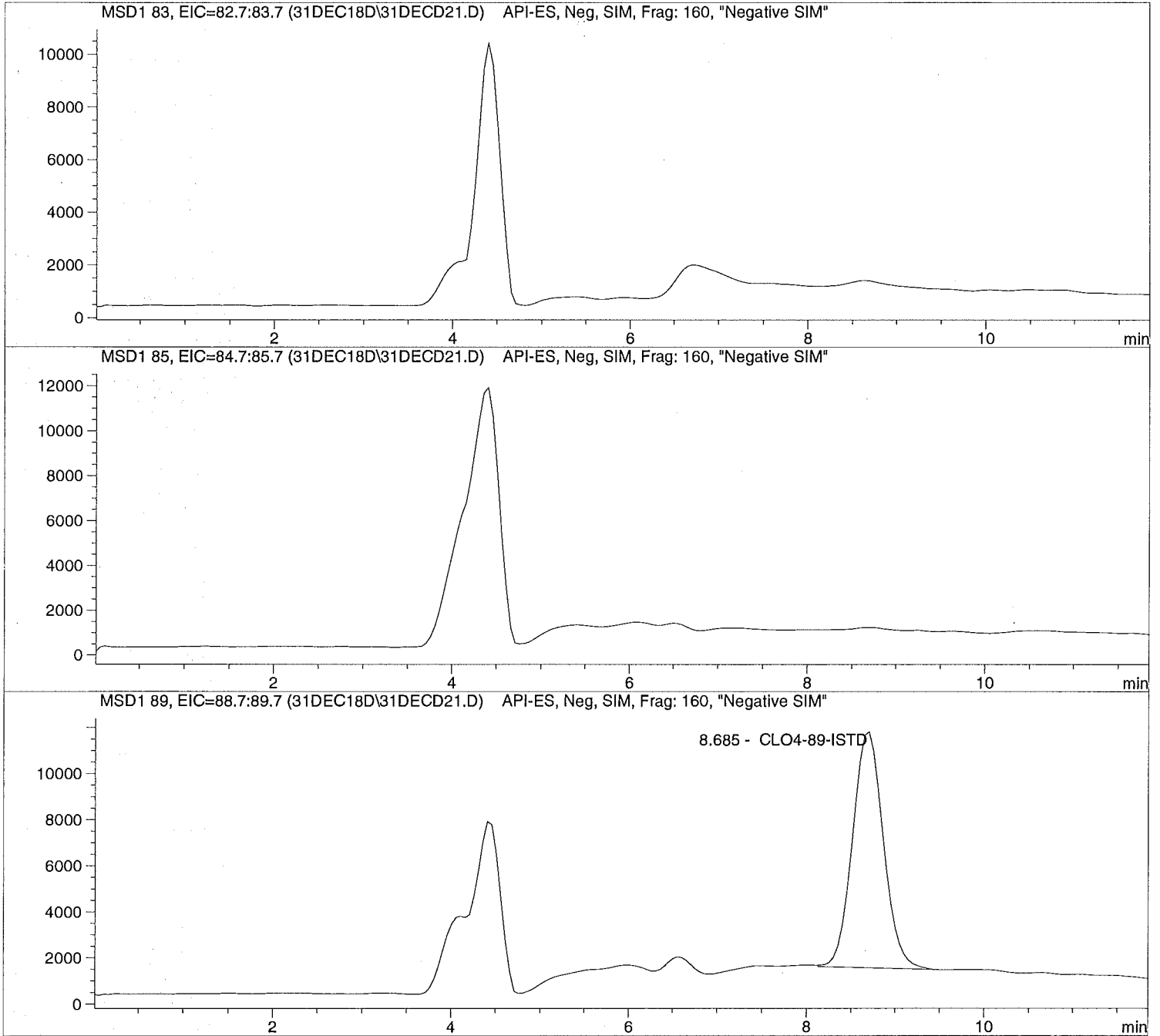
```

Injection Date: 12/31/2018 12:58:12
Sample Name: 1835586008
Acq Operator: TNB

Seq Line: 21
Location: Vial 88
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: 12/31/2018 12:58:12      Seq Line:          21
Sample Name:   1835586008                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:       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
8.685	BBA	249985.3	5.0000	CLO4-89-ISTD

```

=====
*** End of Report ***
=====

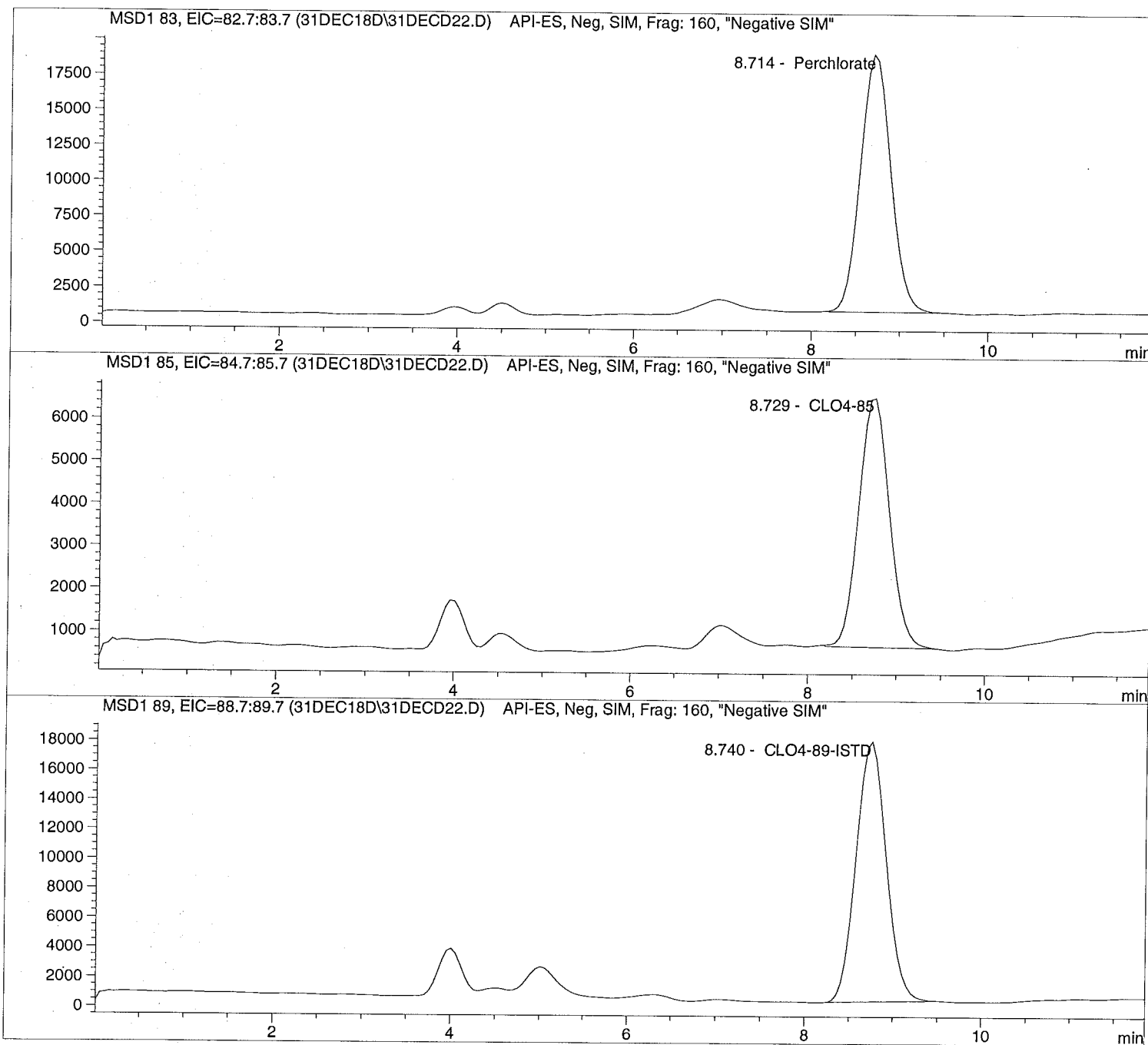
```

Injection Date: 12/31/2018 13:12:01
Sample Name: 1835586009
Acq Operator: TNB

Seq Line: 22
Location: Vial 89
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: 12/31/2018 13:12:01      Seq Line:          22
Sample Name:    1835586009                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
8.714	BBA	433756.5	3.3857	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.729	BBA	141588.7	3.5869	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.740	PBA	419706.2	5.0000	CLO4-89-ISTD

=====
*** End of Report ***
=====

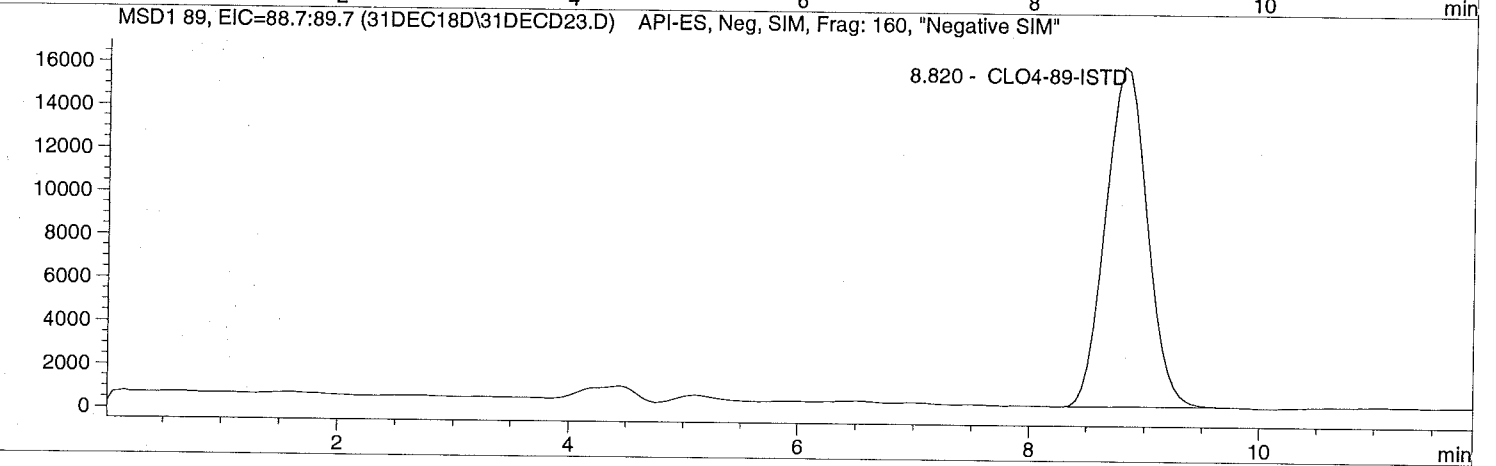
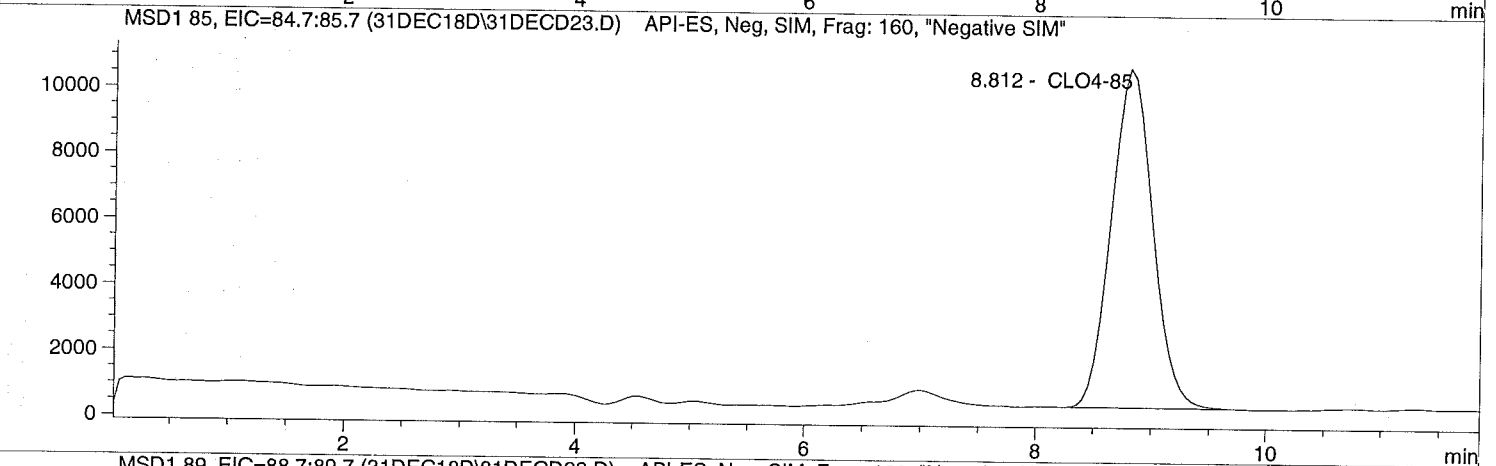
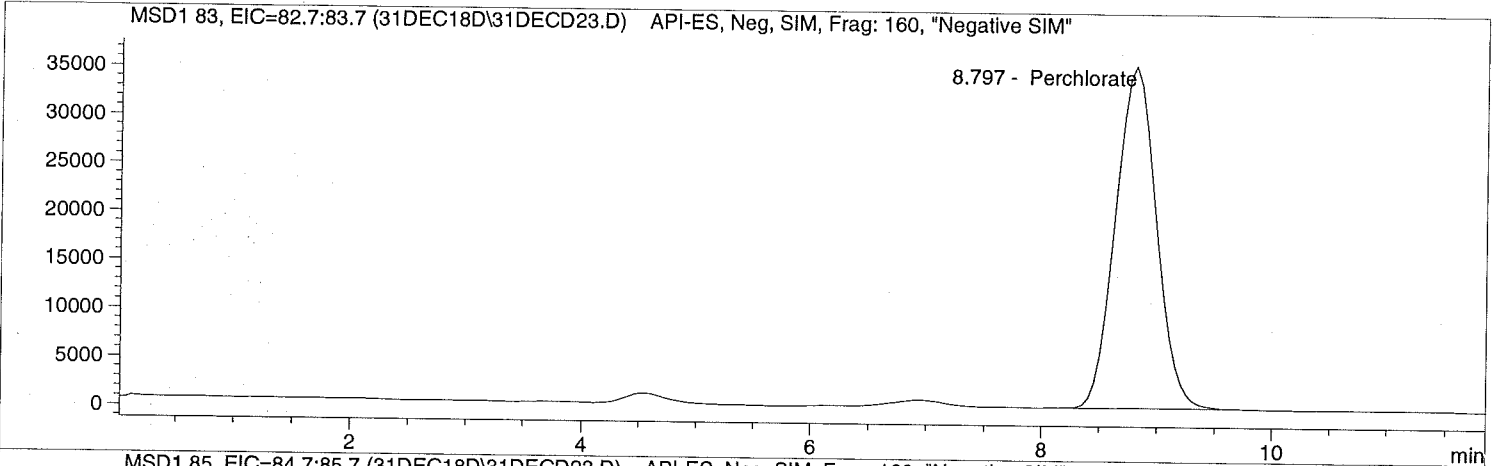


Injection Date: 12/31/2018 13:25:49
Sample Name: 1835589001
Acq Operator: TNB

Seq Line: 23
Location: Vial 90
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: 12/31/2018 13:25:49      Seq Line:          23
Sample Name:    1835589001              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
8.797	BBA	862874.8	6.9170	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.812	PBA	257705.9	6.8373	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.820	PBA	392953.1	5.0000	CLO4-89-ISTD

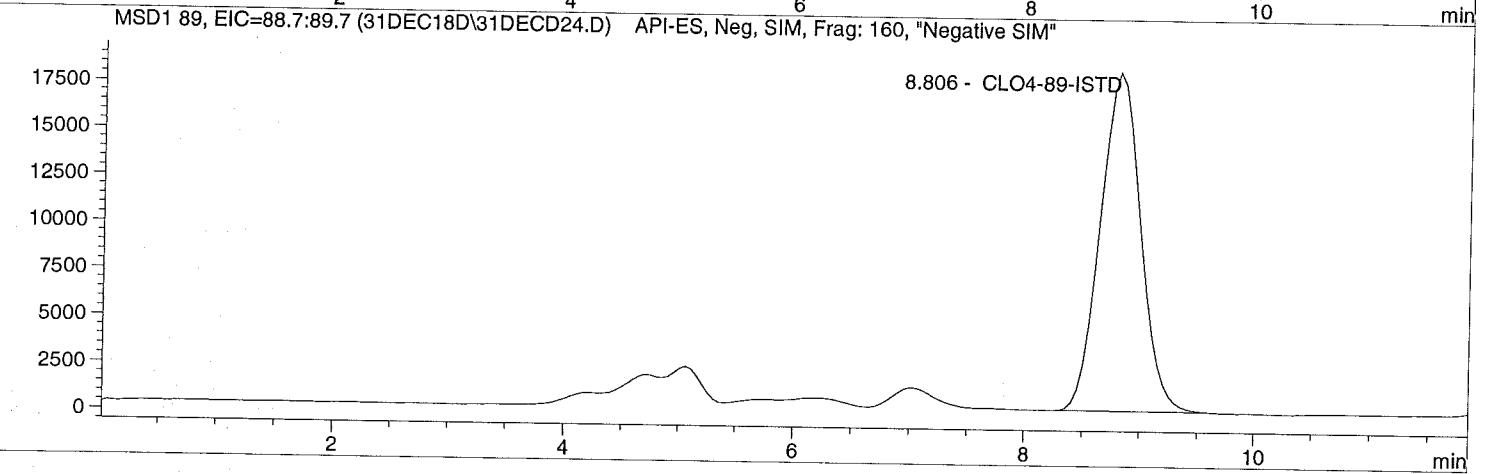
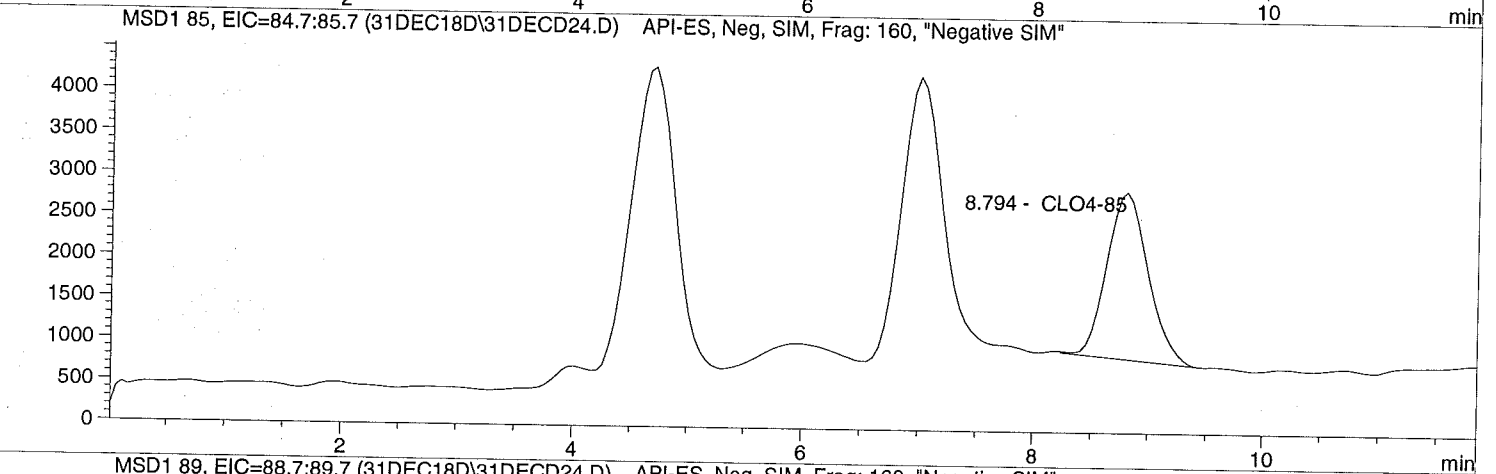
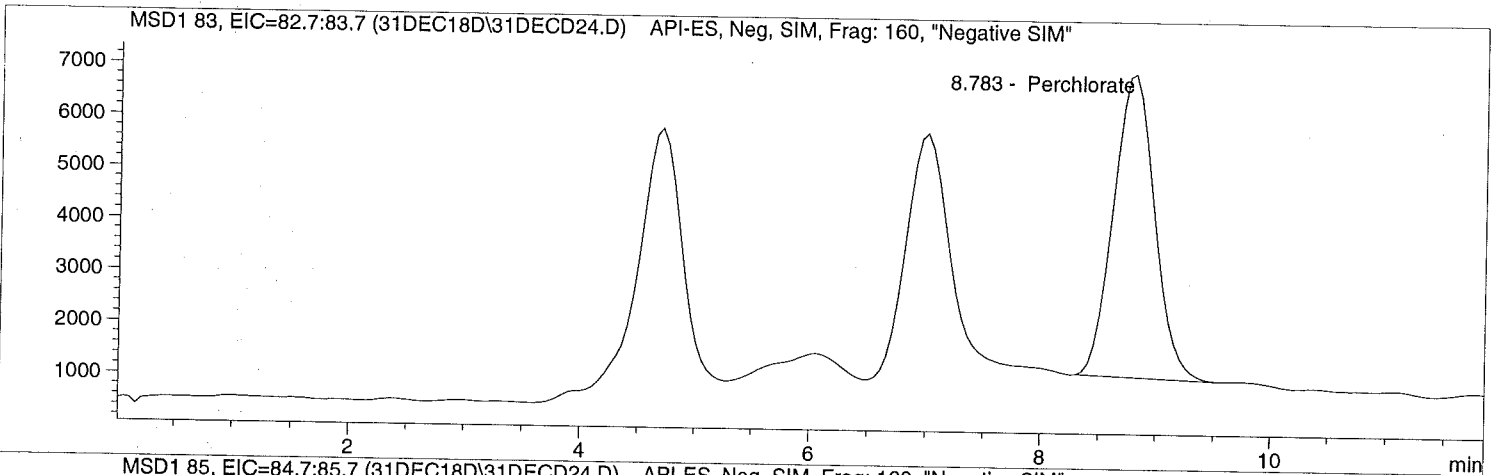
=====
*** End of Report ***

Injection Date: 12/31/2018 13:39:38
Sample Name: 1835589002
Acq Operator: TNB

Seq Line: 24
Location: Vial 91
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: 12/31/2018 13:39:38      Seq Line:          24
Sample Name:    1835589002              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
8.783	PBA	146153.0	1.2321	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.794	BBA	50344.5	1.2783	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.806	PBA	440634.0	5.0000	CLO4-89-ISTD

```

=====
*** End of Report ***
=====

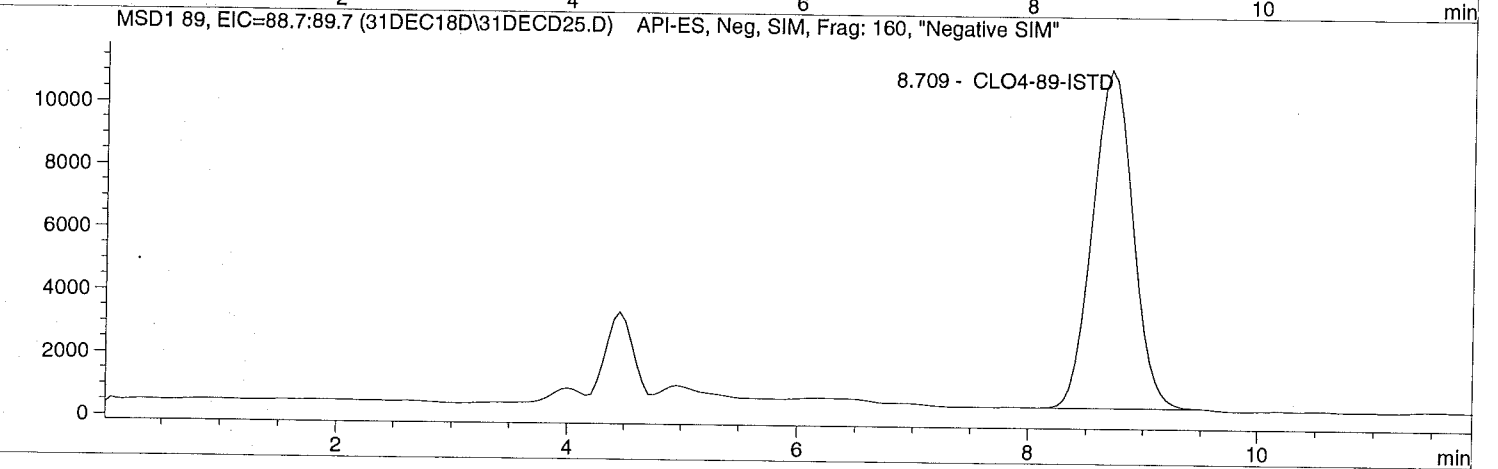
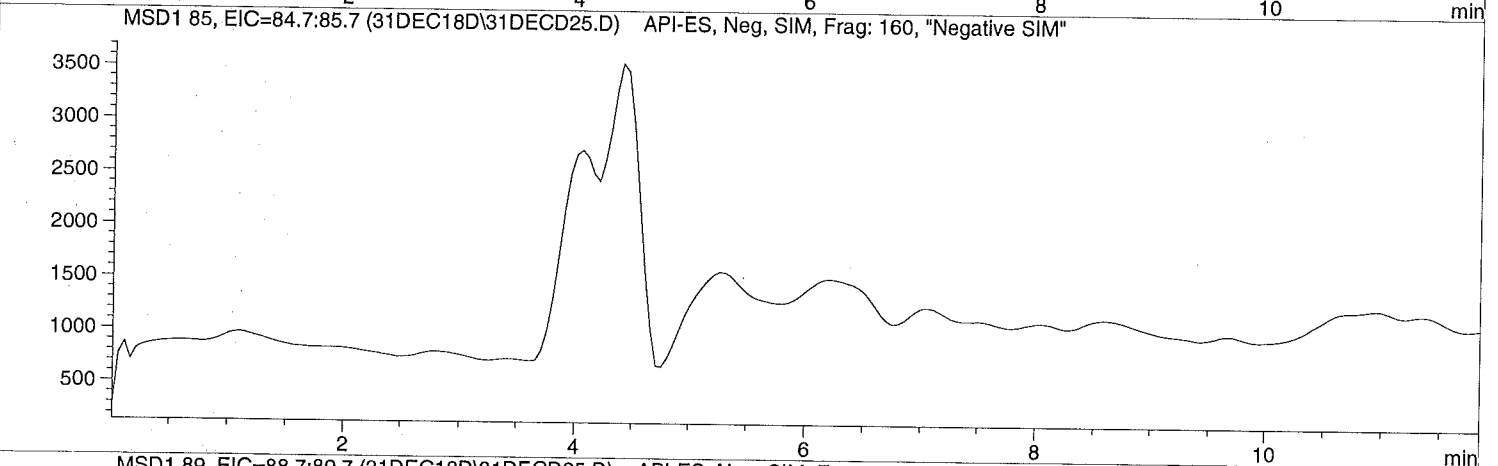
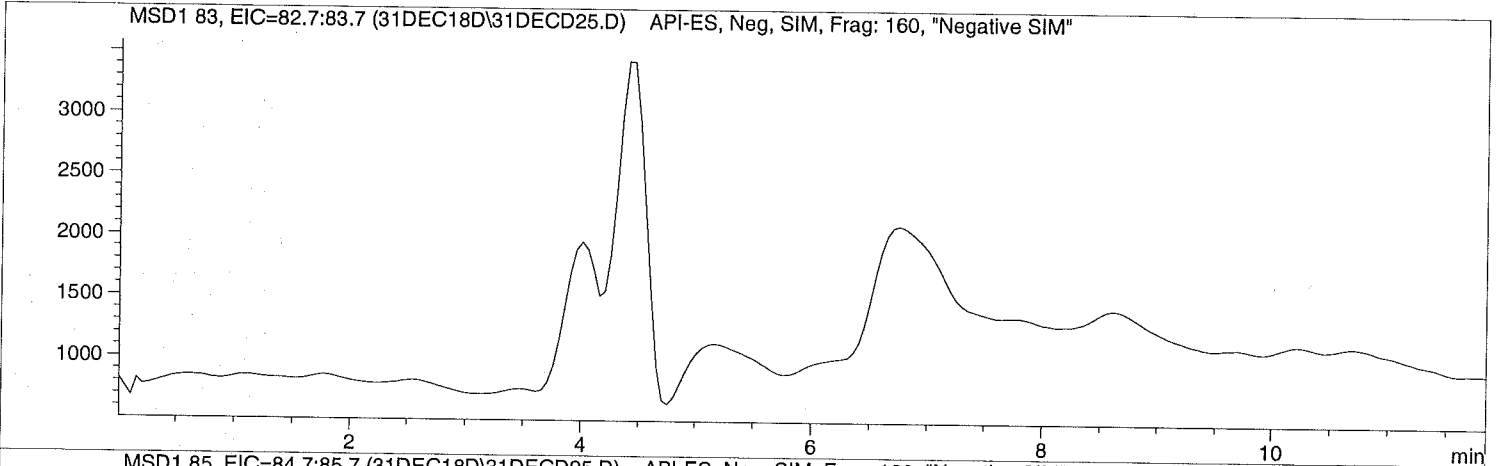
```

Injection Date: 12/31/2018 13:53:22
Sample Name: 1835589003
Acq Operator: TNB

Seq Line: 25
Location: Vial 92
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: 12/31/2018 13:53:22      Seq Line:          25
Sample Name:   1835589003                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
8.709	BBA	263354.0	5.0000	CLO4-89-ISTD

```

=====
*** End of Report ***
=====

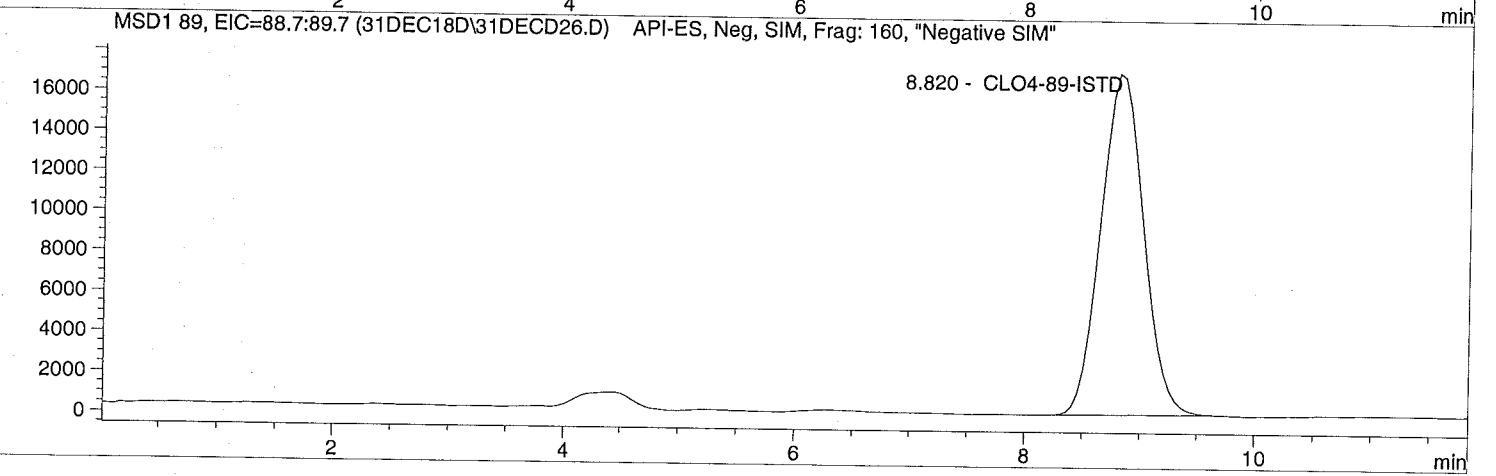
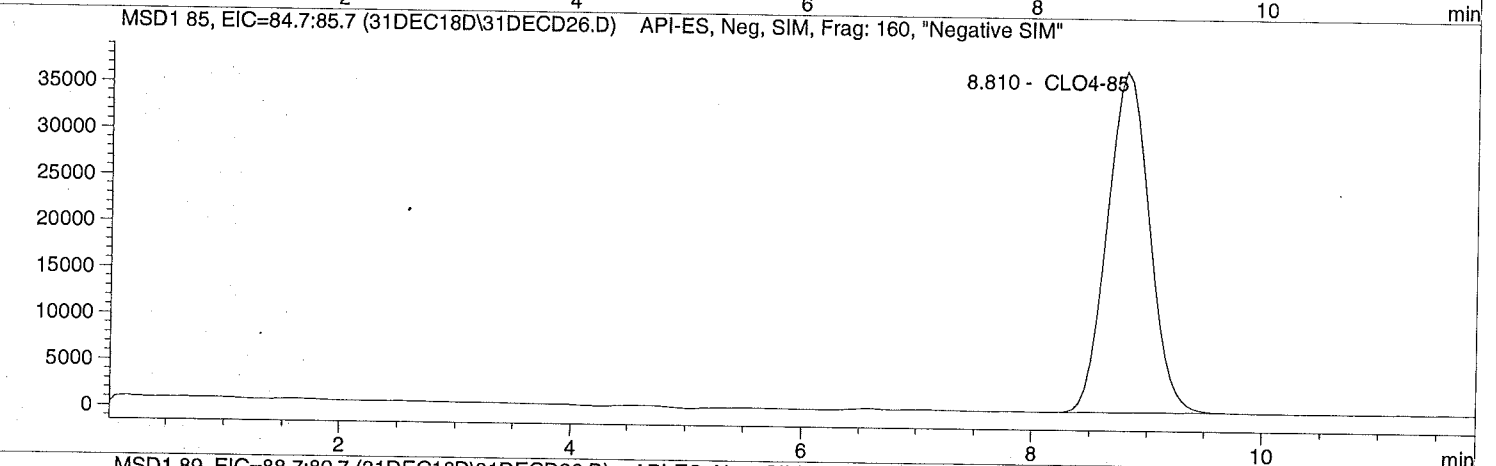
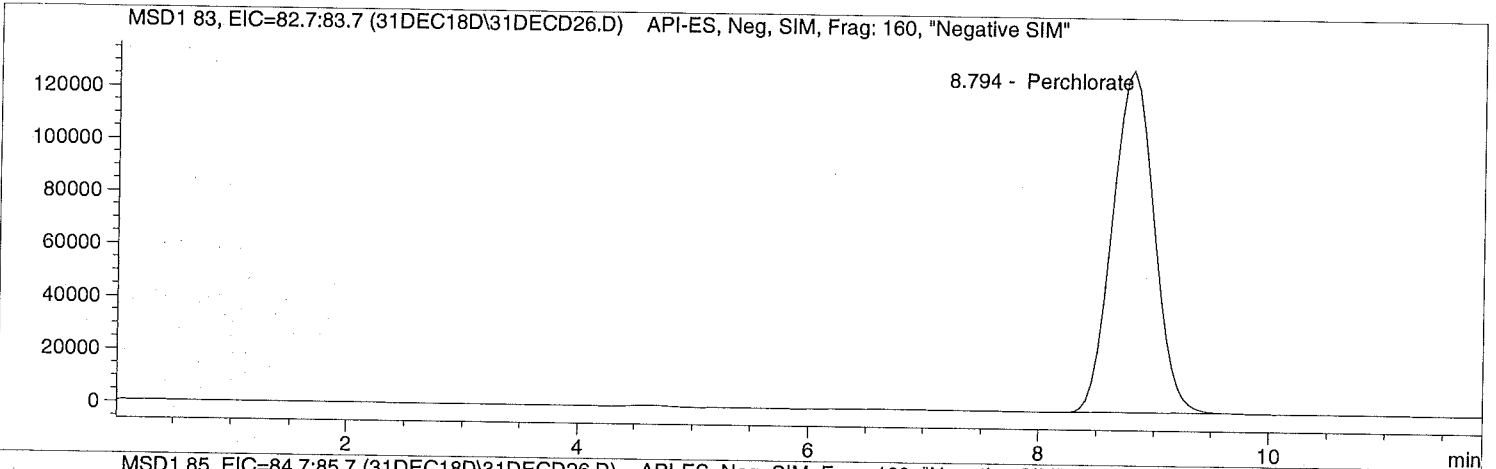
```

Injection Date: 12/31/2018 14:07:05
Sample Name: 1835589004 10X
Acq Operator: TNB

Seq Line: 26
Location: Vial 93
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: 12/31/2018 14:07:05      Seq Line:          26
Sample Name:    1835589004 10X          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:       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
8.794	PBA	3254305.3	221.5267	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.810	PBA	935943.4	211.7832	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.820	BBA	441113.3	50.0000	CLO4-89-ISTD

```

=====
*** End of Report ***
=====

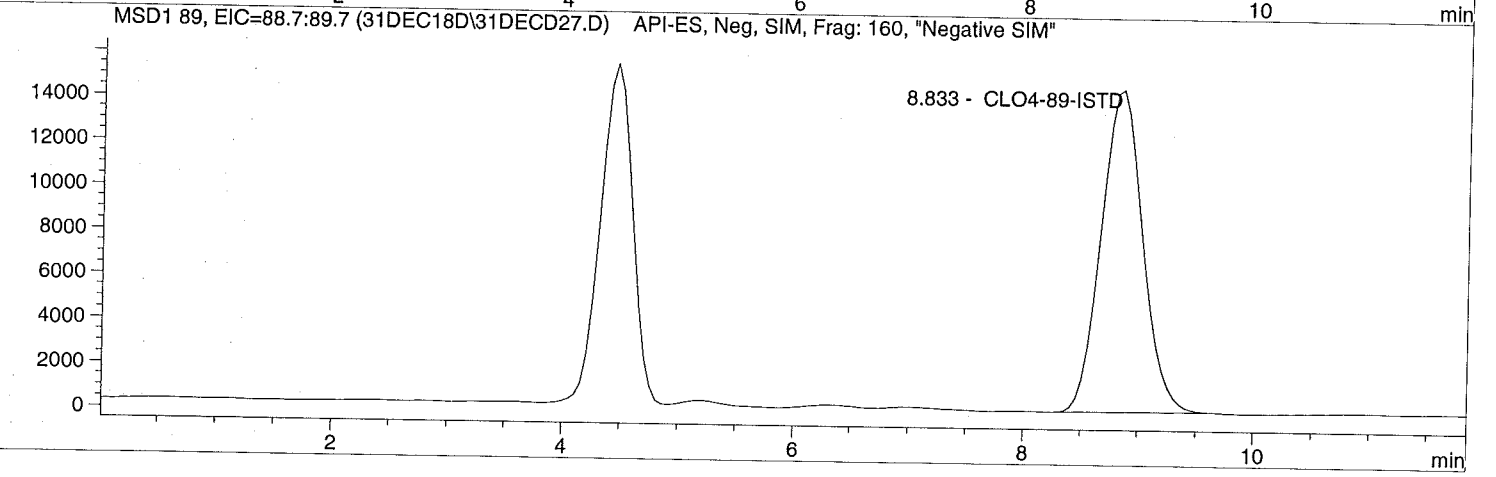
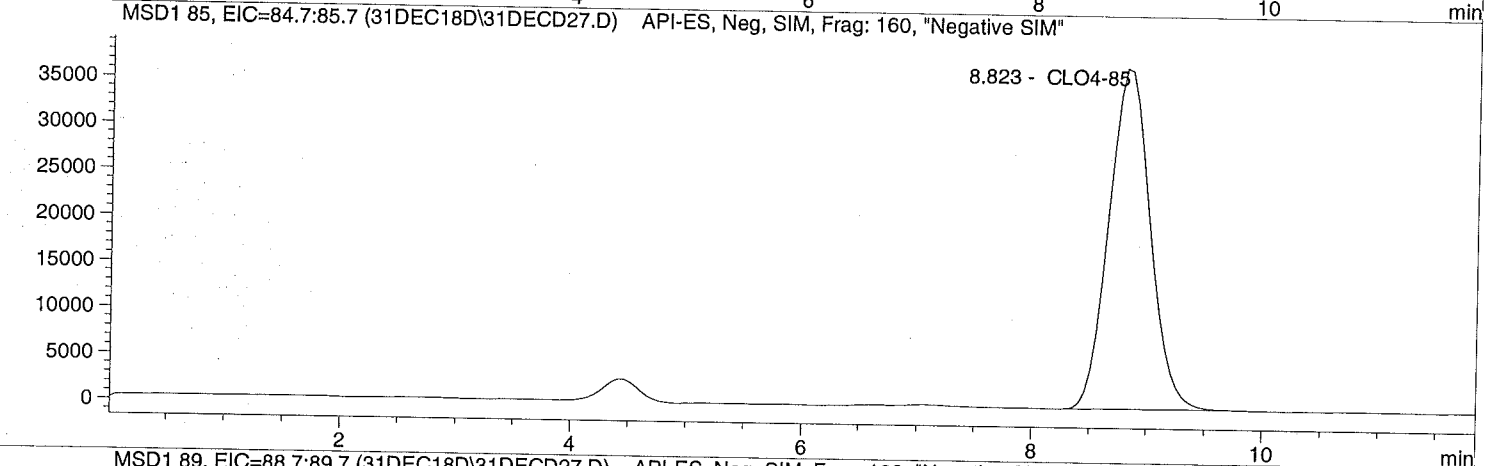
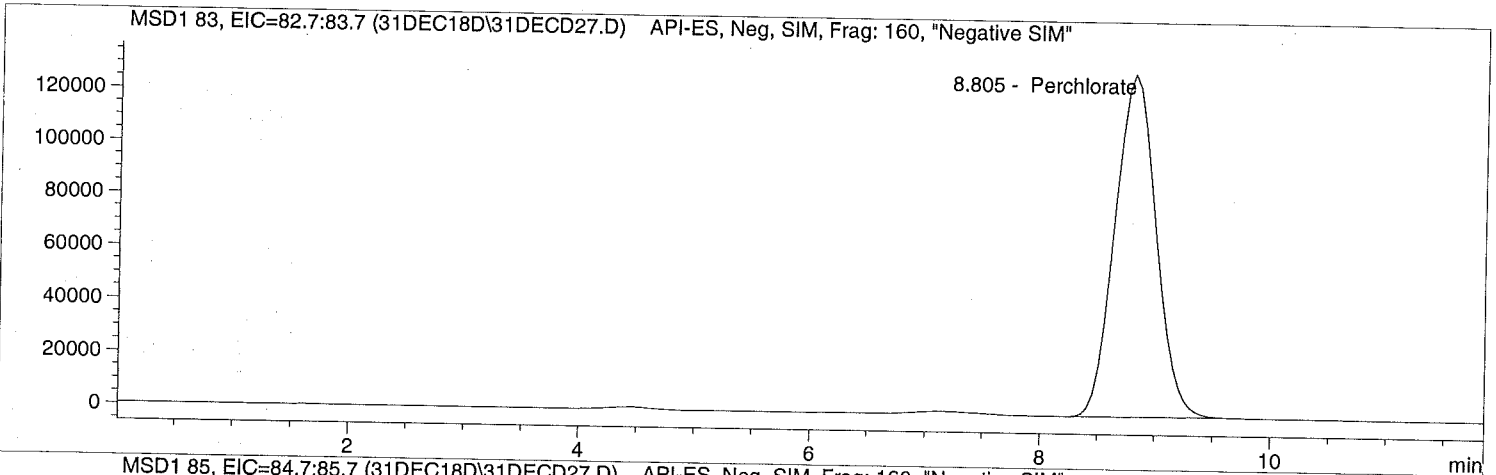
```

Injection Date: 12/31/2018 14:20:49
Sample Name: 634665 CCV@25
Acq Operator: TNB

Seq Line: 27
Location: Vial 71
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: 12/31/2018 14:20:49      Seq Line:          27
Sample Name:    634665   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
8.805	VBA	3223125.5	26.2109	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.823	PBA	926680.6	25.0170	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.833	PBA	366130.1	5.0000	CLO4-89-ISTD

```

=====
*** End of Report ***
=====

```

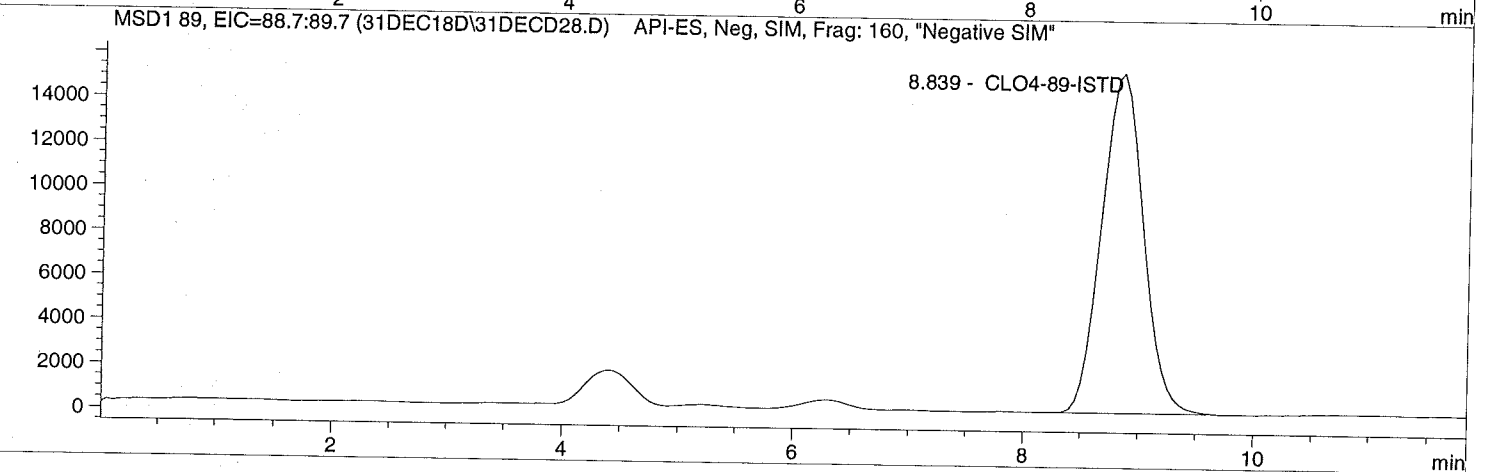
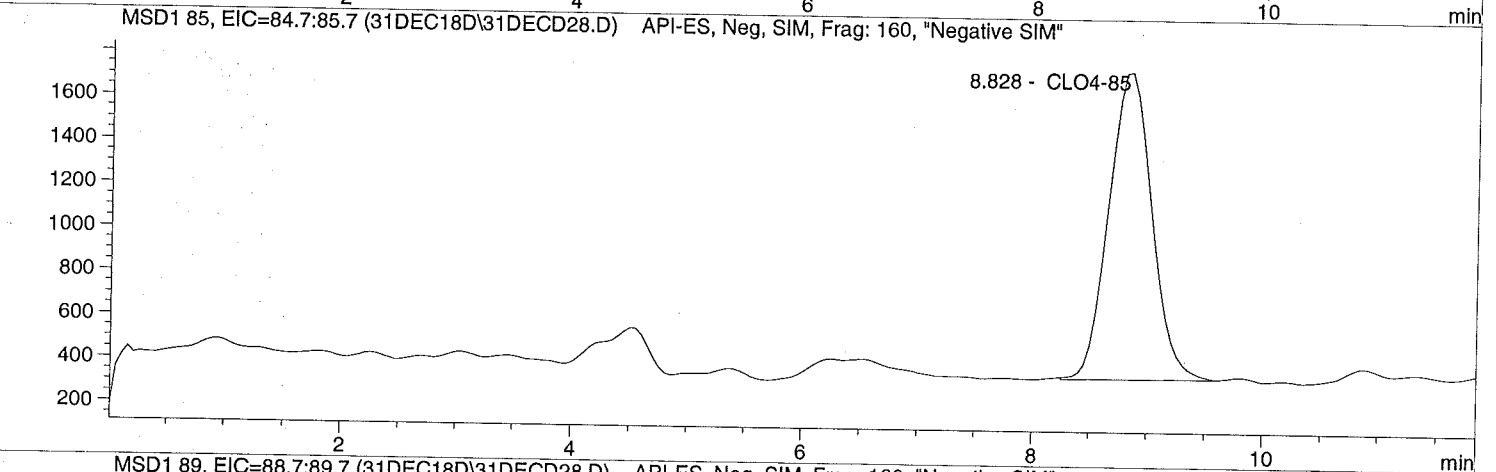
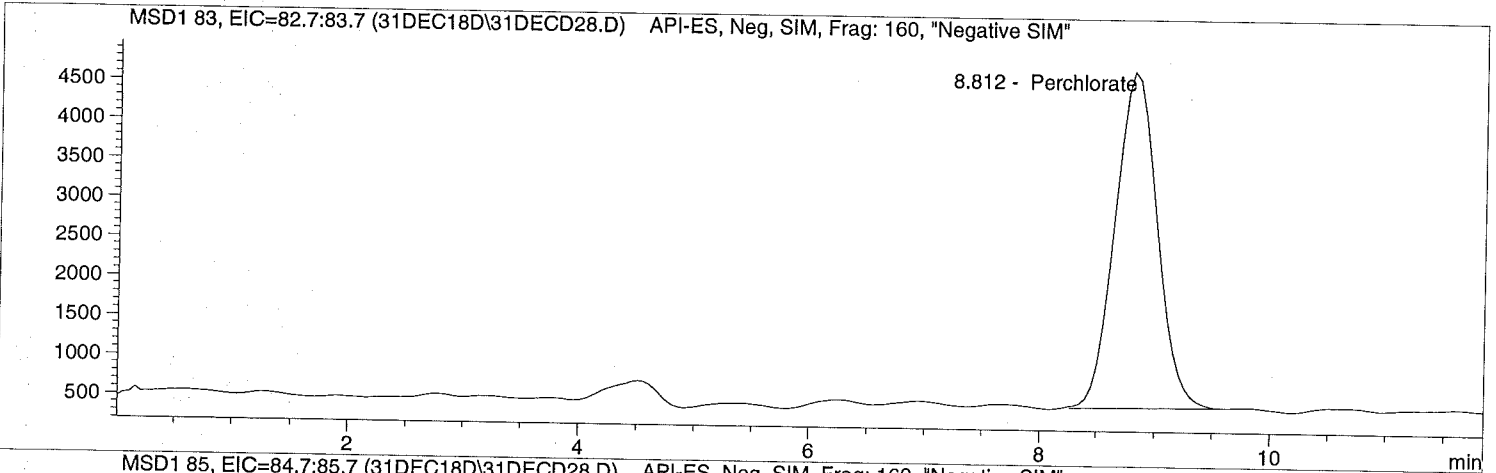


Injection Date: 12/31/2018 14:34:33
Sample Name: 634666 LODV@1.
Acq Operator: TNB

Seq Line: 28
Location: Vial 72
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: 12/31/2018 14:34:33      Seq Line:          28
Sample Name:    634666  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
8.812	PBA	107062.6	1.0785	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.828	BBA	36096.5	1.0780	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.839	BBA	379872.9	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 ***



=====
 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 (Amt) (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 Amount Name

#	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]	Lvl	Amount	Area	Amt/Area	Ref	Grp	Name
9.287	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	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	1.00000	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]	Lvl Sig	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

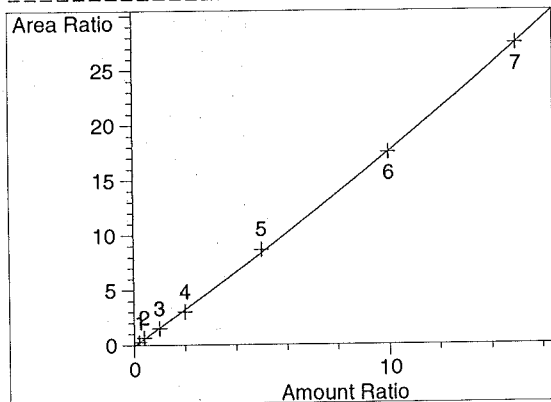
Compound: CLO4-85

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
 =====

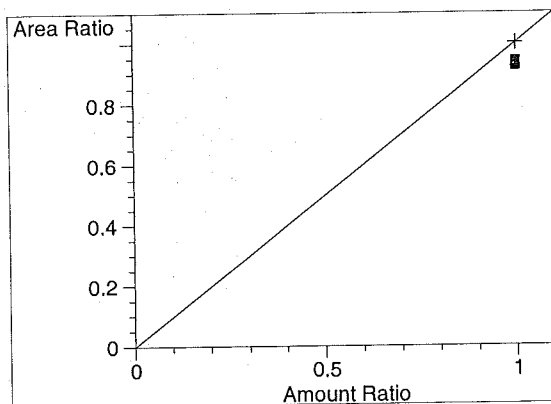
No Entries in table
 =====



=====
 Calibration Curves
 =====


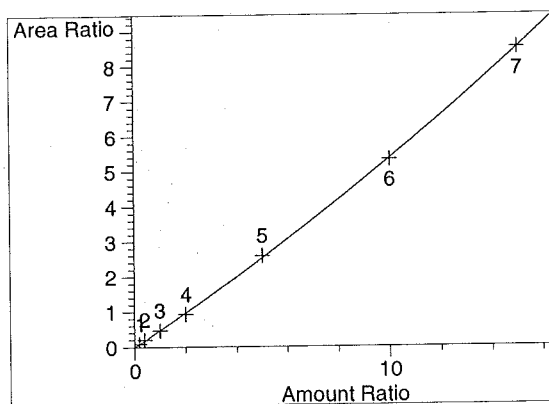
Perchlorate at exp. RT: 9.287
 MSD1 83, EIC=82.7:83.7
 Correlation: 0.99971
 Residual Std. Dev.: 0.16701
 Formula: $y = ax^2 + bx + c$
 a: 1.45482e-2
 b: 1.61590
 c: -6.73998e-2
 x: Amount Ratio
 y: Area Ratio

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 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

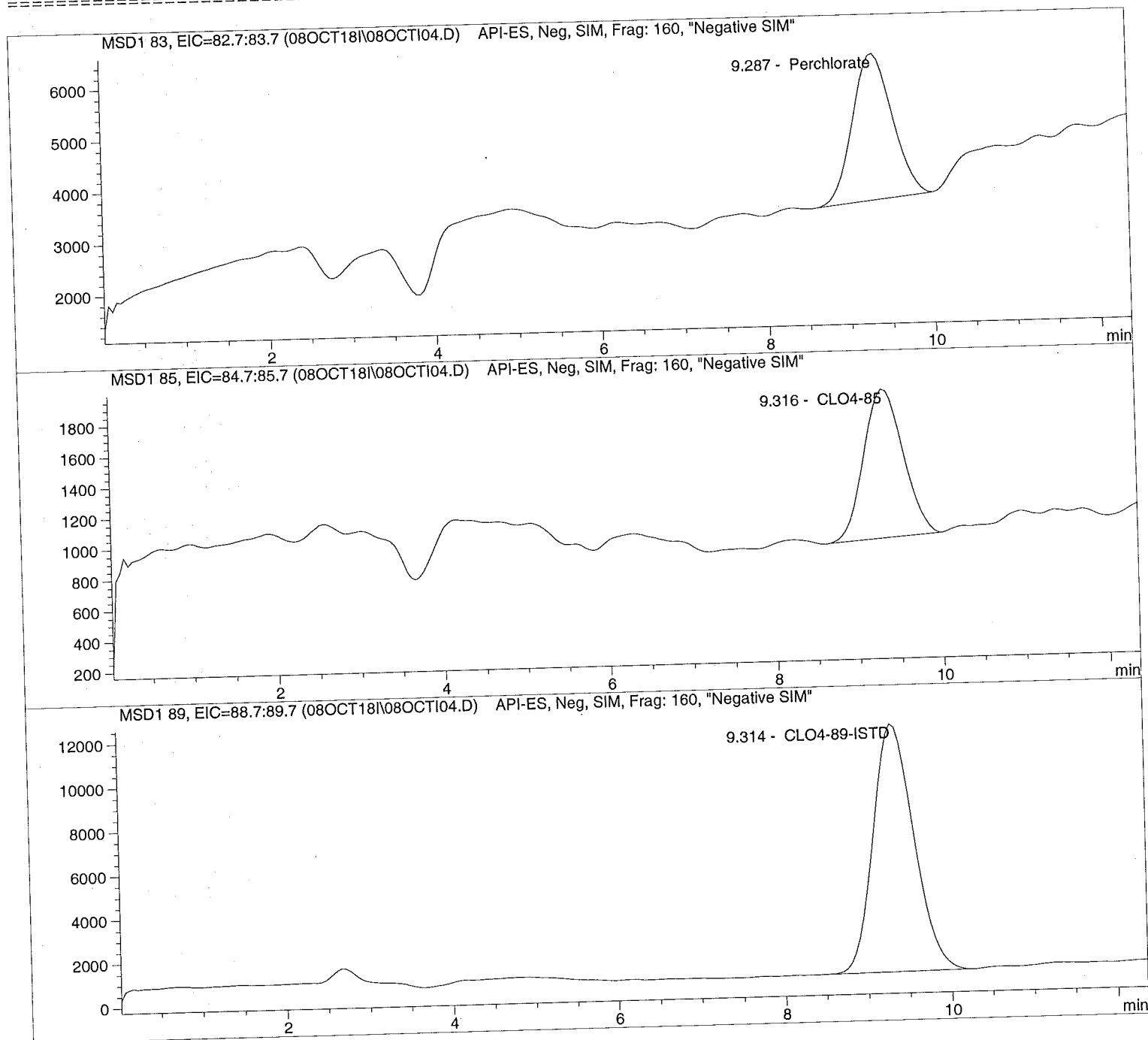
Sample Name: CLO4@ 1.0ug/L

Injection Date: 10/08/2018 11:37:35
Sample Name: CLO4@ 1.0ug/L
Acq Operator: TNB

Seq Line: 4
Location: Vial 74
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 ***
=====

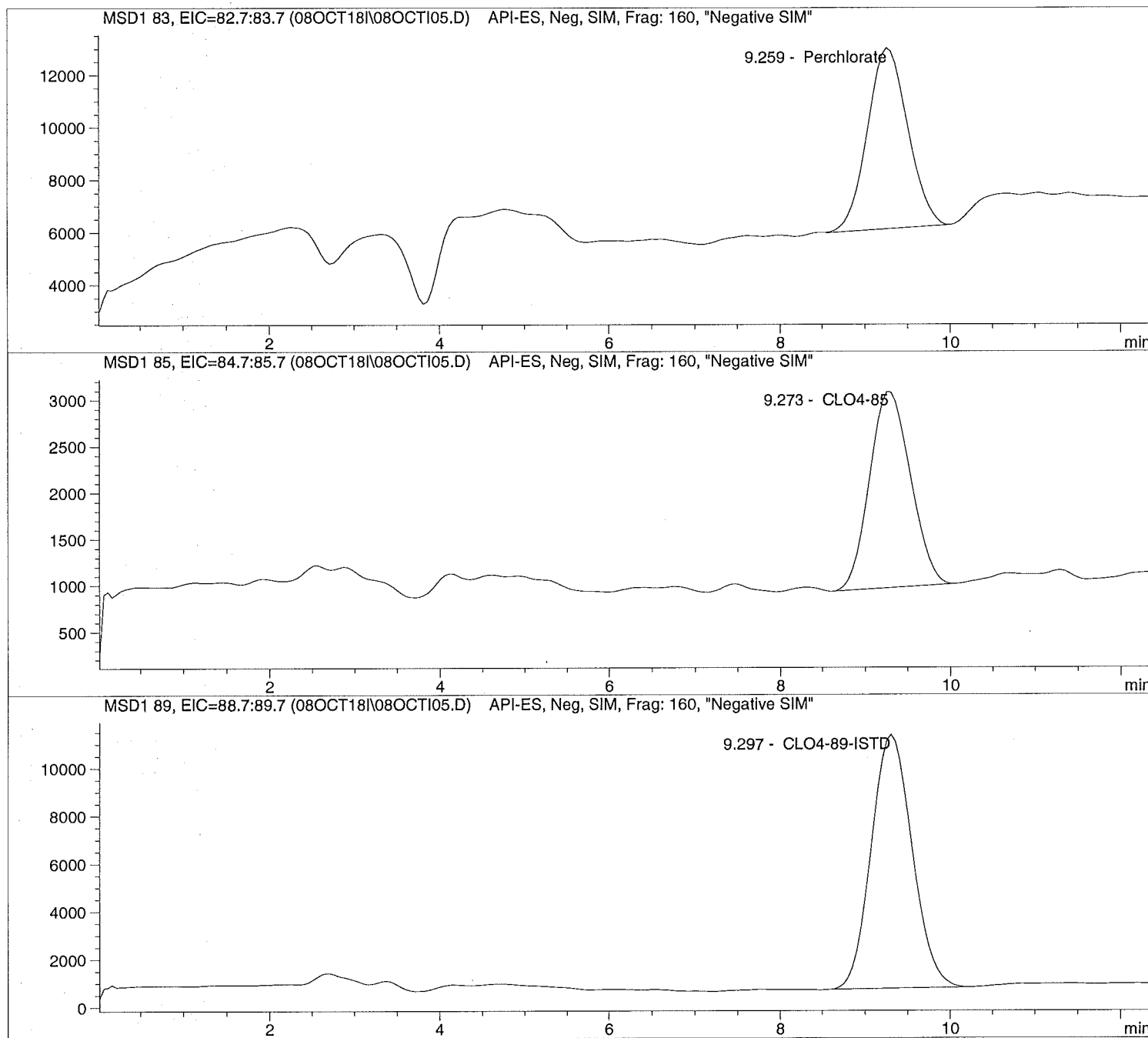
```

Injection Date: 10/08/2018 11:51:45
Sample Name: CLO4@ 2.0ug/L
Acq Operator: TNB

Seq Line: 5
Location: Vial 75
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

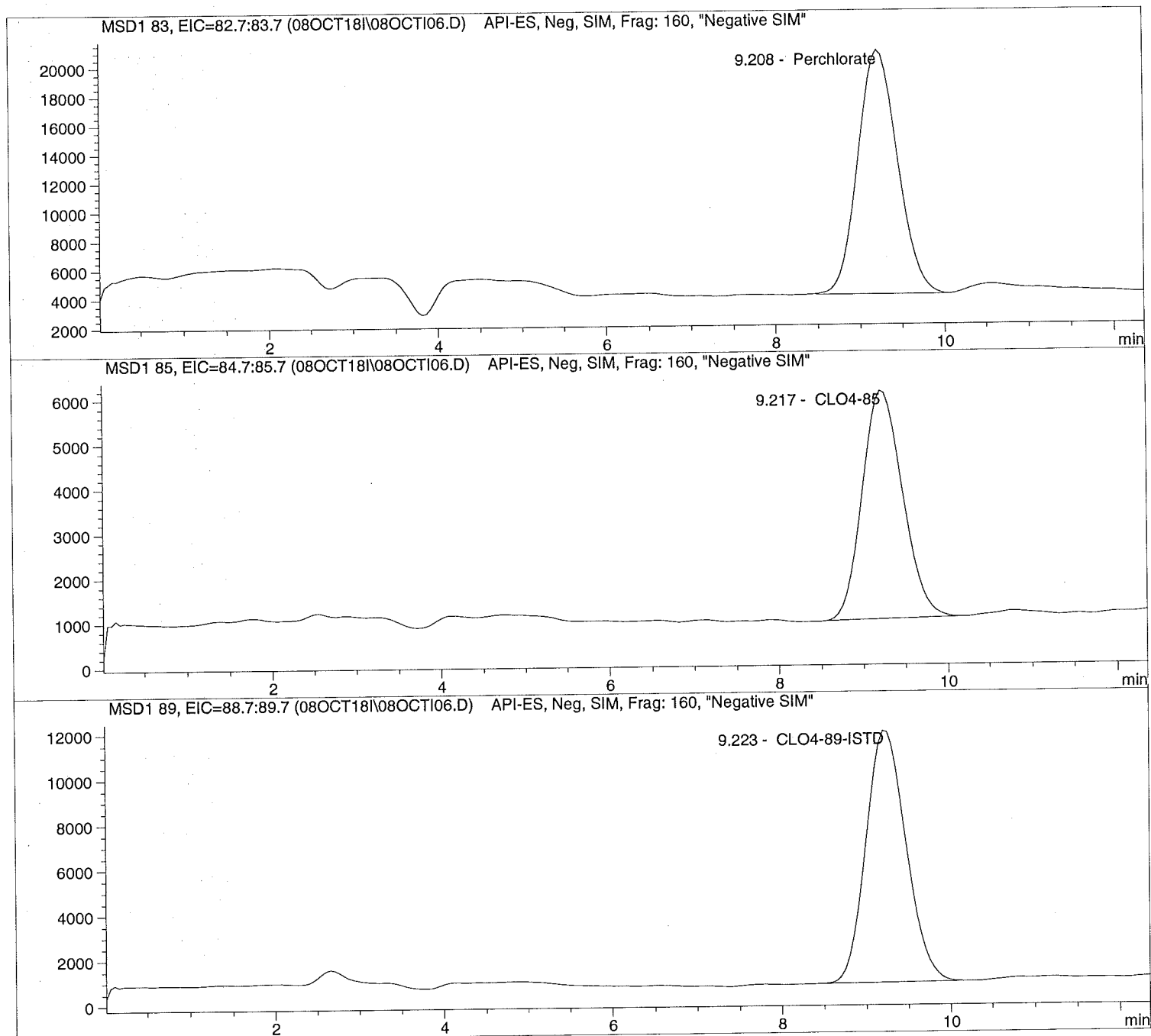
Sample Name: CLO4@ 5.0ug/L

Injection Date: 10/08/2018 12:05:59
Sample Name: CLO4@ 5.0ug/L
Acq Operator: TNB

Seq Line: 6
Location: Vial 76
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



```
=====  
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

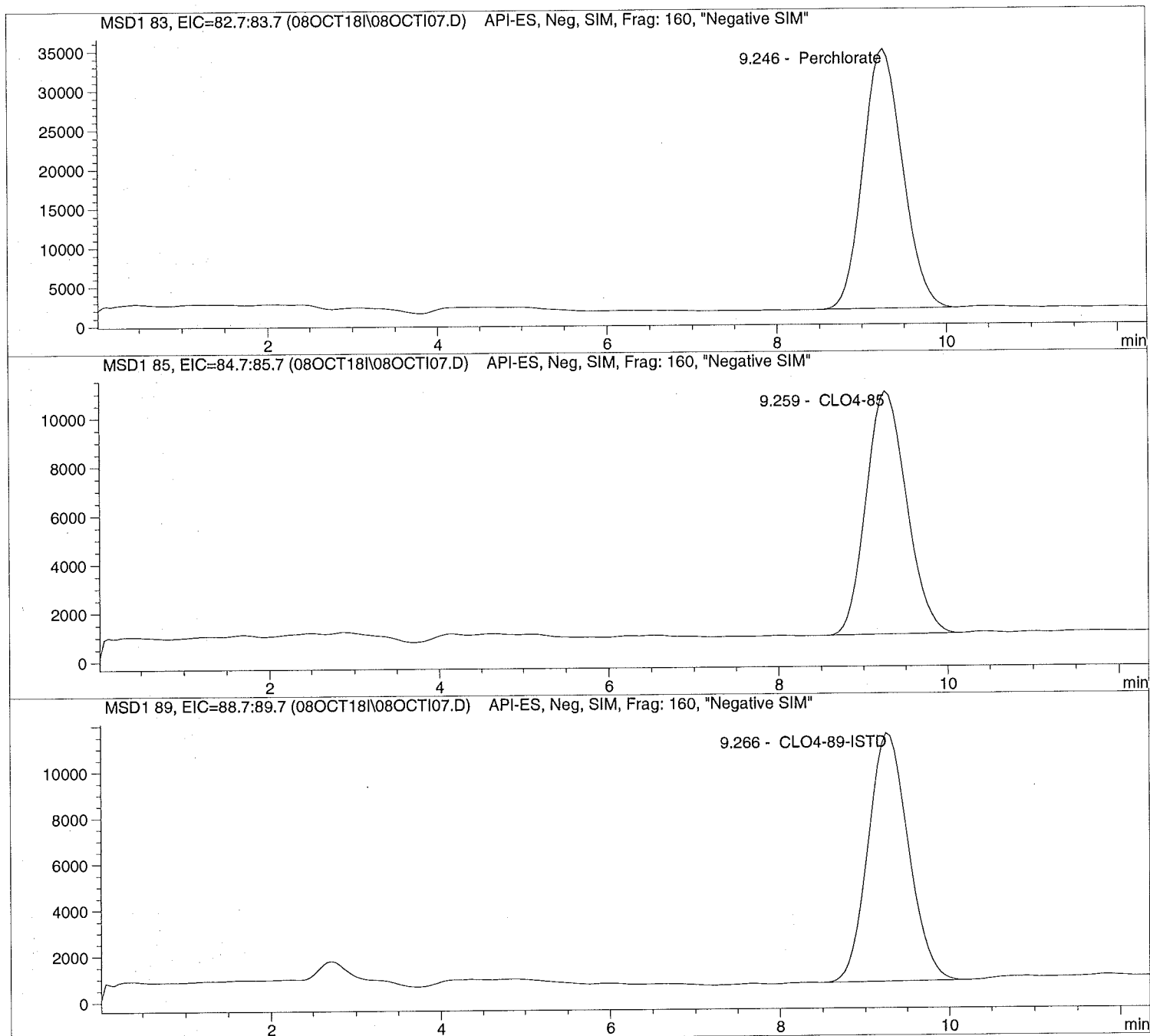
Sample Name: CLO4@ 10.ug/L

Injection Date: 10/08/2018 12:20:10
Sample Name: CLO4@ 10.ug/L
Acq Operator: TNB

Seq Line: 7
Location: Vial 77
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




```

=====
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

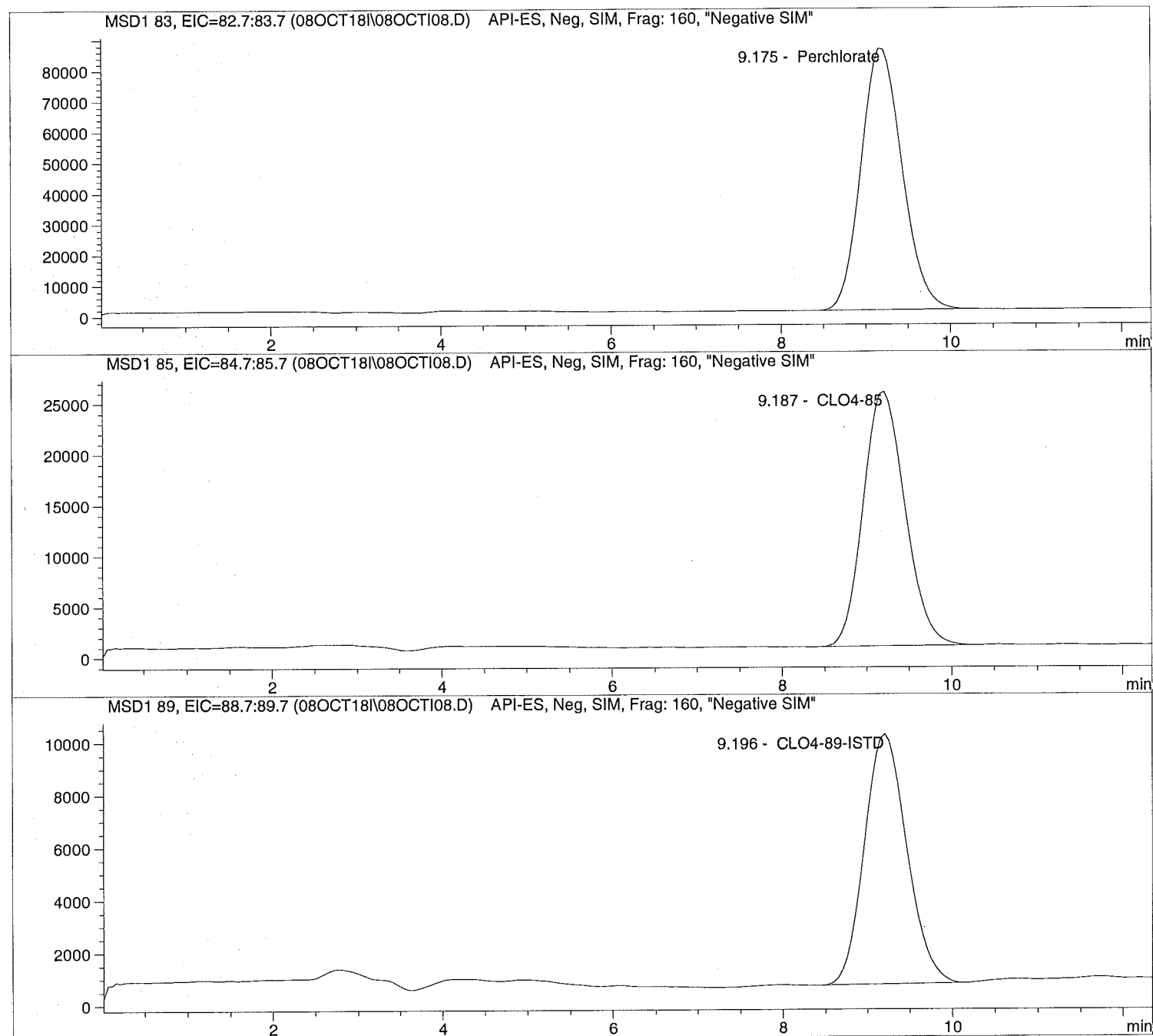
Sample Name: CLO4@ 25.ug/L

Injection Date: 10/08/2018 12:34:24
Sample Name: CLO4@ 25.ug/L
Acq Operator: TNB

Seq Line: 8
Location: Vial 78
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\08OCT18\08OCTI09.D

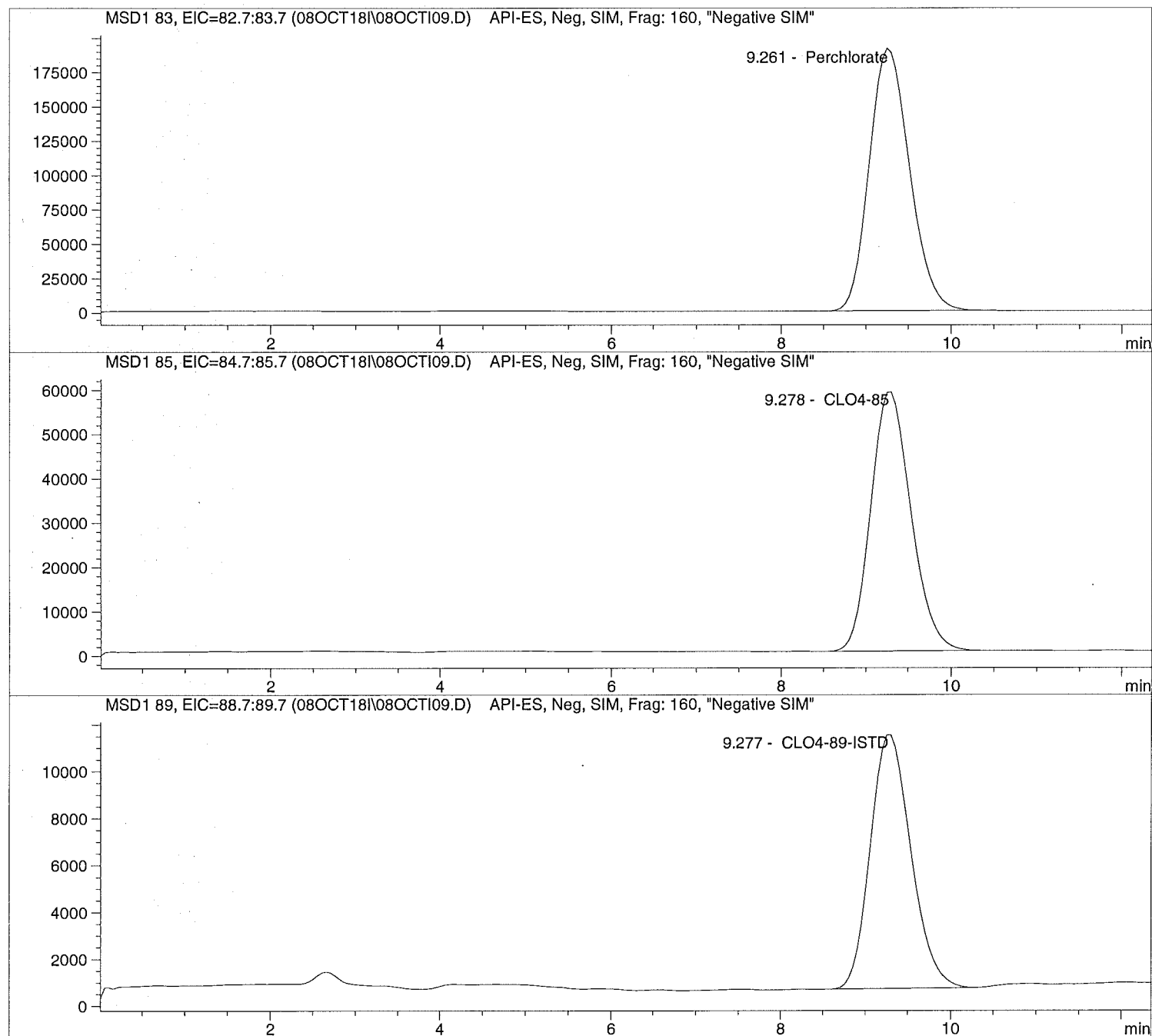
Sample Name: CLO4@ 50.ug/L

Injection Date: 10/08/2018 12:48:34
Sample Name: CLO4@ 50.ug/L
Acq Operator: TNB

Seq Line: 9
Location: Vial 79
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 ***
=====

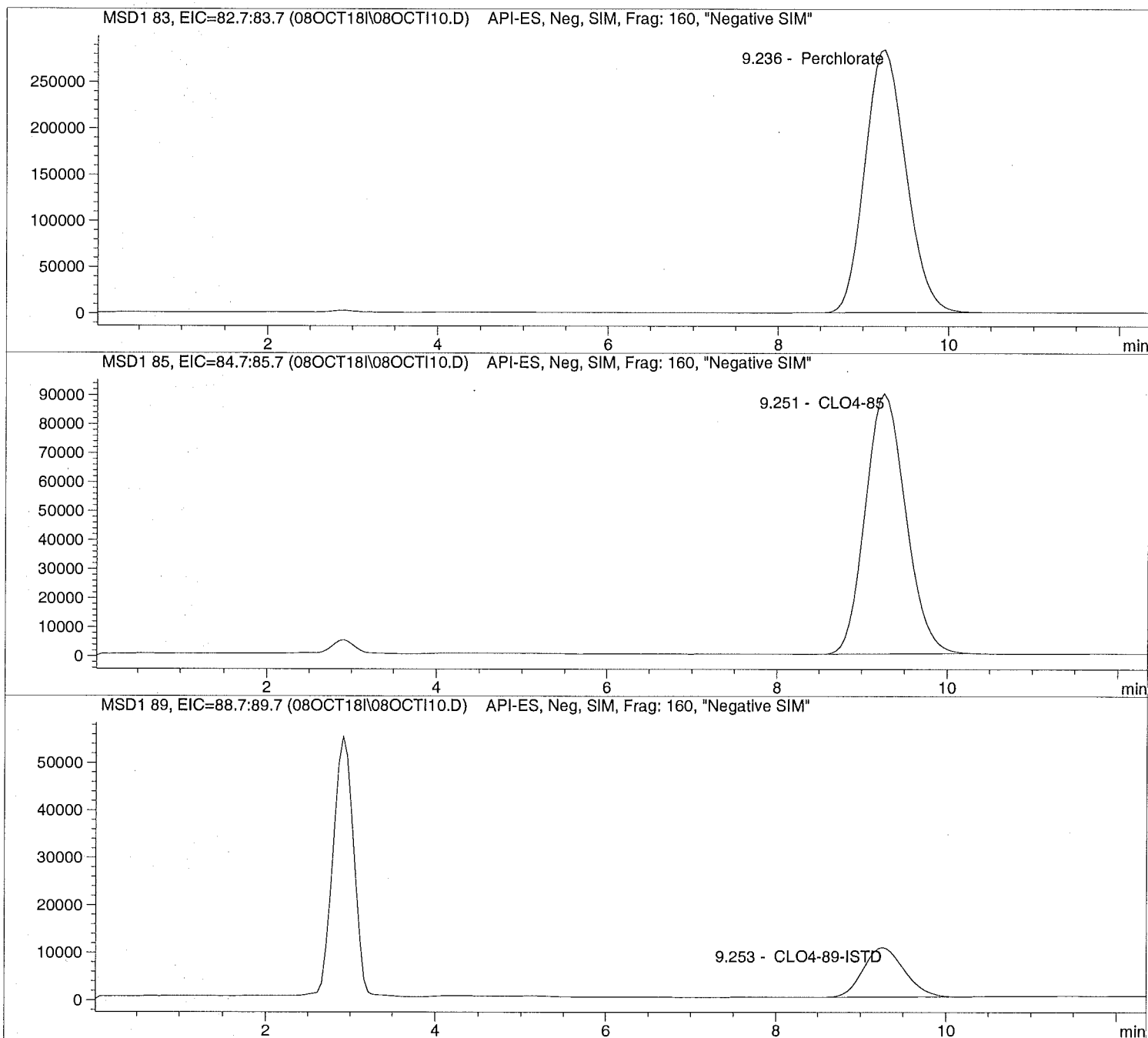
```

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

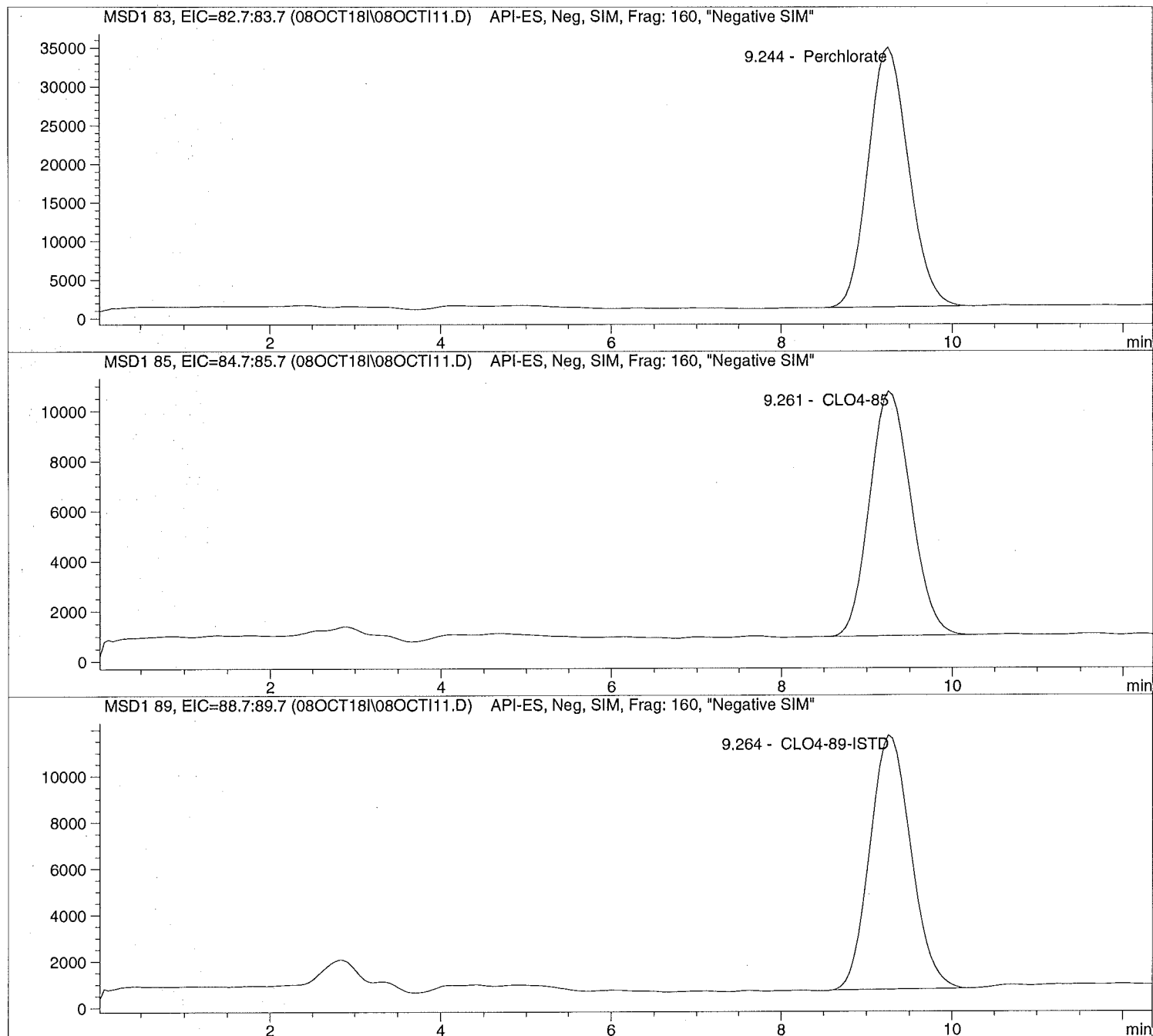
Sample Name: ICAL Verf@10ug/L

Injection Date: 10/08/2018 13:17:00
Sample Name: ICAL Verf@10ug/L
Acq Operator: TNB

Seq Line: 11
Location: Vial 81
Inj. No.: 1
Inj. Vol.: 25 μ l

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 ***
=====

```

HS18121123 8260 Raw Data .

ALS WO# HS18121123



MSVOA09 -Logbook

Batch: 34002
 Date: 12-21-2018
 Method: 8260
 Comments:

Analyst: Presenta Cabascango
 Reviewer:
 Laboratory: Houston

#	<u>Samp ID</u>	<u>Type</u>	<u>Analyzed</u>	<u>DF</u>	<u>Init Wt/Vol</u>	<u>Final Vol</u>	<u>File ID</u>	<u>Matrix</u>	<u>Status</u>	<u>pH</u>
1	BFB <i>Auto find/purged</i>	TUNE	12-21-2018 01:25 pm	1.00	50 mL	50 mL	U122101.D	Liquid	Y	NA
2	VSTD00.25 <i>0.25 uL cal std/250 mL DI</i>	ICAL1	12-21-2018 01:49 pm	1.00	50 mL	50 mL	U122102.D	Liquid	Y	NA
3	VSTD00.5 <i>0.5 uL cal std/250 mL DI</i>	ICAL2	12-21-2018 02:14 pm	1.00	50 mL	50 mL	U122103.D	Liquid	Y	NA
4	VSTD001 <i>1 uL cal std/250 mL DI</i>	ICAL3	12-21-2018 03:03 pm	1.00	50 mL	50 mL	U122104.D	Liquid	Y	NA
5	VSTD002 <i>2 uL cal std/250 mL DI</i>	ICAL4	12-21-2018 03:28 pm	1.00	50 mL	50 mL	U122105.D	Liquid	Y	NA
6	VSTD005 <i>5 uL cal std/250 mL DI</i>	ICAL5	12-21-2018 03:52 pm	1.00	50 mL	50 mL	U122106.D	Liquid	Y	NA
7	VSTD020 <i>4 uL cal std/50 mL DI</i>	ICAL6	12-21-2018 04:17 pm	1.00	50 mL	50 mL	U122107.D	Liquid	Y	NA
8	VSTD050 <i>10 uL cal std/50 mL DI</i>	ICAL7	12-21-2018 04:41 pm	1.00	50 mL	50 mL	U122108.D	Liquid	Y	NA
9	VSTD100 <i>20 uL cal std/50 mL DI</i>	ICAL8	12-21-2018 05:06 pm	1.00	50 mL	50 mL	U122109.D	Liquid	Y	NA
10	VSTD150 <i>30 uL cal std/50 mL DI</i>	ICAL9	12-21-2018 05:31 pm	1.00	50 mL	50 mL	U122110.D	Liquid	Y	NA
11	VSTD200 <i>40 uL cal std/50 mL DI</i>	ICAL	12-21-2018 05:55 pm	1.00	50 mL	50 mL	U122111.D	Liquid	Y	NA
12	BLANK <i>Cleanup blk</i>	SAMP	12-21-2018 06:20 pm	1.00	50 mL	50 mL	U122112.D	Liquid	Y	NA
13	VSTD050 <i>10 uL ICV std/50 mL DI</i>	ICV	12-21-2018 06:45 pm	1.00	50 mL	50 mL	U122113.D	Liquid	Y	NA
14	BLANK	SAMP	12-21-2018 07:09 pm	1.00	50 mL	50 mL	U122114.D	Liquid	Y	NA
15	VLCSW-1812021 <i>4 uL ICV std/50 mL DI</i>	LCS	12-21-2018 07:34 pm	1.00	50 mL	50 mL	U122115.D	Liquid	Y	NA
16	BLANK	SAMP	12-21-2018 07:59 pm	1.00	50 mL	50 mL	U122116.D	Liquid	Y	NA
17	VBLKW-181221	MBLK	12-21-2018 08:24 pm	1.00	50 mL	50 mL	U122117.D	Liquid	Y	NA
18	HS18120782-01	SAMP	12-21-2018 08:48 pm	1.00	50 mL	50 mL	U122118.D	Liquid	Y	<2
19	HS18121172-01	SAMP	12-21-2018 09:13 pm	1.00	50 mL	50 mL	U122119.D	Liquid	Y	<2
20	HS18120947-01	SAMP	12-21-2018 09:38 pm	10.00	5 mL	50 mL	U122120.D	Liquid	Y	<2
21	HS18121172-01MS <i>3.5 uL cal std/40 mL Sample</i>	MS	12-21-2018 10:03 pm	1.00	50 mL	50 mL	U122121.D	Liquid	Y	<2
22	HS18121172-01MSD <i>3.5 uL cal std/40 mL Sample</i>	MSD	12-21-2018 10:27 pm	1.00	50 mL	50 mL	U122122.D	Liquid	Y	<2
23	HS18121172-02	SAMP	12-21-2018 10:52 pm	1.00	50 mL	50 mL	U122123.D	Liquid	Y	<2
24	HS18121172-03	SAMP	12-21-2018 11:17 pm	1.00	50 mL	50 mL	U122124.D	Liquid	Y	<2
25	HS18121172-04	SAMP	12-21-2018 11:42 pm	1.00	50 mL	50 mL	U122125.D	Liquid	Y	<2
26	HS18121172-05	SAMP	12-22-2018 12:06 am	1.00	50 mL	50 mL	U122126.D	Liquid	Y	<2
27	HS18121172-06	SAMP	12-22-2018 12:31 am	1.00	50 mL	50 mL	U122127.D	Liquid	Y	<2



MSVOA09 -Logbook

Chemical	Value
SURR SPK ID	30502-52-03
IS ID	30502-52-04
ICV STD ID	30603-46-01
LCS/MS ID	30603-46-01
CAL STD ID	30502-56-01/02
BFB ID	30502-52-03



FORM 3
WATER VOLATILE METHOD SPIKE RECOVERY

Lab Name: ALS LABORATORY GROUP

Contract:

Lab Code: ALS-HS

Case No.:

SAS No.:

SDG No.: HS18121123

Matrix Spike - Sample No.: VSTD050

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE AMOUNT ()	% REC #	QC. LIMITS REC.
===== cis-1,3-Dichloropropene	50.00	48.91	98	80-120
trans-1,3-Dichloroprope	50.00	48.93	98	80-120
1,3-Dichlorobenzene	50.00	48.27	96	80-120
2,2-Dichloropropane	50.00	53.09	106	80-120
1,1-Dichloropropene	50.00	47.46	95	80-120
Dibromomethane	50.00	50.89	102	80-120
1,2-Dibromoethane	50.00	51.16	102	80-120
trans-1,2-Dichloroethen	50.00	48.02	96	80-120
1,1,1,2-Tetrachloroetha	50.00	48.43	97	80-120
1,1,1-Trichloroethane	50.00	49.36	99	80-120
1,1,2,2-Tetrachloroetha	50.00	49.55	99	80-120
Freon TF	50.00	45.07	90	80-120
1,1,2-Trichloroethane	50.00	49.30	99	80-120
1,1-Dichloroethane	50.00	47.96	96	80-120
1,1-Dichloroethene	50.00	45.82	92	80-120
Trichlorofluoromethane	50.00	45.85	92	80-120
1,2,3-Trichlorobenzene	50.00	47.80	96	80-120
Toluene	50.00	49.27	98	80-120
1,2,4-Trichlorobenzene	50.00	50.37	101	80-120
1,2,4-Trimethylbenzene	50.00	50.13	100	80-120
Tetrachloroethene	50.00	45.93	92	80-120
Trichloroethene	50.00	48.84	98	80-120
1,2-Dichlorobenzene	50.00	48.36	97	80-120
1,2-Dichloroethane	50.00	50.35	101	80-120
1,2-Dichloropropane	50.00	49.19	98	80-120
1,3,5-Trimethylbenzene	50.00	50.06	100	80-120
1,3-Dichloropropane	50.00	49.40	99	80-120
1,4-Dichlorobenzene	50.00	47.08	94	80-120

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

COMMENTS: _____

FORM III VOA



FORM 3
WATER VOLATILE METHOD SPIKE RECOVERY

Lab Name: ALS LABORATORY GROUP

Contract:

Lab Code: ALS-HS

Case No.:

SAS No.:

SDG No.: HS18121123

Matrix Spike - Sample No.: VSTD050

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE AMOUNT ()	% REC #	QC. LIMITS REC.
2-Butanone	100.00	104.35	104	80-120
2-Chlorotoluene	50.00	49.32	99	80-120
2-Hexanone	100.00	109.16	109	80-120
4-Chlorotoluene	50.00	49.71	99	80-120
tert-Butylbenzene	50.00	47.93	96	80-120
4-Methyl-2-Pentanone	100.00	106.57	106	80-120
Acetone	100.00	114.45	114	80-120
Benzene	50.00	48.82	98	80-120
Bromobenzene	50.00	49.77	100	80-120
Bromochloromethane	50.00	56.76	114	80-120
Bromodichloromethane	50.00	52.06	104	80-120
Bromoform	50.00	47.92	96	80-120
Bromomethane	50.00	54.05	108	80-120
Carbon Disulfide	100.00	96.00	96	80-120
Carbon Tetrachloride	50.00	44.88	90	80-120
Chlorobenzene	50.00	48.25	96	80-120
Chloroethane	50.00	46.15	92	80-120
Chloroform	50.00	48.45	97	80-120
Chloromethane	50.00	48.96	98	80-120
cis-1,2-Dichloroethene	50.00	48.93	98	80-120
Dibromochloromethane	50.00	48.57	97	80-120
Dichlorodifluoromethane	50.00	46.21	92	80-120
Ethylbenzene	50.00	49.30	99	80-120
Hexachlorobutadiene	50.00	46.17	92	80-120
Isopropylbenzene	50.00	49.07	98	80-120
m,p-Xylenes	100.00	99.88	100	80-120
Methylene Chloride	50.00	49.75	100	80-120
n-Butylbenzene	50.00	46.94	94	80-120

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

COMMENTS:

FORM III VOA



FORM 3
WATER VOLATILE METHOD SPIKE RECOVERY

Lab Name: ALS LABORATORY GROUP

Contract:

Lab Code: ALS-HS

Case No.:

SAS No.:

SDG No.: HS18121123

Matrix Spike - Sample No.: VSTD050

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE AMOUNT ()	% REC #	QC. LIMITS REC.
=====	=====	=====	=====	=====
n-Propylbenzene	50.00	49.11	98	80-120
Naphthalene	50.00	49.46	99	80-120
o-Xylene	50.00	49.89	100	80-120
sec-Butylbenzene	50.00	47.69	95	80-120
Styrene	50.00	52.73	105	80-120
Vinyl Chloride	50.00	46.02	92	80-120
1,2,3-Trichloropropane	50.00	53.26	106	80-120
p-Isopropyltoluene	50.00	49.19	98	80-120
1,2-Dibromo-3-Chloropro	50.00	49.92	100	80-120

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

COMMENTS: _____

FORM III VOA



FORM 5
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: ALS LABORATORY GROUP Contract:
 Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS18121123
 Lab File ID: U122101 BFB Injection Date: 12/21/18
 Instrument ID: VOA9 BFB Injection Time: 1325
 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	19.6
75	30.0 - 60.0% of mass 95	50.4
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	0.5 (0.8)1
174	Greater than 50.0% of mass 95	66.8
175	5.0 - 9.0% of mass 174	5.1 (7.7)1
176	95.0 - 101.0% of mass 174	63.8 (95.6)1
177	5.0 - 9.0% of mass 176	4.5 (7.0)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	VSTD00.25	VSTD00.25	U122102	12/21/18	1349
02	VSTD00.5	VSTD00.5	U122103	12/21/18	1414
03	VSTD001	VSTD001	U122104	12/21/18	1503
04	VSTD002	VSTD002	U122105	12/21/18	1528
05	VSTD005	VSTD005	U122106	12/21/18	1552
06	VSTD020	VSTD020	U122107	12/21/18	1617
07	VSTD050	VSTD050	U122108	12/21/18	1641
08	VSTD100	VSTD100	U122109	12/21/18	1706
09	VSTD150	VSTD150	U122110	12/21/18	1731
10	VSTD200	VSTD200	U122111	12/21/18	1755
11	VSTD050	VSTD050	U122113	12/21/18	1845
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

page 1 of 1

FORM V VOA



FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS LABORATORY GROUP

Contract:

Lab Code: ALS-HS

Case No.:

SAS No.:

SDG No.: HS18121123

Instrument ID: VOA9

Calibration Date(s): 12/21/18 12/21/18

Column: DB624

ID: 0.18 (mm)

Calibration Time(s): 1349

1755

LAB FILE ID:

RF0.25: U122102

RF0.5: U122103

RF1: U122104

RF2: U122105

RF5: U122106

RF20: U122107

COMPOUND	RF0.25	RF0.5	RF1	RF2	RF5	RF20
===== cis-1,3-Dichloropropene	===== 	2152	7273	13732	38403	162454
trans-1,3-Dichloropropene		1633	5668	10646	30725	135347
1,3-Dichlorobenzene		1.191	1.700	1.605	1.568	1.456
2,2-Dichloropropane		0.485	0.763	0.625	0.645	0.634
1,1-Dichloropropene		0.322	0.521	0.477	0.458	0.439
Dibromomethane		0.143	0.229	0.212	0.217	0.208
1,2-Dibromoethane		0.251	0.393	0.345	0.364	0.358
trans-1,2-Dichloroethene		0.432	0.724	0.620	0.614	0.598
1,1,1,2-Tetrachloroethane		1272	4208	8522	21878	89389
1,1,1-Trichloroethane		0.521	0.866	0.775	0.824	0.806
1,1,2,2-Tetrachloroethane		0.818	1.359	1.245	1.216	1.139
Freon TF		0.306	0.503	0.450	0.439	0.408
1,1,2-Trichloroethane		0.224	0.351	0.317	0.320	0.302
1,1-Dichloroethane		0.726	1.305	1.174	1.154	1.100
1,1-Dichloroethene		0.403	0.563	0.526	0.486	0.447
Trichlorofluoromethane		1919	7922	14026	37144	130957
1,2,3-Trichlorobenzene		1324	6631	12385	31113	126752
Toluene		1.131	1.662	1.581	1.624	1.525
1,2,4-Trichlorobenzene		0.721	1.015	0.905	0.905	0.901
1,2,4-Trimethylbenzene		1.826	2.823	2.656	2.819	2.701
Tetrachloroethene		0.219	0.326	0.277	0.272	0.254
Trichloroethene		0.245	0.382	0.322	0.344	0.317
1,2-Dichlorobenzene		1.166	1.777	1.606	1.586	1.444
1,2-Dichloroethane		2385	8970	15708	41415	149131
1,2-Dichloropropane		0.265	0.415	0.367	0.371	0.353
1,3,5-Trimethylbenzene		1.672	2.689	2.445	2.682	2.616
1,3-Dichloropropane		0.478	0.748	0.679	0.708	0.655
1,4-Dichlorobenzene		1.357	1.906	1.683	1.662	1.508
2-Butanone		2109	6369	11299	29605	119433
2-Chlorotoluene		1.700	2.636	2.392	2.490	2.333
2-Hexanone		0.182	0.278	0.270	0.285	0.300
4-Chlorotoluene		1.938	2.990	2.793	2.876	2.698
tert-Butylbenzene		1.429	2.338	2.197	2.340	2.218
4-Methyl-2-Pentanone		0.264	0.428	0.396	0.407	0.423
Acetone		3366	5582	8219	19230	73380
Benzene		0.975	1.562	1.399	1.435	1.337
Bromobenzene		0.564	0.890	0.814	0.813	0.765
Bromochloromethane		773	2865	5148	13786	51515
Bromodichloromethane		0.250	0.393	0.362	0.383	0.380
Bromoform		762	2343	4574	12962	53922
Bromomethane		822	2293	4588	12245	47148
Carbon Disulfide		1.468	2.043	1.806	1.808	1.714
Carbon Tetrachloride		1510	5463	10077	26439	104210
Chlorobenzene		0.762	1.142	1.012	1.020	0.962

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.: HS1812112

Instrument ID: VOA9

Calibration Date(s): 12/21/18 12/21/18

Column: DB624

ID: 0.18 (mm)

Calibration Time(s): 1349

1755

LAB FILE ID:
RF2: U122105RF0.25: U122102
RF5: U122106RF0.5: U122103
RF20: U122107

RF1: U122104

COMPOUND	RF0.25	RF0.5	RF1	RF2	RF5	RF20
Chloroethane		2753	3213	8179	22172	73150
Chloroform		0.705	1.253	1.110	1.148	1.060
Chloromethane		1695	4689	8693	20682	79075
cis-1,2-Dichloroethene		0.459	0.806	0.684	0.699	0.678
Dibromochloromethane		1194	4051	7740	20846	89836
Dichlorodifluoromethane		2033	6583	11371	26580	98486
Ethylbenzene		0.353	0.556	0.512	0.523	0.497
Hexachlorobutadiene		0.453	0.398	0.322	0.324	0.310
Isopropylbenzene		0.918	1.542	1.455	1.530	1.485
m,p-Xylenes		0.432	0.668	0.621	0.648	0.629
Methylene Chloride		3346	8113	13726	31487	109403
n-Butylbenzene		1.993	2.818	2.596	2.666	2.520
n-Propylbenzene		2.596	4.144	3.755	4.032	3.835
Naphthalene		5535	16505	32897	91300	413229
o-Xylene		0.413	0.703	0.613	0.642	0.637
sec-Butylbenzene		2.047	3.385	3.201	3.334	3.199
Styrene		0.640	1.035	0.996	1.084	1.092
Vinyl Chloride		1815	6308	12656	29272	111713
1,2,3-Trichloropropane		0.777	1.295	1.203	1.184	1.156
p-Isopropyltoluene		1.912	2.733	2.516	2.786	2.704
1,2-Dibromo-3-Chloropropane		272	861	1910	4931	22196
1,2-Dichloroethane-d4		8601	10907	17881	38943	131494
Dibromofluoromethane		6036	8005	12720	28568	98984
Toluene-d8		27052	32175	54444	117010	408521
4-Bromofluorobenzene		9627	12547	20092	42900	153183

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.: HS1812112

Instrument ID: VOA9

Calibration Date(s): 12/21/18 12/21/18

Column: DB624

ID: 0.18 (mm)

Calibration Time(s): 1349

1755

LAB FILE ID: RF50: U122108 RF100: U122109 RF150: U122110
RF200: U122111

COMPOUND	RF50	RF100	RF150	RF200
cis-1,3-Dichloropropene	449225	944095	1468956	1986544
trans-1,3-Dichloropropene	381258	811224	1271771	1721394
1,3-Dichlorobenzene	1.440	1.476	1.485	1.441
2,2-Dichloropropane	0.635	0.683	0.695	0.673
1,1-Dichloropropene	0.427	0.455	0.457	0.448
Dibromomethane	0.207	0.207	0.205	0.205
1,2-Dibromoethane	0.349	0.345	0.342	0.340
trans-1,2-Dichloroethene	0.564	0.579	0.576	0.559
1,1,1,2-Tetrachloroethane	235446	493177	766622	1032567
1,1,1-Trichloroethane	0.788	0.846	0.852	0.826
1,1,2,2-Tetrachloroethane	1.127	1.090	1.080	1.060
Freon TF	0.397	0.445	0.445	0.434
1,1,2-Trichloroethane	0.296	0.295	0.290	0.286
1,1-Dichloroethane	1.058	1.079	1.066	1.028
1,1-Dichloroethene	0.441	0.480	0.472	0.461
Trichlorofluoromethane	330010	753769	1146930	1561606
1,2,3-Trichlorobenzene	334600	694931	1085027	1453309
Toluene	1.488	1.490	1.464	1.421
1,2,4-Trichlorobenzene	0.926	0.982	1.001	0.974
1,2,4-Trimethylbenzene	2.661	2.738	2.712	2.610
Tetrachloroethene	0.243	0.257	0.257	0.251
Trichloroethene	0.311	0.321	0.328	0.321
1,2-Dichlorobenzene	1.442	1.463	1.459	1.417
1,2-Dichloroethane	376591	747337	1129116	1504782
1,2-Dichloropropane	0.350	0.357	0.353	0.348
1,3,5-Trimethylbenzene	2.579	2.685	2.665	2.582
1,3-Dichloropropane	0.642	0.630	0.620	0.613
1,4-Dichlorobenzene	1.482	1.511	1.509	1.472
2-Butanone	304044	587152	880878	1199902
2-Chlorotoluene	2.295	2.323	2.315	2.248
2-Hexanone	0.302	0.295	0.297	0.293
4-Chlorotoluene	2.665	2.704	2.694	2.601
tert-Butylbenzene	2.197	2.301	2.300	2.225
4-Methyl-2-Pentanone	0.427	0.421	0.419	0.415
Acetone	187964	331678	520533	723113
Benzene	1.319	1.335	1.317	1.294
Bromobenzene	0.765	0.778	0.792	0.773
Bromochloromethane	129496	244429	348533	453685
Bromodichloromethane	0.388	0.406	0.411	0.408
Bromoform	154855	331336	522892	718878
Bromomethane	117780	281859	444174	585856
Carbon Disulfide	1.656	1.742	1.730	1.622
Carbon Tetrachloride	274507	601960	939611	1268610
Chlorobenzene	0.940	0.949	0.943	0.916

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.: HS1812112
 Instrument ID: VOA9 Calibration Date(s): 12/21/18 12/21/18
 Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1349 1755
 LAB FILE ID: RF50: U122108 RF100: U122109 RF150: U122110
 RF200: U122111

COMPOUND	RF50	RF100	RF150	RF200
Chloroethane	179707	384958	684109	859472
Chloroform	1.027	1.035	1.016	0.978
Chloromethane	197328	441603	746873	1095269
cis-1,2-Dichloroethene	0.650	0.655	0.653	0.630
Dibromochloromethane	242061	512845	791728	1081017
Dichlorodifluoromethane	248322	553841	873891	1151588
Ethylbenzene	0.490	0.504	0.504	0.495
Hexachlorobutadiene	0.324	0.352	0.356	
Isopropylbenzene	1.450	1.506	1.482	1.428
m,p-Xylenes	0.612	0.626	0.616	0.600
Methylene Chloride	274258	554902	841220	1131189
n-Butylbenzene	2.535	2.661	2.637	
n-Propylbenzene	3.794	3.919	3.867	3.682
Naphthalene	1107938	2231968	3430934	4589381
o-Xylene	0.622	0.631	0.627	0.612
sec-Butylbenzene	3.182	3.378	3.341	3.190
Styrene	1.084	1.087	1.074	1.044
Vinyl Chloride	283791	629175	1000865	1348117
1,2,3-Trichloropropane	1.210	1.222	1.246	1.245
p-Isopropyltoluene	2.733	2.856	2.837	2.735
1,2-Dibromo-3-Chloropropane	61793	125814	200384	274280
1,2-Dichloroethane-d4	320796	635081	949266	1274051
Dibromofluoromethane	245007	495628	745399	1006329
Toluene-d8	1010127	2029223	3016887	4010125
4-Bromofluorobenzene	382581	764798	1153874	1540801

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.: HS1812112

Instrument ID: VOA9

Calibration Date(s): 12/21/18 12/21/18

Column: DB624

ID: 0.18 (mm)

Calibration Time(s): 1349

1755

COMPOUND	CURVE	COEFFICIENTS			%RSD OR R ²	MAX %RSD OR R ²
		A0	A1	A2		
cis-1,3-Dichloropropene	LINR	2.529e-002	1.70725996		0.9997580	0.9900000
trans-1,3-Dichloropropene	LINR	3.3e-002	1.96902158		0.9995927	0.9900000
1,3-Dichlorobenzene	AVRG		1.48472992		9.494	20.000
2,2-Dichloropropane	AVRG		0.64891526		11.509	20.000
1,1-Dichloropropene	AVRG		0.44488137		11.968	20.000
Dibromomethane	AVRG		0.20390294		11.744	20.000
1,2-Dibromoethane	AVRG		0.34310644		11.102	20.000
trans-1,2-Dichloroethene	AVRG		0.58526565		12.993	20.000
1,1,1,2-Tetrachloroethane	LINR	1.17e-002	3.11489679		0.9998991	0.9900000
1,1,1-Trichloroethane	AVRG		0.78949465		13.294	20.000
1,1,2,2-Tetrachloroethane	AVRG		1.12601556		13.302	20.000
Freon TF	AVRG		0.42507305		12.611	20.000
1,1,2-Trichloroethane	AVRG		0.29788801		11.475	20.000
1,1-Dichloroethane	AVRG		1.07678494		14.456	20.000
1,1-Dichloroethene	AVRG		0.47540572		9.911	20.000
Trichlorofluoromethane	LINR	1.25e-002	1.19826122		0.9992799	0.9900000
1,2,3-Trichlorobenzene	LINR	1.266e-002	1.04791842		0.9997493	0.9900000
Toluene	AVRG		1.48733738		10.393	20.000
1,2,4-Trichlorobenzene	AVRG		0.92571167		9.562	20.000
1,2,4-Trimethylbenzene	AVRG		2.61651384		11.645	20.000
Tetrachloroethene	AVRG		0.26176272		11.269	20.000
Trichloroethene	AVRG		0.32119921		11.118	20.000
1,2-Dichlorobenzene	AVRG		1.48461871		11.211	20.000
1,2-Dichloroethane	LINR	-1.47e-002	2.25247271		0.9997943	0.9900000
1,2-Dichloropropane	AVRG		0.35329723		11.023	20.000
1,3,5-Trimethylbenzene	AVRG		2.51283681		12.919	20.000
1,3-Dichloropropane	AVRG		0.64163858		11.739	20.000
1,4-Dichlorobenzene	AVRG		1.56545234		10.298	20.000
2-Butanone	LINR	-4.87e-002	3.13274512		0.9994657	0.9900000
2-Chlorotoluene	AVRG		2.30373097		11.091	20.000
2-Hexanone	AVRG		0.27803053		13.505	20.000
4-Chlorotoluene	AVRG		2.66220268		11.134	20.000
tert-Butylbenzene	AVRG		2.17187412		13.092	20.000
4-Methyl-2-Pentanone	AVRG		0.40004668		13.000	20.000
Acetone	LINR	-6.05e-002	5.27806885		0.9991782	0.9900000
Benzene	AVRG		1.33049482		11.804	20.000
Bromobenzene	AVRG		0.77253354		11.330	20.000
Bromochloromethane	LINR	-6.22e-002	4.05290698		0.9951390	0.9900000
Bromodichloromethane	AVRG		0.37570006		13.249	20.000
Bromoform	LINR	3.523e-002	4.49538839		0.9994690	0.9900000
Bromomethane	LINR	2.677e-002	3.15194291		0.9981331	0.9900000
Carbon Disulfide	AVRG		1.73224763		9.031	20.000
Carbon Tetrachloride	LINR	2.798e-002	2.67309140		0.9994430	0.9900000
Chlorobenzene	AVRG		0.96069061		10.497	20.000

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.: HS1812112
 Instrument ID: VOA9 Calibration Date(s): 12/21/18 12/21/18
 Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1349 1755

COMPOUND	CURVE	COEFFICIENTS			%RSD OR R ²	MAX %RSD OR R ²
		A0	A1	A2		
Chloroethane	2ORDR	9.363e-003	2.27118996	-8.34e-002	0.9953360	0.9900000
Chloroform	AVRG		1.03699562		14.439	20.000
Chloromethane	LINR	6.638e-002	1.75757606		0.9946541	0.9900000
cis-1,2-Dichloroethene	AVRG		0.65721728		13.730	20.000
Dibromochloromethane	LINR	1.95e-002	2.98429229		0.9998675	0.9900000
Dichlorodifluoromethane	LINR	9.706e-003	1.60963706		0.9988360	0.9900000
Ethylbenzene	AVRG		0.49273054		11.389	20.000
Hexachlorobutadiene	AVRG		0.35465839		13.679	20.000
Isopropylbenzene	AVRG		1.42182513		13.532	20.000
m,p-Xylenes	AVRG		0.60575037		11.285	20.000
Methylene Chloride	LINR	-2.41e-002	1.65721813		0.9996145	0.9900000
n-Butylbenzene	AVRG		2.55335964		9.575	20.000
n-Propylbenzene	AVRG		3.73602785		12.044	20.000
Naphthalene	2ORDR	1.313e-002	0.32140252	9.017e-004	0.9999007	0.9900000
o-Xylene	AVRG		0.61109521		12.917	20.000
sec-Butylbenzene	AVRG		3.13985879		13.327	20.000
Styrene	AVRG		1.01526757		14.203	20.000
Vinyl Chloride	LINR	1.938e-002	1.38661185		0.9992348	0.9900000
1,2,3-Trichloropropane	AVRG		1.17088717		13.058	20.000
p-Isopropyltoluene	AVRG		2.64580193		11.042	20.000
1,2-Dibromo-3-Chloropropane	LINR	2.904e-002	5.59224209		0.9995363	0.9900000
1,2-Dichloroethane-d4	LINR	-4.34e-002	1.47435424		0.9993295	0.9900000
Dibromofluoromethane	LINR	-3.06e-002	1.86777807		0.9996249	0.9900000
Toluene-d8	LINR	-3.57e-002	0.80216996		0.9994439	0.9900000
4-Bromofluorobenzene	LINR	-2.86e-002	2.09274699		0.9997553	0.9900000

FORM VI VOA



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181221.b\U122101.D

Date : 21-DEC-2018 13:25

Client ID: BFB

Instrument: VOA9.i

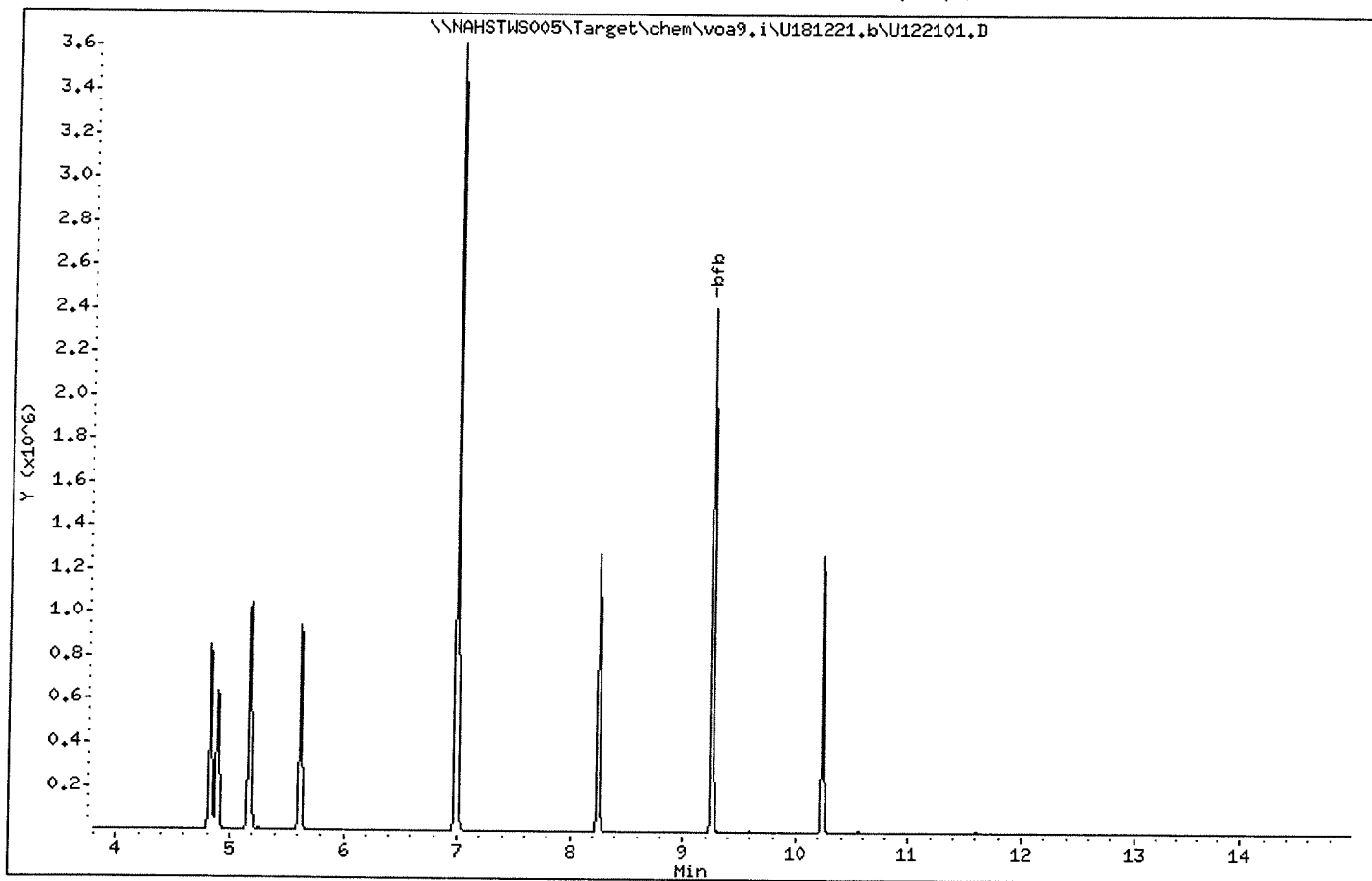
Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181221.b\U122101.D

Page 3

Date : 21-DEC-2018 13:25

Client ID: BFB

Instrument: VOA9.i

Sample Info: BFB;BFB;3;;BFB

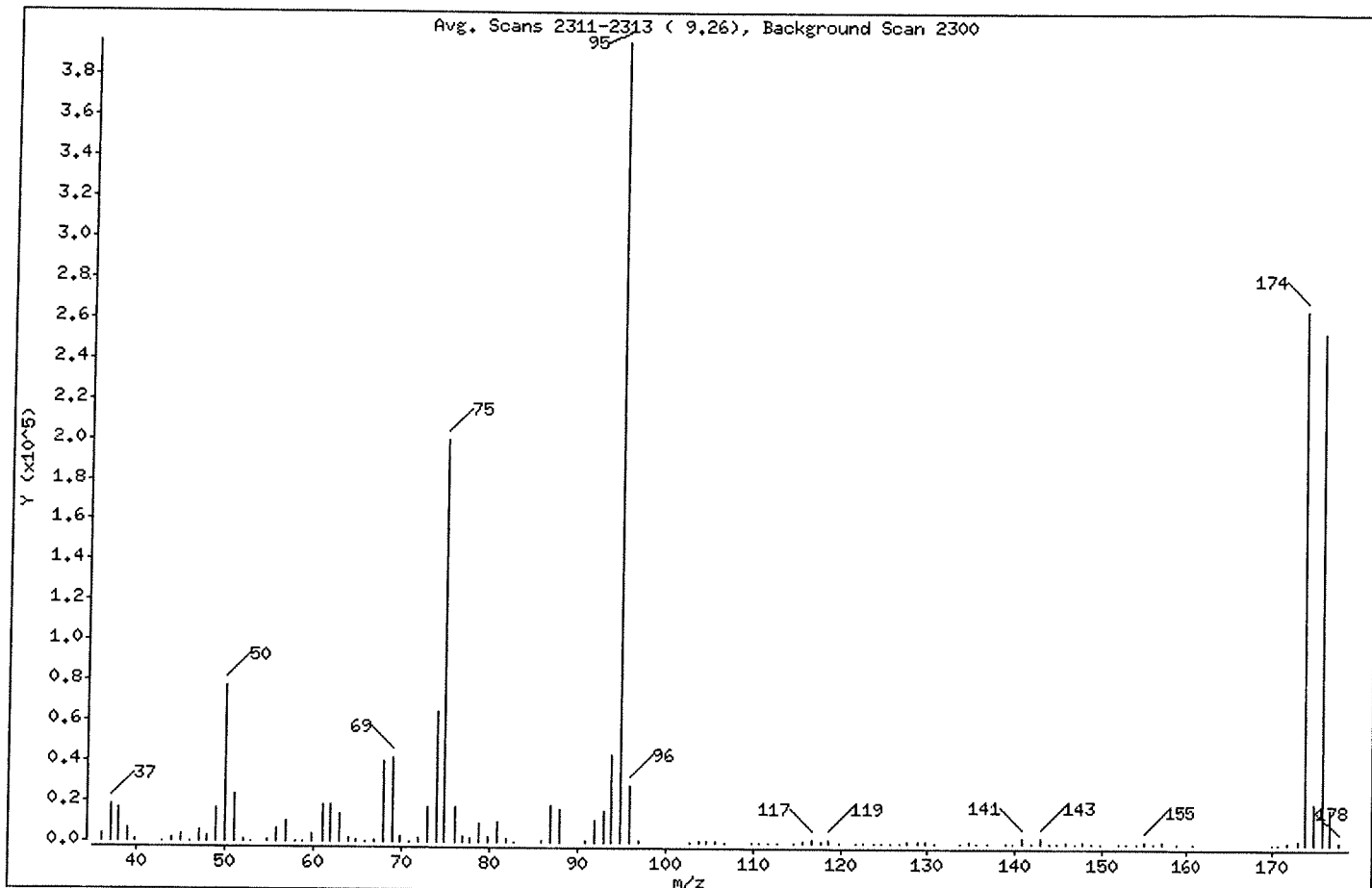
Volume Injected (uL): 2.0

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	19.64
75	30.00 - 60.00% of mass 95	50.36
96	5.00 - 9.00% of mass 95	7.02
173	Less than 2.00% of mass 174	0.53 (0.79)
174	Greater than 50.00% of mass 95	66.76
175	5.00 - 9.00% of mass 174	5.12 (7.67)
176	95.00 - 101.00% of mass 174	63.79 (95.55)
177	5.00 - 9.00% of mass 176	4.47 (7.01)

Data File: \\NAHSTWS005\Target\chem\voa9.i\U181221,b\U122101.D

Page 4

Date : 21-DEC-2018 13:25

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: U122101.D

Spectrum: Avg. Scans 2311-2313 (9.26), Background Scan 2300

Location of Maximum: 94.95

Number of points: 113

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	3522	67.90	40024	105.80	1268	141.70	302
37.00	18528	68.90	41568	106.80	285	142.80	2909
38.00	16159	69.90	3074	109.80	127	143.80	180
39.00	6598	70.90	134	110.70	307	144.70	380
39.90	601	71.90	2102	111.70	156	145.70	457
42.90	115	73.00	17344	112.80	260	146.70	229
43.90	2066	73.90	64968	114.70	321	147.70	676
45.00	3408	74.90	199680	115.70	1039	148.60	185
46.10	284	76.00	17352	116.80	1890	149.70	381
47.00	5059	76.90	2402	117.70	1164	151.70	195
47.90	2352	77.80	1696	118.70	1600	152.70	221
49.00	16317	78.90	8933	119.80	55	153.80	245
50.00	77856	79.90	2552	121.70	99	154.70	869
51.00	23912	80.90	9833	122.70	71	155.70	141
52.00	1198	81.90	1903	123.80	148	156.70	599
52.90	102	82.80	214	124.70	101	158.60	297
54.90	806	85.90	533	125.70	152	160.70	273
55.90	6021	86.90	18088	126.70	123	169.90	51
56.90	10148	87.90	16848	127.70	1127	170.60	105
57.90	434	90.80	1233	128.80	534	171.70	1051
58.70	68	91.90	10521	129.70	1152	172.80	2098
59.90	3925	92.90	15269	130.70	419	173.70	264704
61.00	18160	93.90	43328	133.70	53	174.70	20304
61.90	18216	94.90	396480	134.70	496	175.70	252928
63.00	13327	95.90	27824	135.60	96	176.70	17720
64.00	1507	96.90	709	136.70	369	177.70	520
64.90	816	102.80	137	138.90	62		
65.80	130	103.80	1364	139.70	200		
67.00	910	104.70	463	140.80	2707		



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181221.b\U122102.D Page 1
 Report Date: 28-Jan-2019 11:36

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U181221.b\U122102.D
 Lab Smp Id: VSTD00.25 Client Smp ID: VSTD00.25
 Inj Date : 21-DEC-2018 13:49
 Operator : PC Inst ID: VOA9.i
 Smp Info : VSTD00.25;VSTD00.25;1;1;
 Misc Info : 180315V9;WATER;0;1;
 Comment :
 Method : \\NAHSTWS005\Target\chem\voa9.i\U181221.b\8260C.m
 Meth Date : 28-Jan-2019 11:25 VOA9.i Quant Type: ISTD
 Cal Date : 21-DEC-2018 13:49 Cal File: U122102.D
 Als bottle: 2 Calibration Sample, Level: 1
 Dil Factor: 1.00000
 Integrator: HP RTE Compound Sublist: LHAAP.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	RT	EXP RT	REL RT	RESPONSE	AMOUNTS	
							CAL-AMT (ug/l)	ON-COL (ug/l)
* 1 Pentafluorobenzene	168		4.894	4.890	(1.000)	428138	50.0000	
* 36 1,4-Difluorobenzene	114		5.625	5.625	(1.000)	818709	50.0000	
* 47 Chlorobenzene-d5	117		8.249	8.249	(1.000)	747851	50.0000	
* 70 1,4-Dichlorobenzene-d4	152		10.236	10.236	(1.000)	340535	50.0000	
\$ 30 Dibromofluoromethane	113		4.830	4.826	(0.987)	4885	0.25000	(a)
\$ 35 1,2-Dichloroethane-d4	65		5.175	5.171	(1.057)	7874	0.25000	(a)
\$ 48 Toluene-d8	98		6.986	6.989	(0.847)	25629	0.25000	(a)
\$ 69 4-Bromofluorobenzene	95		9.257	9.257	(1.122)	9480	0.25000	(a)
60 1,1,1,2-Tetrachloroethane	131		8.350	8.350	(1.012)	1214	0.25000	0.83(a)
31 1,1,1-Trichloroethane	97		4.826	4.826	(0.986)	2037	0.25000	0.30(a)
138 Freon TF	101		2.401	2.394	(0.491)	1292	0.25000	0.35(a)
53 1,1,2-Trichloroethane	83		7.421	7.421	(0.900)	1492	0.25000	0.33(a)
22 1,1-Dichloroethane	63		3.601	3.597	(0.736)	2808	0.25000	0.30(Ta)
11 1,1-Dichloroethene	96		2.397	2.394	(0.490)	1606	0.25000	0.39(a)
32 1,1-Dichloropropene	75		5.003	5.003	(0.889)	2559	0.25000	0.35(a)
93 1,2,3-Trichlorobenzene	180		12.335	12.335	(1.205)	2119	0.25000	0.95(a)
71 1,2,3-Trichloropropane	75		9.426	9.430	(0.921)	2311	0.25000	0.28(a)
90 1,2,4-Trichlorobenzene	180		11.923	11.926	(1.165)	1867	0.25000	0.29(a)
79 1,2,4-Trimethylbenzene	105		9.940	9.943	(0.971)	5702	0.25000	0.31(a)
57 1,2-Dibromoethane	107		7.852	7.852	(0.952)	1463	0.25000	0.28(a)
88 1,2-Dichlorobenzene	146		10.573	10.573	(1.033)	3604	0.25000	0.35(a)
33 1,2-Dichloroethane	62		5.254	5.250	(0.934)	2468	0.25000	(a)
42 1,2-Dichloropropane	63		6.079	6.078	(1.081)	1752	0.25000	0.30(a)



Compounds	QUANT SIG				AMOUNTS		
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/l)	ON-COL (ug/l)
75 1,3,5-Trimethylbenzene	105	9.625	9.628	(0.940)	5173	0.25000	0.30(a)
83 1,3-Dichlorobenzene	146	10.180	10.180	(0.995)	3530	0.25000	0.34(a)
54 1,3-Dichloropropane	76	7.563	7.563	(0.917)	3033	0.25000	0.31(a)
84 1,4-Dichlorobenzene	146	10.255	10.258	(1.002)	4184	0.25000	0.39(a)
76 2-Chlorotoluene	91	9.546	9.550	(0.933)	5370	0.25000	0.34(a)
52 2-Hexanone	43	7.649	7.653	(0.927)	2221	0.50000	0.53(a)
77 4-Chlorotoluene	91	9.640	9.640	(0.942)	6065	0.25000	0.33(a)
82 p-Isopropyltoluene	119	10.210	10.213	(0.997)	5637	0.25000	0.31(a)
45 4-Methyl-2-Pentanone	43	6.914	6.914	(0.838)	3388	0.50000	0.56(a)
10 Acetone	43	2.480	2.476	(0.507)	3620	0.50000	(a)
37 Benzene	78	5.216	5.216	(0.927)	7659	0.25000	0.35(a)
74 Bromobenzene	156	9.381	9.385	(0.917)	1549	0.25000	0.29(a)
19 Carbon Disulfide	76	2.588	2.585	(0.529)	12805	0.50000	0.86(a)
34 Carbon Tetrachloride	117	4.988	4.991	(0.887)	1501	0.25000	1.64(a)
59 Chlorobenzene	112	8.272	8.275	(1.003)	5314	0.25000	0.36(a)
28 Chloroform	83	4.654	4.654	(0.951)	3005	0.25000	0.33(a)
27 cis-1,2-Dichloroethene	96	4.283	4.283	(0.875)	1960	0.25000	0.34(a)
46 cis-1,3-Dichloropropene	75	6.757	6.757	(1.201)	2017	0.25000	1.47(a)
55 Dibromochloromethane	129	7.758	7.758	(0.940)	1084	0.25000	1.19(a)
2 Dichlorodifluoromethane	85	1.201	1.198	(0.246)	2264	0.25000	0.91(a)
61 Ethylbenzene	106	8.369	8.373	(1.015)	2474	0.25000	0.33(a)
91 Hexachlorobutadiene	225	12.061	12.065	(1.178)	1019	0.25000	0.42(a)
67 Isopropylbenzene	105	9.126	9.126	(1.106)	6811	0.25000	0.32(a)
62 m,p-Xylenes	106	8.474	8.474	(1.027)	5829	0.50000	0.64(a)
17 Methylene Chloride	84	2.870	2.866	(0.586)	3269	0.25000	(a)
87 n-Butylbenzene	91	10.554	10.558	(1.031)	6526	0.25000	0.37(a)
73 n-Propylbenzene	91	9.475	9.479	(0.926)	8427	0.25000	0.33(a)
92 Naphthalene	128	12.133	12.133	(1.185)	4657	0.25000	0.87(a)
63 o-Xylene	106	8.811	8.811	(1.068)	2975	0.25000	0.32(a)
81 sec-Butylbenzene	105	10.086	10.090	(0.985)	6928	0.25000	0.32(a)
64 Styrene	104	8.823	8.826	(1.070)	4467	0.25000	0.29(a)
78 tert-Butylbenzene	119	9.902	9.902	(0.967)	4611	0.25000	0.31(a)
56 Tetrachloroethene	164	7.522	7.525	(0.912)	1622	0.25000	0.41(a)
50 Toluene	91	7.046	7.046	(0.854)	7336	0.25000	0.32(a)
20 trans-1,2-Dichloroethene	96	3.136	3.136	(0.641)	1833	0.25000	0.36(a)
38 Trichloroethene	130	5.861	5.861	(1.042)	2028	0.25000	0.38(a)
8 Trichlorofluoromethane	101	1.955	1.944	(0.400)	2465	0.25000	0.97(a)
5 Vinyl Chloride	62	1.419	1.415	(0.290)	2098	0.25000	1.30(a)

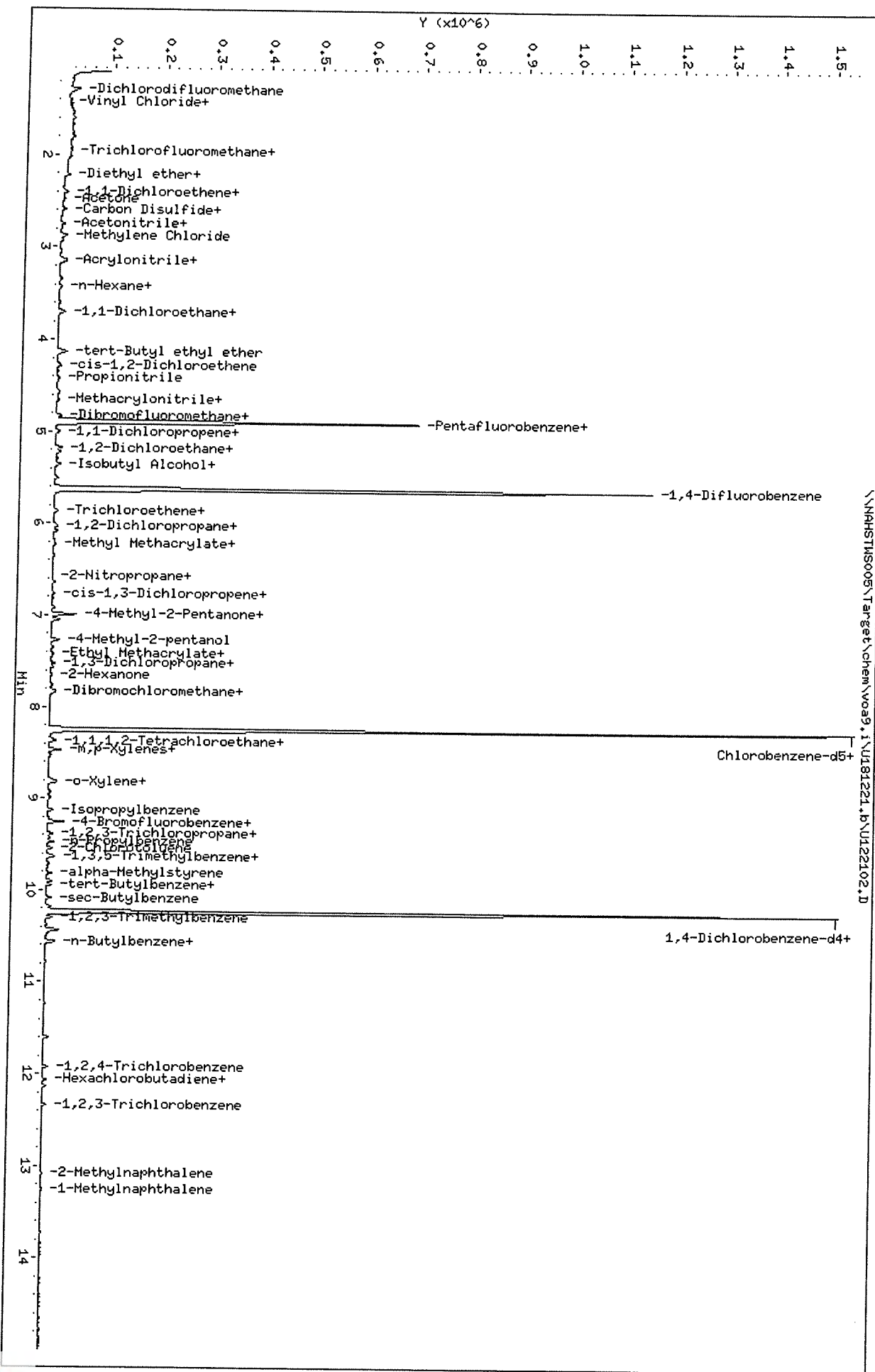
QC Flag Legend

T - Target compound detected outside RT window.
a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).



Data File: \\NAHSTMS005\Target\chem\voa9.1\U181221.b\U122102.D
 Date : 21-DEC-2018 13:49
 Client ID: WSTD00.25
 Sample Info: WSTD00.25;WSTD00.25;1;1;
 Purge Volume: 5.0
 Column phase: DB624

Instrument: VOA9.1
 Operator: PC
 Column diameter: 0.18



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181221.b\U122103.D Page 1
 Report Date: 28-Jan-2019 11:25

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U181221.b\U122103.D
 Lab Smp Id: VSTD00.5 Client Smp ID: VSTD00.5
 Inj Date : 21-DEC-2018 14:14
 Operator : PC Inst ID: VOA9.i
 Smp Info : VSTD00.5;VSTD00.5;1;2;
 Misc Info : 180315V9;WATER;0;1;
 Comment :
 Method : \\NAHSTWS005\Target\chem\voa9.i\U181221.b\8260C.m
 Meth Date : 28-Jan-2019 11:25 VOA9.i Quant Type: ISTD
 Cal Date : 21-DEC-2018 13:49 Cal File: U122102.D
 Als bottle: 3 Calibration Sample, Level: 2
 Dil Factor: 1.00000
 Integrator: HP RTE Compound Sublist: LHAAP.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	AMOUNTS					ON-COL
			MASS	RT	EXP RT	REL RT	RESPONSE	
* 1 Pentafluorobenzene	168		4.898	4.898	(1.000)	422356	50.0000	
* 36 1,4-Difluorobenzene	114		5.629	5.629	(1.000)	796827	50.0000	
* 47 Chlorobenzene-d5	117		8.249	8.249	(1.000)	725774	50.0000	
* 70 1,4-Dichlorobenzene-d4	152		10.236	10.236	(1.000)	333300	50.0000	
\$ 30 Dibromofluoromethane	113		4.834	4.834	(0.987)	6036	0.50000	(a)
\$ 35 1,2-Dichloroethane-d4	65		5.179	5.179	(1.057)	8601	0.50000	(a)
\$ 48 Toluene-d8	98		6.989	6.989	(0.847)	27052	0.50000	(a)
\$ 69 4-Bromofluorobenzene	95		9.257	9.257	(1.122)	9627	0.50000	(a)
60 1,1,1,2-Tetrachloroethane	131		8.350	8.350	(1.012)	1272	0.50000	0.85(a)
31 1,1,1-Trichloroethane	97		4.830	4.830	(0.986)	2201	0.50000	0.33(a)
68 1,1,2,2-Tetrachloroethane	83		9.392	9.392	(0.918)	2725	0.50000	0.36(aM)
138 Freon TF	101		2.412	2.412	(0.493)	1292	0.50000	0.35(a)
53 1,1,2-Trichloroethane	83		7.421	7.421	(0.900)	1629	0.50000	0.37(a)
22 1,1-Dichloroethane	63		3.612	3.612	(0.737)	3066	0.50000	0.33(Ta)
11 1,1-Dichloroethene	96		2.409	2.409	(0.492)	1703	0.50000	0.42(a)
32 1,1-Dichloropropene	75		5.010	5.010	(0.890)	2565	0.50000	0.36(a)
93 1,2,3-Trichlorobenzene	180		12.335	12.335	(1.205)	1324	0.50000	0.84(a)
71 1,2,3-Trichloropropane	75		9.426	9.426	(0.921)	2591	0.50000	0.33(a)
90 1,2,4-Trichlorobenzene	180		11.923	11.923	(1.165)	2402	0.50000	0.38(a)
79 1,2,4-Trimethylbenzene	105		9.943	9.943	(0.971)	6088	0.50000	0.34(a)
89 1,2-Dibromo-3-Chloropropane	155		11.233	11.233	(1.097)	272	0.50000	1.68(aM)
57 1,2-Dibromoethane	107		7.852	7.852	(0.952)	1825	0.50000	0.36(a)



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181221.b\U122103.D Page 2
 Report Date: 28-Jan-2019 11:25

Compounds	QUANT SIG					AMOUNTS	
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/l)	ON-COL (ug/l)
88 1,2-Dichlorobenzene	146	10.573	10.573	(1.033)	3885	0.50000	0.39(a)
33 1,2-Dichloroethane	62	5.258	5.258	(0.934)	2385	0.50000	(a)
42 1,2-Dichloropropane	63	6.082	6.082	(1.081)	2114	0.50000	0.37(a)
75 1,3,5-Trimethylbenzene	105	9.625	9.625	(0.940)	5574	0.50000	0.33(a)
83 1,3-Dichlorobenzene	146	10.180	10.180	(0.995)	3970	0.50000	0.40(a)
54 1,3-Dichloropropane	76	7.563	7.563	(0.917)	3471	0.50000	0.37(a)
84 1,4-Dichlorobenzene	146	10.255	10.255	(1.002)	4522	0.50000	0.43(a)
26 2,2-Dichloropropane	77	4.279	4.279	(0.874)	2050	0.50000	0.37(aM)
24 2-Butanone	43	4.354	4.354	(0.889)	2109	1.00000	(a)
76 2-Chlorotoluene	91	9.550	9.550	(0.933)	5666	0.50000	0.36(a)
52 2-Hexanone	43	7.649	7.649	(0.927)	2639	1.00000	0.65(a)
77 4-Chlorotoluene	91	9.640	9.640	(0.942)	6459	0.50000	0.36(a)
82 p-Isopropyltoluene	119	10.210	10.210	(0.997)	6372	0.50000	0.36(a)
45 4-Methyl-2-Pentanone	43	6.914	6.914	(0.838)	3831	1.00000	0.65(a)
10 Acetone	43	2.491	2.491	(0.509)	3366	1.00000	(a)
37 Benzene	78	5.220	5.220	(0.927)	7772	0.50000	0.36(a)
74 Bromobenzene	156	9.381	9.381	(0.917)	1879	0.50000	0.36(a)
29 Bromochloromethane	128	4.553	4.553	(0.930)	773	0.50000	(a)
39 Bromodichloromethane	83	6.348	6.348	(1.128)	1990	0.50000	0.33(aM)
66 Bromoform	173	8.984	8.984	(1.089)	762	0.50000	1.99(aM)
6 Bromomethane	94	1.681	1.681	(0.343)	822	0.50000	1.64(a)
19 Carbon Disulfide	76	2.596	2.596	(0.530)	12403	1.00000	0.84(a)
34 Carbon Tetrachloride	117	4.999	4.999	(0.888)	1510	0.50000	1.65(a)
59 Chlorobenzene	112	8.275	8.275	(1.003)	5533	0.50000	0.39(a)
7 Chloroethane	64	1.764	1.764	(0.360)	2753	0.50000	1.20(aM)
28 Chloroform	83	4.662	4.662	(0.952)	2977	0.50000	0.33(a)
3 Chloromethane	50	1.348	1.348	(0.275)	1695	0.50000	3.67(aM)
27 cis-1,2-Dichloroethene	96	4.294	4.294	(0.877)	1939	0.50000	0.34(a)
46 cis-1,3-Dichloropropene	75	6.761	6.761	(1.201)	2152	0.50000	1.49(a)
55 Dibromochloromethane	129	7.758	7.758	(0.940)	1194	0.50000	1.22(a)
44 Dibromomethane	93	6.195	6.195	(1.101)	1143	0.50000	0.35(aM)
2 Dichlorodifluoromethane	85	1.213	1.213	(0.248)	2033	0.50000	0.87(aM)
61 Ethylbenzene	106	8.369	8.369	(1.015)	2560	0.50000	0.35(a)
91 Hexachlorobutadiene	225	12.065	12.065	(1.179)	1509	0.50000	0.63(a)
67 Isopropylbenzene	105	9.126	9.126	(1.106)	6665	0.50000	0.32(a)
62 m,p-Xylenes	106	8.474	8.474	(1.027)	6264	1.00000	0.71(a)
17 Methylene Chloride	84	2.877	2.877	(0.587)	3346	0.50000	(a)
87 n-Butylbenzene	91	10.558	10.558	(1.031)	6644	0.50000	0.39(a)
73 n-Propylbenzene	91	9.475	9.475	(0.926)	8654	0.50000	0.34(a)
92 Naphthalene	128	12.136	12.136	(1.186)	5535	0.50000	0.92(a)
63 o-Xylene	106	8.811	8.811	(1.068)	3001	0.50000	0.33(a)
81 sec-Butylbenzene	105	10.086	10.086	(0.985)	6823	0.50000	0.32(a)
64 Styrene	104	8.826	8.826	(1.070)	4646	0.50000	0.31(a)
78 tert-Butylbenzene	119	9.902	9.902	(0.967)	4764	0.50000	0.32(a)
56 Tetrachloroethene	164	7.526	7.526	(0.912)	1587	0.50000	0.41(a)
50 Toluene	91	7.049	7.049	(0.855)	8207	0.50000	0.38(a)
20 trans-1,2-Dichloroethene	96	3.151	3.151	(0.643)	1825	0.50000	0.36(a)
51 trans-1,3-Dichloropropene	75	7.263	7.263	(1.290)	1633	0.50000	1.85(aM)
38 Trichloroethene	130	5.865	5.865	(1.042)	1953	0.50000	0.38(a)
8 Trichlorofluoromethane	101	1.966	1.966	(0.402)	1919	0.50000	0.89(a)
5 Vinyl Chloride	62	1.430	1.430	(0.292)	1815	0.50000	1.26(a)



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181221.b\U122103.D Page 3
Report Date: 28-Jan-2019 11:25

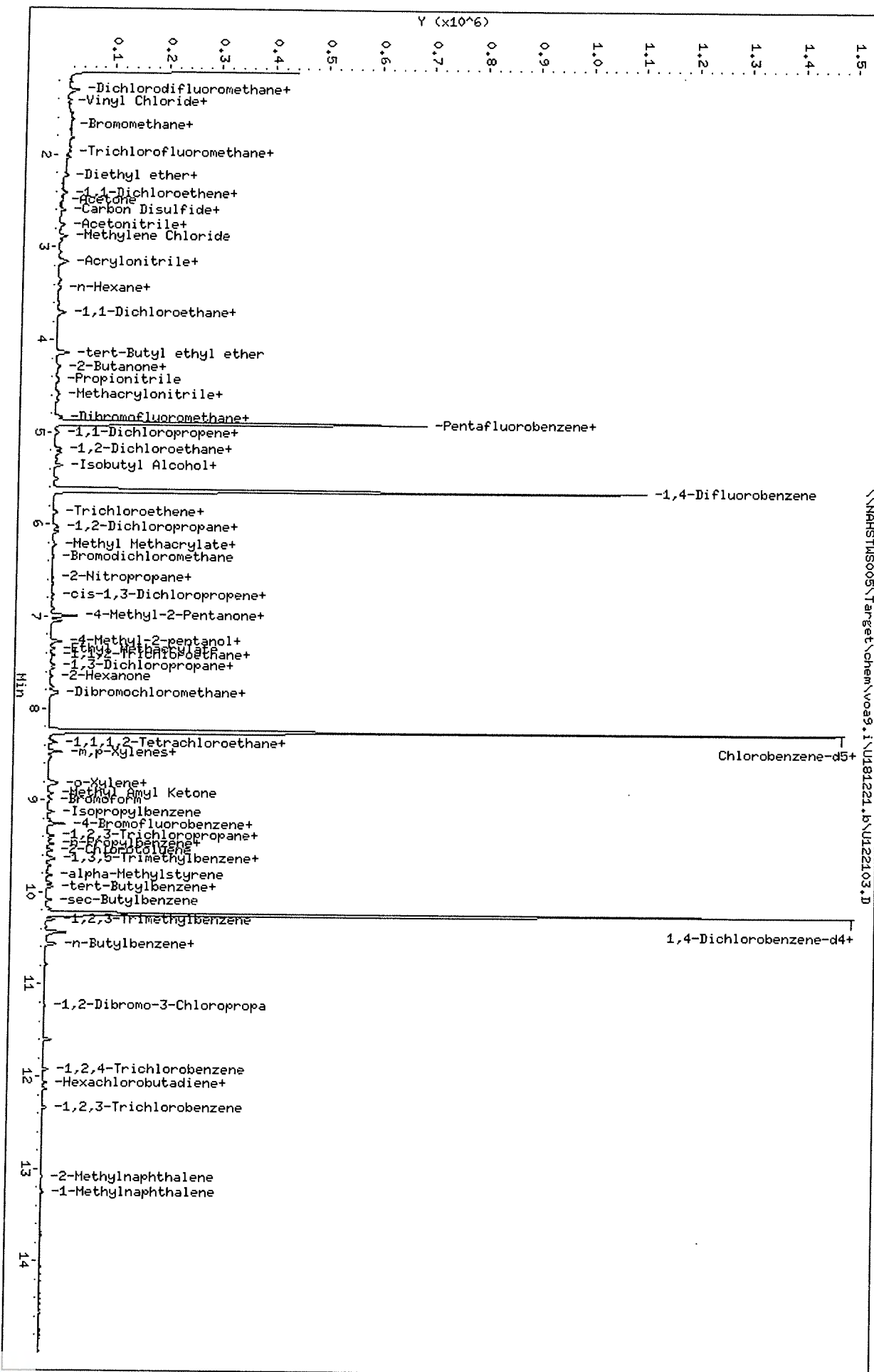
QC Flag Legend

- T - Target compound detected outside RT window.
- a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
- M - Compound response manually integrated.



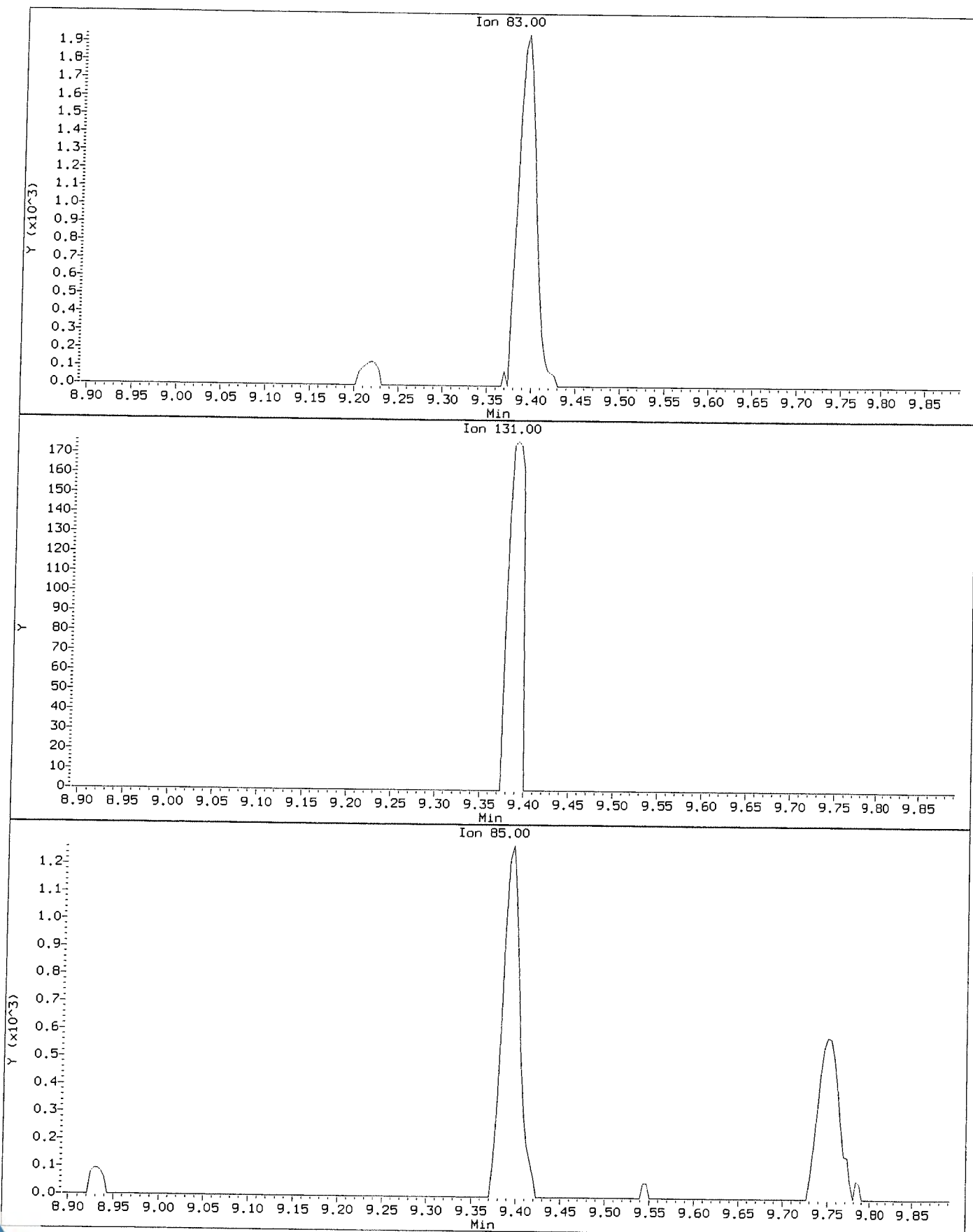
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Sample Info: VSTD00.5;VSTD00.5;1;2;
Purge Volume: 5.0
Column phase: DB624

Instrument: W0A9.1
Operator: PC
Column diameter: 0.18



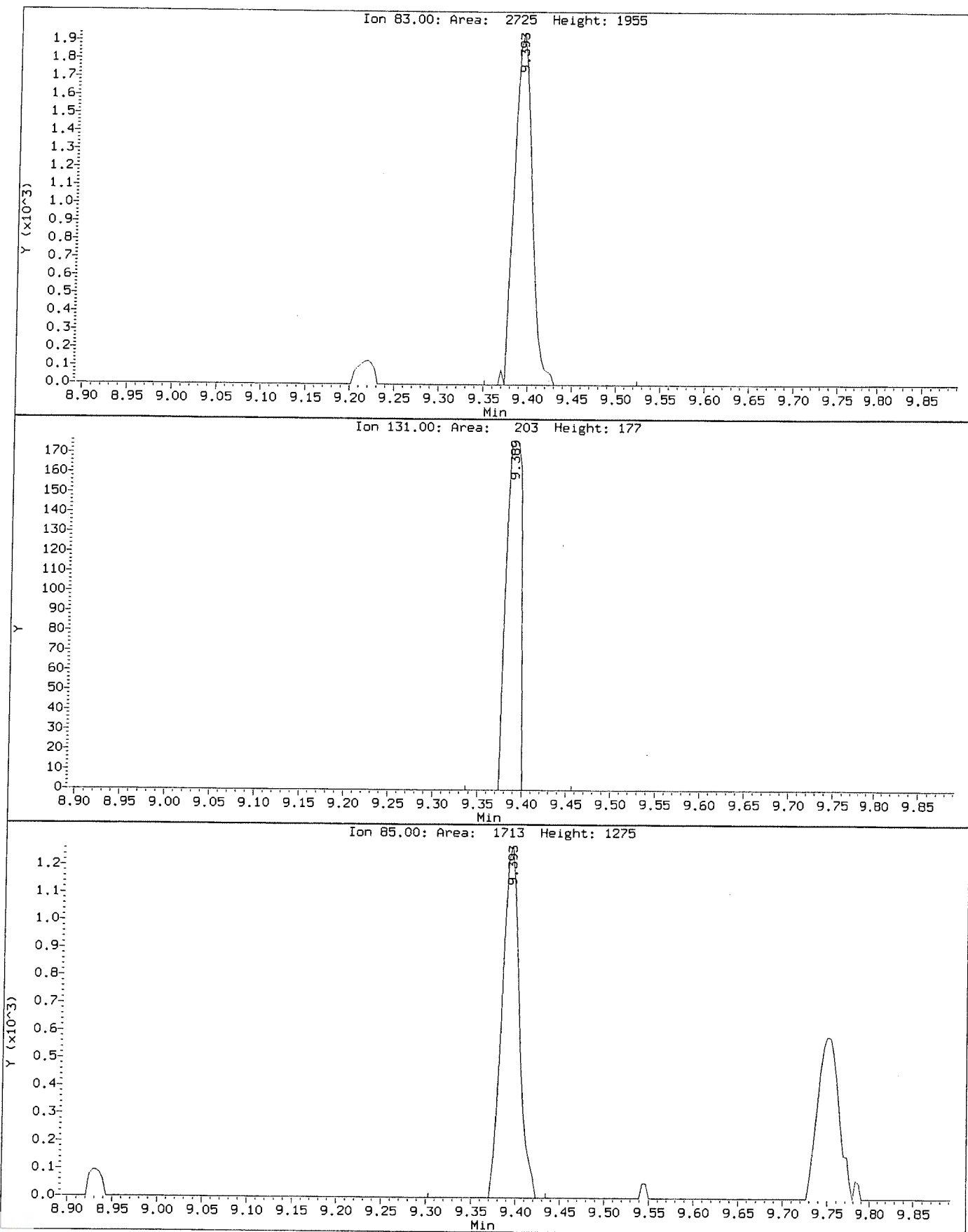
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Client Sample ID: VSTD00.5

Compound: 1,1,2,2-Tetrachloroethane
CAS Number: 79-34-5



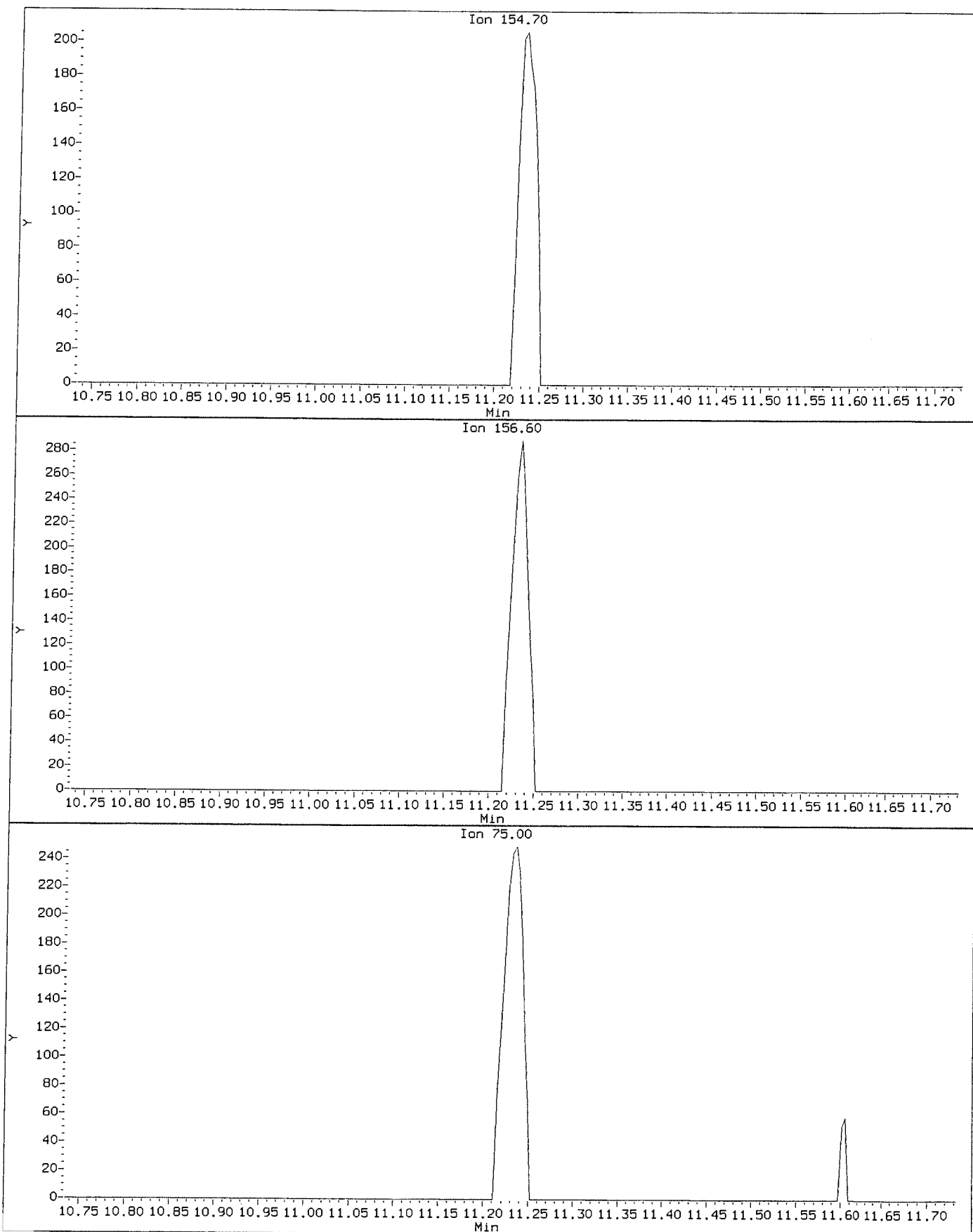
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Client Sample ID: VSTD00.5

Compound: 1,1,2,2-Tetrachloroethane
CAS Number: 79-34-5



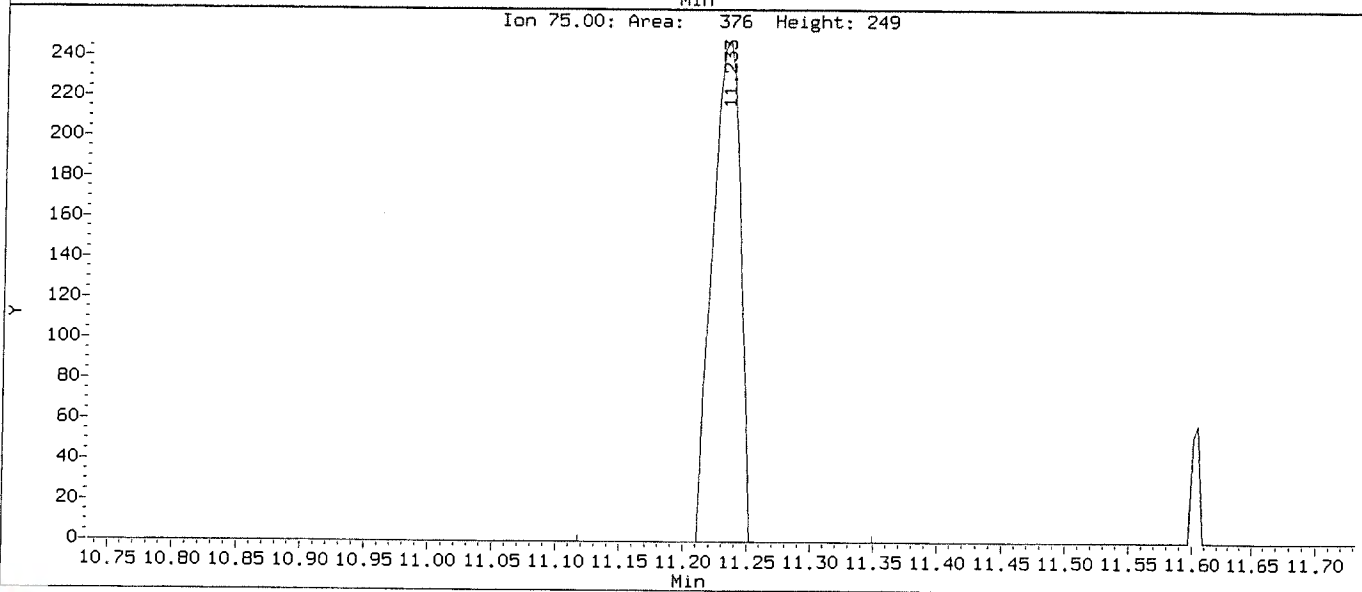
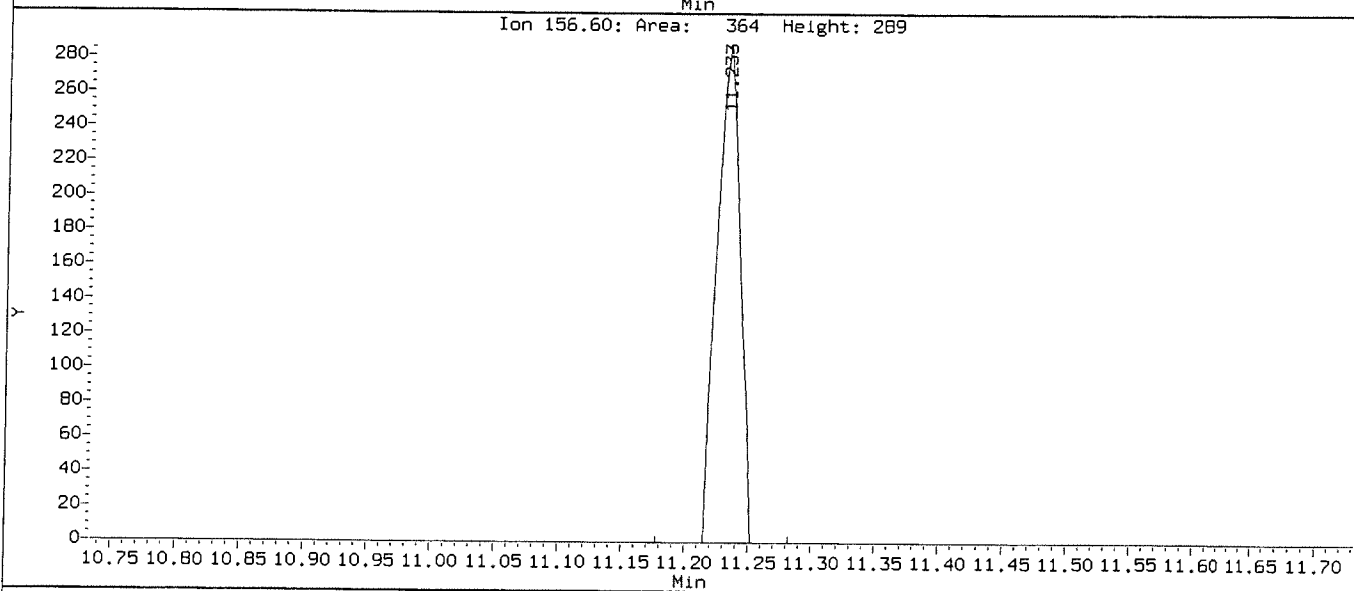
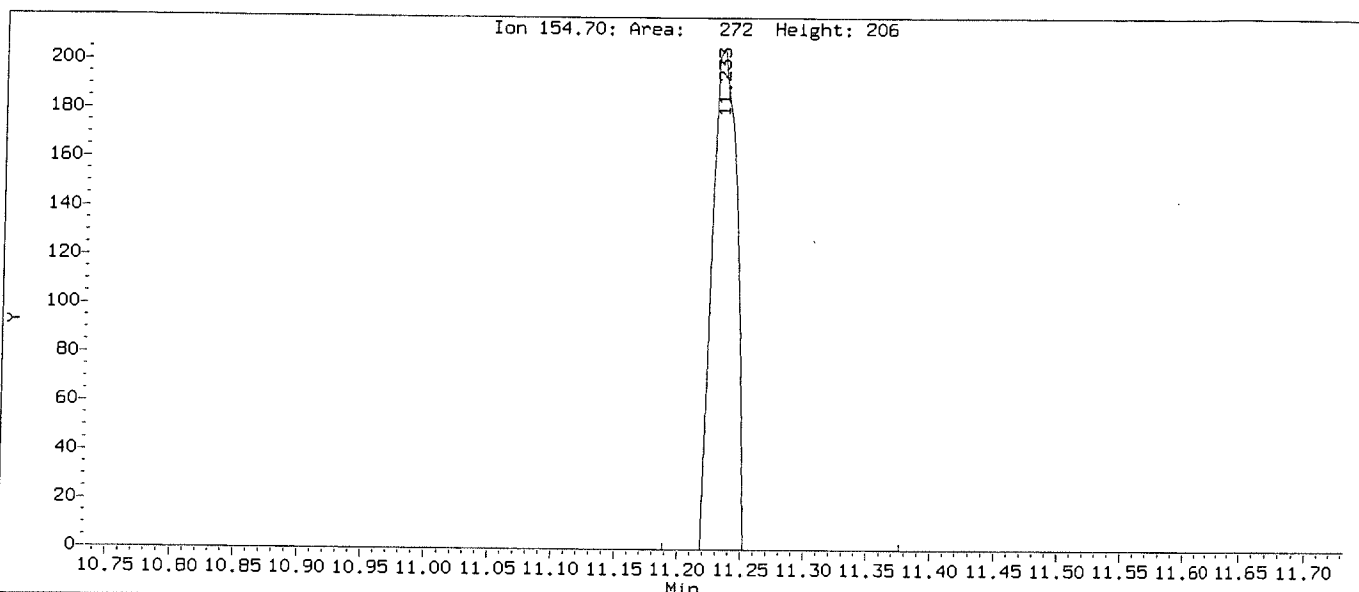
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Compound: 1,2-Dibromo-3-Chloropropane
CAS Number: 96-12-8



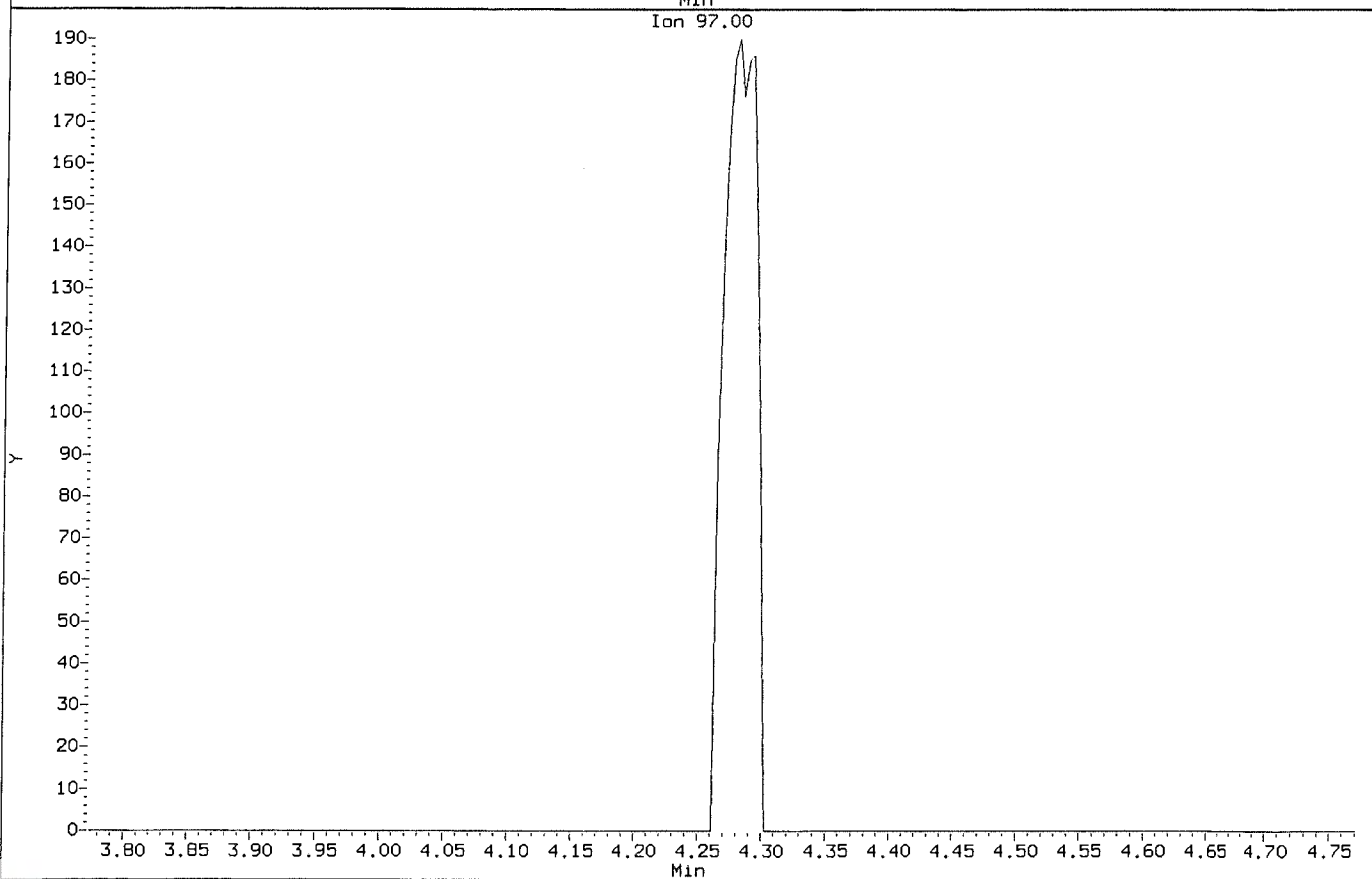
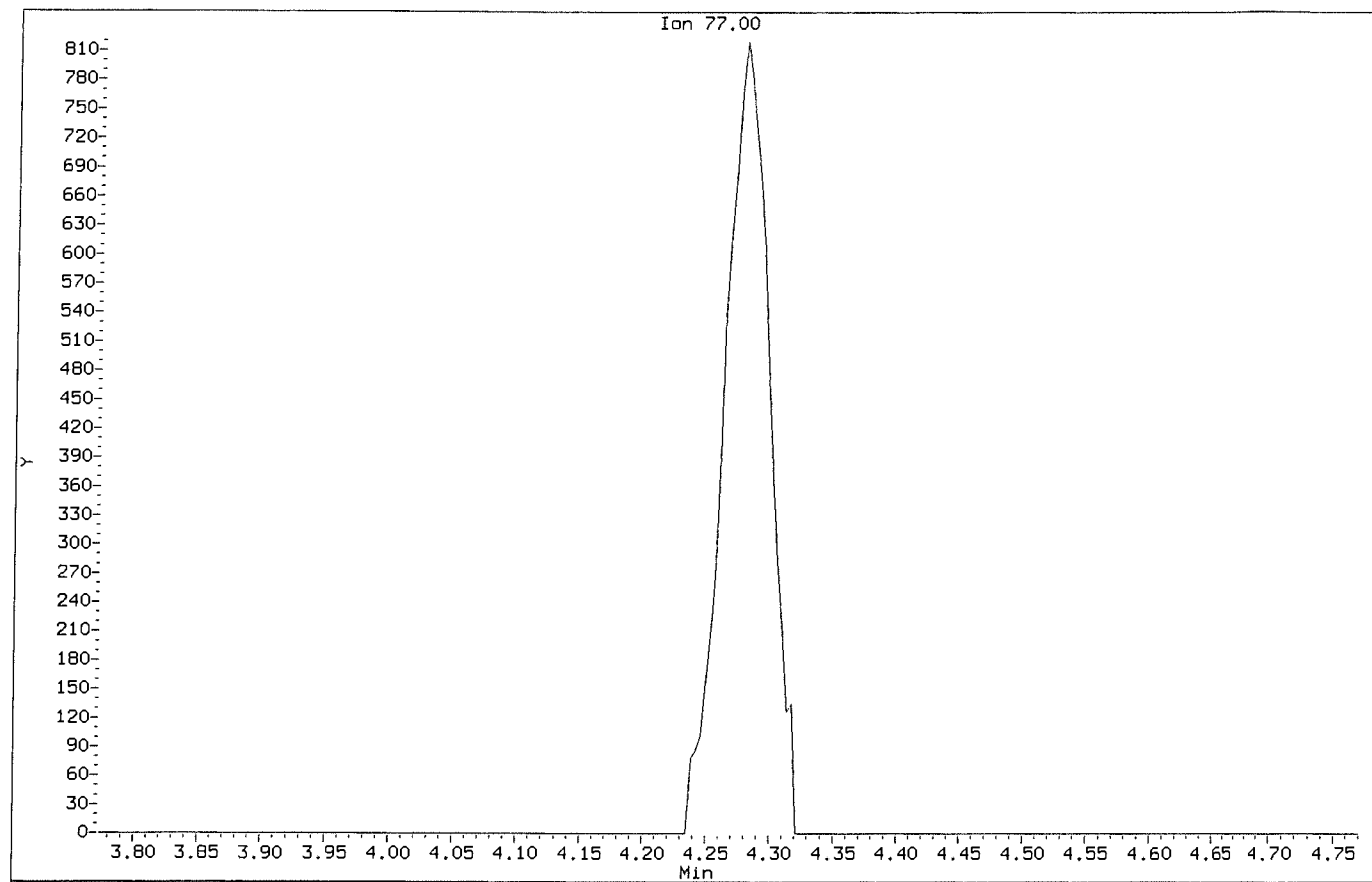
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Client Sample ID: VSTD00.5

Compound: 1,2-Dibromo-3-Chloropropane
CAS Number: 96-12-8



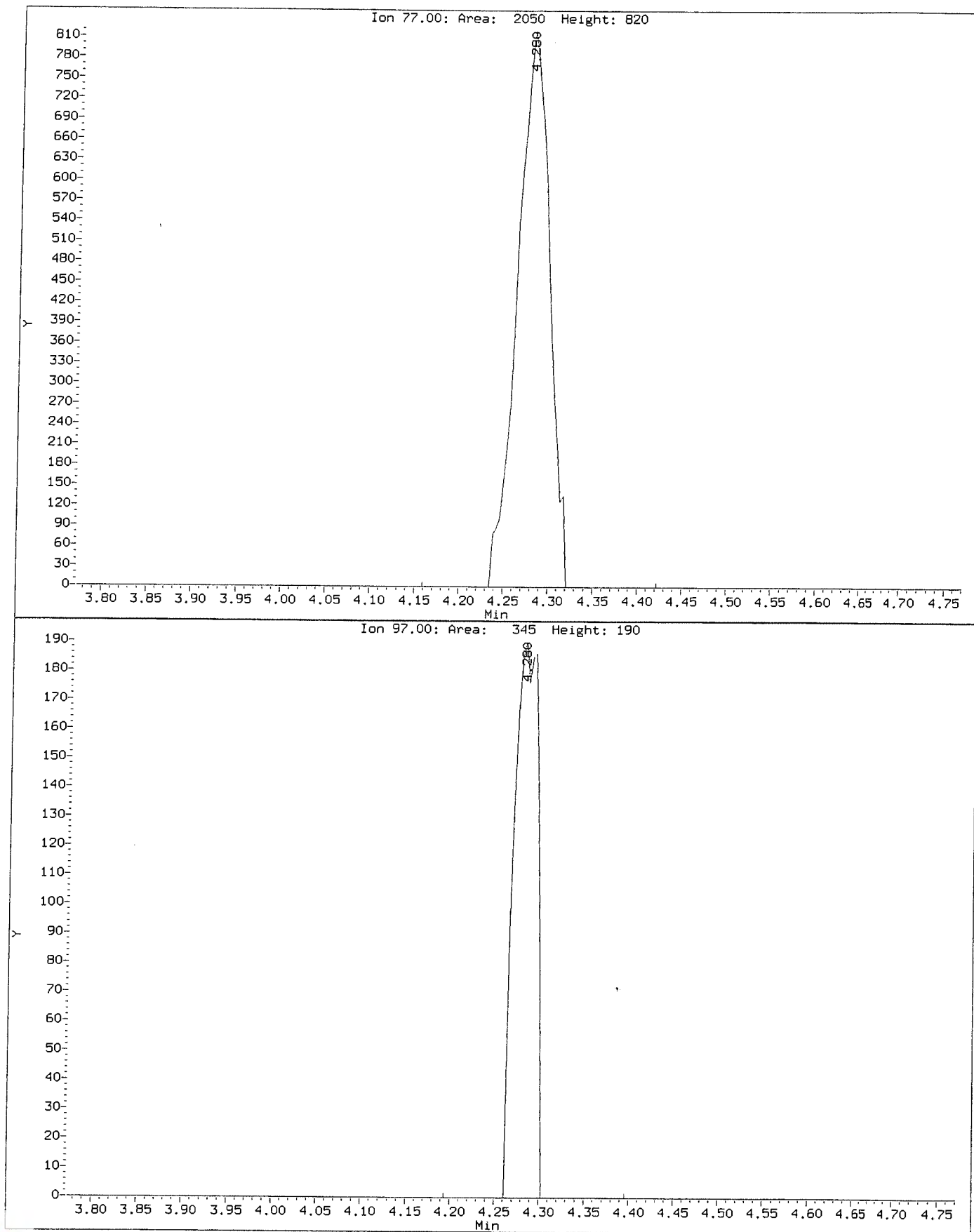
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Instrument: VOA9.1
Client Sample ID: VSTD00.5

Compound: 2,2-Dichloropropane
CAS Number: 594-20-7



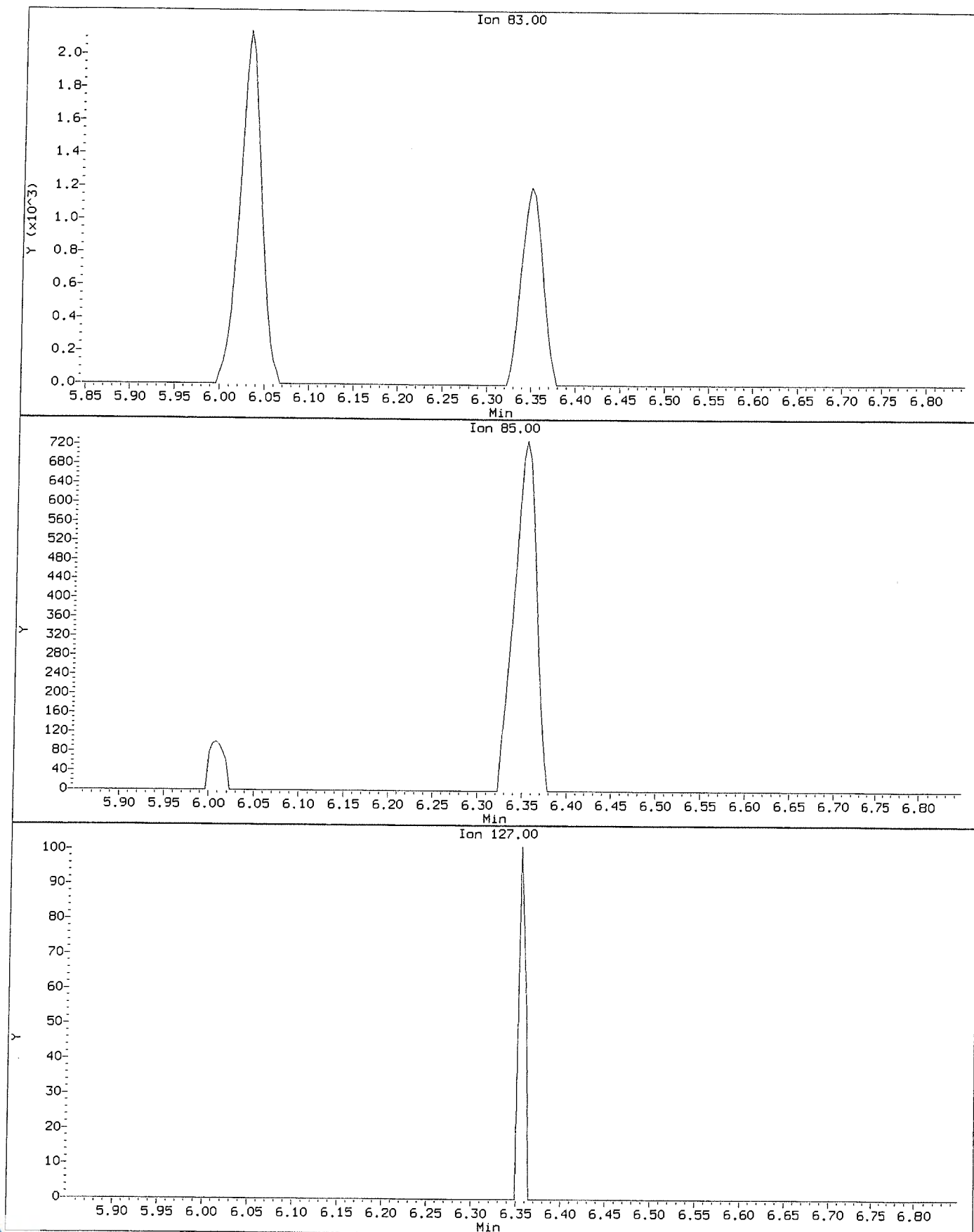
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Instrument: VOA9.1
Client Sample ID: VSTD00.5

Compound: 2,2-Dichloropropane
CAS Number: 594-20-7



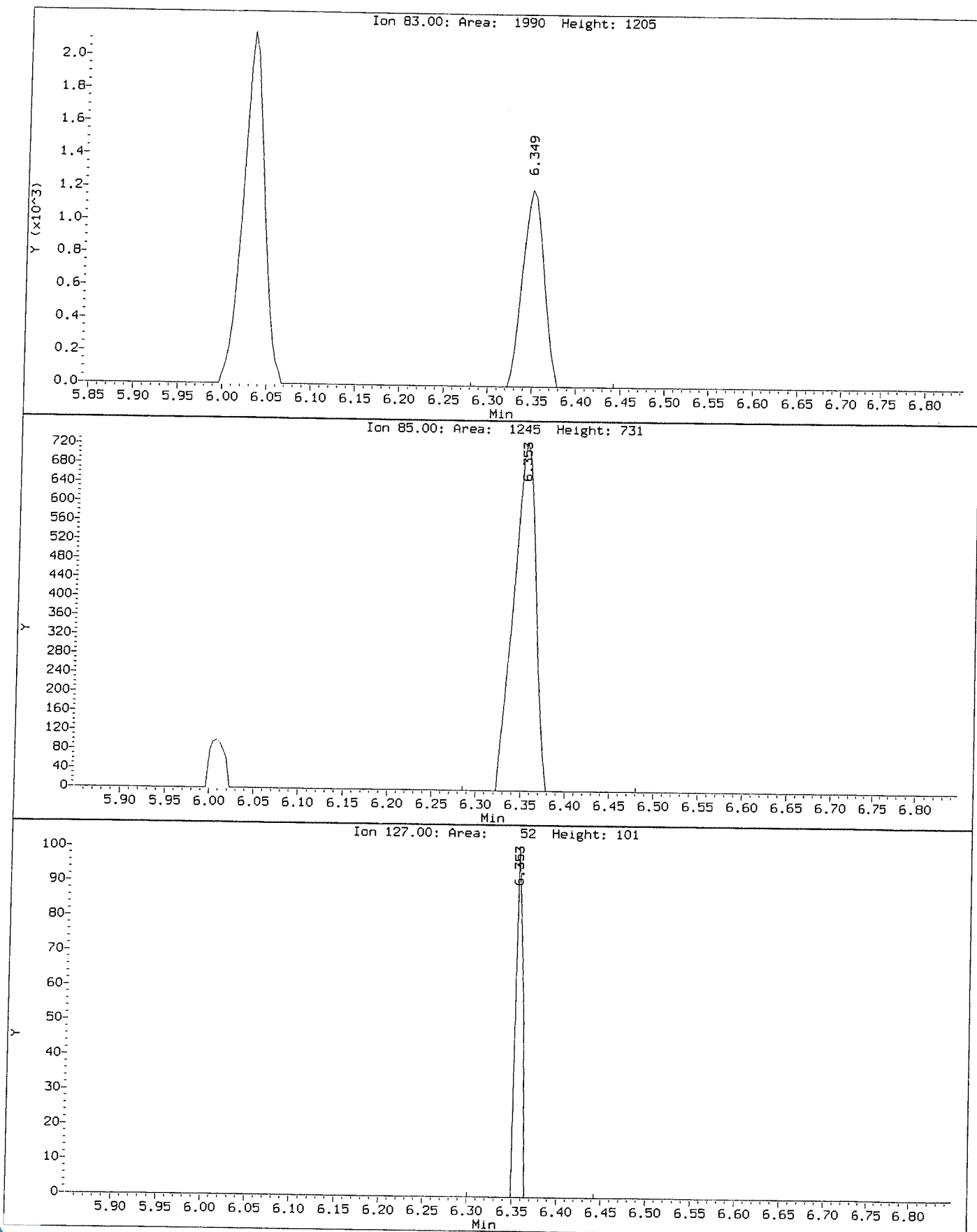
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Client Sample ID: VSTD00.5

Compound: Bromodichloromethane
CAS Number: 75-27-4



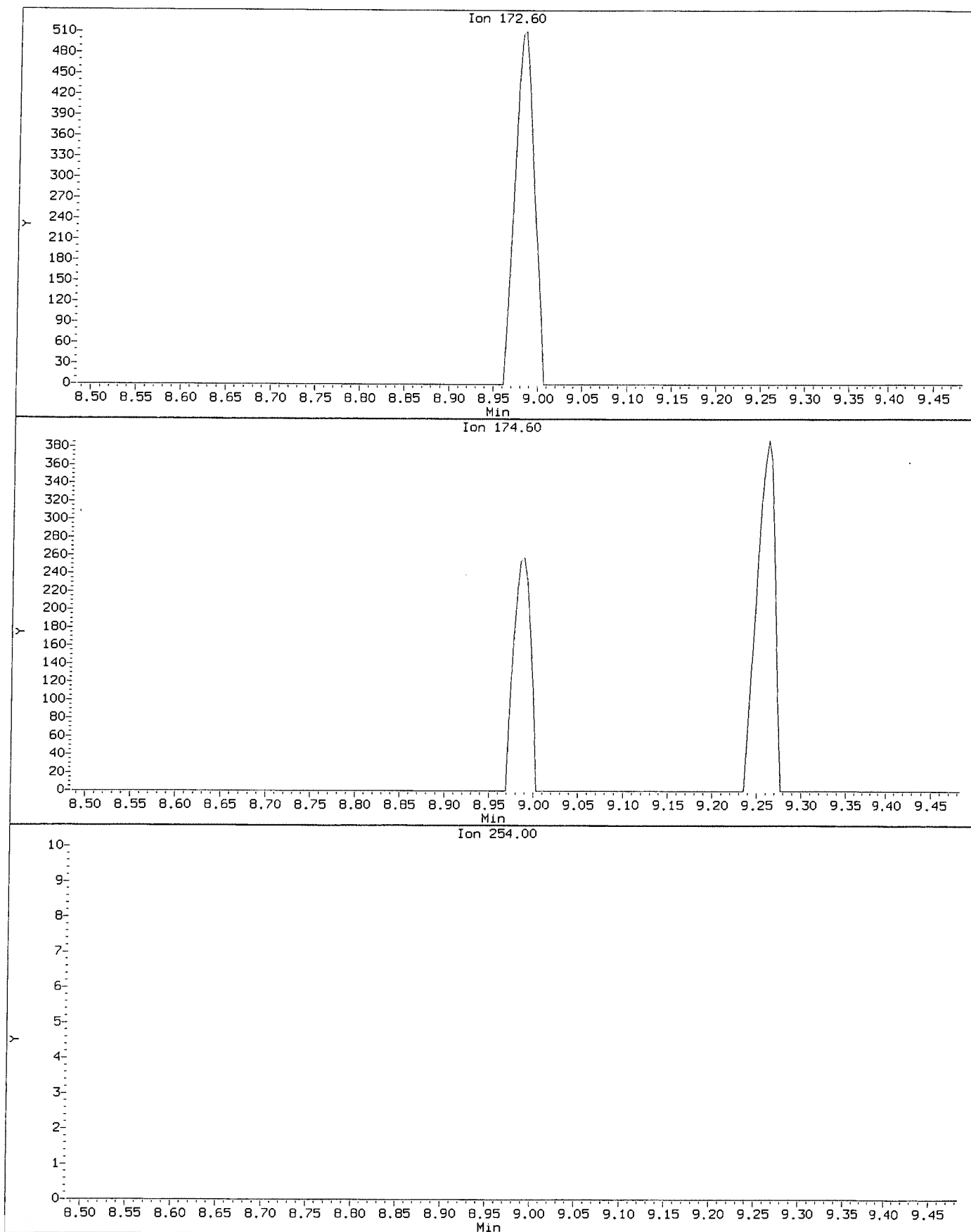
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Instrument: VDA9.i
Client Sample ID: VSTD00.5

Compound: Bromodichloromethane
CAS Number: 75-27-4



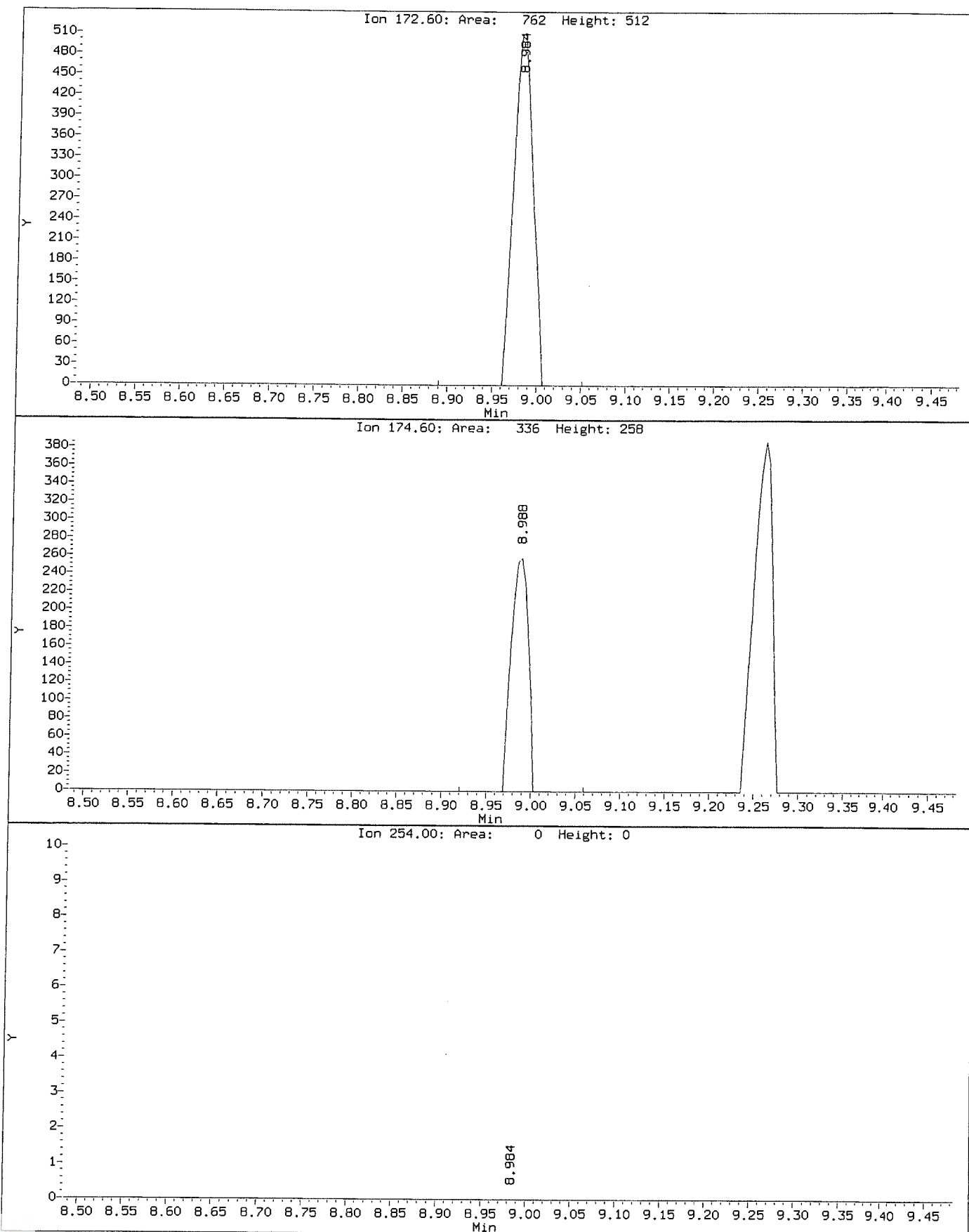
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Instrument: VOA9.1
Client Sample ID: VSTD00.5

Compound: Bromoform
CAS Number: 75-25-2



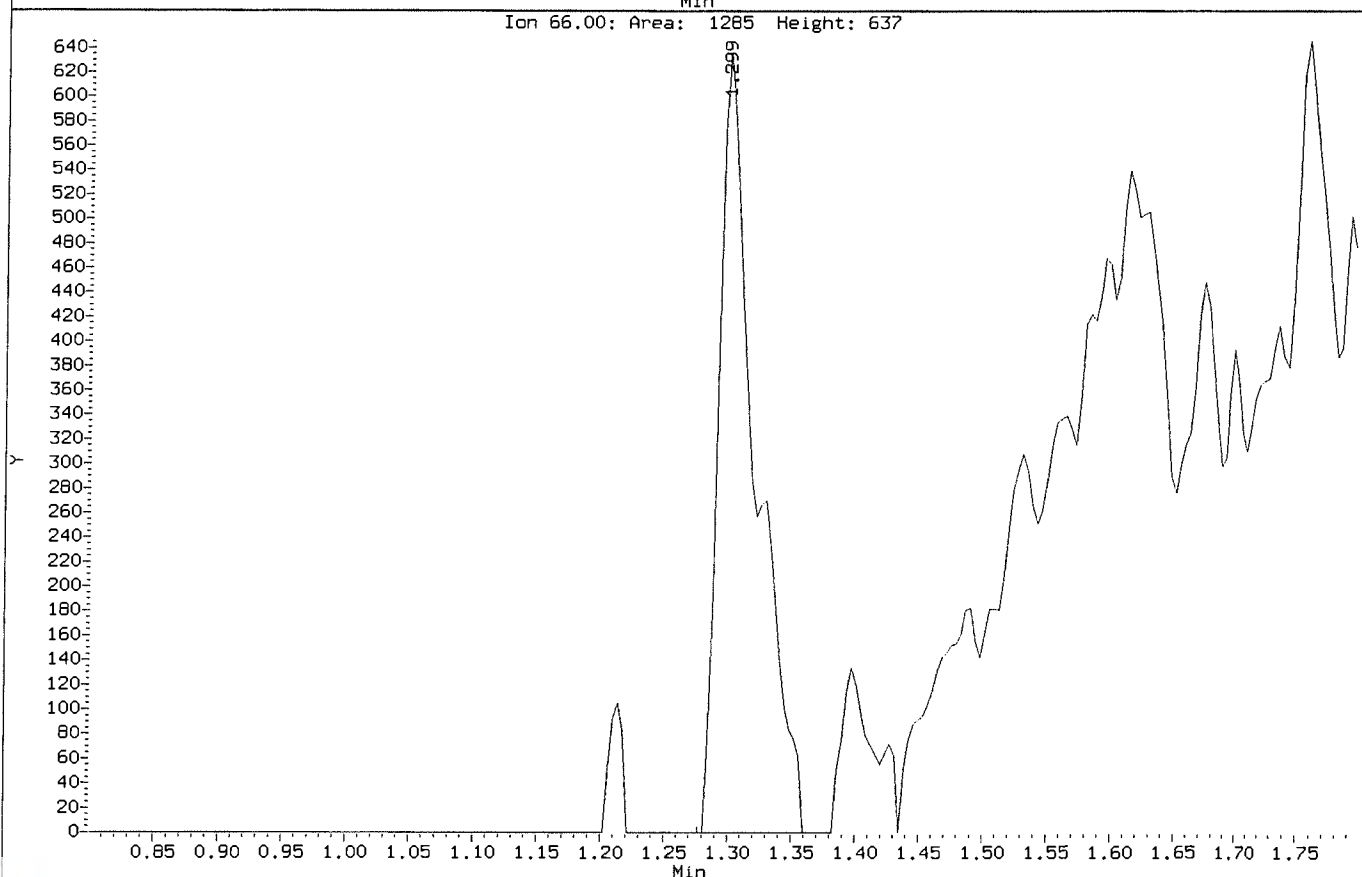
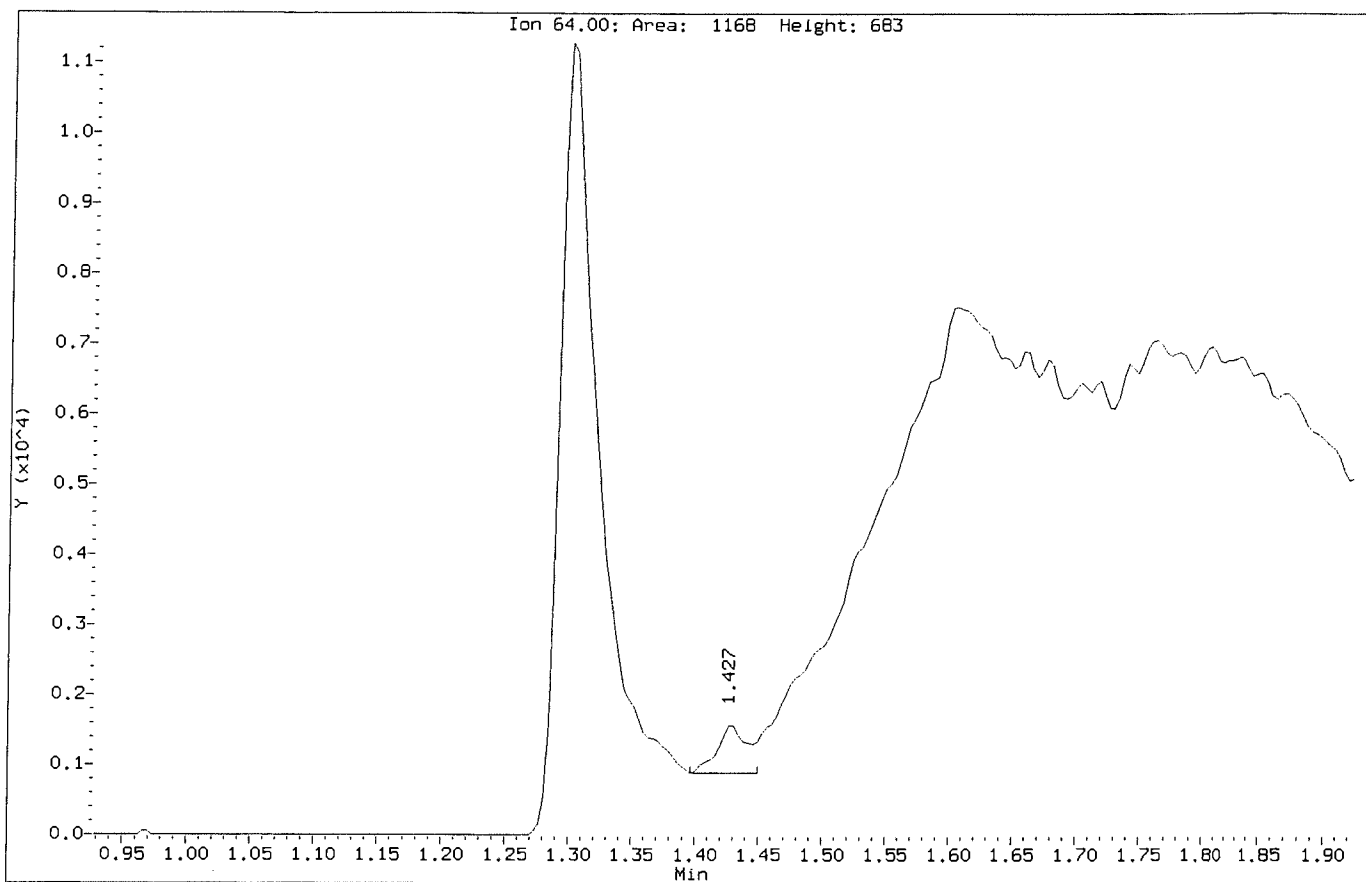
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Client Sample ID: VSTD00.5

Compound: Bromoform
CAS Number: 75-25-2



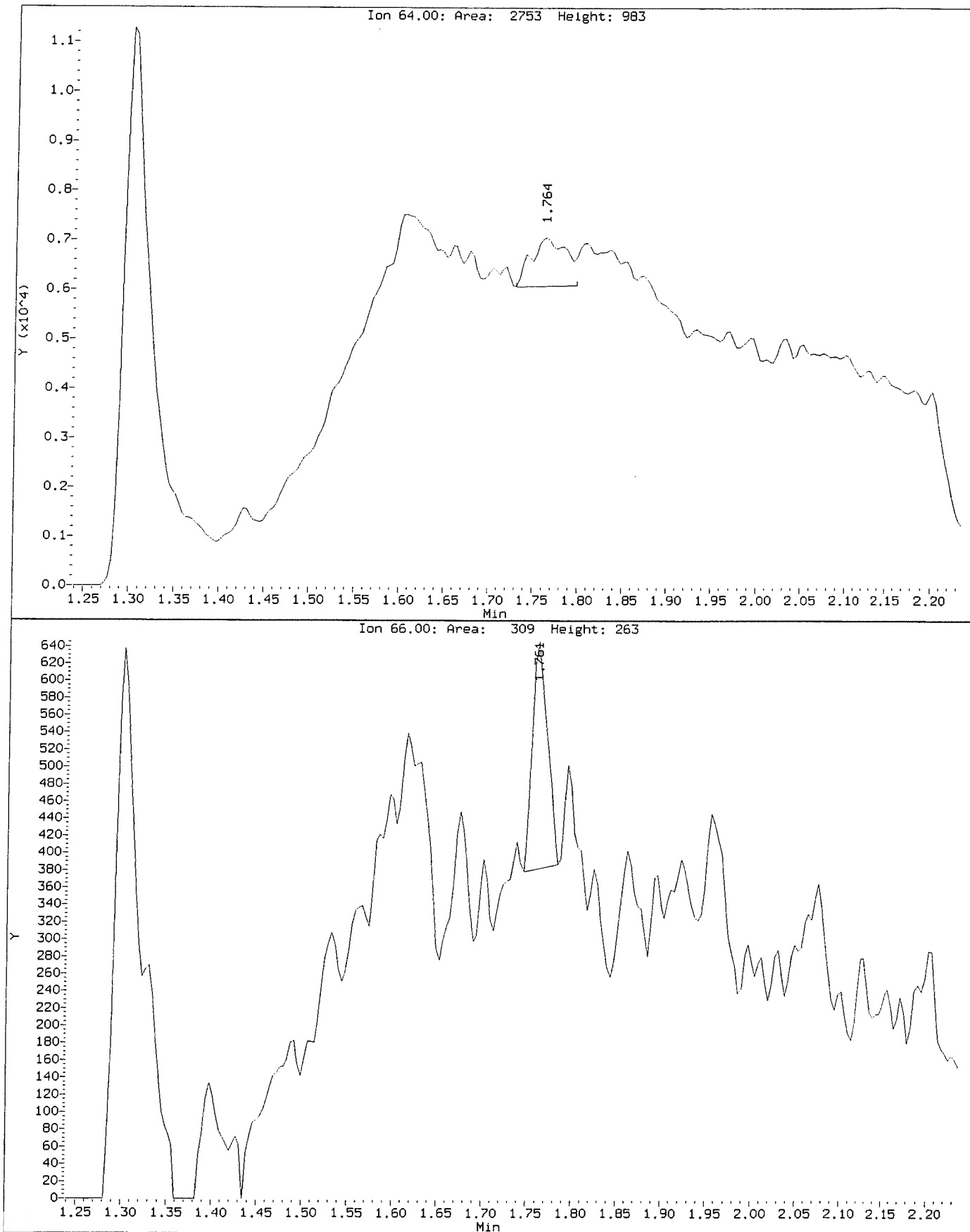
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Client Sample ID: VSTD00.5

Compound: Chloroethane
CAS Number: 75-00-3



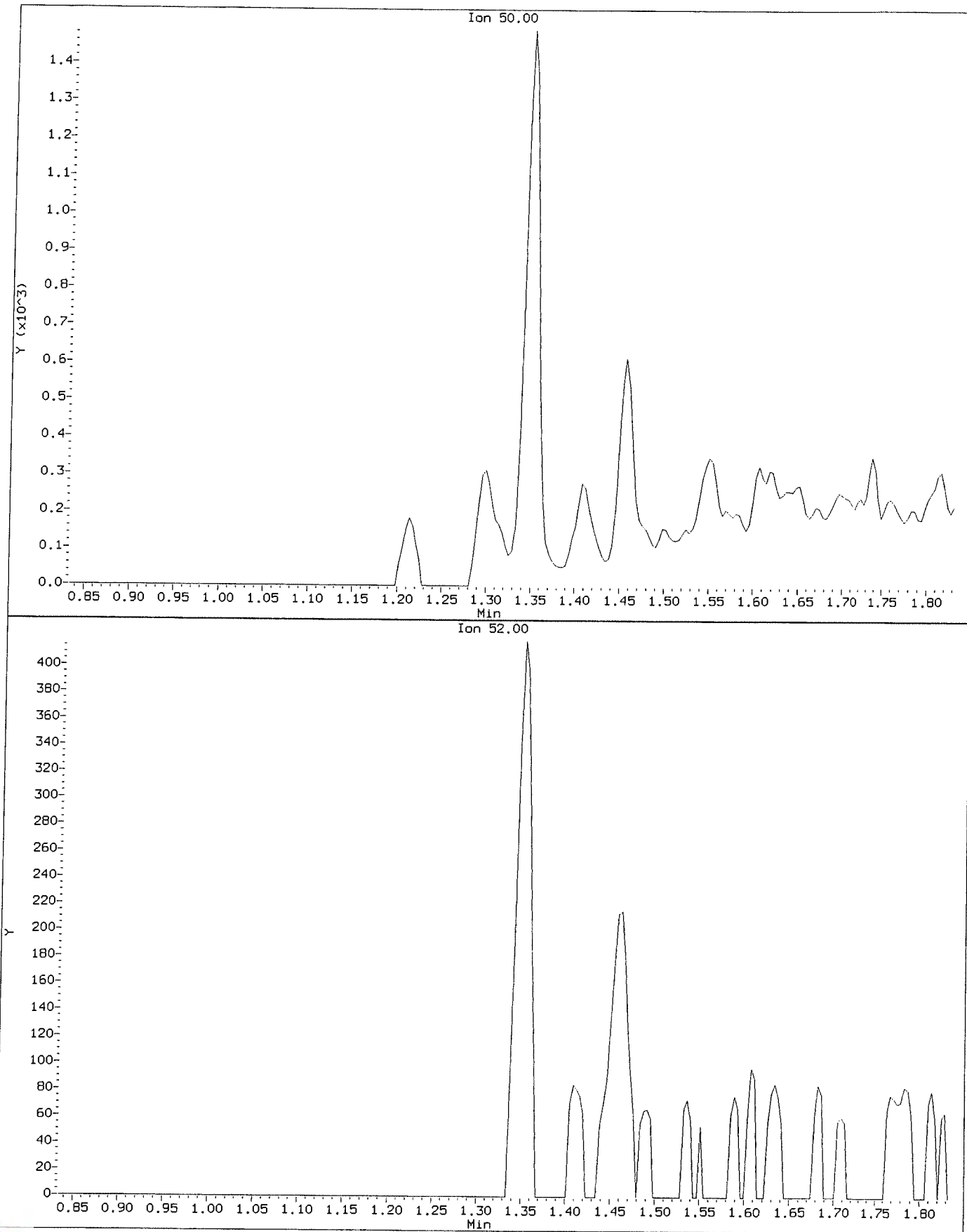
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Compound: Chloroethane
CAS Number: 75-00-3



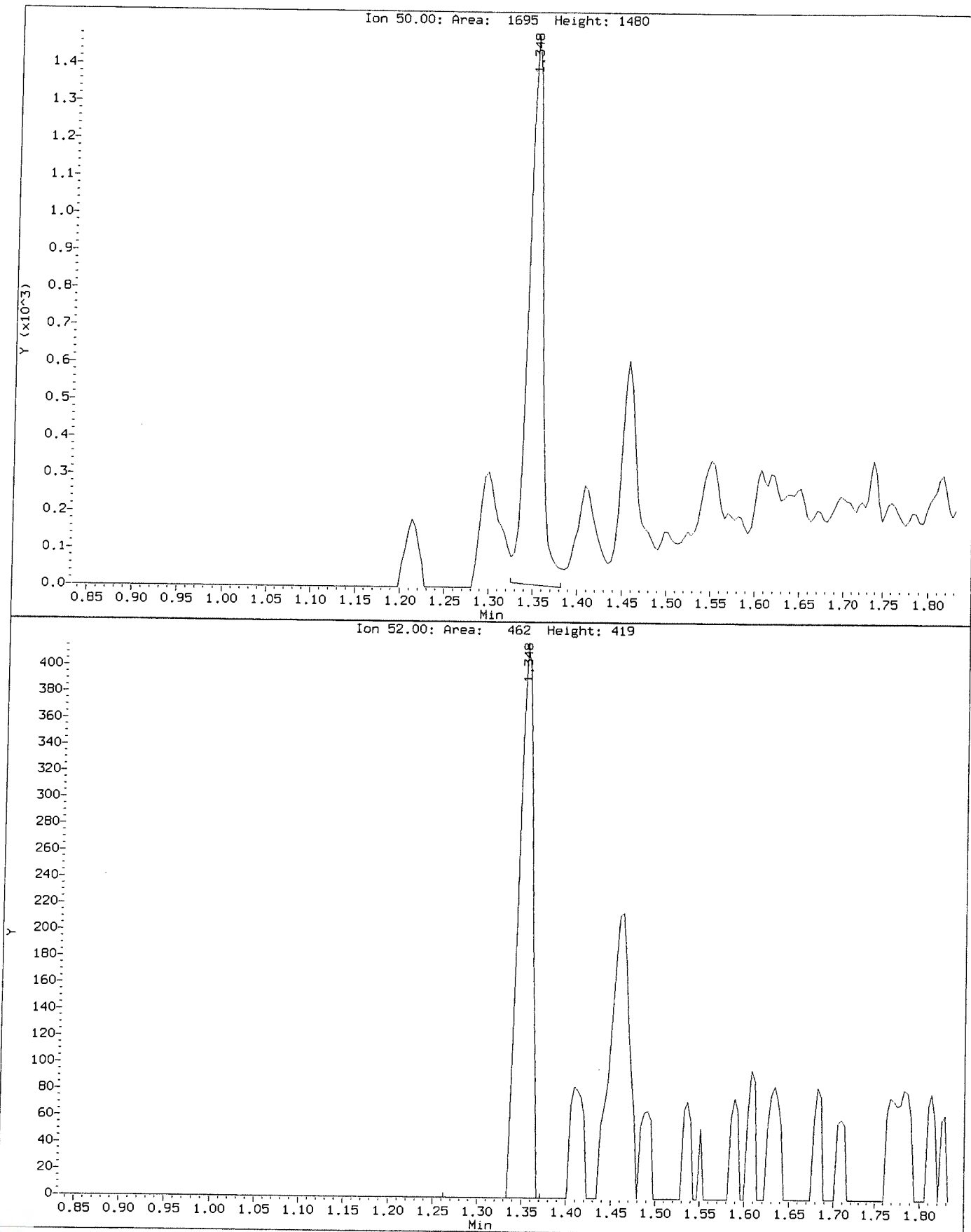
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Client Sample ID: VSTD00.5

Compound: Chloromethane
CAS Number: 74-87-3



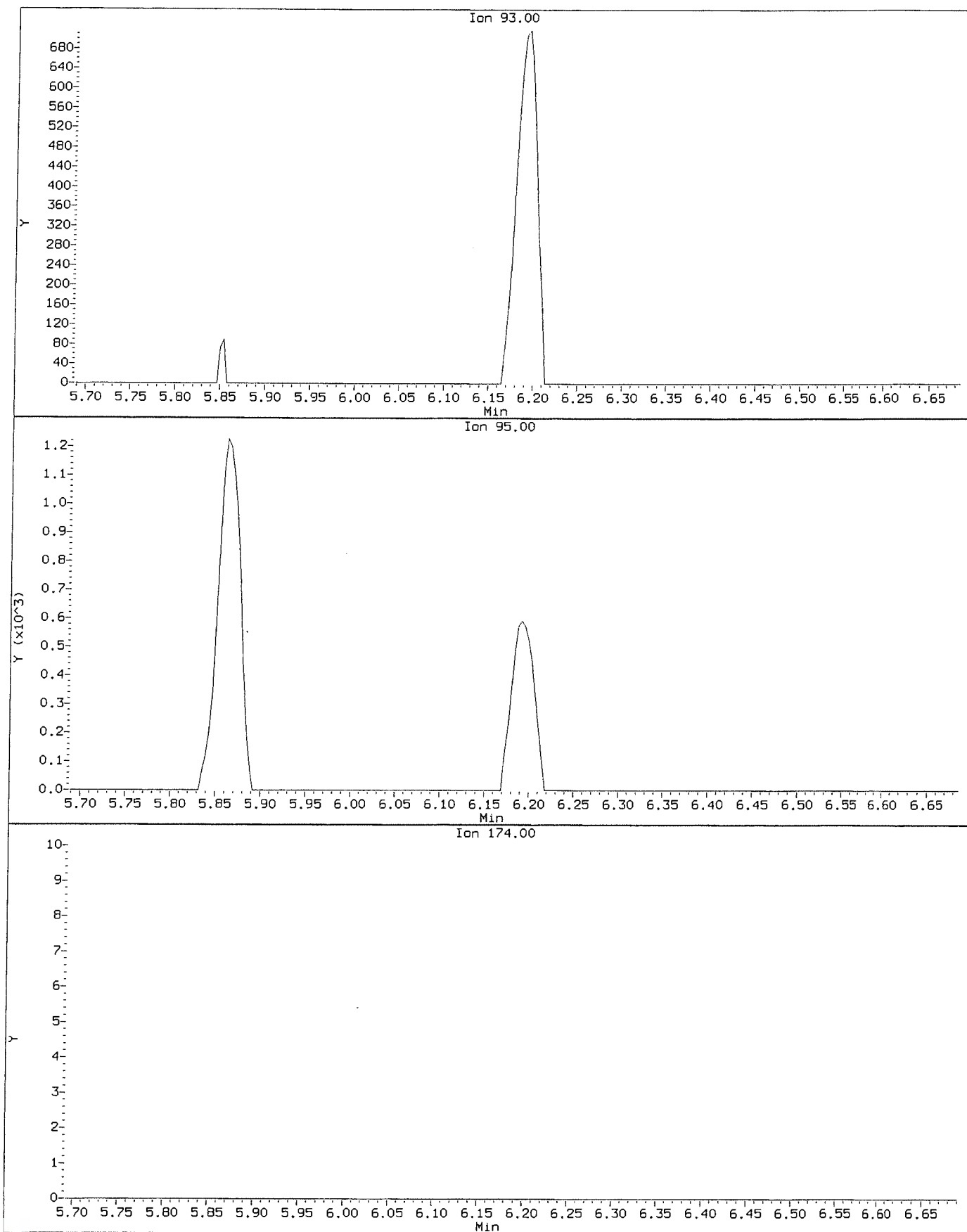
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Client Sample ID: VSTD00.5

Compound: Chloromethane
CAS Number: 74-87-3



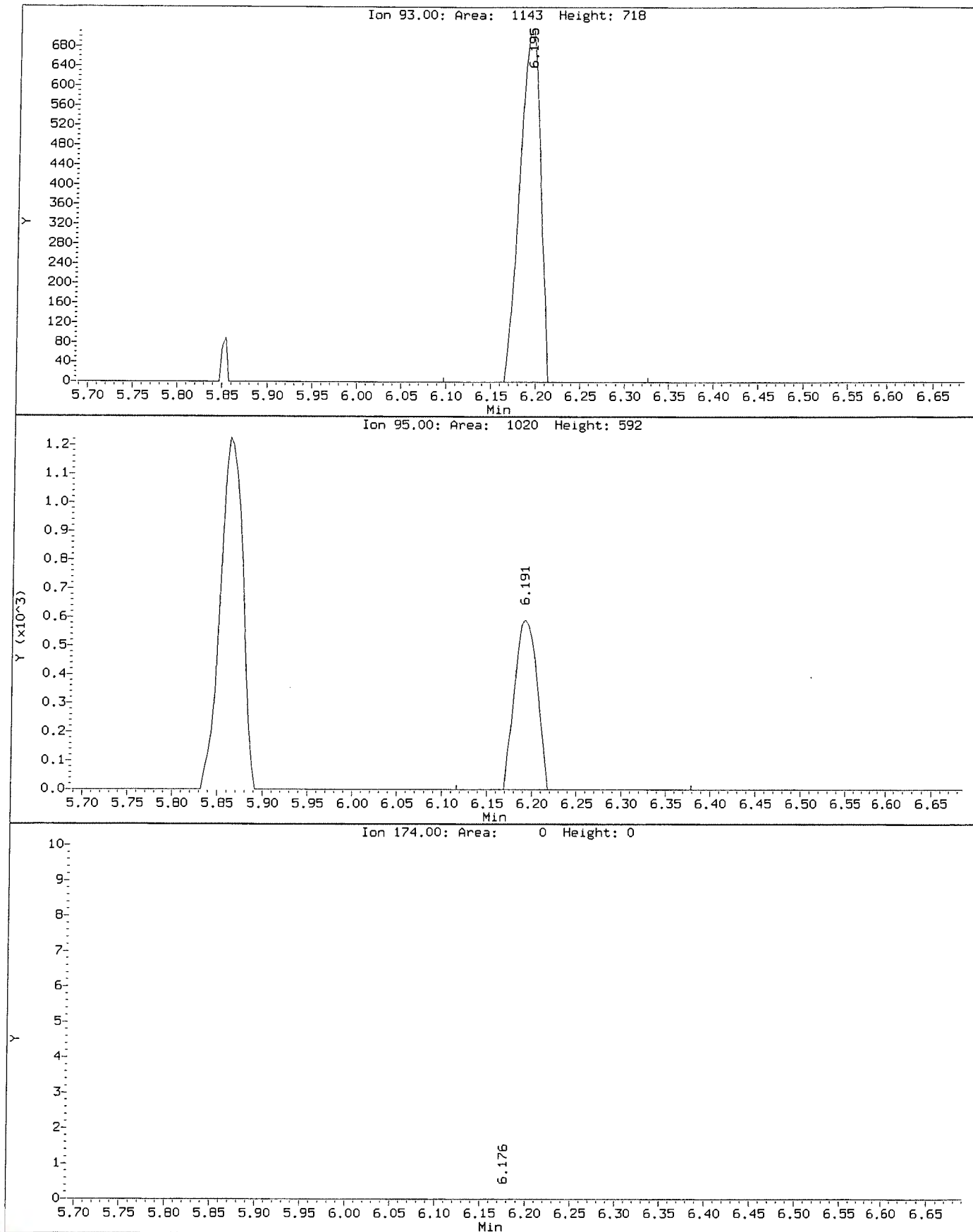
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Instrument: VDA9.1
Client Sample ID: VSTD00.5

Compound: Dibromomethane
CAS Number: 74-95-3



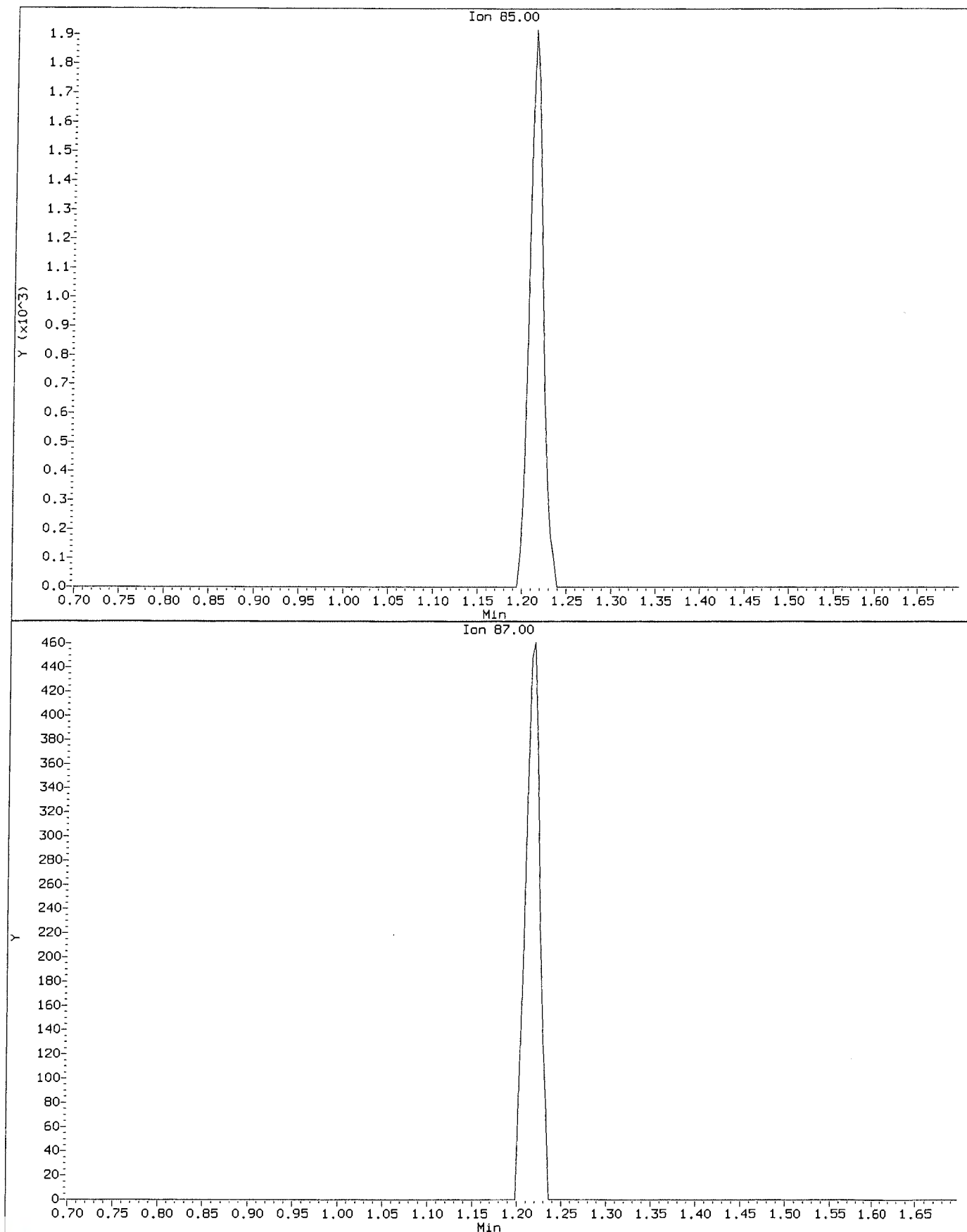
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Client Sample ID: VSTD00.5

Compound: Dibromomethane
CAS Number: 74-95-3



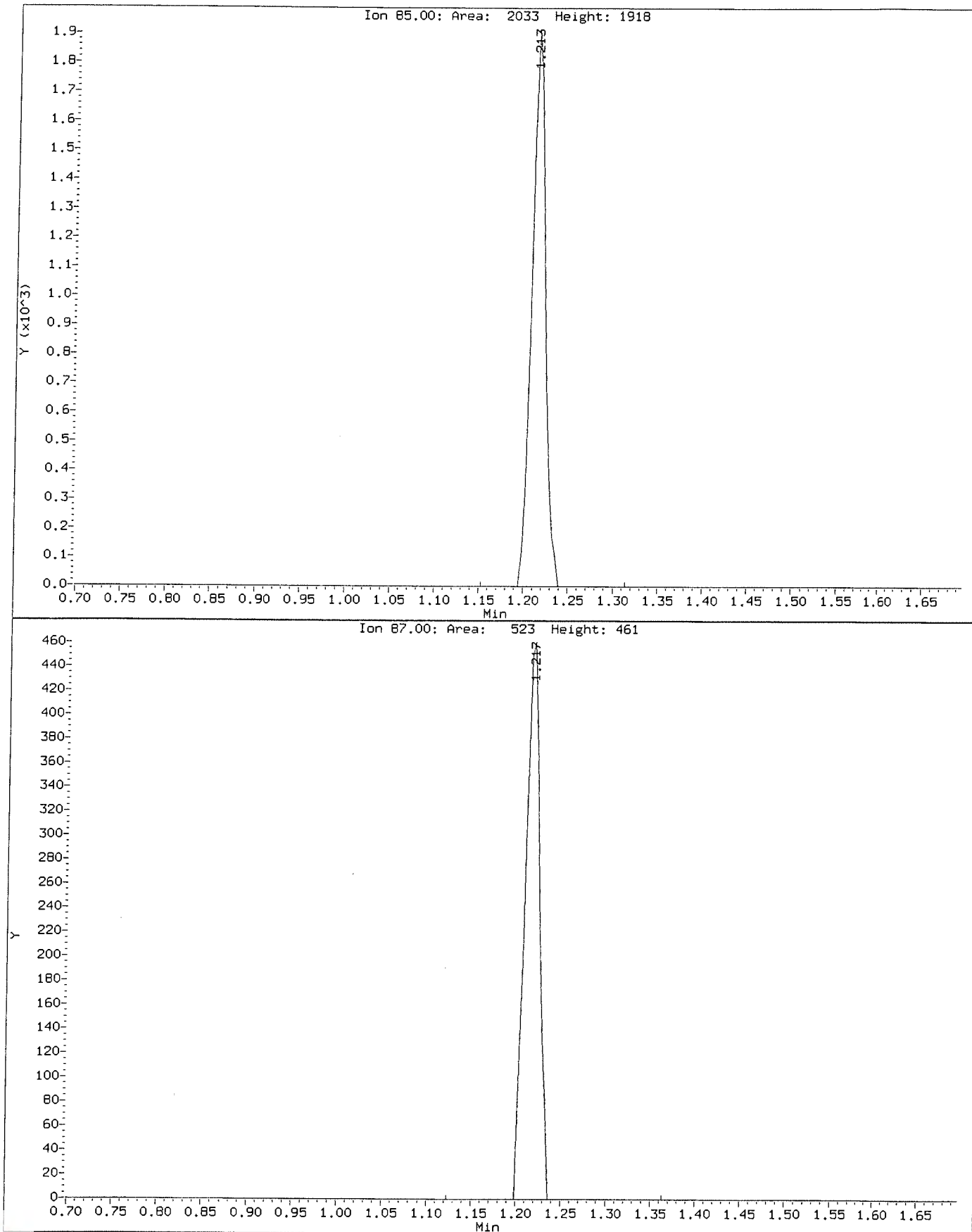
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Injection Date: 21-DEC-2018 14:14
Instrument: VOA9.1
Client Sample ID: VSTD00.5

Compound: Dichlorodifluoromethane
CAS Number: 75-71-8



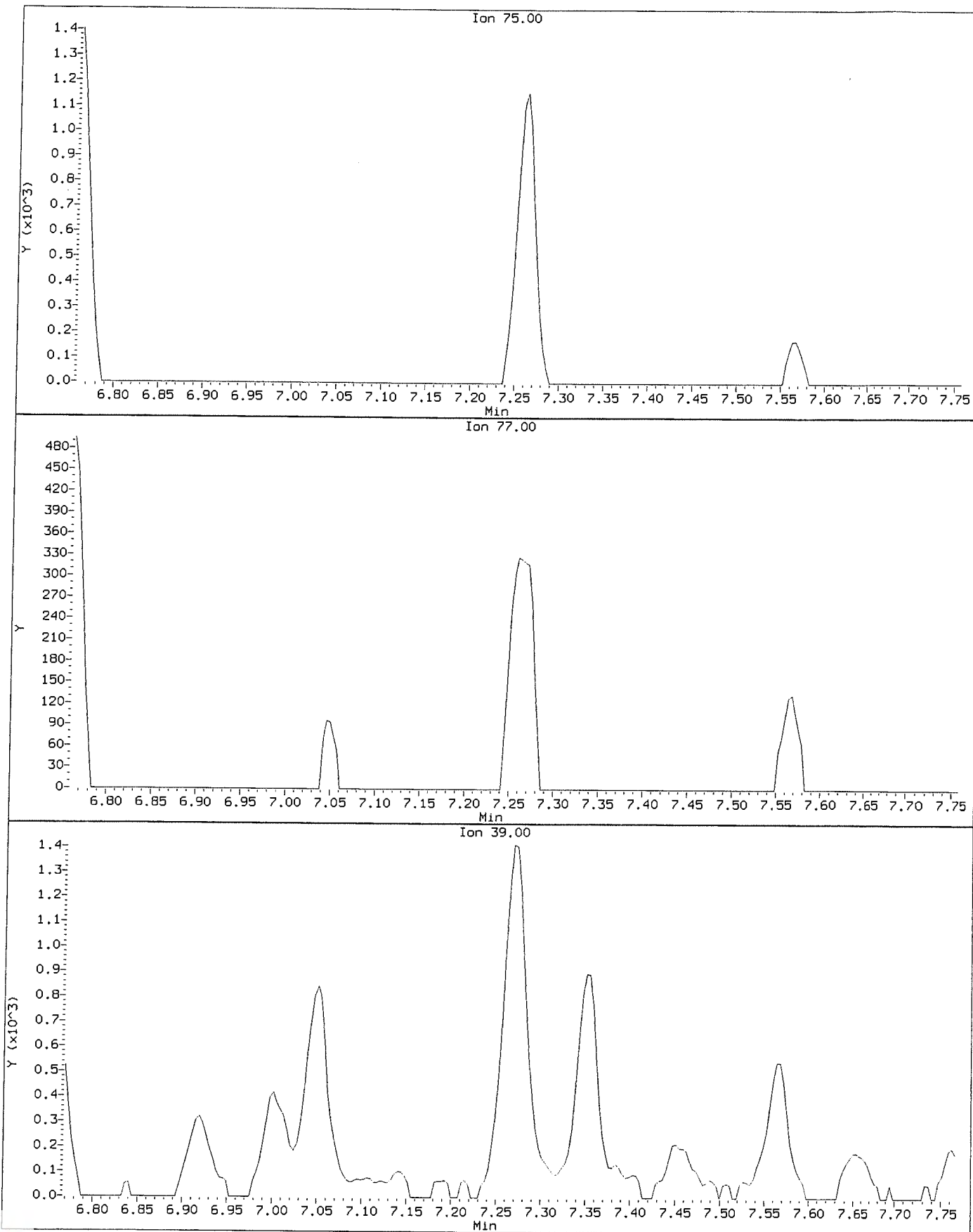
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Client Sample ID: VSTD00.5

Compound: Dichlorodifluoromethane
CAS Number: 75-71-8



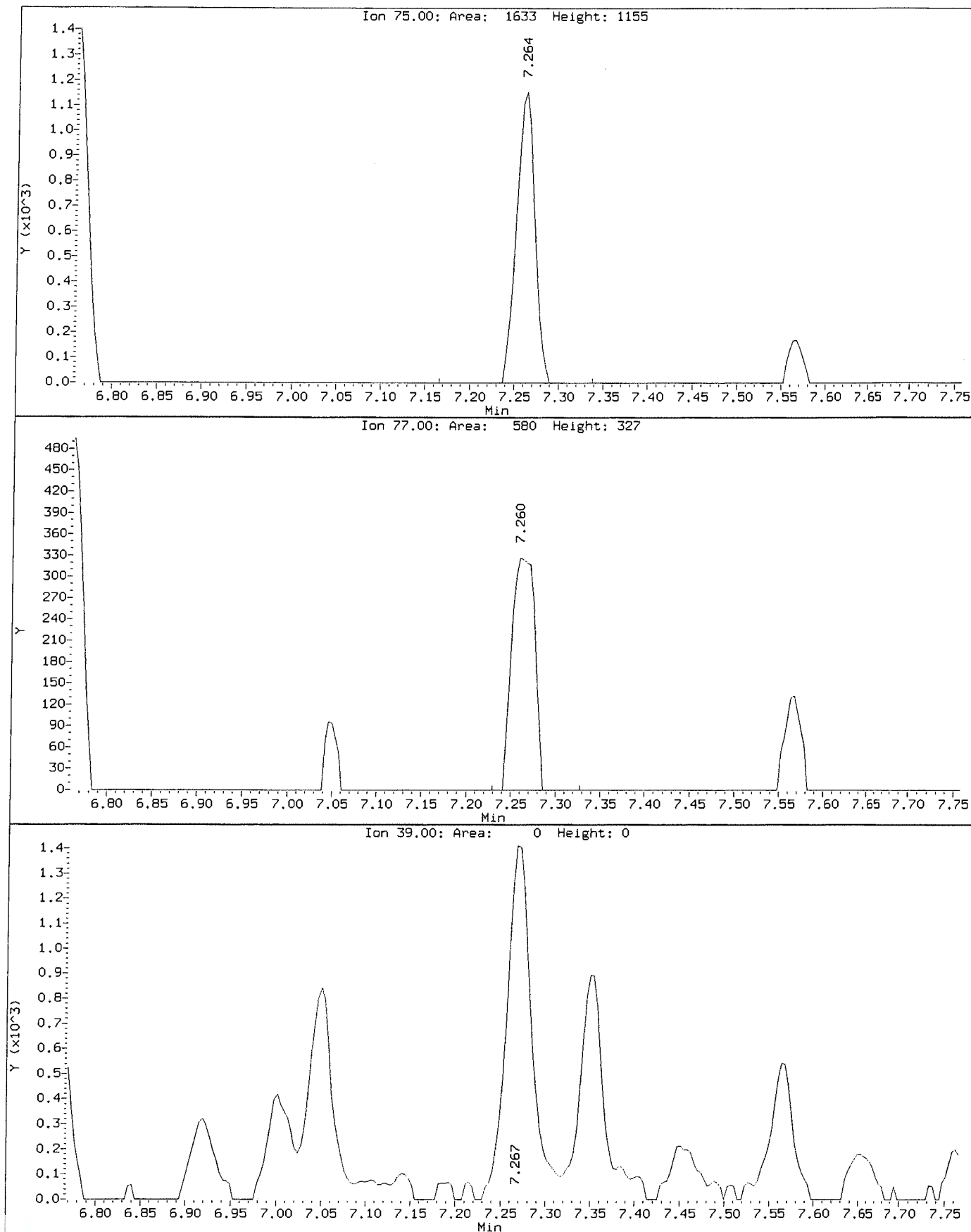
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Instrument: VDA9.i
Client Sample ID: VSTD00.5

Compound: trans-1,3-Dichloropropene
CAS Number: 10061-02-6



Data File: \\NAHSTWS005\Target\chem\voa9.1\U181221.b\U122103.D
Injection Date: 21-DEC-2018 14:14
Instrument: VOA9.1
Client Sample ID: VSTD00.5

Compound: trans-1,3-Dichloropropene
CAS Number: 10061-02-6



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181221.b\U122104.D Page 1
 Report Date: 28-Jan-2019 11:25

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U181221.b\U122104.D
 Lab Smp Id: VSTD001 Client Smp ID: VSTD001
 Inj Date : 21-DEC-2018 15:03
 Operator : PC Inst ID: VOA9.i
 Smp Info : VSTD001;VSTD001;1;3;
 Misc Info : 180315V9;WATER;0;1;
 Comment :
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 Meth Date : 28-Jan-2019 11:25 VOA9.i Quant Type: ISTD
 Cal Date : 21-DEC-2018 14:14 Cal File: U122103.D
 Als bottle: 5 Calibration Sample, Level: 3
 Dil Factor: 1.00000
 Integrator: HP RTE Compound Sublist: LHAAP.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	RT	EXP RT	REL RT	RESPONSE	AMOUNTS	
							CAL-AMT (ug/l)	ON-COL (ug/l)
* 1 Pentafluorobenzene	168		4.894	4.894	(1.000)	408613	50.0000	
* 36 1,4-Difluorobenzene	114		5.625	5.625	(1.000)	790484	50.0000	
* 47 Chlorobenzene-d5	117		8.249	8.249	(1.000)	731112	50.0000	
* 70 1,4-Dichlorobenzene-d4	152		10.236	10.236	(1.000)	336061	50.0000	
\$ 30 Dibromofluoromethane	113		4.826	4.826	(0.986)	8005	1.00000	0.30(a)
\$ 35 1,2-Dichloroethane-d4	65		5.175	5.175	(1.057)	10907	1.00000	(a)
\$ 48 Toluene-d8	98		6.989	6.989	(0.847)	32175	1.00000	(a)
\$ 69 4-Bromofluorobenzene	95		9.257	9.257	(1.122)	12547	1.00000	0.36(a)
60 1,1,1,2-Tetrachloroethane	131		8.350	8.350	(1.012)	4208	1.00000	1.48(a)
31 1,1,1-Trichloroethane	97		4.826	4.826	(0.986)	7082	1.00000	1.09(a)
68 1,1,2,2-Tetrachloroethane	83		9.392	9.392	(0.918)	9134	1.00000	1.20(a)
138 Freon TF	101		2.401	2.401	(0.491)	4108	1.00000	1.18(a)
53 1,1,2-Trichloroethane	83		7.421	7.421	(0.900)	5137	1.00000	1.17(a)
22 1,1-Dichloroethane	63		3.604	3.604	(0.737)	10662	1.00000	1.21(a)
11 1,1-Dichloroethene	96		2.397	2.397	(0.490)	4598	1.00000	1.18(a)
32 1,1-Dichloropropene	75		5.003	5.003	(0.889)	8232	1.00000	1.17(a)
93 1,2,3-Trichlorobenzene	180		12.335	12.335	(1.205)	6631	1.00000	1.66(a)
71 1,2,3-Trichloropropane	75		9.426	9.426	(0.921)	8706	1.00000	1.10(a)
90 1,2,4-Trichlorobenzene	180		11.923	11.923	(1.165)	6820	1.00000	1.09(a)
79 1,2,4-Trimethylbenzene	105		9.943	9.943	(0.971)	18977	1.00000	1.07(a)
89 1,2-Dibromo-3-Chloropropane	155		11.233	11.233	(1.097)	861	1.00000	2.16(a)
57 1,2-Dibromoethane	107		7.852	7.852	(0.952)	5748	1.00000	1.14(a)



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181221.b\U122104.D Page 2
 Report Date: 28-Jan-2019 11:25

Compounds	QUANT SIG					AMOUNTS	
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/l)	ON-COL (ug/l)
88 1,2-Dichlorobenzene	146	10.569	10.569	(1.033)	11945	1.00000	1.19(a)
33 1,2-Dichloroethane	62	5.250	5.250	(0.933)	8970	1.00000	0.54(a)
42 1,2-Dichloropropane	63	6.078	6.078	(1.081)	6565	1.00000	1.17(a)
75 1,3,5-Trimethylbenzene	105	9.625	9.625	(0.940)	18075	1.00000	1.07(a)
83 1,3-Dichlorobenzene	146	10.180	10.180	(0.995)	11430	1.00000	1.14(a)
54 1,3-Dichloropropane	76	7.563	7.563	(0.917)	10939	1.00000	1.16(a)
84 1,4-Dichlorobenzene	146	10.255	10.255	(1.002)	12811	1.00000	1.21(a)
26 2,2-Dichloropropane	77	4.272	4.272	(0.873)	6236	1.00000	1.17(a)
24 2-Butanone	43	4.343	4.343	(0.887)	6369	2.00000	0.00(a)
76 2-Chlorotoluene	91	9.546	9.546	(0.933)	17719	1.00000	1.14(a)
52 2-Hexanone	43	7.649	7.649	(0.927)	8136	2.00000	2.00(a)
77 4-Chlorotoluene	91	9.640	9.640	(0.942)	20099	1.00000	1.12(a)
82 p-Isopropyltoluene	119	10.210	10.210	(0.997)	18371	1.00000	1.03(a)
45 4-Methyl-2-Pentanone	43	6.914	6.914	(0.838)	12526	2.00000	2.14(a)
10 Acetone	43	2.480	2.480	(0.507)	5582	2.00000	0.58(a)
37 Benzene	78	5.216	5.216	(0.927)	24701	1.00000	1.17(a)
74 Bromobenzene	156	9.381	9.381	(0.917)	5982	1.00000	1.15(a)
29 Bromochloromethane	128	4.553	4.553	(0.930)	2865	1.00000	(a)
39 Bromodichloromethane	83	6.348	6.348	(1.129)	6221	1.00000	1.04(aM)
66 Bromoform	173	8.984	8.984	(1.089)	2343	1.00000	2.48(Ta)
6 Bromomethane	94	1.670	1.670	(0.341)	2293	1.00000	2.22(a)
19 Carbon Disulfide	76	2.585	2.585	(0.528)	33391	2.00000	2.35(a)
34 Carbon Tetrachloride	117	4.991	4.991	(0.887)	5463	1.00000	2.32(a)
59 Chlorobenzene	112	8.275	8.275	(1.003)	16703	1.00000	1.18(a)
7 Chloroethane	64	1.749	1.749	(0.357)	3213	1.00000	1.36(aM)
28 Chloroform	83	4.654	4.654	(0.951)	10242	1.00000	1.20(a)
3 Chloromethane	50	1.336	1.336	(0.273)	4689	1.00000	4.32(a)
27 cis-1,2-Dichloroethene	96	4.283	4.283	(0.875)	6586	1.00000	1.22(a)
46 cis-1,3-Dichloropropene	75	6.757	6.757	(1.201)	7273	1.00000	2.04(a)
55 Dibromochloromethane	129	7.758	7.758	(0.940)	4051	1.00000	1.80(a)
44 Dibromomethane	93	6.187	6.187	(1.100)	3627	1.00000	1.12(aM)
2 Dichlorodifluoromethane	85	1.201	1.201	(0.246)	6583	1.00000	1.78(a)
61 Ethylbenzene	106	8.369	8.369	(1.015)	8132	1.00000	1.12(a)
91 Hexachlorobutadiene	225	12.065	12.065	(1.179)	2672	1.00000	1.12(a)
67 Isopropylbenzene	105	9.126	9.126	(1.106)	22547	1.00000	1.08(a)
62 m,p-Xylenes	106	8.470	8.470	(1.027)	19538	2.00000	2.20(a)
17 Methylene Chloride	84	2.866	2.866	(0.586)	8113	1.00000	0.44(a)
87 n-Butylbenzene	91	10.554	10.554	(1.031)	18944	1.00000	1.10(a)
73 n-Propylbenzene	91	9.475	9.475	(0.926)	27852	1.00000	1.10(a)
92 Naphthalene	128	12.133	12.133	(1.185)	16505	1.00000	1.44(a)
63 o-Xylene	106	8.811	8.811	(1.068)	10277	1.00000	1.15(a)
81 sec-Butylbenzene	105	10.086	10.086	(0.985)	22753	1.00000	1.07(a)
64 Styrene	104	8.826	8.826	(1.070)	15133	1.00000	1.01(a)
78 tert-Butylbenzene	119	9.902	9.902	(0.967)	15715	1.00000	1.07(a)
56 Tetrachloroethene	164	7.522	7.522	(0.912)	4775	1.00000	1.24(a)
50 Toluene	91	7.046	7.046	(0.854)	24298	1.00000	1.11(a)
20 trans-1,2-Dichloroethene	96	3.140	3.140	(0.642)	5920	1.00000	1.23(a)
51 trans-1,3-Dichloropropene	75	7.259	7.259	(1.291)	5668	1.00000	2.35(a)
38 Trichloroethene	130	5.861	5.861	(1.042)	6040	1.00000	1.18(a)
8 Trichlorofluoromethane	101	1.951	1.951	(0.399)	7922	1.00000	1.78(a)
5 Vinyl Chloride	62	1.415	1.415	(0.289)	6308	1.00000	2.03(a)



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181221.b\U122104.D Page 3
Report Date: 28-Jan-2019 11:25

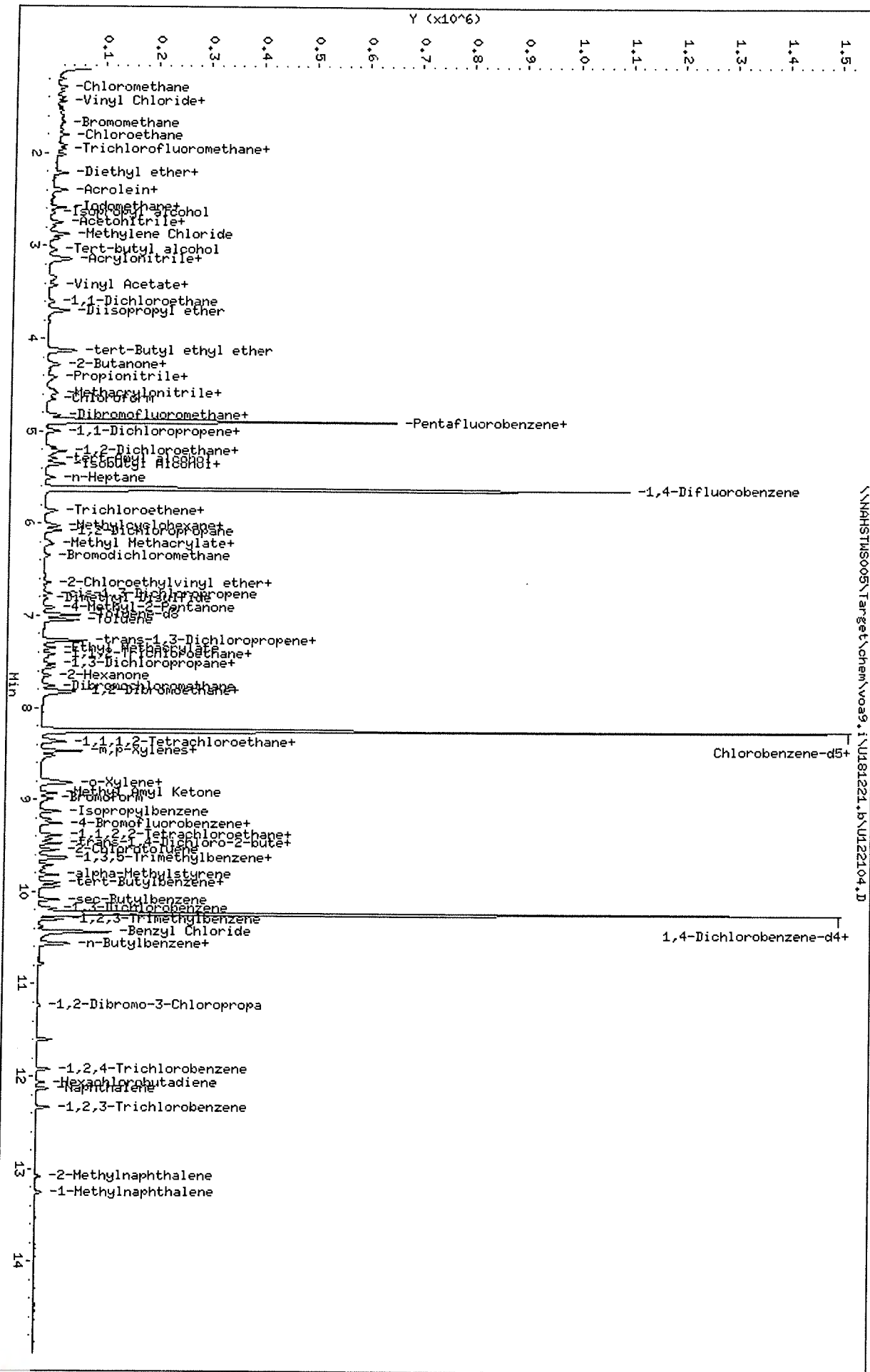
QC Flag Legend

- T - Target compound detected outside RT window.
- a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
- M - Compound response manually integrated.



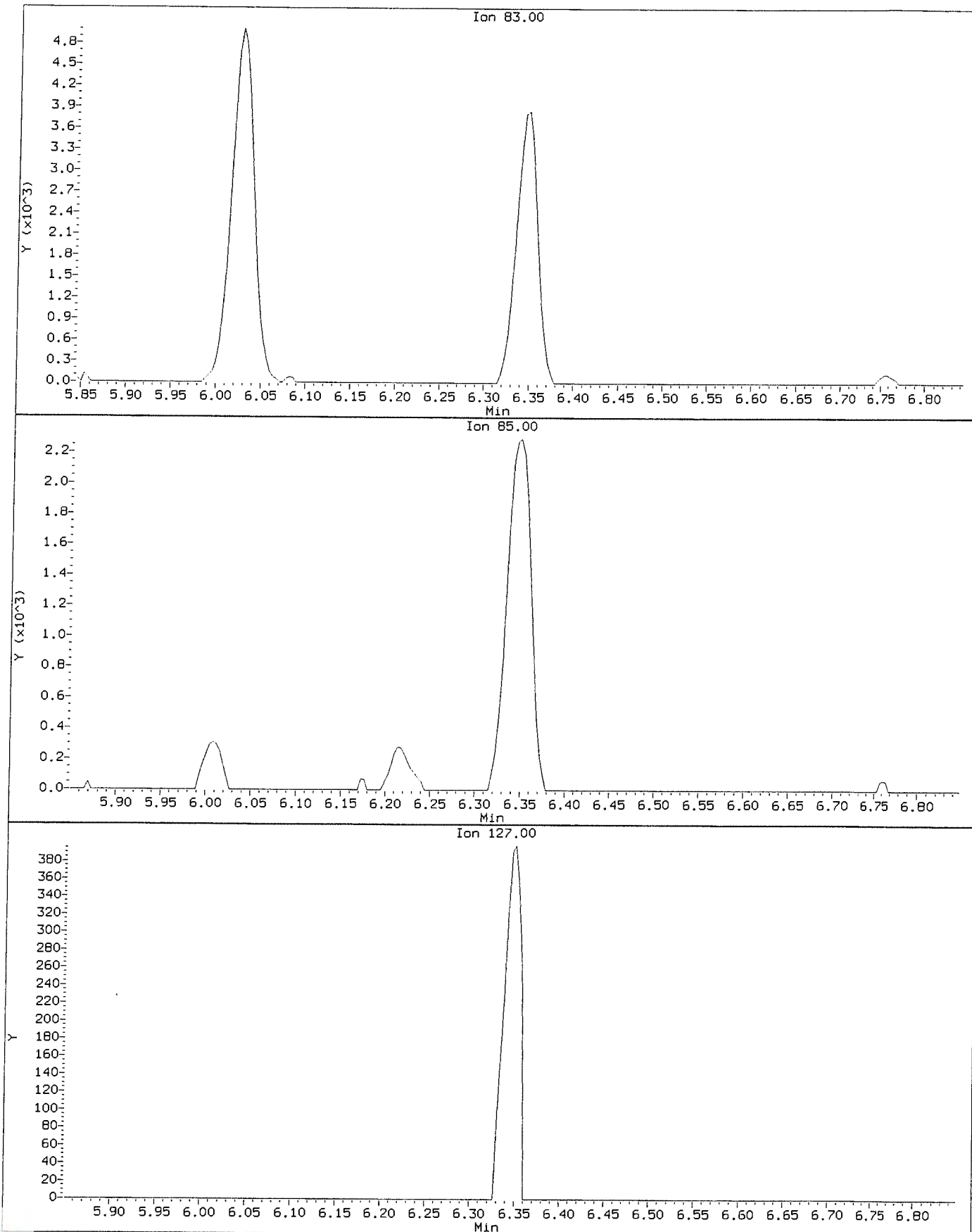
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Instrument: V0A9.i
 Operator: PC
 Column diameter: 0.18



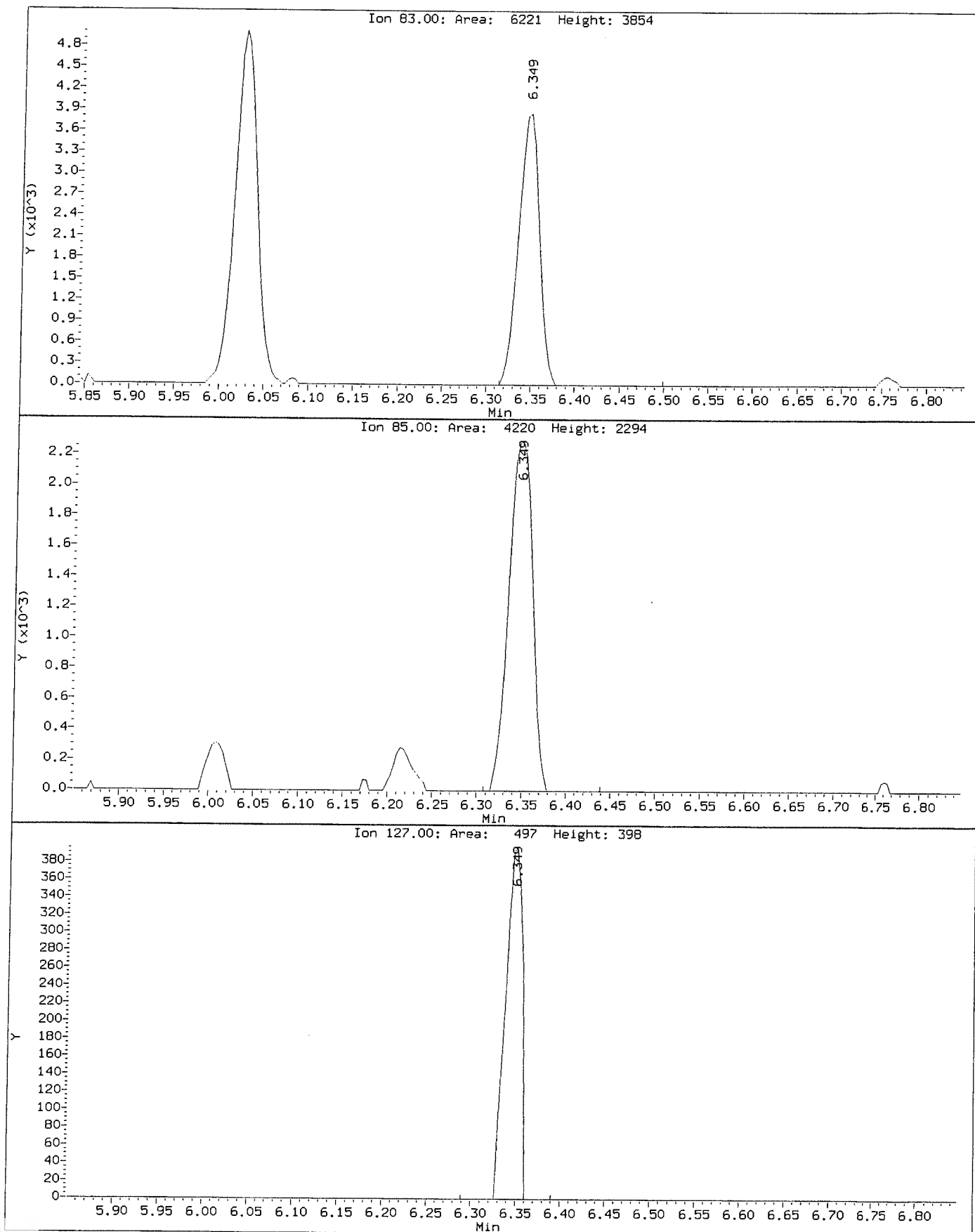
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Client Sample ID: VSTD001

Compound: Bromodichloromethane
CAS Number: 75-27-4



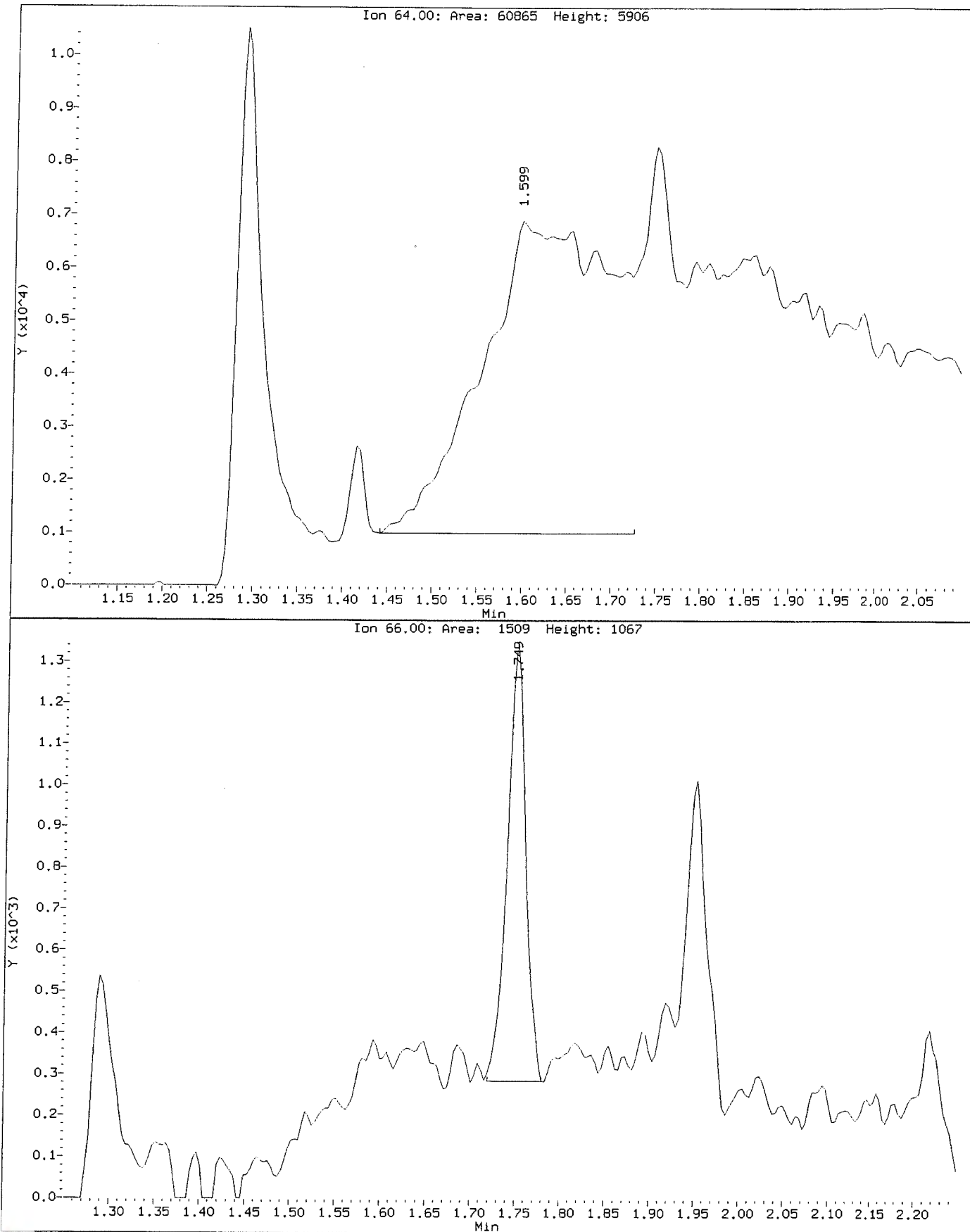
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Client Sample ID: VSTD001

Compound: Bromodichloromethane
CAS Number: 75-27-4



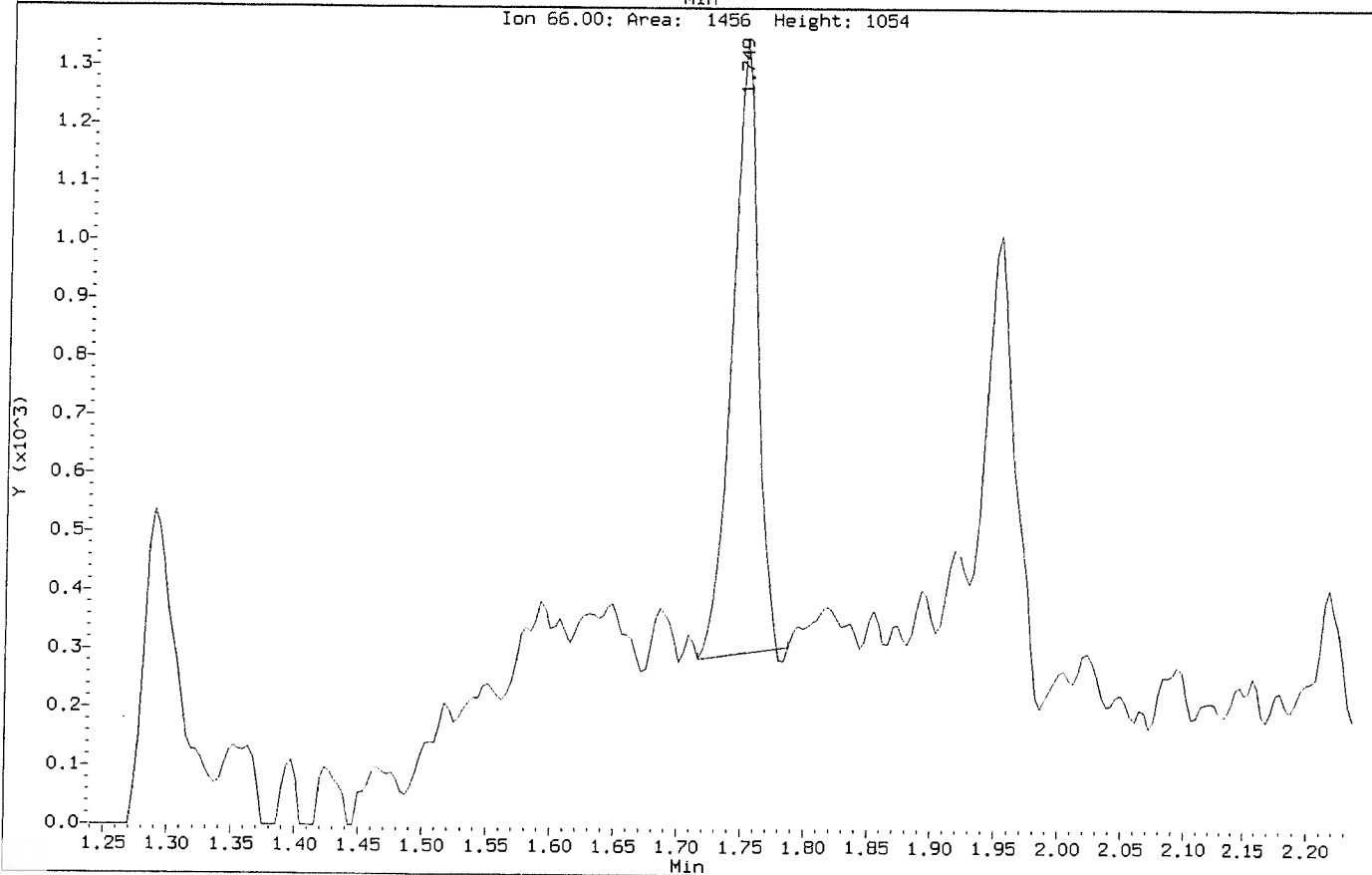
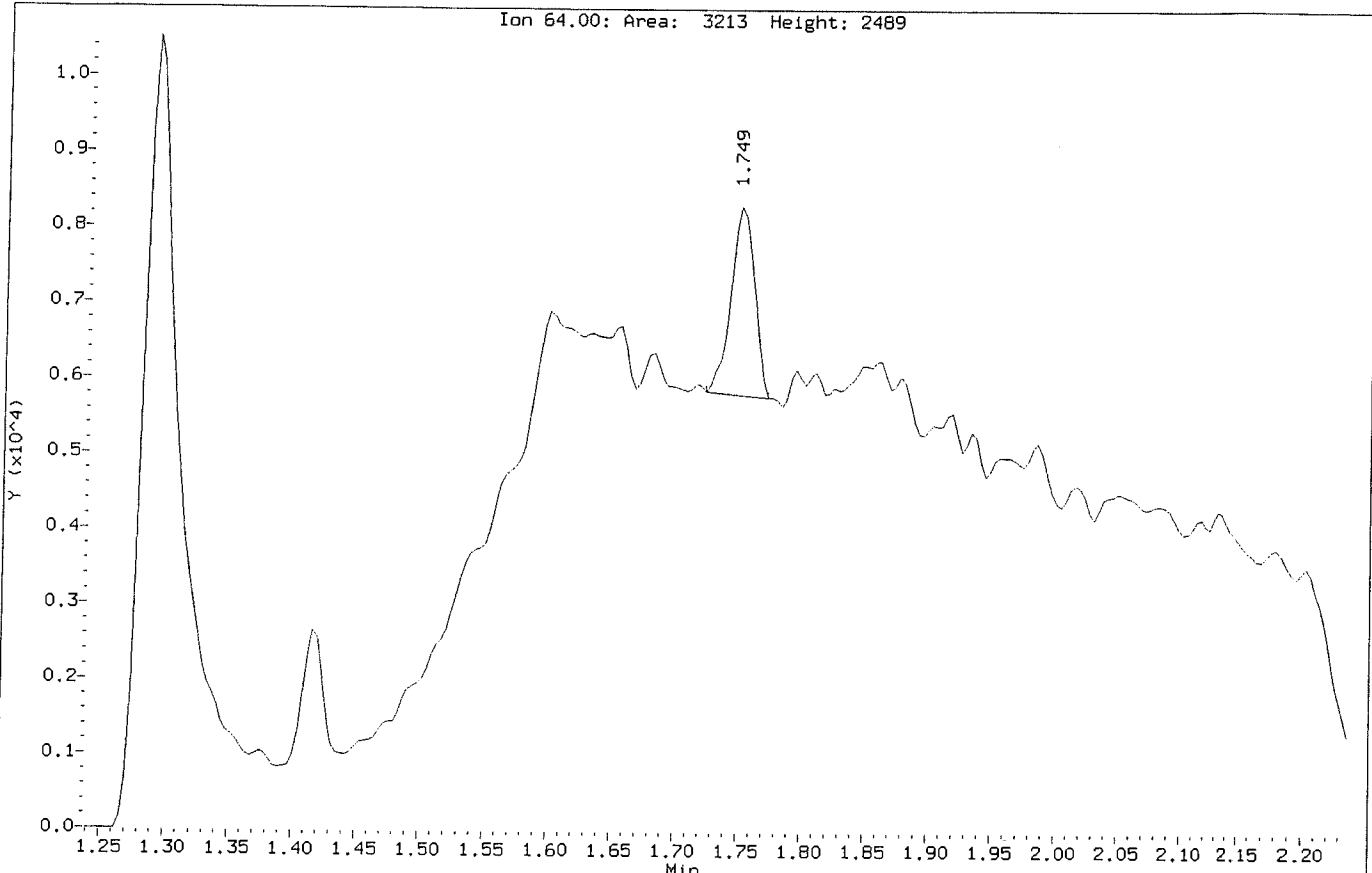
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Instrument: VOA9.i
Client Sample ID: VSTD001

Compound: Chloroethane
CAS Number: 75-00-3



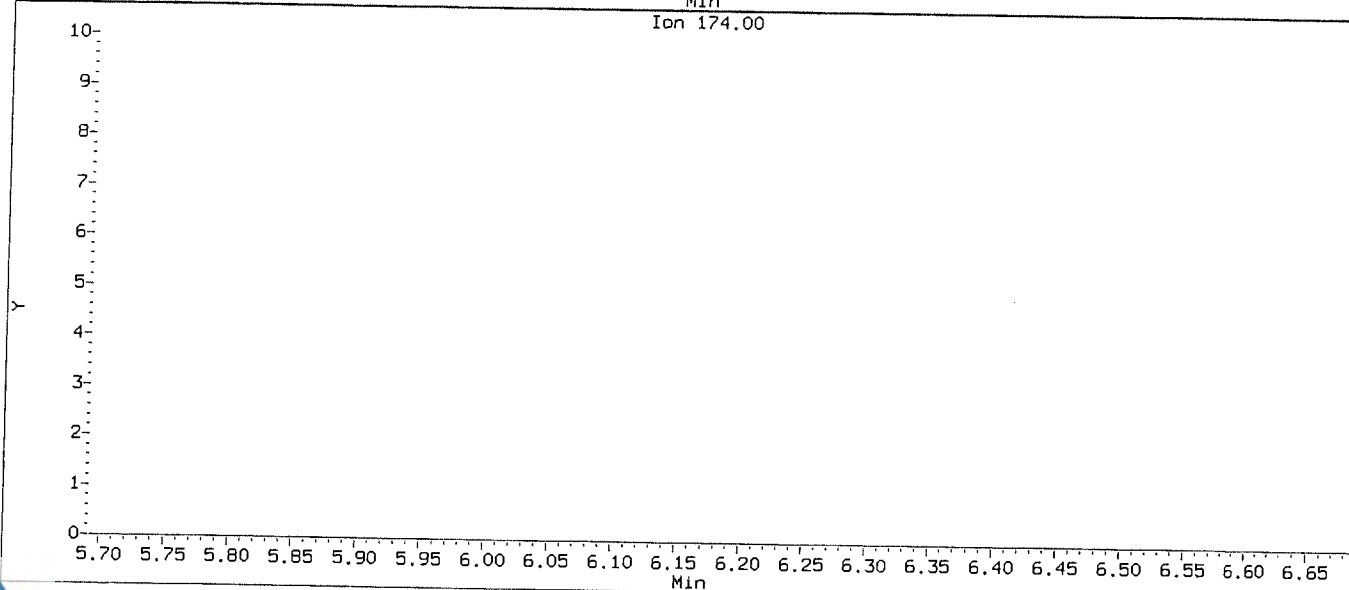
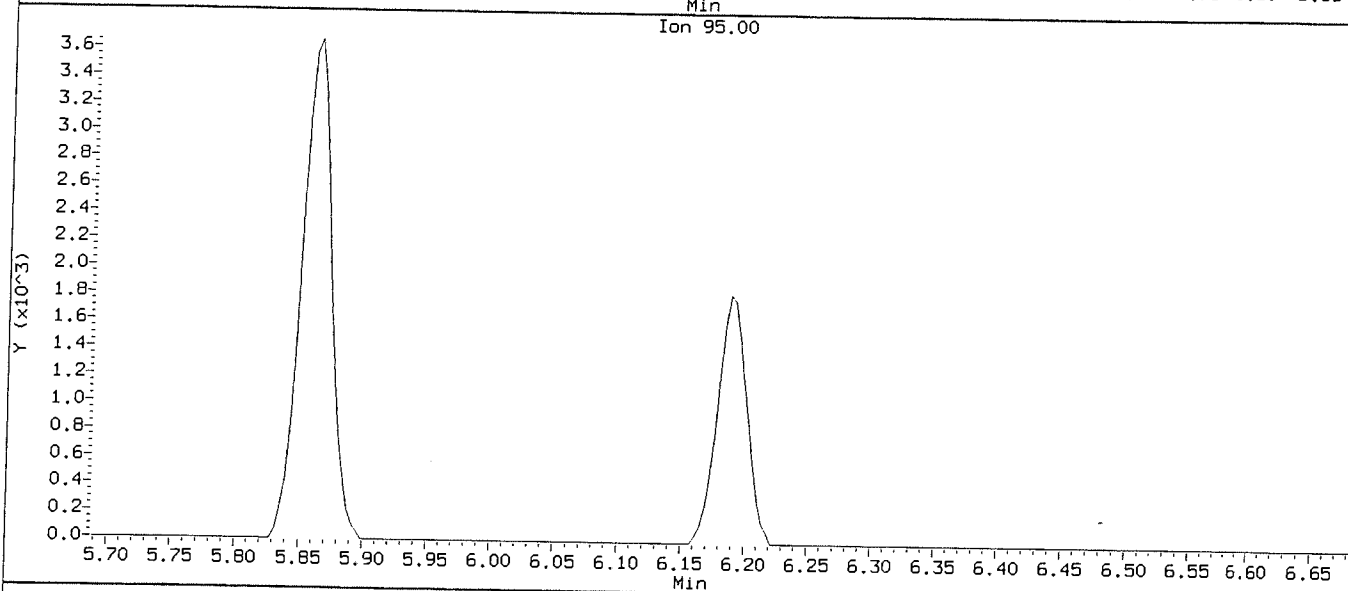
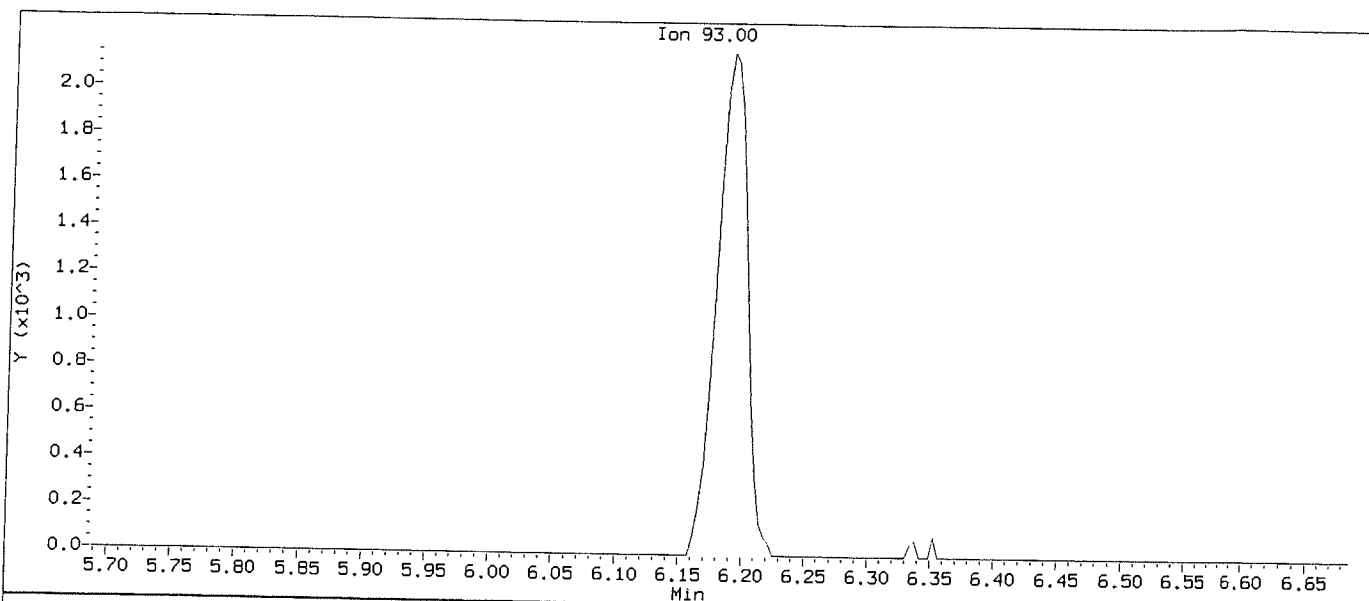
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Client Sample ID: VSTD001

Compound: Chloroethane
CAS Number: 75-00-3



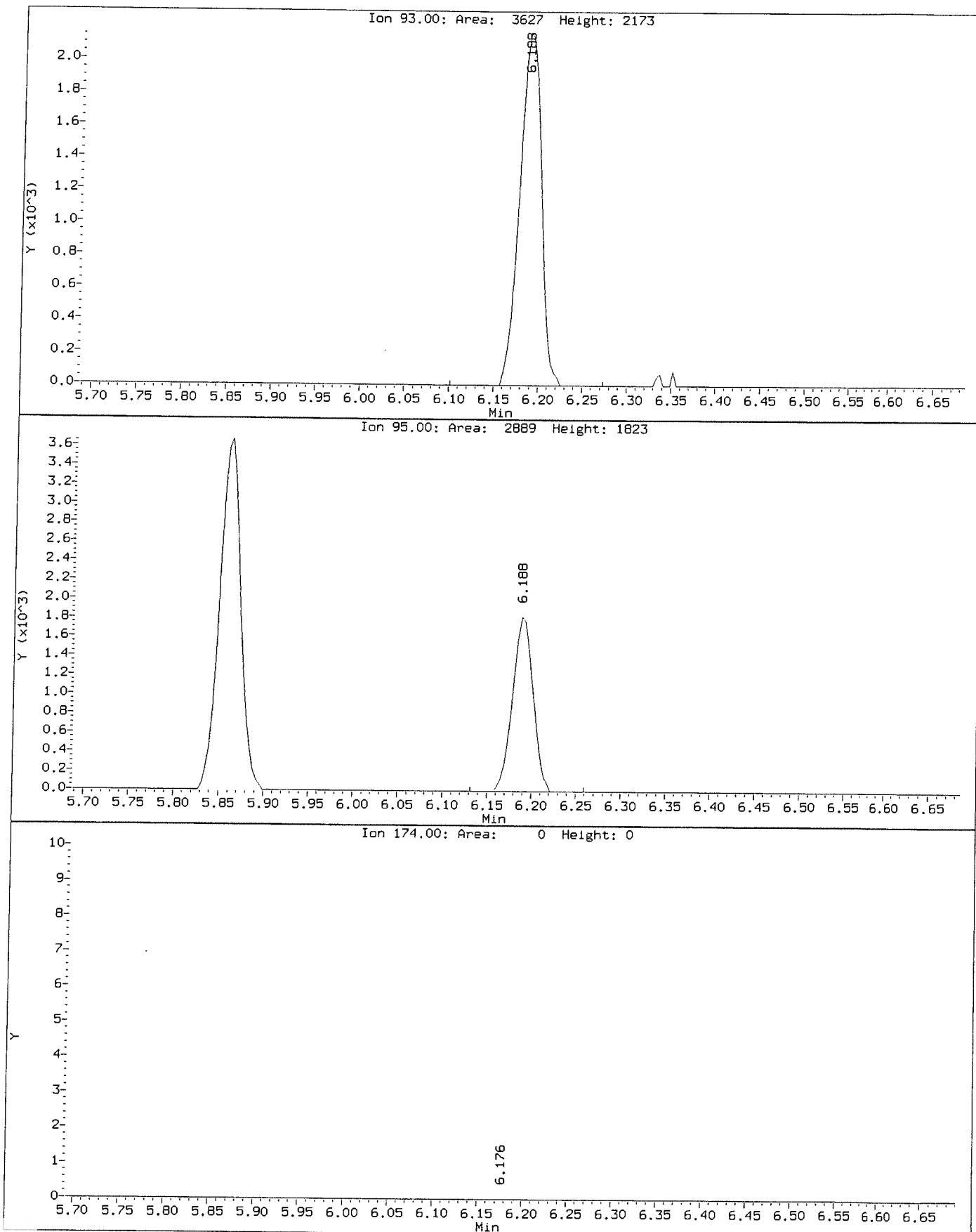
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Instrument: VOA9.i
Client Sample ID: VSTD001

Compound: Dibromomethane
CAS Number: 74-95-3



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181221.b\U122104.D
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Instrument: VDA9.1
Client Sample ID: VSTD001

Compound: Dibromomethane
CAS Number: 74-95-3



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181221.b\U122105.D Page 1
 Report Date: 28-Jan-2019 11:25

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Data file : \\NAHSTWS005\Target\chem\voa9.i\U181221.b\U122105.D
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 Inj Date : 21-DEC-2018 15:28
 Operator : PC Inst ID: VOA9.i
 Smp Info : VSTD002;VSTD002;1;4;
 Misc Info : 180315V9;WATER;0;1;
 Comment :
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 Meth Date : 28-Jan-2019 11:25 VOA9.i Quant Type: ISTD
 Cal Date : 21-DEC-2018 15:03 Cal File: U122104.D
 Als bottle: 6 Calibration Sample, Level: 4
 Dil Factor: 1.00000
 Integrator: HP RTE Compound Sublist: LHAAP.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		AMOUNTS					
	MASS		RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/l)	ON-COL (ug/l)
* 1 Pentafluorobenzene	168		4.894	4.894	(1.000)	416245	50.0000	
* 36 1,4-Difluorobenzene	114		5.625	5.625	(1.000)	790380	50.0000	
* 47 Chlorobenzene-d5	117		8.249	8.249	(1.000)	728875	50.0000	
* 70 1,4-Dichlorobenzene-d4	152		10.236	10.236	(1.000)	340088	50.0000	
\$ 30 Dibromofluoromethane	113		4.830	4.830	(0.987)	12720	2.00000	1.32(a)
\$ 35 1,2-Dichloroethane-d4	65		5.175	5.175	(1.057)	17881	2.00000	0.99(a)
\$ 48 Toluene-d8	98		6.989	6.989	(0.847)	54444	2.00000	1.21(a)
\$ 69 4-Bromofluorobenzene	95		9.257	9.257	(1.122)	20092	2.00000	1.45(a)
60 1,1,1,2-Tetrachloroethane	131		8.347	8.347	(1.012)	8522	2.00000	2.40(a)
31 1,1,1-Trichloroethane	97		4.827	4.827	(0.986)	12904	2.00000	1.96(a)
68 1,1,2,2-Tetrachloroethane	83		9.392	9.392	(0.918)	16933	2.00000	2.21(a)
138 Freon TF	101		2.401	2.401	(0.491)	7489	2.00000	2.11(a)
53 1,1,2-Trichloroethane	83		7.421	7.421	(0.900)	9254	2.00000	2.13(a)
22 1,1-Dichloroethane	63		3.604	3.604	(0.737)	19553	2.00000	2.18(a)
11 1,1-Dichloroethene	96		2.401	2.401	(0.491)	8761	2.00000	2.21(a)
32 1,1-Dichloropropene	75		5.006	5.006	(0.890)	15087	2.00000	2.14(a)
93 1,2,3-Trichlorobenzene	180		12.335	12.335	(1.205)	12385	2.00000	2.54(a)
71 1,2,3-Trichloropropane	75		9.426	9.426	(0.921)	16368	2.00000	2.05(a)
90 1,2,4-Trichlorobenzene	180		11.923	11.923	(1.165)	12313	2.00000	1.95(a)
79 1,2,4-Trimethylbenzene	105		9.943	9.943	(0.971)	36129	2.00000	2.03(a)
89 1,2-Dibromo-3-Chloropropane	155		11.233	11.233	(1.097)	1910	2.00000	3.02(a)
57 1,2-Dibromoethane	107		7.852	7.852	(0.952)	10069	2.00000	2.01(a)



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181221.b\U122105.D Page 2
 Report Date: 28-Jan-2019 11:25

Compounds	QUANT SIG					AMOUNTS	
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/l)	ON-COL (ug/l)
88 1,2-Dichlorobenzene	146	10.569	10.569	(1.033)	21852	2.00000	2.16(a)
33 1,2-Dichloroethane	62	5.254	5.254	(0.934)	15708	2.00000	1.50(a)
42 1,2-Dichloropropane	63	6.079	6.079	(1.081)	11593	2.00000	2.07(a)
75 1,3,5-Trimethylbenzene	105	9.625	9.625	(0.940)	33264	2.00000	1.94(a)
83 1,3-Dichlorobenzene	146	10.180	10.180	(0.995)	21833	2.00000	2.16(a)
54 1,3-Dichloropropane	76	7.563	7.563	(0.917)	19804	2.00000	2.11(a)
84 1,4-Dichlorobenzene	146	10.255	10.255	(1.002)	22897	2.00000	2.15(a)
26 2,2-Dichloropropane	77	4.275	4.275	(0.874)	10414	2.00000	1.92(a)
24 2-Butanone	43	4.343	4.343	(0.887)	11299	4.00000	1.81(a)
76 2-Chlorotoluene	91	9.546	9.546	(0.933)	32538	2.00000	2.07(a)
52 2-Hexanone	43	7.653	7.653	(0.928)	15773	4.00000	3.89(a)
77 4-Chlorotoluene	91	9.640	9.640	(0.942)	38000	2.00000	2.09(a)
82 p-Isopropyltoluene	119	10.210	10.210	(0.997)	34224	2.00000	1.90(a)
45 4-Methyl-2-Pentanone	43	6.915	6.915	(0.838)	23124	4.00000	3.96(a)
10 Acetone	43	2.484	2.484	(0.508)	8219	4.00000	2.18(a)
37 Benzene	78	5.220	5.220	(0.928)	44238	2.00000	2.10(a)
74 Bromobenzene	156	9.381	9.381	(0.917)	11074	2.00000	2.10(a)
29 Bromochloromethane	128	4.557	4.557	(0.931)	5148	2.00000	(a)
39 Bromodichloromethane	83	6.348	6.348	(1.129)	11433	2.00000	1.92(a)
66 Bromoform	173	8.984	8.984	(1.089)	4574	2.00000	3.17(Ta)
6 Bromomethane	94	1.674	1.674	(0.342)	4588	2.00000	3.07(a)
19 Carbon Disulfide	76	2.589	2.589	(0.529)	60138	4.00000	4.17(a)
34 Carbon Tetrachloride	117	4.995	4.995	(0.888)	10077	2.00000	3.10(a)
59 Chlorobenzene	112	8.275	8.275	(1.003)	29501	2.00000	2.10(a)
7 Chloroethane	64	1.753	1.753	(0.358)	8179	2.00000	2.69(aM)
28 Chloroform	83	4.658	4.658	(0.952)	18482	2.00000	2.14(a)
3 Chloromethane	50	1.340	1.340	(0.274)	8693	2.00000	5.15
27 cis-1,2-Dichloroethene	96	4.287	4.287	(0.876)	11391	2.00000	2.08(a)
46 cis-1,3-Dichloropropene	75	6.757	6.757	(1.201)	13732	2.00000	2.74(a)
55 Dibromochloromethane	129	7.758	7.758	(0.940)	7740	2.00000	2.55(a)
44 Dibromomethane	93	6.191	6.191	(1.101)	6690	2.00000	2.07(aM)
2 Dichlorodifluoromethane	85	1.205	1.205	(0.246)	11371	2.00000	2.68(a)
61 Ethylbenzene	106	8.373	8.373	(1.015)	14915	2.00000	2.07(a)
91 Hexachlorobutadiene	225	12.065	12.065	(1.179)	4376	2.00000	1.81(a)
67 Isopropylbenzene	105	9.126	9.126	(1.106)	42416	2.00000	2.04(a)
62 m,p-Xylenes	106	8.474	8.474	(1.027)	36211	4.00000	4.10(a)
17 Methylene Chloride	84	2.873	2.873	(0.587)	13726	2.00000	1.52(a)
87 n-Butylbenzene	91	10.558	10.558	(1.031)	35309	2.00000	2.03(a)
73 n-Propylbenzene	91	9.475	9.475	(0.926)	51078	2.00000	2.01(a)
92 Naphthalene	128	12.133	12.133	(1.185)	32897	2.00000	2.21(a)
63 o-Xylene	106	8.811	8.811	(1.068)	17863	2.00000	2.00(a)
81 sec-Butylbenzene	105	10.086	10.086	(0.985)	43551	2.00000	2.03(a)
64 Styrene	104	8.826	8.826	(1.070)	29048	2.00000	1.96(a)
78 tert-Butylbenzene	119	9.902	9.902	(0.967)	29889	2.00000	2.02(a)
56 Tetrachloroethene	164	7.526	7.526	(0.912)	8071	2.00000	2.11(a)
50 Toluene	91	7.049	7.049	(0.855)	46092	2.00000	2.12(a)
20 trans-1,2-Dichloroethene	96	3.143	3.143	(0.642)	10325	2.00000	2.11(a)
51 trans-1,3-Dichloropropene	75	7.259	7.259	(1.291)	10646	2.00000	2.97(a)
38 Trichloroethene	130	5.861	5.861	(1.042)	10169	2.00000	2.00(a)
8 Trichlorofluoromethane	101	1.955	1.955	(0.400)	14026	2.00000	2.64(a)
5 Vinyl Chloride	62	1.419	1.419	(0.290)	12656	2.00000	3.07(a)



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Report Date: 28-Jan-2019 11:25

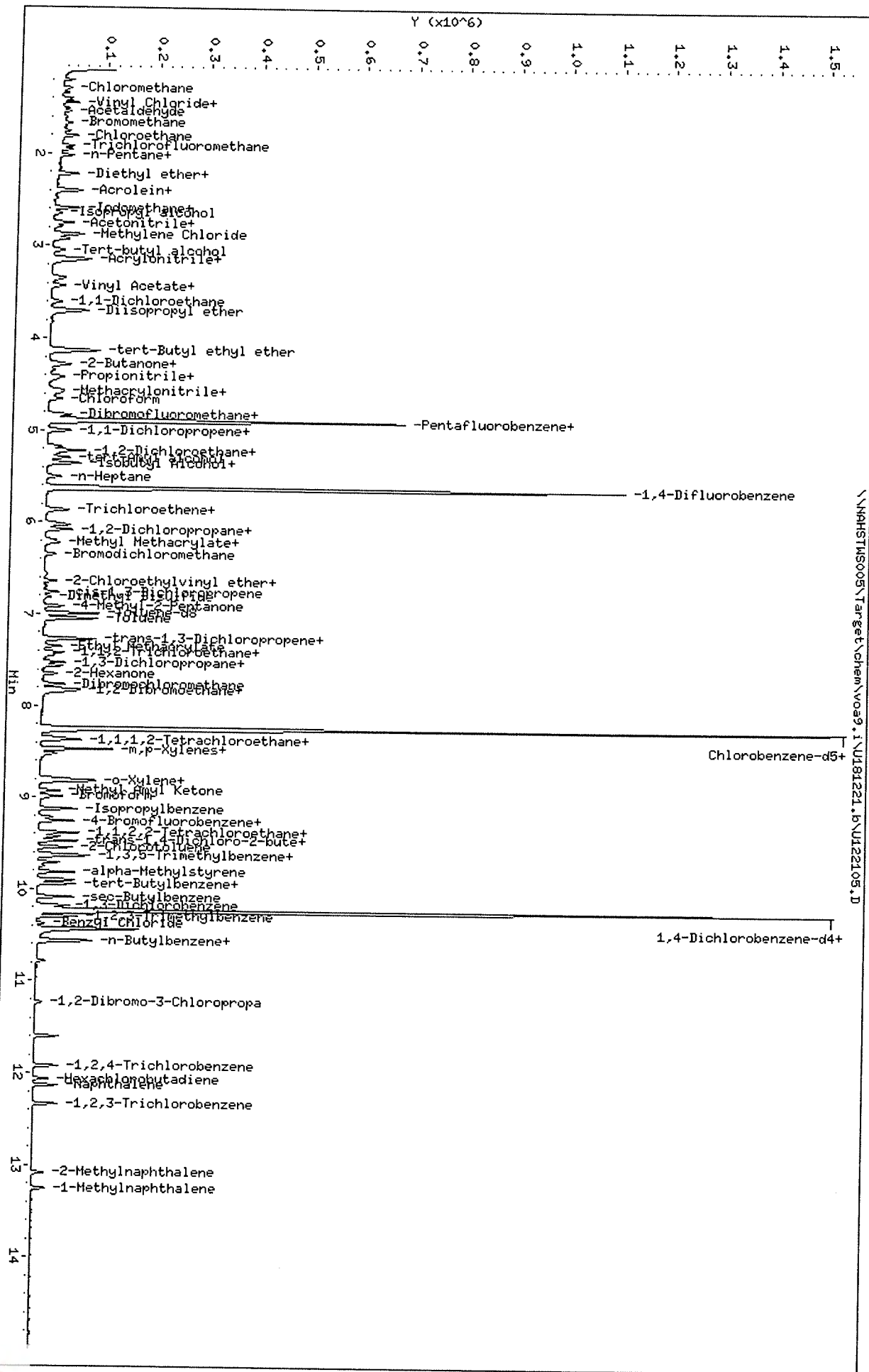
QC Flag Legend

- T - Target compound detected outside RT window.
- a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
- M - Compound response manually integrated.



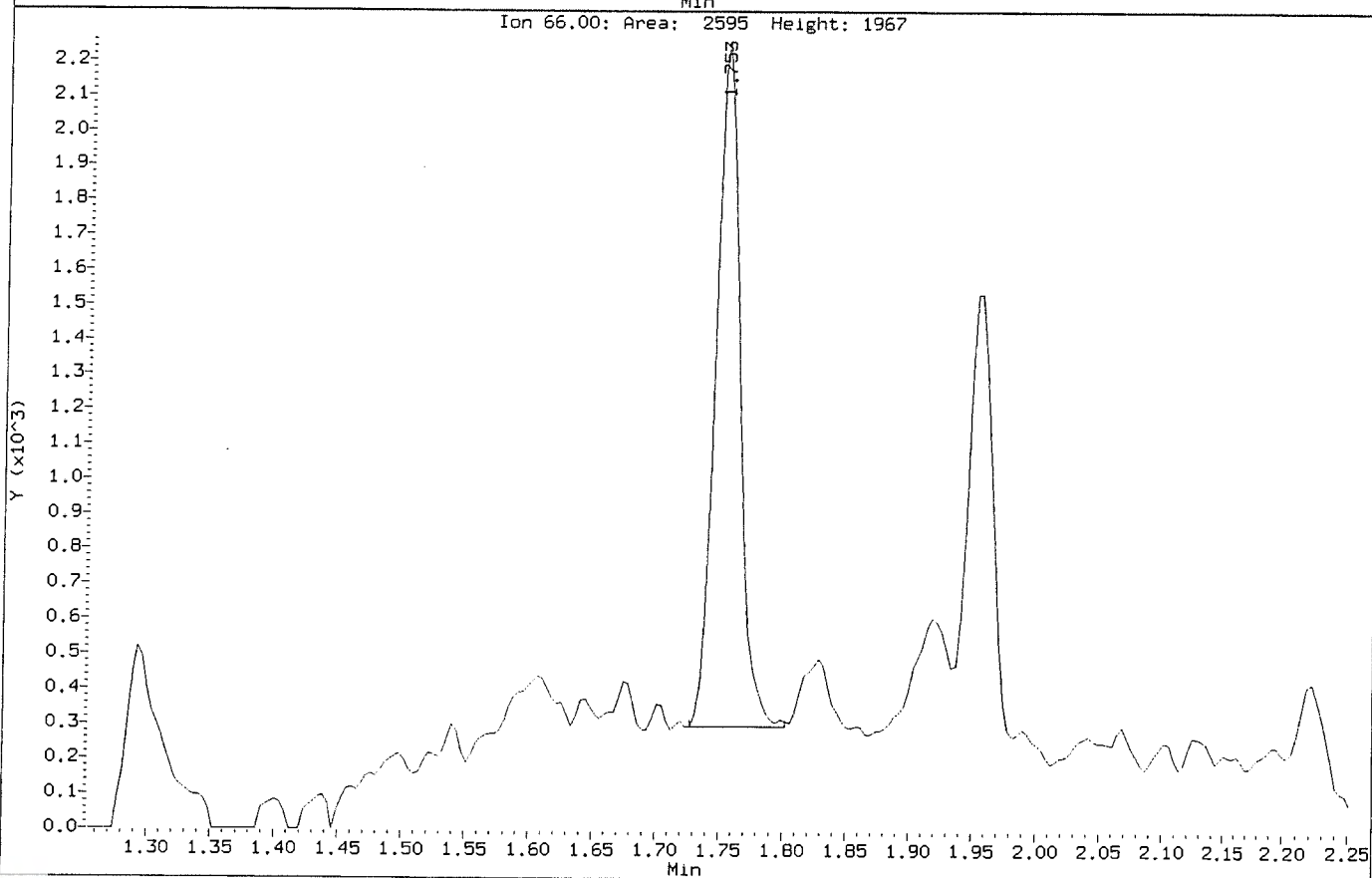
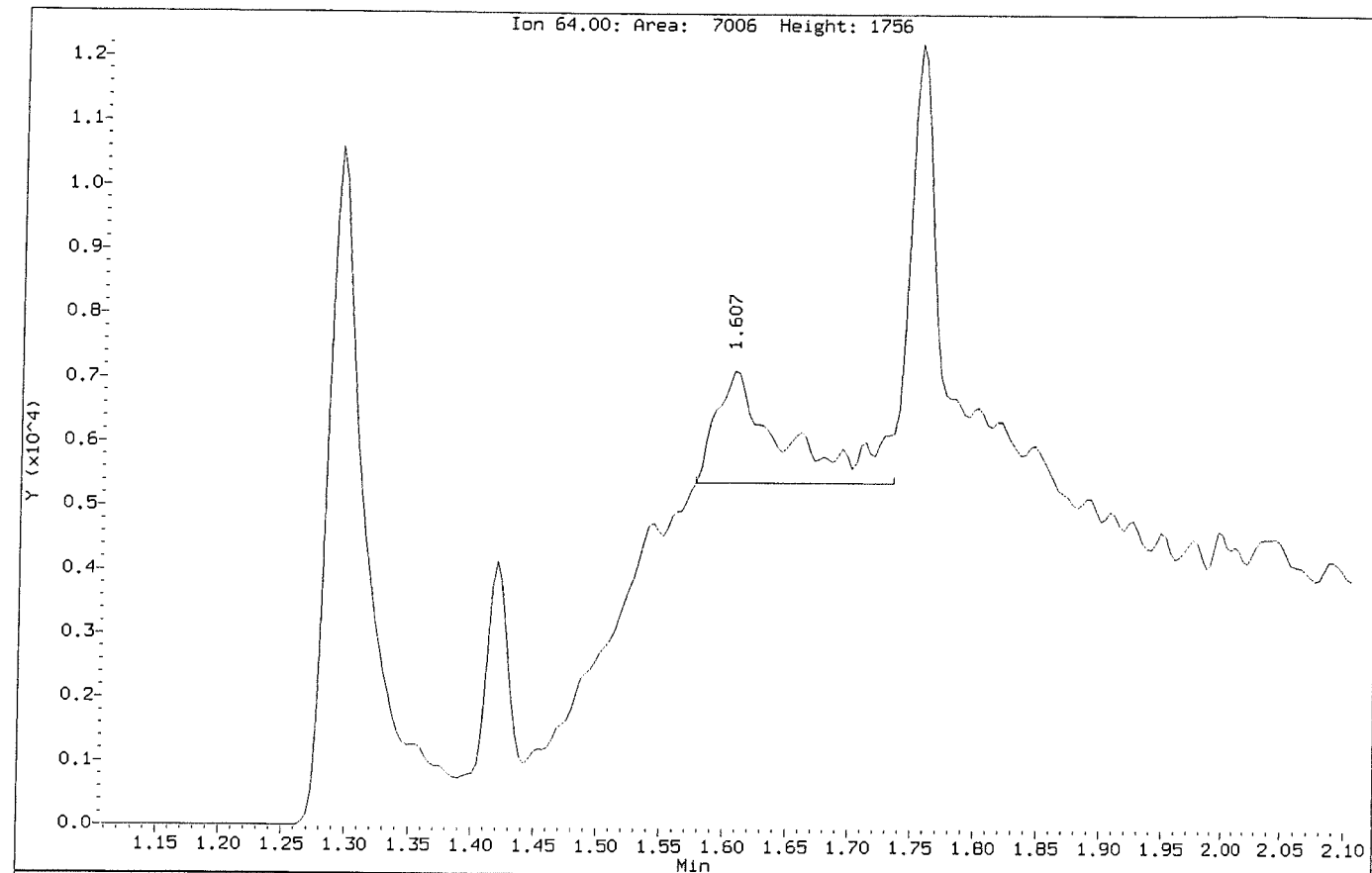
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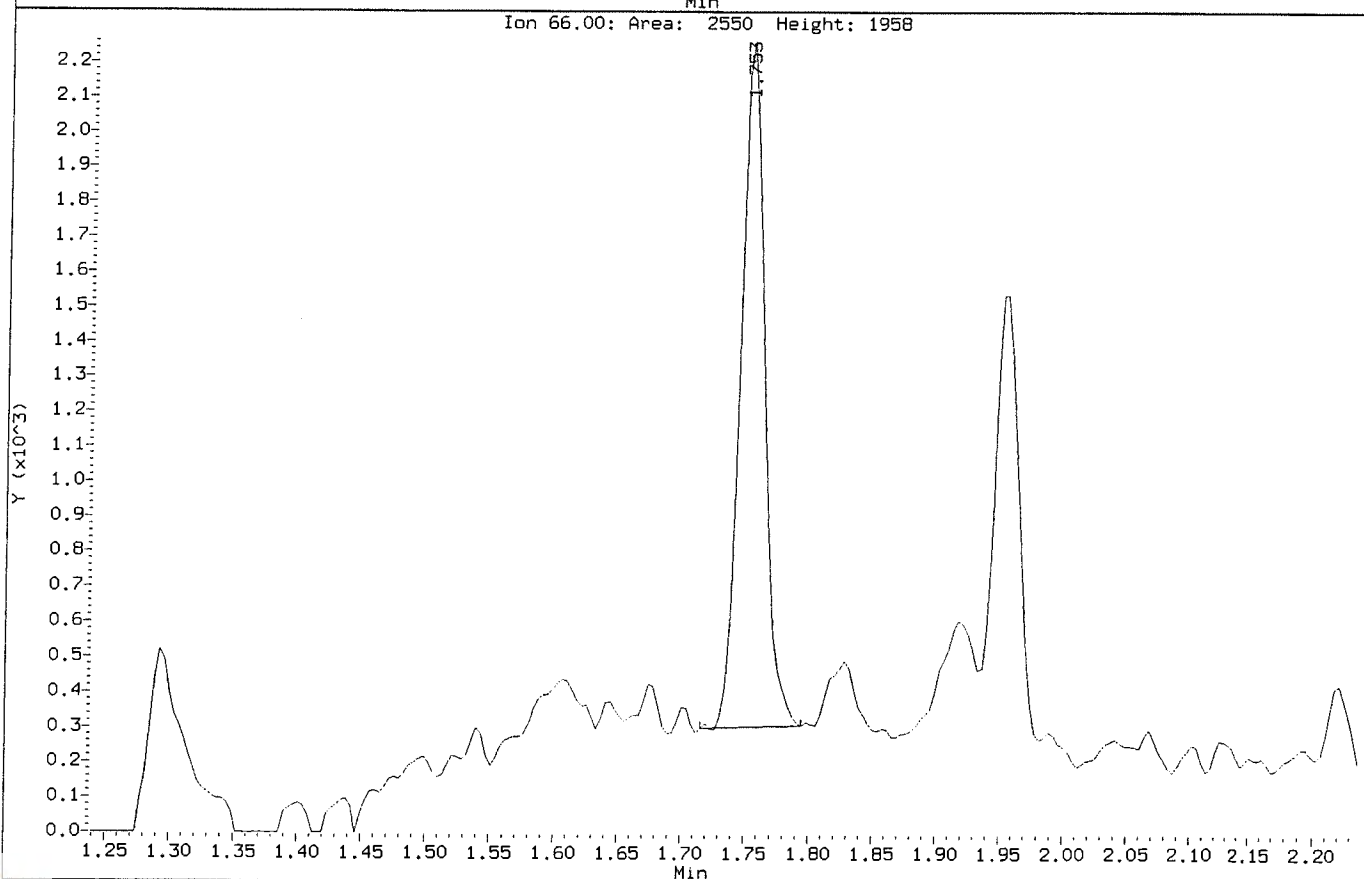
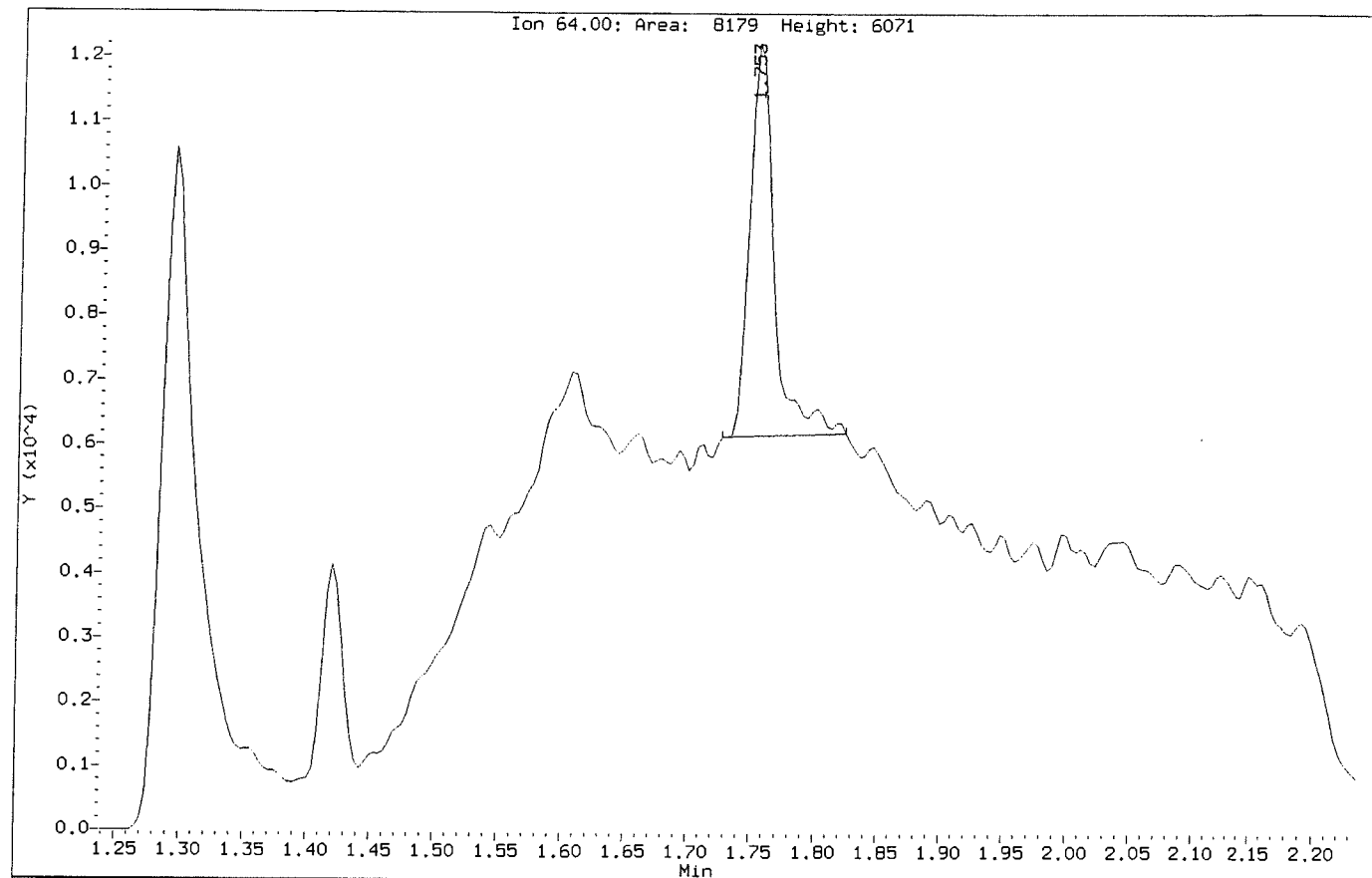
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Compound: Chloroethane
CAS Number: 75-00-3



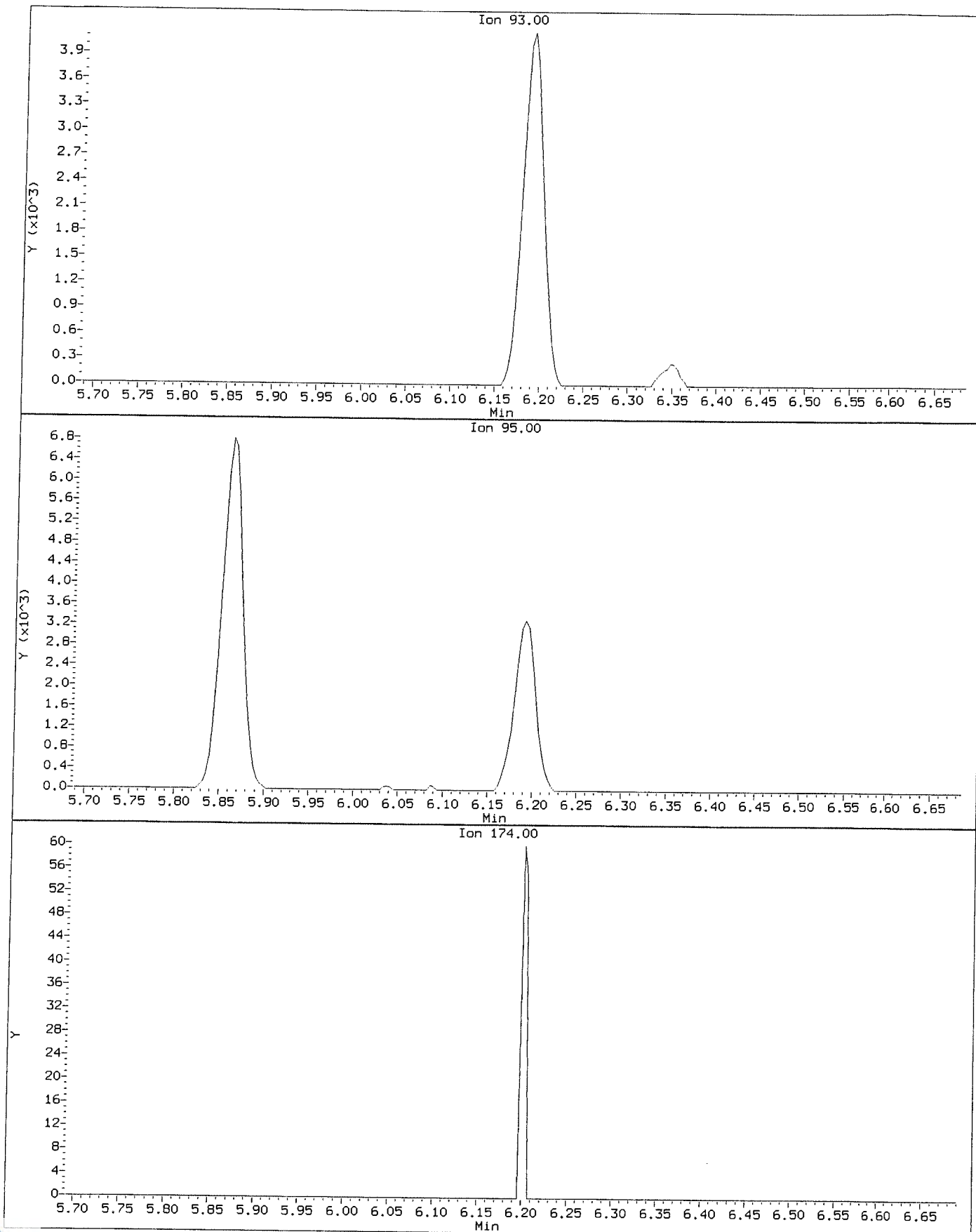
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Compound: Chloroethane
CAS Number: 75-00-3



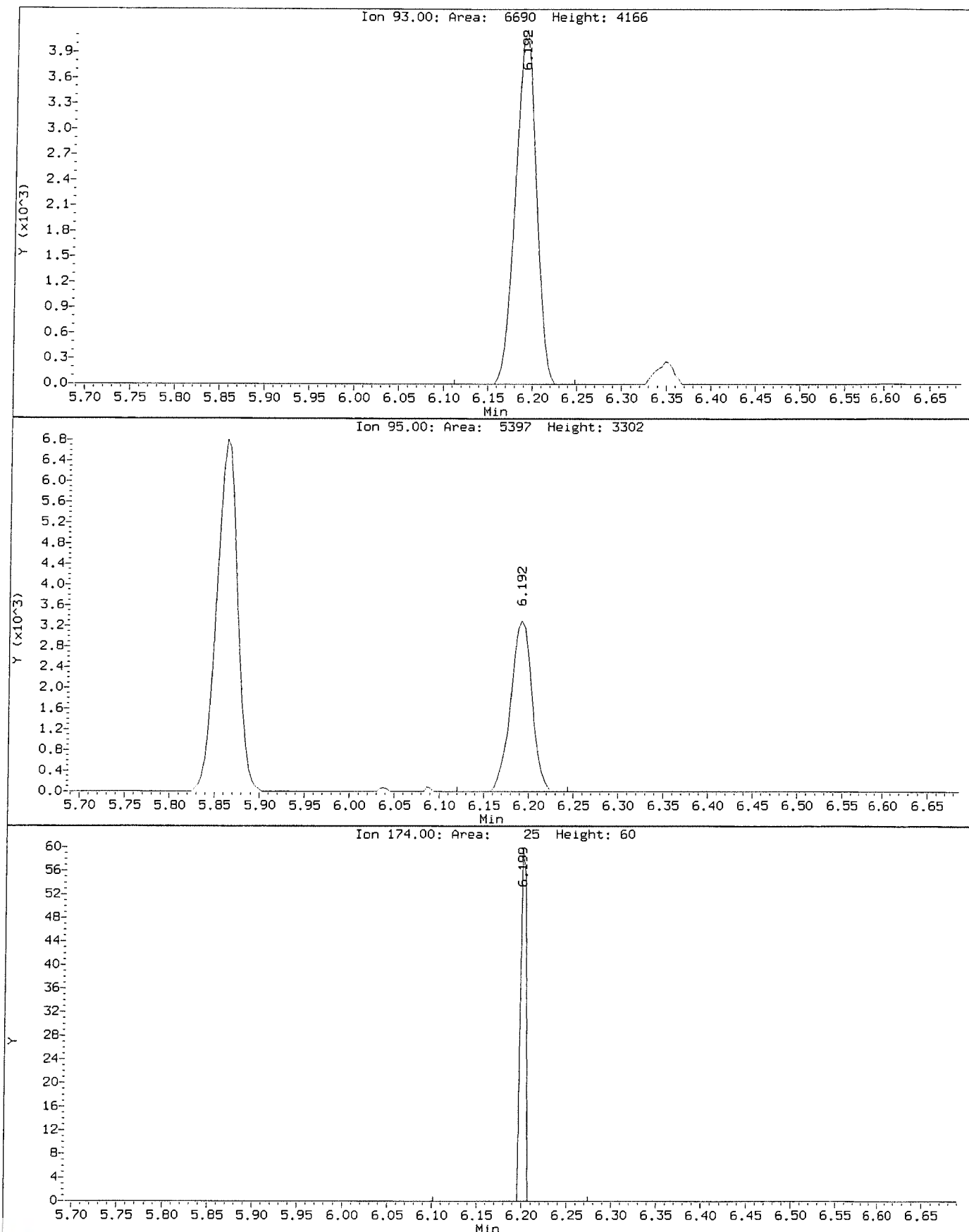
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Instrument: VOA9.1
Client Sample ID: VSTD002

Compound: Dibromomethane
CAS Number: 74-95-3



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Injection Date: 21-DEC-2018 15:28
Instrument: VOA9.1
Client Sample ID: VSTD002

Compound: Dibromomethane
CAS Number: 74-95-3



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 Report Date: 28-Jan-2019 11:25

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 Inj Date : 21-DEC-2018 15:52
 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\U181221.b\8260C.m
 Meth Date : 28-Jan-2019 11:25 VOA9.i Quant Type: ISTD
 Cal Date : 21-DEC-2018 15:28 Cal File: U122105.D
 Als bottle: 7 Calibration Sample, Level: 5
 Dil Factor: 1.00000
 Integrator: HP RTE Compound Sublist: LHAAP.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	AMOUNTS					ON-COL
			MASS	RT	EXP RT	REL RT	RESPONSE	
* 1 Pentafluorobenzene	168		4.897	4.897	(1.000)	423551	50.0000	
* 36 1,4-Difluorobenzene	114		5.625	5.625	(1.000)	811321	50.0000	
* 47 Chlorobenzene-d5	117		8.249	8.249	(1.000)	744062	50.0000	
* 70 1,4-Dichlorobenzene-d4	152		10.236	10.236	(1.000)	348718	50.0000	
\$ 30 Dibromofluoromethane	113		4.830	4.830	(0.986)	28568	5.00000	4.77(a)
\$ 35 1,2-Dichloroethane-d4	65		5.175	5.175	(1.057)	38943	5.00000	4.60(a)
\$ 48 Toluene-d8	98		6.989	6.989	(0.847)	117010	5.00000	4.52(a)
\$ 69 4-Bromofluorobenzene	95		9.257	9.257	(1.122)	42900	5.00000	4.60(a)
60 1,1,1,2-Tetrachloroethane	131		8.350	8.350	(1.012)	21878	5.00000	5.16
31 1,1,1-Trichloroethane	97		4.830	4.830	(0.986)	34906	5.00000	5.21
68 1,1,2,2-Tetrachloroethane	83		9.392	9.392	(0.918)	42397	5.00000	5.39
138 Freon TF	101		2.408	2.408	(0.492)	18593	5.00000	5.16
53 1,1,2-Trichloroethane	83		7.420	7.420	(0.900)	23788	5.00000	5.36
22 1,1-Dichloroethane	63		3.608	3.608	(0.737)	48869	5.00000	5.35
11 1,1-Dichloroethene	96		2.405	2.405	(0.491)	20607	5.00000	5.11
32 1,1-Dichloropropene	75		5.006	5.006	(0.890)	37139	5.00000	5.14
93 1,2,3-Trichlorobenzene	180		12.335	12.335	(1.205)	31113	5.00000	5.30
71 1,2,3-Trichloropropane	75		9.426	9.426	(0.921)	41282	5.00000	5.05
90 1,2,4-Trichlorobenzene	180		11.922	11.922	(1.165)	31564	5.00000	4.88(a)
79 1,2,4-Trimethylbenzene	105		9.943	9.943	(0.971)	98307	5.00000	5.38
89 1,2-Dibromo-3-Chloropropane	155		11.233	11.233	(1.097)	4931	5.00000	5.40
57 1,2-Dibromoethane	107		7.851	7.851	(0.952)	27067	5.00000	5.30



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181221.b\U122106.D Page 2
 Report Date: 28-Jan-2019 11:25

Compounds	QUANT SIG					AMOUNTS	
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/l)	ON-COL (ug/l)
88 1,2-Dichlorobenzene	146	10.569	10.569	(1.033)	55324	5.00000	5.34
33 1,2-Dichloroethane	62	5.254	5.254	(0.934)	41415	5.00000	5.01
42 1,2-Dichloropropane	63	6.082	6.082	(1.081)	30107	5.00000	5.25
75 1,3,5-Trimethylbenzene	105	9.624	9.624	(0.940)	93516	5.00000	5.33
83 1,3-Dichlorobenzene	146	10.179	10.179	(0.995)	54677	5.00000	5.28
54 1,3-Dichloropropane	76	7.563	7.563	(0.917)	52651	5.00000	5.51
84 1,4-Dichlorobenzene	146	10.254	10.254	(1.002)	57942	5.00000	5.30
26 2,2-Dichloropropane	77	4.275	4.275	(0.873)	27335	5.00000	4.97(a)
24 2-Butanone	43	4.343	4.343	(0.887)	29605	10.0000	8.51
76 2-Chlorotoluene	91	9.546	9.546	(0.933)	86842	5.00000	5.40
52 2-Hexanone	43	7.649	7.649	(0.927)	42401	10.0000	10.24
77 4-Chlorotoluene	91	9.639	9.639	(0.942)	100274	5.00000	5.40
82 p-Isopropyltoluene	119	10.209	10.209	(0.997)	97160	5.00000	5.26
45 4-Methyl-2-Pentanone	43	6.914	6.914	(0.838)	60636	10.0000	10.18
10 Acetone	43	2.487	2.487	(0.508)	19230	10.0000	8.95
37 Benzene	78	5.220	5.220	(0.928)	116462	5.00000	5.39
74 Bromobenzene	156	9.381	9.381	(0.917)	28350	5.00000	5.26
29 Bromochloromethane	128	4.556	4.556	(0.930)	13786	5.00000	3.48(a)
39 Bromodichloromethane	83	6.348	6.348	(1.129)	31104	5.00000	5.10
66 Bromoform	173	8.983	8.983	(1.089)	12962	5.00000	5.67(T)
6 Bromomethane	94	1.674	1.674	(0.342)	12245	5.00000	5.89
19 Carbon Disulfide	76	2.592	2.592	(0.529)	153199	10.0000	10.44
34 Carbon Tetrachloride	117	4.999	4.999	(0.889)	26439	5.00000	5.75
59 Chlorobenzene	112	8.275	8.275	(1.003)	75901	5.00000	5.30
7 Chloroethane	64	1.756	1.756	(0.359)	22172	5.00000	6.40(M)
28 Chloroform	83	4.657	4.657	(0.951)	48639	5.00000	5.53
3 Chloromethane	50	1.344	1.344	(0.274)	20682	5.00000	7.61
27 cis-1,2-Dichloroethene	96	4.290	4.290	(0.876)	29626	5.00000	5.32
46 cis-1,3-Dichloropropene	75	6.760	6.760	(1.202)	38403	5.00000	5.30
55 Dibromochloromethane	129	7.758	7.758	(0.940)	20846	5.00000	5.15
44 Dibromomethane	93	6.191	6.191	(1.101)	17610	5.00000	5.32(M)
2 Dichlorodifluoromethane	85	1.209	1.209	(0.247)	26580	5.00000	5.53
61 Ethylbenzene	106	8.372	8.372	(1.015)	38926	5.00000	5.30
91 Hexachlorobutadiene	225	12.065	12.065	(1.179)	11286	5.00000	4.56(a)
67 Isopropylbenzene	105	9.126	9.126	(1.106)	113805	5.00000	5.37
62 m,p-Xylenes	106	8.474	8.474	(1.027)	96419	10.0000	10.69
17 Methylene Chloride	84	2.877	2.877	(0.587)	31487	5.00000	4.95(a)
87 n-Butylbenzene	91	10.554	10.554	(1.031)	92969	5.00000	5.22
73 n-Propylbenzene	91	9.475	9.475	(0.926)	140607	5.00000	5.39
92 Naphthalene	128	12.132	12.132	(1.185)	91300	5.00000	4.86(a)
63 o-Xylene	106	8.811	8.811	(1.068)	47745	5.00000	5.25
81 sec-Butylbenzene	105	10.086	10.086	(0.985)	116270	5.00000	5.30
64 Styrene	104	8.826	8.826	(1.070)	80690	5.00000	5.34
78 tert-Butylbenzene	119	9.902	9.902	(0.967)	81608	5.00000	5.38
56 Tetrachloroethene	164	7.525	7.525	(0.912)	20249	5.00000	5.19
50 Toluene	91	7.049	7.049	(0.855)	120808	5.00000	5.45
20 trans-1,2-Dichloroethene	96	3.147	3.147	(0.643)	25998	5.00000	5.24
51 trans-1,3-Dichloropropene	75	7.259	7.259	(1.291)	30725	5.00000	5.37
38 Trichloroethene	130	5.865	5.865	(1.043)	27950	5.00000	5.36
8 Trichlorofluoromethane	101	1.958	1.958	(0.400)	37144	5.00000	5.87
5 Vinyl Chloride	62	1.422	1.422	(0.291)	29272	5.00000	5.76



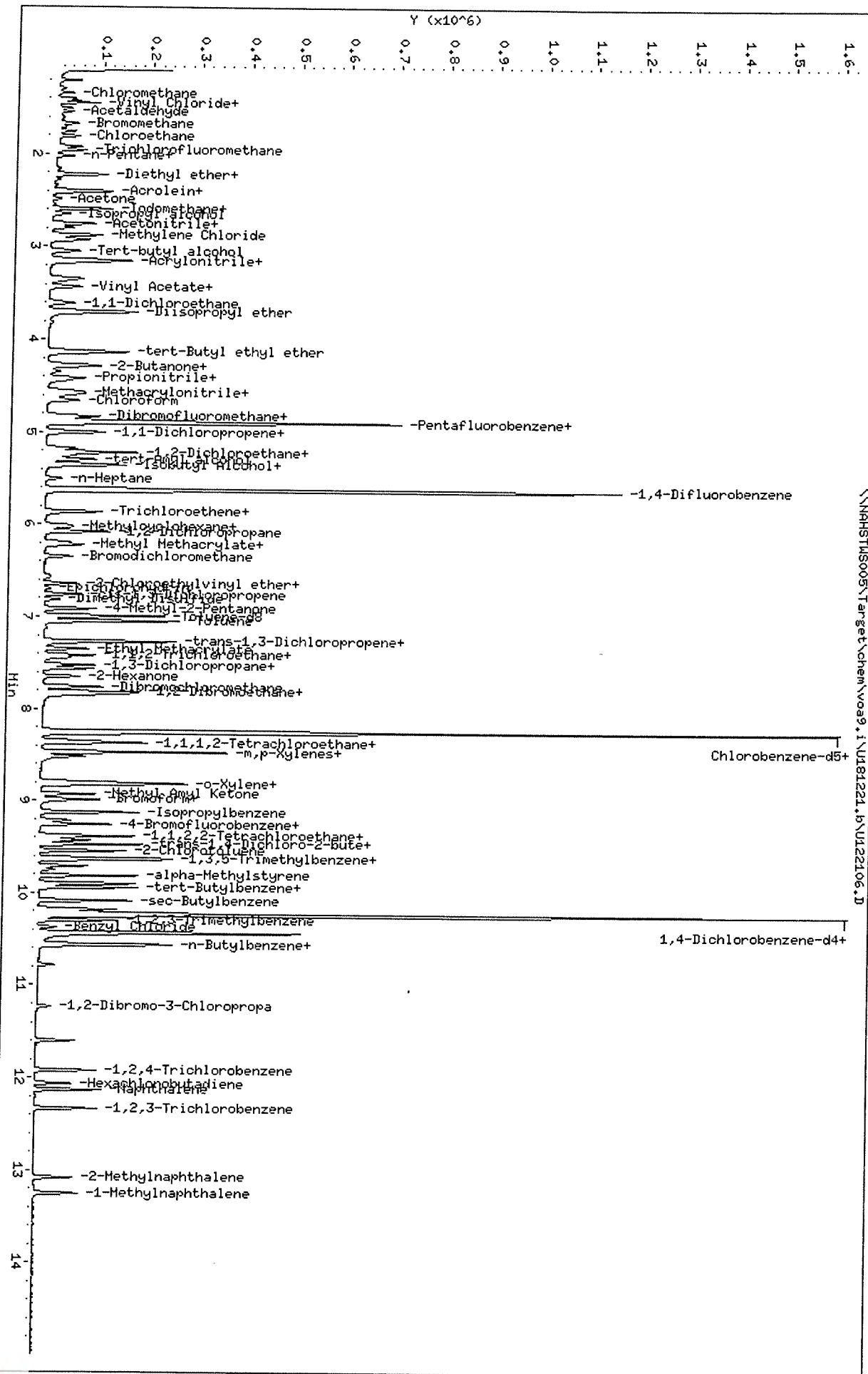
QC Flag Legend

- T - Target compound detected outside RT window.
- a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
- M - Compound response manually integrated.



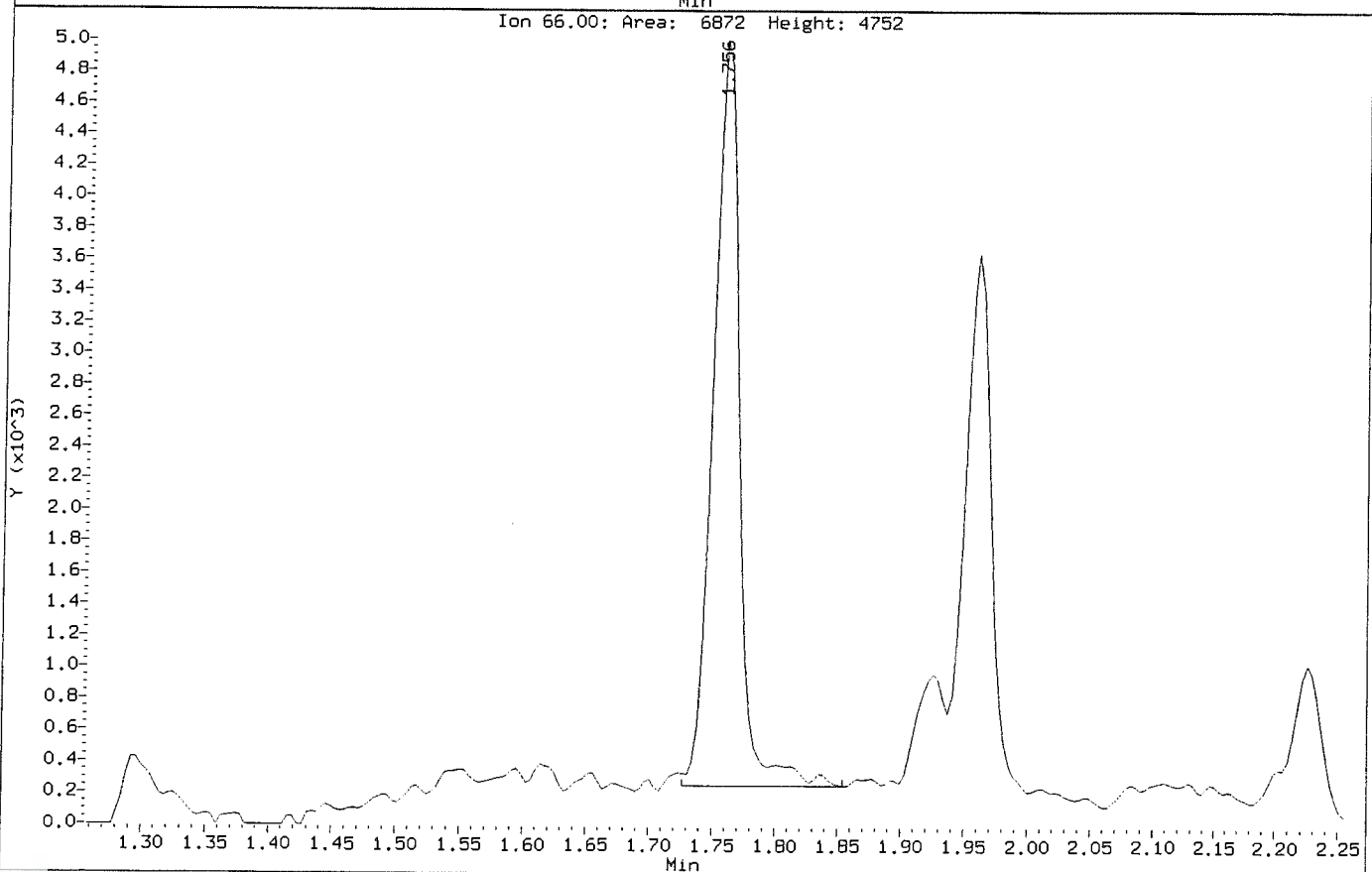
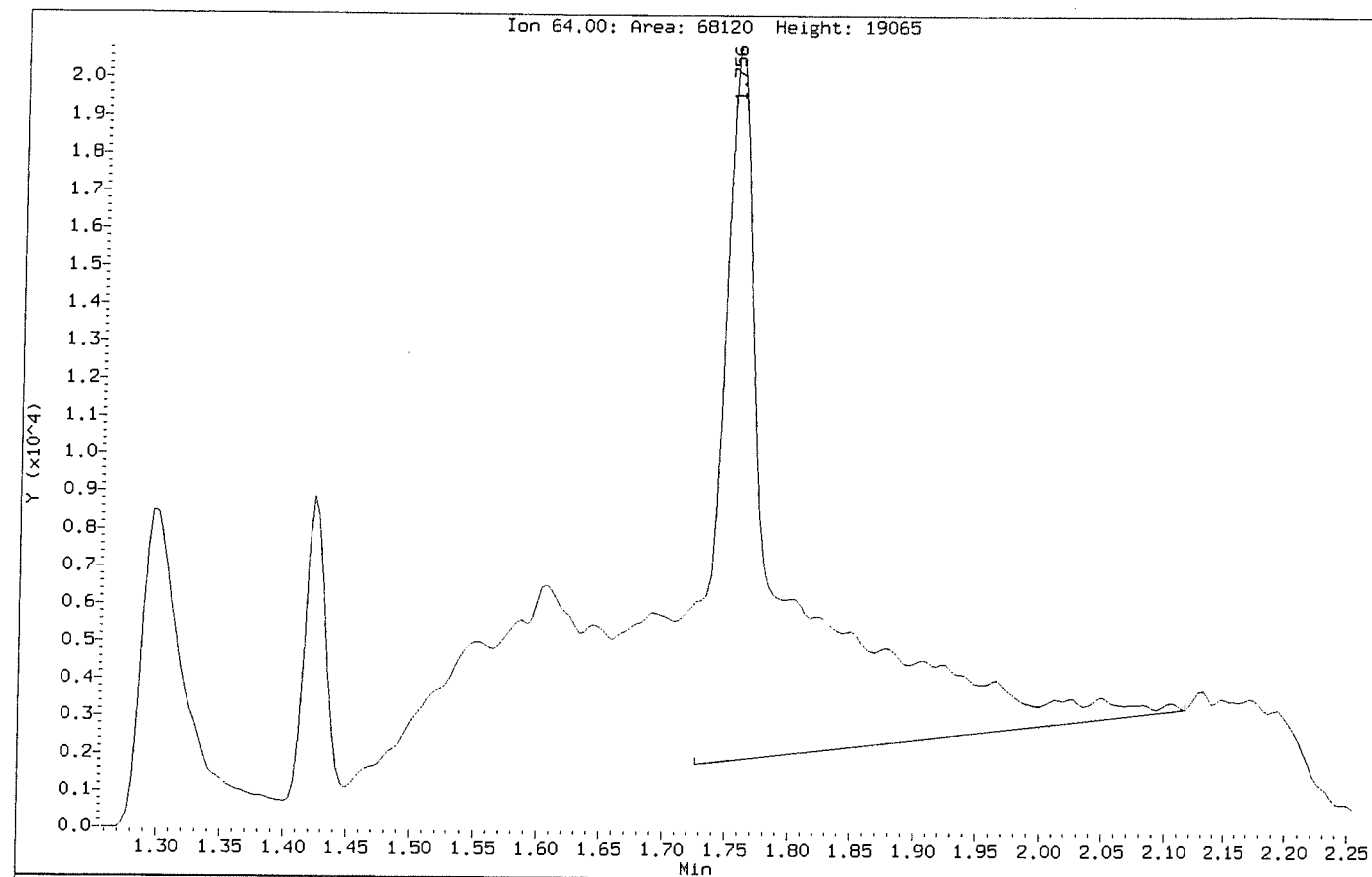
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 Date : 21-DEC-2018 15:52
 Client ID: VSTD005
 Sample Info: VSTD005;VSTD005;1;5;
 Purge Volume: 5.0
 Column phase: DB624

Instrument: VOA9,1
 Operator: PC
 Column diameter: 0.18



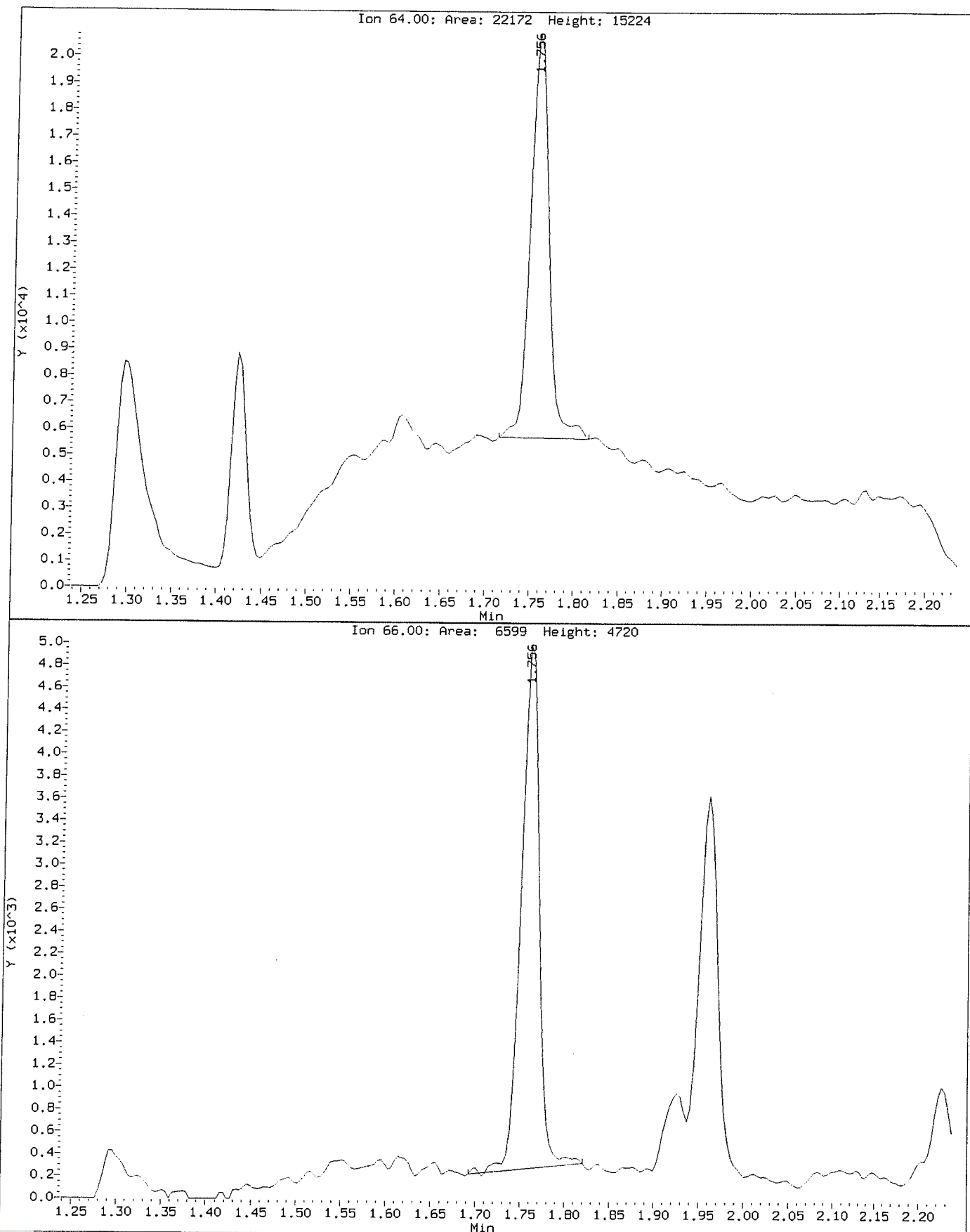
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Instrument: VOA9.i
Client Sample ID: VSTD005

Compound: Chloroethane
CAS Number: 75-00-3



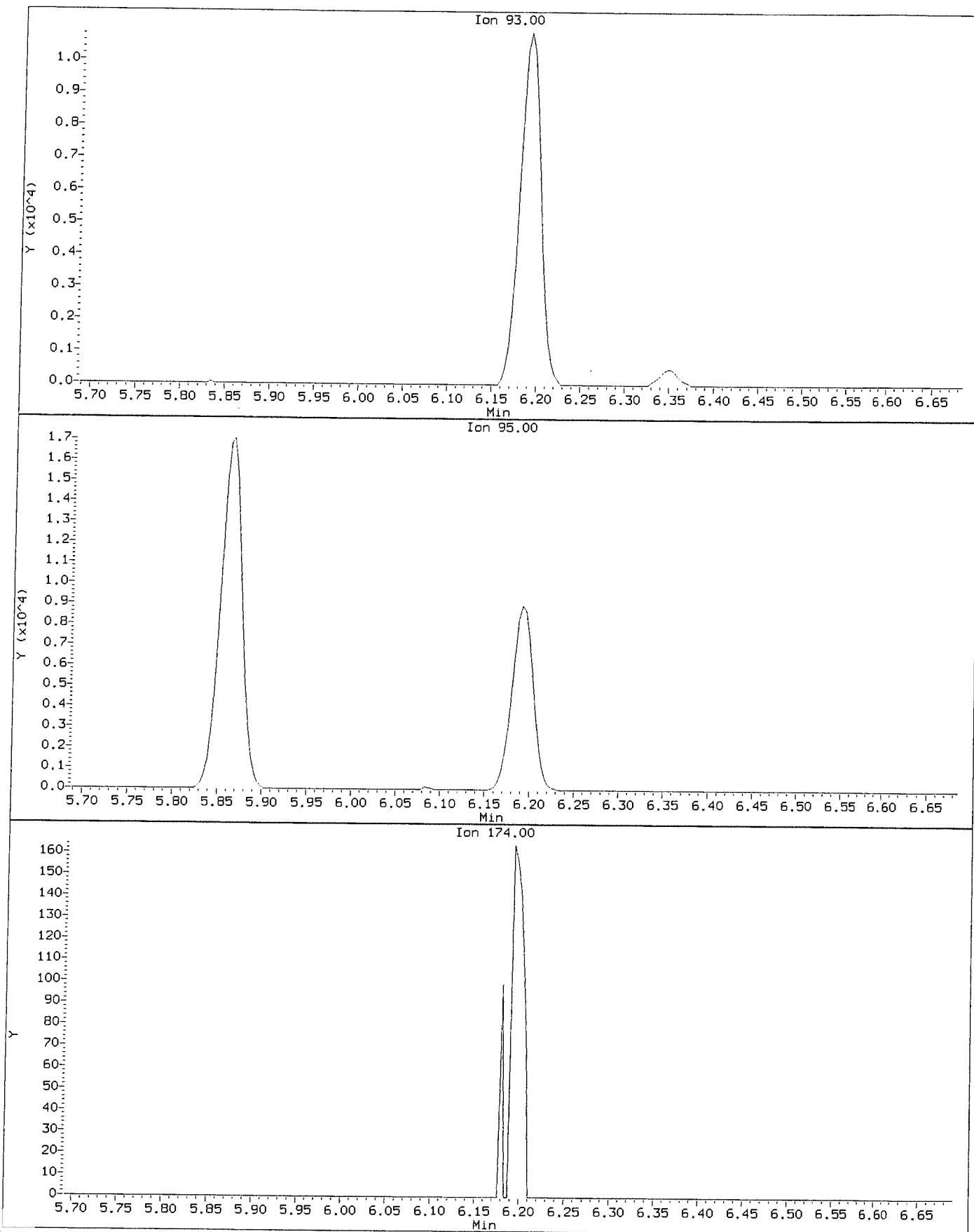
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Instrument: VOA9.i
Client Sample ID: VSTD005

Compound: Chloroethane
CAS Number: 75-00-3



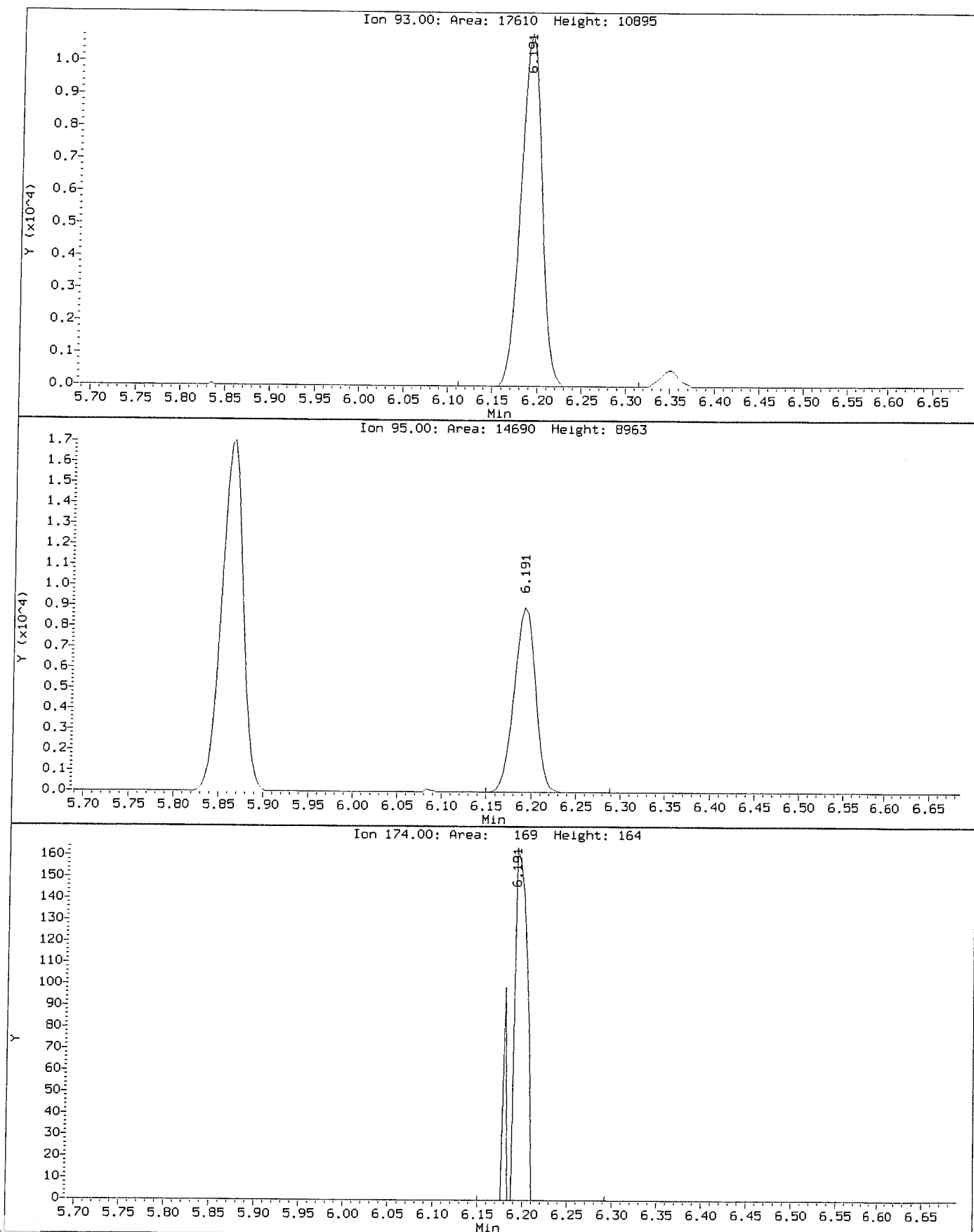
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Injection Date: 21-DEC-2018 15:52
Instrument: VOA9.i
Client Sample ID: VSTD005

Compound: Dibromomethane
CAS Number: 74-95-3



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181221.b\U122106.D
Injection Date: 21-DEC-2018 15:52
Instrument: VOA9.1
Client Sample ID: VSTD005

Compound: Dibromomethane
CAS Number: 74-95-3



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181221.b\U122107.D Page 1
 Report Date: 28-Jan-2019 11:25

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U181221.b\U122107.D
 Lab Smp Id: VSTD020 Client Smp ID: VSTD020
 Inj Date : 21-DEC-2018 16:17
 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\U181221.b\8260C.m
 Meth Date : 28-Jan-2019 11:25 VOA9.i Quant Type: ISTD
 Cal Date : 21-DEC-2018 15:52 Cal File: U122106.D
 Als bottle: 8 Calibration Sample, Level: 6
 Dil Factor: 1.00000
 Integrator: HP RTE Compound Sublist: LHAAP.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	AMOUNTS				CAL-AMT (ug/l)	ON-COL (ug/l)
			MASS	RT	EXP RT	REL RT		
* 1 Pentafluorobenzene	168		4.894	4.894	(1.000)	420221	50.0000	
* 36 1,4-Difluorobenzene	114		5.625	5.625	(1.000)	802033	50.0000	
* 47 Chlorobenzene-d5	117		8.249	8.249	(1.000)	739775	50.0000	
* 70 1,4-Dichlorobenzene-d4	152		10.236	10.236	(1.000)	359235	50.0000	
\$ 30 Dibromofluoromethane	113		4.830	4.830	(0.987)	98984	20.0000	20.47
\$ 35 1,2-Dichloroethane-d4	65		5.175	5.175	(1.057)	131494	20.0000	20.89
\$ 48 Toluene-d8	98		6.989	6.989	(0.847)	408521	20.0000	20.36
\$ 69 4-Bromofluorobenzene	95		9.257	9.257	(1.122)	153183	20.0000	20.23
60 1,1,1,2-Tetrachloroethane	131		8.350	8.350	(1.012)	89389	20.0000	19.40
31 1,1,1-Trichloroethane	97		4.826	4.826	(0.986)	135496	20.0000	20.42
68 1,1,2,2-Tetrachloroethane	83		9.392	9.392	(0.918)	163701	20.0000	20.23
138 Freon TF	101		2.401	2.401	(0.491)	68573	20.0000	19.19
53 1,1,2-Trichloroethane	83		7.421	7.421	(0.900)	89267	20.0000	20.25
22 1,1-Dichloroethane	63		3.604	3.604	(0.737)	184998	20.0000	20.44
11 1,1-Dichloroethene	96		2.397	2.397	(0.490)	75169	20.0000	18.81
32 1,1-Dichloropropene	75		5.003	5.003	(0.889)	140960	20.0000	19.75
93 1,2,3-Trichlorobenzene	180		12.335	12.335	(1.205)	126752	20.0000	19.12
71 1,2,3-Trichloropropane	75		9.426	9.426	(0.921)	166045	20.0000	19.73
90 1,2,4-Trichlorobenzene	180		11.923	11.923	(1.165)	129526	20.0000	19.47
79 1,2,4-Trimethylbenzene	105		9.943	9.943	(0.971)	388189	20.0000	20.64
89 1,2-Dibromo-3-Chloropropane	155		11.233	11.233	(1.097)	22196	20.0000	18.72
57 1,2-Dibromoethane	107		7.852	7.852	(0.952)	105981	20.0000	20.87



Compounds	QUANT SIG	AMOUNTS					
		MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/l)
88 1,2-Dichlorobenzene	146	10.569	10.569	(1.033)	207507	20.0000	19.45
33 1,2-Dichloroethane	62	5.250	5.250	(0.933)	149131	20.0000	20.20
42 1,2-Dichloropropane	63	6.079	6.079	(1.081)	113309	20.0000	19.99
75 1,3,5-Trimethylbenzene	105	9.625	9.625	(0.940)	375852	20.0000	20.81
83 1,3-Dichlorobenzene	146	10.180	10.180	(0.995)	209196	20.0000	19.61
54 1,3-Dichloropropane	76	7.563	7.563	(0.917)	193920	20.0000	20.42
84 1,4-Dichlorobenzene	146	10.255	10.255	(1.002)	216649	20.0000	19.26
26 2,2-Dichloropropane	77	4.275	4.275	(0.874)	106667	20.0000	19.55
24 2-Butanone	43	4.339	4.339	(0.887)	119433	40.0000	42.08
76 2-Chlorotoluene	91	9.546	9.546	(0.933)	335289	20.0000	20.25
52 2-Hexanone	43	7.649	7.649	(0.927)	177404	40.0000	43.12
77 4-Chlorotoluene	91	9.640	9.640	(0.942)	387760	20.0000	20.27
82 p-Isopropyltoluene	119	10.210	10.210	(0.997)	388512	20.0000	20.43
45 4-Methyl-2-Pentanone	43	6.914	6.914	(0.838)	250121	40.0000	42.25
10 Acetone	43	2.480	2.480	(0.507)	73380	40.0000	43.05
37 Benzene	78	5.216	5.216	(0.927)	428833	20.0000	20.09
74 Bromobenzene	156	9.381	9.381	(0.917)	109892	20.0000	19.79
29 Bromochloromethane	128	4.553	4.553	(0.930)	51515	20.0000	21.73
39 Bromodichloromethane	83	6.348	6.348	(1.129)	121760	20.0000	20.20
66 Bromoform	173	8.984	8.984	(1.089)	53922	20.0000	18.14(T)
6 Bromomethane	94	1.666	1.666	(0.341)	47148	20.0000	19.02
19 Carbon Disulfide	76	2.588	2.588	(0.529)	576362	40.0000	39.58
34 Carbon Tetrachloride	117	4.995	4.995	(0.888)	104210	20.0000	18.76
59 Chlorobenzene	112	8.275	8.275	(1.003)	284621	20.0000	20.02
7 Chloroethane	64	1.749	1.749	(0.357)	73150	20.0000	20.10(M)
28 Chloroform	83	4.654	4.654	(0.951)	178122	20.0000	20.43
3 Chloromethane	50	1.336	1.336	(0.273)	79075	20.0000	19.85
27 cis-1,2-Dichloroethene	96	4.287	4.287	(0.876)	114056	20.0000	20.64
46 cis-1,3-Dichloropropene	75	6.757	6.757	(1.201)	162454	20.0000	18.55
55 Dibromochloromethane	129	7.758	7.758	(0.940)	89836	20.0000	19.09
44 Dibromomethane	93	6.187	6.187	(1.100)	66878	20.0000	20.44
2 Dichlorodifluoromethane	85	1.201	1.201	(0.246)	98486	20.0000	19.34
61 Ethylbenzene	106	8.369	8.369	(1.015)	147187	20.0000	20.18
91 Hexachlorobutadiene	225	12.065	12.065	(1.179)	44482	20.0000	17.45
67 Isopropylbenzene	105	9.126	9.126	(1.106)	439477	20.0000	20.89
62 m,p-Xylenes	106	8.474	8.474	(1.027)	372108	40.0000	41.51
17 Methylene Chloride	84	2.870	2.870	(0.586)	109403	20.0000	20.36
87 n-Butylbenzene	91	10.554	10.554	(1.031)	362066	20.0000	19.73
73 n-Propylbenzene	91	9.475	9.475	(0.926)	551133	20.0000	20.53
92 Naphthalene	128	12.133	12.133	(1.185)	413229	20.0000	19.20
63 o-Xylene	106	8.811	8.811	(1.068)	188442	20.0000	20.84
81 sec-Butylbenzene	105	10.086	10.086	(0.985)	459645	20.0000	20.37
64 Styrene	104	8.823	8.823	(1.070)	323232	20.0000	21.51
78 tert-Butylbenzene	119	9.902	9.902	(0.967)	318726	20.0000	20.42
56 Tetrachloroethene	164	7.522	7.522	(0.912)	75128	20.0000	19.39
50 Toluene	91	7.046	7.046	(0.854)	451178	20.0000	20.50
20 trans-1,2-Dichloroethene	96	3.140	3.140	(0.642)	100515	20.0000	20.43
51 trans-1,3-Dichloropropene	75	7.259	7.259	(1.291)	135347	20.0000	18.26
38 Trichloroethene	130	5.861	5.861	(1.042)	101824	20.0000	19.76
8 Trichlorofluoromethane	101	1.951	1.951	(0.399)	130957	20.0000	19.29
5 Vinyl Chloride	62	1.419	1.419	(0.290)	111713	20.0000	19.39



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181221.b\U122107.D Page 3
Report Date: 28-Jan-2019 11:25

QC Flag Legend

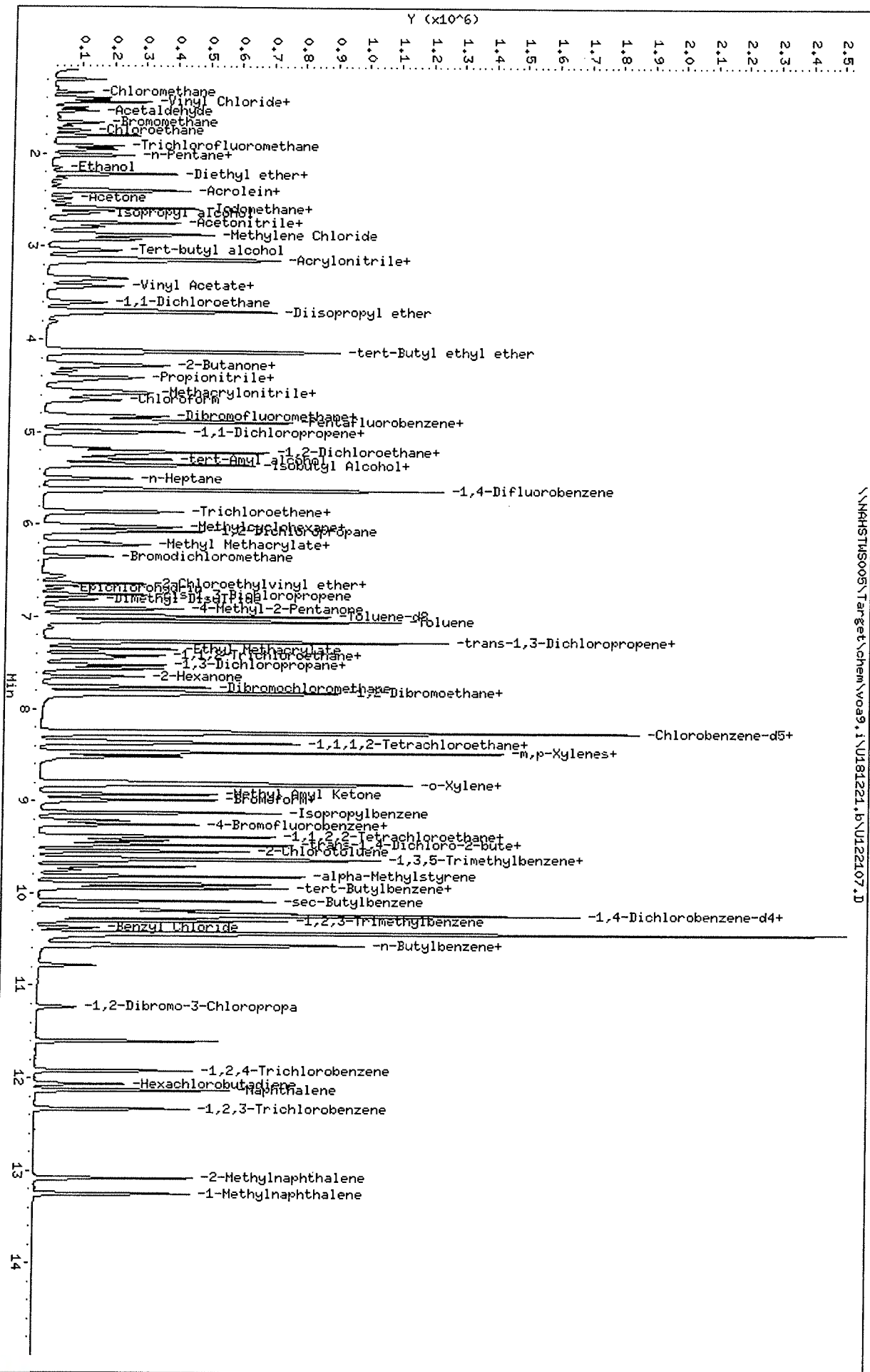
- T - Target compound detected outside RT window.
- M - Compound response manually integrated.



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Purge Volume: 5.0
Column phase: DB624

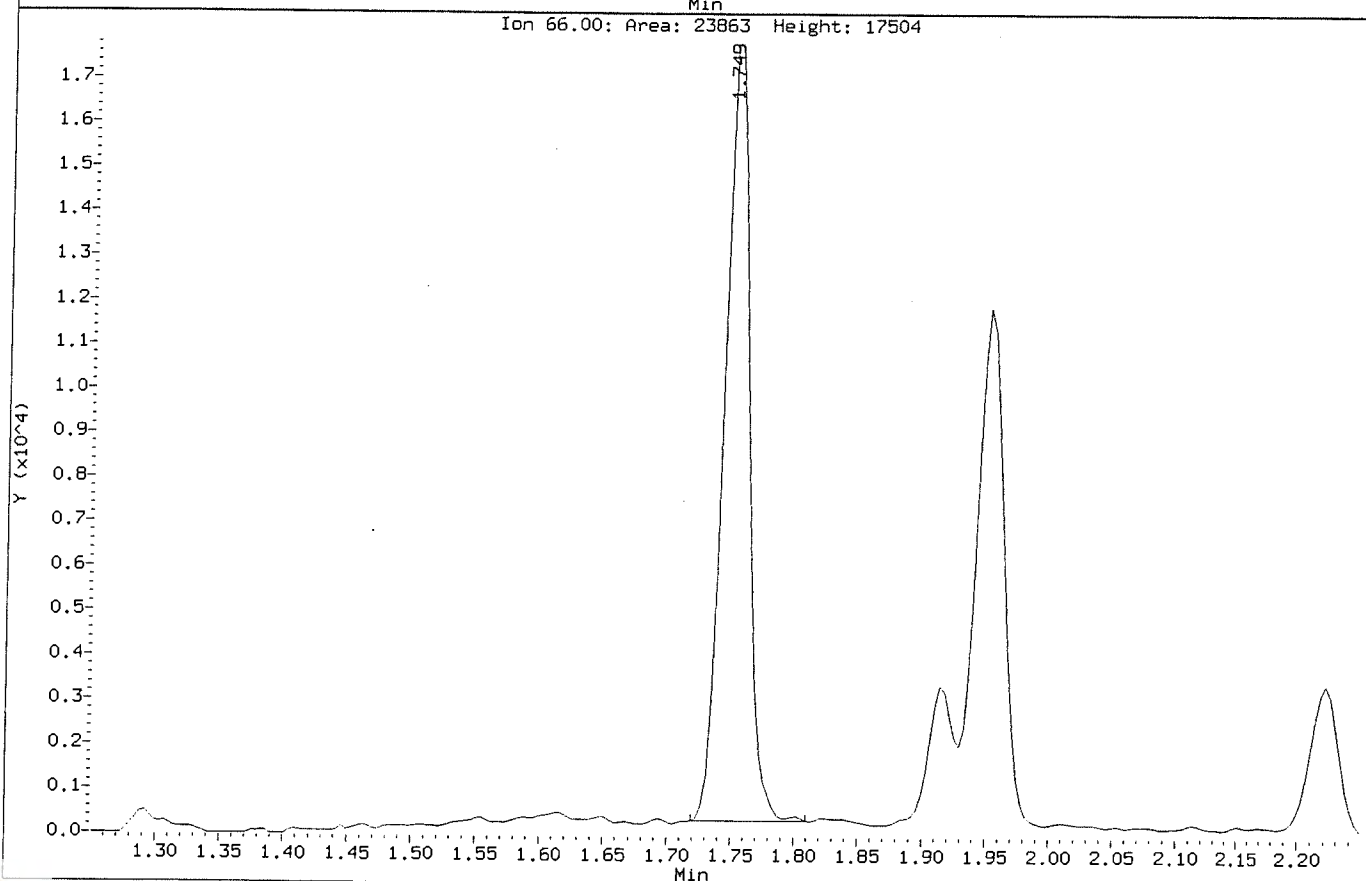
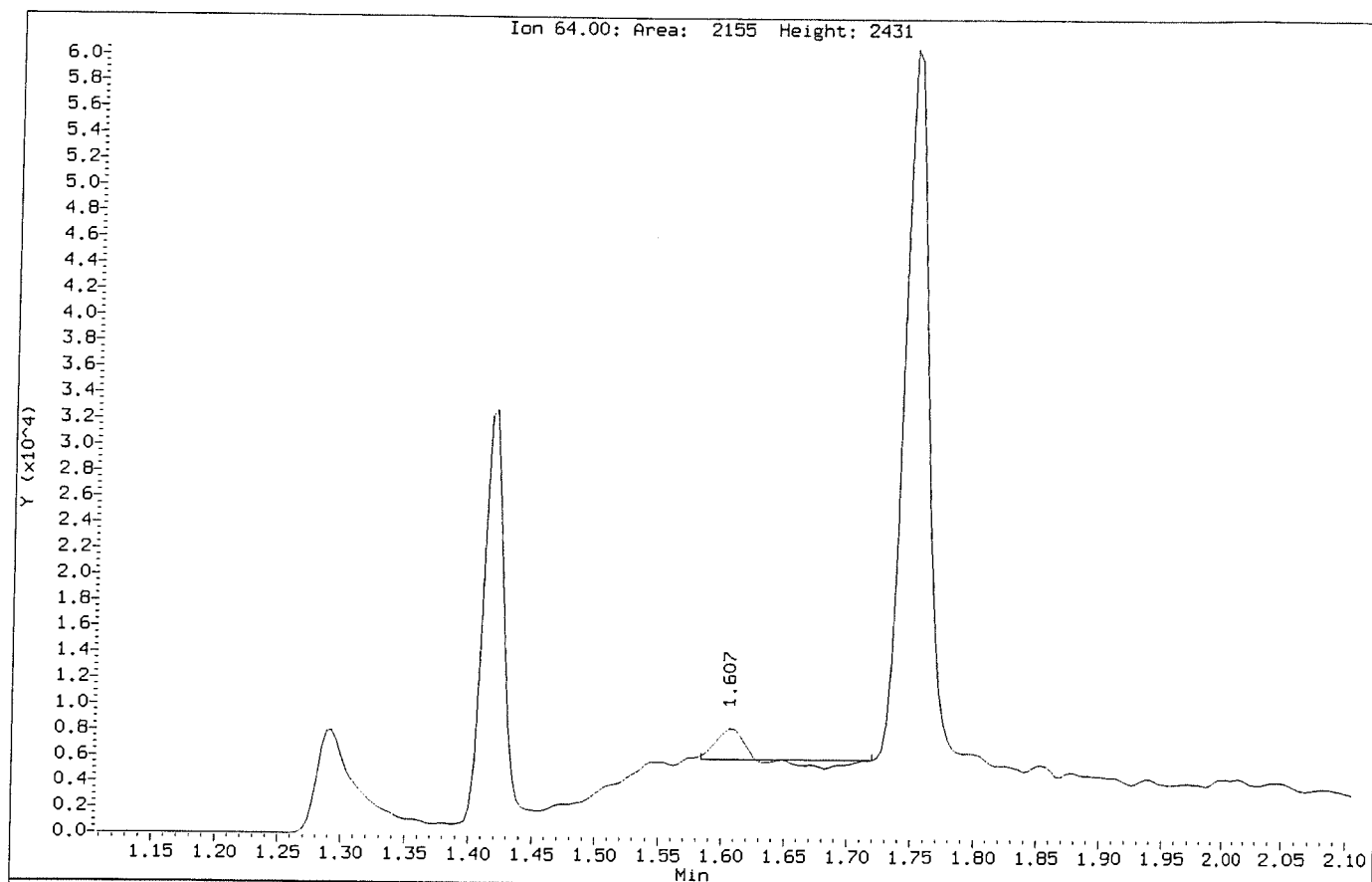
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Operator: PC
Column diameter: 0.18

\\NAHSTMS005\Target\chem\voa9.i\U181221.b\U122107.D



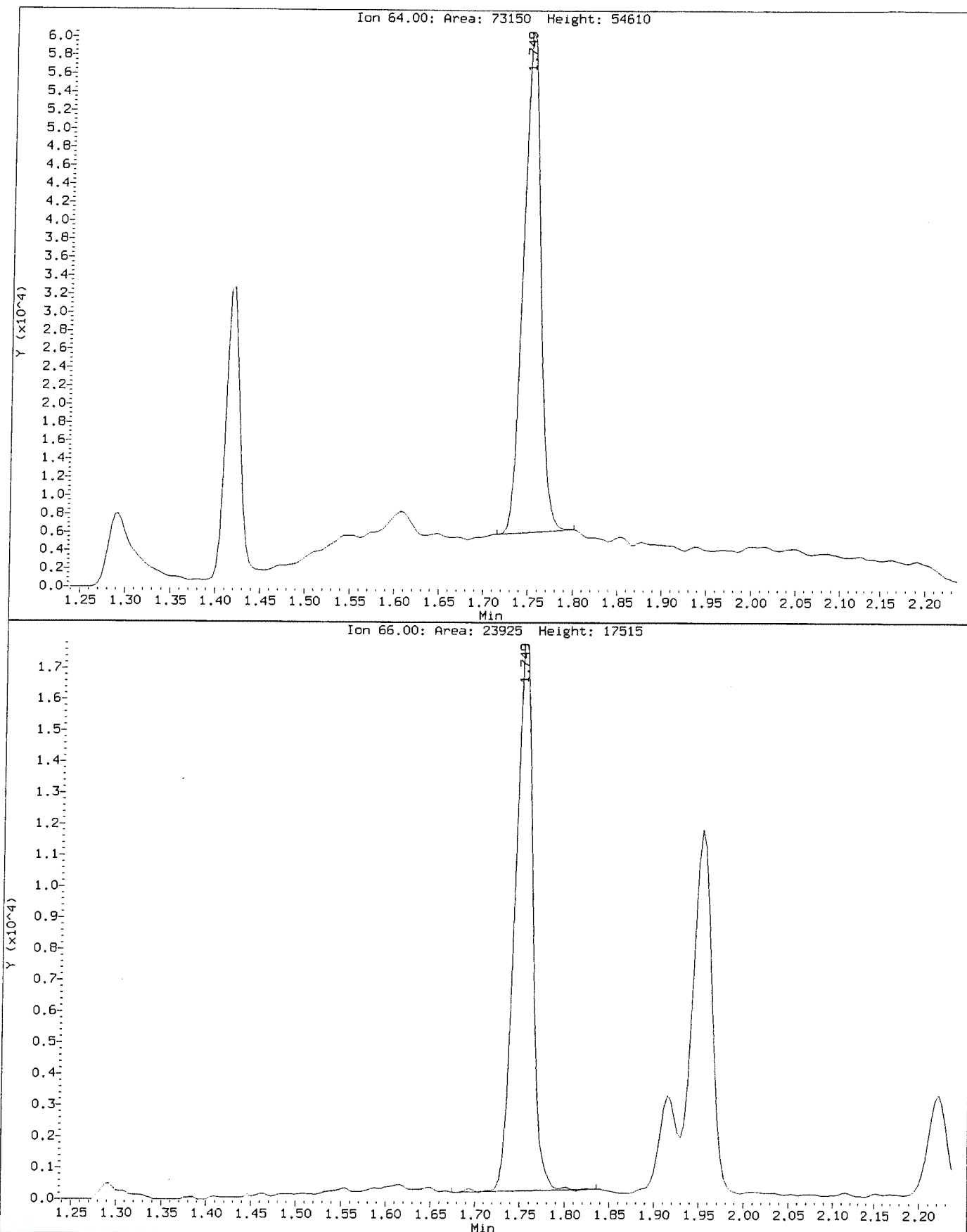
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Client Sample ID: VSTD020

Compound: Chloroethane
CAS Number: 75-00-3



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Injection Date: 21-DEC-2018 16:17
Instrument: VOA9.1
Client Sample ID: VSTD020

Compound: Chloroethane
CAS Number: 75-00-3



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181221.b\U122108.D Page 1
 Report Date: 28-Jan-2019 11:25

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U181221.b\U122108.D
 Lab Smp Id: VSTD050 Client Smp ID: VSTD050
 Inj Date : 21-DEC-2018 16:41
 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\U181221.b\8260C.m
 Meth Date : 28-Jan-2019 11:25 VOA9.i Quant Type: ISTD
 Cal Date : 21-DEC-2018 16:17 Cal File: U122107.D
 Als bottle: 9 Calibration Sample, Level: 7
 Dil Factor: 1.00000
 Integrator: HP RTE Compound Sublist: LHAAP.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	RT	EXP RT	REL RT	RESPONSE	AMOUNTS	
							CAL-AMT (ug/l)	ON-COL (ug/l)
* 1 Pentafluorobenzene	168		4.898	4.898	(1.000)	441118	50.0000	
* 36 1,4-Difluorobenzene	114		5.629	5.629	(1.000)	822734	50.0000	
* 47 Chlorobenzene-d5	117		8.249	8.249	(1.000)	764792	50.0000	
* 70 1,4-Dichlorobenzene-d4	152		10.236	10.236	(1.000)	367345	50.0000	
\$ 30 Dibromofluoromethane	113		4.834	4.834	(0.987)	245007	50.0000	50.34
\$ 35 1,2-Dichloroethane-d4	65		5.179	5.179	(1.057)	320796	50.0000	51.44
\$ 48 Toluene-d8	98		6.989	6.989	(0.847)	1010127	50.0000	51.19
\$ 69 4-Bromofluorobenzene	95		9.257	9.257	(1.122)	382581	50.0000	50.91
60 1,1,1,2-Tetrachloroethane	131		8.350	8.350	(1.012)	235446	50.0000	48.53
31 1,1,1-Trichloroethane	97		4.830	4.830	(0.986)	347757	50.0000	49.92
68 1,1,2,2-Tetrachloroethane	83		9.392	9.392	(0.918)	414173	50.0000	50.06
138 Freon TF	101		2.412	2.412	(0.493)	175022	50.0000	46.67
53 1,1,2-Trichloroethane	83		7.421	7.421	(0.900)	226615	50.0000	49.73
22 1,1-Dichloroethane	63		3.612	3.612	(0.737)	466899	50.0000	49.14
11 1,1-Dichloroethene	96		2.409	2.409	(0.492)	194403	50.0000	46.35
32 1,1-Dichloropropene	75		5.010	5.010	(0.890)	351519	50.0000	48.01
93 1,2,3-Trichlorobenzene	180		12.335	12.335	(1.205)	334600	50.0000	48.35
71 1,2,3-Trichloropropane	75		9.426	9.426	(0.921)	444407	50.0000	51.66
90 1,2,4-Trichlorobenzene	180		11.923	11.923	(1.165)	340316	50.0000	50.03
79 1,2,4-Trimethylbenzene	105		9.943	9.943	(0.971)	977610	50.0000	50.85
89 1,2-Dibromo-3-Chloropropane	155		11.233	11.233	(1.097)	61793	50.0000	48.48
57 1,2-Dibromoethane	107		7.852	7.852	(0.952)	266705	50.0000	50.81



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181221.b\U122108.D Page 2
 Report Date: 28-Jan-2019 11:25

Compounds	QUANT SIG					AMOUNTS	
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/l)	ON-COL (ug/l)
===== 88 1,2-Dichlorobenzene	146	10.569	10.569	(1.033)	529898	50.0000	48.58
33 1,2-Dichloroethane	62	5.258	5.258	(0.934)	376591	50.0000	50.81
42 1,2-Dichloropropane	63	6.082	6.082	(1.081)	287570	50.0000	49.46
75 1,3,5-Trimethylbenzene	105	9.625	9.625	(0.940)	947470	50.0000	51.32
83 1,3-Dichlorobenzene	146	10.180	10.180	(0.995)	529098	50.0000	48.50
54 1,3-Dichloropropane	76	7.563	7.563	(0.917)	491255	50.0000	50.05
84 1,4-Dichlorobenzene	146	10.255	10.255	(1.002)	544274	50.0000	47.32
26 2,2-Dichloropropane	77	4.279	4.279	(0.874)	280126	50.0000	48.93
24 2-Butanone	43	4.343	4.343	(0.887)	304044	100.000	105.52
76 2-Chlorotoluene	91	9.546	9.546	(0.933)	843166	50.0000	49.81
52 2-Hexanone	43	7.653	7.653	(0.928)	461299	100.000	108.47
77 4-Chlorotoluene	91	9.640	9.640	(0.942)	978873	50.0000	50.04
82 p-Isopropyltoluene	119	10.210	10.210	(0.997)	1003937	50.0000	51.64
45 4-Methyl-2-Pentanone	43	6.914	6.914	(0.838)	653234	100.000	106.75
10 Acetone	43	2.487	2.487	(0.508)	187964	100.000	109.42
37 Benzene	78	5.220	5.220	(0.927)	1084861	50.0000	49.55
74 Bromobenzene	156	9.381	9.381	(0.917)	280874	50.0000	49.48
29 Bromochloromethane	128	4.560	4.560	(0.931)	129496	50.0000	56.37
39 Bromodichloromethane	83	6.348	6.348	(1.128)	319701	50.0000	51.71
66 Bromoform	173	8.984	8.984	(1.089)	154855	50.0000	47.27(T)
6 Bromomethane	94	1.674	1.674	(0.342)	117780	50.0000	43.41
19 Carbon Disulfide	76	2.600	2.600	(0.531)	1460668	100.000	95.57
34 Carbon Tetrachloride	117	4.999	4.999	(0.888)	274507	50.0000	45.99
59 Chlorobenzene	112	8.275	8.275	(1.003)	718560	50.0000	48.89
7 Chloroethane	64	1.760	1.760	(0.359)	179707	50.0000	46.03(M)
28 Chloroform	83	4.661	4.661	(0.952)	453061	50.0000	49.52
3 Chloromethane	50	1.348	1.348	(0.275)	197328	50.0000	42.63
27 cis-1,2-Dichloroethene	96	4.290	4.290	(0.876)	286659	50.0000	49.43
46 cis-1,3-Dichloropropene	75	6.761	6.761	(1.201)	449225	50.0000	47.87
55 Dibromochloromethane	129	7.758	7.758	(0.940)	242061	50.0000	48.20
44 Dibromomethane	93	6.191	6.191	(1.100)	170556	50.0000	50.83
2 Dichlorodifluoromethane	85	1.213	1.213	(0.248)	248322	50.0000	45.79
61 Ethylbenzene	106	8.373	8.373	(1.015)	374921	50.0000	49.74
91 Hexachlorobutadiene	225	12.065	12.065	(1.179)	119140	50.0000	45.72
67 Isopropylbenzene	105	9.126	9.126	(1.106)	1109213	50.0000	51.00
62 m,p-Xylenes	106	8.474	8.474	(1.027)	936911	100.000	101.11
17 Methylene Chloride	84	2.877	2.877	(0.587)	274258	50.0000	50.31
87 n-Butylbenzene	91	10.558	10.558	(1.031)	931396	50.0000	49.64
73 n-Propylbenzene	91	9.475	9.475	(0.926)	1393780	50.0000	50.77
92 Naphthalene	128	12.133	12.133	(1.185)	1107938	50.0000	49.53
63 o-Xylene	106	8.811	8.811	(1.068)	475748	50.0000	50.89
81 sec-Butylbenzene	105	10.086	10.086	(0.985)	1169025	50.0000	50.67
64 Styrene	104	8.826	8.826	(1.070)	828798	50.0000	53.36
78 tert-Butylbenzene	119	9.902	9.902	(0.967)	807157	50.0000	50.58
56 Tetrachloroethene	164	7.525	7.525	(0.912)	186057	50.0000	46.46
50 Toluene	91	7.049	7.049	(0.855)	1138194	50.0000	50.03
20 trans-1,2-Dichloroethene	96	3.147	3.147	(0.643)	248845	50.0000	48.19
51 trans-1,3-Dichloropropene	75	7.263	7.263	(1.290)	381258	50.0000	47.27
38 Trichloroethene	130	5.865	5.865	(1.042)	255628	50.0000	48.36
8 Trichlorofluoromethane	101	1.962	1.962	(0.401)	330010	50.0000	45.44
5 Vinyl Chloride	62	1.426	1.426	(0.291)	283791	50.0000	45.57



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181221.b\U122108.D Page 3
Report Date: 28-Jan-2019 11:25

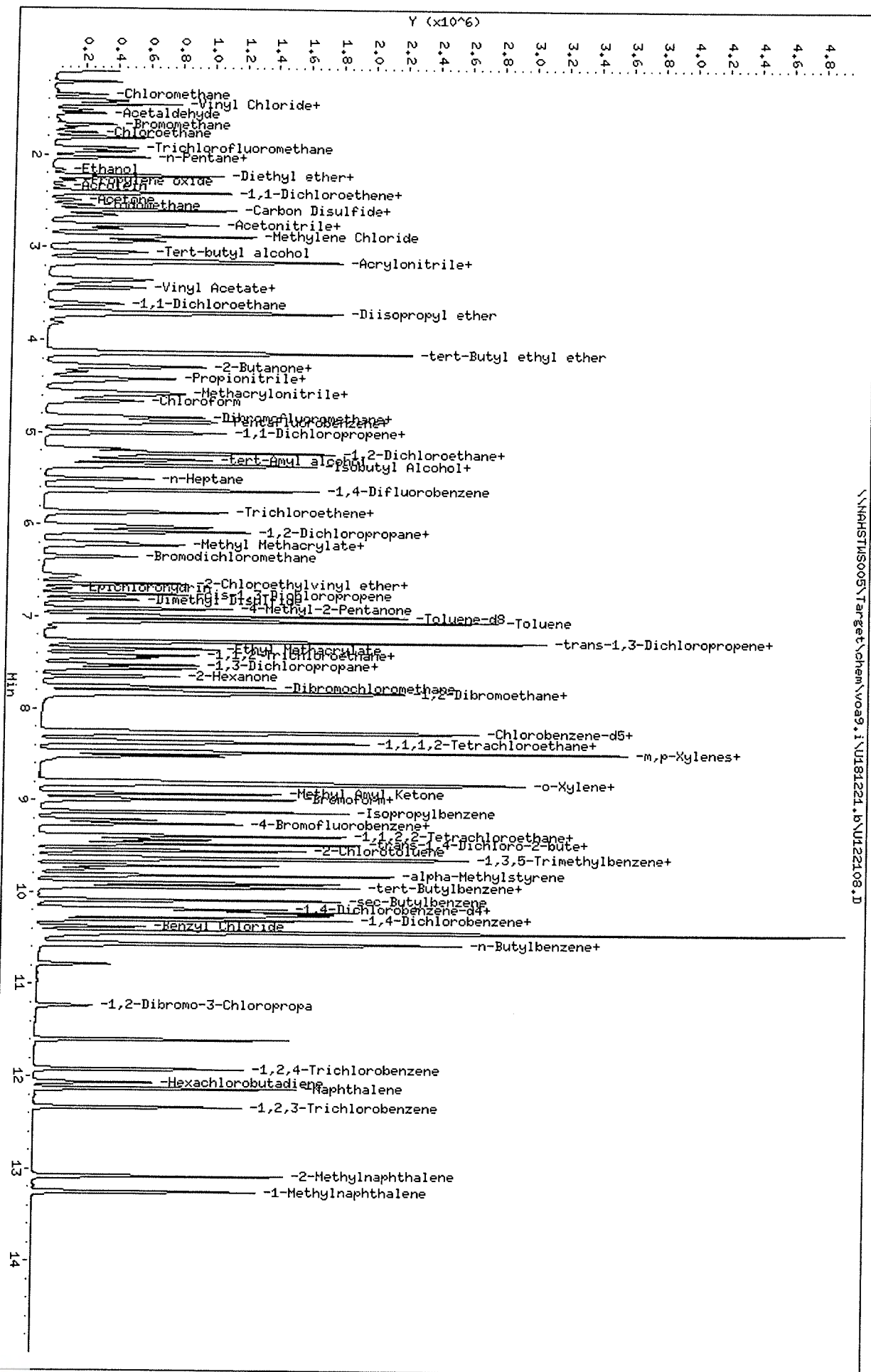
QC Flag Legend

- T - Target compound detected outside RT window.
- M - Compound response manually integrated.



Data File: \\NAHSTMS005\Target\chem\voa99.i\U181221.b\U122108.D
Date : 21-DEC-2018 16:41
Client ID: VSTD0050
Sample Info: VSTD0050,VSTD0050;1;7;
Purge Volume: 5.0
Column phase: DB624

Instrument: V049.i
Operator: PC
Column diameter: 0.18

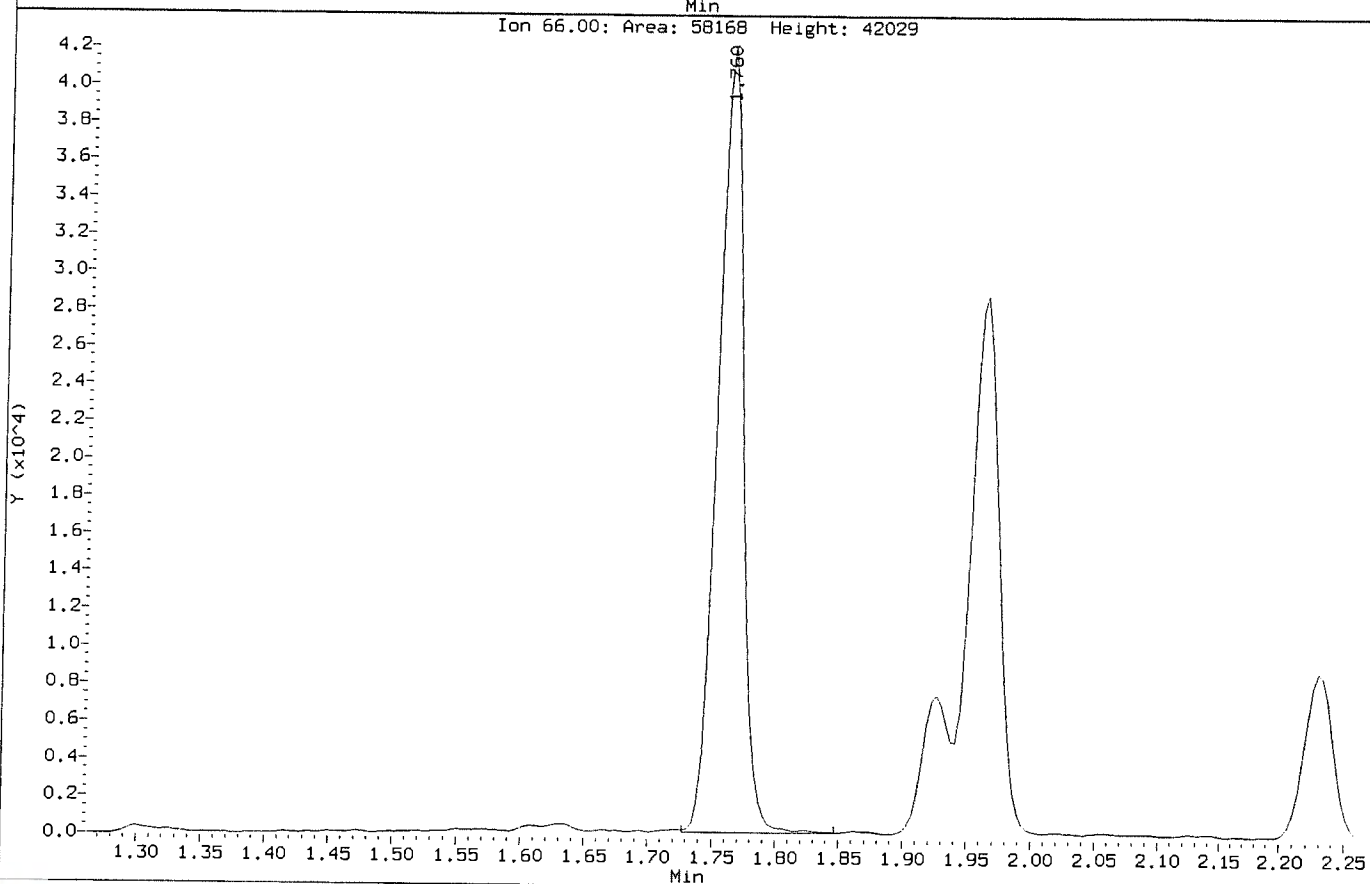
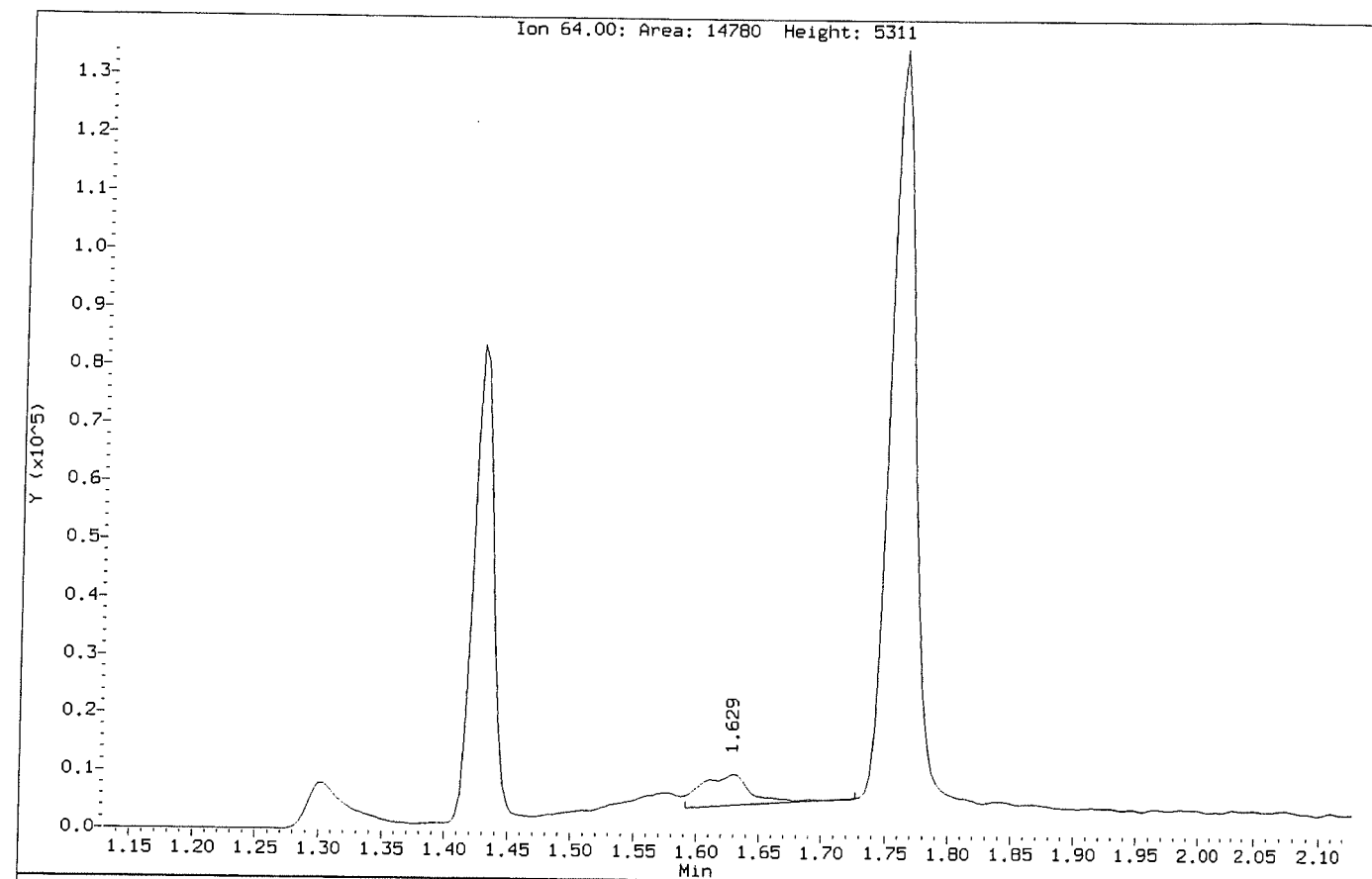


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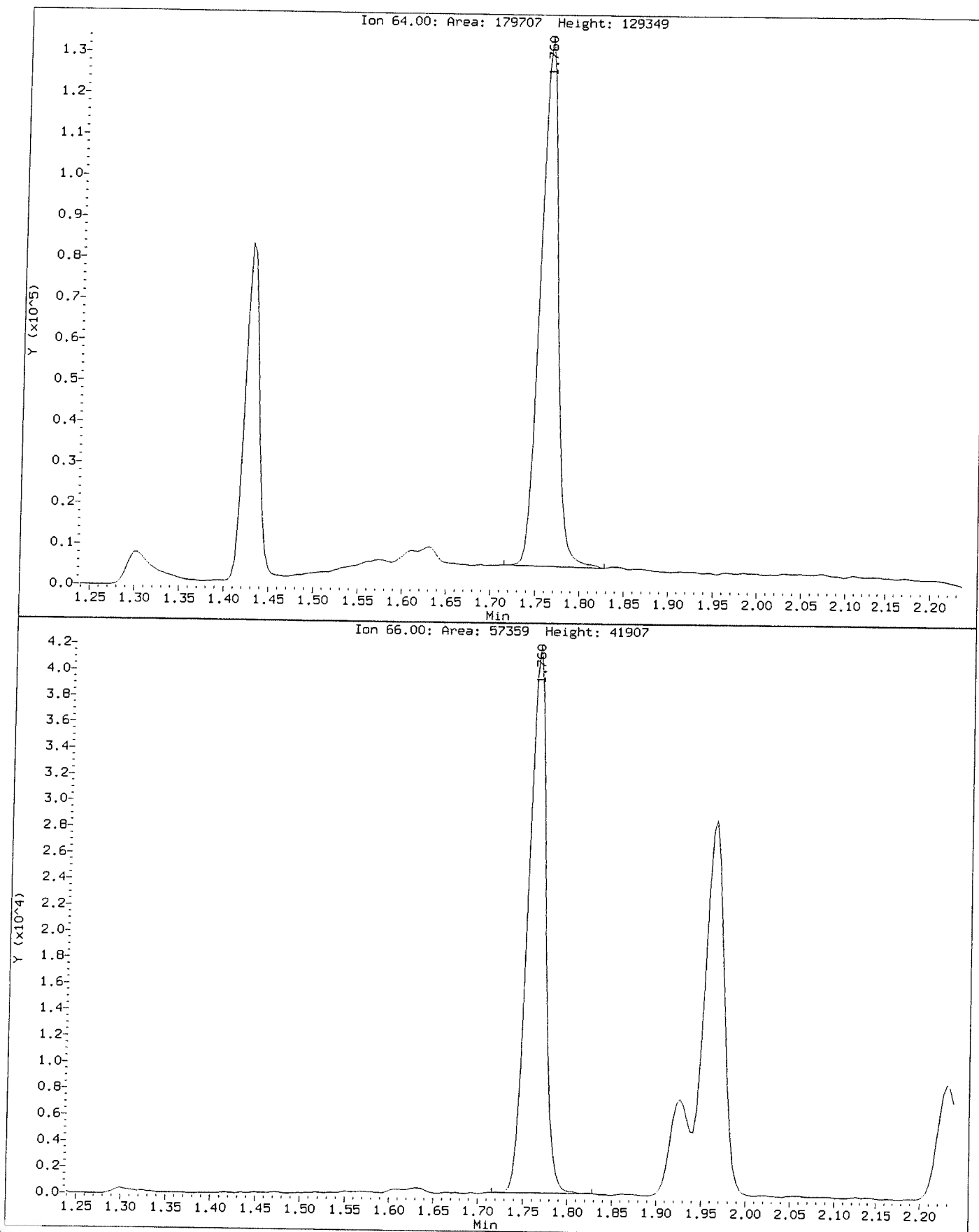
Data File: \\NAHSTWS005\Target\chem\voa9.i\U181221.b\Before\U122108.D
Injection Date: 21-DEC-2018 16:41
Instrument: VOA9.i
Client Sample ID: VSTD050

Compound: Chloroethane
CAS Number: 75-00-3



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181221.b\U122108.D
Injection Date: 21-DEC-2018 16:41
Instrument: VOA9.i
Client Sample ID: VSTD050

Compound: Chloroethane
CAS Number: 75-00-3



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181221.b\U122109.D Page 1
 Report Date: 28-Jan-2019 11:25

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U181221.b\U122109.D
 Lab Smp Id: VSTD100 Client Smp ID: VSTD100
 Inj Date : 21-DEC-2018 17:06
 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\U181221.b\8260C.m
 Meth Date : 28-Jan-2019 11:25 VOA9.i Quant Type: ISTD
 Cal Date : 21-DEC-2018 16:41 Cal File: U122108.D
 Als bottle: 10 Calibration Sample, Level: 8
 Dil Factor: 1.00000
 Integrator: HP RTE Compound Sublist: LHAAP.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				AMOUNTS		
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/l)	ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.897	4.897	(1.000)	443466	50.0000	
* 36 1,4-Difluorobenzene	114	5.625	5.625	(1.000)	822102	50.0000	
* 47 Chlorobenzene-d5	117	8.252	8.252	(1.000)	772888	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.235	10.235	(1.000)	368944	50.0000	
\$ 30 Dibromofluoromethane	113	4.830	4.830	(0.986)	495628	100.000	102.84
\$ 35 1,2-Dichloroethane-d4	65	5.175	5.175	(1.057)	635081	100.000	103.40
\$ 48 Toluene-d8	98	6.989	6.989	(0.847)	2029223	100.000	103.52
\$ 69 4-Bromofluorobenzene	95	9.257	9.257	(1.122)	764798	100.000	102.11
60 1,1,1,2-Tetrachloroethane	131	8.350	8.350	(1.012)	493177	100.000	99.96
31 1,1,1-Trichloroethane	97	4.830	4.830	(0.986)	750490	100.000	107.17
68 1,1,2,2-Tetrachloroethane	83	9.392	9.392	(0.918)	804056	100.000	96.77
138 Freon TF	101	2.404	2.404	(0.491)	394668	100.000	104.68
53 1,1,2-Trichloroethane	83	7.420	7.420	(0.899)	455612	100.000	98.94
22 1,1-Dichloroethane	63	3.604	3.604	(0.736)	956686	100.000	100.17
11 1,1-Dichloroethene	96	2.401	2.401	(0.490)	425292	100.000	100.86
32 1,1-Dichloropropene	75	5.006	5.006	(0.890)	748488	100.000	102.32
93 1,2,3-Trichlorobenzene	180	12.335	12.335	(1.205)	694931	100.000	99.32
71 1,2,3-Trichloropropane	75	9.430	9.430	(0.921)	901833	100.000	104.38
90 1,2,4-Trichlorobenzene	180	11.926	11.926	(1.165)	724973	100.000	106.13
79 1,2,4-Trimethylbenzene	105	9.943	9.943	(0.971)	2020622	100.000	104.65
89 1,2-Dibromo-3-Chloropropane	155	11.233	11.233	(1.097)	125814	100.000	96.80
57 1,2-Dibromoethane	107	7.851	7.851	(0.951)	533692	100.000	100.62



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181221.b\U122109.D Page 2
 Report Date: 28-Jan-2019 11:25

Compounds	QUANT SIG					AMOUNTS	
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/l)	ON-COL (ug/l)
88 1,2-Dichlorobenzene	146	10.573	10.573	(1.033)	1079683	100.000	98.55
33 1,2-Dichloroethane	62	5.253	5.253	(0.934)	747337	100.000	101.64
42 1,2-Dichloropropane	63	6.082	6.082	(1.081)	587293	100.000	101.10
75 1,3,5-Trimethylbenzene	105	9.628	9.628	(0.941)	1981203	100.000	106.84
83 1,3-Dichlorobenzene	146	10.179	10.179	(0.995)	1088889	100.000	99.39
54 1,3-Dichloropropane	76	7.563	7.563	(0.916)	974518	100.000	98.25
84 1,4-Dichlorobenzene	146	10.258	10.258	(1.002)	1115296	100.000	96.55
26 2,2-Dichloropropane	77	4.275	4.275	(0.873)	606051	100.000	105.30
24 2-Butanone	43	4.339	4.339	(0.886)	587152	200.000	204.95(A)
76 2-Chlorotoluene	91	9.549	9.549	(0.933)	1714248	100.000	100.84
52 2-Hexanone	43	7.649	7.649	(0.927)	912444	200.000	212.30(A)
77 4-Chlorotoluene	91	9.639	9.639	(0.942)	1995109	100.000	101.56
82 p-Isopropyltoluene	119	10.209	10.209	(0.997)	2107729	100.000	107.96
45 4-Methyl-2-Pentanone	43	6.914	6.914	(0.838)	1301011	200.000	210.38(A)
10 Acetone	43	2.483	2.483	(0.507)	331678	200.000	194.35
37 Benzene	78	5.220	5.220	(0.928)	2195227	100.000	100.34
74 Bromobenzene	156	9.385	9.385	(0.917)	573954	100.000	100.68
29 Bromochloromethane	128	4.556	4.556	(0.930)	244429	100.000	108.58
39 Bromodichloromethane	83	6.348	6.348	(1.129)	667511	100.000	108.05
66 Bromoform	173	8.983	8.983	(1.089)	331336	100.000	98.11(T)
6 Bromomethane	94	1.666	1.666	(0.340)	281859	100.000	101.50
19 Carbon Disulfide	76	2.592	2.592	(0.529)	3090544	200.000	201.15(A)
34 Carbon Tetrachloride	117	4.999	4.999	(0.889)	601960	100.000	99.26
59 Chlorobenzene	112	8.275	8.275	(1.003)	1466929	100.000	98.78
7 Chloroethane	64	1.752	1.752	(0.358)	384958	100.000	95.90(M)
28 Chloroform	83	4.657	4.657	(0.951)	918394	100.000	99.85
3 Chloromethane	50	1.344	1.344	(0.274)	441603	100.000	90.82
27 cis-1,2-Dichloroethene	96	4.286	4.286	(0.875)	580958	100.000	99.66
46 cis-1,3-Dichloropropene	75	6.760	6.760	(1.202)	944095	100.000	99.29
55 Dibromochloromethane	129	7.758	7.758	(0.940)	512845	100.000	99.98
44 Dibromomethane	93	6.191	6.191	(1.101)	341140	100.000	101.75
2 Dichlorodifluoromethane	85	1.209	1.209	(0.247)	553841	100.000	100.99
61 Ethylbenzene	106	8.372	8.372	(1.015)	779796	100.000	102.38
91 Hexachlorobutadiene	225	12.065	12.065	(1.179)	259405	100.000	99.12
67 Isopropylbenzene	105	9.126	9.126	(1.106)	2327627	100.000	105.90
62 m,p-Xylenes	106	8.474	8.474	(1.027)	1935465	200.000	206.70(A)
17 Methylene Chloride	84	2.873	2.873	(0.587)	554902	100.000	102.47
87 n-Butylbenzene	91	10.558	10.558	(1.031)	1963594	100.000	104.21
73 n-Propylbenzene	91	9.478	9.478	(0.926)	2891517	100.000	104.88
92 Naphthalene	128	12.132	12.132	(1.185)	2231968	100.000	99.52
63 o-Xylene	106	8.811	8.811	(1.068)	975544	100.000	103.27
81 sec-Butylbenzene	105	10.086	10.086	(0.985)	2492415	100.000	107.57
64 Styrene	104	8.826	8.826	(1.069)	1680613	100.000	107.08
78 tert-Butylbenzene	119	9.902	9.902	(0.967)	1698031	100.000	105.95
56 Tetrachloroethene	164	7.525	7.525	(0.912)	397169	100.000	98.15
50 Toluene	91	7.049	7.049	(0.854)	2304015	100.000	100.21
20 trans-1,2-Dichloroethene	96	3.143	3.143	(0.642)	513822	100.000	98.98
51 trans-1,3-Dichloropropene	75	7.263	7.263	(1.291)	811224	100.000	98.79
38 Trichloroethene	130	5.861	5.861	(1.042)	528149	100.000	100.00
8 Trichlorofluoromethane	101	1.955	1.955	(0.399)	753769	100.000	102.46
5 Vinyl Chloride	62	1.422	1.422	(0.290)	629175	100.000	99.33



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181221.b\U122109.D Page 3
Report Date: 28-Jan-2019 11:25

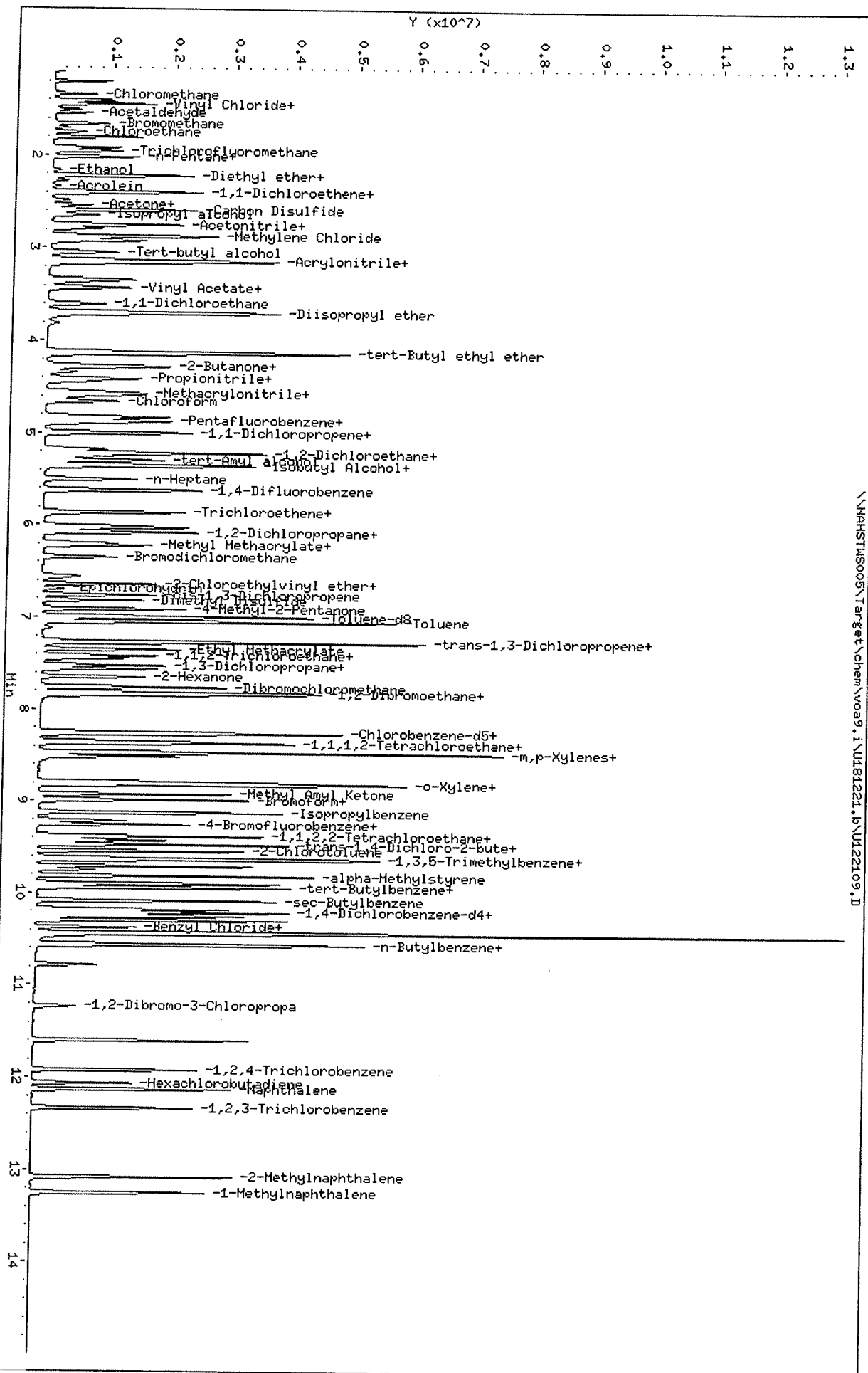
QC Flag Legend

- T - Target compound detected outside RT window.
- A - Target compound detected but, quantitated amount exceeded maximum amount.
- M - Compound response manually integrated.



Data File: \\NAHSTMS005\Target\chem\voa9.i\1181221.b\1122109.J
Date : 21-DEC-2018 17:06
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

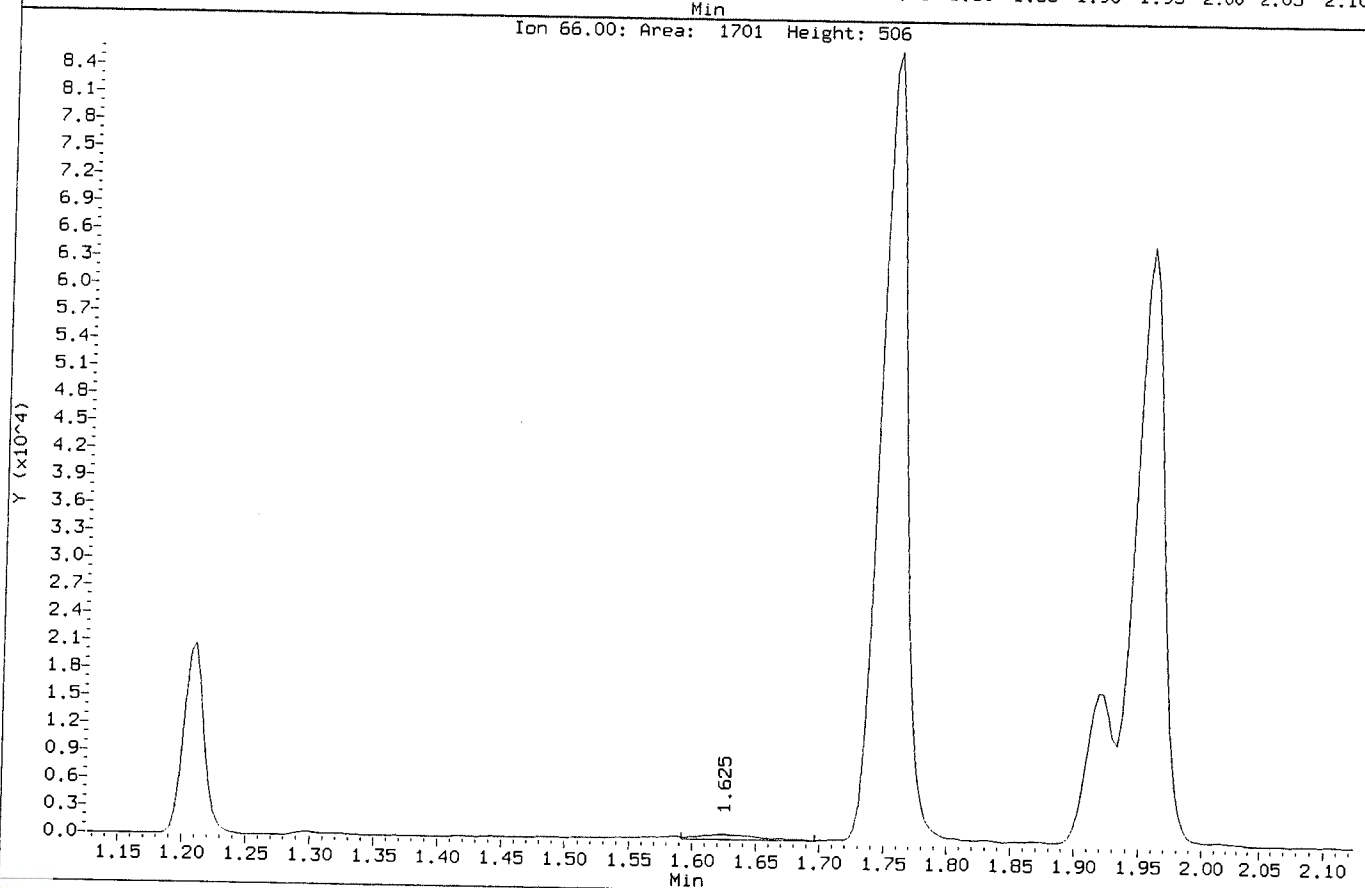
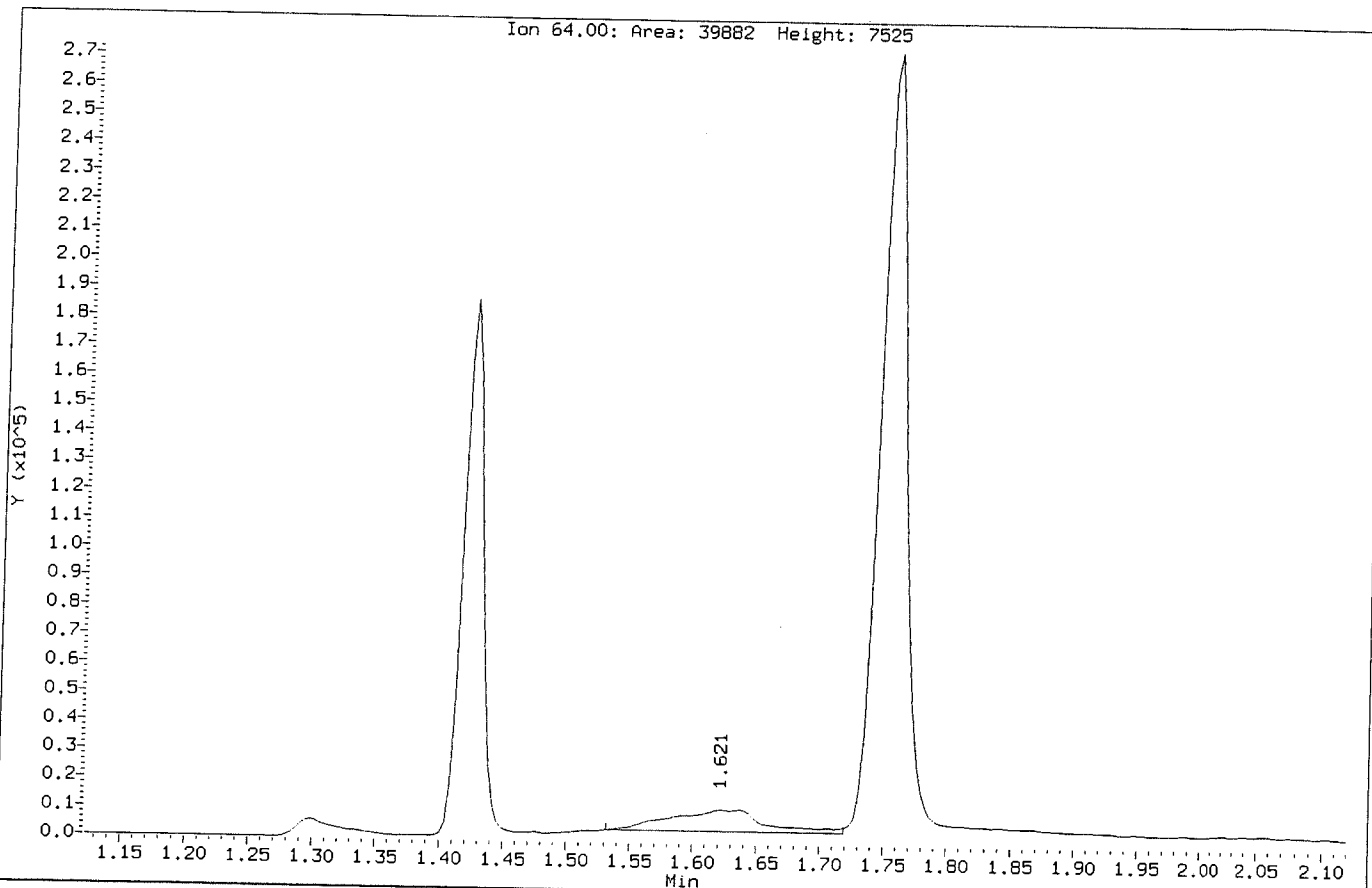


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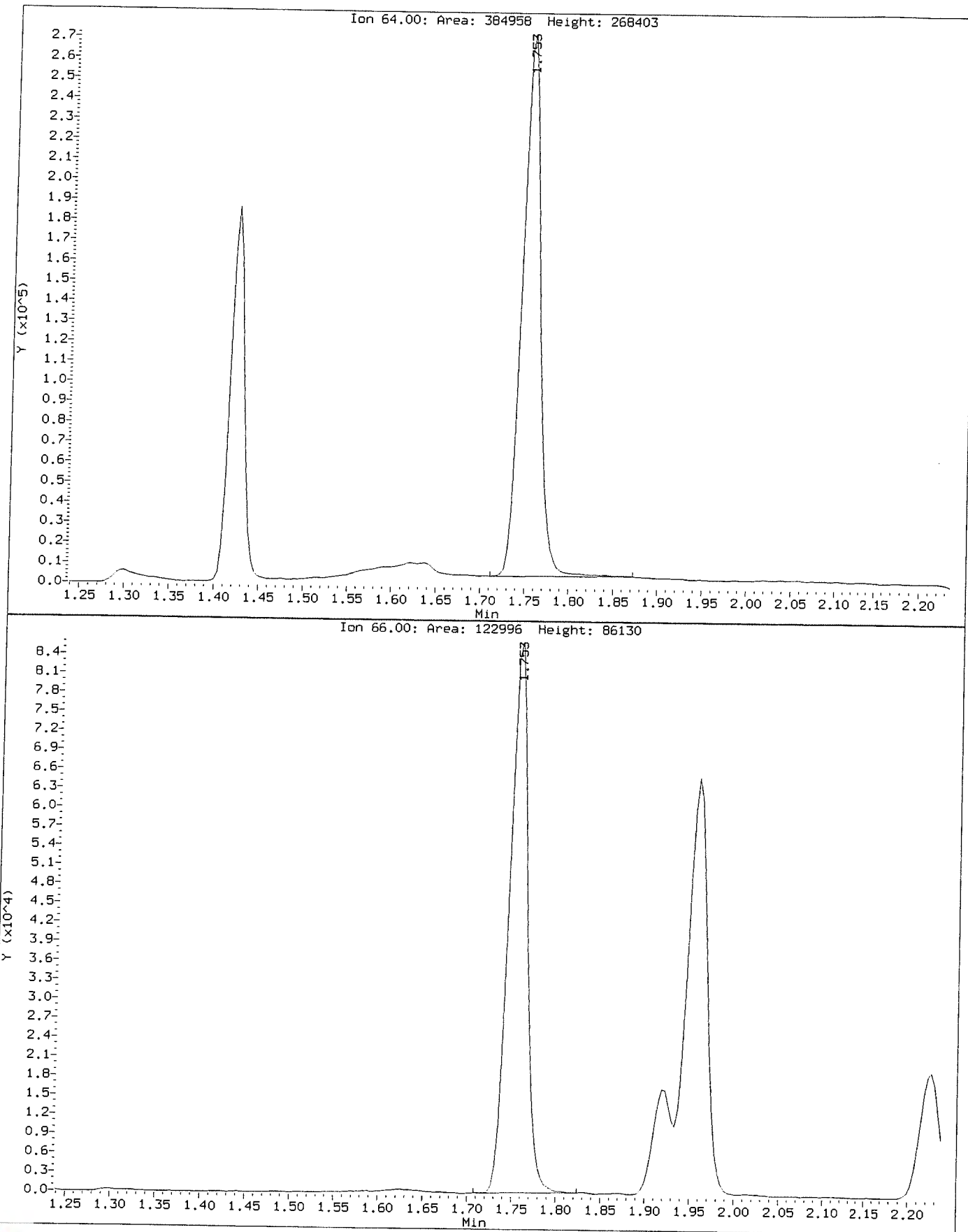
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Injection Date: 21-DEC-2018 17:06
Instrument: VOA9.1
Client Sample ID: VSTD100

Compound: Chloroethane
CAS Number: 75-00-3



Data File: \\NAHSTWS005\Target\chem\voa9.1\U181221.b\U122109.D
Injection Date: 21-DEC-2018 17:06
Instrument: VDA9.1
Client Sample ID: VSTD100

Compound: Chloroethane
CAS Number: 75-00-3



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181221.b\U122110.D Page 1
 Report Date: 28-Jan-2019 11:25

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U181221.b\U122110.D
 Lab Smp Id: VSTD150 Client Smp ID: VSTD150
 Inj Date : 21-DEC-2018 17:31
 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\U181221.b\8260C.m
 Meth Date : 28-Jan-2019 11:25 VOA9.i Quant Type: ISTD
 Cal Date : 21-DEC-2018 17:06 Cal File: U122109.D
 Als bottle: 11 Calibration Sample, Level: 9
 Dil Factor: 1.00000
 Integrator: HP RTE Compound Sublist: LHAAP.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)	456327	50.0000	
* 36 1,4-Difluorobenzene	114	5.625	5.625	(1.000)	837974	50.0000	
* 47 Chlorobenzene-d5	117	8.249	8.249	(1.000)	793198	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	374825	50.0000	
\$ 30 Dibromofluoromethane	113	4.830	4.830	(0.987)	745399	150.000	151.02
\$ 35 1,2-Dichloroethane-d4	65	5.175	5.175	(1.057)	949266	150.000	151.18
\$ 48 Toluene-d8	98	6.989	6.989	(0.847)	3016887	150.000	150.76
\$ 69 4-Bromofluorobenzene	95	9.257	9.257	(1.122)	1153874	150.000	150.78
60 1,1,1,2-Tetrachloroethane	131	8.350	8.350	(1.012)	766622	150.000	151.11
31 1,1,1-Trichloroethane	97	4.826	4.826	(0.986)	1166981	150.000	161.96
68 1,1,2,2-Tetrachloroethane	83	9.392	9.392	(0.918)	1214939	150.000	143.93
138 Freon TF	101	2.401	2.401	(0.491)	609198	150.000	157.03
53 1,1,2-Trichloroethane	83	7.421	7.421	(0.900)	689788	150.000	145.96
22 1,1-Dichloroethane	63	3.604	3.604	(0.737)	1459691	150.000	148.53
11 1,1-Dichloroethene	96	2.397	2.397	(0.490)	645721	150.000	148.82
32 1,1-Dichloropropene	75	5.003	5.003	(0.889)	1147997	150.000	153.96
93 1,2,3-Trichlorobenzene	180	12.335	12.335	(1.205)	1085027	150.000	152.30
71 1,2,3-Trichloropropane	75	9.430	9.430	(0.921)	1401190	150.000	159.63
90 1,2,4-Trichlorobenzene	180	11.923	11.923	(1.165)	1126029	150.000	162.26
79 1,2,4-Trimethylbenzene	105	9.943	9.943	(0.971)	3050007	150.000	155.49
89 1,2-Dibromo-3-Chloropropane	155	11.233	11.233	(1.097)	200384	150.000	150.93
57 1,2-Dibromoethane	107	7.852	7.852	(0.952)	815175	150.000	149.76



Compounds	QUANT SIG				AMOUNTS		
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/l)	ON-COL (ug/l)
88 1,2-Dichlorobenzene	146	10.573	10.573	(1.033)	1640210	150.000	147.37
33 1,2-Dichloroethane	62	5.254	5.254	(0.934)	1129116	150.000	151.01
42 1,2-Dichloropropane	63	6.082	6.082	(1.081)	888346	150.000	150.03
75 1,3,5-Trimethylbenzene	105	9.625	9.625	(0.940)	2996671	150.000	159.08
83 1,3-Dichlorobenzene	146	10.180	10.180	(0.995)	1669910	150.000	150.03
54 1,3-Dichloropropane	76	7.563	7.563	(0.917)	1476732	150.000	145.07
84 1,4-Dichlorobenzene	146	10.255	10.255	(1.002)	1696761	150.000	144.58
26 2,2-Dichloropropane	77	4.275	4.275	(0.874)	951402	150.000	160.64
24 2-Butanone	43	4.335	4.335	(0.886)	880878	300.000	299.93(A)
76 2-Chlorotoluene	91	9.550	9.550	(0.933)	2603345	150.000	150.74
52 2-Hexanone	43	7.653	7.653	(0.928)	1413890	300.000	320.56(A)
77 4-Chlorotoluene	91	9.640	9.640	(0.942)	3029757	150.000	151.81
82 p-Isopropyltoluene	119	10.210	10.210	(0.997)	3190047	150.000	160.83
45 4-Methyl-2-Pentanone	43	6.914	6.914	(0.838)	1993190	300.000	314.06(A)
10 Acetone	43	2.480	2.480	(0.507)	520533	300.000	298.01(A)
37 Benzene	78	5.216	5.216	(0.927)	3311929	150.000	148.52
74 Bromobenzene	156	9.385	9.385	(0.917)	890701	150.000	153.79
29 Bromochloromethane	128	4.557	4.557	(0.931)	348533	150.000	151.66
39 Bromodichloromethane	83	6.348	6.348	(1.129)	1032680	150.000	164.00
66 Bromoform	173	8.984	8.984	(1.089)	522892	150.000	149.93
6 Bromomethane	94	1.659	1.659	(0.339)	444174	150.000	154.73
19 Carbon Disulfide	76	2.588	2.588	(0.529)	4735575	300.000	299.54(A)
34 Carbon Tetrachloride	117	4.995	4.995	(0.888)	939611	150.000	151.26
59 Chlorobenzene	112	8.275	8.275	(1.003)	2244427	150.000	147.26
7 Chloroethane	64	1.745	1.745	(0.357)	684109	150.000	161.33
28 Chloroform	83	4.658	4.658	(0.952)	1391091	150.000	146.98
3 Chloromethane	50	1.340	1.340	(0.274)	746873	150.000	147.15
27 cis-1,2-Dichloroethene	96	4.287	4.287	(0.876)	893807	150.000	149.01
46 cis-1,3-Dichloropropene	75	6.757	6.757	(1.201)	1468956	150.000	150.90
55 Dibromochloromethane	129	7.758	7.758	(0.940)	791728	150.000	149.91
44 Dibromomethane	93	6.191	6.191	(1.101)	516406	150.000	151.11
2 Dichlorodifluoromethane	85	1.205	1.205	(0.246)	873891	150.000	154.61
61 Ethylbenzene	106	8.373	8.373	(1.015)	1198529	150.000	153.33
91 Hexachlorobutadiene	225	12.065	12.065	(1.179)	400552	150.000	150.65
67 Isopropylbenzene	105	9.126	9.126	(1.106)	3526393	150.000	156.34
62 m,p-Xylenes	106	8.474	8.474	(1.027)	2933161	300.000	305.23(A)
17 Methylene Chloride	84	2.870	2.870	(0.586)	841220	150.000	151.54
87 n-Butylbenzene	91	10.558	10.558	(1.031)	2965307	150.000	154.91
73 n-Propylbenzene	91	9.479	9.479	(0.926)	4348220	150.000	155.25
92 Naphthalene	128	12.133	12.133	(1.185)	3430934	150.000	151.53
63 o-Xylene	106	8.811	8.811	(1.068)	1492877	150.000	153.99
81 sec-Butylbenzene	105	10.090	10.090	(0.986)	3757107	150.000	159.61
64 Styrene	104	8.826	8.826	(1.070)	2556162	150.000	158.70
78 tert-Butylbenzene	119	9.902	9.902	(0.967)	2586354	150.000	158.85
56 Tetrachloroethene	164	7.526	7.526	(0.912)	610669	150.000	147.05
50 Toluene	91	7.049	7.049	(0.855)	3483930	150.000	147.65
20 trans-1,2-Dichloroethene	96	3.140	3.140	(0.642)	789348	150.000	147.77
51 trans-1,3-Dichloropropene	75	7.263	7.263	(1.291)	1271771	150.000	151.06
38 Trichloroethene	130	5.861	5.861	(1.042)	823329	150.000	152.94
8 Trichlorofluoromethane	101	1.951	1.951	(0.399)	1146930	150.000	151.21
5 Vinyl Chloride	62	1.419	1.419	(0.290)	1000865	150.000	153.03



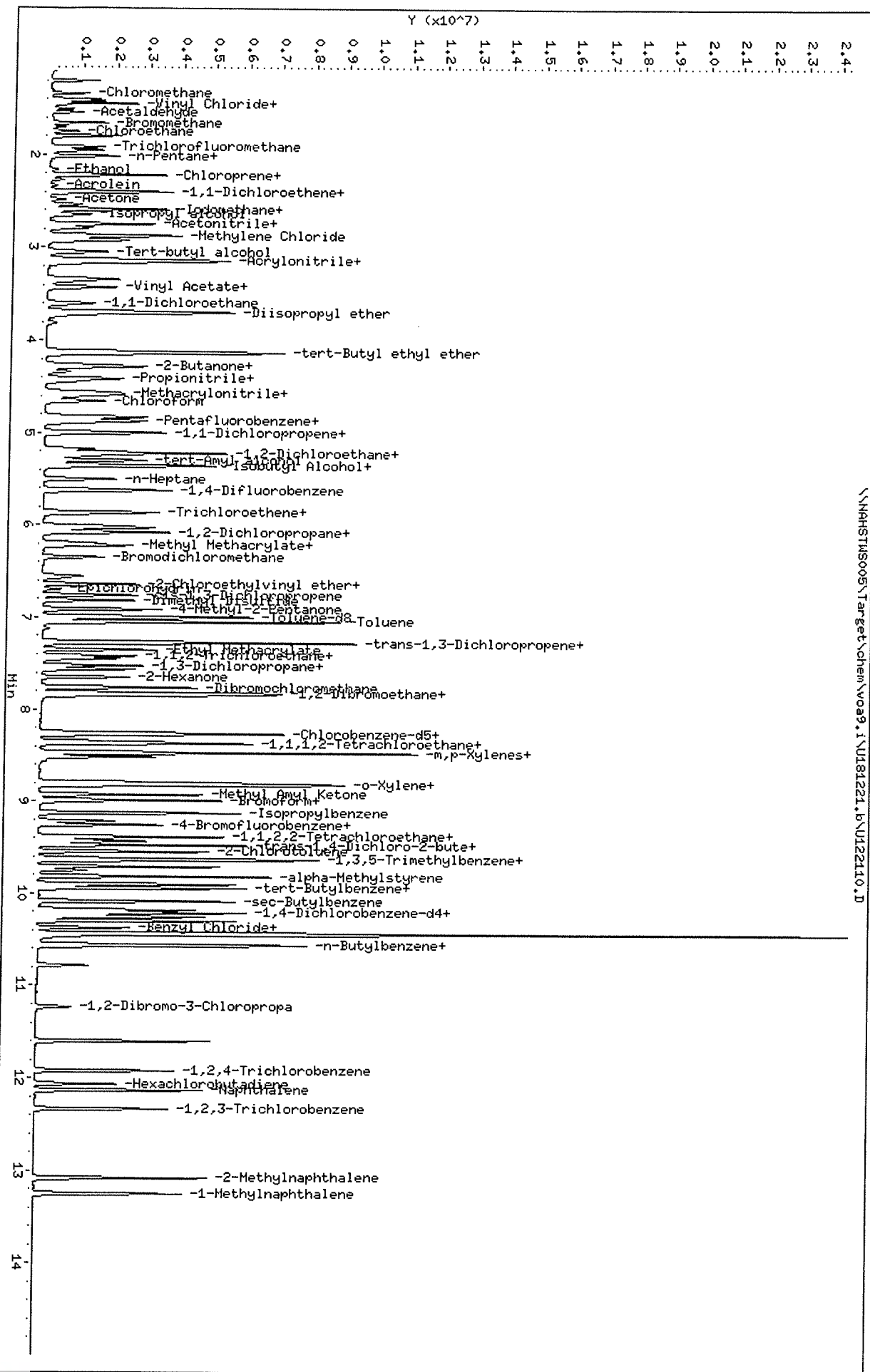
QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.



Data File: \\NAHSTMS005\Target\chem\voa9.i\U181221.b\U122110.D
 Date : 21-DEC-2018 17:31
 Client ID: VST150
 Sample Info: VST150;VST150;11;9;
 Purge Volume: 5.0
 Column phase: DB624

Instrument: VOA9.i
 Operator: PC
 Column diameter: 0.18



\\NAHSTMS005\Target\chem\voa9.i\U181221.b\U122110.D



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181221.b\U122111.D Page 1
 Report Date: 28-Jan-2019 11:25

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U181221.b\U122111.D
 Lab Smp Id: VSTD200 Client Smp ID: VSTD200
 Inj Date : 21-DEC-2018 17:55
 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\U181221.b\8260C.m
 Meth Date : 28-Jan-2019 11:25 VOA9.i Quant Type: ISTD
 Cal Date : 21-DEC-2018 17:31 Cal File: U122110.D
 Als bottle: 12 Calibration Sample, Level: 10
 Dil Factor: 1.00000
 Integrator: HP RTE Compound Sublist: LHAAP.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	AMOUNTS					
			CAL-AMT	ON-COL	RT	EXP RT	REL RT	RESPONSE
=====	====	=====	(ug/l)	(ug/l)	=====	=====	=====	=====
* 1 Pentafluorobenzene	168		50.0000		4.890	4.890	(1.000)	471928
* 36 1,4-Difluorobenzene	114		50.0000		5.625	5.625	(1.000)	852109
* 47 Chlorobenzene-d5	117		50.0000		8.249	8.249	(1.000)	808162
* 70 1,4-Dichlorobenzene-d4	152		50.0000		10.236	10.236	(1.000)	383807
\$ 30 Dibromofluoromethane	113		200.000	197.61	4.826	4.826	(0.987)	1006329
\$ 35 1,2-Dichloroethane-d4	65		200.000	196.84	5.171	5.171	(1.057)	1274051
\$ 48 Toluene-d8	98		200.000	197.23	6.989	6.989	(0.847)	4010125
\$ 69 4-Bromofluorobenzene	95		200.000	198.06	9.257	9.257	(1.122)	1540801
60 1,1,1,2-Tetrachloroethane	131		200.000	199.57	8.350	8.350	(1.012)	1032567
31 1,1,1-Trichloroethane	97		200.000	209.12(A)	4.826	4.826	(0.987)	1558350
68 1,1,2,2-Tetrachloroethane	83		200.000	188.30	9.392	9.392	(0.918)	1627647
138 Freon TF	101		200.000	204.00(A)	2.394	2.394	(0.490)	818502
53 1,1,2-Trichloroethane	83		200.000	191.69	7.421	7.421	(0.900)	922969
22 1,1-Dichloroethane	63		200.000	191.00	3.597	3.597	(0.736)	1941260
11 1,1-Dichloroethene	96		200.000	193.93	2.394	2.394	(0.490)	870210
32 1,1-Dichloropropene	75		200.000	201.33(A)	5.003	5.003	(0.889)	1526453
93 1,2,3-Trichlorobenzene	180		200.000	199.03	12.335	12.335	(1.205)	1453309
71 1,2,3-Trichloropropane	75		200.000	212.60(A)	9.430	9.430	(0.921)	1910859
90 1,2,4-Trichlorobenzene	180		200.000	210.44(A)	11.926	11.926	(1.165)	1495400
79 1,2,4-Trimethylbenzene	105		200.000	199.50	9.943	9.943	(0.971)	4007083
89 1,2-Dibromo-3-Chloropropane	155		200.000	201.27(A)	11.233	11.233	(1.097)	274280
57 1,2-Dibromoethane	107		200.000	197.93	7.852	7.852	(0.952)	1097675



Compounds	QUANT SIG				AMOUNTS		
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/l)	ON-COL (ug/l)
88 1,2-Dichlorobenzene	146	10.573	10.573	(1.033)	2176108	200.000	190.95
33 1,2-Dichloroethane	62	5.250	5.250	(0.933)	1504782	200.000	198.15
42 1,2-Dichloropropane	63	6.078	6.078	(1.081)	1186343	200.000	197.03
75 1,3,5-Trimethylbenzene	105	9.628	9.628	(0.941)	3964216	200.000	205.51(A)
83 1,3-Dichlorobenzene	146	10.180	10.180	(0.995)	2212350	200.000	194.11
54 1,3-Dichloropropane	76	7.563	7.563	(0.917)	1981022	200.000	191.01
84 1,4-Dichlorobenzene	146	10.258	10.258	(1.002)	2259523	200.000	188.03
26 2,2-Dichloropropane	77	4.272	4.272	(0.874)	1270502	200.000	207.43(A)
24 2-Butanone	43	4.335	4.335	(0.887)	1199902	400.000	395.82(A)
76 2-Chlorotoluene	91	9.550	9.550	(0.933)	3451393	200.000	195.17
52 2-Hexanone	43	7.653	7.653	(0.928)	1896004	400.000	421.90(A)
77 4-Chlorotoluene	91	9.640	9.640	(0.942)	3993483	200.000	195.41
82 p-Isopropyltoluene	119	10.213	10.213	(0.998)	4198944	200.000	206.74(A)
45 4-Methyl-2-Pentanone	43	6.914	6.914	(0.838)	2681840	400.000	414.75(A)
10 Acetone	43	2.476	2.476	(0.506)	723113	400.000	401.34(A)
37 Benzene	78	5.216	5.216	(0.927)	4410809	200.000	194.52
74 Bromobenzene	156	9.385	9.385	(0.917)	1186255	200.000	200.04(A)
29 Bromochloromethane	128	4.553	4.553	(0.931)	453685	200.000	191.69
39 Bromodichloromethane	83	6.345	6.345	(1.128)	1391257	200.000	217.29(A)
66 Bromoform	173	8.984	8.984	(1.089)	718878	200.000	201.69(A)
6 Bromomethane	94	1.651	1.651	(0.338)	585856	200.000	196.98
19 Carbon Disulfide	76	2.585	2.585	(0.529)	6125723	400.000	374.66(A)
34 Carbon Tetrachloride	117	4.991	4.991	(0.887)	1268610	200.000	200.38(A)
59 Chlorobenzene	112	8.275	8.275	(1.003)	2961137	200.000	190.69
7 Chloroethane	64	1.737	1.737	(0.355)	859472	200.000	193.44
28 Chloroform	83	4.654	4.654	(0.952)	1846267	200.000	188.63
3 Chloromethane	50	1.333	1.333	(0.273)	1095269	200.000	207.27(A)
27 cis-1,2-Dichloroethene	96	4.283	4.283	(0.876)	1189323	200.000	191.72
46 cis-1,3-Dichloropropene	75	6.757	6.757	(1.201)	1986544	200.000	200.27(A)
55 Dibromochloromethane	129	7.758	7.758	(0.940)	1081017	200.000	200.56(A)
44 Dibromomethane	93	6.187	6.187	(1.100)	698521	200.000	201.01(A)
2 Dichlorodifluoromethane	85	1.198	1.198	(0.245)	1151588	200.000	196.87
61 Ethylbenzene	106	8.373	8.373	(1.015)	1600834	200.000	201.00(A)
91 Hexachlorobutadiene	225	12.065	12.065	(1.179)	534175	200.000	196.21
67 Isopropylbenzene	105	9.126	9.126	(1.106)	4617933	200.000	200.94(A)
62 m,p-Xylenes	106	8.474	8.474	(1.027)	3876248	400.000	395.90(A)
17 Methylene Chloride	84	2.866	2.866	(0.586)	1131189	200.000	197.41
87 n-Butylbenzene	91	10.558	10.558	(1.031)	3856663	200.000	196.76
73 n-Propylbenzene	91	9.479	9.479	(0.926)	5652456	200.000	197.09
92 Naphthalene	128	12.133	12.133	(1.185)	4589381	200.000	199.26
63 o-Xylene	106	8.811	8.811	(1.068)	1977764	200.000	200.23(A)
81 sec-Butylbenzene	105	10.090	10.090	(0.986)	4898290	200.000	203.23(A)
64 Styrene	104	8.826	8.826	(1.070)	3375201	200.000	205.67(A)
78 tert-Butylbenzene	119	9.902	9.902	(0.967)	3416506	200.000	204.92(A)
56 Tetrachloroethene	164	7.525	7.525	(0.912)	811202	200.000	191.73
50 Toluene	91	7.046	7.046	(0.854)	4594912	200.000	191.13
20 trans-1,2-Dichloroethene	96	3.136	3.136	(0.641)	1055077	200.000	190.99
51 trans-1,3-Dichloropropene	75	7.259	7.259	(1.291)	1721394	200.000	200.53(A)
38 Trichloroethene	130	5.861	5.861	(1.042)	1093007	200.000	199.67
8 Trichlorofluoromethane	101	1.944	1.944	(0.398)	1561606	200.000	198.87
5 Vinyl Chloride	62	1.415	1.415	(0.289)	1348117	200.000	199.01



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181221.b\U122111.D Page 3
Report Date: 28-Jan-2019 11:25

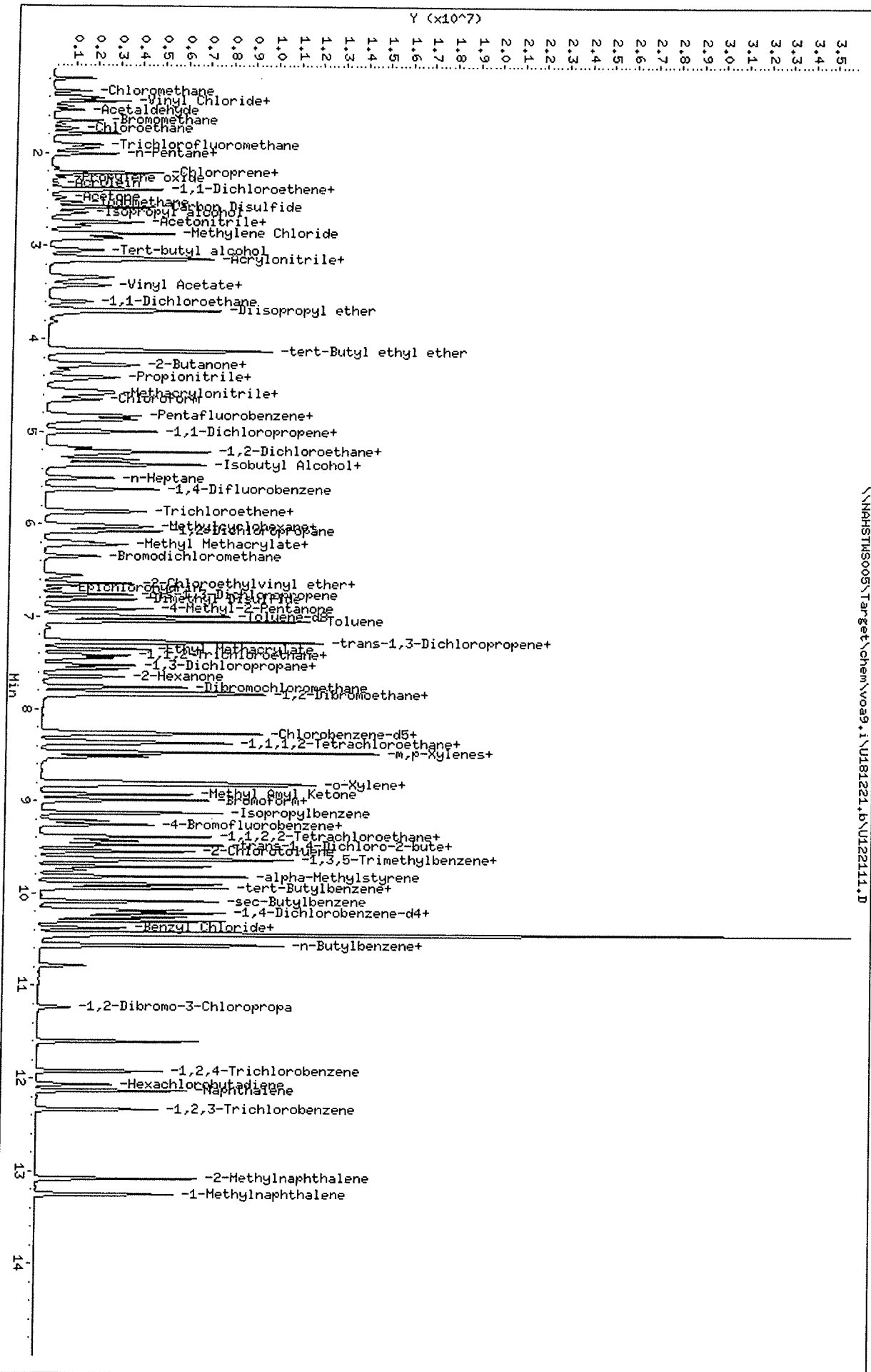
QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.



Data File: \\NAHSTMS005\Target\chem\voa9.i\U181221.b\U122111.D
Date : 21-DEC-2018 17:55
Client ID: VSTD200
Sample Info: VSTD200;VSTD200;1;10;
Purge Volume: 5.0
Column phase: DB624

Instrument: V0A9.i
Operator: PC
Column diameter: 0.18



\\NAHSTMS005\Target\chem\voa9.i\U181221.b\U122111.D



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181221.b\U122113.D Page 1
 Report Date: 28-Jan-2019 11:25

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U181221.b\U122113.D
 Lab Smp Id: VSTD050 Client Smp ID: VSTD050
 Inj Date : 21-DEC-2018 18:45
 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\U181221.b\8260C.m
 Meth Date : 28-Jan-2019 11:25 VOA9.i Quant Type: ISTD
 Cal Date : 21-DEC-2018 17:55 Cal File: U122111.D
 Als bottle: 14 QC Sample: METHSPIKE
 Dil Factor: 1.00000
 Integrator: HP RTE Compound Sublist: LHAAP.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						CONCENTRATIONS	
		MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.894	4.890	(1.000)	454236	50.0000		
* 36 1,4-Difluorobenzene	114	5.625	5.625	(1.000)	837452	50.0000		
* 47 Chlorobenzene-d5	117	8.249	8.249	(1.000)	785431	50.0000		
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	375418	50.0000		
\$ 30 Dibromofluoromethane	113	4.830	4.826	(0.987)	255609	51.0245	51.02	
\$ 35 1,2-Dichloroethane-d4	65	5.175	5.171	(1.057)	329809	51.3551	51.35	
\$ 48 Toluene-d8	98	6.989	6.989	(0.847)	1045729	51.6161	51.61	
\$ 69 4-Bromofluorobenzene	95	9.257	9.257	(1.122)	396478	51.3902	51.39	
60 1,1,1,2-Tetrachloroethane	131	8.350	8.350	(1.012)	241293	48.4317	48.43	
31 1,1,1-Trichloroethane	97	4.826	4.826	(0.986)	354032	49.3608	49.36	
68 1,1,2,2-Tetrachloroethane	83	9.392	9.392	(0.918)	418971	49.5558	49.55	
138 Freon TF	101	2.401	2.394	(0.491)	174050	45.0712	45.07	
53 1,1,2-Trichloroethane	83	7.420	7.421	(0.900)	230741	49.3099	49.30	
22 1,1-Dichloroethane	63	3.604	3.597	(0.737)	469167	47.9609	47.96	
11 1,1-Dichloroethene	96	2.397	2.394	(0.490)	197920	45.8262	45.82	
32 1,1-Dichloropropene	75	5.003	5.003	(0.889)	353683	47.4657	47.46	
93 1,2,3-Trichlorobenzene	180	12.335	12.335	(1.205)	338004	47.8072	47.80	
71 1,2,3-Trichloropropane	75	9.426	9.430	(0.921)	468241	53.2610	53.26	
90 1,2,4-Trichlorobenzene	180	11.923	11.926	(1.165)	350114	50.3719	50.37	
79 1,2,4-Trimethylbenzene	105	9.943	9.943	(0.971)	985013	50.1388	50.13	
89 1,2-Dibromo-3-Chloropropane	155	11.233	11.233	(1.097)	65081	49.9244	49.92	
57 1,2-Dibromoethane	107	7.852	7.852	(0.952)	275792	51.1699	51.16	



Compounds	QUANT SIG				CONCENTRATIONS		
	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/l)	FINAL (ug/l)
88 1,2-Dichlorobenzene	146	10.573	10.573	(1.033)	539129	48.3652	48.36
33 1,2-Dichloroethane	62	5.254	5.250	(0.934)	379863	50.3501	50.35
42 1,2-Dichloropropane	63	6.082	6.078	(1.081)	291083	49.1911	49.19
75 1,3,5-Trimethylbenzene	105	9.625	9.628	(0.940)	944583	50.0646	50.06
83 1,3-Dichlorobenzene	146	10.180	10.180	(0.995)	538150	48.2737	48.27
54 1,3-Dichloropropane	76	7.563	7.563	(0.917)	498006	49.4090	49.40
84 1,4-Dichlorobenzene	146	10.254	10.258	(1.002)	553425	47.0841	47.08
26 2,2-Dichloropropane	77	4.275	4.272	(0.874)	312995	53.0931	53.09
24 2-Butanone	43	4.335	4.335	(0.886)	309683	104.354	104.35
76 2-Chlorotoluene	91	9.546	9.550	(0.933)	853147	49.3227	49.32
52 2-Hexanone	43	7.649	7.653	(0.927)	476780	109.166	109.16
77 4-Chlorotoluene	91	9.640	9.640	(0.942)	993815	49.7187	49.71
82 p-Isopropyltoluene	119	10.209	10.213	(0.997)	977284	49.1947	49.19
45 4-Methyl-2-Pentanone	43	6.914	6.914	(0.838)	669743	106.576	106.57
10 Acetone	43	2.480	2.476	(0.507)	202203	114.452	114.45
37 Benzene	78	5.216	5.216	(0.927)	1087936	48.8203	48.82
74 Bromobenzene	156	9.381	9.385	(0.917)	288693	49.7707	49.77
29 Bromochloromethane	128	4.553	4.553	(0.930)	134219	56.7663	56.76
39 Bromodichloromethane	83	6.348	6.345	(1.129)	327631	52.0660	52.06
66 Bromoform	173	8.984	8.984	(1.089)	161326	47.9288	47.92(T)
6 Bromomethane	94	1.666	1.651	(0.341)	151955	54.0592	54.05
19 Carbon Disulfide	76	2.588	2.585	(0.529)	1510901	96.0096	96.00
34 Carbon Tetrachloride	117	4.995	4.991	(0.888)	272477	44.8853	44.88
59 Chlorobenzene	112	8.275	8.275	(1.003)	728193	48.2531	48.25
7 Chloroethane	64	1.752	1.737	(0.358)	185529	46.1546	46.15(M)
28 Chloroform	83	4.658	4.654	(0.952)	456472	48.4536	48.45
3 Chloromethane	50	1.340	1.333	(0.274)	235959	48.9688	48.96
27 cis-1,2-Dichloroethene	96	4.287	4.283	(0.876)	292150	48.9311	48.93
46 cis-1,3-Dichloropropene	75	6.757	6.757	(1.201)	467498	48.9175	48.91
55 Dibromochloromethane	129	7.758	7.758	(0.940)	250542	48.5723	48.57
44 Dibromomethane	93	6.191	6.187	(1.101)	173822	50.8969	50.89
2 Dichlorodifluoromethane	85	1.205	1.198	(0.246)	258081	46.2123	46.21
61 Ethylbenzene	106	8.373	8.373	(1.015)	381593	49.3007	49.30
91 Hexachlorobutadiene	225	12.065	12.065	(1.179)	122959	46.1748	46.17
67 Isopropylbenzene	105	9.126	9.126	(1.106)	1096015	49.0718	49.07
62 m,p-Xylenes	106	8.474	8.474	(1.027)	950452	99.8846	99.88
17 Methylene Chloride	84	2.870	2.866	(0.586)	279368	49.7584	49.75
87 n-Butylbenzene	91	10.558	10.558	(1.031)	900081	46.9488	46.94
73 n-Propylbenzene	91	9.475	9.479	(0.926)	1377655	49.1117	49.11
92 Naphthalene	128	12.133	12.133	(1.185)	1130612	49.4621	49.46
63 o-Xylene	106	8.811	8.811	(1.068)	478939	49.8923	49.89
81 sec-Butylbenzene	105	10.086	10.090	(0.985)	1124348	47.6920	47.69
64 Styrene	104	8.826	8.826	(1.070)	841070	52.7368	52.73
78 tert-Butylbenzene	119	9.902	9.902	(0.967)	781669	47.9339	47.93
56 Tetrachloroethene	164	7.525	7.525	(0.912)	188872	45.9327	45.93
50 Toluene	91	7.046	7.046	(0.854)	1151259	49.2749	49.27
20 trans-1,2-Dichloroethene	96	3.139	3.136	(0.642)	255368	48.0288	48.02
51 trans-1,3-Dichloropropene	75	7.259	7.259	(1.291)	402226	48.9357	48.93
38 Trichloroethene	130	5.861	5.861	(1.042)	262761	48.8423	48.84
8 Trichlorofluoromethane	101	1.951	1.944	(0.399)	342884	45.8511	45.85
5 Vinyl Chloride	62	1.419	1.415	(0.290)	295169	46.0208	46.02



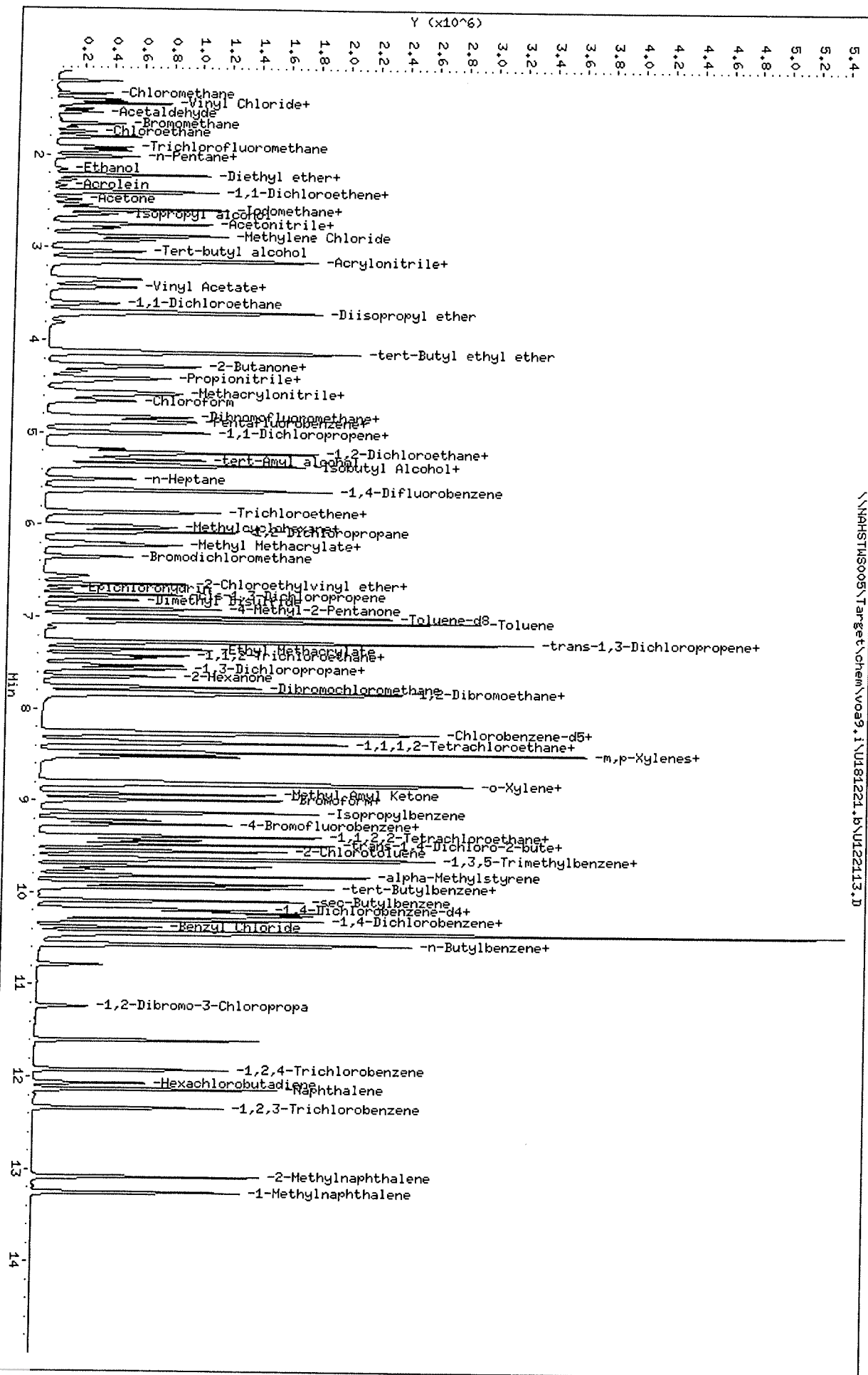
QC Flag Legend

- T - Target compound detected outside RT window.
- M - Compound response manually integrated.



Data File: \\NAHSTMS005\Target\chem\voa9.i\UI181221.b\UI22113.D
Date : 21-DEC-2018 18:45
Client ID: VSTD050
Sample Info: VSTD050;VSTD050;2;1;ICV
Purge Volume: 5.0
Column phase: DB624

Instrument: W099.i
Operator: PC
Column diameter: 0.18

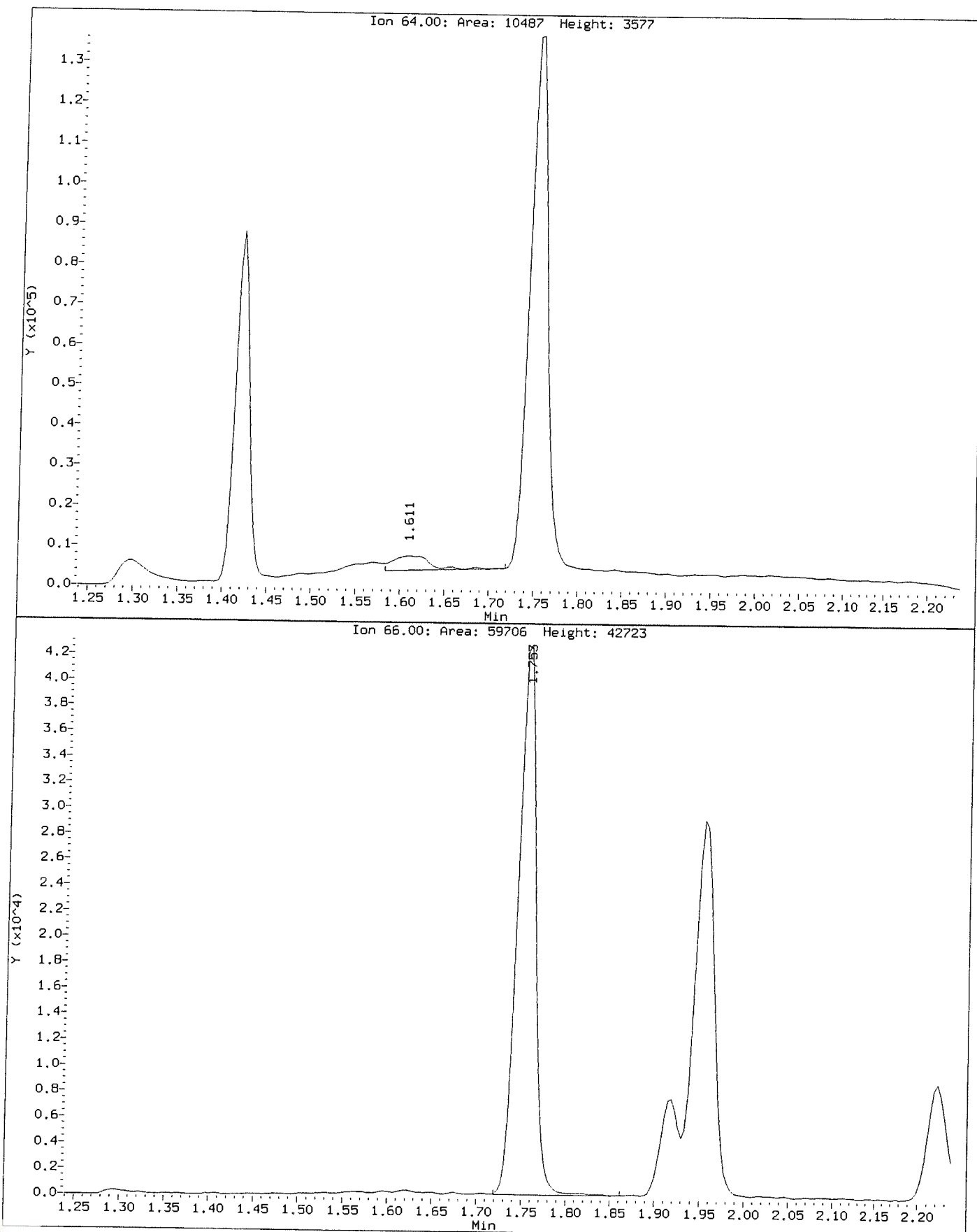


\\NAHSTMS005\Target\chem\voa9.i\UI181221.b\UI22113.D



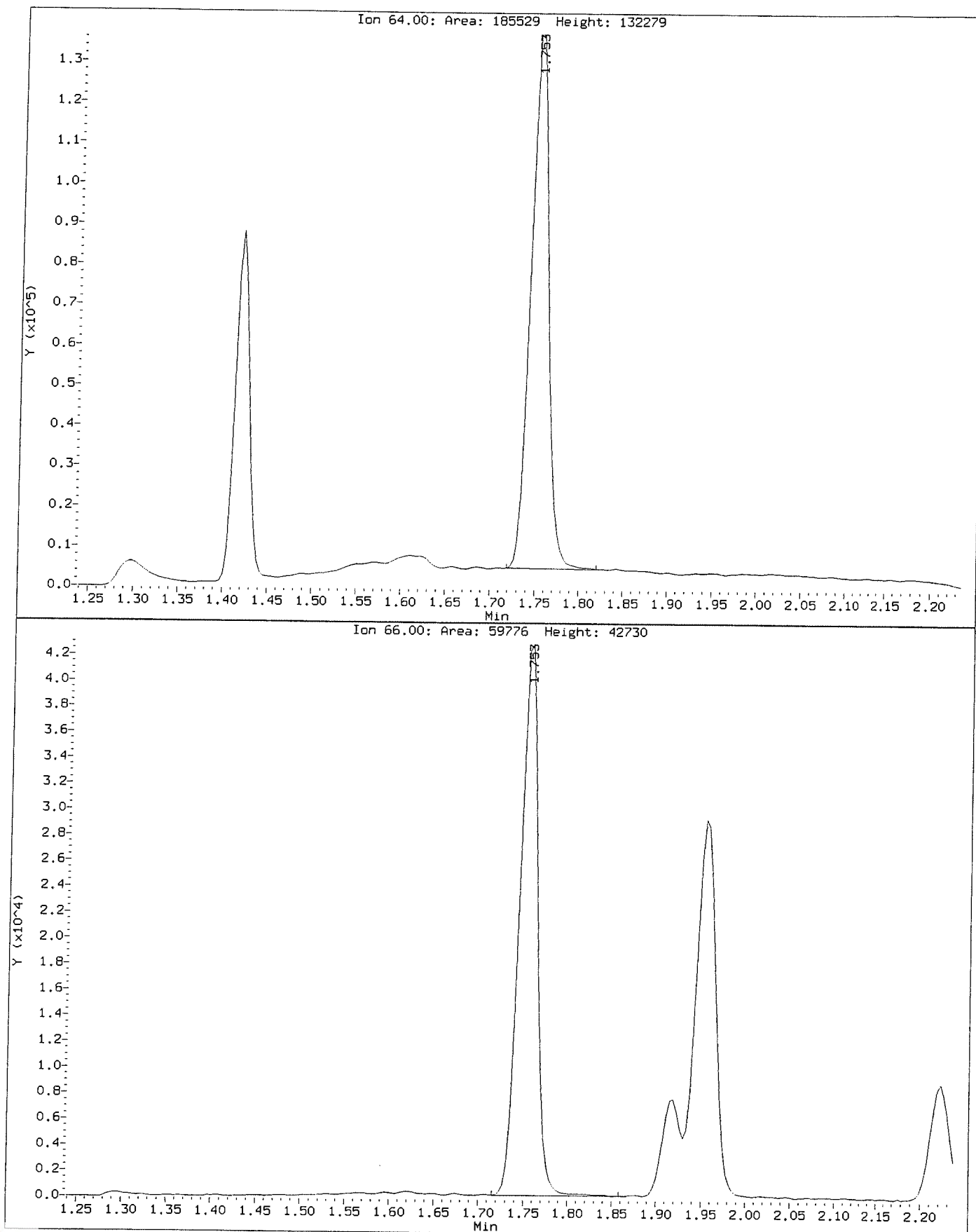
Data File: \\NAHSTWS005\Target\chem\voa9.i\U181221.b\Before\U122113.D
Injection Date: 21-DEC-2018 18:45
Instrument: VOA9.i
Client Sample ID: VSTD050

Compound: Chloroethane
CAS Number: 75-00-3



Data File: \\NAHSTW5005\Target\chem\voa9.i\U181221.b\U122113.D
Injection Date: 21-DEC-2018 18:45
Instrument: VOA9.i
Client Sample ID: VSTD050

Compound: Chloroethane
CAS Number: 75-00-3



MSVOA09 -Logbook

Batch: 34032
 Date: 12-28-2018
 Method: 8260
 Comments:

Analyst: Presenta Cabascango
 Reviewer:
 Laboratory: Houston

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	P
1	BFB	TUNE	12-28-2018 10:12 am	1.00	50 mL	50 mL	U122801a.D	Liquid	Y	r
	<i>not used</i>									
2	BFB	TUNE	12-28-2018 10:37 am	1.00	50 mL	50 mL	U122802.D	Liquid	Y	r
	<i>Auto find/ purged</i>									
3	VSTD050	CCV	12-28-2018 11:01 am	1.00	50 mL	50 mL	U122803.D	Liquid	Y	r
	<i>10 uL cal std/50 mL DI</i>									
4	VLCSW-1812028	LCS	12-28-2018 11:26 am	1.00	50 mL	50 mL	U122804.D	Liquid	Y	r
	<i>4.0 uL cal std/50 mL DI</i>									
5	BLANK	SAMP	12-28-2018 11:51 am	1.00	50 mL	50 mL	U122805.D	Liquid	Y	r
6	VBLKW-181228	MBLK	12-28-2018 12:16 pm	1.00	50 mL	50 mL	U122806.D	Liquid	Y	r
7	HS18121045-04	SAMP	12-28-2018 12:40 pm	1.00	50 mL	50 mL	U122807.D	Liquid	Y	>
8	HS18121123-01	SAMP	12-28-2018 01:05 pm	1.00	50 mL	50 mL	U122808.D	Liquid	Y	>
9	HS18121123-03	SAMP	12-28-2018 01:30 pm	1.00	50 mL	50 mL	U122809.D	Liquid	Y	>
10	HS18121123-04	SAMP	12-28-2018 01:54 pm	5.00	10 mL	50 mL	U122810.D	Liquid	Y	>
11	HS18121123-03MS	MS	12-28-2018 02:19 pm	1.00	50 mL	50 mL	U122811.D	Liquid	Y	>
	<i>3.5 uL cal std/43 mL samp</i>									
12	HS18121123-03MSD	MSD	12-28-2018 02:44 pm	1.00	50 mL	50 mL	U122812.D	Liquid	Y	>
	<i>3.5 uL cal std/43 mL samp</i>									
13	HS18121123-04DL	SAMP	12-28-2018 03:09 pm	50.00	1 mL	50 mL	U122813.D	Liquid	Y	>
14	HS18121108-24	SAMP	12-28-2018 03:34 pm	5.00	10 mL	50 mL	U122814.D	Liquid	Y	>
15	HS18120968-01	SAMP	12-28-2018 03:58 pm	1.00	50 mL	50 mL	U122815.D	Liquid	Y	>
16	HS18120968-02	SAMP	12-28-2018 04:23 pm	1000.0	50 µL	50 mL	U122816.D	Liquid	Y	>
17	HS18120968-02nr	SAMP	12-28-2018 04:50 pm	10000.0	5 µL	50 mL	U122817.D	Liquid	Y	>
18	HS18121255-01	SAMP	12-28-2018 05:15 pm	1.00	50 mL	50 mL	U122818.D	Liquid	Y	>
19	HS18121255-02	SAMP	12-28-2018 05:40 pm	1.00	50 mL	50 mL	U122819.D	Liquid	Y	>
20	HS18121045-18	SAMP	12-28-2018 06:05 pm	1.00	50 mL	50 mL	U122820.D	Liquid	Y	>
21	HS18121045-23	SAMP	12-28-2018 06:29 pm	1.00	50 mL	50 mL	U122821.D	Liquid	Y	>
22	HS18120945-10	SAMP	12-28-2018 06:54 pm	100.00	500 µL	50 mL	U122822.D	Liquid	Y	>
23	HS18120945-14	SAMP	12-28-2018 07:19 pm	200.00	250 µL	50 mL	U122823.D	Liquid	Y	>
24	HS18120945-08	SAMP	12-28-2018 07:44 pm	200.00	250 µL	50 mL	U122824.D	Liquid	Y	>
25	HS18121045-12	SAMP	12-28-2018 08:08 pm	1.00	50 mL	50 mL	U122825.D	Liquid	Y	>
26	HS18121045-13	SAMP	12-28-2018 08:33 pm	1.00	50 mL	50 mL	U122826.D	Liquid	Y	>
27	HS18121045-16	SAMP	12-28-2018 08:58 pm	1.00	50 mL	50 mL	U122827.D	Liquid	Y	>
28	HS18121045-17	SAMP	12-28-2018 09:22 pm	1.00	50 mL	50 mL	U122828.D	Liquid	Y	>
29	VSTD050-END	CCV	12-28-2018 09:47 pm	1.00	50 mL	50 mL	U122829.D	Liquid	Y	r
	<i>10 uL cal std/50 mL DI</i>									



MSVOA09 -Logbook

Chemical	Value
SURR SPK ID	30502-57-03
IS ID	30502-57-04
ICV STD ID	30603-47-01
LCS/MS ID	30603-47-01
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.: HS18121123

	SAMPLE NO.	SMC1 (DCE) #	SMC2 #	SMC3 (TOL) #	OTHER #	TOT OUT
	=====	=====	=====	=====	=====	=====
01	VLCSW-181228	103	102	99	106	
02	VBLKW-181228	100	91	105	97	
03	HS18121123-01	100	93	105	96	
04	HS18121123-03	101	92	105	96	
05	HS18121123-04	100	93	105	97	
06	HS18121123-03MS	97	93	107	104	
07	HS18121123-03MSD	95	93	105	103	
08	HS18121123-04DL	99	92	107	98	
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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-181228

Lab Name: ALS LABORATORY GROUP

Contract:

Lab Code: ALS-HS

Case No.:

SAS No.:

SDG No.: HS18121123

Lab File ID: U122806

Lab Sample ID: VBLKW-181228

Date Analyzed: 12/28/18

Time Analyzed: 1216

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-181228	VLCSW-1812028	U122804	1126
02	HS18121123-0	HS18121123-01	U122808	1305
03	HS18121123-0	HS18121123-03	U122809	1330
04	HS18121123-0	HS18121123-04	U122810	1354
05	HS18121123-0	HS18121123-03M	U122811	1419
06	HS18121123-0	HS18121123-03M	U122812	1444
07	HS18121123-0	HS18121123-04D	U122813	1509
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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.: HS18121123

Lab File ID: U122802

BFB Injection Date: 12/28/18

Instrument ID: VOA9

BFB Injection Time: 1037

GC Column: DB624 ID: 0.25 (mm)

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	19.9
75	30.0 - 60.0% of mass 95	50.2
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.9
173	Less than 2.0% of mass 174	0.6 (0.9)1
174	Greater than 50.0% of mass 95	65.0
175	5.0 - 9.0% of mass 174	4.9 (7.5)1
176	95.0 - 101.0% of mass 174	62.8 (96.6)1
177	5.0 - 9.0% of mass 176	4.3 (6.8)2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD050	VSTD050	U122803	12/28/18	1101
02	VLCSW-181228	VLCSW-1812028	U122804	12/28/18	1126
03	VBLKW-181228	VBLKW-181228	U122806	12/28/18	1216
04	HS18121123-0	HS18121123-01	U122808	12/28/18	1305
05	HS18121123-0	HS18121123-03	U122809	12/28/18	1330
06	HS18121123-0	HS18121123-04	U122810	12/28/18	1354
07	HS18121123-0	HS18121123-03M	U122811	12/28/18	1419
08	HS18121123-0	HS18121123-03M	U122812	12/28/18	1444
09	HS18121123-0	HS18121123-04D	U122813	12/28/18	1509
10	VSTD050-END	VSTD050-END	U122829	12/28/18	2147
11					
12					
13					
14					
15					
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17					
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21					
22					



FORM 7
 VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: ALS LABORATORY GROUP Contract:
 Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS18121123
 Instrument ID: VOA9 Calibration Date: 12/28/18 Time: 1101
 Lab File ID: U122803 Init. Calib. Date(s): 12/21/18 12/21/18
 Heated Purge: (Y/N) N Init. Calib. Times: 1349 1755
 GC Column: DB624 ID: 0.18 (mm)

COMPOUND	SAMPLE AMOUNT	CAL50 AMOUNT	CURVE	%D	MAX %d
=====	=====	=====	=====	=====	=====
cis-1,3-Dichloropropene	53.19	50.00	LINR	6.3	20.0
trans-1,3-Dichloropropene	52.44	50.00	LINR	4.8	20.0
1,3-Dichlorobenzene	50.74	50.00	AVRG	1.4	20.0
2,2-Dichloropropane	59.01	50.00	AVRG	18.0	20.0
1,1-Dichloropropene	53.62	50.00	AVRG	7.2	20.0
Dibromomethane	54.82	50.00	AVRG	9.6	20.0
1,2-Dibromoethane	53.67	50.00	AVRG	7.3	20.0
trans-1,2-Dichloroethene	53.56	50.00	AVRG	7.1	20.0
1,1,1,2-Tetrachloroethane	52.06	50.00	LINR	4.1	20.0
1,1,1-Trichloroethane	55.18	50.00	AVRG	10.3	20.0
1,1,2,2-Tetrachloroethane	49.30	50.00	AVRG	1.4	20.0
Freon TF	49.04	50.00	AVRG	1.9	20.0
1,1,2-Trichloroethane	52.86	50.00	AVRG	5.7	20.0
1,1-Dichloroethane	54.29	50.00	AVRG	8.5	20.0
1,1-Dichloroethene	50.41	50.00	AVRG	0.8	20.0
Trichlorofluoromethane	50.19	50.00	LINR	0.3	20.0
1,2,3-Trichlorobenzene	47.57	50.00	LINR	4.8	20.0
Toluene	54.49	50.00	AVRG	8.9	20.0
1,2,4-Trichlorobenzene	50.96	50.00	AVRG	1.9	20.0
1,2,4-Trimethylbenzene	53.51	50.00	AVRG	7.0	20.0
Tetrachloroethene	49.08	50.00	AVRG	1.8	20.0
Trichloroethene	52.84	50.00	AVRG	5.6	20.0
1,2-Dichlorobenzene	50.08	50.00	AVRG	0.1	20.0
1,2-Dichloroethane	56.00	50.00	LINR	12.0	20.0
1,2-Dichloropropane	54.62	50.00	AVRG	9.2	20.0
1,3,5-Trimethylbenzene	53.68	50.00	AVRG	7.3	20.0
1,3-Dichloropropane	53.43	50.00	AVRG	6.8	20.0
1,4-Dichlorobenzene	49.34	50.00	AVRG	1.3	20.0
2-Butanone	100.98	100.00	LINR	0.9	20.0
2-Chlorotoluene	52.48	50.00	AVRG	4.9	20.0
2-Hexanone	101.97	100.00	AVRG	1.9	20.0
4-Chlorotoluene	53.41	50.00	AVRG	6.8	20.0
tert-Butylbenzene	52.79	50.00	AVRG	5.5	20.0
4-Methyl-2-Pentanone	102.34	100.00	AVRG	2.3	20.0
Acetone	98.56	100.00	LINR	1.4	20.0
Benzene	54.48	50.00	AVRG	8.9	20.0
Bromobenzene	50.98	50.00	AVRG	1.9	20.0



FORM 7
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: ALS LABORATORY GROUP Contract:
 Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS18121123
 Instrument ID: VOA9 Calibration Date: 12/28/18 Time: 1101
 Lab File ID: U122803 Init. Calib. Date(s): 12/21/18 12/21/18
 Heated Purge: (Y/N) N Init. Calib. Times: 1349 1755
 GC Column: DB624 ID: 0.18 (mm)

COMPOUND	SAMPLE AMOUNT	CAL50 AMOUNT	CURVE	%D	MAX %d
=====	=====	=====	=====	=====	=====
Bromochloromethane	61.61	50.00	LINR	23.2	20.0
Bromodichloromethane	57.52	50.00	AVRG	15.0	20.0
Bromoform	47.51	50.00	LINR	4.9	20.0
Bromomethane	49.53	50.00	LINR	0.9	20.0
Carbon Disulfide	102.95	100.00	AVRG	2.9	20.0
Carbon Tetrachloride	50.25	50.00	LINR	0.5	20.0
Chlorobenzene	52.92	50.00	AVRG	5.8	20.0
Chloroethane	51.97	50.00	2ORDR	3.9	20.0
Chloroform	54.21	50.00	AVRG	8.4	20.0
Chloromethane	46.84	50.00	LINR	6.3	20.0
cis-1,2-Dichloroethene	53.87	50.00	AVRG	7.7	20.0
Dibromochloromethane	51.32	50.00	LINR	2.6	20.0
Dichlorodifluoromethane	44.49	50.00	LINR	11.0	20.0
Ethylbenzene	53.65	50.00	AVRG	7.3	20.0
Hexachlorobutadiene	45.64	50.00	AVRG	8.7	20.0
Isopropylbenzene	54.54	50.00	AVRG	9.0	20.0
m,p-Xylenes	109.02	100.00	AVRG	9.0	20.0
Methylene Chloride	55.33	50.00	LINR	10.6	20.0
n-Butylbenzene	51.67	50.00	AVRG	3.3	20.0
n-Propylbenzene	53.64	50.00	AVRG	7.2	20.0
Naphthalene	47.22	50.00	2ORDR	5.5	20.0
o-Xylene	54.61	50.00	AVRG	9.2	20.0
sec-Butylbenzene	52.53	50.00	AVRG	5.0	20.0
Styrene	57.05	50.00	AVRG	14.1	20.0
Vinyl Chloride	51.08	50.00	LINR	2.1	20.0
1,2,3-Trichloropropane	50.02	50.00	AVRG	0.0	20.0
p-Isopropyltoluene	53.48	50.00	AVRG	6.9	20.0
1,2-Dibromo-3-Chloropropane	44.05	50.00	LINR	11.9	20.0
=====	=====	=====	=====	=====	=====
1,2-Dichloroethane-d4	51.04	50.00	LINR	2.0	20.0
Dibromofluoromethane	51.19	50.00	LINR	2.3	20.0
Toluene-d8	48.69	50.00	LINR	2.6	20.0
4-Bromofluorobenzene	51.50	50.00	LINR	3.0	20.0



FORM 7
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: ALS LABORATORY GROUP Contract:
 Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS18121123
 Instrument ID: VOA9 Calibration Date: 12/28/18 Time: 2147
 Lab File ID: U122829 Init. Calib. Date(s): 12/21/18 12/21/18
 Heated Purge: (Y/N) N Init. Calib. Times: 1349 1755
 GC Column: DB624 ID: 0.18 (mm)

COMPOUND	SAMPLE AMOUNT	CAL50 AMOUNT	CURVE	%D	MAX %d
=====	=====	=====	=====	=====	=====
cis-1,3-Dichloropropene	49.65	50.00	LINR	0.7	50.0
trans-1,3-Dichloropropene	49.12	50.00	LINR	1.7	50.0
1,3-Dichlorobenzene	48.21	50.00	AVRG	3.5	50.0
2,2-Dichloropropane	47.57	50.00	AVRG	4.8	50.0
1,1-Dichloropropene	49.84	50.00	AVRG	0.3	50.0
Dibromomethane	52.85	50.00	AVRG	5.7	50.0
1,2-Dibromoethane	53.55	50.00	AVRG	7.1	50.0
trans-1,2-Dichloroethene	52.56	50.00	AVRG	5.1	50.0
1,1,1,2-Tetrachloroethane	49.72	50.00	LINR	0.5	50.0
1,1,1-Trichloroethane	52.85	50.00	AVRG	5.7	50.0
1,1,2,2-Tetrachloroethane	49.55	50.00	AVRG	0.9	50.0
Freon TF	48.54	50.00	AVRG	2.9	50.0
1,1,2-Trichloroethane	52.29	50.00	AVRG	4.5	50.0
1,1-Dichloroethane	53.29	50.00	AVRG	6.5	50.0
1,1-Dichloroethene	50.38	50.00	AVRG	0.7	50.0
Trichlorofluoromethane	49.80	50.00	LINR	0.4	50.0
1,2,3-Trichlorobenzene	46.21	50.00	LINR	7.5	50.0
Toluene	51.91	50.00	AVRG	3.8	50.0
1,2,4-Trichlorobenzene	47.90	50.00	AVRG	4.2	50.0
1,2,4-Trimethylbenzene	49.36	50.00	AVRG	1.2	50.0
Tetrachloroethene	44.80	50.00	AVRG	10.4	50.0
Trichloroethene	51.12	50.00	AVRG	2.2	50.0
1,2-Dichlorobenzene	48.96	50.00	AVRG	2.0	50.0
1,2-Dichloroethane	54.42	50.00	LINR	8.8	50.0
1,2-Dichloropropane	52.77	50.00	AVRG	5.5	50.0
1,3,5-Trimethylbenzene	49.57	50.00	AVRG	0.8	50.0
1,3-Dichloropropane	52.76	50.00	AVRG	5.5	50.0
1,4-Dichlorobenzene	47.07	50.00	AVRG	5.8	50.0
2-Butanone	109.52	100.00	LINR	9.5	50.0
2-Chlorotoluene	49.85	50.00	AVRG	0.3	50.0
2-Hexanone	112.13	100.00	AVRG	12.1	50.0
4-Chlorotoluene	50.10	50.00	AVRG	0.2	50.0
tert-Butylbenzene	46.85	50.00	AVRG	6.3	50.0
4-Methyl-2-Pentanone	110.42	100.00	AVRG	10.4	50.0
Acetone	115.14	100.00	LINR	15.1	50.0
Benzene	52.21	50.00	AVRG	4.4	50.0
Bromobenzene	50.24	50.00	AVRG	0.4	50.0



FORM 7
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: ALS LABORATORY GROUP Contract:
 Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS18121123
 Instrument ID: VOA9 Calibration Date: 12/28/18 Time: 2147
 Lab File ID: U122829 Init. Calib. Date(s): 12/21/18 12/21/18
 Heated Purge: (Y/N) N Init. Calib. Times: 1349 1755
 GC Column: DB624 ID: 0.18 (mm)

COMPOUND	SAMPLE AMOUNT	CAL50 AMOUNT	CURVE	%D	MAX %d
Bromochloromethane	61.53	50.00	LINR	23.0	50.0
Bromodichloromethane	53.82	50.00	AVRG	7.6	50.0
Bromoform	47.21	50.00	LINR	5.5	50.0
Bromomethane	49.91	50.00	LINR	0.1	50.0
Carbon Disulfide	101.40	100.00	AVRG	1.4	50.0
Carbon Tetrachloride	45.78	50.00	LINR	8.4	50.0
Chlorobenzene	50.62	50.00	AVRG	1.2	50.0
Chloroethane	52.19	50.00	2ORDR	4.3	50.0
Chloroform	53.32	50.00	AVRG	6.6	50.0
Chloromethane	57.29	50.00	LINR	14.5	50.0
cis-1,2-Dichloroethene	53.46	50.00	AVRG	6.9	50.0
Dibromochloromethane	49.88	50.00	LINR	0.2	50.0
Dichlorodifluoromethane	45.74	50.00	LINR	8.5	50.0
Ethylbenzene	49.98	50.00	AVRG	0.0	50.0
Hexachlorobutadiene	38.84	50.00	AVRG	22.3	50.0
Isopropylbenzene	49.10	50.00	AVRG	1.8	50.0
m,p-Xylenes	101.17	100.00	AVRG	1.1	50.0
Methylene Chloride	54.53	50.00	LINR	9.0	50.0
n-Butylbenzene	44.63	50.00	AVRG	10.7	50.0
n-Propylbenzene	48.25	50.00	AVRG	3.5	50.0
Naphthalene	49.11	50.00	2ORDR	1.7	50.0
o-Xylene	51.41	50.00	AVRG	2.8	50.0
sec-Butylbenzene	46.18	50.00	AVRG	7.6	50.0
Styrene	54.24	50.00	AVRG	8.4	50.0
Vinyl Chloride	51.46	50.00	LINR	2.9	50.0
1,2,3-Trichloropropane	51.99	50.00	AVRG	3.9	50.0
p-Isopropyltoluene	47.21	50.00	AVRG	5.5	50.0
1,2-Dibromo-3-Chloropropane	47.35	50.00	LINR	5.3	50.0
1,2-Dichloroethane-d4	52.61	50.00	LINR	5.2	50.0
Dibromofluoromethane	52.38	50.00	LINR	4.7	50.0
Toluene-d8	49.28	50.00	LINR	1.4	50.0
4-Bromofluorobenzene	52.25	50.00	LINR	4.5	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.: HS18121123

EPA Sample No. (VSTD050##): VSTD050

Date Analyzed: 12/28/18

Lab File ID (Standard): U122803

Time Analyzed: 1101

Instrument ID: VOA9

Heated Purge: (Y/N) N

GC Column: DB624 ID:0.18(mm)

	IS1 (DCB)		IS2 (CBZ)		IS3 (DFB)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
=====	=====	=====	=====	=====	=====	=====
12 HOUR STD	329757	10.24	670712	8.25	713886	5.63
UPPER LIMIT	659514	10.74	1341424	8.75	1427772	6.13
LOWER LIMIT	164879	9.74	335356	7.75	356943	5.13
=====	=====	=====	=====	=====	=====	=====
CLIENT						
=====	=====	=====	=====	=====	=====	=====
01 VLCSW-181228	327149	10.24	662579	8.25	702278	5.63
02 VBLKW-181228	232649	10.24	503607	8.25	560451	5.63
03 HS18121123-0	217295	10.24	482105	8.25	525921	5.63
04 HS18121123-0	217051	10.24	482907	8.25	531661	5.63
05 HS18121123-0	205902	10.24	461003	8.25	509683	5.63
06 HS18121123-0	229566	10.24	477547	8.25	525310	5.63
07 HS18121123-0	239056	10.24	492616	8.25	537919	5.63
08 HS18121123-0	231696	10.24	506381	8.25	569784	5.63
09						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						

IS1 (DCB) = 1,4-Dichlorobenzene-d4

IS2 (CBZ) = Chlorobenzene-d5

IS3 (DFB) = 1,4-Difluorobenzene

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.: HS18121123

EPA Sample No. (VSTD050##): VSTD050

Date Analyzed: 12/28/18

Lab File ID (Standard): U122803

Time Analyzed: 1101

Instrument ID: VOA9

Heated Purge: (Y/N) N

GC Column: DB624 ID:0.18 (mm)

	IS4 AREA #	RT #	AREA #	RT #	AREA #	RT #
=====	=====	=====	=====	=====	=====	=====
12 HOUR STD	383764	4.89				
UPPER LIMIT	767528	5.39				
LOWER LIMIT	191882	4.39				
=====	=====	=====	=====	=====	=====	=====
CLIENT						
=====	=====	=====	=====	=====	=====	=====
01 VLCSW-181228	385002	4.90				
02 VBLKW-181228	312410	4.89				
03 HS18121123-0	295434	4.89				
04 HS18121123-0	297572	4.90				
05 HS18121123-0	286143	4.90				
06 HS18121123-0	296142	4.89				
07 HS18121123-0	308307	4.89				
08 HS18121123-0	320437	4.90				
09						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						

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\U181228.b\U122802.D

Page 1

Date : 28-DEC-2018 10:37

Client ID: BFB

Instrument: VOA9.i

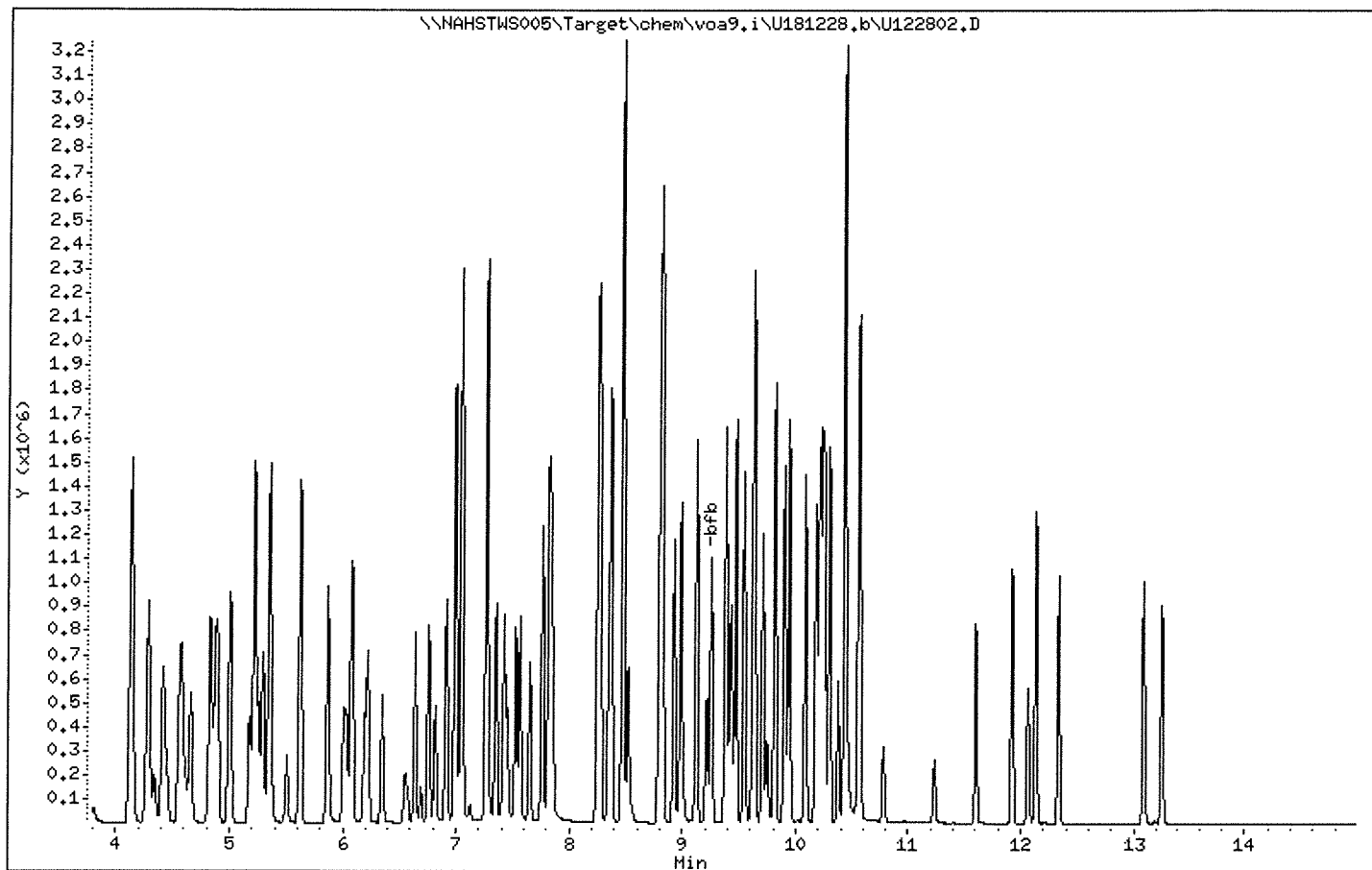
Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0,25



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181228.b\U122802.D

Page 2

Date : 28-DEC-2018 10:37

Client ID: BFB

Instrument: VOA9.i

Sample Info: BFB;BFB;3;;BFB

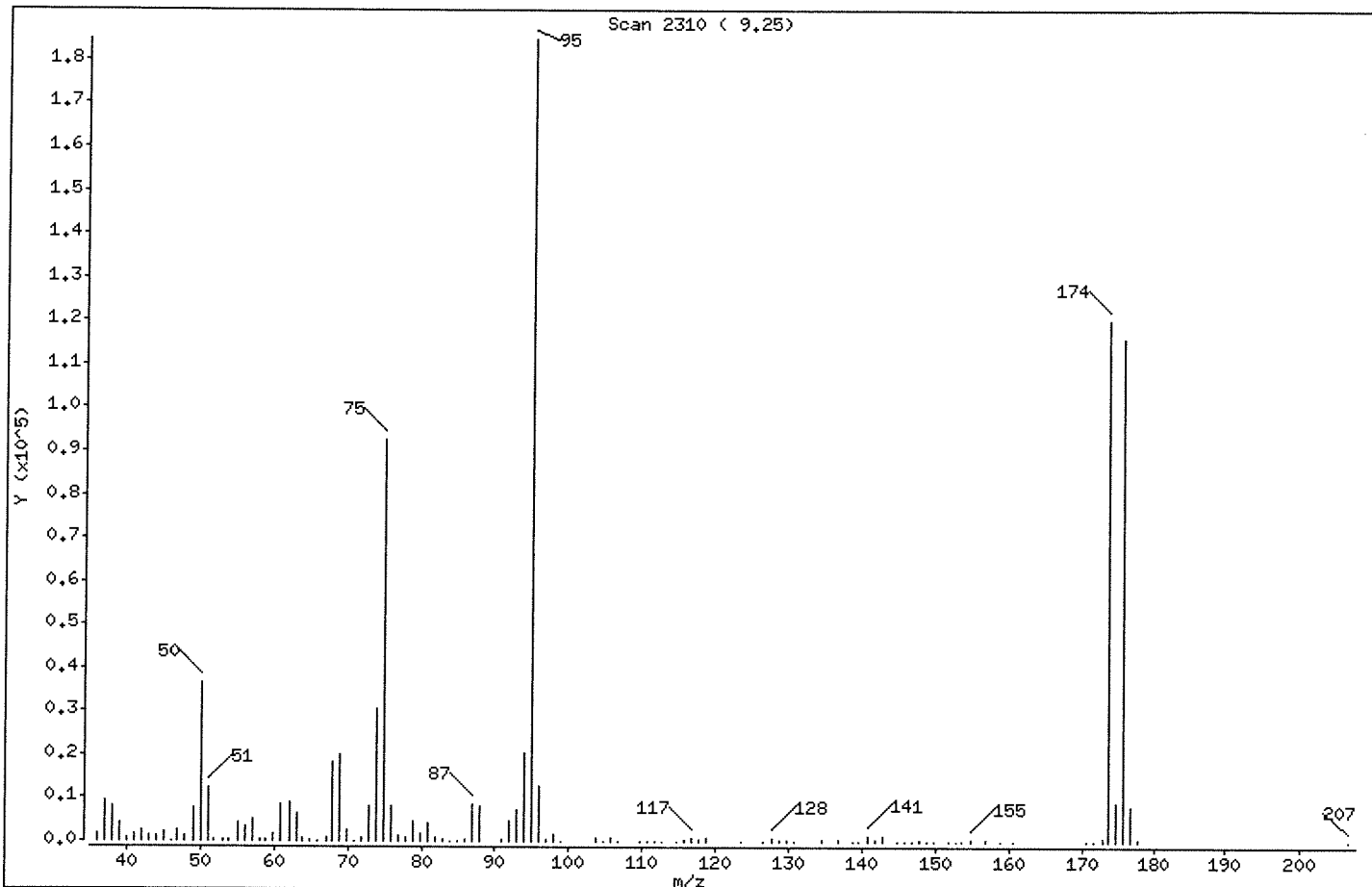
Volume Injected (uL): 2.0

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	19.86
75	30.00 - 60.00% of mass 95	50.19
96	5.00 - 9.00% of mass 95	6.95
173	Less than 2.00% of mass 174	0.56 (0.86)
174	Greater than 50.00% of mass 95	64.96
175	5.00 - 9.00% of mass 174	4.86 (7.49)
176	95.00 - 101.00% of mass 174	62.75 (96.60)
177	5.00 - 9.00% of mass 176	4.29 (6.83)



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181228.b\U122802.D

Page 3

Date : 28-DEC-2018 10:37

Client ID: BFB

Instrument: VDA9.i

Sample Info: BFB;BFB;3;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25

Data File: U122802.D
 Spectrum: Scan 2310 (9.25)
 Location of Maximum: 94.90
 Number of points: 110

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1687	63.90	671	93.90	20560	139.60	107
37.00	9204	64.90	228	94.90	184640	140.80	1327
38.00	8106	65.80	56	95.90	12826	141.70	223
39.00	4271	67.00	677	96.90	542	142.70	1319
40.00	890	67.90	18384	97.90	1537	144.80	132
41.00	1851	68.90	19992	98.90	86	145.70	206
42.00	2535	69.90	2411	103.80	692	146.70	96
43.00	1270	70.90	156	104.70	201	147.70	427
43.90	1426	71.90	930	105.80	765	148.70	112
45.00	2122	72.90	8173	106.70	139	149.70	176
46.00	165	73.90	30352	109.70	78	151.80	81
46.90	2701	74.90	92672	110.70	137	152.70	80
47.90	1236	75.90	8138	111.70	64	153.60	68
49.00	7479	76.90	1173	112.70	97	154.70	338
50.00	36664	77.90	849	114.70	127	156.70	259
51.00	12132	78.80	4539	115.70	514	158.70	152
51.90	548	79.90	1534	116.80	901	160.70	148
53.00	292	80.80	4439	117.70	484	170.70	81
53.90	426	81.80	1011	118.70	825	171.60	194
55.00	4128	82.90	469	123.60	77	172.80	1026
56.00	3388	84.00	82	126.60	147	173.70	119944
57.00	5111	85.00	100	127.70	654	174.70	8980
58.00	535	85.90	238	128.70	244	175.70	115864
58.90	547	86.90	8574	129.70	546	176.70	7916
59.90	1750	87.80	8260	130.70	193	177.60	218
60.90	8647	90.80	623	134.60	249	206.70	58
62.00	9011	91.90	4638	136.70	294		
63.00	6404	92.90	7118	138.70	54		



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181228.b\U122803.D Page 1
 Report Date: 30-Jan-2019 17:17

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U181228.b\U122803.D
 Lab Smp Id: VSTD050 Client Smp ID: VSTD050
 Inj Date : 28-DEC-2018 11:01
 Operator : PC Inst ID: VOA9.i
 Smp Info : VSTD050;VSTD050;2;;
 Misc Info : 180315V9;WATER;0;1;
 Comment :
 Method : \\NAHSTWS005\Target\chem\voa9.i\U181228.b\8260C.m
 Meth Date : 30-Jan-2019 17:08 hvan Quant Type: ISTD
 Cal Date : 21-DEC-2018 16:41 Cal File: U122108.D
 Als bottle: 3 Continuing Calibration Sample
 Dil Factor: 1.00000
 Integrator: HP RTE Compound Sublist: LHAAP.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)	ON-COL (ug/l)
* 1 Pentafluorobenzene	168		4.894	4.894	(1.000)	383764	50.0000		
* 36 1,4-Difluorobenzene	114		5.625	5.625	(1.000)	713886	50.0000		
* 47 Chlorobenzene-d5	117		8.249	8.249	(1.000)	670712	50.0000		
* 70 1,4-Dichlorobenzene-d4	152		10.236	10.236	(1.000)	329757	50.0000		
\$ 30 Dibromofluoromethane	113		4.830	4.830	(0.987)	216638	50.0000	51.19	
\$ 35 1,2-Dichloroethane-d4	65		5.175	5.175	(1.057)	277035	50.0000	51.04	
\$ 48 Toluene-d8	98		6.989	6.990	(0.847)	844137	50.0000	48.69	
\$ 69 4-Bromofluorobenzene	95		9.257	9.257	(1.122)	339334	50.0000	51.50	
60 1,1,1,2-Tetrachloroethane	131		8.350	8.350	(1.012)	221712	50.0000	52.06	
31 1,1,1-Trichloroethane	97		4.826	4.827	(0.986)	334412	50.0000	55.18	
68 1,1,2,2-Tetrachloroethane	83		9.392	9.392	(0.918)	366136	50.0000	49.30	
138 Freon TF	101		2.405	2.401	(0.491)	160013	50.0000	49.04	
53 1,1,2-Trichloroethane	83		7.421	7.421	(0.900)	211232	50.0000	52.86	
22 1,1-Dichloroethane	63		3.604	3.604	(0.737)	448724	50.0000	54.29	
11 1,1-Dichloroethene	96		2.401	2.401	(0.491)	183945	50.0000	50.41	
32 1,1-Dichloropropene	75		5.006	5.003	(0.890)	340597	50.0000	53.62	
93 1,2,3-Trichlorobenzene	180		12.335	12.335	(1.205)	295408	50.0000	47.57	
71 1,2,3-Trichloropropane	75		9.426	9.426	(0.921)	386288	50.0000	50.02	
90 1,2,4-Trichlorobenzene	180		11.923	11.923	(1.165)	311165	50.0000	50.96	
79 1,2,4-Trimethylbenzene	105		9.943	9.943	(0.971)	923490	50.0000	53.51	
89 1,2-Dibromo-3-Chloropropane	155		11.233	11.233	(1.097)	50241	50.0000	44.05	
57 1,2-Dibromoethane	107		7.852	7.852	(0.952)	247018	50.0000	53.67	
88 1,2-Dichlorobenzene	146		10.569	10.570	(1.033)	490415	50.0000	50.08	



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181228.b\U122803.D Page 2
 Report Date: 30-Jan-2019 17:17

Compounds	QUANT SIG					AMOUNTS	
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/l)	ON-COL (ug/l)
33 1,2-Dichloroethane	62	5.254	5.254	(0.934)	359650	50.0000	56.00
42 1,2-Dichloropropane	63	6.082	6.082	(1.081)	275542	50.0000	54.62
75 1,3,5-Trimethylbenzene	105	9.625	9.625	(0.940)	889723	50.0000	53.68
83 1,3-Dichlorobenzene	146	10.180	10.180	(0.995)	496880	50.0000	50.74
54 1,3-Dichloropropane	76	7.563	7.563	(0.917)	459900	50.0000	53.43
84 1,4-Dichlorobenzene	146	10.255	10.255	(1.002)	509434	50.0000	49.34
26 2,2-Dichloropropane	77	4.275	4.275	(0.874)	293923	50.0000	59.01
24 2-Butanone	43	4.335	4.335	(0.886)	253382	100.000	100.98
76 2-Chlorotoluene	91	9.546	9.546	(0.933)	797399	50.0000	52.48
52 2-Hexanone	43	7.649	7.649	(0.927)	380314	100.000	101.97
77 4-Chlorotoluene	91	9.640	9.640	(0.942)	937767	50.0000	53.41
82 p-Isopropyltoluene	119	10.210	10.210	(0.997)	933264	50.0000	53.48
45 4-Methyl-2-Pentanone	43	6.911	6.915	(0.838)	549224	100.000	102.34
10 Acetone	43	2.480	2.480	(0.507)	147729	100.000	98.56
37 Benzene	78	5.216	5.216	(0.927)	1034963	50.0000	54.48
74 Bromobenzene	156	9.381	9.381	(0.917)	259753	50.0000	50.98
29 Bromochloromethane	128	4.553	4.553	(0.930)	122578	50.0000	61.61
39 Bromodichloromethane	83	6.348	6.348	(1.129)	308566	50.0000	57.52
66 Bromoform	173	8.984	8.984	(1.089)	136529	50.0000	47.51 (T)
6 Bromomethane	94	1.670	1.670	(0.341)	117367	50.0000	49.53
19 Carbon Disulfide	76	2.592	2.592	(0.530)	1368787	100.000	102.95
34 Carbon Tetrachloride	117	4.995	4.995	(0.888)	260931	50.0000	50.25
59 Chlorobenzene	112	8.275	8.275	(1.003)	682004	50.0000	52.92
7 Chloroethane	64	1.756	1.753	(0.359)	177081	50.0000	51.97 (M)
28 Chloroform	83	4.658	4.658	(0.952)	431529	50.0000	54.21
3 Chloromethane	50	1.340	1.340	(0.274)	190095	50.0000	46.84
27 cis-1,2-Dichloroethene	96	4.287	4.287	(0.876)	271744	50.0000	53.87
46 cis-1,3-Dichloropropene	75	6.757	6.757	(1.201)	434290	50.0000	53.19
55 Dibromochloromethane	129	7.758	7.758	(0.940)	226337	50.0000	51.32
44 Dibromomethane	93	6.191	6.191	(1.101)	159618	50.0000	54.82
2 Dichlorodifluoromethane	85	1.209	1.205	(0.247)	209857	50.0000	44.49
61 Ethylbenzene	106	8.369	8.369	(1.015)	354656	50.0000	53.65
91 Hexachlorobutadiene	225	12.065	12.065	(1.179)	106757	50.0000	45.64
67 Isopropylbenzene	105	9.126	9.126	(1.106)	1040369	50.0000	54.54
62 m,p-Xylenes	106	8.470	8.474	(1.027)	885879	100.000	109.02
17 Methylene Chloride	84	2.873	2.873	(0.587)	261844	50.0000	55.33
87 n-Butylbenzene	91	10.554	10.555	(1.031)	870209	50.0000	51.67
73 n-Propylbenzene	91	9.475	9.475	(0.926)	1321691	50.0000	53.64
92 Naphthalene	128	12.133	12.133	(1.185)	947949	50.0000	47.22
63 o-Xylene	106	8.811	8.811	(1.068)	447667	50.0000	54.61
81 sec-Butylbenzene	105	10.086	10.086	(0.985)	1087870	50.0000	52.53
64 Styrene	104	8.823	8.826	(1.070)	777007	50.0000	57.05
78 tert-Butylbenzene	119	9.902	9.902	(0.967)	756223	50.0000	52.79
56 Tetrachloroethene	164	7.522	7.526	(0.912)	172344	50.0000	49.08
50 Toluene	91	7.046	7.046	(0.854)	1087185	50.0000	54.49
20 trans-1,2-Dichloroethene	96	3.143	3.143	(0.642)	240637	50.0000	53.56
51 trans-1,3-Dichloropropene	75	7.259	7.259	(1.291)	368356	50.0000	52.44
38 Trichloroethene	130	5.861	5.861	(1.042)	242329	50.0000	52.84
8 Trichlorofluoromethane	101	1.959	1.955	(0.400)	317527	50.0000	50.19
5 Vinyl Chloride	62	1.423	1.419	(0.291)	277397	50.0000	51.08



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181228.b\U122803.D Page 3
Report Date: 30-Jan-2019 17:17

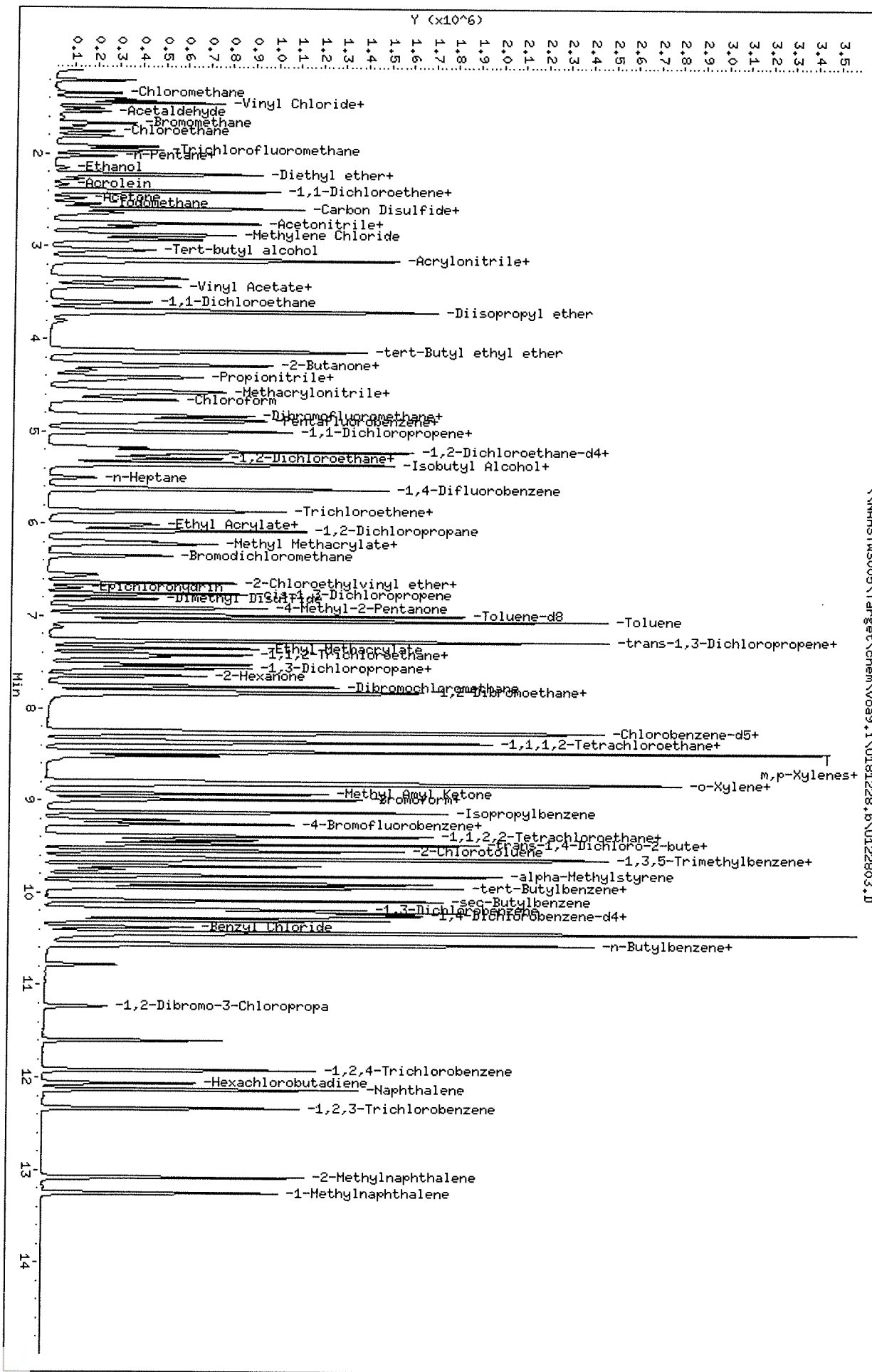
QC Flag Legend

- T - Target compound detected outside RT window.
- M - Compound response manually integrated.



Data File: \\NAHSTW5005\Target\chem\voa9.1\U181228.6\U122803.D
Date : 28-DEC-2018 11:01
Client ID: WSTD050
Sample Info: WSTD050;WSTD050;2;+
Purge Volume: 5.0
Column Phase: DB624

Instrument: VOA9.1
Operator: PC
Column diameter: 0.18

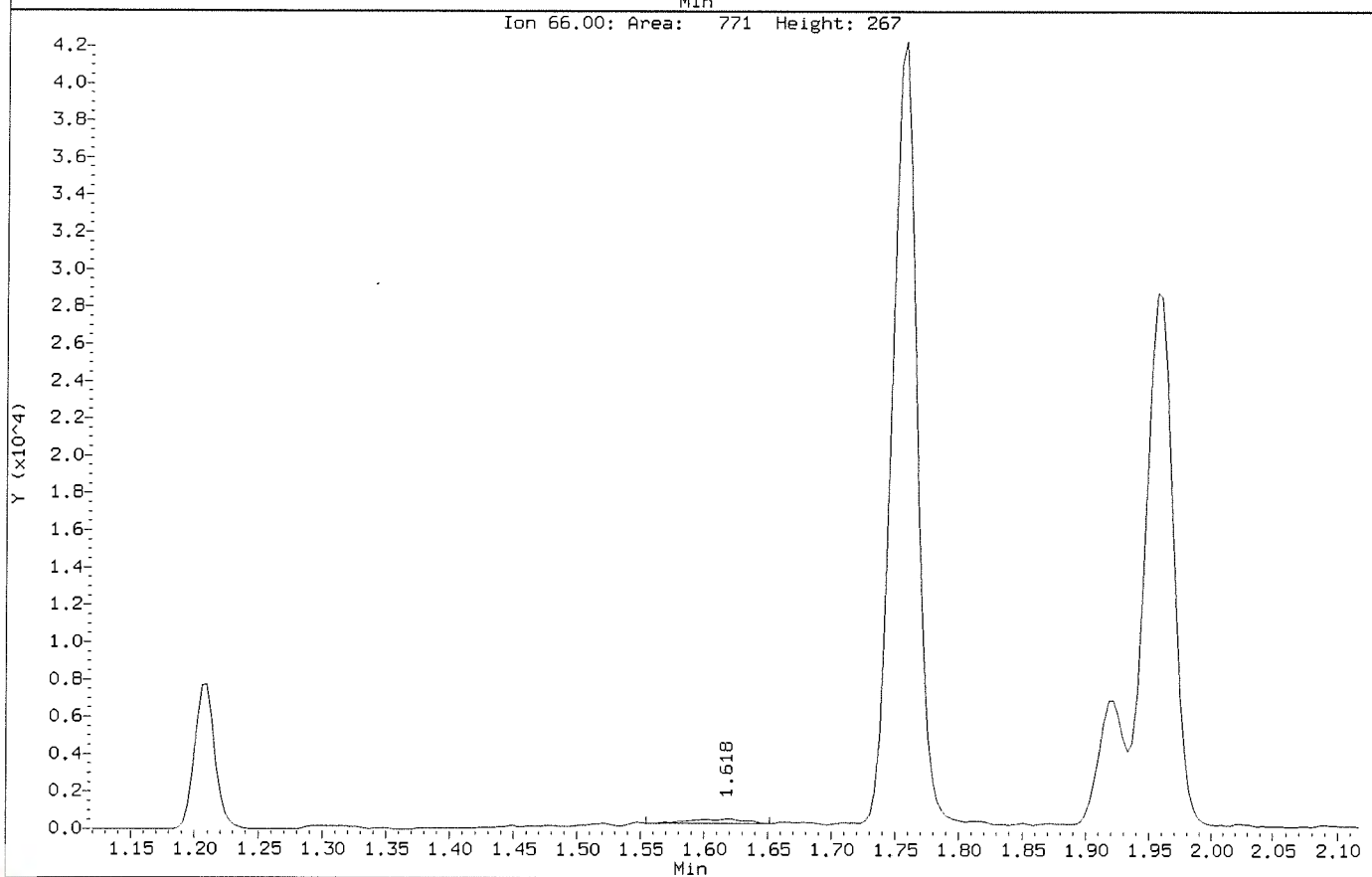
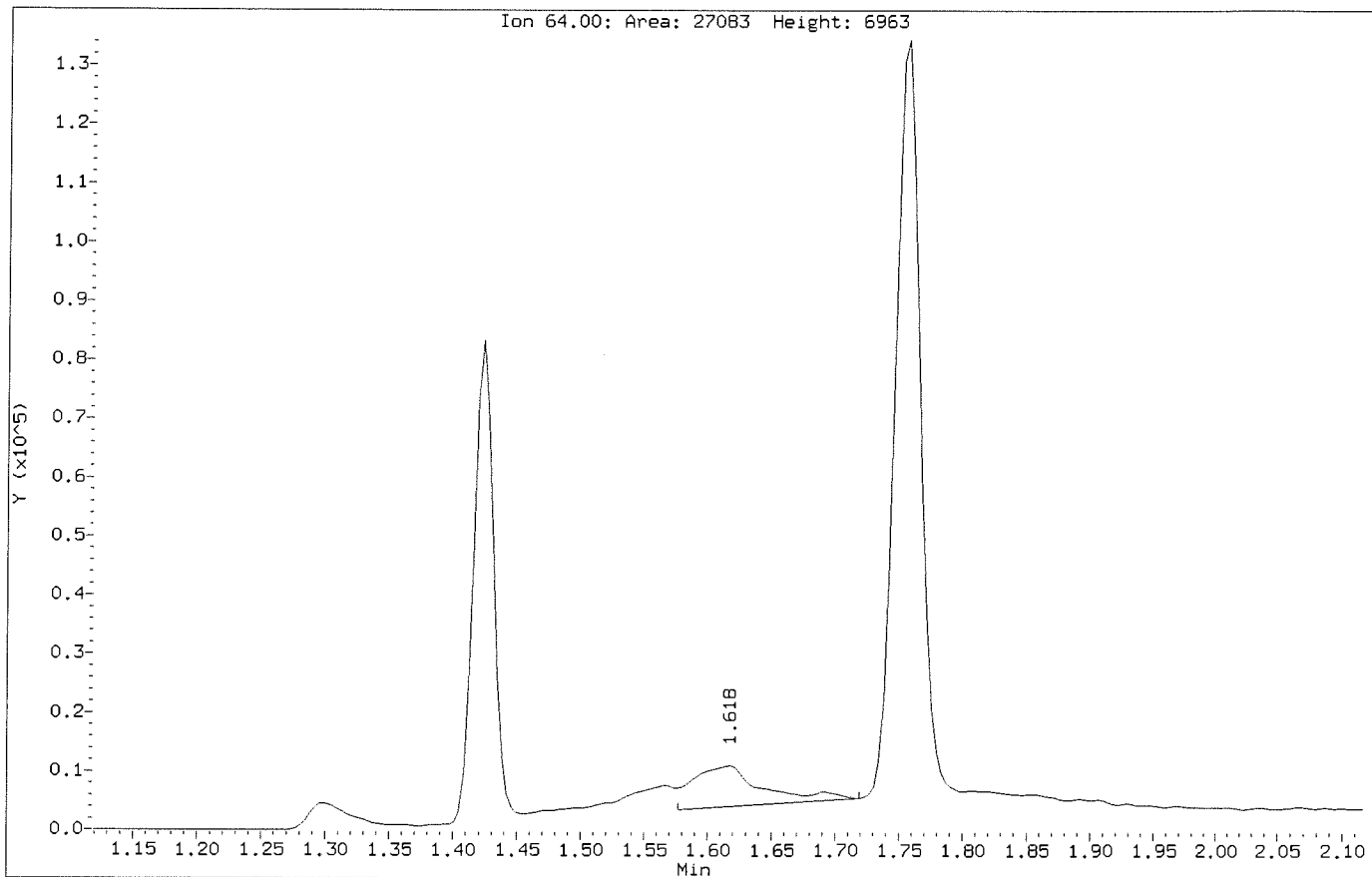


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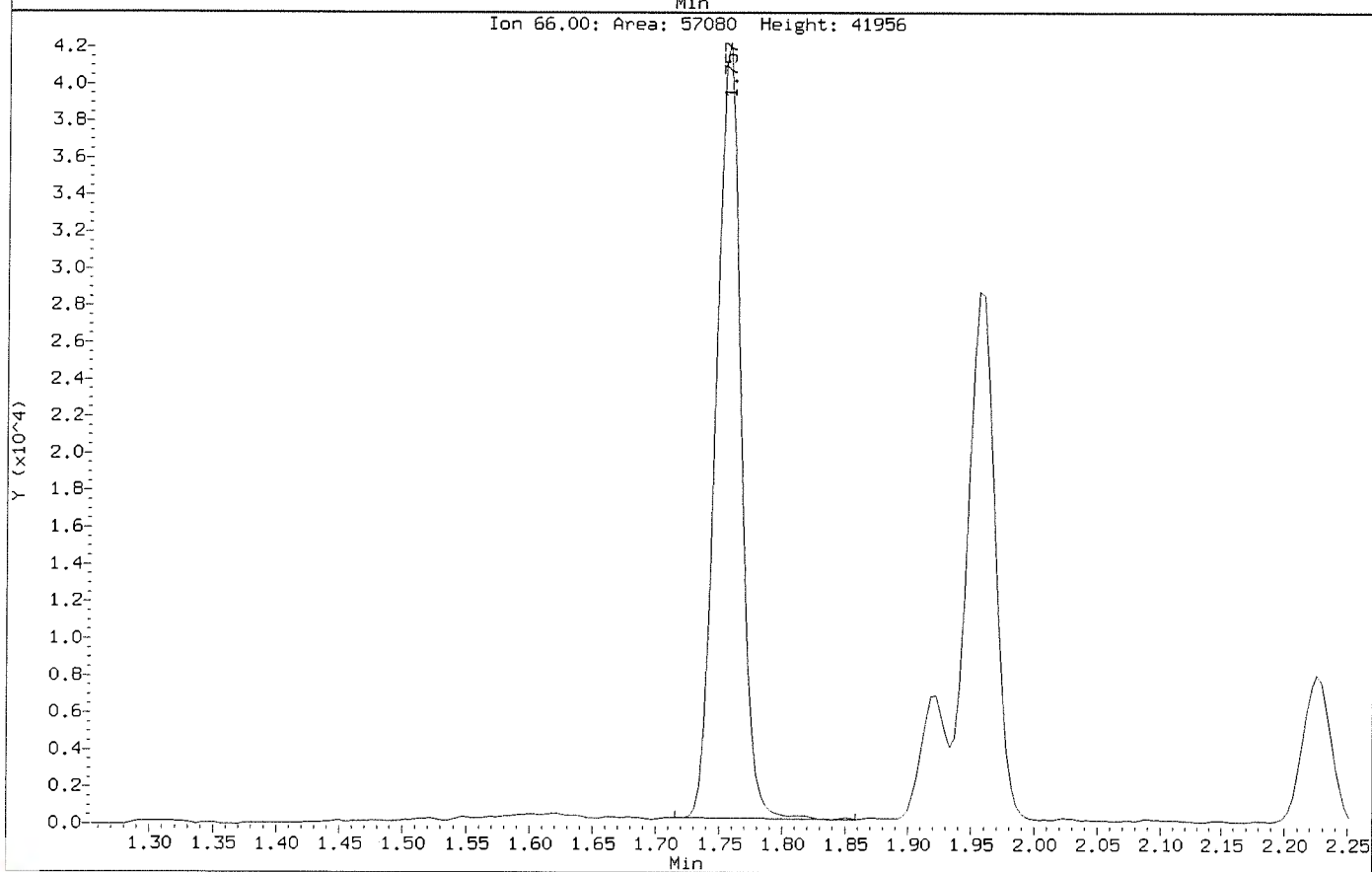
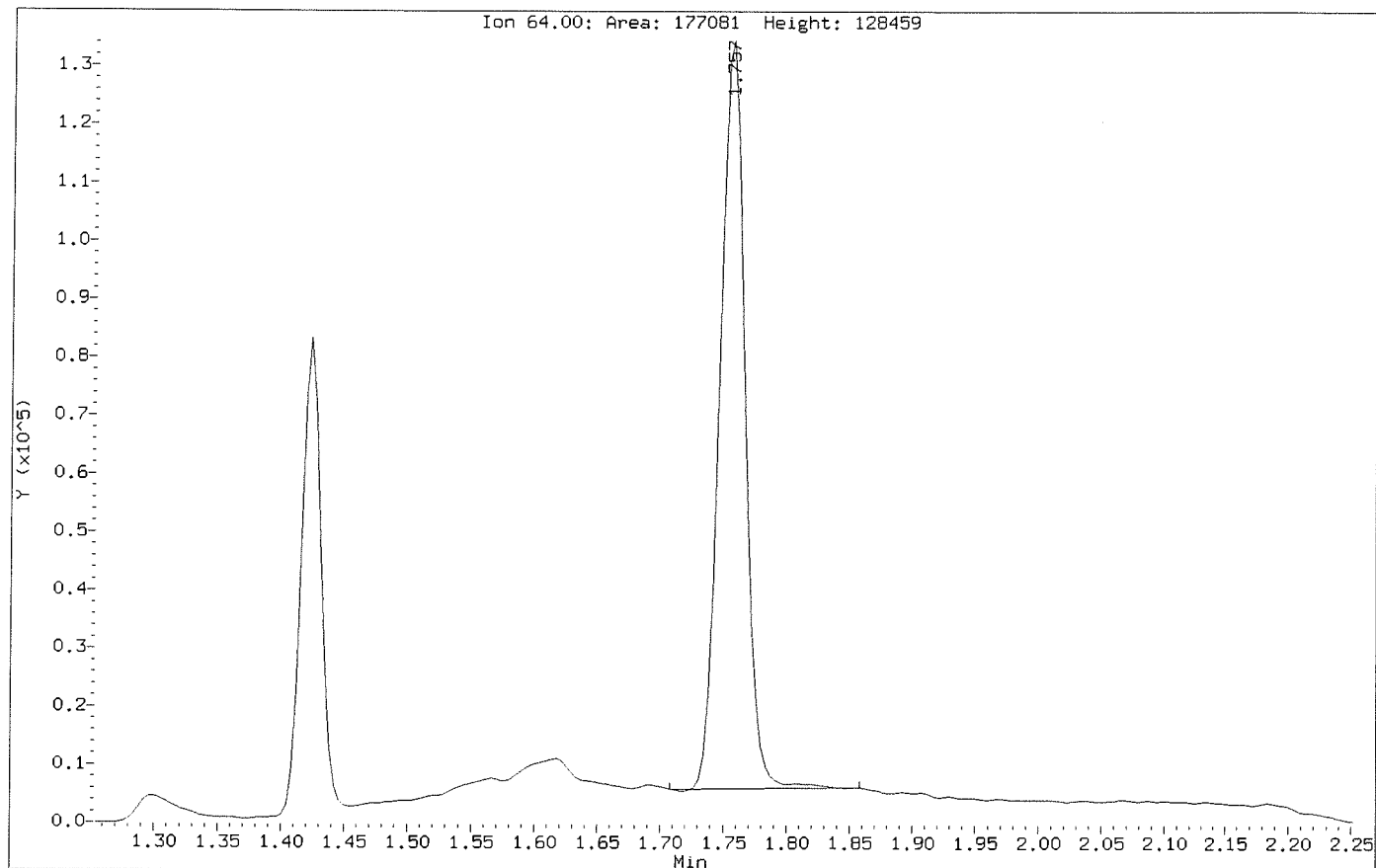
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Injection Date: 28-DEC-2018 11:01
Instrument: VOA9.i
Client Sample ID: VSTD050

Compound: Chloroethane
CAS Number: 75-00-3



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181228.b\U122803.D
Injection Date: 28-DEC-2018 11:01
Instrument: VOA9.i
Client Sample ID: VSTD050

Compound: Chloroethane
CAS Number: 75-00-3



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181228.b\U122804.D Page 1
 Report Date: 30-Jan-2019 17:04

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U181228.b\U122804.D
 Lab Smp Id: VLCSW-1812028 Client Smp ID: VLCSW-181228
 Inj Date : 28-DEC-2018 11:26
 Operator : PC Inst ID: VOA9.i
 Smp Info : VLCSW-1812028;VLCSW-181228;3;;LCS
 Misc Info : 180315V9;WATER;0;1;
 Comment :
 Method : \\NAHSTWS005\Target\chem\voa9.i\U181228.b\8260C.m
 Meth Date : 30-Jan-2019 17:04 VOA9.i Quant Type: ISTD
 Cal Date : 21-DEC-2018 16:41 Cal File: U122108.D
 Als bottle: 4 QC Sample: LCS
 Dil Factor: 1.00000
 Integrator: HP RTE Compound Sublist: LHAAP.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)	385002	50.0000		
* 36 1,4-Difluorobenzene	114		5.625	5.625	(1.000)	702278	50.0000		
* 47 Chlorobenzene-d5	117		8.249	8.249	(1.000)	662579	50.0000		
* 70 1,4-Dichlorobenzene-d4	152		10.236	10.236	(1.000)	327149	50.0000		
\$ 30 Dibromofluoromethane	113		4.830	4.830	(0.986)	216751	51.0492	51.04	
\$ 35 1,2-Dichloroethane-d4	65		5.175	5.175	(1.057)	281531	51.7363	51.73	
\$ 48 Toluene-d8	98		6.989	6.989	(0.847)	852141	49.7987	49.79	
\$ 69 4-Bromofluorobenzene	95		9.257	9.257	(1.122)	346214	53.2459	53.24	
60 1,1,1,2-Tetrachloroethane	131		8.350	8.350	(1.012)	86287	20.8676	20.86	
31 1,1,1-Trichloroethane	97		4.830	4.826	(0.986)	131691	21.6628	21.66	
68 1,1,2,2-Tetrachloroethane	83		9.392	9.392	(0.918)	149988	20.3581	20.35	
138 Freon TF	101		2.409	2.405	(0.492)	66601	20.3481	20.34	
53 1,1,2-Trichloroethane	83		7.421	7.421	(0.900)	86434	21.8960	21.89	
22 1,1-Dichloroethane	63		3.608	3.604	(0.737)	183714	22.1575	22.15	
11 1,1-Dichloroethene	96		2.409	2.401	(0.492)	74205	20.2710	20.27	
32 1,1-Dichloropropene	75		5.006	5.006	(0.890)	139369	22.3040	22.30	
93 1,2,3-Trichlorobenzene	180		12.335	12.335	(1.205)	118776	19.6561	19.65	
71 1,2,3-Trichloropropane	75		9.426	9.426	(0.921)	155394	20.2835	20.28	
90 1,2,4-Trichlorobenzene	180		11.923	11.923	(1.165)	122609	20.2428	20.24	
79 1,2,4-Trimethylbenzene	105		9.943	9.943	(0.971)	374050	21.8490	21.84	
89 1,2-Dibromo-3-Chloropropane	155		11.233	11.233	(1.097)	18722	17.4535	17.45	
57 1,2-Dibromoethane	107		7.852	7.852	(0.952)	99681	21.9238	21.92	



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181228.b\U122804.D Page 2
 Report Date: 30-Jan-2019 17:04

Compounds	QUANT SIG					CONCENTRATIONS	
	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/l)	FINAL (ug/l)
88 1,2-Dichlorobenzene	146	10.569	10.569	(1.033)	200512	20.6419	20.64
33 1,2-Dichloroethane	62	5.254	5.254	(0.934)	148581	23.0925	23.09
42 1,2-Dichloropropane	63	6.082	6.082	(1.081)	112506	22.6723	22.67
75 1,3,5-Trimethylbenzene	105	9.625	9.625	(0.940)	356076	21.6572	21.65
83 1,3-Dichlorobenzene	146	10.180	10.180	(0.995)	202236	20.8178	20.81
54 1,3-Dichloropropane	76	7.563	7.563	(0.917)	186151	21.8931	21.89
84 1,4-Dichlorobenzene	146	10.255	10.255	(1.002)	208378	20.3440	20.34
26 2,2-Dichloropropane	77	4.279	4.275	(0.874)	114241	22.8634	22.86
24 2-Butanone	43	4.339	4.335	(0.886)	103795	39.7932	39.79
76 2-Chlorotoluene	91	9.546	9.546	(0.933)	322092	21.3684	21.36
52 2-Hexanone	43	7.649	7.649	(0.927)	156680	42.5259	42.52
77 4-Chlorotoluene	91	9.640	9.640	(0.942)	380087	21.8206	21.82
82 p-Isopropyltoluene	119	10.210	10.210	(0.997)	370700	21.4136	21.41
45 4-Methyl-2-Pentanone	43	6.915	6.911	(0.838)	223966	42.2478	42.24
10 Acetone	43	2.484	2.480	(0.507)	63953	40.8131	40.81
37 Benzene	78	5.220	5.216	(0.928)	422911	22.6306	22.63
74 Bromobenzene	156	9.381	9.381	(0.917)	106029	20.9764	20.97
29 Bromochloromethane	128	4.557	4.553	(0.930)	49304	22.8392	22.83
39 Bromodichloromethane	83	6.348	6.348	(1.129)	120956	22.9217	22.92
66 Bromoform	173	8.984	8.984	(1.089)	51484	19.2268	19.22
6 Bromomethane	94	1.678	1.670	(0.343)	51216	22.3033	22.30
19 Carbon Disulfide	76	2.596	2.592	(0.530)	583361	43.7355	43.73
34 Carbon Tetrachloride	117	4.999	4.995	(0.889)	100758	20.5747	20.57
59 Chlorobenzene	112	8.275	8.275	(1.003)	279594	21.9622	21.96
7 Chloroethane	64	1.760	1.756	(0.359)	73251	21.9231	21.92 (M)
28 Chloroform	83	4.658	4.658	(0.951)	175164	21.9369	21.93
3 Chloromethane	50	1.344	1.340	(0.274)	87173	23.2167	23.21
27 cis-1,2-Dichloroethene	96	4.290	4.287	(0.876)	112196	22.1705	22.17
46 cis-1,3-Dichloropropene	75	6.757	6.757	(1.201)	165522	21.3840	21.38
55 Dibromochloromethane	129	7.758	7.758	(0.940)	85576	20.2468	20.24
44 Dibromomethane	93	6.191	6.191	(1.101)	63648	22.2240	22.22 (M)
2 Dichlorodifluoromethane	85	1.213	1.209	(0.248)	92400	19.8009	19.80
61 Ethylbenzene	106	8.369	8.369	(1.015)	140987	21.5925	21.59
91 Hexachlorobutadiene	225	12.065	12.065	(1.179)	46521	20.0476	20.04
67 Isopropylbenzene	105	9.126	9.126	(1.106)	413147	21.9276	21.92
62 m,p-Xylenes	106	8.474	8.470	(1.027)	358811	44.6997	44.69
17 Methylene Chloride	84	2.877	2.873	(0.587)	108227	22.0894	22.08
87 n-Butylbenzene	91	10.554	10.554	(1.031)	359367	21.5105	21.51
73 n-Propylbenzene	91	9.475	9.475	(0.926)	528999	21.6406	21.64
92 Naphthalene	128	12.133	12.133	(1.185)	364315	18.6080	18.60
63 o-Xylene	106	8.811	8.811	(1.068)	180697	22.3138	22.31
81 sec-Butylbenzene	105	10.086	10.086	(0.985)	429167	20.8901	20.89
64 Styrene	104	8.826	8.823	(1.070)	312610	23.2356	23.23
78 tert-Butylbenzene	119	9.902	9.902	(0.967)	297637	20.9448	20.94
56 Tetrachloroethene	164	7.526	7.522	(0.912)	69977	20.1734	20.17
50 Toluene	91	7.049	7.046	(0.855)	443987	22.5265	22.52
20 trans-1,2-Dichloroethene	96	3.147	3.143	(0.643)	97658	21.6701	21.67
51 trans-1,3-Dichloropropene	75	7.259	7.259	(1.291)	138190	21.0226	21.02
38 Trichloroethene	130	5.861	5.861	(1.042)	100450	22.2657	22.26
8 Trichlorofluoromethane	101	1.963	1.959	(0.401)	133211	21.3552	21.35
5 Vinyl Chloride	62	1.426	1.423	(0.291)	118654	22.3359	22.33



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181228.b\U122804.D Page 3
Report Date: 30-Jan-2019 17:04

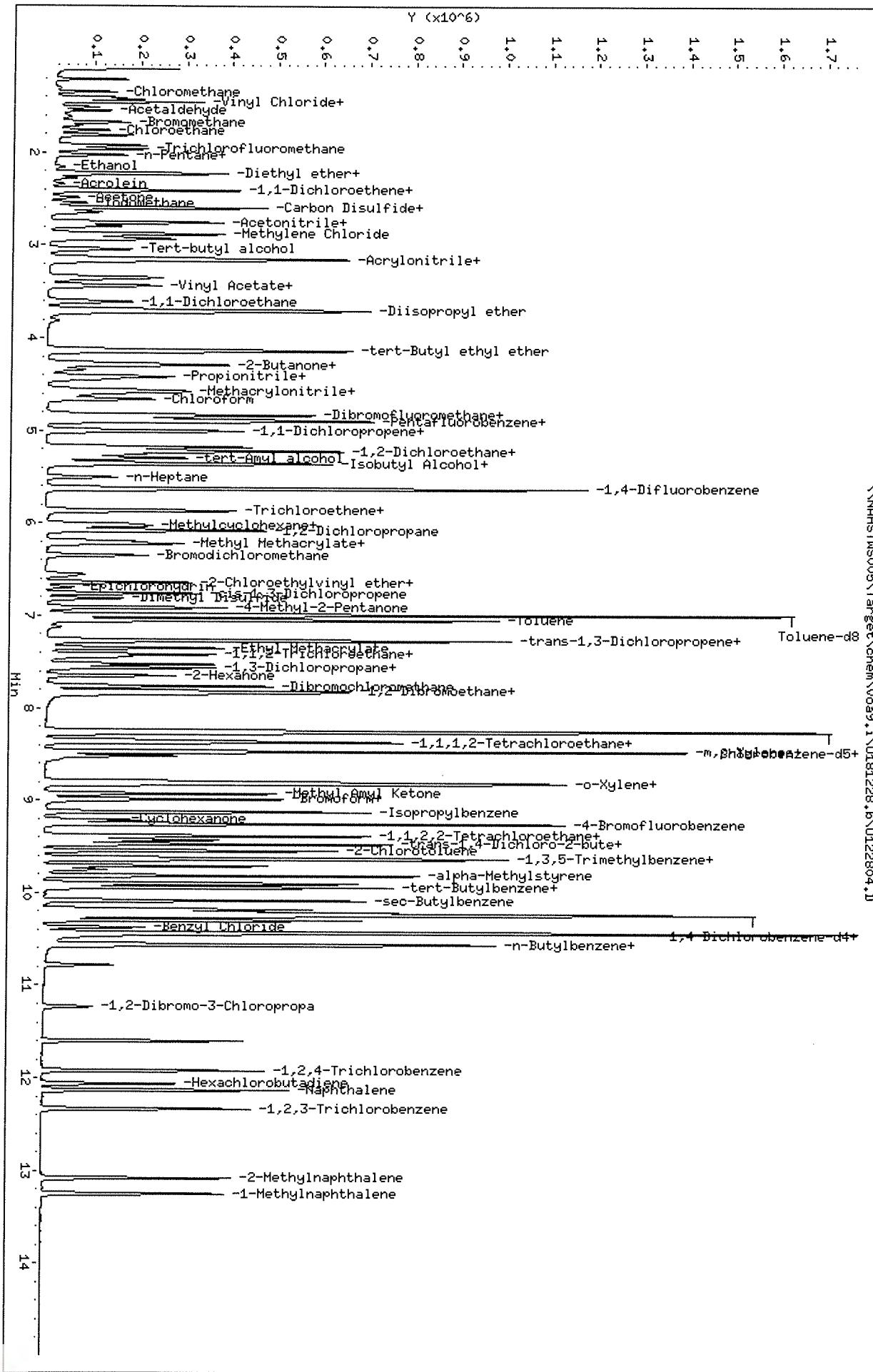
QC Flag Legend

M - Compound response manually integrated.



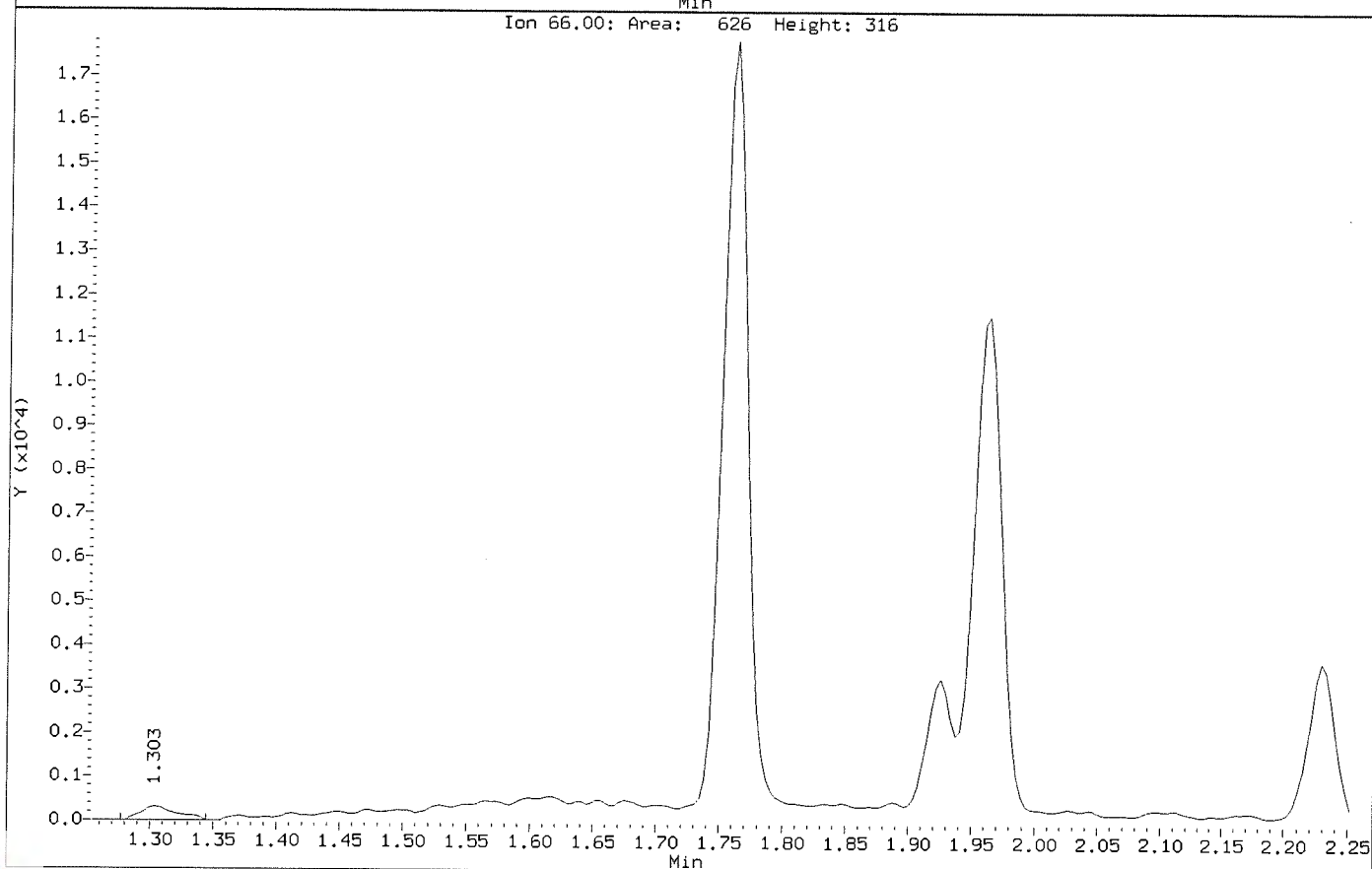
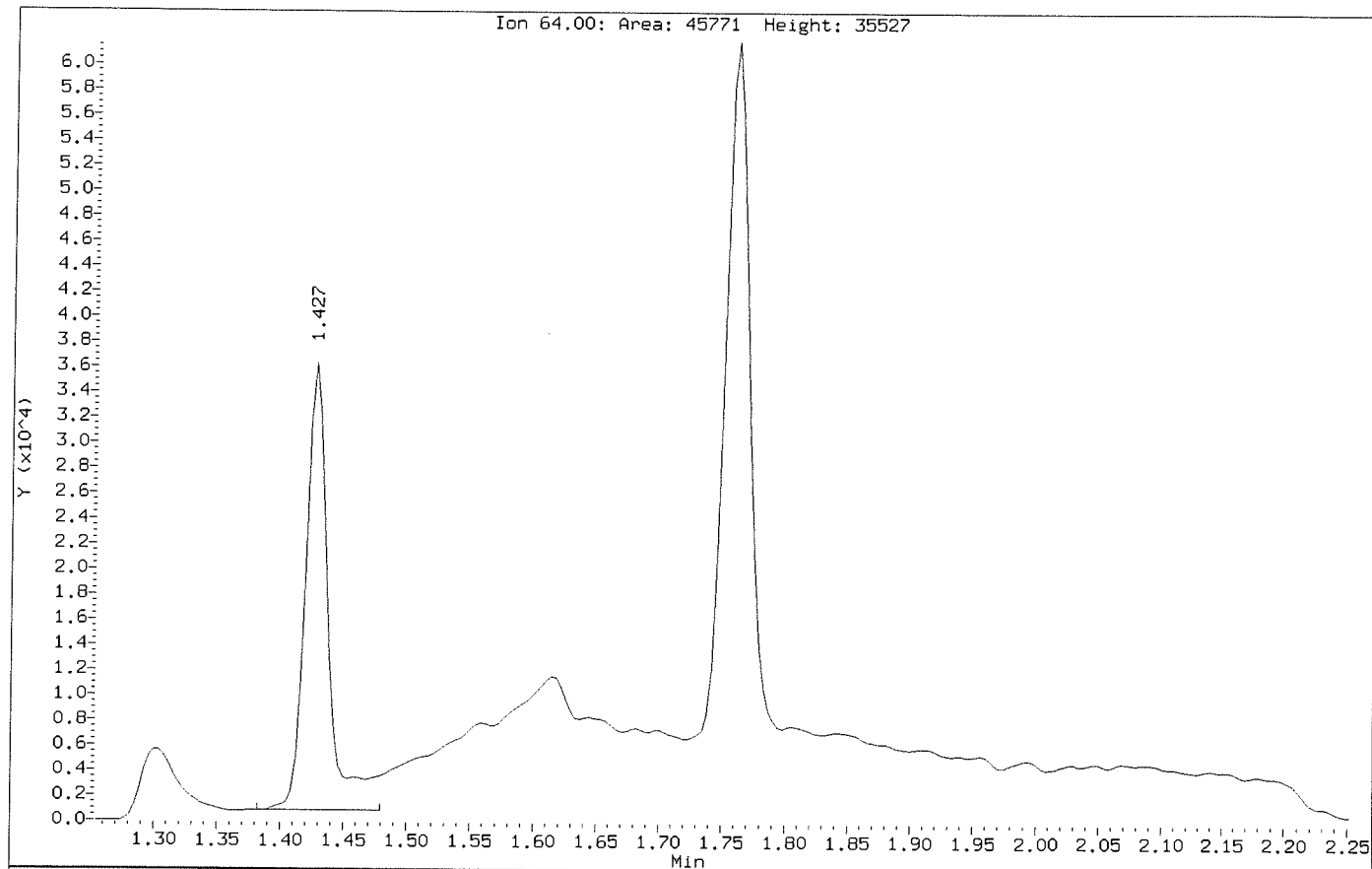
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 Date: 28-DEC-2018 11:26
 Client ID: VLCSM-181228
 Sample Info: VLCSM-1812028;VLCSM-181228;3;ILCS
 Purge Volume: 5.0
 Column phase: DB624

Instrument: VOA9.1
 Operator: PC
 Column diameter: 0.18



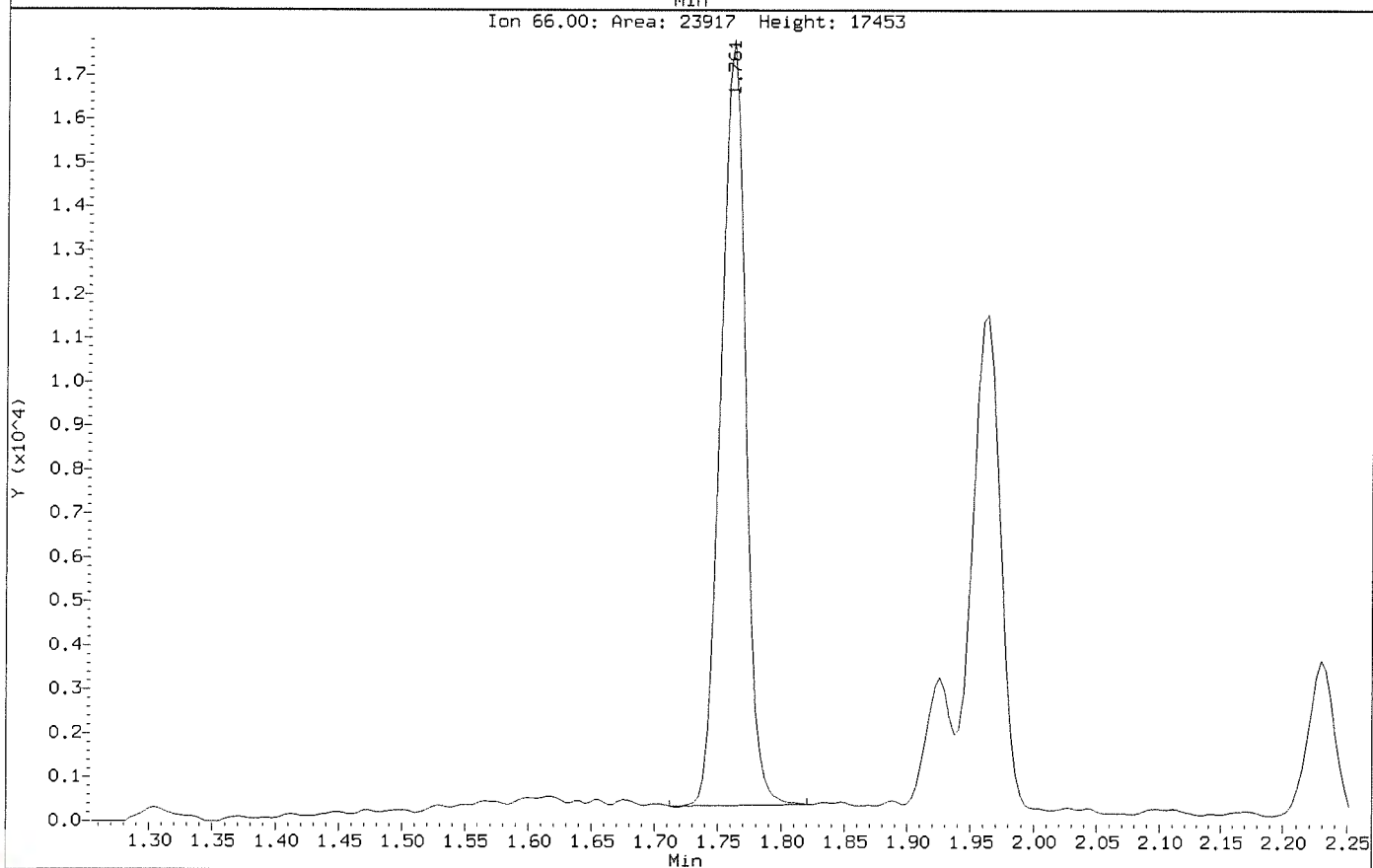
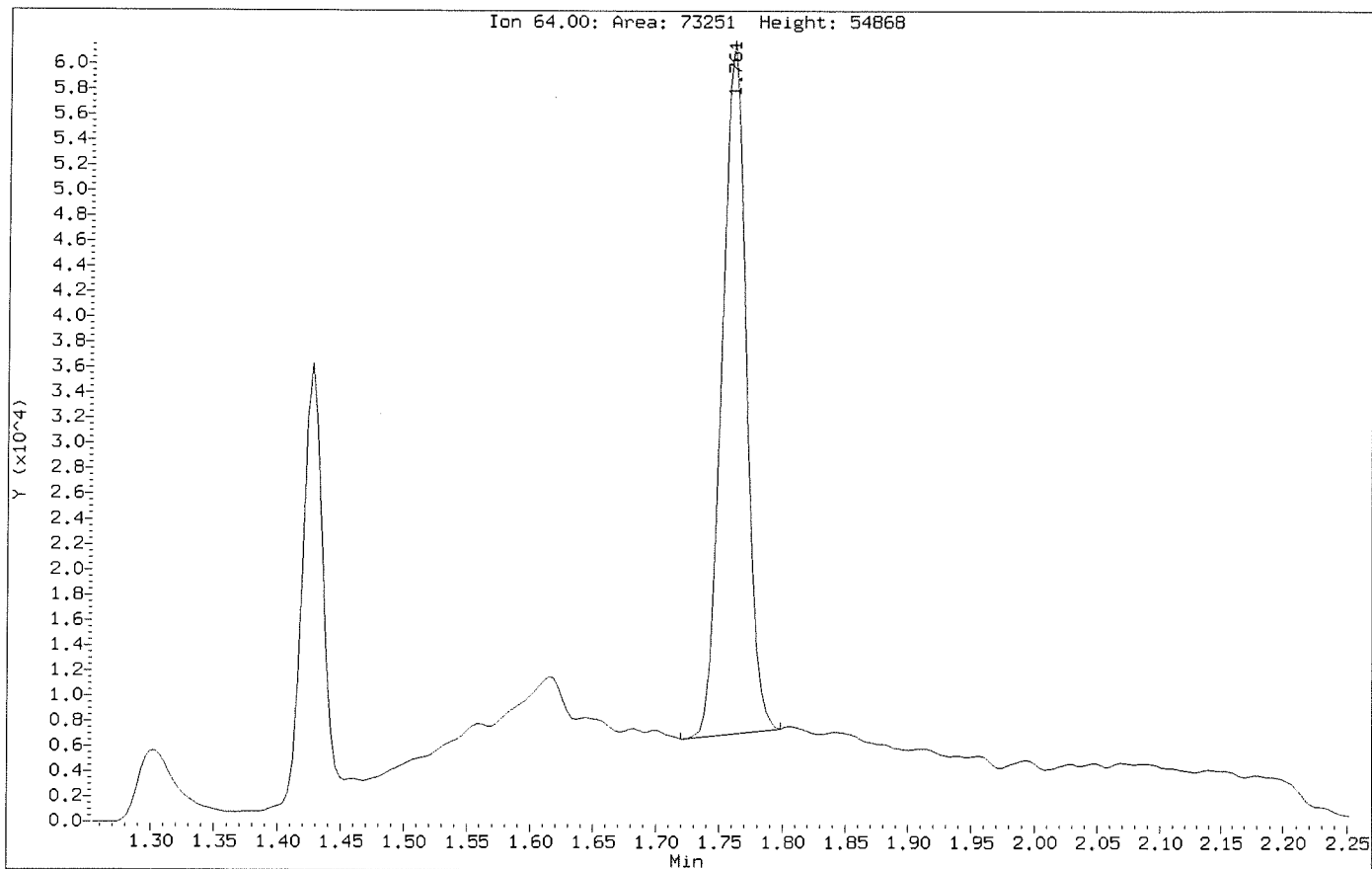
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Injection Date: 28-DEC-2018 11:26
Instrument: VOA9.1
Client Sample ID: VLCSW-181228

Compound: Chloroethane
CAS Number: 75-00-3



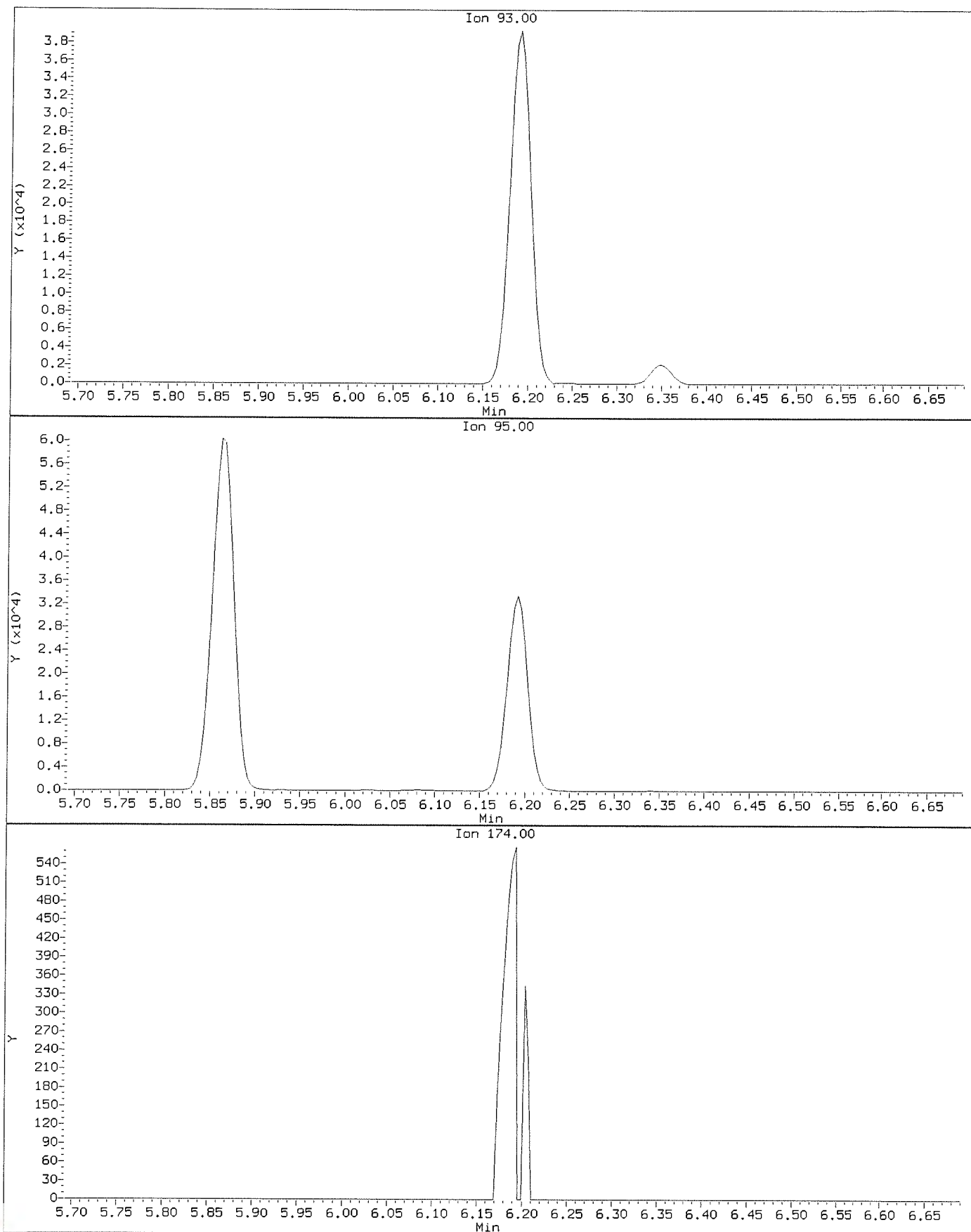
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Instrument: VOA9.i
Client Sample ID: VLCSW-181228

Compound: Chloroethane
CAS Number: 75-00-3



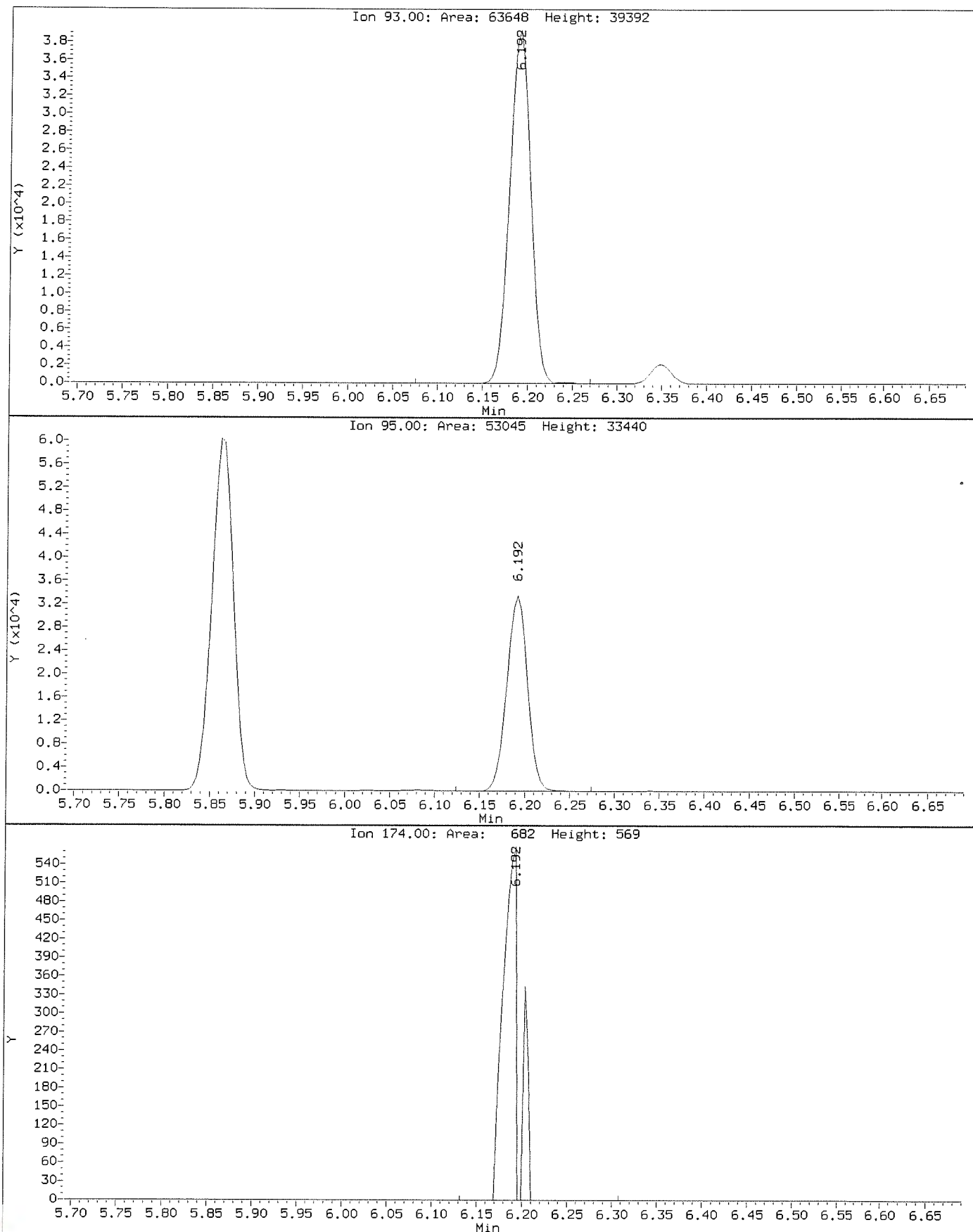
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Injection Date: 28-DEC-2018 11:26
Instrument: VOA9.i
Client Sample ID: VLCSW-181228

Compound: Dibromomethane
CAS Number: 74-95-3



Data File: \\NAHSTWS005\Target\chem\voa9.1\U181228.b\U122804.D
Injection Date: 28-DEC-2018 11:26
Instrument: VOA9.i
Client Sample ID: VLCSW-181228

Compound: Dibromomethane
CAS Number: 74-95-3



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181228.b\U122806.D Page 1
 Report Date: 30-Jan-2019 17:04

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U181228.b\U122806.D
 Lab Smp Id: VBLKW-181228 Client Smp ID: VBLKW-181228
 Inj Date : 28-DEC-2018 12:16
 Operator : PC Inst ID: VOA9.i
 Smp Info : VBLKW-181228;VBLKW-181228;3;;BLANK
 Misc Info : 180315V9;WATER;0;1;
 Comment :
 Method : \\NAHSTWS005\Target\chem\voa9.i\U181228.b\8260C.m
 Meth Date : 30-Jan-2019 17:04 VOA9.i Quant Type: ISTD
 Cal Date : 21-DEC-2018 16:41 Cal File: U122108.D
 Als bottle: 6 QC Sample: BLANK
 Dil Factor: 1.00000
 Integrator: HP RTE Compound Sublist: LHAAP.sub
 Target Version: 4.14
 Processing Host: NAHSTW7087

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

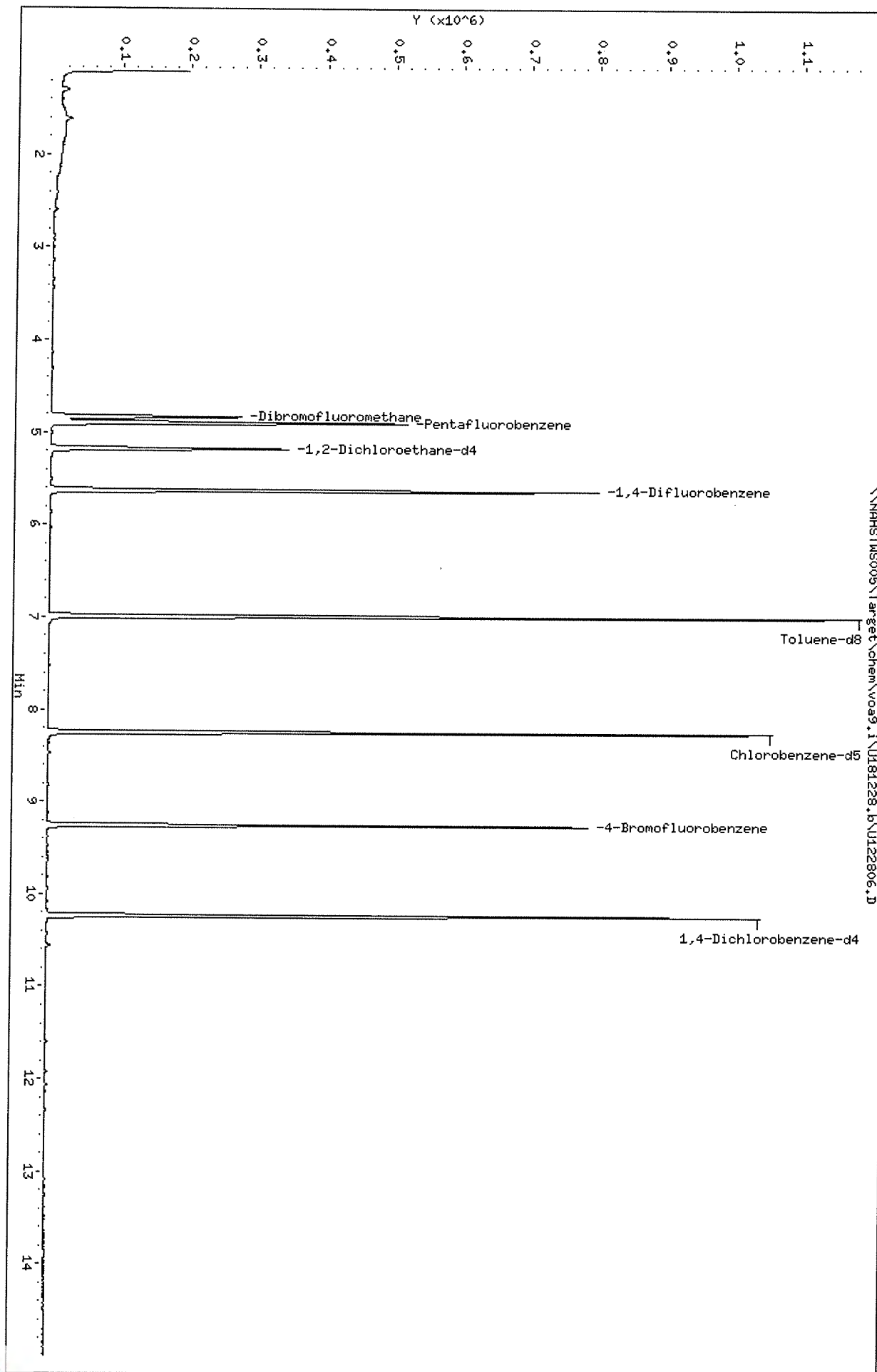
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168		4.894	4.894	(1.000)	312410	50.0000	
* 36 1,4-Difluorobenzene	114		5.625	5.625	(1.000)	560451	50.0000	
* 47 Chlorobenzene-d5	117		8.249	8.249	(1.000)	503607	50.0000	
* 70 1,4-Dichlorobenzene-d4	152		10.236	10.236	(1.000)	232649	50.0000	
\$ 30 Dibromofluoromethane	113		4.830	4.830	(0.987)	158921	45.9788	45.97
\$ 35 1,2-Dichloroethane-d4	65		5.175	5.175	(1.057)	221548	50.1081	50.10
\$ 48 Toluene-d8	98		6.989	6.989	(0.847)	687264	52.9507	52.95
\$ 69 4-Bromofluorobenzene	95		9.257	9.257	(1.122)	240839	48.6108	48.61



Data File: \\NAHSTMS005\Target\chem\voa9.i\U181228.b\U122806.D
Date : 28-DEC-2018 12:16
Client ID: VBLKM-181228
Sample Info: VBLKM-181228;VBLKM-181228;3;BLANK
Purge Volume: 5.0
Column phase: DB624

Instrument: VOA9.i
Operator: PC
Column diameter: 0.18



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181228.b\U122808.D Page 1
 Report Date: 30-Jan-2019 17:38

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U181228.b\U122808.D
 Lab Smp Id: HS18121123-01 Client Smp ID: HS18121123-01
 Inj Date : 28-DEC-2018 13:05
 Operator : PC Inst ID: VOA9.i
 Smp Info : HS18121123-01;HS18121123-01;;
 Misc Info : 180315V9;WATER;0;1;
 Comment :
 Method : \\NAHSTWS005\Target\chem\voa9.i\U181228.b\8260C.m
 Meth Date : 30-Jan-2019 17:08 hvan Quant Type: ISTD
 Cal Date : 21-DEC-2018 16:41 Cal File: U122108.D
 Als bottle: 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	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168		4.894	4.894	(1.000)	295434	50.0000	
* 36 1,4-Difluorobenzene	114		5.625	5.625	(1.000)	525921	50.0000	
* 47 Chlorobenzene-d5	117		8.249	8.249	(1.000)	482105	50.0000	
* 70 1,4-Dichlorobenzene-d4	152		10.236	10.236	(1.000)	217295	50.0000	
\$ 30 Dibromofluoromethane	113		4.830	4.830	(0.987)	152351	46.6317	46.63
\$ 35 1,2-Dichloroethane-d4	65		5.175	5.175	(1.057)	209348	50.0678	50.06
\$ 48 Toluene-d8	98		6.989	6.990	(0.847)	654241	52.6446	52.64
\$ 69 4-Bromofluorobenzene	95		9.257	9.257	(1.122)	227783	48.0089	48.00
34 Carbon Tetrachloride	117		4.995	4.995	(0.888)	16769	5.66046	5.66
27 cis-1,2-Dichloroethene	96		4.283	4.287	(0.875)	7051	1.81573	1.81(a)
56 Tetrachloroethene	164		7.526	7.526	(0.912)	3164	1.25359	1.25(a)
38 Trichloroethene	130		5.861	5.861	(1.042)	553815	163.923	163.92

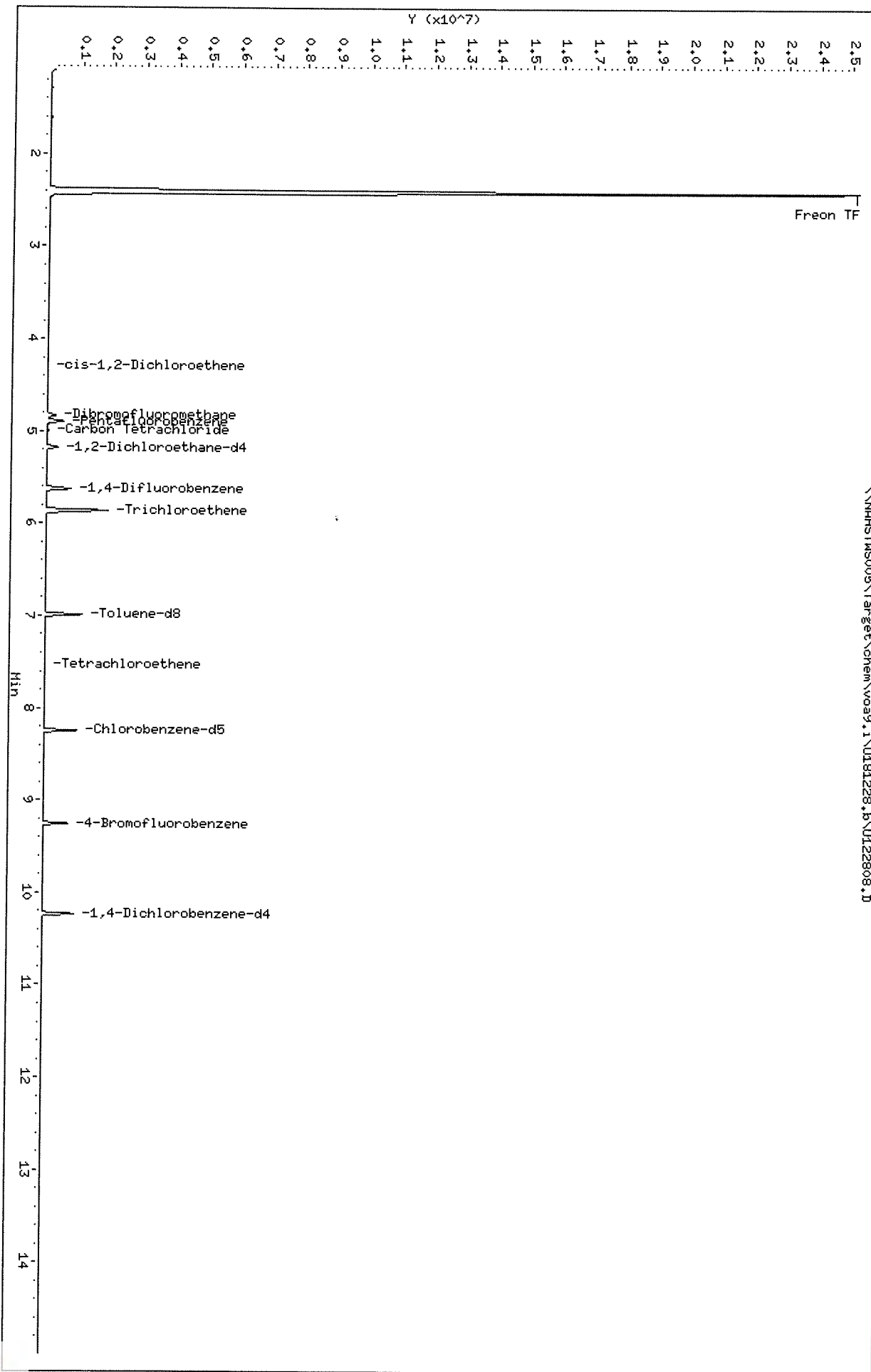
QC Flag Legend

a - Target compound detected but, quantitated amount
 Below Limit Of Quantitation(BLOQ).



Data File: \\NAHSTMS005\Target\chem\voa9.i\U181228.b\U122808.D
 Date : 28-DEC-2018 13:05
 Client ID: HS18121123-01
 Sample Info: HS18121123-01;HS18121123-01;;;
 Purge Volume: 5.0
 Column phase: DB624

Instrument: V099.i
 Operator: PC
 Column diameter: 0.18



Data File: \\NAHSTMS005\Target\chem\voa9.i\U122808.D

Page 3

Date : 28-DEC-2018 13:05

Client ID: HS18121123-01

Instrument: VOA9.i

Sample Info: HS18121123-01;HS18121123-01;;;

Purge Volume: 5.0

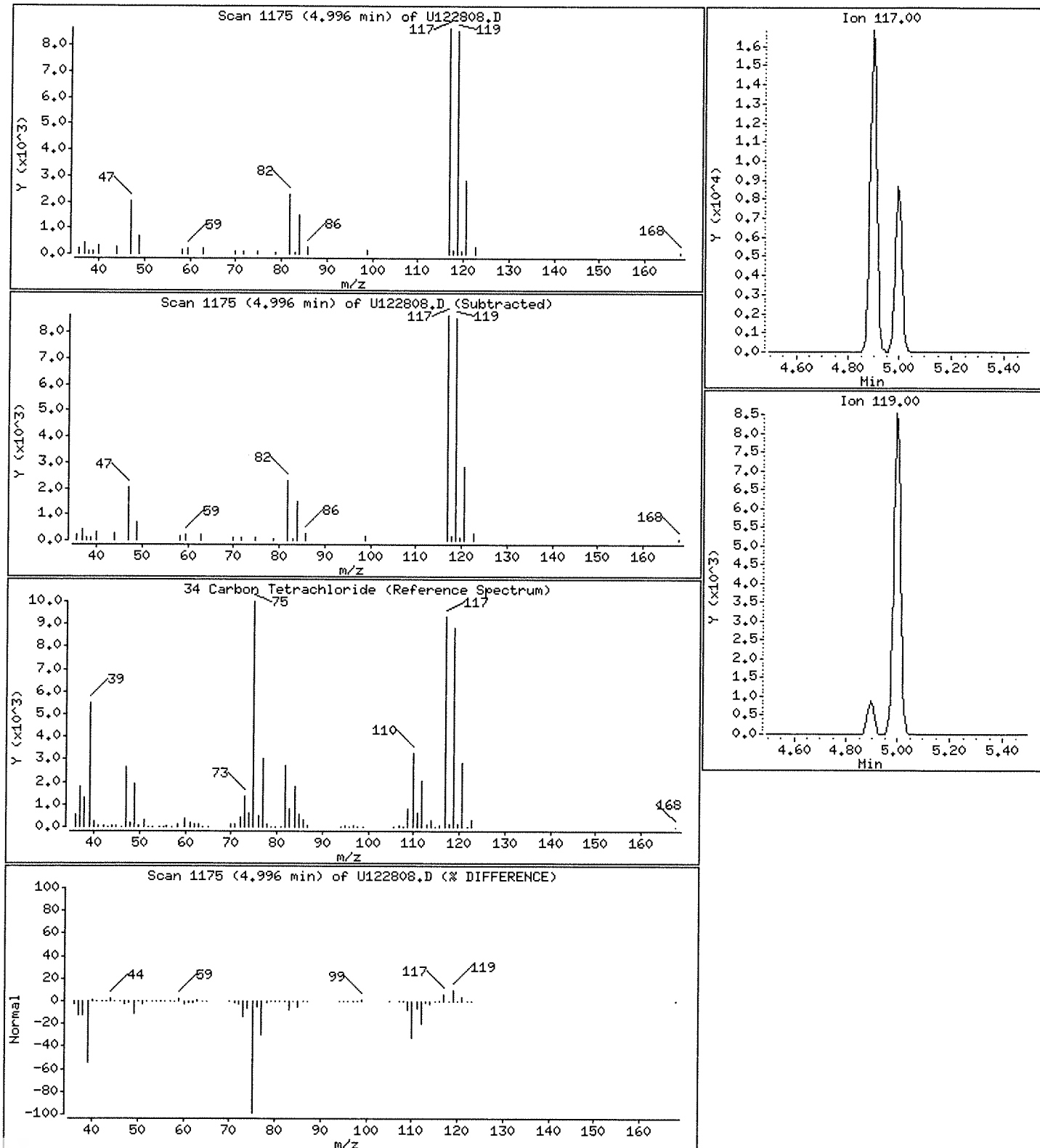
Operator: PC

Column phase: DB624

Column diameter: 0.18

34 Carbon Tetrachloride

Concentration: 5.66 ug/l



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181228.b\U122808.D

Page 4

Date : 28-DEC-2018 13:05

Client ID: HS18121123-01

Instrument: VOA9.i

Sample Info: HS18121123-01;HS18121123-01;;;

Purge Volume: 5.0

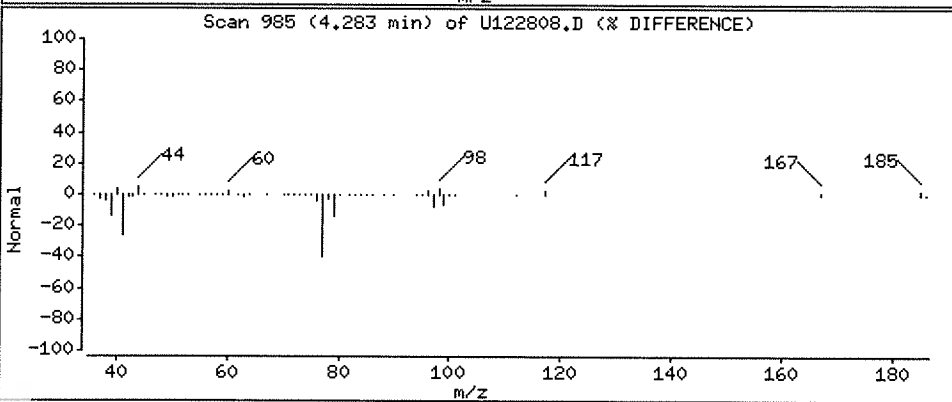
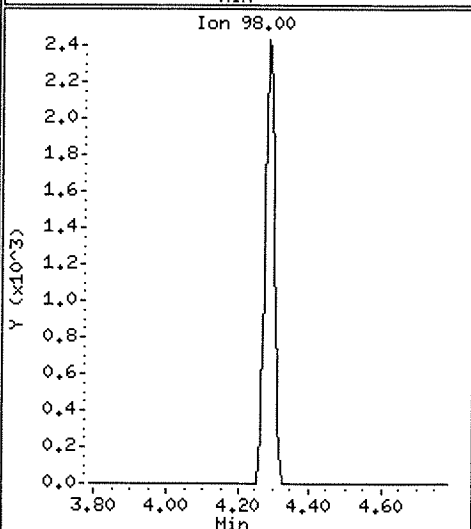
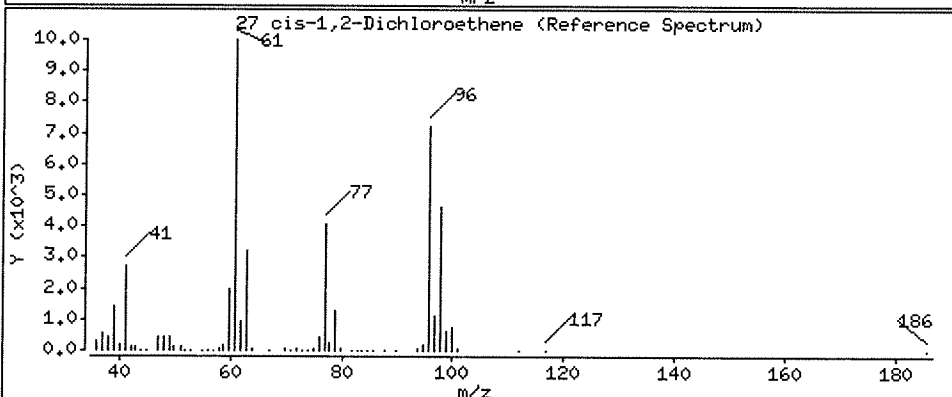
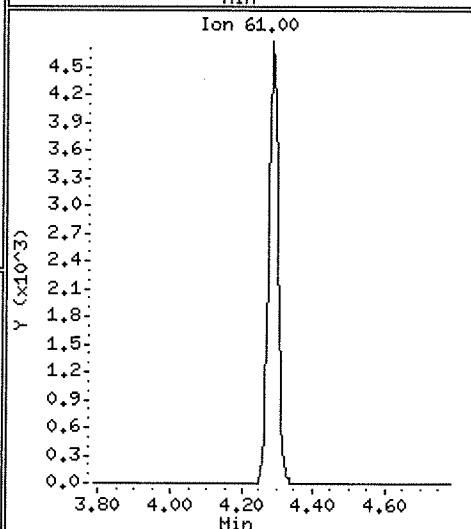
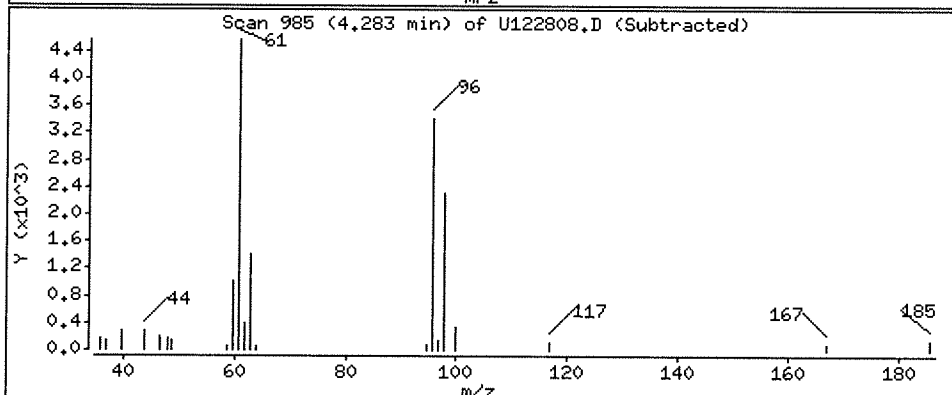
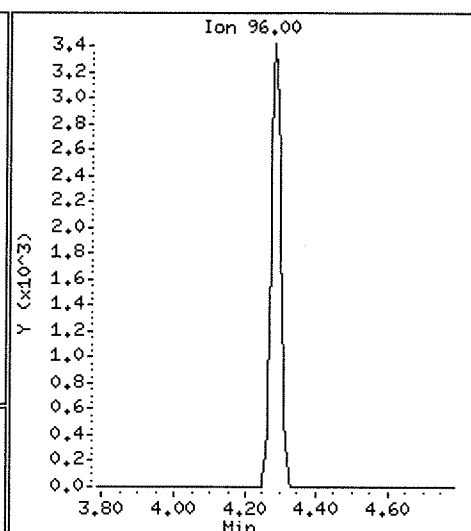
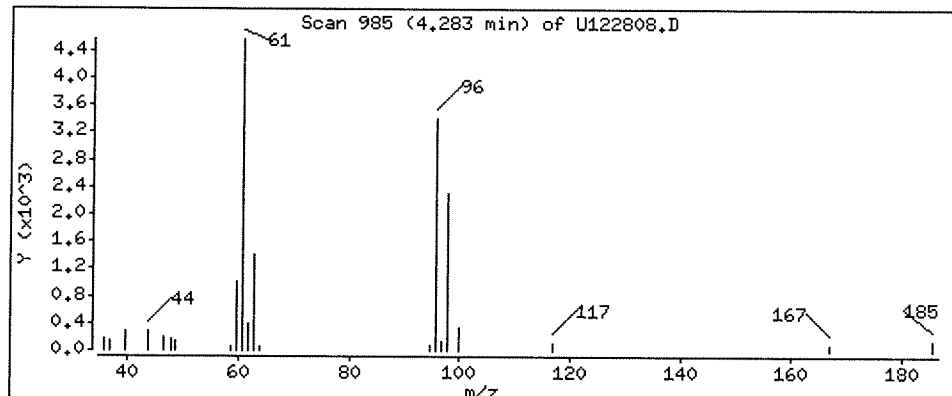
Operator: PC

Column phase: DB624

Column diameter: 0.18

27 cis-1,2-Dichloroethene

Concentration: 1.81 ug/l



Data File: \\NAHSTWS005\Target\chem\voa9,i\U181228,b\U122808.D

Page 5

Date : 28-DEC-2018 13:05

Client ID: HS18121123-01

Instrument: VOA9.i

Sample Info: HS18121123-01;HS18121123-01;;;

Purge Volume: 5.0

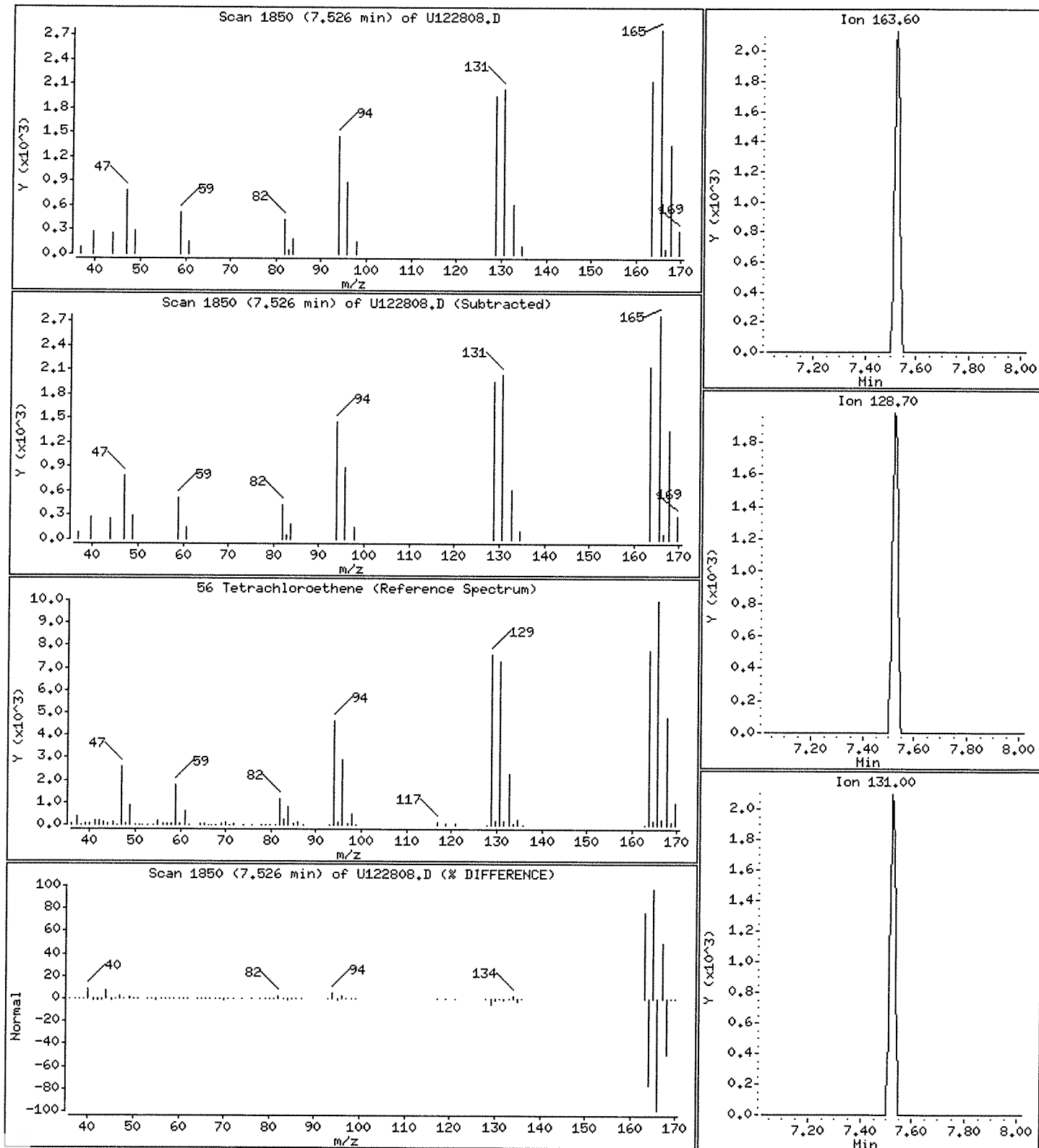
Operator: PC

Column phase: DB624

Column diameter: 0.18

56 Tetrachloroethene

Concentration: 1.25 ug/l



Data File: \\NAHSTWS005\Target\chem\voa9.i\U122808.D

Page 6

Date : 28-DEC-2018 13:05

Client ID: HS18121123-01

Instrument: VOA9.i

Sample Info: HS18121123-01;HS18121123-01;;;

Purge Volume: 5.0

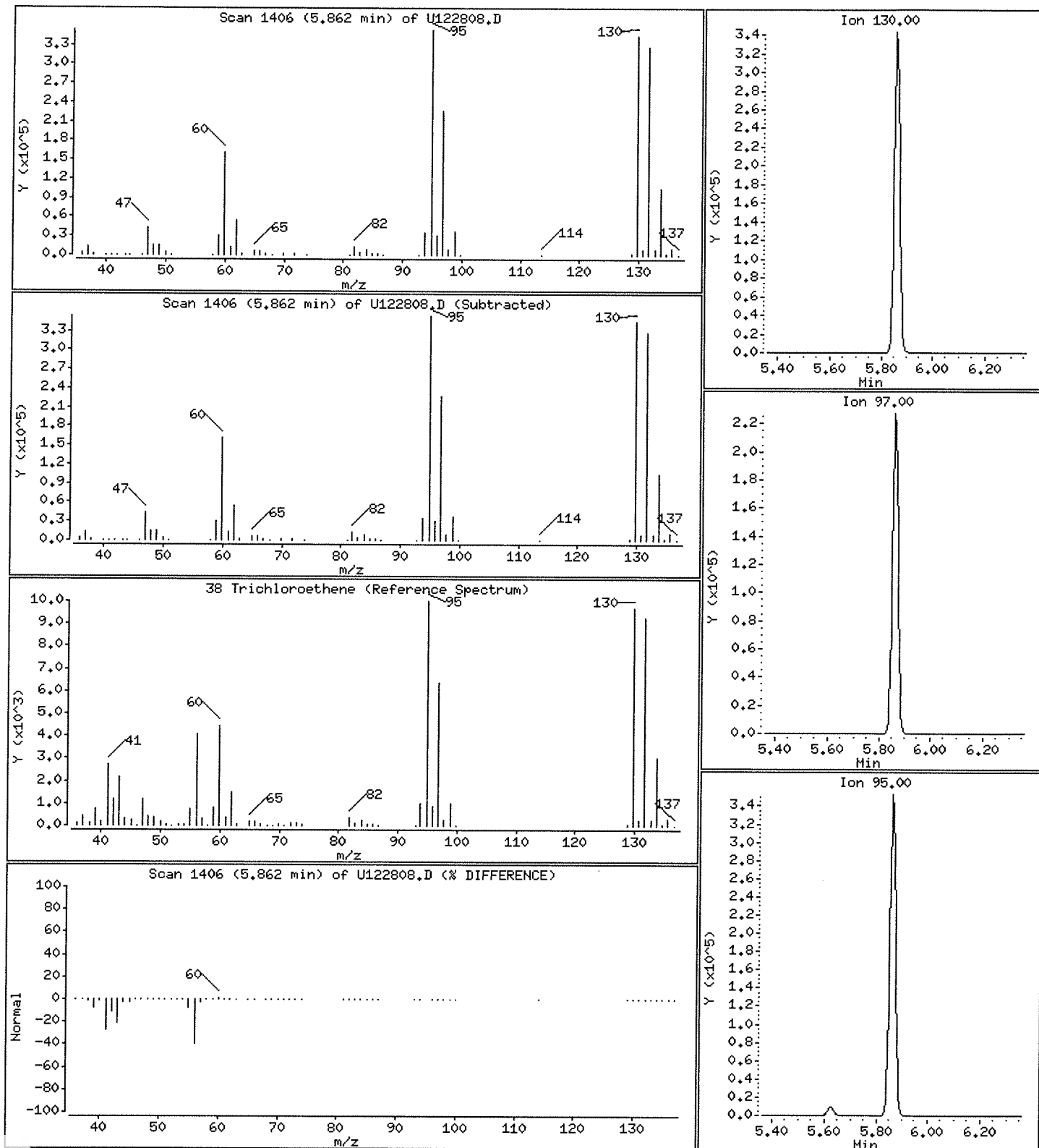
Operator: PC

Column phase: DB624

Column diameter: 0.18

38 Trichloroethene

Concentration: 163.92 ug/l



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181228.b\U122809.D Page 1
 Report Date: 30-Jan-2019 17:38

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U181228.b\U122809.D
 Lab Smp Id: HS18121123-03 Client Smp ID: HS18121123-03
 Inj Date : 28-DEC-2018 13:30
 Operator : PC Inst ID: VOA9.i
 Smp Info : HS18121123-03;HS18121123-03;;
 Misc Info : 180315V9;WATER;0;1;
 Comment :
 Method : \\NAHSTWS005\Target\chem\voa9.i\U181228.b\8260C.m
 Meth Date : 30-Jan-2019 17:08 hvan Quant Type: ISTD
 Cal Date : 21-DEC-2018 16:41 Cal File: U122108.D
 Als bottle: 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	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.898	4.894	(1.000)	297572	50.0000	
* 36 1,4-Difluorobenzene	114	5.625	5.625	(1.000)	531661	50.0000	
* 47 Chlorobenzene-d5	117	8.249	8.249	(1.000)	482907	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	217051	50.0000	
\$ 30 Dibromofluoromethane	113	4.830	4.830	(0.986)	152641	46.3767	46.37
\$ 35 1,2-Dichloroethane-d4	65	5.175	5.175	(1.057)	213432	50.7042	50.70
\$ 48 Toluene-d8	98	6.990	6.990	(0.847)	655238	52.6370	52.63
\$ 69 4-Bromofluorobenzene	95	9.257	9.257	(1.122)	228735	48.1331	48.13
38 Trichloroethene	130	5.861	5.861	(1.042)	3427	1.00340	1.00(a)

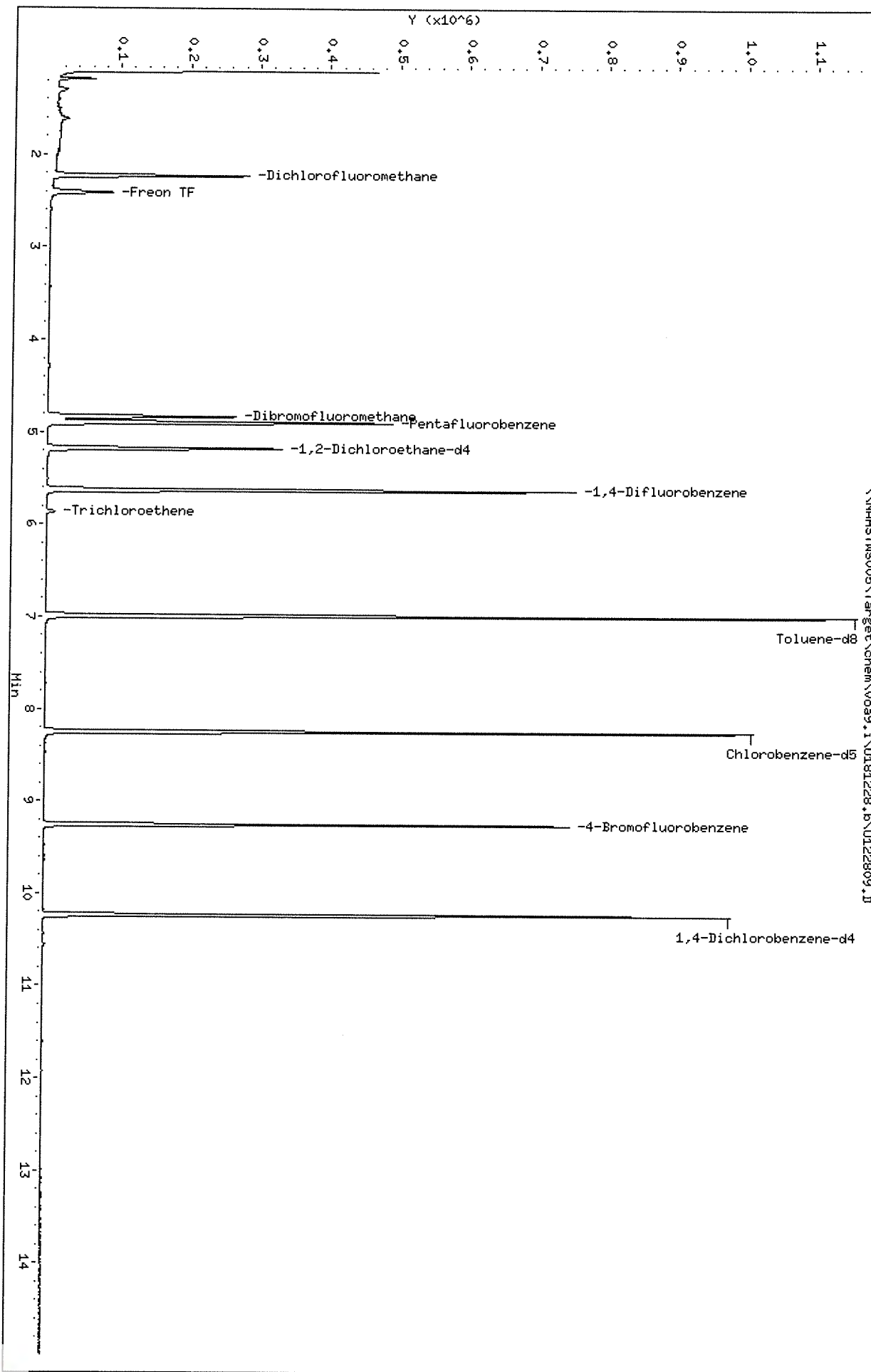
QC Flag Legend

a - Target compound detected but, quantitated amount
 Below Limit Of Quantitation(BLOQ).



Data File: \\NAHSTMS005\Target\chem\voa9.1\U181228.b\U122809.D
Date: 28-DEC-2018 13:30
Client ID: HSL8121123-03
Sample Info: HSL8121123-03;HSL8121123-03;;
Purge Volume: 5.0
Column phase: DB624

Instrument: W089.i
Operator: PC
Column diameter: 0.18



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181228.b\U122809.D

Page 3

Date : 28-DEC-2018 13:30

Client ID: HS18121123-03

Instrument: VOA9.i

Sample Info: HS18121123-03;HS18121123-03;;;

Purge Volume: 5.0

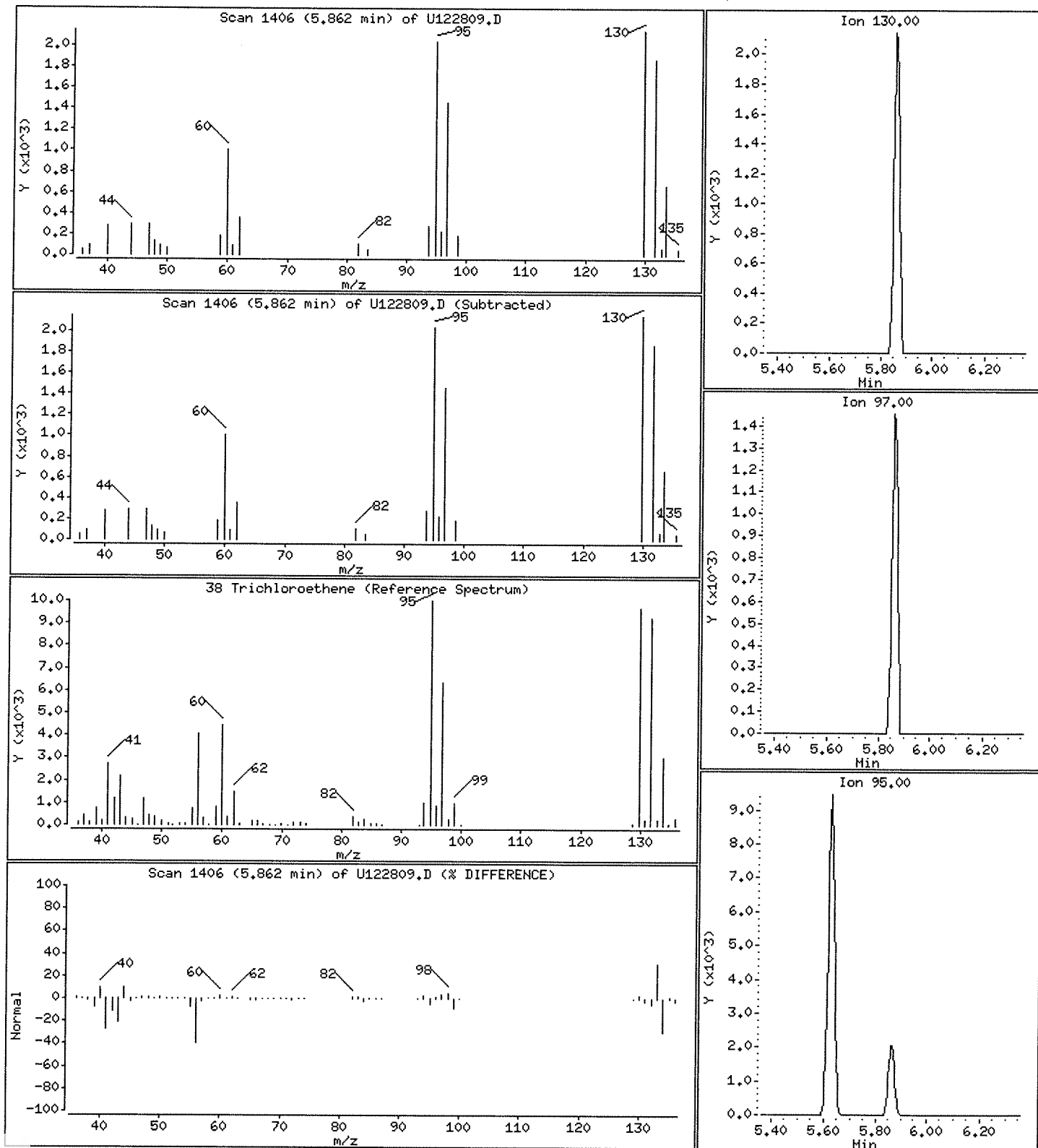
Operator: PC

Column phase: DB624

Column diameter: 0.18

38 Trichloroethene

Concentration: 1.00 ug/l



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181228.b\U122810.D Page 1
 Report Date: 30-Jan-2019 17:38

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U181228.b\U122810.D
 Lab Smp Id: HS18121123-04 Client Smp ID: HS18121123-04
 Inj Date : 28-DEC-2018 13:54
 Operator : PC Inst ID: VOA9.i
 Smp Info : HS18121123-04;HS18121123-04;;;
 Misc Info : 180315V9;WATER;0;5;
 Comment :
 Method : \\NAHSTWS005\Target\chem\voa9.i\U181228.b\8260C.m
 Meth Date : 30-Jan-2019 17:08 hvan Quant Type: ISTD
 Cal Date : 21-DEC-2018 16:41 Cal File: U122108.D
 Als bottle: 10
 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				CONCENTRATIONS		
	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.898	4.894	(1.000)	286143	50.0000	
* 36 1,4-Difluorobenzene	114	5.629	5.625	(1.000)	509683	50.0000	
* 47 Chlorobenzene-d5	117	8.249	8.249	(1.000)	461003	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	205902	50.0000	
\$ 30 Dibromofluoromethane	113	4.834	4.830	(0.987)	147212	46.5182	46.51
\$ 35 1,2-Dichloroethane-d4	65	5.179	5.175	(1.057)	203711	50.3117	50.31
\$ 48 Toluene-d8	98	6.989	6.990	(0.847)	626581	52.7295	52.72
\$ 69 4-Bromofluorobenzene	95	9.257	9.257	(1.122)	220020	48.5099	48.50
33 1,2-Dichloroethane	62	5.254	5.254	(0.933)	8391	1.11890	5.59(a)
28 Chloroform	83	4.658	4.658	(0.951)	3947	0.66508	3.32(a)
27 cis-1,2-Dichloroethene	96	4.290	4.287	(0.876)	79977	21.2639	106.31
38 Trichloroethene	130	5.865	5.861	(1.042)	1660239	507.068	2535.33(A)
5 Vinyl Chloride	62	1.426	1.419	(0.291)	2001	1.45368	7.26(a)

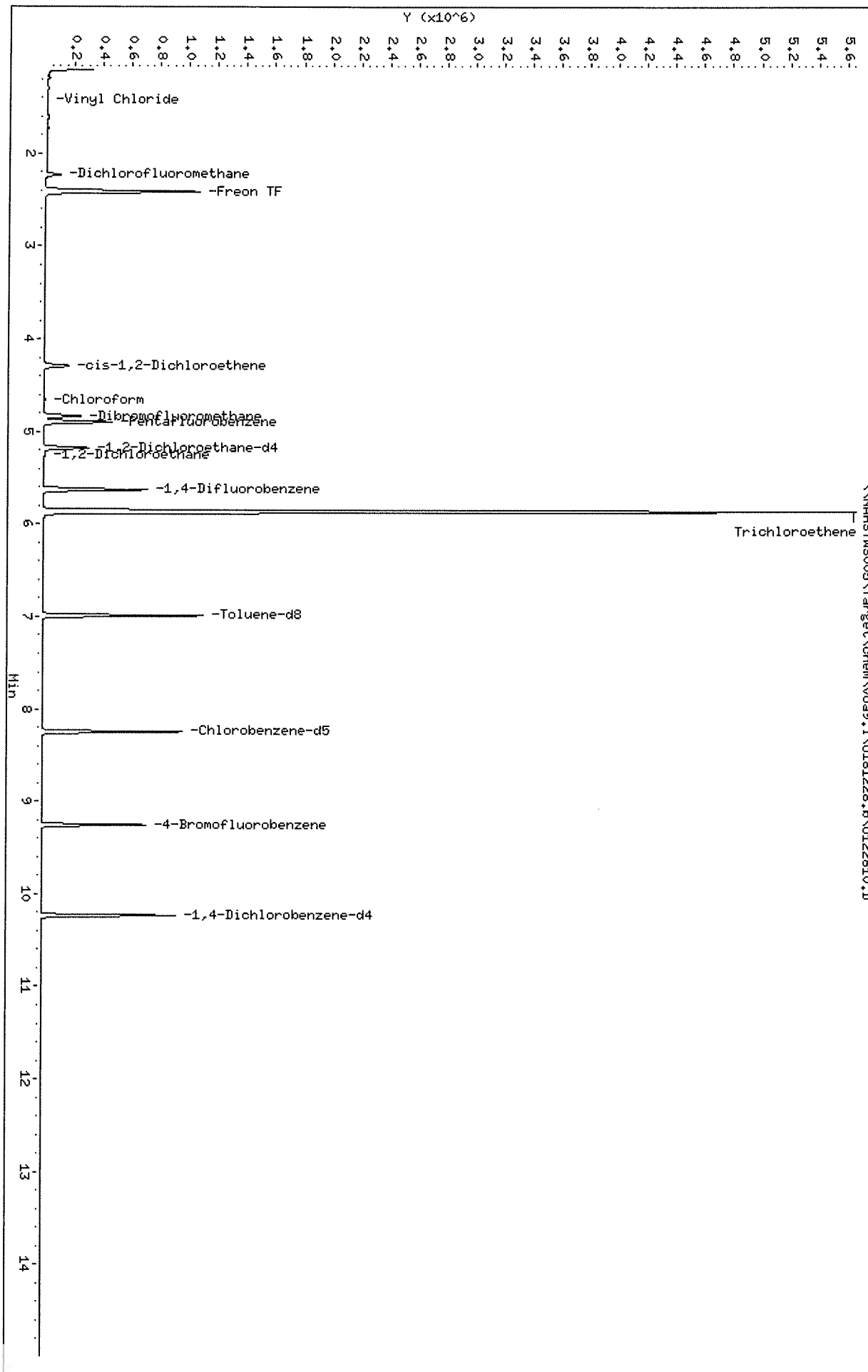
QC Flag Legend

- a - Target compound detected but, quantitated amount
 Below Limit Of Quantitation(BLOQ).
 A - Target compound detected but, quantitated amount
 exceeded maximum amount.



Data File: \\NAHSTMS005\Target\chem\voa9.1\U181228.6\U122810.D
 Date : 28-DEC-2018 13:54
 Client ID: H51812123-04
 Sample Info: H51812123-04\H51812123-04;;
 Purge Volume: 5.0
 Column phase: DB624

Instrument: VDA9.1
 Operator: PC
 Column diameter: 0.18



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181228.b\U122810.D

Page 3

Date : 28-DEC-2018 13:54

Client ID: HS18121123-04

Instrument: VOA9.i

Sample Info: HS18121123-04;HS18121123-04;;

Purge Volume: 5.0

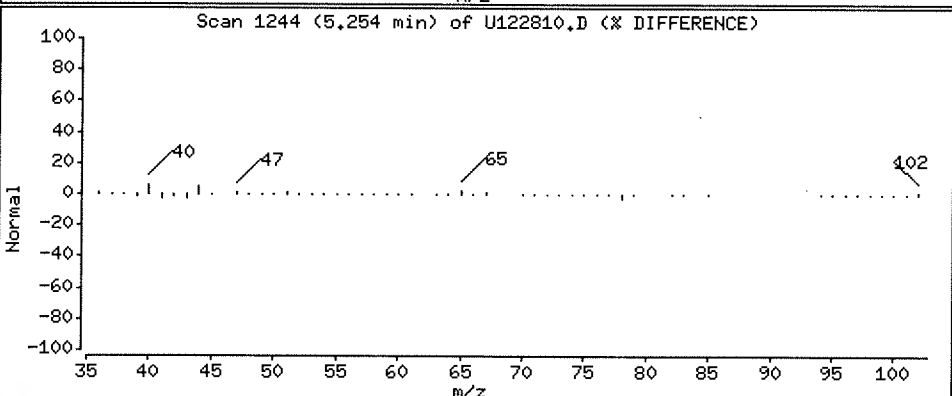
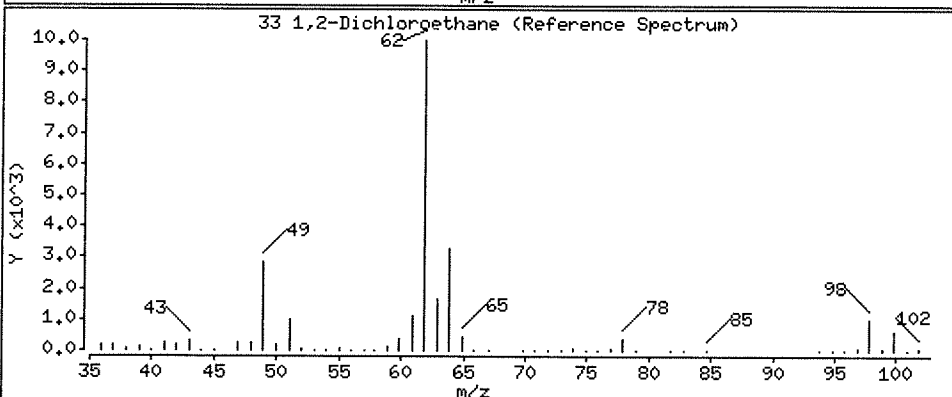
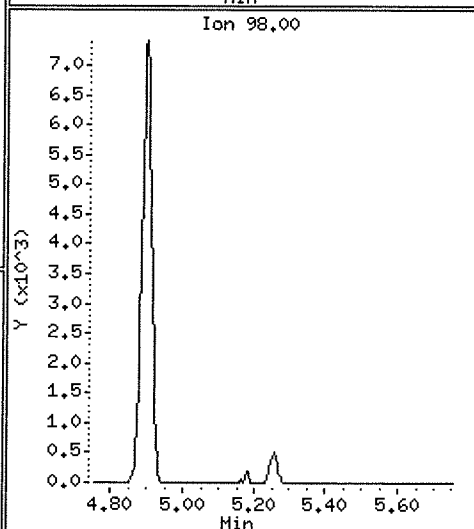
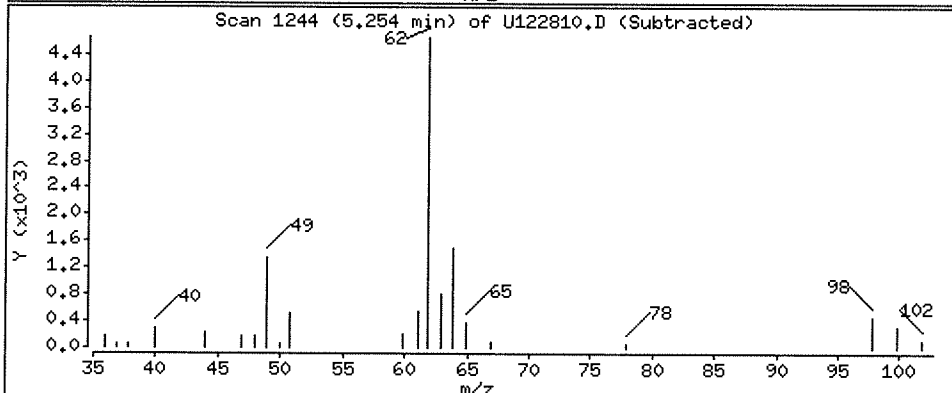
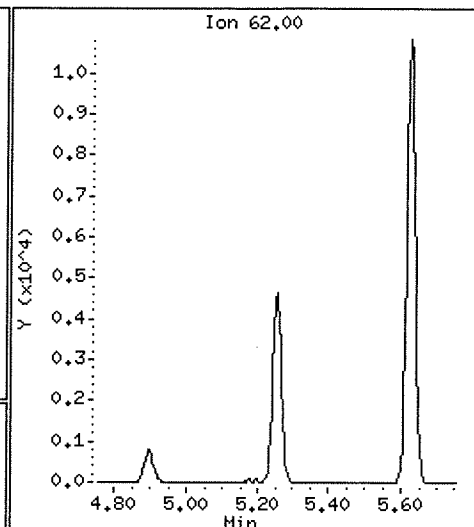
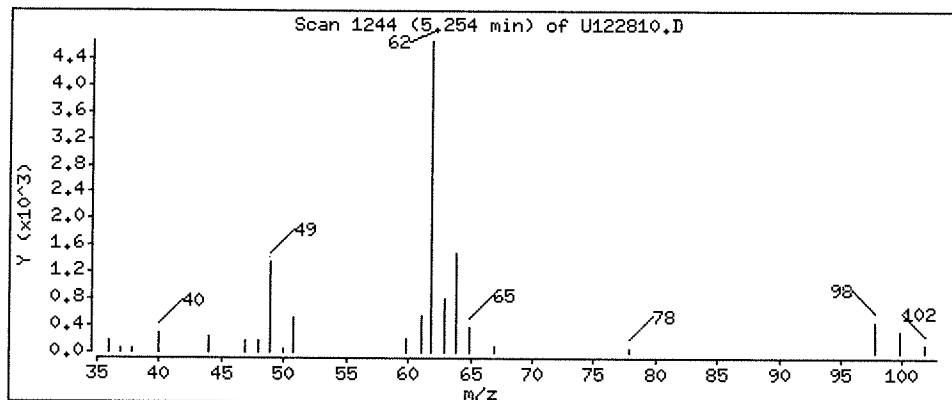
Operator: PC

Column phase: DB624

Column diameter: 0.18

33 1,2-Dichloroethane

Concentration: 5.59 ug/l



Data File: \\NAHSTWS005\Target\chem\voa9.i\U122810.D

Page 4

Date : 28-DEC-2018 13:54

Client ID: HS18121123-04

Instrument: VOA9.i

Sample Info: HS18121123-04;HS18121123-04;;

Purge Volume: 5.0

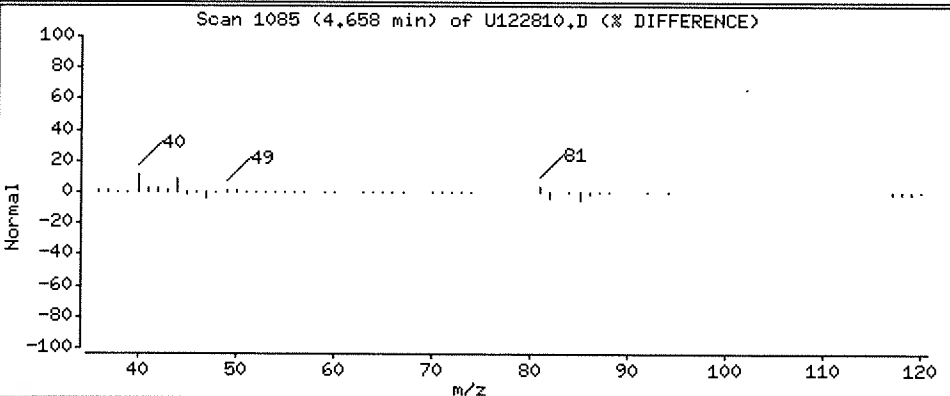
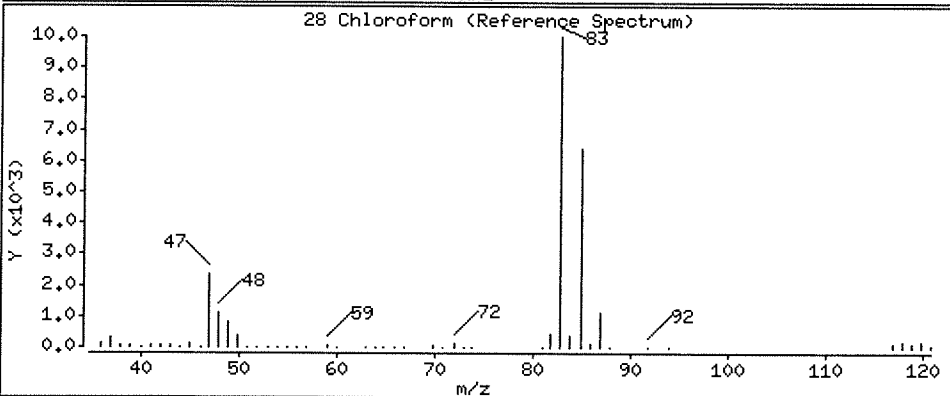
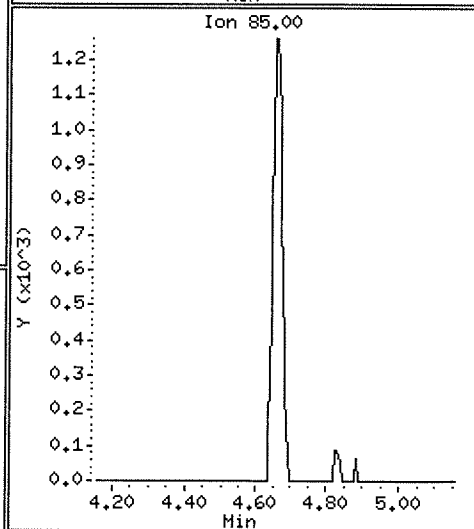
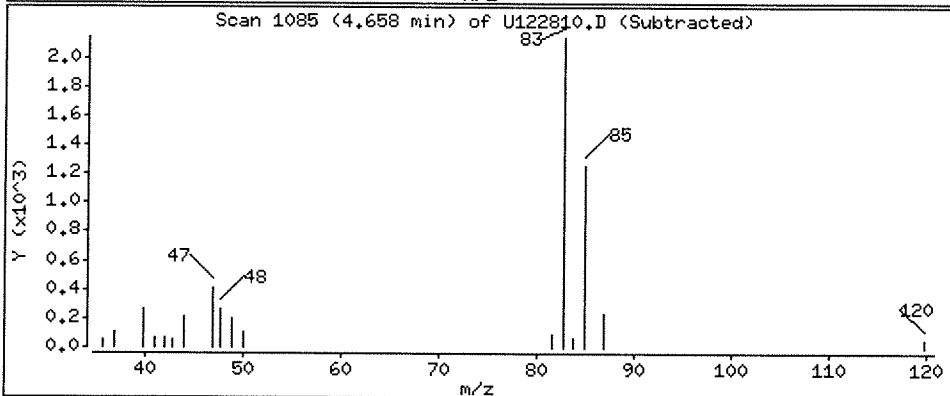
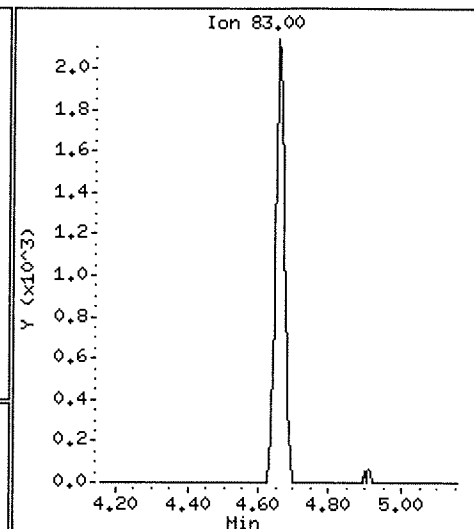
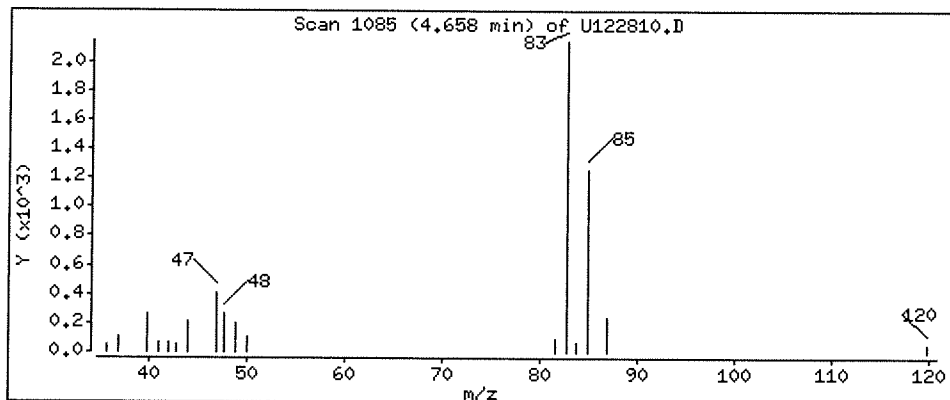
Operator: PC

Column phase: DB624

Column diameter: 0.18

28 Chloroform

Concentration: 3.32 ug/l



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181228.b\U122810.D

Page 5

Date : 28-DEC-2018 13:54

Client ID: HS18121123-04

Instrument: VOA9.i

Sample Info: HS18121123-04;HS18121123-04;;;

Purge Volume: 5.0

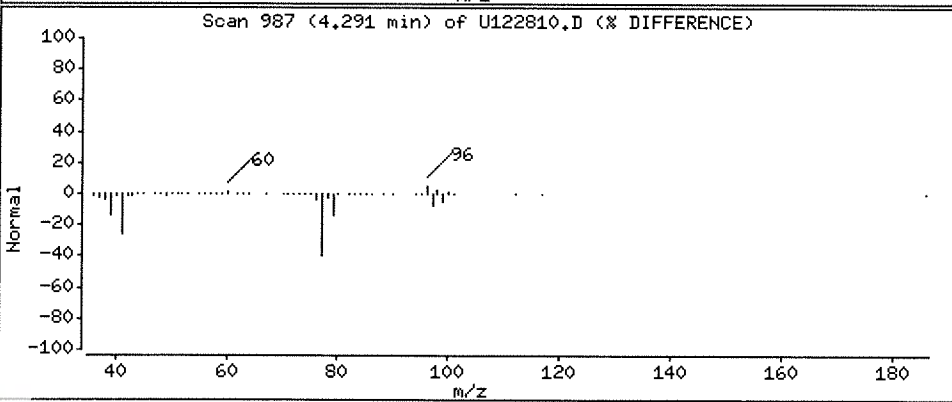
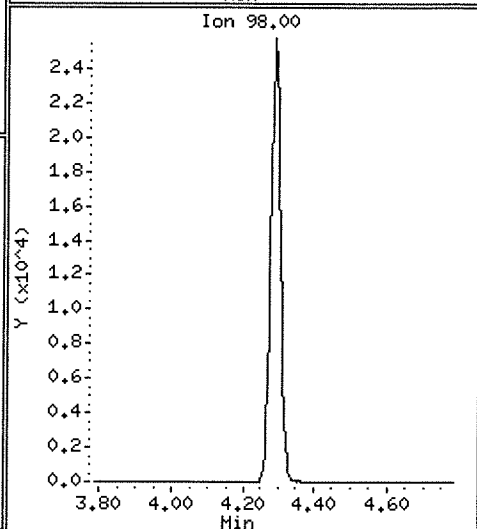
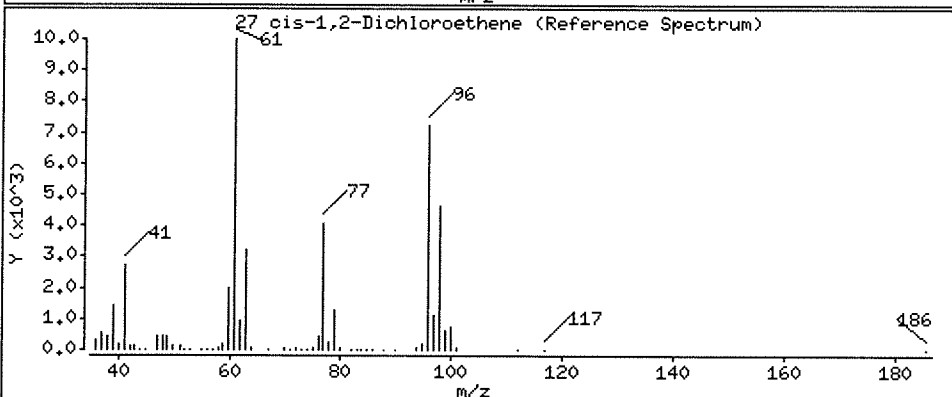
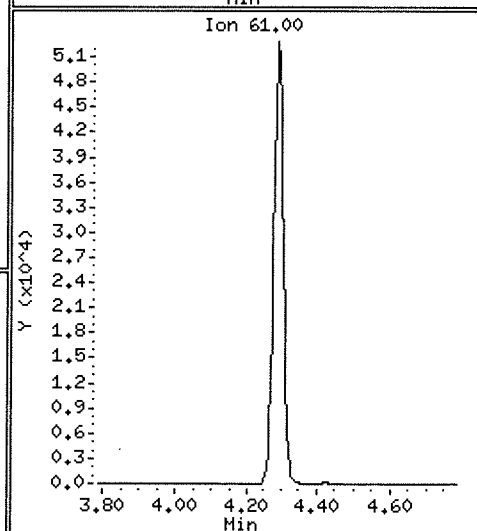
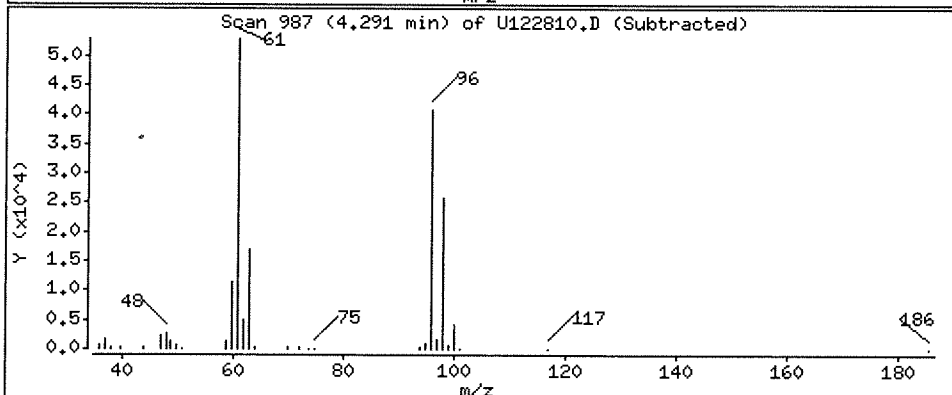
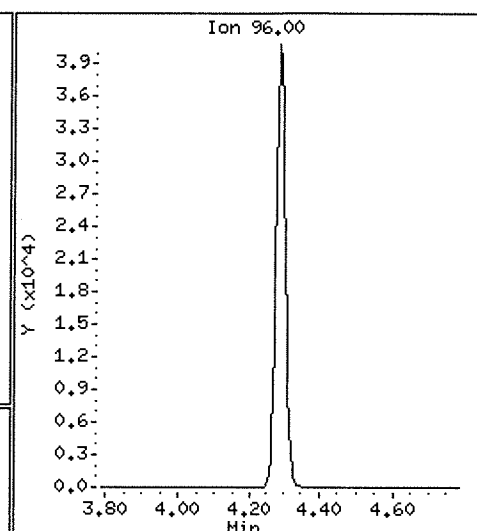
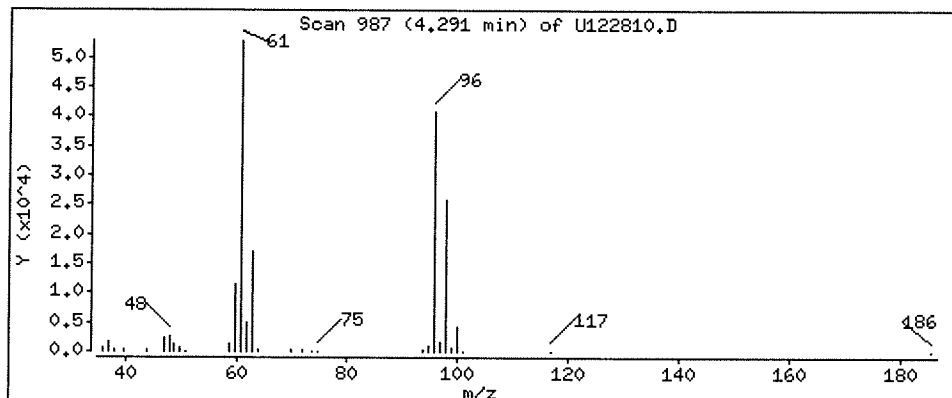
Operator: PC

Column phase: DB624

Column diameter: 0.18

27 cis-1,2-Dichloroethene

Concentration: 106.31 ug/l



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181228.b\U122810.D

Page 6

Date : 28-DEC-2018 13:54

Client ID: HS18121123-04

Instrument: VOA9.i

Sample Info: HS18121123-04;HS18121123-04;;;

Purge Volume: 5.0

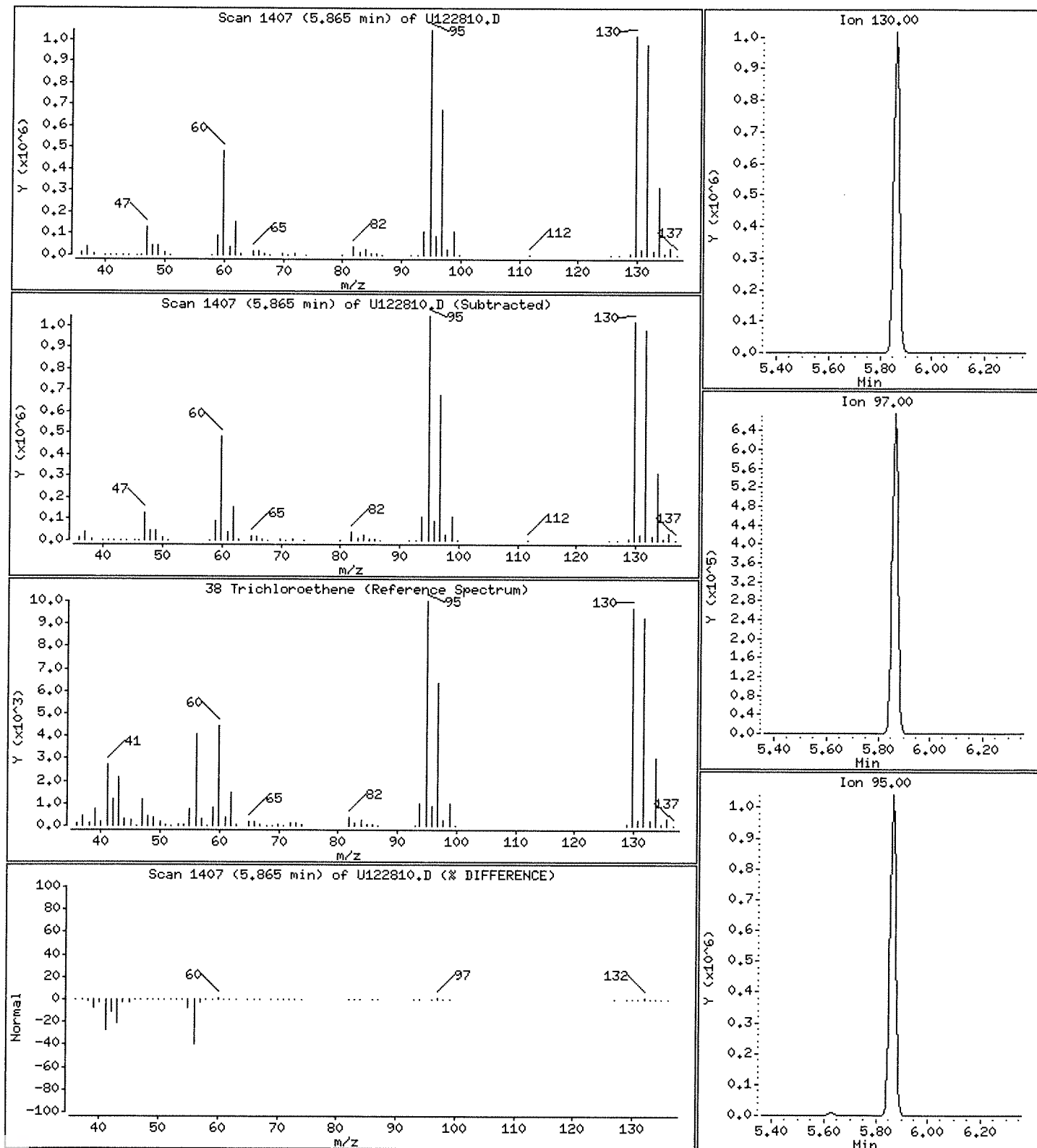
Operator: PC

Column phase: DB624

Column diameter: 0.18

38 Trichloroethene

Concentration: 2535.33 ug/l



Data File: \\NAHSTWS005\Target\chem\voa9.i\U122810.D

Page 7

Date : 28-DEC-2018 13:54

Client ID: HS18121123-04

Instrument: VOA9.i

Sample Info: HS18121123-04;HS18121123-04;;;

Purge Volume: 5.0

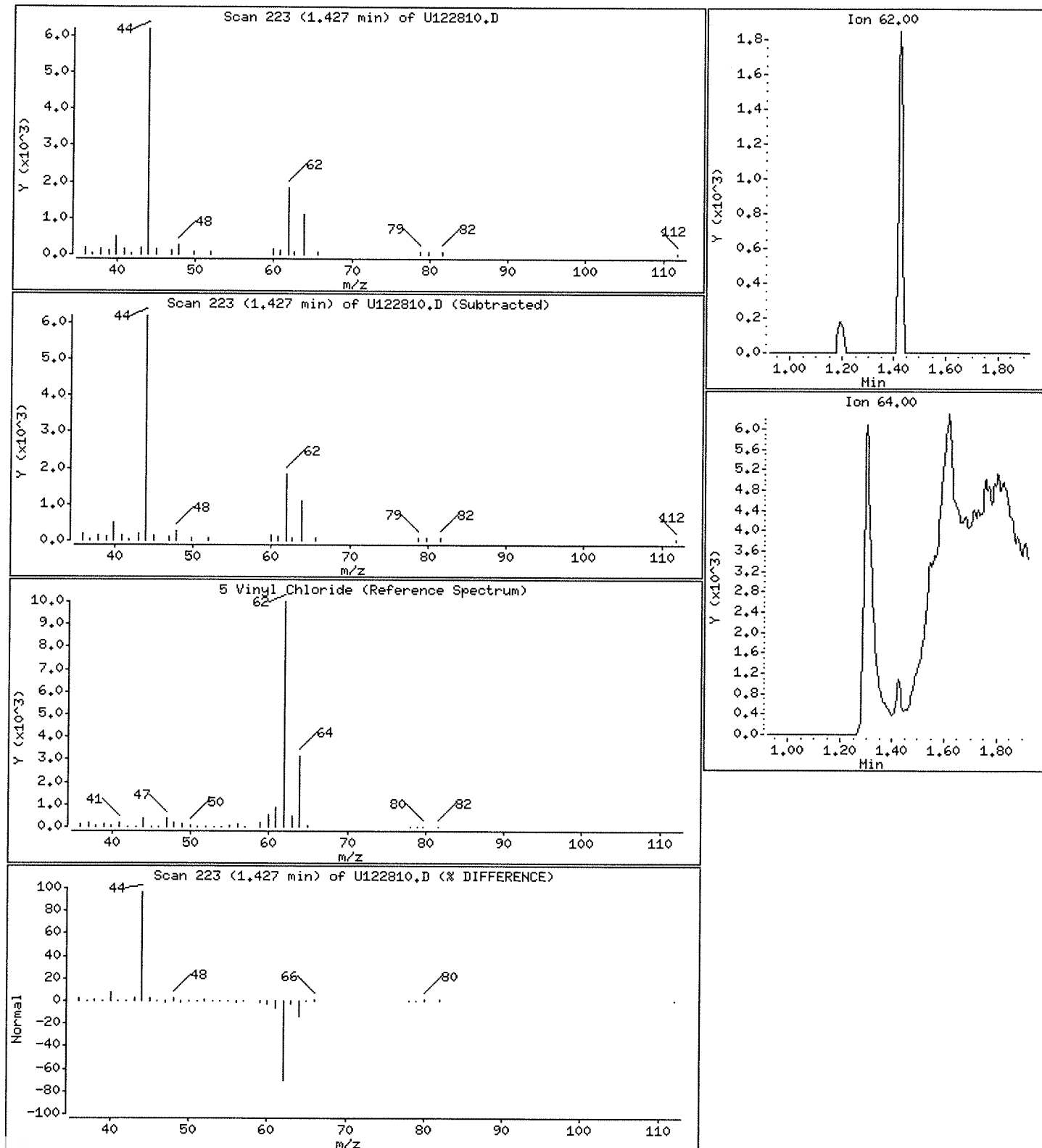
Operator: PC

Column phase: DB624

Column diameter: 0.18

5 Vinyl Chloride

Concentration: 7.26 ug/l



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181228.b\U122811.D Page 1
 Report Date: 30-Jan-2019 17:04

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U181228.b\U122811.D
 Lab Smp Id: HS18121123-03MS Client Smp ID: HS18121123-03MS
 Inj Date : 28-DEC-2018 14:19
 Operator : PC Inst ID: VOA9.i
 Smp Info : HS18121123-03MS;HS18121123-03MS;3;;MS
 Misc Info : 180315V9;WATER;0;1;
 Comment :
 Method : \\NAHSTWS005\Target\chem\voa9.i\U181228.b\8260C.m
 Meth Date : 30-Jan-2019 17:04 VOA9.i Quant Type: ISTD
 Cal Date : 21-DEC-2018 16:41 Cal File: U122108.D
 Als bottle: 11 QC Sample: MS
 Dil Factor: 1.00000
 Integrator: HP RTE Compound Sublist: LHAAP.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	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.894	4.894	(1.000)	296142	50.0000	
* 36 1,4-Difluorobenzene	114	5.625	5.625	(1.000)	525310	50.0000	
* 47 Chlorobenzene-d5	117	8.249	8.249	(1.000)	477547	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	229566	50.0000	
\$ 30 Dibromofluoromethane	113	4.830	4.830	(0.987)	153275	46.8080	46.80
\$ 35 1,2-Dichloroethane-d4	65	5.175	5.175	(1.057)	204391	48.7090	48.70
\$ 48 Toluene-d8	98	6.989	6.989	(0.847)	660357	53.6777	53.67
\$ 69 4-Bromofluorobenzene	95	9.257	9.257	(1.122)	244993	52.2517	52.25
60 1,1,1,2-Tetrachloroethane	131	8.350	8.350	(1.012)	80375	26.7983	26.79
31 1,1,1-Trichloroethane	97	4.826	4.826	(0.986)	129131	27.6154	27.61
68 1,1,2,2-Tetrachloroethane	83	9.392	9.392	(0.918)	140097	27.0986	27.09
138 Freon TF	101	2.405	2.405	(0.491)	86790	34.4728	34.47
53 1,1,2-Trichloroethane	83	7.421	7.421	(0.900)	80685	28.3592	28.35
22 1,1-Dichloroethane	63	3.604	3.604	(0.737)	173070	27.1371	27.13
11 1,1-Dichloroethene	96	2.401	2.401	(0.491)	74488	26.4540	26.45
32 1,1-Dichloropropene	75	5.006	5.006	(0.890)	137418	29.4004	29.40
93 1,2,3-Trichlorobenzene	180	12.335	12.335	(1.205)	109578	25.6430	25.64
71 1,2,3-Trichloropropane	75	9.426	9.426	(0.921)	142966	26.5938	26.59
90 1,2,4-Trichlorobenzene	180	11.923	11.923	(1.165)	114129	26.8524	26.85
79 1,2,4-Trimethylbenzene	105	9.943	9.943	(0.971)	357792	29.7831	29.78
89 1,2-Dibromo-3-Chloropropane	155	11.233	11.233	(1.097)	17223	22.4296	22.42
57 1,2-Dibromoethane	107	7.852	7.852	(0.952)	91996	28.0733	28.07



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181228.b\U122811.D Page 2
 Report Date: 30-Jan-2019 17:04

Compounds	QUANT	SIG						CONCENTRATIONS	
			MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/l)	FINAL (ug/l)
=====	=====	=====	=====	=====	=====	=====	=====	=====	
88 1,2-Dichlorobenzene	146		10.569	10.569	(1.033)	186897	27.4189	27.41	
33 1,2-Dichloroethane	62		5.254	5.254	(0.934)	139203	29.1091	29.10	
42 1,2-Dichloropropane	63		6.082	6.082	(1.081)	105069	28.3067	28.30	
75 1,3,5-Trimethylbenzene	105		9.625	9.625	(0.940)	347422	30.1131	30.11	
83 1,3-Dichlorobenzene	146		10.180	10.180	(0.995)	187832	27.5540	27.55	
54 1,3-Dichloropropane	76		7.563	7.563	(0.917)	175408	28.6228	28.62	
84 1,4-Dichlorobenzene	146		10.255	10.255	(1.002)	192991	26.8509	26.85	
26 2,2-Dichloropropane	77		4.275	4.275	(0.874)	106598	27.7352	27.73	
24 2-Butanone	43		4.339	4.335	(0.887)	96336	48.5190	48.51	
76 2-Chlorotoluene	91		9.546	9.546	(0.933)	309677	29.2779	29.27	
52 2-Hexanone	43		7.649	7.649	(0.927)	142857	53.7976	53.79	
77 4-Chlorotoluene	91		9.640	9.640	(0.942)	361103	29.5429	29.54	
82 p-Isopropyltoluene	119		10.210	10.210	(0.997)	371497	30.5816	30.58	
45 4-Methyl-2-Pentanone	43		6.915	6.911	(0.838)	210194	55.0128	55.01	
10 Acetone	43		2.480	2.480	(0.507)	48191	39.9207	39.92	
37 Benzene	78		5.220	5.216	(0.928)	402317	28.7812	28.78	
74 Bromobenzene	156		9.381	9.381	(0.917)	97104	27.3768	27.37	
29 Bromochloromethane	128		4.557	4.553	(0.931)	46538	28.7333	28.73	
39 Bromodichloromethane	83		6.348	6.348	(1.129)	109912	27.8457	27.84	
66 Bromoform	173		8.984	8.984	(1.089)	46343	23.5741	23.57	
6 Bromomethane	94		1.670	1.670	(0.341)	47260	26.4887	26.48	
19 Carbon Disulfide	76		2.592	2.592	(0.530)	407109	39.6799	39.67	
34 Carbon Tetrachloride	117		4.995	4.995	(0.888)	102250	27.4143	27.41	
59 Chlorobenzene	112		8.275	8.275	(1.003)	262592	28.6188	28.61	
7 Chloroethane	64		1.756	1.756	(0.359)	66055	25.5902	25.59 (M)	
28 Chloroform	83		4.658	4.658	(0.952)	166695	27.1404	27.14	
3 Chloromethane	50		1.340	1.340	(0.274)	68383	23.6113	23.61	
27 cis-1,2-Dichloroethene	96		4.287	4.287	(0.876)	107051	27.5012	27.50	
46 cis-1,3-Dichloropropene	75		6.757	6.757	(1.201)	145630	24.9295	24.92	
55 Dibromochloromethane	129		7.758	7.758	(0.940)	78229	25.4183	25.41	
44 Dibromomethane	93		6.191	6.191	(1.101)	59532	27.7895	27.78	
2 Dichlorodifluoromethane	85		1.205	1.209	(0.246)	57685	16.1622	16.16	
61 Ethylbenzene	106		8.369	8.369	(1.015)	137900	29.3028	29.30	
91 Hexachlorobutadiene	225		12.065	12.065	(1.179)	43385	26.6435	26.64	
67 Isopropylbenzene	105		9.126	9.126	(1.106)	415126	30.5695	30.56	
62 m,p-Xylenes	106		8.474	8.470	(1.027)	345108	59.6507	59.65	
17 Methylene Chloride	84		2.873	2.873	(0.587)	101739	27.2633	27.26	
87 n-Butylbenzene	91		10.554	10.554	(1.031)	352918	30.1040	30.10	
73 n-Propylbenzene	91		9.475	9.475	(0.926)	525184	30.6171	30.61	
92 Naphthalene	128		12.133	12.133	(1.185)	344537	24.8762	24.87	
63 o-Xylene	106		8.811	8.811	(1.068)	171825	29.4396	29.43	
81 sec-Butylbenzene	105		10.086	10.086	(0.985)	442713	30.7096	30.70	
64 Styrene	104		8.826	8.823	(1.070)	290732	29.9824	29.98	
78 tert-Butylbenzene	119		9.902	9.902	(0.967)	299924	30.0773	30.07	
56 Tetrachloroethene	164		7.526	7.522	(0.912)	70026	28.0095	28.00	
50 Toluene	91		7.046	7.046	(0.854)	422892	29.7697	29.76	
20 trans-1,2-Dichloroethene	96		3.143	3.143	(0.642)	92735	26.7523	26.75	
51 trans-1,3-Dichloropropene	75		7.259	7.259	(1.291)	122927	24.6883	24.68	
38 Trichloroethene	130		5.861	5.861	(1.042)	100204	29.6937	29.69	
8 Trichlorofluoromethane	101		1.955	1.959	(0.400)	127435	26.4069	26.40	
5 Vinyl Chloride	62		1.423	1.423	(0.291)	99330	24.2233	24.22	



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181228.b\U122811.D Page 3
Report Date: 30-Jan-2019 17:04

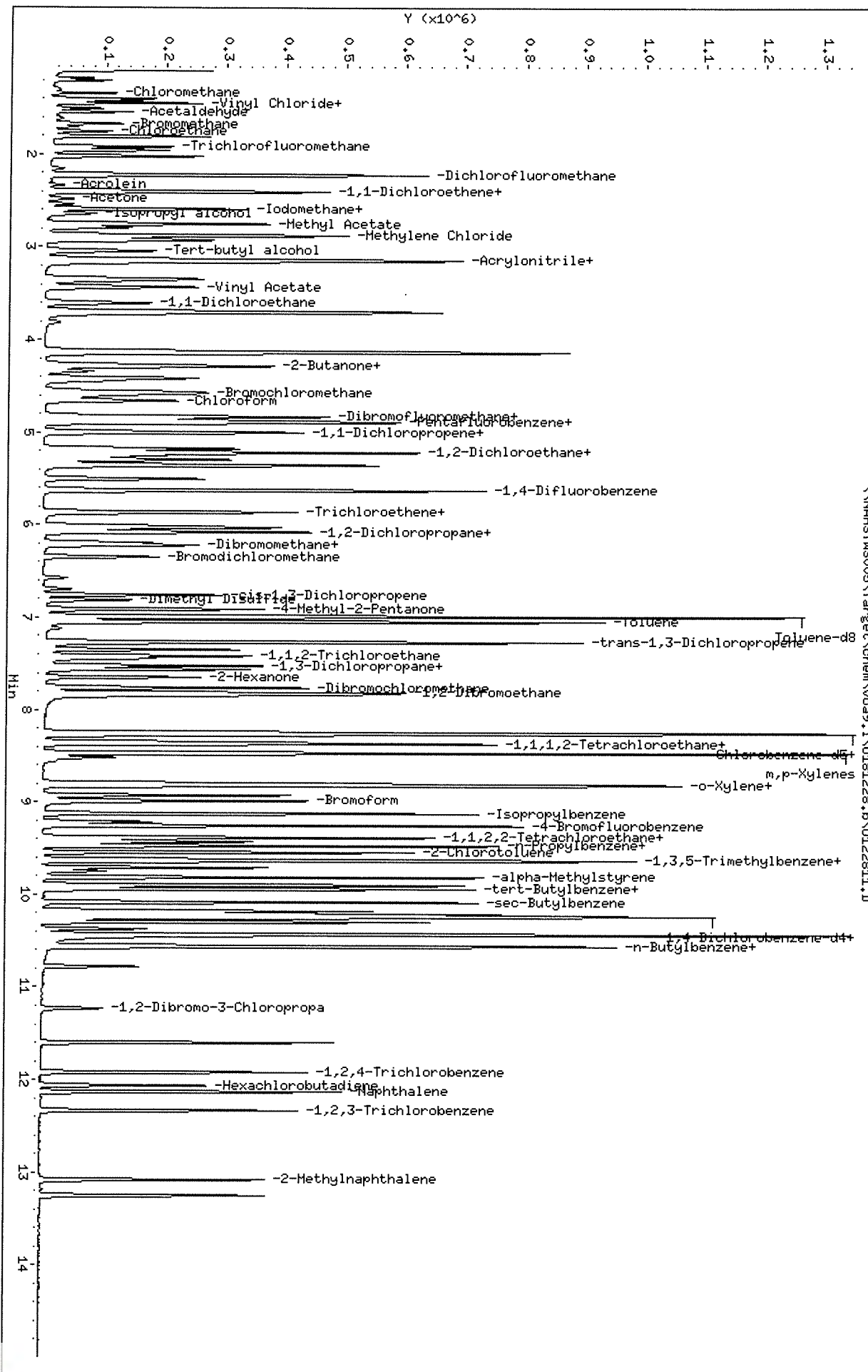
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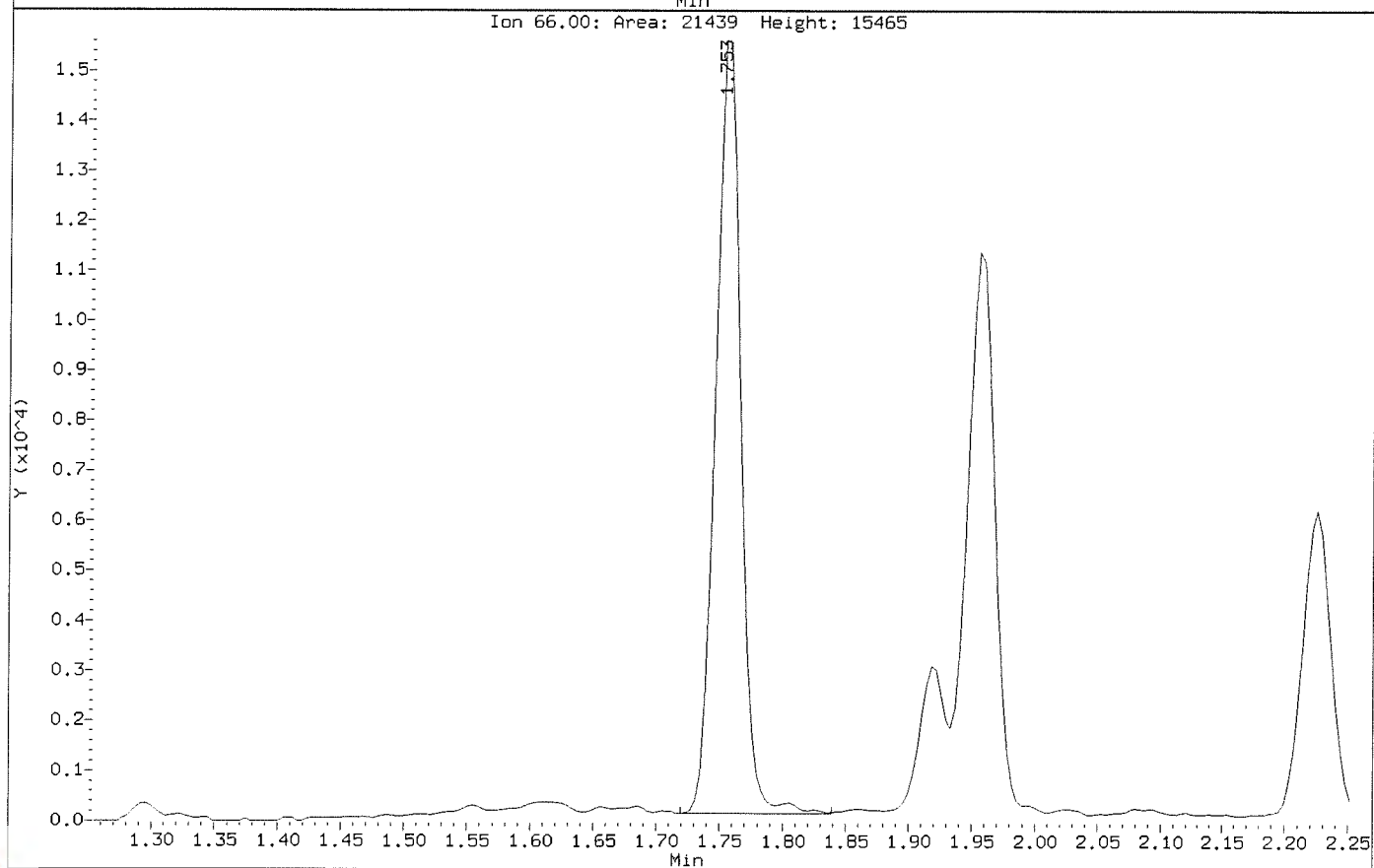
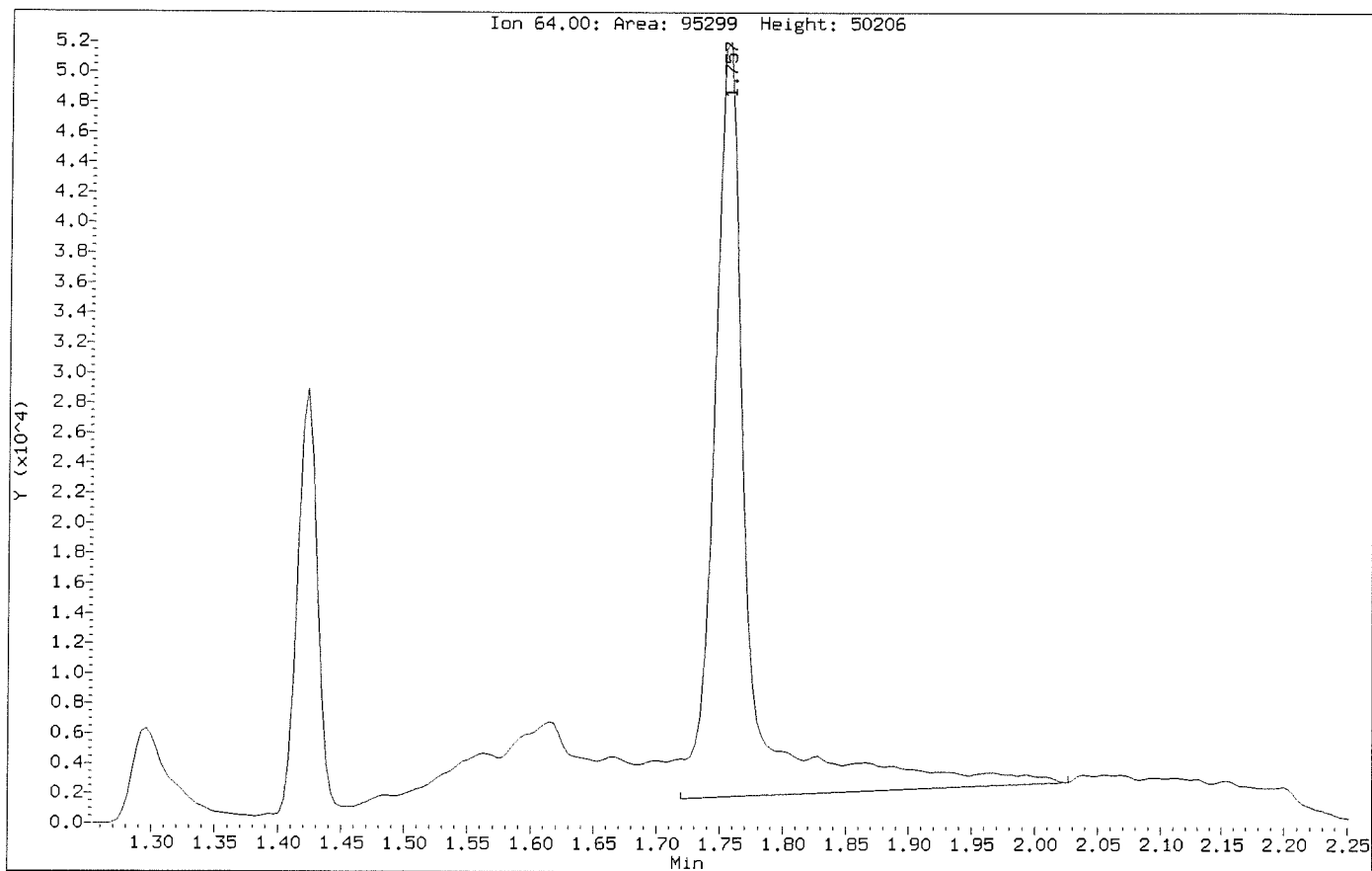
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 Sample Info: HSI8121123-03MS;HSI8121123-03MS;3;MS
 Purge Volume: 5.0
 Column phase: DB624

Instrument: W099.i
 Operator: PC
 Column diameter: 0.18



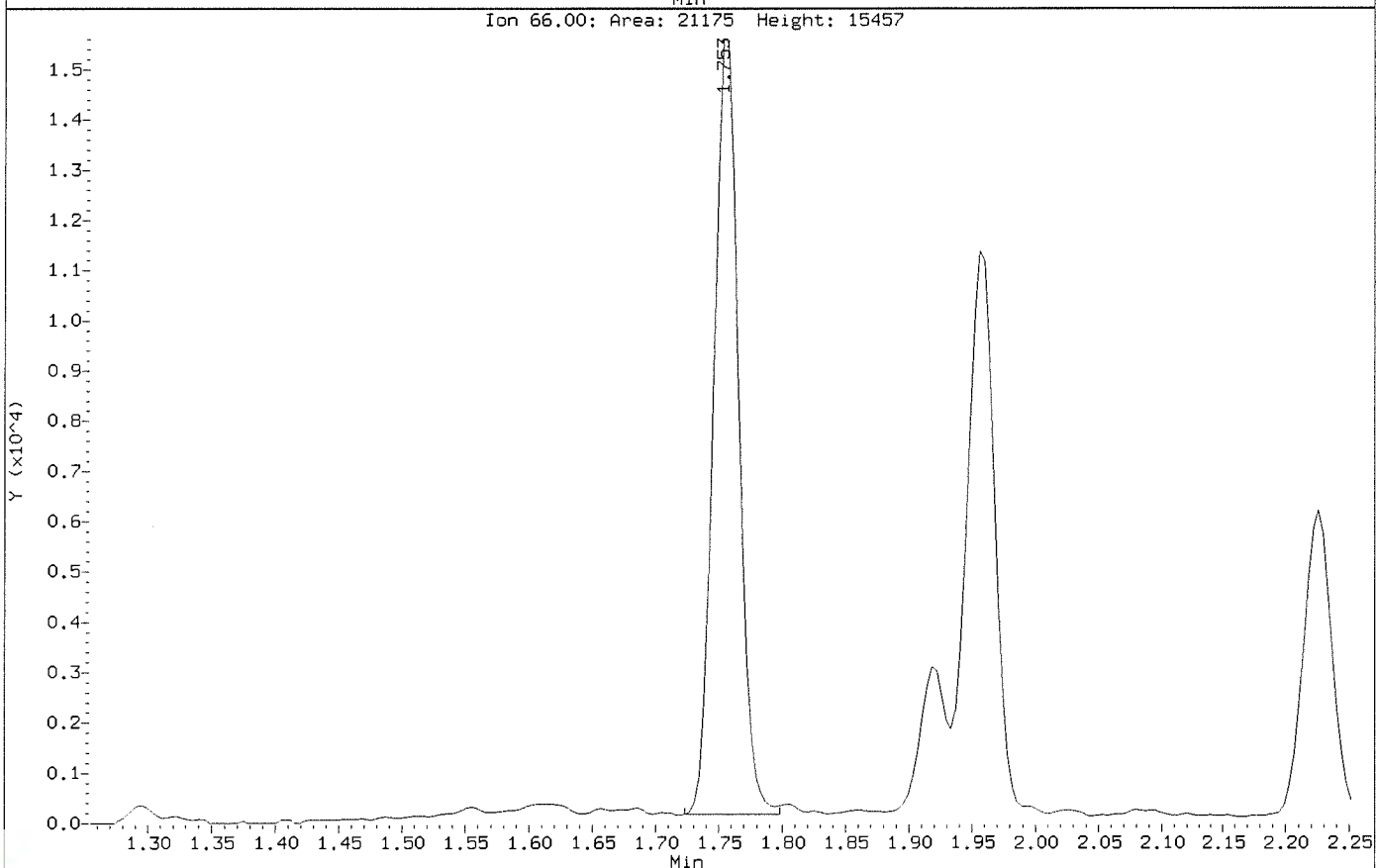
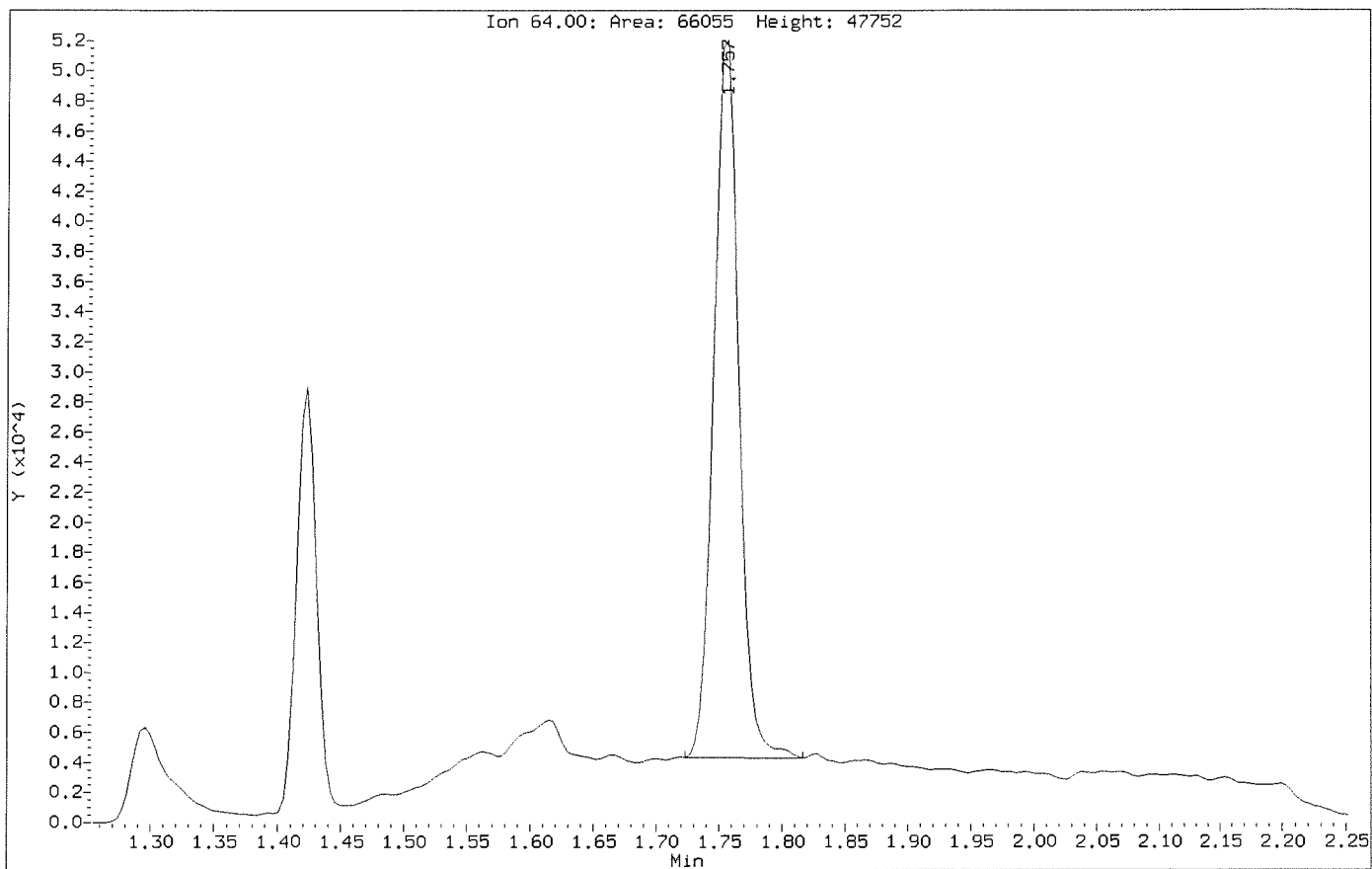
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Injection Date: 28-DEC-2018 14:19
Instrument: VOA9.i
Client Sample ID: HS18121123-03MS

Compound: Chloroethane
CAS Number: 75-00-3



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181228.b\U122811.D
Injection Date: 28-DEC-2018 14:19
Instrument: VOA9.i
Client Sample ID: HS18121123-03MS

Compound: Chloroethane
CAS Number: 75-00-3



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181228.b\U122812.D Page 1
 Report Date: 30-Jan-2019 17:04

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Data file : \\NAHSTWS005\Target\chem\voa9.i\U181228.b\U122812.D
 Lab Smp Id: HS18121123-03MSD Client Smp ID: HS18121123-03MSD
 Inj Date : 28-DEC-2018 14:44
 Operator : PC Inst ID: VOA9.i
 Smp Info : HS18121123-03MSD;HS18121123-03MSD;3;;MSD
 Misc Info : 180315V9;WATER;0;1;
 Comment :
 Method : \\NAHSTWS005\Target\chem\voa9.i\U181228.b\8260C.m
 Meth Date : 30-Jan-2019 17:04 VOA9.i Quant Type: ISTD
 Cal Date : 21-DEC-2018 16:41 Cal File: U122108.D
 Als bottle: 11 QC Sample: MSD
 Dil Factor: 1.00000
 Integrator: HP RTE Compound Sublist: LHAAP.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	4.894	(1.000)	308307	50.0000	
* 36 1,4-Difluorobenzene		114	5.625	5.625	(1.000)	537919	50.0000	
* 47 Chlorobenzene-d5		117	8.249	8.249	(1.000)	492616	50.0000	
* 70 1,4-Dichlorobenzene-d4		152	10.236	10.236	(1.000)	239056	50.0000	
\$ 30 Dibromofluoromethane		113	4.826	4.830	(0.986)	158871	46.5959	46.59
\$ 35 1,2-Dichloroethane-d4		65	5.175	5.175	(1.057)	209525	47.9290	47.92
\$ 48 Toluene-d8		98	6.989	6.989	(0.847)	670811	52.8323	52.83
\$ 69 4-Bromofluorobenzene		95	9.257	9.257	(1.122)	250186	51.7127	51.71
60 1,1,1,2-Tetrachloroethane		131	8.350	8.350	(1.012)	79297	25.6556	25.65
31 1,1,1-Trichloroethane		97	4.826	4.826	(0.986)	129281	26.5566	26.55
68 1,1,2,2-Tetrachloroethane		83	9.392	9.392	(0.918)	138170	25.6649	25.66
138 Freon TF		101	2.401	2.405	(0.491)	83037	31.6807	31.68
53 1,1,2-Trichloroethane		83	7.420	7.421	(0.900)	80538	27.4416	27.44
22 1,1-Dichloroethane		63	3.600	3.604	(0.736)	171583	25.8423	25.84
11 1,1-Dichloroethene		96	2.397	2.401	(0.490)	72401	24.6983	24.69
32 1,1-Dichloropropene		75	5.002	5.006	(0.889)	138780	28.9958	28.99
93 1,2,3-Trichlorobenzene		180	12.335	12.335	(1.205)	111814	25.1403	25.14
71 1,2,3-Trichloropropane		75	9.426	9.426	(0.921)	139850	24.9815	24.98
90 1,2,4-Trichlorobenzene		180	11.923	11.923	(1.165)	115995	26.2080	26.20
79 1,2,4-Trimethylbenzene		105	9.943	9.943	(0.971)	360401	28.8093	28.80
89 1,2-Dibromo-3-Chloropropane		155	11.233	11.233	(1.097)	17359	21.7559	21.75
57 1,2-Dibromoethane		107	7.851	7.852	(0.952)	92159	27.2628	27.26



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181228.b\U122812.D Page 2
 Report Date: 30-Jan-2019 17:04

Compounds	QUANT	SIG						CONCENTRATIONS	
			MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/l)	FINAL (ug/l)
88 1,2-Dichlorobenzene	146		10.569	10.569	(1.033)	188869	26.6082	26.60	
33 1,2-Dichloroethane	62		5.250	5.254	(0.933)	139607	28.4942	28.49	
42 1,2-Dichloropropane	63		6.078	6.082	(1.081)	104599	27.5195	27.51	
75 1,3,5-Trimethylbenzene	105		9.625	9.625	(0.940)	349113	29.0584	29.05	
83 1,3-Dichlorobenzene	146		10.179	10.180	(0.995)	191004	26.9070	26.90	
54 1,3-Dichloropropane	76		7.563	7.563	(0.917)	173214	27.4002	27.40	
84 1,4-Dichlorobenzene	146		10.254	10.255	(1.002)	193496	25.8525	25.85	
26 2,2-Dichloropropane	77		4.271	4.275	(0.873)	106652	26.6543	26.65	
24 2-Butanone	43		4.335	4.335	(0.886)	95759	46.2153	46.21	
76 2-Chlorotoluene	91		9.546	9.546	(0.933)	309017	28.0557	28.05	
52 2-Hexanone	43		7.649	7.649	(0.927)	142473	52.0118	52.01	
77 4-Chlorotoluene	91		9.640	9.640	(0.942)	362431	28.4744	28.47	
82 p-Isopropyltoluene	119		10.209	10.210	(0.997)	369682	29.2241	29.22	
45 4-Methyl-2-Pentanone	43		6.914	6.911	(0.838)	208805	52.9775	52.97	
10 Acetone	43		2.480	2.480	(0.507)	48790	38.7390	38.73	
37 Benzene	78		5.216	5.216	(0.927)	405685	28.3419	28.34	
74 Bromobenzene	156		9.381	9.381	(0.917)	98729	26.7299	26.72	
29 Bromochloromethane	128		4.553	4.553	(0.930)	45745	26.9556	26.95	
39 Bromodichloromethane	83		6.344	6.348	(1.128)	110087	27.2363	27.23	
66 Bromoform	173		8.984	8.984	(1.089)	45917	22.7125	22.71	
6 Bromomethane	94		1.670	1.670	(0.341)	47658	25.6998	25.69	
19 Carbon Disulfide	76		2.588	2.592	(0.529)	533368	49.9348	49.93	
34 Carbon Tetrachloride	117		4.995	4.995	(0.888)	103132	27.0237	27.02	
59 Chlorobenzene	112		8.275	8.275	(1.003)	262869	27.7726	27.77	
7 Chloroethane	64		1.752	1.756	(0.358)	65272	24.3230	24.32 (M)	
28 Chloroform	83		4.654	4.658	(0.951)	165589	25.8965	25.89	
3 Chloromethane	50		1.336	1.340	(0.273)	66802	22.3600	22.35	
27 cis-1,2-Dichloroethene	96		4.283	4.287	(0.875)	106044	26.1676	26.16	
46 cis-1,3-Dichloropropene	75		6.757	6.757	(1.201)	148115	24.7691	24.76	
55 Dibromochloromethane	129		7.758	7.758	(0.940)	78454	24.7388	24.73	
44 Dibromomethane	93		6.187	6.191	(1.100)	59950	27.3287	27.32	
2 Dichlorodifluoromethane	85		1.205	1.209	(0.246)	57621	15.5270	15.52	
61 Ethylbenzene	106		8.369	8.369	(1.015)	137399	28.3032	28.30	
91 Hexachlorobutadiene	225		12.065	12.065	(1.179)	42710	25.1878	25.18	
67 Isopropylbenzene	105		9.126	9.126	(1.106)	413603	29.5256	29.52	
62 m,p-Xylenes	106		8.470	8.470	(1.027)	346592	58.0746	58.07	
17 Methylene Chloride	84		2.869	2.873	(0.586)	101633	26.1116	26.11	
87 n-Butylbenzene	91		10.558	10.554	(1.031)	354394	29.0298	29.02	
73 n-Propylbenzene	91		9.475	9.475	(0.926)	524780	29.3790	29.37	
92 Naphthalene	128		12.132	12.133	(1.185)	350181	24.2933	24.29	
63 o-Xylene	106		8.811	8.811	(1.068)	173371	28.7958	28.79	
81 sec-Butylbenzene	105		10.086	10.086	(0.985)	442548	29.4795	29.47	
64 Styrene	104		8.822	8.823	(1.070)	292184	29.2104	29.21	
78 tert-Butylbenzene	119		9.902	9.902	(0.967)	301929	29.0764	29.07	
56 Tetrachloroethene	164		7.522	7.522	(0.912)	70735	27.4276	27.42	
50 Toluene	91		7.049	7.046	(0.855)	423656	28.9111	28.91	
20 trans-1,2-Dichloroethene	96		3.139	3.143	(0.642)	93686	25.9602	25.96	
51 trans-1,3-Dichloropropene	75		7.259	7.259	(1.291)	123174	24.1935	24.19	
38 Trichloroethene	130		5.861	5.861	(1.042)	97471	28.2068	28.20	
8 Trichlorofluoromethane	101		1.955	1.959	(0.399)	124276	24.7757	24.77	
5 Vinyl Chloride	62		1.419	1.423	(0.290)	98191	23.0496	23.04	



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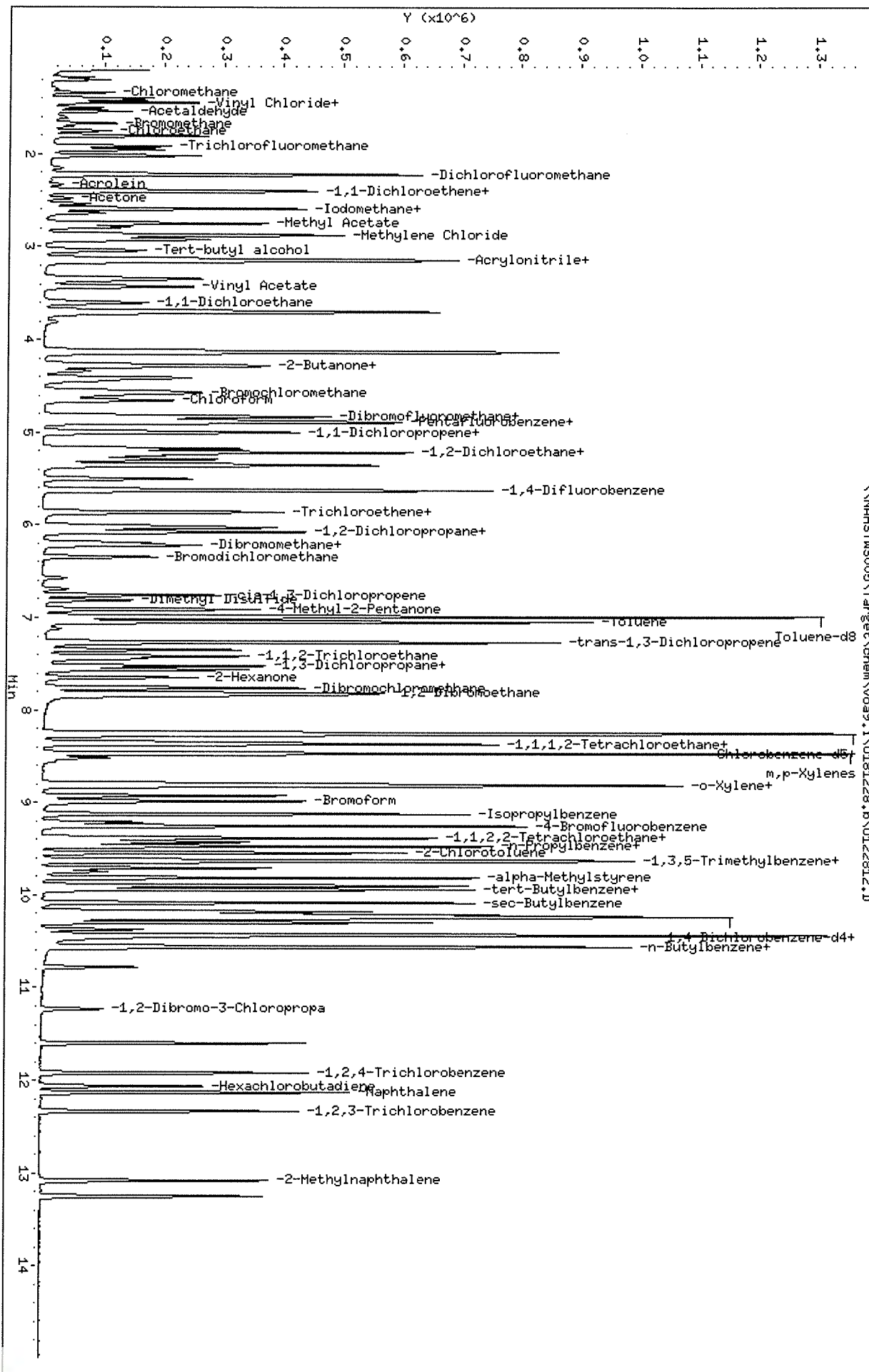
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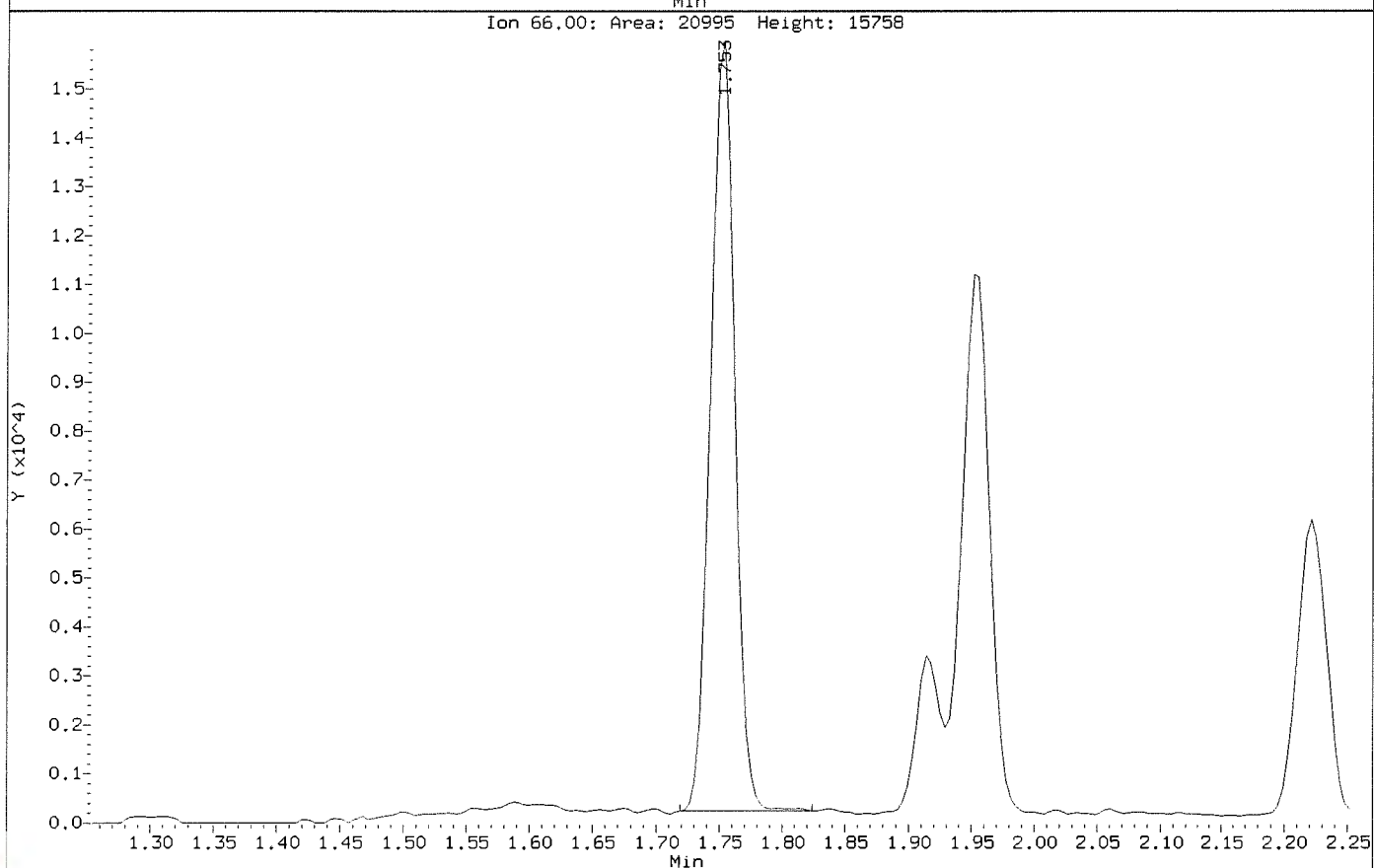
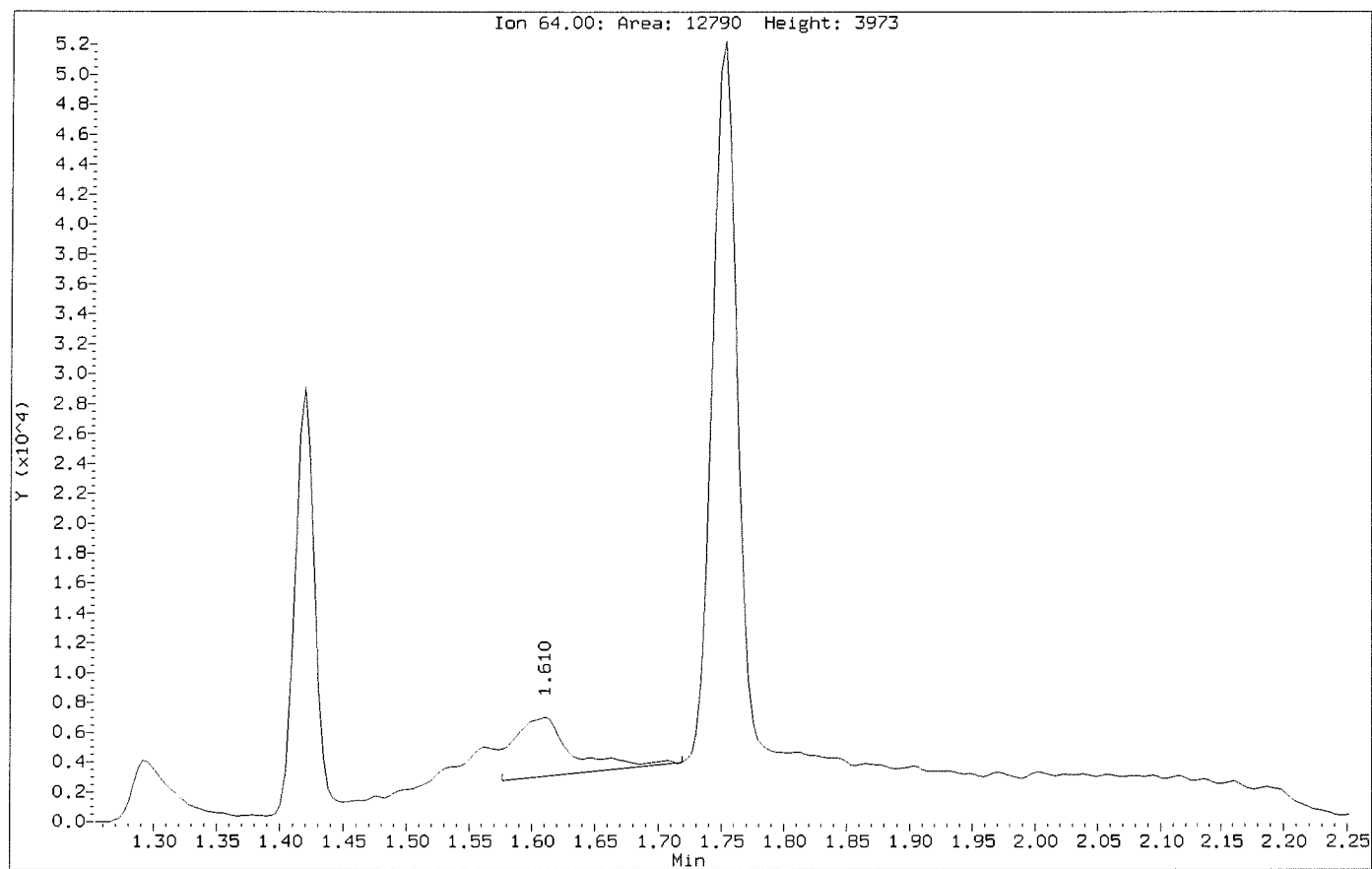
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Instrument: VOA9.1
Operator: PC
Column diameter: 0.18



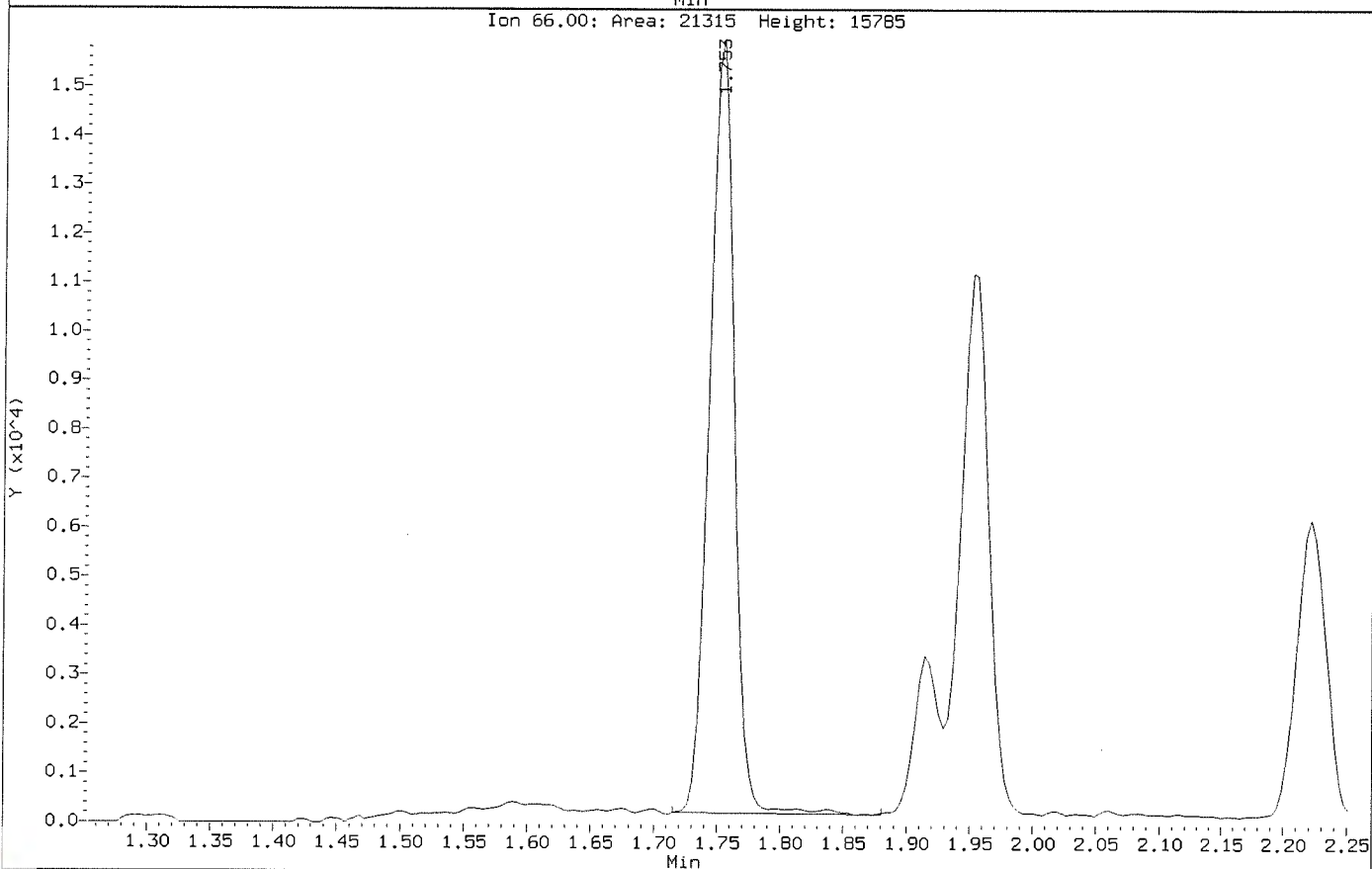
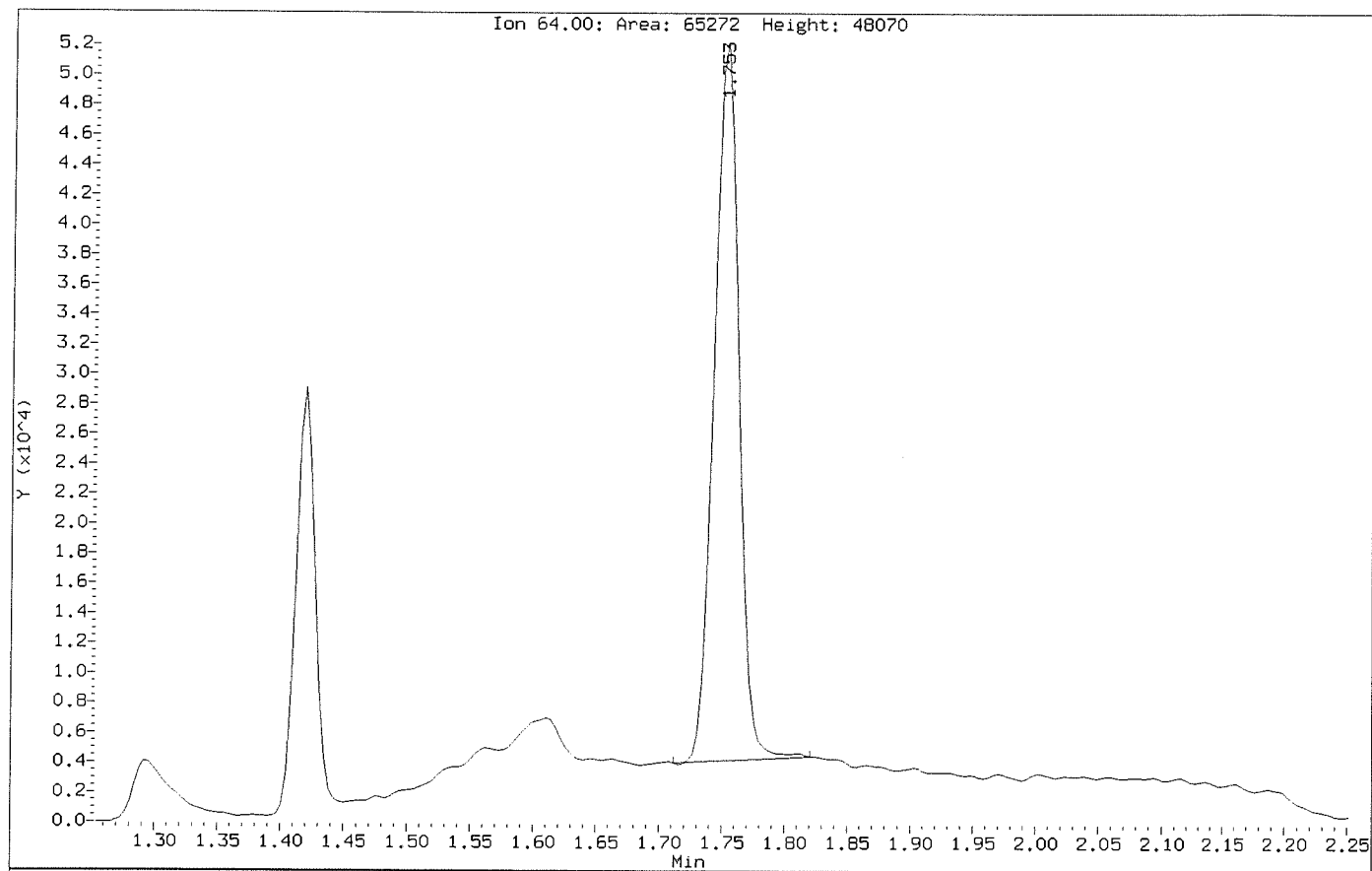
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Injection Date: 28-DEC-2018 14:44
Instrument: VDA9.i
Client Sample ID: HS18121123-03MSD

Compound: Chloroethane
CAS Number: 75-00-3



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181228.b\U122812.D
Injection Date: 28-DEC-2018 14:44
Instrument: VOA9.i
Client Sample ID: HS18121123-03MSD

Compound: Chloroethane
CAS Number: 75-00-3



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181228.b\U122813.D Page 1
 Report Date: 30-Jan-2019 17:38

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U181228.b\U122813.D
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 Operator : PC Inst ID: VOA9.i
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 Misc Info : 180315V9;WATER;0;50;
 Comment :
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 Meth Date : 30-Jan-2019 17:08 hvan Quant Type: ISTD
 Cal Date : 21-DEC-2018 16:41 Cal File: U122108.D
 Als bottle: 12
 Dil Factor: 50.00000
 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	50.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT	SIG	CONCENTRATIONS				ON-COLUMN	FINAL
			MASS	RT	EXP RT	REL RT	RESPONSE	(ug/l)
* 1 Pentafluorobenzene	168		4.898	4.894	(1.000)	320437	50.0000	
* 36 1,4-Difluorobenzene	114		5.629	5.625	(1.000)	569784	50.0000	
* 47 Chlorobenzene-d5	117		8.249	8.249	(1.000)	506381	50.0000	
* 70 1,4-Dichlorobenzene-d4	152		10.236	10.236	(1.000)	231696	50.0000	
\$ 30 Dibromofluoromethane	113		4.834	4.830	(0.987)	163108	46.0090	46.00
\$ 35 1,2-Dichloroethane-d4	65		5.179	5.175	(1.057)	225017	49.5966	49.59
\$ 48 Toluene-d8	98		6.990	6.990	(0.847)	701779	53.8005	53.80
\$ 69 4-Bromofluorobenzene	95		9.258	9.257	(1.122)	245237	49.2455	49.24
27 cis-1,2-Dichloroethene	96		4.291	4.287	(0.876)	8437	2.00312	100.15 (a)
92 Naphthalene	128		12.137	12.133	(1.186)	2315	0.81683	40.84 (a)
38 Trichloroethene	130		5.865	5.861	(1.042)	179922	49.1552	2457.76

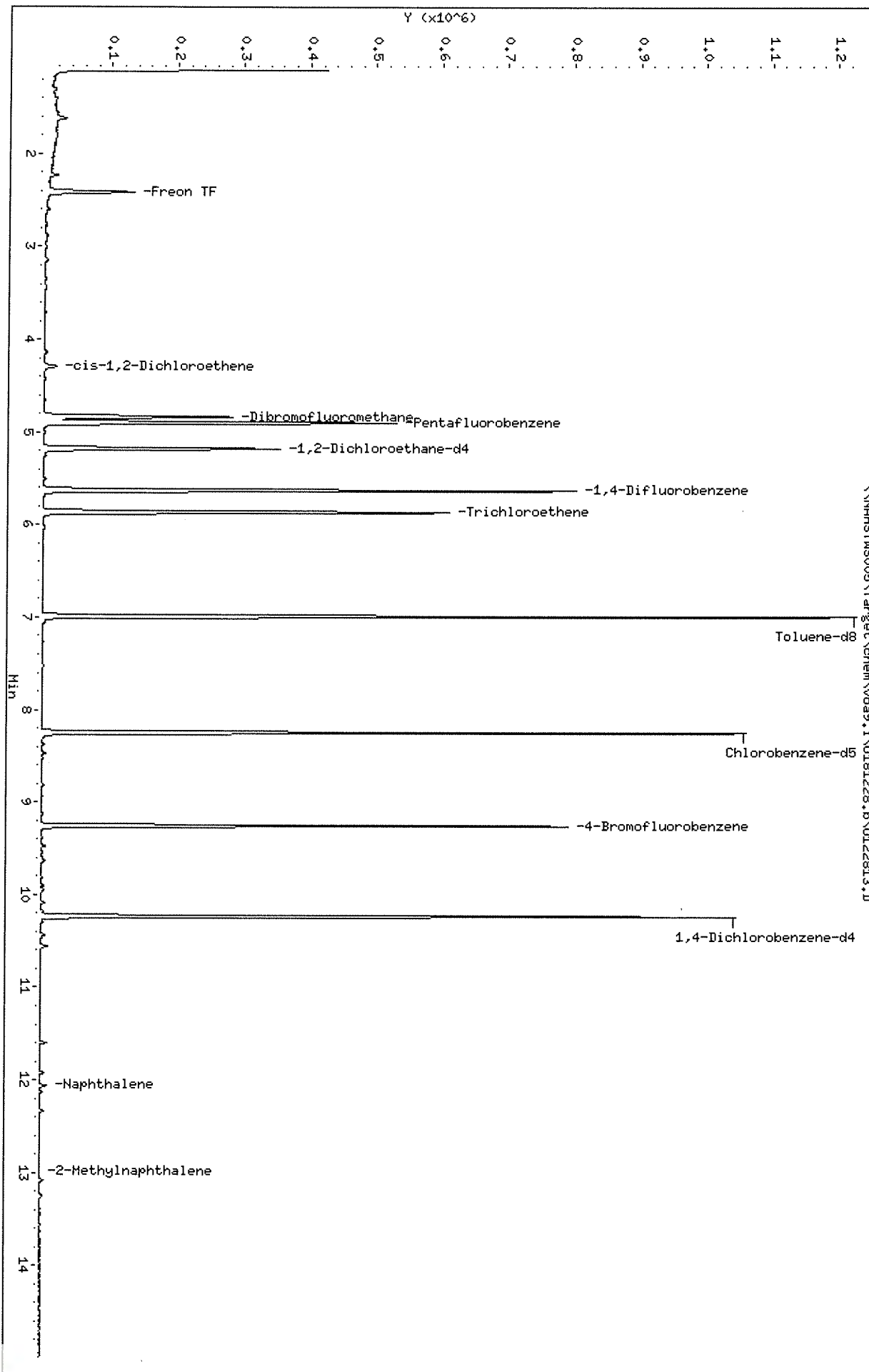
QC Flag Legend

a - Target compound detected but, quantitated amount
 Below Limit Of Quantitation(BLOQ).



Data File: \\NAHSTMS005\Target\chem\voa9.1\U181228.b\U122813.D
 Date : 28-DEC-2018 15:09
 Client ID: H818121123-04DL
 Sample Info: H818121123-04;H818121123-04;;
 Purge Volume: 5.0
 Column phase: DB624

Instrument: V093.i
 Operator: PC
 Column diameter: 0.18



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181228.b\U122813.D

Page 3

Date : 28-DEC-2018 15:09

Client ID: HS18121123-04DL

Instrument: VOA9.i

Sample Info: HS18121123-04;HS18121123-04;;;

Purge Volume: 5.0

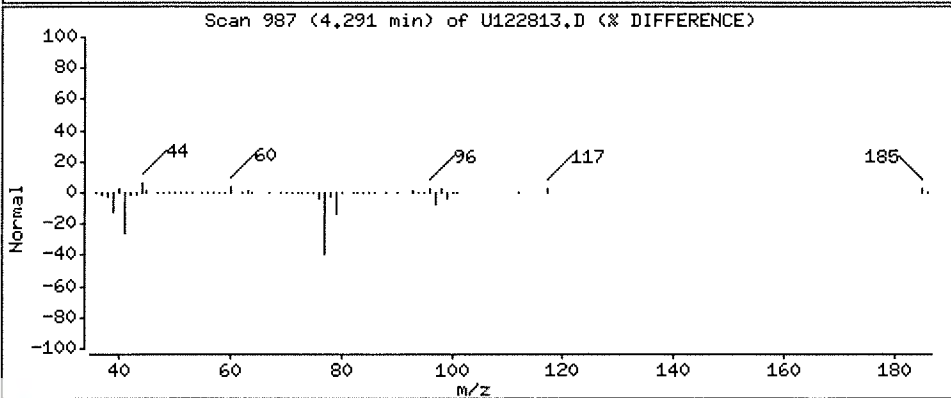
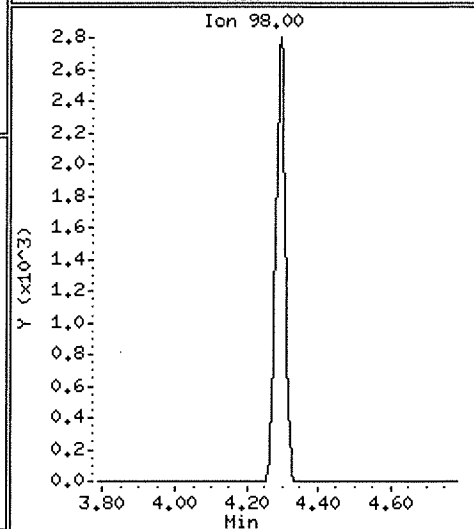
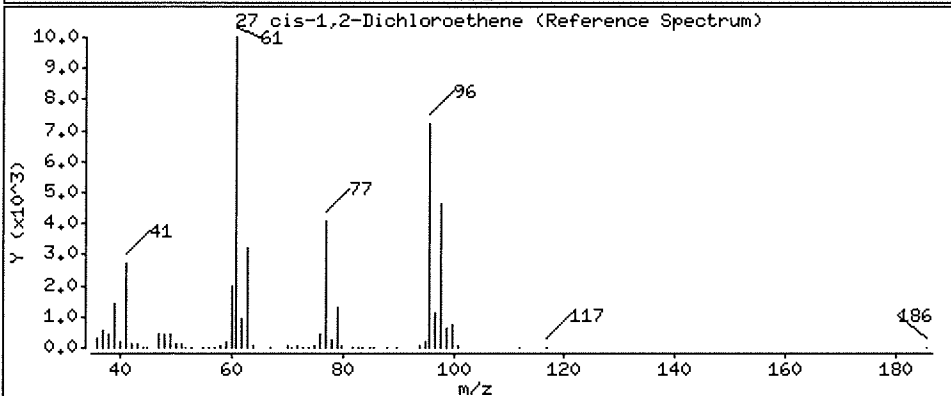
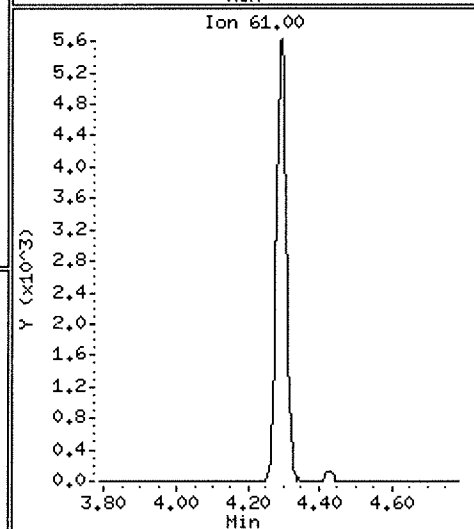
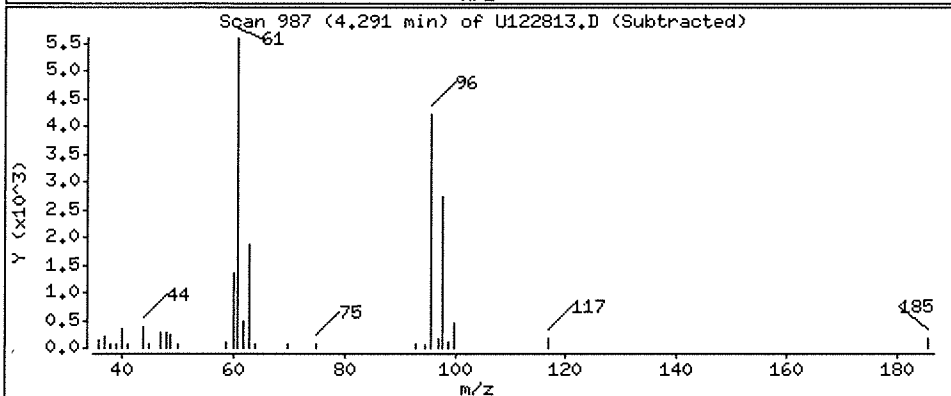
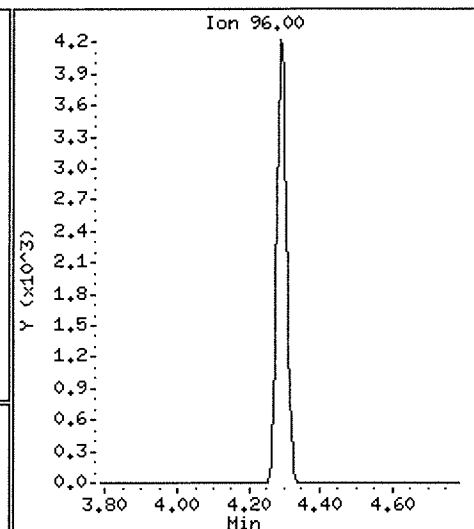
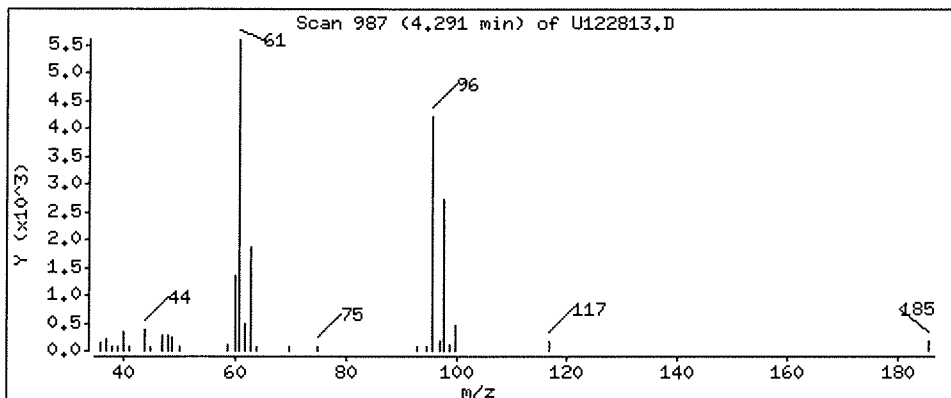
Operator: PC

Column phase: DB624

Column diameter: 0.18

27 cis-1,2-Dichloroethene

Concentration: 100.15 ug/l



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181228.b\U122813.D

Page 4

Date : 28-DEC-2018 15:09

Client ID: HS18121123-04DL

Instrument: VOA9.i

Sample Info: HS18121123-04;HS18121123-04;;;

Purge Volume: 5.0

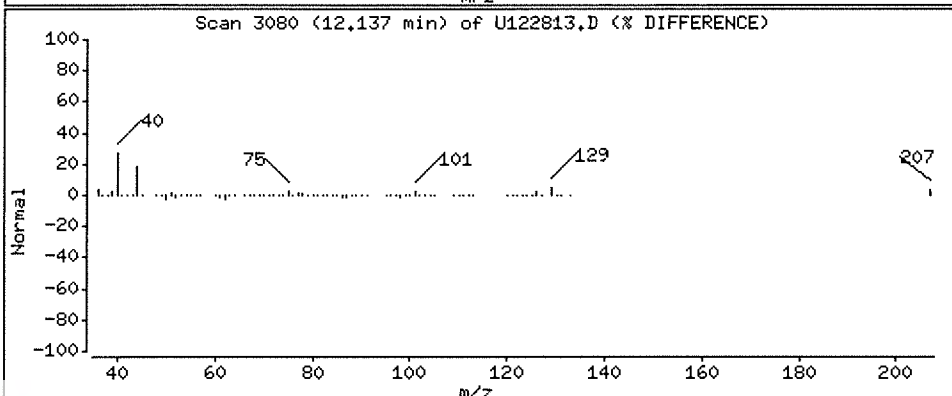
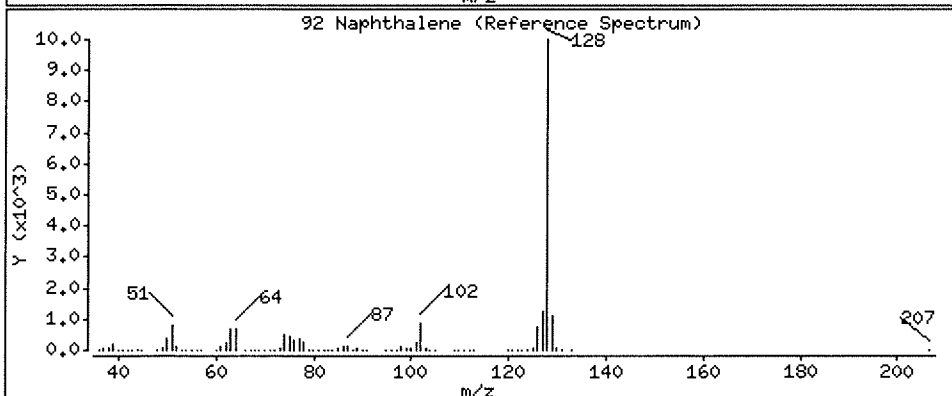
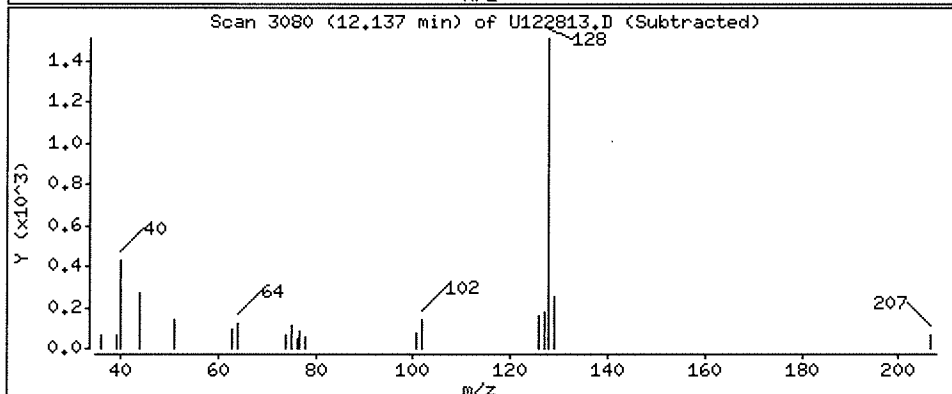
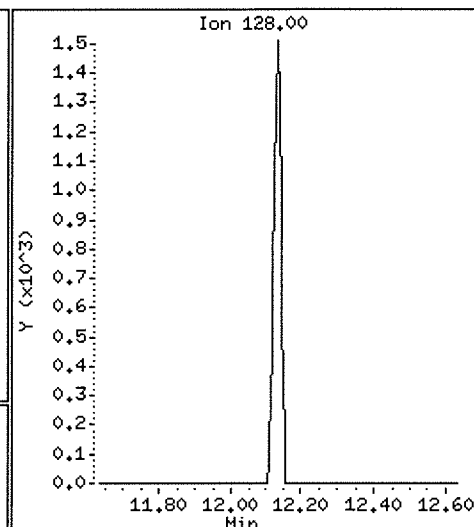
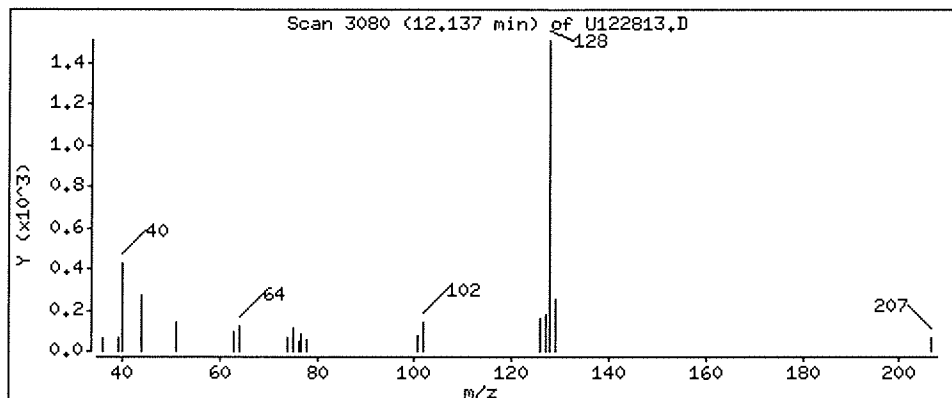
Operator: PC

Column phase: DB624

Column diameter: 0.18

92 Naphthalene

Concentration: 40.84 ug/l



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181228.b\U122813.D

Page 5

Date : 28-DEC-2018 15:09

Client ID: HS18121123-04DL

Instrument: VOA9.i

Sample Info: HS18121123-04;HS18121123-04;;

Purge Volume: 5.0

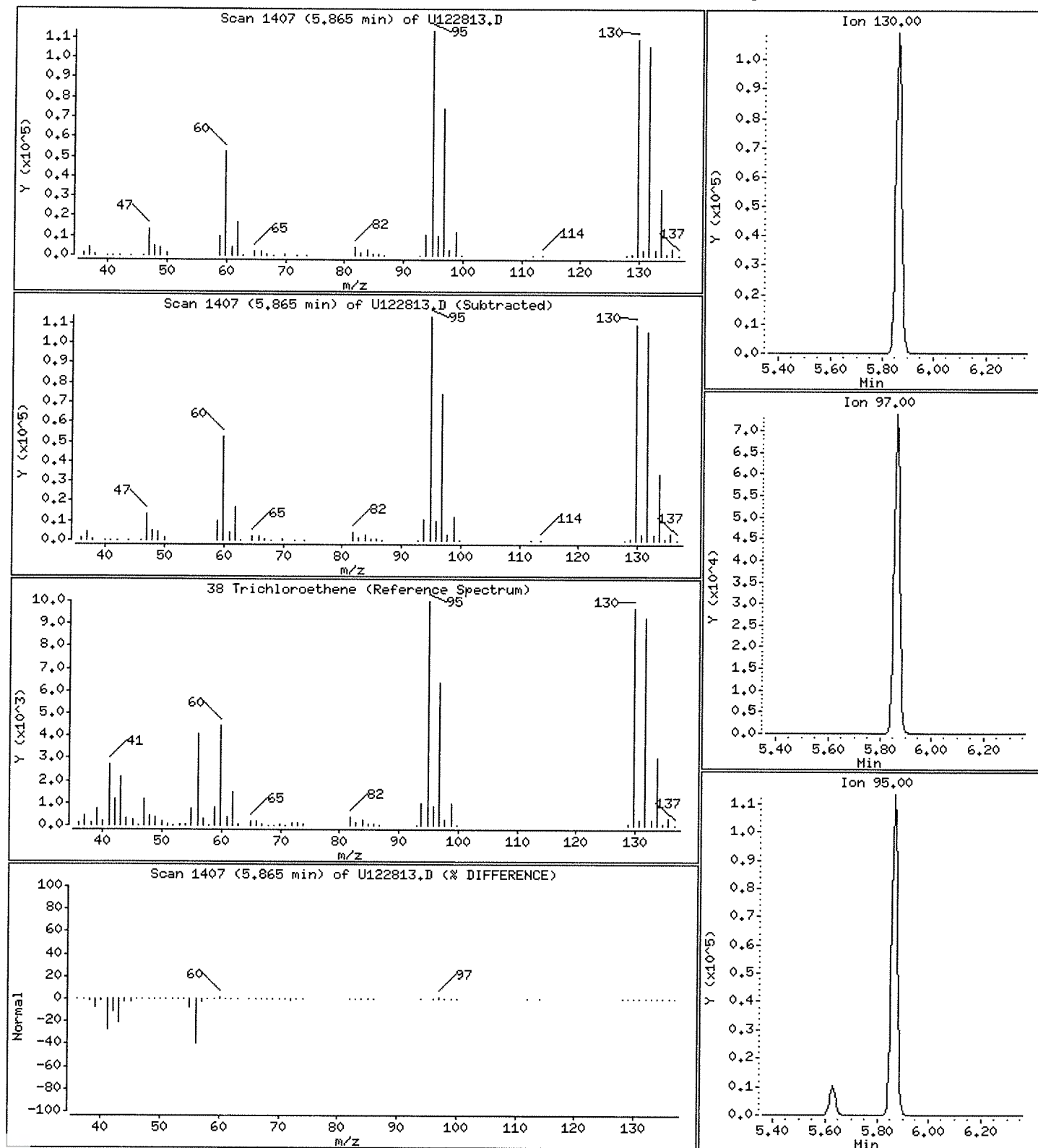
Operator: PC

Column phase: DB624

Column diameter: 0.18

38 Trichloroethene

Concentration: 2457.76 ug/l



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181228.b\U122829.D Page 1
 Report Date: 30-Jan-2019 17:04

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U181228.b\U122829.D
 Lab Smp Id: VSTD050-END Client Smp ID: VSTD050-END
 Inj Date : 28-DEC-2018 21:47
 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\U181228.b\8260C.m
 Meth Date : 30-Jan-2019 17:04 VOA9.i Quant Type: ISTD
 Cal Date : 21-DEC-2018 16:41 Cal File: U122108.D
 Als bottle: 27 Continuing Calibration Sample
 Dil Factor: 1.00000
 Integrator: HP RTE Compound Sublist: LHAAP.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	RT	EXP RT	REL RT	RESPONSE	AMOUNTS	
							CAL-AMT (ug/l)	ON-COL (ug/l)
* 1 Pentafluorobenzene	168		4.894	4.894	(1.000)	384360	50.0000	
* 36 1,4-Difluorobenzene	114		5.625	5.625	(1.000)	730098	50.0000	
* 47 Chlorobenzene-d5	117		8.249	8.249	(1.000)	679064	50.0000	
* 70 1,4-Dichlorobenzene-d4	152		10.236	10.236	(1.000)	327793	50.0000	
\$ 30 Dibromofluoromethane	113		4.830	4.830	(0.987)	221881	50.0000	52.38
\$ 35 1,2-Dichloroethane-d4	65		5.175	5.175	(1.057)	285660	50.0000	52.61
\$ 48 Toluene-d8	98		6.990	6.990	(0.847)	864629	50.0000	49.28
\$ 69 4-Bromofluorobenzene	95		9.257	9.257	(1.122)	348416	50.0000	52.25
60 1,1,1,2-Tetrachloroethane	131		8.350	8.350	(1.012)	214242	50.0000	49.72
31 1,1,1-Trichloroethane	97		4.827	4.827	(0.986)	320799	50.0000	52.85
68 1,1,2,2-Tetrachloroethane	83		9.392	9.392	(0.918)	365847	50.0000	49.55
138 Freon TF	101		2.401	2.401	(0.491)	158630	50.0000	48.54
53 1,1,2-Trichloroethane	83		7.421	7.421	(0.900)	211551	50.0000	52.29
22 1,1-Dichloroethane	63		3.604	3.604	(0.737)	441119	50.0000	53.29
11 1,1-Dichloroethene	96		2.401	2.401	(0.491)	184147	50.0000	50.38
32 1,1-Dichloropropene	75		5.003	5.003	(0.889)	323815	50.0000	49.84
93 1,2,3-Trichlorobenzene	180		12.335	12.335	(1.205)	285134	50.0000	46.21
71 1,2,3-Trichloropropane	75		9.426	9.426	(0.921)	399119	50.0000	51.99
90 1,2,4-Trichlorobenzene	180		11.923	11.923	(1.165)	290744	50.0000	47.90
79 1,2,4-Trimethylbenzene	105		9.943	9.943	(0.971)	846842	50.0000	49.36
89 1,2-Dibromo-3-Chloropropane	155		11.233	11.233	(1.097)	53818	50.0000	47.35
57 1,2-Dibromoethane	107		7.852	7.852	(0.952)	249555	50.0000	53.55



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181228.b\U122829.D Page 2
 Report Date: 30-Jan-2019 17:04

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS	
						CAL-AMT (ug/l)	ON-COL (ug/l)
88 1,2-Dichlorobenzene	146	10.570	10.570	(1.033)	476564	50.0000	48.96
33 1,2-Dichloroethane	62	5.254	5.254	(0.934)	357553	50.0000	54.42
42 1,2-Dichloropropane	63	6.082	6.082	(1.081)	272267	50.0000	52.77
75 1,3,5-Trimethylbenzene	105	9.625	9.625	(0.940)	816632	50.0000	49.57
83 1,3-Dichlorobenzene	146	10.180	10.180	(0.995)	469347	50.0000	48.21
54 1,3-Dichloropropane	76	7.563	7.563	(0.917)	459769	50.0000	52.76
84 1,4-Dichlorobenzene	146	10.255	10.255	(1.002)	483125	50.0000	47.07
26 2,2-Dichloropropane	77	4.275	4.275	(0.874)	237327	50.0000	47.57
24 2-Butanone	43	4.335	4.335	(0.886)	274722	100.000	109.52
76 2-Chlorotoluene	91	9.546	9.546	(0.933)	752996	50.0000	49.85
52 2-Hexanone	43	7.649	7.649	(0.927)	423418	100.000	112.13
77 4-Chlorotoluene	91	9.640	9.640	(0.942)	874479	50.0000	50.10
82 p-Isopropyltoluene	119	10.210	10.210	(0.997)	818886	50.0000	47.21
45 4-Methyl-2-Pentanone	43	6.915	6.915	(0.838)	599967	100.000	110.42
10 Acetone	43	2.480	2.480	(0.507)	172107	100.000	115.14
37 Benzene	78	5.216	5.216	(0.927)	1014494	50.0000	52.21
74 Bromobenzene	156	9.381	9.381	(0.917)	254454	50.0000	50.24
29 Bromochloromethane	128	4.553	4.553	(0.930)	122617	50.0000	61.53
39 Bromodichloromethane	83	6.348	6.348	(1.129)	295305	50.0000	53.82
66 Bromoform	173	8.984	8.984	(1.089)	137310	50.0000	47.21 (T)
6 Bromomethane	94	1.670	1.670	(0.341)	118477	50.0000	49.91
19 Carbon Disulfide	76	2.592	2.592	(0.530)	1350295	100.000	101.40
34 Carbon Tetrachloride	117	4.995	4.995	(0.888)	242485	50.0000	45.78
59 Chlorobenzene	112	8.275	8.275	(1.003)	660468	50.0000	50.62
7 Chloroethane	64	1.753	1.753	(0.358)	178112	50.0000	52.19 (M)
28 Chloroform	83	4.658	4.658	(0.952)	425097	50.0000	53.32
3 Chloromethane	50	1.340	1.340	(0.274)	236085	50.0000	57.29
27 cis-1,2-Dichloroethene	96	4.287	4.287	(0.876)	270119	50.0000	53.46
46 cis-1,3-Dichloropropene	75	6.757	6.757	(1.201)	413857	50.0000	49.65
55 Dibromochloromethane	129	7.758	7.758	(0.940)	222564	50.0000	49.88
44 Dibromomethane	93	6.191	6.191	(1.101)	157377	50.0000	52.85
2 Dichlorodifluoromethane	85	1.205	1.205	(0.246)	216163	50.0000	45.74
61 Ethylbenzene	106	8.369	8.369	(1.015)	334470	50.0000	49.98
91 Hexachlorobutadiene	225	12.065	12.065	(1.179)	90326	50.0000	38.84
67 Isopropylbenzene	105	9.126	9.126	(1.106)	948172	50.0000	49.10
62 m,p-Xylenes	106	8.474	8.474	(1.027)	832314	100.000	101.17
17 Methylene Chloride	84	2.873	2.873	(0.587)	258552	50.0000	54.53
87 n-Butylbenzene	91	10.555	10.555	(1.031)	747134	50.0000	44.63
73 n-Propylbenzene	91	9.475	9.475	(0.926)	1181941	50.0000	48.25
92 Naphthalene	128	12.133	12.133	(1.185)	980139	50.0000	49.11
63 o-Xylene	106	8.811	8.811	(1.068)	426685	50.0000	51.41
81 sec-Butylbenzene	105	10.086	10.086	(0.985)	950734	50.0000	46.18
64 Styrene	104	8.826	8.826	(1.070)	747903	50.0000	54.24
78 tert-Butylbenzene	119	9.902	9.902	(0.967)	667188	50.0000	46.85
56 Tetrachloroethene	164	7.526	7.526	(0.912)	159274	50.0000	44.80
50 Toluene	91	7.046	7.046	(0.854)	1048622	50.0000	51.91
20 trans-1,2-Dichloroethene	96	3.143	3.143	(0.642)	236481	50.0000	52.56
51 trans-1,3-Dichloropropene	75	7.259	7.259	(1.291)	352045	50.0000	49.12
38 Trichloroethene	130	5.861	5.861	(1.042)	239773	50.0000	51.12
8 Trichlorofluoromethane	101	1.955	1.955	(0.400)	315483	50.0000	49.80
5 Vinyl Chloride	62	1.419	1.419	(0.290)	279971	50.0000	51.46



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181228.b\U122829.D Page 3
Report Date: 30-Jan-2019 17:04

QC Flag Legend

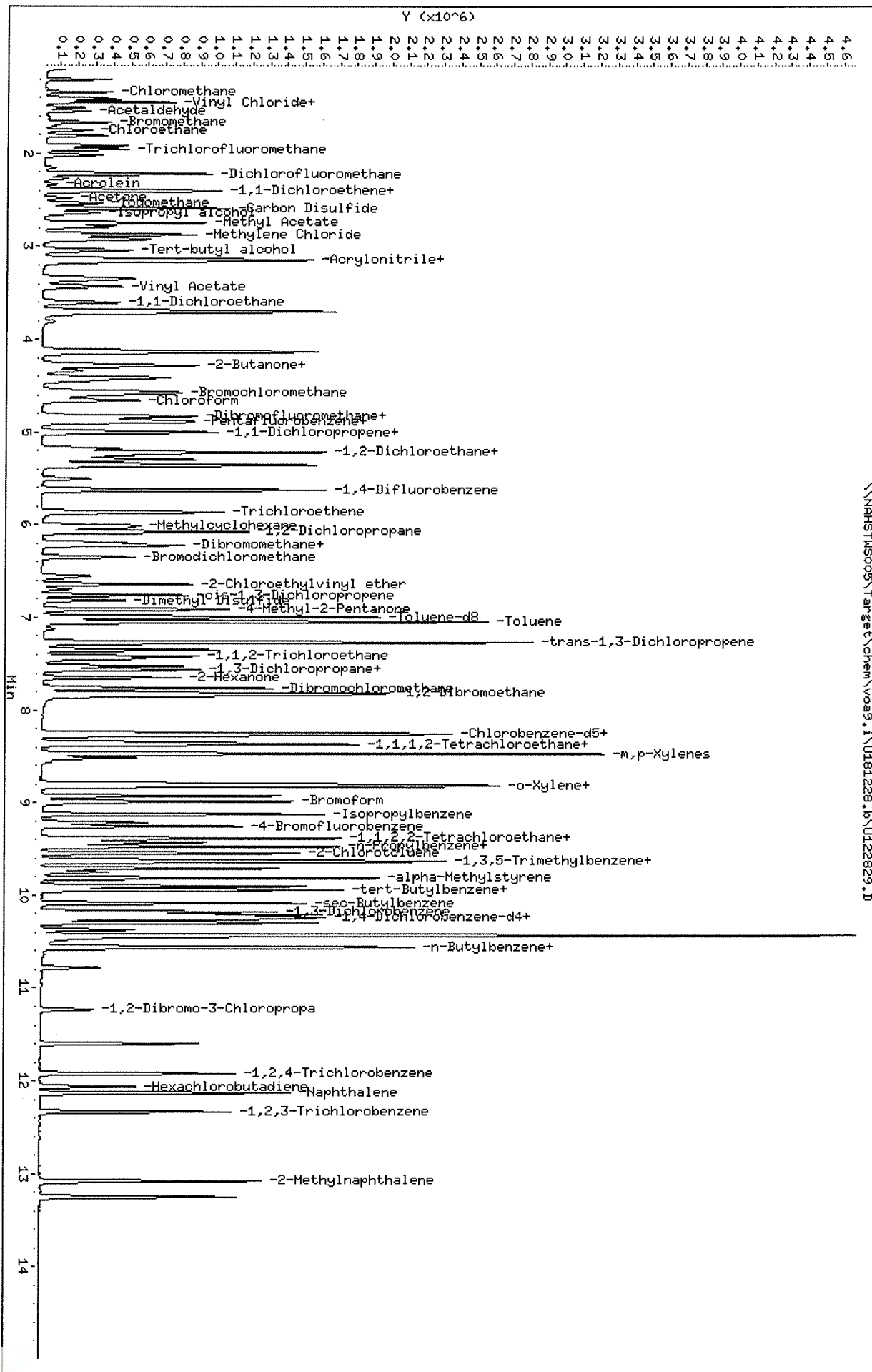
T - Target compound detected outside RT window.
M - Compound response manually integrated.



Data File: \\NAHSTW005\Target\chem\voa9.i\U181228.b\U122829.J
 Date : 28-DEC-2018 21:47
 Client ID: VSTD050-END
 Sample Info: VSTD050-END;VSTD050-END;2;
 Purge Volume: 5.0
 Column phase: DB624

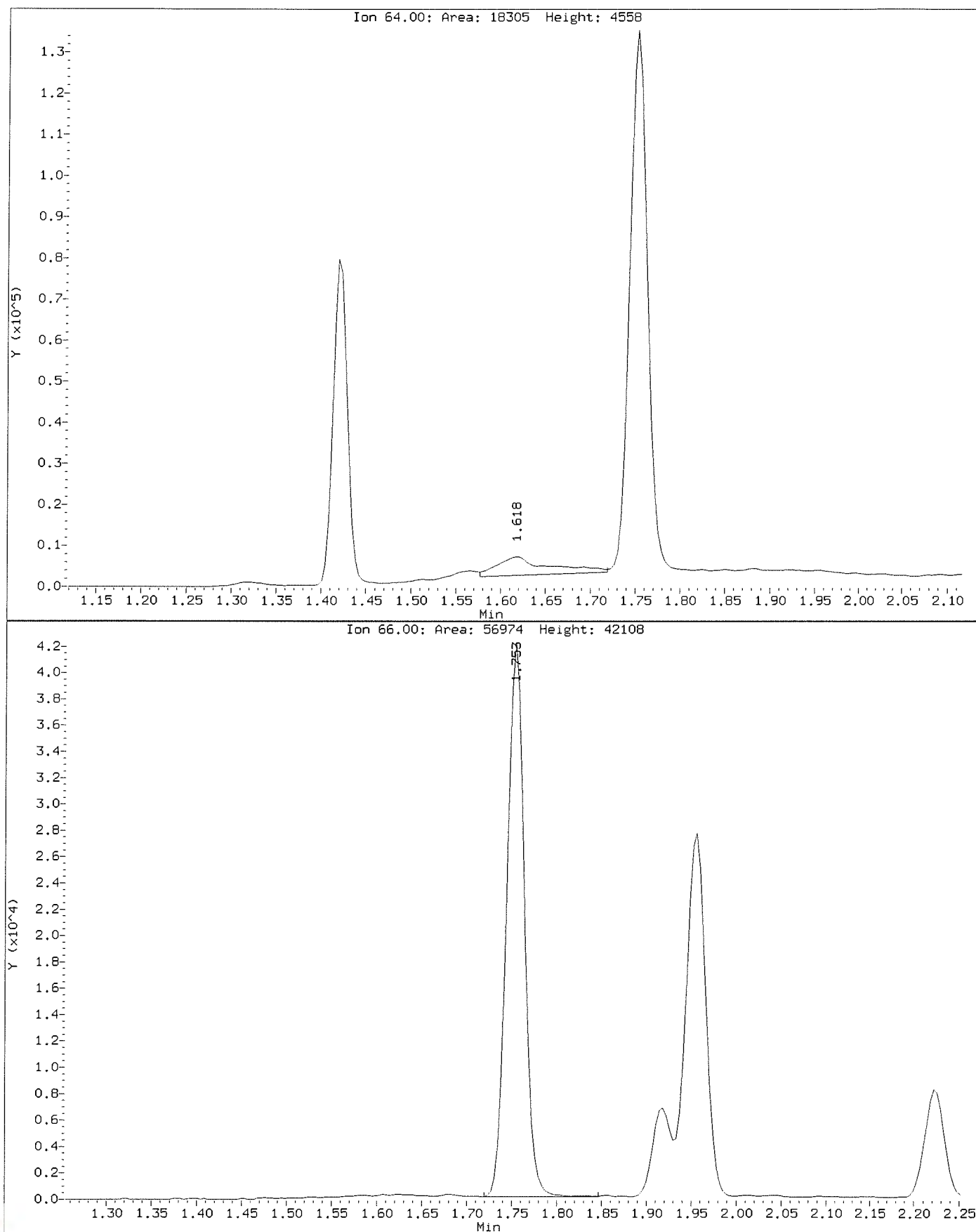
Instrument: V009.i
 Operator: PC
 Column diameter: 0.18

\\NAHSTW005\Target\chem\voa9.i\U181228.b\U122829.J



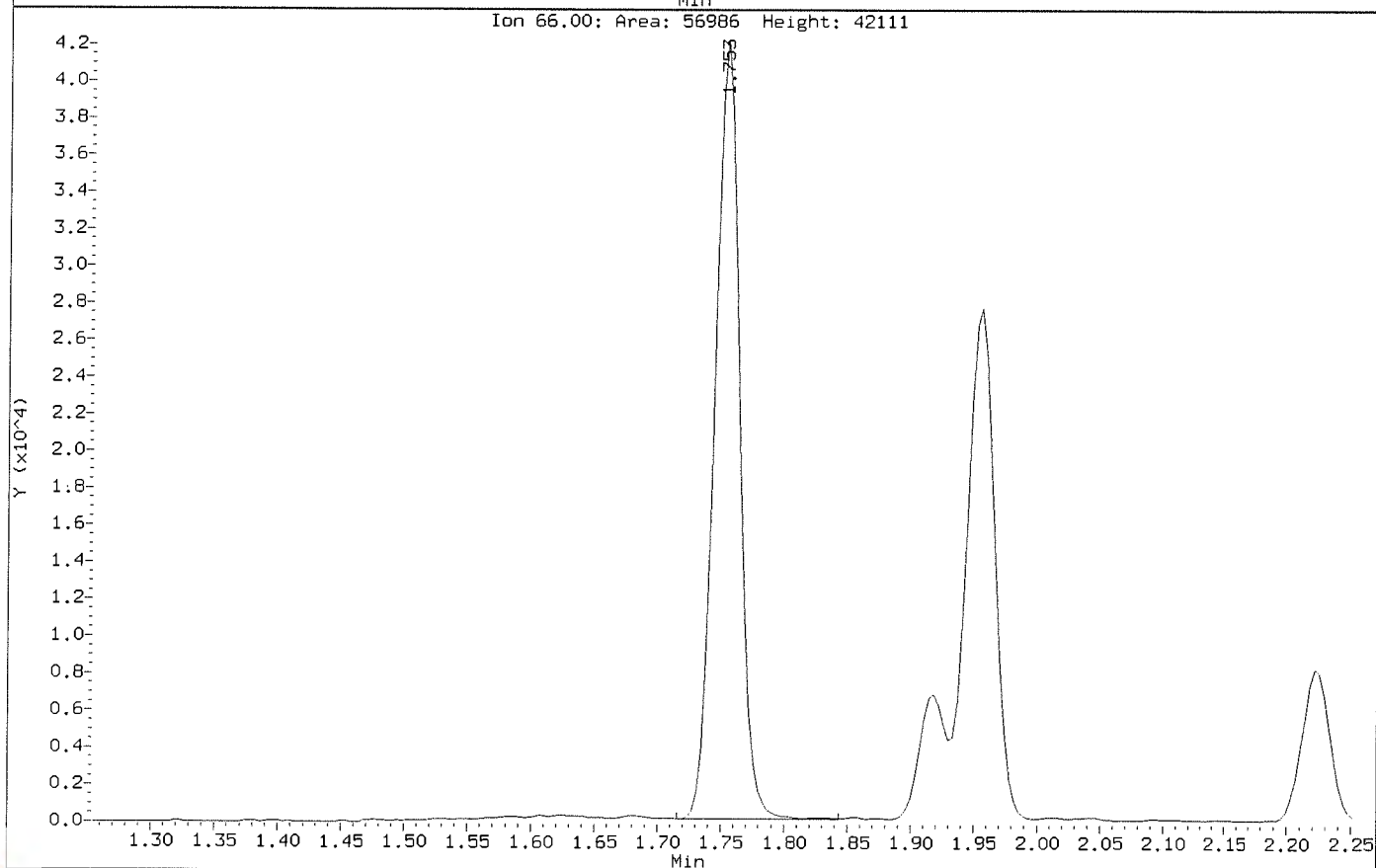
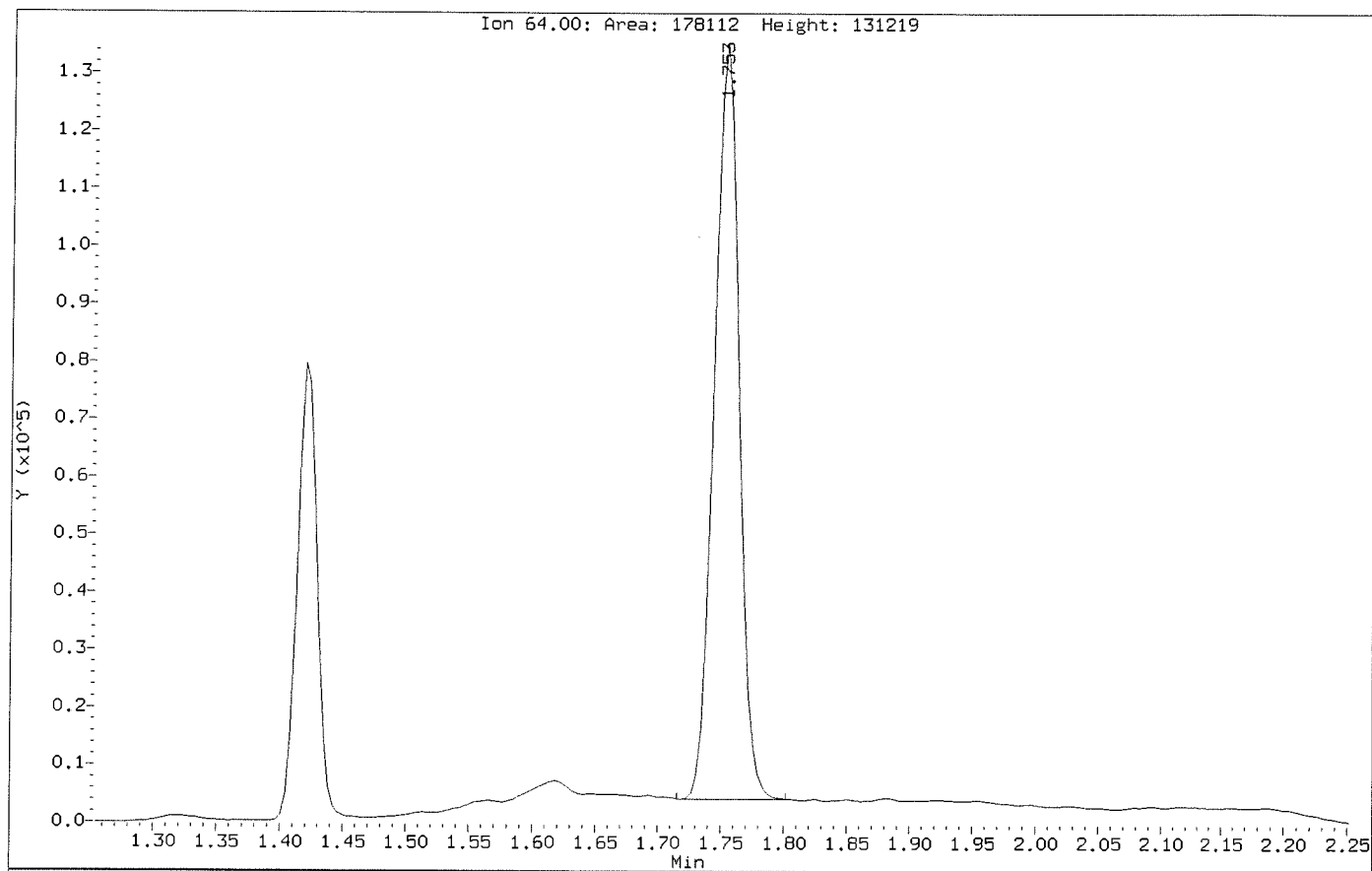
Data File: \\NAHSTW5005\Target\chem\voa9.i\U181228.b\Before\U122829.D
Injection Date: 28-DEC-2018 21:47
Instrument: VDA9.i
Client Sample ID: VSTD050-END

Compound: Chloroethane
CAS Number: 75-00-3



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181228.b\U122829.D
Injection Date: 28-DEC-2018 21:47
Instrument: VOA9.i
Client Sample ID: VSTD050-END

Compound: Chloroethane
CAS Number: 75-00-3



HS18121123 LHAAP Site 18 24

ALS WO# HS18121123



Form 11 - INTERNAL STANDARD ASSOCIATION

Client: Bhate Environmental Associates, Inc.

Instrument: ICPMS05

Project: LHAAP /Site 18 /24

WorkOrder: HS18121123

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

FORM 12 - PREPARATION LOG

Client: Bhate Environmental Associates, Inc.

Batch ID: 136208

Project: LHAAP /Site 18 /24

Prep Code: Hg_WPr

WorkOrder: HS18121123

Method: SW7470

Start Date: 02-Jan-2019 11:00

End Date: 02-Jan-2019 13:00

Technician:

SampID	ClientID	Matrix	Init Wt	Init Vol	FinalVol (mL)	PrepFac
HS18121093-01MS				10	10	1
HS18121093-01MSD				10	10	1
HS18121123-01	AWD3_121718	Groundwater		10	10	1
HS18121123-02	AWD1_121818	Groundwater		10	10	1
HS18121123-03	18CPTMW04SW_121818	Groundwater		10	10	1
LCS-136208				10	10	1
MBLK-136208				10	10	1



FORM 12 - PREPARATION LOG

Client: Bhate Environmental Associates, Inc.

Batch ID: 136231

Project: LHAAP /Site 18 /24

Prep Code: 3010A

WorkOrder: HS18121123

Method: SW3010A

Start Date: 02-Jan-2019 13:00

End Date: 02-Jan-2019 17:00

Technician:

SampID	ClientID	Matrix	Init Wt	Init Vol	FinalVol (mL)	PrepFac
HS18121117-01MS				10	10	1
HS18121117-01MSD				10	10	1
HS18121117-01PDS				10	10	1
HS18121117-01SD				10	10	1
HS18121123-01	AWD3_121718	Groundwater		10	10	1
HS18121123-02	AWD1_121818	Groundwater		10	10	1
HS18121123-03	18CPTMW04SW_121818	Groundwater		10	10	1
LCS-136231				10	10	1
MBLK-136231				10	10	1



FORM 13 - ANALYSIS RUN LOG

Client: Bhate Environmental Associates, Inc.

Run ID:HG03_330358

Project: LHAAP /Site 18 /24

Instrument:HG03

WorkOrder: HS18121123

Method:SW7470

Start Date: 02-Jan-2019

End Date: 02-Jan-2019

Sample No.	D/F	Time	FileID	Analytes
ICV	1	02-Jan-2019 14:13	HG03_330358 Raw Data_4891244	HG
ICB	1	02-Jan-2019 14:15		HG
CRA	1	02-Jan-2019 14:16		HG
CCV 1	1	02-Jan-2019 14:47		HG
CCB 1	1	02-Jan-2019 14:49		HG
CCV 2	1	02-Jan-2019 15:05		HG
CCB 2	1	02-Jan-2019 15:07		HG
CCV 3	1	02-Jan-2019 15:43		HG
CCB 3	1	02-Jan-2019 15:45		HG
CCV 4	1	02-Jan-2019 16:13		HG
CCB 4	1	02-Jan-2019 16:14		HG
MBLK-136208	1	02-Jan-2019 16:31		HG
LCS-136208	1	02-Jan-2019 16:33		HG
ZZZZZMS	1	02-Jan-2019 16:36		HG
ZZZZZMSD	1	02-Jan-2019 16:38		HG
CCV 5	1	02-Jan-2019 16:40		HG
CCB 5	1	02-Jan-2019 16:42		HG
CCV 6	1	02-Jan-2019 17:00		HG
CCB 6	1	02-Jan-2019 17:02		HG
AWD3_121718	1	02-Jan-2019 17:06		HG
AWD1_121818	1	02-Jan-2019 17:07		HG
18CPTMW04SW_121818	1	02-Jan-2019 17:09		HG
CCV 7	1	02-Jan-2019 17:20		HG
CCB 7	1	02-Jan-2019 17:21		HG
CCV 8	1	02-Jan-2019 17:44		HG
CCB 8	1	02-Jan-2019 17:46		HG
CCV 9	1	02-Jan-2019 18:53		HG
CCB 9	1	02-Jan-2019 18:55		HG
CCV 10	1	02-Jan-2019 19:17		HG
CCB 10	1	02-Jan-2019 19:19		HG
CCV 11	1	02-Jan-2019 19:42		HG
CCB 11	1	02-Jan-2019 19:43		HG



FORM 13 - ANALYSIS RUN LOG

Client: Bhate Environmental Associates, Inc.

Run ID:ICPMS05_330637

Project: LHAAP /Site 18 /24

Instrument:ICPMS05

WorkOrder: HS18121123

Method:

Start Date: 08-Jan-2019

End Date: 09-Jan-2019

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 AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
2/10/200	1	08-Jan-2019 12:04	031CALB.d_4899012	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
5/25/500	1	08-Jan-2019 12:06	032CALB.d_4899013	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
10/50/1000	1	08-Jan-2019 12:08	033CALB.d_4899014	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
100/500/10K	1	08-Jan-2019 12:10	034CALB.d_4899015	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
200/1000/20K	1	08-Jan-2019 12:12	035CALB.d_4899016	AG AL AS BA BE CA CD 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 AL AS BA BE CA CD 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 AL AS BA BE CA CD 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 AL AS BA BE CA CD 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 AL AS BA BE CA CD 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 AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
2/10/200	1	08-Jan-2019 13:46	076CALB.d_4899364	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
5/25/500	1	08-Jan-2019 13:48	077CALB.d_4899365	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
10/50/1000	1	08-Jan-2019 13:50	078CALB.d_4899366	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
100/500/10K	1	08-Jan-2019 13:52	079CALB.d_4899367	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
200/1000/20K	1	08-Jan-2019 13:54	080CALB.d_4899368	AG AL AS BA BE CA CD 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 AL AS BA BE CA CD 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 AL AS BA BE CA CD 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.

Run ID:ICPMS05_330637

Project: LHAAP /Site 18 /24

Instrument:ICPMS05

WorkOrder: HS18121123

Method:

Start Date: 08-Jan-2019

End Date: 09-Jan-2019

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 AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
2/10/200	1	08-Jan-2019 15:55	139CALSD.d_4899739	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
5/25/500	1	08-Jan-2019 15:57	140CALSD.d_4899740	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
10/50/1000	1	08-Jan-2019 15:59	141CALSD.d_4899741	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
100/500/10K	1	08-Jan-2019 16:01	142CALSD.d_4899742	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
200/1000/20K	1	08-Jan-2019 16:03	143CALSD.d_4899743	AG AL AS BA BE CA CD 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 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 16:11	147SMPL.d_4899747	AG AL AS BA BE CA CD 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
MBLK-136231	1	08-Jan-2019 16:34	155SMPL.d_4899851	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
LCS-136231	1	08-Jan-2019 16:36	156SMPL.d_4899857	AG AL AS BA BE CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
ZZZZZSD	5	08-Jan-2019 16:40	158SMPL.d_4899859	AG AL AS BA BE CA CD CO CR CU FE K MG MN 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
ZZZZZMS	1	08-Jan-2019 16:49	162SMPL.d_4899863	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
ZZZZZMSD	1	08-Jan-2019 16:51	163SMPL.d_4899864	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
ZZZZZPDS	1	08-Jan-2019 16:53	164SMPL.d_4899865	AG AL AS BA BE CA CD CO CR CU FE K MG MN NI PB SB SE TL V ZN
AWD3_121718	1	08-Jan-2019 17:07	171SMPL.d_4899872	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
AWD1_121818	1	08-Jan-2019 17:13	174SMPL.d_4899875	AG AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
18CPTMW04SW_121818	1	08-Jan-2019 17:15	175SMPL.d_4899876	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 AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
2/10/200	1	08-Jan-2019 19:28	216CALSD.d_4900155	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.

Run ID: ICPMS05_330637

Project: LHAAP /Site 18 /24

Instrument: ICPMS05

WorkOrder: HS18121123

Method:

Start Date: 08-Jan-2019

End Date: 09-Jan-2019

Sample No.	D/F	Time	FileID	Analytes
5/25/500	1	08-Jan-2019 19:30	217CALSD.d_4900156	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
10/50/1000	1	08-Jan-2019 19:32	218CALSD.d_4900157	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
100/500/10K	1	08-Jan-2019 19:34	219CALSD.d_4900158	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
200/1000/20K	1	08-Jan-2019 19:36	220CALSD.d_4900159	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 19:42	223LICV.d_4900162	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 19:44	224SMPL.d_4900163	AG AL AS BA BE CA CD 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_CCVD.d_4900174	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	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_CCVD.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_CCVD.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 AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
2/10/200	1	08-Jan-2019 21:43	274CALSD.d_4900279	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
5/25/500	1	08-Jan-2019 21:45	275CALSD.d_4900280	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
10/50/1000	1	08-Jan-2019 21:47	276CALSD.d_4900281	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
100/500/10K	1	08-Jan-2019 21:49	277CALSD.d_4900282	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
200/1000/20K	1	08-Jan-2019 21:51	278CALSD.d_4900283	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 21:57	281LICV.d_4900286	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 21:59	282SMPL.d_4900287	AG AL AS BA BE CA CD 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_CCVD.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_CCVD.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_CCVD.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_CCVD.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



FORM 13 - ANALYSIS RUN LOG

Client: Bhate Environmental Associates, Inc.

Run ID:ICPMS05_330637

Project: LHAAP /Site 18 /24

Instrument:ICPMS05

WorkOrder: HS18121123

Method:

Start Date: 08-Jan-2019

End Date: 09-Jan-2019

Sample No.	D/F	Time	FileID	Analytes
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
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 AL AS BA BE CA CD 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 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 00:25	355ICSA.d_4900360	AG AL AS BA BE CA CD 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 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.

Run ID:ICPMS05_330716

Project: LHAAP /Site 18 /24

Instrument:ICPMS05

WorkOrder: HS18121123

Method:

Start Date: 09-Jan-2019

End Date: 10-Jan-2019

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 CA NA
2/10/200	1	09-Jan-2019 11:55	018CALB.d_4901064	AL CA NA
5/25/500	1	09-Jan-2019 11:57	019CALB.d_4901065	AL CA NA
10/50/1000	1	09-Jan-2019 11:59	020CALB.d_4901066	AL CA NA
100/500/10K	1	09-Jan-2019 12:01	021CALB.d_4901067	AL CA NA
200/1000/20K	1	09-Jan-2019 12:03	022CALB.d_4901068	AL CA NA
LLICV2	1	09-Jan-2019 12:09	025SMPL.d_4901071	AL CA NA
LLICV5	1	09-Jan-2019 12:11	026LICV.d_4901072	AL CA NA
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 CA NA
ICSAB	1	09-Jan-2019 12:19	030ICSB.d_4901076	AL CA NA
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 CA NA
2/10/200	1	09-Jan-2019 13:43	071CALB.d_4901184	AL CA NA
5/25/500	1	09-Jan-2019 13:45	072CALB.d_4901185	AL CA NA
10/50/1000	1	09-Jan-2019 13:47	073CALB.d_4901186	AL CA NA
100/500/10K	1	09-Jan-2019 13:49	074CALB.d_4901187	AL CA NA
200/1000/20K	1	09-Jan-2019 13:51	075CALB.d_4901188	AL CA NA
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 CA NA
LLCCV2	1	09-Jan-2019 13:59	079SMPL.d_4901192	AL CA NA
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
LCS-136231	1	09-Jan-2019 14:34	097SMPL.d_4901335	CA
ZZZZZSD	100	09-Jan-2019 14:38	099SMPL.d_4901337	NA
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
AWD1_121818	20	09-Jan-2019 15:00	109SMPL.d_4901352	AL
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



FORM 13 - ANALYSIS RUN LOG

Client: Bhate Environmental Associates, Inc.

Run ID:ICPMS05_330716

Project: LHAAP /Site 18 /24

Instrument:ICPMS05

WorkOrder: HS18121123

Method:

Start Date: 09-Jan-2019

End Date: 10-Jan-2019

Sample No.	D/F	Time	FileID	Analytes
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
ZZZZZPDS	20	09-Jan-2019 15:53	136SMPL.d_4901515	NA
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
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
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
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
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
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 CA NA
2/10/200	1	09-Jan-2019 19:14	222CALB.d_4902036	AL CA NA
5/25/500	1	09-Jan-2019 19:16	223CALB.d_4902037	AL CA NA
10/50/1000	1	09-Jan-2019 19:18	224CALB.d_4902038	AL CA NA
200/1000/20K	1	09-Jan-2019 19:22	226CALB.d_4902040	AL CA NA
100/500/10K	1	09-Jan-2019 19:24	227CALB.d_4902041	AL CA NA
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 CA NA
LLCCV2	1	09-Jan-2019 19:32	231SMPL.d_4902045	AL CA NA
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
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
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



FORM 13 - ANALYSIS RUN LOG

Client: Bhate Environmental Associates, Inc.

Run ID:ICPMS05_330716

Project: LHAAP /Site 18 /24

Instrument:ICPMS05

WorkOrder: HS18121123

Method:

Start Date: 09-Jan-2019

End Date: 10-Jan-2019

Sample No.	D/F	Time	FileID	Analytes
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
LLCCV5	1	10-Jan-2019 01:06	399LICV.d_4902621	AL CA NA
LLCCV2	1	10-Jan-2019 01:08	400SMPL.d_4902622	AL CA NA
ICSA	1	10-Jan-2019 01:10	401ICSA.d_4902623	AL CA NA
ICSAB	1	10-Jan-2019 01:12	402ICSB.d_4902624	AL CA NA



Form 2 - Initial and Continuing Calibration Verification

Client: Bhate Environmental Associates, Inc.

Run ID: HG03_330358

Project: LHAAP /Site 18 /24

Instrument: HG03

WorkOrder: HS18121123

Method: SW7470

ICV	Date: 02-Jan-2019 14:13	Seq: 4891244	ICV	Units: ug/L
Analyte	True	Found	%R	Control Limits
Mercury	5	4.8	96	90-110
CCV1	Date: 02-Jan-2019 14:47	Seq: 4891256	CCV	Units: ug/L
Analyte	True	Found	%R	Control Limits
Mercury	5	5.22	104	90-110
CCV2	Date: 02-Jan-2019 15:05	Seq: 4891271	CCV	Units: ug/L
Analyte	True	Found	%R	Control Limits
Mercury	5	4.94	99	90-110
CCV3	Date: 02-Jan-2019 15:43	Seq: 4891510	CCV	Units: ug/L
Analyte	True	Found	%R	Control Limits
Mercury	5	4.95	99	90-110
CCV4	Date: 02-Jan-2019 16:13	Seq: 4891522	CCV	Units: ug/L
Analyte	True	Found	%R	Control Limits
Mercury	5	5.41	108	90-110
CCV5	Date: 02-Jan-2019 16:40	Seq: 4891534	CCV	Units: ug/L
Analyte	True	Found	%R	Control Limits
Mercury	5	5.46	109	90-110
CCV6	Date: 02-Jan-2019 17:00	Seq: 4891546	CCV	Units: ug/L
Analyte	True	Found	%R	Control Limits
Mercury	5	5.18	104	90-110
CCV7	Date: 02-Jan-2019 17:20	Seq: 4891557	CCV	Units: ug/L
Analyte	True	Found	%R	Control Limits
Mercury	5	5.11	102	90-110
CCV8	Date: 02-Jan-2019 17:44	Seq: 4891569	CCV	Units: ug/L
Analyte	True	Found	%R	Control Limits
Mercury	5	5.28	106	90-110
CCV9	Date: 02-Jan-2019 18:53	Seq: 4891593	CCV	Units: ug/L
Analyte	True	Found	%R	Control Limits
Mercury	5	5.34	107	90-110
CCV10	Date: 02-Jan-2019 19:17	Seq: 4891634	CCV	Units: ug/L
Analyte	True	Found	%R	Control Limits
Mercury	5	5.23	105	90-110
CCV11	Date: 02-Jan-2019 19:42	Seq: 4891645	CCV	Units: ug/L
Analyte	True	Found	%R	Control Limits
Mercury	5	5.25	105	90-110

Form 2 - Initial and Continuing Calibration Verification

Client: Bhate Environmental Associates, Inc.

Run ID: ICPMS05_330637

Project: LHAAP /Site 18 /24

Instrument: ICPMS05

WorkOrder: HS18121123

Method: SW6020

ICV	Date: 08-Jan-2019 12:16	Seq: 4899018	ICV	Units: ug/L	
Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	99.49	100	90-110	
Antimony	100	101.605	102	90-110	
Arsenic	100	101.68	102	90-110	
Barium	100	96.038	96	90-110	
Beryllium	100	94.819	95	90-110	
Cadmium	100	96.979	97	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
Aluminum	100	102.744	103	90-110	
Antimony	100	99.588	100	90-110	
Arsenic	100	99.634	100	90-110	
Barium	100	96.414	96	90-110	
Beryllium	100	94.23	94	90-110	
Cadmium	100	93.052	93	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
Aluminum	100	104.598	105	90-110	
Antimony	100	99.676	100	90-110	
Arsenic	100	100.341	100	90-110	
Barium	100	104.409	104	90-110	
Beryllium	100	100.149	100	90-110	



Form 2 - Initial and Continuing Calibration Verification

Client: Bhate Environmental Associates, Inc.

Run ID: ICPMS05_330637

Project: LHAAP /Site 18 /24

Instrument: ICPMS05

WorkOrder: HS18121123

Method: SW6020

CCV2		Date: 08-Jan-2019 13:29	Seq: 4899293	CCV	Units: ug/L
Analyte	True	Found	%R	Control Limits	Flag
Cadmium	100	102.306	102	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	
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
Aluminum	100	101.896	102	90-110	
Antimony	100	108.13	108	90-110	
Arsenic	100	102.595	103	90-110	
Barium	100	99.401	99	90-110	
Beryllium	100	105.784	106	90-110	
Cadmium	100	100.495	100	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
Aluminum	100	98.752	99	90-110	
Antimony	100	95.76	96	90-110	
Arsenic	100	95.992	96	90-110	
Barium	100	95.671	96	90-110	
Beryllium	100	103.17	103	90-110	
Cadmium	100	97.642	98	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	



Form 2 - Initial and Continuing Calibration Verification

Client: Bhate Environmental Associates, Inc.

Run ID: ICPMS05_330637

Project: LHAAP /Site 18 /24

Instrument: ICPMS05

WorkOrder: HS18121123

Method: SW6020

CCV4		Date: 08-Jan-2019 14:26	Seq: 4899384	CCV	Units: ug/L
Analyte	True	Found	%R	Control Limits	Flag
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	

CCV5		Date: 08-Jan-2019 14:50	Seq: 4899571	CCV	Units: ug/L
Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	100.425	100	90-110	
Antimony	100	95.574	96	90-110	
Arsenic	100	94.527	95	90-110	
Barium	100	96.514	97	90-110	
Beryllium	100	95.919	96	90-110	
Cadmium	100	99.631	100	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
Aluminum	100	96.168	96	90-110	
Antimony	100	93.183	93	90-110	
Arsenic	100	92.642	93	90-110	
Barium	100	95.604	96	90-110	
Beryllium	100	101.383	101	90-110	
Cadmium	100	96.198	96	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	



Form 2 - Initial and Continuing Calibration Verification

Client: Bhate Environmental Associates, Inc.

Run ID: ICPMS05_330637

Project: LHAAP /Site 18 /24

Instrument: ICPMS05

WorkOrder: HS18121123

Method: SW6020

CCV6	Date: 08-Jan-2019 15:14	Seq: 4899583	CCV	Units: ug/L	
Analyte	True	Found	%R	Control Limits	Flag
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
Aluminum	100	105.153	105	90-110	
Antimony	100	105.763	106	90-110	
Arsenic	100	99.417	99	90-110	
Barium	100	95.276	95	90-110	
Beryllium	100	104.416	104	90-110	
Cadmium	100	95.864	96	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	
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
Aluminum	100	108.136	108	90-110	
Antimony	100	105.926	106	90-110	
Arsenic	100	103.001	103	90-110	
Barium	100	96.528	97	90-110	
Beryllium	100	103.091	103	90-110	
Cadmium	100	94.412	94	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	



Form 2 - Initial and Continuing Calibration Verification

Client: Bhate Environmental Associates, Inc.

Run ID: ICPMS05_330637

Project: LHAAP /Site 18 /24

Instrument: ICPMS05

WorkOrder: HS18121123

Method: SW6020

ICCV8	Date: 08-Jan-2019 16:07	Seq: 4899745	CCV	Units: ug/L	
Analyte	True	Found	%R	Control Limits	Flag

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

Aluminum	100	105.59	106	90-110	
Antimony	100	101.515	102	90-110	
Arsenic	100	101.058	101	90-110	
Barium	100	101.681	102	90-110	
Beryllium	100	108.097	108	90-110	
Cadmium	100	100.167	100	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	

CCV10	Date: 08-Jan-2019 17:09	Seq: 4899873	CCV	Units: ug/L	
Analyte	True	Found	%R	Control Limits	Flag

Aluminum	100	102.585	103	90-110	
Antimony	100	101.784	102	90-110	
Arsenic	100	102.078	102	90-110	
Barium	100	101.168	101	90-110	
Beryllium	100	105.76	106	90-110	
Cadmium	100	98.834	99	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	



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Project: LHAAP /Site 18 /24

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CCV11	Date: 08-Jan-2019 17:33	Seq: 4899885	CCV	Units: ug/L	
Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	100.874	101	90-110	
Antimony	100	100.687	101	90-110	
Arsenic	100	99.728	100	90-110	
Barium	100	96.516	97	90-110	
Beryllium	100	99.831	100	90-110	
Cadmium	100	91.917	92	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
Aluminum	100	101.437	101	90-110	
Antimony	100	101.041	101	90-110	
Arsenic	100	100.813	101	90-110	
Barium	100	91.346	91	90-110	
Beryllium	100	98.239	98	90-110	
Cadmium	100	92.101	92	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	
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
Aluminum	100	105.43	105	90-110	
Antimony	100	99.311	99	90-110	
Arsenic	100	101.98	102	90-110	
Barium	100	98.151	98	90-110	
Beryllium	100	87.337	87	90-110	S



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Method: SW6020

ICCV13		Date: 08-Jan-2019 19:46	Seq: 4900164	CCV	Units: ug/L
Analyte	True	Found	%R	Control Limits	Flag
Cadmium	100	99.569	100	90-110	
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
Aluminum	100	101.732	102	90-110	
Antimony	100	98.583	99	90-110	
Arsenic	100	100.469	100	90-110	
Barium	100	97.97	98	90-110	
Beryllium	100	92.354	92	90-110	
Cadmium	100	98.514	99	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	

CCV15		Date: 08-Jan-2019 20:29	Seq: 4900186	CCV	Units: ug/L
Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	103.163	103	90-110	
Antimony	100	97.893	98	90-110	
Arsenic	100	100.839	101	90-110	
Barium	100	97.334	97	90-110	
Beryllium	100	94.279	94	90-110	
Cadmium	100	96.829	97	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	



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Method: SW6020

CCV15		Date: 08-Jan-2019 20:29	Seq: 4900186	CCV	Units: ug/L
Analyte	True	Found	%R	Control Limits	Flag
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
Aluminum	100	106.379	106	90-110	
Antimony	100	93.311	93	90-110	
Arsenic	100	99.541	100	90-110	
Barium	100	95.926	96	90-110	
Beryllium	100	96.912	97	90-110	
Cadmium	100	99.601	100	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
Aluminum	100	100.871	101	90-110	
Antimony	100	101.124	101	90-110	
Arsenic	100	99.311	99	90-110	
Barium	100	105.983	106	90-110	
Beryllium	100	96.854	97	90-110	
Cadmium	100	108.762	109	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	
Nickel	100	102.972	103	90-110	



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Method: SW6020

ICCV17	Date: 08-Jan-2019 22:01	Seq: 4900288	CCV	Units: ug/L	
Analyte	True	Found	%R	Control Limits	Flag

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

Aluminum	100	99.787	100	90-110	
Antimony	100	103.185	103	90-110	
Arsenic	100	100.631	101	90-110	
Barium	100	97.702	98	90-110	
Beryllium	100	92.004	92	90-110	
Cadmium	100	97.876	98	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

Aluminum	100	99.753	100	90-110	
Antimony	100	99.957	100	90-110	
Arsenic	100	99.625	100	90-110	
Barium	100	97.287	97	90-110	
Beryllium	100	94.413	94	90-110	
Cadmium	100	98.3	98	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	



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Project: LHAAP /Site 18 /24

Instrument: ICPMS05

WorkOrder: HS18121123

Method: SW6020

CCV19	Date: 08-Jan-2019 22:31	Seq: 4900302	CCV	Units: ug/L	
Analyte	True	Found	%R	Control Limits	Flag

Vanadium	100	100.723	101	90-110	
Zinc	100	98.058	98	90-110	

CCV20	Date: 08-Jan-2019 22:55	Seq: 4900314	CCV	Units: ug/L	
Analyte	True	Found	%R	Control Limits	Flag

Aluminum	100	101.718	102	90-110	
Antimony	100	98.904	99	90-110	
Arsenic	100	99.812	100	90-110	
Barium	100	93.69	94	90-110	
Beryllium	100	93.857	94	90-110	
Cadmium	100	98.437	98	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

Aluminum	100	98.591	99	90-110	
Antimony	100	100.324	100	90-110	
Arsenic	100	98.028	98	90-110	
Barium	100	104.083	104	90-110	
Beryllium	100	94.734	95	90-110	
Cadmium	100	106.672	107	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	



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Method: SW6020

CCV22		Date: 08-Jan-2019 23:36	Seq: 4900335	CCV	Units: ug/L
Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	102.432	102	90-110	
Antimony	100	98.38	98	90-110	
Arsenic	100	97.437	97	90-110	
Barium	100	110.882	111	90-110	S
Beryllium	100	97.622	98	90-110	
Cadmium	100	110.404	110	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	
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
Aluminum	100	103.066	103	90-110	
Antimony	100	94.216	94	90-110	
Arsenic	100	97.611	98	90-110	
Barium	100	112.381	112	90-110	S
Beryllium	100	101.611	102	90-110	
Cadmium	100	110.688	111	90-110	S
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
Aluminum	100	98.885	99	90-110	
Antimony	100	97.826	98	90-110	
Arsenic	100	99.676	100	90-110	
Barium	100	98.731	99	90-110	
Beryllium	100	89.125	89	90-110	S



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Method: SW6020

CCV24	Date: 09-Jan-2019 00:18	Seq: 4900356	CCV	Units: ug/L	
Analyte	True	Found	%R	Control Limits	Flag
Cadmium	100	100.442	100	90-110	
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	

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Client: Bhate Environmental Associates, Inc.

Run ID: ICPMS05_330716

Project: LHAAP /Site 18 /24

Instrument: ICPMS05

WorkOrder: HS18121123

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	
Calcium	10000	9892.007	99	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	
Calcium	10000	10102.69	101	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	
Calcium	10000	9964.709	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	
Calcium	10000	9973.428	100	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	
Calcium	10000	10229.973	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	
Calcium	10000	10261.536	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	
Calcium	10000	10268.77	103	90-110	
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	
Calcium	10000	10630.808	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	
Calcium	10000	10110.273	101	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	



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Client: Bhate Environmental Associates, Inc.

Run ID: ICPMS05_330716

Project: LHAAP /Site 18 /24

Instrument: ICPMS05

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CCV9	Date: 09-Jan-2019 15:35	Seq: 4901506	CCV	Units: ug/L	
Analyte	True	Found	%R	Control Limits	Flag
Calcium	10000	10491.564	105	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	
Calcium	10000	10117.767	101	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	
Calcium	10000	10016.144	100	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	
Calcium	10000	9964.873	100	90-110	
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	
Calcium	10000	9756.209	98	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	
Calcium	10000	9731.52	97	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	
Calcium	10000	9906.353	99	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	
Calcium	10000	9637.71	96	90-110	
Sodium	10000	9397.619	94	90-110	
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	
Calcium	10000	9685.007	97	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	
Calcium	10000	9963.214	100	90-110	



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ICCV18	Date: 09-Jan-2019 19:28	Seq: 4902043	CCV	Units: ug/L	
Analyte	True	Found	%R	Control Limits	Flag
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	
Calcium	10000	9847.064	99	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	
Calcium	10000	10166.824	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	
Calcium	10000	10020.185	100	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	
Calcium	10000	9828.264	98	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	
Calcium	10000	9924.528	99	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	
Calcium	10000	9916.612	99	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	
Calcium	10000	9872.997	99	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	
Calcium	10000	9707.852	97	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	
Calcium	10000	9416.24	94	90-110	
Sodium	10000	9924.536	99	90-110	



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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	
Calcium	10000	10004.72	100	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	
Calcium	10000	9851.025	99	90-110	
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	
Calcium	10000	9219.603	92	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	
Calcium	10000	9719.431	97	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	
Calcium	10000	9462.835	95	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	
Calcium	10000	9196.918	92	90-110	
Sodium	10000	9210.56	92	90-110	
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	
Calcium	10000	9249.971	93	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	
Calcium	10000	9232.172	92	90-110	
Sodium	10000	8935.714	89	90-110	S

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Run ID: HG03_330358

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Instrument: HG03

WorkOrder: HS18121123

Method: SW7470

ICB	Date: 02-Jan-2019 14:15	Seq: 4891245	ICB	Units: ug/L
Analyte	Result	MDL	Report Limit	Qual
Mercury	0.2	0.03	0.2	U
CCB1	Date: 02-Jan-2019 14:49	Seq: 4891258	CCB	Units: ug/L
Analyte	Result	MDL	Report Limit	Qual
Mercury	0.2	0.03	0.2	U
CCB2	Date: 02-Jan-2019 15:07	Seq: 4891272	CCB	Units: ug/L
Analyte	Result	MDL	Report Limit	Qual
Mercury	0.2	0.03	0.2	U
CCB3	Date: 02-Jan-2019 15:45	Seq: 4891511	CCB	Units: ug/L
Analyte	Result	MDL	Report Limit	Qual
Mercury	0.2	0.03	0.2	U
CCB4	Date: 02-Jan-2019 16:14	Seq: 4891523	CCB	Units: ug/L
Analyte	Result	MDL	Report Limit	Qual
Mercury	0.2	0.03	0.2	U
MBLK-136208	Date: 02-Jan-2019 16:31	Seq: 4891529	MBLK	Units: ug/L
Analyte	Result	MDL	Report Limit	Qual
Mercury	0.2	0.03	0.2	U
CCB5	Date: 02-Jan-2019 16:42	Seq: 4891535	CCB	Units: ug/L
Analyte	Result	MDL	Report Limit	Qual
Mercury	0.2	0.03	0.2	U
CCB6	Date: 02-Jan-2019 17:02	Seq: 4891547	CCB	Units: ug/L
Analyte	Result	MDL	Report Limit	Qual
Mercury	0.2	0.03	0.2	U
CCB7	Date: 02-Jan-2019 17:21	Seq: 4891558	CCB	Units: ug/L
Analyte	Result	MDL	Report Limit	Qual
Mercury	0.2	0.03	0.2	U
CCB8	Date: 02-Jan-2019 17:46	Seq: 4891570	CCB	Units: ug/L
Analyte	Result	MDL	Report Limit	Qual
Mercury	0.2	0.03	0.2	U
CCB9	Date: 02-Jan-2019 18:55	Seq: 4891594	CCB	Units: ug/L
Analyte	Result	MDL	Report Limit	Qual
Mercury	0.2	0.03	0.2	U
CCB10	Date: 02-Jan-2019 19:19	Seq: 4891635	CCB	Units: ug/L
Analyte	Result	MDL	Report Limit	Qual
Mercury	0.2	0.03	0.2	U
CCB11	Date: 02-Jan-2019 19:43	Seq: 4891646	CCB	Units: ug/L
Analyte	Result	MDL	Report Limit	Qual
Mercury	0.2	0.03	0.2	U



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Method: SW6020

ICB		Date: 08-Jan-2019 12:22	Seq: 4899021	ICB	Units: ug/L
Analyte	Result	MDL	Report Limit	Qual	
Aluminum	10	1.8	10	U	
Antimony	2	0.4	2	U	
Arsenic	2	0.4	2	U	
Barium	4	1.9	4	U	
Beryllium	2	0.2	2	U	
Cadmium	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	
Aluminum	3.499	1.8	10	J	
Antimony	2	0.4	2	U	
Arsenic	2	0.4	2	U	
Barium	4	1.9	4	U	
Beryllium	2	0.2	2	U	
Cadmium	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	
Aluminum	2.935	1.8	10	J	
Antimony	2	0.4	2	U	
Arsenic	2	0.4	2	U	
Barium	4	1.9	4	U	
Beryllium	2	0.2	2	U	



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CCB2		Date: 08-Jan-2019 13:31	Seq: 4899294	CCB	Units: ug/L
Analyte	Result	MDL	Report Limit	Qual	
Cadmium	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	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	
Aluminum	10	1.8	10	U	
Antimony	2	0.4	2	U	
Arsenic	2	0.4	2	U	
Barium	4	1.9	4	U	
Beryllium	2	0.2	2	U	
Cadmium	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	
Aluminum	10	1.8	10	U	
Antimony	1.491	0.4	2	J	
Arsenic	2	0.4	2	U	
Barium	4	1.9	4	U	
Beryllium	2	0.2	2	U	
Cadmium	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	



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CCB4		Date: 08-Jan-2019 14:28	Seq: 4899385	CCB	Units: ug/L
Analyte	Result	MDL	Report Limit	Qual	
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	

CCB5		Date: 08-Jan-2019 14:52	Seq: 4899572	CCB	Units: ug/L
Analyte	Result	MDL	Report Limit	Qual	
Aluminum	10	1.8	10	U	
Antimony	1.358	0.4	2	J	
Arsenic	2	0.4	2	U	
Barium	4	1.9	4	U	
Beryllium	2	0.2	2	U	
Cadmium	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	
Aluminum	10	1.8	10	U	
Antimony	1.435	0.4	2	J	
Arsenic	2	0.4	2	U	
Barium	4	1.9	4	U	
Beryllium	2	0.2	2	U	
Cadmium	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	



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CCB6		Date: 08-Jan-2019 15:16	Seq: 4899584	CCB	Units: ug/L
Analyte	Result	MDL	Report Limit	Qual	
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	
Aluminum	10	1.8	10	U	
Antimony	2	0.4	2	U	
Arsenic	2	0.4	2	U	
Barium	4	1.9	4	U	
Beryllium	2	0.2	2	U	
Cadmium	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	-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	
Aluminum	10	1.8	10	U	
Antimony	2	0.4	2	U	
Arsenic	2	0.4	2	U	
Barium	4	1.9	4	U	
Beryllium	2	0.2	2	U	
Cadmium	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	



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Client: Bhate Environmental Associates, Inc.

Run ID: ICPMS05_330637

Project: LHAAP /Site 18 /24

Instrument: ICPMS05

WorkOrder: HS18121123

Method: SW6020

ICCB8	Date: 08-Jan-2019 16:13	Seq: 4899748	CCB	Units: ug/L
Analyte	Result	MDL	Report Limit	Qual

Vanadium	-0.895	0.6	5	J
Zinc	4	2	4	U

MBLK-136231	Date: 08-Jan-2019 16:34	Seq: 4899851	MBLK	Units: ug/L
Analyte	Result	MDL	Report Limit	Qual

Aluminum	4.269	1.8	10	J
Antimony	2	0.4	2	U
Arsenic	2	0.4	2	U
Barium	4	1.9	4	U
Beryllium	2	0.2	2	U
Cadmium	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	11.38	10	200	J
Manganese	0.911	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	200	14	200	U
Thallium	2	0.2	2	U
Vanadium	5	0.6	5	U
Zinc	4	2	4	U

CCB9	Date: 08-Jan-2019 16:44	Seq: 4899861	CCB	Units: ug/L
Analyte	Result	MDL	Report Limit	Qual

Aluminum	10	1.8	10	U
Antimony	2	0.4	2	U
Arsenic	2	0.4	2	U
Barium	4	1.9	4	U
Beryllium	2	0.2	2	U
Cadmium	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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Run ID: ICPMS05_330637

Project: LHAAP /Site 18 /24

Instrument: ICPMS05

WorkOrder: HS18121123

Method: SW6020

CCB10		Date: 08-Jan-2019 17:11	Seq: 4899874	CCB	Units: ug/L
Analyte	Result	MDL	Report Limit	Qual	
Aluminum	10	1.8	10	U	
Antimony	1.05	0.4	2	J	
Arsenic	2	0.4	2	U	
Barium	4	1.9	4	U	
Beryllium	2	0.2	2	U	
Cadmium	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	
Aluminum	10	1.8	10	U	
Antimony	1.068	0.4	2	J	
Arsenic	2	0.4	2	U	
Barium	4	1.9	4	U	
Beryllium	2	0.2	2	U	
Cadmium	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	
Aluminum	10	1.8	10	U	
Antimony	0.947	0.4	2	J	
Arsenic	2	0.4	2	U	
Barium	4	1.9	4	U	
Beryllium	2	0.2	2	U	



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Client: Bhate Environmental Associates, Inc.

Run ID: ICPMS05_330637

Project: LHAAP /Site 18 /24

Instrument: ICPMS05

WorkOrder: HS18121123

Method: SW6020

CCB12		Date: 08-Jan-2019 17:51	Seq: 4899898	CCB	Units: ug/L
Analyte	Result	MDL	Report Limit	Qual	
Cadmium	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	-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	
Aluminum	10	1.8	10	U	
Antimony	0.806	0.4	2	J	
Arsenic	2	0.4	2	U	
Barium	4	1.9	4	U	
Beryllium	2	0.2	2	U	
Cadmium	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	
Aluminum	10	1.8	10	U	
Antimony	1.009	0.4	2	J	
Arsenic	2	0.4	2	U	
Barium	4	1.9	4	U	
Beryllium	2	0.2	2	U	
Cadmium	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	



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WorkOrder: HS18121123

Method: SW6020

CCB14		Date: 08-Jan-2019 20:07	Seq: 4900175	CCB	Units: ug/L
Analyte	Result	MDL	Report Limit	Qual	
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	

CCB15		Date: 08-Jan-2019 20:31	Seq: 4900187	CCB	Units: ug/L
Analyte	Result	MDL	Report Limit	Qual	
Aluminum	10	1.8	10	U	
Antimony	0.707	0.4	2	J	
Arsenic	2	0.4	2	U	
Barium	4	1.9	4	U	
Beryllium	2	0.2	2	U	
Cadmium	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	
Aluminum	10	1.8	10	U	
Antimony	0.673	0.4	2	J	
Arsenic	2	0.4	2	U	
Barium	4	1.9	4	U	
Beryllium	2	0.2	2	U	
Cadmium	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	



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Method: SW6020

CCB16		Date: 08-Jan-2019 20:53	Seq: 4900198	CCB	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	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	
Aluminum	10	1.8	10	U	
Antimony	0.799	0.4	2	J	
Arsenic	2	0.4	2	U	
Barium	4	1.9	4	U	
Beryllium	2	0.2	2	U	
Cadmium	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	0.342	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	
Aluminum	10	1.8	10	U	
Antimony	0.583	0.4	2	J	
Arsenic	2	0.4	2	U	
Barium	4	1.9	4	U	
Beryllium	2	0.2	2	U	
Cadmium	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	



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Project: LHAAP /Site 18 /24

Instrument: ICPMS05

WorkOrder: HS18121123

Method: SW6020

CCB18	Date: 08-Jan-2019 22:19	Seq: 4900296	CCB	Units: ug/L
Analyte	Result	MDL	Report Limit	Qual

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

Aluminum	10	1.8	10	U
Antimony	0.755	0.4	2	J
Arsenic	2	0.4	2	U
Barium	4	1.9	4	U
Beryllium	2	0.2	2	U
Cadmium	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

CCB20	Date: 08-Jan-2019 22:57	Seq: 4900315	CCB	Units: ug/L
Analyte	Result	MDL	Report Limit	Qual

Aluminum	10	1.8	10	U
Antimony	0.53	0.4	2	J
Arsenic	2	0.4	2	U
Barium	4	1.9	4	U
Beryllium	2	0.2	2	U
Cadmium	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



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Method: SW6020

CCB21		Date: 08-Jan-2019 23:20	Seq: 4900327	CCB	Units: ug/L
Analyte	Result	MDL	Report Limit	Qual	
Aluminum	10	1.8	10	U	
Antimony	0.588	0.4	2	J	
Arsenic	2	0.4	2	U	
Barium	4	1.9	4	U	
Beryllium	2	0.2	2	U	
Cadmium	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	

CCB22		Date: 08-Jan-2019 23:38	Seq: 4900336	CCB	Units: ug/L
Analyte	Result	MDL	Report Limit	Qual	
Aluminum	10	1.8	10	U	
Antimony	0.685	0.4	2	J	
Arsenic	2	0.4	2	U	
Barium	4	1.9	4	U	
Beryllium	2	0.2	2	U	
Cadmium	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	
Aluminum	10	1.8	10	U	
Antimony	0.484	0.4	2	J	
Arsenic	2	0.4	2	U	
Barium	4	1.9	4	U	
Beryllium	2	0.2	2	U	



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CCB23		Date: 09-Jan-2019 00:02	Seq: 4900348	CCB	Units: ug/L
Analyte	Result	MDL	Report Limit	Qual	
Cadmium	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	
Aluminum	10	1.8	10	U	
Antimony	0.613	0.4	2	J	
Arsenic	2	0.4	2	U	
Barium	4	1.9	4	U	
Beryllium	2	0.2	2	U	
Cadmium	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	

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Client: Bhate Environmental Associates, Inc.

Run ID: ICPMS05_330716

Project: LHAAP /Site 18 /24

Instrument: ICPMS05

WorkOrder: HS18121123

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	
Calcium	500	34	500	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	
Calcium	500	34	500	U	
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		
Calcium	500	34	500	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	
Calcium	500	34	500	U	
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	
Calcium	500	34	500	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	
Calcium	500	34	500	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	
Calcium	500	34	500	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	
Calcium	500	34	500	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	
Calcium	500	34	500	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	
Calcium	500	34	500	U	



ALS Houston, US

Form 3 - BLANKS

Client: Bhate Environmental Associates, Inc.

Run ID: ICPMS05_330716

Project: LHAAP /Site 18 /24

Instrument: ICPMS05

WorkOrder: HS18121123

Method: SW6020

CCB9	Date: 09-Jan-2019 16:01	Seq: 4901519	CCB	Units: ug/L
Analyte	Result	MDL	Report Limit	Qual
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
Calcium	500	34	500	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
Calcium	500	34	500	U
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
Calcium	500	34	500	U
Sodium	49.17	14	200	J
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
Calcium	500	34	500	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
Calcium	500	34	500	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
Calcium	500	34	500	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
Calcium	500	34	500	U
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
Calcium	500	34	500	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
Calcium	500	34	500	U
Sodium	112.9	14	200	J



Form 3 - BLANKS

Client: Bhate Environmental Associates, Inc.

Run ID: ICPMS05_330716

Project: LHAAP /Site 18 /24

Instrument: ICPMS05

WorkOrder: HS18121123

Method: SW6020

CCB	Date	Seq	CCB	Units
CCB19	09-Jan-2019 20:04	4902182	CCB	ug/L
Analyte	Result	MDL	Report Limit	Qual
Aluminum	10	1.8	10	U
Calcium	500	34	500	U
Sodium	193.1	14	200	J
CCB20	09-Jan-2019 20:27	4902194	CCB	ug/L
Analyte	Result	MDL	Report Limit	Qual
Aluminum	10	1.8	10	U
Calcium	500	34	500	U
Sodium	59.7	14	200	J
CCB21	09-Jan-2019 20:45	4902203	CCB	ug/L
Analyte	Result	MDL	Report Limit	Qual
Aluminum	10	1.8	10	U
Calcium	500	34	500	U
Sodium	27.78	14	200	J
CCB22	09-Jan-2019 21:03	4902212	CCB	ug/L
Analyte	Result	MDL	Report Limit	Qual
Aluminum	10	1.8	10	U
Calcium	500	34	500	U
Sodium	16	14	200	J
CCB23	09-Jan-2019 21:27	4902224	CCB	ug/L
Analyte	Result	MDL	Report Limit	Qual
Aluminum	10	1.8	10	U
Calcium	500	34	500	U
Sodium	16.4	14	200	J
CCB24	09-Jan-2019 21:46	4902234	CCB	ug/L
Analyte	Result	MDL	Report Limit	Qual
Aluminum	10	1.8	10	U
Calcium	500	34	500	U
Sodium	200	14	200	U
CCB25	09-Jan-2019 22:08	4902245	CCB	ug/L
Analyte	Result	MDL	Report Limit	Qual
Aluminum	10	1.8	10	U
Calcium	500	34	500	U
Sodium	22.46	14	200	J
CCB26	09-Jan-2019 22:22	4902252	CCB	ug/L
Analyte	Result	MDL	Report Limit	Qual
Aluminum	10	1.8	10	U
Calcium	500	34	500	U
Sodium	200	14	200	U
CCB27	09-Jan-2019 22:42	4902299	CCB	ug/L
Analyte	Result	MDL	Report Limit	Qual
Aluminum	10	1.8	10	U
Calcium	500	34	500	U
Sodium	22.58	14	200	J
CCB28	09-Jan-2019 23:09	4902312	CCB	ug/L
Analyte	Result	MDL	Report Limit	Qual
Aluminum	10	1.8	10	U
Calcium	500	34	500	U



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Form 3 - BLANKS

Client: Bhate Environmental Associates, Inc.

Run ID: ICPMS05_330716

Project: LHAAP /Site 18 /24

Instrument: ICPMS05

WorkOrder: HS18121123

Method: SW6020

CCB28	Date: 09-Jan-2019 23:09	Seq: 4902312	CCB	Units: ug/L
Analyte	Result	MDL	Report Limit	Qual
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
Calcium	500	34	500	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
Calcium	500	34	500	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
Calcium	500	34	500	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
Calcium	500	34	500	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
Calcium	500	34	500	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
Calcium	500	34	500	U
Sodium	16.83	14	200	J



Form 4 - ICP Interference Check Sample

Client: Bhate Environmental Associates, Inc.

Run ID: ICPMS05_330637

Project: LHAAP /Site 18 /24

Instrument: ICPMS05

WorkOrder: HS18121123

Method: SW6020

ICSA		Date: 08-Jan-2019 12:34	Seq: 4899267	ICSA	Units: ug/L
Analyte	True	Found	%R		
Aluminum	100000	97360	97.4		
Antimony		0.105	0		
Arsenic		0.154	0		
Barium		0.145	0		
Beryllium		0.004	0		
Cadmium		1.982	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		
Aluminum	100500	95850	95.4		
Antimony	100	115.1	115		
Arsenic	100	113.2	113		
Barium	100	110.4	110		
Beryllium	100	110.5	110		
Cadmium	100	112.3	112		
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		
Aluminum	100000	100300	100		
Antimony		0.243	0		
Arsenic		0.092	0		
Barium		0.302	0		



Form 4 - ICP Interference Check Sample

Client: Bhate Environmental Associates, Inc.

Run ID:ICPMS05_330637

Project: LHAAP /Site 18 /24

Instrument:ICPMS05

WorkOrder: HS18121123

Method:SW6020

ICSA		Date: 09-Jan-2019 00:25	Seq: 4900360	ICSA	Units: ug/L
Analyte	True	Found	%R		
Beryllium		0.011	0		
Cadmium		2.533	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		
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		
Aluminum	100500	97400	96.9		
Antimony	100	115.9	116		
Arsenic	100	116.2	116		
Barium	100	124.7	125		
Beryllium	100	108.4	108		
Cadmium	100	127.9	128		
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 /Site 18 /24

Instrument: ICPMS05

WorkOrder: HS18121123

Method: SW6020

ICSA		Date: 09-Jan-2019 12:17	Seq: 4901075	ICSA	Units: ug/L
Analyte	True	Found	%R		
Aluminum	100000	97590	97.6		
Calcium	100000	101700	102		
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		
Calcium	110000	115500	105		
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		
Calcium	100000	93910	93.9		
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		
Calcium	110000	104400	94.9		
Sodium	110000	105900	96.3		

Form 5A - Matrix Spike/Matrix Spike Duplicate Recovery

Client: Bhate Environmental Associates, Inc.

Date Analyzed: 02-Jan-2019 16:38

Project: LHAAP /Site 18 /24

Date Extracted: 02-Jan-2019 11:00

WorkOrder: HS18121123

Units: ug/L

Matrix Spike: HS18121093-01MS

Analysis Method: SW7470

Client Sample ID:

Analyte	Sample Result	MS Result	Spike Amount	% Rec	MSD Result	Spike Amount	% Rec	% Rec Limits	RPD RPD Limit
Mercury	0.2000	5.210	5.000	104	5.260	5.000	105	75-125	0.955 20

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Form 5A - Matrix Spike/Matrix Spike Duplicate Recovery

Client: Bhate Environmental Associates, Inc.

Date Analyzed: 08-Jan-2019 16:51

Project: LHAAP /Site 18 /24

Date Extracted: 02-Jan-2019 13:00

WorkOrder: HS18121123

Units: ug/L

Matrix Spike: HS18121117-01MS

Analysis Method: SW6020

Client Sample ID:

Analyte	Sample Result	MS Result	Spike Amount	% Rec	MSD Result	Spike Amount	% Rec	% Rec Limits	RPD RPD Limit
Aluminum	24.80	163.1	100.0	138	165.4	100.0	141	80-120	1.42 20
Antimony	2.000	56.56	50.00	113	58.07	50.00	116	80-120	2.63 20
Arsenic	1.232	53.99	50.00	106	57.10	50.00	112	80-120	5.59 20
Barium	784.0	833.4	50.00	98.8	855.9	50.00	144	80-120	2.67 20
Beryllium	2.000	60.61	50.00	121	60.62	50.00	121	80-120	0.00990 20
Cadmium	2.000	48.54	50.00	96.7	49.75	50.00	99.1	80-120	2.46 20
Calcium	65420	68510	5000	61.8	72350	5000	139	80-120	5.46 20
Chromium	11.31	62.41	50.00	102	65.18	50.00	108	80-120	4.34 20
Cobalt	3.152	55.52	50.00	105	57.02	50.00	108	80-120	2.67 20
Copper	2.000	52.05	50.00	105	53.76	50.00	108	80-120	3.24 20
Iron	1744	7021	5000	106	7316	5000	111	80-120	4.11 20
Lead	2.000	51.16	50.00	102	51.34	50.00	103	80-120	0.361 20
Magnesium	42080	45430	5000	67.0	46670	5000	91.8	80-120	2.69 20
Manganese	601.3	641.4	50.00	80.1	658.7	50.00	115	80-120	2.67 20
Nickel	8.904	60.54	50.00	103	63.05	50.00	108	80-120	4.05 20
Potassium	49190	57380	5000	164	52460	5000	65.5	80-120	8.96 20
Selenium	2.000	54.16	50.00	109	54.98	50.00	111	80-120	1.50 20
Silver	2.000	51.82	50.00	104	48.94	50.00	97.8	80-120	5.72 20
Sodium	272500	276700	5000	84.0	277800	5000	107	80-120	0.408 20
Thallium	0.7070	43.94	50.00	86.5	49.92	50.00	98.4	80-120	12.7 20
Vanadium	5.000	52.51	50.00	106	56.22	50.00	113	80-120	6.84 20
Zinc	13.71	65.40	50.00	103	61.88	50.00	96.3	80-120	5.52 20



Form 5B - Post Digest Sample Recovery

Client: Bhate Environmental Associates, Inc.

Date Analyzed: 08-Jan-2019 16:53

Project: LHAAP /Site 18 /24

Date Extracted: 02-Jan-2019 13:00

WorkOrder: HS18121123

Units: ug/L

Lab Sample ID: HS18121117-01PDS

Analysis Method: SW6020

Client Sample ID:

Analyte	Sample Result	PDS Result	Spike Amount	% Rec	% Rec Limits
Aluminum	24.8	143	100	118	75-125
Antimony	0	121	100	121	75-125
Arsenic	1.232	122.7	100	121	75-125
Barium	784	923.9	100	140	75-125
Beryllium	0	134.3	100	134	75-125
Cadmium	0	113.6	100	113	75-125
Calcium	65420	76720	10000	113	75-125
Chromium	11.31	131.2	100	120	75-125
Cobalt	3.152	124	100	121	75-125
Copper	0	117.1	100	117	75-125
Iron	1744	14310	10000	126	75-125
Lead	0	110	100	110	75-125
Magnesium	42080	52700	10000	106	75-125
Manganese	601.3	749.6	100	148	75-125
Nickel	8.904	127.5	100	119	75-125
Potassium	49190	60420	10000	112	75-125
Selenium	0	125.7	100	126	75-125
Silver	0	107	100	107	75-125
Thallium	0.707	114.7	100	114	75-125
Vanadium	0	122.5	100	123	75-125
Zinc	13.71	124	100	110	75-125

Form 5B - Post Digest Sample Recovery

Client: Bhate Environmental Associates, Inc.

Date Analyzed: 09-Jan-2019 15:53

Project: LHAAP /Site 18 /24

Date Extracted: 02-Jan-2019 13:00

WorkOrder: HS18121123

Units: ug/L

Lab Sample ID: HS18121117-01PDS

Analysis Method: SW6020

Client Sample ID:

Analyte	Sample Result	PDS Result	Spike Amount	% Rec	% Rec Limits
Sodium	248900	477900	200000	115	75-125

Form 7 - Laboratory Control Sample

Client: Bhate Environmental Associates, Inc.

Date Analyzed: 02-Jan-2019 16:33

Project: LHAAP /Site 18 /24

Date Extracted: 02-Jan-2019 11:00

WorkOrder: HS18121123

Units: ug/L

Lab Sample ID: LCS-136208

Analysis Method: SW7470

Analyte	Spike Amount	LCS Result	% Rec	% Rec Limits
Mercury	5	5.19	104	80-120

Form 7 - Laboratory Control Sample

Client: Bhate Environmental Associates, Inc.

Date Analyzed: 08-Jan-2019 16:36

Project: LHAAP /Site 18 /24

Date Extracted: 02-Jan-2019 13:00

WorkOrder: HS18121123

Units: ug/L

Lab Sample ID: LCS-136231

Analysis Method: SW6020

Analyte	Spike Amount	LCS Result	% Rec	% Rec Limits
Aluminum	100	115.7	116	80-120
Antimony	50	58.35	117	80-120
Arsenic	50	55.51	111	80-120
Barium	50	54.9	110	80-120
Beryllium	50	57.64	115	80-120
Cadmium	50	54.38	109	80-120
Chromium	50	56.22	112	80-120
Cobalt	50	57.35	115	80-120
Copper	50	56.38	113	80-120
Iron	5000	5789	116	80-120
Lead	50	59.41	119	80-120
Magnesium	5000	5938	119	80-120
Manganese	50	55.43	111	80-120
Nickel	50	57.26	115	80-120
Potassium	5000	5839	117	80-120
Selenium	50	55.85	112	80-120
Silver	50	57.81	116	80-120
Sodium	5000	5817	116	80-120
Thallium	50	55.07	110	80-120
Vanadium	50	56.2	112	80-120
Zinc	50	59.15	118	80-120

Form 7 - Laboratory Control Sample

Client: Bhate Environmental Associates, Inc.

Date Analyzed: 09-Jan-2019 14:34

Project: LHAAP /Site 18 /24

Date Extracted: 02-Jan-2019 13:00

WorkOrder: HS18121123

Units: ug/L

Lab Sample ID: LCS-136231

Analysis Method: SW6020

Analyte	Spike Amount	LCS Result	% Rec	% Rec Limits
Calcium	5000	5955	119	80-120

Form 8 - ICP Serial Dilutions

Client: Bhate Environmental Associates, Inc.

Date Analyzed: 08-Jan-2019 16:40

Project: LHAAP /Site 18 /24

Date Extracted: 02-Jan-2019 13:00

WorkOrder: HS18121123

Units: ug/L

Lab Sample ID: HS18121117-01SD

Analysis Method: SW6020

Client Sample ID:

Analyte	Sample Result	C	SD Result	C	RPD	Q
Aluminum	24.8		32.48	J	31	
Antimony	0	U	0	U	0	
Arsenic	1.232	J	0	U	0	
Barium	784		756.7		3	
Beryllium	0	U	0	U	0	
Cadmium	0	U	0	U	0	
Calcium	65420		61970		5	
Chromium	11.31		11.08	J	2	
Cobalt	3.152	J	3.171	J	1	
Copper	0	U	0	U	0	
Iron	1744		1587		9	
Lead	0	U	0	U	0	
Magnesium	42080		39200		7	
Manganese	601.3		565.8		6	
Nickel	8.904		5.621	J	37	
Potassium	49190		50600		3	
Selenium	0	U	0	U	0	
Silver	0	U	0	U	0	
Thallium	0.707	J	0	U	0	
Vanadium	0	U	0	U	0	
Zinc	13.71		18.87	J	38	

Form 8 - ICP Serial Dilutions

Client: Bhate Environmental Associates, Inc.

Date Analyzed: 09-Jan-2019 14:38

Project: LHAAP /Site 18 /24

Date Extracted: 02-Jan-2019 13:00

WorkOrder: HS18121123

Units: ug/L

Lab Sample ID: HS18121117-01SD

Analysis Method: SW6020

Client Sample ID:

Analyte	Sample Result	C	SD Result	C	RPD	Q
Sodium	248900		270300		9	

Report Generated By CETAC QuickTrace

Analyst: ALSHS.NoUser

Worksheet file: C:\Program Files (x86)\QuickTrace\Worksheets\010219AW.wsz

Date Started: 1/2/2019 1:01:41 PM

Comment:

Results

Sample Name	Type	Date/Time	Conc (ppb)	μ Abs	%RSD	Flags
Calibration Blank	STD	01/02/19 01:58:33 pm	0.000	-19	42.63	
Replicates				-7.1	-23.5	-24.7
						-22.0
Standard #1 (0.2 ppb)	STD	01/02/19 02:00:14 pm	0.200	1045	0.62	
Replicates				1042.4	1038.9	1053.9
						1046.9
Standard #2 (0.5 ppb)	STD	01/02/19 02:01:56 pm	0.500	2420	0.55	
Replicates				2433.2	2417.9	2427.4
						2402.9
Standard #3 (2.0 ppb)	STD	01/02/19 02:03:39 pm	2.000	10248	0.35	
Replicates				10252.3	10284.1	10257.6
						10199.4
Standard #4 (5.0 ppb)	STD	01/02/19 02:05:22 pm	5.000	25553	0.40	
Replicates				25628.1	25599.6	25580.8
						25403.1
Standard #5 (10.0 ppb)	STD	01/02/19 02:07:06 pm	10.000	51933	0.64	
Replicates				52157.6	52118.7	52008.9
						51445.9

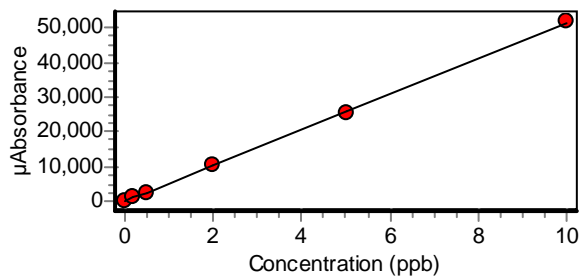
Calibration

Equation: $A = -37.016 + 5153.930C$

R2: 0.99989

SEE: 242.6198

Flags:



ICCV	UNK	01/02/19 02:10:16 pm	5.050	25974	0.15	
Replicates				25945.2	25937.5	25995.7
						26016.5
ICV	UNK	01/02/19 02:13:30 pm	4.800	24704	0.15	
Replicates				24695.7	24665.2	24698.9
						24756.7



Sample Name	Type	Date/Time	Conc (ppb)	μ Abs	%RSD	Flags
ICB	UNK	01/02/19 02:15:11 pm	0.001	-30	41.57	
Replicates			-20.7 -24.3 -48.3 -26.5			
CRA	UNK	01/02/19 02:16:53 pm	0.215	1073	1.47	
Replicates			1083.7 1049.9 1081.4 1078.7			
MBLK-136206	UNK	01/02/19 02:24:09 pm	0.007	-1	850.77	
Replicates			-27.5 14.5 -1.3 10.2			
LCS-136206	UNK	01/02/19 02:32:01 pm	5.020	25842	0.31	
Replicates			25748.2 25815.3 25867.8 25936.1			
HS18121395-01	UNK	01/02/19 02:33:44 pm	0.188	931	1.83	
Replicates			934.5 912.0 926.3 952.8			
HS18121395-01MS	UNK	01/02/19 02:38:22 pm	5.620	28920	0.96	
Replicates			29312.8 28920.1 28734.1 28712.1			
HS18121395-01MSD	UNK	01/02/19 02:40:05 pm	5.540	28497	1.22	
Replicates			28936.1 28602.2 28288.4 28160.2			
GBLKT1-136206	UNK	01/02/19 02:41:49 pm	-0.002	-46	18.84	
Replicates			-54.1 -34.6 -43.8 -50.8			
CCV	CCV	01/02/19 02:47:50 pm	5.220	26887	0.18	
Replicates			26816.6 26900.4 26930.9 26898.2			
% Recovery			104.48			
CCB	CCB	01/02/19 02:49:35 pm	0.001	-31	37.48	
Replicates			-40.8 -30.0 -14.8 -37.0			
HS18121339-01	UNK	01/02/19 02:51:18 pm	0.049	213	7.36 s	
Replicates			225.2 223.5 191.3 211.0			
HS18121339-02	UNK	01/02/19 02:53:02 pm	-0.002	-48	33.45	
Replicates			-66.6 -43.1 -28.6 -52.9			

Sample Name	Type	Date/Time	Conc (ppb)	μAbs	%RSD	Flags
HS18121339-03 Replicates	UNK	01/02/19 02:54:43 pm	0.112	538	5.36	s
			518.6	560.3	508.5	565.5
HS18121339-04 Replicates	UNK	01/02/19 02:56:24 pm	0.027	101	9.74	s
			93.6	96.5	115.3	97.8
HS18121437-01 Replicates	UNK	01/02/19 02:58:05 pm	0.068	313	4.02	
			304.1	306.1	331.3	309.8
HS18121469-01 Replicates	UNK	01/02/19 02:59:46 pm	0.024	85	16.38	s
			71.7	85.4	79.9	104.6
HS18121522-01 Replicates	UNK	01/02/19 03:01:28 pm	0.007	-2	525.87	
			-10.9	-0.8	12.2	-8.3
HS18121553-01 Replicates	UNK	01/02/19 03:03:10 pm	0.035	143	7.56	s
			143.5	150.4	150.1	127.4
CCV Replicates % Recovery	CCV	01/02/19 03:05:23 pm	4.940	25429	0.54	
			25267.8	25380.1	25478.6	25591.3
			98.82			
CCB Replicates	CCB	01/02/19 03:07:07 pm	0.003	-22	71.62	
			-16.1	-38.4	-2.9	-29.1
MBLK-136207 Replicates	UNK	01/02/19 03:13:23 pm	0.011	20	67.67	
			10.5	21.0	9.5	38.5
LCS-136207 Replicates	UNK	01/02/19 03:15:06 pm	5.010	25803	0.50	
			25787.6	25736.8	25697.1	25988.6
LCSD-136207 Replicates	UNK	01/02/19 03:28:44 pm	4.860	24997	0.73	
			24768.0	24937.3	25101.3	25180.1
HS18121045-01 Replicates	UNK	01/02/19 03:30:27 pm	-0.005	-62	8.84	
			-69.4	-59.4	-56.9	-60.9



Sample Name				Type	Date/Time	Conc (ppb)	μAbs	%RSD	Flags
HS18121045-01MS				UNK	01/02/19 03:33:38 pm	4.890	25160	0.12	
Replicates	25125.9	25148.5	25170.2	25195.0					
HS18121045-01MSD				UNK	01/02/19 03:35:21 pm	5.090	26174	0.06	
Replicates	26170.6	26164.3	26164.8	26195.8					
HS18121045-02				UNK	01/02/19 03:37:02 pm	-0.005	-62	19.99	
Replicates	-53.0	-54.9	-58.7	-79.7					
HS18121045-03				UNK	01/02/19 03:38:43 pm	0.003	-22	116.75	
Replicates	-32.3	15.4	-43.1	-28.1					
HS18121045-04				UNK	01/02/19 03:40:24 pm	0.004	-19	107.79	
Replicates	-3.0	-41.6	-30.9	-0.4					
HS18121045-05				UNK	01/02/19 03:42:05 pm	0.011	22	43.90	
Replicates	20.1	35.5	11.8	22.3					
CCV				CCV	01/02/19 03:43:49 pm	4.950	25463	0.16	
Replicates	25425.1	25436.8	25475.0	25513.5					
% Recovery	98.95								
CCB				CCB	01/02/19 03:45:33 pm	0.006	-7	209.44	
Replicates	5.3	5.0	-21.0	-15.5					
HS18121045-06				UNK	01/02/19 03:47:15 pm	0.016	47	38.56	
Replicates	28.3	71.2	49.7	39.7					
HS18121045-07				UNK	01/02/19 03:48:57 pm	0.101	483	2.43	
Replicates	487.9	487.8	465.5	490.8					
HS18121045-08				UNK	01/02/19 03:50:39 pm	0.017	48	48.17	
Replicates	43.4	17.7	69.5	63.5					
HS18121045-09				UNK	01/02/19 03:52:22 pm	0.010	17	102.58	
Replicates	33.9	-5.5	13.2	24.5					



Sample Name				Type	Date/Time	Conc (ppb)	μAbs	%RSD	Flags
HS18121045-10				UNK	01/02/19 03:54:05 pm	0.009	9	78.24	
Replicates	14.0	-0.1	6.9	14.1					
HS18121045-11				UNK	01/02/19 03:55:48 pm	-0.001	-40	39.62	
Replicates	-57.4	-37.4	-19.7	-45.9					
HS18121045-12				UNK	01/02/19 03:57:31 pm	0.004	-17	23.86	
Replicates	-13.2	-20.4	-19.6	-13.1					
HS18121045-13				UNK	01/02/19 03:59:15 pm	-0.004	-58	16.49	
Replicates	-54.8	-71.1	-57.9	-48.4					
HS18121045-14				UNK	01/02/19 04:00:56 pm	0.002	-24	57.41	
Replicates	-36.5	-12.6	-11.9	-36.4					
HS18121045-15				UNK	01/02/19 04:02:37 pm	0.000	-39	24.28	
Replicates	-28.6	-36.6	-38.8	-51.3					
CCV				CCV	01/02/19 04:13:09 pm	5.410	27863	0.21	
Replicates	27914.5	27910.6	27831.3	27797.6					
% Recovery	108.27								
CCB				CCB	01/02/19 04:14:54 pm	0.013	33	24.19	
Replicates	27.0	40.8	37.8	24.8					
HS18121045-16				UNK	01/02/19 04:16:35 pm	0.003	-21	104.09	
Replicates	-33.9	-24.4	10.9	-38.1					
HS18121045-17				UNK	01/02/19 04:18:16 pm	0.001	-30	35.43	
Replicates	-45.0	-27.1	-19.8	-28.3					
HS18121045-18				UNK	01/02/19 04:19:58 pm	0.008	5	511.56	
Replicates	5.8	36.2	-0.8	-22.3					
HS18121045-19				UNK	01/02/19 04:21:40 pm	0.002	-29	33.60	
Replicates	-20.6	-36.2	-20.2	-37.9					



Sample Name				Type	Date/Time	Conc (ppb)	μAbs	%RSD	Flags
HS18121045-20				UNK	01/02/19 04:23:22 pm	0.007	-1	277.18	
Replicates	16.4	-6.2	1.6	-16.2					
MBLK-136208				UNK	01/02/19 04:31:48 pm	0.017	51	25.93	s
Replicates	58.7	47.6	33.6	63.1					
LCS-136208				UNK	01/02/19 04:33:31 pm	5.190	26692	0.22	
Replicates	26653.2	26635.8	26719.0	26759.0					
HS18121093-01				UNK	01/02/19 04:35:14 pm	0.012	25	67.81	
Replicates	39.4	1.1	25.6	33.6					
HS18121093-01MS				UNK	01/02/19 04:36:57 pm	5.210	26839	0.19	
Replicates	26905.7	26844.1	26814.6	26789.9					
HS18121093-01MSD				UNK	01/02/19 04:38:41 pm	5.260	27074	0.38	
Replicates	27202.2	27114.3	26996.1	26983.1					
CCV				CCV	01/02/19 04:40:25 pm	5.460	28081	0.29	
Replicates	27985.7	28139.2	28156.0	28042.0					
% Recovery	109.11								
CCB				CCB	01/02/19 04:42:09 pm	0.011	22	70.00	
Replicates	30.4	29.4	30.9	-1.1					
HS18120707-15				UNK	01/02/19 04:43:50 pm	0.012	23	23.91	
Replicates	15.9	21.8	27.1	27.8					
HS18120707-24				UNK	01/02/19 04:45:32 pm	0.011	20	103.27	
Replicates	1.9	47.6	7.4	22.4					
HS18120707-27				UNK	01/02/19 04:47:13 pm	0.012	27	20.00	
Replicates	32.1	23.9	30.6	20.9					
HS18120707-30				UNK	01/02/19 04:48:54 pm	0.009	10	62.96	
Replicates	18.4	3.6	8.8	8.6					



Sample Name				Type	Date/Time	Conc (ppb)	μAbs	%RSD	Flags
HS18120707-33				UNK	01/02/19 04:50:36 pm	0.014	37	21.64	
Replicates	44.8	27.7	41.7	32.5					
HS18121094-01				UNK	01/02/19 04:52:18 pm	0.005	-10	225.82	
Replicates	-35.5	10.0	9.3	-25.5					
HS18121117-01				UNK	01/02/19 04:54:00 pm	0.006	-8	172.15	
Replicates	-28.1	-2.7	2.3	-3.2					
HS18121117-02				UNK	01/02/19 04:55:43 pm	0.009	9	171.76	
Replicates	33.7	2.6	3.3	-1.7					
HS18121117-06				UNK	01/02/19 04:57:26 pm	0.022	75	39.95	s
Replicates	58.8	102.1	41.3	99.3					
HS18121117-07				UNK	01/02/19 04:59:09 pm	0.003	-19	82.31	
Replicates	1.7	-25.0	-17.7	-36.0					
CCV				CCV	01/02/19 05:00:53 pm	5.180	26665	0.11	
Replicates	26703.1	26671.2	26651.2	26634.9					
% Recovery	103.62								
CCB				CCB	01/02/19 05:02:37 pm	0.019	61	27.47	s
Replicates	85.2	55.7	55.7	46.9					
HS18121117-09				UNK	01/02/19 05:04:20 pm	0.012	25	24.43	
Replicates	17.4	22.3	31.1	27.6					
HS18121123-01				UNK	01/02/19 05:06:04 pm	0.012	26	36.58	
Replicates	38.6	26.5	15.3	24.5					
HS18121123-02				UNK	01/02/19 05:07:46 pm	0.020	65	31.22	s
Replicates	71.6	78.2	75.9	34.9					
HS18121123-03				UNK	01/02/19 05:09:28 pm	0.005	-11	60.27	
Replicates	-12.4	-12.6	-15.8	-1.3					



Sample Name	Type	Date/Time	Conc (ppb)	μAbs	%RSD	Flags
HS18121144-01 Replicates	UNK	01/02/19 05:11:09 pm	0.007	1	322.83	
				11.7	5.2	5.0
						-19.5
HS18121158-01 Replicates	UNK	01/02/19 05:12:51 pm	0.009	10	89.17	
				8.9	-1.2	21.3
						13.0
HS18121158-02 Replicates	UNK	01/02/19 05:14:33 pm	0.000	-39	21.60	
				-38.9	-50.3	-35.5
						-30.5
HS18121158-03 Replicates	UNK	01/02/19 05:16:15 pm	-0.010	-90	8.35	
				-92.4	-78.6	-94.8
						-93.1
HS18121507-01 Replicates	UNK	01/02/19 05:17:57 pm	0.013	29	53.49	
				18.4	13.0	43.5
						41.0
CCV Replicates % Recovery	CCV	01/02/19 05:20:06 pm	5.110	26295	0.21	
				26349.3	26310.8	26217.3
				102.18		26301.6
CCB Replicates	CCB	01/02/19 05:21:50 pm	0.016	45	28.61	
				50.8	43.8	58.1
						27.8
MBLK-136209 Replicates	UNK	01/02/19 05:27:13 pm	0.019	59	49.31 s	
				34.9	73.9	92.2
						34.2
LCS-136209 Replicates	UNK	01/02/19 05:28:56 pm	5.210	26793	1.03	
				26499.8	26655.1	26886.8
						27130.6
HS18121402-01 Replicates	UNK	01/02/19 05:30:39 pm	0.006	-4	276.42	
				3.8	-3.7	3.1
						-17.2
HS18121402-01MS Replicates	UNK	01/02/19 05:32:23 pm	5.200	26744	0.23	
				26803.6	26789.8	26710.3
						26673.8
HS18121402-01MSD Replicates	UNK	01/02/19 05:34:06 pm	5.260	27068	0.16	
				27073.7	27094.3	27100.1
						27004.1



Sample Name				Type	Date/Time	Conc (ppb)	μAbs	%RSD	Flags
HS18121402-02				UNK	01/02/19 05:35:48 pm	0.014	36	34.99	
Replicates	26.6	54.0	31.0	30.7					
HS18121402-03				UNK	01/02/19 05:37:31 pm	0.018	58	26.69	s
Replicates	45.7	50.9	80.9	56.1					
HS18121403-01				UNK	01/02/19 05:39:13 pm	0.023	81	10.55	s
Replicates	76.4	74.2	79.4	93.2					
HS18121427-01				UNK	01/02/19 05:40:55 pm	0.014	33	41.51	
Replicates	15.0	42.5	44.5	29.5					
HS18121428-01				UNK	01/02/19 05:42:37 pm	0.006	-6	242.30	
Replicates	-20.0	1.9	-18.3	11.2					
CCV				CCV	01/02/19 05:44:20 pm	5.280	27198	0.09	
Replicates	27206.4	27230.5	27173.0	27183.8					
% Recovery	105.69								
CCB				CCB	01/02/19 05:46:05 pm	0.015	38	31.86	
Replicates	42.5	42.2	46.5	20.0					
HS18121476-01				UNK	01/02/19 05:47:47 pm	0.008	2	898.10	
Replicates	22.9	-0.7	-19.2	4.8					
HS18121534-01				UNK	01/02/19 05:49:29 pm	0.014	35	11.75	
Replicates	35.2	29.1	37.1	38.3					
HS18121537-01				UNK	01/02/19 05:51:12 pm	0.010	12	149.17	
Replicates	20.0	31.2	7.9	-10.8					
HS18121538-01				UNK	01/02/19 05:52:55 pm	0.003	-21	76.63	
Replicates	-23.9	-5.7	-12.2	-42.4					
MBLK-136210				UNK	01/02/19 06:43:18 pm	0.019	62	19.44	s
Replicates	64.9	44.4	65.1	72.1					



Sample Name	Type	Date/Time	Conc (ppb)	μAbs	%RSD	Flags
LCS-136210	UNK	01/02/19 06:45:02 pm	5.320	27370	0.77	
Replicates	27212.6	27225.7	27374.4	27668.2		
HS18121491-01	UNK	01/02/19 06:46:45 pm	0.002	-26	68.85	
Replicates	-7.2	-49.7	-19.2	-28.0		
HS18121491-01MS	UNK	01/02/19 06:48:28 pm	5.250	27020	0.62	
Replicates	27225.5	27072.9	26946.9	26836.4		
HS18121491-01MSD	UNK	01/02/19 06:50:10 pm	5.240	26968	0.41	
Replicates	27115.0	26990.3	26894.3	26870.6		
HS18121492-01	UNK	01/02/19 06:51:53 pm	0.005	-12	75.81	
Replicates	-9.4	-8.8	-24.0	-3.8		
CCV	CCV	01/02/19 06:53:36 pm	5.340	27485	0.32	
Replicates	27388.1	27458.1	27492.6	27599.3		
% Recovery	106.80					
CCB	CCB	01/02/19 06:55:21 pm	0.017	52	18.70 s	
Replicates	45.8	51.1	65.8	44.8		
HS18121551-01	UNK	01/02/19 06:57:03 pm	0.015	39	55.90	
Replicates	28.2	22.1	35.1	70.8		
HS18121551-02	UNK	01/02/19 06:58:45 pm	0.012	23	54.61	
Replicates	8.2	21.6	22.4	38.4		
HS18121551-03	UNK	01/02/19 07:00:28 pm	0.015	38	35.47	
Replicates	40.4	48.8	18.3	42.8		
HS18121552-01	UNK	01/02/19 07:02:10 pm	0.001	-32	33.30	
Replicates	-21.1	-29.9	-30.4	-46.6		
HS18121560-01	UNK	01/02/19 07:03:52 pm	0.015	40	21.18	
Replicates	37.1	33.9	35.6	52.1		



Sample Name				Type	Date/Time	Conc (ppb)	μAbs	%RSD	Flags
HS18121560-02				UNK	01/02/19 07:05:35 pm	0.020	68	19.78	s
Replicates	51.9	80.4	61.2	76.7					
HS18121563-01				UNK	01/02/19 07:07:18 pm	0.015	39	57.81	
Replicates	63.1	53.1	14.6	26.1					
HS18121563-02				UNK	01/02/19 07:09:02 pm	0.108	519	5.14	s
Replicates	506.0	488.0	532.3	547.8					
HS18121037-01				UNK	01/02/19 07:14:26 pm	0.000	-38	24.56	
Replicates	-35.4	-39.2	-26.7	-49.0					
HS18121039-01				UNK	01/02/19 07:16:09 pm	0.004	-16	52.15	
Replicates	-4.4	-20.1	-24.1	-16.9					
CCV				CCV	01/02/19 07:17:52 pm	5.230	26907	0.24	
Replicates	26859.1	26867.0	26901.8	27001.3					
% Recovery	104.56								
CCB				CCB	01/02/19 07:19:37 pm	0.017	50	24.62	
Replicates	44.6	46.6	40.3	67.8					
HS18121040-01				UNK	01/02/19 07:24:54 pm	0.007	-2	631.19	
Replicates	-19.4	15.1	2.8	-7.9					
HS18121229-01				UNK	01/02/19 07:26:37 pm	0.005	-10	50.62	
Replicates	-14.7	-6.2	-5.2	-14.5					
HS18121230-01				UNK	01/02/19 07:28:19 pm	0.020	68	20.97	s
Replicates	57.6	78.3	54.3	82.5					
HS18121233-01				UNK	01/02/19 07:30:02 pm	0.046	201	7.61	s
Replicates	203.3	179.0	205.7	214.7					
HS18121233-02				UNK	01/02/19 07:31:44 pm	0.042	178	7.53	s
Replicates	183.6	178.7	191.2	159.7					



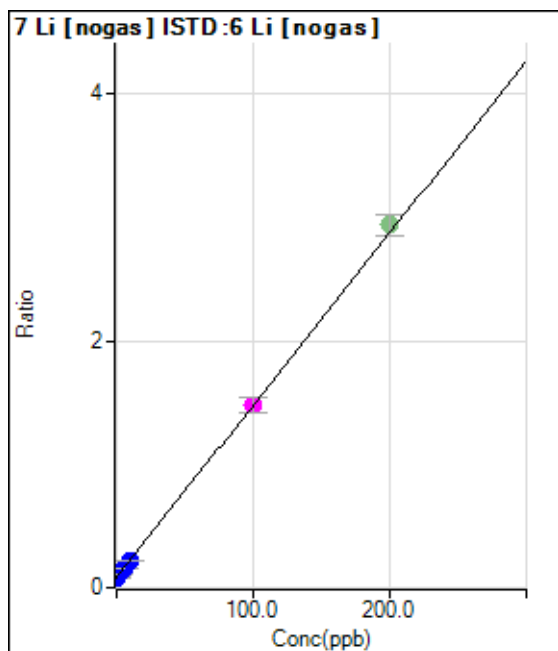
Sample Name				Type	Date/Time	Conc (ppb)	μAbs	%RSD	Flags
HS18121274-01				UNK	01/02/19 07:33:27 pm	-0.004	-60	24.69	
Replicates	-76.6	-56.8	-41.3	-64.1					
HS18121276-01				UNK	01/02/19 07:35:10 pm	0.002	-28	29.90	
Replicates	-29.7	-19.4	-38.9	-24.1					
HS18121514-01				UNK	01/02/19 07:36:52 pm	0.089	422	1.73	
Replicates	421.0	416.6	417.9	432.6					
HS18121038-01				UNK	01/02/19 07:38:35 pm	0.017	49	28.71	
Replicates	31.6	44.4	55.6	63.9					
CCV				CCV	01/02/19 07:42:11 pm	5.250	27009	0.40	
Replicates	27141.8	27053.1	26924.6	26916.8					
% Recovery	104.95								
CCB				CCB	01/02/19 07:43:56 pm	0.022	79	23.37	s
Replicates	68.3	97.3	58.5	91.3					

Calibration for 037_ICV.d

Batch Folder: C:\Agilent\ICPMH\1\DATA\010819B\
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	031CALB.d	2/10/200	2019-01-08 12:04:21
3	032CALB.d	5/25/500	2019-01-08 12:06:18
4	033CALB.d	10/50/1000	2019-01-08 12:08:18
5	034CALB.d	100/500/10K	2019-01-08 12:10:17
6	035CALB.d	200/1000/20K	2019-01-08 12:12:13
7			





	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	70121.92	0.0848	P	3.2
2	<input type="checkbox"/>	2.000	1.859	89348.53	0.1107	P	1.3
3	<input type="checkbox"/>	5.000	4.837	117105.45	0.1523	P	1.9
4	<input type="checkbox"/>	10.000	9.247	167940.97	0.2137	P	2.1
5	<input type="checkbox"/>	100.000	100.086	1084849.88	1.4802	M	8.2
6	<input checked="" type="checkbox"/>	200.000		2069056.90	2.9404	A	6.1
7	<input type="checkbox"/>	1.000					

$y = 0.0139 * x + 0.0848$

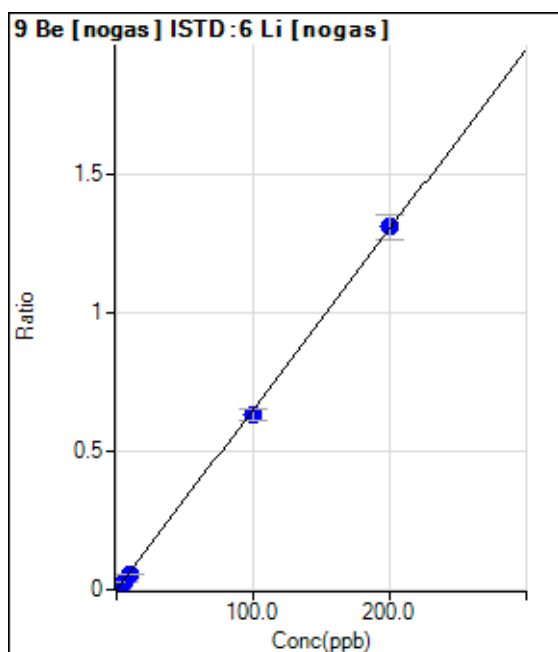
R = 1.0000

DL = 0.5833

BEC = 6.085

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	70.00	0.0001	P	37.4
2	<input type="checkbox"/>	2.000	1.676	8875.51	0.0110	P	2.8
3	<input type="checkbox"/>	5.000	4.470	22410.02	0.0292	P	6.5
4	<input type="checkbox"/>	10.000	8.713	44658.64	0.0568	P	1.3
5	<input type="checkbox"/>	100.000	97.477	465547.28	0.6348	P	6.6
6	<input type="checkbox"/>	200.000	201.342	922231.34	1.3111	P	6.8
7	<input type="checkbox"/>	1.000					

$y = 0.0065 * x + 8.4600E-005$

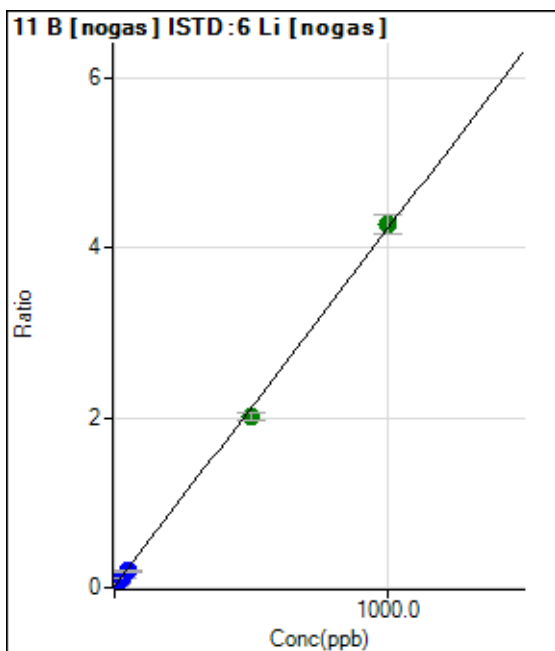
R = 0.9999

DL = 0.01458

BEC = 0.01299

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	14689.19	0.0178	P	3.0
2	<input type="checkbox"/>	10.000	7.969	41324.83	0.0512	P	2.5
3	<input type="checkbox"/>	25.000	21.084	81597.40	0.1062	P	5.6
4	<input type="checkbox"/>	50.000	41.794	151760.13	0.1931	P	2.3
5	<input type="checkbox"/>	500.000	477.292	1483117.89	2.0206	A	4.5
6	<input type="checkbox"/>	1000.000	1011.882	3000594.54	4.2639	A	5.4
7	<input type="checkbox"/>	5.000					

$y = 0.0042 * x + 0.0178$

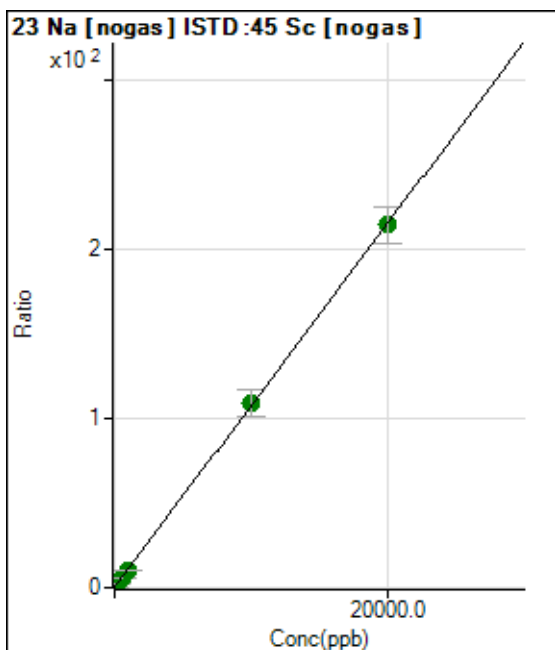
R = 0.9997

DL = 0.375

BEC = 4.235

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	289129.92	0.1959	P	1.2
2	<input type="checkbox"/>	200.000	191.632	3326080.54	2.2568	A	2.9
3	<input type="checkbox"/>	500.000	518.915	7781921.79	5.7765	A	12.6
4	<input type="checkbox"/>	1000.000	958.181	14827119.60	10.5006	A	3.3
5	<input type="checkbox"/>	10000.00	10145.991	148901428.3	109.310	A	15.0
6	<input type="checkbox"/>	20000.00	19928.706	297120448.3	214.518	A	10.4
7	<input type="checkbox"/>	100.000					

$y = 0.0108 * x + 0.1959$

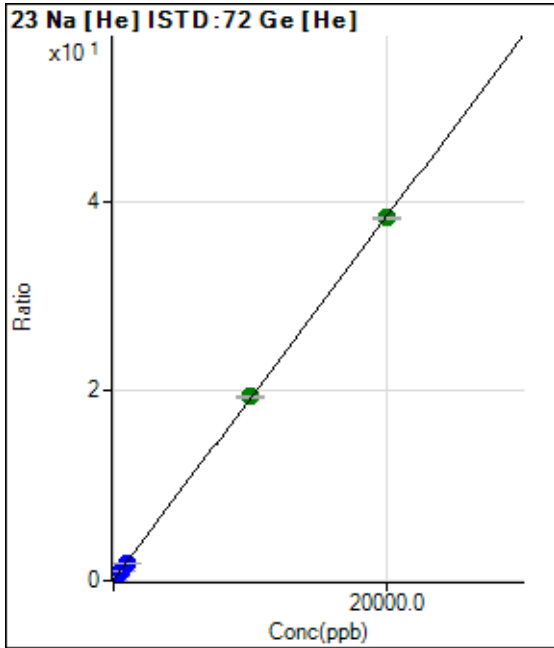
R = 1.0000

DL = 0.6712

BEC = 18.21

Weight: <None>

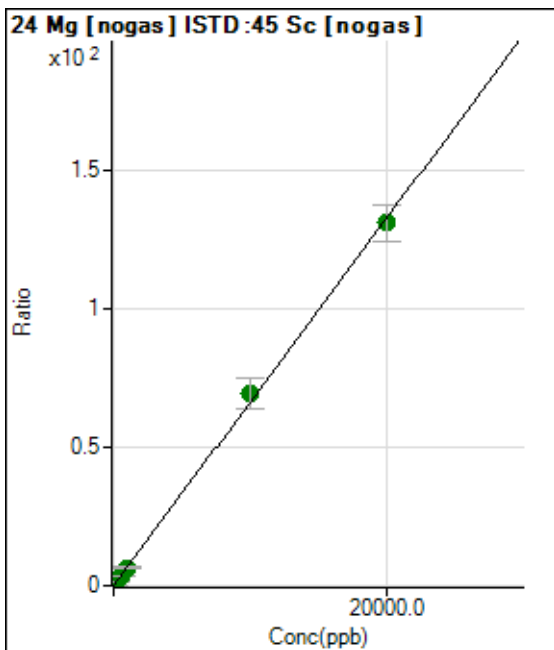
Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	31346.07	0.0604	P	2.3
2	<input type="checkbox"/>	200.000	193.719	224961.31	0.4312	P	1.6
3	<input type="checkbox"/>	500.000	487.457	516577.66	0.9934	P	0.8
4	<input type="checkbox"/>	1000.000	958.261	987595.32	1.8945	P	1.2
5	<input type="checkbox"/>	10000.00	10103.371	10024189.23	19.3982	A	1.1
6	<input type="checkbox"/>	20000.00	19950.778	19306984.71	38.2461	A	0.3
7	<input type="checkbox"/>	100.000					

$y = 0.0019 * x + 0.0604$
 $R = 1.0000$
 $DL = 2.162$
 $BEC = 31.56$

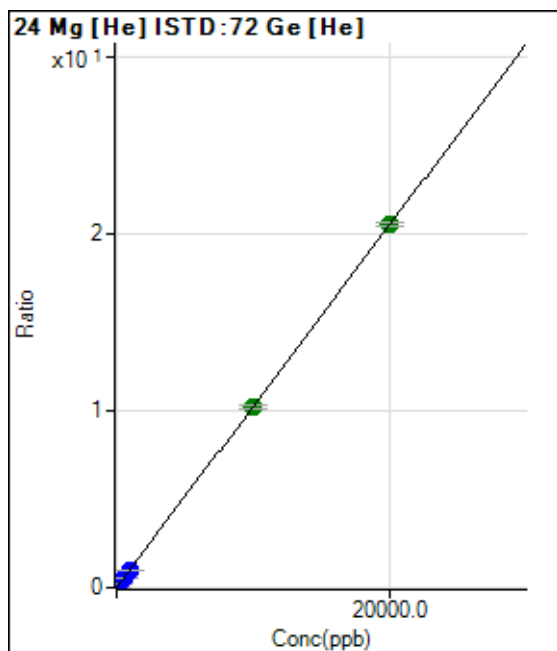
Weight: <None>
 Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	16042.36	0.0109	P	17.6
2	<input type="checkbox"/>	200.000	199.849	1966312.02	1.3346	A	1.7
3	<input type="checkbox"/>	500.000	524.290	4688941.38	3.4836	A	13.6
4	<input type="checkbox"/>	1000.000	983.874	9216626.77	6.5277	A	3.5
5	<input type="checkbox"/>	10000.00	10471.116	94480393.78	69.3682	A	15.1
6	<input type="checkbox"/>	20000.00	19764.643	181395512.3	130.925	A	10.0
7	<input type="checkbox"/>	100.000					

$y = 0.0066 * x + 0.0109$
 $R = 0.9996$
 $DL = 0.8692$
 $BEC = 1.643$

Weight: <None>
 Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	933.37	0.0018	P	15.9
2	<input type="checkbox"/>	200.000	199.945	107841.91	0.2067	P	2.2
3	<input type="checkbox"/>	500.000	497.741	266193.56	0.5119	P	1.4
4	<input type="checkbox"/>	1000.000	972.279	520336.54	0.9982	P	2.0
5	<input type="checkbox"/>	10000.00	9983.400	5287951.17	10.2331	A	1.5
6	<input type="checkbox"/>	20000.00	20009.743	10352786.30	20.5084	A	1.0
7	<input type="checkbox"/>	100.000					

$y = 0.0010 * x + 0.0018$

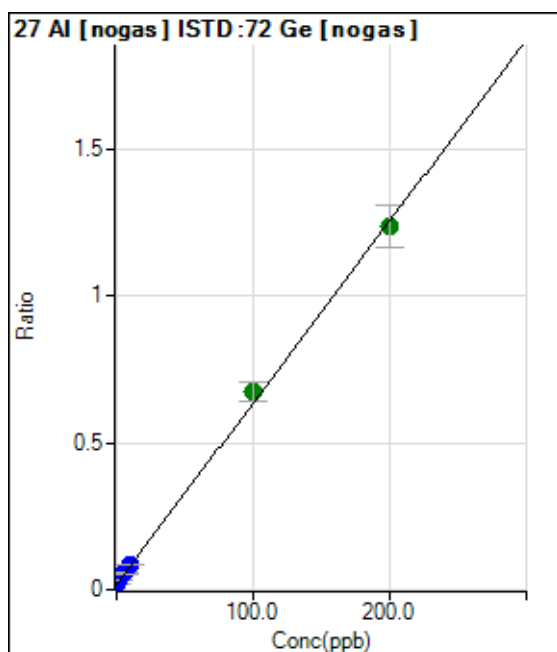
R = 1.0000

DL = 0.8369

BEC = 1.756

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	33583.53	0.0179	P	6.2
2	<input type="checkbox"/>	2.000	2.211	59721.30	0.0316	P	5.0
3	<input type="checkbox"/>	5.000	6.383	100144.56	0.0574	P	9.8
4	<input type="checkbox"/>	10.000	10.542	158459.59	0.0831	P	2.3
5	<input type="checkbox"/>	100.000	105.892	1211415.66	0.6730	A	9.6
6	<input type="checkbox"/>	200.000	196.990	2196130.80	1.2365	A	11.8
7	<input type="checkbox"/>	1.000					

$y = 0.0062 * x + 0.0179$

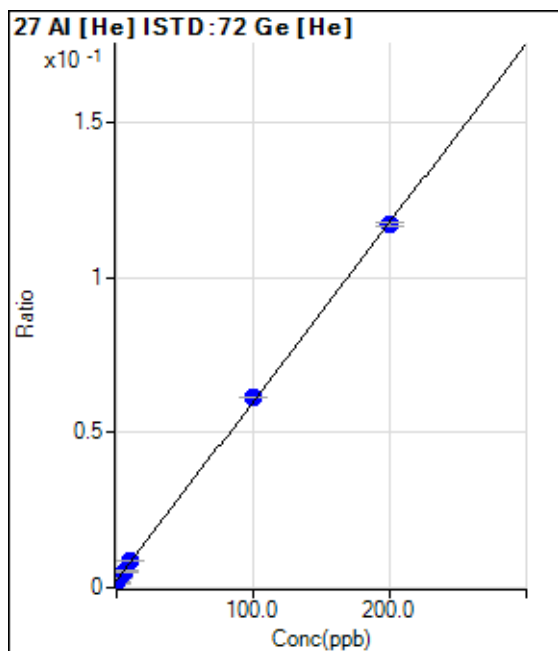
R = 0.9994

DL = 0.5362

BEC = 2.894

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	-1.125	876.70	0.0017	P	17.7
2	<input type="checkbox"/>	2.000	1.065	1540.09	0.0030	P	4.9
3	<input type="checkbox"/>	5.000	5.041	2726.91	0.0052	P	7.8
4	<input type="checkbox"/>	10.000	10.849	4477.27	0.0086	P	4.8
5	<input type="checkbox"/>	100.000	102.408	31700.01	0.0613	P	0.2
6	<input type="checkbox"/>	200.000	198.762	58988.67	0.1169	P	1.1
7	<input type="checkbox"/>	1.000					

$y = 5.7615E-004 * x + 0.0023$

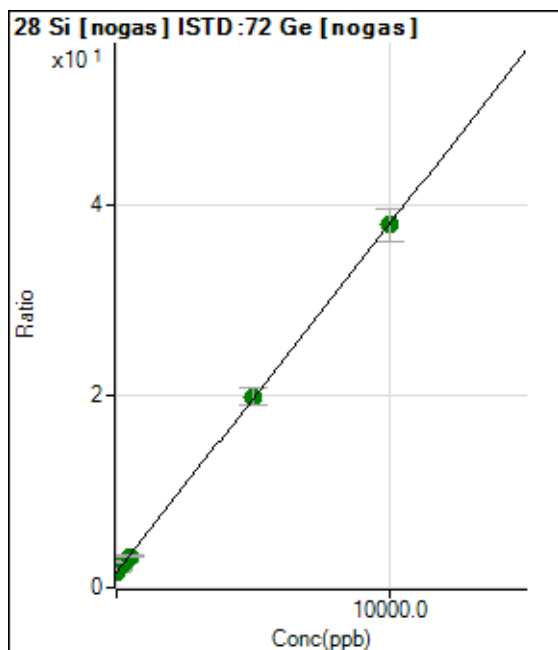
R = 0.9998

DL = 1.561

BEC = 4.061

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	2988508.29	1.5926	A	4.5
2	<input type="checkbox"/>	100.000	88.539	3621399.22	1.9143	A	2.8
3	<input type="checkbox"/>	250.000	286.255	4597909.52	2.6326	A	8.2
4	<input type="checkbox"/>	500.000	463.045	6242705.53	3.2750	A	2.7
5	<input type="checkbox"/>	5000.000	5043.257	35851291.13	19.9160	A	9.6
6	<input type="checkbox"/>	10000.00	9979.427	67341304.00	37.8504	A	8.8
7	<input type="checkbox"/>	5.000					

$y = 0.0036 * x + 1.5926$

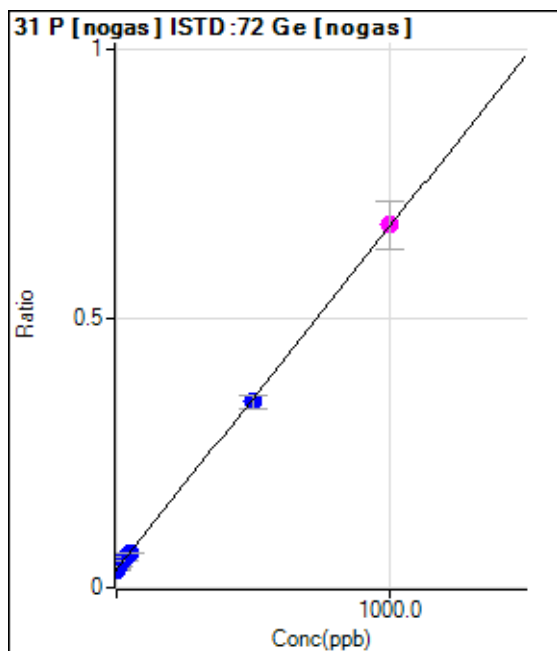
R = 1.0000

DL = 58.95

BEC = 438.3

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	63499.74	0.0338	P	2.9
2	<input type="checkbox"/>	10.000	8.691	74472.50	0.0394	P	3.1
3	<input type="checkbox"/>	25.000	30.111	92518.23	0.0530	P	10.0
4	<input type="checkbox"/>	50.000	48.383	123271.38	0.0647	P	2.8
5	<input type="checkbox"/>	500.000	489.279	622927.15	0.3457	P	7.7
6	<input type="checkbox"/>	1000.000	1005.327	1197004.36	0.6747	M	13.5
7	<input type="checkbox"/>	5.000					

$y = 6.3744E-004 * x + 0.0338$

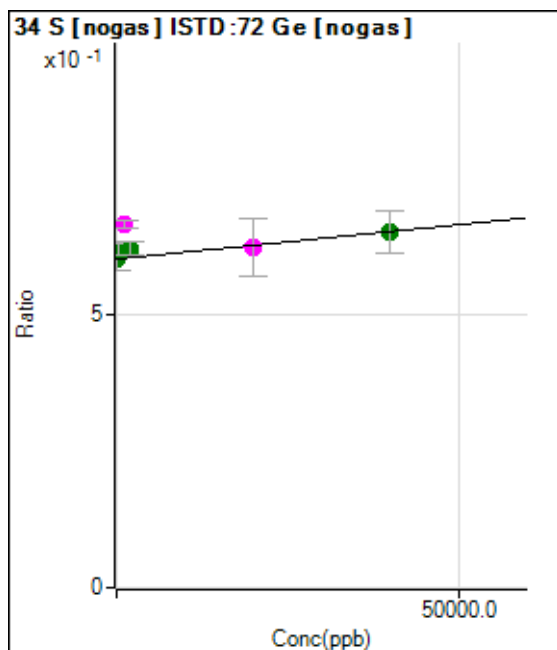
R = 0.9999

DL = 4.595

BEC = 53.07

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	1125789.02	0.6001	A	7.3
2	<input type="checkbox"/>	400.000	14774.253	1170286.68	0.6186	A	3.1
3	<input type="checkbox"/>	1000.000	49635.707	1160575.06	0.6623	M	2.0
4	<input type="checkbox"/>	2000.000	14716.398	1179025.58	0.6186	A	4.1
5	<input type="checkbox"/>	20000.00	16292.045	1112553.93	0.6205	M	17.0
6	<input type="checkbox"/>	40000.00	39858.522	1154244.39	0.6500	A	12.2
7	<input type="checkbox"/>	100.000					

$y = 1.2521E-006 * x + 0.6001$

R = 0.3818

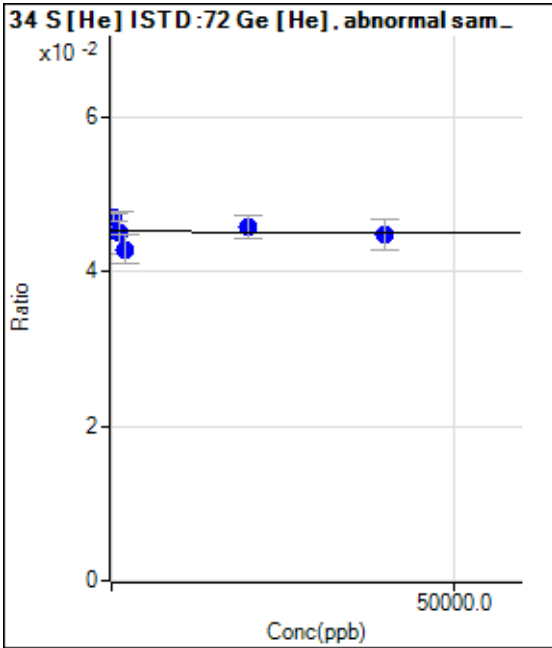
DL = 1.049E+05

BEC = 4.793E+05

Weight: <None>

Min Conc: <None>

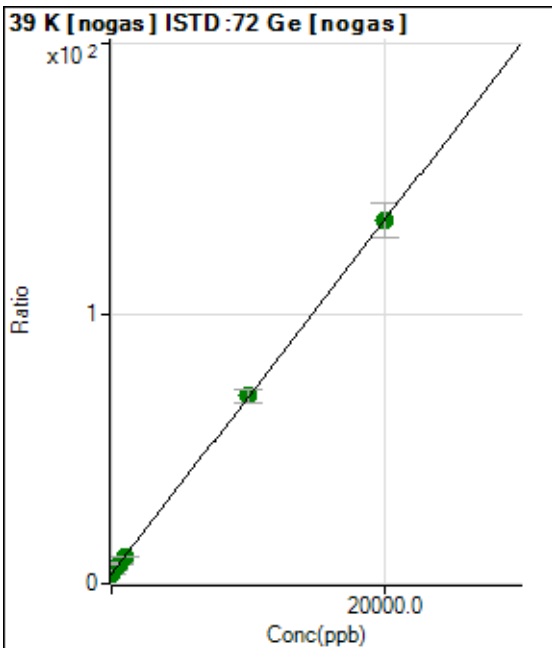
Calibration for 037_ICV.d



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	23451.35	0.0452	P	2.9
2	<input type="checkbox"/>	400.000	-602879.22	24486.10	0.0469	P	2.0
3	<input type="checkbox"/>	1000.000	70732.064	23384.36	0.0450	P	11.9
4	<input type="checkbox"/>	2000.000	787470.95	22383.17	0.0429	P	8.9
5	<input type="checkbox"/>	20000.00	-199896.13	23651.83	0.0458	P	6.3
6	<input type="checkbox"/>	40000.00	114964.01	22650.81	0.0449	P	8.9
7	<input type="checkbox"/>	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>

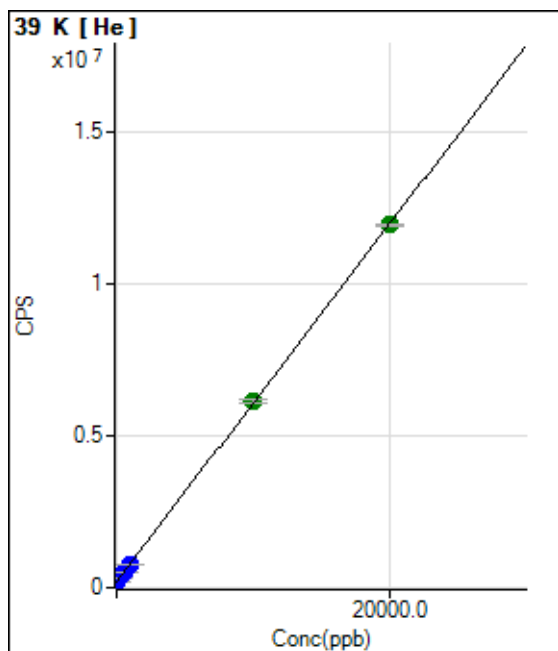


	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	6864279.58	3.6574	A	3.3
2	<input type="checkbox"/>	200.000	188.609	9256871.82	4.8929	A	2.5
3	<input type="checkbox"/>	500.000	548.396	12662283.87	7.2497	A	8.1
4	<input type="checkbox"/>	1000.000	961.711	18972057.19	9.9571	A	4.5
5	<input type="checkbox"/>	10000.00	10060.746	125430344.4	69.5604	A	6.3
6	<input type="checkbox"/>	20000.00	19970.446	239214855.3	134.474	A	9.4
7	<input type="checkbox"/>	100.000					

$y = 0.0066 * x + 3.6574$
 $R = 1.0000$
 $DL = 55.46$
 $BEC = 558.3$

Weight: <None>
Min Conc: <None>





	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	190358.59		P	0.4
2	<input type="checkbox"/>	200.000	204.893	310887.96		P	0.5
3	<input type="checkbox"/>	500.000	510.218	490497.48		P	1.4
4	<input type="checkbox"/>	1000.000	1005.057	781588.92		P	1.0
5	<input type="checkbox"/>	10000.00	10088.213	6124808.24		A	2.7
6	<input type="checkbox"/>	20000.00	19955.336	11929200.65		A	0.7
7	<input type="checkbox"/>	100.000					

$y = 588.2558 * x + 190358.5867$

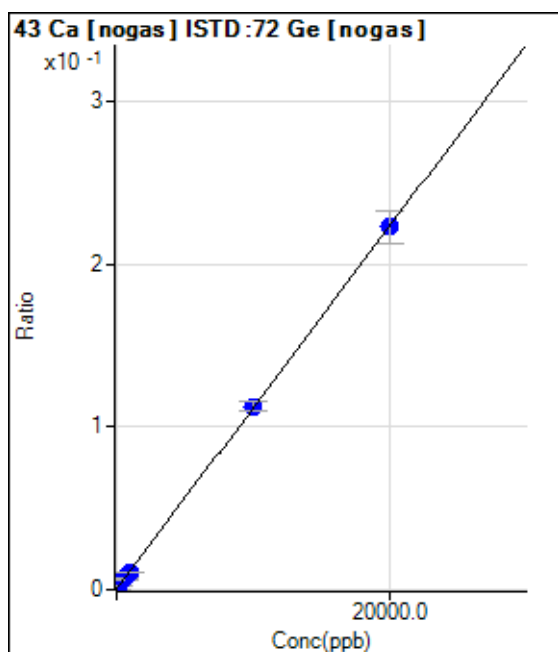
R = 1.0000

DL = 3.531

BEC = 323.6

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	566.69	0.0003	P	5.3
2	<input type="checkbox"/>	200.000	184.930	4473.93	0.0024	P	2.5
3	<input type="checkbox"/>	500.000	558.139	11397.00	0.0065	P	8.8
4	<input type="checkbox"/>	1000.000	951.045	20795.14	0.0109	P	3.2
5	<input type="checkbox"/>	10000.00	10067.598	203196.20	0.1126	P	4.9
6	<input type="checkbox"/>	20000.00	19967.346	396770.80	0.2230	P	8.9
7	<input type="checkbox"/>	100.000					

$y = 1.1155E-005 * x + 3.0198E-004$

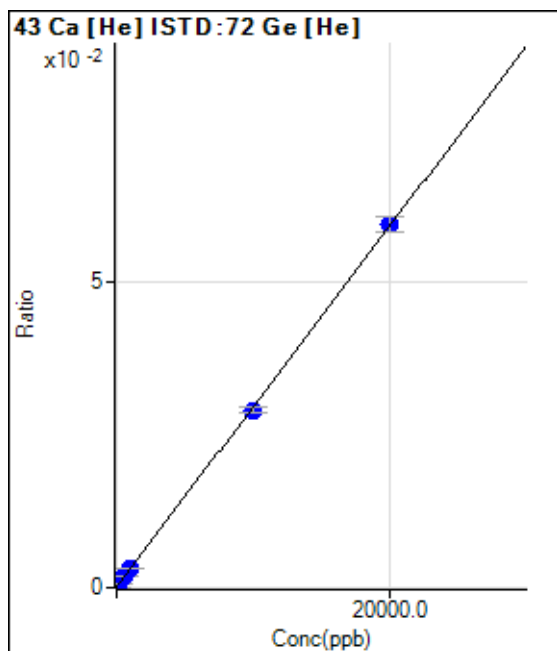
R = 1.0000

DL = 4.297

BEC = 27.07

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	46.67	0.0001	P	76.0
2	<input type="checkbox"/>	200.000	181.610	326.68	0.0006	P	13.1
3	<input type="checkbox"/>	500.000	572.945	926.71	0.0018	P	3.6
4	<input type="checkbox"/>	1000.000	1048.042	1660.10	0.0032	P	2.5
5	<input type="checkbox"/>	10000.00	9815.092	15019.64	0.0291	P	3.1
6	<input type="checkbox"/>	20000.00	20088.412	29987.67	0.0594	P	4.2
7	<input type="checkbox"/>	100.000					

$y = 2.9523E-006 * x + 9.0224E-005$

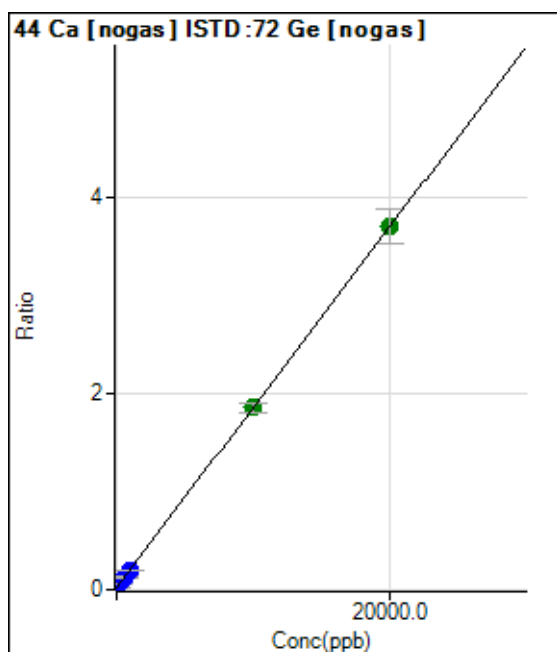
R = 0.9999

DL = 69.71

BEC = 30.56

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	42729.09	0.0228	P	2.0
2	<input type="checkbox"/>	200.000	190.817	109558.92	0.0579	P	0.5
3	<input type="checkbox"/>	500.000	548.656	216204.96	0.1238	P	7.9
4	<input type="checkbox"/>	1000.000	910.672	363014.16	0.1904	P	1.9
5	<input type="checkbox"/>	10000.00	9973.558	3352957.03	1.8587	A	5.6
6	<input type="checkbox"/>	20000.00	20016.563	6593824.28	3.7074	A	9.6
7	<input type="checkbox"/>	100.000					

$y = 1.8408E-004 * x + 0.0228$

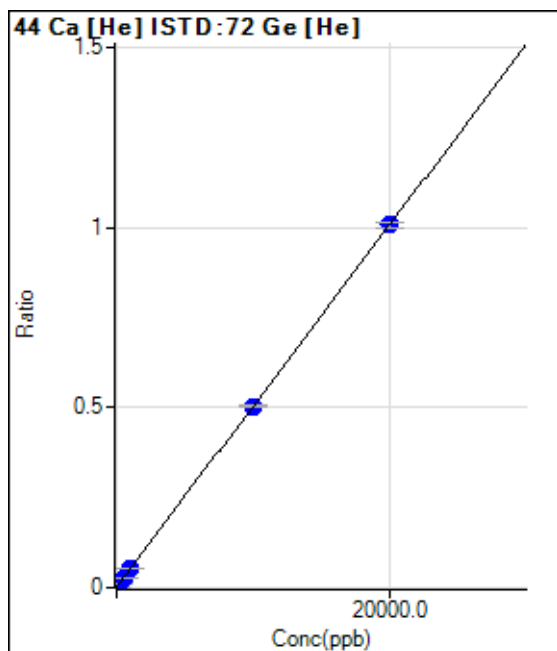
R = 1.0000

DL = 7.411

BEC = 123.6

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	930.04	0.0018	P	15.1
2	<input type="checkbox"/>	200.000	202.195	6237.80	0.0119	P	3.5
3	<input type="checkbox"/>	500.000	533.082	14859.50	0.0286	P	1.9
4	<input type="checkbox"/>	1000.000	989.565	26852.90	0.0515	P	0.8
5	<input type="checkbox"/>	10000.00	9972.577	259831.59	0.5028	P	1.0
6	<input type="checkbox"/>	20000.00	20013.384	508448.03	1.0072	P	1.9
7	<input type="checkbox"/>	100.000					

$y = 5.0239E-005 * x + 0.0018$

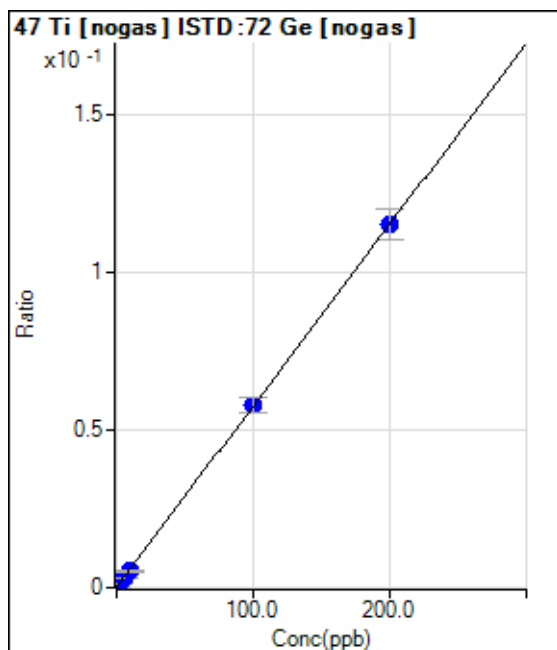
R = 1.0000

DL = 16.19

BEC = 35.65

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	243.33	0.0001	P	15.8
2	<input type="checkbox"/>	2.000	1.909	2323.51	0.0012	P	7.1
3	<input type="checkbox"/>	5.000	5.039	5300.83	0.0030	P	4.8
4	<input type="checkbox"/>	10.000	8.912	9999.50	0.0052	P	3.9
5	<input type="checkbox"/>	100.000	100.382	104047.02	0.0578	P	8.0
6	<input type="checkbox"/>	200.000	199.863	204384.95	0.1149	P	8.6
7	<input type="checkbox"/>	1.000					

$y = 5.7404E-004 * x + 1.2981E-004$

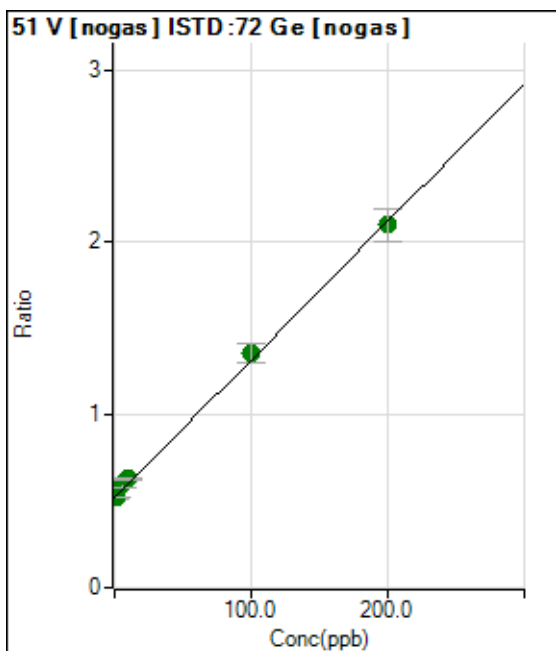
R = 1.0000

DL = 0.1071

BEC = 0.2261

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	973352.01	0.5186	A	3.6
2	<input type="checkbox"/>	2.000	0.726	992743.81	0.5244	A	0.5
3	<input type="checkbox"/>	5.000	10.179	1049303.90	0.6002	A	6.9
4	<input type="checkbox"/>	10.000	13.993	1202722.23	0.6308	A	1.5
5	<input type="checkbox"/>	100.000	104.470	2443220.95	1.3560	A	7.9
6	<input type="checkbox"/>	200.000	197.449	3738628.21	2.1013	A	8.9
7	<input type="checkbox"/>	1.000					

$y = 0.0080 * x + 0.5186$

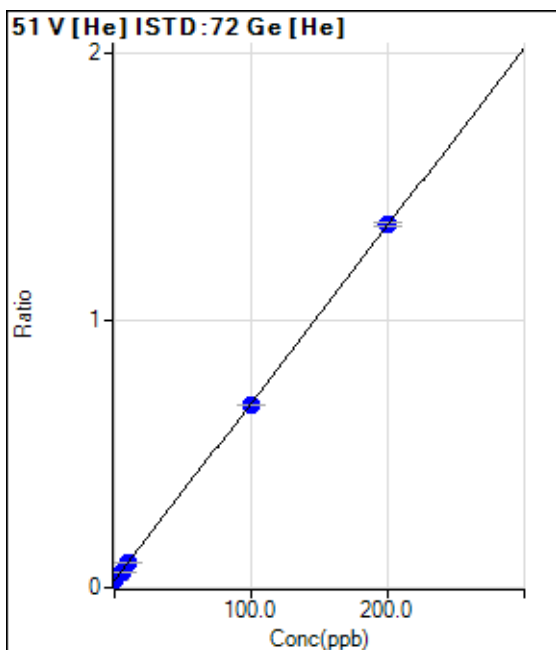
R = 0.9993

DL = 6.928

BEC = 64.7

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.276	15040.75	0.0290	P	1.5
2	<input type="checkbox"/>	2.000	2.104	21447.62	0.0411	P	1.4
3	<input type="checkbox"/>	5.000	4.907	31047.74	0.0597	P	1.9
4	<input type="checkbox"/>	10.000	10.126	49171.78	0.0943	P	1.9
5	<input type="checkbox"/>	100.000	99.185	354062.86	0.6851	P	0.4
6	<input type="checkbox"/>	200.000	200.403	684827.94	1.3566	P	0.9
7	<input type="checkbox"/>	1.000					

$y = 0.0066 * x + 0.0272$

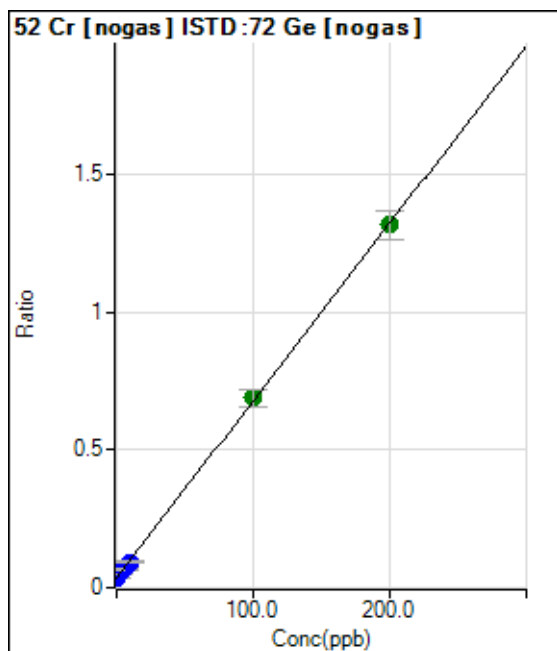
R = 1.0000

DL = 0.1988

BEC = 4.093

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	66739.61	0.0356	P	2.4
2	<input type="checkbox"/>	2.000	1.738	88416.23	0.0467	P	3.6
3	<input type="checkbox"/>	5.000	5.139	119858.17	0.0686	P	8.5
4	<input type="checkbox"/>	10.000	9.086	179237.09	0.0940	P	3.5
5	<input type="checkbox"/>	100.000	101.626	1241556.41	0.6896	A	9.5
6	<input type="checkbox"/>	200.000	199.232	2345522.93	1.3178	A	8.2
7	<input type="checkbox"/>	1.000					

$y = 0.0064 * x + 0.0356$

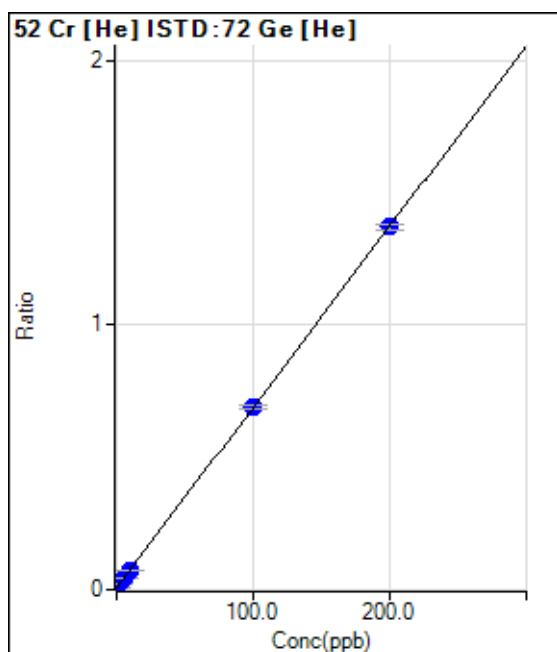
R = 0.9999

DL = 0.4027

BEC = 5.524

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	3415.36	0.0066	P	2.4
2	<input type="checkbox"/>	2.000	1.985	10503.13	0.0201	P	3.7
3	<input type="checkbox"/>	5.000	5.021	21249.10	0.0409	P	2.5
4	<input type="checkbox"/>	10.000	9.670	37855.72	0.0726	P	2.9
5	<input type="checkbox"/>	100.000	100.347	357538.18	0.6919	P	1.6
6	<input type="checkbox"/>	200.000	199.843	692221.06	1.3714	P	1.5
7	<input type="checkbox"/>	1.000					

$y = 0.0068 * x + 0.0066$

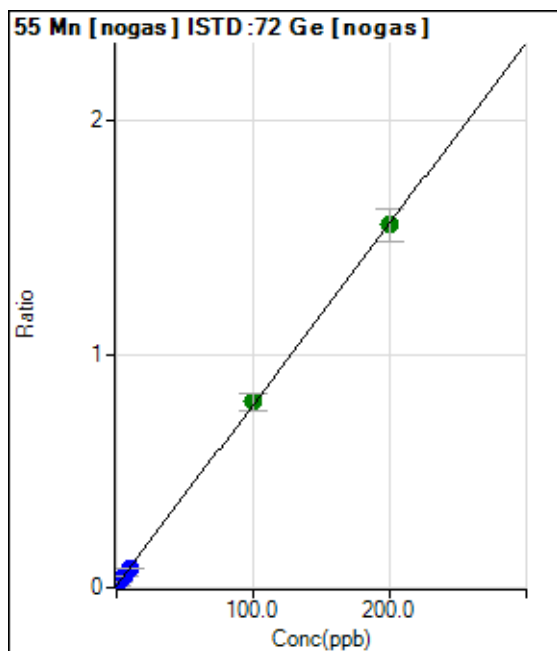
R = 1.0000

DL = 0.06953

BEC = 0.9635

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	17158.12	0.0091	P	2.3
2	<input type="checkbox"/>	2.000	1.960	46037.52	0.0243	P	1.8
3	<input type="checkbox"/>	5.000	5.320	87862.00	0.0504	P	10.8
4	<input type="checkbox"/>	10.000	9.474	157405.88	0.0826	P	2.8
5	<input type="checkbox"/>	100.000	101.464	1432237.27	0.7956	A	9.8
6	<input type="checkbox"/>	200.000	199.287	2764379.44	1.5538	A	8.8
7	<input type="checkbox"/>	1.000					

$y = 0.0078 * x + 0.0091$

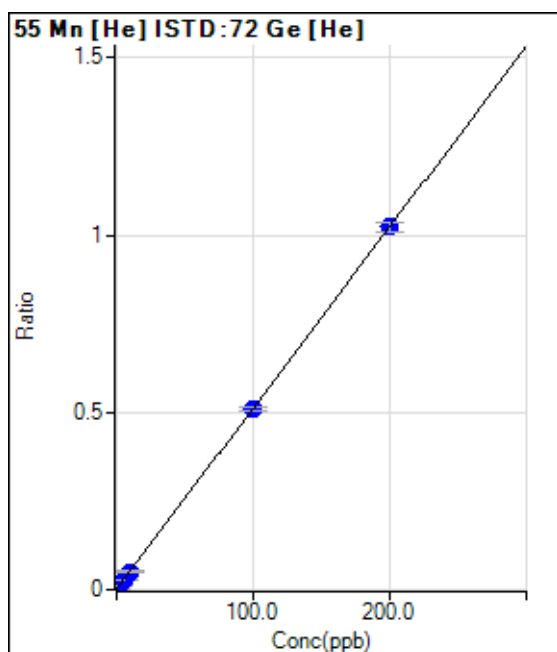
R = 1.0000

DL = 0.08273

BEC = 1.179

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	660.02	0.0013	P	13.6
2	<input type="checkbox"/>	2.000	2.007	6011.09	0.0115	P	3.6
3	<input type="checkbox"/>	5.000	5.179	14402.41	0.0277	P	3.2
4	<input type="checkbox"/>	10.000	9.798	26719.73	0.0513	P	2.5
5	<input type="checkbox"/>	100.000	99.645	263358.30	0.5097	P	3.1
6	<input type="checkbox"/>	200.000	200.183	516137.23	1.0226	P	2.5
7	<input type="checkbox"/>	1.000					

$y = 0.0051 * x + 0.0013$

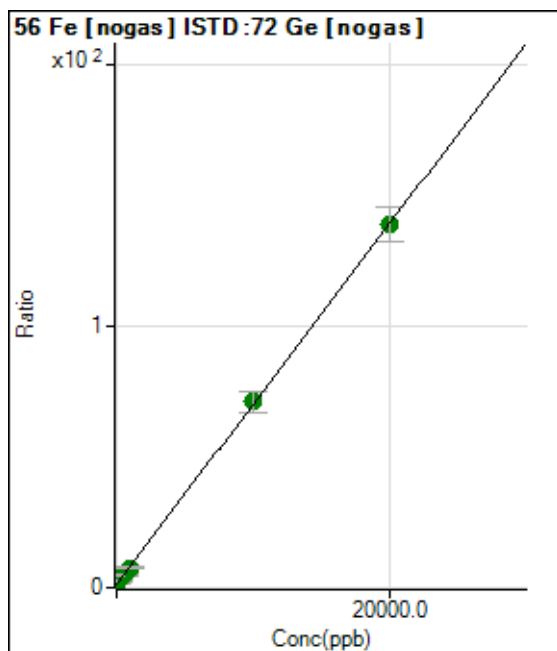
R = 1.0000

DL = 0.1021

BEC = 0.2495

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	2476830.65	1.3197	A	3.3
2	<input type="checkbox"/>	200.000	183.257	4885262.74	2.5816	A	1.4
3	<input type="checkbox"/>	500.000	510.670	8443879.36	4.8361	A	8.7
4	<input type="checkbox"/>	1000.000	915.735	14537134.18	7.6253	A	4.1
5	<input type="checkbox"/>	10000.00	10121.957	127746352.8	71.0184	A	10.9
6	<input type="checkbox"/>	20000.00	19943.135	246578680.5	138.646	A	9.5
7	<input type="checkbox"/>	100.000					

$y = 0.0069 * x + 1.3197$

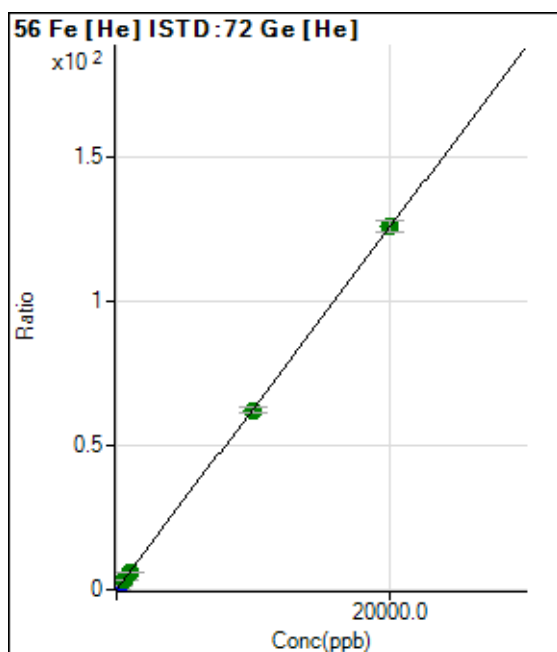
R = 1.0000

DL = 19.2

BEC = 191.7

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	17485.07	0.0337	P	3.4
2	<input type="checkbox"/>	200.000	192.973	649848.27	1.2456	P	2.1
3	<input type="checkbox"/>	500.000	498.893	1646848.05	3.1668	A	1.0
4	<input type="checkbox"/>	1000.000	970.909	3195893.60	6.1312	A	2.1
5	<input type="checkbox"/>	10000.00	9926.651	32232500.35	62.3749	A	4.0
6	<input type="checkbox"/>	20000.00	20038.227	63531460.72	125.877	A	3.1
7	<input type="checkbox"/>	100.000					

$y = 0.0063 * x + 0.0337$

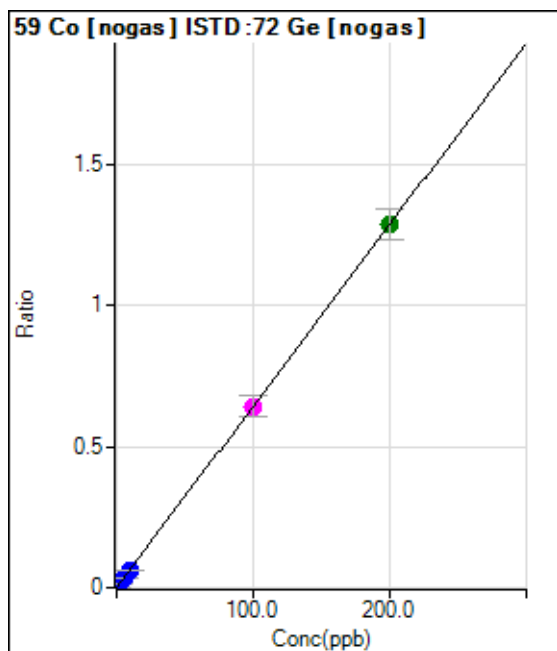
R = 1.0000

DL = 0.541

BEC = 5.365

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	500.01	0.0003	P	14.1
2	<input type="checkbox"/>	2.000	1.921	23889.06	0.0126	P	4.4
3	<input type="checkbox"/>	5.000	5.159	58473.54	0.0335	P	8.3
4	<input type="checkbox"/>	10.000	9.346	115204.37	0.0604	P	3.0
5	<input type="checkbox"/>	100.000	100.065	1158451.81	0.6444	M	12.0
6	<input type="checkbox"/>	200.000	199.997	2291259.55	1.2877	A	8.6
7	<input type="checkbox"/>	1.000					

$y = 0.0064 * x + 2.6589E-004$

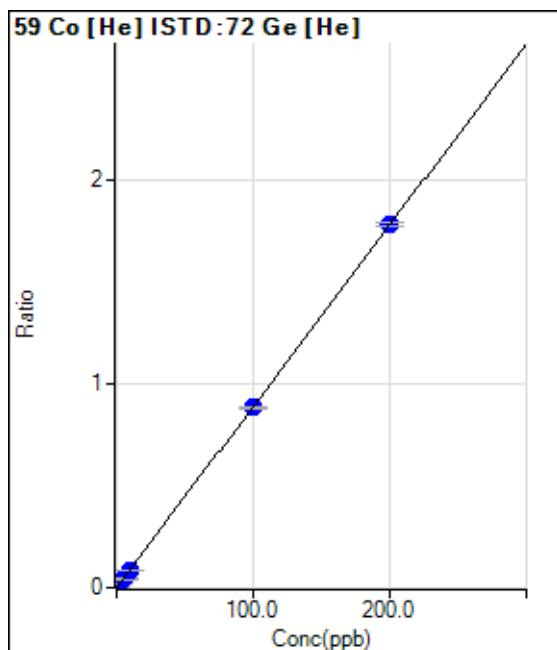
R = 1.0000

DL = 0.0175

BEC = 0.04131

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	70.00	0.0001	P	36.8
2	<input type="checkbox"/>	2.000	2.029	9482.54	0.0182	P	2.8
3	<input type="checkbox"/>	5.000	4.851	22497.32	0.0433	P	5.8
4	<input type="checkbox"/>	10.000	9.821	45600.08	0.0875	P	1.5
5	<input type="checkbox"/>	100.000	99.481	457212.52	0.8847	P	1.6
6	<input type="checkbox"/>	200.000	200.272	899016.42	1.7810	P	1.1
7	<input type="checkbox"/>	1.000					

$y = 0.0089 * x + 1.3462E-004$

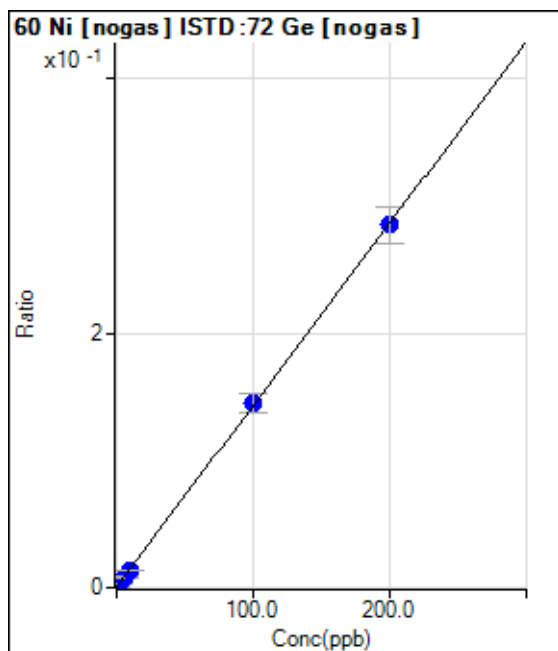
R = 1.0000

DL = 0.01673

BEC = 0.01514

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	-0.072	673.35	0.0004	P	5.5
2	<input type="checkbox"/>	2.000	1.818	5784.32	0.0031	P	6.4
3	<input type="checkbox"/>	5.000	5.334	14125.59	0.0081	P	7.4
4	<input type="checkbox"/>	10.000	9.122	25721.66	0.0135	P	2.0
5	<input type="checkbox"/>	100.000	101.523	261778.15	0.1455	P	9.9
6	<input type="checkbox"/>	200.000	199.276	506789.40	0.2851	P	10.1
7	<input type="checkbox"/>	1.000					

$y = 0.0014 * x + 4.6197E-004$

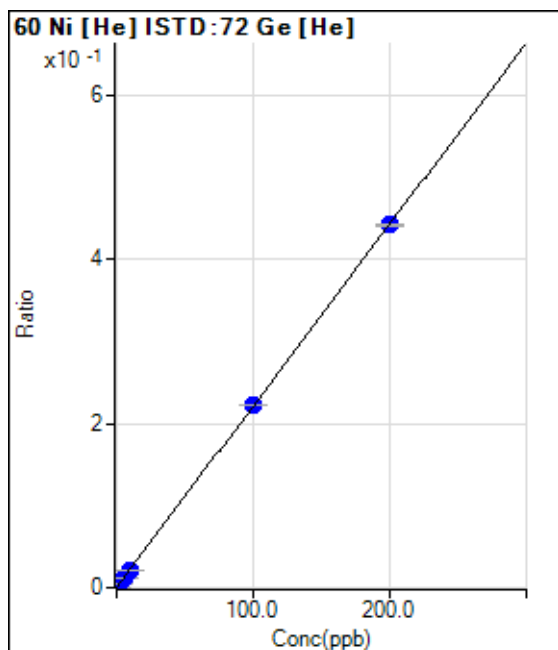
R = 0.9999

DL = 0.04163

BEC = 0.3235

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	-0.042	113.33	0.0002	P	21.5
2	<input type="checkbox"/>	2.000	2.091	2580.22	0.0049	P	11.3
3	<input type="checkbox"/>	5.000	5.010	5927.71	0.0114	P	1.3
4	<input type="checkbox"/>	10.000	9.684	11333.58	0.0217	P	2.7
5	<input type="checkbox"/>	100.000	100.483	115082.74	0.2227	P	0.9
6	<input type="checkbox"/>	200.000	199.773	223360.56	0.4424	P	0.8
7	<input type="checkbox"/>	1.000					

$y = 0.0022 * x + 3.1067E-004$

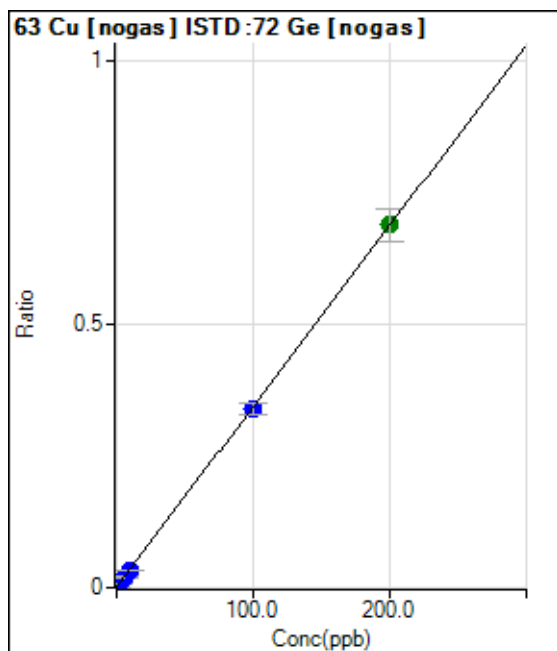
R = 1.0000

DL = 0.06368

BEC = 0.1404

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	2193.50	0.0012	P	4.3
2	<input type="checkbox"/>	2.000	1.930	14726.02	0.0078	P	1.6
3	<input type="checkbox"/>	5.000	5.350	34075.36	0.0195	P	7.1
4	<input type="checkbox"/>	10.000	9.358	63340.02	0.0332	P	3.3
5	<input type="checkbox"/>	100.000	99.082	614355.38	0.3407	P	6.3
6	<input type="checkbox"/>	200.000	200.483	1223838.81	0.6881	A	9.3
7	<input type="checkbox"/>	1.000					

$y = 0.0034 * x + 0.0012$

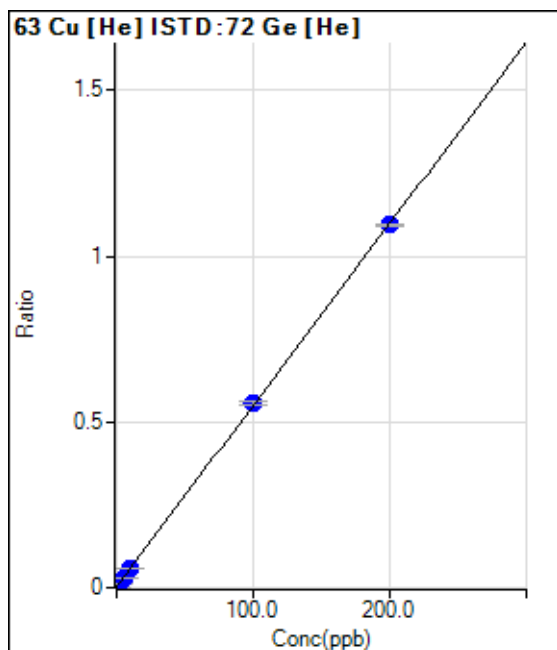
R = 1.0000

DL = 0.04365

BEC = 0.3409

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	-0.183	806.70	0.0016	P	5.3
2	<input type="checkbox"/>	2.000	1.826	6551.25	0.0125	P	2.5
3	<input type="checkbox"/>	5.000	4.926	15353.26	0.0295	P	1.8
4	<input type="checkbox"/>	10.000	9.836	29400.50	0.0564	P	2.6
5	<input type="checkbox"/>	100.000	101.167	287558.28	0.5565	P	2.0
6	<input type="checkbox"/>	200.000	199.428	552505.11	1.0945	P	0.7
7	<input type="checkbox"/>	1.000					

$y = 0.0055 * x + 0.0026$

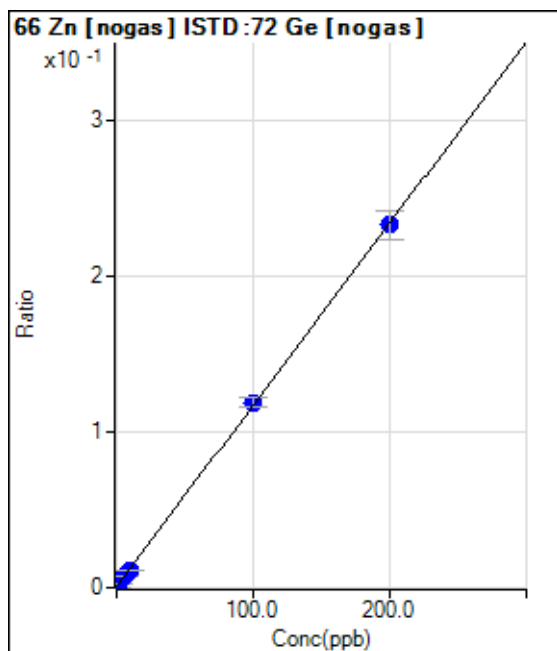
R = 1.0000

DL = 0.04537

BEC = 0.4664

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	-0.212	726.69	0.0004	P	13.3
2	<input type="checkbox"/>	2.000	1.710	4960.74	0.0026	P	6.0
3	<input type="checkbox"/>	5.000	5.494	12291.01	0.0070	P	5.7
4	<input type="checkbox"/>	10.000	9.170	21562.99	0.0113	P	2.0
5	<input type="checkbox"/>	100.000	101.612	214462.06	0.1189	P	6.1
6	<input type="checkbox"/>	200.000	199.226	413931.83	0.2325	P	8.0
7	<input type="checkbox"/>	1.000					

$y = 0.0012 * x + 6.3315E-004$

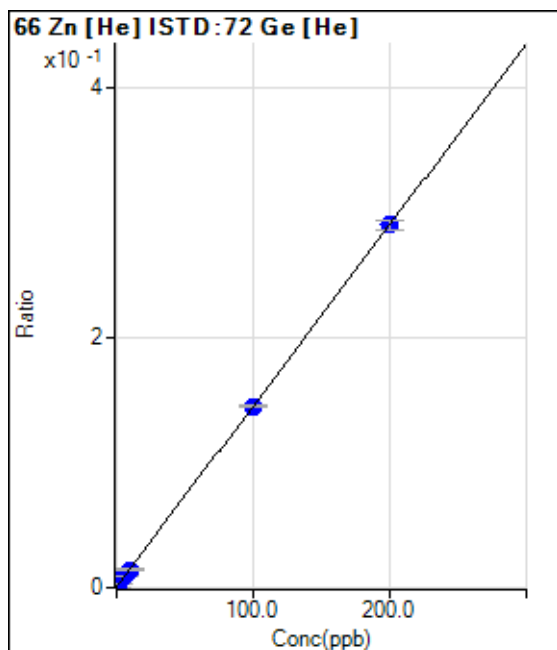
R = 0.9999

DL = 0.1327

BEC = 0.5439

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	-0.126	220.01	0.0004	P	23.2
2	<input type="checkbox"/>	2.000	2.011	1836.79	0.0035	P	8.3
3	<input type="checkbox"/>	5.000	5.593	4530.62	0.0087	P	3.9
4	<input type="checkbox"/>	10.000	9.588	7558.32	0.0145	P	2.0
5	<input type="checkbox"/>	100.000	99.854	75094.49	0.1453	P	1.5
6	<input type="checkbox"/>	200.000	200.079	146647.77	0.2905	P	2.9
7	<input type="checkbox"/>	1.000					

$y = 0.0014 * x + 6.0547E-004$

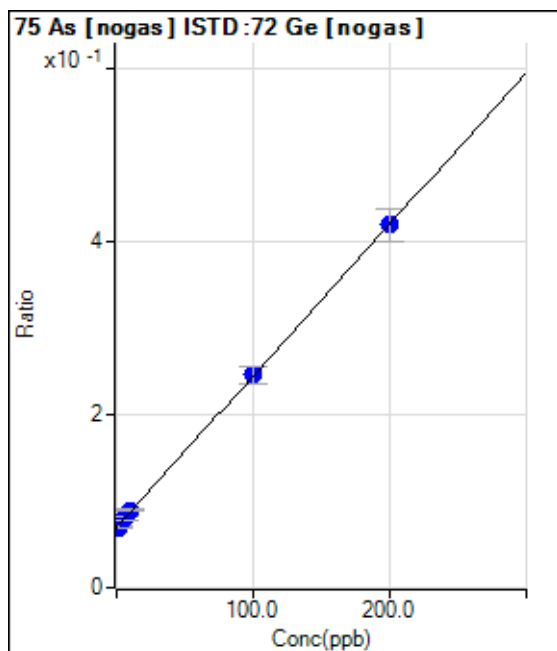
R = 1.0000

DL = 0.2037

BEC = 0.4178

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	-0.609	129079.57	0.0688	P	0.9
2	<input type="checkbox"/>	2.000	0.132	132547.00	0.0701	P	1.9
3	<input type="checkbox"/>	5.000	5.877	140049.46	0.0801	P	6.6
4	<input type="checkbox"/>	10.000	11.280	170831.95	0.0896	P	3.0
5	<input type="checkbox"/>	100.000	100.775	444200.19	0.2465	P	7.9
6	<input type="checkbox"/>	200.000	199.545	746818.32	0.4197	P	8.7
7	<input type="checkbox"/>	1.000					

$y = 0.0018 * x + 0.0698$

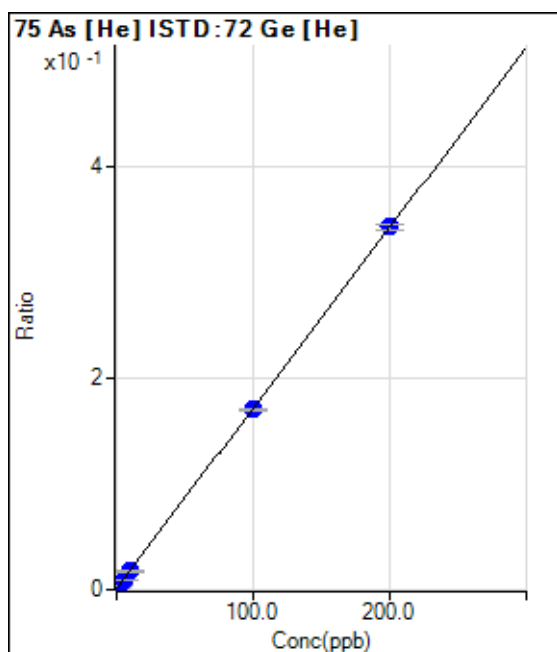
R = 0.9999

DL = 1.085

BEC = 39.82

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	578.90	0.0011	P	19.3
2	<input type="checkbox"/>	2.000	1.897	2270.15	0.0044	P	5.8
3	<input type="checkbox"/>	5.000	4.964	4980.70	0.0096	P	5.3
4	<input type="checkbox"/>	10.000	9.556	9075.61	0.0174	P	2.0
5	<input type="checkbox"/>	100.000	99.121	87913.76	0.1701	P	1.8
6	<input type="checkbox"/>	200.000	200.464	173107.76	0.3429	P	1.8
7	<input type="checkbox"/>	1.000					

$y = 0.0017 * x + 0.0011$

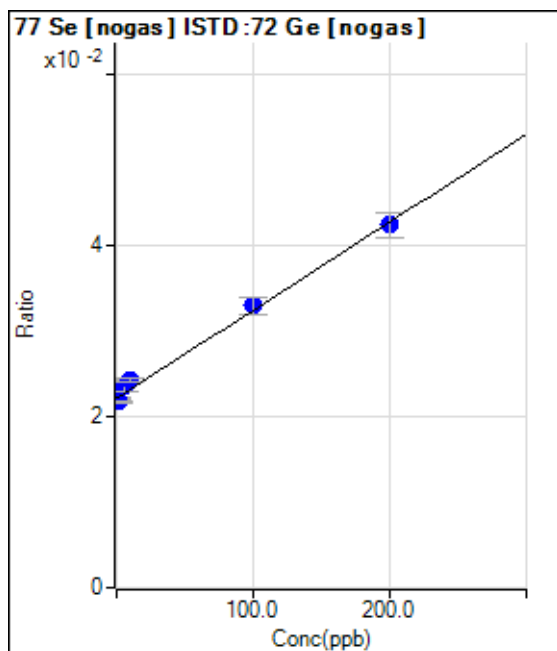
R = 1.0000

DL = 0.3801

BEC = 0.6551

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	41564.34	0.0221	P	0.8
2	<input type="checkbox"/>	2.000	-3.979	41126.58	0.0217	P	0.6
3	<input type="checkbox"/>	5.000	14.895	41417.39	0.0237	P	5.5
4	<input type="checkbox"/>	10.000	21.462	46419.13	0.0243	P	1.9
5	<input type="checkbox"/>	100.000	104.935	59423.58	0.0329	P	5.8
6	<input type="checkbox"/>	200.000	196.772	75489.12	0.0424	P	7.2
7	<input type="checkbox"/>	1.000					

$y = 1.0293E-004 * x + 0.0221$

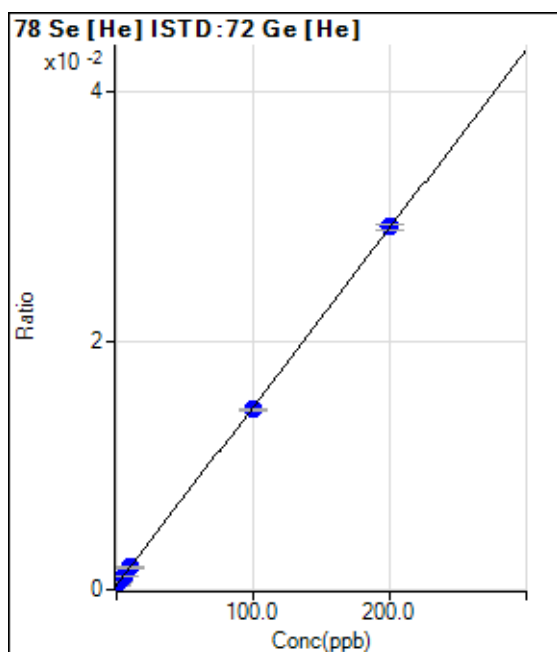
R = 0.9964

DL = 5.234

BEC = 215

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.270	202.00	0.0004	P	12.2
2	<input type="checkbox"/>	2.000	2.279	353.34	0.0007	P	11.3
3	<input type="checkbox"/>	5.000	5.201	570.01	0.0011	P	5.0
4	<input type="checkbox"/>	10.000	10.042	933.36	0.0018	P	2.2
5	<input type="checkbox"/>	100.000	98.437	7475.55	0.0145	P	1.0
6	<input type="checkbox"/>	200.000	200.772	14708.61	0.0291	P	1.9
7	<input type="checkbox"/>	1.000					

$y = 1.4339E-004 * x + 3.5057E-004$

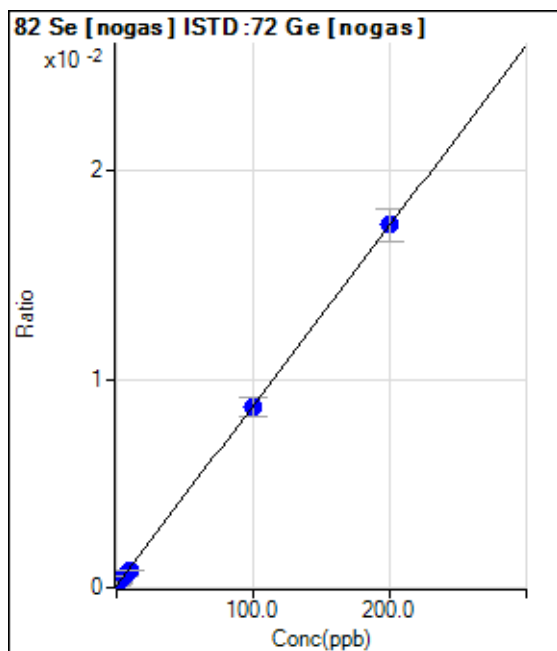
R = 1.0000

DL = 0.9909

BEC = 2.445

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	176.67	0.0001	P	18.2
2	<input type="checkbox"/>	2.000	1.814	476.68	0.0003	P	16.9
3	<input type="checkbox"/>	5.000	4.959	916.70	0.0005	P	1.3
4	<input type="checkbox"/>	10.000	8.703	1616.76	0.0008	P	6.5
5	<input type="checkbox"/>	100.000	99.435	15640.24	0.0087	P	10.3
6	<input type="checkbox"/>	200.000	200.350	30963.39	0.0174	P	9.2
7	<input type="checkbox"/>	1.000					

$y = 8.6417E-005 * x + 9.4285E-005$

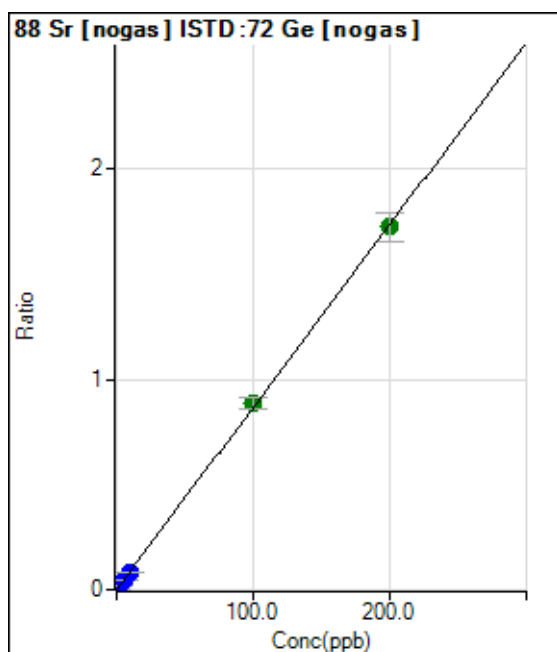
R = 1.0000

DL = 0.5945

BEC = 1.091

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	1106.72	0.0006	P	9.0
2	<input type="checkbox"/>	2.000	1.905	32342.81	0.0171	P	3.8
3	<input type="checkbox"/>	5.000	5.159	79077.47	0.0453	P	9.0
4	<input type="checkbox"/>	10.000	9.119	151812.40	0.0796	P	2.6
5	<input type="checkbox"/>	100.000	102.130	1596452.06	0.8856	A	6.9
6	<input type="checkbox"/>	200.000	198.976	3070311.62	1.7249	A	8.2
7	<input type="checkbox"/>	1.000					

$y = 0.0087 * x + 5.8970E-004$

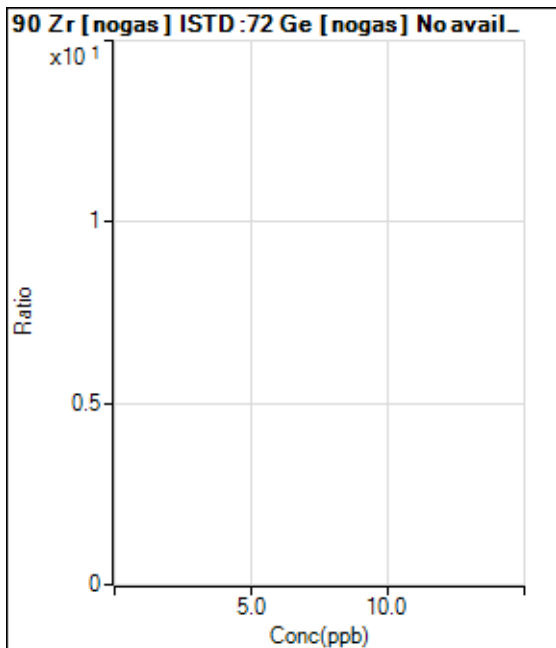
R = 0.9999

DL = 0.01828

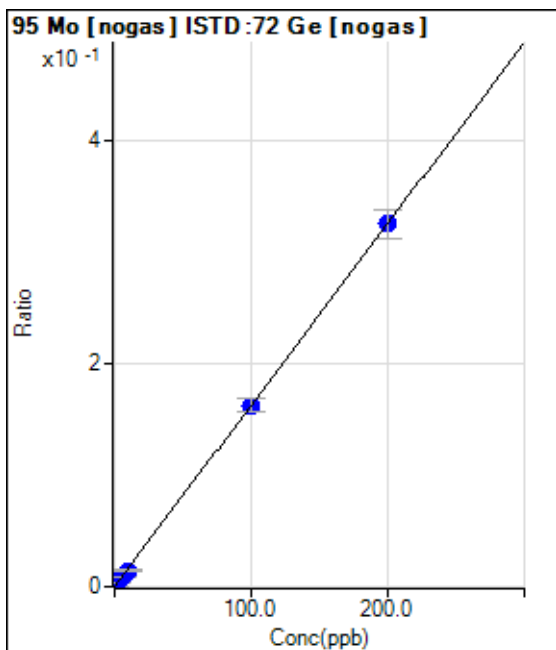
BEC = 0.06805

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000					
2	<input type="checkbox"/>	2.000					
3	<input type="checkbox"/>	5.000					
4	<input type="checkbox"/>	10.000					
5	<input type="checkbox"/>	100.000					
6	<input type="checkbox"/>	200.000					
7	<input type="checkbox"/>	1.000					



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	293.34	0.0002	P	14.4
2	<input type="checkbox"/>	2.000	1.883	6081.15	0.0032	P	5.9
3	<input type="checkbox"/>	5.000	4.986	14429.35	0.0083	P	7.4
4	<input type="checkbox"/>	10.000	8.872	27781.92	0.0146	P	4.3
5	<input type="checkbox"/>	100.000	100.120	293413.28	0.1629	P	8.2
6	<input type="checkbox"/>	200.000	199.998	578753.78	0.3252	P	8.3
7	<input type="checkbox"/>	1.000					

$y = 0.0016 * x + 1.5600E-004$

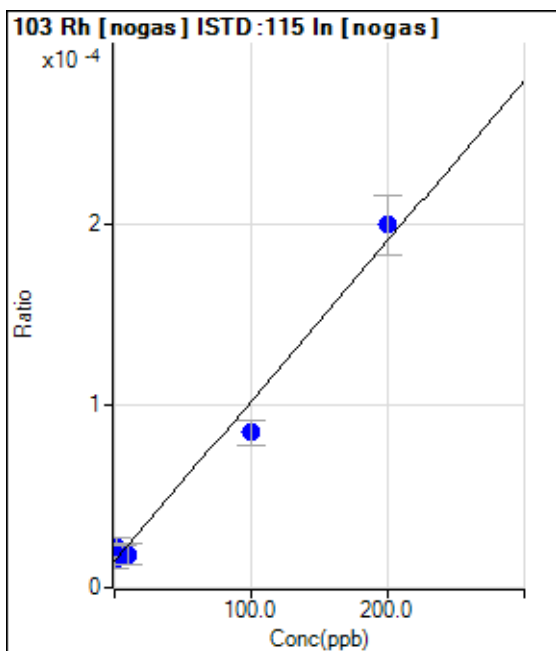
R = 1.0000

DL = 0.0414

BEC = 0.09599

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	23.33	0.0000	P	49.2
2	<input type="checkbox"/>	2.000	8.814	36.67	0.0000	P	43.4
3	<input type="checkbox"/>	5.000	5.945	30.00	0.0000	P	32.4
4	<input type="checkbox"/>	10.000	3.970	30.00	0.0000	P	64.2
5	<input type="checkbox"/>	100.000	80.491	130.00	0.0001	P	15.7
6	<input type="checkbox"/>	200.000	209.964	303.34	0.0002	P	16.8
7	<input type="checkbox"/>	1.000					

$y = 8.8107E-007 * x + 1.4580E-005$

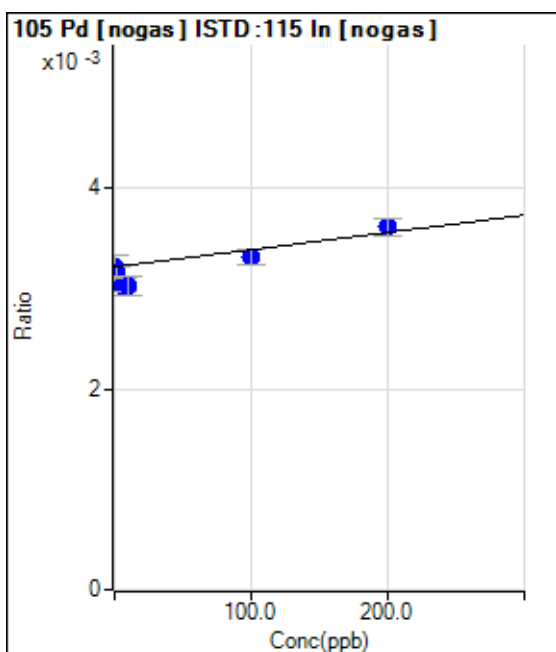
R = 0.9921

DL = 24.44

BEC = 16.55

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	5137.51	0.0032	P	7.6
2	<input type="checkbox"/>	2.000	-37.326	5207.53	0.0032	P	4.4
3	<input type="checkbox"/>	5.000	-104.611	4617.33	0.0030	P	3.9
4	<input type="checkbox"/>	10.000	-108.722	4940.78	0.0030	P	5.9
5	<input type="checkbox"/>	100.000	54.967	5007.46	0.0033	P	4.7
6	<input type="checkbox"/>	200.000	231.586	5514.28	0.0036	P	4.6
7	<input type="checkbox"/>	1.000					

$y = 1.7200E-006 * x + 0.0032$

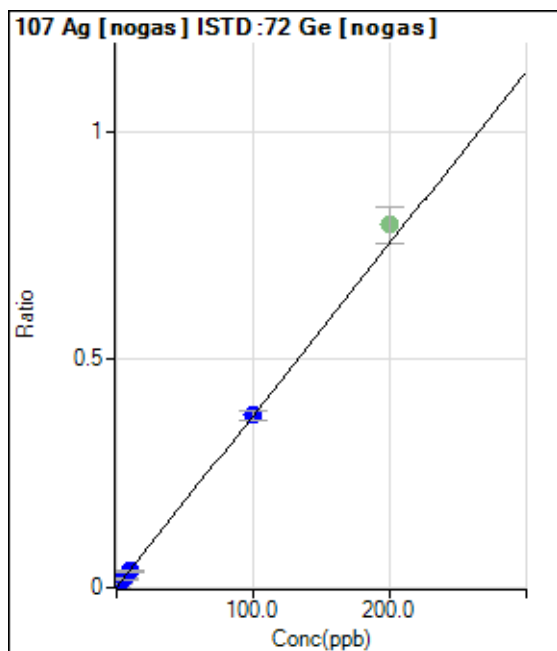
R = 0.9299

DL = 427.4

BEC = 1869

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	1356.74	0.0007	P	8.3
2	<input type="checkbox"/>	2.000	1.710	13538.66	0.0072	P	5.3
3	<input type="checkbox"/>	5.000	4.923	33602.33	0.0193	P	10.2
4	<input type="checkbox"/>	10.000	9.342	68436.02	0.0359	P	2.9
5	<input type="checkbox"/>	100.000	100.075	680705.95	0.3775	P	6.3
6	<input checked="" type="checkbox"/>	200.000		1412684.98	0.7945	A	10.0
7	<input type="checkbox"/>	1.000					

$y = 0.0038 * x + 7.2341E-004$

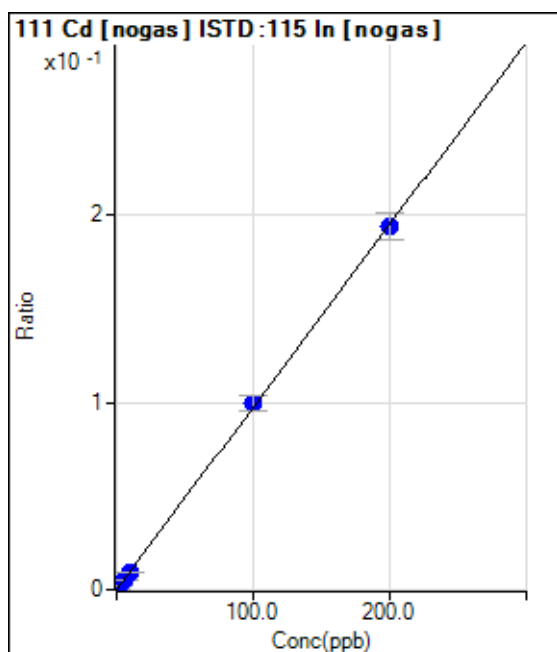
R = 1.0000

DL = 0.0476

BEC = 0.1921

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	16.67	0.0000	P	36.2
2	<input type="checkbox"/>	2.000	1.858	3010.30	0.0018	P	8.1
3	<input type="checkbox"/>	5.000	5.180	7635.07	0.0051	P	14.3
4	<input type="checkbox"/>	10.000	9.260	14723.02	0.0090	P	1.1
5	<input type="checkbox"/>	100.000	102.369	149928.74	0.0999	P	8.7
6	<input type="checkbox"/>	200.000	198.849	294697.88	0.1940	P	7.3
7	<input type="checkbox"/>	1.000					

$y = 9.7542E-004 * x + 1.0487E-005$

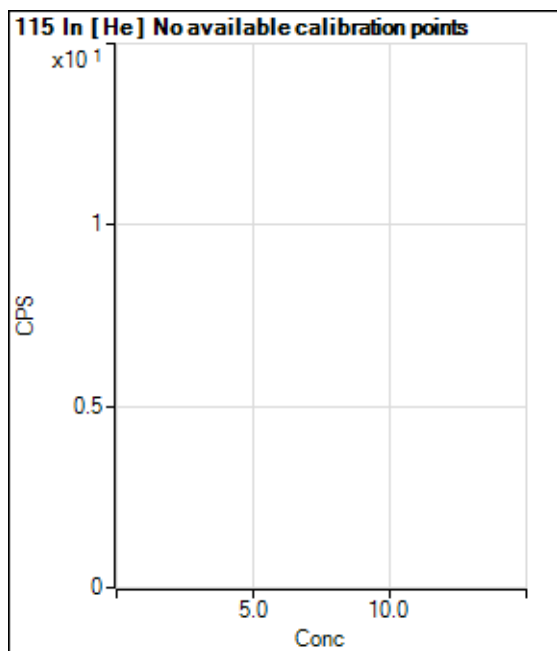
R = 0.9999

DL = 0.01167

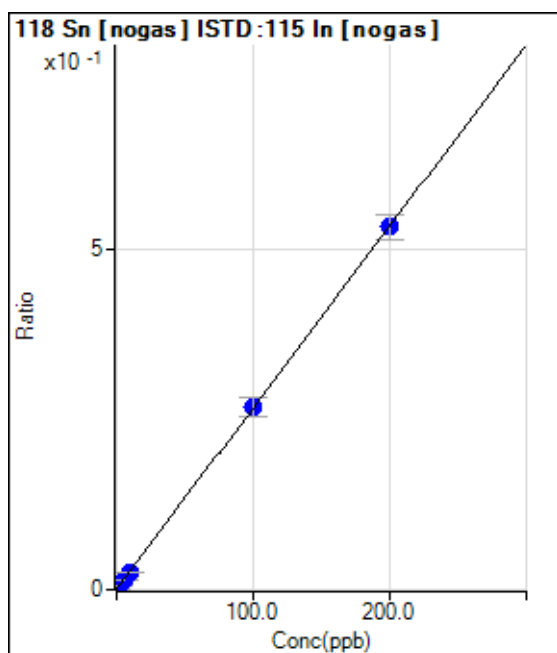
BEC = 0.01075

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>			665907.86		P	1.4
2	<input type="checkbox"/>			674499.80		P	2.0
3	<input type="checkbox"/>			684267.03		P	2.1
4	<input type="checkbox"/>			678346.22		P	0.9
5	<input type="checkbox"/>			656280.76		P	1.3
6	<input type="checkbox"/>			642562.83		P	1.2
7	<input type="checkbox"/>						



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	1167.04	0.0007	P	49.2
2	<input type="checkbox"/>	2.000	1.713	8752.31	0.0053	P	4.3
3	<input type="checkbox"/>	5.000	5.059	21446.86	0.0142	P	13.6
4	<input type="checkbox"/>	10.000	8.995	40210.03	0.0247	P	4.4
5	<input type="checkbox"/>	100.000	100.705	404027.42	0.2693	P	10.3
6	<input type="checkbox"/>	200.000	199.699	810644.75	0.5334	P	6.9
7	<input type="checkbox"/>	1.000					

$y = 0.0027 * x + 7.2560E-004$

R = 1.0000

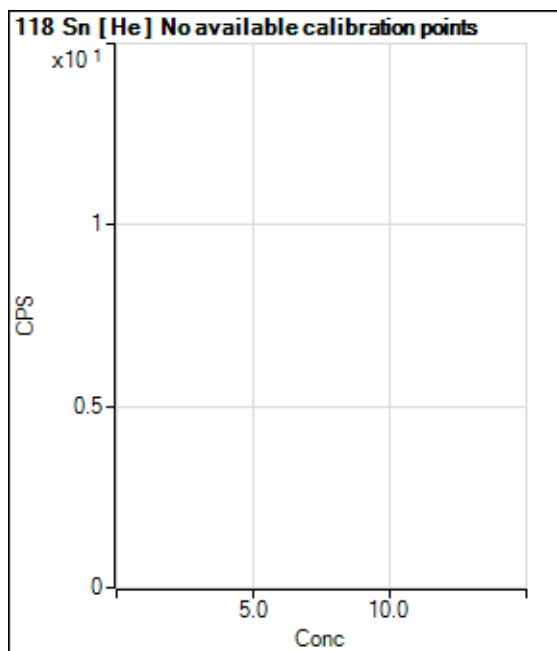
DL = 0.4016

BEC = 0.272

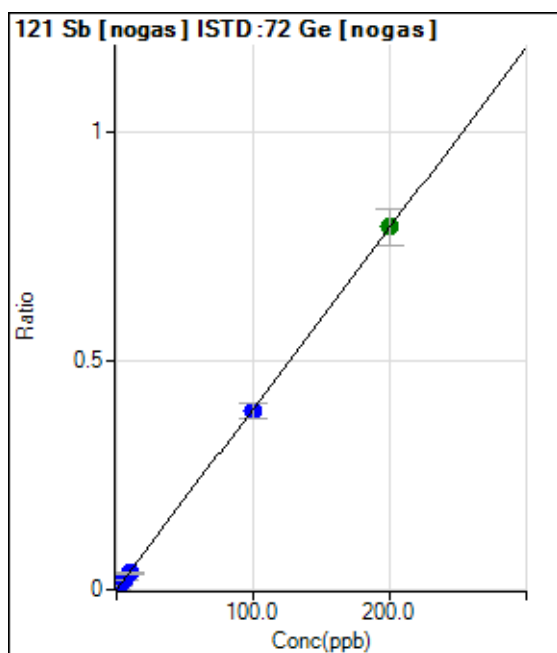
Weight: <None>

Min Conc: <None>





	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>			390.01		P	7.7
2	<input type="checkbox"/>			3787.14		P	0.7
3	<input type="checkbox"/>			9872.96		P	2.7
4	<input type="checkbox"/>			18660.15		P	1.2
5	<input type="checkbox"/>			183964.87		P	2.1
6	<input type="checkbox"/>			362158.38		P	1.6
7	<input type="checkbox"/>						



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	780.03	0.0004	P	4.2
2	<input type="checkbox"/>	2.000	1.742	13812.31	0.0073	P	4.7
3	<input type="checkbox"/>	5.000	4.877	34424.20	0.0197	P	7.5
4	<input type="checkbox"/>	10.000	8.985	68538.26	0.0359	P	2.0
5	<input type="checkbox"/>	100.000	98.819	704796.21	0.3912	P	8.0
6	<input type="checkbox"/>	200.000	200.647	1411708.10	0.7939	A	9.8
7	<input type="checkbox"/>	1.000					

$y = 0.0040 * x + 4.1565E-004$

R = 1.0000

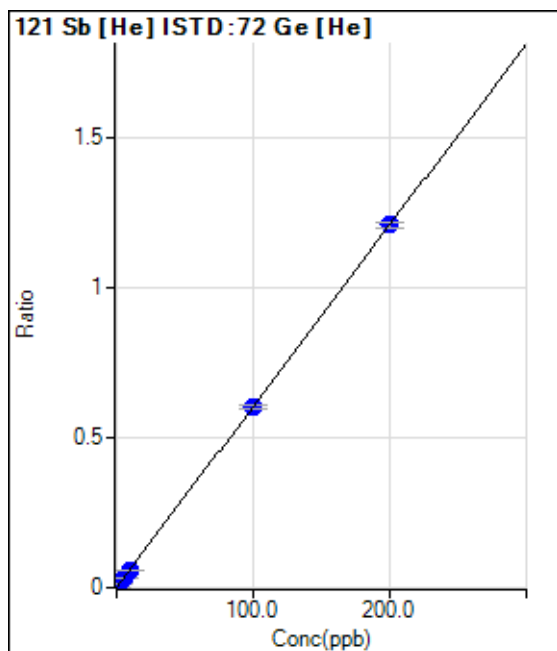
DL = 0.01317

BEC = 0.1051

Weight: <None>

Min Conc: <None>





	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	370.01	0.0007	P	4.8
2	<input type="checkbox"/>	2.000	1.848	6181.20	0.0119	P	4.5
3	<input type="checkbox"/>	5.000	4.798	15406.99	0.0296	P	1.7
4	<input type="checkbox"/>	10.000	9.513	30256.43	0.0580	P	1.4
5	<input type="checkbox"/>	100.000	99.557	310412.42	0.6007	P	1.4
6	<input type="checkbox"/>	200.000	200.252	609499.08	1.2075	P	1.8
7	<input type="checkbox"/>	1.000					

$y = 0.0060 * x + 7.1277E-004$

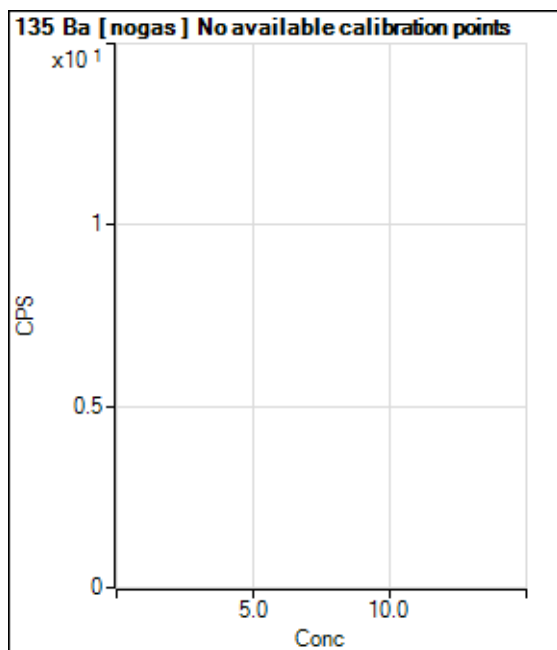
R = 1.0000

DL = 0.01694

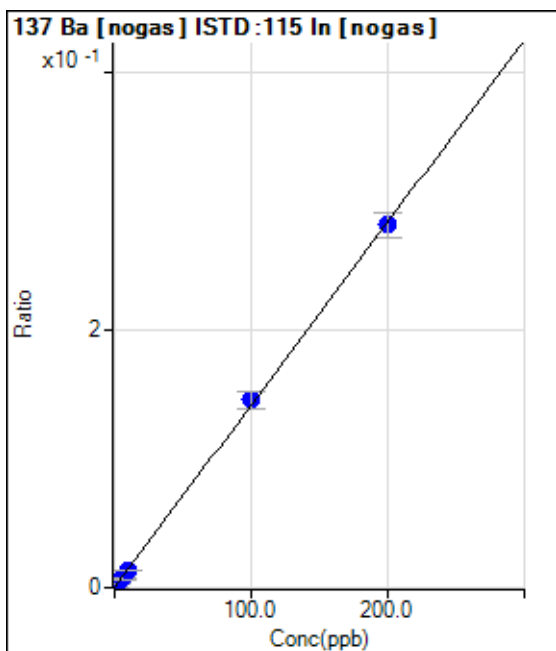
BEC = 0.1183

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>			176.67		P	56.7
2	<input type="checkbox"/>			2633.57		P	1.6
3	<input type="checkbox"/>			6477.98		P	4.2
4	<input type="checkbox"/>			12604.77		P	3.9
5	<input type="checkbox"/>			127713.08		P	1.5
6	<input type="checkbox"/>			248026.74		P	1.0
7	<input type="checkbox"/>						



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	270.01	0.0002	P	25.3
2	<input type="checkbox"/>	2.000	1.788	4470.65	0.0027	P	2.8
3	<input type="checkbox"/>	5.000	4.889	10720.14	0.0071	P	11.9
4	<input type="checkbox"/>	10.000	9.090	21226.57	0.0131	P	4.4
5	<input type="checkbox"/>	100.000	102.730	218709.74	0.1458	P	9.7
6	<input type="checkbox"/>	200.000	198.685	428231.79	0.2817	P	6.7
7	<input type="checkbox"/>	1.000					

$y = 0.0014 * x + 1.6888E-004$

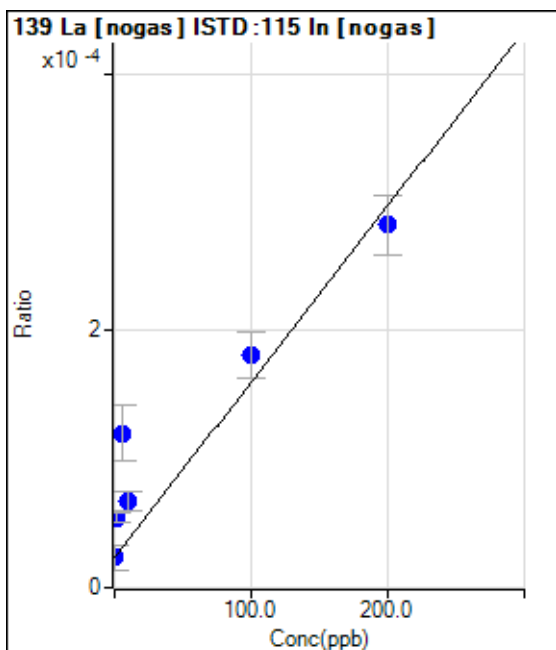
R = 0.9998

DL = 0.0904

BEC = 0.1192

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	36.67	0.0000	P	84.5
2	<input type="checkbox"/>	2.000	22.910	90.00	0.0001	P	13.9
3	<input type="checkbox"/>	5.000	71.061	180.00	0.0001	P	35.4
4	<input type="checkbox"/>	10.000	32.071	110.00	0.0001	P	23.3
5	<input type="checkbox"/>	100.000	115.377	270.01	0.0002	P	20.3
6	<input type="checkbox"/>	200.000	189.347	433.35	0.0003	P	16.7
7	<input type="checkbox"/>	1.000					

$y = 1.3681E-006 * x + 2.3212E-005$

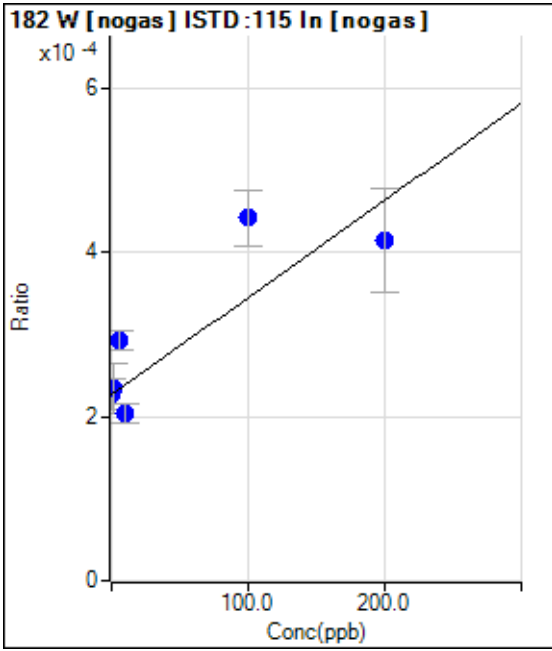
R = 0.9505

DL = 43

BEC = 16.97

Weight: <None>

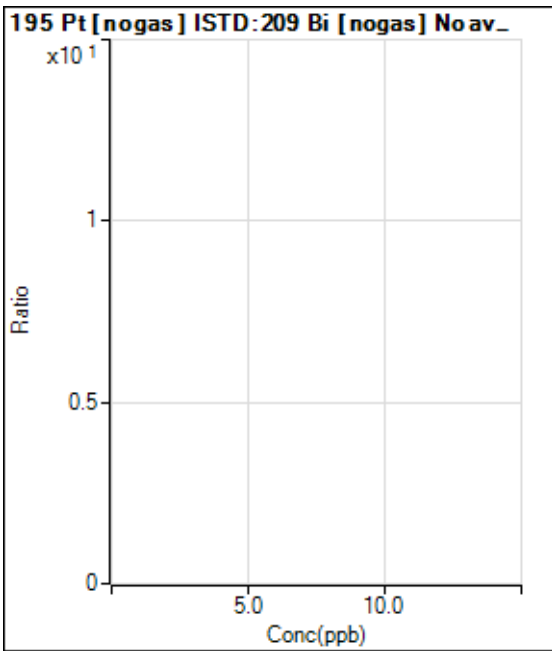
Min Conc: <None>



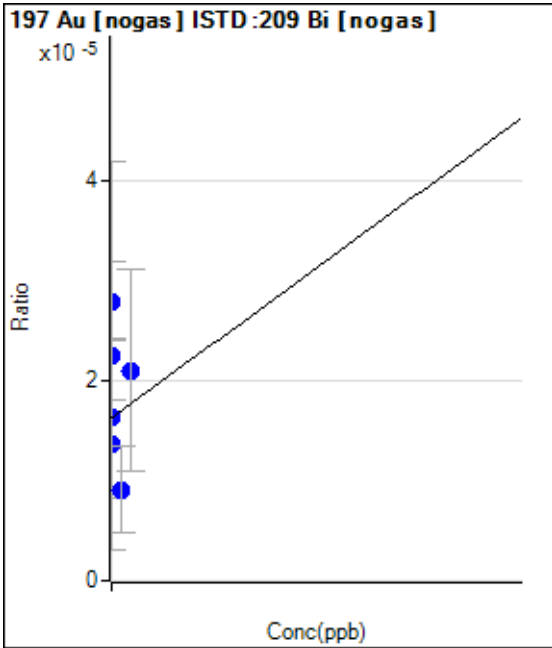
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	363.34	0.0002	P	17.2
2	<input type="checkbox"/>	2.000	6.546	386.68	0.0002	P	25.9
3	<input type="checkbox"/>	5.000	55.474	446.68	0.0003	P	7.8
4	<input type="checkbox"/>	10.000	-19.639	333.34	0.0002	P	12.2
5	<input type="checkbox"/>	100.000	181.876	673.36	0.0004	P	15.5
6	<input type="checkbox"/>	200.000	159.236	626.69	0.0004	P	30.5
7	<input type="checkbox"/>	1.000					

$y = 1.1845E-006 * x + 2.2716E-004$
 R = 0.8450
 DL = 98.81
 BEC = 191.8

Weight: <None>
 Min Conc: <None>



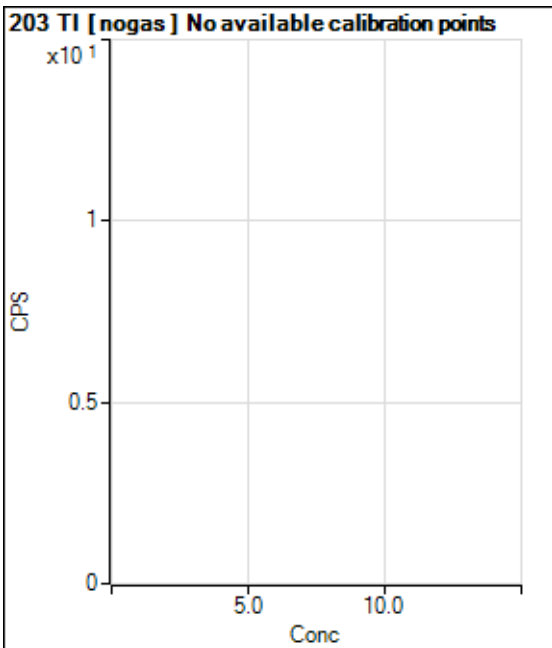
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000					
2	<input type="checkbox"/>	2.000					
3	<input type="checkbox"/>	5.000					
4	<input type="checkbox"/>	10.000					
5	<input type="checkbox"/>	100.000					
6	<input type="checkbox"/>	200.000					
7	<input type="checkbox"/>	1.000					



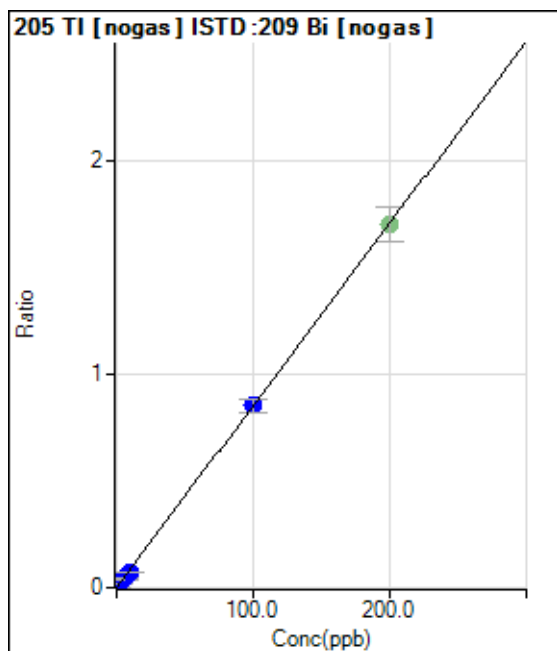
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	20.00	0.0000	P	98.4
2	<input type="checkbox"/>	2.000	-395.234	16.67	0.0000	P	66.1
3	<input type="checkbox"/>	5.000	1705.538	30.00	0.0000	P	28.3
4	<input type="checkbox"/>	10.000	902.778	26.67	0.0000	P	173.
5	<input type="checkbox"/>	100.000	-1045.009	10.00	0.0000	P	94.9
6	<input type="checkbox"/>	200.000	689.325	23.33	0.0000	P	96.0
7	<input type="checkbox"/>	1.000					

$y = 6.8328E-009 * x + 1.6248E-005$
 $R = -0.1190$
 $DL = 7016$
 $BEC = 2378$

Weight: <None>
 Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>			150.00		P	13.3
2	<input type="checkbox"/>			7501.83		P	1.9
3	<input type="checkbox"/>			19044.69		P	2.9
4	<input type="checkbox"/>			36628.21		P	5.6
5	<input type="checkbox"/>			387442.38		P	0.6
6	<input type="checkbox"/>			765767.49		P	1.5
7	<input type="checkbox"/>						



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	466.68	0.0004	P	25.6
2	<input type="checkbox"/>	2.000	1.697	18030.17	0.0149	P	5.7
3	<input type="checkbox"/>	5.000	4.900	44658.26	0.0422	P	9.2
4	<input type="checkbox"/>	10.000	8.659	89140.06	0.0743	P	6.1
5	<input type="checkbox"/>	100.000	100.145	924218.06	0.8550	P	7.1
6	<input checked="" type="checkbox"/>	200.000		1853604.71	1.7013	A	9.5
7	<input type="checkbox"/>	1.000					

$y = 0.0085 * x + 3.8216E-004$

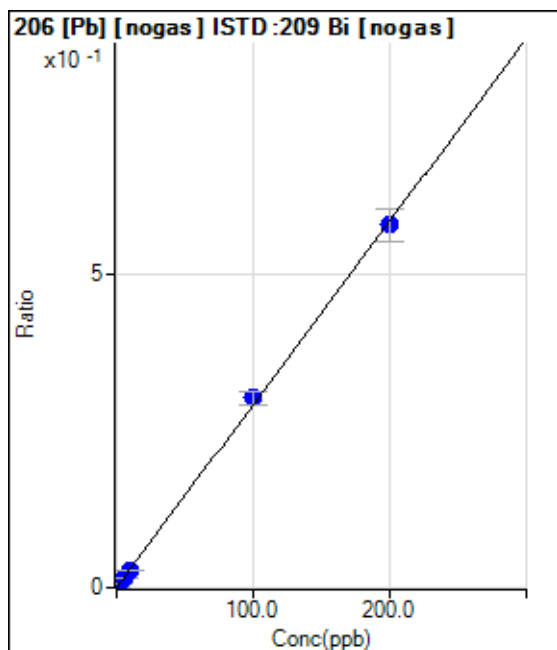
R = 0.9999

DL = 0.03441

BEC = 0.04478

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	136.67	0.0001	P	22.1
2	<input type="checkbox"/>	2.000	1.850	6678.14	0.0055	P	6.7
3	<input type="checkbox"/>	5.000	5.225	16208.27	0.0153	P	11.1
4	<input type="checkbox"/>	10.000	9.222	32375.92	0.0270	P	4.8
5	<input type="checkbox"/>	100.000	103.703	326772.18	0.3022	P	6.6
6	<input type="checkbox"/>	200.000	198.183	629482.73	0.5775	P	8.9
7	<input type="checkbox"/>	1.000					

$y = 0.0029 * x + 1.1258E-004$

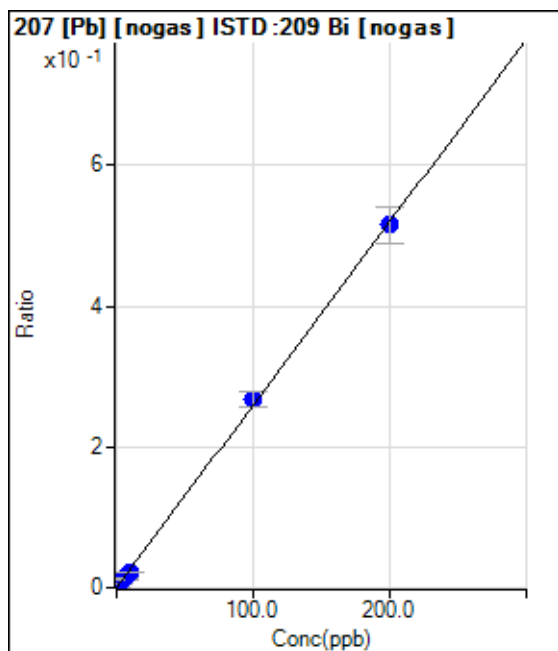
R = 0.9997

DL = 0.02557

BEC = 0.03864

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	66.67	0.0001	P	25.2
2	<input type="checkbox"/>	2.000	1.870	5954.51	0.0049	P	7.2
3	<input type="checkbox"/>	5.000	4.970	13706.01	0.0130	P	11.0
4	<input type="checkbox"/>	10.000	8.655	27032.75	0.0225	P	6.1
5	<input type="checkbox"/>	100.000	103.066	289196.73	0.2677	P	8.2
6	<input type="checkbox"/>	200.000	198.536	561697.48	0.5156	P	9.9
7	<input type="checkbox"/>	1.000					

$y = 0.0026 * x + 5.5075E-005$

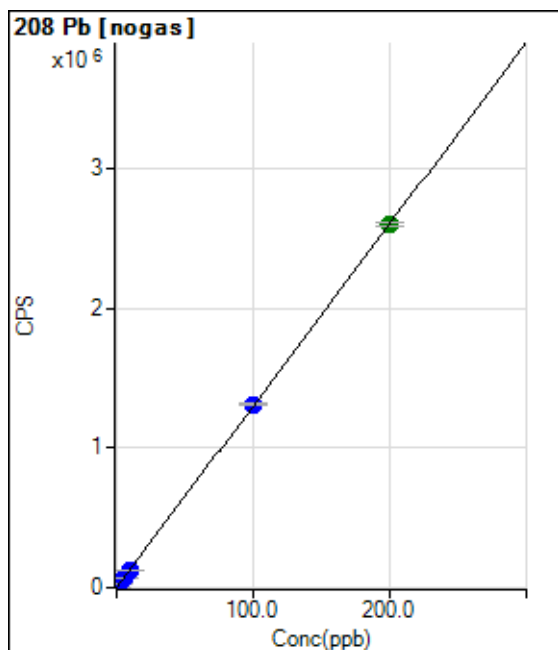
R = 0.9998

DL = 0.01604

BEC = 0.02121

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	323.33		P	4.7
2	<input type="checkbox"/>	2.000	2.018	26545.42		P	1.8
3	<input type="checkbox"/>	5.000	4.878	63696.50		P	2.4
4	<input type="checkbox"/>	10.000	9.718	126580.56		P	3.8
5	<input type="checkbox"/>	100.000	100.846	1310460.49		P	0.7
6	<input type="checkbox"/>	200.000	199.594	2593356.80		A	1.0
7	<input type="checkbox"/>	1.000					

$y = 12991.5277 * x + 323.3333$

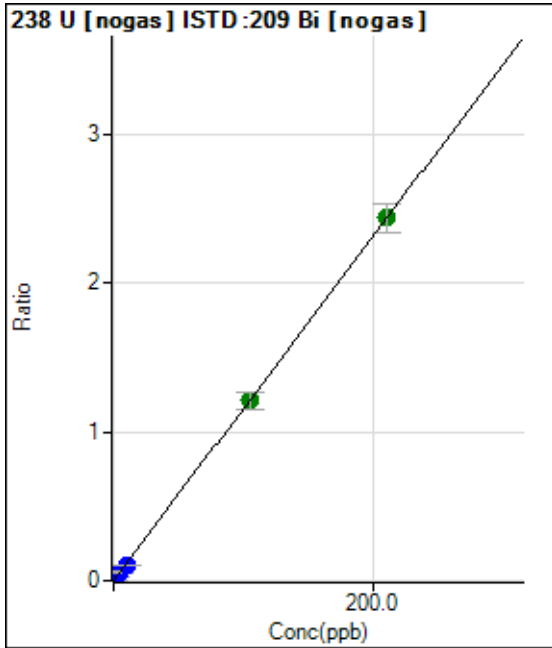
R = 1.0000

DL = 0.003527

BEC = 0.02489

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	<input type="checkbox"/>	0.000	0.000	146.67	0.0001	P	15.8
2	<input type="checkbox"/>	2.000	1.717	24288.85	0.0200	P	4.8
3	<input type="checkbox"/>	5.000	4.938	60706.38	0.0573	P	8.3
4	<input type="checkbox"/>	10.000	8.671	120704.18	0.1006	P	4.3
5	<input type="checkbox"/>	105.000	104.385	1305934.85	1.2095	A	9.2
6	<input type="checkbox"/>	210.000	210.375	2657602.36	2.4374	A	8.2
7	<input type="checkbox"/>	1.000					

$y = 0.0116 * x + 1.2083E-004$

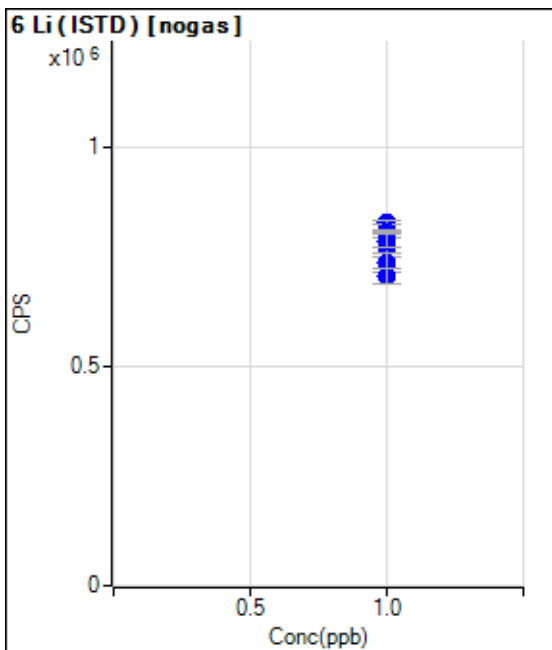
R = 1.0000

DL = 0.004948

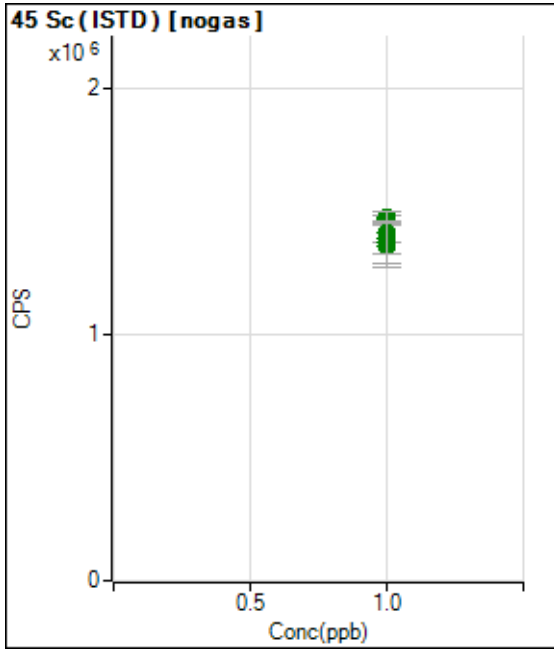
BEC = 0.01043

Weight: <None>

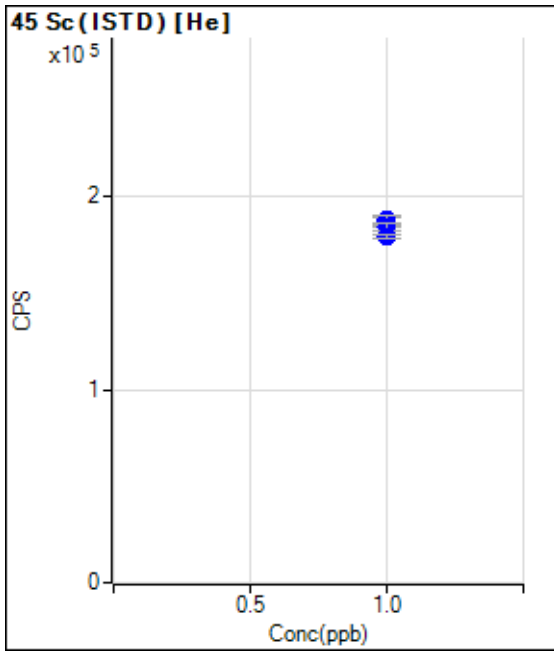
Min Conc: <None>



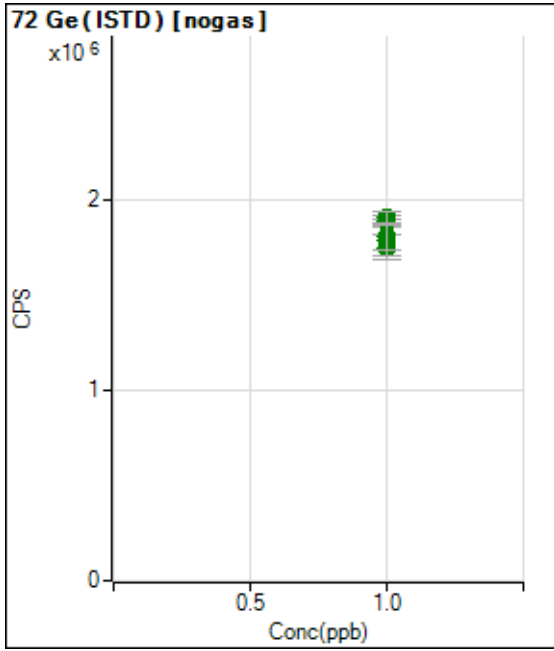
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	<input type="checkbox"/>	1.000		826647.96		P	1.1
2	<input type="checkbox"/>	1.000		806856.59		P	0.7
3	<input type="checkbox"/>	1.000		769673.54		P	5.9
4	<input type="checkbox"/>	1.000		786176.10		P	4.3
5	<input type="checkbox"/>	1.000		735287.30		P	6.1
6	<input type="checkbox"/>	1.000		704975.19		P	5.0
7	<input type="checkbox"/>	1.000					



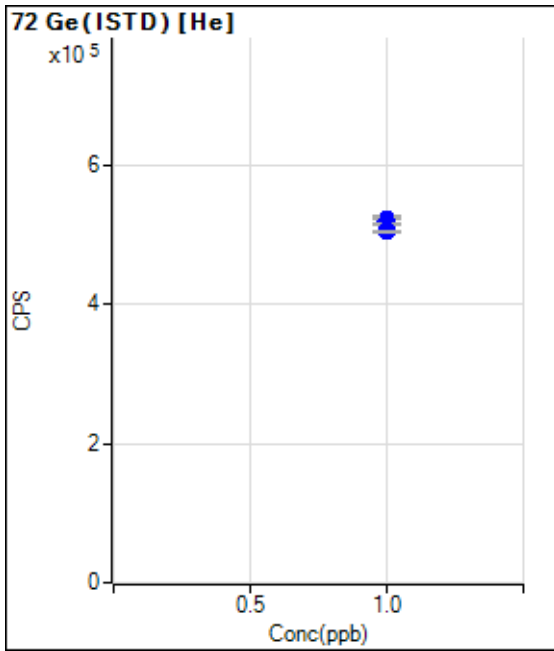
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	1.000		1475779.25		A	1.9
2	<input type="checkbox"/>	1.000		1473933.78		A	3.7
3	<input type="checkbox"/>	1.000		1360965.84		A	12.2
4	<input type="checkbox"/>	1.000		1413750.19		A	5.6
5	<input type="checkbox"/>	1.000		1379496.96		A	12.6
6	<input type="checkbox"/>	1.000		1394281.43		A	9.5
7	<input type="checkbox"/>	1.000					



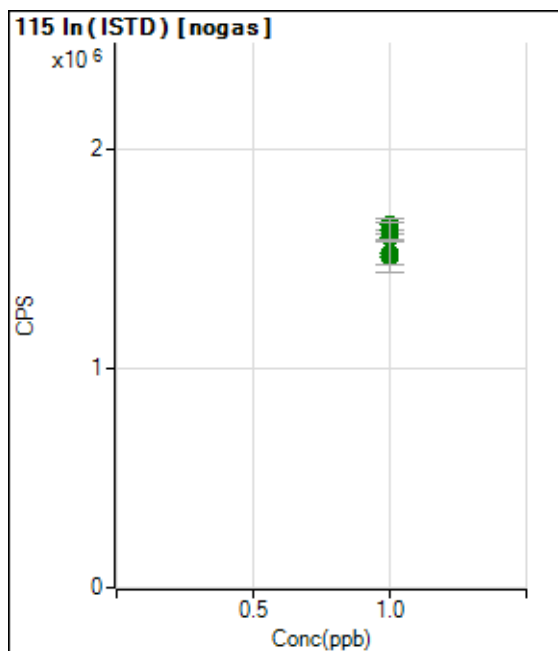
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	1.000		185753.03		P	0.5
2	<input type="checkbox"/>	1.000		185897.33		P	0.6
3	<input type="checkbox"/>	1.000		186831.50		P	2.4
4	<input type="checkbox"/>	1.000		187875.87		P	2.1
5	<input type="checkbox"/>	1.000		184061.96		P	2.0
6	<input type="checkbox"/>	1.000		179280.95		P	0.9
7	<input type="checkbox"/>	1.000					



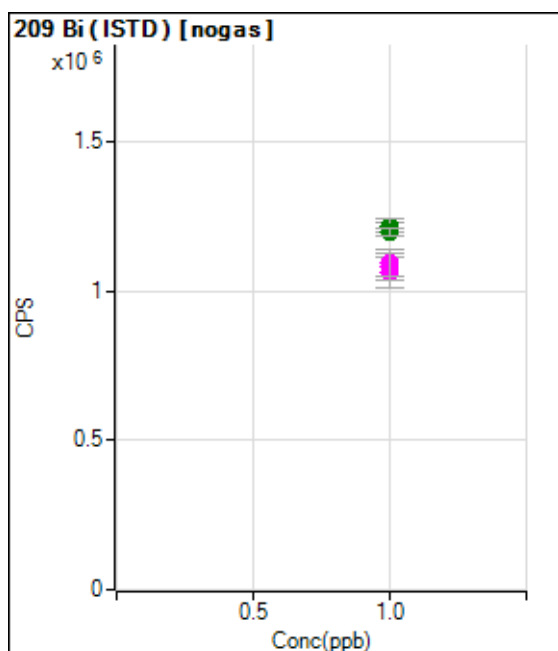
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	1.000		1877763.93		A	2.3
2	<input type="checkbox"/>	1.000		1892790.65		A	2.9
3	<input type="checkbox"/>	1.000		1753628.98		A	7.5
4	<input type="checkbox"/>	1.000		1907356.22		A	3.4
5	<input type="checkbox"/>	1.000		1809278.15		A	8.0
6	<input type="checkbox"/>	1.000		1788355.18		A	8.8
7	<input type="checkbox"/>	1.000					



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	1.000		519023.12		P	1.2
2	<input type="checkbox"/>	1.000		521848.11		P	2.1
3	<input type="checkbox"/>	1.000		520028.77		P	0.8
4	<input type="checkbox"/>	1.000		521349.59		P	1.3
5	<input type="checkbox"/>	1.000		516775.86		P	0.5
6	<input type="checkbox"/>	1.000		504821.02		P	1.1
7	<input type="checkbox"/>	1.000					



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	1.000		1597661.51		A	2.3
2	<input type="checkbox"/>	1.000		1654239.53		A	3.1
3	<input type="checkbox"/>	1.000		1524655.66		A	11.8
4	<input type="checkbox"/>	1.000		1628728.75		A	4.8
5	<input type="checkbox"/>	1.000		1509275.42		A	9.0
6	<input type="checkbox"/>	1.000		1524410.79		A	6.9
7	<input type="checkbox"/>	1.000					



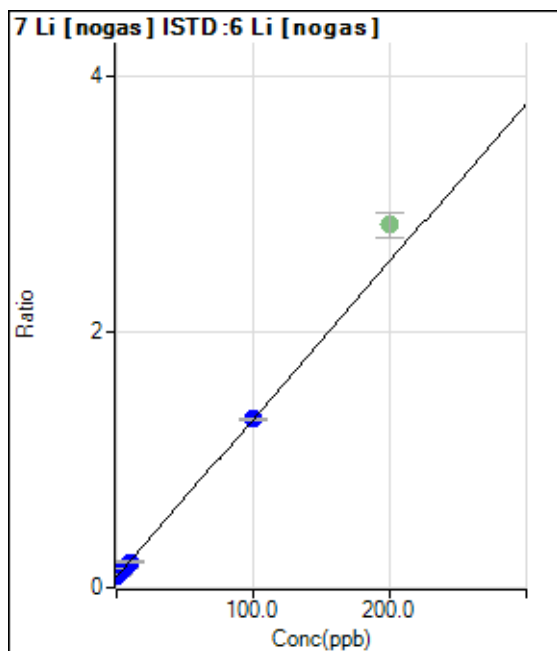
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	1.000		1215842.35		A	2.7
2	<input type="checkbox"/>	1.000		1215072.35		A	4.4
3	<input type="checkbox"/>	1.000		1064647.90		M	9.8
4	<input type="checkbox"/>	1.000		1200776.28		A	2.0
5	<input type="checkbox"/>	1.000		1085117.35		M	8.3
6	<input type="checkbox"/>	1.000		1095607.35		M	8.8
7	<input type="checkbox"/>	1.000					

Calibration for 082_ICV.d

Batch Folder: C:\Agilent\ICPMH\1\DATA\010819B\
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			





	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	57115.74	0.0851	P	3.4
2	<input type="checkbox"/>	2.000	1.610	72393.16	0.1050	P	2.7
3	<input type="checkbox"/>	5.000	4.884	97428.30	0.1454	P	1.5
4	<input type="checkbox"/>	10.000	9.414	137221.54	0.2014	P	3.5
5	<input type="checkbox"/>	100.000	100.072	848720.17	1.3207	P	0.9
6	<input checked="" type="checkbox"/>	200.000		1732064.77	2.8408	A	7.1
7	<input type="checkbox"/>	1.000					

$y = 0.0123 * x + 0.0851$

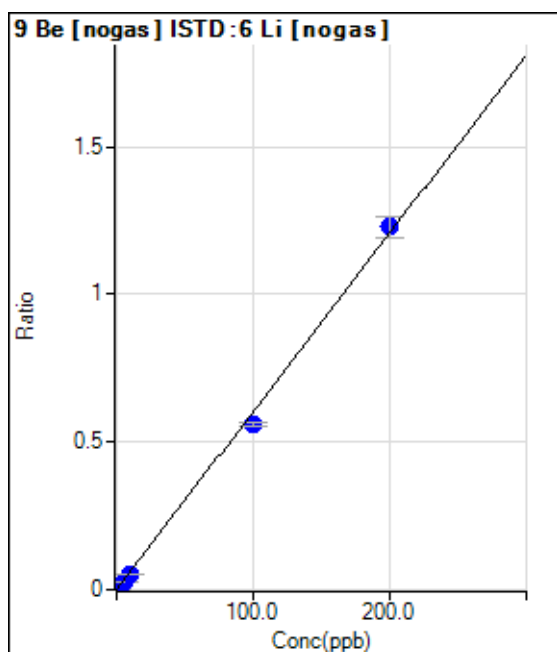
R = 1.0000

DL = 0.7008

BEC = 6.895

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	80.00	0.0001	P	40.3
2	<input type="checkbox"/>	2.000	1.744	7331.52	0.0106	P	2.0
3	<input type="checkbox"/>	5.000	4.649	18822.77	0.0281	P	5.7
4	<input type="checkbox"/>	10.000	8.528	35122.47	0.0515	P	3.0
5	<input type="checkbox"/>	100.000	92.868	359952.01	0.5600	P	1.4
6	<input type="checkbox"/>	200.000	203.651	748980.35	1.2279	P	6.1
7	<input type="checkbox"/>	1.000					

$y = 0.0060 * x + 1.2053E-004$

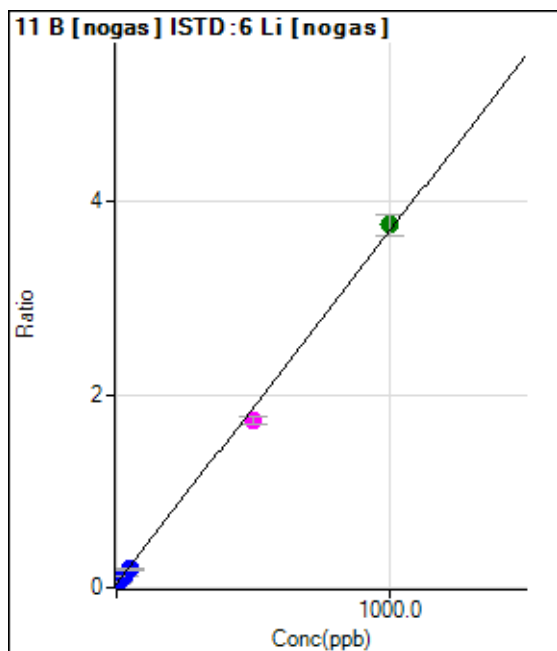
R = 0.9991

DL = 0.02415

BEC = 0.01999

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	27456.59	0.0409	P	2.5
2	<input type="checkbox"/>	10.000	7.421	46897.54	0.0680	P	2.2
3	<input type="checkbox"/>	25.000	21.450	79772.40	0.1193	P	5.8
4	<input type="checkbox"/>	50.000	41.378	130955.91	0.1922	P	3.0
5	<input type="checkbox"/>	500.000	464.452	1118157.07	1.7385	M	4.7
6	<input type="checkbox"/>	1000.000	1018.320	2296029.08	3.7630	A	5.6
7	<input type="checkbox"/>	5.000					

$y = 0.0037 * x + 0.0409$

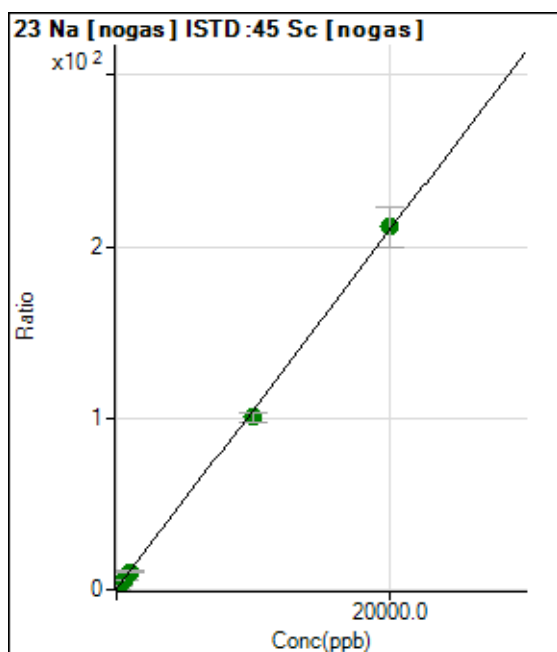
R = 0.9992

DL = 0.843

BEC = 11.19

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	423105.84	0.3845	P	2.8
2	<input type="checkbox"/>	200.000	188.545	2690696.28	2.3550	A	2.3
3	<input type="checkbox"/>	500.000	524.542	6224997.40	5.8667	A	10.0
4	<input type="checkbox"/>	1000.000	981.561	11865032.56	10.6432	A	7.7
5	<input type="checkbox"/>	10000.00	9598.269	113153727.5	100.700	A	5.3
6	<input type="checkbox"/>	20000.00	20201.289	231400346.8	211.518	A	11.2
7	<input type="checkbox"/>	100.000					

$y = 0.0105 * x + 0.3845$

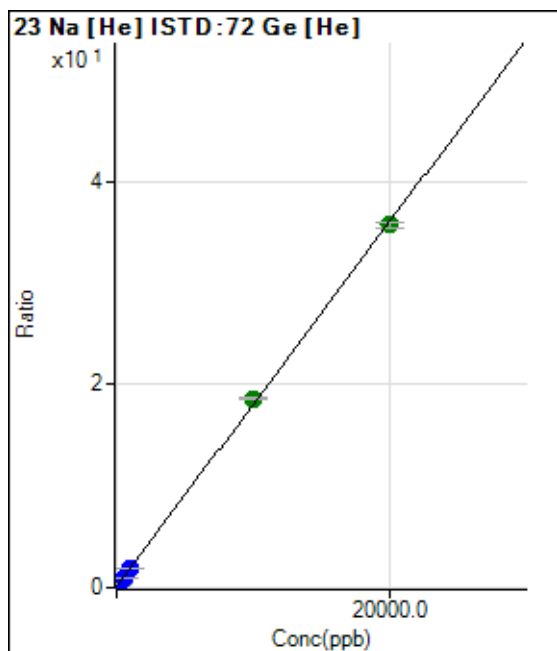
R = 0.9997

DL = 3.097

BEC = 36.78

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	40580.02	0.1005	P	1.7
2	<input type="checkbox"/>	200.000	193.173	183026.43	0.4470	P	1.2
3	<input type="checkbox"/>	500.000	502.914	414093.12	1.0025	P	3.2
4	<input type="checkbox"/>	1000.000	968.240	759608.77	1.8371	P	2.1
5	<input type="checkbox"/>	10000.00	10326.898	7528608.01	18.6226	A	1.4
6	<input type="checkbox"/>	20000.00	19838.134	14602653.53	35.6818	A	1.2
7	<input type="checkbox"/>	100.000					

$y = 0.0018 * x + 0.1005$

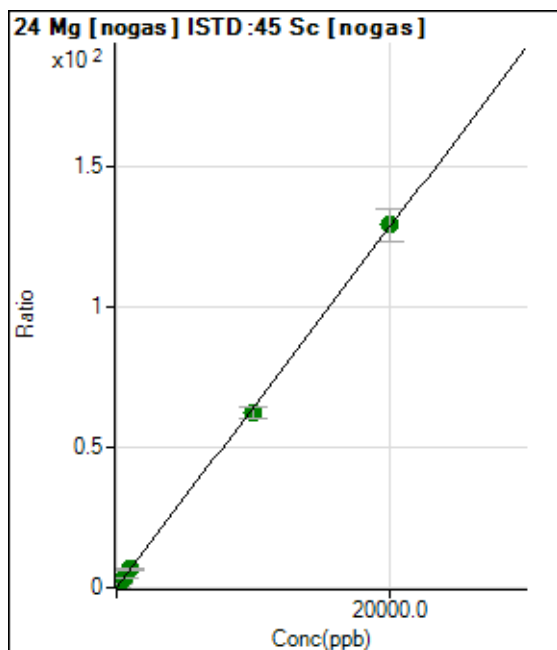
R = 0.9998

DL = 2.935

BEC = 56.05

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	7369.32	0.0067	P	7.1
2	<input type="checkbox"/>	200.000	198.494	1465321.39	1.2825	A	3.3
3	<input type="checkbox"/>	500.000	546.959	3732605.03	3.5223	A	12.3
4	<input type="checkbox"/>	1000.000	1024.615	7343054.85	6.5925	A	9.4
5	<input type="checkbox"/>	10000.00	9722.739	70211601.57	62.5005	A	6.2
6	<input type="checkbox"/>	20000.00	20136.241	141771886.5	129.434	A	9.2
7	<input type="checkbox"/>	100.000					

$y = 0.0064 * x + 0.0067$

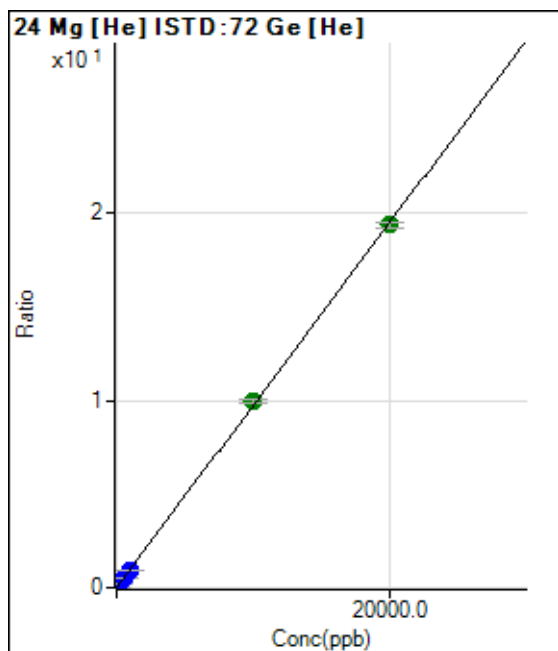
R = 0.9999

DL = 0.222

BEC = 1.038

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	450.01	0.0011	P	16.3
2	<input type="checkbox"/>	200.000	202.388	81233.25	0.1984	P	3.9
3	<input type="checkbox"/>	500.000	514.660	207716.54	0.5029	P	3.7
4	<input type="checkbox"/>	1000.000	977.720	394649.27	0.9544	P	0.5
5	<input type="checkbox"/>	10000.00	10225.166	4029917.96	9.9710	A	2.9
6	<input type="checkbox"/>	20000.00	19888.140	7936318.84	19.3926	A	1.3
7	<input type="checkbox"/>	100.000					

$y = 9.7503E-004 * x + 0.0011$

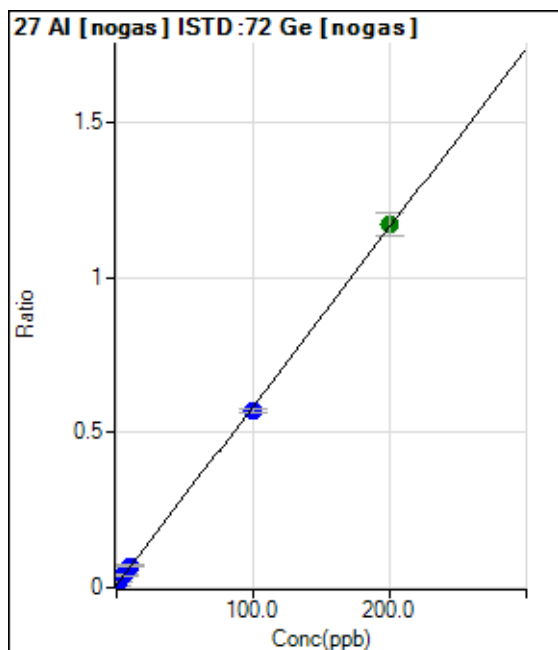
R = 0.9999

DL = 0.5581

BEC = 1.141

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	11783.85	0.0080	P	9.0
2	<input type="checkbox"/>	2.000	2.016	29486.61	0.0196	P	2.9
3	<input type="checkbox"/>	5.000	5.701	58045.84	0.0409	P	12.6
4	<input type="checkbox"/>	10.000	10.876	102494.53	0.0708	P	7.0
5	<input type="checkbox"/>	100.000	97.129	835223.92	0.5688	P	2.4
6	<input type="checkbox"/>	200.000	201.374	1728710.91	1.1706	A	6.4
7	<input type="checkbox"/>	1.000					

$y = 0.0058 * x + 0.0080$

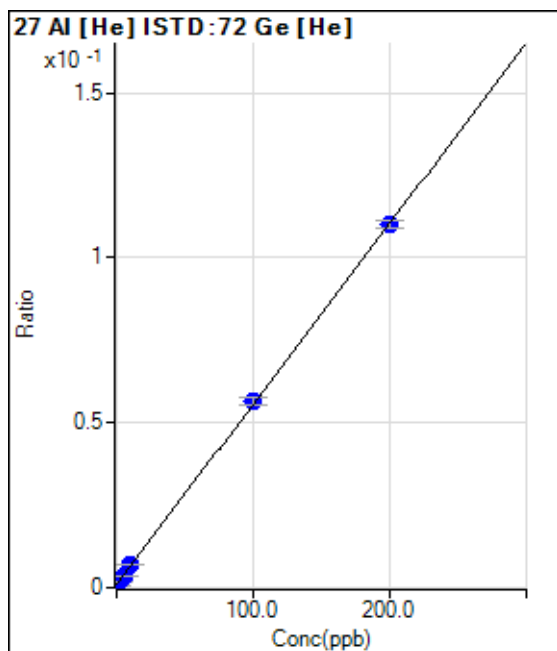
R = 0.9998

DL = 0.3765

BEC = 1.387

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	-0.406	333.34	0.0008	P	7.7
2	<input type="checkbox"/>	2.000	1.422	746.69	0.0018	P	9.8
3	<input type="checkbox"/>	5.000	4.605	1473.41	0.0036	P	4.8
4	<input type="checkbox"/>	10.000	10.649	2840.26	0.0069	P	3.2
5	<input type="checkbox"/>	100.000	101.495	22844.07	0.0565	P	3.2
6	<input type="checkbox"/>	200.000	199.236	44997.11	0.1100	P	2.0
7	<input type="checkbox"/>	1.000					

$y = 5.4660E-004 * x + 0.0010$

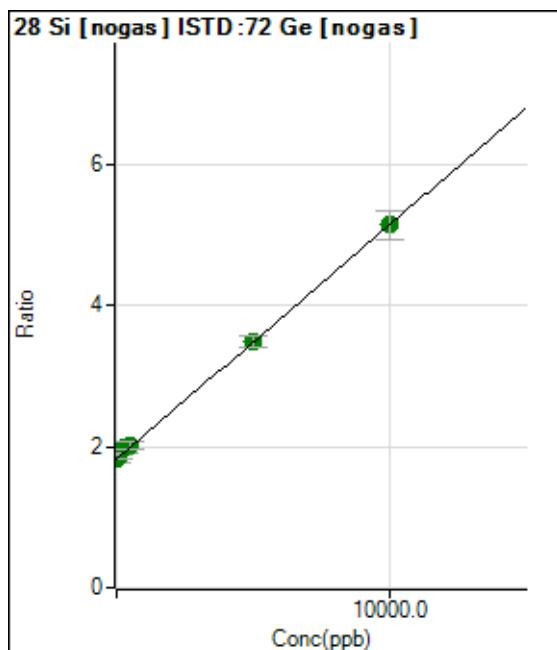
R = 0.9999

DL = 0.3505

BEC = 1.916

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	2687573.40	1.8248	A	6.4
2	<input type="checkbox"/>	100.000	74.194	2775368.81	1.8494	A	2.2
3	<input type="checkbox"/>	250.000	481.179	2820944.02	1.9846	A	8.2
4	<input type="checkbox"/>	500.000	601.694	2932057.04	2.0246	A	5.9
5	<input type="checkbox"/>	5000.000	4992.046	5111263.15	3.4826	A	4.4
6	<input type="checkbox"/>	10000.00	9993.371	7590137.39	5.1436	A	7.8
7	<input type="checkbox"/>	5.000					

$y = 3.3210E-004 * x + 1.8248$

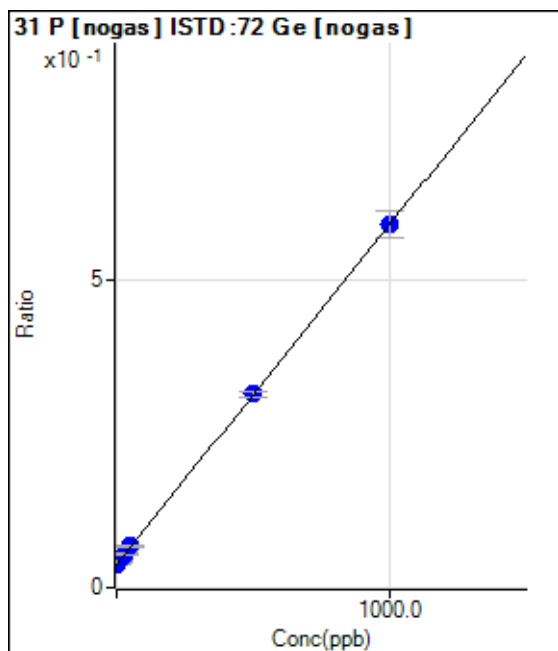
R = 0.9997

DL = 1051

BEC = 5495

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	55310.53	0.0375	P	5.8
2	<input type="checkbox"/>	10.000	8.776	63630.04	0.0424	P	2.6
3	<input type="checkbox"/>	25.000	30.989	77738.76	0.0547	P	8.6
4	<input type="checkbox"/>	50.000	55.274	98726.22	0.0681	P	4.5
5	<input type="checkbox"/>	500.000	501.060	462218.81	0.3149	P	3.3
6	<input type="checkbox"/>	1000.000	999.069	871522.04	0.5905	P	7.4
7	<input type="checkbox"/>	5.000					

$y = 5.5346E-004 * x + 0.0375$

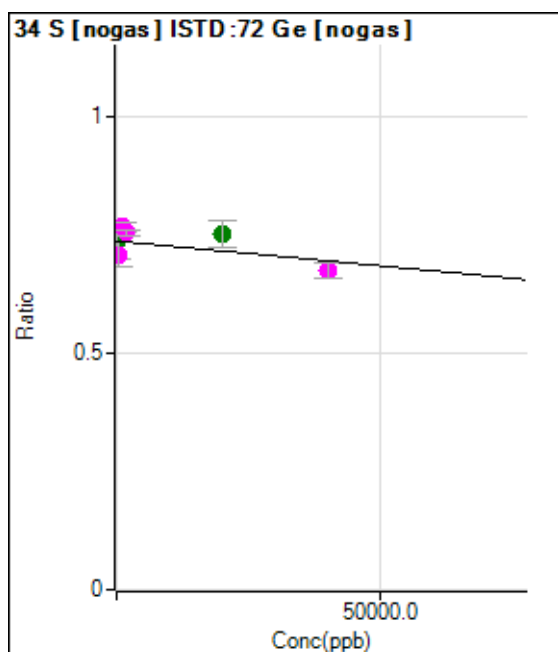
R = 1.0000

DL = 11.73

BEC = 67.84

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	1084231.47	0.7370	A	10.3
2	<input type="checkbox"/>	400.000	27922.754	1062011.00	0.7077	M	7.6
3	<input type="checkbox"/>	1000.000	-28453.420	1093970.56	0.7668	M	2.7
4	<input type="checkbox"/>	2000.000	-16451.370	1094247.22	0.7542	M	1.8
5	<input type="checkbox"/>	20000.00	-13825.153	1101754.06	0.7514	A	7.8
6	<input type="checkbox"/>	40000.00	58296.253	1000353.12	0.6759	M	4.6
7	<input type="checkbox"/>	100.000					

$y = -1.0470E-006 * x + 0.7370$

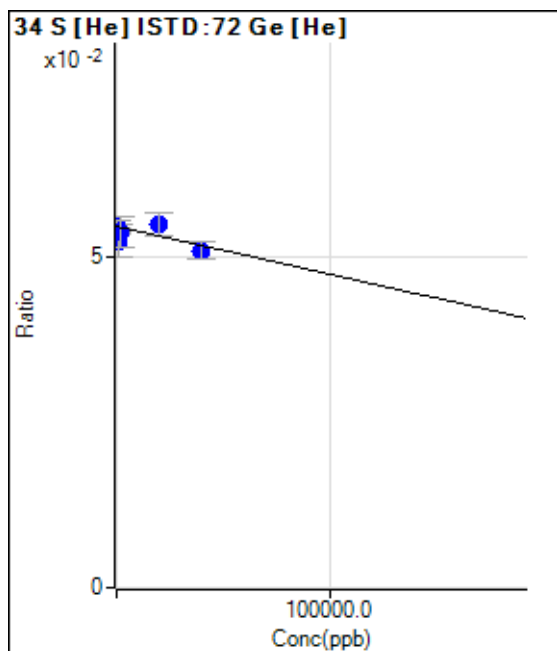
R = -0.6431

DL = -2.174E+05

BEC = -7.039E+05

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	22083.29	0.0547	P	3.3
2	<input type="checkbox"/>	400.000	10998.764	22082.91	0.0539	P	1.5
3	<input type="checkbox"/>	1000.000	30299.890	21682.62	0.0525	P	9.8
4	<input type="checkbox"/>	2000.000	10517.108	22316.66	0.0540	P	8.8
5	<input type="checkbox"/>	20000.00	-3048.478	22216.62	0.0549	P	6.2
6	<input type="checkbox"/>	40000.00	50259.899	20914.53	0.0511	P	5.6
7	<input type="checkbox"/>	100.000					

$y = -7.2407E-008 * x + 0.0547$

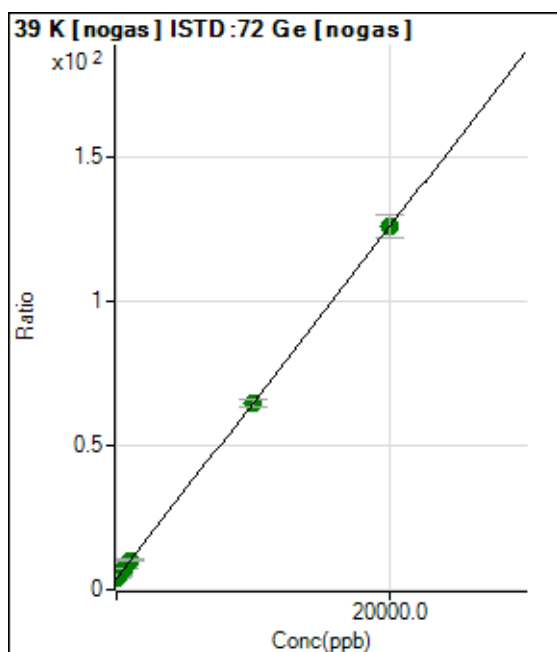
$R = -0.5794$

$DL = -7.561E+04$

$BEC = -7.557E+05$

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	5711736.72	3.8778	A	6.2
2	<input type="checkbox"/>	200.000	177.482	7439017.87	4.9572	A	2.3
3	<input type="checkbox"/>	500.000	563.610	10389976.28	7.3054	A	7.2
4	<input type="checkbox"/>	1000.000	1020.354	14607389.91	10.0832	A	4.9
5	<input type="checkbox"/>	10000.00	9982.562	94796587.54	64.5873	A	3.8
6	<input type="checkbox"/>	20000.00	20006.336	185404599.9	125.547	A	6.2
7	<input type="checkbox"/>	100.000					

$y = 0.0061 * x + 3.8778$

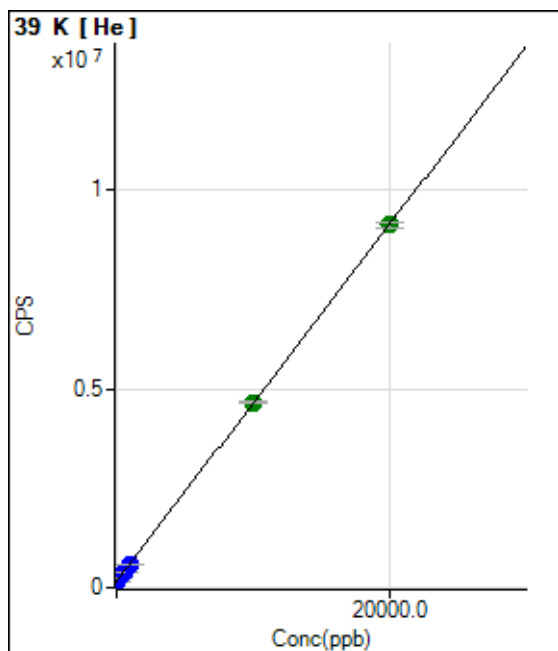
$R = 1.0000$

$DL = 118.2$

$BEC = 637.6$

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	157324.39		P	0.3
2	<input type="checkbox"/>	200.000	193.772	244295.80		P	0.4
3	<input type="checkbox"/>	500.000	500.537	381982.90		P	1.2
4	<input type="checkbox"/>	1000.000	984.182	599059.31		P	0.7
5	<input type="checkbox"/>	10000.00	10038.720	4663048.78		A	0.9
6	<input type="checkbox"/>	20000.00	19981.480	9125702.37		A	1.3
7	<input type="checkbox"/>	100.000					

$y = 448.8345 * x + 157324.3867$

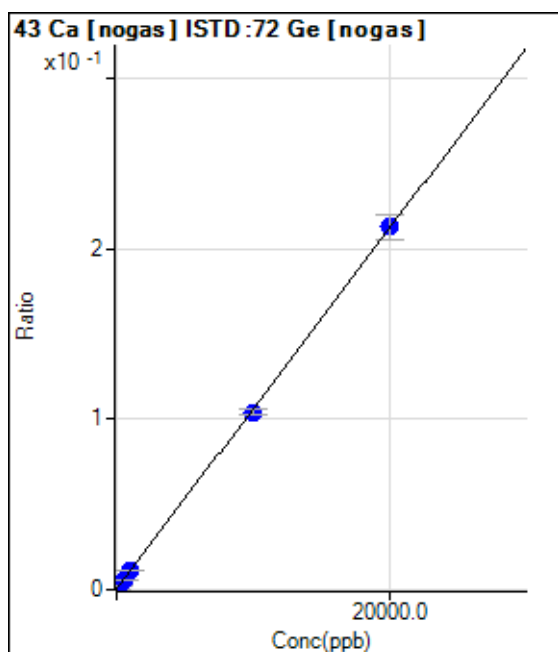
R = 1.0000

DL = 3.064

BEC = 350.5

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	403.34	0.0003	P	18.7
2	<input type="checkbox"/>	200.000	192.378	3463.71	0.0023	P	6.3
3	<input type="checkbox"/>	500.000	541.258	8542.09	0.0060	P	5.3
4	<input type="checkbox"/>	1000.000	1013.398	15930.39	0.0110	P	5.0
5	<input type="checkbox"/>	10000.00	9832.471	153136.10	0.1043	P	3.4
6	<input type="checkbox"/>	20000.00	20082.140	314191.65	0.2128	P	6.6
7	<input type="checkbox"/>	100.000					

$y = 1.0582E-005 * x + 2.7286E-004$

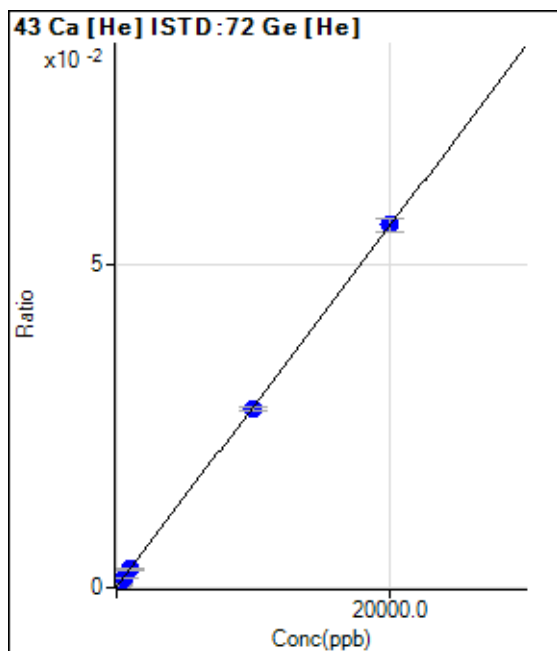
R = 0.9999

DL = 14.5

BEC = 25.78

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	23.33	0.0001	P	88.7
2	<input type="checkbox"/>	200.000	168.713	216.67	0.0005	P	39.1
3	<input type="checkbox"/>	500.000	498.468	600.02	0.0015	P	8.0
4	<input type="checkbox"/>	1000.000	999.164	1180.05	0.0029	P	2.9
5	<input type="checkbox"/>	10000.00	9858.377	11180.19	0.0276	P	2.0
6	<input type="checkbox"/>	20000.00	20071.205	23007.71	0.0562	P	3.7
7	<input type="checkbox"/>	100.000					

$y = 2.7986E-006 * x + 5.7843E-005$

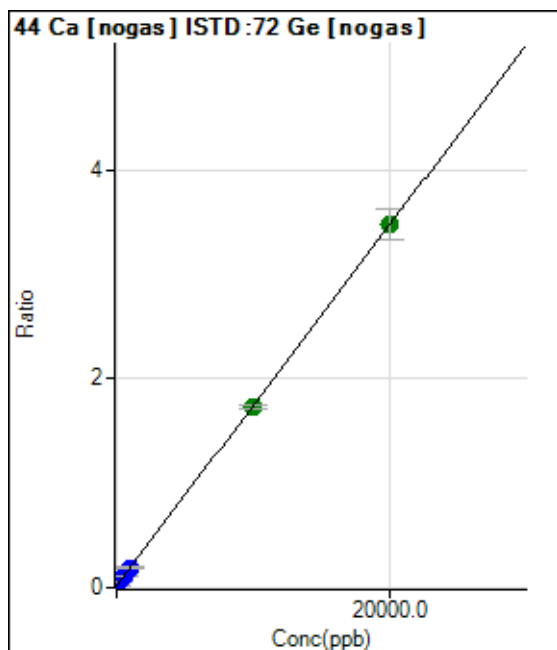
R = 1.0000

DL = 55.02

BEC = 20.67

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	28124.67	0.0191	P	7.5
2	<input type="checkbox"/>	200.000	190.847	78132.66	0.0521	P	2.0
3	<input type="checkbox"/>	500.000	528.326	156733.47	0.1103	P	9.7
4	<input type="checkbox"/>	1000.000	997.002	277053.11	0.1913	P	5.6
5	<input type="checkbox"/>	10000.00	9963.633	2554807.57	1.7399	A	2.1
6	<input type="checkbox"/>	20000.00	20017.717	5127967.63	3.4763	A	8.5
7	<input type="checkbox"/>	100.000					

$y = 1.7270E-004 * x + 0.0191$

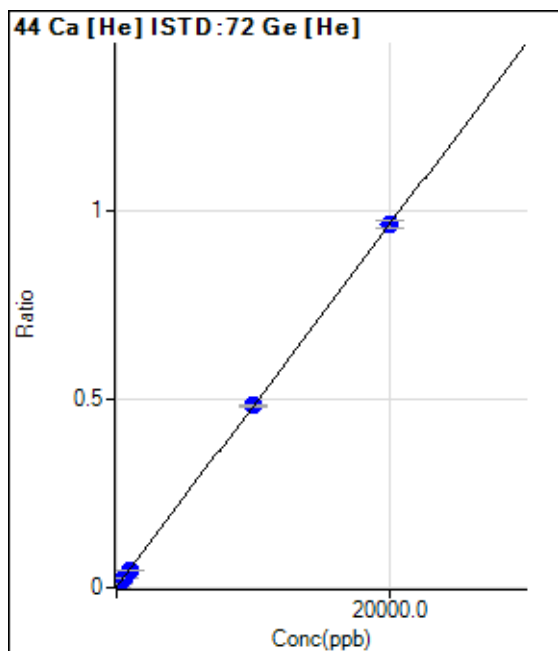
R = 1.0000

DL = 24.97

BEC = 110.6

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	530.02	0.0013	P	10.8
2	<input type="checkbox"/>	200.000	198.388	4440.60	0.0108	P	3.8
3	<input type="checkbox"/>	500.000	503.829	10539.79	0.0255	P	5.8
4	<input type="checkbox"/>	1000.000	953.134	19480.46	0.0471	P	1.4
5	<input type="checkbox"/>	10000.00	10019.461	195169.87	0.4828	P	1.0
6	<input type="checkbox"/>	20000.00	19992.533	393661.99	0.9620	P	2.1
7	<input type="checkbox"/>	100.000					

$y = 4.8052E-005 * x + 0.0013$

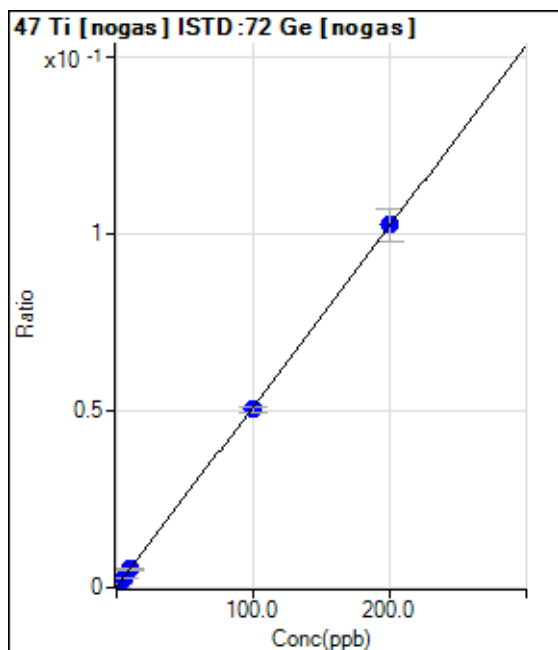
R = 1.0000

DL = 8.864

BEC = 27.34

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	133.33	0.0001	P	51.9
2	<input type="checkbox"/>	2.000	1.879	1576.76	0.0011	P	2.7
3	<input type="checkbox"/>	5.000	5.075	3817.12	0.0027	P	5.7
4	<input type="checkbox"/>	10.000	10.128	7625.00	0.0053	P	5.2
5	<input type="checkbox"/>	100.000	98.577	74047.86	0.0504	P	3.2
6	<input type="checkbox"/>	200.000	200.704	151120.82	0.1025	P	9.0
7	<input type="checkbox"/>	1.000					

$y = 5.1006E-004 * x + 9.2108E-005$

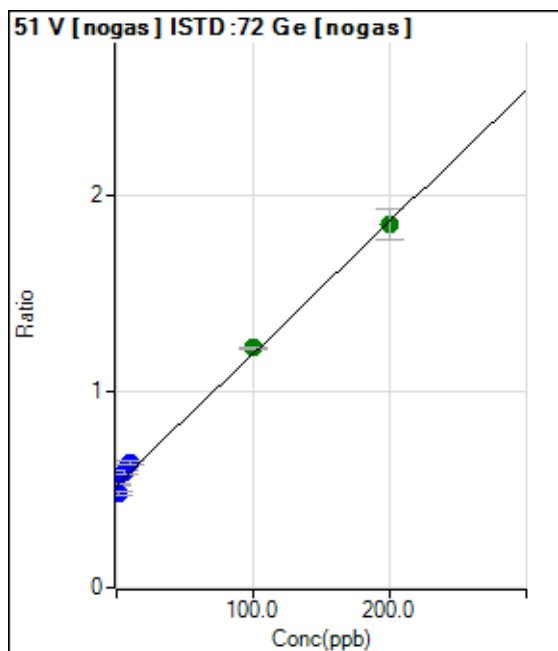
R = 1.0000

DL = 0.2811

BEC = 0.1806

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	770104.56	0.5219	P	1.5
2	<input type="checkbox"/>	2.000	-6.120	721610.68	0.4808	P	3.2
3	<input type="checkbox"/>	5.000	10.146	841064.50	0.5900	P	2.7
4	<input type="checkbox"/>	10.000	17.123	923330.26	0.6368	P	2.6
5	<input type="checkbox"/>	100.000	104.472	1796770.09	1.2231	A	0.7
6	<input type="checkbox"/>	200.000	197.360	2724212.69	1.8466	A	8.4
7	<input type="checkbox"/>	1.000					

$y = 0.0067 * x + 0.5219$

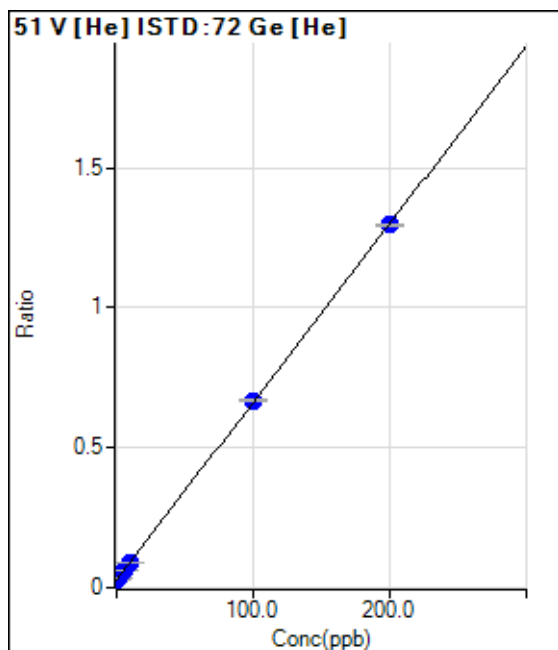
R = 0.9975

DL = 3.53

BEC = 77.75

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.059	11054.62	0.0274	P	2.0
2	<input type="checkbox"/>	2.000	1.588	15193.52	0.0371	P	2.8
3	<input type="checkbox"/>	5.000	5.107	24571.45	0.0595	P	2.0
4	<input type="checkbox"/>	10.000	9.809	36955.77	0.0894	P	1.4
5	<input type="checkbox"/>	100.000	100.852	270119.32	0.6682	P	1.3
6	<input type="checkbox"/>	200.000	199.585	530364.46	1.2959	P	0.7
7	<input type="checkbox"/>	1.000					

$y = 0.0064 * x + 0.0270$

R = 1.0000

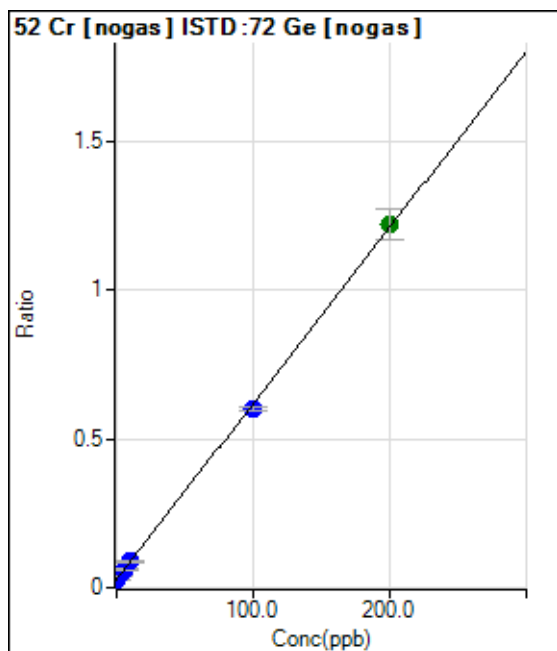
DL = 0.2546

BEC = 4.249

Weight: <None>

Min Conc: <None>

Calibration for 082_ICV.d



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	40427.57	0.0274	P	4.1
2	<input type="checkbox"/>	2.000	1.580	55171.93	0.0368	P	2.3
3	<input type="checkbox"/>	5.000	5.499	85298.83	0.0599	P	5.8
4	<input type="checkbox"/>	10.000	10.403	128750.73	0.0889	P	6.7
5	<input type="checkbox"/>	100.000	96.867	881496.13	0.6001	P	2.3
6	<input type="checkbox"/>	200.000	201.538	1797923.72	1.2189	A	8.6
7	<input type="checkbox"/>	1.000					

$y = 0.0059 * x + 0.0274$

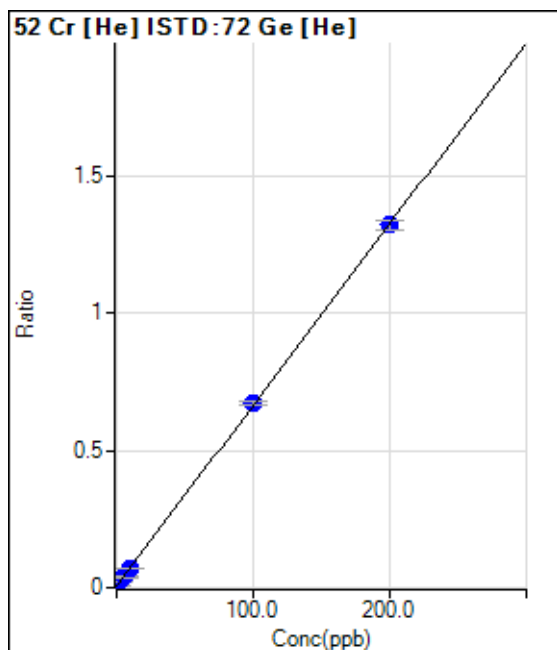
R = 0.9998

DL = 0.5675

BEC = 4.639

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	2306.85	0.0057	P	5.9
2	<input type="checkbox"/>	2.000	1.914	7508.33	0.0183	P	1.6
3	<input type="checkbox"/>	5.000	5.011	16007.14	0.0388	P	6.5
4	<input type="checkbox"/>	10.000	9.785	29046.37	0.0702	P	3.0
5	<input type="checkbox"/>	100.000	100.823	271095.87	0.6707	P	1.8
6	<input type="checkbox"/>	200.000	199.600	541011.62	1.3221	P	2.5
7	<input type="checkbox"/>	1.000					

$y = 0.0066 * x + 0.0057$

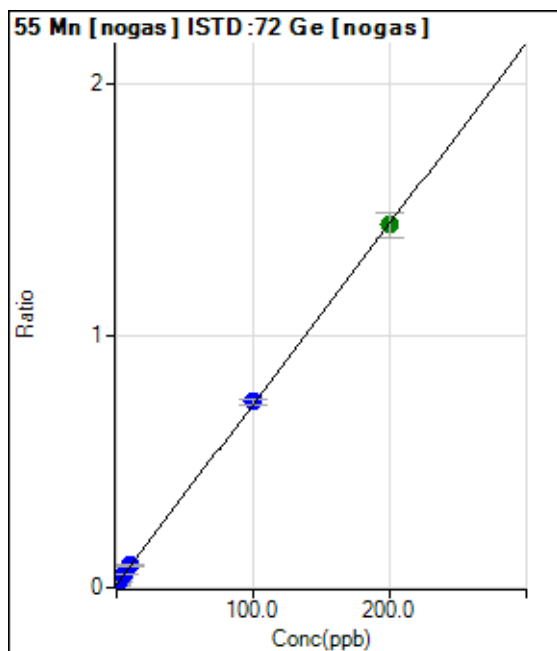
R = 1.0000

DL = 0.1539

BEC = 0.8663

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	16927.92	0.0115	P	11.3
2	<input type="checkbox"/>	2.000	1.938	38142.90	0.0254	P	2.7
3	<input type="checkbox"/>	5.000	5.596	73435.55	0.0516	P	7.7
4	<input type="checkbox"/>	10.000	10.729	128137.91	0.0885	P	5.2
5	<input type="checkbox"/>	100.000	101.211	1082308.63	0.7374	P	3.8
6	<input type="checkbox"/>	200.000	199.344	2127614.71	1.4412	A	6.9
7	<input type="checkbox"/>	1.000					

$y = 0.0072 * x + 0.0115$

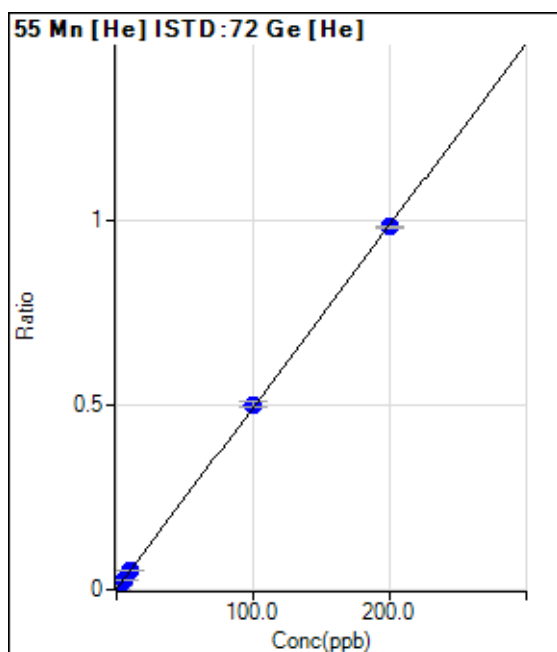
R = 1.0000

DL = 0.5432

BEC = 1.606

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	513.35	0.0013	P	9.7
2	<input type="checkbox"/>	2.000	2.090	4734.00	0.0116	P	5.0
3	<input type="checkbox"/>	5.000	5.063	10819.99	0.0262	P	2.4
4	<input type="checkbox"/>	10.000	10.002	20871.97	0.0505	P	1.8
5	<input type="checkbox"/>	100.000	101.678	202706.56	0.5015	P	2.8
6	<input type="checkbox"/>	200.000	199.158	401552.29	0.9811	P	0.8
7	<input type="checkbox"/>	1.000					

$y = 0.0049 * x + 0.0013$

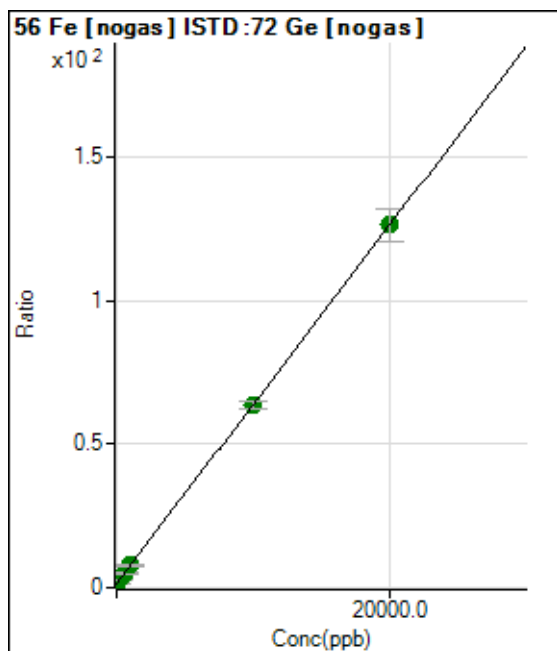
R = 1.0000

DL = 0.07488

BEC = 0.2582

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	2078495.95	1.4097	A	3.7
2	<input type="checkbox"/>	200.000	186.923	3868161.02	2.5775	A	1.8
3	<input type="checkbox"/>	500.000	552.993	6910398.59	4.8647	A	9.5
4	<input type="checkbox"/>	1000.000	1038.255	11430657.03	7.8965	A	7.3
5	<input type="checkbox"/>	10000.00	9954.803	93341806.25	63.6053	A	4.3
6	<input type="checkbox"/>	20000.00	20019.492	186517866.6	126.487	A	9.2
7	<input type="checkbox"/>	100.000					

$y = 0.0062 * x + 1.4097$

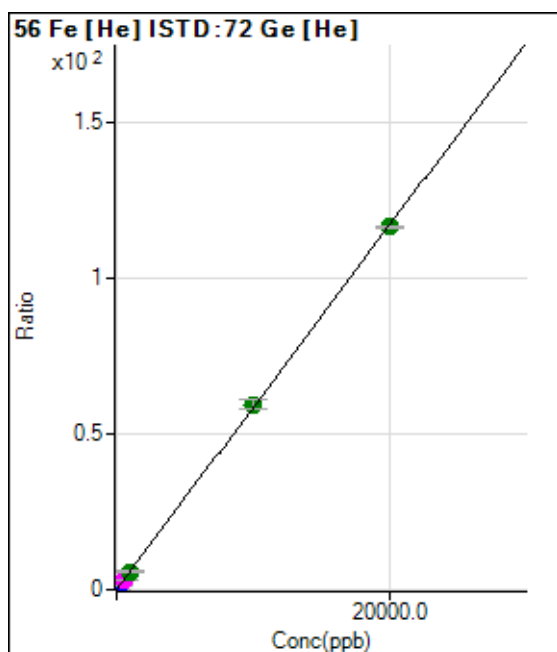
R = 1.0000

DL = 24.84

BEC = 225.6

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	9569.25	0.0237	P	3.5
2	<input type="checkbox"/>	200.000	197.449	483416.79	1.1807	P	1.4
3	<input type="checkbox"/>	500.000	505.198	1232790.21	2.9839	M	3.1
4	<input type="checkbox"/>	1000.000	997.306	2426056.68	5.8674	A	2.3
5	<input type="checkbox"/>	10000.00	10181.157	24116035.47	59.6803	A	4.3
6	<input type="checkbox"/>	20000.00	19909.452	47757012.62	116.683	A	0.6
7	<input type="checkbox"/>	100.000					

$y = 0.0059 * x + 0.0237$

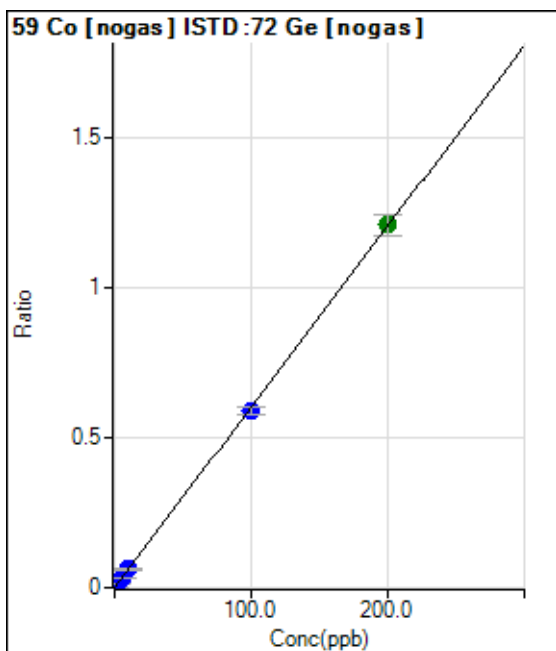
R = 0.9999

DL = 0.4276

BEC = 4.046

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	353.34	0.0002	P	10.2
2	<input type="checkbox"/>	2.000	1.900	17521.91	0.0117	P	3.2
3	<input type="checkbox"/>	5.000	5.318	45807.27	0.0322	P	9.4
4	<input type="checkbox"/>	10.000	10.236	89594.40	0.0618	P	5.2
5	<input type="checkbox"/>	100.000	98.344	868977.93	0.5921	P	4.2
6	<input type="checkbox"/>	200.000	200.809	1785765.96	1.2088	A	5.6
7	<input type="checkbox"/>	1.000					

$y = 0.0060 * x + 2.4025E-004$

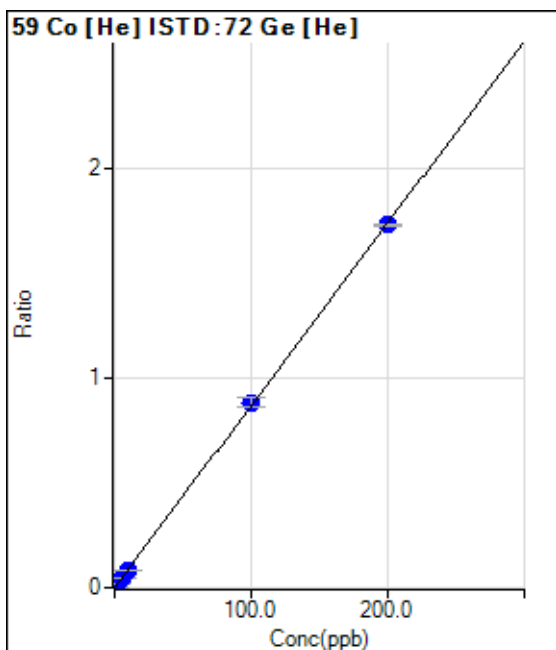
R = 0.9999

DL = 0.01218

BEC = 0.03992

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	76.67	0.0002	P	28.7
2	<input type="checkbox"/>	2.000	2.038	7311.55	0.0179	P	6.3
3	<input type="checkbox"/>	5.000	4.968	17868.91	0.0433	P	6.4
4	<input type="checkbox"/>	10.000	9.802	35223.90	0.0852	P	1.5
5	<input type="checkbox"/>	100.000	101.641	356143.35	0.8815	P	5.2
6	<input type="checkbox"/>	200.000	199.190	706938.82	1.7273	P	0.6
7	<input type="checkbox"/>	1.000					

$y = 0.0087 * x + 1.9045E-004$

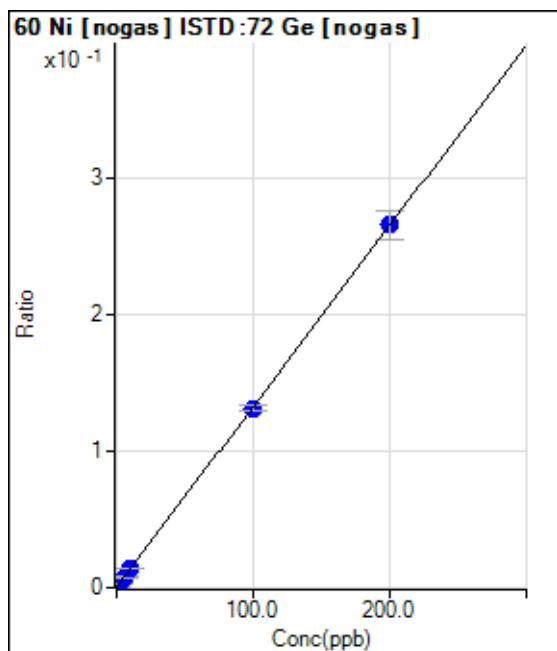
R = 1.0000

DL = 0.01894

BEC = 0.02196

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	-0.088	466.68	0.0003	P	30.6
2	<input type="checkbox"/>	2.000	1.978	4577.30	0.0031	P	5.7
3	<input type="checkbox"/>	5.000	5.402	10763.34	0.0076	P	11.2
4	<input type="checkbox"/>	10.000	10.269	20321.51	0.0140	P	3.8
5	<input type="checkbox"/>	100.000	98.925	192812.04	0.1313	P	3.6
6	<input type="checkbox"/>	200.000	200.514	392160.79	0.2657	P	7.7
7	<input type="checkbox"/>	1.000					

$y = 0.0013 * x + 4.3452E-004$

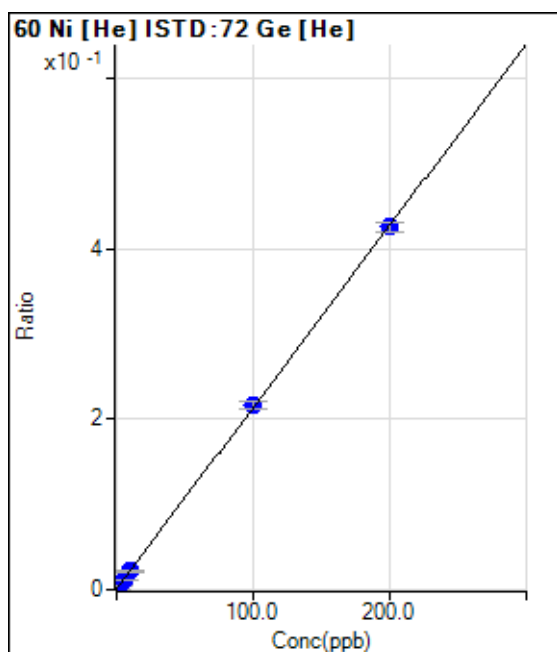
R = 1.0000

DL = 0.2201

BEC = 0.3284

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	-0.222	53.33	0.0001	P	48.6
2	<input type="checkbox"/>	2.000	1.913	1916.79	0.0047	P	6.2
3	<input type="checkbox"/>	5.000	4.785	4467.27	0.0108	P	6.0
4	<input type="checkbox"/>	10.000	9.880	8958.98	0.0217	P	2.3
5	<input type="checkbox"/>	100.000	101.263	87488.15	0.2165	P	3.6
6	<input type="checkbox"/>	200.000	199.381	174187.86	0.4257	P	2.3
7	<input type="checkbox"/>	1.000					

$y = 0.0021 * x + 6.0504E-004$

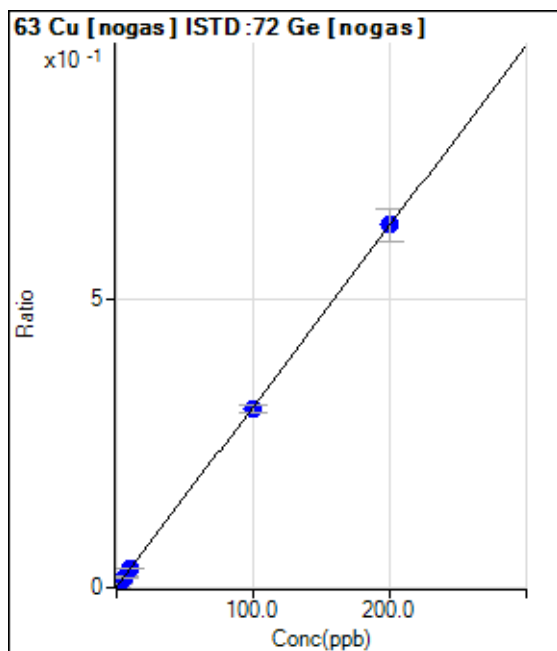
R = 1.0000

DL = 0.09086

BEC = 0.2838

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	1403.41	0.0010	P	4.0
2	<input type="checkbox"/>	2.000	2.022	10933.38	0.0073	P	2.2
3	<input type="checkbox"/>	5.000	5.475	25765.09	0.0181	P	5.9
4	<input type="checkbox"/>	10.000	10.327	48226.95	0.0333	P	6.3
5	<input type="checkbox"/>	100.000	98.843	456124.81	0.3106	P	4.2
6	<input type="checkbox"/>	200.000	200.550	928023.06	0.6292	P	8.9
7	<input type="checkbox"/>	1.000					

$y = 0.0031 * x + 9.5066E-004$

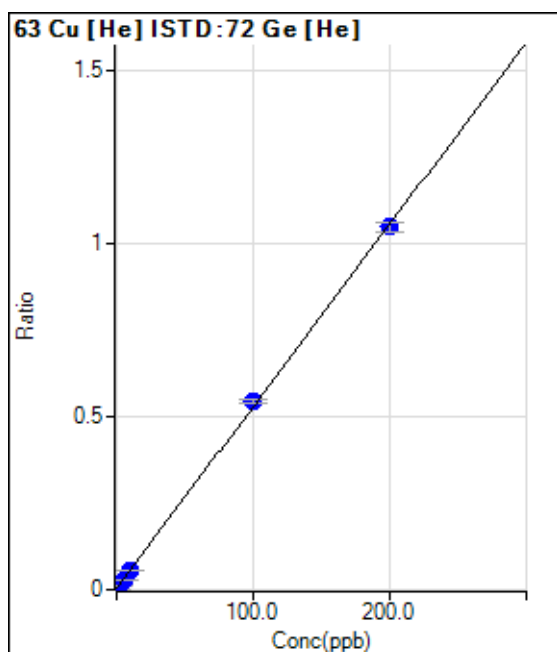
R = 1.0000

DL = 0.03617

BEC = 0.3034

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	-0.407	453.34	0.0011	P	23.2
2	<input type="checkbox"/>	2.000	1.603	4794.02	0.0117	P	3.7
3	<input type="checkbox"/>	5.000	4.737	11657.18	0.0282	P	3.4
4	<input type="checkbox"/>	10.000	9.698	22467.35	0.0543	P	0.8
5	<input type="checkbox"/>	100.000	102.685	219871.06	0.5440	P	2.0
6	<input type="checkbox"/>	200.000	198.683	429425.77	1.0494	P	2.7
7	<input type="checkbox"/>	1.000					

$y = 0.0053 * x + 0.0033$

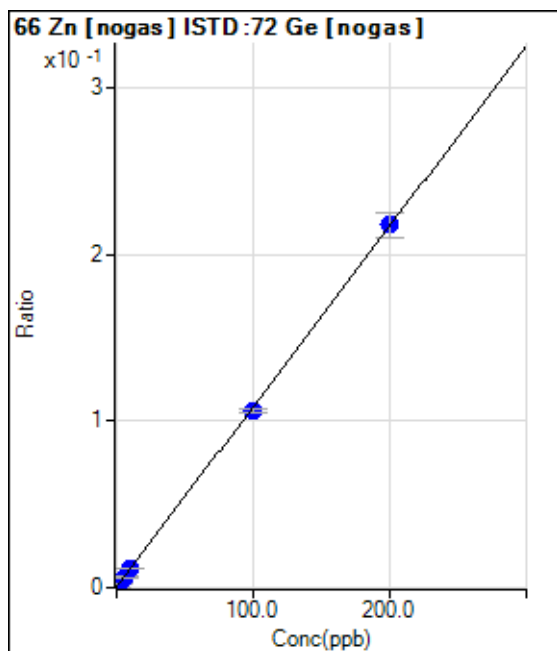
R = 0.9999

DL = 0.1488

BEC = 0.6205

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.055	443.34	0.0003	P	8.3
2	<input type="checkbox"/>	2.000	1.903	3450.38	0.0023	P	7.7
3	<input type="checkbox"/>	5.000	5.603	8952.31	0.0063	P	10.7
4	<input type="checkbox"/>	10.000	10.483	16787.95	0.0116	P	5.1
5	<input type="checkbox"/>	100.000	97.990	156138.54	0.1063	P	2.6
6	<input type="checkbox"/>	200.000	200.967	321547.31	0.2178	P	6.9
7	<input type="checkbox"/>	1.000					

$y = 0.0011 * x + 2.4077E-004$

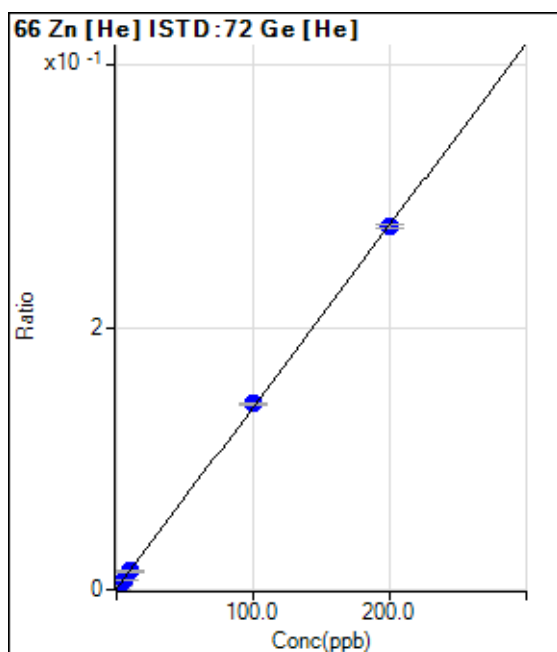
R = 0.9999

DL = 0.06861

BEC = 0.2224

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	-0.372	63.33	0.0002	P	31.9
2	<input type="checkbox"/>	2.000	1.617	1193.39	0.0029	P	6.9
3	<input type="checkbox"/>	5.000	5.158	3233.67	0.0078	P	5.6
4	<input type="checkbox"/>	10.000	9.689	5830.99	0.0141	P	3.4
5	<input type="checkbox"/>	100.000	101.786	57316.76	0.1418	P	0.9
6	<input type="checkbox"/>	200.000	199.122	113247.74	0.2767	P	1.1
7	<input type="checkbox"/>	1.000					

$y = 0.0014 * x + 6.7210E-004$

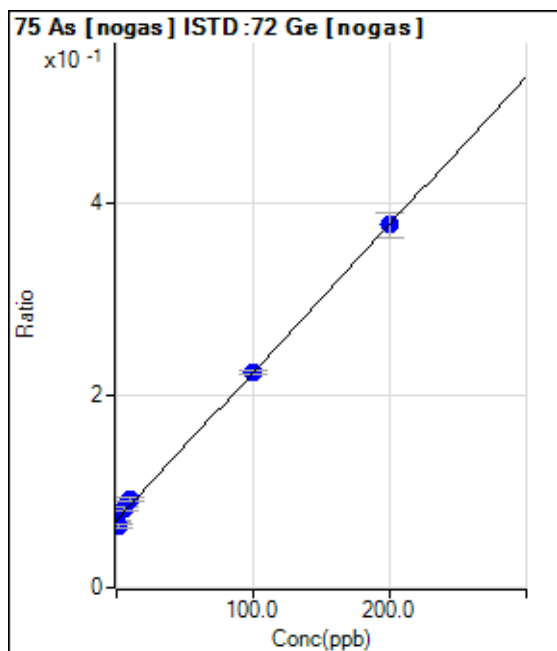
R = 0.9999

DL = 0.108

BEC = 0.4848

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	-0.718	102419.24	0.0694	P	3.3
2	<input type="checkbox"/>	2.000	-3.714	97278.72	0.0648	P	5.6
3	<input type="checkbox"/>	5.000	7.530	117083.82	0.0822	P	3.1
4	<input type="checkbox"/>	10.000	13.997	133555.26	0.0921	P	2.6
5	<input type="checkbox"/>	100.000	100.222	330345.56	0.2249	P	2.2
6	<input type="checkbox"/>	200.000	199.683	558356.89	0.3782	P	6.6
7	<input type="checkbox"/>	1.000					

$y = 0.0015 * x + 0.0706$

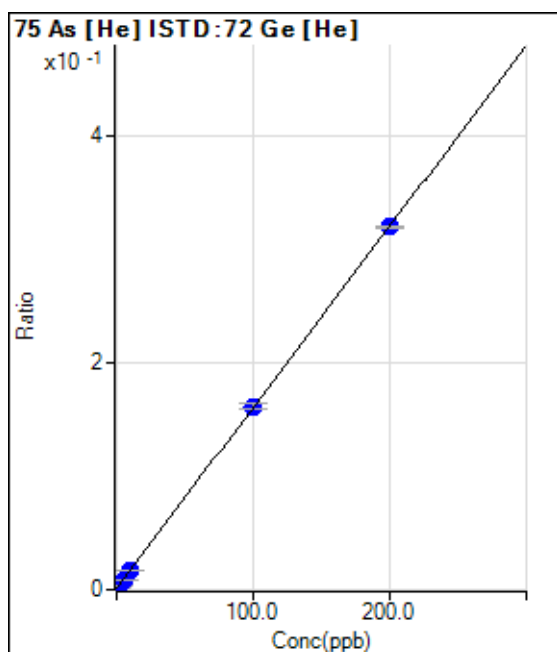
R = 0.9992

DL = 4.482

BEC = 45.8

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	421.12	0.0010	P	7.8
2	<input type="checkbox"/>	2.000	1.968	1714.53	0.0042	P	4.6
3	<input type="checkbox"/>	5.000	4.876	3649.27	0.0088	P	3.1
4	<input type="checkbox"/>	10.000	9.557	6746.83	0.0163	P	1.3
5	<input type="checkbox"/>	100.000	100.526	65347.29	0.1617	P	2.6
6	<input type="checkbox"/>	200.000	199.763	131070.61	0.3202	P	0.4
7	<input type="checkbox"/>	1.000					

$y = 0.0016 * x + 0.0010$

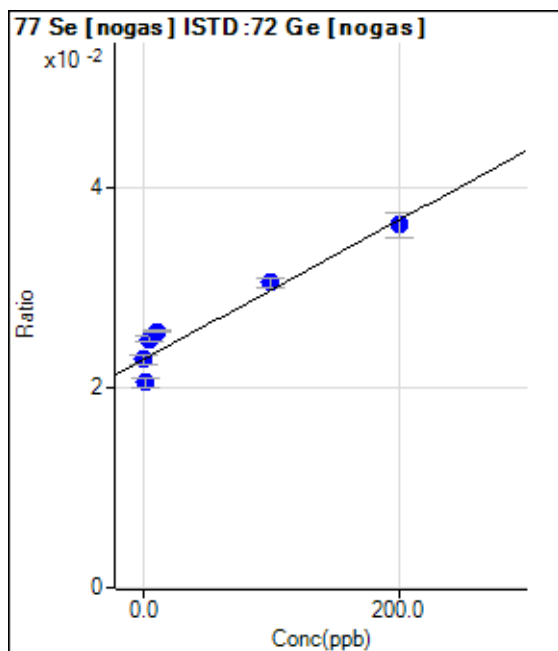
R = 1.0000

DL = 0.1521

BEC = 0.6533

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	33607.84	0.0228	P	3.9
2	<input type="checkbox"/>	2.000	-33.709	30696.12	0.0205	P	3.9
3	<input type="checkbox"/>	5.000	29.479	35411.49	0.0248	P	2.8
4	<input type="checkbox"/>	10.000	39.959	37114.63	0.0256	P	0.8
5	<input type="checkbox"/>	100.000	109.966	44691.66	0.0304	P	2.8
6	<input type="checkbox"/>	200.000	193.264	53455.21	0.0362	P	7.1
7	<input type="checkbox"/>	1.000					

$y = 6.9416E-005 * x + 0.0228$

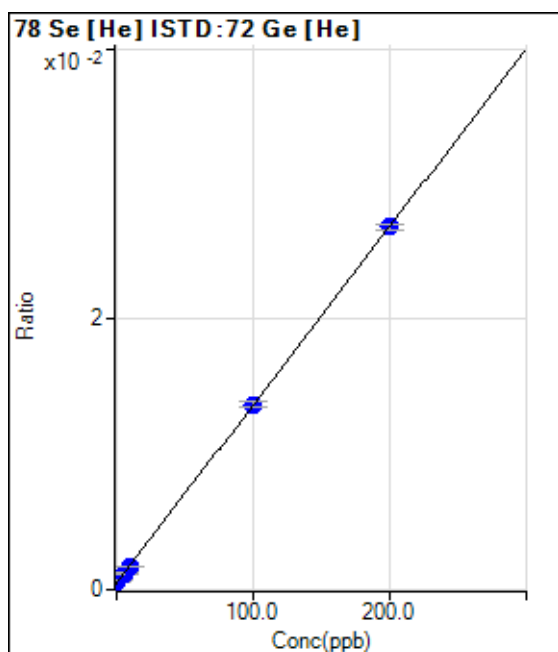
R = 0.9579

DL = 38.77

BEC = 328.4

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.289	214.00	0.0005	P	5.6
2	<input type="checkbox"/>	2.000	2.238	322.00	0.0008	P	9.9
3	<input type="checkbox"/>	5.000	4.976	474.01	0.0011	P	12.2
4	<input type="checkbox"/>	10.000	9.373	714.02	0.0017	P	4.7
5	<input type="checkbox"/>	100.000	100.190	5534.19	0.0137	P	2.9
6	<input type="checkbox"/>	200.000	199.935	10979.31	0.0268	P	1.7
7	<input type="checkbox"/>	1.000					

$y = 1.3173E-004 * x + 4.9232E-004$

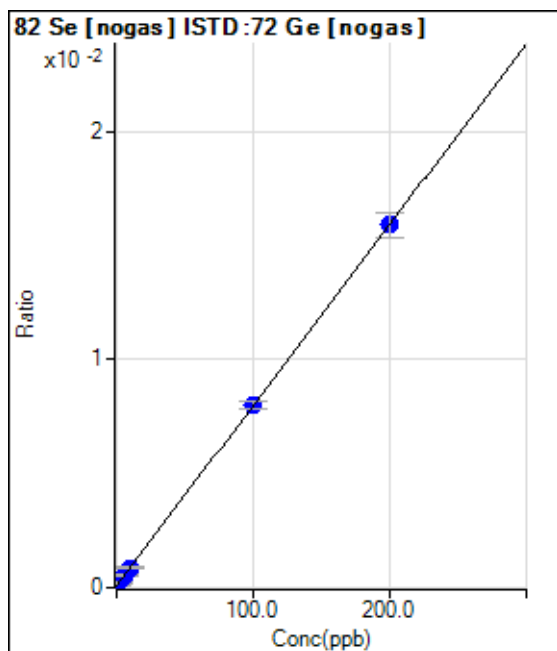
R = 1.0000

DL = 0.6756

BEC = 3.737

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	113.33	0.0001	P	59.8
2	<input type="checkbox"/>	2.000	2.033	360.01	0.0002	P	26.3
3	<input type="checkbox"/>	5.000	5.753	760.03	0.0005	P	8.2
4	<input type="checkbox"/>	10.000	9.957	1260.07	0.0009	P	12.4
5	<input type="checkbox"/>	100.000	100.045	11740.59	0.0080	P	3.9
6	<input type="checkbox"/>	200.000	199.961	23485.42	0.0159	P	7.1
7	<input type="checkbox"/>	1.000					

$y = 7.9172E-005 * x + 7.8439E-005$

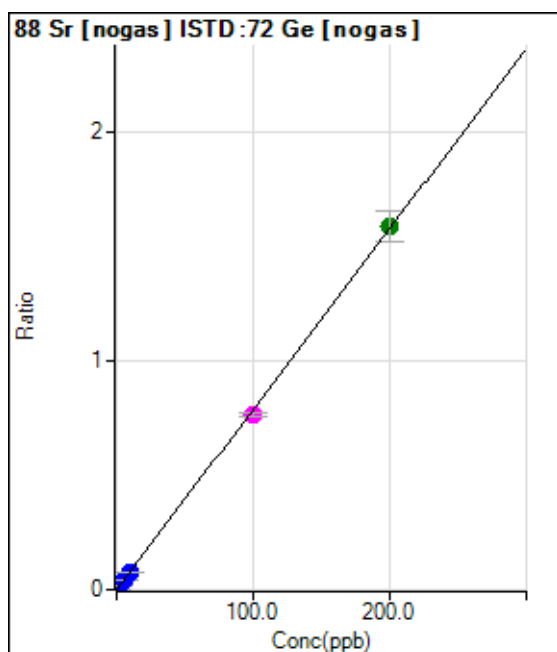
R = 1.0000

DL = 1.778

BEC = 0.9907

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	490.02	0.0003	P	5.7
2	<input type="checkbox"/>	2.000	1.907	23068.41	0.0154	P	2.2
3	<input type="checkbox"/>	5.000	5.263	59458.72	0.0418	P	8.9
4	<input type="checkbox"/>	10.000	9.902	113664.20	0.0784	P	3.7
5	<input type="checkbox"/>	100.000	97.425	1128659.12	0.7687	M	2.5
6	<input type="checkbox"/>	200.000	201.287	2342306.47	1.5879	A	8.5
7	<input type="checkbox"/>	1.000					

$y = 0.0079 * x + 3.3128E-004$

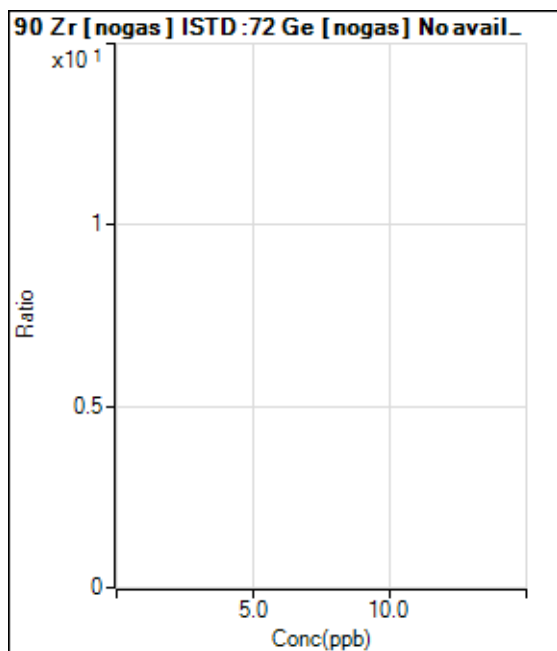
R = 0.9999

DL = 0.007136

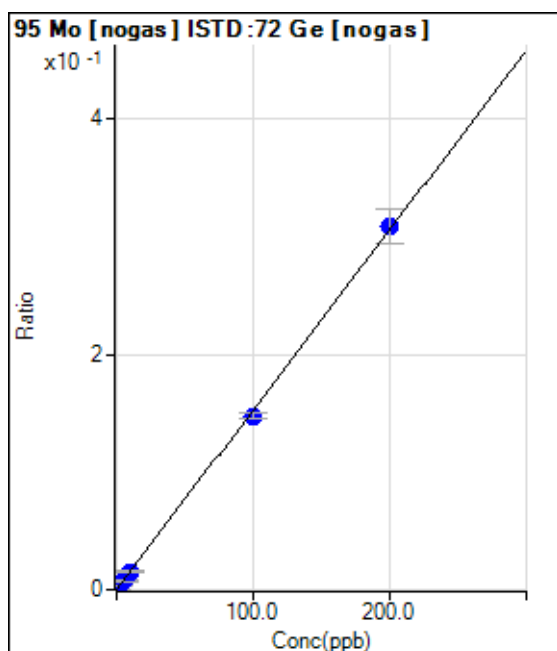
BEC = 0.042

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000					
2	<input type="checkbox"/>	2.000					
3	<input type="checkbox"/>	5.000					
4	<input type="checkbox"/>	10.000					
5	<input type="checkbox"/>	100.000					
6	<input type="checkbox"/>	200.000					
7	<input type="checkbox"/>	1.000					



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	126.67	0.0001	P	43.6
2	<input type="checkbox"/>	2.000	1.904	4487.30	0.0030	P	6.3
3	<input type="checkbox"/>	5.000	4.979	10910.16	0.0077	P	10.3
4	<input type="checkbox"/>	10.000	9.982	22204.19	0.0153	P	4.9
5	<input type="checkbox"/>	100.000	96.431	216309.83	0.1473	P	3.1
6	<input type="checkbox"/>	200.000	201.787	454174.38	0.3081	P	9.6
7	<input type="checkbox"/>	1.000					

$y = 0.0015 * x + 8.4593E-005$

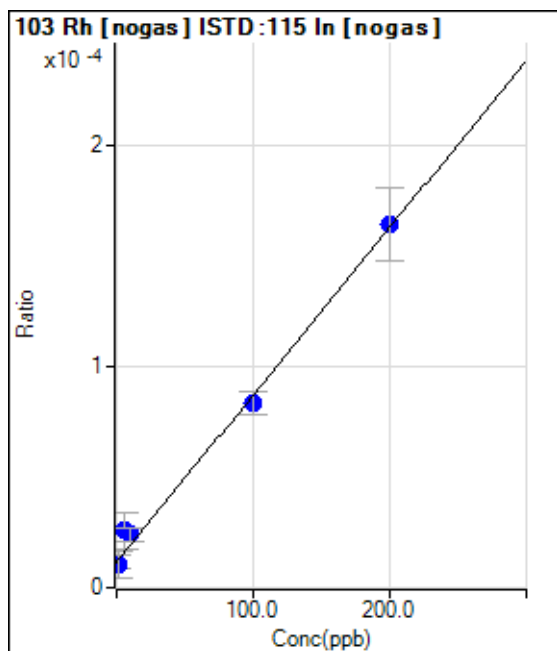
R = 0.9998

DL = 0.0725

BEC = 0.05543

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	13.33	0.0000	P	53.1
2	<input type="checkbox"/>	2.000	-1.658	13.33	0.0000	P	115.
3	<input type="checkbox"/>	5.000	18.698	30.00	0.0000	P	61.9
4	<input type="checkbox"/>	10.000	16.388	30.00	0.0000	P	25.4
5	<input type="checkbox"/>	100.000	95.290	106.67	0.0001	P	12.4
6	<input type="checkbox"/>	200.000	201.730	196.67	0.0002	P	20.1
7	<input type="checkbox"/>	1.000					

$y = 7.5451E-007 * x + 1.1579E-005$

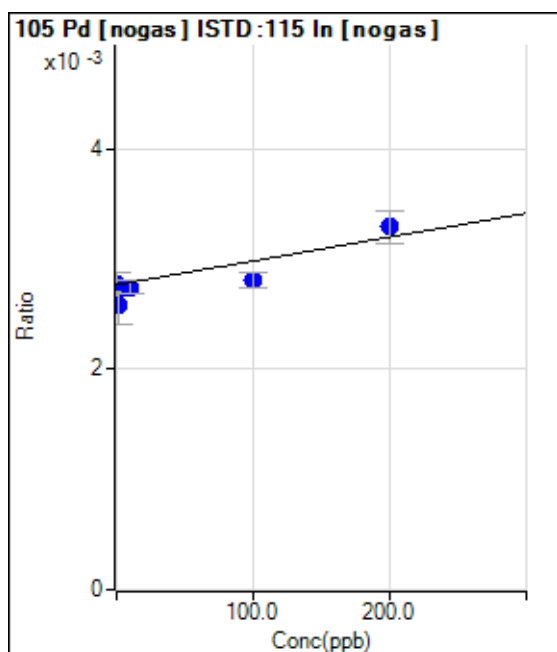
R = 0.9966

DL = 24.43

BEC = 15.35

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	3267.01	0.0028	P	7.6
2	<input type="checkbox"/>	2.000	-86.905	3343.70	0.0026	P	13.0
3	<input type="checkbox"/>	5.000	-13.462	3283.70	0.0027	P	2.1
4	<input type="checkbox"/>	10.000	-9.979	3377.05	0.0027	P	4.6
5	<input type="checkbox"/>	100.000	19.959	3563.74	0.0028	P	5.1
6	<input type="checkbox"/>	200.000	242.370	3970.51	0.0033	P	9.0
7	<input type="checkbox"/>	1.000					

$y = 2.1647E-006 * x + 0.0028$

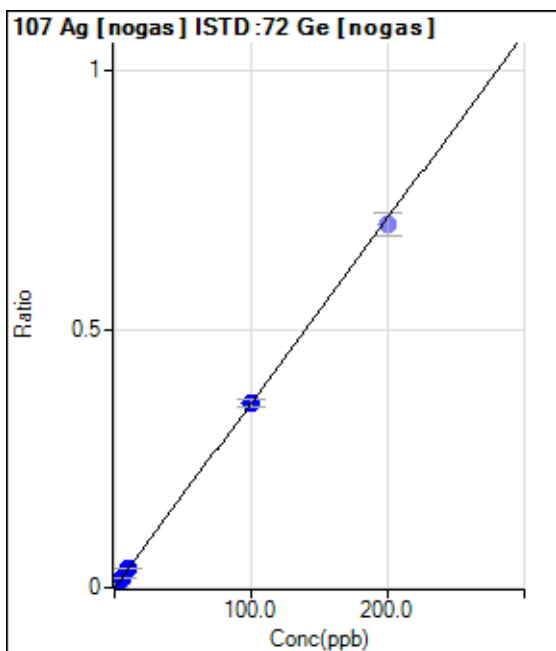
R = 0.9171

DL = 291.4

BEC = 1277

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	40.00	0.0000	P	64.2
2	<input type="checkbox"/>	2.000	2.016	10843.47	0.0072	P	0.2
3	<input type="checkbox"/>	5.000	5.452	27712.01	0.0195	P	8.0
4	<input type="checkbox"/>	10.000	10.270	53173.55	0.0367	P	4.6
5	<input type="checkbox"/>	100.000	99.950	523694.54	0.3569	P	5.0
6	<input checked="" type="checkbox"/>	200.000		1035856.60	0.7015	P	6.4
7	<input type="checkbox"/>	1.000					

$y = 0.0036 * x + 2.6469E-005$

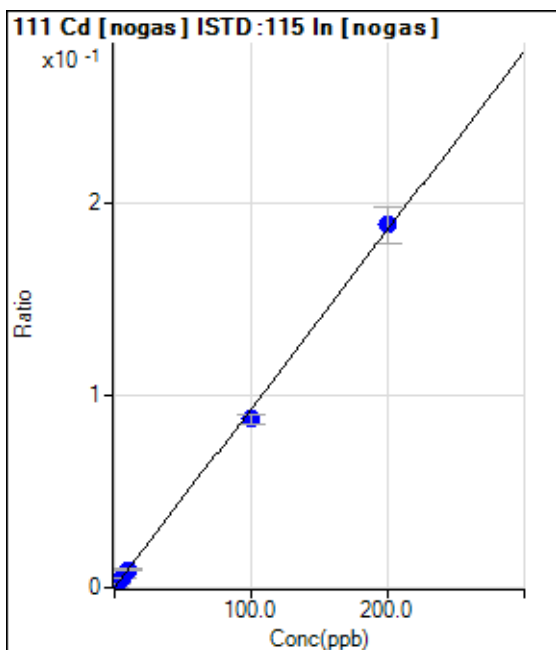
R = 1.0000

DL = 0.01428

BEC = 0.007413

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	20.00	0.0000	P	83.0
2	<input type="checkbox"/>	2.000	2.054	2506.89	0.0019	P	3.7
3	<input type="checkbox"/>	5.000	5.236	5817.71	0.0049	P	15.5
4	<input type="checkbox"/>	10.000	9.733	11153.76	0.0091	P	10.0
5	<input type="checkbox"/>	100.000	94.307	111430.40	0.0879	P	5.6
6	<input type="checkbox"/>	200.000	202.854	227229.56	0.1891	P	9.9
7	<input type="checkbox"/>	1.000					

$y = 9.3214E-004 * x + 1.6578E-005$

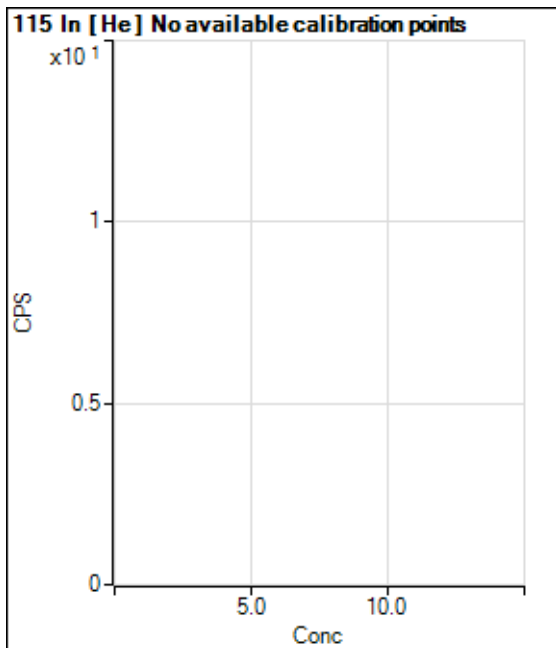
R = 0.9994

DL = 0.04428

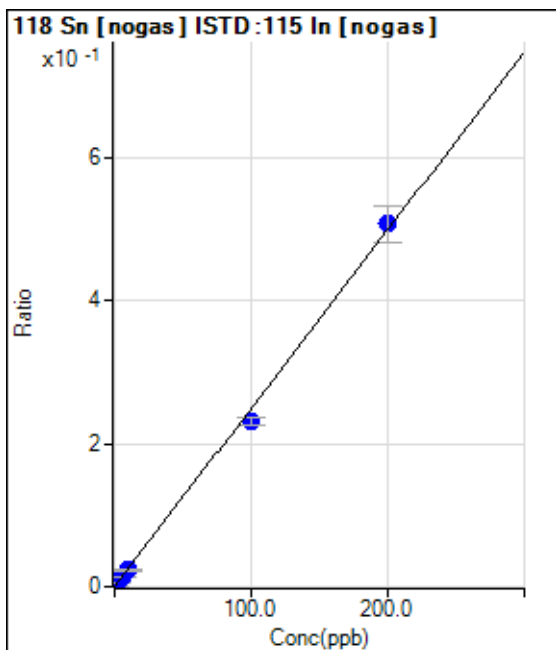
BEC = 0.01778

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>			535844.53		P	1.6
2	<input type="checkbox"/>			528983.01		P	2.8
3	<input type="checkbox"/>			542641.29		P	2.2
4	<input type="checkbox"/>			537545.91		P	0.8
5	<input type="checkbox"/>			516594.15		P	1.0
6	<input type="checkbox"/>			515804.79		P	0.5
7	<input type="checkbox"/>						



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	360.01	0.0003	P	13.8
2	<input type="checkbox"/>	2.000	1.747	6047.80	0.0047	P	6.7
3	<input type="checkbox"/>	5.000	5.140	15613.95	0.0131	P	12.6
4	<input type="checkbox"/>	10.000	9.354	28947.61	0.0236	P	13.0
5	<input type="checkbox"/>	100.000	93.036	294589.07	0.2324	P	4.8
6	<input type="checkbox"/>	200.000	203.513	610124.41	0.5079	P	10.3
7	<input type="checkbox"/>	1.000					

$y = 0.0025 * x + 3.0195E-004$

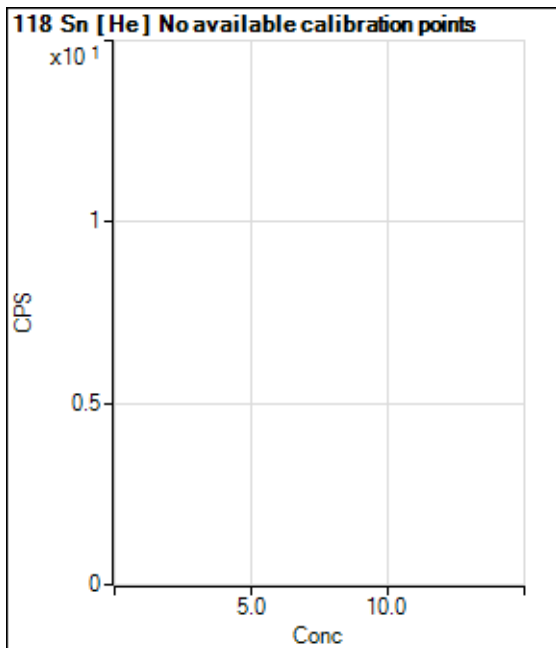
R = 0.9992

DL = 0.05009

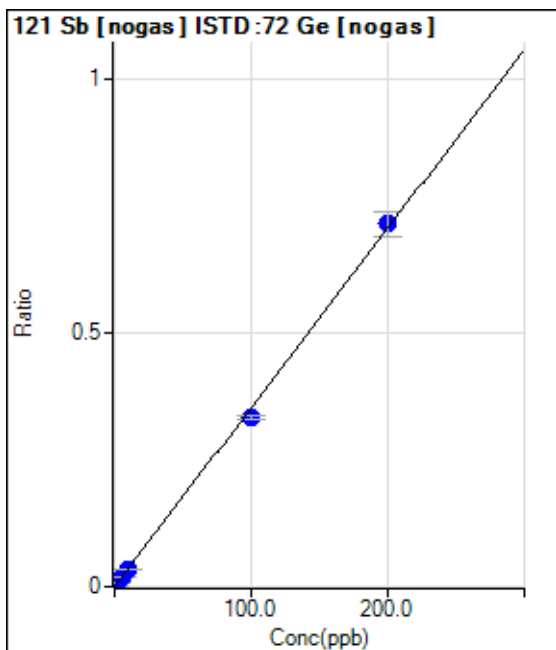
BEC = 0.1211

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>			180.00		P	5.6
2	<input type="checkbox"/>			2673.58		P	6.8
3	<input type="checkbox"/>			6978.16		P	3.0
4	<input type="checkbox"/>			13565.46		P	1.3
5	<input type="checkbox"/>			131737.08		P	1.3
6	<input type="checkbox"/>			268898.02		P	0.5
7	<input type="checkbox"/>						



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	226.67	0.0002	P	8.7
2	<input type="checkbox"/>	2.000	1.960	10600.03	0.0071	P	0.9
3	<input type="checkbox"/>	5.000	5.152	26046.29	0.0183	P	7.2
4	<input type="checkbox"/>	10.000	9.863	50596.66	0.0349	P	4.6
5	<input type="checkbox"/>	100.000	94.734	490689.17	0.3341	P	1.8
6	<input type="checkbox"/>	200.000	202.636	1054661.02	0.7144	P	6.9
7	<input type="checkbox"/>	1.000					

$y = 0.0035 * x + 1.5368E-004$

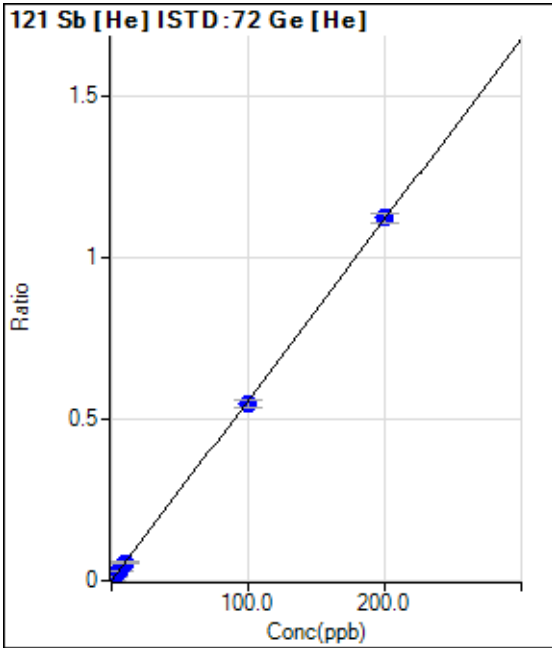
R = 0.9995

DL = 0.01135

BEC = 0.0436

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	100.00	0.0002	P	28.0
2	<input type="checkbox"/>	2.000	1.950	4560.66	0.0111	P	4.3
3	<input type="checkbox"/>	5.000	4.889	11377.19	0.0275	P	0.5
4	<input type="checkbox"/>	10.000	10.020	23225.74	0.0562	P	5.2
5	<input type="checkbox"/>	100.000	98.031	221202.73	0.5474	P	4.4
6	<input type="checkbox"/>	200.000	200.987	459164.08	1.1221	P	2.6
7	<input type="checkbox"/>	1.000					

$y = 0.0056 * x + 2.4834E-004$

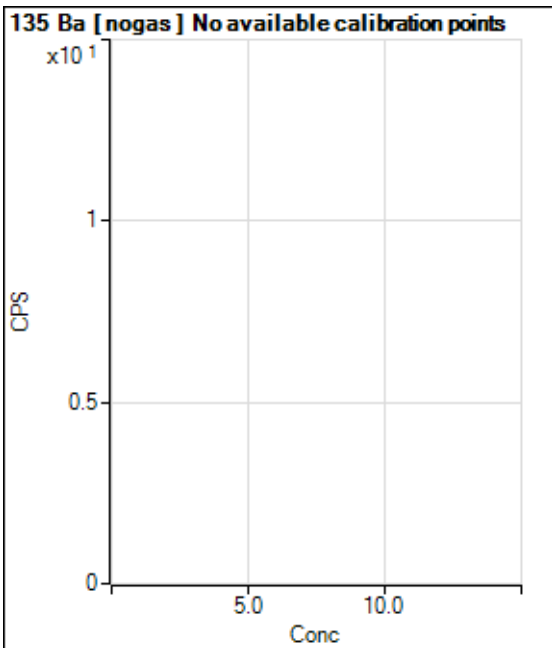
R = 0.9999

DL = 0.03737

BEC = 0.04449

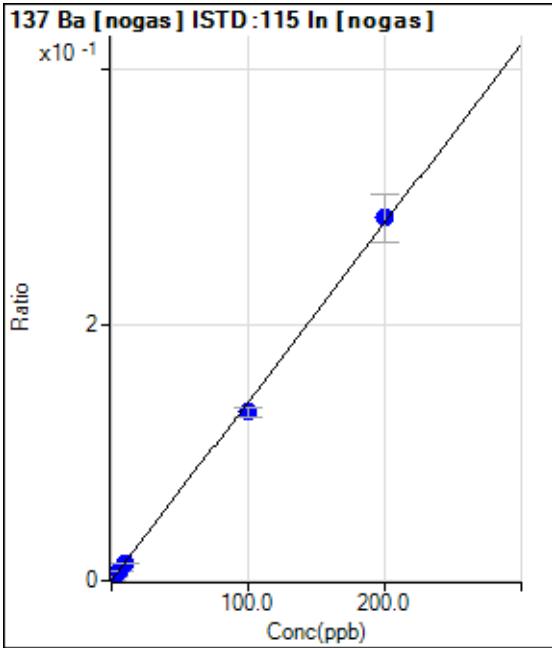
Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>			36.67		P	15.7
2	<input type="checkbox"/>			2033.49		P	6.6
3	<input type="checkbox"/>			5164.17		P	3.4
4	<input type="checkbox"/>			9849.59		P	3.8
5	<input type="checkbox"/>			97004.59		P	1.6
6	<input type="checkbox"/>			199842.75		P	1.3
7	<input type="checkbox"/>						

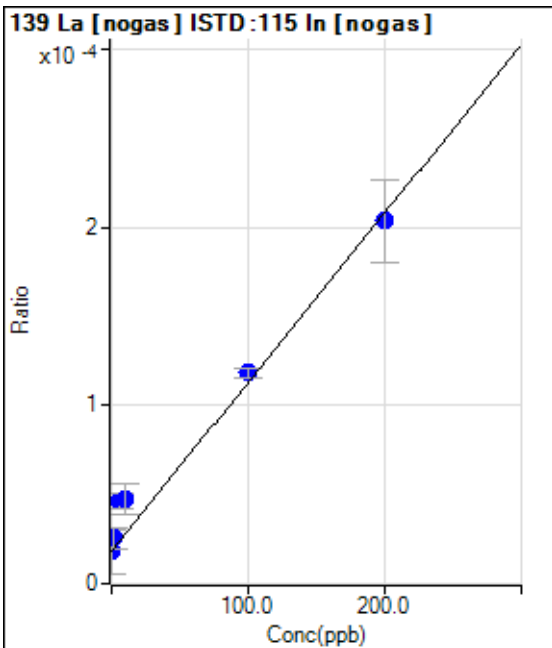
Calibration for 082_ICV.d



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	83.33	0.0001	P	70.4
2	<input type="checkbox"/>	2.000	1.779	3323.71	0.0026	P	2.0
3	<input type="checkbox"/>	5.000	5.300	8932.42	0.0075	P	8.6
4	<input type="checkbox"/>	10.000	9.555	16491.39	0.0134	P	9.5
5	<input type="checkbox"/>	100.000	94.196	166962.19	0.1318	P	6.4
6	<input type="checkbox"/>	200.000	202.919	340266.14	0.2838	P	12.9
7	<input type="checkbox"/>	1.000					

$y = 0.0014 * x + 7.3098E-005$
 R = 0.9994
 DL = 0.1103
 BEC = 0.05228

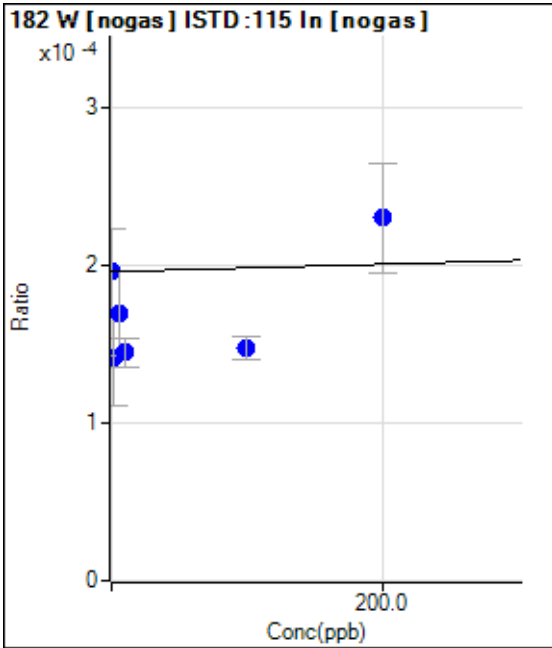
Weight: <None>
Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	20.00	0.0000	P	137.
2	<input type="checkbox"/>	2.000	7.884	33.33	0.0000	P	45.7
3	<input type="checkbox"/>	5.000	30.013	56.67	0.0000	P	18.3
4	<input type="checkbox"/>	10.000	30.939	60.00	0.0000	P	38.2
5	<input type="checkbox"/>	100.000	105.464	150.00	0.0001	P	4.9
6	<input type="checkbox"/>	200.000	195.537	250.01	0.0002	P	22.9
7	<input type="checkbox"/>	1.000					

$y = 9.4764E-007 * x + 1.8211E-005$
 R = 0.9921
 DL = 79.06
 BEC = 19.22

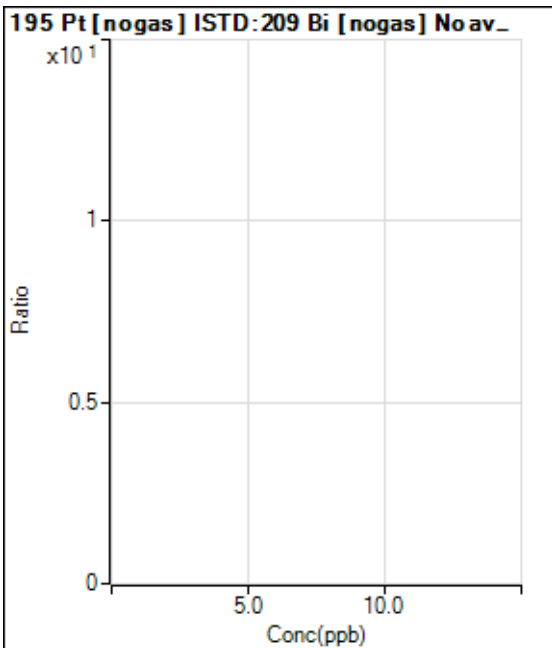
Weight: <None>
Min Conc: <None>



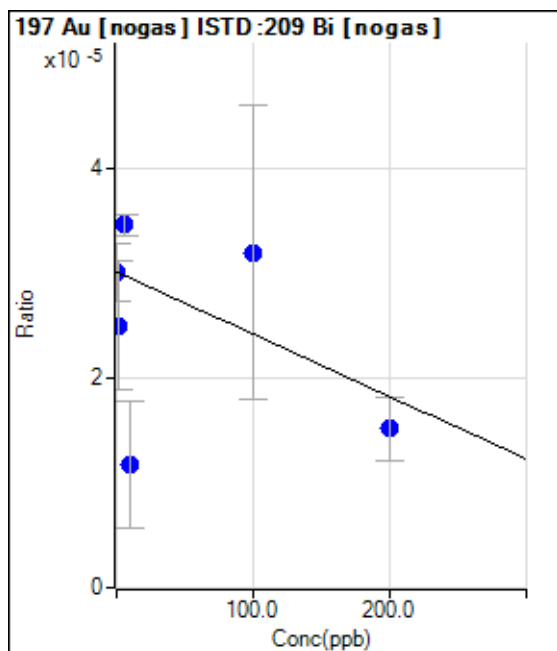
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	230.01	0.0002	P	27.1
2	<input type="checkbox"/>	2.000	-2308.337	183.34	0.0001	P	43.1
3	<input type="checkbox"/>	5.000	-1103.018	203.34	0.0002	P	31.7
4	<input type="checkbox"/>	10.000	-2158.113	180.00	0.0001	P	12.9
5	<input type="checkbox"/>	100.000	-2057.477	186.67	0.0001	P	10.3
6	<input type="checkbox"/>	200.000	1437.948	273.34	0.0002	P	30.5
7	<input type="checkbox"/>	1.000					

$y = 2.3735E-008 * x + 1.9632E-004$
 R = 0.6190
 DL = 6731
 BEC = 8271

Weight: <None>
Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000					
2	<input type="checkbox"/>	2.000					
3	<input type="checkbox"/>	5.000					
4	<input type="checkbox"/>	10.000					
5	<input type="checkbox"/>	100.000					
6	<input type="checkbox"/>	200.000					
7	<input type="checkbox"/>	1.000					



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	26.67	0.0000	P	18.4
2	<input type="checkbox"/>	2.000	85.934	23.33	0.0000	P	49.3
3	<input type="checkbox"/>	5.000	-75.192	30.00	0.0000	P	6.1
4	<input type="checkbox"/>	10.000	309.676	10.00	0.0000	P	102.
5	<input type="checkbox"/>	100.000	-30.977	30.00	0.0000	P	88.0
6	<input type="checkbox"/>	200.000	251.670	13.33	0.0000	P	40.3
7	<input type="checkbox"/>	1.000					

$y = -5.9384E-008 * x + 3.0077E-005$

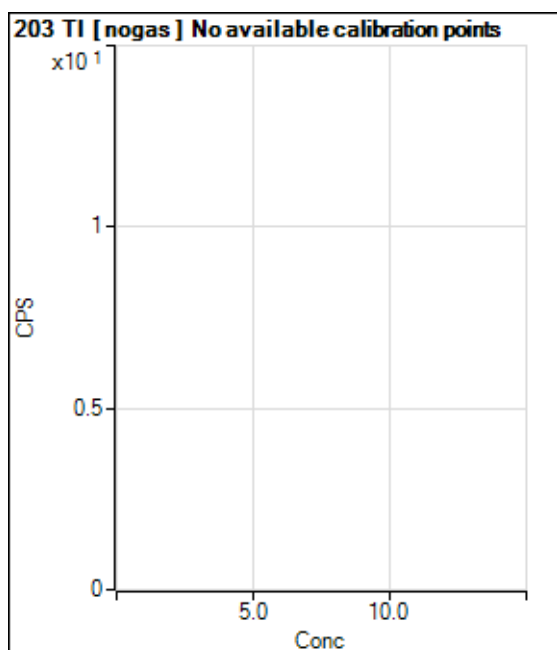
R = -0.3342

DL = -279.4

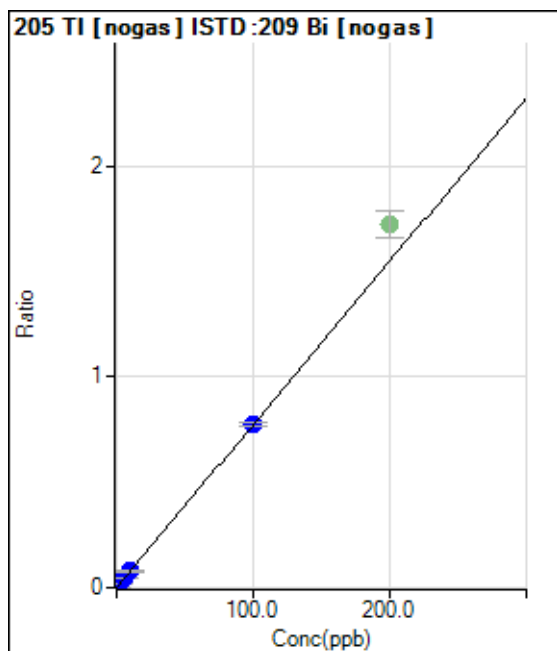
BEC = -506.5

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>			100.00		P	30.0
2	<input type="checkbox"/>			6161.26		P	1.5
3	<input type="checkbox"/>			15147.25		P	2.7
4	<input type="checkbox"/>			30138.15		P	1.8
5	<input type="checkbox"/>			308677.10		P	1.3
6	<input type="checkbox"/>			620386.12		P	1.7
7	<input type="checkbox"/>						



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	240.00	0.0003	P	20.7
2	<input type="checkbox"/>	2.000	1.954	14356.50	0.0154	P	5.0
3	<input type="checkbox"/>	5.000	5.489	37156.04	0.0428	P	5.4
4	<input type="checkbox"/>	10.000	10.083	70261.59	0.0783	P	7.1
5	<input type="checkbox"/>	100.000	99.968	735229.29	0.7740	P	2.5
6	<input checked="" type="checkbox"/>	200.000		1503663.68	1.7212	A	7.3
7	<input type="checkbox"/>	1.000					

$y = 0.0077 * x + 2.7154E-004$

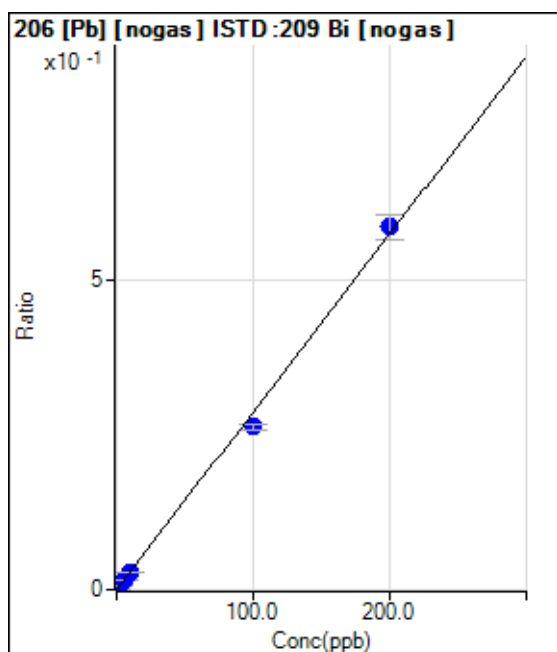
R = 1.0000

DL = 0.02178

BEC = 0.03508

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	36.67	0.0000	P	30.5
2	<input type="checkbox"/>	2.000	1.935	5224.24	0.0056	P	4.6
3	<input type="checkbox"/>	5.000	5.356	13402.35	0.0154	P	6.9
4	<input type="checkbox"/>	10.000	9.804	25316.62	0.0282	P	7.1
5	<input type="checkbox"/>	100.000	91.736	250438.75	0.2637	P	3.6
6	<input type="checkbox"/>	200.000	204.134	512641.34	0.5867	P	6.8
7	<input type="checkbox"/>	1.000					

$y = 0.0029 * x + 4.1502E-005$

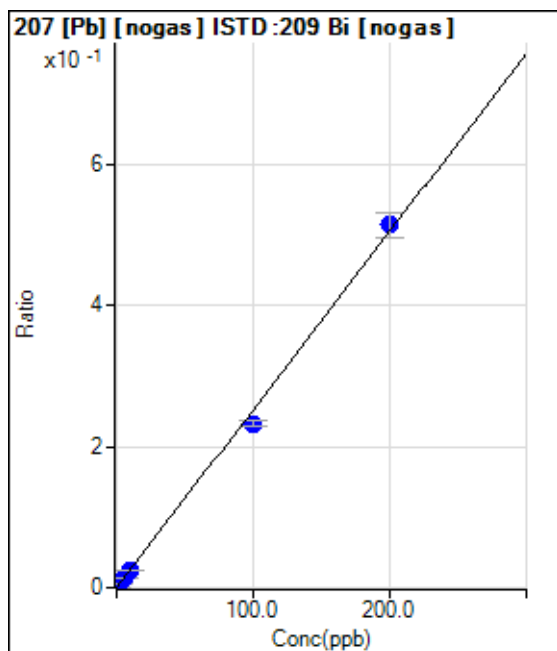
R = 0.9988

DL = 0.01323

BEC = 0.01444

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	36.67	0.0000	P	60.9
2	<input type="checkbox"/>	2.000	1.877	4454.01	0.0048	P	1.6
3	<input type="checkbox"/>	5.000	5.164	11340.79	0.0131	P	6.2
4	<input type="checkbox"/>	10.000	9.749	22108.54	0.0246	P	4.7
5	<input type="checkbox"/>	100.000	92.349	221086.20	0.2328	P	3.3
6	<input type="checkbox"/>	200.000	203.835	448929.82	0.5137	P	6.7
7	<input type="checkbox"/>	1.000					

$y = 0.0025 * x + 4.2226E-005$

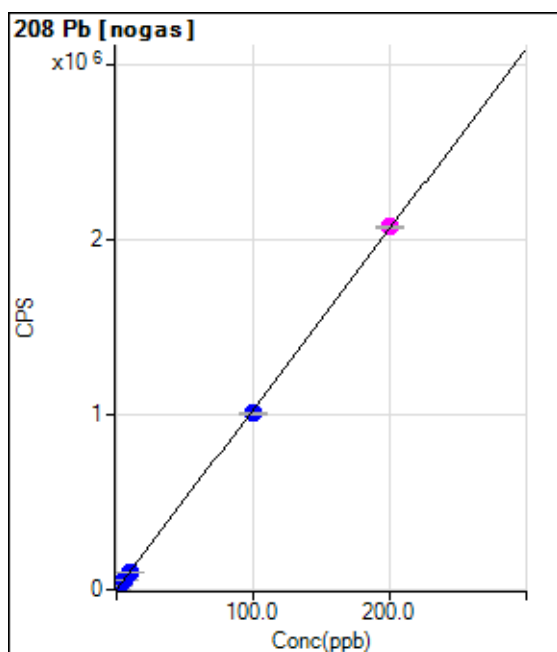
R = 0.9990

DL = 0.03059

BEC = 0.01676

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	133.33		P	4.3
2	<input type="checkbox"/>	2.000	1.976	20512.01		P	1.1
3	<input type="checkbox"/>	5.000	5.086	52580.63		P	1.2
4	<input type="checkbox"/>	10.000	9.885	102070.51		P	2.3
5	<input type="checkbox"/>	100.000	97.668	1007331.21		P	1.7
6	<input type="checkbox"/>	200.000	201.170	2074701.77		M	0.8
7	<input type="checkbox"/>	1.000					

$y = 10312.5105 * x + 133.3333$

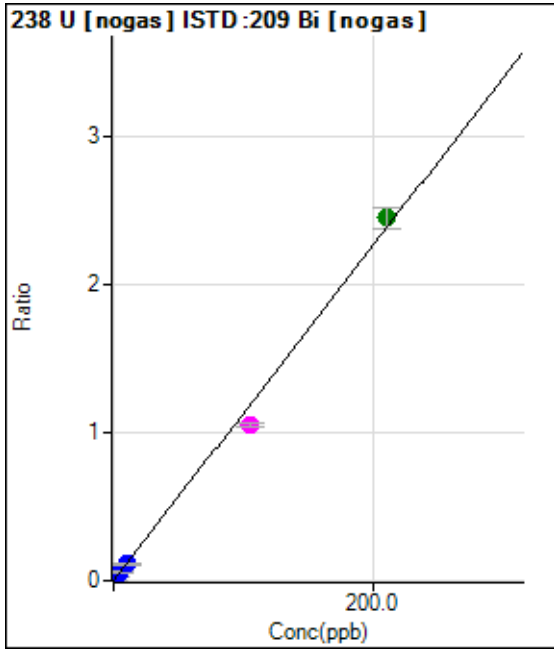
R = 0.9999

DL = 0.00168

BEC = 0.01293

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	40.00	0.0000	P	40.9
2	<input type="checkbox"/>	2.000	1.900	20109.62	0.0216	P	5.5
3	<input type="checkbox"/>	5.000	5.063	49865.06	0.0574	P	4.3
4	<input type="checkbox"/>	10.000	9.800	99590.00	0.1110	P	7.2
5	<input type="checkbox"/>	105.000	92.870	998791.49	1.0516	M	3.3
6	<input type="checkbox"/>	210.000	216.074	2138716.32	2.4465	A	5.6
7	<input type="checkbox"/>	1.000					

$y = 0.0113 * x + 4.4860E-005$

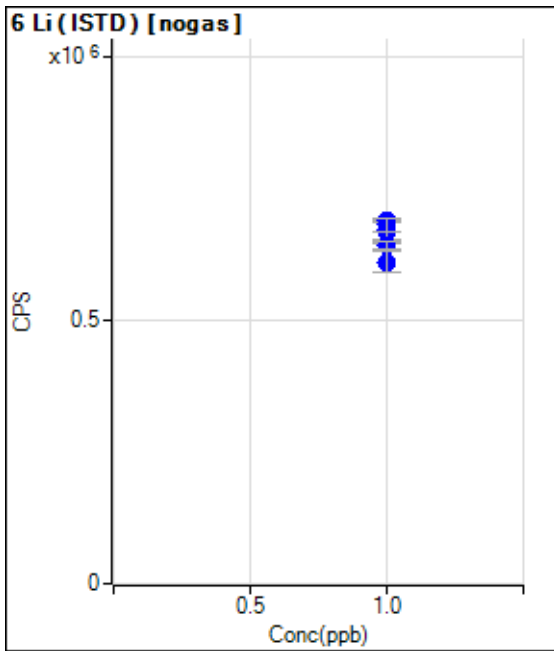
R = 0.9977

DL = 0.004857

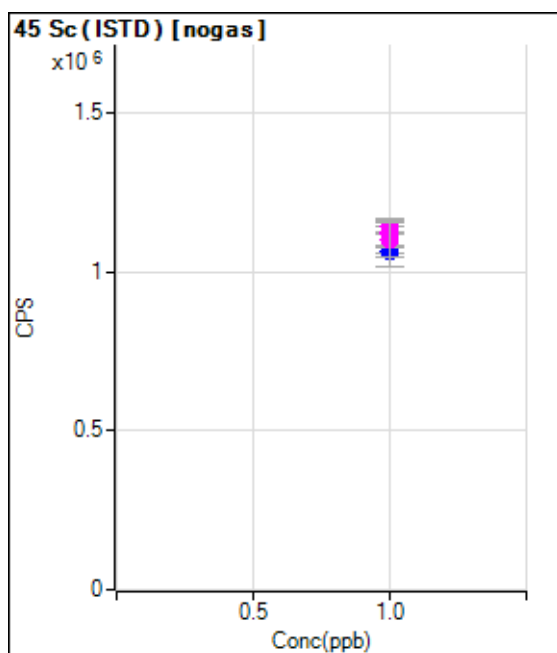
BEC = 0.003962

Weight: <None>

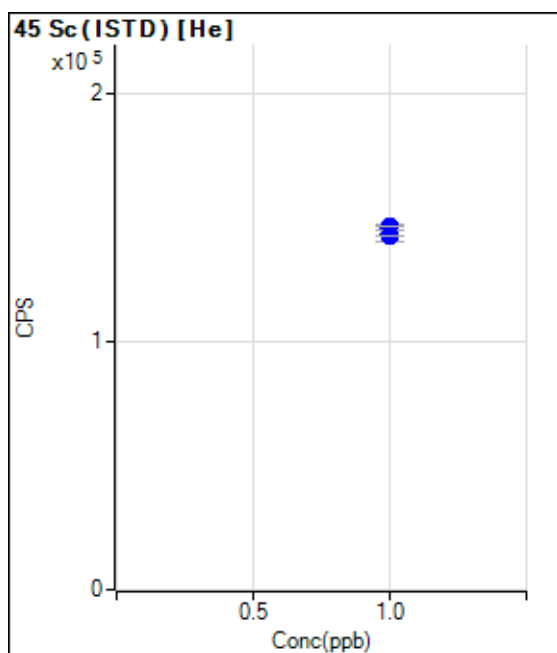
Min Conc: <None>



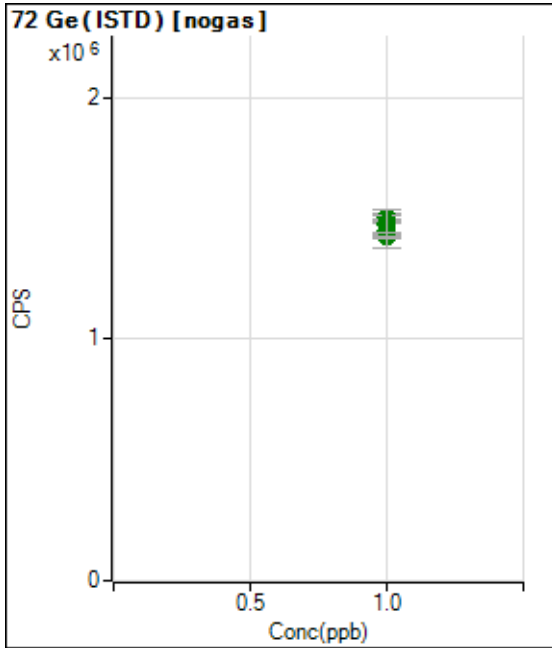
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	1.000		671259.72		P	5.3
2	<input type="checkbox"/>	1.000		689388.65		P	1.0
3	<input type="checkbox"/>	1.000		670301.51		P	6.8
4	<input type="checkbox"/>	1.000		682008.37		P	3.6
5	<input type="checkbox"/>	1.000		642630.85		P	2.7
6	<input type="checkbox"/>	1.000		611712.60		P	6.9
7	<input type="checkbox"/>	1.000					



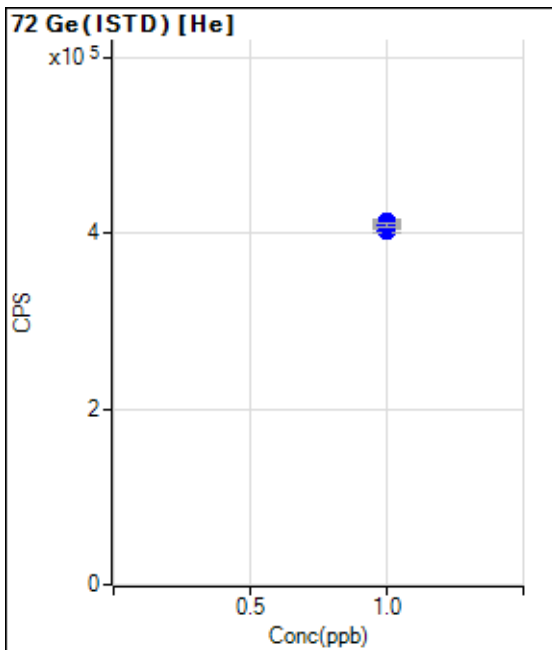
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	1.000		1102075.87		M	7.5
2	<input type="checkbox"/>	1.000		1142944.36		M	2.8
3	<input type="checkbox"/>	1.000		1068008.97		P	9.8
4	<input type="checkbox"/>	1.000		1119160.92		M	7.6
5	<input type="checkbox"/>	1.000		1126598.91		M	7.6
6	<input type="checkbox"/>	1.000		1101830.30		M	9.6
7	<input type="checkbox"/>	1.000					



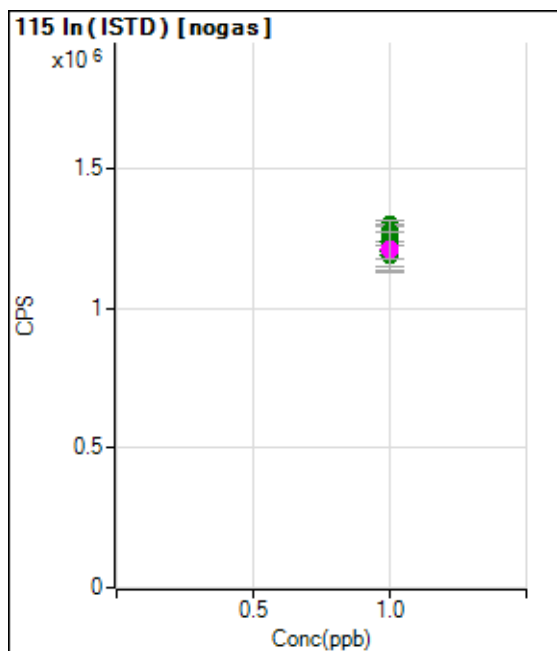
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	1.000		145951.31		P	2.0
2	<input type="checkbox"/>	1.000		142935.91		P	4.2
3	<input type="checkbox"/>	1.000		146041.33		P	1.4
4	<input type="checkbox"/>	1.000		145342.61		P	1.3
5	<input type="checkbox"/>	1.000		142305.61		P	0.2
6	<input type="checkbox"/>	1.000		142372.58		P	0.4
7	<input type="checkbox"/>	1.000					



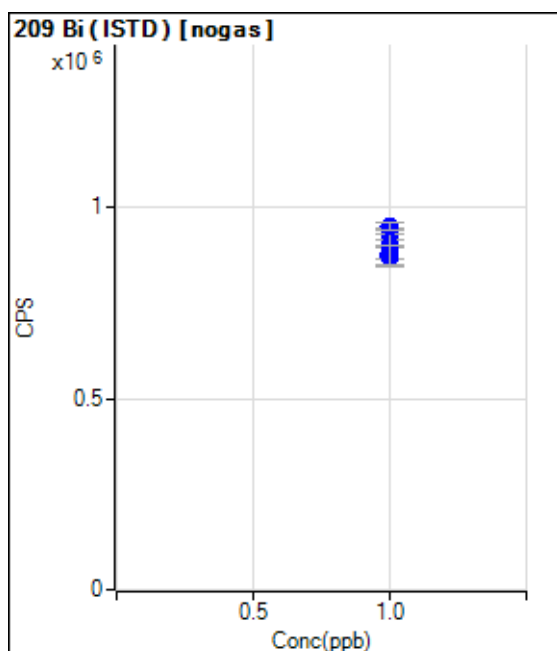
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	1.000		1476428.16		A	5.8
2	<input type="checkbox"/>	1.000		1501014.30		A	1.6
3	<input type="checkbox"/>	1.000		1427398.24		A	7.6
4	<input type="checkbox"/>	1.000		1451110.24		A	5.1
5	<input type="checkbox"/>	1.000		1469237.74		A	4.1
6	<input type="checkbox"/>	1.000		1481278.52		A	7.3
7	<input type="checkbox"/>	1.000					



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	1.000		403705.63		P	1.5
2	<input type="checkbox"/>	1.000		409504.71		P	1.6
3	<input type="checkbox"/>	1.000		413173.26		P	1.6
4	<input type="checkbox"/>	1.000		413507.24		P	0.8
5	<input type="checkbox"/>	1.000		404323.67		P	2.1
6	<input type="checkbox"/>	1.000		409287.48		P	1.2
7	<input type="checkbox"/>	1.000					



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	1.000		1187104.91		A	8.5
2	<input type="checkbox"/>	1.000		1297947.89		A	0.7
3	<input type="checkbox"/>	1.000		1202085.84		A	12.1
4	<input type="checkbox"/>	1.000		1234983.65		A	9.5
5	<input type="checkbox"/>	1.000		1270625.00		A	6.9
6	<input type="checkbox"/>	1.000		1209695.51		M	10.2
7	<input type="checkbox"/>	1.000					



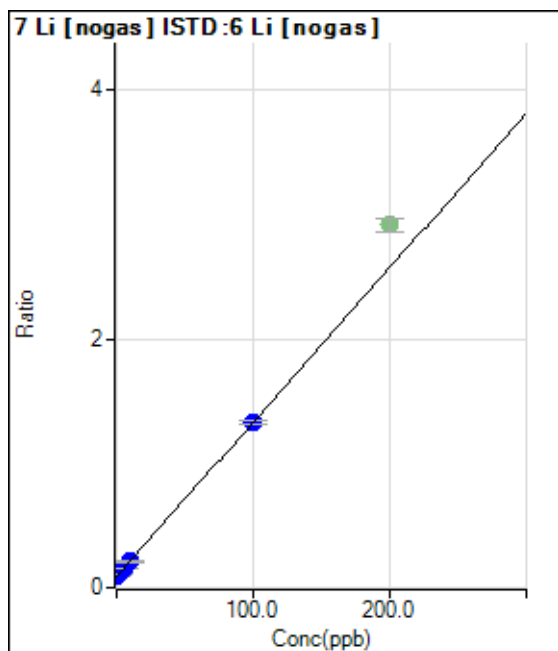
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	1.000		882577.28		P	4.0
2	<input type="checkbox"/>	1.000		933264.73		P	3.2
3	<input type="checkbox"/>	1.000		870660.14		P	6.1
4	<input type="checkbox"/>	1.000		900264.89		P	7.2
5	<input type="checkbox"/>	1.000		950215.45		P	2.2
6	<input type="checkbox"/>	1.000		876085.12		P	5.9
7	<input type="checkbox"/>	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			





	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	56487.26	0.0903	P	1.4
2	<input type="checkbox"/>	2.000	1.881	73152.86	0.1136	P	2.0
3	<input type="checkbox"/>	5.000	4.983	95517.39	0.1521	P	1.5
4	<input type="checkbox"/>	10.000	9.551	132047.69	0.2087	P	2.3
5	<input type="checkbox"/>	100.000	100.048	799870.33	1.3310	P	3.1
6	<input checked="" type="checkbox"/>	200.000		1620070.65	2.9147	A	3.8
7	<input type="checkbox"/>	1.000					

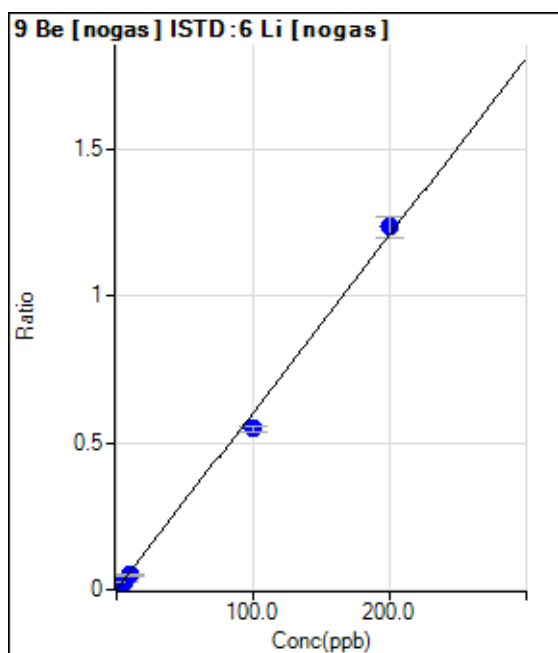
$y = 0.0124 * x + 0.0903$

R = 1.0000

DL = 0.3062

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	93.33	0.0002	P	25.2
2	<input type="checkbox"/>	2.000	1.693	6664.58	0.0104	P	0.7
3	<input type="checkbox"/>	5.000	4.275	16273.74	0.0259	P	2.4
4	<input type="checkbox"/>	10.000	8.324	31803.28	0.0503	P	5.6
5	<input type="checkbox"/>	100.000	90.814	328908.39	0.5474	P	3.5
6	<input type="checkbox"/>	200.000	204.698	685347.31	1.2336	P	6.0
7	<input type="checkbox"/>	1.000					

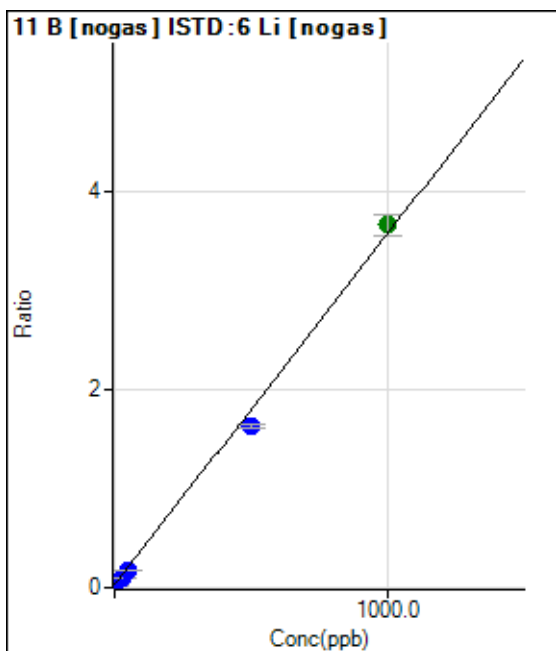
$y = 0.0060 * x + 1.5024E-004$

R = 0.9986

DL = 0.01887

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	18549.15	0.0297	P	5.0
2	<input type="checkbox"/>	10.000	7.572	36401.34	0.0566	P	2.8
3	<input type="checkbox"/>	25.000	20.549	64427.90	0.1026	P	2.5
4	<input type="checkbox"/>	50.000	40.440	109569.22	0.1732	P	1.5
5	<input type="checkbox"/>	500.000	450.198	978104.26	1.6271	P	2.3
6	<input type="checkbox"/>	1000.000	1025.515	2037681.64	3.6685	A	5.8
7	<input type="checkbox"/>	5.000					

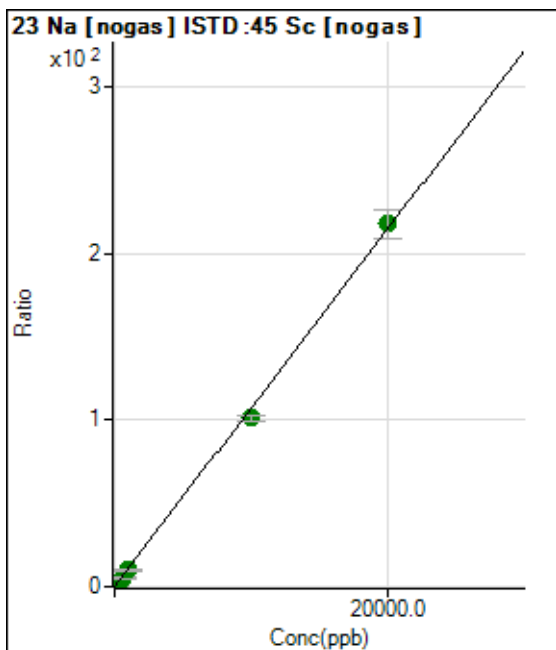
$y = 0.0035 * x + 0.0297$

R = 0.9983

DL = 1.26

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	198309.49	0.1891	P	7.0
2	<input type="checkbox"/>	200.000	184.993	2450894.65	2.1716	A	5.4
3	<input type="checkbox"/>	500.000	452.235	5651123.43	5.0356	A	8.1
4	<input type="checkbox"/>	1000.000	916.239	10839581.23	10.0083	A	4.5
5	<input type="checkbox"/>	10000.00	9408.907	108646319.1	101.022	A	3.6
6	<input type="checkbox"/>	20000.00	20301.079	217129238.1	217.752	A	8.1
7	<input type="checkbox"/>	100.000					

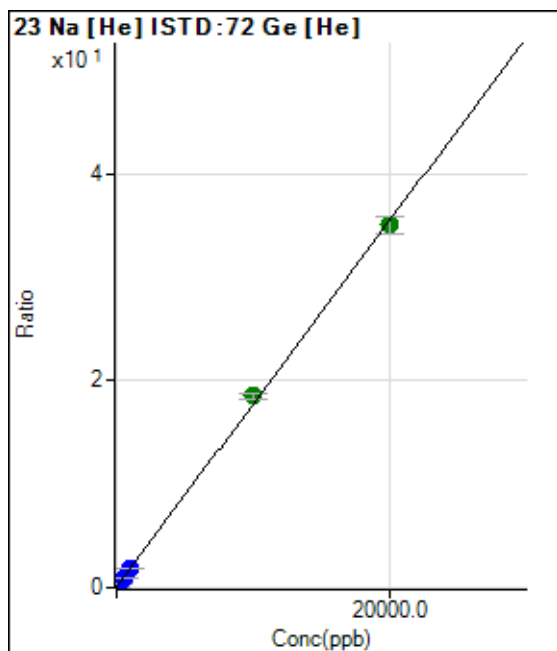
$y = 0.0107 * x + 0.1891$

R = 0.9994

DL = 3.722

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	24382.41	0.0636	P	1.7
2	<input type="checkbox"/>	200.000	198.382	160487.29	0.4146	P	1.3
3	<input type="checkbox"/>	500.000	509.064	366886.14	0.9643	P	0.8
4	<input type="checkbox"/>	1000.000	985.009	684957.77	1.8064	P	0.9
5	<input type="checkbox"/>	10000.00	10446.976	6951300.94	18.5477	A	2.8
6	<input type="checkbox"/>	20000.00	19777.051	13523761.47	35.0557	A	5.0
7	<input type="checkbox"/>	100.000					

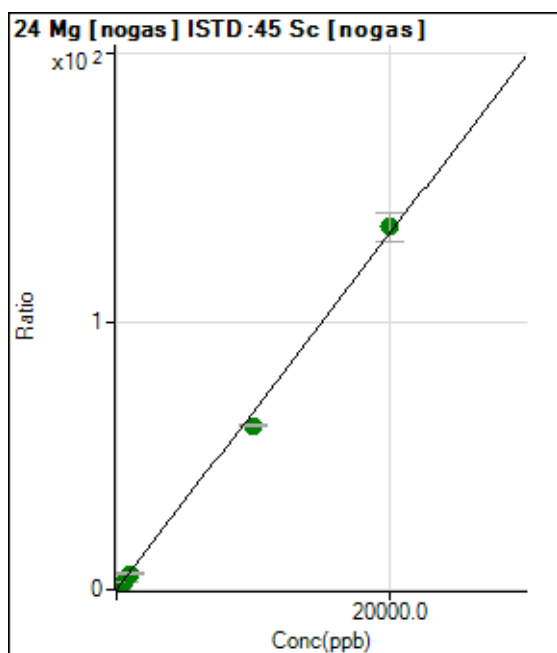
$y = 0.0018 * x + 0.0636$

R = 0.9996

DL = 1.817

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	4434.61	0.0042	P	20.2
2	<input type="checkbox"/>	200.000	189.577	1424398.86	1.2620	A	5.2
3	<input type="checkbox"/>	500.000	464.226	3459758.67	3.0842	A	8.8
4	<input type="checkbox"/>	1000.000	908.163	6529955.36	6.0296	A	5.1
5	<input type="checkbox"/>	10000.00	9225.390	65885049.39	61.2128	A	0.7
6	<input type="checkbox"/>	20000.00	20392.895	134970428.0	135.307	A	7.9
7	<input type="checkbox"/>	100.000					

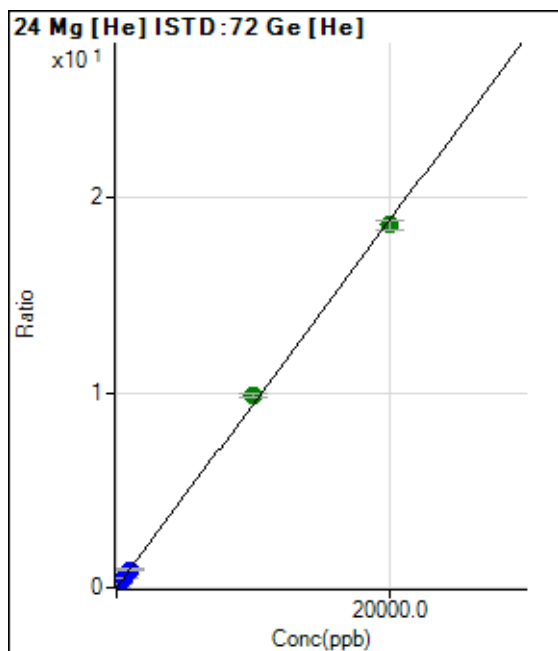
$y = 0.0066 * x + 0.0042$

R = 0.9990

DL = 0.3787

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	366.68	0.0010	P	22.4
2	<input type="checkbox"/>	200.000	203.031	74345.10	0.1921	P	2.4
3	<input type="checkbox"/>	500.000	519.456	186389.66	0.4899	P	1.2
4	<input type="checkbox"/>	1000.000	988.289	353016.52	0.9312	P	3.2
5	<input type="checkbox"/>	10000.00	10479.906	3697815.15	9.8654	A	1.8
6	<input type="checkbox"/>	20000.00	19760.116	7177156.77	18.6006	A	2.9
7	<input type="checkbox"/>	100.000					

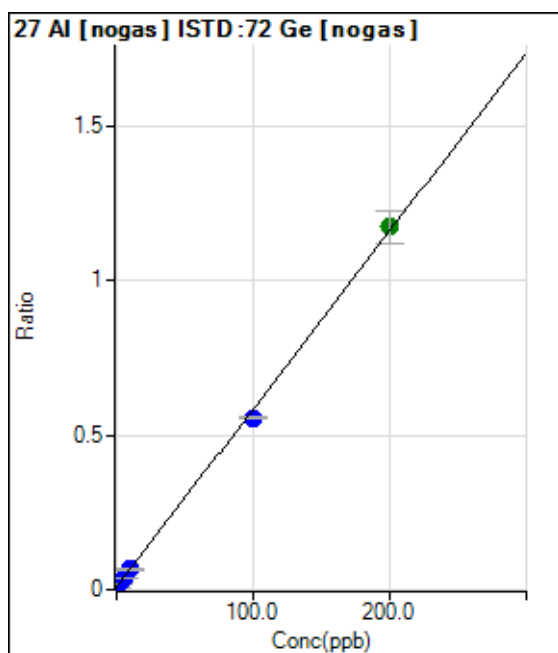
$y = 9.4127E-004 * x + 9.5703E-004$

R = 0.9996

DL = 0.6821

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	11113.40	0.0081	P	6.9
2	<input type="checkbox"/>	2.000	2.163	29466.68	0.0206	P	4.2
3	<input type="checkbox"/>	5.000	5.258	55752.27	0.0384	P	1.8
4	<input type="checkbox"/>	10.000	9.983	93343.08	0.0655	P	4.4
5	<input type="checkbox"/>	100.000	95.247	790793.69	0.5561	P	1.8
6	<input type="checkbox"/>	200.000	202.369	1606129.77	1.1723	A	9.0
7	<input type="checkbox"/>	1.000					

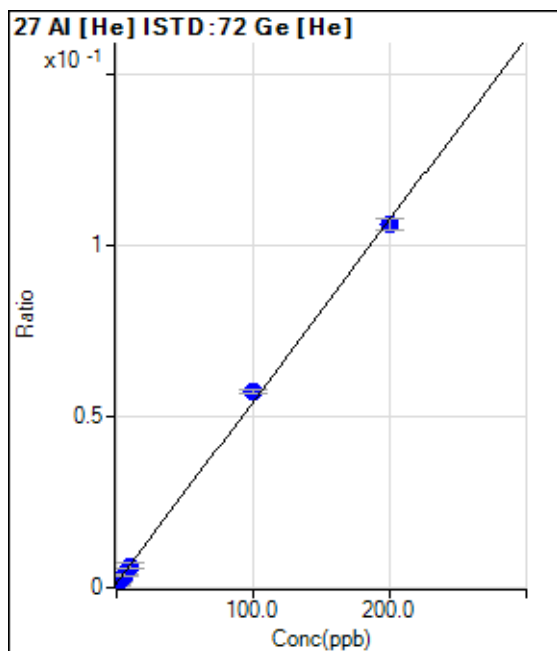
$y = 0.0058 * x + 0.0081$

R = 0.9996

DL = 0.2905

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	-0.819	333.34	0.0009	P	11.7
2	<input type="checkbox"/>	2.000	0.903	690.03	0.0018	P	14.1
3	<input type="checkbox"/>	5.000	4.413	1386.74	0.0036	P	7.6
4	<input type="checkbox"/>	10.000	9.681	2433.53	0.0064	P	18.9
5	<input type="checkbox"/>	100.000	105.561	21462.36	0.0573	P	2.0
6	<input type="checkbox"/>	200.000	197.261	40851.01	0.1059	P	3.2
7	<input type="checkbox"/>	1.000					

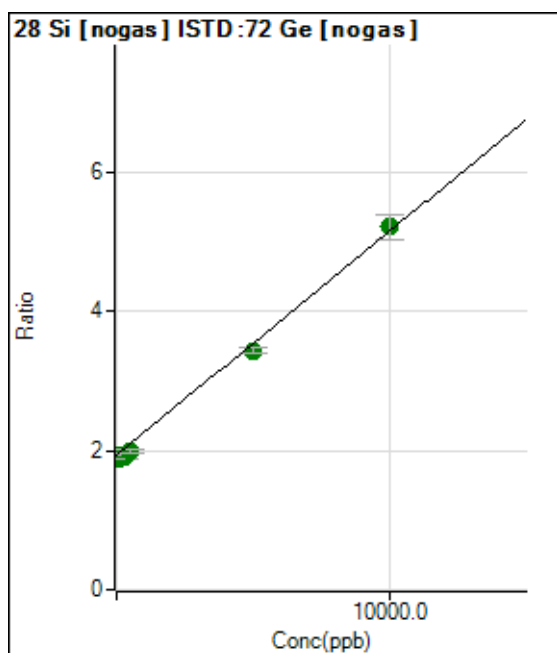
$y = 5.3010E-004 * x + 0.0013$

R = 0.9994

DL = 0.5738

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	2656866.79	1.9394	A	7.2
2	<input type="checkbox"/>	100.000	-192.958	2691988.40	1.8773	A	2.3
3	<input type="checkbox"/>	250.000	-115.435	2762877.46	1.9022	A	2.6
4	<input type="checkbox"/>	500.000	187.453	2848858.81	1.9997	A	2.9
5	<input type="checkbox"/>	5000.000	4675.019	4896375.97	3.4442	A	2.7
6	<input type="checkbox"/>	10000.00	10190.183	7156750.93	5.2195	A	6.9
7	<input type="checkbox"/>	5.000					

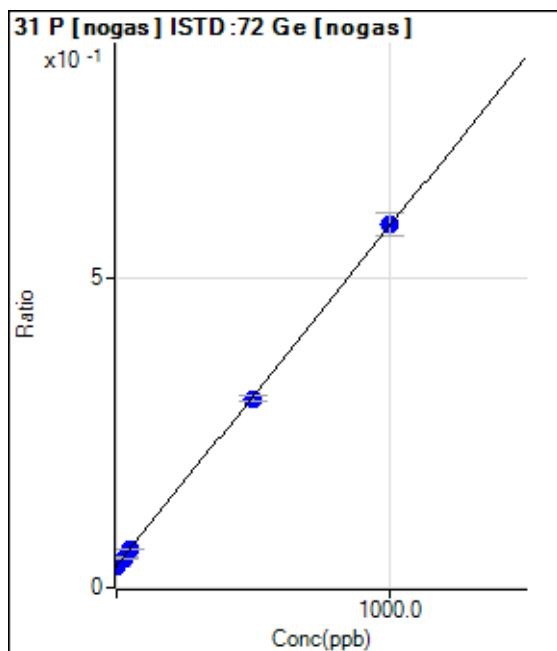
$y = 3.2189E-004 * x + 1.9394$

R = 0.9991

DL = 1308

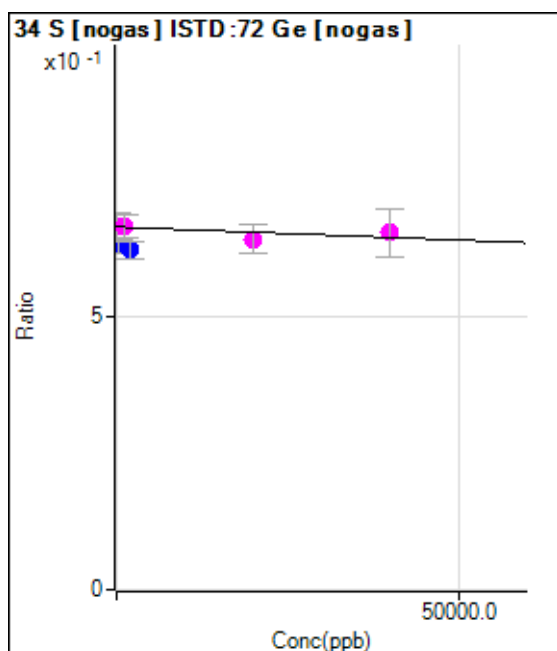
Weight: <None>

Min Conc: <None>



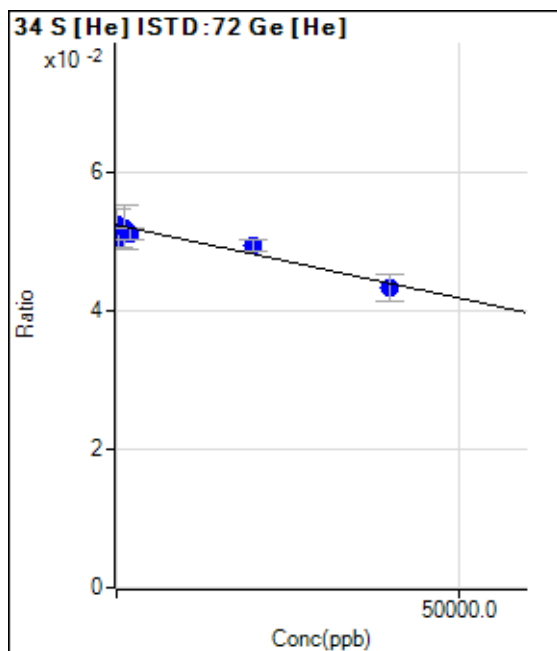
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	48792.94	0.0356	P	7.3
2	<input type="checkbox"/>	10.000	8.569	57818.04	0.0403	P	2.4
3	<input type="checkbox"/>	25.000	22.692	69828.13	0.0481	P	0.7
4	<input type="checkbox"/>	50.000	48.672	88757.10	0.0623	P	2.7
5	<input type="checkbox"/>	500.000	491.793	433922.74	0.3052	P	2.7
6	<input type="checkbox"/>	1000.000	1004.242	803854.81	0.5861	P	6.3
7	<input type="checkbox"/>	5.000					

$y = 5.4813E-004 * x + 0.0356$
 $R = 1.0000$
 $DL = 14.28$
 Weight: <None>
 Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	912326.25	0.6655	M	7.8
2	<input type="checkbox"/>	400.000	73117.438	903490.58	0.6303	P	4.1
3	<input type="checkbox"/>	1000.000	168.193	967561.64	0.6655	M	6.5
4	<input type="checkbox"/>	2000.000	87742.083	887174.27	0.6232	P	5.2
5	<input type="checkbox"/>	20000.00	46439.832	913930.36	0.6431	M	8.4
6	<input type="checkbox"/>	40000.00	21786.601	895793.18	0.6550	M	13.5
7	<input type="checkbox"/>	100.000					

$y = -4.8250E-007 * x + 0.6655$
 $R = 0.1373$
 $DL = -3.209E+05$
 Weight: <None>
 Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	20114.46	0.0525	P	8.4
2	<input type="checkbox"/>	400.000	8431.674	19613.48	0.0507	P	6.1
3	<input type="checkbox"/>	1000.000	1581.523	19846.95	0.0521	P	12.3
4	<input type="checkbox"/>	2000.000	6355.675	19379.86	0.0511	P	3.3
5	<input type="checkbox"/>	20000.00	14084.265	18545.48	0.0495	P	2.9
6	<input type="checkbox"/>	40000.00	42645.229	16777.05	0.0435	P	9.2
7	<input type="checkbox"/>	100.000					

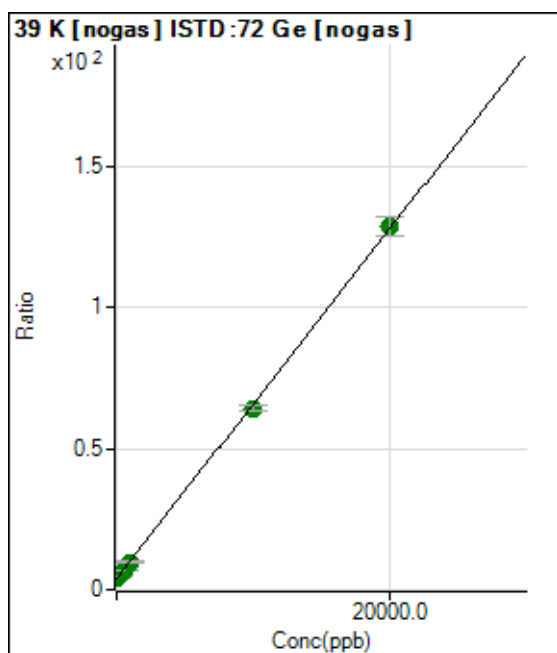
$y = -2.1106E-007 * x + 0.0525$

$R = -0.9579$

$DL = -6.286E+04$

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	5358642.18	3.9107	A	6.6
2	<input type="checkbox"/>	200.000	169.678	7112122.55	4.9598	A	2.1
3	<input type="checkbox"/>	500.000	431.039	9550691.88	6.5757	A	2.7
4	<input type="checkbox"/>	1000.000	927.014	13725955.51	9.6421	A	5.1
5	<input type="checkbox"/>	10000.00	9755.597	91307520.79	64.2258	A	3.9
6	<input type="checkbox"/>	20000.00	20127.878	176125591.4	128.353	A	5.4
7	<input type="checkbox"/>	100.000					

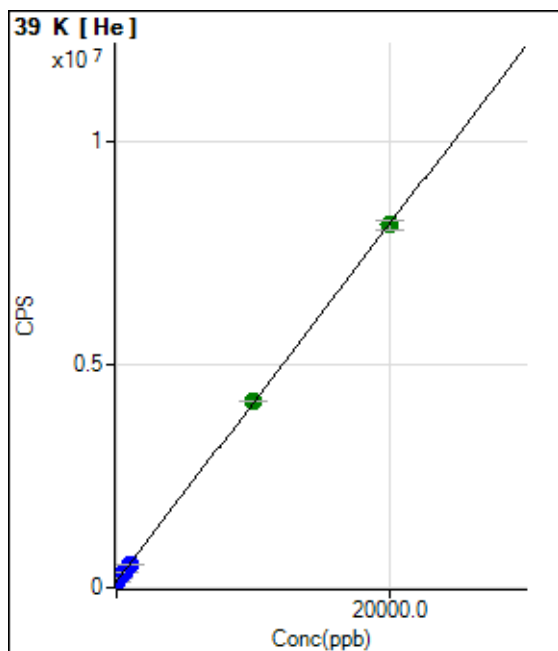
$y = 0.0062 * x + 3.9107$

$R = 0.9999$

$DL = 124.8$

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	139939.10		P	1.2
2	<input type="checkbox"/>	200.000	213.562	225584.16		P	1.5
3	<input type="checkbox"/>	500.000	509.092	344101.43		P	0.0
4	<input type="checkbox"/>	1000.000	984.362	534700.04		P	1.4
5	<input type="checkbox"/>	10000.00	10083.533	4183759.94		A	0.7
6	<input type="checkbox"/>	20000.00	19958.652	8144000.09		A	2.6
7	<input type="checkbox"/>	100.000					

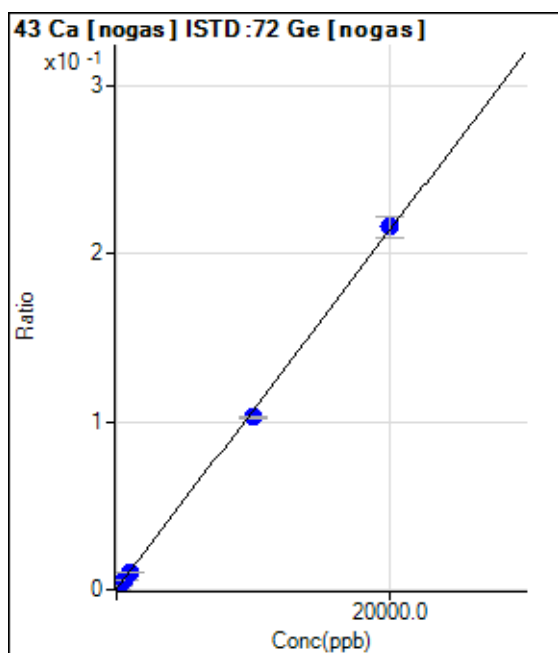
$y = 401.0321 * x + 139939.1033$

R = 1.0000

DL = 12.17

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	413.34	0.0003	P	9.9
2	<input type="checkbox"/>	200.000	183.672	3247.00	0.0023	P	11.0
3	<input type="checkbox"/>	500.000	468.203	7701.72	0.0053	P	2.5
4	<input type="checkbox"/>	1000.000	898.279	14098.85	0.0099	P	1.6
5	<input type="checkbox"/>	10000.00	9596.099	146092.08	0.1027	P	1.5
6	<input type="checkbox"/>	20000.00	20207.995	296449.05	0.2160	P	5.5
7	<input type="checkbox"/>	100.000					

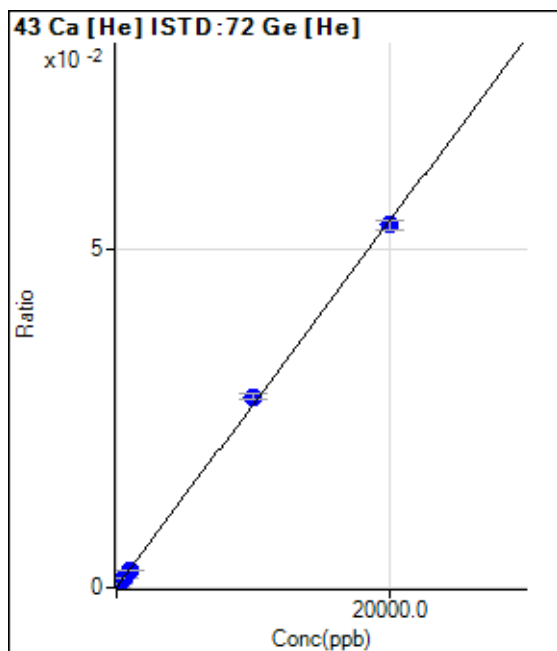
$y = 1.0675E-005 * x + 3.0190E-004$

R = 0.9997

DL = 8.367

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	13.33	0.0000	P	43.0
2	<input type="checkbox"/>	200.000	239.128	263.34	0.0007	P	28.7
3	<input type="checkbox"/>	500.000	496.790	523.35	0.0014	P	11.0
4	<input type="checkbox"/>	1000.000	939.385	973.37	0.0026	P	5.8
5	<input type="checkbox"/>	10000.00	10399.613	10526.47	0.0281	P	3.0
6	<input type="checkbox"/>	20000.00	19802.913	20631.69	0.0535	P	2.6
7	<input type="checkbox"/>	100.000					

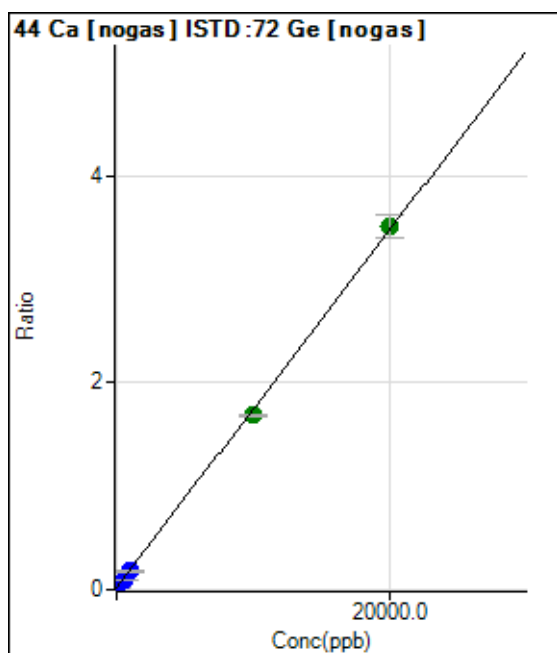
$y = 2.6975E-006 * x + 3.4749E-005$

R = 0.9997

DL = 16.61

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	25964.97	0.0190	P	7.3
2	<input type="checkbox"/>	200.000	188.687	73912.05	0.0515	P	0.6
3	<input type="checkbox"/>	500.000	464.609	144078.00	0.0992	P	2.2
4	<input type="checkbox"/>	1000.000	915.267	252158.97	0.1770	P	2.4
5	<input type="checkbox"/>	10000.00	9630.101	2391145.49	1.6813	A	1.4
6	<input type="checkbox"/>	20000.00	20190.184	4808732.74	3.5043	A	6.3
7	<input type="checkbox"/>	100.000					

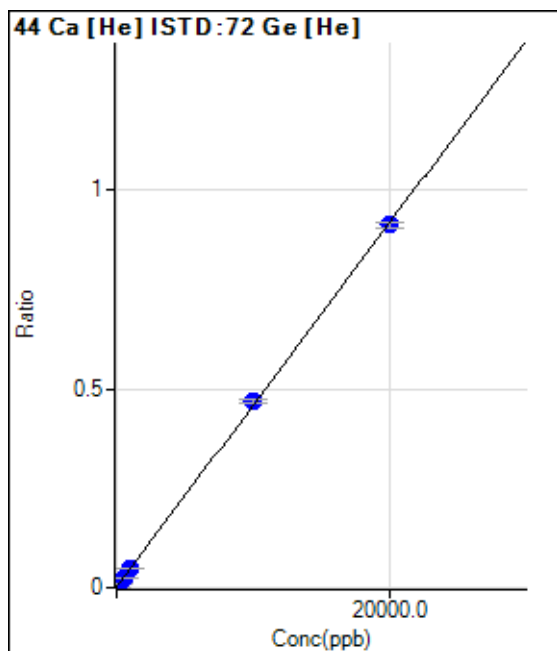
$y = 1.7262E-004 * x + 0.0190$

R = 0.9998

DL = 24.19

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	483.35	0.0013	P	23.6
2	<input type="checkbox"/>	200.000	219.350	4377.24	0.0113	P	13.8
3	<input type="checkbox"/>	500.000	532.337	9759.37	0.0256	P	0.8
4	<input type="checkbox"/>	1000.000	1003.801	17908.81	0.0473	P	4.9
5	<input type="checkbox"/>	10000.00	10216.703	175935.09	0.4694	P	1.8
6	<input type="checkbox"/>	20000.00	19890.456	352169.16	0.9126	P	1.6
7	<input type="checkbox"/>	100.000					

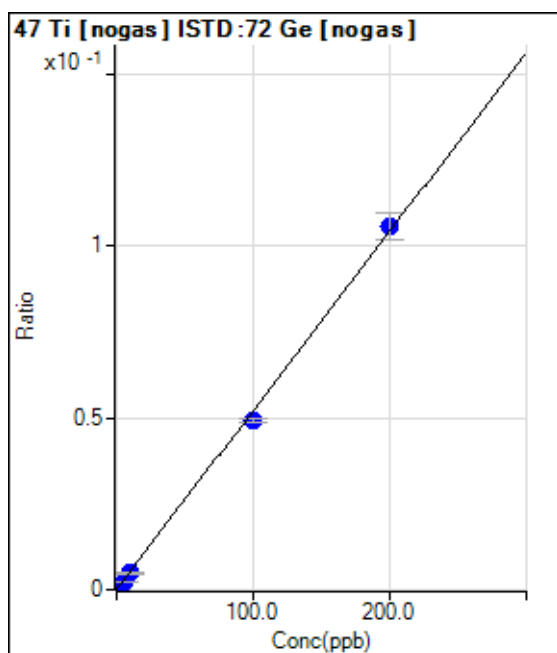
$y = 4.5816E-005 * x + 0.0013$

R = 0.9999

DL = 19.43

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	150.00	0.0001	P	19.2
2	<input type="checkbox"/>	2.000	1.814	1510.09	0.0011	P	7.3
3	<input type="checkbox"/>	5.000	4.428	3503.72	0.0024	P	8.4
4	<input type="checkbox"/>	10.000	9.112	6904.73	0.0049	P	5.5
5	<input type="checkbox"/>	100.000	94.737	70236.24	0.0494	P	2.0
6	<input type="checkbox"/>	200.000	202.692	144764.24	0.1056	P	7.4
7	<input type="checkbox"/>	1.000					

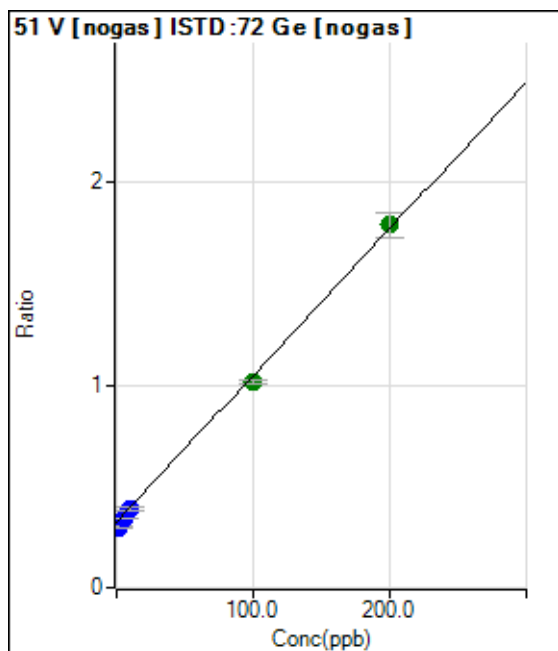
$y = 5.2026E-004 * x + 1.0996E-004$

R = 0.9995

DL = 0.1216

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	445243.60	0.3247	P	4.9
2	<input type="checkbox"/>	2.000	-3.842	426004.31	0.2969	P	2.0
3	<input type="checkbox"/>	5.000	2.255	495596.30	0.3410	P	1.9
4	<input type="checkbox"/>	10.000	8.831	553475.01	0.3886	P	3.4
5	<input type="checkbox"/>	100.000	95.304	1442823.57	1.0144	A	2.5
6	<input type="checkbox"/>	200.000	202.534	2455531.17	1.7904	A	6.8
7	<input type="checkbox"/>	1.000					

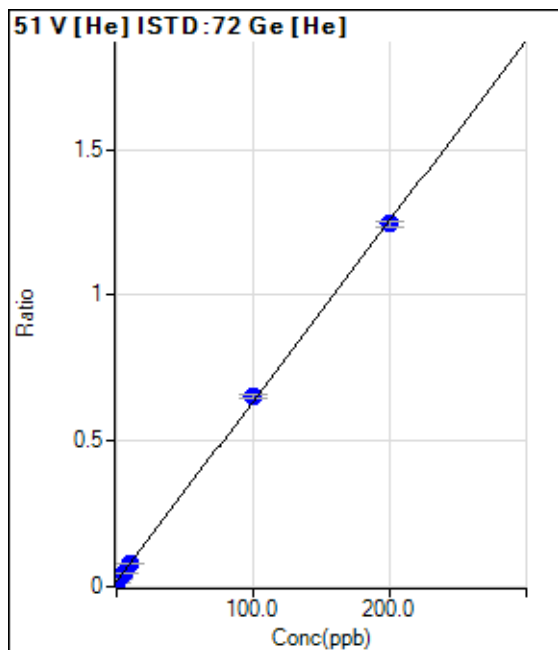
$y = 0.0072 * x + 0.3247$

R = 0.9995

DL = 6.634

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	-0.347	5806.25	0.0151	P	1.1
2	<input type="checkbox"/>	2.000	1.426	10105.41	0.0261	P	1.7
3	<input type="checkbox"/>	5.000	4.732	17713.08	0.0466	P	0.8
4	<input type="checkbox"/>	10.000	9.562	28980.46	0.0764	P	0.9
5	<input type="checkbox"/>	100.000	103.185	245667.99	0.6555	P	1.9
6	<input type="checkbox"/>	200.000	198.442	480308.08	1.2446	P	1.4
7	<input type="checkbox"/>	1.000					

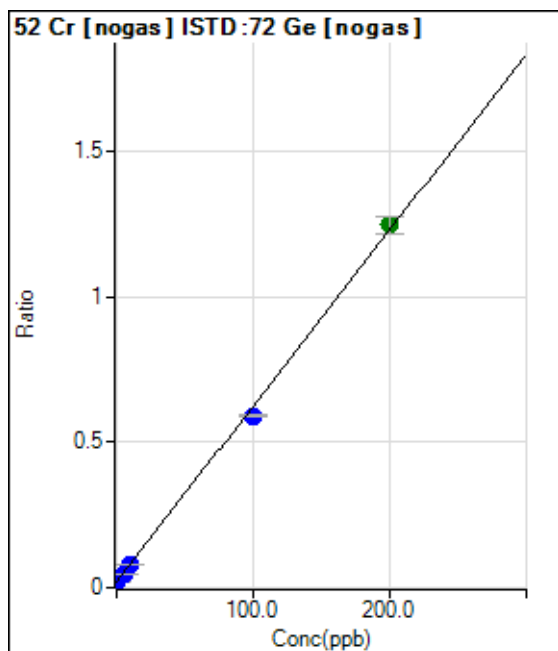
$y = 0.0062 * x + 0.0173$

R = 0.9998

DL = 0.08343

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	28018.05	0.0205	P	7.6
2	<input type="checkbox"/>	2.000	1.639	43544.63	0.0304	P	0.4
3	<input type="checkbox"/>	5.000	4.645	70466.72	0.0485	P	2.3
4	<input type="checkbox"/>	10.000	9.615	111862.61	0.0785	P	3.2
5	<input type="checkbox"/>	100.000	94.123	837675.38	0.5889	P	1.4
6	<input type="checkbox"/>	200.000	202.970	1710582.11	1.2464	A	4.8
7	<input type="checkbox"/>	1.000					

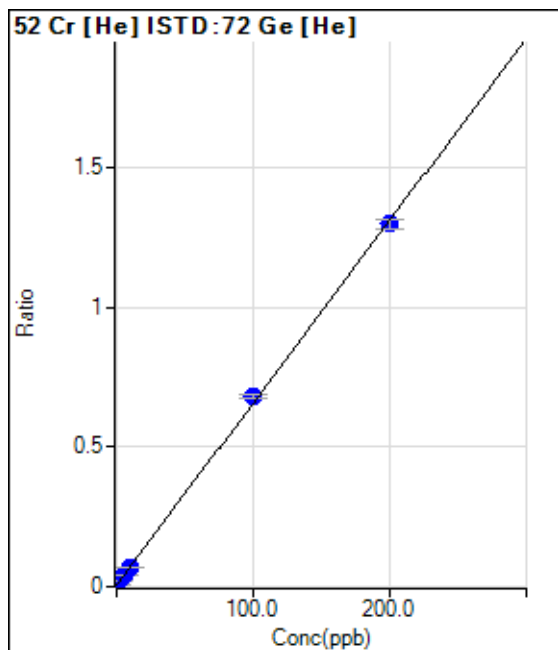
$y = 0.0060 * x + 0.0205$

R = 0.9994

DL = 0.769

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	1923.46	0.0050	P	10.0
2	<input type="checkbox"/>	2.000	2.015	7028.08	0.0182	P	1.6
3	<input type="checkbox"/>	5.000	5.207	14829.47	0.0390	P	3.8
4	<input type="checkbox"/>	10.000	9.699	25881.66	0.0683	P	1.8
5	<input type="checkbox"/>	100.000	103.487	254810.15	0.6799	P	2.2
6	<input type="checkbox"/>	200.000	198.266	500865.88	1.2979	P	2.5
7	<input type="checkbox"/>	1.000					

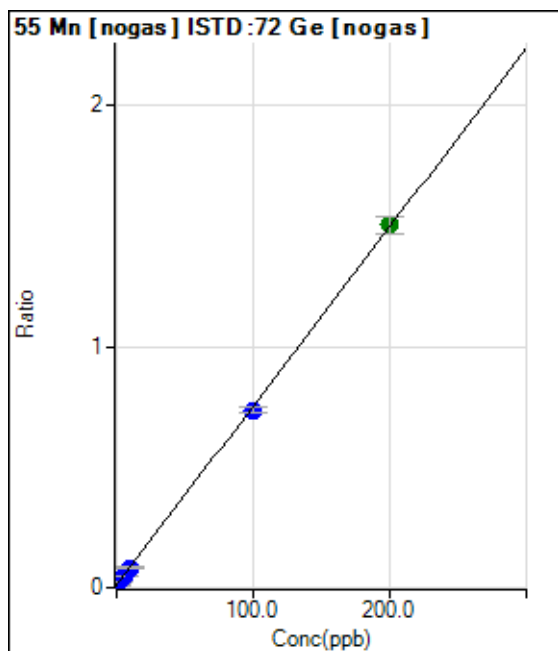
$y = 0.0065 * x + 0.0050$

R = 0.9998

DL = 0.2303

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	15833.63	0.0116	P	8.1
2	<input type="checkbox"/>	2.000	1.912	36950.56	0.0258	P	0.8
3	<input type="checkbox"/>	5.000	4.918	69821.50	0.0481	P	1.8
4	<input type="checkbox"/>	10.000	9.687	118853.07	0.0835	P	4.1
5	<input type="checkbox"/>	100.000	97.594	1046208.71	0.7359	P	3.4
6	<input type="checkbox"/>	200.000	201.221	2065901.74	1.5051	A	4.7
7	<input type="checkbox"/>	1.000					

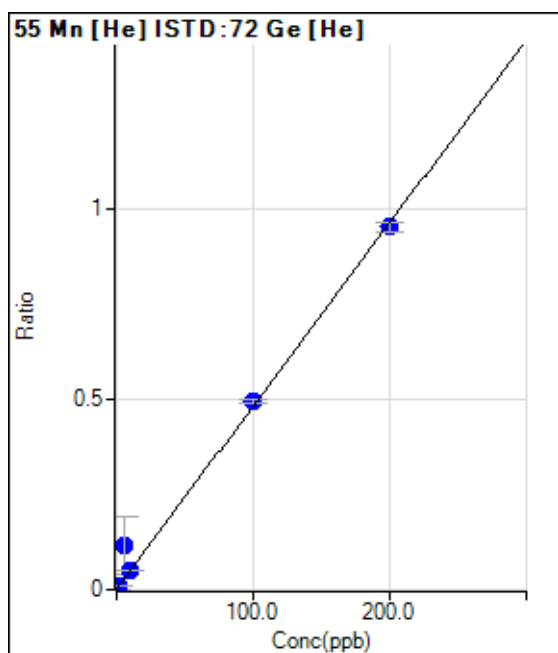
$y = 0.0074 * x + 0.0116$

R = 0.9999

DL = 0.3792

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	493.35	0.0013	P	27.3
2	<input type="checkbox"/>	2.000	2.057	4317.23	0.0112	P	2.7
3	<input type="checkbox"/>	5.000	23.712	43387.77	0.1150	P	132.
4	<input type="checkbox"/>	10.000	10.223	19083.38	0.0503	P	0.4
5	<input type="checkbox"/>	100.000	103.128	185892.00	0.4959	P	2.0
6	<input type="checkbox"/>	200.000	197.957	366827.62	0.9507	P	2.9
7	<input type="checkbox"/>	1.000					

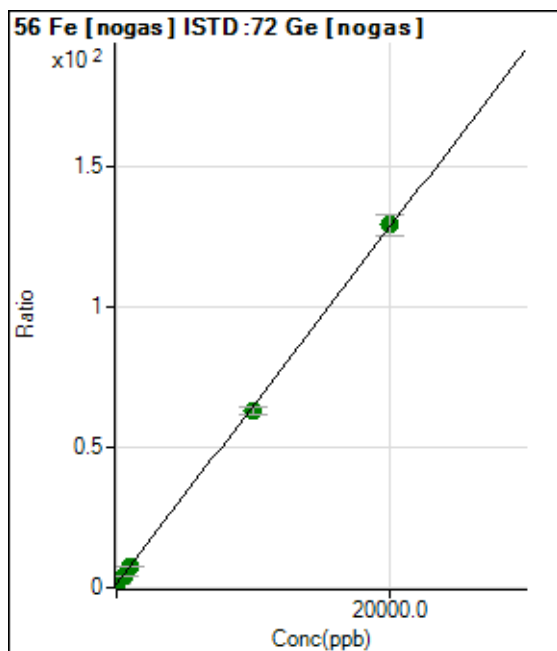
$y = 0.0048 * x + 0.0013$

R = 0.9958

DL = 0.2194

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	1782816.84	1.3022	A	8.5
2	<input type="checkbox"/>	200.000	192.906	3621176.25	2.5247	A	2.8
3	<input type="checkbox"/>	500.000	480.053	6310952.88	4.3446	A	2.0
4	<input type="checkbox"/>	1000.000	961.791	10535363.26	7.3977	A	3.8
5	<input type="checkbox"/>	10000.00	9723.947	89470927.00	62.9292	A	3.6
6	<input type="checkbox"/>	20000.00	20140.506	176872928.9	128.945	A	6.1
7	<input type="checkbox"/>	100.000					

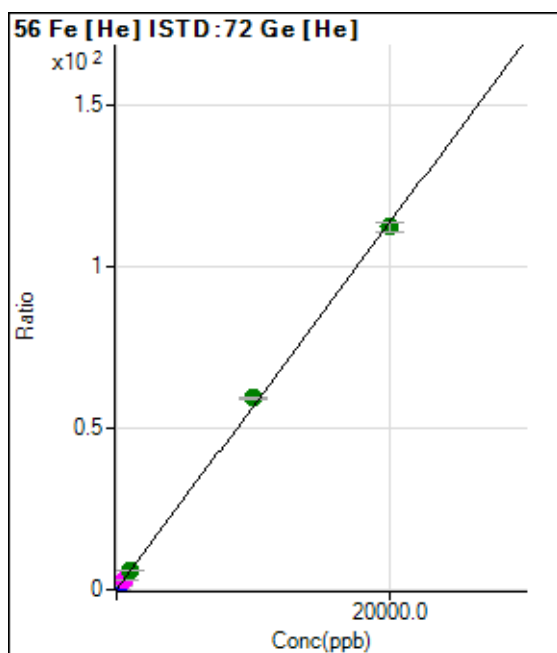
$y = 0.0063 * x + 1.3022$

R = 0.9999

DL = 52.66

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	8215.27	0.0214	P	5.5
2	<input type="checkbox"/>	200.000	204.677	458060.78	1.1834	P	2.3
3	<input type="checkbox"/>	500.000	524.349	1140132.46	2.9982	M	8.2
4	<input type="checkbox"/>	1000.000	1024.251	2212806.79	5.8361	A	1.4
5	<input type="checkbox"/>	10000.00	10433.565	22212840.50	59.2531	A	1.2
6	<input type="checkbox"/>	20000.00	19781.349	43340751.02	112.320	A	2.6
7	<input type="checkbox"/>	100.000					

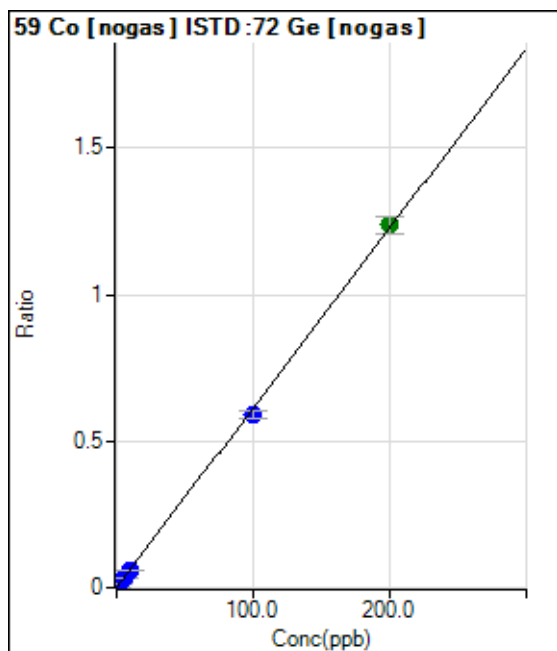
$y = 0.0057 * x + 0.0214$

R = 0.9997

DL = 0.6217

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	480.02	0.0004	P	7.8
2	<input type="checkbox"/>	2.000	1.962	17768.86	0.0124	P	2.9
3	<input type="checkbox"/>	5.000	4.799	43251.29	0.0298	P	1.6
4	<input type="checkbox"/>	10.000	9.495	83405.62	0.0586	P	4.1
5	<input type="checkbox"/>	100.000	96.329	840143.29	0.5910	P	3.9
6	<input type="checkbox"/>	200.000	201.866	1699921.54	1.2381	A	5.0
7	<input type="checkbox"/>	1.000					

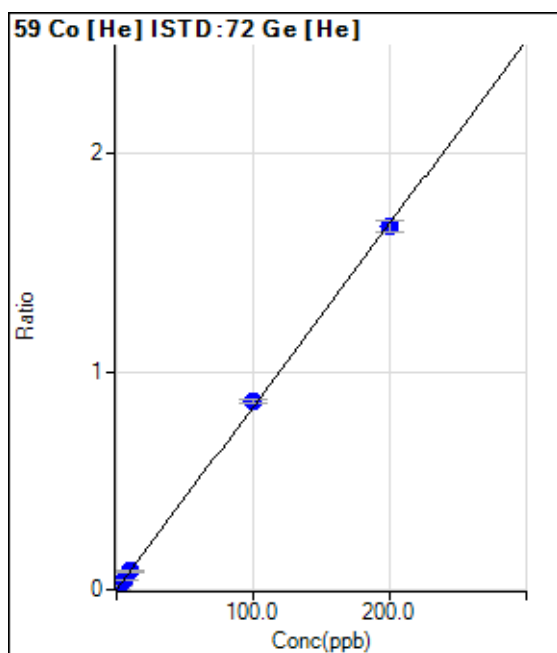
$y = 0.0061 * x + 3.5010E-004$

R = 0.9998

DL = 0.01336

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	80.00	0.0002	P	21.9
2	<input type="checkbox"/>	2.000	2.023	6651.33	0.0172	P	0.3
3	<input type="checkbox"/>	5.000	5.294	16974.68	0.0446	P	2.5
4	<input type="checkbox"/>	10.000	9.980	31807.61	0.0839	P	4.6
5	<input type="checkbox"/>	100.000	103.301	324916.61	0.8668	P	1.7
6	<input type="checkbox"/>	200.000	198.343	642115.60	1.6642	P	3.1
7	<input type="checkbox"/>	1.000					

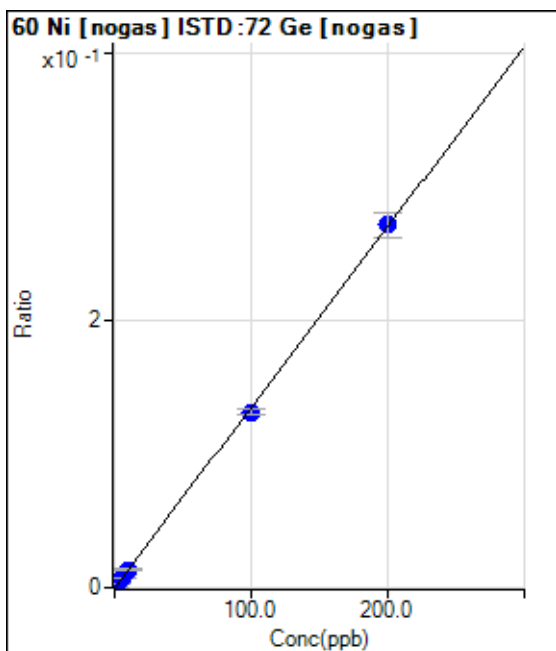
$y = 0.0084 * x + 2.0873E-004$

R = 0.9998

DL = 0.01632

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.398	320.01	0.0002	P	21.9
2	<input type="checkbox"/>	2.000	2.420	4250.54	0.0030	P	3.9
3	<input type="checkbox"/>	5.000	5.157	9679.33	0.0067	P	2.7
4	<input type="checkbox"/>	10.000	10.243	19256.92	0.0135	P	5.3
5	<input type="checkbox"/>	100.000	97.605	187036.89	0.1315	P	3.8
6	<input type="checkbox"/>	200.000	201.177	372090.15	0.2713	P	7.1
7	<input type="checkbox"/>	1.000					

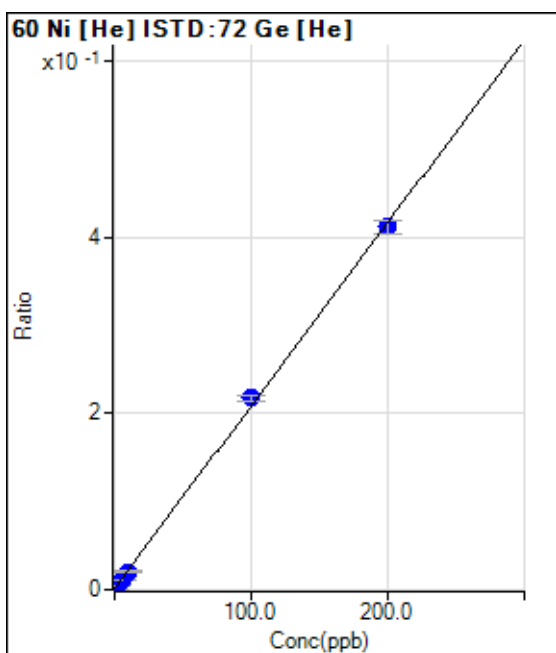
$y = 0.0014 * x - 3.0312E-004$

R = 0.9999

DL = 0.114

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	-0.557	80.00	0.0002	P	37.1
2	<input type="checkbox"/>	2.000	1.451	1693.43	0.0044	P	8.4
3	<input type="checkbox"/>	5.000	4.708	4237.21	0.0111	P	2.6
4	<input type="checkbox"/>	10.000	9.188	7755.06	0.0204	P	3.9
5	<input type="checkbox"/>	100.000	104.313	81667.72	0.2179	P	3.0
6	<input type="checkbox"/>	200.000	197.897	159029.01	0.4122	P	4.0
7	<input type="checkbox"/>	1.000					

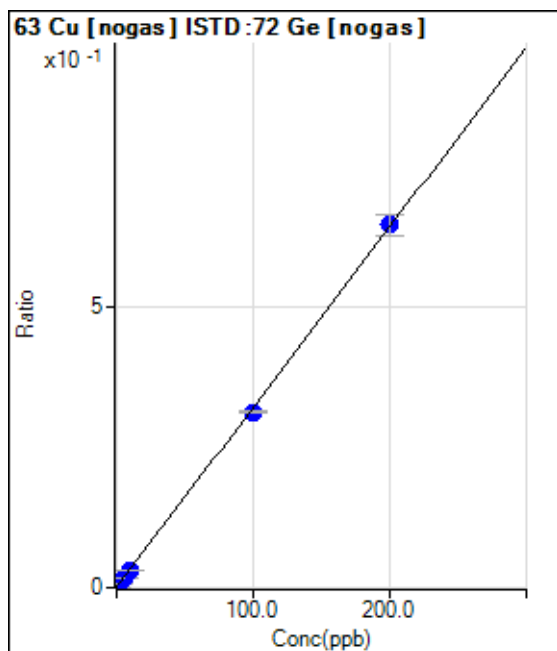
$y = 0.0021 * x + 0.0014$

R = 0.9996

DL = 0.1119

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	1050.04	0.0008	P	7.3
2	<input type="checkbox"/>	2.000	2.013	10333.03	0.0072	P	4.1
3	<input type="checkbox"/>	5.000	4.826	23562.05	0.0162	P	0.9
4	<input type="checkbox"/>	10.000	9.482	44334.07	0.0311	P	3.3
5	<input type="checkbox"/>	100.000	97.408	444635.70	0.3126	P	1.9
6	<input type="checkbox"/>	200.000	201.326	885305.61	0.6453	P	5.7
7	<input type="checkbox"/>	1.000					

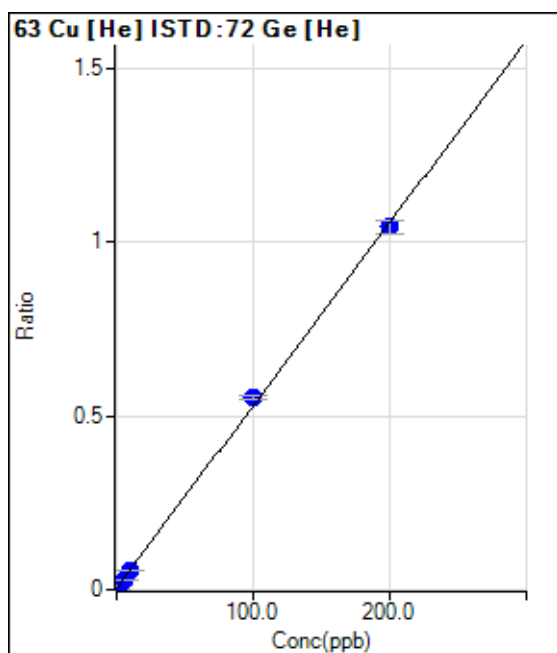
$y = 0.0032 * x + 7.6512E-004$

R = 0.9999

DL = 0.05201

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	-0.655	333.34	0.0009	P	8.2
2	<input type="checkbox"/>	2.000	1.379	4477.27	0.0116	P	6.0
3	<input type="checkbox"/>	5.000	4.670	10983.39	0.0289	P	2.7
4	<input type="checkbox"/>	10.000	9.424	20428.41	0.0539	P	2.7
5	<input type="checkbox"/>	100.000	104.277	207141.27	0.5526	P	1.7
6	<input type="checkbox"/>	200.000	197.905	403180.76	1.0450	P	3.6
7	<input type="checkbox"/>	1.000					

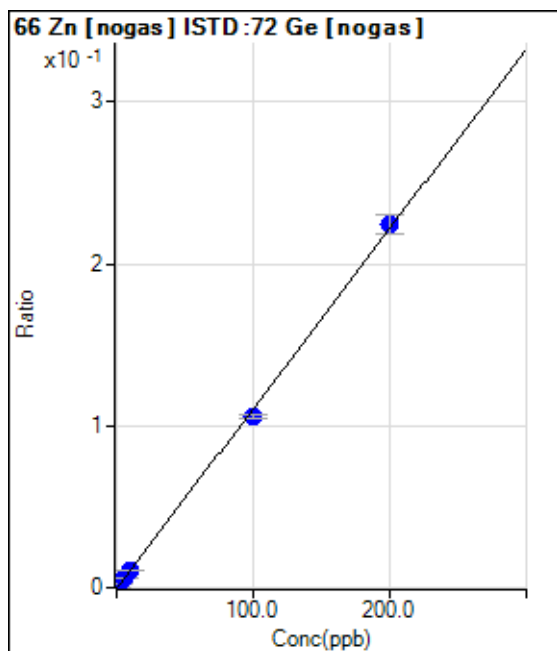
$y = 0.0053 * x + 0.0043$

R = 0.9996

DL = 0.04051

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.794	326.68	0.0002	P	19.3
2	<input type="checkbox"/>	2.000	2.666	3322.01	0.0023	P	1.4
3	<input type="checkbox"/>	5.000	5.695	8251.98	0.0057	P	1.7
4	<input type="checkbox"/>	10.000	10.183	15203.12	0.0107	P	5.3
5	<input type="checkbox"/>	100.000	95.391	149731.37	0.1053	P	2.6
6	<input type="checkbox"/>	200.000	202.271	307378.24	0.2240	P	5.2
7	<input type="checkbox"/>	1.000					

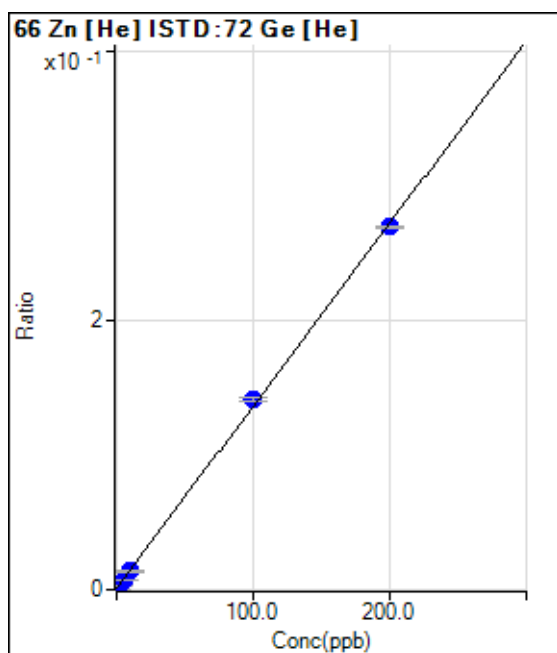
$y = 0.0011 * x - 6.4533E-004$

R = 0.9996

DL = 0.1233

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	-0.491	90.00	0.0002	P	59.3
2	<input type="checkbox"/>	2.000	1.671	1226.73	0.0032	P	7.8
3	<input type="checkbox"/>	5.000	4.490	2660.22	0.0070	P	6.6
4	<input type="checkbox"/>	10.000	9.442	5197.47	0.0137	P	4.2
5	<input type="checkbox"/>	100.000	103.687	53060.39	0.1415	P	2.0
6	<input type="checkbox"/>	200.000	198.201	104094.50	0.2697	P	0.8
7	<input type="checkbox"/>	1.000					

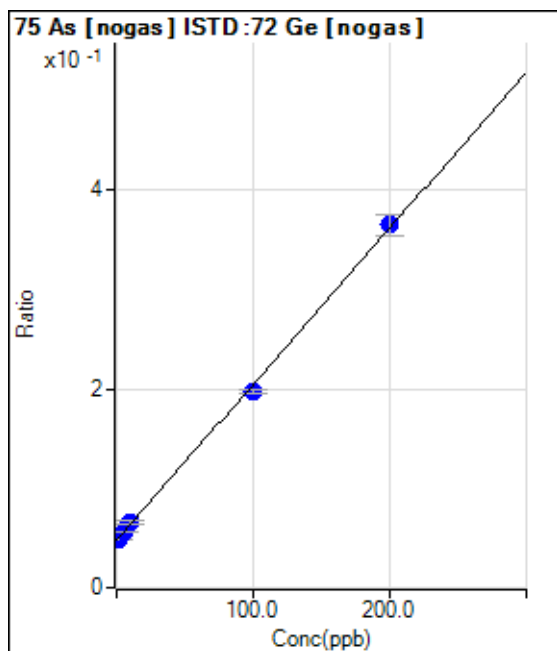
$y = 0.0014 * x + 9.0179E-004$

R = 0.9997

DL = 0.3088

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	2.292	70526.15	0.0514	P	3.1
2	<input type="checkbox"/>	2.000	0.280	69200.95	0.0482	P	1.9
3	<input type="checkbox"/>	5.000	5.178	81270.23	0.0559	P	2.3
4	<input type="checkbox"/>	10.000	11.511	93867.25	0.0659	P	3.3
5	<input type="checkbox"/>	100.000	95.605	281441.50	0.1979	P	1.5
6	<input type="checkbox"/>	200.000	202.135	501141.41	0.3652	P	5.6
7	<input type="checkbox"/>	1.000					

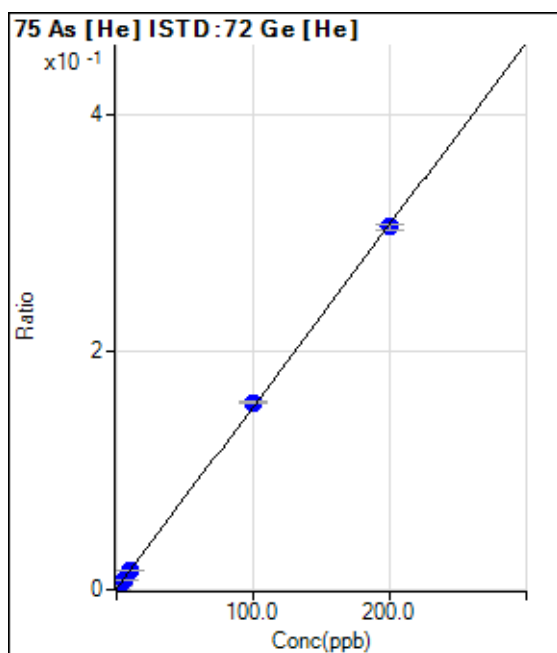
$y = 0.0016 * x + 0.0478$

R = 0.9995

DL = 3.064

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	268.89	0.0007	P	20.5
2	<input type="checkbox"/>	2.000	1.926	1414.51	0.0037	P	6.6
3	<input type="checkbox"/>	5.000	5.068	3223.63	0.0085	P	5.8
4	<input type="checkbox"/>	10.000	9.994	6073.26	0.0160	P	3.4
5	<input type="checkbox"/>	100.000	102.403	59105.13	0.1577	P	1.0
6	<input type="checkbox"/>	200.000	198.798	117871.80	0.3055	P	1.9
7	<input type="checkbox"/>	1.000					

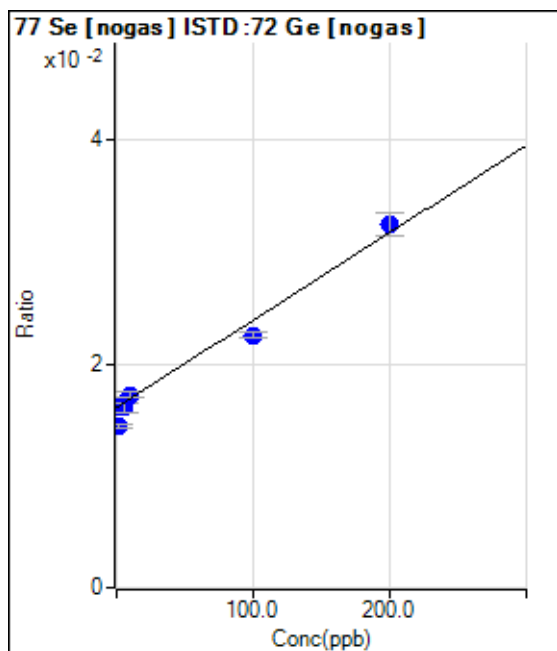
$y = 0.0015 * x + 7.0148E-004$

R = 0.9999

DL = 0.2813

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	22100.36	0.0161	P	4.3
2	<input type="checkbox"/>	2.000	-21.402	20722.10	0.0144	P	2.5
3	<input type="checkbox"/>	5.000	-0.357	23388.64	0.0161	P	5.4
4	<input type="checkbox"/>	10.000	14.580	24576.87	0.0172	P	2.4
5	<input type="checkbox"/>	100.000	82.789	32111.76	0.0226	P	1.9
6	<input type="checkbox"/>	200.000	208.744	44437.61	0.0324	P	6.3
7	<input type="checkbox"/>	1.000					

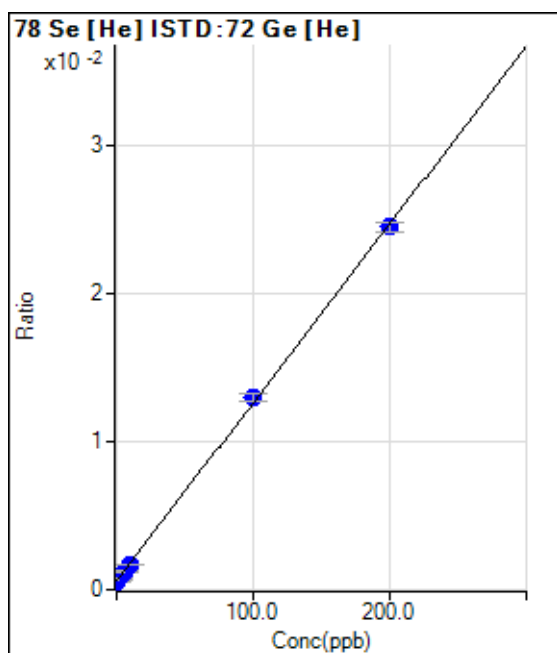
$y = 7.8037E-005 * x + 0.0161$

R = 0.9906

DL = 26.4

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	-0.334	209.33	0.0005	P	2.6
2	<input type="checkbox"/>	2.000	1.494	296.67	0.0008	P	13.6
3	<input type="checkbox"/>	5.000	5.178	460.68	0.0012	P	4.8
4	<input type="checkbox"/>	10.000	9.164	641.35	0.0017	P	5.7
5	<input type="checkbox"/>	100.000	102.910	4872.66	0.0130	P	3.2
6	<input type="checkbox"/>	200.000	198.587	9468.47	0.0245	P	2.4
7	<input type="checkbox"/>	1.000					

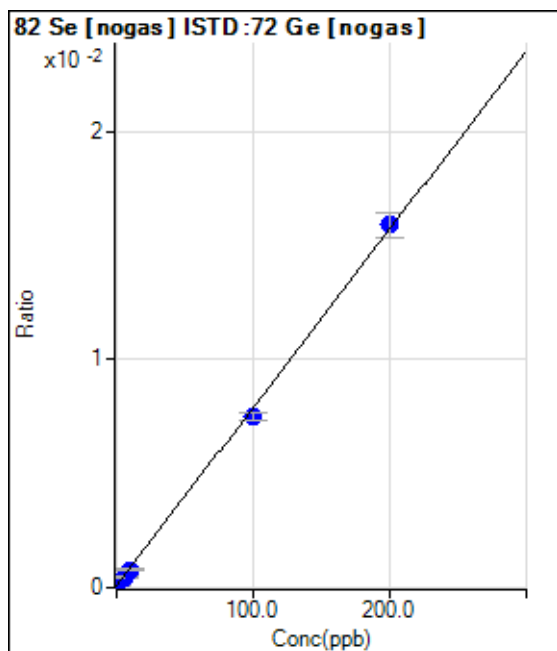
$y = 1.2061E-004 * x + 5.8626E-004$

R = 0.9998

DL = 0.3467

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	126.67	0.0001	P	9.9
2	<input type="checkbox"/>	2.000	1.854	340.01	0.0002	P	5.2
3	<input type="checkbox"/>	5.000	4.611	656.69	0.0005	P	10.6
4	<input type="checkbox"/>	10.000	9.036	1140.06	0.0008	P	6.5
5	<input type="checkbox"/>	100.000	94.990	10683.32	0.0075	P	5.3
6	<input type="checkbox"/>	200.000	202.564	21826.76	0.0159	P	6.8
7	<input type="checkbox"/>	1.000					

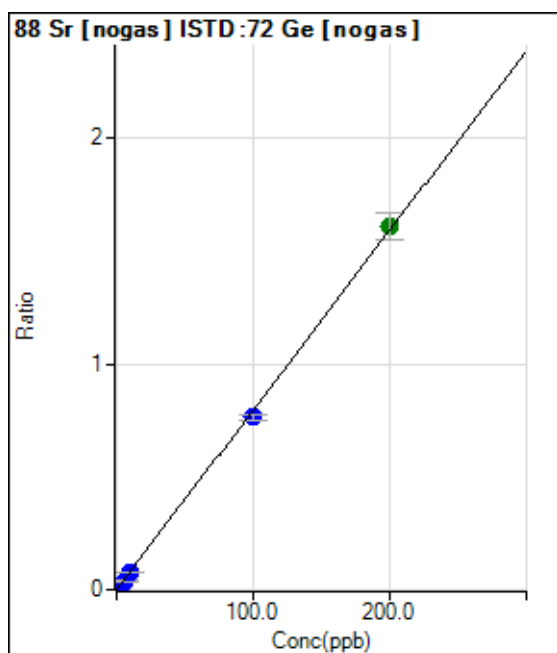
$y = 7.8123E-005 * x + 9.2380E-005$

R = 0.9996

DL = 0.3524

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	446.68	0.0003	P	16.8
2	<input type="checkbox"/>	2.000	1.925	22417.71	0.0156	P	3.2
3	<input type="checkbox"/>	5.000	4.744	55302.23	0.0381	P	4.8
4	<input type="checkbox"/>	10.000	9.383	106870.97	0.0750	P	1.8
5	<input type="checkbox"/>	100.000	95.905	1085234.62	0.7633	P	3.5
6	<input type="checkbox"/>	200.000	202.085	2203983.30	1.6080	A	7.6
7	<input type="checkbox"/>	1.000					

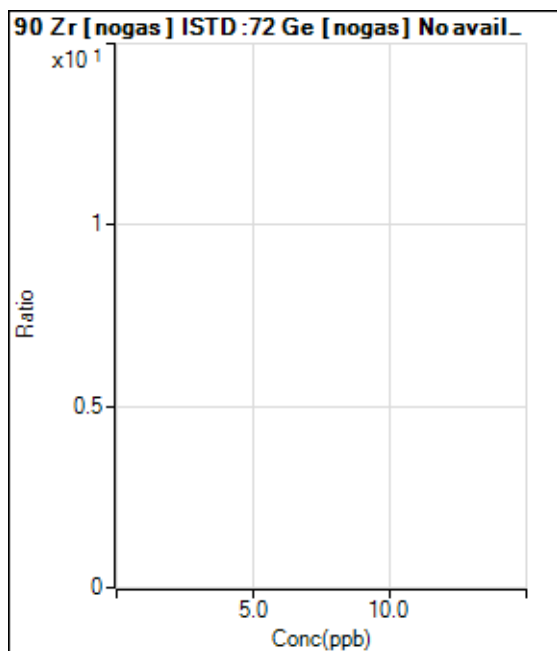
$y = 0.0080 * x + 3.2361E-004$

R = 0.9997

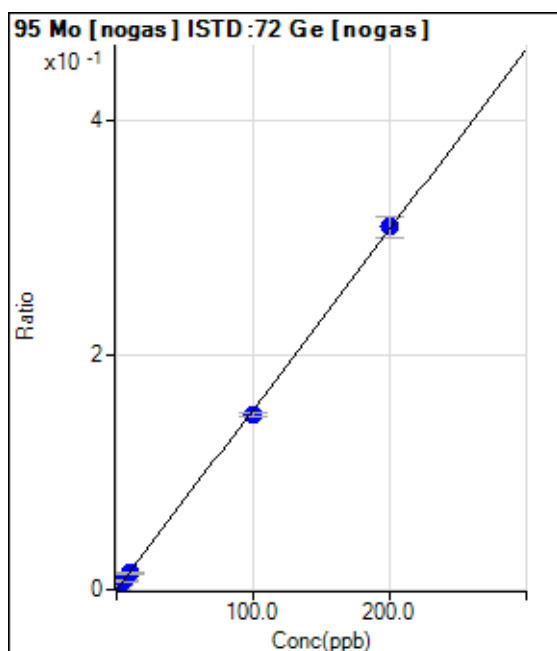
DL = 0.02051

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000					
2	<input type="checkbox"/>	2.000					
3	<input type="checkbox"/>	5.000					
4	<input type="checkbox"/>	10.000					
5	<input type="checkbox"/>	100.000					
6	<input type="checkbox"/>	200.000					
7	<input type="checkbox"/>	1.000					



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	50.00	0.0000	P	51.2
2	<input type="checkbox"/>	2.000	1.857	4137.21	0.0029	P	5.8
3	<input type="checkbox"/>	5.000	4.858	10883.49	0.0075	P	6.5
4	<input type="checkbox"/>	10.000	9.175	20118.29	0.0141	P	4.2
5	<input type="checkbox"/>	100.000	97.026	211849.93	0.1490	P	2.3
6	<input type="checkbox"/>	200.000	201.533	424590.32	0.3095	P	5.5
7	<input type="checkbox"/>	1.000					

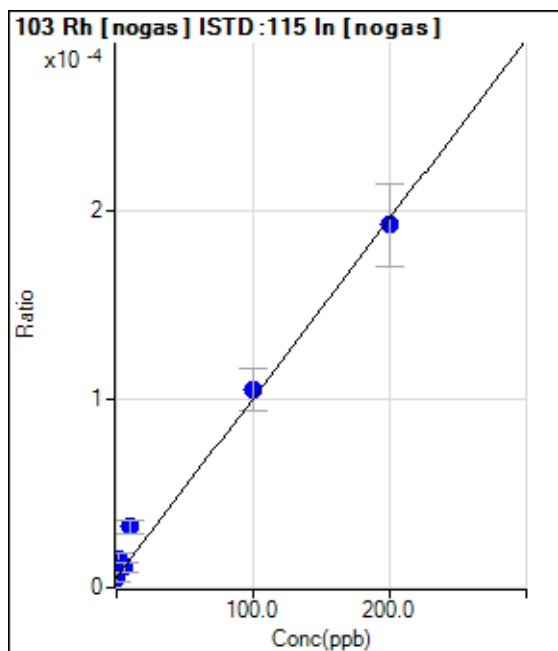
$y = 0.0015 * x + 3.6142E-005$

R = 0.9998

DL = 0.03614

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	6.67	0.0000	P	86.6
2	<input type="checkbox"/>	2.000	10.287	20.00	0.0000	P	44.4
3	<input type="checkbox"/>	5.000	5.636	13.33	0.0000	P	41.8
4	<input type="checkbox"/>	10.000	28.127	40.00	0.0000	P	24.8
5	<input type="checkbox"/>	100.000	104.777	126.67	0.0001	P	20.4
6	<input type="checkbox"/>	200.000	196.606	220.01	0.0002	P	22.8
7	<input type="checkbox"/>	1.000					

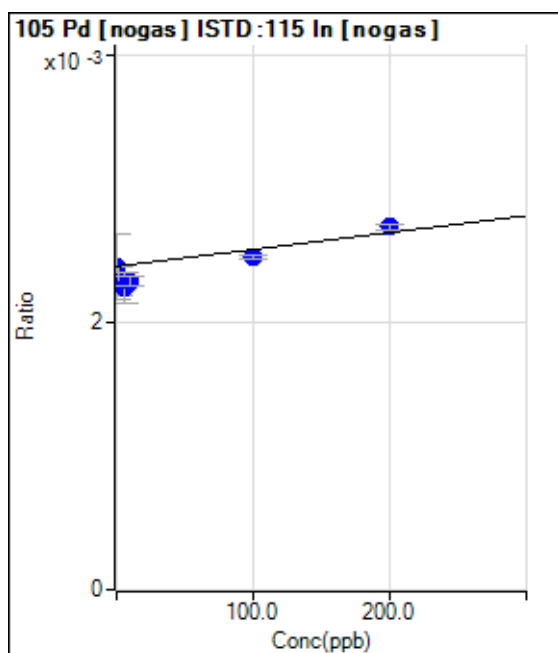
$y = 9.5203E-007 * x + 5.3912E-006$

R = 0.9962

DL = 14.72

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	2786.94	0.0024	P	20.0
2	<input type="checkbox"/>	2.000	-84.398	2976.97	0.0023	P	9.2
3	<input type="checkbox"/>	5.000	-123.496	2786.92	0.0023	P	10.2
4	<input type="checkbox"/>	10.000	-88.614	2866.95	0.0023	P	3.0
5	<input type="checkbox"/>	100.000	51.020	3000.30	0.0025	P	1.1
6	<input type="checkbox"/>	200.000	233.497	3063.64	0.0027	P	1.8
7	<input type="checkbox"/>	1.000					

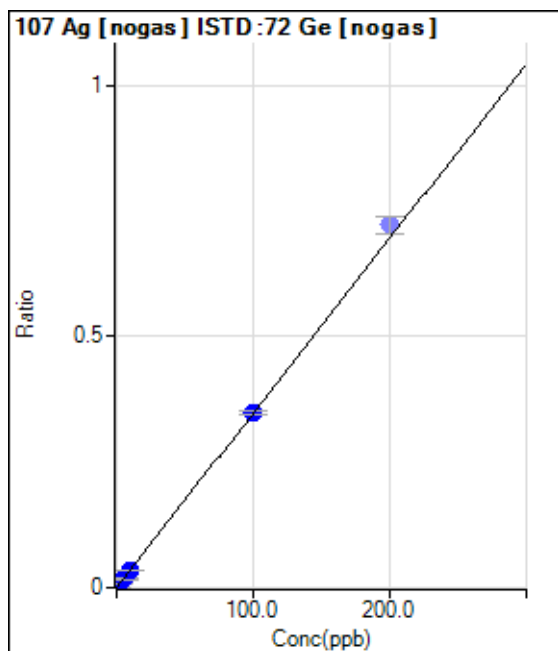
$y = 1.2647E-006 * x + 0.0024$

R = 0.9402

DL = 1146

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	26.67	0.0000	P	41.9
2	<input type="checkbox"/>	2.000	1.921	9602.73	0.0067	P	6.2
3	<input type="checkbox"/>	5.000	4.999	25274.97	0.0174	P	4.1
4	<input type="checkbox"/>	10.000	9.828	48687.45	0.0342	P	4.6
5	<input type="checkbox"/>	100.000	100.019	494498.12	0.3478	P	2.8
6	<input checked="" type="checkbox"/>	200.000		991979.86	0.7228	P	5.0
7	<input type="checkbox"/>	1.000					

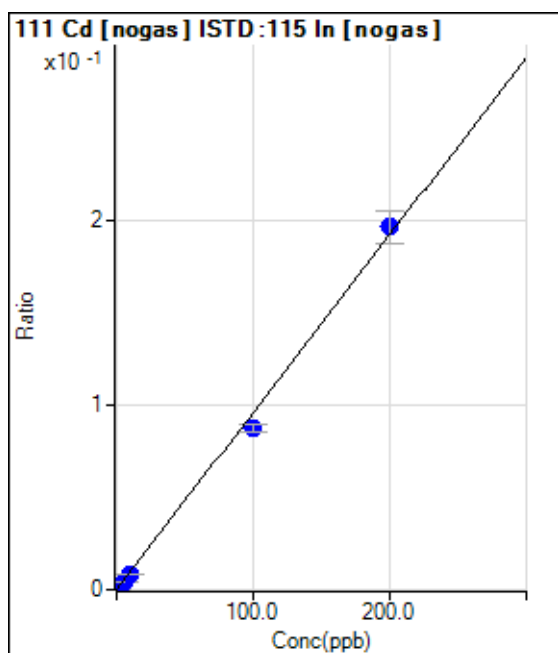
$y = 0.0035 * x + 1.9382E-005$

R = 1.0000

DL = 0.007008

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	13.33	0.0000	P	39.2
2	<input type="checkbox"/>	2.000	1.703	2126.83	0.0016	P	4.2
3	<input type="checkbox"/>	5.000	4.611	5487.60	0.0044	P	6.2
4	<input type="checkbox"/>	10.000	8.413	10083.06	0.0081	P	4.2
5	<input type="checkbox"/>	100.000	91.031	105752.76	0.0876	P	4.0
6	<input type="checkbox"/>	200.000	204.577	221277.63	0.1968	P	9.4
7	<input type="checkbox"/>	1.000					

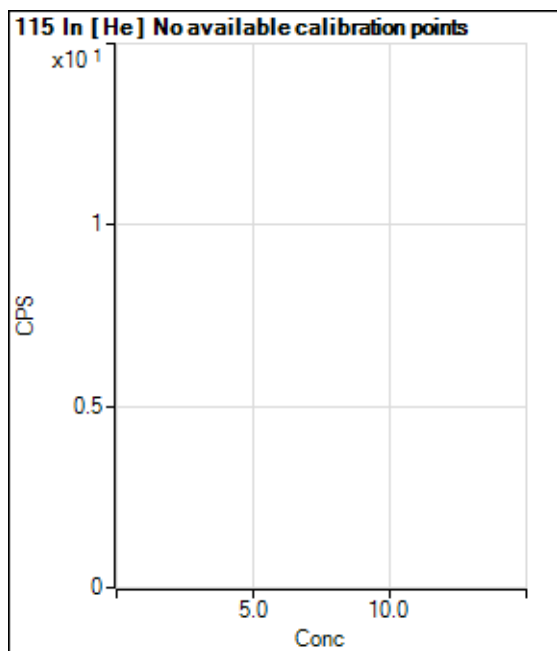
$y = 9.6180E-004 * x + 1.1409E-005$

R = 0.9986

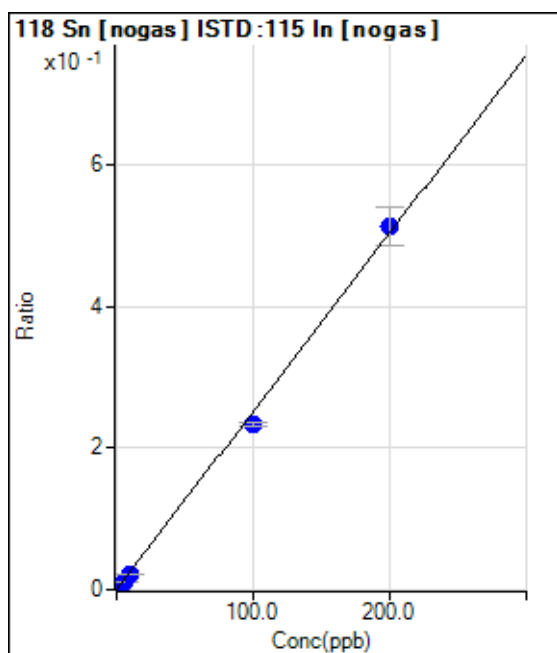
DL = 0.01394

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>			493811.36		P	1.4
2	<input type="checkbox"/>			491013.79		P	1.4
3	<input type="checkbox"/>			491476.80		P	1.8
4	<input type="checkbox"/>			492195.32		P	2.2
5	<input type="checkbox"/>			479986.38		P	1.0
6	<input type="checkbox"/>			482622.22		P	0.6
7	<input type="checkbox"/>						



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	330.01	0.0003	P	43.5
2	<input type="checkbox"/>	2.000	1.748	6044.49	0.0047	P	5.0
3	<input type="checkbox"/>	5.000	4.491	14312.67	0.0116	P	1.7
4	<input type="checkbox"/>	10.000	8.747	27678.92	0.0223	P	4.1
5	<input type="checkbox"/>	100.000	92.979	282624.74	0.2338	P	1.8
6	<input type="checkbox"/>	200.000	203.588	575037.92	0.5116	P	10.6
7	<input type="checkbox"/>	1.000					

$y = 0.0025 * x + 2.9282E-004$

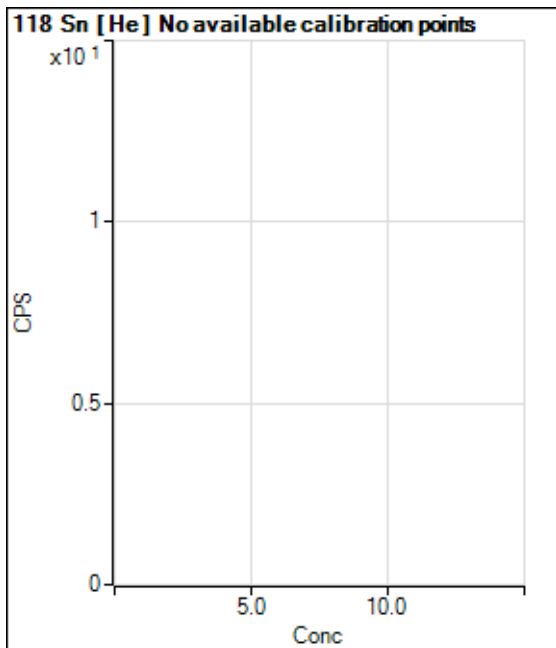
R = 0.9992

DL = 0.1522

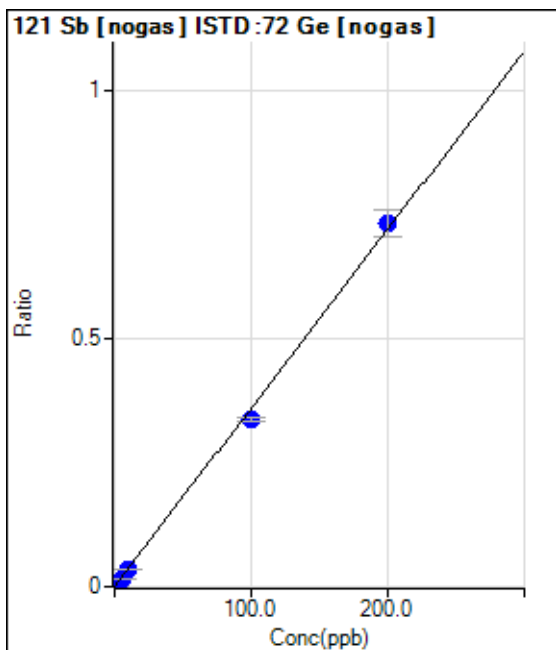
Weight: <None>

Min Conc: <None>





	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>			153.33		P	32.8
2	<input type="checkbox"/>			2586.89		P	8.5
3	<input type="checkbox"/>			6524.63		P	4.5
4	<input type="checkbox"/>			11860.83		P	1.5
5	<input type="checkbox"/>			122364.54		P	1.4
6	<input type="checkbox"/>			245623.81		P	1.6
7	<input type="checkbox"/>						



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	316.68	0.0002	P	17.3
2	<input type="checkbox"/>	2.000	1.919	10223.13	0.0071	P	0.3
3	<input type="checkbox"/>	5.000	4.586	24297.14	0.0167	P	5.0
4	<input type="checkbox"/>	10.000	9.446	48714.84	0.0342	P	2.0
5	<input type="checkbox"/>	100.000	93.638	479048.33	0.3368	P	3.0
6	<input type="checkbox"/>	200.000	203.220	1001804.96	0.7307	P	7.5
7	<input type="checkbox"/>	1.000					

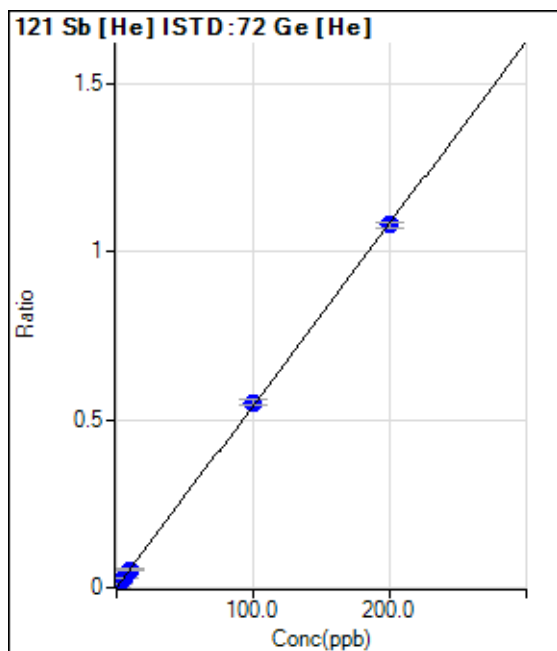
$y = 0.0036 * x + 2.2901E-004$

R = 0.9993

DL = 0.03299

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	153.33	0.0004	P	26.8
2	<input type="checkbox"/>	2.000	1.916	4167.22	0.0108	P	3.2
3	<input type="checkbox"/>	5.000	5.215	10883.49	0.0286	P	1.7
4	<input type="checkbox"/>	10.000	9.916	20475.57	0.0540	P	6.2
5	<input type="checkbox"/>	100.000	101.437	205737.06	0.5490	P	3.1
6	<input type="checkbox"/>	200.000	199.281	416059.19	1.0781	P	1.7
7	<input type="checkbox"/>	1.000					

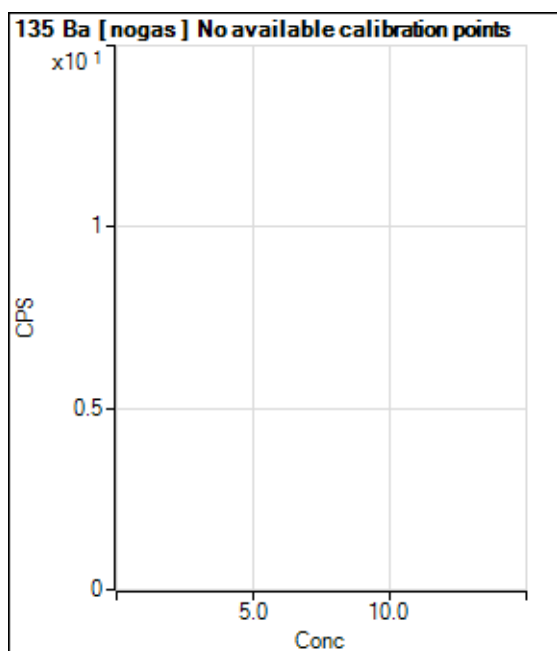
$y = 0.0054 * x + 4.0023E-004$

R = 1.0000

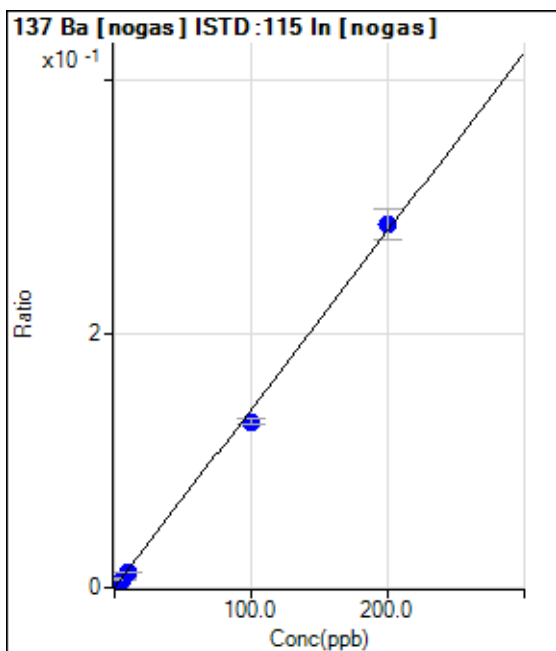
DL = 0.05945

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>			46.67		P	53.9
2	<input type="checkbox"/>			1616.77		P	7.4
3	<input type="checkbox"/>			4794.08		P	3.4
4	<input type="checkbox"/>			9035.82		P	7.0
5	<input type="checkbox"/>			92255.85		P	2.4
6	<input type="checkbox"/>			189288.26		P	0.6
7	<input type="checkbox"/>						



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	53.33	0.0000	P	76.0
2	<input type="checkbox"/>	2.000	1.760	3253.69	0.0025	P	5.5
3	<input type="checkbox"/>	5.000	4.777	8348.83	0.0068	P	4.8
4	<input type="checkbox"/>	10.000	8.778	15397.05	0.0124	P	1.1
5	<input type="checkbox"/>	100.000	93.203	158269.37	0.1310	P	3.0
6	<input type="checkbox"/>	200.000	203.468	321599.40	0.2859	P	8.4
7	<input type="checkbox"/>	1.000					

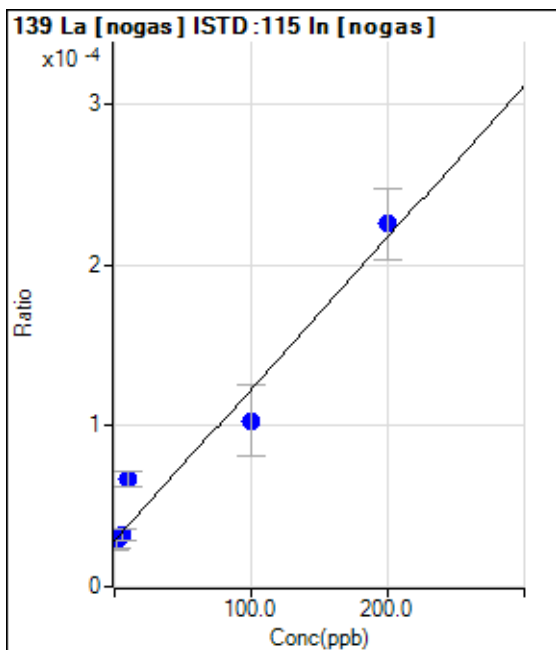
$y = 0.0014 * x + 4.8492E-005$

R = 0.9992

DL = 0.07864

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	33.33	0.0000	P	40.8
2	<input type="checkbox"/>	2.000	0.302	36.67	0.0000	P	38.2
3	<input type="checkbox"/>	5.000	3.838	40.00	0.0000	P	21.7
4	<input type="checkbox"/>	10.000	40.878	83.33	0.0001	P	14.8
5	<input type="checkbox"/>	100.000	79.272	123.33	0.0001	P	41.9
6	<input type="checkbox"/>	200.000	208.866	253.34	0.0002	P	19.4
7	<input type="checkbox"/>	1.000					

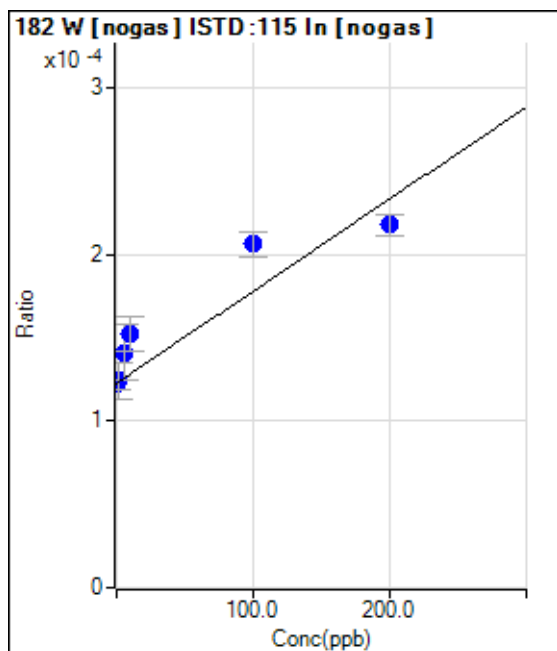
$y = 9.4239E-007 * x + 2.8556E-005$

R = 0.9786

DL = 37.13

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	143.33	0.0001	P	6.2
2	<input type="checkbox"/>	2.000	2.640	160.00	0.0001	P	18.1
3	<input type="checkbox"/>	5.000	33.335	176.67	0.0001	P	23.5
4	<input type="checkbox"/>	10.000	53.535	190.00	0.0002	P	14.3
5	<input type="checkbox"/>	100.000	150.660	250.01	0.0002	P	7.3
6	<input type="checkbox"/>	200.000	171.779	246.67	0.0002	P	6.1
7	<input type="checkbox"/>	1.000					

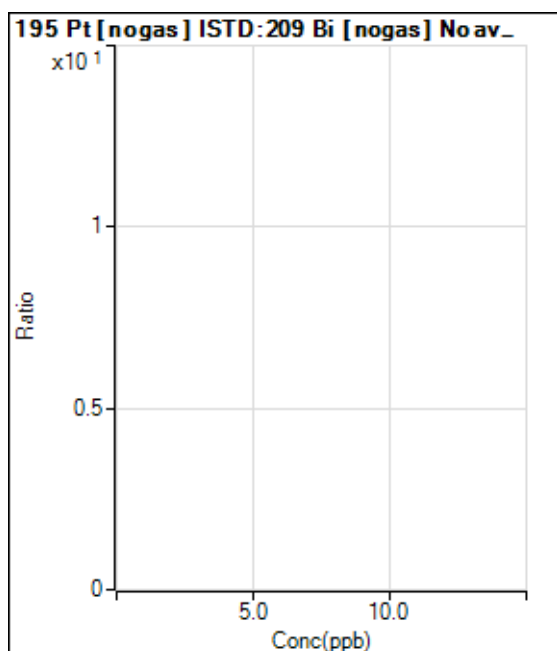
$y = 5.5330E-007 * x + 1.2292E-004$

R = 0.9293

DL = 41.1

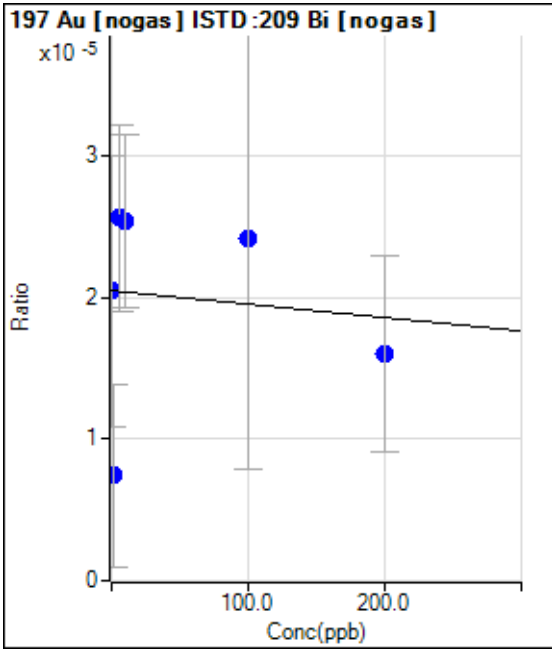
Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000					
2	<input type="checkbox"/>	2.000					
3	<input type="checkbox"/>	5.000					
4	<input type="checkbox"/>	10.000					
5	<input type="checkbox"/>	100.000					
6	<input type="checkbox"/>	200.000					
7	<input type="checkbox"/>	1.000					





	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	16.67	0.0000	P	93.7
2	<input type="checkbox"/>	2.000	1374.964	6.67	0.0000	P	173.
3	<input type="checkbox"/>	5.000	-541.218	23.33	0.0000	P	51.5
4	<input type="checkbox"/>	10.000	-519.482	23.33	0.0000	P	47.8
5	<input type="checkbox"/>	100.000	-382.125	23.33	0.0000	P	134.
6	<input type="checkbox"/>	200.000	467.462	13.33	0.0000	P	86.8
7	<input type="checkbox"/>	1.000					

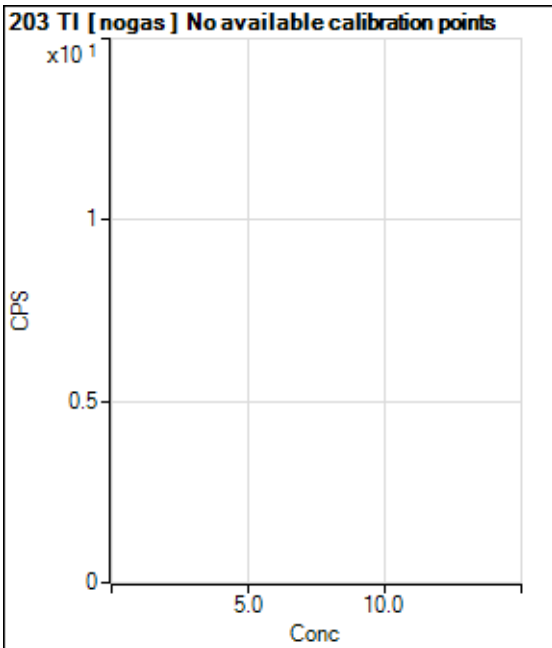
$y = -9.5020E-009 * x + 2.0500E-005$

R = -0.0951

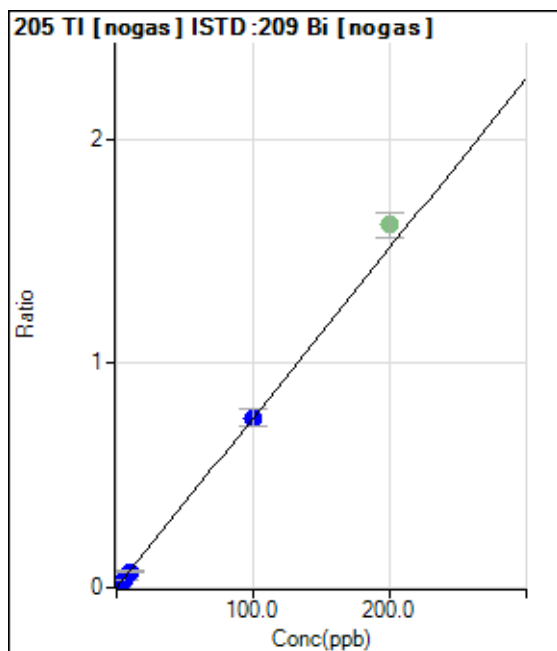
DL = -6063

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>			60.00		P	44.1
2	<input type="checkbox"/>			5894.49		P	5.7
3	<input type="checkbox"/>			13685.91		P	0.7
4	<input type="checkbox"/>			27837.22		P	1.1
5	<input type="checkbox"/>			291768.58		P	3.7
6	<input type="checkbox"/>			588421.28		P	1.7
7	<input type="checkbox"/>						



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	106.67	0.0001	P	20.3
2	<input type="checkbox"/>	2.000	1.984	13909.43	0.0151	P	7.0
3	<input type="checkbox"/>	5.000	4.807	33605.08	0.0365	P	5.7
4	<input type="checkbox"/>	10.000	9.529	65518.62	0.0722	P	6.2
5	<input type="checkbox"/>	100.000	100.057	690690.22	0.7573	P	10.2
6	<input checked="" type="checkbox"/>	200.000		1382875.71	1.6172	A	6.7
7	<input type="checkbox"/>	1.000					

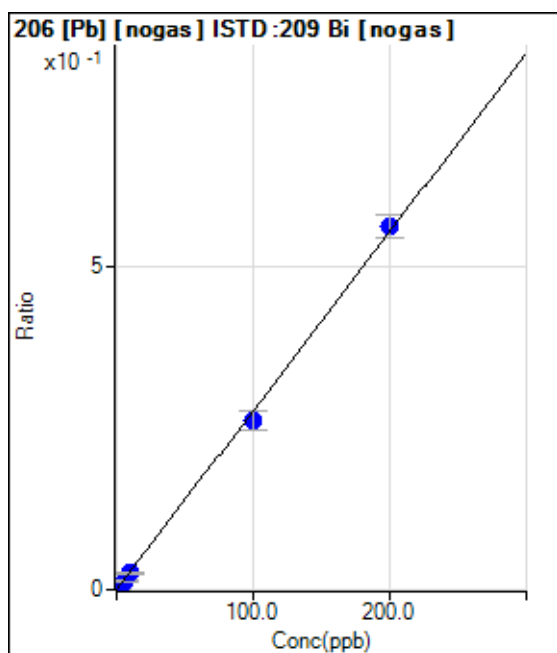
$y = 0.0076 * x + 1.2666E-004$

R = 1.0000

DL = 0.0102

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	56.67	0.0001	P	43.3
2	<input type="checkbox"/>	2.000	1.895	4874.14	0.0053	P	8.7
3	<input type="checkbox"/>	5.000	4.724	12084.65	0.0131	P	5.9
4	<input type="checkbox"/>	10.000	9.187	23093.21	0.0255	P	6.6
5	<input type="checkbox"/>	100.000	94.315	237768.88	0.2608	P	10.9
6	<input type="checkbox"/>	200.000	202.891	479782.44	0.5609	P	6.2
7	<input type="checkbox"/>	1.000					

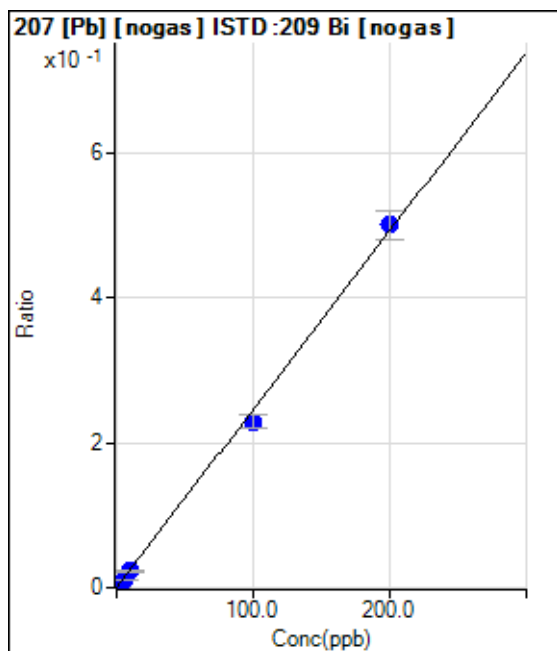
$y = 0.0028 * x + 6.8298E-005$

R = 0.9994

DL = 0.03212

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	20.00	0.0000	P	50.4
2	<input type="checkbox"/>	2.000	1.882	4283.98	0.0046	P	4.0
3	<input type="checkbox"/>	5.000	4.575	10370.13	0.0113	P	8.0
4	<input type="checkbox"/>	10.000	9.294	20723.41	0.0229	P	8.4
5	<input type="checkbox"/>	100.000	93.162	208991.25	0.2289	P	8.4
6	<input type="checkbox"/>	200.000	203.466	427330.87	0.5000	P	7.9
7	<input type="checkbox"/>	1.000					

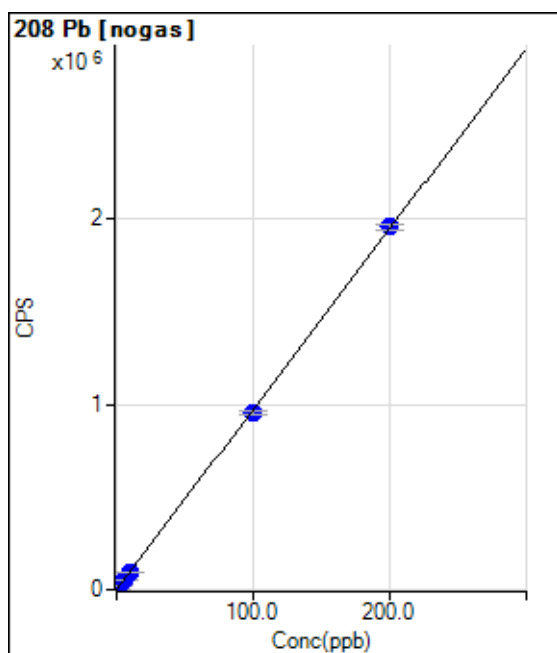
$y = 0.0025 * x + 2.3907E-005$

R = 0.9992

DL = 0.0147

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	160.00		P	33.1
2	<input type="checkbox"/>	2.000	1.980	19411.51		P	3.4
3	<input type="checkbox"/>	5.000	4.934	48128.66		P	2.6
4	<input type="checkbox"/>	10.000	9.598	93468.96		P	2.9
5	<input type="checkbox"/>	100.000	97.874	951685.88		P	2.0
6	<input type="checkbox"/>	200.000	201.085	1955106.57		P	1.9
7	<input type="checkbox"/>	1.000					

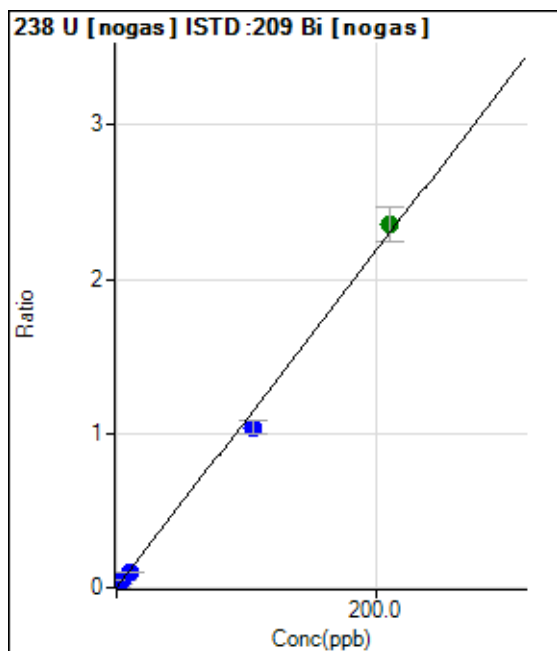
$y = 9721.9841 * x + 160.0000$

R = 0.9999

DL = 0.01633

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	40.00	0.0000	P	6.4
2	<input type="checkbox"/>	2.000	1.808	18197.35	0.0198	P	9.4
3	<input type="checkbox"/>	5.000	4.583	46197.40	0.0502	P	7.1
4	<input type="checkbox"/>	10.000	9.093	90339.18	0.0995	P	4.1
5	<input type="checkbox"/>	105.000	95.036	949108.61	1.0400	P	8.7
6	<input type="checkbox"/>	210.000	215.037	2009692.37	2.3530	A	9.6
7	<input type="checkbox"/>	1.000					

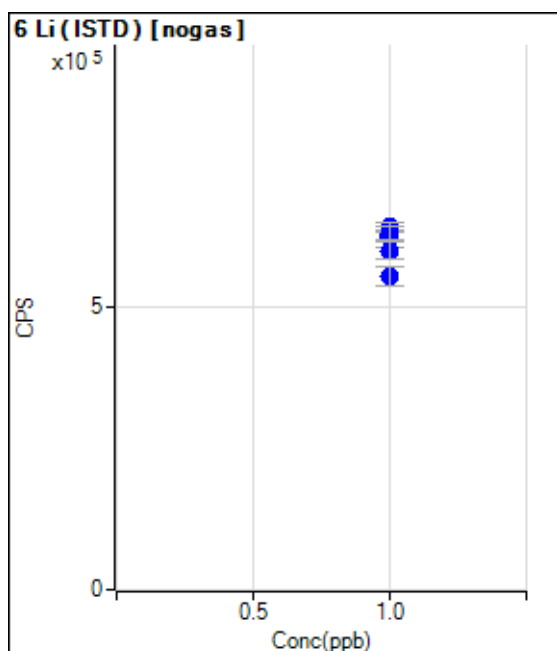
$y = 0.0109 * x + 4.7472E-005$

R = 0.9985

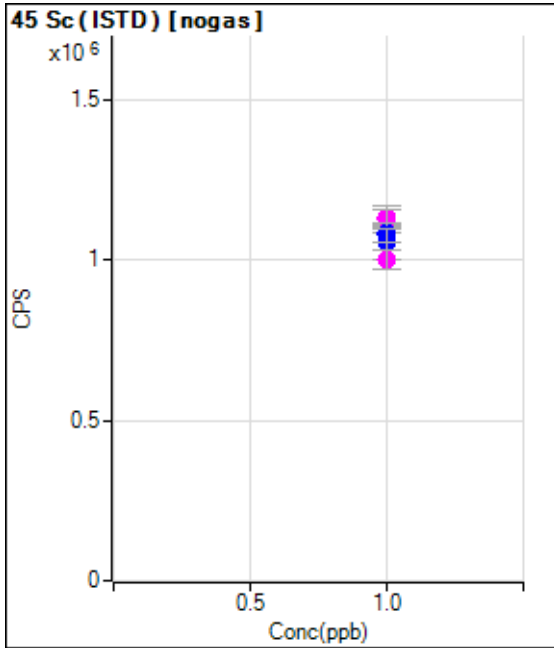
DL = 0.0008312

Weight: <None>

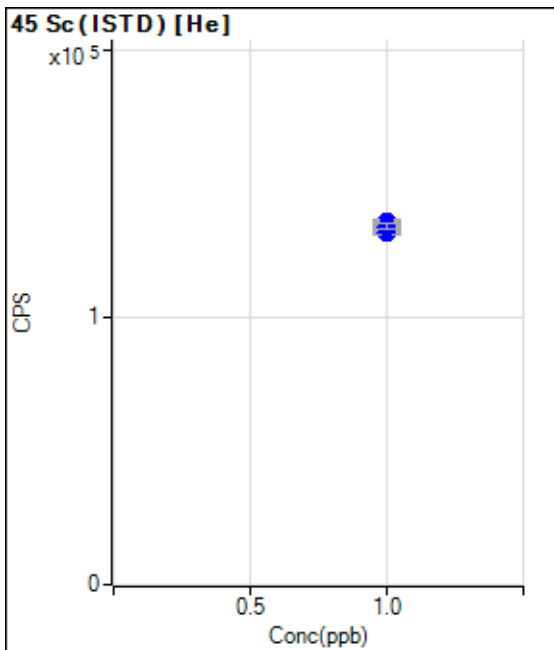
Min Conc: <None>



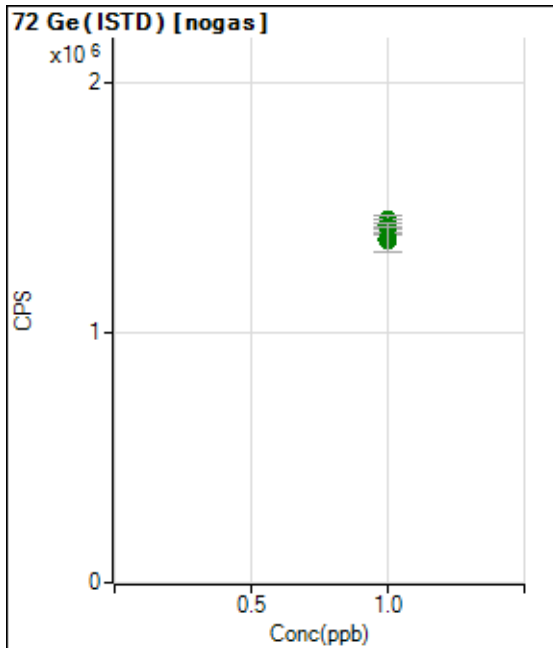
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	1.000		625644.70		P	5.7
2	<input type="checkbox"/>	1.000		643849.53		P	2.6
3	<input type="checkbox"/>	1.000		628264.19		P	3.6
4	<input type="checkbox"/>	1.000		632859.48		P	3.5
5	<input type="checkbox"/>	1.000		601531.99		P	4.9
6	<input type="checkbox"/>	1.000		556640.84		P	5.9
7	<input type="checkbox"/>	1.000					



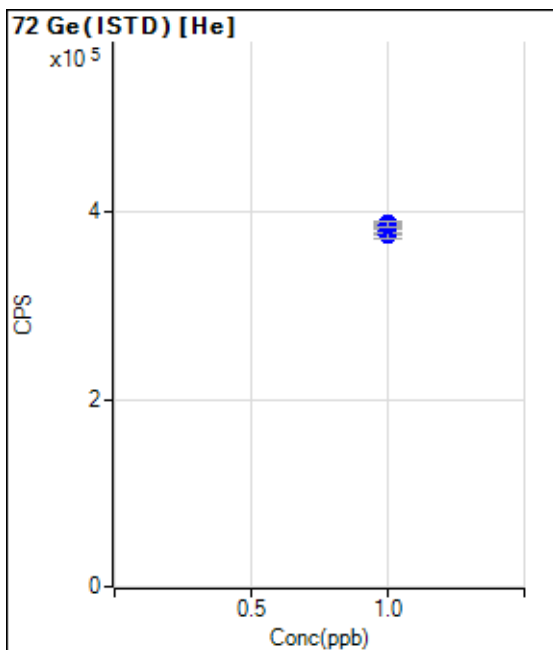
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	1.000		1053566.81		P	10.0
2	<input type="checkbox"/>	1.000		1130561.86		M	4.8
3	<input type="checkbox"/>	1.000		1126536.76		M	7.6
4	<input type="checkbox"/>	1.000		1084779.02		P	5.5
5	<input type="checkbox"/>	1.000		1076496.31		P	4.0
6	<input type="checkbox"/>	1.000		1000504.93		M	6.5
7	<input type="checkbox"/>	1.000					



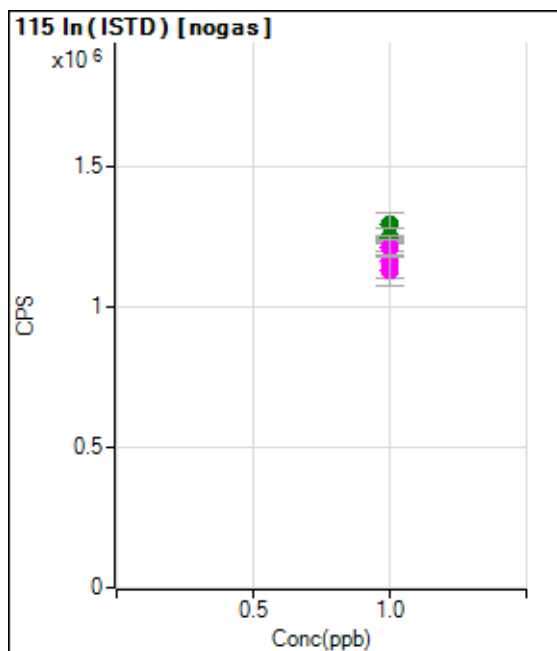
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	1.000		135658.03		P	1.7
2	<input type="checkbox"/>	1.000		134145.91		P	2.2
3	<input type="checkbox"/>	1.000		133188.15		P	2.0
4	<input type="checkbox"/>	1.000		133252.89		P	1.2
5	<input type="checkbox"/>	1.000		131781.67		P	1.2
6	<input type="checkbox"/>	1.000		134093.01		P	1.6
7	<input type="checkbox"/>	1.000					



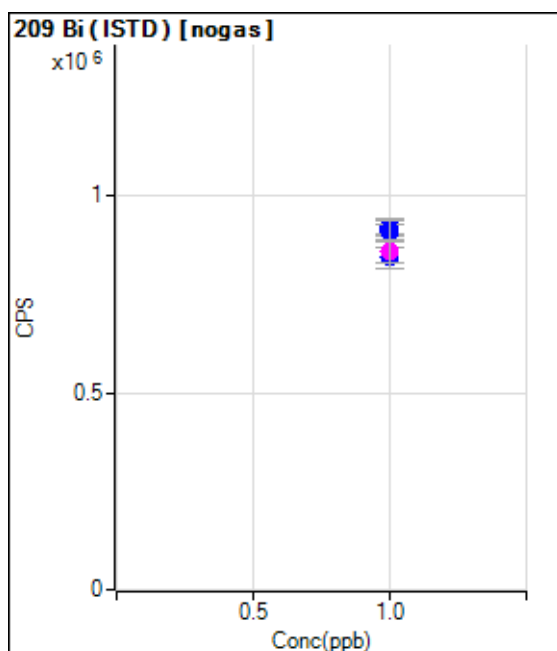
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	1.000		1374265.32		A	6.8
2	<input type="checkbox"/>	1.000		1434480.60		A	2.6
3	<input type="checkbox"/>	1.000		1452982.01		A	2.2
4	<input type="checkbox"/>	1.000		1425835.76		A	4.7
5	<input type="checkbox"/>	1.000		1422284.36		A	2.7
6	<input type="checkbox"/>	1.000		1375523.68		A	7.0
7	<input type="checkbox"/>	1.000					



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	1.000		383404.47		P	0.5
2	<input type="checkbox"/>	1.000		387102.76		P	0.4
3	<input type="checkbox"/>	1.000		380491.28		P	1.1
4	<input type="checkbox"/>	1.000		379235.50		P	2.3
5	<input type="checkbox"/>	1.000		374873.99		P	1.4
6	<input type="checkbox"/>	1.000		385968.76		P	1.5
7	<input type="checkbox"/>	1.000					



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	1.000		1163835.21		M	11.0
2	<input type="checkbox"/>	1.000		1291434.68		A	6.7
3	<input type="checkbox"/>	1.000		1237331.74		A	6.4
4	<input type="checkbox"/>	1.000		1243698.39		A	1.9
5	<input type="checkbox"/>	1.000		1209338.18		M	5.1
6	<input type="checkbox"/>	1.000		1130791.43		M	9.5
7	<input type="checkbox"/>	1.000					



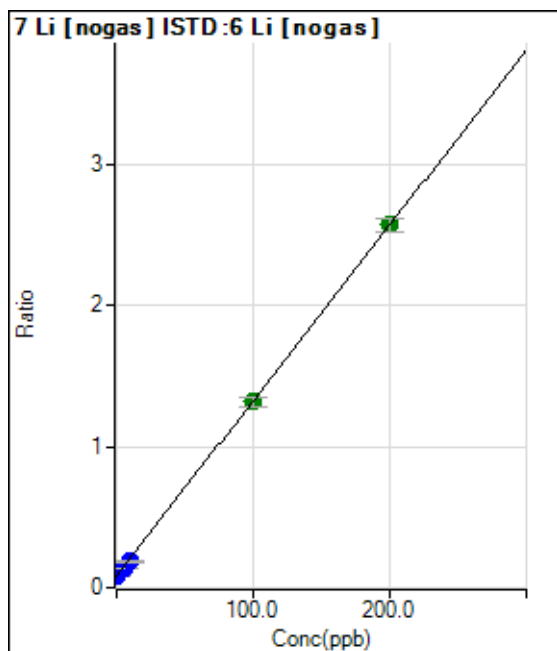
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	1.000		844864.93		P	6.3
2	<input type="checkbox"/>	1.000		920507.41		P	5.1
3	<input type="checkbox"/>	1.000		921939.80		P	3.8
4	<input type="checkbox"/>	1.000		908519.18		P	4.0
5	<input type="checkbox"/>	1.000		916010.66		P	6.4
6	<input type="checkbox"/>	1.000		857677.78		M	6.7
7	<input type="checkbox"/>	1.000					

Calibration for 225_ICV.d

Batch Folder: C:\Agilent\ICPMH\1\DATA\010819B\
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	216CAL.S.d	2/10/200	2019-01-08 19:28:43
3	217CAL.S.d	5/25/500	2019-01-08 19:30:41
4	218CAL.S.d	10/50/1000	2019-01-08 19:32:39
5	219CAL.S.d	100/500/10K	2019-01-08 19:34:37
6	220CAL.S.d	200/1000/20K	2019-01-08 19:36:32
7			

Calibration for 225_ICV.d



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	90289.58	0.0839	P	2.6
2	<input type="checkbox"/>	2.000	1.572	114952.42	0.1034	P	1.5
3	<input type="checkbox"/>	5.000	4.070	152428.41	0.1345	P	5.4
4	<input type="checkbox"/>	10.000	8.151	211647.34	0.1851	P	1.8
5	<input type="checkbox"/>	100.000	99.635	1298658.86	1.3209	A	5.3
6	<input type="checkbox"/>	200.000	200.302	2439773.82	2.5707	A	3.4
7	<input type="checkbox"/>	1.000					

$$y = 0.0124 * x + 0.0839$$

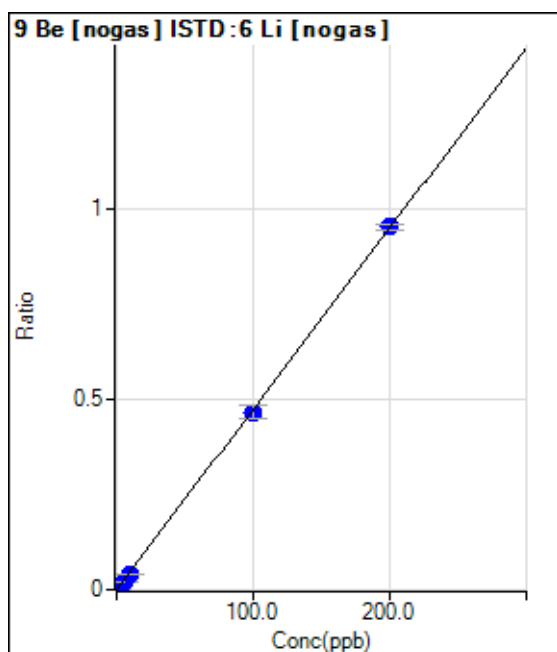
$$R = 1.0000$$

$$DL = 0.5195$$

$$BEC = 6.76$$

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	123.33	0.0001	P	45.0
2	<input type="checkbox"/>	2.000	1.718	9182.31	0.0083	P	7.7
3	<input type="checkbox"/>	5.000	4.184	22650.17	0.0200	P	4.8
4	<input type="checkbox"/>	10.000	8.441	45938.07	0.0402	P	2.9
5	<input type="checkbox"/>	100.000	98.462	459513.53	0.4676	P	6.7
6	<input type="checkbox"/>	200.000	200.870	905391.50	0.9537	P	1.7
7	<input type="checkbox"/>	1.000					

$$y = 0.0047 * x + 1.1554E-004$$

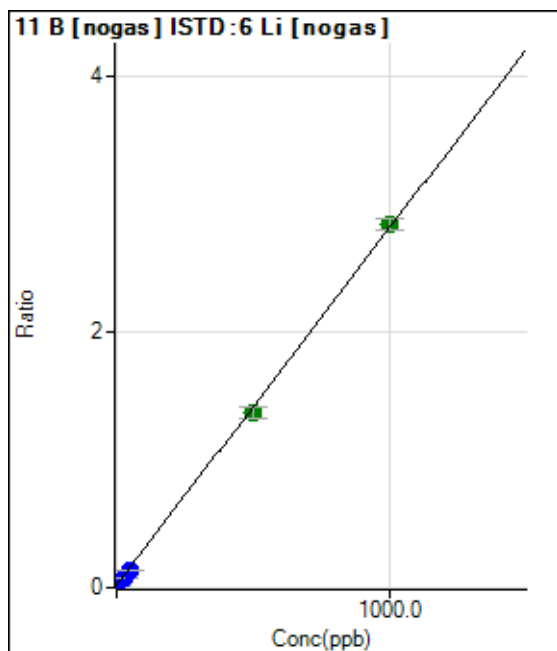
$$R = 0.9999$$

$$DL = 0.03283$$

$$BEC = 0.02434$$

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	20871.52	0.0194	P	5.9
2	<input type="checkbox"/>	10.000	7.985	46322.39	0.0417	P	2.7
3	<input type="checkbox"/>	25.000	19.815	84648.34	0.0747	P	6.3
4	<input type="checkbox"/>	50.000	40.414	151022.14	0.1321	P	3.1
5	<input type="checkbox"/>	500.000	484.015	1345555.87	1.3692	A	6.5
6	<input type="checkbox"/>	1000.000	1008.622	2688007.88	2.8322	A	3.3
7	<input type="checkbox"/>	5.000					

$y = 0.0028 * x + 0.0194$

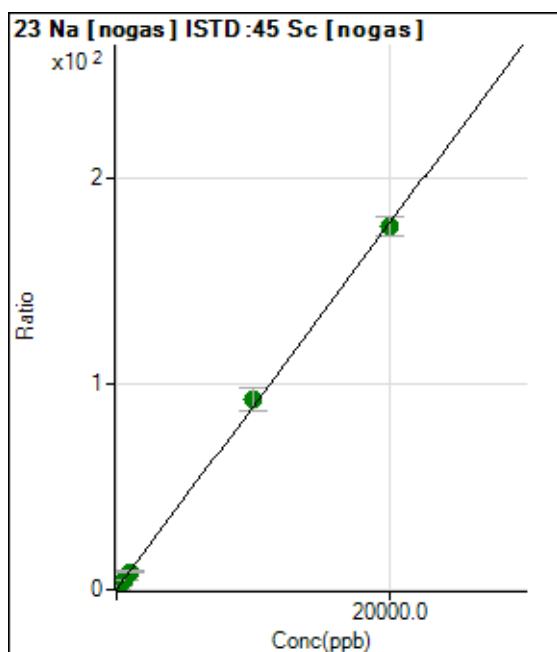
R = 0.9998

DL = 1.224

BEC = 6.964

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	209647.11	0.1169	P	3.3
2	<input type="checkbox"/>	200.000	205.724	3507621.69	1.9468	A	3.9
3	<input type="checkbox"/>	500.000	492.842	8304111.38	4.5006	A	4.4
4	<input type="checkbox"/>	1000.000	965.744	16187855.05	8.7068	A	4.9
5	<input type="checkbox"/>	10000.00	10386.998	161826841.1	92.5050	A	11.2
6	<input type="checkbox"/>	20000.00	19808.335	317662398.7	176.303	A	5.2
7	<input type="checkbox"/>	100.000					

$y = 0.0089 * x + 0.1169$

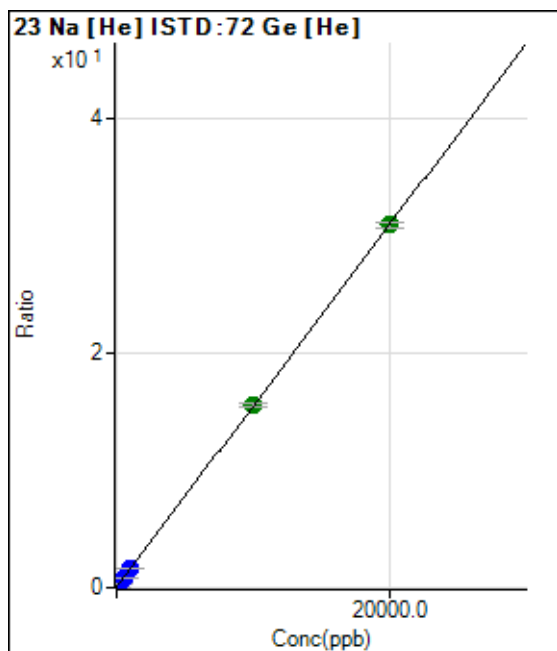
R = 0.9997

DL = 1.321

BEC = 13.15

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	20988.45	0.0340	P	1.5
2	<input type="checkbox"/>	200.000	202.620	215741.99	0.3467	P	0.7
3	<input type="checkbox"/>	500.000	497.626	504314.81	0.8020	P	0.3
4	<input type="checkbox"/>	1000.000	994.818	985977.88	1.5693	P	0.5
5	<input type="checkbox"/>	10000.00	10011.948	9671617.56	15.4852	A	2.1
6	<input type="checkbox"/>	20000.00	19994.318	18891702.22	30.8907	A	1.8
7	<input type="checkbox"/>	100.000					

$y = 0.0015 * x + 0.0340$

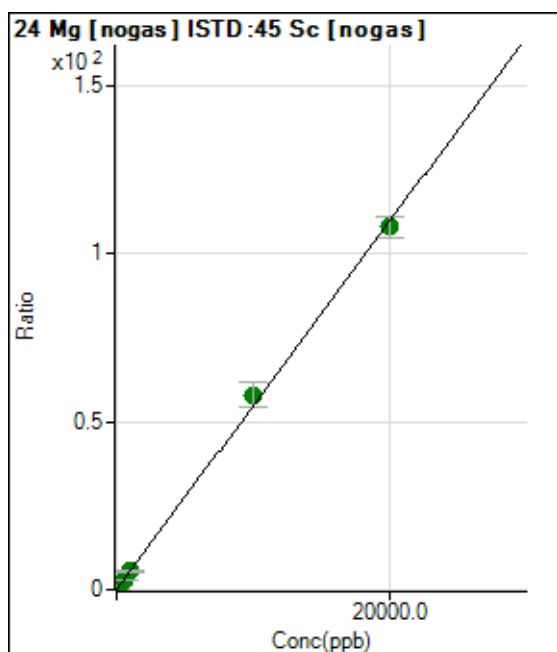
R = 1.0000

DL = 0.9697

BEC = 22.02

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	8836.85	0.0050	P	18.7
2	<input type="checkbox"/>	200.000	213.250	2112678.83	1.1721	A	2.0
3	<input type="checkbox"/>	500.000	512.904	5183735.66	2.8122	A	6.9
4	<input type="checkbox"/>	1000.000	1006.371	10242869.24	5.5130	A	6.6
5	<input type="checkbox"/>	10000.00	10579.191	101185525.1	57.9070	A	13.2
6	<input type="checkbox"/>	20000.00	19709.631	194295621.0	107.879	A	6.1
7	<input type="checkbox"/>	100.000					

$y = 0.0055 * x + 0.0050$

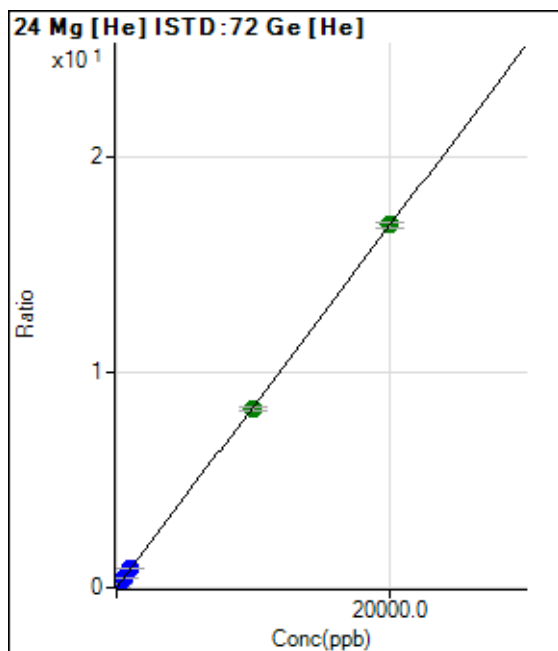
R = 0.9994

DL = 0.508

BEC = 0.9053

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	540.01	0.0009	P	7.8
2	<input type="checkbox"/>	200.000	209.296	109901.55	0.1766	P	2.0
3	<input type="checkbox"/>	500.000	507.148	268312.87	0.4267	P	1.4
4	<input type="checkbox"/>	1000.000	1011.642	534220.90	0.8502	P	0.1
5	<input type="checkbox"/>	10000.00	9886.060	5184529.61	8.3012	A	1.9
6	<input type="checkbox"/>	20000.00	20056.116	10298505.68	16.8400	A	1.9
7	<input type="checkbox"/>	100.000					

$y = 8.3960E-004 * x + 8.7416E-004$

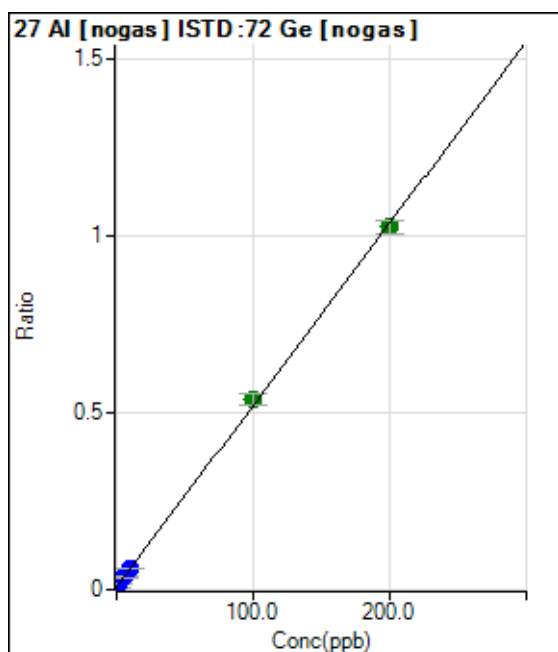
R = 1.0000

DL = 0.2447

BEC = 1.041

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	17321.39	0.0073	P	1.9
2	<input type="checkbox"/>	2.000	2.239	44869.77	0.0188	P	1.9
3	<input type="checkbox"/>	5.000	5.463	85291.11	0.0354	P	2.6
4	<input type="checkbox"/>	10.000	10.399	147678.54	0.0608	P	2.5
5	<input type="checkbox"/>	100.000	103.664	1227839.33	0.5401	A	6.3
6	<input type="checkbox"/>	200.000	198.134	2395303.72	1.0257	A	3.9
7	<input type="checkbox"/>	1.000					

$y = 0.0051 * x + 0.0073$

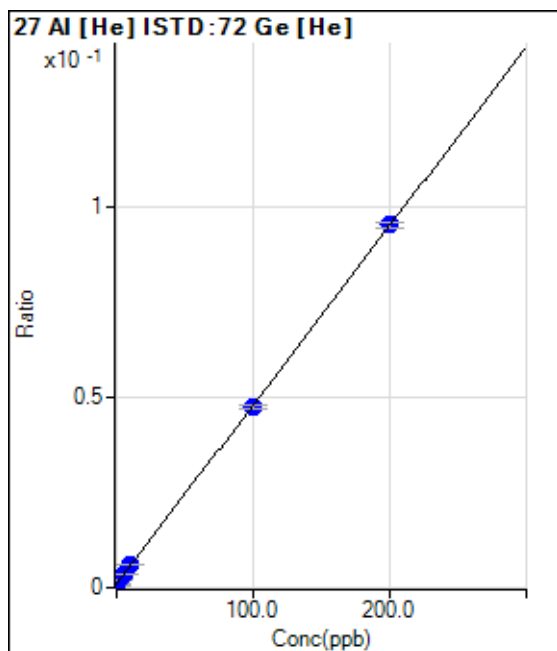
R = 0.9998

DL = 0.08222

BEC = 1.421

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	-0.486	463.35	0.0008	P	6.2
2	<input type="checkbox"/>	2.000	2.005	1193.39	0.0019	P	14.9
3	<input type="checkbox"/>	5.000	5.464	2226.83	0.0035	P	5.3
4	<input type="checkbox"/>	10.000	10.709	3770.43	0.0060	P	1.3
5	<input type="checkbox"/>	100.000	98.710	29529.90	0.0473	P	2.4
6	<input type="checkbox"/>	200.000	200.598	58145.60	0.0951	P	1.7
7	<input type="checkbox"/>	1.000					

$y = 4.6906E-004 * x + 9.7811E-004$

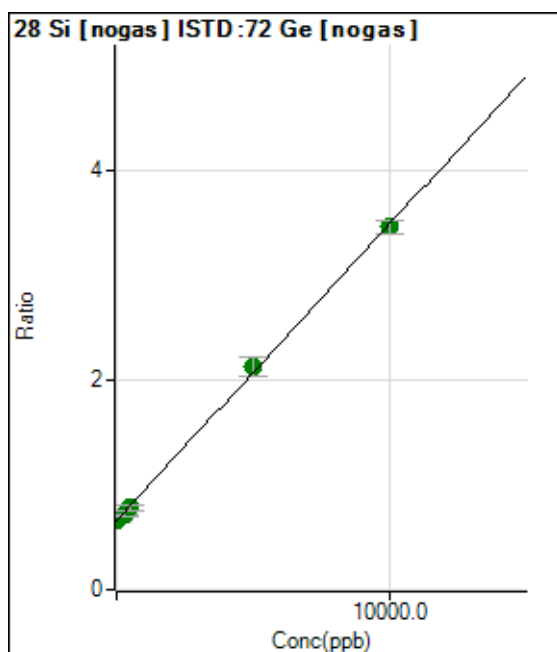
R = 1.0000

DL = 0.2973

BEC = 2.085

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	1564902.48	0.6607	A	5.0
2	<input type="checkbox"/>	100.000	37.584	1601289.14	0.6714	A	2.0
3	<input type="checkbox"/>	250.000	187.665	1720703.73	0.7140	A	3.2
4	<input type="checkbox"/>	500.000	439.284	1907310.86	0.7853	A	5.9
5	<input type="checkbox"/>	5000.000	5206.590	4850570.86	2.1372	A	8.6
6	<input type="checkbox"/>	10000.00	9901.923	8097618.42	3.4686	A	3.6
7	<input type="checkbox"/>	5.000					

$y = 2.8357E-004 * x + 0.6607$

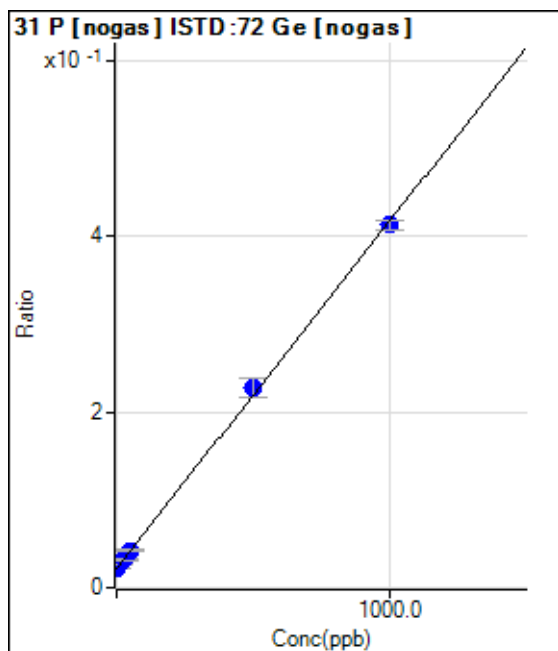
R = 0.9996

DL = 351.8

BEC = 2330

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	51433.44	0.0217	P	4.3
2	<input type="checkbox"/>	10.000	9.861	61081.81	0.0256	P	1.5
3	<input type="checkbox"/>	25.000	25.874	76996.09	0.0319	P	1.5
4	<input type="checkbox"/>	50.000	51.038	101751.64	0.0419	P	4.5
5	<input type="checkbox"/>	500.000	520.294	515842.61	0.2273	P	9.4
6	<input type="checkbox"/>	1000.000	989.780	964100.77	0.4129	P	2.6
7	<input type="checkbox"/>	5.000					

$y = 3.9521E-004 * x + 0.0217$

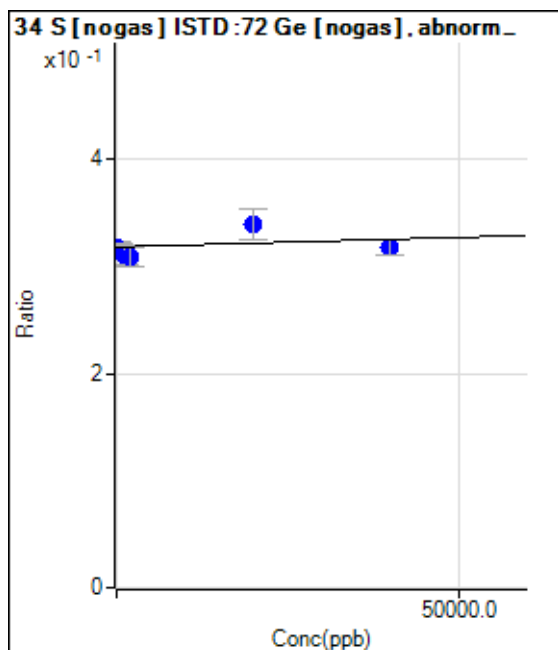
R = 0.9997

DL = 7.055

BEC = 54.94

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	753557.91	0.3180	P	2.8
2	<input type="checkbox"/>	400.000	-9512.732	754171.91	0.3163	P	2.6
3	<input type="checkbox"/>	1000.000	-40602.675	748589.31	0.3107	P	5.5
4	<input type="checkbox"/>	2000.000	-55604.469	748175.28	0.3081	P	5.7
5	<input type="checkbox"/>	20000.00	115057.99	768304.80	0.3385	P	8.7
6	<input type="checkbox"/>	40000.00	-3509.581	740727.16	0.3174	P	4.9
7	<input type="checkbox"/>	100.000					

$y = 1.7852E-007 * x + 0.3180$

R = 0.3956

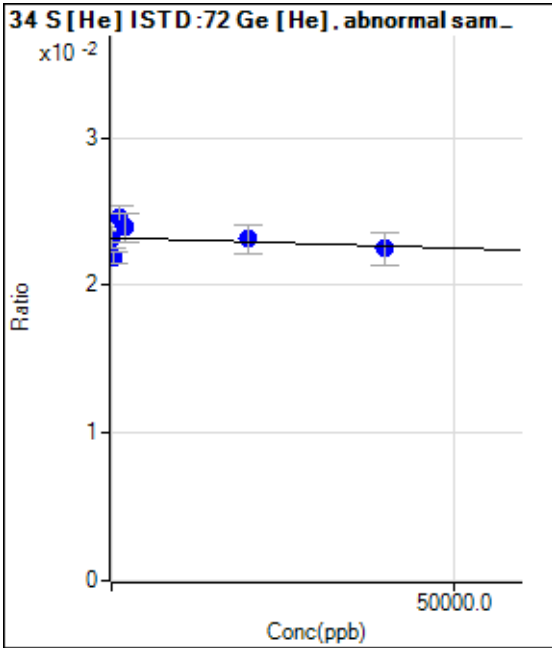
DL = 1.518E+05

BEC = 1.781E+06

Weight: <None>

Min Conc: <None>

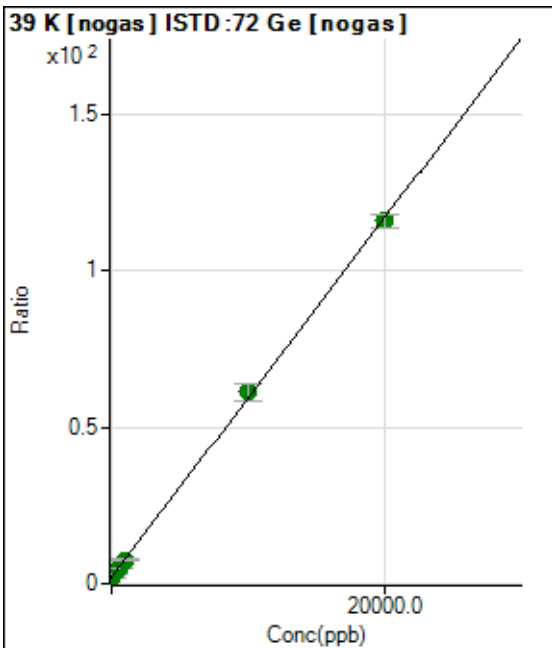
Calibration for 225_ICV.d



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	14340.98	0.0232	P	5.8
2	<input type="checkbox"/>	400.000	96592.115	13607.00	0.0219	P	3.4
3	<input type="checkbox"/>	1000.000	-93956.827	15442.81	0.0246	P	7.2
4	<input type="checkbox"/>	2000.000	-46756.905	15008.25	0.0239	P	8.6
5	<input type="checkbox"/>	20000.00	7372.917	14440.77	0.0231	P	8.8
6	<input type="checkbox"/>	40000.00	50163.386	13774.39	0.0225	P	9.8
7	<input type="checkbox"/>	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>



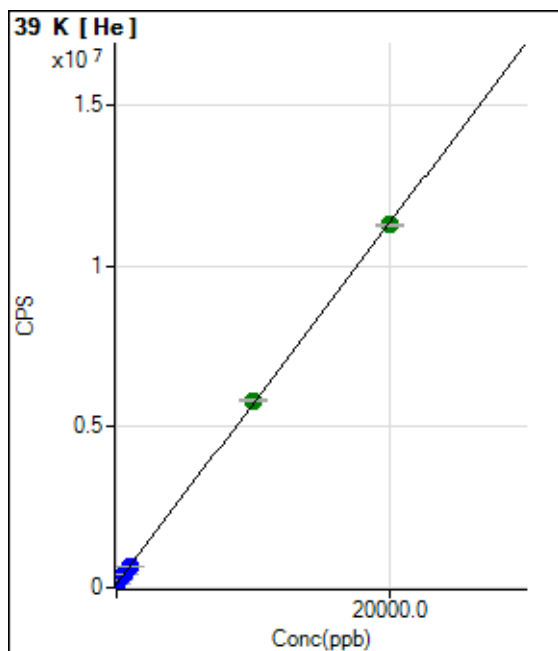
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	4817556.75	2.0340	A	4.7
2	<input type="checkbox"/>	200.000	196.970	7546315.27	3.1641	A	1.2
3	<input type="checkbox"/>	500.000	493.612	11729722.40	4.8660	A	1.8
4	<input type="checkbox"/>	1000.000	963.526	18376307.18	7.5621	A	3.5
5	<input type="checkbox"/>	10000.00	10314.438	138949932.2	61.2112	A	9.0
6	<input type="checkbox"/>	20000.00	19844.795	270535622.7	115.889	A	3.9
7	<input type="checkbox"/>	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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	113987.39		P	1.4
2	<input type="checkbox"/>	200.000	205.540	229343.28		P	0.8
3	<input type="checkbox"/>	500.000	508.450	399345.72		P	0.5
4	<input type="checkbox"/>	1000.000	1010.340	681022.93		P	0.4
5	<input type="checkbox"/>	10000.00	10182.085	5828500.96		A	1.4
6	<input type="checkbox"/>	20000.00	19908.174	11287094.83		A	0.4
7	<input type="checkbox"/>	100.000					

$y = 561.2322 * x + 113987.3933$

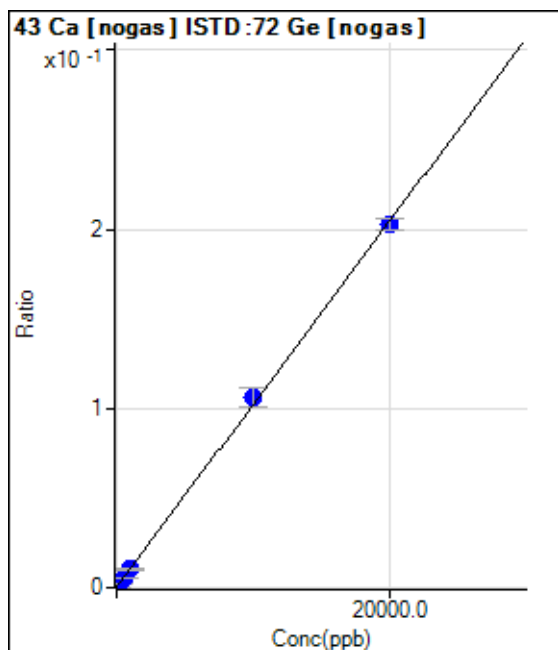
R = 0.9999

DL = 8.557

BEC = 203.1

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	376.68	0.0002	P	27.9
2	<input type="checkbox"/>	200.000	202.394	5314.17	0.0022	P	2.9
3	<input type="checkbox"/>	500.000	498.323	12651.11	0.0052	P	6.6
4	<input type="checkbox"/>	1000.000	993.063	25043.65	0.0103	P	2.3
5	<input type="checkbox"/>	10000.00	10388.783	241174.10	0.1063	P	9.6
6	<input type="checkbox"/>	20000.00	19805.973	472679.91	0.2024	P	3.0
7	<input type="checkbox"/>	100.000					

$y = 1.0213E-005 * x + 1.5995E-004$

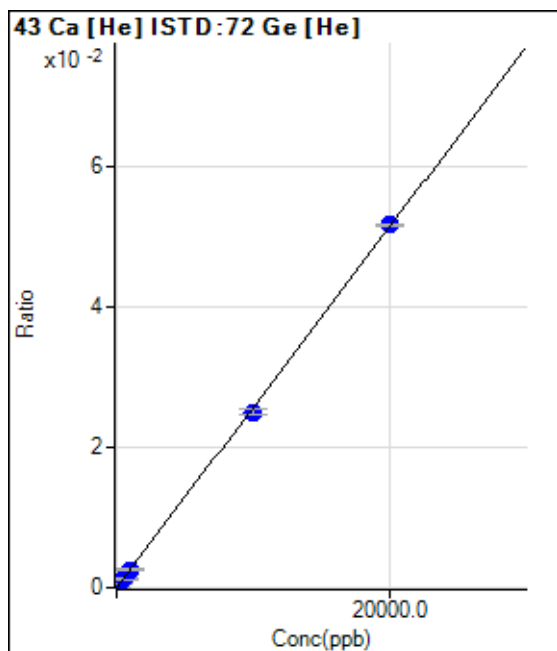
R = 0.9997

DL = 13.12

BEC = 15.66

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	13.33	0.0000	P	114.
2	<input type="checkbox"/>	200.000	245.754	406.68	0.0007	P	2.9
3	<input type="checkbox"/>	500.000	480.096	790.03	0.0013	P	11.2
4	<input type="checkbox"/>	1000.000	1000.051	1630.09	0.0026	P	6.8
5	<input type="checkbox"/>	10000.00	9754.420	15686.70	0.0251	P	2.6
6	<input type="checkbox"/>	20000.00	20122.828	31673.72	0.0518	P	0.3
7	<input type="checkbox"/>	100.000					

$y = 2.5725E-006 * x + 2.1453E-005$

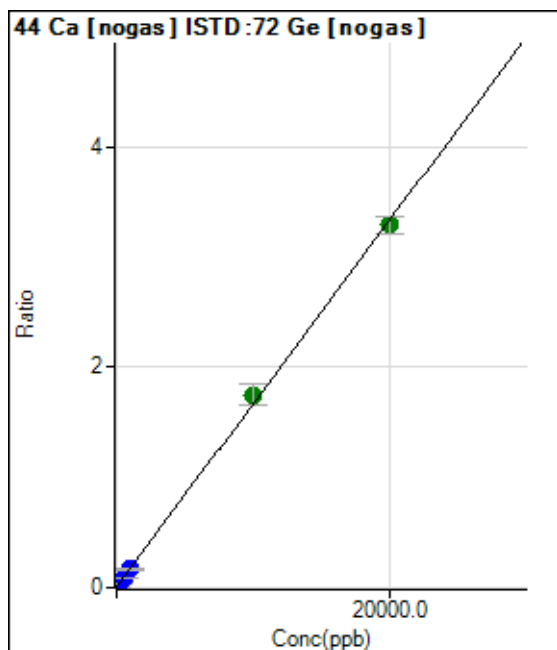
R = 0.9999

DL = 28.57

BEC = 8.339

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	16127.19	0.0068	P	5.3
2	<input type="checkbox"/>	200.000	193.223	92785.69	0.0389	P	2.5
3	<input type="checkbox"/>	500.000	490.667	212936.93	0.0883	P	1.5
4	<input type="checkbox"/>	1000.000	957.958	403411.63	0.1660	P	2.6
5	<input type="checkbox"/>	10000.00	10492.239	3968217.86	1.7501	A	10.7
6	<input type="checkbox"/>	20000.00	19756.284	7677339.68	3.2892	A	4.8
7	<input type="checkbox"/>	100.000					

$y = 1.6615E-004 * x + 0.0068$

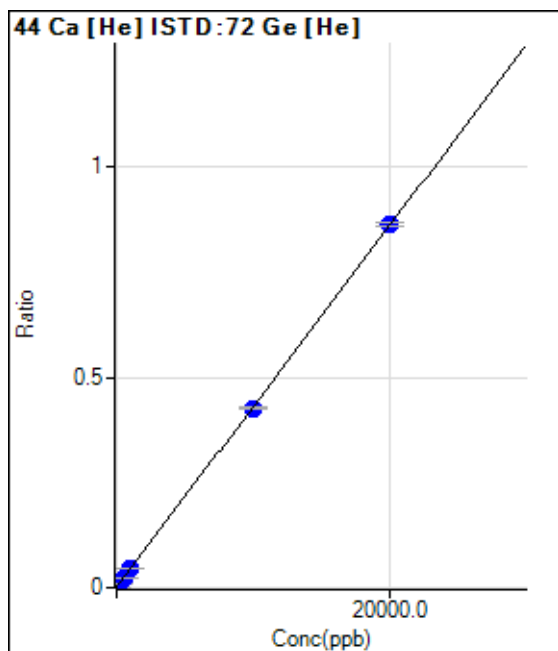
R = 0.9996

DL = 6.475

BEC = 40.99

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	560.02	0.0009	P	7.2
2	<input type="checkbox"/>	200.000	194.481	5764.30	0.0093	P	4.0
3	<input type="checkbox"/>	500.000	492.665	13885.35	0.0221	P	1.4
4	<input type="checkbox"/>	1000.000	998.530	27533.84	0.0438	P	1.0
5	<input type="checkbox"/>	10000.00	9917.843	266775.97	0.4272	P	1.4
6	<input type="checkbox"/>	20000.00	20041.391	527341.82	0.8622	P	1.0
7	<input type="checkbox"/>	100.000					

$y = 4.2978E-005 * x + 9.0718E-004$

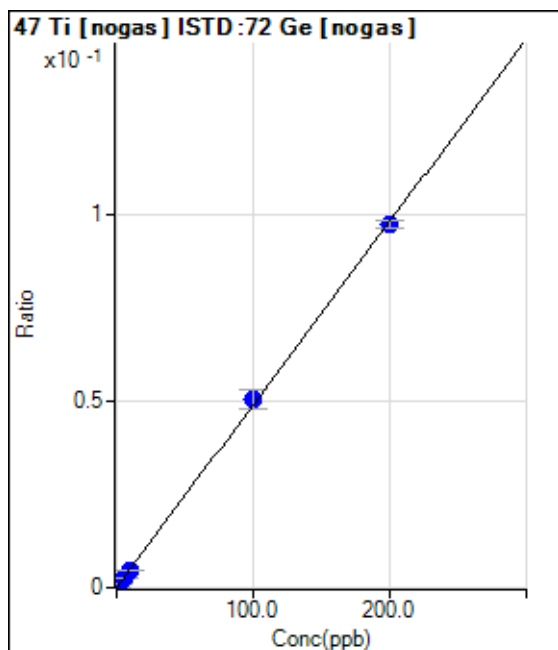
R = 1.0000

DL = 4.578

BEC = 21.11

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	103.33	0.0000	P	56.0
2	<input type="checkbox"/>	2.000	1.909	2336.85	0.0010	P	6.2
3	<input type="checkbox"/>	5.000	4.995	6011.05	0.0025	P	3.3
4	<input type="checkbox"/>	10.000	9.617	11580.42	0.0048	P	1.9
5	<input type="checkbox"/>	100.000	103.328	115093.98	0.0507	P	10.1
6	<input type="checkbox"/>	200.000	198.356	227388.34	0.0974	P	2.0
7	<input type="checkbox"/>	1.000					

$y = 4.9061E-004 * x + 4.3602E-005$

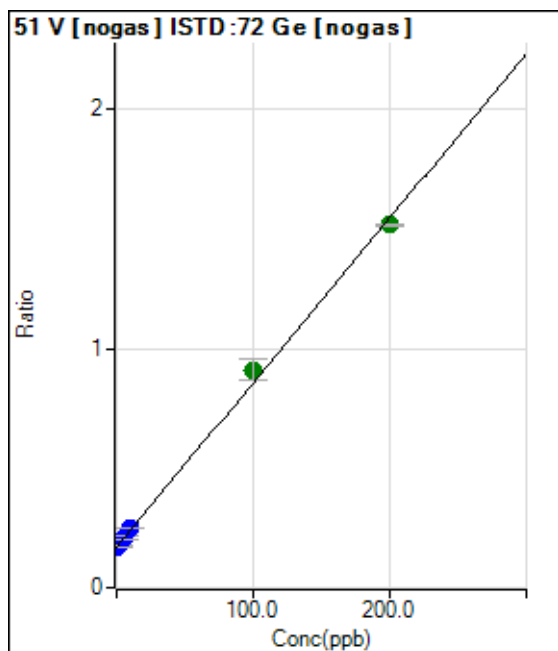
R = 0.9998

DL = 0.1493

BEC = 0.08887

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	403019.21	0.1698	P	4.5
2	<input type="checkbox"/>	2.000	0.681	416239.73	0.1745	P	1.9
3	<input type="checkbox"/>	5.000	5.818	506057.06	0.2098	P	4.7
4	<input type="checkbox"/>	10.000	11.718	608854.20	0.2504	P	1.3
5	<input type="checkbox"/>	100.000	107.920	2068404.73	0.9119	A	9.7
6	<input type="checkbox"/>	200.000	195.947	3544244.48	1.5171	A	0.8
7	<input type="checkbox"/>	1.000					

$y = 0.0069 * x + 0.1698$

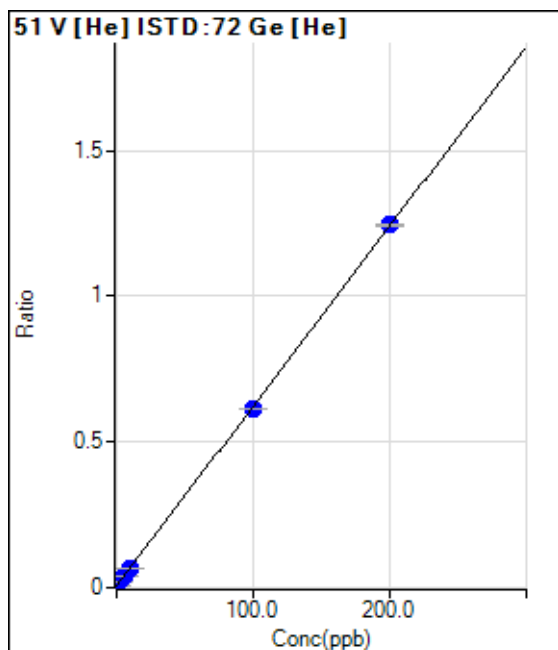
R = 0.9988

DL = 3.345

BEC = 24.7

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.289	4788.63	0.0078	P	0.9
2	<input type="checkbox"/>	2.000	2.240	12310.74	0.0198	P	2.7
3	<input type="checkbox"/>	5.000	5.205	23943.98	0.0381	P	0.8
4	<input type="checkbox"/>	10.000	10.113	42940.43	0.0683	P	1.0
5	<input type="checkbox"/>	100.000	98.332	382504.80	0.6124	P	0.6
6	<input type="checkbox"/>	200.000	200.821	761139.19	1.2445	P	0.7
7	<input type="checkbox"/>	1.000					

$y = 0.0062 * x + 0.0060$

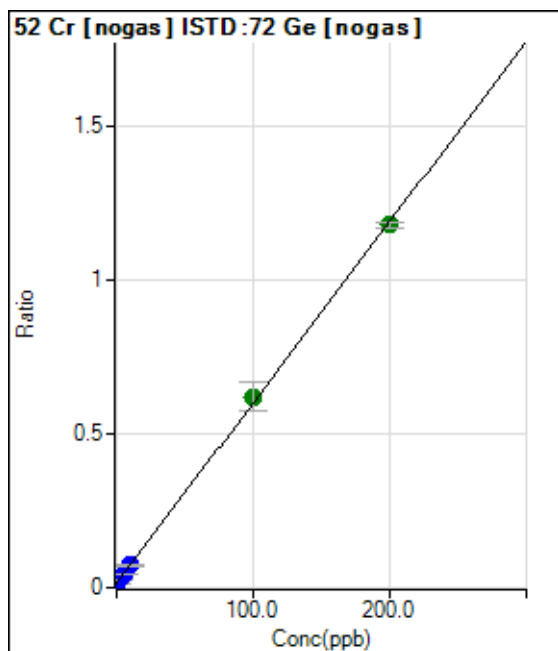
R = 0.9999

DL = 0.03331

BEC = 0.9683

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	34061.46	0.0144	P	2.3
2	<input type="checkbox"/>	2.000	1.943	61478.00	0.0258	P	1.7
3	<input type="checkbox"/>	5.000	5.045	106047.55	0.0440	P	1.8
4	<input type="checkbox"/>	10.000	9.855	175516.38	0.0722	P	3.2
5	<input type="checkbox"/>	100.000	103.279	1405385.39	0.6207	A	15.0
6	<input type="checkbox"/>	200.000	198.367	2753677.25	1.1789	A	1.7
7	<input type="checkbox"/>	1.000					

$y = 0.0059 * x + 0.0144$

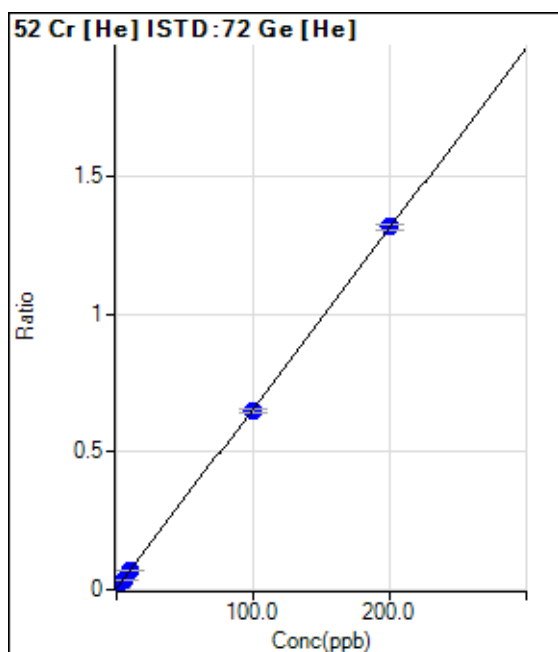
R = 0.9998

DL = 0.1658

BEC = 2.448

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	2430.19	0.0039	P	3.0
2	<input type="checkbox"/>	2.000	2.153	11200.18	0.0180	P	2.1
3	<input type="checkbox"/>	5.000	5.056	23238.08	0.0370	P	0.9
4	<input type="checkbox"/>	10.000	9.808	42719.20	0.0680	P	1.2
5	<input type="checkbox"/>	100.000	98.502	404215.71	0.6472	P	1.4
6	<input type="checkbox"/>	200.000	200.755	804224.96	1.3150	P	1.3
7	<input type="checkbox"/>	1.000					

$y = 0.0065 * x + 0.0039$

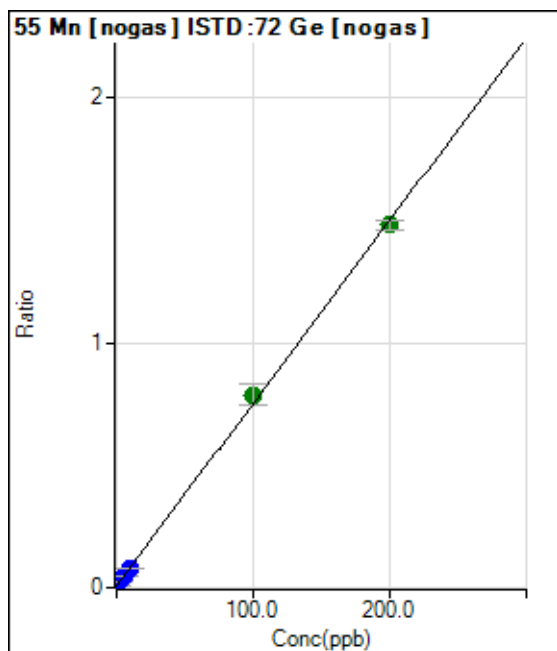
R = 1.0000

DL = 0.05424

BEC = 0.6027

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	16480.86	0.0070	P	3.2
2	<input type="checkbox"/>	2.000	2.051	53066.02	0.0223	P	2.7
3	<input type="checkbox"/>	5.000	5.116	108750.47	0.0451	P	2.3
4	<input type="checkbox"/>	10.000	9.903	196465.42	0.0808	P	2.5
5	<input type="checkbox"/>	100.000	104.601	1785128.72	0.7871	A	10.8
6	<input type="checkbox"/>	200.000	197.701	3459145.37	1.4815	A	2.8
7	<input type="checkbox"/>	1.000					

$y = 0.0075 * x + 0.0070$

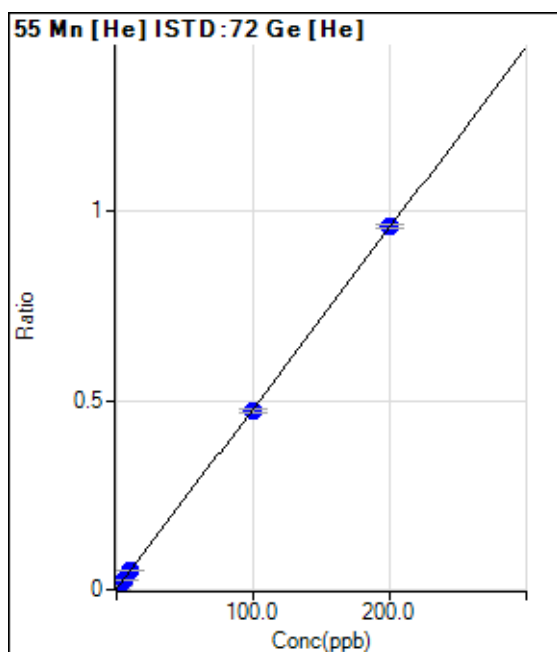
R = 0.9996

DL = 0.08939

BEC = 0.9326

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	663.36	0.0011	P	22.6
2	<input type="checkbox"/>	2.000	2.102	6921.41	0.0111	P	7.8
3	<input type="checkbox"/>	5.000	5.043	15830.32	0.0252	P	3.0
4	<input type="checkbox"/>	10.000	10.251	31453.69	0.0501	P	0.8
5	<input type="checkbox"/>	100.000	99.080	296372.32	0.4745	P	1.9
6	<input type="checkbox"/>	200.000	200.446	586479.85	0.9589	P	1.0
7	<input type="checkbox"/>	1.000					

$y = 0.0048 * x + 0.0011$

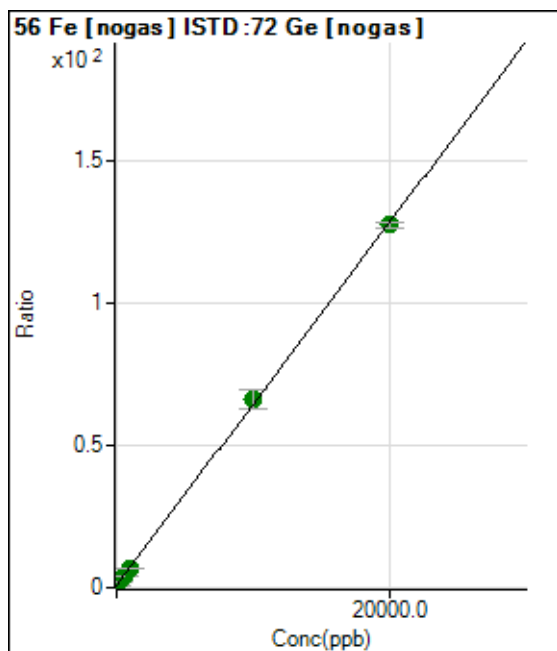
R = 1.0000

DL = 0.1524

BEC = 0.2247

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	1816794.51	0.7670	A	4.6
2	<input type="checkbox"/>	200.000	194.655	4787148.03	2.0071	A	0.8
3	<input type="checkbox"/>	500.000	495.767	9461886.15	3.9253	A	2.2
4	<input type="checkbox"/>	1000.000	961.609	16752026.94	6.8929	A	3.0
5	<input type="checkbox"/>	10000.00	10256.937	149943803.3	66.1087	A	10.4
6	<input type="checkbox"/>	20000.00	19873.610	297522223.3	127.371	A	1.4
7	<input type="checkbox"/>	100.000					

$y = 0.0064 * x + 0.7670$

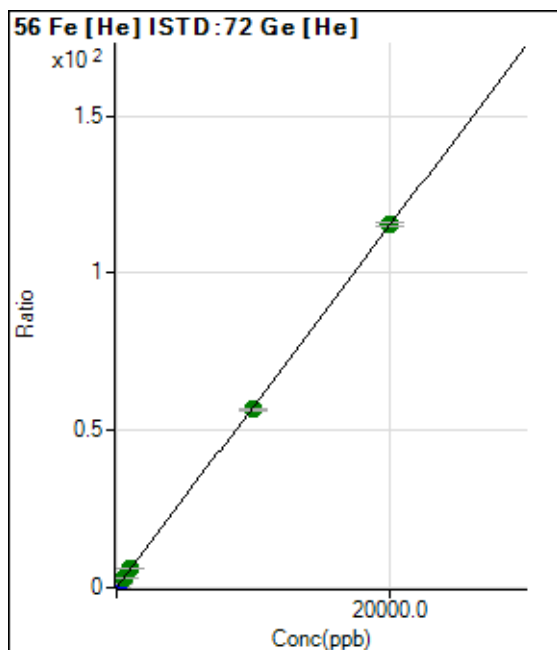
R = 0.9999

DL = 16.54

BEC = 120.4

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	8885.59	0.0144	P	4.3
2	<input type="checkbox"/>	200.000	202.299	732265.04	1.1767	P	2.8
3	<input type="checkbox"/>	500.000	510.683	1854227.63	2.9486	A	1.4
4	<input type="checkbox"/>	1000.000	1022.532	3700469.94	5.8896	A	0.8
5	<input type="checkbox"/>	10000.00	9874.396	35443834.47	56.7502	A	0.9
6	<input type="checkbox"/>	20000.00	20061.385	70504553.95	115.282	A	1.1
7	<input type="checkbox"/>	100.000					

$y = 0.0057 * x + 0.0144$

R = 1.0000

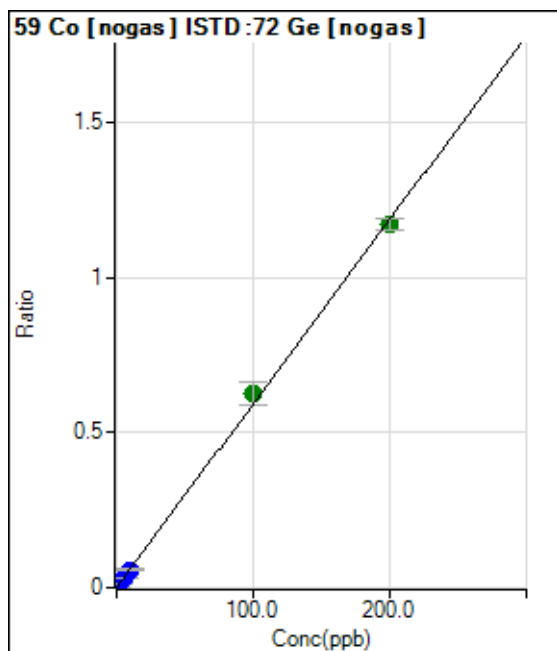
DL = 0.3195

BEC = 2.504

Weight: <None>

Min Conc: <None>

Calibration for 225_ICV.d



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	420.01	0.0002	P	30.4
2	<input type="checkbox"/>	2.000	2.056	29483.80	0.0124	P	3.1
3	<input type="checkbox"/>	5.000	5.123	73663.24	0.0305	P	1.2
4	<input type="checkbox"/>	10.000	9.904	143140.37	0.0589	P	2.8
5	<input type="checkbox"/>	100.000	105.436	1417108.47	0.6253	A	11.8
6	<input type="checkbox"/>	200.000	197.283	2731303.71	1.1698	A	3.0
7	<input type="checkbox"/>	1.000					

$y = 0.0059 * x + 1.7809E-004$

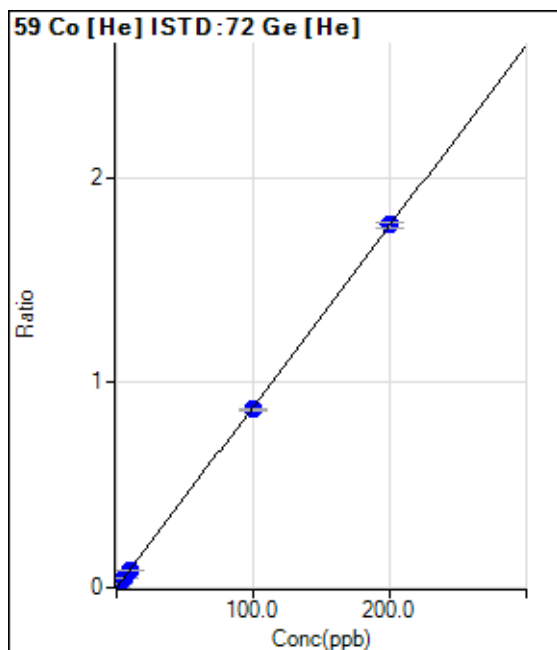
R = 0.9995

DL = 0.02738

BEC = 0.03004

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	56.67	0.0001	P	73.5
2	<input type="checkbox"/>	2.000	2.034	11210.26	0.0180	P	3.3
3	<input type="checkbox"/>	5.000	4.938	27423.86	0.0436	P	2.1
4	<input type="checkbox"/>	10.000	9.918	54978.56	0.0875	P	2.4
5	<input type="checkbox"/>	100.000	98.721	543469.93	0.8702	P	1.0
6	<input type="checkbox"/>	200.000	200.645	1081530.90	1.7685	P	1.9
7	<input type="checkbox"/>	1.000					

$y = 0.0088 * x + 9.1533E-005$

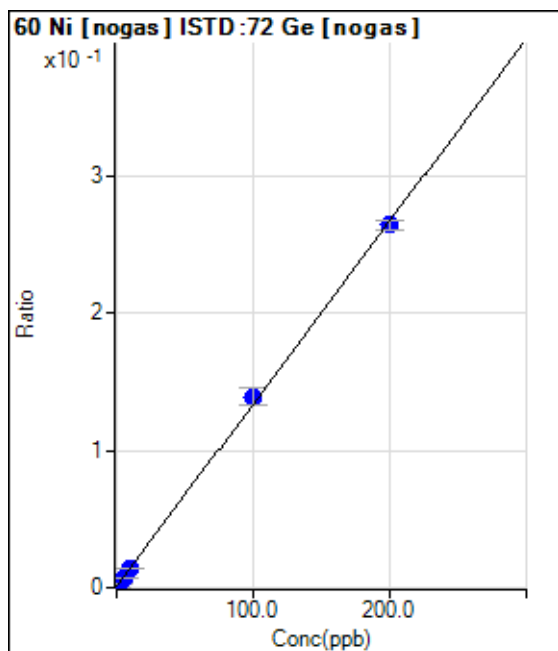
R = 1.0000

DL = 0.0229

BEC = 0.01039

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	-0.486	403.34	0.0002	P	9.7
2	<input type="checkbox"/>	2.000	1.462	6574.61	0.0028	P	3.9
3	<input type="checkbox"/>	5.000	4.591	16657.72	0.0069	P	4.6
4	<input type="checkbox"/>	10.000	9.492	32632.37	0.0134	P	1.6
5	<input type="checkbox"/>	100.000	103.800	314650.89	0.1387	P	9.3
6	<input type="checkbox"/>	200.000	198.141	616454.65	0.2640	P	2.6
7	<input type="checkbox"/>	1.000					

$y = 0.0013 * x + 8.1548E-004$

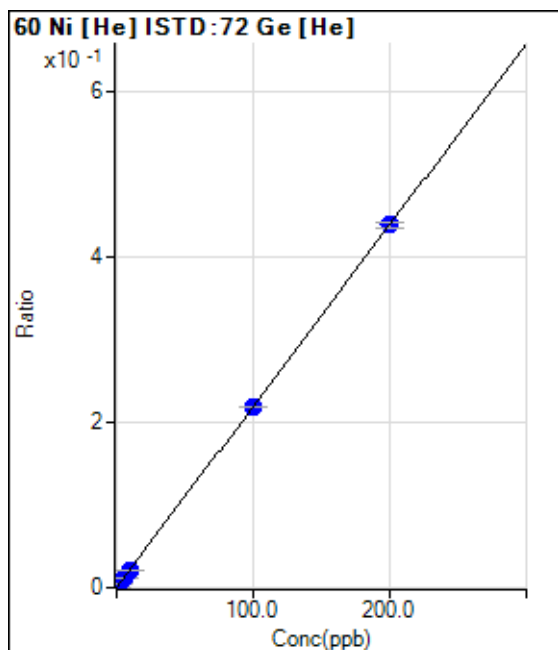
R = 0.9997

DL = 0.0372

BEC = 0.614

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.026	130.00	0.0002	P	27.0
2	<input type="checkbox"/>	2.000	2.145	3026.97	0.0049	P	5.4
3	<input type="checkbox"/>	5.000	5.179	7244.84	0.0115	P	6.2
4	<input type="checkbox"/>	10.000	9.781	13585.16	0.0216	P	2.7
5	<input type="checkbox"/>	100.000	99.727	136823.79	0.2191	P	0.9
6	<input type="checkbox"/>	200.000	200.142	268786.77	0.4395	P	1.6
7	<input type="checkbox"/>	1.000					

$y = 0.0022 * x + 1.5228E-004$

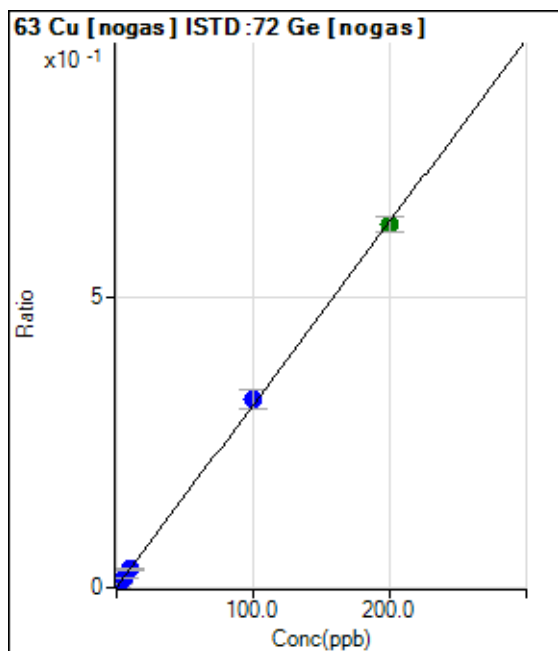
R = 1.0000

DL = 0.07769

BEC = 0.06937

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	<input type="checkbox"/>	0.000	0.000	963.37	0.0004	P	4.6
2	<input type="checkbox"/>	2.000	1.994	15877.04	0.0067	P	6.3
3	<input type="checkbox"/>	5.000	4.997	38787.84	0.0161	P	1.4
4	<input type="checkbox"/>	10.000	9.969	77034.16	0.0317	P	3.0
5	<input type="checkbox"/>	100.000	103.140	735086.03	0.3241	P	10.3
6	<input type="checkbox"/>	200.000	198.432	1454920.24	0.6232	A	4.1
7	<input type="checkbox"/>	1.000					

$y = 0.0031 * x + 4.0637E-004$

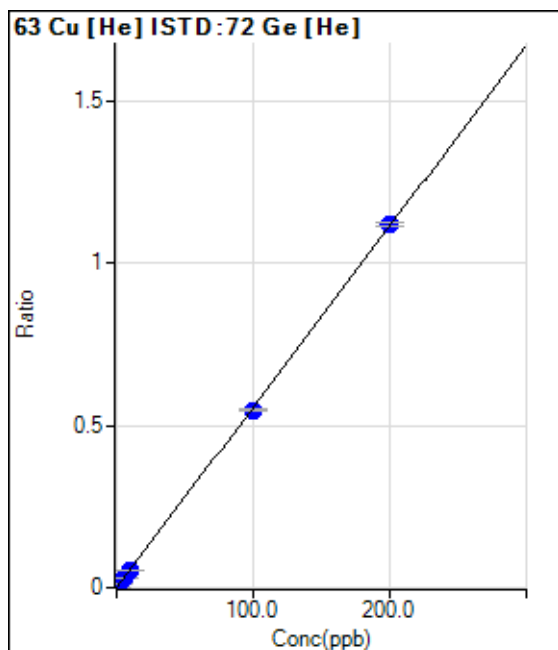
R = 0.9998

DL = 0.0179

BEC = 0.1295

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	<input type="checkbox"/>	0.000	0.181	350.01	0.0006	P	17.1
2	<input type="checkbox"/>	2.000	2.232	7461.60	0.0120	P	2.3
3	<input type="checkbox"/>	5.000	5.290	18245.89	0.0290	P	4.8
4	<input type="checkbox"/>	10.000	10.079	34986.77	0.0557	P	1.4
5	<input type="checkbox"/>	100.000	98.463	342141.85	0.5478	P	1.4
6	<input type="checkbox"/>	200.000	200.755	683421.14	1.1174	P	1.2
7	<input type="checkbox"/>	1.000					

$y = 0.0056 * x - 4.3916E-004$

R = 1.0000

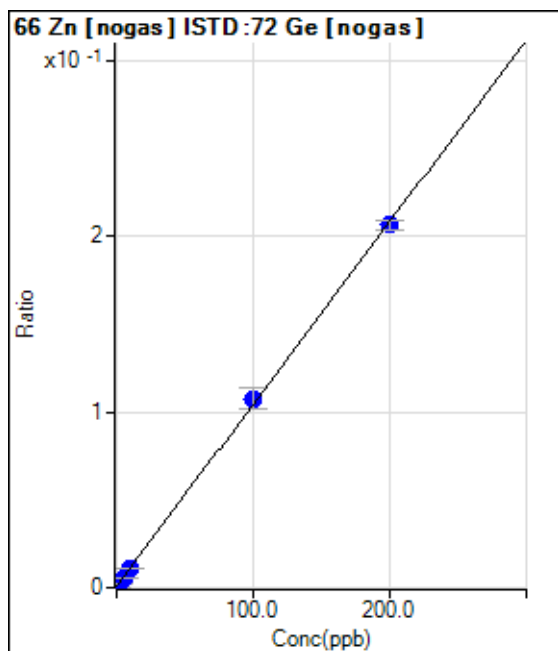
DL = 0.05215

BEC = -0.07887

Weight: <None>

Min Conc: <None>

Calibration for 225_ICV.d



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	-0.532	550.02	0.0002	P	1.4
2	<input type="checkbox"/>	2.000	1.521	5617.61	0.0024	P	7.7
3	<input type="checkbox"/>	5.000	4.762	13782.03	0.0057	P	2.8
4	<input type="checkbox"/>	10.000	9.685	26272.29	0.0108	P	3.3
5	<input type="checkbox"/>	100.000	103.074	243773.11	0.1075	P	11.0
6	<input type="checkbox"/>	200.000	198.490	481725.83	0.2063	P	2.6
7	<input type="checkbox"/>	1.000					

$y = 0.0010 * x + 7.8300E-004$

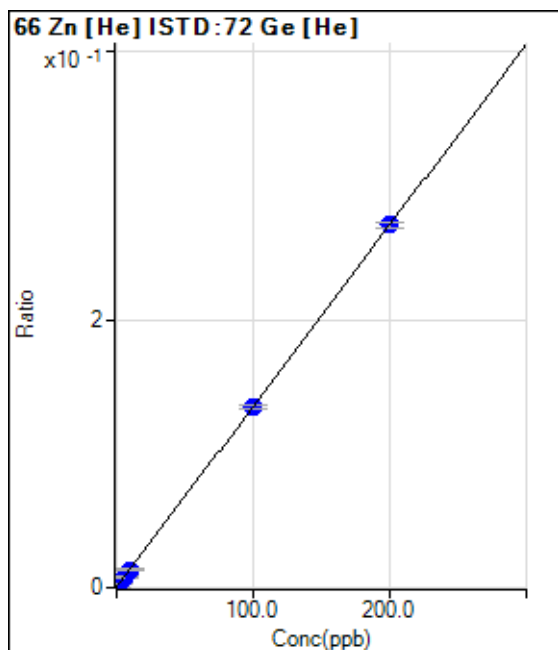
R = 0.9998

DL = 0.009629

BEC = 0.7563

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	-0.003	163.34	0.0003	P	36.6
2	<input type="checkbox"/>	2.000	1.984	1833.45	0.0029	P	6.0
3	<input type="checkbox"/>	5.000	5.542	4874.05	0.0078	P	3.8
4	<input type="checkbox"/>	10.000	9.729	8422.05	0.0134	P	4.7
5	<input type="checkbox"/>	100.000	99.499	84065.34	0.1346	P	1.4
6	<input type="checkbox"/>	200.000	200.251	165535.98	0.2706	P	1.8
7	<input type="checkbox"/>	1.000					

$y = 0.0014 * x + 2.6951E-004$

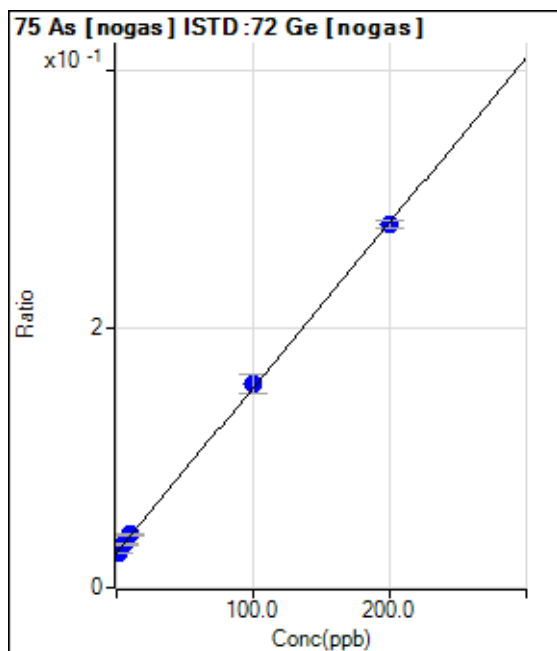
R = 1.0000

DL = 0.2151

BEC = 0.1996

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	-0.263	63337.22	0.0267	P	5.0
2	<input type="checkbox"/>	2.000	-0.108	64173.11	0.0269	P	0.5
3	<input type="checkbox"/>	5.000	5.141	81026.50	0.0336	P	2.5
4	<input type="checkbox"/>	10.000	10.903	99553.92	0.0410	P	1.8
5	<input type="checkbox"/>	100.000	102.710	358758.52	0.1581	P	9.3
6	<input type="checkbox"/>	200.000	198.618	654952.18	0.2805	P	2.3
7	<input type="checkbox"/>	1.000					

$y = 0.0013 * x + 0.0270$

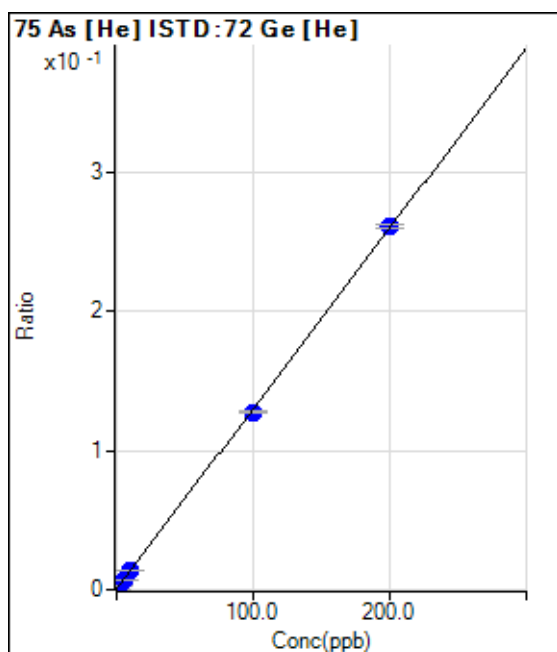
R = 0.9998

DL = 3.146

BEC = 21.19

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	203.34	0.0003	P	13.8
2	<input type="checkbox"/>	2.000	2.019	1831.21	0.0029	P	8.6
3	<input type="checkbox"/>	5.000	4.882	4180.49	0.0066	P	3.3
4	<input type="checkbox"/>	10.000	9.936	8286.35	0.0132	P	1.1
5	<input type="checkbox"/>	100.000	98.073	79480.42	0.1273	P	0.9
6	<input type="checkbox"/>	200.000	200.969	159273.44	0.2604	P	1.1
7	<input type="checkbox"/>	1.000					

$y = 0.0013 * x + 3.2909E-004$

R = 0.9999

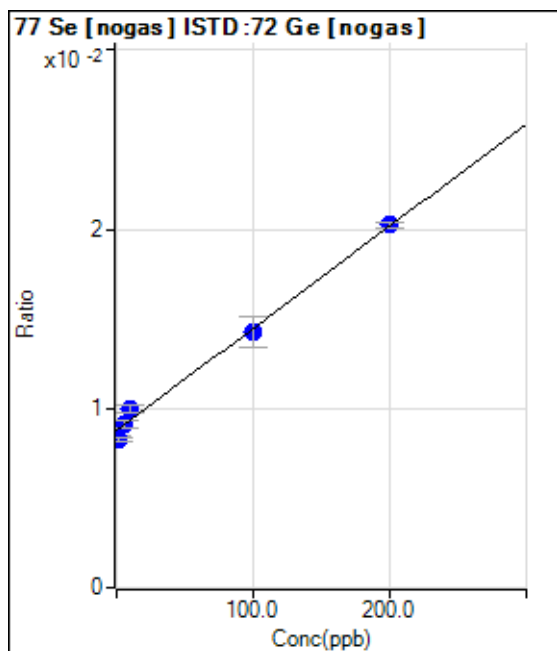
DL = 0.1051

BEC = 0.2543

Weight: <None>

Min Conc: <None>

Calibration for 225_ICV.d



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	20848.96	0.0088	P	8.0
2	<input type="checkbox"/>	2.000	-9.073	19724.29	0.0083	P	2.6
3	<input type="checkbox"/>	5.000	6.641	22093.70	0.0092	P	4.8
4	<input type="checkbox"/>	10.000	20.908	24256.57	0.0100	P	3.5
5	<input type="checkbox"/>	100.000	96.930	32439.16	0.0143	P	12.1
6	<input type="checkbox"/>	200.000	201.059	47301.47	0.0202	P	1.7
7	<input type="checkbox"/>	1.000					

$y = 5.7013E-005 * x + 0.0088$

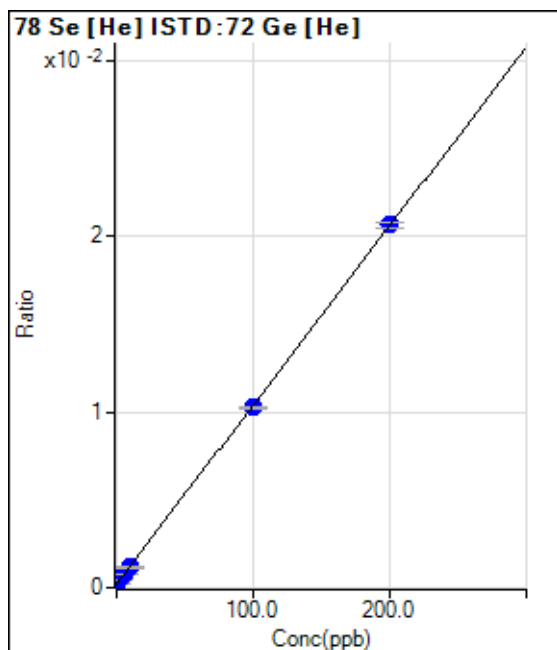
R = 0.9962

DL = 36.91

BEC = 154

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.135	135.33	0.0002	P	13.8
2	<input type="checkbox"/>	2.000	2.465	284.00	0.0005	P	4.3
3	<input type="checkbox"/>	5.000	5.665	492.01	0.0008	P	1.3
4	<input type="checkbox"/>	10.000	9.392	730.02	0.0012	P	5.4
5	<input type="checkbox"/>	100.000	98.666	6405.14	0.0103	P	1.2
6	<input type="checkbox"/>	200.000	200.676	12625.71	0.0206	P	1.3
7	<input type="checkbox"/>	1.000					

$y = 1.0185E-004 * x + 2.0536E-004$

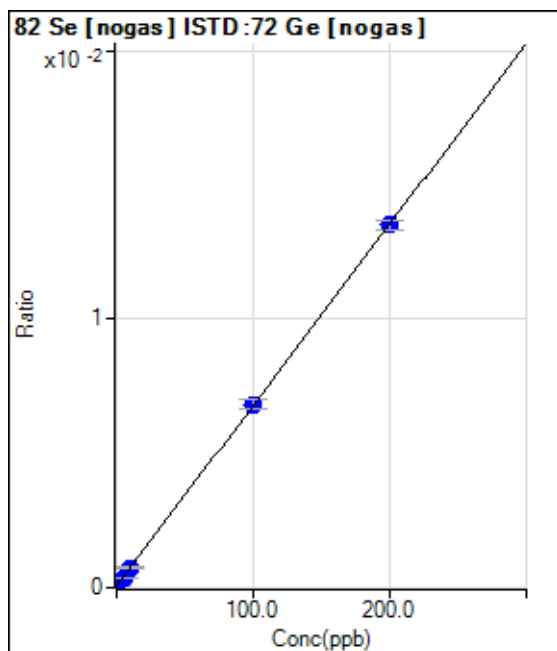
R = 1.0000

DL = 0.8877

BEC = 2.016

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	156.67	0.0001	P	24.2
2	<input type="checkbox"/>	2.000	1.990	476.68	0.0002	P	5.1
3	<input type="checkbox"/>	5.000	4.692	920.04	0.0004	P	6.0
4	<input type="checkbox"/>	10.000	10.027	1803.45	0.0007	P	10.5
5	<input type="checkbox"/>	100.000	100.507	15520.14	0.0068	P	5.1
6	<input type="checkbox"/>	200.000	199.753	31534.34	0.0135	P	2.4
7	<input type="checkbox"/>	1.000					

$y = 6.7275E-005 * x + 6.5884E-005$

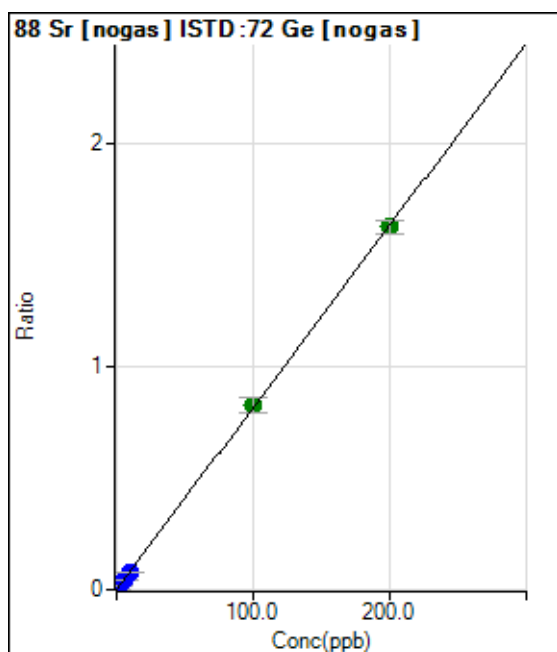
R = 1.0000

DL = 0.7103

BEC = 0.9793

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	723.36	0.0003	P	9.6
2	<input type="checkbox"/>	2.000	1.990	39393.45	0.0165	P	0.5
3	<input type="checkbox"/>	5.000	4.984	98602.59	0.0409	P	3.4
4	<input type="checkbox"/>	10.000	9.676	192259.85	0.0791	P	4.0
5	<input type="checkbox"/>	100.000	101.430	1876905.80	0.8266	A	9.0
6	<input type="checkbox"/>	200.000	199.302	3791538.38	1.6238	A	3.7
7	<input type="checkbox"/>	1.000					

$y = 0.0081 * x + 3.0545E-004$

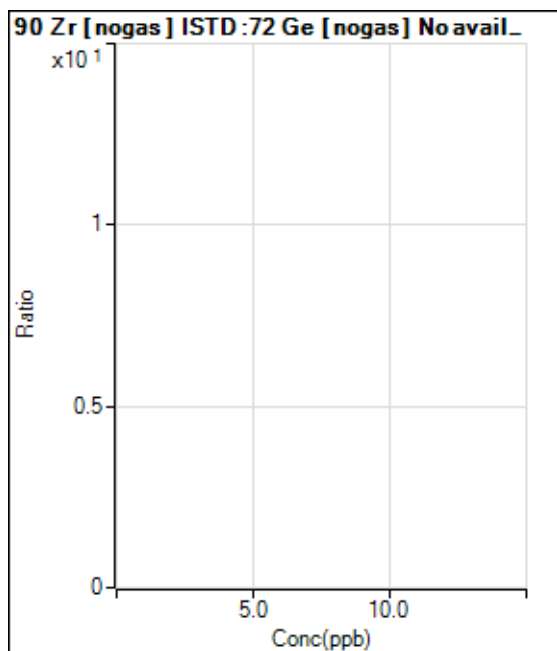
R = 1.0000

DL = 0.01084

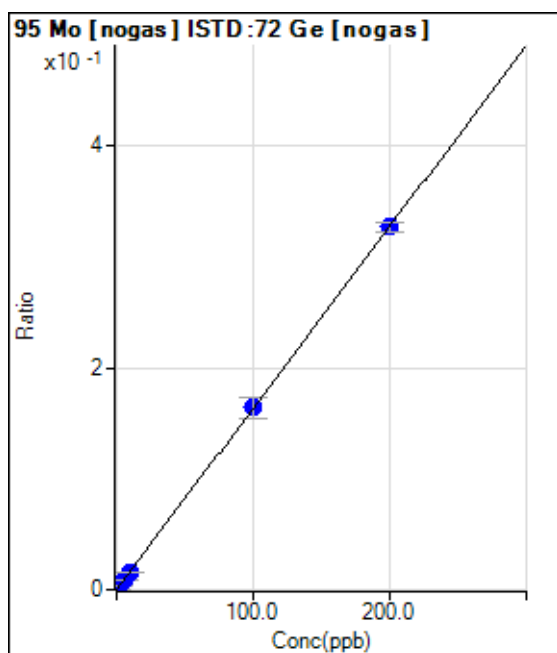
BEC = 0.0375

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000					
2	<input type="checkbox"/>	2.000					
3	<input type="checkbox"/>	5.000					
4	<input type="checkbox"/>	10.000					
5	<input type="checkbox"/>	100.000					
6	<input type="checkbox"/>	200.000					
7	<input type="checkbox"/>	1.000					



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	123.34	0.0001	P	46.5
2	<input type="checkbox"/>	2.000	1.850	7344.94	0.0031	P	7.5
3	<input type="checkbox"/>	5.000	4.878	19370.74	0.0080	P	2.6
4	<input type="checkbox"/>	10.000	9.607	38338.12	0.0158	P	4.4
5	<input type="checkbox"/>	100.000	100.184	372040.61	0.1640	P	11.2
6	<input type="checkbox"/>	200.000	199.932	764434.16	0.3273	P	2.9
7	<input type="checkbox"/>	1.000					

$y = 0.0016 * x + 5.1825E-005$

R = 1.0000

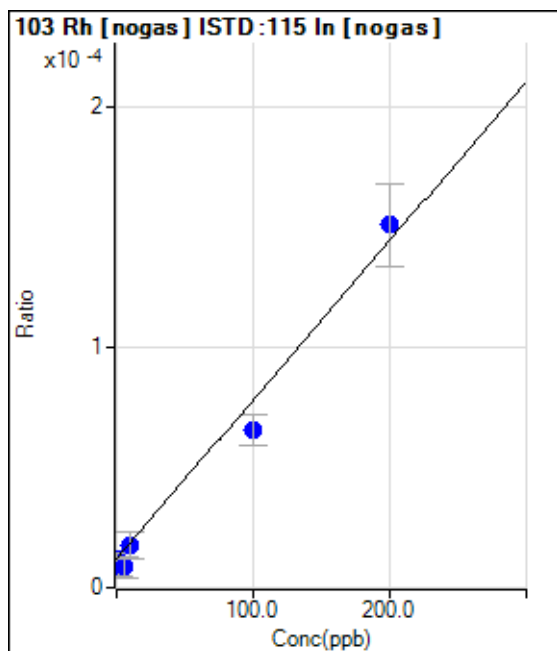
DL = 0.04417

BEC = 0.03166

Weight: <None>

Min Conc: <None>





	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	26.67	0.0000	P	41.7
2	<input type="checkbox"/>	2.000	-6.919	16.67	0.0000	P	74.6
3	<input type="checkbox"/>	5.000	-5.160	20.00	0.0000	P	100.
4	<input type="checkbox"/>	10.000	8.362	40.00	0.0000	P	65.5
5	<input type="checkbox"/>	100.000	80.897	136.67	0.0001	P	20.4
6	<input type="checkbox"/>	200.000	209.976	323.34	0.0002	P	22.5
7	<input type="checkbox"/>	1.000					

$y = 6.6065E-007 * x + 1.2009E-005$

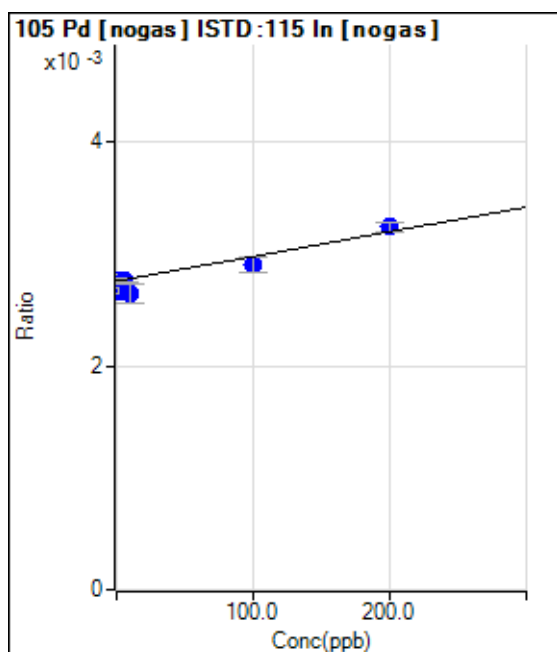
R = 0.9942

DL = 22.74

BEC = 18.18

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	6121.16	0.0028	P	4.9
2	<input type="checkbox"/>	2.000	-39.570	6134.47	0.0027	P	1.6
3	<input type="checkbox"/>	5.000	2.219	6271.20	0.0028	P	1.6
4	<input type="checkbox"/>	10.000	-50.436	5954.42	0.0026	P	6.6
5	<input type="checkbox"/>	100.000	68.266	6121.21	0.0029	P	4.7
6	<input type="checkbox"/>	200.000	219.374	6984.81	0.0032	P	2.7
7	<input type="checkbox"/>	1.000					

$y = 2.2045E-006 * x + 0.0028$

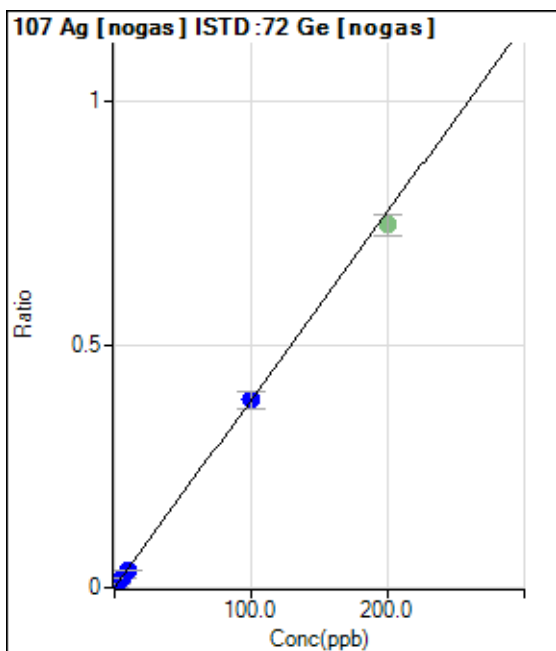
R = 0.9662

DL = 183.3

BEC = 1251

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	56.67	0.0000	P	58.8
2	<input type="checkbox"/>	2.000	1.938	17932.66	0.0075	P	3.8
3	<input type="checkbox"/>	5.000	4.954	46270.75	0.0192	P	2.5
4	<input type="checkbox"/>	10.000	9.460	89026.39	0.0366	P	1.9
5	<input type="checkbox"/>	100.000	100.058	878296.52	0.3871	P	9.3
6	<input checked="" type="checkbox"/>	200.000		1743115.60	0.7470	A	6.1
7	<input type="checkbox"/>	1.000					

$y = 0.0039 * x + 2.4228E-005$

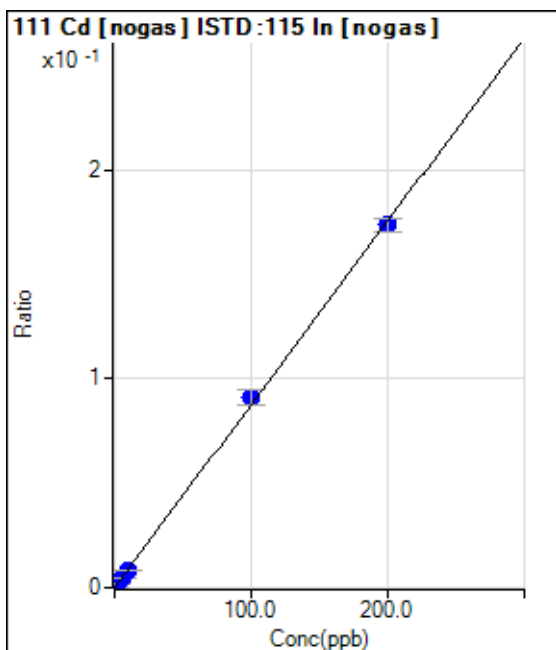
R = 1.0000

DL = 0.01104

BEC = 0.006263

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	6.67	0.0000	P	86.8
2	<input type="checkbox"/>	2.000	1.941	3910.48	0.0017	P	6.5
3	<input type="checkbox"/>	5.000	5.053	10063.04	0.0044	P	0.8
4	<input type="checkbox"/>	10.000	9.471	18713.43	0.0083	P	2.6
5	<input type="checkbox"/>	100.000	103.967	191187.62	0.0912	P	8.0
6	<input type="checkbox"/>	200.000	198.042	374218.08	0.1737	P	3.7
7	<input type="checkbox"/>	1.000					

$y = 8.7715E-004 * x + 3.0937E-006$

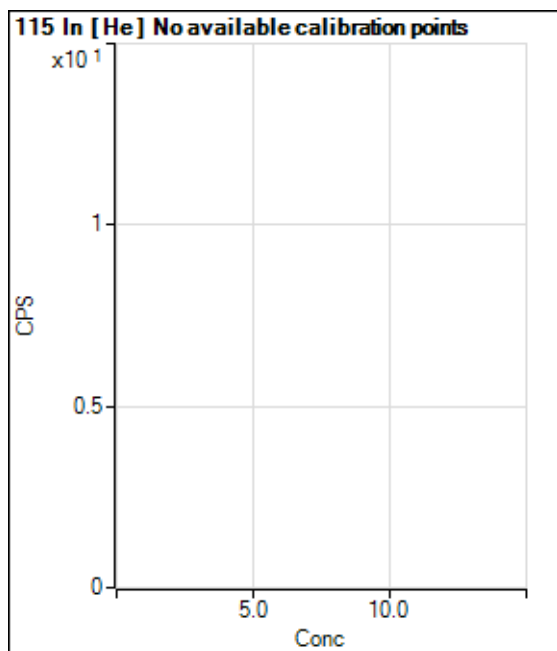
R = 0.9997

DL = 0.009189

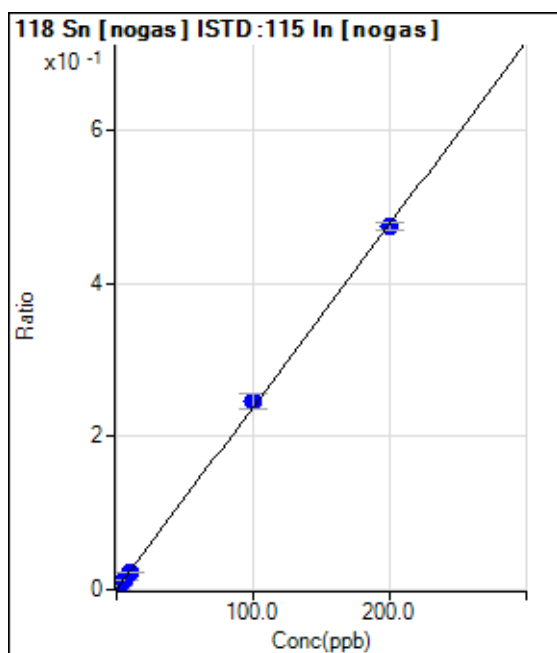
BEC = 0.003527

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>			855781.23		P	1.2
2	<input type="checkbox"/>			868855.16		P	0.9
3	<input type="checkbox"/>			868948.85		P	1.1
4	<input type="checkbox"/>			864503.20		P	0.7
5	<input type="checkbox"/>			837572.60		P	0.9
6	<input type="checkbox"/>			825670.09		P	1.3
7	<input type="checkbox"/>						



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	686.69	0.0003	P	6.6
2	<input type="checkbox"/>	2.000	1.904	11096.99	0.0048	P	9.3
3	<input type="checkbox"/>	5.000	4.877	27057.90	0.0119	P	1.4
4	<input type="checkbox"/>	10.000	9.582	52020.85	0.0231	P	5.4
5	<input type="checkbox"/>	100.000	102.812	514197.66	0.2452	P	8.4
6	<input type="checkbox"/>	200.000	198.619	1020333.58	0.4735	P	2.0
7	<input type="checkbox"/>	1.000					

$y = 0.0024 * x + 3.1073E-004$

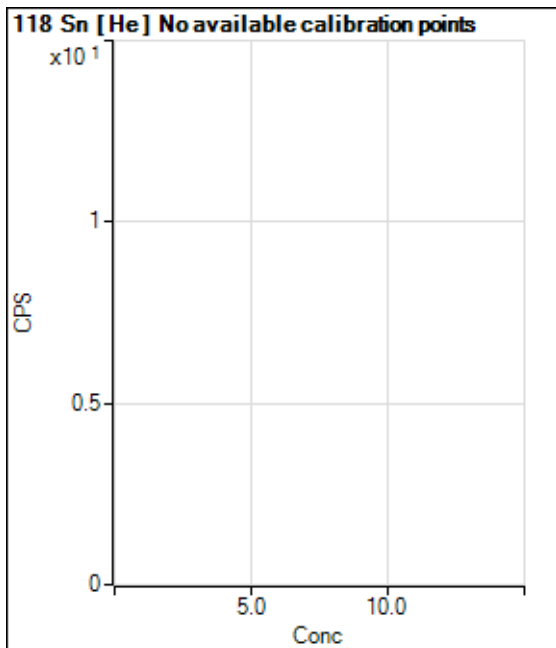
R = 0.9999

DL = 0.02572

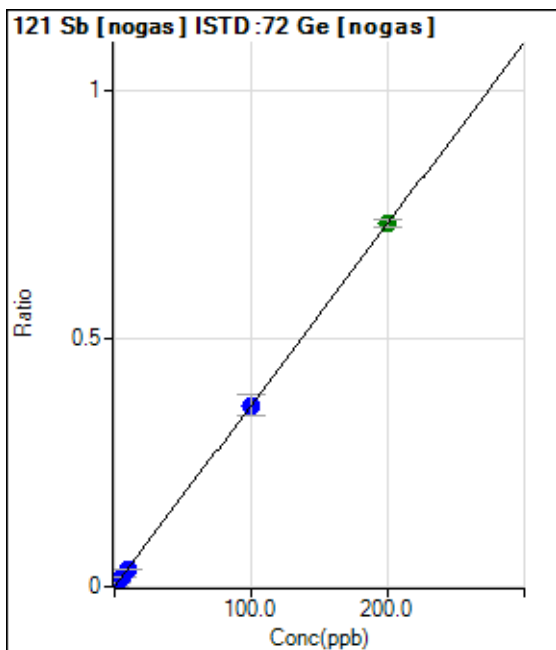
BEC = 0.1304

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>			316.68		P	10.2
2	<input type="checkbox"/>			4617.34		P	4.4
3	<input type="checkbox"/>			11437.23		P	3.2
4	<input type="checkbox"/>			21720.29		P	1.6
5	<input type="checkbox"/>			218128.10		P	1.4
6	<input type="checkbox"/>			439019.56		P	1.6
7	<input type="checkbox"/>						



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	570.02	0.0002	P	13.8
2	<input type="checkbox"/>	2.000	1.921	17318.83	0.0073	P	2.1
3	<input type="checkbox"/>	5.000	4.851	43330.47	0.0180	P	3.5
4	<input type="checkbox"/>	10.000	9.559	85511.21	0.0352	P	3.6
5	<input type="checkbox"/>	100.000	100.039	830221.52	0.3660	P	11.1
6	<input type="checkbox"/>	200.000	200.007	1709277.32	0.7316	A	2.2
7	<input type="checkbox"/>	1.000					

$y = 0.0037 * x + 2.3951E-004$

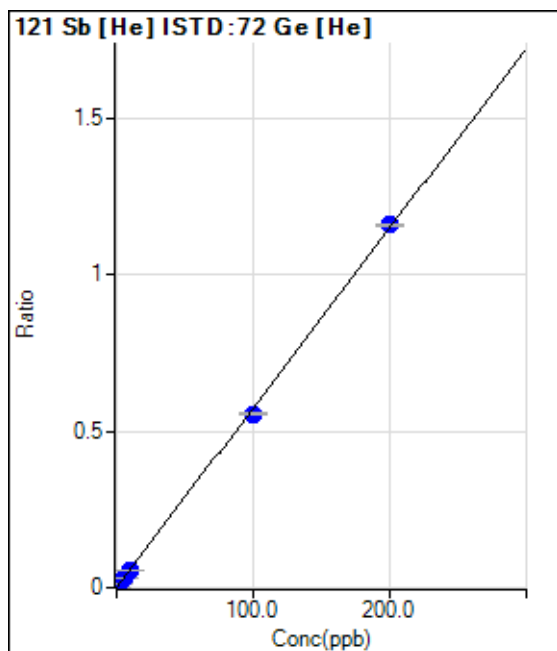
R = 1.0000

DL = 0.02703

BEC = 0.0655

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	333.34	0.0005	P	1.0
2	<input type="checkbox"/>	2.000	1.871	7021.50	0.0113	P	5.7
3	<input type="checkbox"/>	5.000	4.868	17922.82	0.0285	P	1.3
4	<input type="checkbox"/>	10.000	9.448	34434.01	0.0548	P	1.9
5	<input type="checkbox"/>	100.000	96.361	345994.12	0.5540	P	0.9
6	<input type="checkbox"/>	200.000	201.852	709375.51	1.1599	P	0.7
7	<input type="checkbox"/>	1.000					

$y = 0.0057 * x + 5.3975E-004$

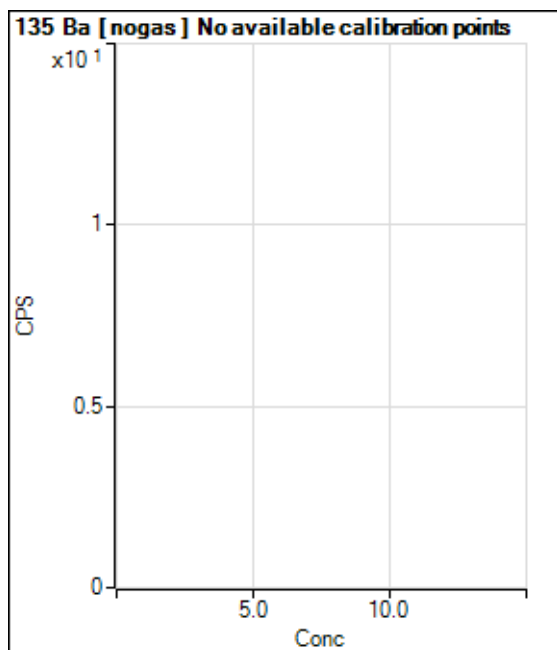
R = 0.9998

DL = 0.002793

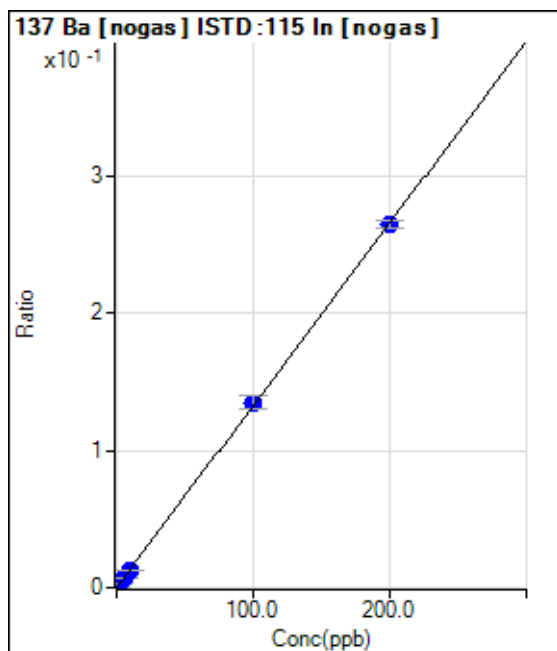
BEC = 0.09398

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>			60.00		P	28.9
2	<input type="checkbox"/>			3200.35		P	8.5
3	<input type="checkbox"/>			8685.61		P	4.6
4	<input type="checkbox"/>			17195.44		P	4.3
5	<input type="checkbox"/>			164140.95		P	5.3
6	<input type="checkbox"/>			333627.11		P	1.1
7	<input type="checkbox"/>						



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	133.33	0.0001	P	13.7
2	<input type="checkbox"/>	2.000	1.911	5957.78	0.0026	P	4.4
3	<input type="checkbox"/>	5.000	4.779	14526.32	0.0064	P	1.8
4	<input type="checkbox"/>	10.000	9.525	28573.76	0.0127	P	4.7
5	<input type="checkbox"/>	100.000	101.638	283064.58	0.1350	P	7.7
6	<input type="checkbox"/>	200.000	199.211	570045.28	0.2645	P	2.2
7	<input type="checkbox"/>	1.000					

$y = 0.0013 * x + 6.0483E-005$

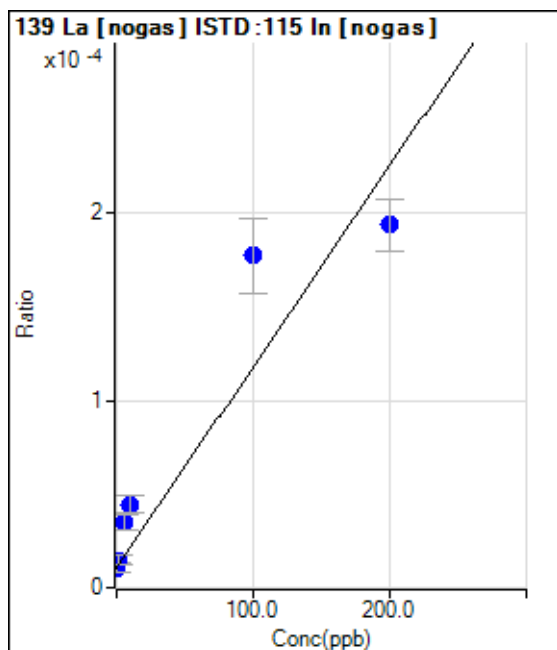
R = 0.9999

DL = 0.01867

BEC = 0.04556

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	23.33	0.0000	P	51.0
2	<input type="checkbox"/>	2.000	3.777	33.33	0.0000	P	37.7
3	<input type="checkbox"/>	5.000	22.793	80.00	0.0000	P	21.5
4	<input type="checkbox"/>	10.000	31.713	100.00	0.0000	P	21.3
5	<input type="checkbox"/>	100.000	155.459	370.01	0.0002	P	22.5
6	<input type="checkbox"/>	200.000	170.722	416.68	0.0002	P	14.0
7	<input type="checkbox"/>	1.000					

$y = 1.0732E-006 * x + 1.0614E-005$

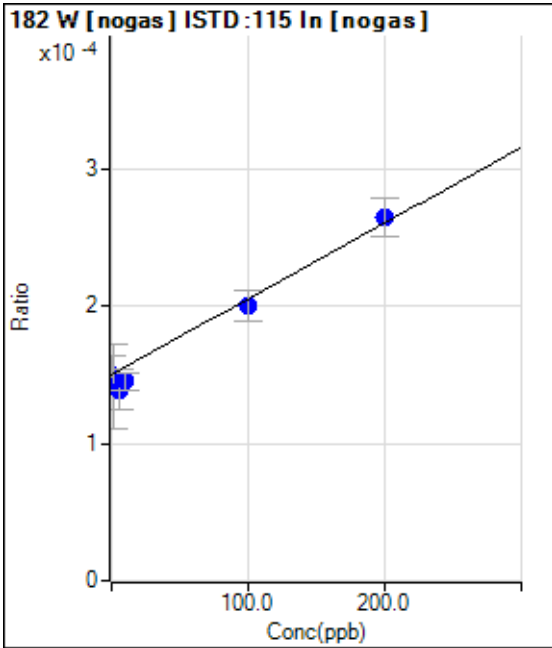
R = 0.9388

DL = 15.13

BEC = 9.891

Weight: <None>

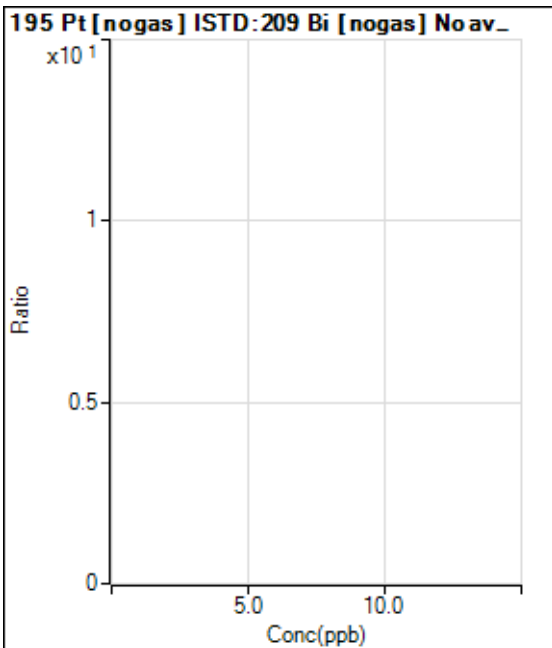
Min Conc: <None>



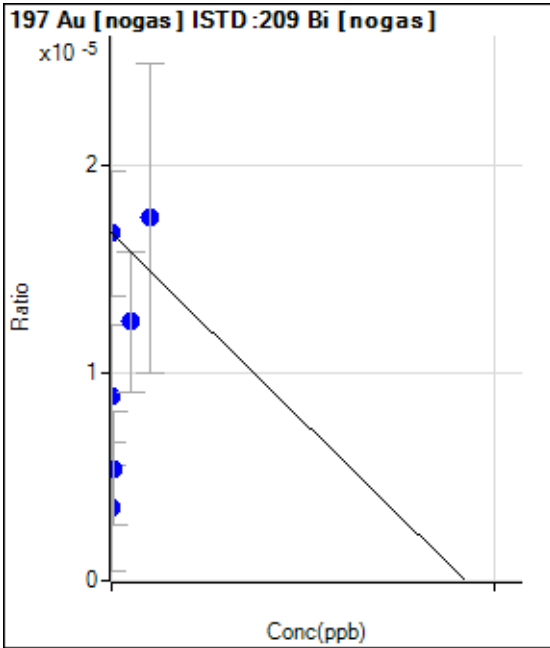
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	333.34	0.0002	P	18.6
2	<input type="checkbox"/>	2.000	-15.792	320.01	0.0001	P	43.5
3	<input type="checkbox"/>	5.000	-20.465	316.68	0.0001	P	20.8
4	<input type="checkbox"/>	10.000	-9.456	326.68	0.0001	P	7.9
5	<input type="checkbox"/>	100.000	90.332	420.01	0.0002	P	11.4
6	<input type="checkbox"/>	200.000	206.621	570.02	0.0003	P	10.7
7	<input type="checkbox"/>	1.000					

$y = 5.5127E-007 * x + 1.5004E-004$
 R = 0.9951
 DL = 151.8
 BEC = 272.2

Weight: <None>
Min Conc: <None>



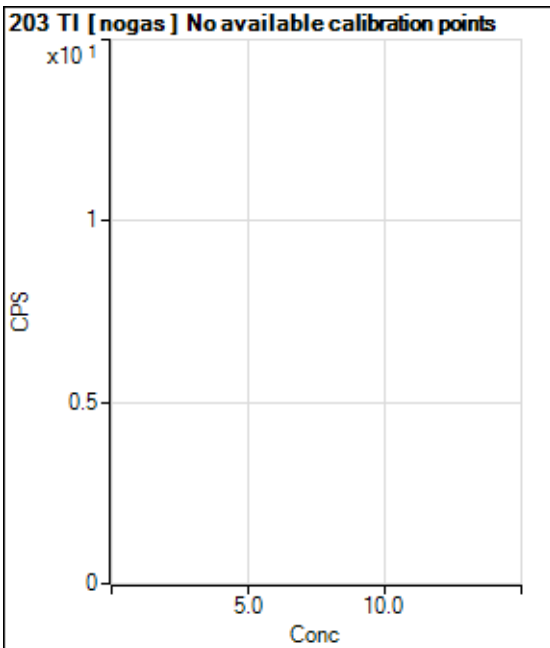
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000					
2	<input type="checkbox"/>	2.000					
3	<input type="checkbox"/>	5.000					
4	<input type="checkbox"/>	10.000					
5	<input type="checkbox"/>	100.000					
6	<input type="checkbox"/>	200.000					
7	<input type="checkbox"/>	1.000					



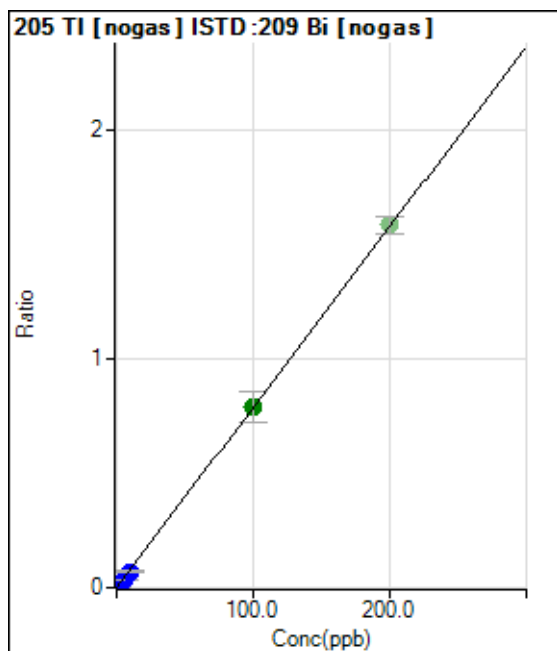
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	30.00	0.0000	P	35.7
2	<input type="checkbox"/>	2.000	1452.690	6.67	0.0000	P	173.
3	<input type="checkbox"/>	5.000	862.594	16.67	0.0000	P	75.8
4	<input type="checkbox"/>	10.000	1249.613	10.00	0.0000	P	101.
5	<input type="checkbox"/>	100.000	469.181	20.00	0.0000	P	53.7
6	<input type="checkbox"/>	200.000	-82.518	30.00	0.0000	P	85.0
7	<input type="checkbox"/>	1.000					

$y = -9.0772E-009 * x + 1.6739E-005$
 R = 0.6079
 DL = -1974
 BEC = -1844

Weight: <None>
 Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>			136.67		P	33.0
2	<input type="checkbox"/>			11384.10		P	2.8
3	<input type="checkbox"/>			27636.94		P	4.7
4	<input type="checkbox"/>			54306.79		P	4.1
5	<input type="checkbox"/>			564095.61		P	3.9
6	<input type="checkbox"/>			1104627.59		A	3.0
7	<input type="checkbox"/>						



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	256.67	0.0001	P	13.9
2	<input type="checkbox"/>	2.000	1.815	26197.79	0.0145	P	6.2
3	<input type="checkbox"/>	5.000	4.337	65942.95	0.0343	P	13.4
4	<input type="checkbox"/>	10.000	8.977	130602.61	0.0709	P	4.4
5	<input type="checkbox"/>	100.000	100.139	1292535.06	0.7898	A	17.3
6	<input checked="" type="checkbox"/>	200.000		2674486.00	1.5861	A	5.0
7	<input type="checkbox"/>	1.000					

$y = 0.0079 * x + 1.4224E-004$

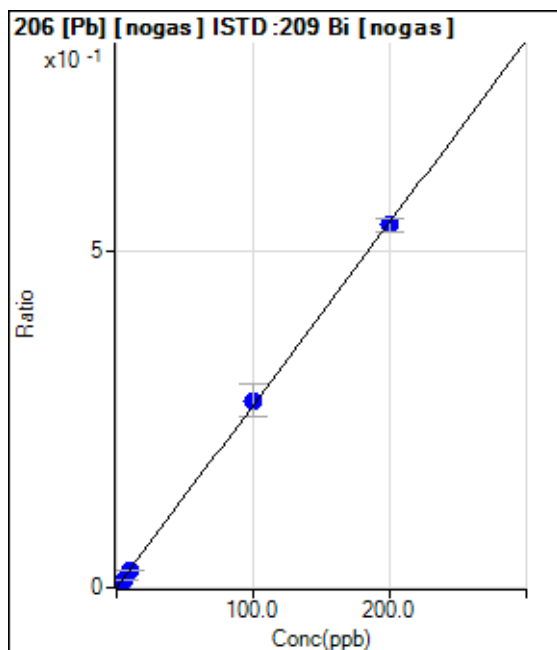
R = 1.0000

DL = 0.007527

BEC = 0.01804

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	73.33	0.0000	P	24.7
2	<input type="checkbox"/>	2.000	1.913	9439.58	0.0052	P	10.6
3	<input type="checkbox"/>	5.000	4.400	22923.03	0.0119	P	13.6
4	<input type="checkbox"/>	10.000	9.210	45951.55	0.0249	P	2.9
5	<input type="checkbox"/>	100.000	102.597	454290.38	0.2775	P	16.9
6	<input type="checkbox"/>	200.000	198.757	906715.90	0.5376	P	3.9
7	<input type="checkbox"/>	1.000					

$y = 0.0027 * x + 4.0489E-005$

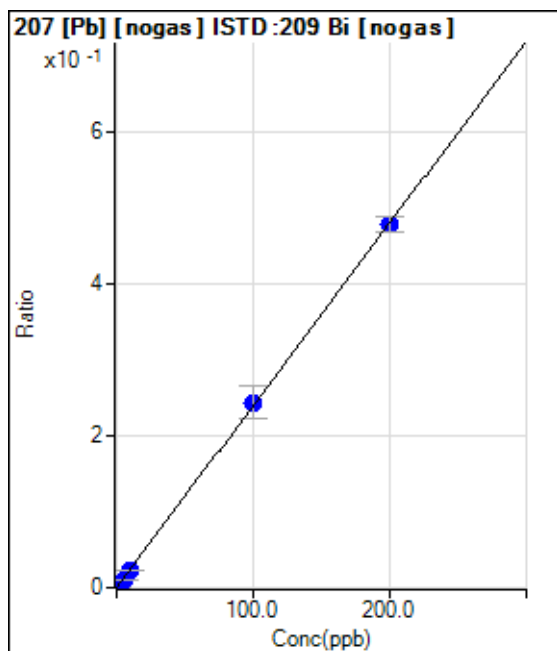
R = 0.9999

DL = 0.01108

BEC = 0.01497

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	56.67	0.0000	P	8.3
2	<input type="checkbox"/>	2.000	1.832	8022.08	0.0044	P	7.3
3	<input type="checkbox"/>	5.000	4.358	20132.78	0.0105	P	12.8
4	<input type="checkbox"/>	10.000	9.185	40637.44	0.0221	P	0.4
5	<input type="checkbox"/>	100.000	101.765	399411.22	0.2440	P	17.1
6	<input type="checkbox"/>	200.000	199.176	805468.53	0.4776	P	4.2
7	<input type="checkbox"/>	1.000					

$y = 0.0024 * x + 3.1479E-005$

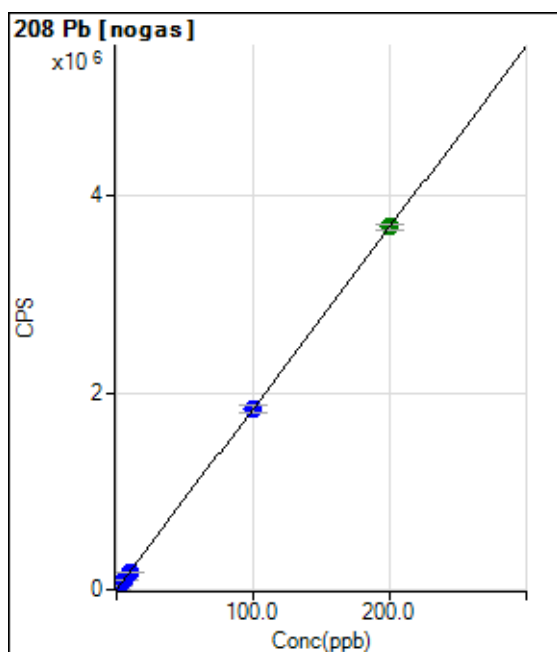
R = 0.9999

DL = 0.00326

BEC = 0.01313

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	230.00		P	11.5
2	<input type="checkbox"/>	2.000	2.011	37197.12		P	1.8
3	<input type="checkbox"/>	5.000	5.042	92912.10		P	1.1
4	<input type="checkbox"/>	10.000	9.977	183613.22		P	0.3
5	<input type="checkbox"/>	100.000	99.454	1828327.97		P	4.4
6	<input type="checkbox"/>	200.000	200.273	3681516.74		A	1.8
7	<input type="checkbox"/>	1.000					

$y = 18381.3426 * x + 230.0000$

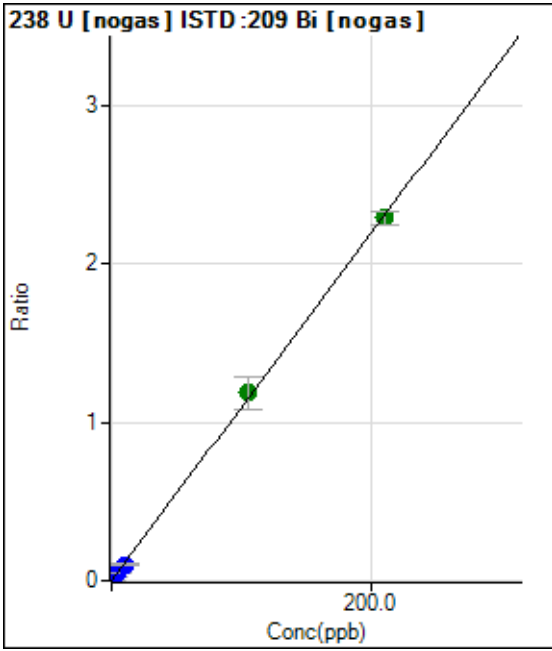
R = 1.0000

DL = 0.004318

BEC = 0.01251

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	73.33	0.0000	P	25.8
2	<input type="checkbox"/>	2.000	1.858	37033.29	0.0204	P	4.2
3	<input type="checkbox"/>	5.000	4.479	94362.42	0.0492	P	13.8
4	<input type="checkbox"/>	10.000	9.182	185427.80	0.1007	P	5.5
5	<input type="checkbox"/>	105.000	107.859	1936906.43	1.1829	A	16.7
6	<input type="checkbox"/>	210.000	208.623	3859870.25	2.2880	A	4.0
7	<input type="checkbox"/>	1.000					

$y = 0.0110 * x + 4.0589E-005$

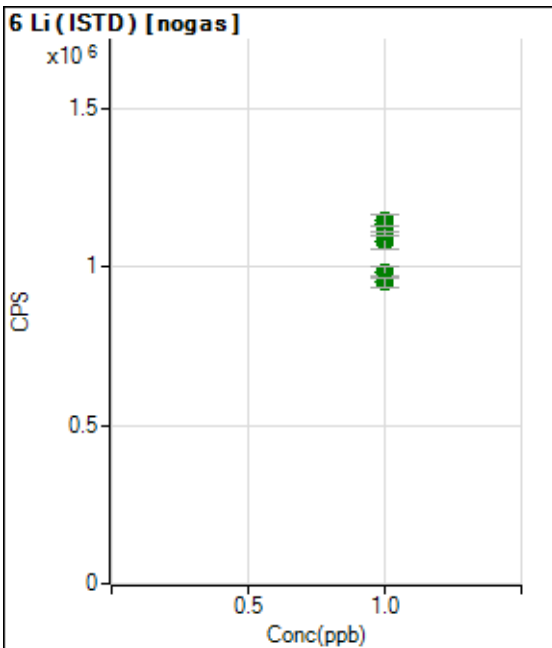
R = 0.9999

DL = 0.002869

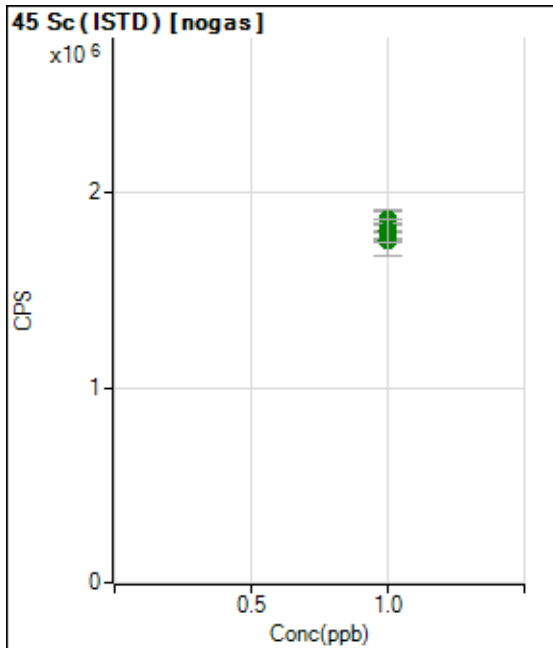
BEC = 0.003701

Weight: <None>

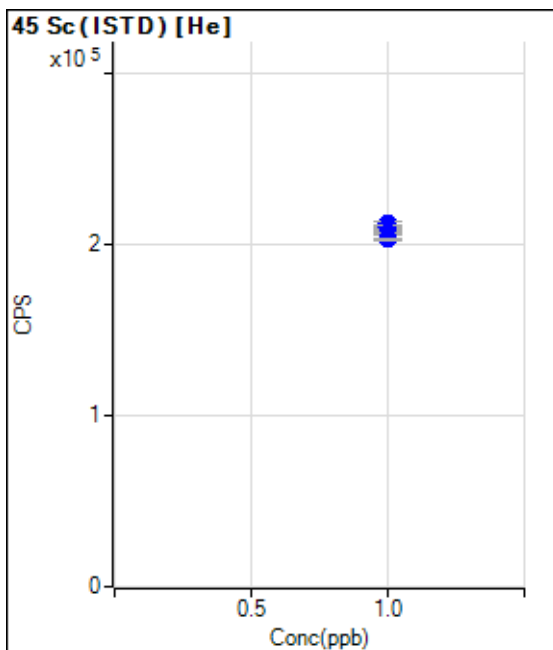
Min Conc: <None>



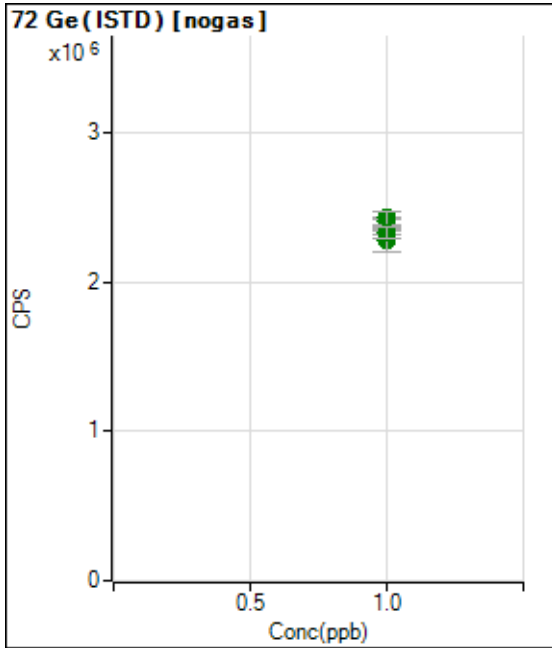
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	1.000		1076308.82		A	4.2
2	<input type="checkbox"/>	1.000		1111485.37		A	2.8
3	<input type="checkbox"/>	1.000		1135377.52		A	4.6
4	<input type="checkbox"/>	1.000		1143719.04		A	3.1
5	<input type="checkbox"/>	1.000		983805.30		A	2.7
6	<input type="checkbox"/>	1.000		949657.04		A	3.1
7	<input type="checkbox"/>	1.000					



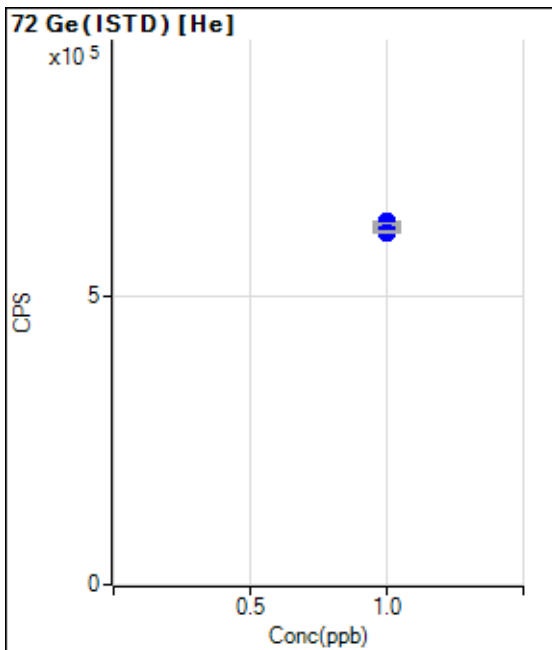
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	1.000		1793297.58		A	4.4
2	<input type="checkbox"/>	1.000		1803375.13		A	3.9
3	<input type="checkbox"/>	1.000		1848263.20		A	5.8
4	<input type="checkbox"/>	1.000		1862938.82		A	6.1
5	<input type="checkbox"/>	1.000		1761878.05		A	9.6
6	<input type="checkbox"/>	1.000		1805658.05		A	6.3
7	<input type="checkbox"/>	1.000					



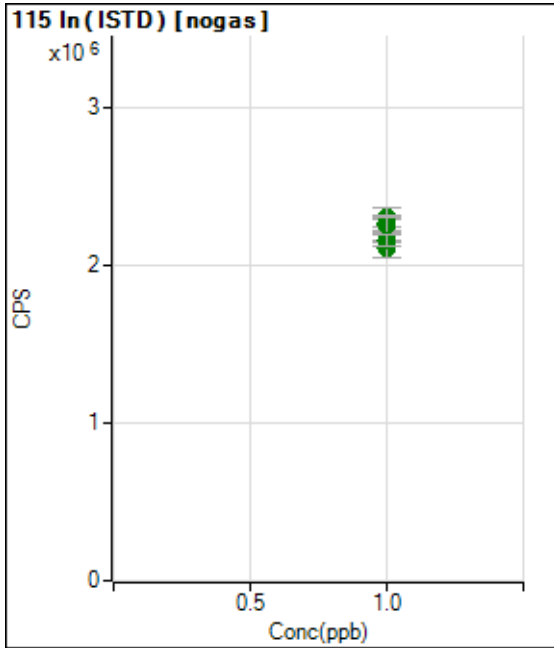
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	1.000		208011.27		P	0.6
2	<input type="checkbox"/>	1.000		211721.30		P	1.1
3	<input type="checkbox"/>	1.000		208849.03		P	0.6
4	<input type="checkbox"/>	1.000		209841.02		P	1.4
5	<input type="checkbox"/>	1.000		206219.73		P	0.4
6	<input type="checkbox"/>	1.000		202692.90		P	0.9
7	<input type="checkbox"/>	1.000					



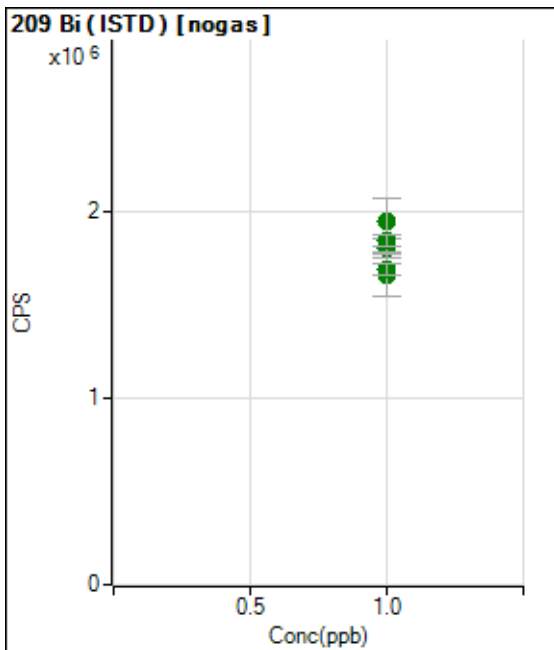
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	1.000		2371436.79		A	4.0
2	<input type="checkbox"/>	1.000		2385497.67		A	2.8
3	<input type="checkbox"/>	1.000		2411200.90		A	2.5
4	<input type="checkbox"/>	1.000		2432240.90		A	3.9
5	<input type="checkbox"/>	1.000		2278187.57		A	6.8
6	<input type="checkbox"/>	1.000		2336391.27		A	3.3
7	<input type="checkbox"/>	1.000					



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	1.000		617556.72		P	0.8
2	<input type="checkbox"/>	1.000		622344.34		P	1.5
3	<input type="checkbox"/>	1.000		628857.79		P	0.3
4	<input type="checkbox"/>	1.000		628310.77		P	0.3
5	<input type="checkbox"/>	1.000		624576.57		P	0.6
6	<input type="checkbox"/>	1.000		611621.78		P	0.9
7	<input type="checkbox"/>	1.000					



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	1.000		2215793.12		A	6.1
2	<input type="checkbox"/>	1.000		2297192.68		A	5.2
3	<input type="checkbox"/>	1.000		2268786.10		A	4.4
4	<input type="checkbox"/>	1.000		2251640.11		A	4.1
5	<input type="checkbox"/>	1.000		2101806.51		A	5.3
6	<input type="checkbox"/>	1.000		2156018.53		A	3.5
7	<input type="checkbox"/>	1.000					



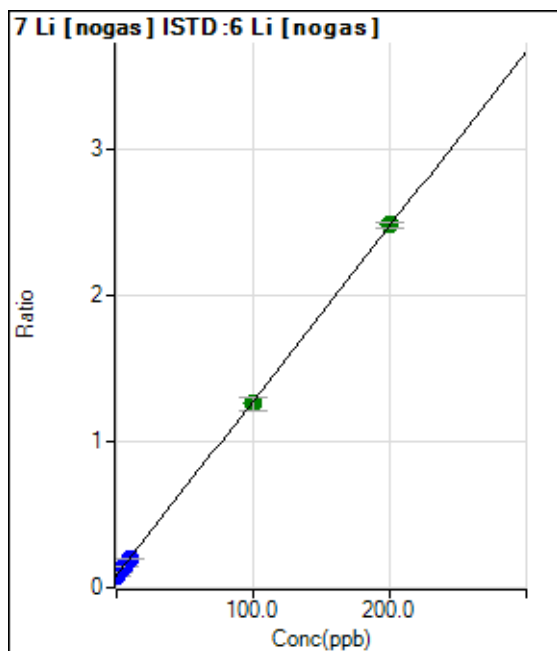
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	1.000		1799697.37		A	5.8
2	<input type="checkbox"/>	1.000		1815254.40		A	3.8
3	<input type="checkbox"/>	1.000		1942653.93		A	13.0
4	<input type="checkbox"/>	1.000		1842923.57		A	3.2
5	<input type="checkbox"/>	1.000		1662519.61		A	13.6
6	<input type="checkbox"/>	1.000		1688240.65		A	3.6
7	<input type="checkbox"/>	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	274CAL.S.d	2/10/200	2019-01-08 21:43:36
3	275CAL.S.d	5/25/500	2019-01-08 21:45:38
4	276CAL.S.d	10/50/1000	2019-01-08 21:47:39
5	277CAL.S.d	100/500/10K	2019-01-08 21:49:40
6	278CAL.S.d	200/1000/20K	2019-01-08 21:51:37
7			





	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	130241.76	0.0835	P	3.4
2	<input type="checkbox"/>	2.000	1.695	164122.42	0.1037	P	2.7
3	<input type="checkbox"/>	5.000	5.163	213328.10	0.1451	P	4.7
4	<input type="checkbox"/>	10.000	9.311	292075.26	0.1945	P	1.4
5	<input type="checkbox"/>	100.000	98.457	1767732.99	1.2573	A	7.0
6	<input type="checkbox"/>	200.000	200.805	3259921.10	2.4775	A	1.8
7	<input type="checkbox"/>	1.000					

$y = 0.0119 * x + 0.0835$

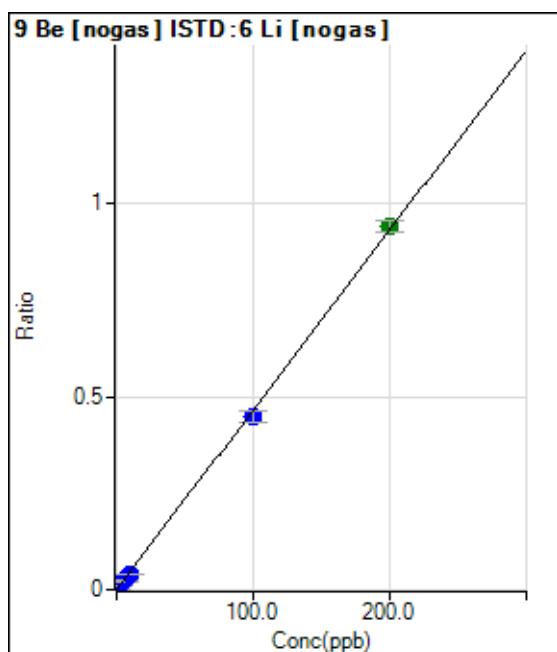
R = 1.0000

DL = 0.7244

BEC = 7.006

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	80.00	0.0001	P	60.4
2	<input type="checkbox"/>	2.000	1.777	13188.00	0.0083	P	2.3
3	<input type="checkbox"/>	5.000	4.851	33268.89	0.0227	P	7.5
4	<input type="checkbox"/>	10.000	8.873	62166.70	0.0414	P	1.5
5	<input type="checkbox"/>	100.000	96.420	631856.37	0.4493	P	6.2
6	<input type="checkbox"/>	200.000	201.852	1237472.40	0.9406	A	3.1
7	<input type="checkbox"/>	1.000					

$y = 0.0047 * x + 5.2402E-005$

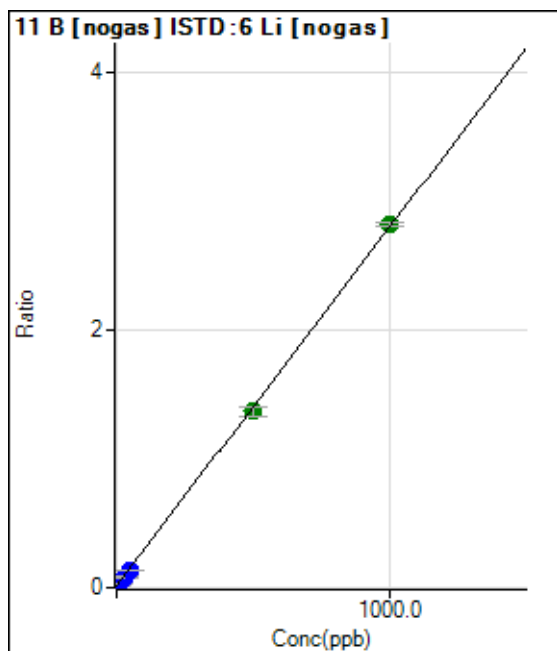
R = 0.9998

DL = 0.02037

BEC = 0.01125

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	21769.20	0.0140	P	8.8
2	<input type="checkbox"/>	10.000	8.193	58284.59	0.0368	P	1.3
3	<input type="checkbox"/>	25.000	23.392	116224.17	0.0792	P	9.1
4	<input type="checkbox"/>	50.000	43.846	204537.64	0.1362	P	0.4
5	<input type="checkbox"/>	500.000	487.384	1930705.08	1.3727	A	5.8
6	<input type="checkbox"/>	1000.000	1006.674	3711451.82	2.8204	A	1.1
7	<input type="checkbox"/>	5.000					

$y = 0.0028 * x + 0.0140$

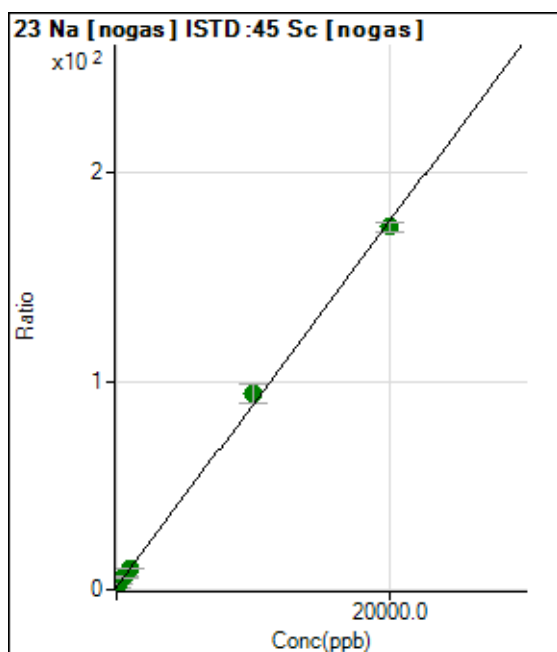
R = 0.9999

DL = 1.329

BEC = 5.019

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	3503206.98	1.2607	A	9.1
2	<input type="checkbox"/>	200.000	191.306	8367845.76	2.9402	A	4.1
3	<input type="checkbox"/>	500.000	547.133	15862124.83	6.0641	A	9.6
4	<input type="checkbox"/>	1000.000	1008.255	27174075.61	10.1123	A	4.9
5	<input type="checkbox"/>	10000.00	10581.908	239433022.0	94.1613	A	9.7
6	<input type="checkbox"/>	20000.00	19707.542	455973760.1	174.277	A	2.4
7	<input type="checkbox"/>	100.000					

$y = 0.0088 * x + 1.2607$

R = 0.9994

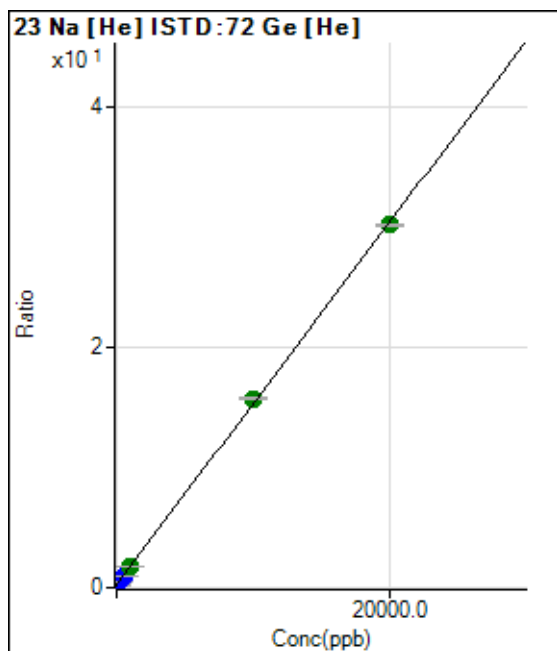
DL = 39.33

BEC = 143.6

Weight: <None>

Min Conc: <None>

Calibration for 283_ICV.d



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	218340.82	0.2390	P	2.6
2	<input type="checkbox"/>	200.000	205.128	509185.80	0.5485	P	2.0
3	<input type="checkbox"/>	500.000	526.856	937824.15	1.0338	P	0.9
4	<input type="checkbox"/>	1000.000	1015.472	1606899.25	1.7710	A	0.7
5	<input type="checkbox"/>	10000.00	10277.037	13872806.46	15.7439	A	0.5
6	<input type="checkbox"/>	20000.00	19859.985	26489877.10	30.2016	A	0.8
7	<input type="checkbox"/>	100.000					

$y = 0.0015 * x + 0.2390$

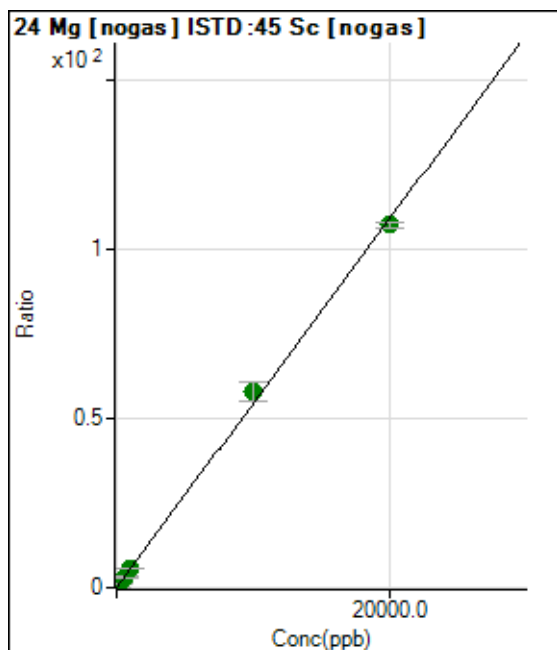
R = 0.9999

DL = 12.21

BEC = 158.4

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	32699.81	0.0118	P	11.8
2	<input type="checkbox"/>	200.000	205.282	3219726.05	1.1313	A	4.0
3	<input type="checkbox"/>	500.000	555.028	7943948.10	3.0386	A	10.5
4	<input type="checkbox"/>	1000.000	1016.796	14930068.04	5.5568	A	5.4
5	<input type="checkbox"/>	10000.00	10639.588	147522953.2	58.0340	A	10.3
6	<input type="checkbox"/>	20000.00	19677.938	280848172.9	107.323	A	1.2
7	<input type="checkbox"/>	100.000					

$y = 0.0055 * x + 0.0118$

R = 0.9993

DL = 0.7661

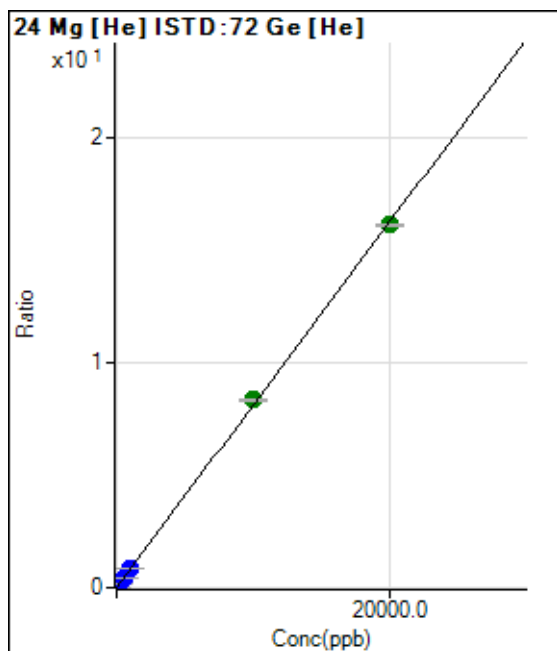
BEC = 2.161

Weight: <None>

Min Conc: <None>



Calibration for 283_ICV.d



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	1790.11	0.0020	P	7.5
2	<input type="checkbox"/>	200.000	216.800	165175.94	0.1779	P	2.6
3	<input type="checkbox"/>	500.000	537.858	397781.68	0.4385	P	1.8
4	<input type="checkbox"/>	1000.000	1009.897	745385.56	0.8216	P	1.5
5	<input type="checkbox"/>	10000.00	10289.000	7360312.18	8.3530	A	0.8
6	<input type="checkbox"/>	20000.00	19853.891	14135847.71	16.1163	A	0.4
7	<input type="checkbox"/>	100.000					

$y = 8.1165E-004 * x + 0.0020$

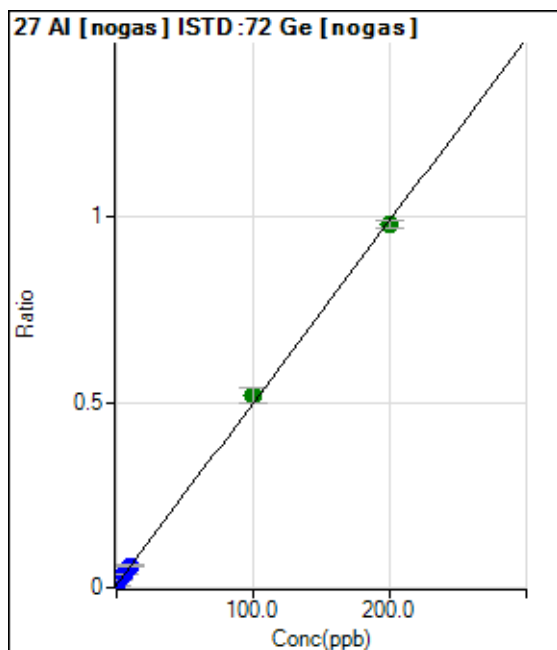
R = 0.9999

DL = 0.5412

BEC = 2.415

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	26612.29	0.0071	P	3.5
2	<input type="checkbox"/>	2.000	2.355	69775.01	0.0187	P	0.4
3	<input type="checkbox"/>	5.000	6.054	129398.41	0.0369	P	7.4
4	<input type="checkbox"/>	10.000	10.667	212888.51	0.0596	P	1.9
5	<input type="checkbox"/>	100.000	104.413	1786075.39	0.5204	A	7.6
6	<input type="checkbox"/>	200.000	197.730	3358567.55	0.9792	A	2.2
7	<input type="checkbox"/>	1.000					

$y = 0.0049 * x + 0.0071$

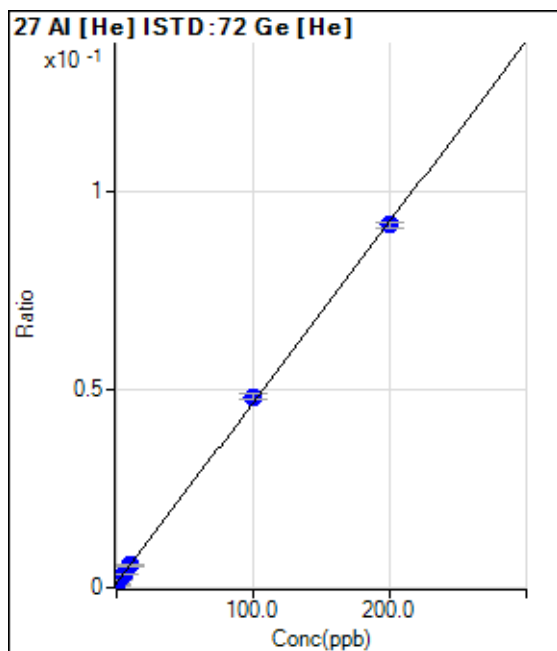
R = 0.9997

DL = 0.1544

BEC = 1.453

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	-0.907	663.35	0.0007	P	1.8
2	<input type="checkbox"/>	2.000	1.510	1700.10	0.0018	P	10.5
3	<input type="checkbox"/>	5.000	4.899	3063.62	0.0034	P	5.3
4	<input type="checkbox"/>	10.000	9.783	5090.77	0.0056	P	8.8
5	<input type="checkbox"/>	100.000	103.394	42611.67	0.0484	P	2.3
6	<input type="checkbox"/>	200.000	198.321	80446.32	0.0917	P	1.3
7	<input type="checkbox"/>	1.000					

$y = 4.5670E-004 * x + 0.0011$

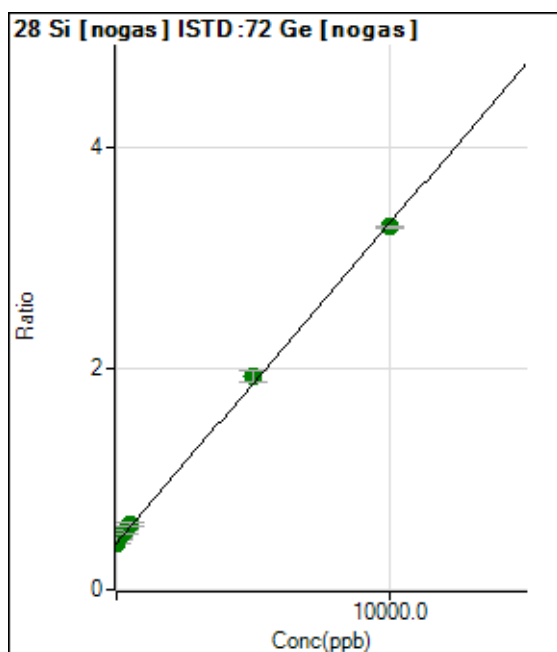
R = 0.9998

DL = 0.08681

BEC = 2.497

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	1568632.79	0.4209	A	1.8
2	<input type="checkbox"/>	100.000	136.692	1714785.86	0.4604	A	5.9
3	<input type="checkbox"/>	250.000	356.477	1835428.72	0.5238	A	8.6
4	<input type="checkbox"/>	500.000	573.492	2094473.46	0.5864	A	4.6
5	<input type="checkbox"/>	5000.000	5203.693	6601083.86	1.9227	A	5.5
6	<input type="checkbox"/>	10000.00	9891.450	11236243.58	3.2756	A	0.7
7	<input type="checkbox"/>	5.000					

$y = 2.8861E-004 * x + 0.4209$

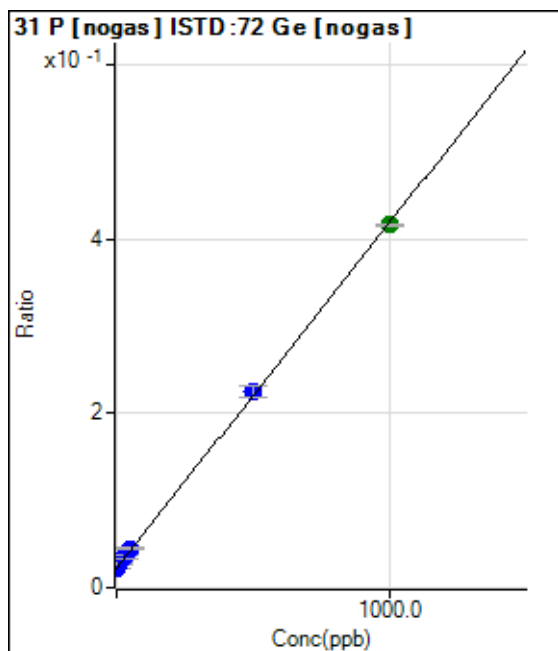
R = 0.9997

DL = 76.63

BEC = 1458

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	83473.60	0.0224	P	2.4
2	<input type="checkbox"/>	10.000	12.416	101788.41	0.0273	P	1.9
3	<input type="checkbox"/>	25.000	32.834	124076.48	0.0354	P	8.7
4	<input type="checkbox"/>	50.000	56.748	160301.86	0.0449	P	3.4
5	<input type="checkbox"/>	500.000	512.002	773304.20	0.2253	P	5.9
6	<input type="checkbox"/>	1000.000	993.442	1427175.08	0.4160	A	0.9
7	<input type="checkbox"/>	5.000					

$y = 3.9624E-004 * x + 0.0224$

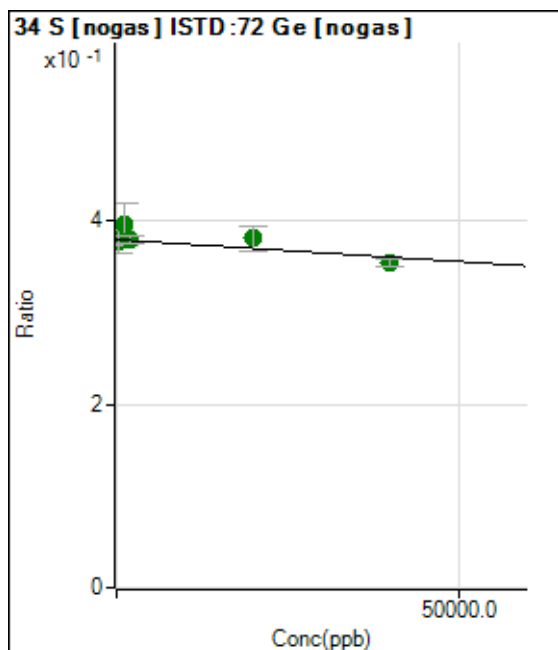
R = 0.9999

DL = 4.073

BEC = 56.52

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	1415986.36	0.3800	A	2.0
2	<input type="checkbox"/>	400.000	5527.777	1405464.36	0.3773	A	6.6
3	<input type="checkbox"/>	1000.000	-33953.440	1386106.02	0.3961	A	11.6
4	<input type="checkbox"/>	2000.000	325.576	1356890.33	0.3798	A	2.2
5	<input type="checkbox"/>	20000.00	-3008.623	1308608.56	0.3814	A	7.5
6	<input type="checkbox"/>	40000.00	52410.591	1218122.75	0.3551	A	2.3
7	<input type="checkbox"/>	100.000					

$y = -4.7509E-007 * x + 0.3800$

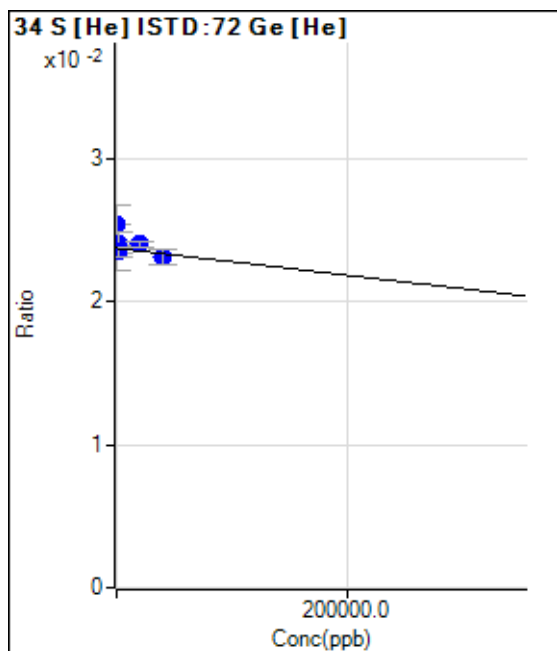
R = -0.7837

DL = -4.859E+04

BEC = -7.998E+05

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	21682.63	0.0238	P	13.6
2	<input type="checkbox"/>	400.000	-173319.24	23552.45	0.0254	P	11.2
3	<input type="checkbox"/>	1000.000	-38469.951	21882.59	0.0241	P	6.0
4	<input type="checkbox"/>	2000.000	27170.547	21315.12	0.0235	P	2.8
5	<input type="checkbox"/>	20000.00	-30526.132	21181.99	0.0240	P	2.0
6	<input type="checkbox"/>	40000.00	66728.480	20280.21	0.0231	P	4.3
7	<input type="checkbox"/>	100.000					

$y = -9.4252E-009 * x + 0.0238$

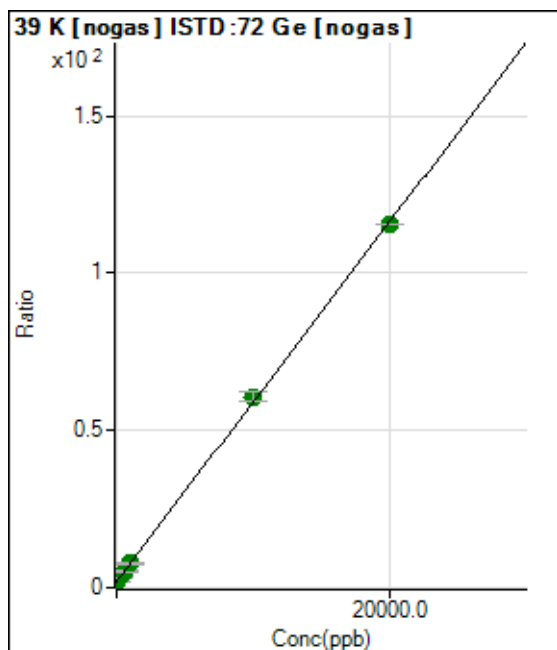
R = -0.5306

DL = -1.028E+06

BEC = -2.52E+06

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	7232153.81	1.9406	A	1.8
2	<input type="checkbox"/>	200.000	208.162	11662633.60	3.1303	A	3.1
3	<input type="checkbox"/>	500.000	555.159	17930374.88	5.1135	A	7.2
4	<input type="checkbox"/>	1000.000	1016.779	27686544.37	7.7518	A	3.4
5	<input type="checkbox"/>	10000.00	10301.273	208873788.0	60.8162	A	4.2
6	<input type="checkbox"/>	20000.00	19847.064	395774275.5	115.374	A	0.1
7	<input type="checkbox"/>	100.000					

$y = 0.0057 * x + 1.9406$

R = 0.9998

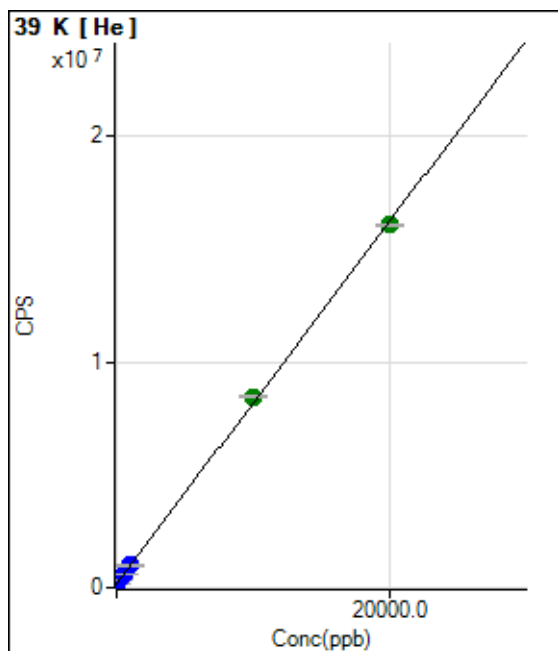
DL = 18.62

BEC = 339.5

Weight: <None>

Min Conc: <None>

Calibration for 283_ICV.d



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	160463.01		P	1.0
2	<input type="checkbox"/>	200.000	217.797	335355.91		P	0.4
3	<input type="checkbox"/>	500.000	534.865	589964.42		P	0.4
4	<input type="checkbox"/>	1000.000	1020.999	980335.30		P	0.8
5	<input type="checkbox"/>	10000.00	10357.055	8477277.17		A	1.9
6	<input type="checkbox"/>	20000.00	19819.373	16075608.93		A	0.6
7	<input type="checkbox"/>	100.000					

$y = 803.0096 * x + 160463.0133$

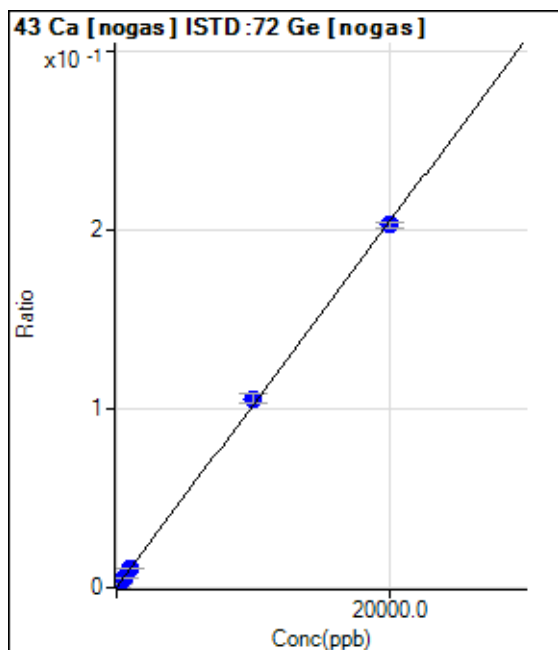
R = 0.9998

DL = 6.237

BEC = 199.8

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	513.35	0.0001	P	13.9
2	<input type="checkbox"/>	200.000	199.557	8118.54	0.0022	P	5.0
3	<input type="checkbox"/>	500.000	517.436	19019.87	0.0054	P	10.4
4	<input type="checkbox"/>	1000.000	1009.070	37400.84	0.0105	P	1.7
5	<input type="checkbox"/>	10000.00	10327.336	363319.97	0.1058	P	4.9
6	<input type="checkbox"/>	20000.00	19835.447	696633.24	0.2031	P	1.3
7	<input type="checkbox"/>	100.000					

$y = 1.0232E-005 * x + 1.3783E-004$

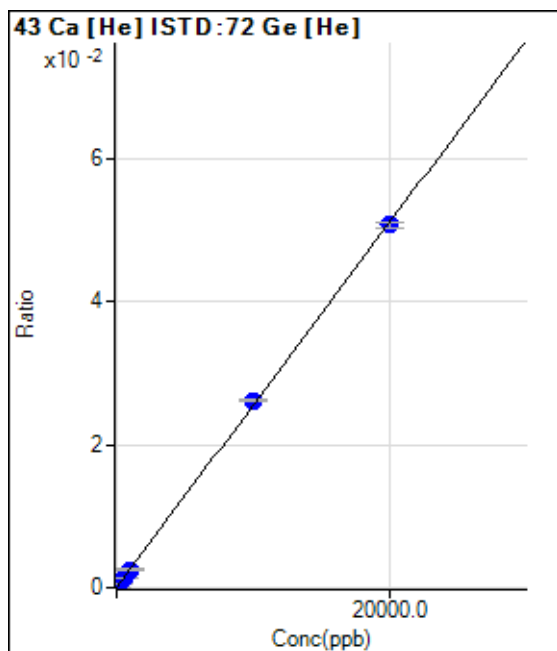
R = 0.9998

DL = 5.602

BEC = 13.47

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	23.33	0.0000	P	49.2
2	<input type="checkbox"/>	200.000	227.654	563.35	0.0006	P	17.8
3	<input type="checkbox"/>	500.000	505.860	1193.39	0.0013	P	10.0
4	<input type="checkbox"/>	1000.000	963.986	2253.50	0.0025	P	6.7
5	<input type="checkbox"/>	10000.00	10256.137	23074.44	0.0262	P	1.6
6	<input type="checkbox"/>	20000.00	19873.309	44489.82	0.0507	P	1.7
7	<input type="checkbox"/>	100.000					

$y = 2.5509E-006 * x + 2.5484E-005$

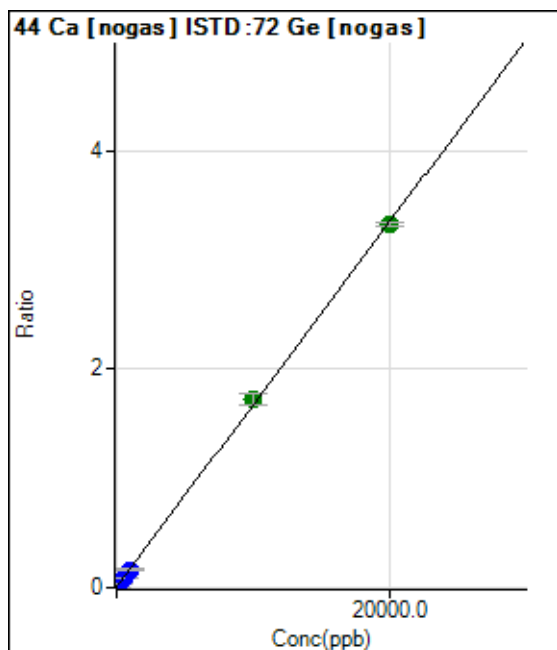
R = 0.9999

DL = 14.73

BEC = 9.99

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	18856.40	0.0051	P	4.5
2	<input type="checkbox"/>	200.000	197.904	141973.71	0.0381	P	2.2
3	<input type="checkbox"/>	500.000	523.113	323798.33	0.0924	P	8.4
4	<input type="checkbox"/>	1000.000	968.417	595724.89	0.1667	P	1.7
5	<input type="checkbox"/>	10000.00	10309.777	5925872.62	1.7262	A	5.8
6	<input type="checkbox"/>	20000.00	19846.134	11382074.41	3.3182	A	1.2
7	<input type="checkbox"/>	100.000					

$y = 1.6694E-004 * x + 0.0051$

R = 0.9998

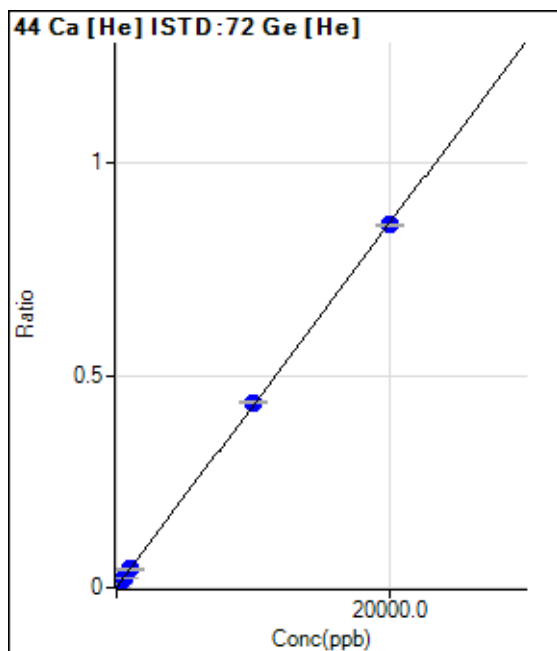
DL = 4.127

BEC = 30.32

Weight: <None>

Min Conc: <None>

Calibration for 283_ICV.d



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	633.35	0.0007	P	13.1
2	<input type="checkbox"/>	200.000	199.065	8562.09	0.0092	P	2.0
3	<input type="checkbox"/>	500.000	536.711	21485.94	0.0237	P	3.9
4	<input type="checkbox"/>	1000.000	1000.150	39505.14	0.0435	P	3.1
5	<input type="checkbox"/>	10000.00	10165.664	384381.15	0.4362	P	0.6
6	<input type="checkbox"/>	20000.00	19916.252	749028.74	0.8540	P	0.8
7	<input type="checkbox"/>	100.000					

$y = 4.2844E-005 * x + 6.9381E-004$

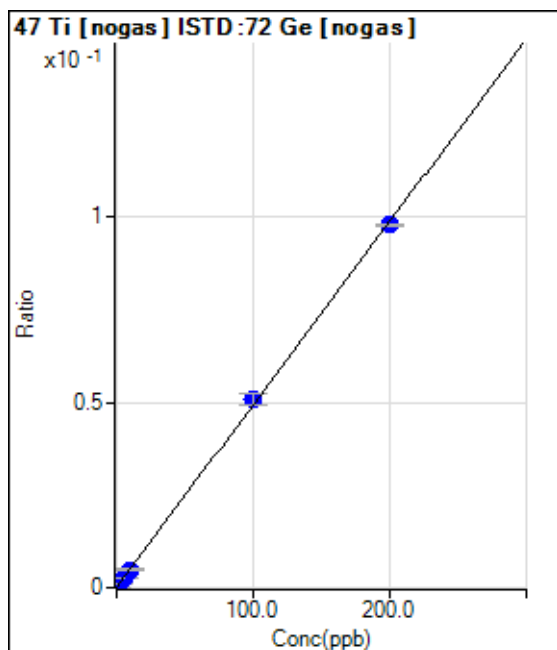
R = 1.0000

DL = 6.384

BEC = 16.19

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	223.34	0.0001	P	12.0
2	<input type="checkbox"/>	2.000	1.929	3763.78	0.0010	P	8.5
3	<input type="checkbox"/>	5.000	5.241	9262.43	0.0026	P	9.0
4	<input type="checkbox"/>	10.000	9.695	17288.32	0.0048	P	4.1
5	<input type="checkbox"/>	100.000	103.306	175033.10	0.0510	P	5.9
6	<input type="checkbox"/>	200.000	198.357	335652.90	0.0979	P	0.8
7	<input type="checkbox"/>	1.000					

$y = 4.9301E-004 * x + 5.9801E-005$

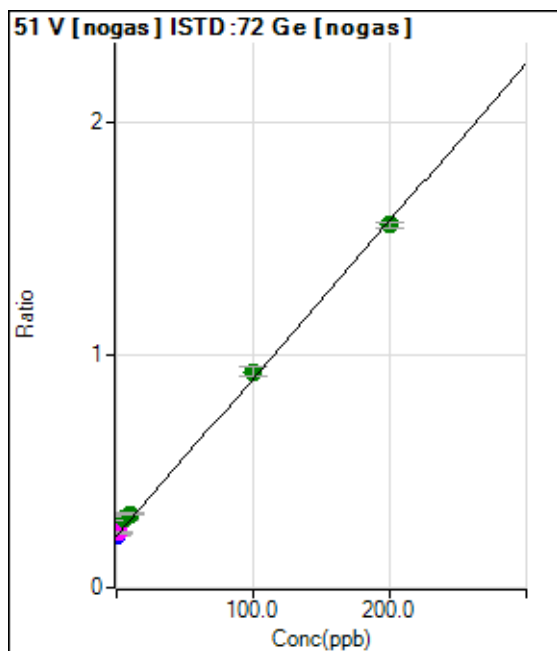
R = 0.9998

DL = 0.04359

BEC = 0.1213

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	829456.86	0.2225	P	0.5
2	<input type="checkbox"/>	2.000	2.119	882487.00	0.2368	M	2.8
3	<input type="checkbox"/>	5.000	11.093	1043791.04	0.2976	A	7.2
4	<input type="checkbox"/>	10.000	13.855	1130461.35	0.3163	A	1.5
5	<input type="checkbox"/>	100.000	104.453	3191693.43	0.9296	A	5.2
6	<input type="checkbox"/>	200.000	197.427	5347263.53	1.5589	A	1.7
7	<input type="checkbox"/>	1.000					

$y = 0.0068 * x + 0.2225$

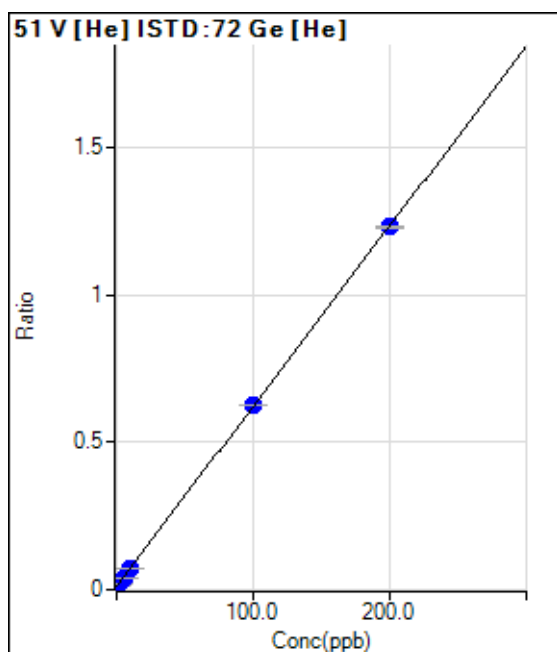
R = 0.9993

DL = 0.4629

BEC = 32.87

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	-0.070	9677.86	0.0106	P	1.6
2	<input type="checkbox"/>	2.000	1.867	20822.91	0.0224	P	0.4
3	<input type="checkbox"/>	5.000	5.097	38250.32	0.0422	P	1.0
4	<input type="checkbox"/>	10.000	9.660	63553.41	0.0701	P	1.0
5	<input type="checkbox"/>	100.000	100.860	552862.38	0.6274	P	0.3
6	<input type="checkbox"/>	200.000	199.586	1079523.71	1.2308	P	0.9
7	<input type="checkbox"/>	1.000					

$y = 0.0061 * x + 0.0110$

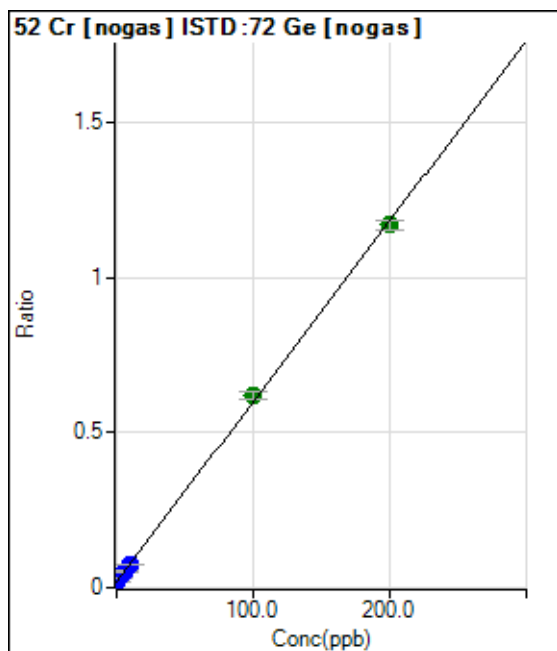
R = 1.0000

DL = 0.0809

BEC = 1.802

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	67625.71	0.0181	P	0.9
2	<input type="checkbox"/>	2.000	1.954	109999.46	0.0295	P	1.3
3	<input type="checkbox"/>	5.000	5.723	180349.52	0.0515	P	8.3
4	<input type="checkbox"/>	10.000	10.046	273819.05	0.0766	P	1.3
5	<input type="checkbox"/>	100.000	103.829	2138474.81	0.6226	A	4.4
6	<input type="checkbox"/>	200.000	198.066	4017181.29	1.1712	A	2.8
7	<input type="checkbox"/>	1.000					

$y = 0.0058 * x + 0.0181$

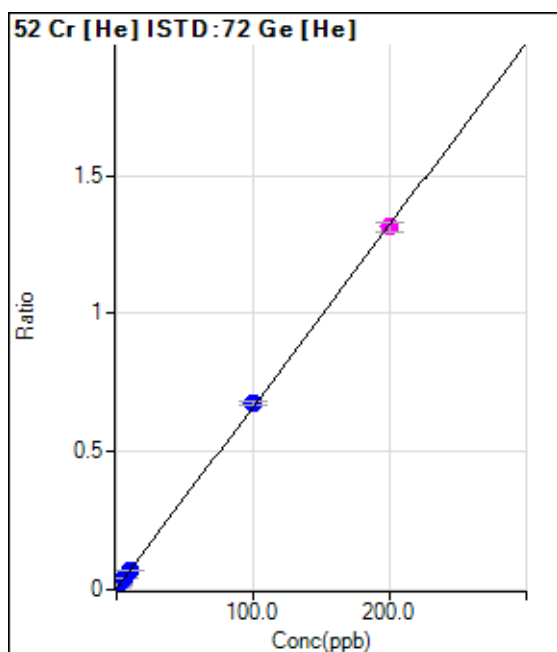
R = 0.9997

DL = 0.08787

BEC = 3.116

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	3733.76	0.0041	P	6.2
2	<input type="checkbox"/>	2.000	2.052	16340.74	0.0176	P	2.6
3	<input type="checkbox"/>	5.000	5.255	35106.81	0.0387	P	1.1
4	<input type="checkbox"/>	10.000	9.851	62578.68	0.0690	P	0.9
5	<input type="checkbox"/>	100.000	102.108	596239.24	0.6767	P	2.4
6	<input type="checkbox"/>	200.000	198.947	1152916.94	1.3146	M	2.5
7	<input type="checkbox"/>	1.000					

$y = 0.0066 * x + 0.0041$

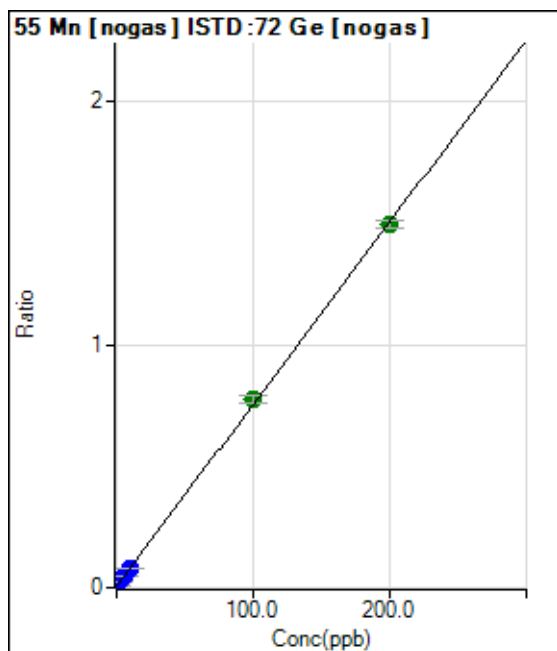
R = 0.9999

DL = 0.116

BEC = 0.6202

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	19984.26	0.0054	P	3.2
2	<input type="checkbox"/>	2.000	2.093	78348.48	0.0210	P	2.9
3	<input type="checkbox"/>	5.000	5.515	163577.99	0.0467	P	7.5
4	<input type="checkbox"/>	10.000	10.045	287871.03	0.0806	P	1.8
5	<input type="checkbox"/>	100.000	102.782	2660856.73	0.7749	A	4.9
6	<input type="checkbox"/>	200.000	198.593	5118570.65	1.4922	A	2.1
7	<input type="checkbox"/>	1.000					

$y = 0.0075 * x + 0.0054$

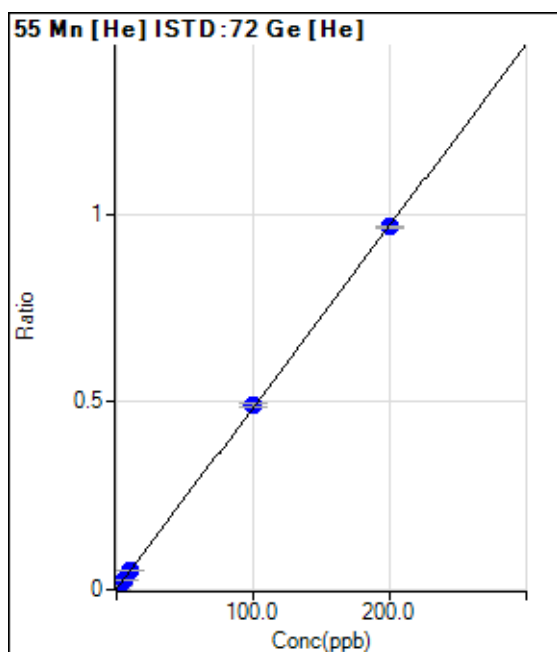
R = 0.9999

DL = 0.06951

BEC = 0.7161

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	903.37	0.0010	P	26.3
2	<input type="checkbox"/>	2.000	2.005	9939.45	0.0107	P	1.8
3	<input type="checkbox"/>	5.000	5.226	23858.97	0.0263	P	2.4
4	<input type="checkbox"/>	10.000	9.997	44824.50	0.0494	P	1.9
5	<input type="checkbox"/>	100.000	101.179	432693.65	0.4911	P	2.2
6	<input type="checkbox"/>	200.000	199.405	847982.96	0.9668	P	0.8
7	<input type="checkbox"/>	1.000					

$y = 0.0048 * x + 9.8978E-004$

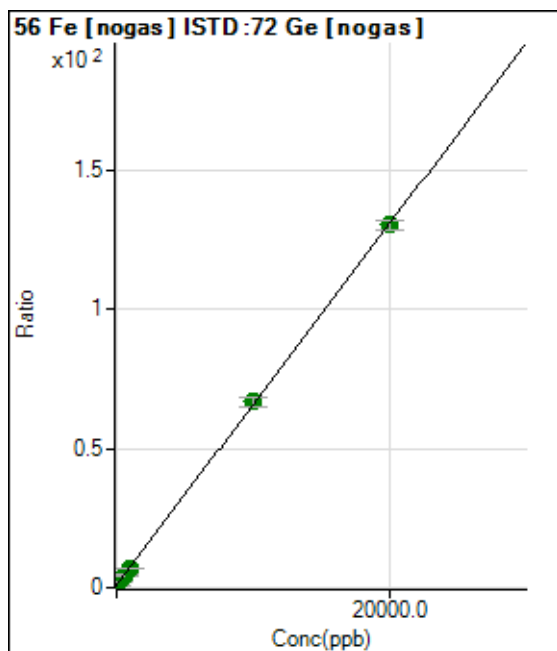
R = 1.0000

DL = 0.1612

BEC = 0.2043

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	3475326.64	0.9327	A	2.7
2	<input type="checkbox"/>	200.000	197.690	8253109.82	2.2149	A	2.5
3	<input type="checkbox"/>	500.000	525.808	15227973.26	4.3431	A	7.4
4	<input type="checkbox"/>	1000.000	963.734	25667364.64	7.1836	A	1.5
5	<input type="checkbox"/>	10000.00	10132.800	228862805.1	66.6556	A	5.2
6	<input type="checkbox"/>	20000.00	19934.791	446697409.9	130.232	A	2.3
7	<input type="checkbox"/>	100.000					

$y = 0.0065 * x + 0.9327$

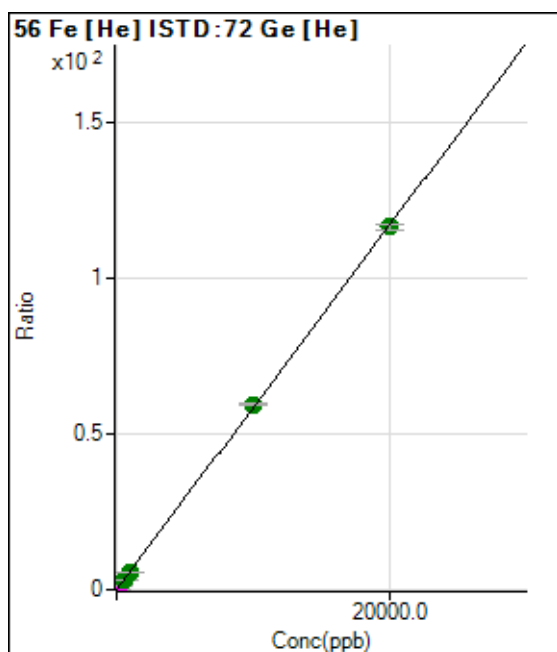
R = 1.0000

DL = 11.68

BEC = 143.8

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	13418.38	0.0147	P	3.5
2	<input type="checkbox"/>	200.000	204.407	1124419.54	1.2111	M	2.2
3	<input type="checkbox"/>	500.000	519.921	2773818.50	3.0578	A	0.6
4	<input type="checkbox"/>	1000.000	983.525	5235604.61	5.7713	A	2.3
5	<input type="checkbox"/>	10000.00	10176.200	52494760.89	59.5762	A	1.4
6	<input type="checkbox"/>	20000.00	19912.181	102232328.4	116.561	A	1.7
7	<input type="checkbox"/>	100.000					

$y = 0.0059 * x + 0.0147$

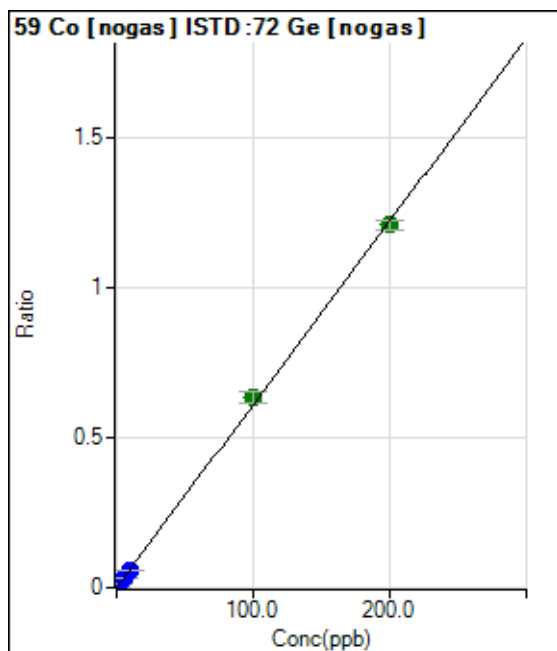
R = 0.9999

DL = 0.2624

BEC = 2.509

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	<input type="checkbox"/>	0.000	0.000	433.34	0.0001	P	11.4
2	<input type="checkbox"/>	2.000	2.006	46030.96	0.0124	P	3.0
3	<input type="checkbox"/>	5.000	5.262	113034.25	0.0322	P	6.3
4	<input type="checkbox"/>	10.000	9.887	216017.69	0.0604	P	0.6
5	<input type="checkbox"/>	100.000	103.725	2172840.02	0.6330	A	6.0
6	<input type="checkbox"/>	200.000	198.136	4146868.27	1.2090	A	2.8
7	<input type="checkbox"/>	1.000					

$y = 0.0061 * x + 1.1616E-004$

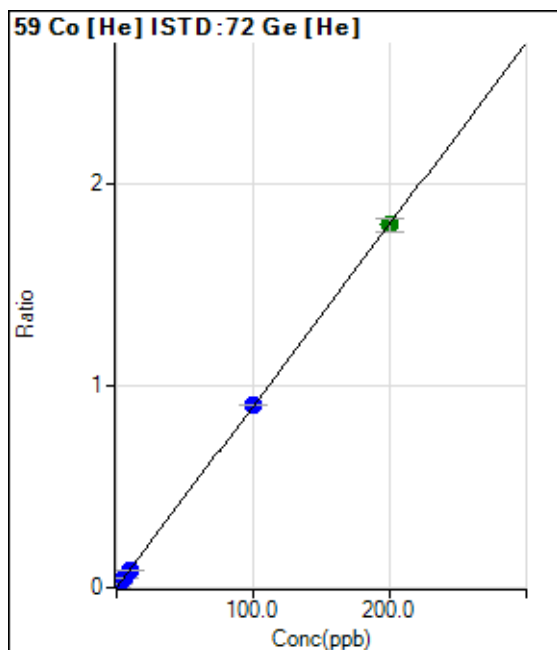
R = 0.9998

DL = 0.006534

BEC = 0.01904

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	<input type="checkbox"/>	0.000	0.000	60.00	0.0001	P	33.6
2	<input type="checkbox"/>	2.000	2.022	16978.04	0.0183	P	1.9
3	<input type="checkbox"/>	5.000	5.199	42546.04	0.0469	P	4.4
4	<input type="checkbox"/>	10.000	9.722	79517.32	0.0876	P	1.0
5	<input type="checkbox"/>	100.000	100.621	798769.18	0.9065	P	0.6
6	<input type="checkbox"/>	200.000	199.698	1577889.30	1.7990	A	3.6
7	<input type="checkbox"/>	1.000					

$y = 0.0090 * x + 6.5665E-005$

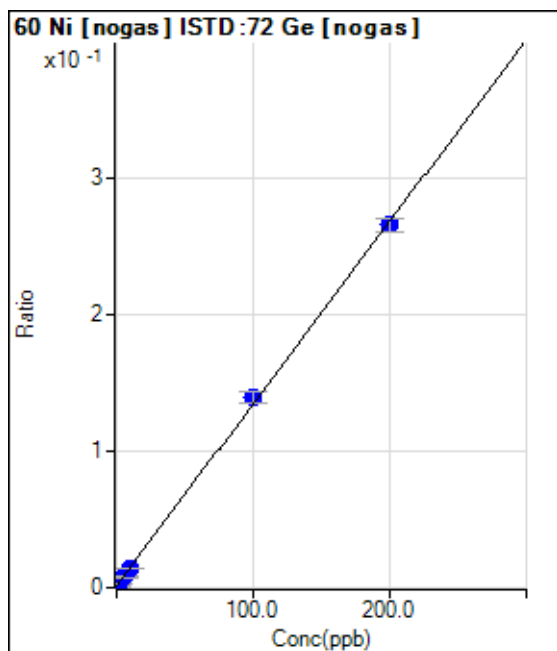
R = 1.0000

DL = 0.007344

BEC = 0.007289

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	-0.548	2590.23	0.0007	P	16.2
2	<input type="checkbox"/>	2.000	1.540	12968.08	0.0035	P	2.4
3	<input type="checkbox"/>	5.000	4.806	27420.70	0.0078	P	9.9
4	<input type="checkbox"/>	10.000	9.427	49974.48	0.0140	P	2.3
5	<input type="checkbox"/>	100.000	103.476	478360.58	0.1393	P	5.3
6	<input type="checkbox"/>	200.000	198.300	911285.30	0.2657	P	3.5
7	<input type="checkbox"/>	1.000					

$y = 0.0013 * x + 0.0014$

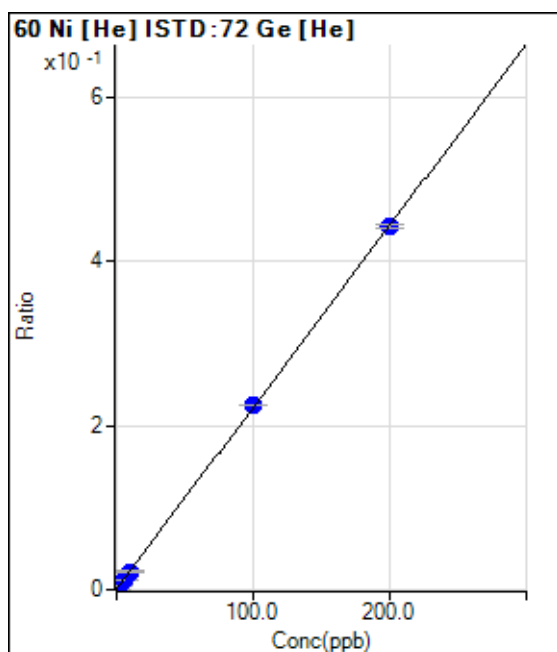
R = 0.9998

DL = 0.254

BEC = 1.069

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	-0.200	196.67	0.0002	P	39.6
2	<input type="checkbox"/>	2.000	1.841	4400.59	0.0047	P	1.6
3	<input type="checkbox"/>	5.000	5.060	10769.94	0.0119	P	4.6
4	<input type="checkbox"/>	10.000	9.625	19954.29	0.0220	P	3.4
5	<input type="checkbox"/>	100.000	101.309	198408.76	0.2252	P	0.8
6	<input type="checkbox"/>	200.000	199.364	388082.55	0.4425	P	1.1
7	<input type="checkbox"/>	1.000					

$y = 0.0022 * x + 6.5873E-004$

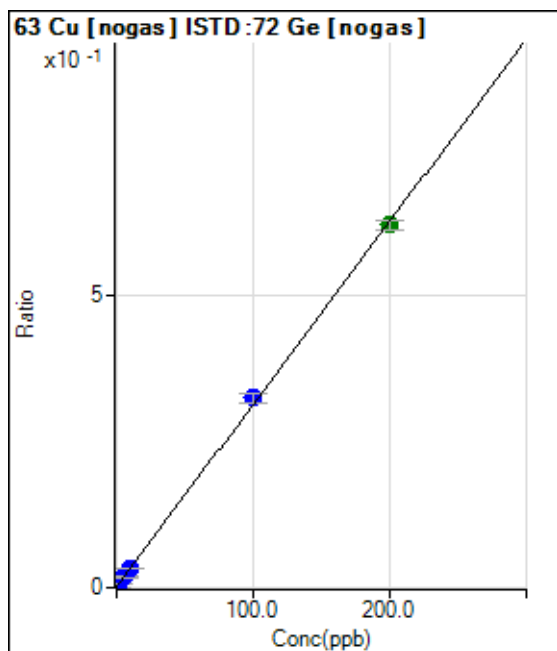
R = 1.0000

DL = 0.1151

BEC = 0.2972

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	5360.86	0.0014	P	8.8
2	<input type="checkbox"/>	2.000	2.031	29029.70	0.0078	P	0.8
3	<input type="checkbox"/>	5.000	5.517	65452.99	0.0187	P	10.2
4	<input type="checkbox"/>	10.000	10.059	117459.38	0.0329	P	4.6
5	<input type="checkbox"/>	100.000	103.381	1115155.17	0.3247	P	4.9
6	<input type="checkbox"/>	200.000	198.293	2131900.59	0.6216	A	2.9
7	<input type="checkbox"/>	1.000					

$y = 0.0031 * x + 0.0014$

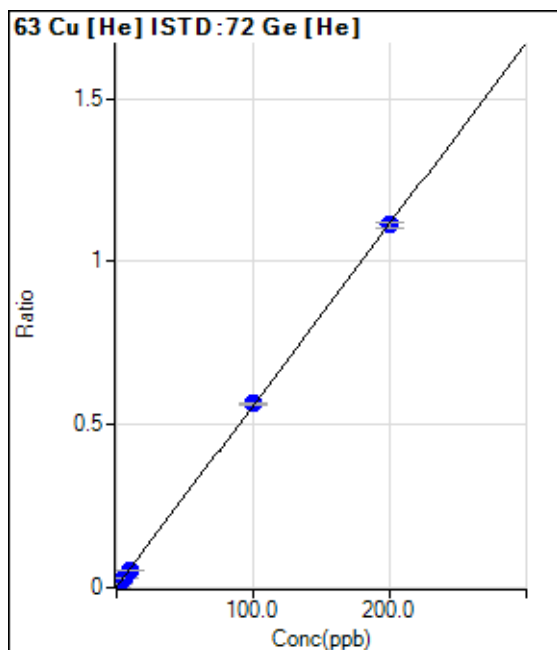
R = 0.9998

DL = 0.121

BEC = 0.4596

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	-0.216	956.70	0.0010	P	5.5
2	<input type="checkbox"/>	2.000	1.887	11827.29	0.0127	P	5.9
3	<input type="checkbox"/>	5.000	5.216	28362.03	0.0313	P	1.0
4	<input type="checkbox"/>	10.000	9.638	50693.36	0.0559	P	0.4
5	<input type="checkbox"/>	100.000	100.923	496766.39	0.5638	P	0.6
6	<input type="checkbox"/>	200.000	199.552	975789.31	1.1125	P	1.7
7	<input type="checkbox"/>	1.000					

$y = 0.0056 * x + 0.0022$

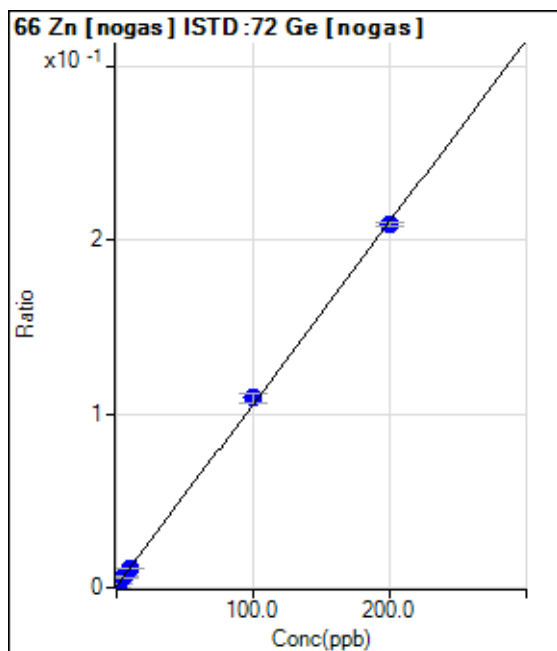
R = 1.0000

DL = 0.0313

BEC = 0.4037

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	-0.645	796.70	0.0002	P	17.2
2	<input type="checkbox"/>	2.000	1.400	8792.23	0.0024	P	1.5
3	<input type="checkbox"/>	5.000	5.010	21572.87	0.0061	P	4.5
4	<input type="checkbox"/>	10.000	9.613	39222.15	0.0110	P	1.3
5	<input type="checkbox"/>	100.000	103.193	374583.39	0.1091	P	5.5
6	<input type="checkbox"/>	200.000	198.429	716838.06	0.2090	P	1.2
7	<input type="checkbox"/>	1.000					

$y = 0.0010 * x + 8.9032E-004$

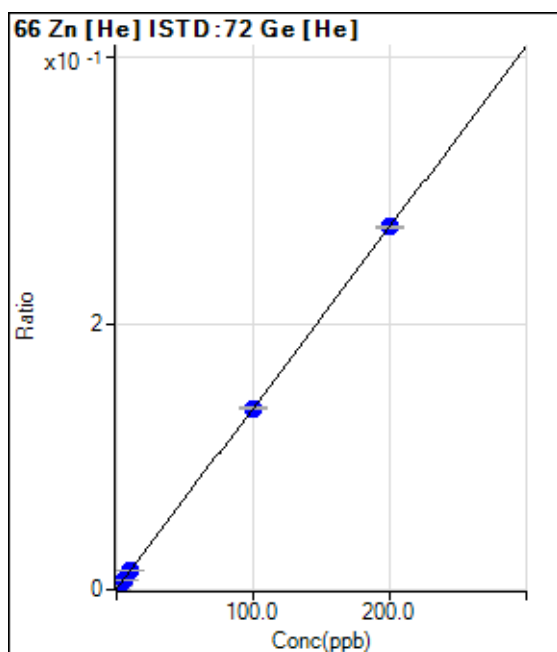
R = 0.9998

DL = 0.1052

BEC = 0.849

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	-0.097	253.34	0.0003	P	17.7
2	<input type="checkbox"/>	2.000	1.985	2890.29	0.0031	P	5.5
3	<input type="checkbox"/>	5.000	5.214	6811.36	0.0075	P	3.9
4	<input type="checkbox"/>	10.000	10.015	12744.56	0.0140	P	1.8
5	<input type="checkbox"/>	100.000	99.779	120093.60	0.1363	P	1.5
6	<input type="checkbox"/>	200.000	200.104	239369.65	0.2729	P	0.6
7	<input type="checkbox"/>	1.000					

$y = 0.0014 * x + 4.0965E-004$

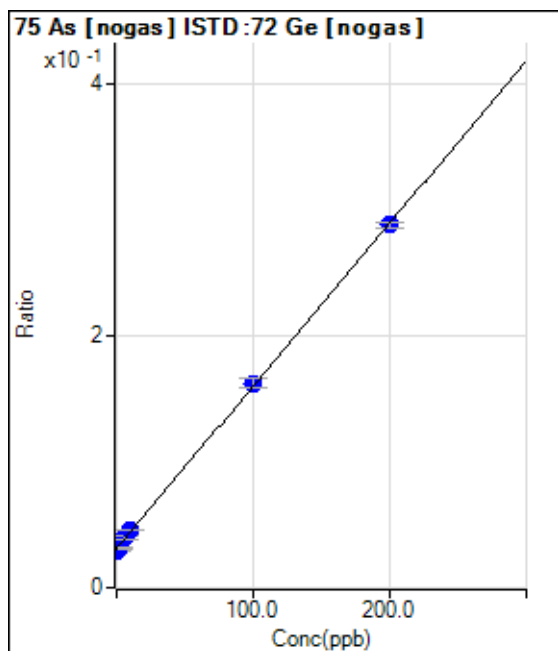
R = 1.0000

DL = 0.1083

BEC = 0.3008

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	-1.636	108294.63	0.0290	P	4.6
2	<input type="checkbox"/>	2.000	-0.077	115816.81	0.0311	P	3.4
3	<input type="checkbox"/>	5.000	6.604	139361.03	0.0397	P	5.3
4	<input type="checkbox"/>	10.000	11.351	163779.53	0.0458	P	1.8
5	<input type="checkbox"/>	100.000	101.688	558382.75	0.1626	P	4.9
6	<input type="checkbox"/>	200.000	199.069	989617.87	0.2885	P	1.7
7	<input type="checkbox"/>	1.000					

$y = 0.0013 * x + 0.0312$

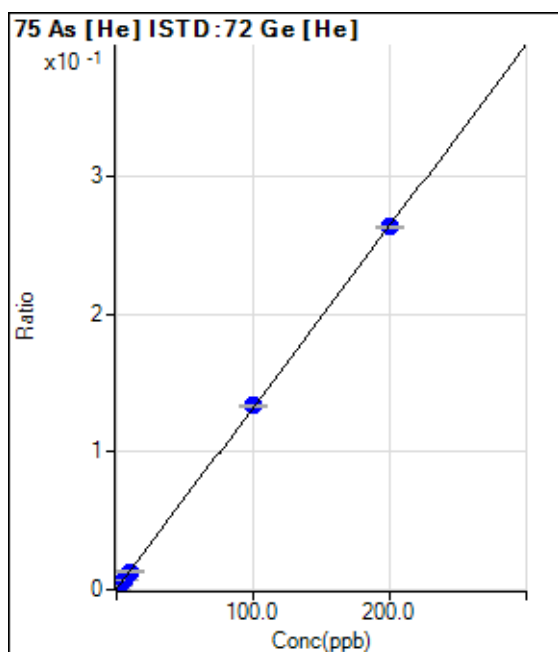
R = 0.9998

DL = 3.095

BEC = 24.1

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	352.23	0.0004	P	9.8
2	<input type="checkbox"/>	2.000	2.019	2826.90	0.0030	P	2.6
3	<input type="checkbox"/>	5.000	5.079	6418.92	0.0071	P	2.4
4	<input type="checkbox"/>	10.000	9.650	11880.56	0.0131	P	3.6
5	<input type="checkbox"/>	100.000	100.971	117549.20	0.1334	P	0.8
6	<input type="checkbox"/>	200.000	199.530	230899.31	0.2633	P	0.4
7	<input type="checkbox"/>	1.000					

$y = 0.0013 * x + 3.8520E-004$

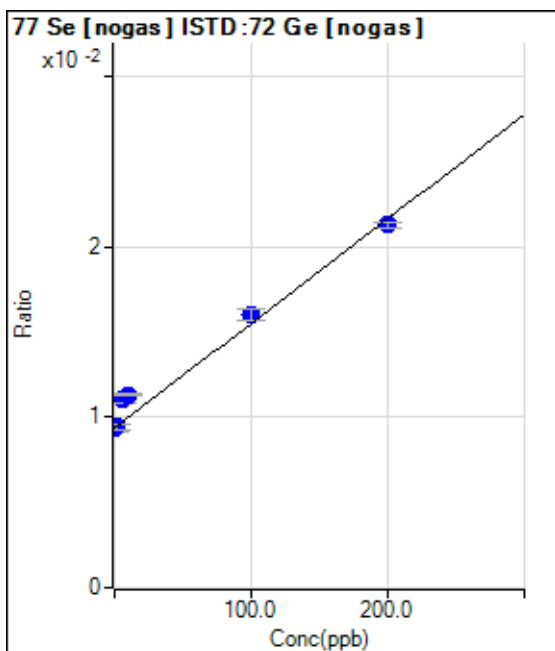
R = 1.0000

DL = 0.08625

BEC = 0.2924

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	34970.98	0.0094	P	5.5
2	<input type="checkbox"/>	2.000	0.763	35141.27	0.0094	P	4.4
3	<input type="checkbox"/>	5.000	27.981	38938.87	0.0111	P	4.8
4	<input type="checkbox"/>	10.000	31.751	40462.25	0.0113	P	1.5
5	<input type="checkbox"/>	100.000	108.496	55029.90	0.0160	P	3.9
6	<input type="checkbox"/>	200.000	194.102	72942.53	0.0213	P	1.4
7	<input type="checkbox"/>	1.000					

$y = 6.1257E-005 * x + 0.0094$

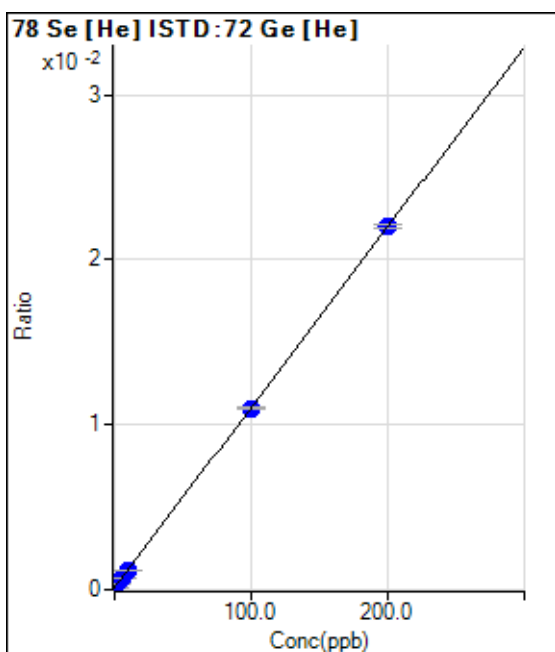
R = 0.9901

DL = 25.27

BEC = 153

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.071	132.00	0.0001	P	18.1
2	<input type="checkbox"/>	2.000	2.354	365.34	0.0004	P	6.2
3	<input type="checkbox"/>	5.000	5.043	623.34	0.0007	P	6.4
4	<input type="checkbox"/>	10.000	9.706	1085.37	0.0012	P	1.7
5	<input type="checkbox"/>	100.000	99.629	9705.93	0.0110	P	1.5
6	<input type="checkbox"/>	200.000	200.195	19292.19	0.0220	P	1.1
7	<input type="checkbox"/>	1.000					

$y = 1.0919E-004 * x + 1.3651E-004$

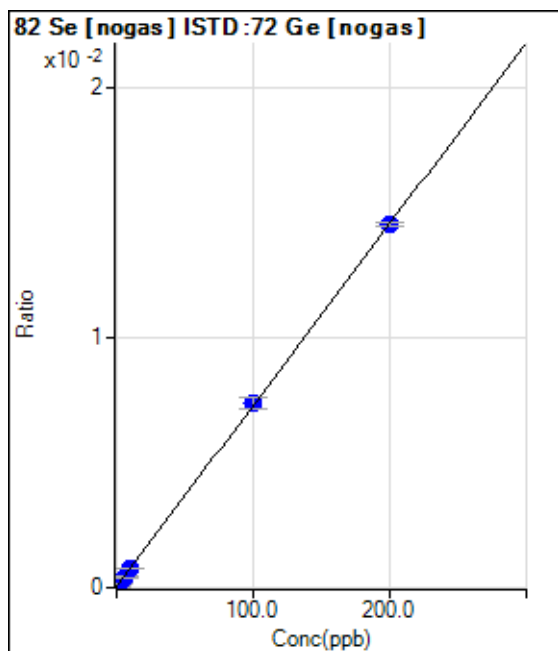
R = 1.0000

DL = 0.719

BEC = 1.25

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	143.33	0.0000	P	22.8
2	<input type="checkbox"/>	2.000	1.835	640.02	0.0002	P	4.3
3	<input type="checkbox"/>	5.000	5.025	1406.74	0.0004	P	18.4
4	<input type="checkbox"/>	10.000	9.940	2716.92	0.0008	P	3.7
5	<input type="checkbox"/>	100.000	100.886	25267.83	0.0074	P	6.2
6	<input type="checkbox"/>	200.000	199.561	49821.99	0.0145	P	0.9
7	<input type="checkbox"/>	1.000					

$y = 7.2587E-005 * x + 3.8485E-005$

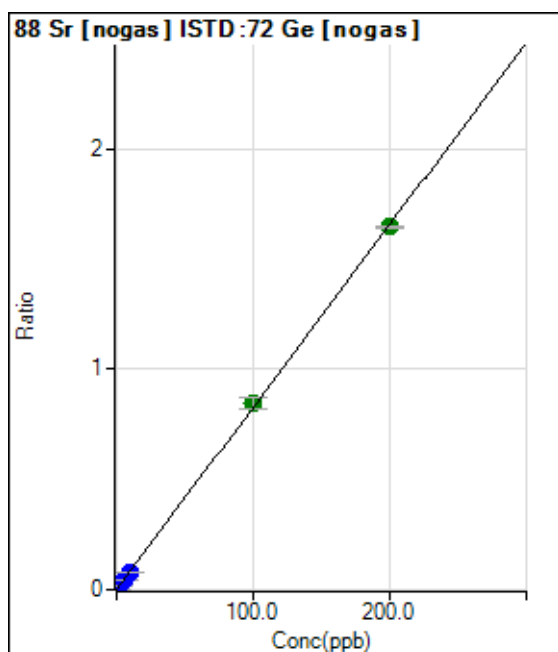
R = 1.0000

DL = 0.3619

BEC = 0.5302

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	2760.26	0.0007	P	4.5
2	<input type="checkbox"/>	2.000	1.966	63361.86	0.0170	P	2.7
3	<input type="checkbox"/>	5.000	5.153	152059.01	0.0434	P	7.0
4	<input type="checkbox"/>	10.000	9.705	289433.34	0.0810	P	2.1
5	<input type="checkbox"/>	100.000	102.200	2904729.75	0.8461	A	5.7
6	<input type="checkbox"/>	200.000	198.911	5646506.38	1.6460	A	0.3
7	<input type="checkbox"/>	1.000					

$y = 0.0083 * x + 7.4004E-004$

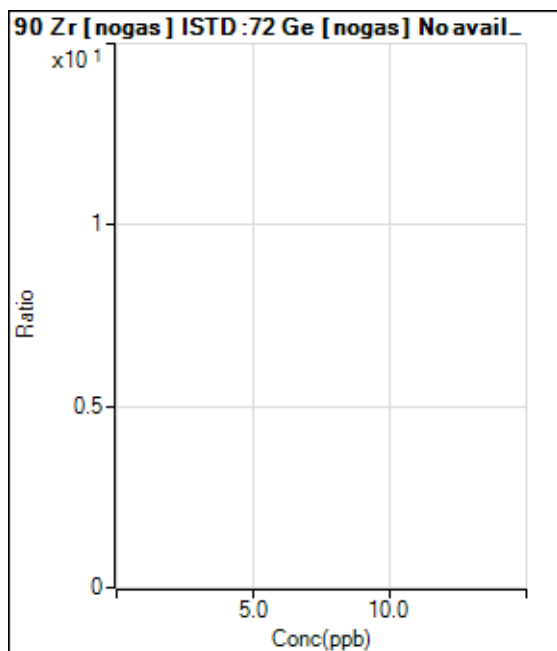
R = 0.9999

DL = 0.01204

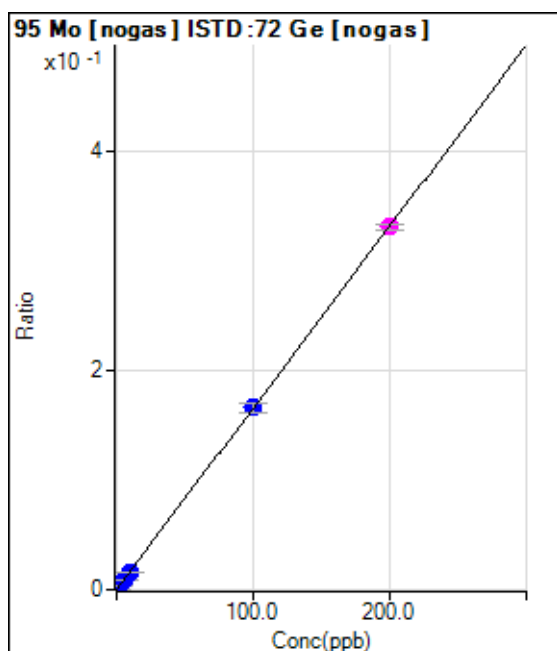
BEC = 0.08947

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000					
2	<input type="checkbox"/>	2.000					
3	<input type="checkbox"/>	5.000					
4	<input type="checkbox"/>	10.000					
5	<input type="checkbox"/>	100.000					
6	<input type="checkbox"/>	200.000					
7	<input type="checkbox"/>	1.000					



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	136.67	0.0000	P	34.4
2	<input type="checkbox"/>	2.000	1.900	11867.42	0.0032	P	1.6
3	<input type="checkbox"/>	5.000	5.108	29761.68	0.0085	P	9.8
4	<input type="checkbox"/>	10.000	9.304	55215.29	0.0154	P	1.9
5	<input type="checkbox"/>	100.000	100.466	571471.84	0.1665	P	5.4
6	<input type="checkbox"/>	200.000	199.800	1135329.64	0.3310	M	1.7
7	<input type="checkbox"/>	1.000					

$y = 0.0017 * x + 3.6451E-005$

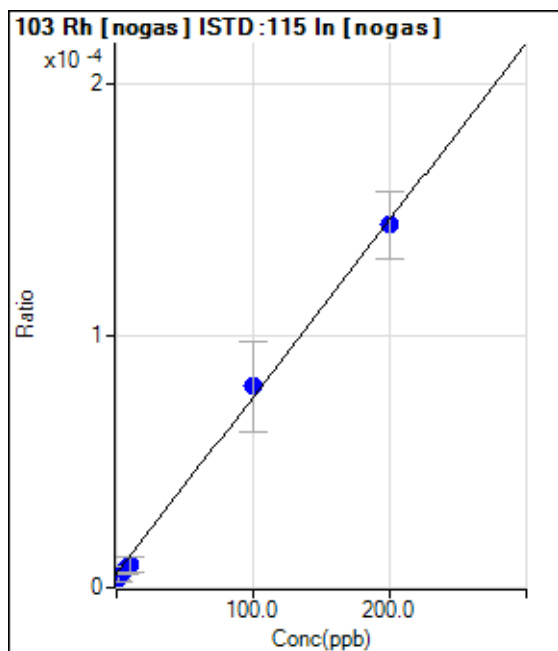
R = 1.0000

DL = 0.02273

BEC = 0.02201

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	20.00	0.0000	P	86.7
2	<input type="checkbox"/>	2.000	-2.486	13.33	0.0000	P	86.6
3	<input type="checkbox"/>	5.000	2.028	23.33	0.0000	P	44.0
4	<input type="checkbox"/>	10.000	4.931	30.00	0.0000	P	64.1
5	<input type="checkbox"/>	100.000	106.215	250.00	0.0001	P	44.8
6	<input type="checkbox"/>	200.000	197.265	473.35	0.0001	P	18.2
7	<input type="checkbox"/>	1.000					

$y = 7.0262E-007 * x + 5.5800E-006$

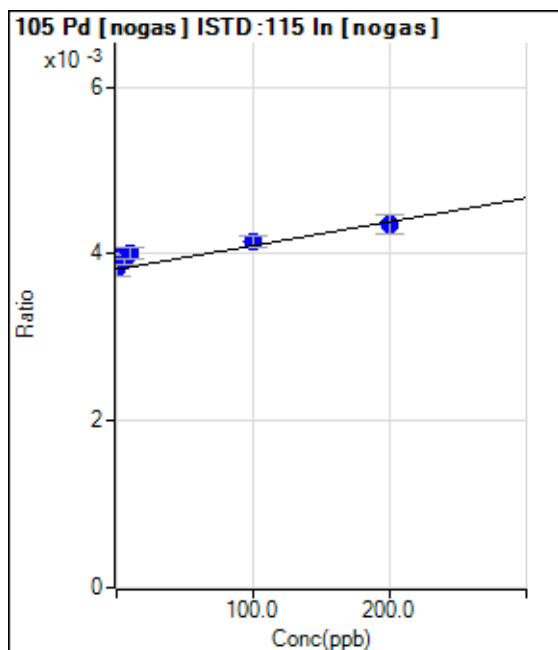
R = 0.9988

DL = 20.66

BEC = 7.942

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	13325.19	0.0038	P	4.3
2	<input type="checkbox"/>	2.000	58.329	13992.44	0.0040	P	1.9
3	<input type="checkbox"/>	5.000	39.737	12728.11	0.0039	P	2.6
4	<input type="checkbox"/>	10.000	66.393	13265.21	0.0040	P	3.2
5	<input type="checkbox"/>	100.000	118.235	12998.32	0.0042	P	3.5
6	<input type="checkbox"/>	200.000	186.631	14272.65	0.0043	P	5.3
7	<input type="checkbox"/>	1.000					

$y = 2.8546E-006 * x + 0.0038$

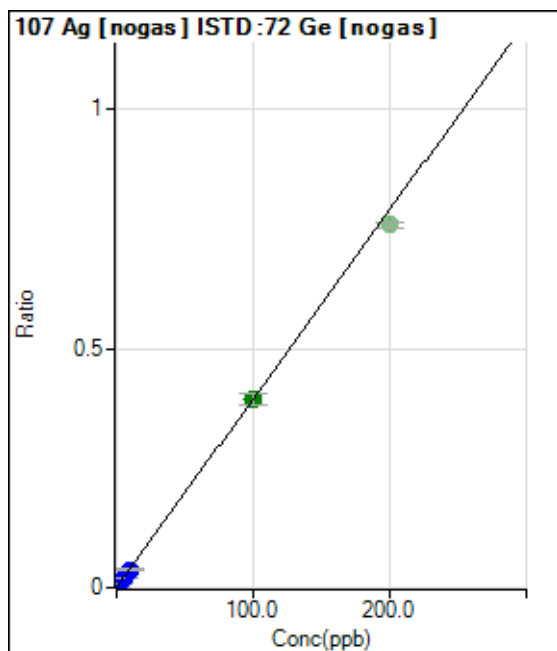
R = 0.9459

DL = 173.9

BEC = 1336

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	163.36	0.0000	P	96.3
2	<input type="checkbox"/>	2.000	1.893	28002.38	0.0075	P	2.7
3	<input type="checkbox"/>	5.000	5.035	69777.37	0.0199	P	8.9
4	<input type="checkbox"/>	10.000	9.627	135810.18	0.0380	P	5.0
5	<input type="checkbox"/>	100.000	100.038	1355344.56	0.3948	A	6.1
6	<input checked="" type="checkbox"/>	200.000		2601707.98	0.7585	A	1.4
7	<input type="checkbox"/>	1.000					

$y = 0.0039 * x + 4.4411E-005$

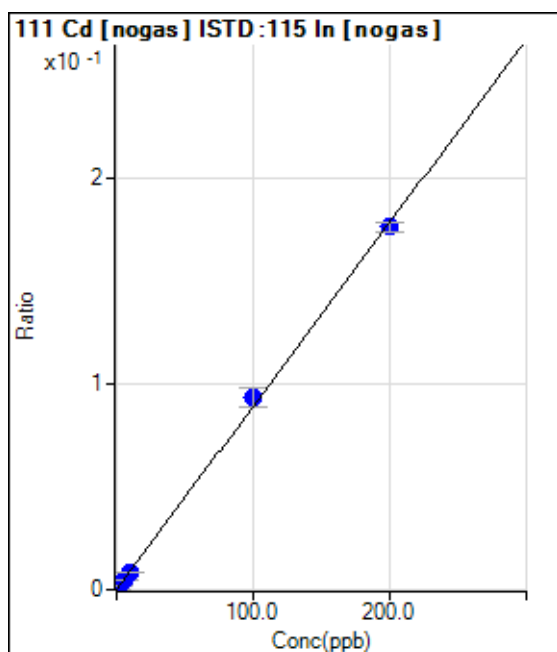
R = 1.0000

DL = 0.0325

BEC = 0.01125

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	30.00	0.0000	P	31.9
2	<input type="checkbox"/>	2.000	1.911	6007.77	0.0017	P	3.3
3	<input type="checkbox"/>	5.000	5.289	15210.16	0.0047	P	9.2
4	<input type="checkbox"/>	10.000	9.689	28583.48	0.0086	P	3.6
5	<input type="checkbox"/>	100.000	104.429	289802.88	0.0929	P	10.2
6	<input type="checkbox"/>	200.000	197.795	577562.62	0.1760	P	2.7
7	<input type="checkbox"/>	1.000					

$y = 8.8983E-004 * x + 8.5518E-006$

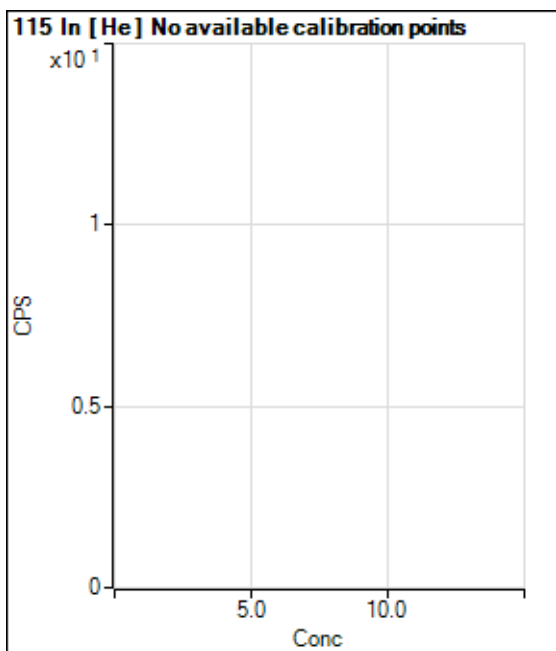
R = 0.9996

DL = 0.009197

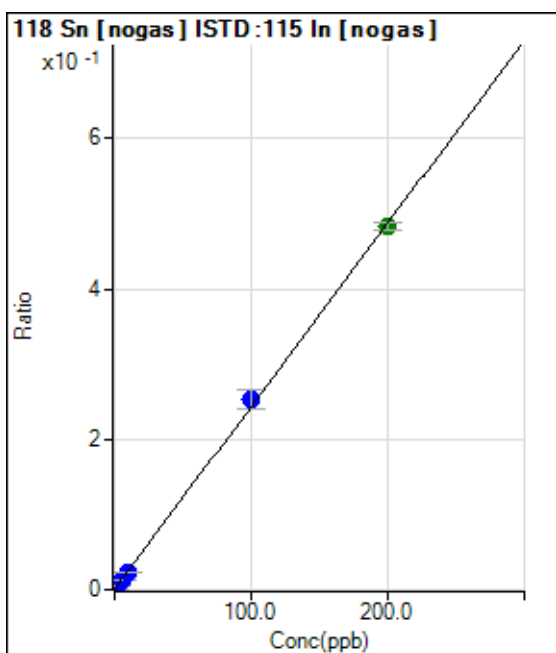
BEC = 0.009611

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>			1304341.71		A	0.8
2	<input type="checkbox"/>			1326196.52		A	1.0
3	<input type="checkbox"/>			1303085.08		A	2.1
4	<input type="checkbox"/>			1256180.38		A	0.9
5	<input type="checkbox"/>			1216230.08		A	2.1
6	<input type="checkbox"/>			1232509.45		A	1.8
7	<input type="checkbox"/>						



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	996.71	0.0003	P	3.2
2	<input type="checkbox"/>	2.000	1.819	16558.05	0.0047	P	5.3
3	<input type="checkbox"/>	5.000	5.117	41068.38	0.0127	P	10.1
4	<input type="checkbox"/>	10.000	9.592	78315.03	0.0236	P	1.6
5	<input type="checkbox"/>	100.000	103.696	787913.56	0.2526	P	9.9
6	<input type="checkbox"/>	200.000	198.171	1583321.33	0.4825	A	2.3
7	<input type="checkbox"/>	1.000					

$y = 0.0024 * x + 2.8548E-004$

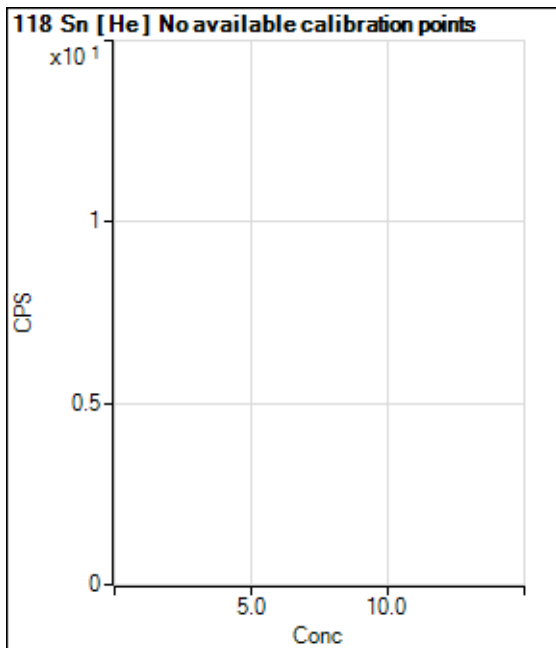
R = 0.9997

DL = 0.01128

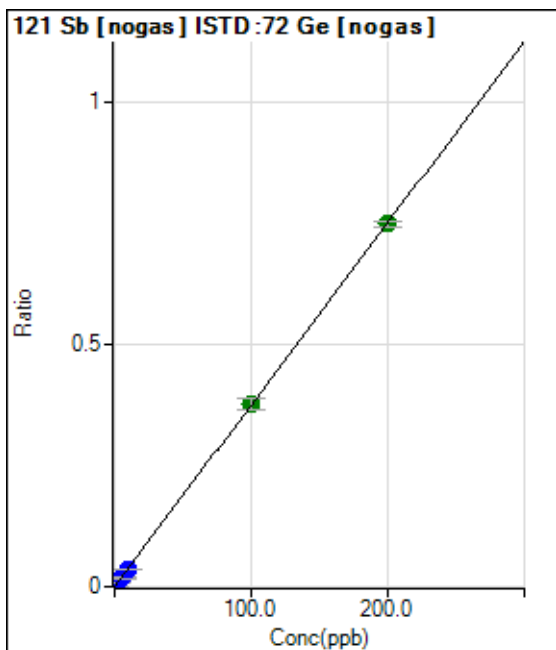
BEC = 0.1173

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>			406.68		P	12.4
2	<input type="checkbox"/>			6728.07		P	2.6
3	<input type="checkbox"/>			16841.59		P	4.0
4	<input type="checkbox"/>			31137.93		P	3.4
5	<input type="checkbox"/>			312781.85		P	1.4
6	<input type="checkbox"/>			630668.49		P	1.0
7	<input type="checkbox"/>						



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	296.68	0.0001	P	11.6
2	<input type="checkbox"/>	2.000	1.888	26693.96	0.0072	P	4.2
3	<input type="checkbox"/>	5.000	4.924	65067.39	0.0186	P	8.1
4	<input type="checkbox"/>	10.000	9.419	126611.04	0.0354	P	1.5
5	<input type="checkbox"/>	100.000	100.817	1299039.09	0.3785	A	6.7
6	<input type="checkbox"/>	200.000	199.623	2570602.72	0.7493	A	1.3
7	<input type="checkbox"/>	1.000					

$y = 0.0038 * x + 7.9642E-005$

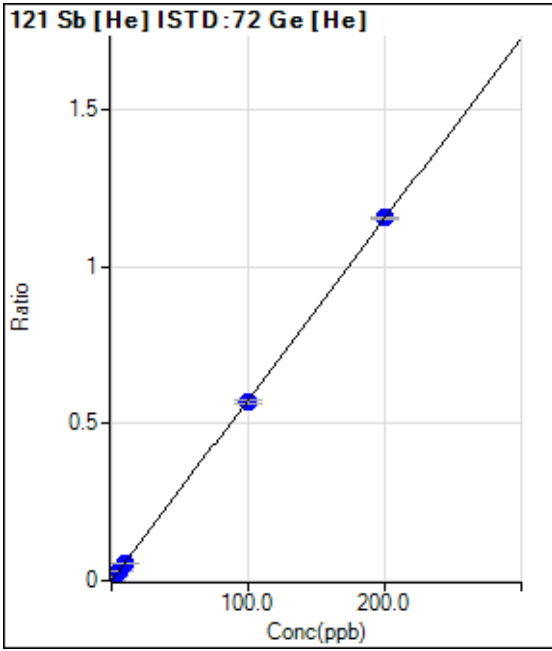
R = 1.0000

DL = 0.007399

BEC = 0.02122

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	106.67	0.0001	P	13.4
2	<input type="checkbox"/>	2.000	1.980	10690.09	0.0115	P	1.5
3	<input type="checkbox"/>	5.000	4.976	26089.78	0.0288	P	2.2
4	<input type="checkbox"/>	10.000	9.300	48667.95	0.0536	P	1.8
5	<input type="checkbox"/>	100.000	98.793	501163.47	0.5688	P	1.3
6	<input type="checkbox"/>	200.000	200.639	1013013.06	1.1550	P	0.6
7	<input type="checkbox"/>	1.000					

$y = 0.0058 * x + 1.1664E-004$

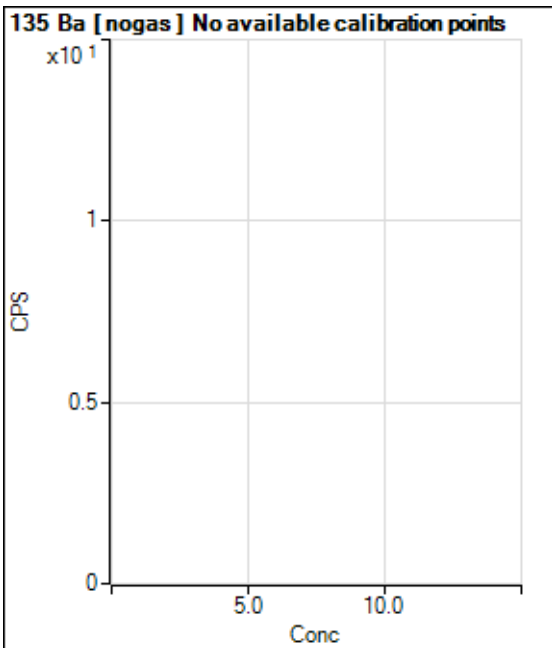
R = 1.0000

DL = 0.008155

BEC = 0.02026

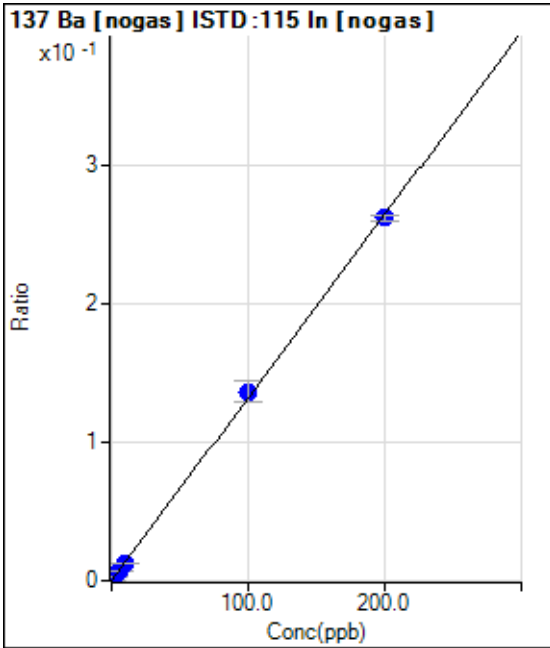
Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>			143.33		P	32.2
2	<input type="checkbox"/>			5160.85		P	1.4
3	<input type="checkbox"/>			12998.45		P	3.0
4	<input type="checkbox"/>			24484.27		P	2.6
5	<input type="checkbox"/>			248379.44		P	0.9
6	<input type="checkbox"/>			490069.47		P	1.9
7	<input type="checkbox"/>						

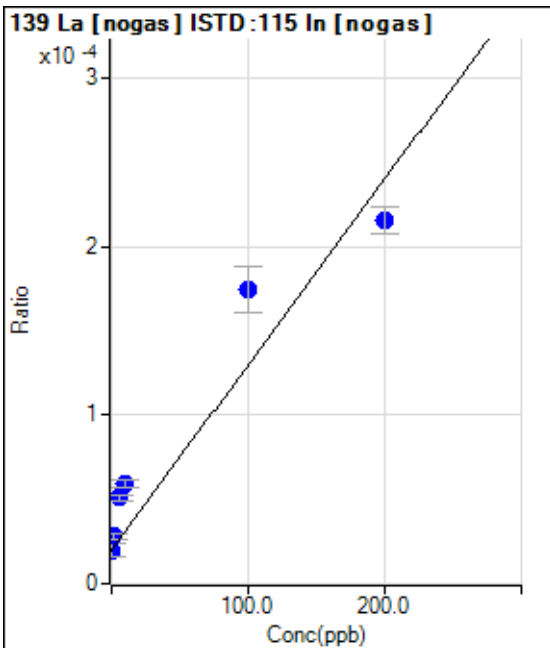
Calibration for 283_ICV.d



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	226.67	0.0001	P	25.8
2	<input type="checkbox"/>	2.000	1.874	8909.11	0.0025	P	5.1
3	<input type="checkbox"/>	5.000	5.264	22548.33	0.0070	P	12.3
4	<input type="checkbox"/>	10.000	9.525	41774.19	0.0126	P	5.7
5	<input type="checkbox"/>	100.000	103.315	424775.18	0.1363	P	11.0
6	<input type="checkbox"/>	200.000	198.361	858584.13	0.2616	P	1.5
7	<input type="checkbox"/>	1.000					

$y = 0.0013 * x + 6.4296E-005$
 R = 0.9998
 DL = 0.03768
 BEC = 0.04877

Weight: <None>
 Min Conc: <None>

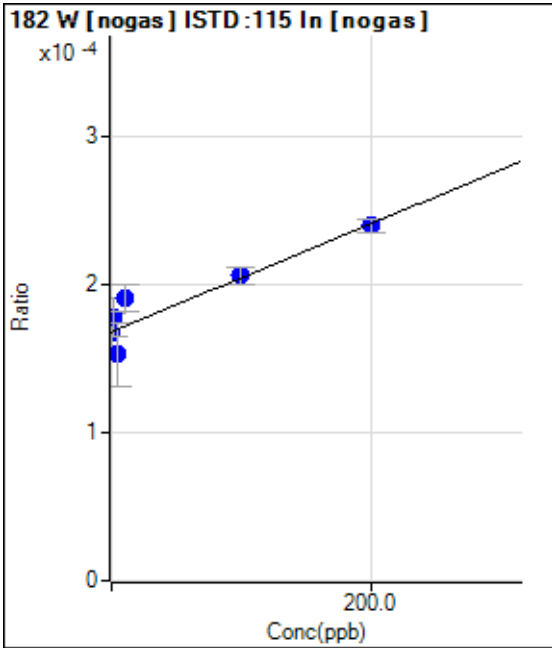


	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	70.00	0.0000	P	41.7
2	<input type="checkbox"/>	2.000	7.787	100.00	0.0000	P	11.8
3	<input type="checkbox"/>	5.000	28.464	166.67	0.0001	P	7.1
4	<input type="checkbox"/>	10.000	35.987	196.67	0.0001	P	8.3
5	<input type="checkbox"/>	100.000	140.830	543.35	0.0002	P	15.5
6	<input type="checkbox"/>	200.000	177.641	706.69	0.0002	P	7.4
7	<input type="checkbox"/>	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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	583.36	0.0002	P	14.2
2	<input type="checkbox"/>	2.000	26.827	623.36	0.0002	P	14.7
3	<input type="checkbox"/>	5.000	-41.847	503.35	0.0002	P	27.9
4	<input type="checkbox"/>	10.000	62.378	630.02	0.0002	P	9.9
5	<input type="checkbox"/>	100.000	103.671	643.35	0.0002	P	6.1
6	<input type="checkbox"/>	200.000	196.469	786.70	0.0002	P	4.0
7	<input type="checkbox"/>	1.000					

$y = 3.6486E-007 * x + 1.6785E-004$

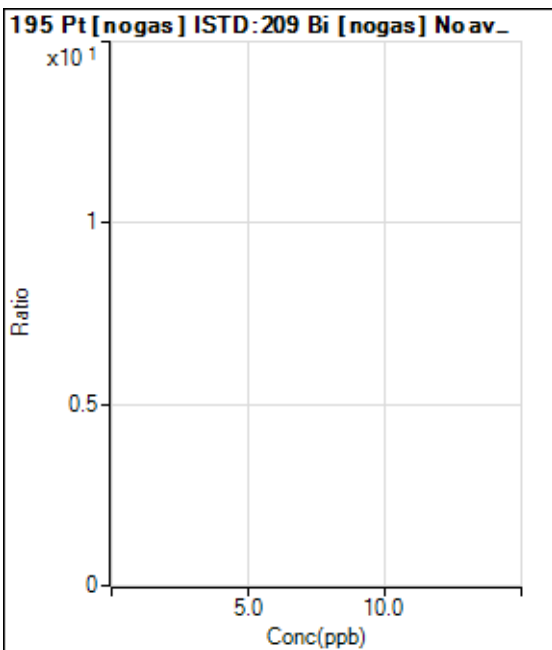
R = 0.9218

DL = 196

BEC = 460

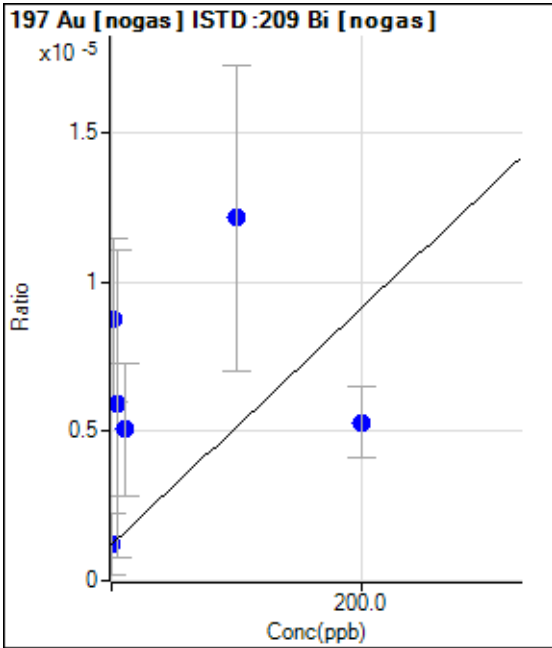
Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000					
2	<input type="checkbox"/>	2.000					
3	<input type="checkbox"/>	5.000					
4	<input type="checkbox"/>	10.000					
5	<input type="checkbox"/>	100.000					
6	<input type="checkbox"/>	200.000					
7	<input type="checkbox"/>	1.000					

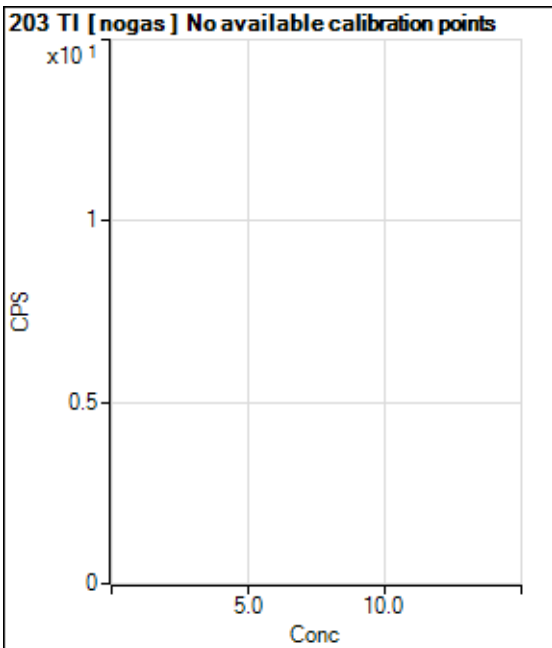




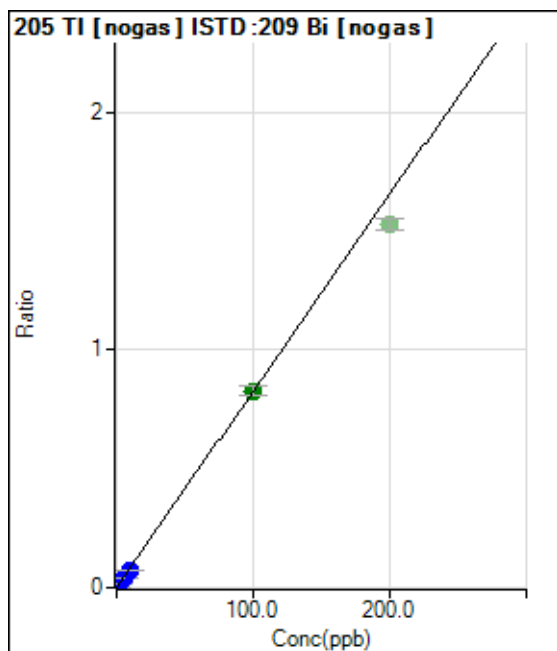
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	3.33	0.0000	P	173.
2	<input type="checkbox"/>	2.000	189.504	23.33	0.0000	P	62.6
3	<input type="checkbox"/>	5.000	118.783	13.33	0.0000	P	173.
4	<input type="checkbox"/>	10.000	96.996	13.33	0.0000	P	86.9
5	<input type="checkbox"/>	100.000	275.410	30.00	0.0000	P	84.2
6	<input type="checkbox"/>	200.000	103.225	13.33	0.0000	P	45.5
7	<input type="checkbox"/>	1.000					

$y = 3.9731E-008 * x + 1.2028E-006$
 R = 0.2286
 DL = 157.3
 BEC = 30.27

Weight: <None>
 Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>			66.67		P	37.7
2	<input type="checkbox"/>			17119.25		P	2.8
3	<input type="checkbox"/>			41579.91		P	1.2
4	<input type="checkbox"/>			79597.06		P	3.6
5	<input type="checkbox"/>			821817.88		P	4.1
6	<input type="checkbox"/>			1671901.90		A	2.3
7	<input type="checkbox"/>						



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	193.34	0.0001	P	18.8
2	<input type="checkbox"/>	2.000	1.851	40740.99	0.0154	P	5.0
3	<input type="checkbox"/>	5.000	5.037	100588.81	0.0417	P	6.0
4	<input type="checkbox"/>	10.000	8.893	190015.75	0.0736	P	8.8
5	<input type="checkbox"/>	100.000	100.112	1979502.47	0.8282	A	5.4
6	<input checked="" type="checkbox"/>	200.000		3861400.36	1.5275	A	3.2
7	<input type="checkbox"/>	1.000					

$y = 0.0083 * x + 7.2553E-005$

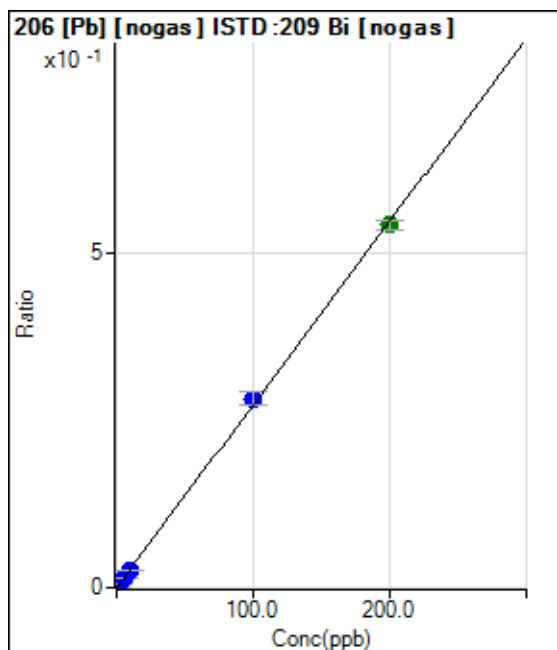
R = 0.9999

DL = 0.00495

BEC = 0.008771

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	66.67	0.0000	P	58.0
2	<input type="checkbox"/>	2.000	1.960	14263.03	0.0054	P	2.4
3	<input type="checkbox"/>	5.000	5.302	35021.14	0.0145	P	4.2
4	<input type="checkbox"/>	10.000	9.532	67342.04	0.0261	P	6.4
5	<input type="checkbox"/>	100.000	103.488	675581.37	0.2828	P	6.5
6	<input type="checkbox"/>	200.000	198.272	1369804.36	0.5418	A	2.7
7	<input type="checkbox"/>	1.000					

$y = 0.0027 * x + 2.5234E-005$

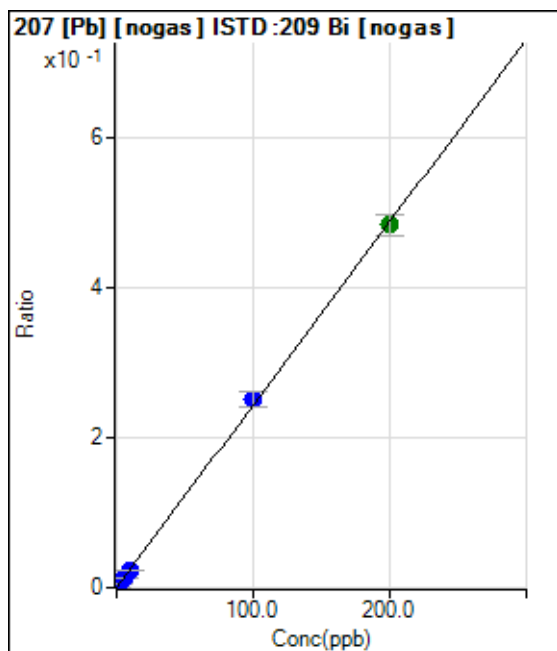
R = 0.9998

DL = 0.01606

BEC = 0.009235

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	<input type="checkbox"/>	0.000	0.000	90.00	0.0000	P	40.8
2	<input type="checkbox"/>	2.000	1.997	13005.38	0.0049	P	3.2
3	<input type="checkbox"/>	5.000	5.232	30866.07	0.0128	P	5.1
4	<input type="checkbox"/>	10.000	9.306	58752.44	0.0227	P	6.3
5	<input type="checkbox"/>	100.000	102.978	599927.82	0.2513	P	8.3
6	<input type="checkbox"/>	200.000	198.540	1224342.85	0.4846	A	5.6
7	<input type="checkbox"/>	1.000					

$y = 0.0024 * x + 3.3877E-005$

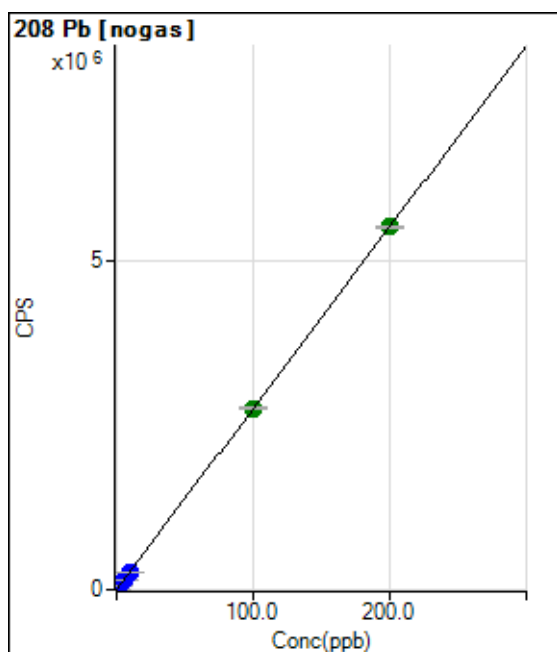
R = 0.9998

DL = 0.01698

BEC = 0.01388

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	<input type="checkbox"/>	0.000	0.000	306.67		P	12.3
2	<input type="checkbox"/>	2.000	2.069	57352.99		P	2.1
3	<input type="checkbox"/>	5.000	5.109	141171.14		P	0.4
4	<input type="checkbox"/>	10.000	9.703	267837.44		P	0.6
5	<input type="checkbox"/>	100.000	99.748	2750600.00		A	1.1
6	<input type="checkbox"/>	200.000	200.137	5518582.89		A	0.8
7	<input type="checkbox"/>	1.000					

$y = 27572.4291 * x + 306.6667$

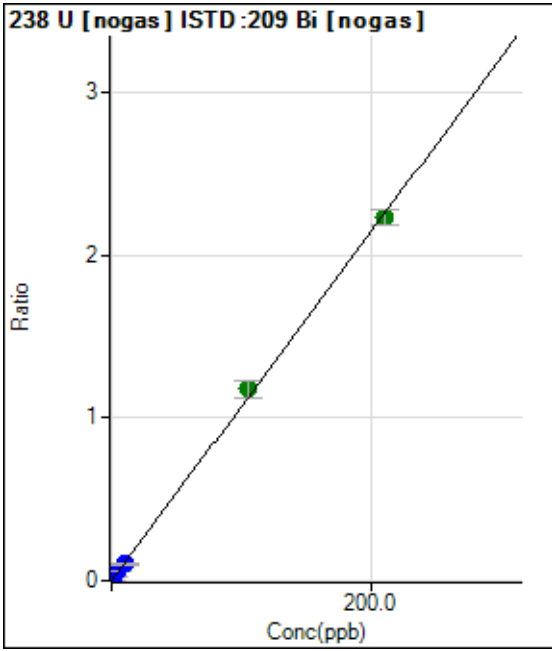
R = 1.0000

DL = 0.004119

BEC = 0.01112

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	70.00	0.0000	P	76.6
2	<input type="checkbox"/>	2.000	1.982	56471.05	0.0213	P	3.2
3	<input type="checkbox"/>	5.000	5.422	140377.29	0.0583	P	6.9
4	<input type="checkbox"/>	10.000	9.636	267280.05	0.1035	P	7.5
5	<input type="checkbox"/>	105.000	109.840	2814542.25	1.1797	A	9.3
6	<input type="checkbox"/>	210.000	207.587	5635326.58	2.2296	A	4.1
7	<input type="checkbox"/>	1.000					

$y = 0.0107 * x + 2.6312E-005$

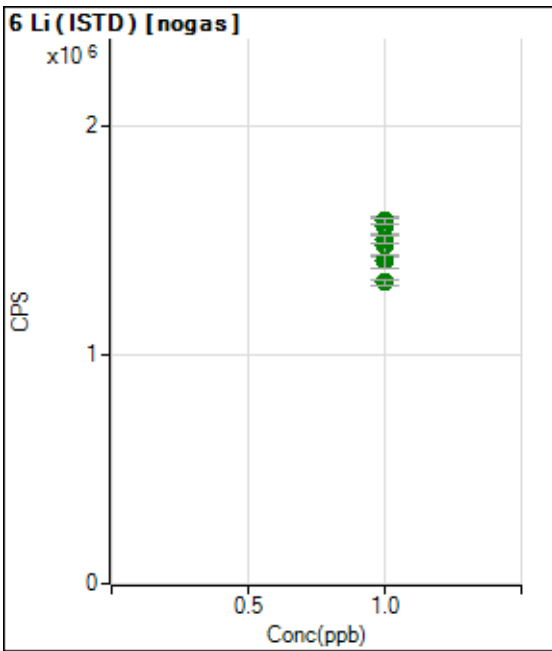
R = 0.9996

DL = 0.005626

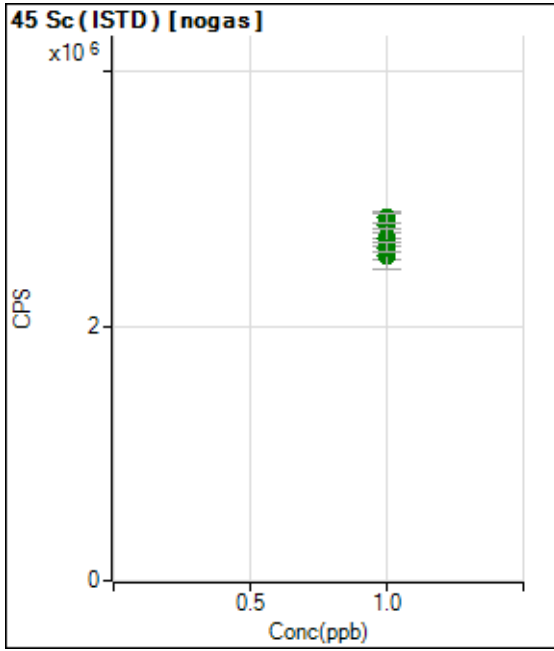
BEC = 0.00245

Weight: <None>

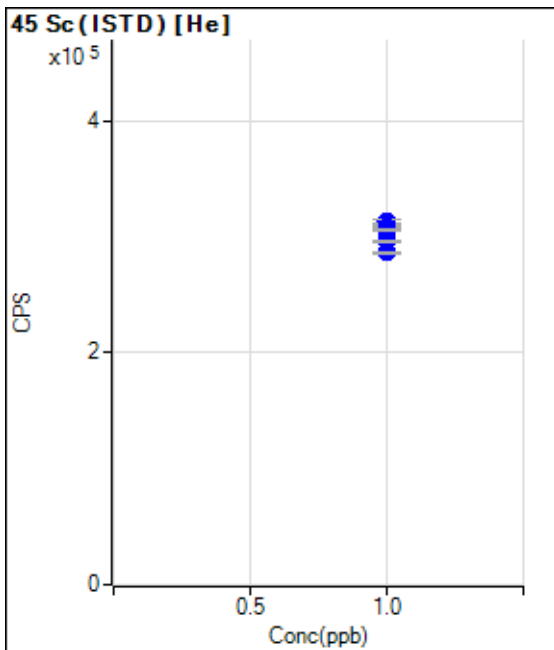
Min Conc: <None>



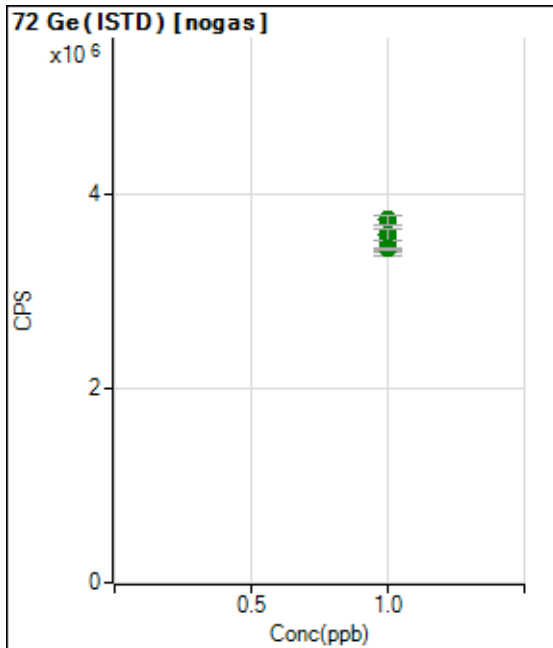
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	1.000		1561049.21		A	5.6
2	<input type="checkbox"/>	1.000		1582672.72		A	1.9
3	<input type="checkbox"/>	1.000		1473574.63		A	7.0
4	<input type="checkbox"/>	1.000		1501518.35		A	1.7
5	<input type="checkbox"/>	1.000		1408609.05		A	4.1
6	<input type="checkbox"/>	1.000		1316097.75		A	2.0
7	<input type="checkbox"/>	1.000					



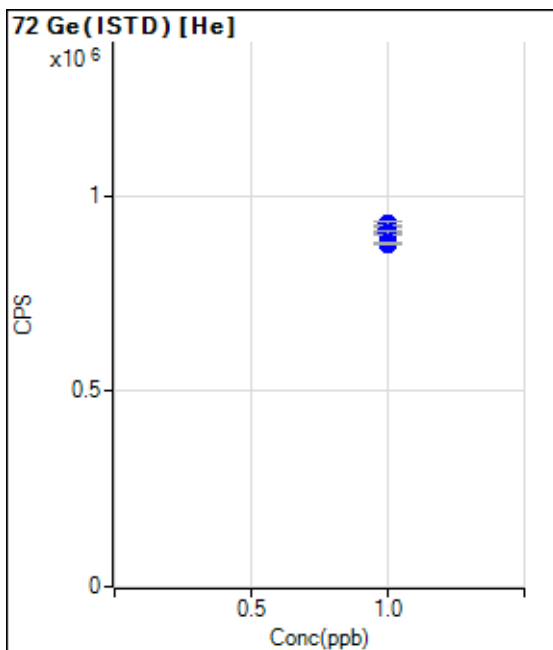
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	1.000		2792104.23		A	7.8
2	<input type="checkbox"/>	1.000		2848253.29		A	2.9
3	<input type="checkbox"/>	1.000		2629538.29		A	8.3
4	<input type="checkbox"/>	1.000		2691751.83		A	5.1
5	<input type="checkbox"/>	1.000		2556439.28		A	8.3
6	<input type="checkbox"/>	1.000		2617377.67		A	2.5
7	<input type="checkbox"/>	1.000					



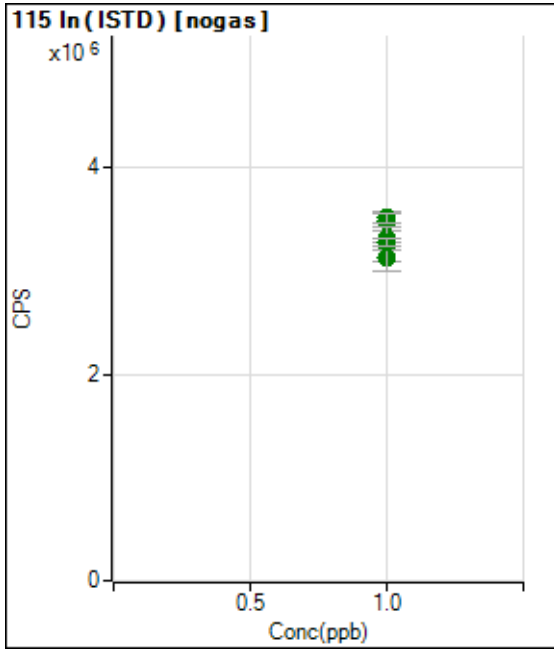
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	1.000		310721.29		P	0.4
2	<input type="checkbox"/>	1.000		312837.78		P	1.7
3	<input type="checkbox"/>	1.000		307894.91		P	0.7
4	<input type="checkbox"/>	1.000		305644.45		P	0.5
5	<input type="checkbox"/>	1.000		296519.14		P	0.4
6	<input type="checkbox"/>	1.000		286195.62		P	0.5
7	<input type="checkbox"/>	1.000					



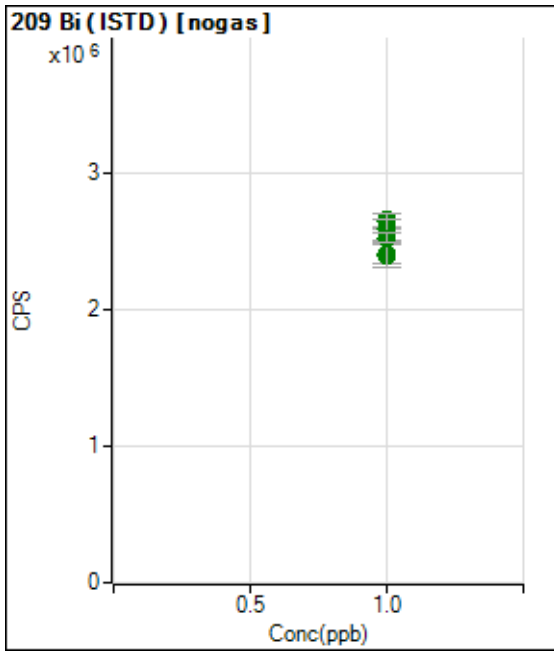
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	1.000		3727881.30		A	2.5
2	<input type="checkbox"/>	1.000		3727478.59		A	2.3
3	<input type="checkbox"/>	1.000		3518477.97		A	7.1
4	<input type="checkbox"/>	1.000		3574184.01		A	3.2
5	<input type="checkbox"/>	1.000		3438831.09		A	4.5
6	<input type="checkbox"/>	1.000		3430381.93		A	0.8
7	<input type="checkbox"/>	1.000					



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	1.000		913805.84		P	1.2
2	<input type="checkbox"/>	1.000		928507.20		P	1.1
3	<input type="checkbox"/>	1.000		907153.56		P	0.7
4	<input type="checkbox"/>	1.000		907296.55		P	1.1
5	<input type="checkbox"/>	1.000		881144.99		P	0.4
6	<input type="checkbox"/>	1.000		877109.31		P	0.6
7	<input type="checkbox"/>	1.000					



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	1.000		3493075.68		A	5.4
2	<input type="checkbox"/>	1.000		3516344.70		A	2.4
3	<input type="checkbox"/>	1.000		3243733.85		A	9.2
4	<input type="checkbox"/>	1.000		3317166.57		A	6.3
5	<input type="checkbox"/>	1.000		3137443.23		A	8.9
6	<input type="checkbox"/>	1.000		3282583.35		A	2.1
7	<input type="checkbox"/>	1.000					



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	1.000		2658884.91		A	3.8
2	<input type="checkbox"/>	1.000		2651686.57		A	3.9
3	<input type="checkbox"/>	1.000		2415811.32		A	5.9
4	<input type="checkbox"/>	1.000		2589500.90		A	5.9
5	<input type="checkbox"/>	1.000		2396302.57		A	7.2
6	<input type="checkbox"/>	1.000		2529566.32		A	3.1
7	<input type="checkbox"/>	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 031CAL.S.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 032CAL.S.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 033CAL.S.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 034CAL.S.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 035CAL.S.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	13006770	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	
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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	
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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	
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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 076CAL.S.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 077CAL.S.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 078CAL.S.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 079CAL.S.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 080CAL.S.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	
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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	
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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	
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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	
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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 139CAL.S.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 140CAL.S.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 141CAL.S.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 142CAL.S.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 143CAL.S.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	

Sample Report

Sample Table

Sample Name MBLK-136231
 Data File Name 155SMPL.d
 Data Path Name C:\Agilent\ICPMH\1\DATA\010
 Acq Date Time 2019-01-08T16:34:10-06:00
 Sample Type Sample
 Dilution 1
 Comment TW B136231
 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	0.002	0.002	210.13	107	0.00	2000	
Na	23	1	nogas	1.533	1.533	10.52	233876	0.00	200000	
Mg	24	1	nogas	10.560	10.560	3.98	84403	0.01	200000	
Al	27	1	nogas	4.964	4.964	5.20	53639	0.01	2000	
K	39	1	nogas	-52.867	-52.867	-26.91	5243680	0.00	200000	
Ti	47	1	nogas	0.039	0.039	187.19	190	0.02	2000	
V	51	1	nogas	-7.297	-7.297	-9.10	397956	0.00	2000	
Cr	52	1	nogas	-0.237	-0.237	-21.95	27841	0.00	2000	
Mn	55	1	nogas	0.412	0.412	9.02	21399	0.00	2000	
Co	59	1	nogas	-0.014	-0.014	-109.68	387	0.00	2000	
Ni	60	1	nogas	0.412	0.412	7.17	370	0.11	2000	
Cu	63	1	nogas	-0.008	-0.008	-182.99	1080	0.00	2000	
Zn	66	1	nogas	1.065	1.065	6.96	787	0.14	2000	
As	75	1	nogas	-0.173	-0.173	-287.67	69552	0.00	2000	
Sr	88	1	nogas	0.001	0.001	597.39	483	0.00	2000	
Ag	107	1	nogas	0.000	0.000	-770.37	27	0.00	2000	
Cd	111	1	nogas	-0.003	-0.003	-470.07	10	-0.03	2000	
Sb	121	1	nogas	0.103	0.103	7.48	880	0.01	2000	
Tl	205	1	nogas	0.009	0.009	98.22	180	0.01	2000	
Pb	208	1	nogas	0.002	0.002	229.13	180	0.00	2000	
U	238	1	nogas	0.004	0.004	114.14	80	0.00	2000	
[Pb]	206	1	nogas	0.002	0.002	128.71	67	0.00	2000	
[Pb]	207	1	nogas	0.010	0.010	74.43	43	0.02	2000	
Na	23	2	He	0.439	0.439	135.63	25457	0.00	200000	
Mg	24	2	He	11.379	11.379	2.07	4614	0.25	200000	
Al	27	2	He	4.269	4.269	7.67	1410	0.30	2000	
K	39	2	He	-5.156	-5.156	-71.53	137871	0.00	200000	
Ca	43	2	He	18.361	18.361	78.35	33	55.08	200000	
Ca	44	2	He	6.178	6.178	20.53	610	1.01	200000	
V	51	2	He	-0.734	-0.734	-6.29	5041	-0.01	2000	
Cr	52	2	He	0.071	0.071	54.20	2167	0.00	2000	
Mn	55	2	He	0.911	0.911	8.56	2237	0.04	2000	
Fe	56	2	He	5.573	5.573	4.62	20986	0.03	200000	
Co	59	2	He	0.000	0.000	763.38	83	0.00	2000	
Ni	60	2	He	-0.503	-0.503	-5.51	127	-0.40	2000	
Cu	63	2	He	-0.619	-0.619	-4.31	420	-0.15	2000	
Zn	66	2	He	-0.124	-0.124	-106.46	290	-0.04	2000	
As	75	2	He	0.001	0.001	4902.09	278	0.00	2000	
Se	78	2	He	-0.637	-0.637	-56.97	201	-0.32	2000	
B	11	1	nogas	-0.142	-0.142	-251.31	19480	0.00	2000	
Si	28	1	nogas	597.556	597.556	15.51	3119551	0.02	2000	
Ca	43	1	nogas	-1.837	-1.837	-63.95	413	-0.44	200000	
Ca	44	1	nogas	-4.837	-4.837	-22.45	26519	-0.02	200000	
Fe	56	1	nogas	-30.583	-30.583	-25.55	1621448	0.00	200000	

Sample Report

Se	77	1	nogas	-14.026	-14.026	-31.91	21983	-0.06	2000	
Se	82	1	nogas	0.274	0.274	39.83	167	0.16	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Mo	95	1	nogas	0.095	0.095	21.33	267	0.04	2000	
Sn	118	1	nogas	0.022	0.022	83.00	440	0.01	2000	
Ba	137	1	nogas	0.042	0.042	40.13	137	0.03	2000	
Sb	121	2	He	0.104	0.104	37.87	380	0.03	2000	
La	139	1	nogas	-18.740	-18.740	-72.56	13	-140.55	2000	
Au	197	1	nogas	-551.751	-551.751	-236.63	23	-2364.65	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	666457	1.84	625645	106.52	70	125	
Ge	72	1	nogas	1463543	1.72	1374265	106.50	70	125	
In	115	1	nogas	1267364	4.64	1163835	108.90	70	125	
Bi	209	1	nogas	899752	2.33	844865	106.50	70	125	
Ge	72	2	He	395484	1.20	383404	103.15	70	125	

Sample Report

Sample Table

Sample Name LCS-136231
 Data File Name 156SMPL.d
 Data Path Name C:\Agilent\ICPMH\1\DATA\010
 Acq Date Time 2019-01-08T16:36:10-06:00
 Sample Type Sample
 Dilution 1
 Comment TW B136231
 ISTD Ref FileName 138CALB.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	57.643	57.643	5.19	201059	0.03	2000	
Na	23	1	nogas	5334.026	5334.026	8.22	66053737	0.01	200000	
Mg	24	1	nogas	5396.680	5396.680	7.69	41252001	0.01	200000	
Al	27	1	nogas	115.824	115.824	12.36	970227	0.01	2000	
K	39	1	nogas	5839.352	5839.352	14.43	57522447	0.01	200000	
Ti	47	1	nogas	174.509	174.509	15.16	130449	0.13	2000	
V	51	1	nogas	44.900	44.900	6.85	941816	0.00	2000	
Cr	52	1	nogas	56.064	56.064	14.67	515857	0.01	2000	
Mn	55	1	nogas	56.882	56.882	13.42	623625	0.01	2000	
Co	59	1	nogas	56.405	56.405	12.74	497827	0.01	2000	
Ni	60	1	nogas	58.690	58.690	12.09	113576	0.05	2000	
Cu	63	1	nogas	59.474	59.474	11.94	275095	0.02	2000	
Zn	66	1	nogas	59.153	59.153	11.63	93616	0.06	2000	
As	75	1	nogas	54.999	54.999	18.07	193107	0.03	2000	
Sr	88	1	nogas	112.466	112.466	5.64	1294736	0.01	2000	
Ag	107	1	nogas	57.815	57.815	12.84	298140	0.02	2000	
Cd	111	1	nogas	54.376	54.376	13.09	63969	0.09	2000	
Sb	121	1	nogas	57.957	57.957	13.51	299687	0.02	2000	
Tl	205	1	nogas	55.069	55.069	2.11	404719	0.01	2000	
Pb	208	1	nogas	59.411	59.411	1.55	577753	0.01	2000	
U	238	1	nogas	110.999	110.999	2.32	1118260	0.01	2000	
[Pb]	206	1	nogas	57.041	57.041	2.04	145220	0.04	2000	
[Pb]	207	1	nogas	55.704	55.704	1.59	126013	0.04	2000	
Na	23	2	He	5817.450	5817.450	3.48	4159948	0.14	200000	
Mg	24	2	He	5938.326	5938.326	0.52	2246266	0.26	200000	
Al	27	2	He	115.680	115.680	2.09	25167	0.46	2000	
K	39	2	He	6298.441	6298.441	1.49	2665817	0.24	200000	
Ca	43	2	He	6041.438	6041.438	7.36	6558	92.12	200000	
Ca	44	2	He	5749.746	5749.746	1.30	106341	5.41	200000	
V	51	2	He	56.200	56.200	1.88	146585	0.04	2000	
Cr	52	2	He	56.216	56.216	1.67	149291	0.04	2000	
Mn	55	2	He	55.427	55.427	2.72	107301	0.05	2000	
Fe	56	2	He	5789.346	5789.346	2.78	13210884	0.04	200000	
Co	59	2	He	57.346	57.346	1.93	193367	0.03	2000	
Ni	60	2	He	57.258	57.258	2.76	48317	0.12	2000	
Cu	63	2	He	56.381	56.381	0.46	120853	0.05	2000	
Zn	66	2	He	56.678	56.678	4.83	31237	0.18	2000	
As	75	2	He	55.509	55.509	1.87	34467	0.16	2000	
Se	78	2	He	55.846	55.846	3.84	2941	1.90	2000	
B	11	1	nogas	620.850	620.850	11.95	1279104	0.05	2000	
Si	28	1	nogas	56981.940	56981.940	14.99	29142330	0.20	2000	>LDR
Ca	43	1	nogas	5823.022	5823.022	11.81	89896	6.48	200000	
Ca	44	1	nogas	5726.250	5726.250	5.85	1457662	0.39	200000	
Fe	56	1	nogas	5816.056	5816.056	14.62	54817322	0.01	200000	
Se	77	1	nogas	40.797	40.797	54.30	27841	0.15	2000	
Se	82	1	nogas	56.745	56.745	17.91	6481	0.88	2000	

Sample Report

Mo	95	1	nogas	56.715	56.715	12.93	125247	0.05	2000	
Sn	118	1	nogas	115.269	115.269	13.69	354234	0.03	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Ba	137	1	nogas	54.900	54.900	11.04	94553	0.06	2000	
Sb	121	2	He	58.348	58.348	0.94	126961	0.05	2000	
La	139	1	nogas	41.838	41.838	33.76	83	50.21	2000	
Au	197	1	nogas	1028.501	1028.501	108.91	10	10285.01	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	638709	5.09	625645	102.09	70	125	
Ge	72	1	nogas	1453382	12.54	1374265	105.76	70	125	
In	115	1	nogas	1236053	12.22	1163835	106.21	70	125	
Bi	209	1	nogas	920604	1.93	844865	108.96	70	125	
Ge	72	2	He	401806	1.48	383404	104.80	70	125	

Sample Report

Sample Table

Sample Name HS18121117-01SD
 Data File Name 158SMPL.d
 Data Path Name C:\Agilent\ICPMH\1\DATA\010
 Acq Date Time 2019-01-08T16:40:11-06:00
 Sample Type Sample
 Dilution 5
 Comment TW B136231
 ISTD Ref FileName 138CALB.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	-0.001	-10123.47	97	0.00	2000	
Na	23	1	nogas	50868.308	254341.541	6.25	601806247	0.01	200000	
Mg	24	1	nogas	7374.065	36870.324	7.49	53971389	0.01	200000	
Al	27	1	nogas	7.016	35.078	6.52	71612	0.01	2000	
K	39	1	nogas	10119.901	50599.504	5.40	98236704	0.01	200000	
Ti	47	1	nogas	0.295	1.476	11.00	390	0.08	2000	
V	51	1	nogas	0.702	3.511	90.08	487877	0.00	2000	
Cr	52	1	nogas	2.147	10.735	12.13	49399	0.00	2000	
Mn	55	1	nogas	111.731	558.654	2.54	1243588	0.01	2000	
Co	59	1	nogas	0.561	2.807	5.22	5608	0.01	2000	
Ni	60	1	nogas	2.508	12.541	6.89	4554	0.06	2000	
Cu	63	1	nogas	0.387	1.933	13.53	2957	0.01	2000	
Zn	66	1	nogas	3.774	18.868	7.80	5234	0.07	2000	
As	75	1	nogas	3.073	15.366	42.21	77792	0.00	2000	
Sr	88	1	nogas	372.193	1860.965	6.78	4372890	0.01	2000	
Ag	107	1	nogas	0.007	0.036	83.23	67	0.01	2000	
Cd	111	1	nogas	0.025	0.125	100.96	43	0.06	2000	
Sb	121	1	nogas	0.115	0.574	17.68	947	0.01	2000	
Tl	205	1	nogas	0.075	0.376	4.02	633	0.01	2000	
Pb	208	1	nogas	0.011	0.053	24.35	263	0.00	2000	
U	238	1	nogas	0.047	0.233	19.82	483	0.01	2000	
[Pb]	206	1	nogas	-0.004	-0.019	-113.41	50	-0.01	2000	
[Pb]	207	1	nogas	0.034	0.170	57.34	93	0.04	2000	
Na	23	2	He	52882.098	264410.489	1.17	37993601	0.14	200000	
Mg	24	2	He	7840.209	39201.043	1.27	2995000	0.26	200000	
Al	27	2	He	6.496	32.482	9.19	1927	0.34	2000	
K	39	2	He	11606.741	58033.704	1.18	4794615	0.24	200000	
Ca	43	2	He	12393.859	61969.296	1.76	13582	91.25	200000	
Ca	44	2	He	11731.831	58659.156	1.26	218624	5.37	200000	
V	51	2	He	-0.169	-0.845	-44.05	6590	0.00	2000	
Cr	52	2	He	2.215	11.077	9.29	7898	0.03	2000	
Mn	55	2	He	113.165	565.826	2.28	220734	0.05	2000	
Fe	56	2	He	317.437	1587.184	0.88	739985	0.04	200000	
Co	59	2	He	0.634	3.171	6.37	2243	0.03	2000	
Ni	60	2	He	1.124	5.621	7.18	1500	0.07	2000	
Cu	63	2	He	-0.495	-2.473	-12.75	697	-0.07	2000	
Zn	66	2	He	2.603	13.017	8.62	1800	0.14	2000	
As	75	2	He	0.202	1.012	50.08	410	0.05	2000	
Se	78	2	He	-0.829	-4.145	-33.08	197	-0.42	2000	
B	11	1	nogas	18.307	91.534	10.10	56119	0.03	2000	
Si	28	1	nogas	32934.862	164674.309	5.70	18531486	0.18	2000	>LDR
Ca	43	1	nogas	11204.965	56024.823	4.94	177205	6.32	200000	
Ca	44	1	nogas	11440.760	57203.799	6.46	2944772	0.39	200000	
Fe	56	1	nogas	303.038	1515.189	6.90	4763224	0.01	200000	
Se	77	1	nogas	10.363	51.817	108.00	25007	0.04	2000	
Se	82	1	nogas	0.158	0.788	273.00	153	0.10	2000	

Sample Report

Mo	95	1	nogas	0.088	0.438	9.42	253	0.03	2000	
Sn	118	1	nogas	0.119	0.597	21.59	727	0.02	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Ba	137	1	nogas	151.330	756.652	7.90	259906	0.06	2000	
Sb	121	2	He	0.145	0.724	6.24	480	0.03	2000	
La	139	1	nogas	229.581	1147.905	8.94	300	76.52	2000	
Au	197	1	nogas	-1437.711	-7188.553	-244.58	30	-4792.37	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	638153	4.42	625645	102.00	70	125	
Ge	72	1	nogas	1480079	5.16	1374265	107.70	70	125	
In	115	1	nogas	1226849	7.47	1163835	105.41	70	125	
Bi	209	1	nogas	870934	3.37	844865	103.09	70	125	
Ge	72	2	He	405834	1.50	383404	105.85	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	
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Sample Report

Sample Table

Sample Name HS18121117-01MS
 Data File Name 162SMPL.d
 Data Path Name C:\Agilent\ICPMH\1\DATA\010
 Acq Date Time 2019-01-08T16:49:00-06:00
 Sample Type Sample
 Dilution 1
 Comment TW B136231
 ISTD Ref FileName 138CALB.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	60.611	60.611	0.80	181834	0.03	2000	
Na	23	1	nogas	253637.404	253637.404	3.54	2920574065	0.01	200000	>LDR
Mg	24	1	nogas	40512.727	40512.727	1.40	288919315	0.01	200000	
Al	27	1	nogas	165.522	165.522	10.37	1294094	0.01	2000	
K	39	1	nogas	57384.153	57384.153	6.78	483343594	0.01	200000	
Ti	47	1	nogas	160.321	160.321	6.05	112606	0.14	2000	
V	51	1	nogas	49.019	49.019	9.51	920447	0.01	2000	
Cr	52	1	nogas	62.050	62.050	4.83	533019	0.01	2000	
Mn	55	1	nogas	634.140	634.140	4.71	6362948	0.01	2000	
Co	59	1	nogas	54.516	54.516	5.91	451029	0.01	2000	
Ni	60	1	nogas	61.919	61.919	6.82	112225	0.06	2000	
Cu	63	1	nogas	54.430	54.430	7.11	235838	0.02	2000	
Zn	66	1	nogas	65.397	65.397	5.77	97046	0.07	2000	
As	75	1	nogas	56.219	56.219	6.62	183560	0.03	2000	
Sr	88	1	nogas	2042.752	2042.752	5.22	21909162	0.01	2000	>LDR
Ag	107	1	nogas	51.824	51.824	6.50	250470	0.02	2000	
Cd	111	1	nogas	48.542	48.542	3.64	55715	0.09	2000	
Sb	121	1	nogas	55.813	55.813	6.56	270603	0.02	2000	
Tl	205	1	nogas	43.937	43.937	22.22	328278	0.01	2000	
Pb	208	1	nogas	51.160	51.160	2.42	497541	0.01	2000	
U	238	1	nogas	95.732	95.732	19.40	983997	0.01	2000	
[Pb]	206	1	nogas	47.521	47.521	19.91	123387	0.04	2000	
[Pb]	207	1	nogas	47.049	47.049	19.68	108583	0.04	2000	
Na	23	2	He	276704.509	276704.509	1.36	180411184	0.15	200000	>LDR
Mg	24	2	He	45431.140	45431.140	0.77	15755399	0.29	200000	
Al	27	2	He	163.102	163.102	1.69	32338	0.50	2000	
K	39	2	He	57223.994	57223.994	1.47	23088600	0.25	200000	
Ca	43	2	He	68509.761	68509.761	1.61	68107	100.59	200000	
Ca	44	2	He	66314.643	66314.643	0.95	1119840	5.92	200000	
V	51	2	He	52.506	52.506	2.12	126004	0.04	2000	
Cr	52	2	He	62.408	62.408	0.90	151787	0.04	2000	
Mn	55	2	He	641.363	641.363	0.44	1133730	0.06	2000	
Fe	56	2	He	7021.028	7021.028	0.52	14692941	0.05	200000	
Co	59	2	He	55.519	55.519	1.77	171667	0.03	2000	
Ni	60	2	He	60.545	60.545	1.78	46803	0.13	2000	
Cu	63	2	He	52.048	52.048	0.53	102422	0.05	2000	
Zn	66	2	He	65.666	65.666	0.84	33144	0.20	2000	
As	75	2	He	53.994	53.994	0.75	30755	0.18	2000	
Se	78	2	He	54.158	54.158	2.78	2622	2.07	2000	
B	11	1	nogas	707.475	707.475	3.52	1254813	0.06	2000	
Si	28	1	nogas	228089.972	228089.972	7.36	101529018	0.22	2000	>LDR
Ca	43	1	nogas	63575.360	63575.360	5.27	915370	6.95	200000	
Ca	44	1	nogas	63561.340	63561.340	4.80	14821316	0.43	200000	
Fe	56	1	nogas	6908.845	6908.845	4.79	60804037	0.01	200000	
Se	77	1	nogas	52.479	52.479	29.11	27271	0.19	2000	
Se	82	1	nogas	53.903	53.903	11.45	5788	0.93	2000	

Sample Report

Mo	95	1	nogas	52.253	52.253	4.23	108268	0.05	2000	
Sn	118	1	nogas	101.771	101.771	1.39	305422	0.03	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Ba	137	1	nogas	833.350	833.350	6.84	1397840	0.06	2000	
Sb	121	2	He	56.561	56.561	2.95	112859	0.05	2000	
La	139	1	nogas	1111.009	1111.009	5.34	1283	86.57	2000	
Au	197	1	nogas	1139.558	1139.558	80.26	10	11395.58	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	548529	1.00	625645	87.67	70	125	
Ge	72	1	nogas	1351547	7.17	1374265	98.35	70	125	
In	115	1	nogas	1193742	2.41	1163835	102.57	70	125	
Bi	209	1	nogas	964738	20.38	844865	114.19	70	125	
Ge	72	2	He	368430	0.89	383404	96.09	70	125	

Sample Report

Sample Table

Sample Name HS18121117-01MSD
 Data File Name 163SMPL.d
 Data Path Name C:\Agilent\ICPMH\1\DATA\010
 Acq Date Time 2019-01-08T16:51:03-06:00
 Sample Type Sample
 Dilution 1
 Comment TW B136231
 ISTD Ref FileName 138CALB.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	60.617	60.617	1.82	178965	0.03	2000	
Na	23	1	nogas	241285.560	241285.560	2.72	2859820797	0.01	200000	>LDR
Mg	24	1	nogas	39231.579	39231.579	0.75	287948890	0.01	200000	
Al	27	1	nogas	142.326	142.326	6.98	1203084	0.01	2000	
K	39	1	nogas	52460.512	52460.512	2.87	477889461	0.01	200000	
Ti	47	1	nogas	155.780	155.780	1.21	118221	0.13	2000	
V	51	1	nogas	50.992	50.992	3.75	1010391	0.01	2000	
Cr	52	1	nogas	57.059	57.059	1.71	531783	0.01	2000	
Mn	55	1	nogas	573.583	573.583	1.22	6216074	0.01	2000	
Co	59	1	nogas	49.807	49.807	1.15	445199	0.01	2000	
Ni	60	1	nogas	57.317	57.317	0.36	112275	0.05	2000	
Cu	63	1	nogas	50.485	50.485	0.88	236486	0.02	2000	
Zn	66	1	nogas	61.881	61.881	1.24	99138	0.06	2000	
As	75	1	nogas	54.294	54.294	0.27	193781	0.03	2000	
Sr	88	1	nogas	1881.118	1881.118	0.79	21793896	0.01	2000	>LDR
Ag	107	1	nogas	48.940	48.940	2.87	255657	0.02	2000	
Cd	111	1	nogas	49.753	49.753	2.58	55762	0.09	2000	
Sb	121	1	nogas	50.944	50.944	2.34	266964	0.02	2000	
Tl	205	1	nogas	49.919	49.919	6.36	344850	0.01	2000	
Pb	208	1	nogas	51.345	51.345	2.43	499334	0.01	2000	
U	238	1	nogas	103.371	103.371	6.04	978894	0.01	2000	
[Pb]	206	1	nogas	52.020	52.020	4.48	124527	0.04	2000	
[Pb]	207	1	nogas	51.174	51.174	4.19	108876	0.05	2000	
Na	23	2	He	277834.597	277834.597	1.79	181376591	0.15	200000	>LDR
Mg	24	2	He	46667.963	46667.963	1.53	16206014	0.29	200000	
Al	27	2	He	165.433	165.433	0.74	32835	0.50	2000	
K	39	2	He	58187.984	58187.984	0.34	23475190	0.25	200000	
Ca	43	2	He	72353.336	72353.336	2.05	72025	100.46	200000	
Ca	44	2	He	69864.897	69864.897	4.05	1181381	5.91	200000	
V	51	2	He	56.225	56.225	0.97	134673	0.04	2000	
Cr	52	2	He	65.177	65.177	0.96	158655	0.04	2000	
Mn	55	2	He	658.717	658.717	2.83	1165997	0.06	2000	
Fe	56	2	He	7315.676	7315.676	2.71	15329719	0.05	200000	
Co	59	2	He	57.022	57.022	2.02	176559	0.03	2000	
Ni	60	2	He	63.048	63.048	0.99	48788	0.13	2000	
Cu	63	2	He	53.761	53.761	1.88	105884	0.05	2000	
Zn	66	2	He	67.531	67.531	2.57	34122	0.20	2000	
As	75	2	He	57.098	57.098	1.27	32551	0.18	2000	
Se	78	2	He	54.976	54.976	4.79	2662	2.07	2000	
B	11	1	nogas	673.480	673.480	3.30	1175831	0.06	2000	
Si	28	1	nogas	209666.568	209666.568	2.64	101079908	0.21	2000	>LDR
Ca	43	1	nogas	58761.320	58761.320	0.58	914005	6.43	200000	
Ca	44	1	nogas	59491.694	59491.694	1.28	14982107	0.40	200000	
Fe	56	1	nogas	6300.990	6300.990	2.13	60061470	0.01	200000	
Se	77	1	nogas	60.980	60.980	8.88	30402	0.20	2000	
Se	82	1	nogas	47.971	47.971	4.71	5594	0.86	2000	

Sample Report

Mo	95	1	nogas	49.068	49.068	3.34	109729	0.04	2000	
Sn	118	1	nogas	104.100	104.100	4.16	304735	0.03	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Ba	137	1	nogas	855.884	855.884	3.86	1400767	0.06	2000	
Sb	121	2	He	58.071	58.071	2.00	116009	0.05	2000	
La	139	1	nogas	1287.586	1287.586	6.55	1447	89.00	2000	
Au	197	1	nogas	-287.705	-287.705	-744.71	20	-1438.53	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	539884	1.42	625645	86.29	70	125	
Ge	72	1	nogas	1456443	2.48	1374265	105.98	70	125	
In	115	1	nogas	1165342	3.90	1163835	100.13	70	125	
Bi	209	1	nogas	866252	2.47	844865	102.53	70	125	
Ge	72	2	He	368940	0.53	383404	96.23	70	125	

Sample Report

Sample Table

Sample Name HS18121117-01PDS
 Data File Name 164SMPL.d
 Data Path Name C:\Agilent\ICPMH\1\DATA\010
 Acq Date Time 2019-01-08T16:53:06-06:00
 Sample Type Sample
 Dilution 1
 Comment TW B136231
 ISTD Ref FileName 138CALB.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	134.324	134.324	2.97	402450	0.03	2000	
Na	23	1	nogas	241165.071	241165.071	0.65	2788181862	0.01	200000	>LDR
Mg	24	1	nogas	45421.707	45421.707	0.97	325080457	0.01	200000	
Al	27	1	nogas	131.032	131.032	1.83	1055280	0.01	2000	
K	39	1	nogas	60420.616	60420.616	2.75	522661028	0.01	200000	
Ti	47	1	nogas	118.538	118.538	2.89	85541	0.14	2000	
V	51	1	nogas	111.225	111.225	4.29	1563988	0.01	2000	
Cr	52	1	nogas	120.413	120.413	1.61	1035627	0.01	2000	
Mn	55	1	nogas	650.151	650.151	1.28	6699853	0.01	2000	
Co	59	1	nogas	111.771	111.771	2.75	949397	0.01	2000	
Ni	60	1	nogas	118.724	118.724	2.50	221581	0.05	2000	
Cu	63	1	nogas	112.795	112.795	2.43	501180	0.02	2000	
Zn	66	1	nogas	123.960	123.960	3.13	189717	0.07	2000	
As	75	1	nogas	117.537	117.537	2.55	321814	0.04	2000	
Sr	88	1	nogas	1904.302	1904.302	4.20	20971043	0.01	2000	>LDR
Ag	107	1	nogas	106.999	106.999	2.08	531437	0.02	2000	
Cd	111	1	nogas	113.595	113.595	0.80	122174	0.09	2000	
Sb	121	1	nogas	109.218	109.218	1.84	544012	0.02	2000	
Tl	205	1	nogas	114.706	114.706	0.13	764243	0.02	2000	
Pb	208	1	nogas	110.029	110.029	0.37	1069855	0.01	2000	
U	238	1	nogas	0.362	0.362	30.08	3350	0.01	2000	
[Pb]	206	1	nogas	115.978	115.978	0.66	267656	0.04	2000	
[Pb]	207	1	nogas	114.315	114.315	1.23	234487	0.05	2000	
Na	23	2	He	283674.206	283674.206	3.94	185067091	0.15	200000	>LDR
Mg	24	2	He	52698.536	52698.536	3.16	18291523	0.29	200000	
Al	27	2	He	143.046	143.046	6.95	28425	0.50	2000	
K	39	2	He	65033.013	65033.013	1.45	26220267	0.25	200000	
Ca	43	2	He	76717.454	76717.454	3.40	76319	100.52	200000	
Ca	44	2	He	79763.212	79763.212	3.23	1347967	5.92	200000	
V	51	2	He	122.521	122.521	2.59	285838	0.04	2000	
Cr	52	2	He	131.182	131.182	3.25	317275	0.04	2000	
Mn	55	2	He	749.597	749.597	5.91	1325437	0.06	2000	
Fe	56	2	He	14306.889	14306.889	3.70	29953519	0.05	200000	
Co	59	2	He	124.017	124.017	3.90	383655	0.03	2000	
Ni	60	2	He	127.456	127.456	4.32	98040	0.13	2000	
Cu	63	2	He	117.135	117.135	3.57	228695	0.05	2000	
Zn	66	2	He	131.540	131.540	1.55	66136	0.20	2000	
As	75	2	He	122.706	122.706	3.31	69617	0.18	2000	
Se	78	2	He	125.726	125.726	1.91	5809	2.16	2000	
B	11	1	nogas	90.543	90.543	4.40	174577	0.05	2000	
Si	28	1	nogas	164230.494	164230.494	3.53	75871916	0.22	2000	>LDR
Ca	43	1	nogas	66293.603	66293.603	1.52	980597	6.76	200000	
Ca	44	1	nogas	68293.531	68293.531	4.72	16344909	0.42	200000	
Fe	56	1	nogas	12832.523	12832.523	0.94	114467711	0.01	200000	

Sample Report

Se	77	1	nogas	128.901	128.901	4.31	36250	0.36	2000	
Se	82	1	nogas	112.849	112.849	1.76	12341	0.91	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Mo	95	1	nogas	114.672	114.672	2.43	243889	0.05	2000	
Sn	118	1	nogas	0.522	0.522	32.82	1787	0.03	2000	
Ba	137	1	nogas	923.947	923.947	1.49	1451397	0.06	2000	
Sb	121	2	He	120.966	120.966	3.18	241364	0.05	2000	
La	139	1	nogas	1209.097	1209.097	12.91	1307	92.53	2000	
Au	197	1	nogas	55.606	55.606	1312.46	17	333.63	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	548025	1.10	625645	87.59	70	125	
Ge	72	1	nogas	1385477	3.30	1374265	100.82	70	125	
In	115	1	nogas	1118156	2.12	1163835	96.08	70	125	
Bi	209	1	nogas	834741	0.74	844865	98.80	70	125	
Ge	72	2	He	368948	2.80	383404	96.23	70	125	

Sample Report

Sample Table

Sample Name HS18121123-01
 Data File Name 171SMPL.d
 Data Path Name C:\Agilent\ICPMH\1\DATA\010
 Acq Date Time 2019-01-08T17:07:18-06:00
 Sample Type Sample
 Dilution 1
 Comment TW B136231
 ISTD Ref FileName 138CALB.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	0.055	0.055	6.97	293	0.02	2000	
Na	23	1	nogas	26289.766	26289.766	1.05	320639774	0.01	200000	
Mg	24	1	nogas	375.210	375.210	4.37	2834373	0.01	200000	
Al	27	1	nogas	228.798	228.798	1.88	1881308	0.01	2000	
K	39	1	nogas	482.460	482.460	3.64	9792559	0.00	200000	
Ti	47	1	nogas	4.318	4.318	1.87	3347	0.13	2000	
V	51	1	nogas	22.985	22.985	14.74	697404	0.00	2000	
Cr	52	1	nogas	50.376	50.376	2.59	461266	0.01	2000	
Mn	55	1	nogas	5.324	5.324	2.88	72579	0.01	2000	
Co	59	1	nogas	0.330	0.330	7.89	3374	0.01	2000	
Ni	60	1	nogas	9.124	9.124	1.85	17071	0.05	2000	
Cu	63	1	nogas	1.169	1.169	9.53	6401	0.02	2000	
Zn	66	1	nogas	5.818	5.818	7.17	8259	0.07	2000	
As	75	1	nogas	10.361	10.361	22.29	90979	0.01	2000	
Sr	88	1	nogas	9.822	9.822	1.95	111464	0.01	2000	
Ag	107	1	nogas	0.003	0.003	158.19	43	0.01	2000	
Cd	111	1	nogas	0.005	0.005	168.23	20	0.03	2000	
Sb	121	1	nogas	0.366	0.366	6.20	2197	0.02	2000	
Tl	205	1	nogas	0.016	0.016	56.47	237	0.01	2000	
Pb	208	1	nogas	0.144	0.144	10.13	1560	0.01	2000	
U	238	1	nogas	0.057	0.057	10.62	613	0.01	2000	
[Pb]	206	1	nogas	0.128	0.128	10.22	390	0.03	2000	
[Pb]	207	1	nogas	0.159	0.159	23.04	380	0.04	2000	
Na	23	2	He	29390.426	29390.426	2.46	19905728	0.15	200000	
Mg	24	2	He	410.795	410.795	3.38	148178	0.28	200000	
Al	27	2	He	247.099	247.099	2.92	50574	0.49	2000	
K	39	2	He	556.498	556.498	1.54	363113	0.15	200000	
Ca	43	2	He	644.702	644.702	17.32	677	95.27	200000	
Ca	44	2	He	644.465	644.465	6.31	11764	5.48	200000	
V	51	2	He	2.093	2.093	7.71	11559	0.02	2000	
Cr	52	2	He	53.316	53.316	1.72	134855	0.04	2000	
Mn	55	2	He	6.330	6.330	2.05	12104	0.05	2000	
Fe	56	2	He	459.420	459.420	1.03	1005628	0.05	200000	
Co	59	2	He	0.380	0.380	10.64	1300	0.03	2000	
Ni	60	2	He	7.709	7.709	5.84	6641	0.12	2000	
Cu	63	2	He	0.240	0.240	25.14	2130	0.01	2000	
Zn	66	2	He	5.111	5.111	5.38	2994	0.17	2000	
As	75	2	He	0.279	0.279	20.62	432	0.06	2000	
Se	78	2	He	4.671	4.671	14.78	440	1.06	2000	
B	11	1	nogas	122.059	122.059	1.08	273097	0.04	2000	
Si	28	1	nogas	217389.711	217389.711	1.36	102160112	0.21	2000	>LDR
Ca	43	1	nogas	564.372	564.372	5.21	8986	6.28	200000	
Ca	44	1	nogas	632.172	632.172	2.42	181950	0.35	200000	
Fe	56	1	nogas	389.676	389.676	1.27	5358593	0.01	200000	
Se	77	1	nogas	59.287	59.287	23.39	29454	0.20	2000	
Se	82	1	nogas	4.852	4.852	15.56	670	0.72	2000	

Sample Report

Mo	95	1	nogas	0.102	0.102	36.91	273	0.04	2000	
Sn	118	1	nogas	0.166	0.166	25.57	873	0.02	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Ba	137	1	nogas	23.988	23.988	2.08	41574	0.06	2000	
Sb	121	2	He	0.364	0.364	4.92	907	0.04	2000	
La	139	1	nogas	3232.492	3232.492	2.77	3787	85.35	2000	>LDR
Au	197	1	nogas	-566.740	-566.740	-490.88	23	-2428.89	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	651480	1.32	625645	104.13	70	125	
Ge	72	1	nogas	1420674	0.96	1374265	103.38	70	125	
In	115	1	nogas	1231749	0.44	1163835	105.84	70	125	
Bi	209	1	nogas	924811	6.73	844865	109.46	70	125	
Ge	72	2	He	382472	2.57	383404	99.76	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	
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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	

Sample Report

Sample Table

Sample Name HS18121123-02
 Data File Name 174SMPL.d
 Data Path Name C:\Agilent\ICPMH\1\DATA\010
 Acq Date Time 2019-01-08T17:13:15-06:00
 Sample Type Sample
 Dilution 1
 Comment TW B136231
 ISTD Ref FileName 138CALB.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	0.576	0.576	4.80	2027	0.03	2000	
Na	23	1	nogas	97465.555	97465.555	6.10	1138023159	0.01	200000	
Mg	24	1	nogas	4028.955	4028.955	6.45	29119367	0.01	200000	
Al	27	1	nogas	6578.888	6578.888	3.57	53307413	0.01	2000	>LDR
K	39	1	nogas	3507.636	3507.636	6.48	36025703	0.01	200000	
Ti	47	1	nogas	37.143	37.143	2.44	27378	0.14	2000	
V	51	1	nogas	18.319	18.319	3.68	644674	0.00	2000	
Cr	52	1	nogas	11.833	11.833	6.60	129393	0.01	2000	
Mn	55	1	nogas	330.730	330.730	4.25	3472626	0.01	2000	
Co	59	1	nogas	11.273	11.273	4.18	97823	0.01	2000	
Ni	60	1	nogas	22.935	22.935	3.64	43184	0.05	2000	
Cu	63	1	nogas	4.383	4.383	4.47	20835	0.02	2000	
Zn	66	1	nogas	24.359	24.359	6.44	37155	0.07	2000	
As	75	1	nogas	19.722	19.722	1.91	111002	0.02	2000	
Sr	88	1	nogas	136.924	136.924	4.43	1533962	0.01	2000	
Ag	107	1	nogas	0.034	0.034	23.70	200	0.02	2000	
Cd	111	1	nogas	0.067	0.067	86.83	83	0.08	2000	
Sb	121	1	nogas	1.397	1.397	6.67	7388	0.02	2000	
Tl	205	1	nogas	0.097	0.097	6.09	747	0.01	2000	
Pb	208	1	nogas	3.685	3.685	2.21	35983	0.01	2000	
U	238	1	nogas	0.708	0.708	5.96	6481	0.01	2000	
[Pb]	206	1	nogas	4.001	4.001	1.14	9256	0.04	2000	
[Pb]	207	1	nogas	3.724	3.724	4.71	7629	0.05	2000	
Na	23	2	He	106583.053	106583.053	1.52	71897677	0.15	200000	
Mg	24	2	He	4427.283	4427.283	3.36	1588857	0.28	200000	
Al	27	2	He	7085.668	7085.668	2.68	1431953	0.49	2000	>LDR
K	39	2	He	4013.328	4013.328	0.99	1749413	0.23	200000	
Ca	43	2	He	3690.756	3690.756	0.57	3807	96.94	200000	
Ca	44	2	He	3453.691	3453.691	2.00	60783	5.68	200000	
V	51	2	He	12.379	12.379	0.93	35763	0.03	2000	
Cr	52	2	He	12.712	12.712	0.87	33500	0.04	2000	
Mn	55	2	He	345.686	345.686	1.29	632265	0.05	2000	
Fe	56	2	He	9782.504	9782.504	2.11	21172555	0.05	200000	
Co	59	2	He	11.938	11.938	0.96	38247	0.03	2000	
Ni	60	2	He	22.726	22.726	2.52	18496	0.12	2000	
Cu	63	2	He	3.286	3.286	2.06	8229	0.04	2000	
Zn	66	2	He	24.340	24.340	0.63	12925	0.19	2000	
As	75	2	He	15.488	15.488	1.02	9315	0.17	2000	
Se	78	2	He	3.801	3.801	10.63	398	0.96	2000	
B	11	1	nogas	118.717	118.717	3.63	250486	0.05	2000	
Si	28	1	nogas	304643.853	304643.853	2.01	140887278	0.22	2000	>LDR
Ca	43	1	nogas	3104.786	3104.786	6.25	47063	6.60	200000	
Ca	44	1	nogas	3143.856	3143.856	3.67	790947	0.40	200000	
Fe	56	1	nogas	9410.064	9410.064	5.89	85766446	0.01	200000	
Se	77	1	nogas	30.294	30.294	5.62	26049	0.12	2000	
Se	82	1	nogas	3.577	3.577	11.89	523	0.68	2000	

Sample Report

Mo	95	1	nogas	0.515	0.515	6.84	1163	0.04	2000	
Sn	118	1	nogas	0.406	0.406	7.34	1483	0.03	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Ba	137	1	nogas	406.425	406.425	9.03	643099	0.06	2000	
Sb	121	2	He	1.499	1.499	9.56	3244	0.05	2000	
La	139	1	nogas	107418.224	107418.224	9.43	113995	94.23	2000	>LDR
Au	197	1	nogas	-836.747	-836.747	-246.08	23	-3586.06	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	613682	3.61	625645	98.09	70	125	
Ge	72	1	nogas	1409590	4.24	1374265	102.57	70	125	
In	115	1	nogas	1132146	8.95	1163835	97.28	70	125	
Bi	209	1	nogas	831945	3.36	844865	98.47	70	125	
Ge	72	2	He	381086	1.19	383404	99.40	70	125	

Sample Report

Sample Table

Sample Name HS18121123-03
 Data File Name 175SMPL.d
 Data Path Name C:\Agilent\ICPMH\1\DATA\010
 Acq Date Time 2019-01-08T17:15:14-06:00
 Sample Type Sample
 Dilution 1
 Comment TW B136231
 ISTD Ref FileName 138CALB.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	0.051	0.051	12.55	247	0.02	2000	
Na	23	1	nogas	105912.664	105912.664	0.49	1216133894	0.01	200000	
Mg	24	1	nogas	17796.879	17796.879	1.06	126472561	0.01	200000	
Al	27	1	nogas	75.778	75.778	12.99	614439	0.01	2000	
K	39	1	nogas	44667.135	44667.135	14.33	387085684	0.01	200000	
Ti	47	1	nogas	2.448	2.448	21.60	1903	0.13	2000	
V	51	1	nogas	5.241	5.241	139.77	501017	0.00	2000	
Cr	52	1	nogas	6.733	6.733	22.14	84456	0.01	2000	
Mn	55	1	nogas	680.340	680.340	10.98	7013877	0.01	2000	
Co	59	1	nogas	13.590	13.590	14.71	115606	0.01	2000	
Ni	60	1	nogas	10.762	10.762	11.65	19704	0.05	2000	
Cu	63	1	nogas	1.126	1.126	11.33	6064	0.02	2000	
Zn	66	1	nogas	38.159	38.159	11.62	57795	0.07	2000	
As	75	1	nogas	10.593	10.593	52.83	89127	0.01	2000	
Sr	88	1	nogas	731.236	731.236	12.53	8051413	0.01	2000	
Ag	107	1	nogas	0.011	0.011	16.27	80	0.01	2000	
Cd	111	1	nogas	0.060	0.060	71.01	80	0.08	2000	
Sb	121	1	nogas	0.270	0.270	18.18	1660	0.02	2000	
Tl	205	1	nogas	0.020	0.020	44.85	243	0.01	2000	
Pb	208	1	nogas	0.129	0.129	6.25	1410	0.01	2000	
U	238	1	nogas	0.036	0.036	18.44	370	0.01	2000	
[Pb]	206	1	nogas	0.146	0.146	16.54	397	0.04	2000	
[Pb]	207	1	nogas	0.144	0.144	16.34	317	0.05	2000	
Na	23	2	He	118119.461	118119.461	2.90	76610751	0.15	200000	
Mg	24	2	He	19978.946	19978.946	2.08	6892802	0.29	200000	
Al	27	2	He	83.449	83.449	4.08	16684	0.50	2000	
K	39	2	He	47063.487	47063.487	0.90	19013910	0.25	200000	
Ca	43	2	He	34775.553	34775.553	1.96	34389	101.13	200000	
Ca	44	2	He	34329.017	34329.017	1.57	576966	5.95	200000	
V	51	2	He	0.323	0.323	26.78	7066	0.00	2000	
Cr	52	2	He	7.810	7.810	4.20	20498	0.04	2000	
Mn	55	2	He	749.840	749.840	4.85	1317892	0.06	2000	
Fe	56	2	He	19925.673	19925.673	2.67	41457819	0.05	200000	
Co	59	2	He	14.598	14.598	2.09	44955	0.03	2000	
Ni	60	2	He	9.735	9.735	2.33	7905	0.12	2000	
Cu	63	2	He	-0.241	-0.241	-19.10	1117	-0.02	2000	
Zn	66	2	He	40.265	40.265	1.15	20345	0.20	2000	
As	75	2	He	4.293	4.293	4.36	2670	0.16	2000	
Se	78	2	He	-0.200	-0.200	-77.53	206	-0.10	2000	
B	11	1	nogas	44.940	44.940	1.81	99094	0.05	2000	
Si	28	1	nogas	204782.812	204782.812	10.89	94067785	0.22	2000	>LDR
Ca	43	1	nogas	30899.688	30899.688	11.65	457340	6.76	200000	
Ca	44	1	nogas	31361.186	31361.186	10.96	7529401	0.42	200000	
Fe	56	1	nogas	18123.635	18123.635	14.18	160569908	0.01	200000	
Se	77	1	nogas	37.172	37.172	93.83	26279	0.14	2000	
Se	82	1	nogas	0.490	0.490	79.79	180	0.27	2000	

Sample Report

Mo	95	1	nogas	0.158	0.158	32.53	383	0.04	2000	
Sn	118	1	nogas	0.273	0.273	31.84	1073	0.03	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Ba	137	1	nogas	977.374	977.374	3.45	1533200	0.06	2000	
Sb	121	2	He	0.264	0.264	0.65	670	0.04	2000	
La	139	1	nogas	4037.783	4037.783	17.71	4221	95.67	2000	>LDR
Au	197	1	nogas	-1204.718	-1204.718	-129.55	27	-4517.69	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	572602	2.28	625645	91.52	70	125	
Ge	72	1	nogas	1398677	12.61	1374265	101.78	70	125	
In	115	1	nogas	1119465	14.52	1163835	96.19	70	125	
Bi	209	1	nogas	842656	5.13	844865	99.74	70	125	
Ge	72	2	He	366533	1.76	383404	95.60	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	
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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	
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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 216CAL.S.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 217CAL.S.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 218CAL.S.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 219CAL.S.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 220CAL.S.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	
Sb	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	
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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	
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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
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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 274CAL.S.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 275CAL.S.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 276CAL.S.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 277CAL.S.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 278CAL.S.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 281LLICV.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	395.8	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	
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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	
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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	
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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	
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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	

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	
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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	
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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	

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	
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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 3551CSA.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 3561CSB.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

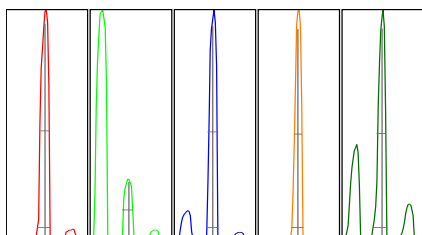
[nogas]

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 °C
 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 Parameters

RF Power	1600 W	Carrier Gas	0.40 L/min	S/C Temp	2 °C
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

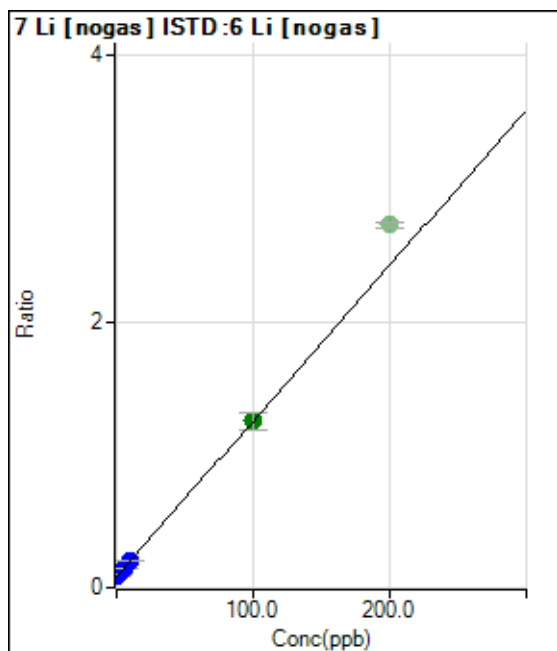
OctP Bias	-18.0 V	He Flow	4.0 mL/min	Energy Discrimination	5.0 V
OctP RF	190 V	H2 Flow	0.0 mL/min		
Use Gas	true	3rd Gas Flow	0 %		

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			





	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	106994.00	0.0846	P	4.3
2	<input type="checkbox"/>	2.000	2.035	137820.85	0.1084	P	2.5
3	<input type="checkbox"/>	5.000	5.268	185173.66	0.1462	P	5.2
4	<input type="checkbox"/>	10.000	10.366	265590.43	0.2058	P	1.4
5	<input type="checkbox"/>	100.000	99.949	1556520.60	1.2535	A	10.2
6	<input checked="" type="checkbox"/>	200.000		3018752.04	2.7281	A	1.4
7	<input type="checkbox"/>	1.000					

$y = 0.0117 * x + 0.0846$

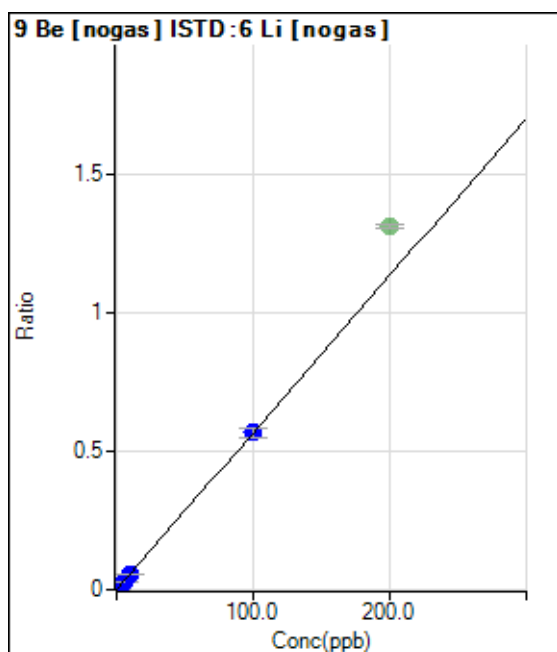
R = 1.0000

DL = 0.9363

BEC = 7.229

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	200.01	0.0002	P	62.7
2	<input type="checkbox"/>	2.000	1.952	14235.48	0.0112	P	6.0
3	<input type="checkbox"/>	5.000	5.044	36348.13	0.0287	P	8.0
4	<input type="checkbox"/>	10.000	9.888	72463.63	0.0562	P	2.2
5	<input type="checkbox"/>	100.000	100.010	704529.23	0.5665	P	5.4
6	<input checked="" type="checkbox"/>	200.000		1447760.45	1.3083	A	1.2
7	<input type="checkbox"/>	1.000					

$y = 0.0057 * x + 1.5619E-004$

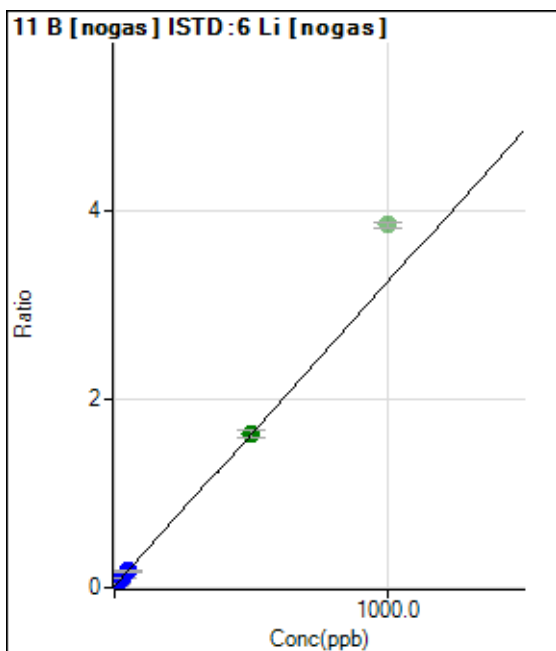
R = 1.0000

DL = 0.05191

BEC = 0.02758

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	24339.13	0.0193	P	8.7
2	<input type="checkbox"/>	10.000	9.715	64218.04	0.0506	P	5.0
3	<input type="checkbox"/>	25.000	24.319	123613.63	0.0976	P	6.9
4	<input type="checkbox"/>	50.000	48.300	225701.64	0.1749	P	4.8
5	<input type="checkbox"/>	500.000	500.210	2027888.57	1.6312	A	5.7
6	<input checked="" type="checkbox"/>	1000.000		4258091.92	3.8475	A	1.6
7	<input type="checkbox"/>	5.000					

$y = 0.0032 * x + 0.0193$

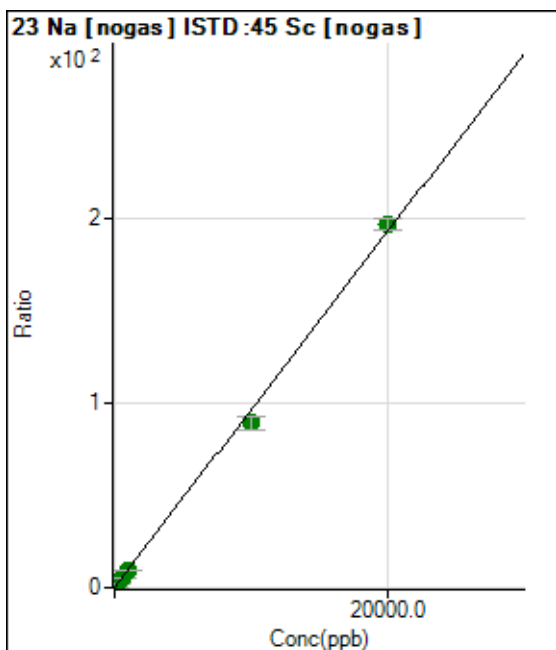
R = 1.0000

DL = 1.561

BEC = 5.985

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	400158.56	0.1793	P	11.6
2	<input type="checkbox"/>	200.000	207.888	4906227.58	2.1769	A	7.4
3	<input type="checkbox"/>	500.000	506.242	11845798.18	5.0437	A	8.1
4	<input type="checkbox"/>	1000.000	974.010	22632956.76	9.5385	A	2.5
5	<input type="checkbox"/>	10000.00	9231.683	222214671.6	88.8859	A	8.2
6	<input type="checkbox"/>	20000.00	20385.223	452199093.4	196.059	A	3.3
7	<input type="checkbox"/>	100.000					

$y = 0.0096 * x + 0.1793$

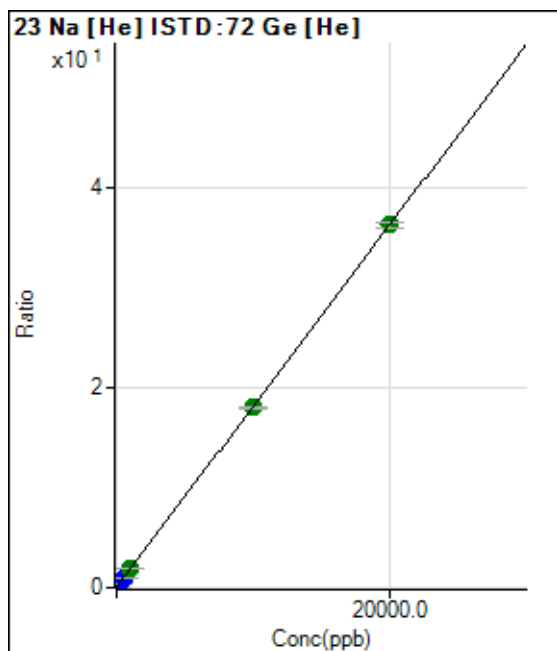
R = 0.9990

DL = 6.494

BEC = 18.66

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	49474.50	0.0466	P	2.1
2	<input type="checkbox"/>	200.000	200.750	435180.16	0.4093	P	2.3
3	<input type="checkbox"/>	500.000	509.117	1025528.06	0.9666	P	0.2
4	<input type="checkbox"/>	1000.000	1038.261	2032190.75	1.9228	A	1.8
5	<input type="checkbox"/>	10000.00	9945.713	19203630.55	18.0191	A	1.4
6	<input type="checkbox"/>	20000.00	20024.995	37686065.27	36.2329	A	1.6
7	<input type="checkbox"/>	100.000					

$y = 0.0018 * x + 0.0466$

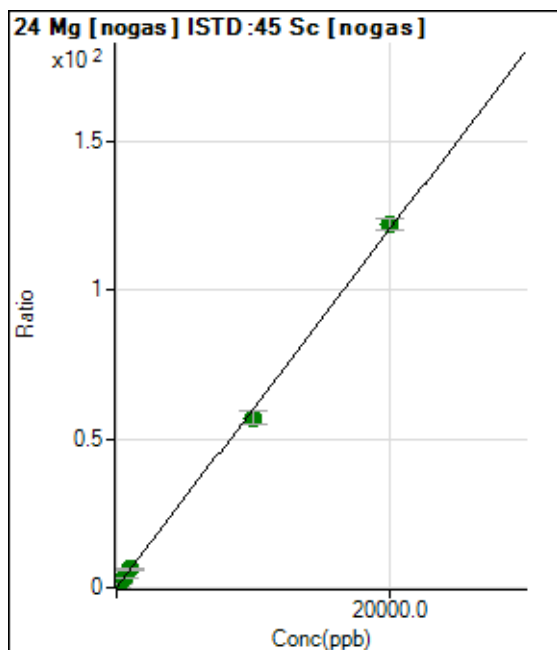
R = 1.0000

DL = 1.63

BEC = 25.77

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	13941.15	0.0062	P	15.8
2	<input type="checkbox"/>	200.000	224.218	3047284.83	1.3533	A	9.9
3	<input type="checkbox"/>	500.000	541.055	7652662.67	3.2567	A	7.1
4	<input type="checkbox"/>	1000.000	1024.165	14603968.56	6.1591	A	4.9
5	<input type="checkbox"/>	10000.00	9458.330	142076244.8	56.8291	A	8.0
6	<input type="checkbox"/>	20000.00	20268.358	280689981.2	121.772	A	3.2
7	<input type="checkbox"/>	100.000					

$y = 0.0060 * x + 0.0062$

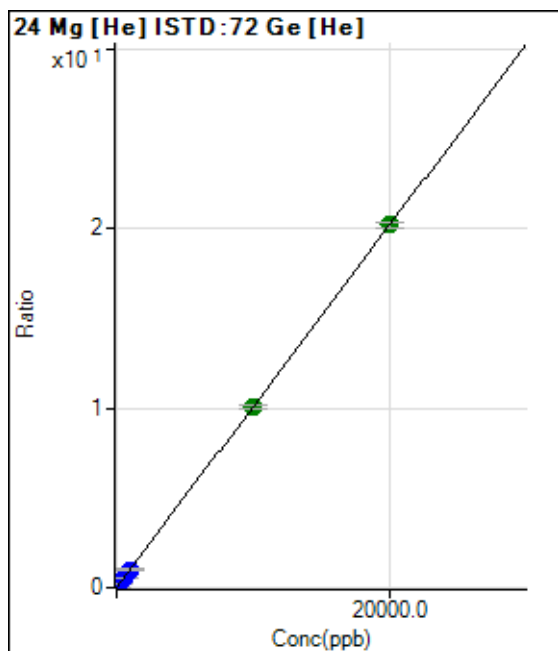
R = 0.9995

DL = 0.4925

BEC = 1.039

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	1110.05	0.0010	P	15.8
2	<input type="checkbox"/>	200.000	204.422	220412.04	0.2073	P	2.5
3	<input type="checkbox"/>	500.000	506.450	543331.54	0.5121	P	0.4
4	<input type="checkbox"/>	1000.000	1002.851	1070663.55	1.0130	P	1.4
5	<input type="checkbox"/>	10000.00	9951.557	10702248.59	10.0429	A	2.3
6	<input type="checkbox"/>	20000.00	20023.874	21017040.11	20.2065	A	1.7
7	<input type="checkbox"/>	100.000					

$y = 0.0010 * x + 0.0010$

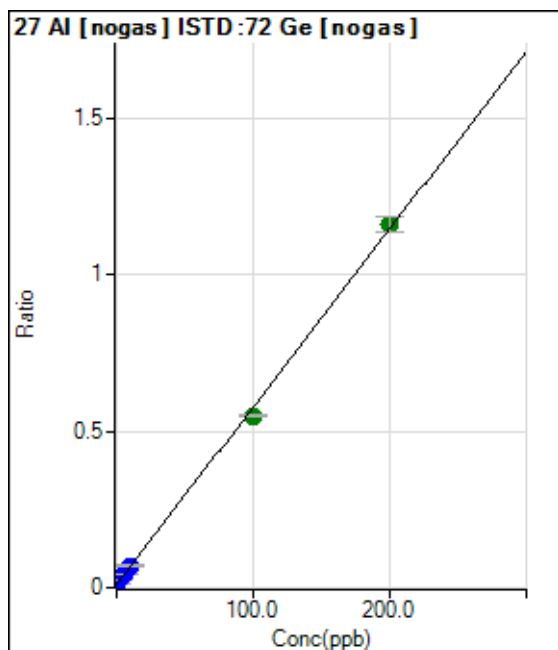
R = 1.0000

DL = 0.4921

BEC = 1.035

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	28508.35	0.0098	P	6.8
2	<input type="checkbox"/>	2.000	2.398	68862.03	0.0234	P	7.0
3	<input type="checkbox"/>	5.000	5.905	128951.61	0.0433	P	4.9
4	<input type="checkbox"/>	10.000	10.535	216877.32	0.0696	P	3.1
5	<input type="checkbox"/>	100.000	94.909	1634964.09	0.5482	A	1.5
6	<input type="checkbox"/>	200.000	202.492	3427008.91	1.1584	A	4.1
7	<input type="checkbox"/>	1.000					

$y = 0.0057 * x + 0.0098$

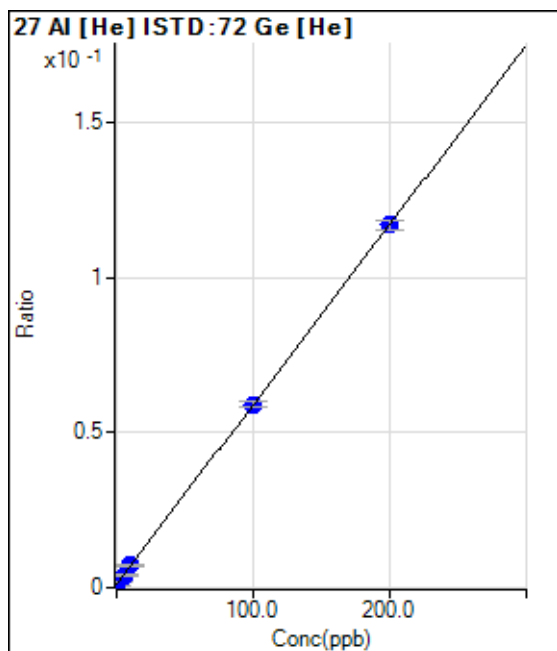
R = 0.9995

DL = 0.3549

BEC = 1.733

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	-0.450	896.71	0.0008	P	9.2
2	<input type="checkbox"/>	2.000	1.964	2383.52	0.0022	P	6.5
3	<input type="checkbox"/>	5.000	5.007	4247.19	0.0040	P	5.3
4	<input type="checkbox"/>	10.000	10.499	7591.66	0.0072	P	2.9
5	<input type="checkbox"/>	100.000	100.010	62887.53	0.0590	P	3.2
6	<input type="checkbox"/>	200.000	199.970	121580.96	0.1169	P	2.3
7	<input type="checkbox"/>	1.000					

$y = 5.7904E-004 * x + 0.0011$

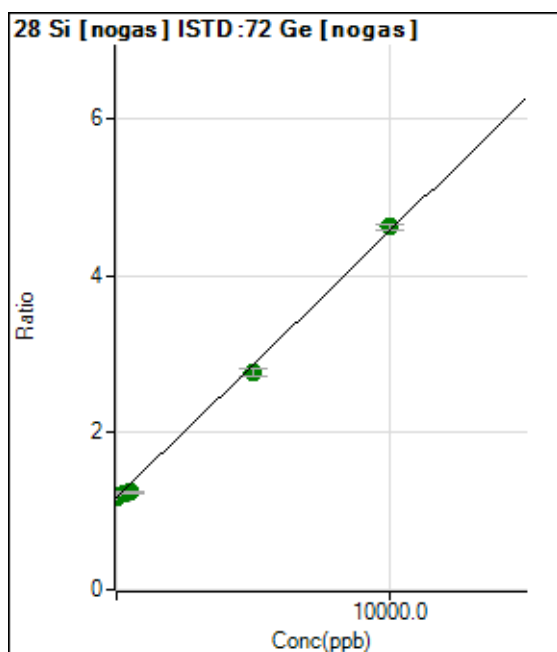
R = 1.0000

DL = 0.4003

BEC = 1.907

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	3401955.99	1.1735	A	7.2
2	<input type="checkbox"/>	100.000	74.335	3522573.38	1.1988	A	7.4
3	<input type="checkbox"/>	250.000	171.864	3668181.30	1.2320	A	3.5
4	<input type="checkbox"/>	500.000	217.159	3887677.75	1.2474	A	1.9
5	<input type="checkbox"/>	5000.000	4717.310	8281308.42	2.7780	A	3.4
6	<input type="checkbox"/>	10000.00	10157.697	13695396.88	4.6283	A	1.4
7	<input type="checkbox"/>	5.000					

$y = 3.4011E-004 * x + 1.1735$

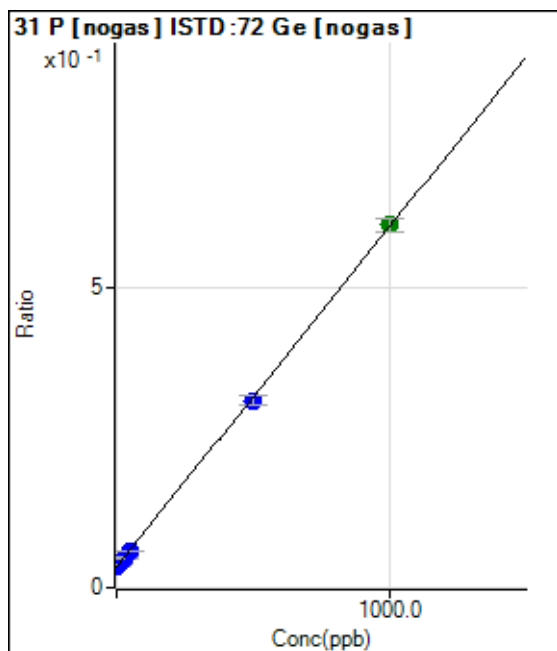
R = 0.9993

DL = 743.9

BEC = 3450

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	101148.91	0.0349	P	5.5
2	<input type="checkbox"/>	10.000	9.138	117777.00	0.0401	P	5.9
3	<input type="checkbox"/>	25.000	24.508	145211.68	0.0488	P	5.0
4	<input type="checkbox"/>	50.000	45.071	188481.92	0.0605	P	2.0
5	<input type="checkbox"/>	500.000	489.640	933041.16	0.3130	P	4.7
6	<input type="checkbox"/>	1000.000	1005.447	1792962.37	0.6061	A	4.0
7	<input type="checkbox"/>	5.000					

$y = 5.6811E-004 * x + 0.0349$

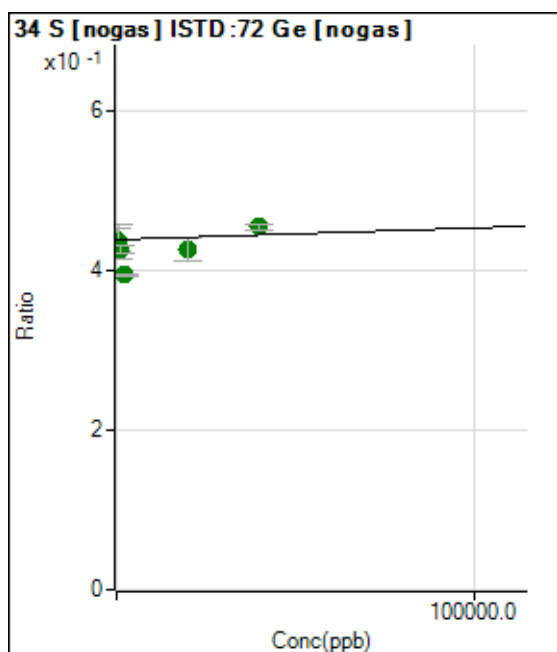
R = 0.9999

DL = 10.17

BEC = 61.38

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	1271822.81	0.4384	A	6.3
2	<input type="checkbox"/>	400.000	-21304.000	1277741.86	0.4353	A	10.1
3	<input type="checkbox"/>	1000.000	-77662.506	1272000.71	0.4270	A	2.1
4	<input type="checkbox"/>	2000.000	-302025.08	1228202.79	0.3939	A	1.1
5	<input type="checkbox"/>	20000.00	-80536.127	1272182.32	0.4266	A	6.4
6	<input type="checkbox"/>	40000.00	107652.92	1344244.89	0.4543	A	1.6
7	<input type="checkbox"/>	100.000					

$y = 1.4726E-007 * x + 0.4384$

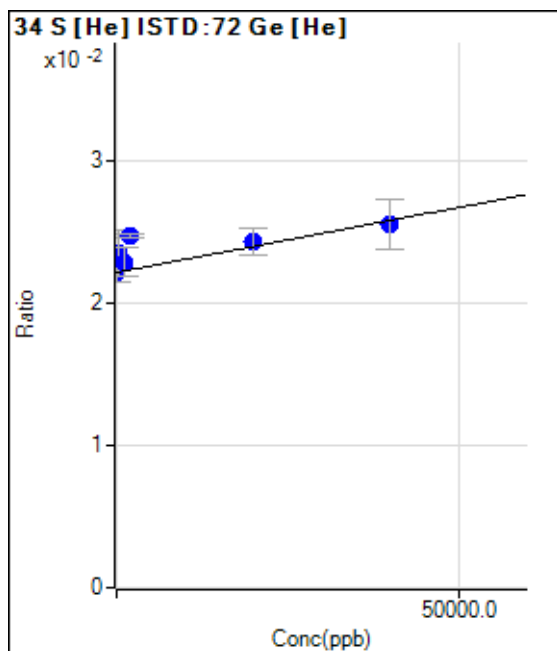
R = 0.5360

DL = 5.652E+05

BEC = 2.977E+06

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	23585.07	0.0222	P	6.3
2	<input type="checkbox"/>	400.000	14510.876	24988.03	0.0235	P	14.0
3	<input type="checkbox"/>	1000.000	7967.978	24319.72	0.0229	P	8.9
4	<input type="checkbox"/>	2000.000	28689.161	26222.72	0.0248	P	1.2
5	<input type="checkbox"/>	20000.00	23590.425	25954.95	0.0243	P	7.3
6	<input type="checkbox"/>	40000.00	36555.021	26524.06	0.0255	P	13.7
7	<input type="checkbox"/>	100.000					

$y = 9.1275E-008 * x + 0.0222$

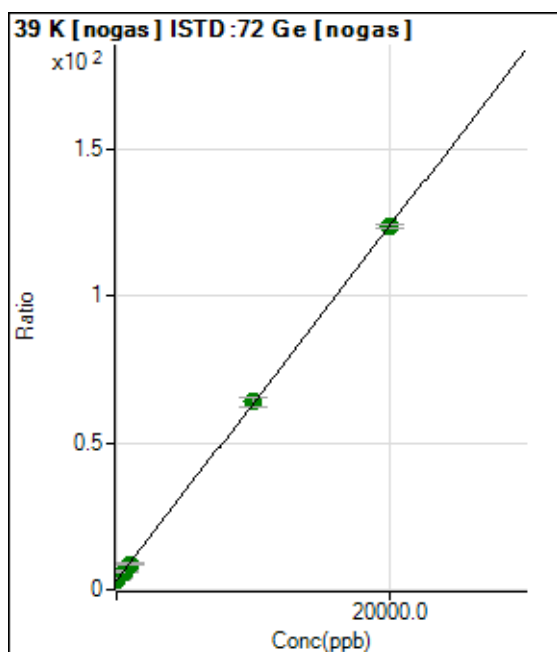
R = 0.7460

DL = 4.589E+04

BEC = 2.431E+05

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	9182958.80	3.1668	A	6.4
2	<input type="checkbox"/>	200.000	195.005	12758610.44	4.3425	A	7.6
3	<input type="checkbox"/>	500.000	501.550	18431656.66	6.1908	A	3.7
4	<input type="checkbox"/>	1000.000	921.686	27185956.86	8.7239	A	3.2
5	<input type="checkbox"/>	10000.00	10075.649	190492687.5	63.9153	A	4.5
6	<input type="checkbox"/>	20000.00	19966.102	365605774.8	123.547	A	1.2
7	<input type="checkbox"/>	100.000					

$y = 0.0060 * x + 3.1668$

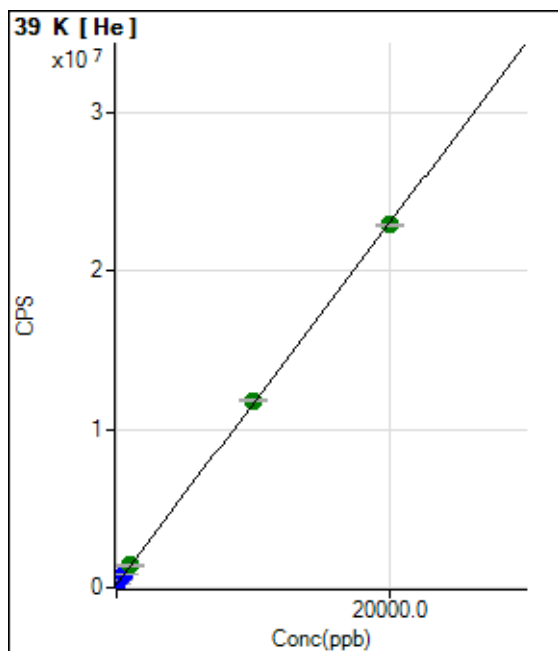
R = 1.0000

DL = 101.6

BEC = 525.2

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	216445.12		P	1.6
2	<input type="checkbox"/>	200.000	203.986	448890.76		P	0.4
3	<input type="checkbox"/>	500.000	520.431	809486.63		P	1.1
4	<input type="checkbox"/>	1000.000	1041.326	1403057.01		A	2.6
5	<input type="checkbox"/>	10000.00	10187.092	11824843.16		A	0.8
6	<input type="checkbox"/>	20000.00	19903.837	22897270.49		A	0.7
7	<input type="checkbox"/>	100.000					

$y = 1139.5203 * x + 216445.1233$

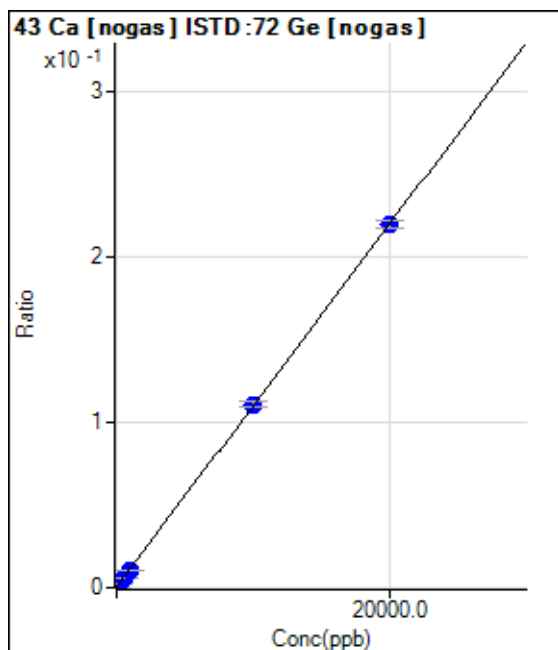
R = 0.9999

DL = 8.84

BEC = 189.9

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	1063.38	0.0004	P	5.4
2	<input type="checkbox"/>	200.000	192.385	7288.20	0.0025	P	3.1
3	<input type="checkbox"/>	500.000	499.616	17391.72	0.0058	P	7.0
4	<input type="checkbox"/>	1000.000	932.927	33042.89	0.0106	P	2.3
5	<input type="checkbox"/>	10000.00	10083.780	330952.75	0.1110	P	3.3
6	<input type="checkbox"/>	20000.00	19961.549	649171.18	0.2194	P	2.1
7	<input type="checkbox"/>	100.000					

$y = 1.0973E-005 * x + 3.6506E-004$

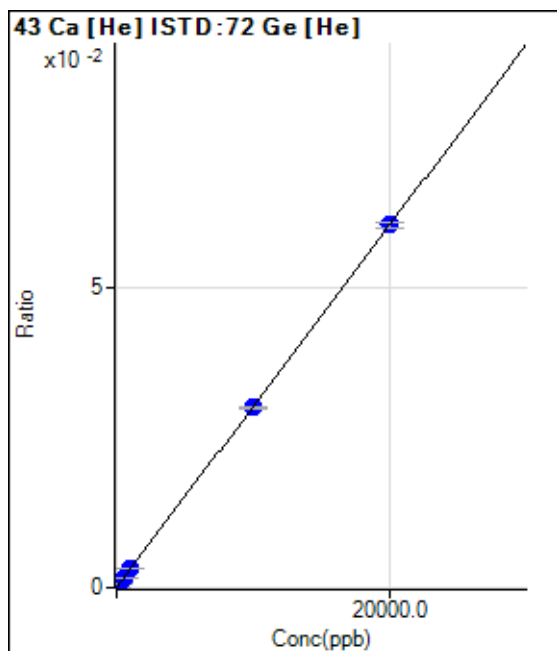
R = 1.0000

DL = 5.422

BEC = 33.27

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	46.67	0.0000	P	12.8
2	<input type="checkbox"/>	200.000	196.763	676.69	0.0006	P	17.0
3	<input type="checkbox"/>	500.000	500.396	1646.76	0.0016	P	1.6
4	<input type="checkbox"/>	1000.000	1052.981	3400.38	0.0032	P	3.3
5	<input type="checkbox"/>	10000.00	9939.253	31977.57	0.0300	P	1.5
6	<input type="checkbox"/>	20000.00	20027.747	62835.38	0.0604	P	1.8
7	<input type="checkbox"/>	100.000					

$y = 3.0140E-006 * x + 4.3930E-005$

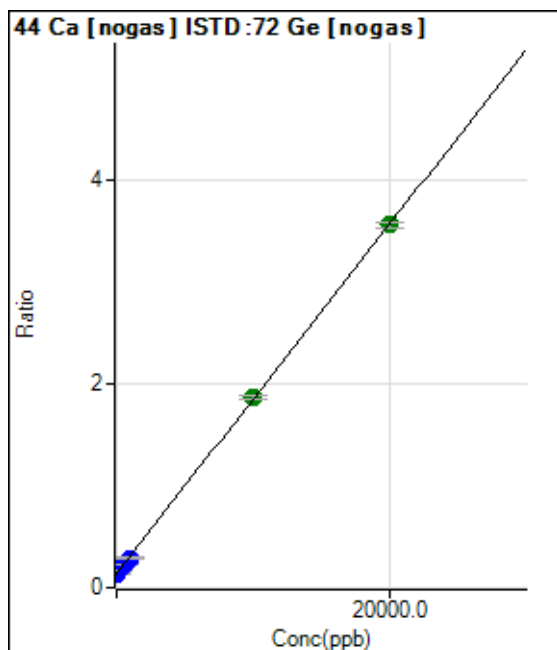
R = 1.0000

DL = 5.581

BEC = 14.57

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	401093.39	0.1383	P	5.4
2	<input type="checkbox"/>	200.000	186.838	500522.99	0.1702	P	5.3
3	<input type="checkbox"/>	500.000	487.912	659911.34	0.2217	P	4.5
4	<input type="checkbox"/>	1000.000	891.713	906184.86	0.2908	P	2.8
5	<input type="checkbox"/>	10000.00	10083.886	5555000.75	1.8627	A	2.3
6	<input type="checkbox"/>	20000.00	19963.905	10511568.17	3.5523	A	1.4
7	<input type="checkbox"/>	100.000					

$y = 1.7101E-004 * x + 0.1383$

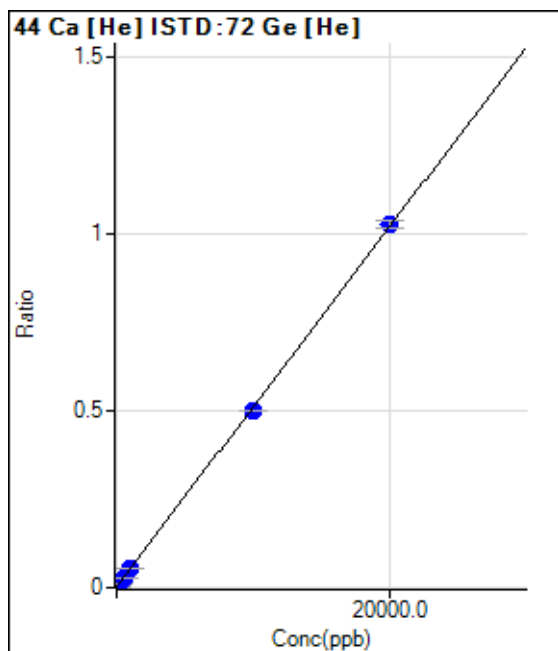
R = 1.0000

DL = 130.6

BEC = 808.5

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	2816.93	0.0027	P	5.5
2	<input type="checkbox"/>	200.000	203.281	13818.70	0.0130	P	0.7
3	<input type="checkbox"/>	500.000	512.650	30491.87	0.0287	P	4.7
4	<input type="checkbox"/>	1000.000	999.769	56579.23	0.0535	P	1.5
5	<input type="checkbox"/>	10000.00	9758.445	532138.54	0.4993	P	0.3
6	<input type="checkbox"/>	20000.00	20120.440	1067785.30	1.0266	P	2.1
7	<input type="checkbox"/>	100.000					

$y = 5.0892E-005 * x + 0.0027$

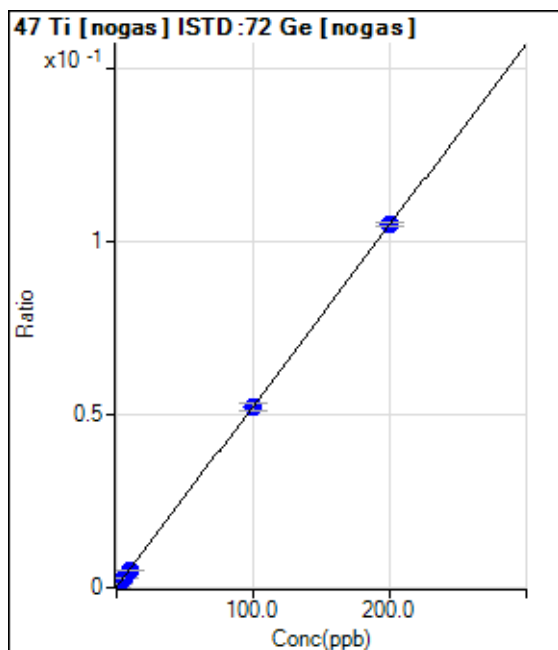
R = 0.9999

DL = 8.637

BEC = 52.1

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	423.36	0.0001	P	28.3
2	<input type="checkbox"/>	2.000	1.984	3467.04	0.0012	P	15.5
3	<input type="checkbox"/>	5.000	5.183	8495.41	0.0029	P	4.3
4	<input type="checkbox"/>	10.000	9.495	15923.70	0.0051	P	3.5
5	<input type="checkbox"/>	100.000	99.816	155818.36	0.0523	P	3.9
6	<input type="checkbox"/>	200.000	200.113	309703.23	0.1047	P	1.1
7	<input type="checkbox"/>	1.000					

$y = 5.2223E-004 * x + 1.4720E-004$

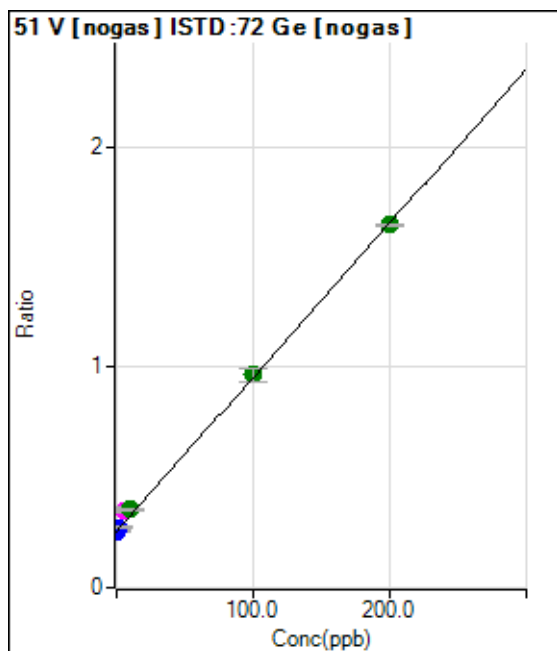
R = 1.0000

DL = 0.2391

BEC = 0.2819

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	743041.29	0.2560	P	4.2
2	<input type="checkbox"/>	2.000	2.613	807108.56	0.2743	P	3.7
3	<input type="checkbox"/>	5.000	13.866	1051372.84	0.3530	M	6.3
4	<input type="checkbox"/>	10.000	14.161	1106503.31	0.3551	A	3.9
5	<input type="checkbox"/>	100.000	101.372	2875995.77	0.9653	A	6.2
6	<input type="checkbox"/>	200.000	198.878	4875490.86	1.6475	A	0.3
7	<input type="checkbox"/>	1.000					

$y = 0.0070 * x + 0.2560$

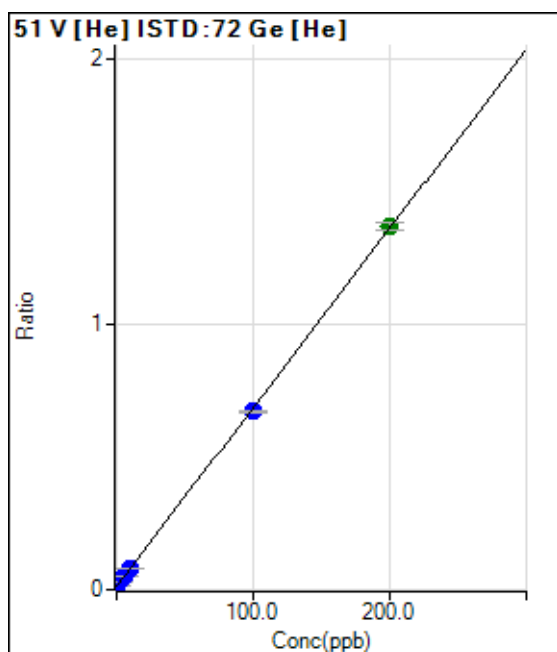
R = 0.9992

DL = 4.648

BEC = 36.59

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.258	13795.11	0.0130	P	2.2
2	<input type="checkbox"/>	2.000	2.285	28339.45	0.0267	P	1.6
3	<input type="checkbox"/>	5.000	5.444	50891.64	0.0480	P	1.4
4	<input type="checkbox"/>	10.000	10.020	83324.39	0.0788	P	2.4
5	<input type="checkbox"/>	100.000	98.016	716682.94	0.6725	P	1.4
6	<input type="checkbox"/>	200.000	200.977	1422120.42	1.3671	A	2.2
7	<input type="checkbox"/>	1.000					

$y = 0.0067 * x + 0.0112$

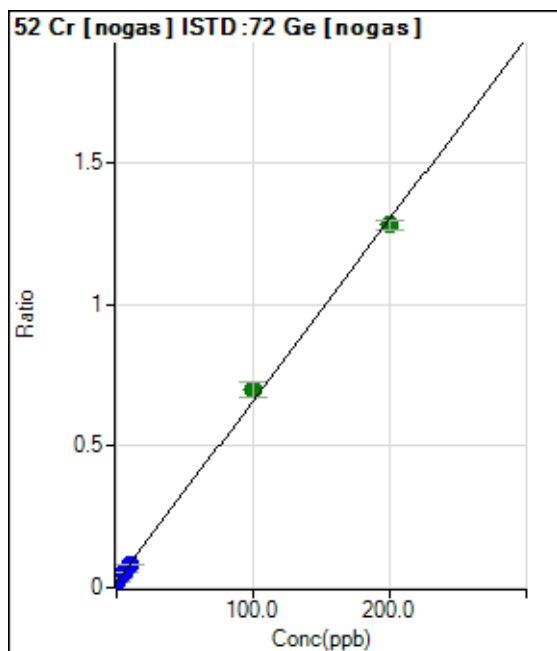
R = 0.9999

DL = 0.1242

BEC = 1.666

Weight: <None>

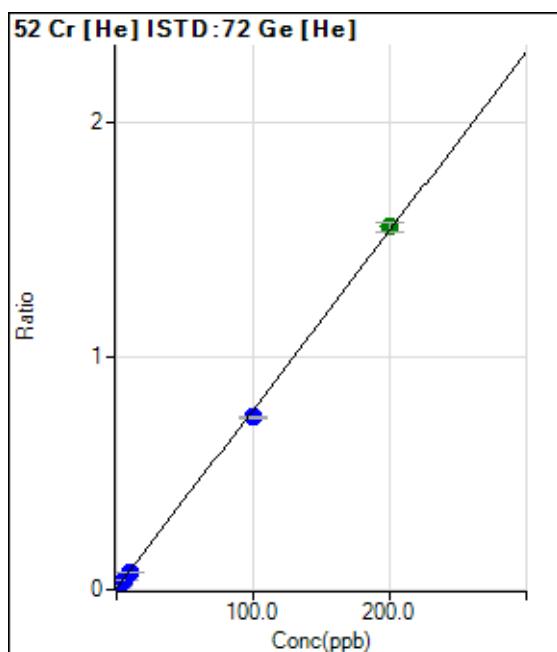
Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	61113.98	0.0211	P	7.5
2	<input type="checkbox"/>	2.000	1.818	96188.81	0.0327	P	5.0
3	<input type="checkbox"/>	5.000	5.036	158516.98	0.0533	P	6.3
4	<input type="checkbox"/>	10.000	9.214	249261.96	0.0800	P	2.5
5	<input type="checkbox"/>	100.000	106.029	2081526.43	0.6989	A	7.9
6	<input type="checkbox"/>	200.000	197.026	3789212.65	1.2806	A	2.7
7	<input type="checkbox"/>	1.000					

$y = 0.0064 * x + 0.0211$
 R = 0.9993
 DL = 0.7438
 BEC = 3.298

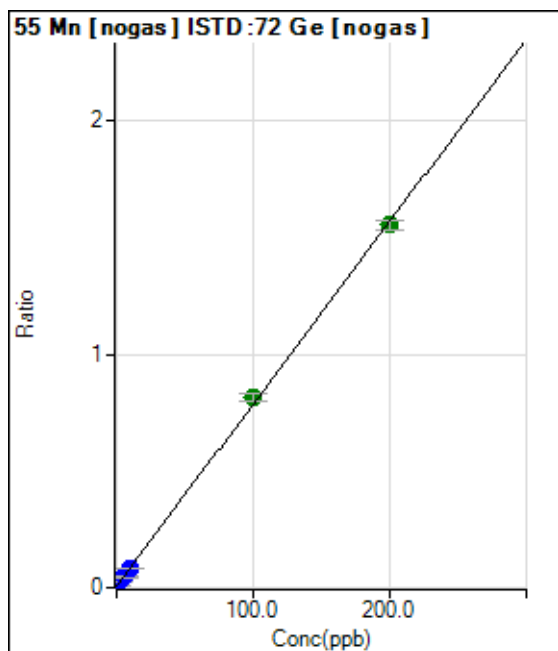
Weight: <None>
 Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	5257.49	0.0049	P	5.7
2	<input type="checkbox"/>	2.000	1.935	21028.98	0.0198	P	1.9
3	<input type="checkbox"/>	5.000	4.818	44413.48	0.0419	P	1.7
4	<input type="checkbox"/>	10.000	9.482	82027.39	0.0776	P	0.6
5	<input type="checkbox"/>	100.000	95.646	786313.09	0.7378	P	0.2
6	<input type="checkbox"/>	200.000	202.208	1616576.07	1.5542	A	2.6
7	<input type="checkbox"/>	1.000					

$y = 0.0077 * x + 0.0049$
 R = 0.9997
 DL = 0.1101
 BEC = 0.6456

Weight: <None>
 Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	16514.24	0.0057	P	5.8
2	<input type="checkbox"/>	2.000	2.045	63719.98	0.0217	P	6.1
3	<input type="checkbox"/>	5.000	5.124	136115.59	0.0457	P	4.9
4	<input type="checkbox"/>	10.000	9.680	253503.46	0.0813	P	2.3
5	<input type="checkbox"/>	100.000	103.387	2424969.23	0.8136	A	4.3
6	<input type="checkbox"/>	200.000	198.319	4602395.56	1.5555	A	2.7
7	<input type="checkbox"/>	1.000					

$y = 0.0078 * x + 0.0057$

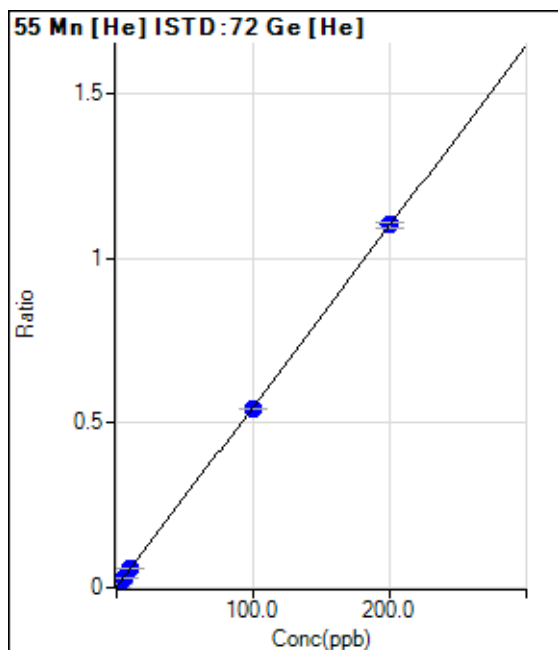
R = 0.9998

DL = 0.1276

BEC = 0.7285

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	1403.41	0.0013	P	6.5
2	<input type="checkbox"/>	2.000	2.114	13748.59	0.0129	P	1.0
3	<input type="checkbox"/>	5.000	5.215	31794.30	0.0300	P	2.0
4	<input type="checkbox"/>	10.000	10.371	61599.44	0.0583	P	2.3
5	<input type="checkbox"/>	100.000	98.766	579600.25	0.5438	P	1.0
6	<input type="checkbox"/>	200.000	200.592	1147320.40	1.1031	P	1.6
7	<input type="checkbox"/>	1.000					

$y = 0.0055 * x + 0.0013$

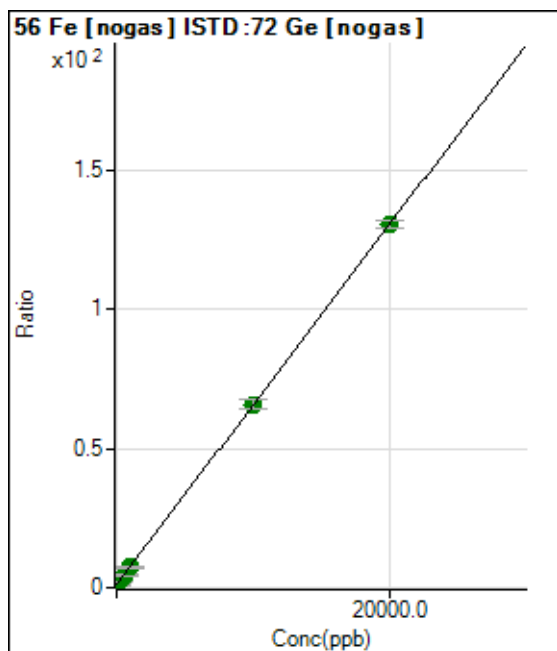
R = 1.0000

DL = 0.04656

BEC = 0.2404

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	3061494.79	1.0563	A	7.7
2	<input type="checkbox"/>	200.000	208.935	7072857.19	2.4060	A	6.1
3	<input type="checkbox"/>	500.000	521.216	13170591.44	4.4233	A	3.4
4	<input type="checkbox"/>	1000.000	964.720	22713720.82	7.2882	A	2.5
5	<input type="checkbox"/>	10000.00	10033.482	196313425.2	65.8708	A	5.6
6	<input type="checkbox"/>	20000.00	19984.403	385151641.9	130.152	A	2.2
7	<input type="checkbox"/>	100.000					

$y = 0.0065 * x + 1.0563$

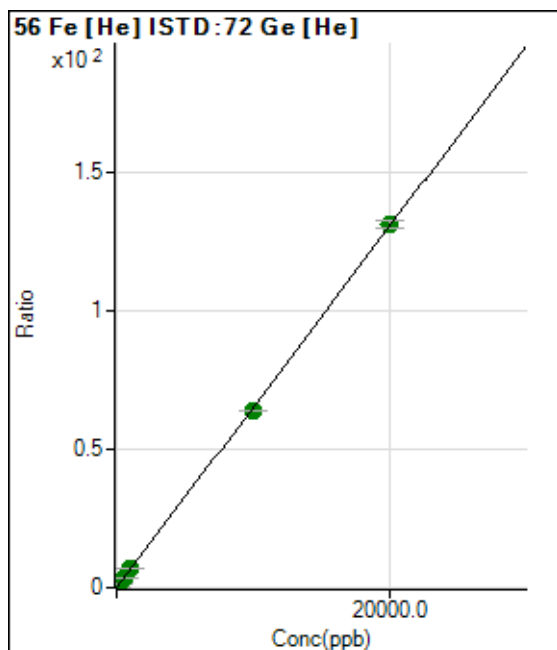
R = 1.0000

DL = 37.65

BEC = 163.5

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	18970.02	0.0179	P	3.6
2	<input type="checkbox"/>	200.000	207.057	1451797.58	1.3655	A	1.6
3	<input type="checkbox"/>	500.000	509.489	3537292.76	3.3339	A	1.0
4	<input type="checkbox"/>	1000.000	1023.752	7060975.73	6.6810	A	2.8
5	<input type="checkbox"/>	10000.00	9803.739	68025277.32	63.8259	A	0.3
6	<input type="checkbox"/>	20000.00	20096.635	136067977.9	130.817	A	2.0
7	<input type="checkbox"/>	100.000					

$y = 0.0065 * x + 0.0179$

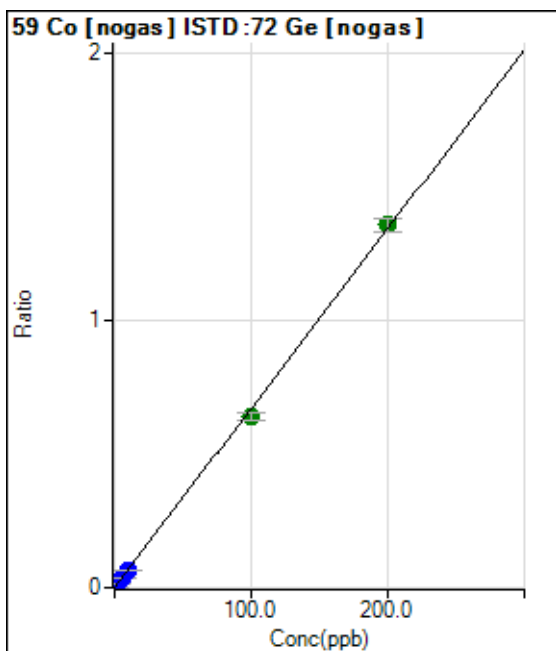
R = 0.9999

DL = 0.2941

BEC = 2.743

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	823.37	0.0003	P	11.2
2	<input type="checkbox"/>	2.000	2.074	41781.19	0.0142	P	5.0
3	<input type="checkbox"/>	5.000	5.127	103299.85	0.0347	P	4.5
4	<input type="checkbox"/>	10.000	9.615	202014.35	0.0648	P	2.4
5	<input type="checkbox"/>	100.000	95.399	1912202.32	0.6407	A	3.7
6	<input type="checkbox"/>	200.000	202.316	4018670.04	1.3584	A	3.5
7	<input type="checkbox"/>	1.000					

$y = 0.0067 * x + 2.8259E-004$

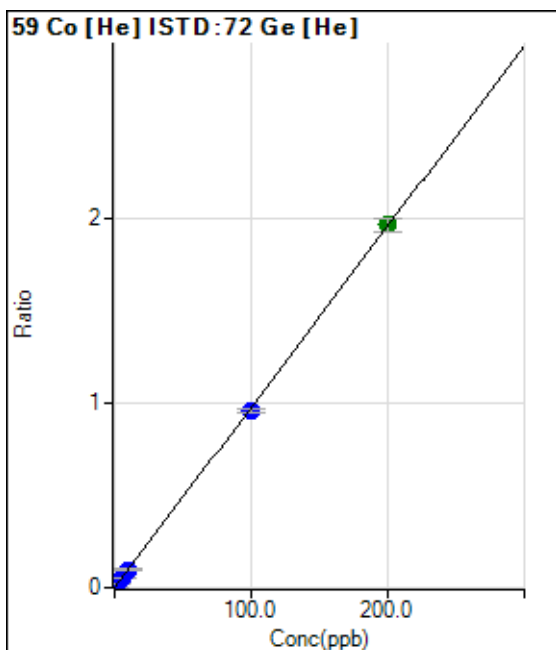
R = 0.9996

DL = 0.01419

BEC = 0.0421

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	186.67	0.0002	P	5.9
2	<input type="checkbox"/>	2.000	2.018	21215.88	0.0200	P	1.9
3	<input type="checkbox"/>	5.000	4.997	52137.32	0.0491	P	1.9
4	<input type="checkbox"/>	10.000	10.056	104317.43	0.0987	P	3.6
5	<input type="checkbox"/>	100.000	98.093	1024543.92	0.9614	P	1.6
6	<input type="checkbox"/>	200.000	200.951	2047924.76	1.9692	A	4.1
7	<input type="checkbox"/>	1.000					

$y = 0.0098 * x + 1.7564E-004$

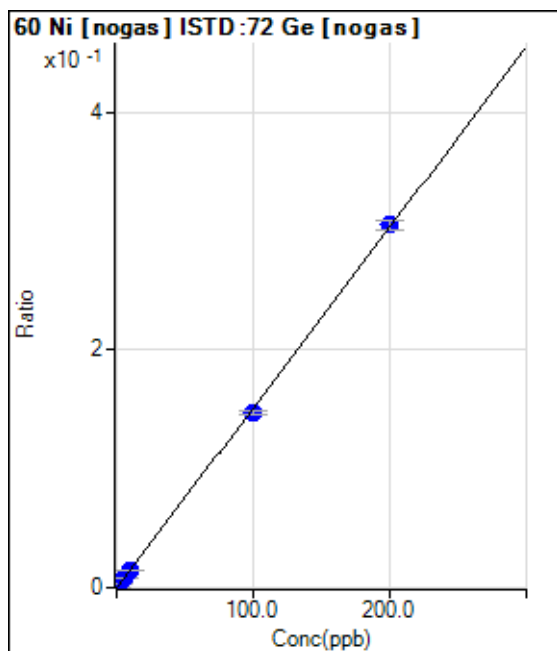
R = 0.9999

DL = 0.003194

BEC = 0.01792

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.448	550.02	0.0002	P	25.5
2	<input type="checkbox"/>	2.000	2.500	9719.39	0.0033	P	4.0
3	<input type="checkbox"/>	5.000	5.742	24476.64	0.0082	P	2.9
4	<input type="checkbox"/>	10.000	9.719	44410.78	0.0142	P	2.1
5	<input type="checkbox"/>	100.000	97.202	438056.41	0.1469	P	2.8
6	<input type="checkbox"/>	200.000	201.390	902154.28	0.3049	P	2.8
7	<input type="checkbox"/>	1.000					

$y = 0.0015 * x - 4.8842E-004$

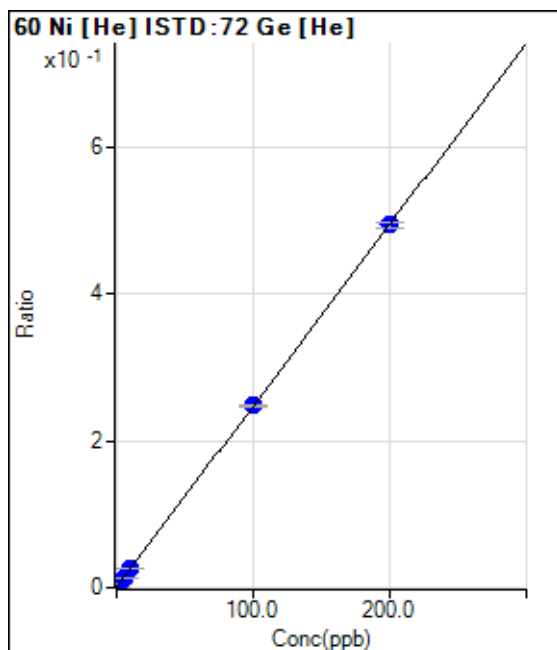
R = 0.9998

DL = 0.09622

BEC = -0.3221

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	-0.110	203.33	0.0002	P	18.0
2	<input type="checkbox"/>	2.000	1.934	5564.25	0.0052	P	6.6
3	<input type="checkbox"/>	5.000	5.116	13882.04	0.0131	P	0.9
4	<input type="checkbox"/>	10.000	10.027	26629.64	0.0252	P	2.7
5	<input type="checkbox"/>	100.000	100.073	263576.10	0.2473	P	2.0
6	<input type="checkbox"/>	200.000	199.960	513546.32	0.4937	P	1.5
7	<input type="checkbox"/>	1.000					

$y = 0.0025 * x + 4.6217E-004$

R = 1.0000

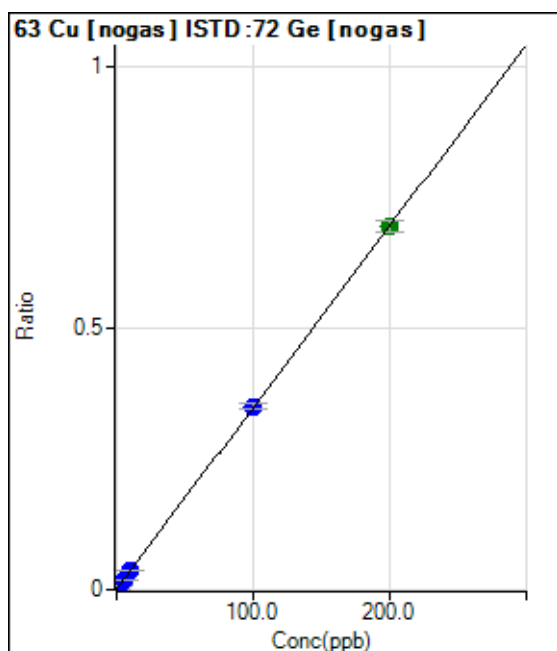
DL = 0.04196

BEC = 0.1874

Weight: <None>

Min Conc: <None>

Calibration for 028_ICV.d



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	2896.95	0.0010	P	10.6
2	<input type="checkbox"/>	2.000	2.109	24416.61	0.0083	P	6.6
3	<input type="checkbox"/>	5.000	5.382	58514.20	0.0196	P	3.1
4	<input type="checkbox"/>	10.000	9.874	109741.63	0.0352	P	1.2
5	<input type="checkbox"/>	100.000	100.803	1044266.55	0.3502	P	2.5
6	<input type="checkbox"/>	200.000	199.594	2049869.97	0.6925	A	3.3
7	<input type="checkbox"/>	1.000					

$$y = 0.0035 * x + 9.9924E-004$$

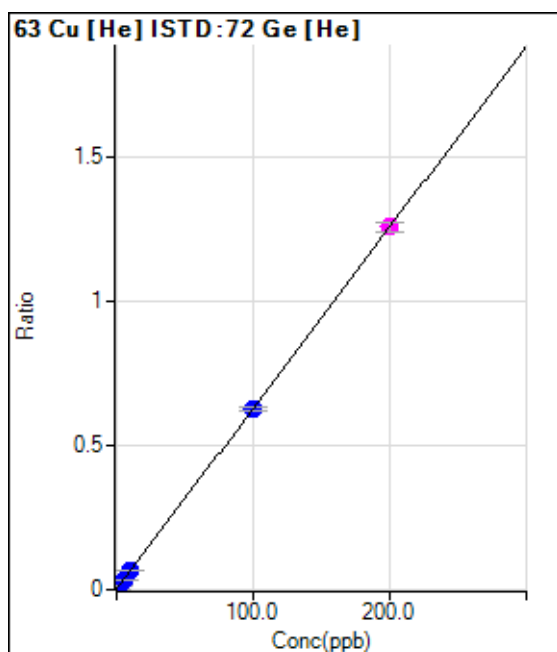
$$R = 1.0000$$

$$DL = 0.0921$$

$$BEC = 0.2884$$

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	-0.066	1036.71	0.0010	P	10.9
2	<input type="checkbox"/>	2.000	1.984	14679.39	0.0138	P	1.0
3	<input type="checkbox"/>	5.000	5.159	35735.11	0.0337	P	3.2
4	<input type="checkbox"/>	10.000	10.229	69150.26	0.0654	P	1.8
5	<input type="checkbox"/>	100.000	99.418	664732.91	0.6238	P	2.7
6	<input type="checkbox"/>	200.000	200.276	1305411.47	1.2552	M	2.9
7	<input type="checkbox"/>	1.000					

$$y = 0.0063 * x + 0.0014$$

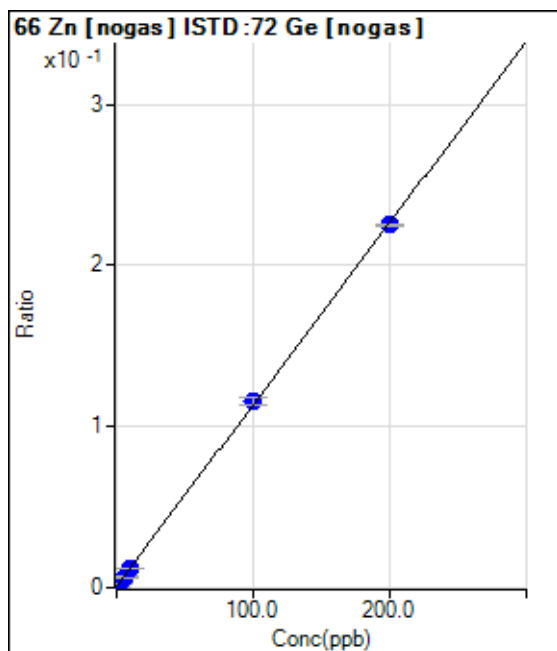
$$R = 1.0000$$

$$DL = 0.05117$$

$$BEC = 0.2213$$

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	-0.456	880.03	0.0003	P	3.5
2	<input type="checkbox"/>	2.000	1.674	7955.18	0.0027	P	5.5
3	<input type="checkbox"/>	5.000	5.053	19363.89	0.0065	P	7.8
4	<input type="checkbox"/>	10.000	9.701	36633.65	0.0118	P	0.6
5	<input type="checkbox"/>	100.000	102.022	345186.43	0.1158	P	3.7
6	<input type="checkbox"/>	200.000	199.006	666163.86	0.2251	P	0.8
7	<input type="checkbox"/>	1.000					

$y = 0.0011 * x + 8.1705E-004$

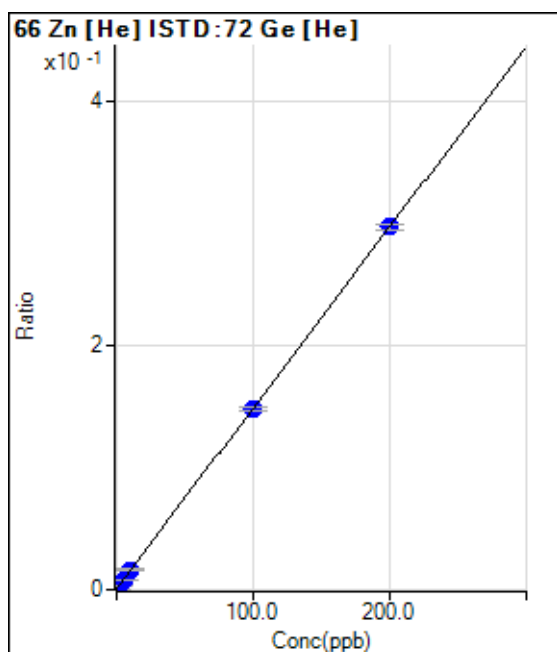
R = 0.9999

DL = 0.028

BEC = 0.725

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	-0.241	316.68	0.0003	P	20.5
2	<input type="checkbox"/>	2.000	1.962	3787.11	0.0036	P	4.6
3	<input type="checkbox"/>	5.000	5.014	8572.13	0.0081	P	8.4
4	<input type="checkbox"/>	10.000	10.556	17215.01	0.0163	P	3.8
5	<input type="checkbox"/>	100.000	99.473	157723.67	0.1480	P	1.6
6	<input type="checkbox"/>	200.000	200.236	309181.40	0.2972	P	1.3
7	<input type="checkbox"/>	1.000					

$y = 0.0015 * x + 6.5435E-004$

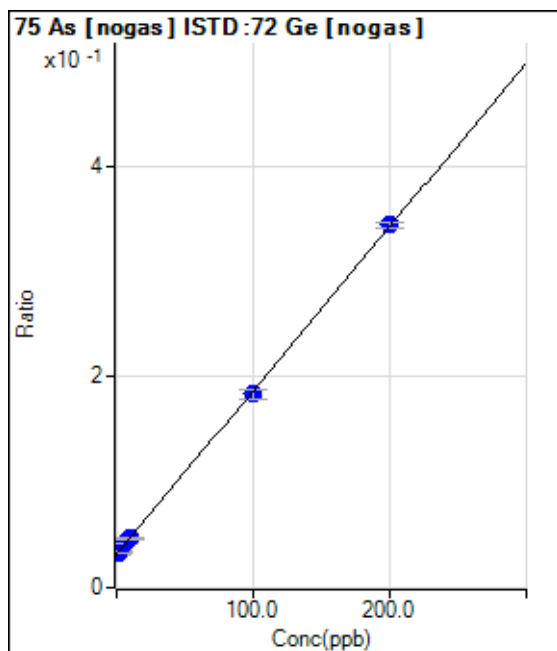
R = 1.0000

DL = 0.1235

BEC = 0.4418

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.462	93833.47	0.0323	P	4.1
2	<input type="checkbox"/>	2.000	1.178	98386.97	0.0334	P	4.0
3	<input type="checkbox"/>	5.000	6.662	124890.53	0.0420	P	4.1
4	<input type="checkbox"/>	10.000	9.903	146425.51	0.0470	P	2.2
5	<input type="checkbox"/>	100.000	97.648	546018.13	0.1832	P	4.0
6	<input type="checkbox"/>	200.000	201.147	1017420.11	0.3438	P	1.8
7	<input type="checkbox"/>	1.000					

$y = 0.0016 * x + 0.0316$

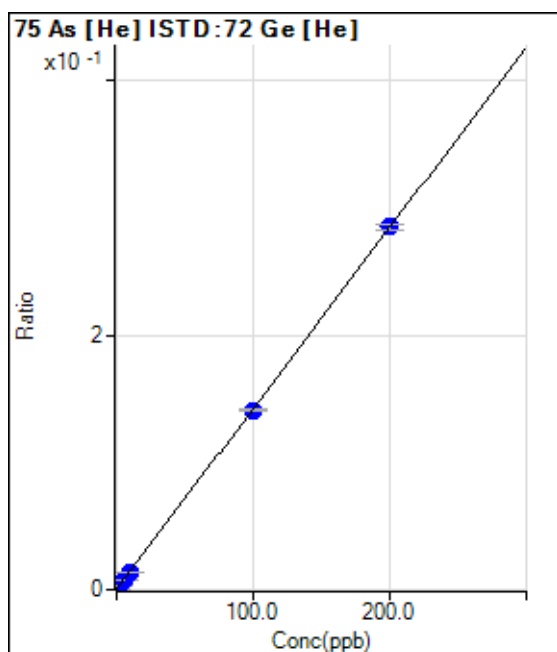
R = 0.9998

DL = 2.554

BEC = 20.37

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	414.45	0.0004	P	11.8
2	<input type="checkbox"/>	2.000	1.859	3216.97	0.0030	P	4.8
3	<input type="checkbox"/>	5.000	4.983	7910.64	0.0075	P	2.7
4	<input type="checkbox"/>	10.000	9.626	14837.16	0.0140	P	2.9
5	<input type="checkbox"/>	100.000	98.917	149901.26	0.1407	P	0.9
6	<input type="checkbox"/>	200.000	200.562	296210.76	0.2848	P	1.7
7	<input type="checkbox"/>	1.000					

$y = 0.0014 * x + 3.9011E-004$

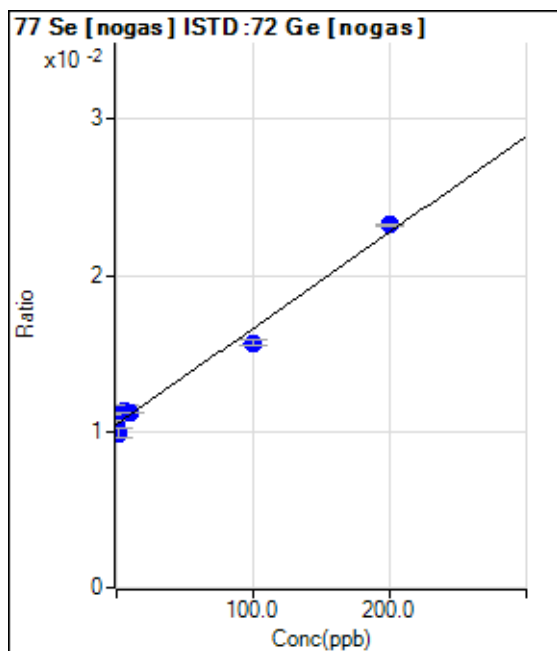
R = 1.0000

DL = 0.09721

BEC = 0.2751

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	30408.91	0.0105	P	4.4
2	<input type="checkbox"/>	2.000	-9.694	29049.99	0.0099	P	6.1
3	<input type="checkbox"/>	5.000	14.352	33804.99	0.0114	P	5.5
4	<input type="checkbox"/>	10.000	11.649	34896.99	0.0112	P	0.5
5	<input type="checkbox"/>	100.000	84.579	46753.49	0.0157	P	2.2
6	<input type="checkbox"/>	200.000	207.511	68783.13	0.0232	P	0.7
7	<input type="checkbox"/>	1.000					

$y = 6.1519E-005 * x + 0.0105$

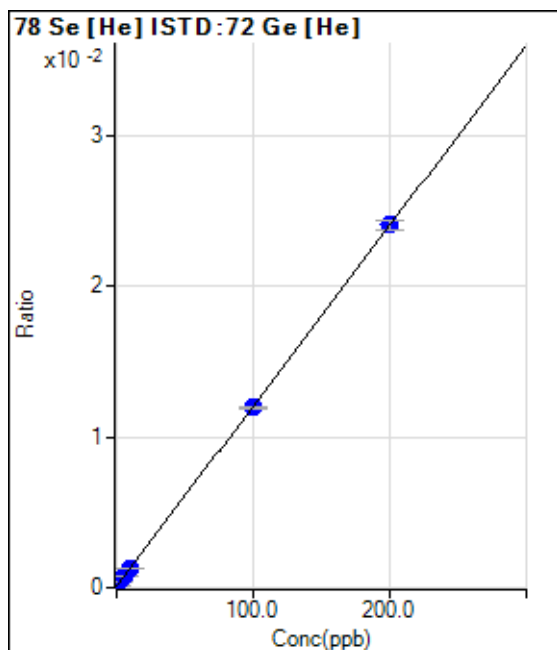
R = 0.9928

DL = 22.53

BEC = 170.3

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.275	144.67	0.0001	P	12.2
2	<input type="checkbox"/>	2.000	2.116	378.68	0.0004	P	3.3
3	<input type="checkbox"/>	5.000	5.195	768.69	0.0007	P	5.5
4	<input type="checkbox"/>	10.000	9.877	1357.39	0.0013	P	1.2
5	<input type="checkbox"/>	100.000	99.076	12736.46	0.0120	P	0.8
6	<input type="checkbox"/>	200.000	200.462	25037.16	0.0241	P	2.4
7	<input type="checkbox"/>	1.000					

$y = 1.1957E-004 * x + 1.0323E-004$

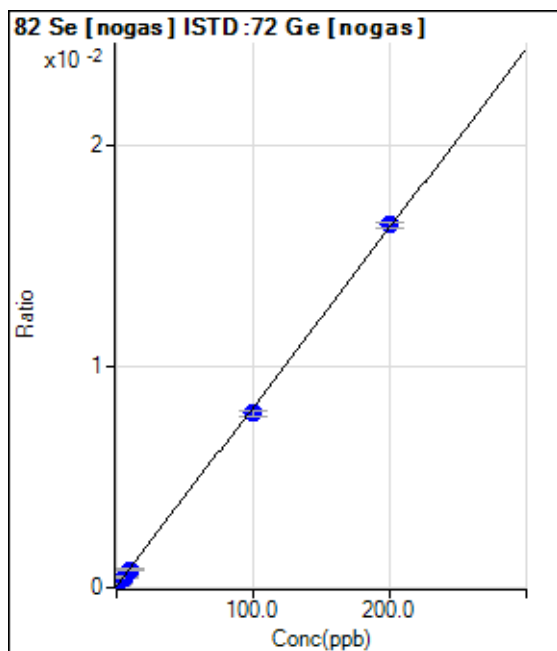
R = 1.0000

DL = 0.417

BEC = 0.8633

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	200.00	0.0001	P	12.8
2	<input type="checkbox"/>	2.000	2.016	680.02	0.0002	P	19.3
3	<input type="checkbox"/>	5.000	4.986	1406.74	0.0005	P	5.5
4	<input type="checkbox"/>	10.000	9.286	2560.22	0.0008	P	3.4
5	<input type="checkbox"/>	100.000	96.666	23535.57	0.0079	P	3.5
6	<input type="checkbox"/>	200.000	201.703	48525.20	0.0164	P	1.8
7	<input type="checkbox"/>	1.000					

$y = 8.0959E-005 * x + 6.9048E-005$

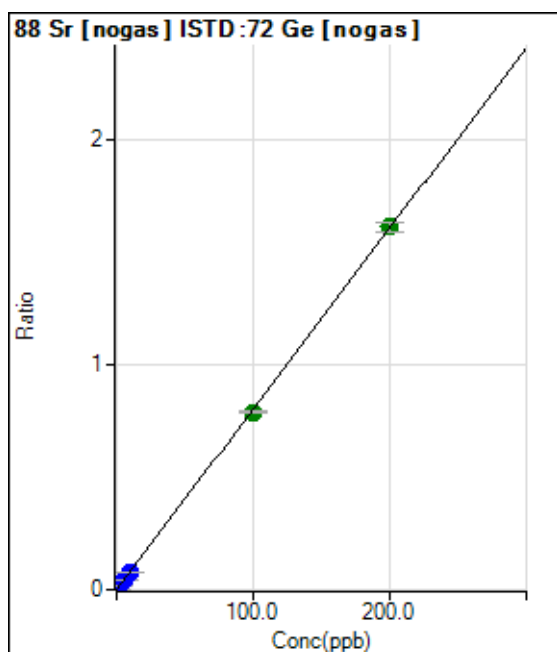
R = 0.9998

DL = 0.3285

BEC = 0.8529

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	1060.05	0.0004	P	4.6
2	<input type="checkbox"/>	2.000	2.054	49388.07	0.0168	P	9.0
3	<input type="checkbox"/>	5.000	5.059	121744.99	0.0409	P	3.7
4	<input type="checkbox"/>	10.000	9.711	243564.64	0.0782	P	4.8
5	<input type="checkbox"/>	100.000	98.374	2351530.75	0.7885	A	1.5
6	<input type="checkbox"/>	200.000	200.825	4762020.24	1.6092	A	2.6
7	<input type="checkbox"/>	1.000					

$y = 0.0080 * x + 3.6512E-004$

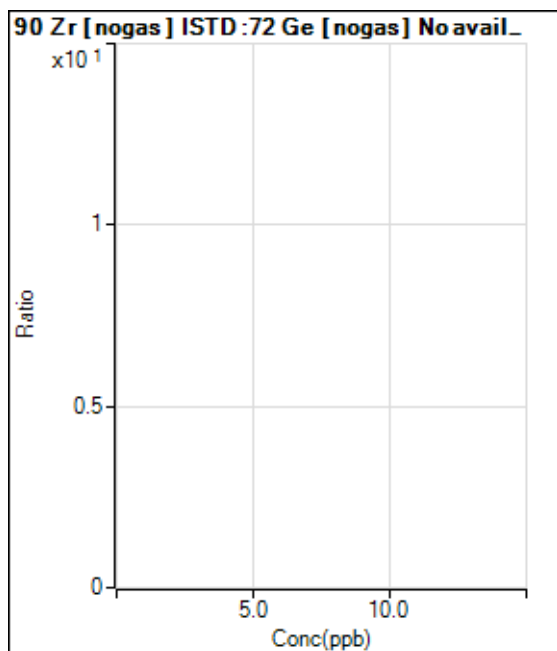
R = 1.0000

DL = 0.006337

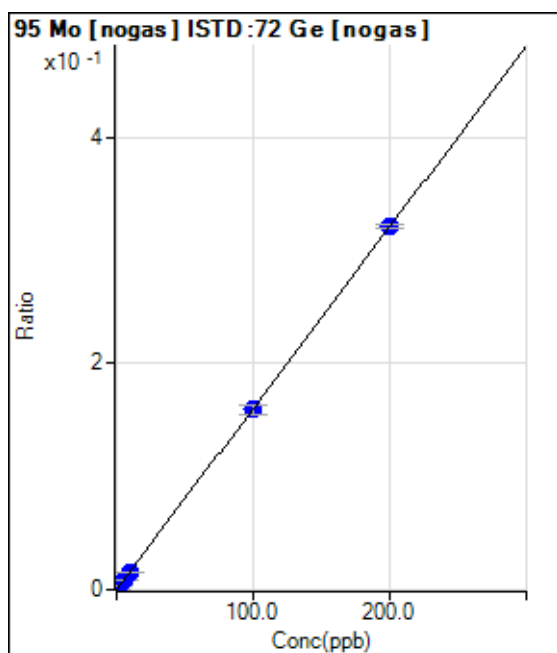
BEC = 0.04558

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000					
2	<input type="checkbox"/>	2.000					
3	<input type="checkbox"/>	5.000					
4	<input type="checkbox"/>	10.000					
5	<input type="checkbox"/>	100.000					
6	<input type="checkbox"/>	200.000					
7	<input type="checkbox"/>	1.000					



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	200.00	0.0001	P	26.1
2	<input type="checkbox"/>	2.000	1.976	9519.37	0.0032	P	5.8
3	<input type="checkbox"/>	5.000	4.905	23609.17	0.0079	P	4.7
4	<input type="checkbox"/>	10.000	9.591	48125.25	0.0154	P	5.0
5	<input type="checkbox"/>	100.000	99.646	476266.07	0.1598	P	5.4
6	<input type="checkbox"/>	200.000	200.200	949882.62	0.3210	P	1.0
7	<input type="checkbox"/>	1.000					

$y = 0.0016 * x + 6.9519E-005$

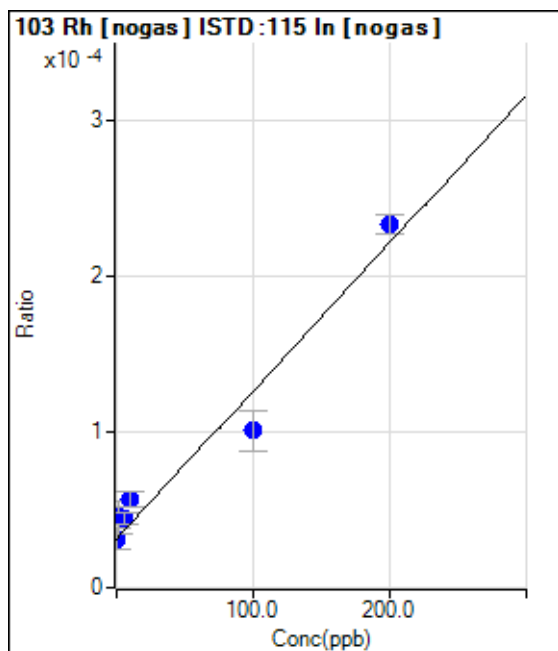
R = 1.0000

DL = 0.0339

BEC = 0.04337

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	83.33	0.0000	P	43.7
2	<input type="checkbox"/>	2.000	14.822	116.67	0.0000	P	46.4
3	<input type="checkbox"/>	5.000	14.075	120.00	0.0000	P	17.7
4	<input type="checkbox"/>	10.000	27.220	153.33	0.0001	P	17.8
5	<input type="checkbox"/>	100.000	73.381	276.68	0.0001	P	25.5
6	<input type="checkbox"/>	200.000	212.093	616.69	0.0002	P	5.4
7	<input type="checkbox"/>	1.000					

$y = 9.5145E-007 * x + 3.1397E-005$

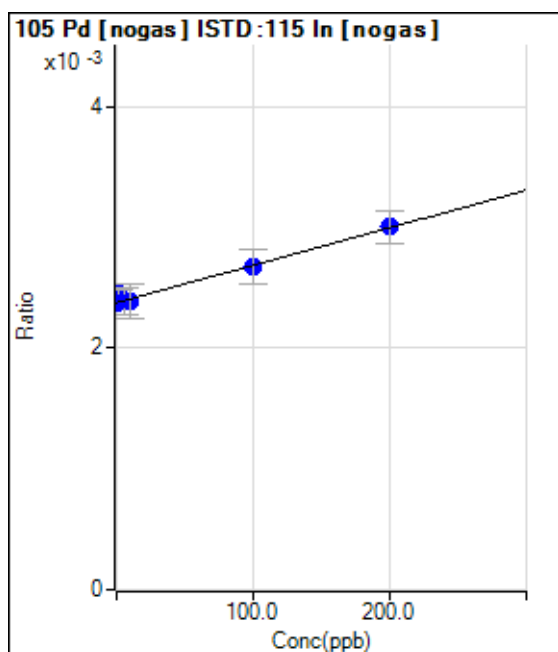
R = 0.9804

DL = 43.29

BEC = 33

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	6187.87	0.0024	P	2.1
2	<input type="checkbox"/>	2.000	25.273	6477.98	0.0025	P	2.8
3	<input type="checkbox"/>	5.000	3.684	6354.60	0.0024	P	8.9
4	<input type="checkbox"/>	10.000	1.767	6384.60	0.0024	P	12.1
5	<input type="checkbox"/>	100.000	96.564	7331.69	0.0027	P	10.7
6	<input type="checkbox"/>	200.000	201.930	7951.97	0.0030	P	9.1
7	<input type="checkbox"/>	1.000					

$y = 3.1110E-006 * x + 0.0024$

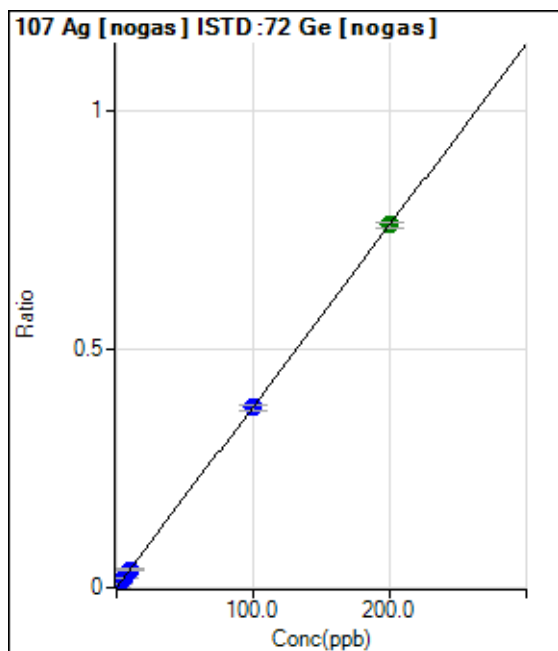
R = 0.9909

DL = 47.68

BEC = 764.4

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	110.00	0.0000	P	34.1
2	<input type="checkbox"/>	2.000	2.074	23345.66	0.0079	P	4.6
3	<input type="checkbox"/>	5.000	5.242	59540.65	0.0200	P	4.1
4	<input type="checkbox"/>	10.000	10.010	118894.83	0.0381	P	2.1
5	<input type="checkbox"/>	100.000	99.568	1130301.21	0.3791	P	2.9
6	<input type="checkbox"/>	200.000	200.209	2256172.52	0.7623	A	1.6
7	<input type="checkbox"/>	1.000					

$y = 0.0038 * x + 3.7764E-005$

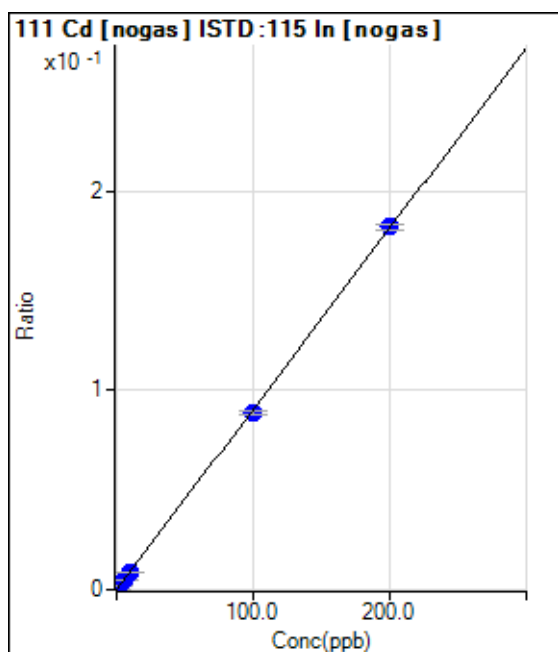
R = 1.0000

DL = 0.01013

BEC = 0.009919

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	20.00	0.0000	P	43.9
2	<input type="checkbox"/>	2.000	2.068	4947.44	0.0019	P	7.4
3	<input type="checkbox"/>	5.000	5.237	12641.36	0.0048	P	8.5
4	<input type="checkbox"/>	10.000	9.942	24173.58	0.0090	P	2.3
5	<input type="checkbox"/>	100.000	98.139	243834.17	0.0889	P	2.8
6	<input type="checkbox"/>	200.000	200.927	481596.95	0.1821	P	1.2
7	<input type="checkbox"/>	1.000					

$y = 9.0621E-004 * x + 7.5203E-006$

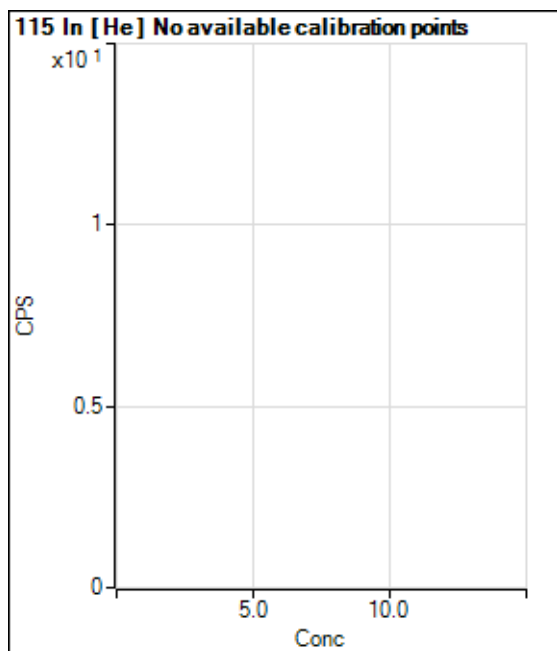
R = 0.9999

DL = 0.01093

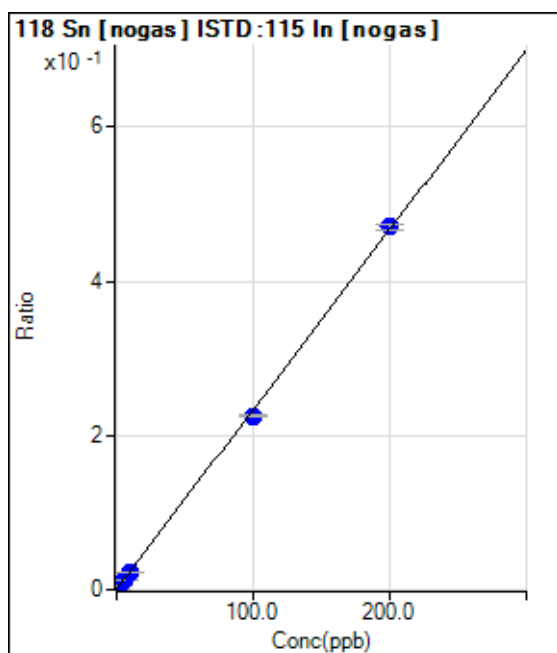
BEC = 0.008299

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>			1484817.94		A	2.9
2	<input type="checkbox"/>			1494913.49		A	2.7
3	<input type="checkbox"/>			1473868.25		A	2.4
4	<input type="checkbox"/>			1465491.49		A	2.2
5	<input type="checkbox"/>			1420355.36		A	1.4
6	<input type="checkbox"/>			1430930.30		A	2.7
7	<input type="checkbox"/>						



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	1220.06	0.0005	P	6.8
2	<input type="checkbox"/>	2.000	2.006	13508.77	0.0051	P	8.3
3	<input type="checkbox"/>	5.000	5.109	32834.86	0.0124	P	11.6
4	<input type="checkbox"/>	10.000	9.787	62374.77	0.0233	P	0.1
5	<input type="checkbox"/>	100.000	96.626	618378.34	0.2256	P	1.6
6	<input type="checkbox"/>	200.000	201.695	1243986.73	0.4703	P	1.5
7	<input type="checkbox"/>	1.000					

$y = 0.0023 * x + 4.6988E-004$

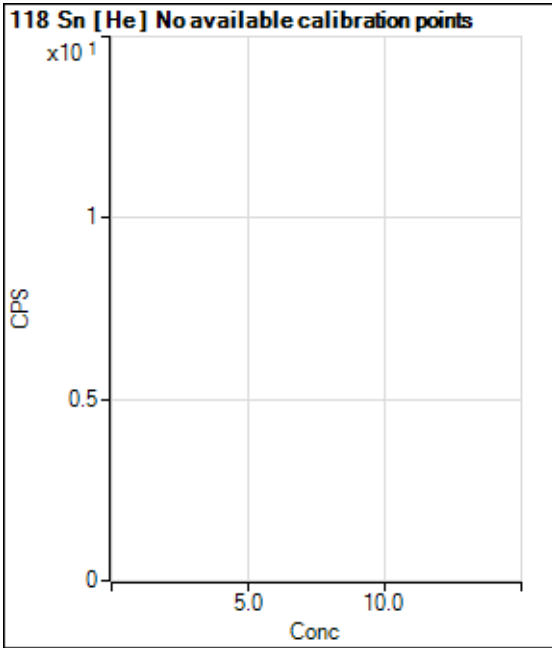
R = 0.9998

DL = 0.04096

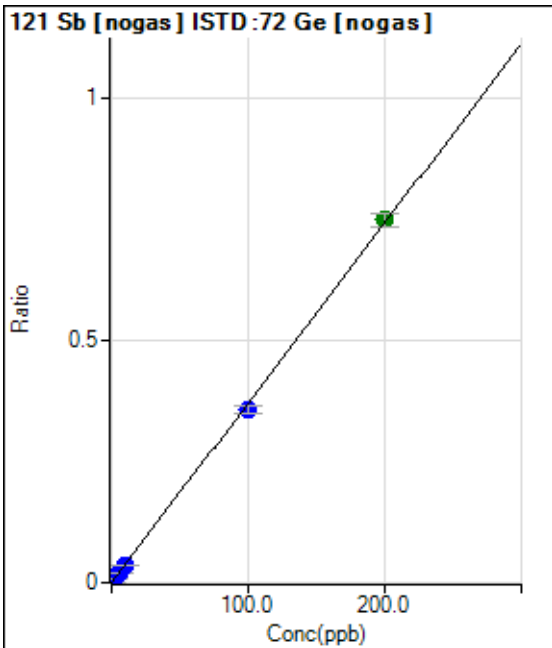
BEC = 0.2017

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>			606.69		P	14.9
2	<input type="checkbox"/>			7695.14		P	1.9
3	<input type="checkbox"/>			19003.86		P	2.3
4	<input type="checkbox"/>			35479.57		P	0.2
5	<input type="checkbox"/>			361784.55		P	1.1
6	<input type="checkbox"/>			723545.04		P	1.0
7	<input type="checkbox"/>						



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	530.02	0.0002	P	16.0
2	<input type="checkbox"/>	2.000	1.999	22291.06	0.0076	P	5.6
3	<input type="checkbox"/>	5.000	4.958	55116.92	0.0185	P	6.4
4	<input type="checkbox"/>	10.000	9.318	108006.59	0.0347	P	2.0
5	<input type="checkbox"/>	100.000	96.148	1060601.47	0.3559	P	4.8
6	<input type="checkbox"/>	200.000	201.961	2210877.62	0.7473	A	3.7
7	<input type="checkbox"/>	1.000					

$y = 0.0037 * x + 1.8343E-004$

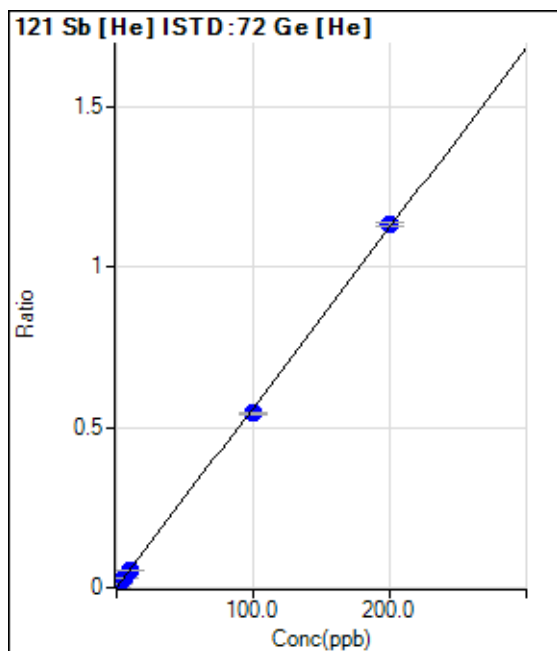
R = 0.9997

DL = 0.02381

BEC = 0.04958

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	326.68	0.0003	P	9.5
2	<input type="checkbox"/>	2.000	1.875	11497.28	0.0108	P	3.6
3	<input type="checkbox"/>	5.000	4.925	29595.28	0.0279	P	2.0
4	<input type="checkbox"/>	10.000	9.619	57277.15	0.0542	P	2.4
5	<input type="checkbox"/>	100.000	96.788	578196.53	0.5425	P	1.2
6	<input type="checkbox"/>	200.000	201.628	1175196.49	1.1298	P	1.2
7	<input type="checkbox"/>	1.000					

$y = 0.0056 * x + 3.0753E-004$

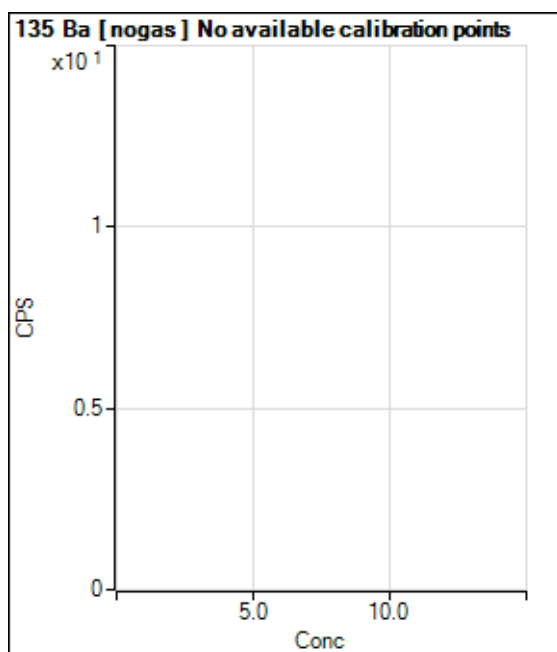
R = 0.9998

DL = 0.01572

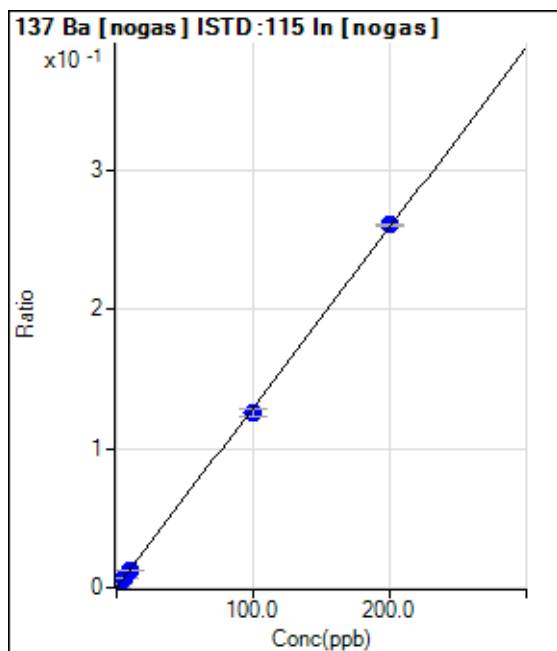
BEC = 0.0549

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>			143.33		P	10.7
2	<input type="checkbox"/>			4390.64		P	2.2
3	<input type="checkbox"/>			10163.17		P	2.2
4	<input type="checkbox"/>			20375.64		P	2.1
5	<input type="checkbox"/>			199174.44		P	3.1
6	<input type="checkbox"/>			403355.81		P	1.2
7	<input type="checkbox"/>						



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	<input type="checkbox"/>	0.000	0.000	243.34	0.0001	P	7.3
2	<input type="checkbox"/>	2.000	1.990	7001.54	0.0027	P	12.5
3	<input type="checkbox"/>	5.000	5.347	18670.29	0.0070	P	8.6
4	<input type="checkbox"/>	10.000	10.038	35113.01	0.0131	P	0.5
5	<input type="checkbox"/>	100.000	97.166	345389.27	0.1260	P	4.3
6	<input type="checkbox"/>	200.000	201.407	690463.69	0.2611	P	0.4
7	<input type="checkbox"/>	1.000					

$y = 0.0013 * x + 9.3240E-005$

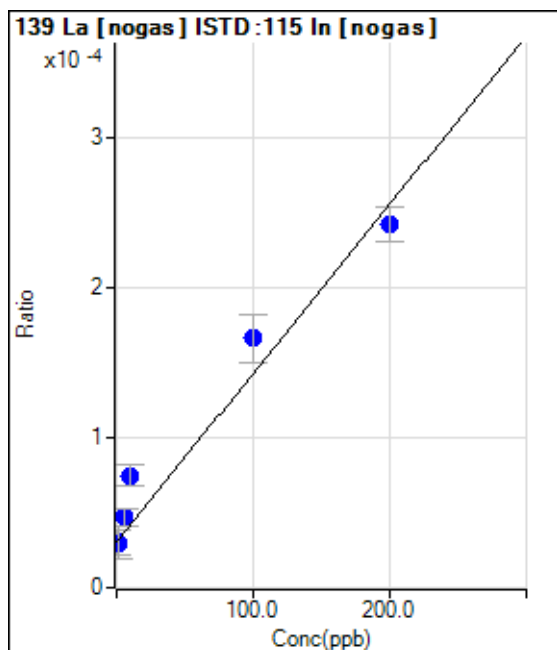
R = 0.9999

DL = 0.01566

BEC = 0.07196

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	<input type="checkbox"/>	0.000	0.000	76.67	0.0000	P	53.5
2	<input type="checkbox"/>	2.000	-0.229	80.00	0.0000	P	71.0
3	<input type="checkbox"/>	5.000	14.601	123.33	0.0000	P	23.0
4	<input type="checkbox"/>	10.000	39.420	200.00	0.0001	P	19.5
5	<input type="checkbox"/>	100.000	120.630	456.68	0.0002	P	19.4
6	<input type="checkbox"/>	200.000	187.996	640.02	0.0002	P	9.6
7	<input type="checkbox"/>	1.000					

$y = 1.1255E-006 * x + 3.0387E-005$

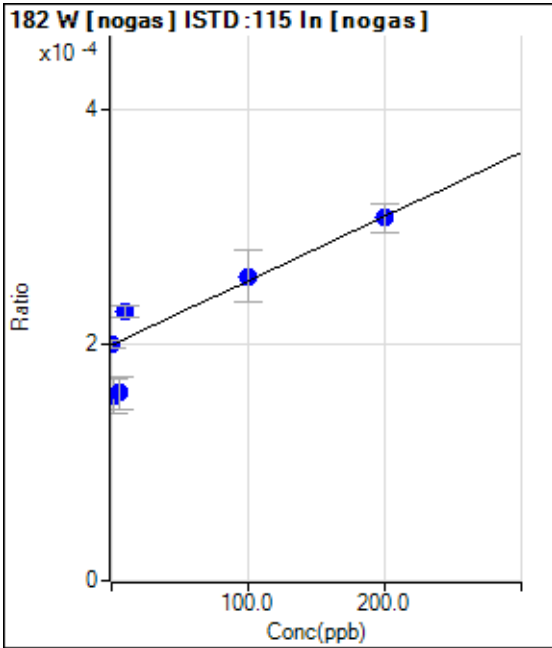
R = 0.9828

DL = 43.36

BEC = 27

Weight: <None>

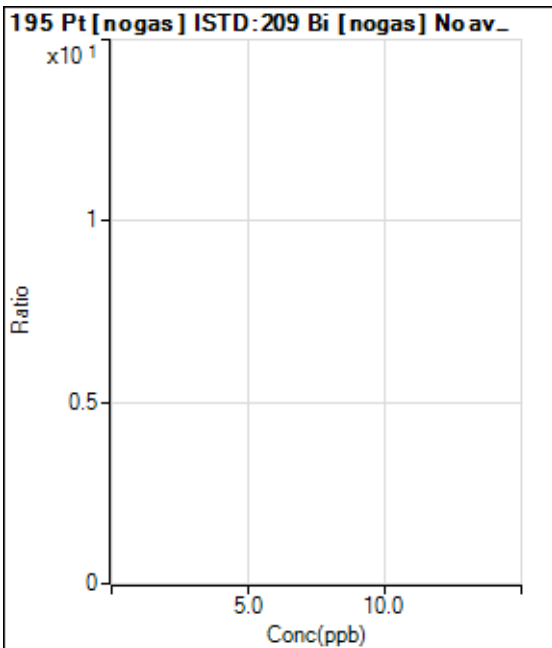
Min Conc: <None>



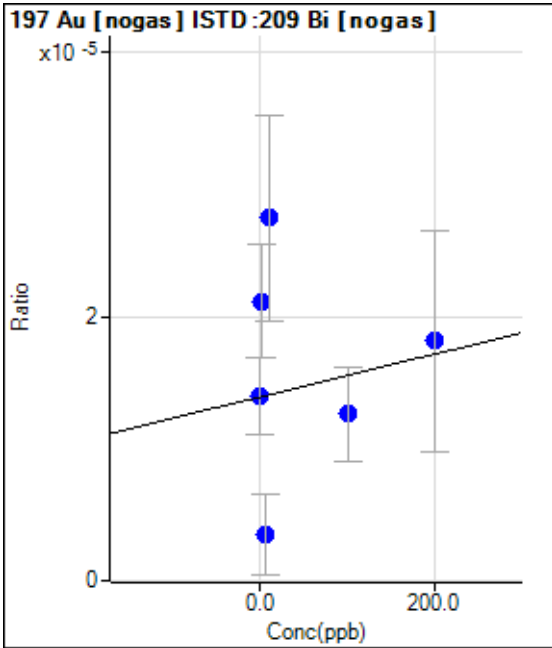
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	520.02	0.0002	P	3.2
2	<input type="checkbox"/>	2.000	-78.769	410.01	0.0002	P	18.9
3	<input type="checkbox"/>	5.000	-73.901	423.35	0.0002	P	17.2
4	<input type="checkbox"/>	10.000	51.101	610.02	0.0002	P	4.1
5	<input type="checkbox"/>	100.000	106.197	706.70	0.0003	P	17.0
6	<input type="checkbox"/>	200.000	197.627	813.37	0.0003	P	7.9
7	<input type="checkbox"/>	1.000					

$y = 5.4533E-007 * x + 1.9972E-004$
 R = 0.8980
 DL = 35.3
 BEC = 366.2

Weight: <None>
Min Conc: <None>



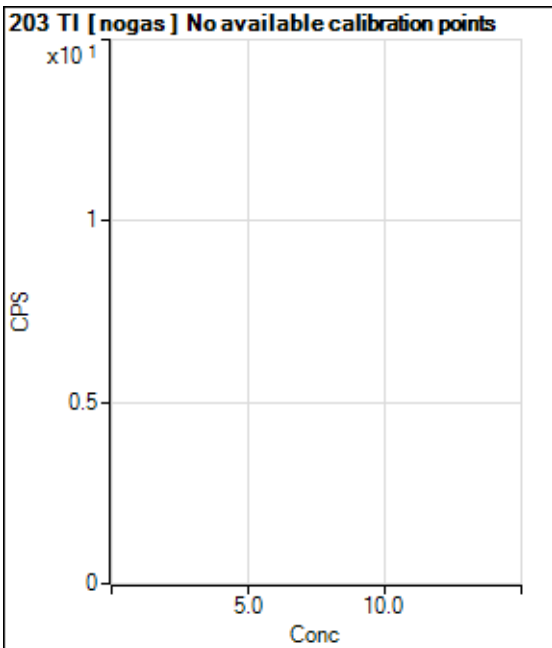
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000					
2	<input type="checkbox"/>	2.000					
3	<input type="checkbox"/>	5.000					
4	<input type="checkbox"/>	10.000					
5	<input type="checkbox"/>	100.000					
6	<input type="checkbox"/>	200.000					
7	<input type="checkbox"/>	1.000					



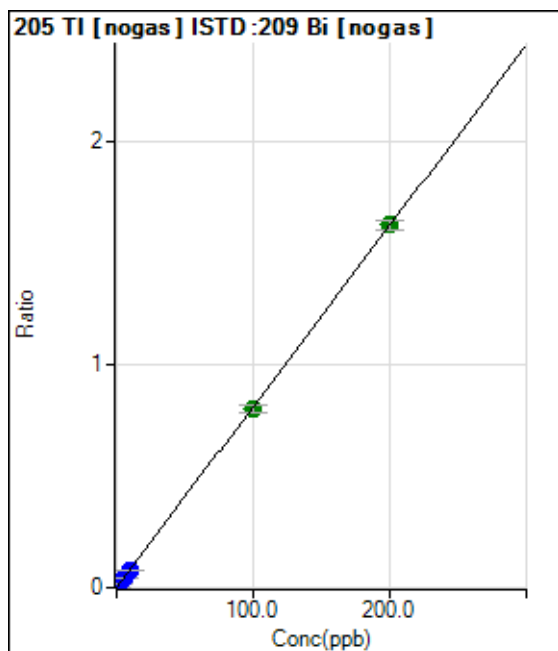
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	26.67	0.0000	P	41.7
2	<input type="checkbox"/>	2.000	449.136	40.00	0.0000	P	41.0
3	<input type="checkbox"/>	5.000	-643.164	6.67	0.0000	P	173.
4	<input type="checkbox"/>	10.000	838.419	53.33	0.0000	P	56.8
5	<input type="checkbox"/>	100.000	-80.228	26.67	0.0000	P	57.1
6	<input type="checkbox"/>	200.000	260.426	33.33	0.0000	P	92.6
7	<input type="checkbox"/>	1.000					

$y = 1.6156E-008 * x + 1.3921E-005$
 R = 0.0318
 DL = 1078
 BEC = 861.7

Weight: <None>
Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>			170.00		P	45.9
2	<input type="checkbox"/>			13325.67		P	5.2
3	<input type="checkbox"/>			31791.39		P	3.4
4	<input type="checkbox"/>			64043.33		P	4.1
5	<input type="checkbox"/>			632547.80		P	2.9
6	<input type="checkbox"/>			1274268.81		P	1.2
7	<input type="checkbox"/>						



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	<input type="checkbox"/>	0.000	0.000	433.34	0.0002	P	11.0
2	<input type="checkbox"/>	2.000	2.048	31577.73	0.0168	P	1.3
3	<input type="checkbox"/>	5.000	5.076	77910.72	0.0413	P	7.0
4	<input type="checkbox"/>	10.000	9.490	149757.25	0.0770	P	3.8
5	<input type="checkbox"/>	100.000	98.987	1699141.64	0.8015	A	3.8
6	<input type="checkbox"/>	200.000	200.530	3051749.22	1.6235	A	2.5
7	<input type="checkbox"/>	1.000					

$y = 0.0081 * x + 2.2746E-004$

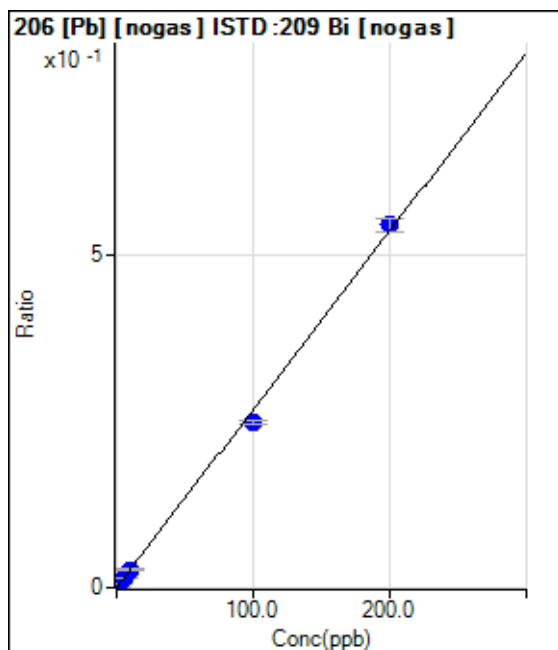
R = 1.0000

DL = 0.009277

BEC = 0.0281

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	<input type="checkbox"/>	0.000	0.000	160.00	0.0001	P	14.5
2	<input type="checkbox"/>	2.000	2.117	10817.12	0.0058	P	5.5
3	<input type="checkbox"/>	5.000	5.416	27553.70	0.0146	P	7.5
4	<input type="checkbox"/>	10.000	10.151	53090.45	0.0273	P	5.8
5	<input type="checkbox"/>	100.000	92.786	527528.18	0.2491	P	3.4
6	<input type="checkbox"/>	200.000	203.588	1026681.16	0.5464	P	4.1
7	<input type="checkbox"/>	1.000					

$y = 0.0027 * x + 8.3685E-005$

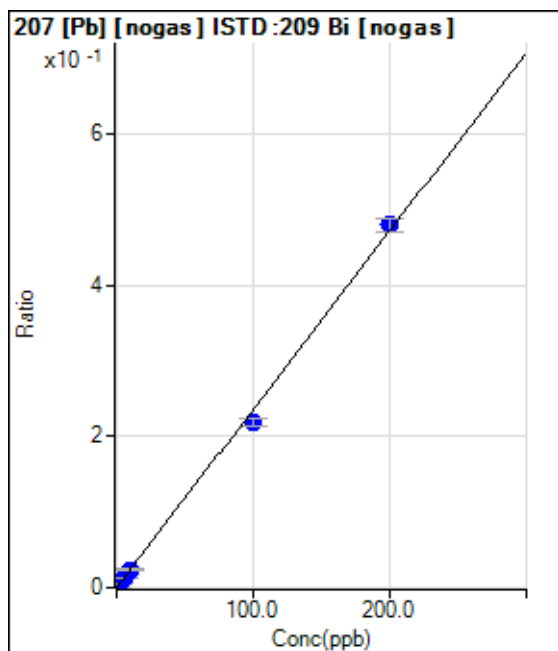
R = 0.9991

DL = 0.01357

BEC = 0.03119

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	160.00	0.0001	P	21.7
2	<input type="checkbox"/>	2.000	2.084	9386.16	0.0050	P	8.0
3	<input type="checkbox"/>	5.000	5.312	23811.11	0.0126	P	6.7
4	<input type="checkbox"/>	10.000	10.164	46794.67	0.0241	P	5.6
5	<input type="checkbox"/>	100.000	92.907	464688.32	0.2195	P	4.3
6	<input type="checkbox"/>	200.000	203.530	903392.70	0.4806	P	3.5
7	<input type="checkbox"/>	1.000					

$y = 0.0024 * x + 8.3802E-005$

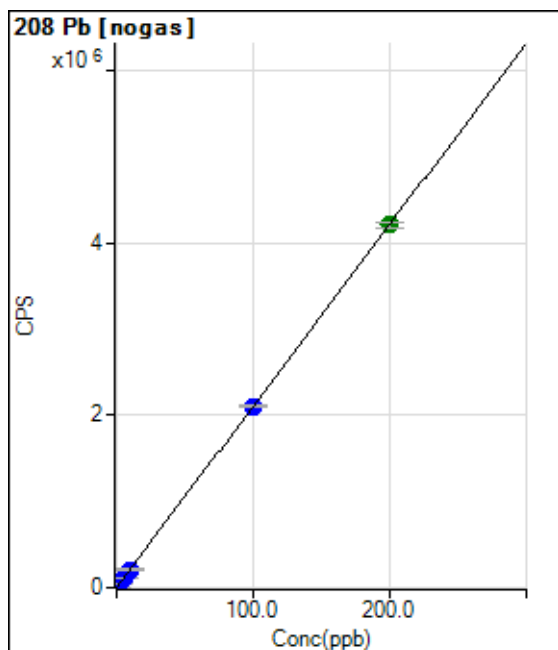
R = 0.9991

DL = 0.02316

BEC = 0.03549

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	526.67		P	18.2
2	<input type="checkbox"/>	2.000	2.023	43133.25		P	1.7
3	<input type="checkbox"/>	5.000	5.104	108007.31		P	1.1
4	<input type="checkbox"/>	10.000	10.043	212021.61		P	1.5
5	<input type="checkbox"/>	100.000	100.057	2107554.67		P	1.8
6	<input type="checkbox"/>	200.000	199.966	4211457.42		A	1.7
7	<input type="checkbox"/>	1.000					

$y = 21058.2001 * x + 526.6733$

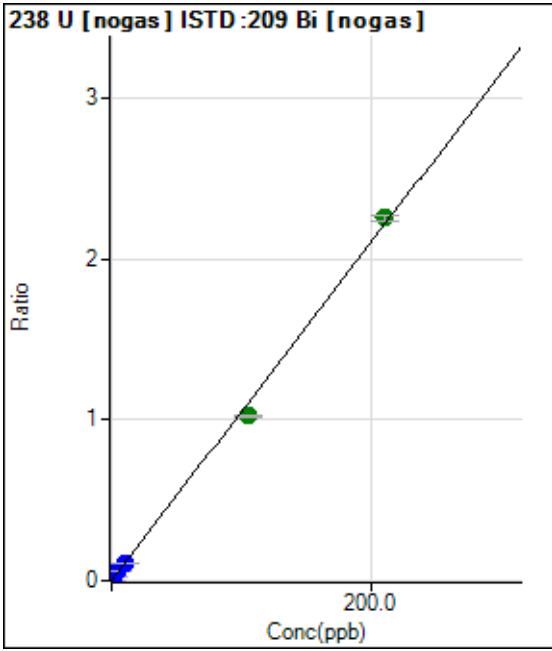
R = 1.0000

DL = 0.01369

BEC = 0.02501

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	196.67	0.0001	P	18.1
2	<input type="checkbox"/>	2.000	2.157	42848.15	0.0228	P	6.5
3	<input type="checkbox"/>	5.000	5.268	105068.07	0.0556	P	3.5
4	<input type="checkbox"/>	10.000	9.877	202710.24	0.1042	P	0.5
5	<input type="checkbox"/>	105.000	96.992	2166271.27	1.0226	A	1.7
6	<input type="checkbox"/>	210.000	214.002	4241301.50	2.2561	A	1.9
7	<input type="checkbox"/>	1.000					

$y = 0.0105 * x + 1.0343E-004$

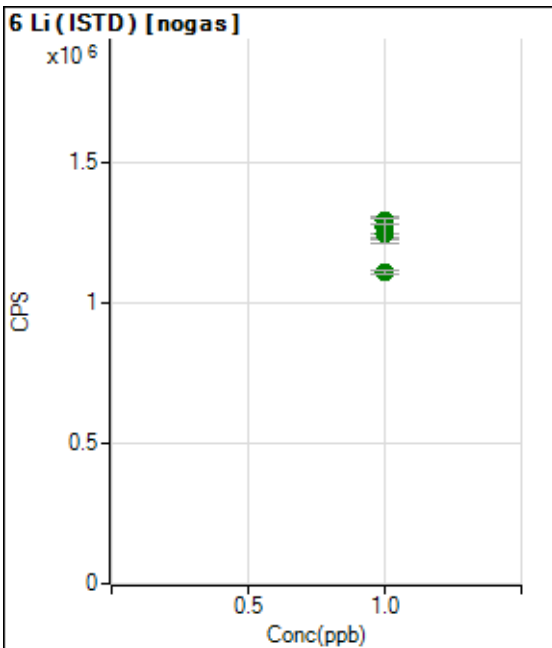
R = 0.9990

DL = 0.005314

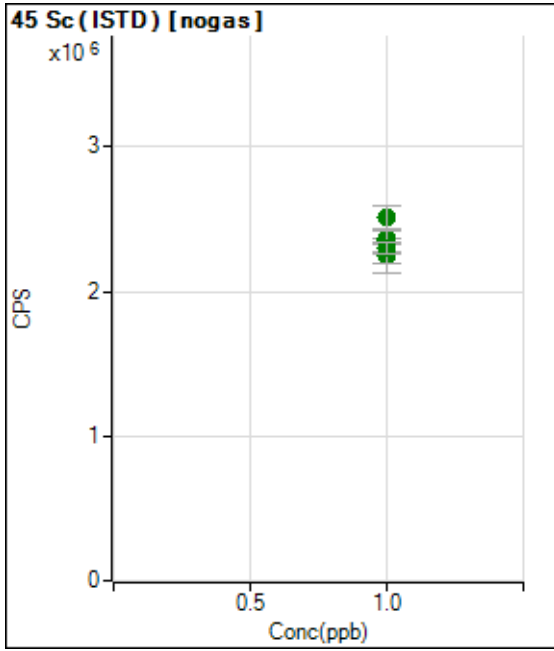
BEC = 0.009811

Weight: <None>

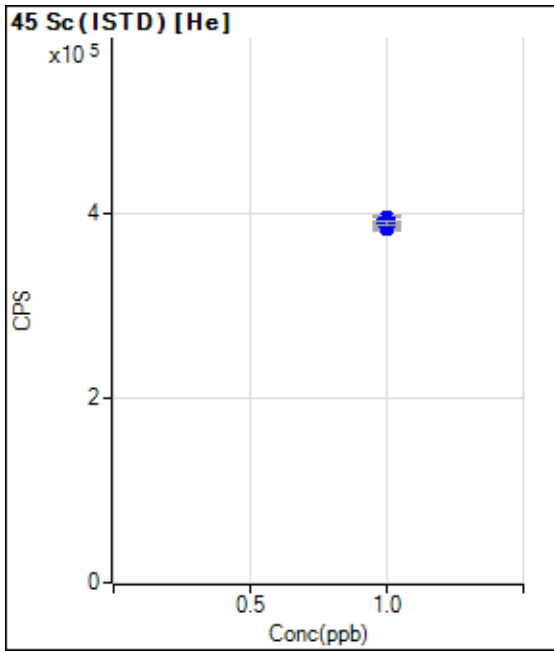
Min Conc: <None>



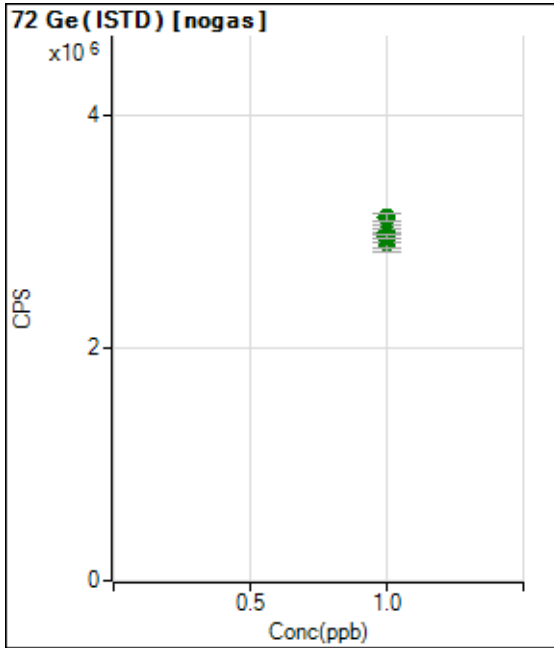
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	1.000		1267062.36		A	6.8
2	<input type="checkbox"/>	1.000		1271057.89		A	4.3
3	<input type="checkbox"/>	1.000		1269593.34		A	6.3
4	<input type="checkbox"/>	1.000		1290761.54		A	1.8
5	<input type="checkbox"/>	1.000		1245616.57		A	5.1
6	<input type="checkbox"/>	1.000		1106604.65		A	1.0
7	<input type="checkbox"/>	1.000					



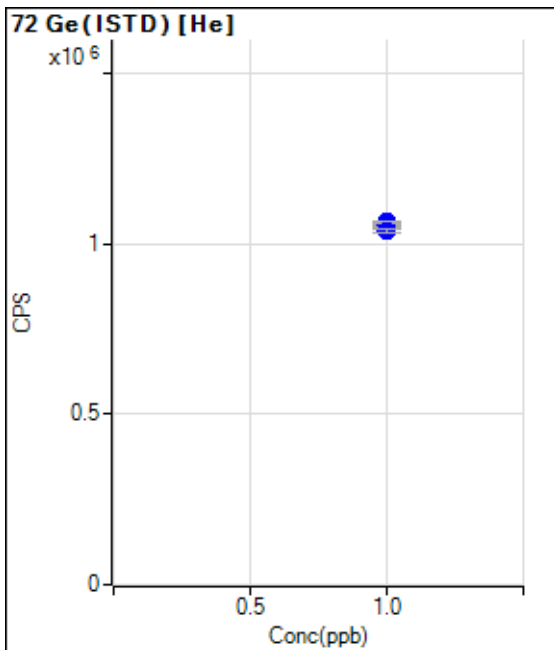
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	1.000		2250601.27		A	10.9
2	<input type="checkbox"/>	1.000		2260091.11		A	5.6
3	<input type="checkbox"/>	1.000		2357293.56		A	6.9
4	<input type="checkbox"/>	1.000		2374087.15		A	3.8
5	<input type="checkbox"/>	1.000		2509380.96		A	7.0
6	<input type="checkbox"/>	1.000		2306574.76		A	3.4
7	<input type="checkbox"/>	1.000					



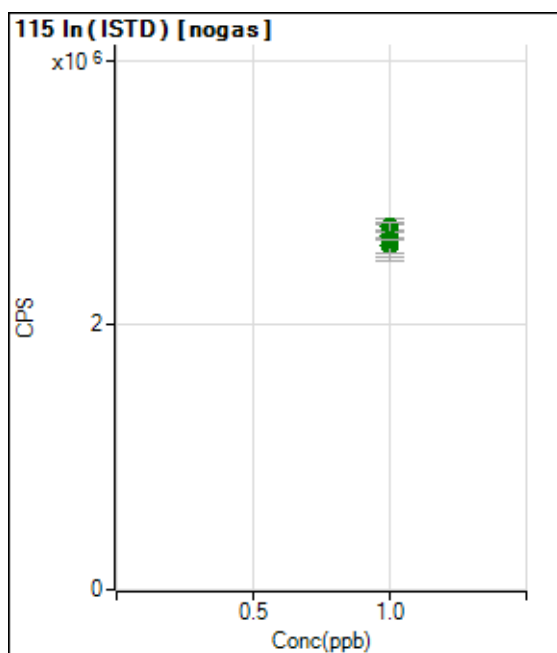
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	1.000		386126.10		P	2.1
2	<input type="checkbox"/>	1.000		392737.56		P	2.0
3	<input type="checkbox"/>	1.000		393297.70		P	2.5
4	<input type="checkbox"/>	1.000		388638.34		P	1.3
5	<input type="checkbox"/>	1.000		387218.05		P	1.9
6	<input type="checkbox"/>	1.000		389969.96		P	1.0
7	<input type="checkbox"/>	1.000					



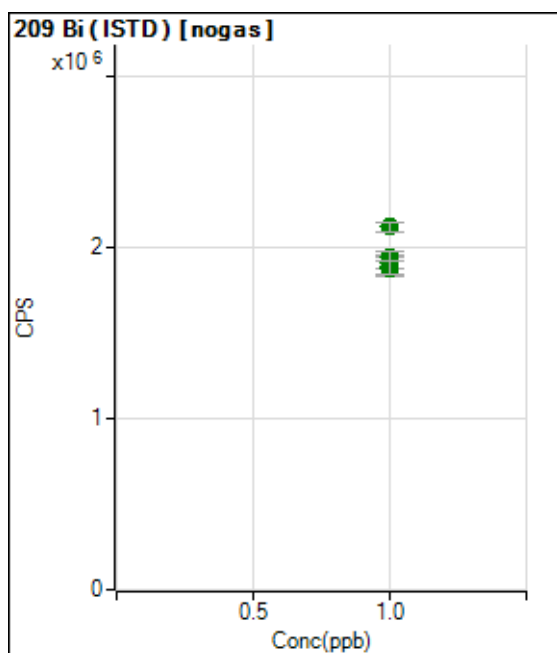
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	1.000		2907309.33		A	6.0
2	<input type="checkbox"/>	1.000		2946465.58		A	5.6
3	<input type="checkbox"/>	1.000		2980652.35		A	4.6
4	<input type="checkbox"/>	1.000		3117445.37		A	2.1
5	<input type="checkbox"/>	1.000		2982906.10		A	2.8
6	<input type="checkbox"/>	1.000		2959445.06		A	1.4
7	<input type="checkbox"/>	1.000					



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	1.000		1062701.31		P	0.7
2	<input type="checkbox"/>	1.000		1063284.25		P	0.8
3	<input type="checkbox"/>	1.000		1061003.50		P	0.4
4	<input type="checkbox"/>	1.000		1057039.28		P	1.1
5	<input type="checkbox"/>	1.000		1065790.98		P	0.8
6	<input type="checkbox"/>	1.000		1040244.31		P	1.2
7	<input type="checkbox"/>	1.000					



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	1.000		2598911.99		A	8.7
2	<input type="checkbox"/>	1.000		2640658.23		A	9.4
3	<input type="checkbox"/>	1.000		2674431.47		A	10.1
4	<input type="checkbox"/>	1.000		2680380.57		A	1.4
5	<input type="checkbox"/>	1.000		2742092.04		A	2.6
6	<input type="checkbox"/>	1.000		2644771.13		A	0.3
7	<input type="checkbox"/>	1.000					



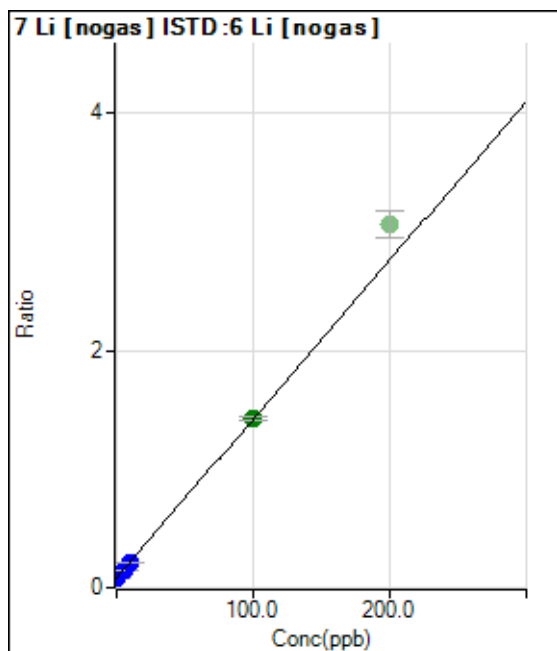
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	1.000		1908674.66		A	3.1
2	<input type="checkbox"/>	1.000		1879436.69		A	4.3
3	<input type="checkbox"/>	1.000		1891457.58		A	6.9
4	<input type="checkbox"/>	1.000		1945018.25		A	2.8
5	<input type="checkbox"/>	1.000		2119037.31		A	2.5
6	<input type="checkbox"/>	1.000		1880818.15		A	3.7
7	<input type="checkbox"/>	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	071CALB.d	2/10/200	2019-01-09 13:43:25
3	072CALB.d	5/25/500	2019-01-09 13:45:22
4	073CALB.d	10/50/1000	2019-01-09 13:47:20
5	074CALB.d	100/500/10K	2019-01-09 13:49:18
6	075CALB.d	200/1000/20K	2019-01-09 13:51:19
7			





	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	107910.50	0.0842	P	0.8
2	<input type="checkbox"/>	2.000	1.743	137663.75	0.1075	P	0.5
3	<input type="checkbox"/>	5.000	4.568	189211.91	0.1453	P	2.6
4	<input type="checkbox"/>	10.000	9.383	263400.18	0.2098	P	2.4
5	<input type="checkbox"/>	100.000	100.088	1635930.55	1.4241	A	2.7
6	<input checked="" type="checkbox"/>	200.000		3075285.27	3.0601	A	7.3
7	<input type="checkbox"/>	1.000					

$y = 0.0134 * x + 0.0842$

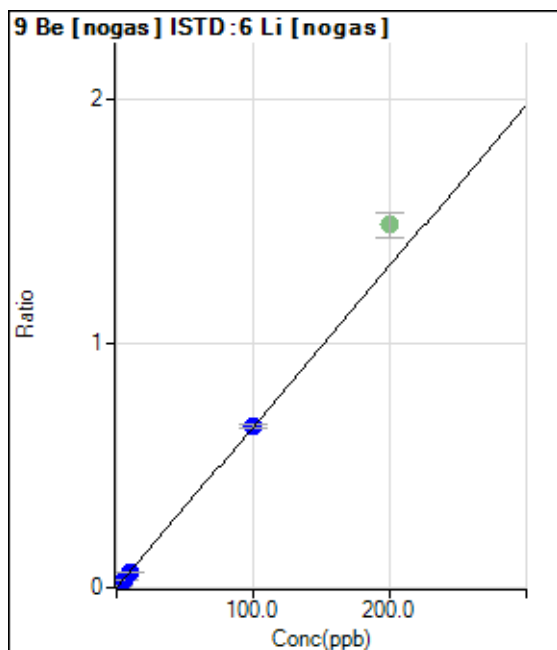
R = 1.0000

DL = 0.1423

BEC = 6.287

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	103.33	0.0001	P	7.0
2	<input type="checkbox"/>	2.000	1.808	15363.06	0.0120	P	7.1
3	<input type="checkbox"/>	5.000	4.399	37894.34	0.0291	P	1.9
4	<input type="checkbox"/>	10.000	9.054	75120.63	0.0598	P	1.5
5	<input type="checkbox"/>	100.000	100.129	759168.37	0.6608	P	2.3
6	<input checked="" type="checkbox"/>	200.000		1495626.18	1.4880	A	6.9
7	<input type="checkbox"/>	1.000					

$y = 0.0066 * x + 8.0671E-005$

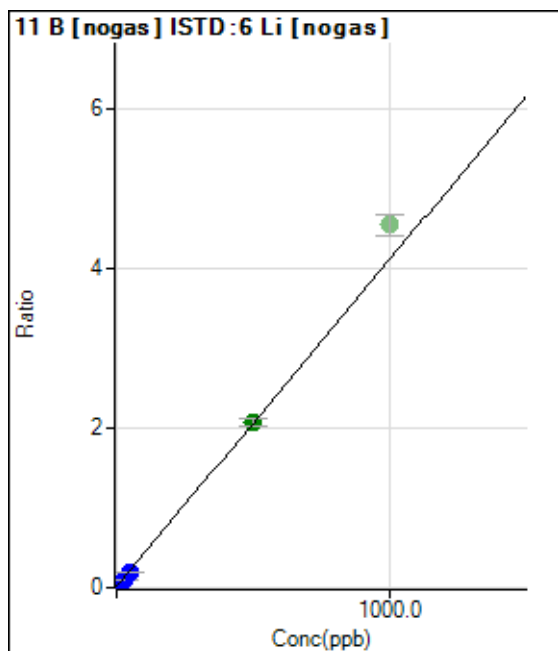
R = 1.0000

DL = 0.002558

BEC = 0.01223

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	19226.65	0.0150	P	5.5
2	<input type="checkbox"/>	10.000	8.420	63398.42	0.0495	P	2.9
3	<input type="checkbox"/>	25.000	21.589	134752.51	0.1035	P	3.2
4	<input type="checkbox"/>	50.000	44.837	249616.38	0.1988	P	2.0
5	<input type="checkbox"/>	500.000	500.718	2374732.68	2.0679	A	5.0
6	<input checked="" type="checkbox"/>	1000.000		4576882.33	4.5501	A	6.1
7	<input type="checkbox"/>	5.000					

$y = 0.0041 * x + 0.0150$

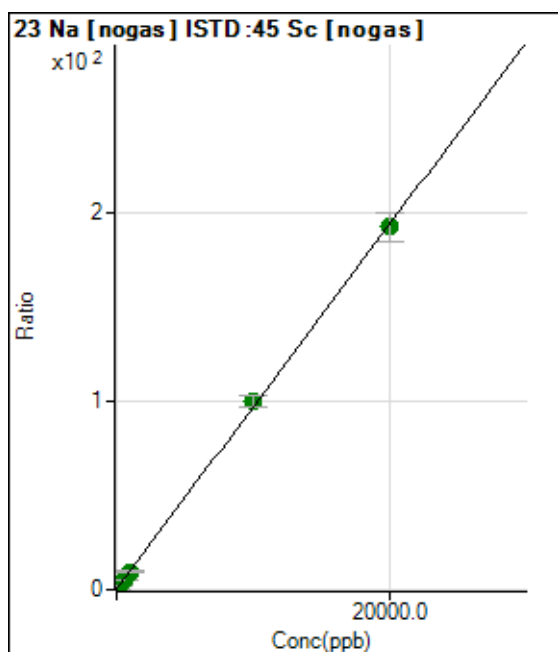
R = 1.0000

DL = 0.6078

BEC = 3.661

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	773666.70	0.2608	P	3.2
2	<input type="checkbox"/>	200.000	217.621	6712318.38	2.3621	A	9.5
3	<input type="checkbox"/>	500.000	485.533	14934755.54	4.9488	A	4.2
4	<input type="checkbox"/>	1000.000	970.484	28015169.37	9.6312	A	3.1
5	<input type="checkbox"/>	10000.00	10273.157	274654589.4	99.4521	A	6.4
6	<input type="checkbox"/>	20000.00	19865.083	505797144.6	192.065	A	7.7
7	<input type="checkbox"/>	100.000					

$y = 0.0097 * x + 0.2608$

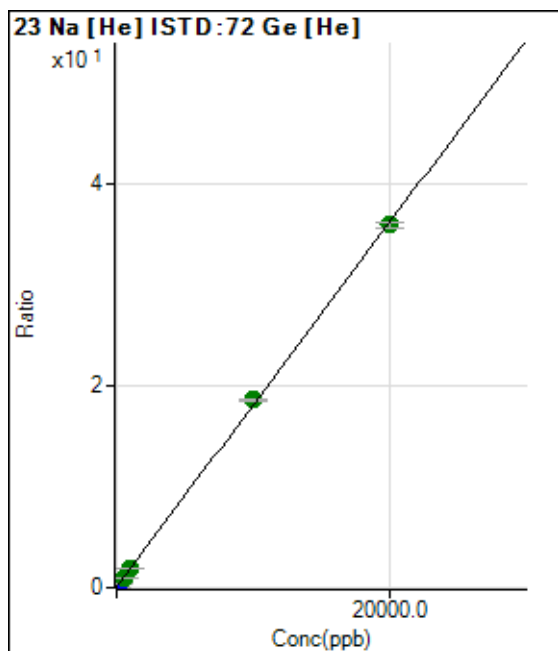
R = 0.9999

DL = 2.572

BEC = 27.01

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	80114.44	0.0608	P	1.5
2	<input type="checkbox"/>	200.000	211.205	589153.63	0.4420	P	2.6
3	<input type="checkbox"/>	500.000	523.954	1305962.51	1.0064	A	4.0
4	<input type="checkbox"/>	1000.000	1014.801	2392101.16	1.8921	A	2.2
5	<input type="checkbox"/>	10000.00	10260.632	22733625.49	18.5770	A	1.6
6	<input type="checkbox"/>	20000.00	19868.233	42820309.36	35.9147	A	1.8
7	<input type="checkbox"/>	100.000					

$y = 0.0018 * x + 0.0608$

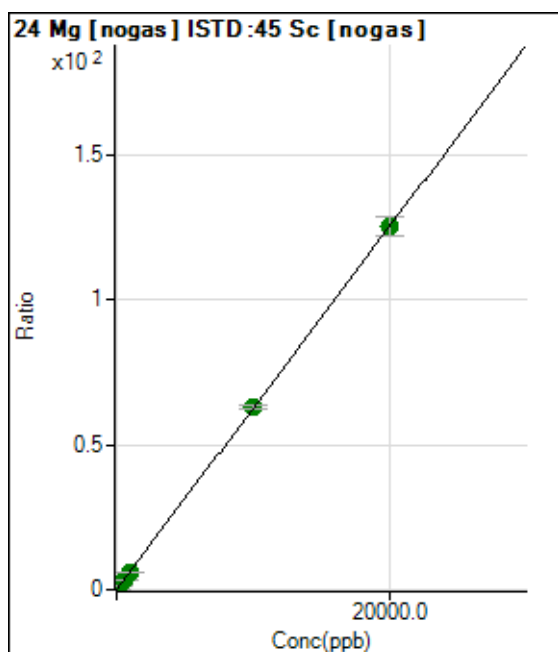
R = 0.9999

DL = 1.517

BEC = 33.72

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	17578.36	0.0059	P	9.5
2	<input type="checkbox"/>	200.000	209.505	3739704.51	1.3159	A	9.2
3	<input type="checkbox"/>	500.000	490.476	9272721.56	3.0728	A	4.6
4	<input type="checkbox"/>	1000.000	984.799	17926517.07	6.1637	A	4.0
5	<input type="checkbox"/>	10000.00	10031.968	173502891.3	62.7339	A	2.2
6	<input type="checkbox"/>	20000.00	19984.919	329468065.7	124.967	A	5.2
7	<input type="checkbox"/>	100.000					

$y = 0.0063 * x + 0.0059$

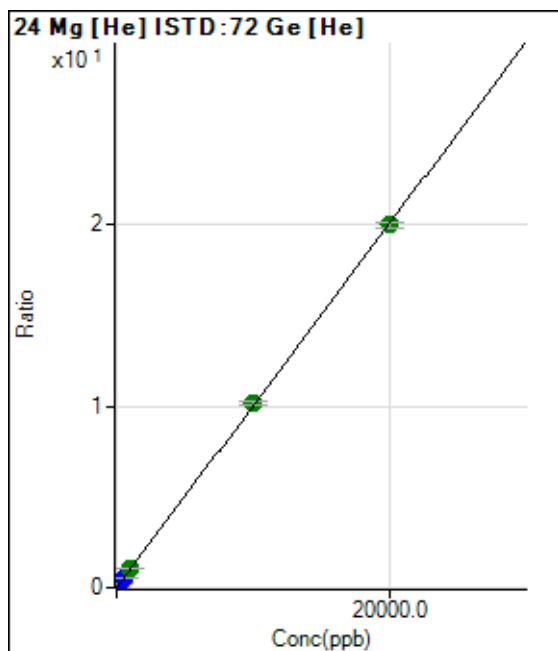
R = 1.0000

DL = 0.2691

BEC = 0.9478

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	1776.78	0.0013	P	13.5
2	<input type="checkbox"/>	200.000	196.581	264699.65	0.1986	P	3.3
3	<input type="checkbox"/>	500.000	514.441	671604.05	0.5175	P	3.6
4	<input type="checkbox"/>	1000.000	1034.788	1314597.17	1.0397	A	1.7
5	<input type="checkbox"/>	10000.00	10134.041	12446127.73	10.1698	A	1.8
6	<input type="checkbox"/>	20000.00	19930.913	23846852.14	19.9999	A	1.9
7	<input type="checkbox"/>	100.000					

$y = 0.0010 * x + 0.0013$

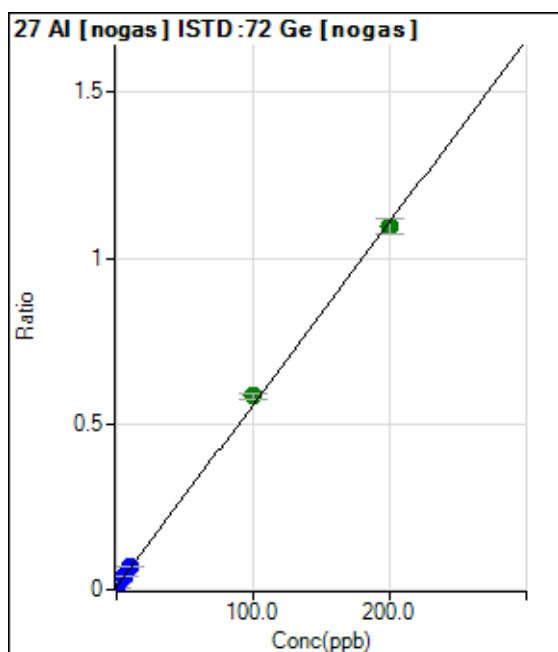
R = 1.0000

DL = 0.5458

BEC = 1.344

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	33062.73	0.0085	P	4.6
2	<input type="checkbox"/>	2.000	2.740	88164.04	0.0236	P	8.6
3	<input type="checkbox"/>	5.000	5.759	156311.26	0.0402	P	4.0
4	<input type="checkbox"/>	10.000	11.162	257708.26	0.0699	P	3.4
5	<input type="checkbox"/>	100.000	104.860	2112403.77	0.5849	A	3.0
6	<input type="checkbox"/>	200.000	197.486	3851404.21	1.0941	A	4.2
7	<input type="checkbox"/>	1.000					

$y = 0.0055 * x + 0.0085$

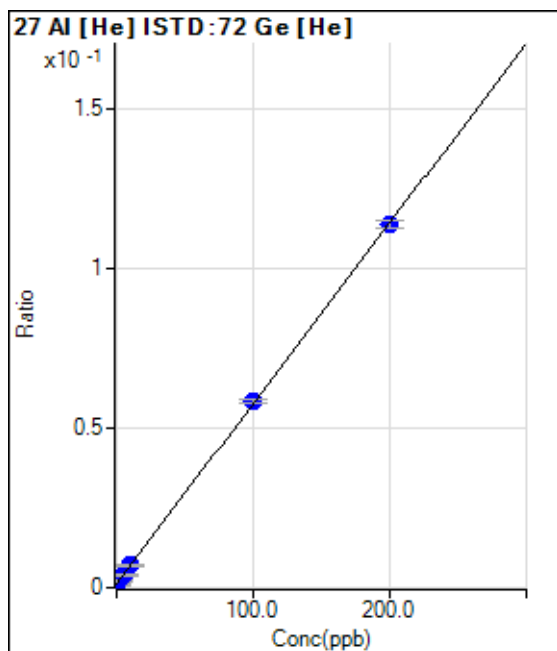
R = 0.9996

DL = 0.2137

BEC = 1.545

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	-0.553	1186.72	0.0009	P	17.2
2	<input type="checkbox"/>	2.000	1.682	2890.26	0.0022	P	5.6
3	<input type="checkbox"/>	5.000	4.799	5097.43	0.0039	P	1.7
4	<input type="checkbox"/>	10.000	10.281	8878.88	0.0070	P	5.5
5	<input type="checkbox"/>	100.000	101.593	71735.52	0.0586	P	1.9
6	<input type="checkbox"/>	200.000	199.198	135645.44	0.1138	P	2.2
7	<input type="checkbox"/>	1.000					

$y = 5.6504E-004 * x + 0.0012$

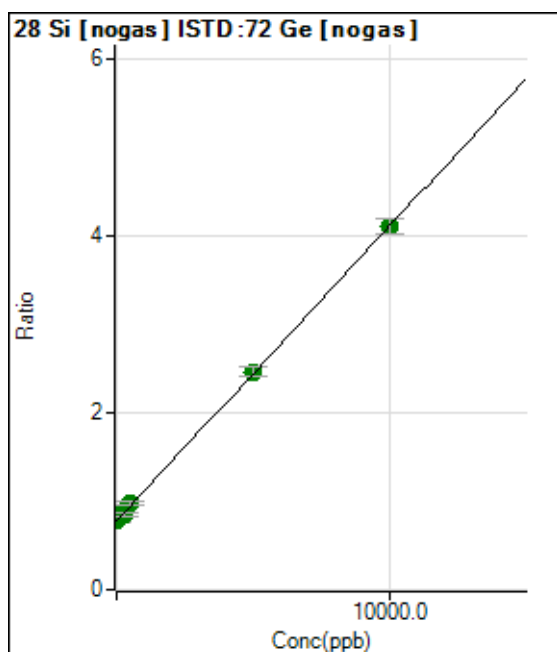
R = 0.9999

DL = 0.8229

BEC = 2.151

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	3029602.77	0.7780	A	1.7
2	<input type="checkbox"/>	100.000	195.426	3161212.45	0.8432	A	2.5
3	<input type="checkbox"/>	250.000	231.403	3328855.58	0.8552	A	4.6
4	<input type="checkbox"/>	500.000	588.199	3594030.99	0.9743	A	3.7
5	<input type="checkbox"/>	5000.000	5058.342	8895870.08	2.4659	A	4.8
6	<input type="checkbox"/>	10000.00	9965.930	14440967.29	4.1035	A	4.1
7	<input type="checkbox"/>	5.000					

$y = 3.3368E-004 * x + 0.7780$

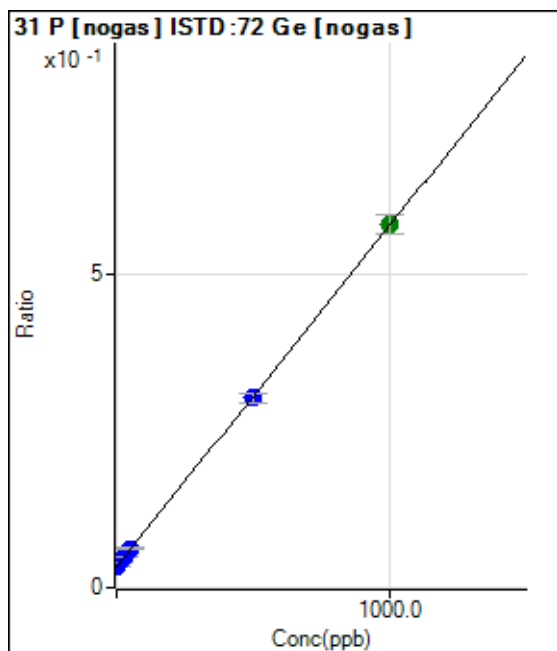
R = 0.9999

DL = 121.5

BEC = 2332

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	130238.79	0.0334	P	1.3
2	<input type="checkbox"/>	10.000	11.880	149478.51	0.0399	P	6.2
3	<input type="checkbox"/>	25.000	29.339	192523.35	0.0495	P	4.5
4	<input type="checkbox"/>	50.000	53.547	231233.75	0.0627	P	2.4
5	<input type="checkbox"/>	500.000	494.695	1094218.21	0.3034	P	5.8
6	<input type="checkbox"/>	1000.000	1002.348	2042378.61	0.5805	A	5.3
7	<input type="checkbox"/>	5.000					

$y = 5.4575E-004 * x + 0.0334$

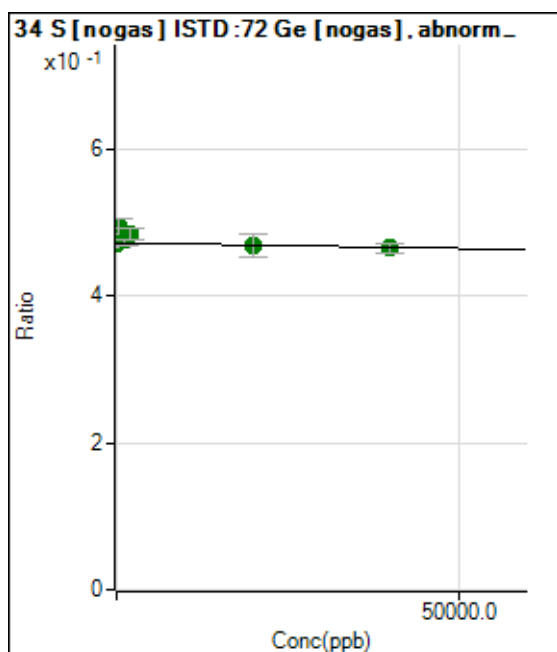
R = 1.0000

DL = 2.434

BEC = 61.28

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	1840899.45	0.4727	A	2.8
2	<input type="checkbox"/>	400.000	-144565.88	1852452.19	0.4945	A	4.5
3	<input type="checkbox"/>	1000.000	-23735.257	1854657.40	0.4763	A	3.3
4	<input type="checkbox"/>	2000.000	-79647.947	1788187.73	0.4847	A	3.7
5	<input type="checkbox"/>	20000.00	22967.931	1692000.56	0.4693	A	6.6
6	<input type="checkbox"/>	40000.00	44666.472	1640322.92	0.4660	A	3.0
7	<input type="checkbox"/>	100.000					

$y = -1.5042E-007 * x + 0.4727$

R = -0.6781

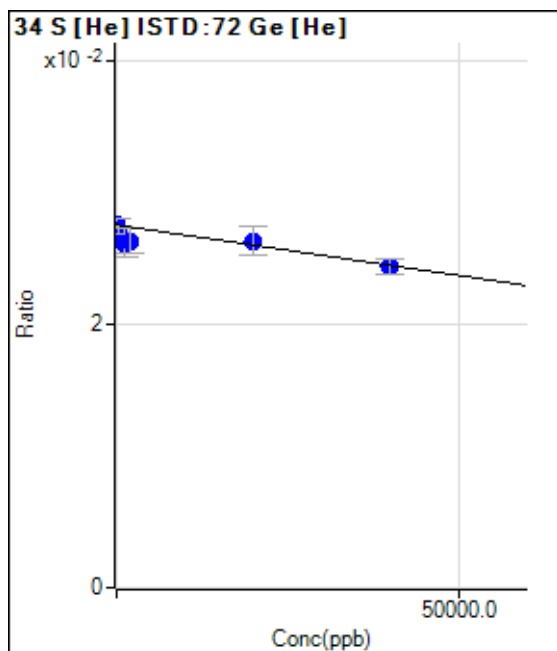
DL = -2.604E+05

BEC = -3.143E+06

Weight: <None>

Min Conc: <None>

Calibration for 077_ICV.d



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	36307.91	0.0276	P	3.8
2	<input type="checkbox"/>	400.000	5213.380	36209.18	0.0272	P	2.3
3	<input type="checkbox"/>	1000.000	17578.832	34003.16	0.0262	P	8.8
4	<input type="checkbox"/>	2000.000	15567.728	33335.91	0.0264	P	6.8
5	<input type="checkbox"/>	20000.00	15878.700	32232.93	0.0263	P	8.7
6	<input type="checkbox"/>	40000.00	40919.659	29127.89	0.0244	P	5.1
7	<input type="checkbox"/>	100.000					

$y = -7.6653E-008 * x + 0.0276$

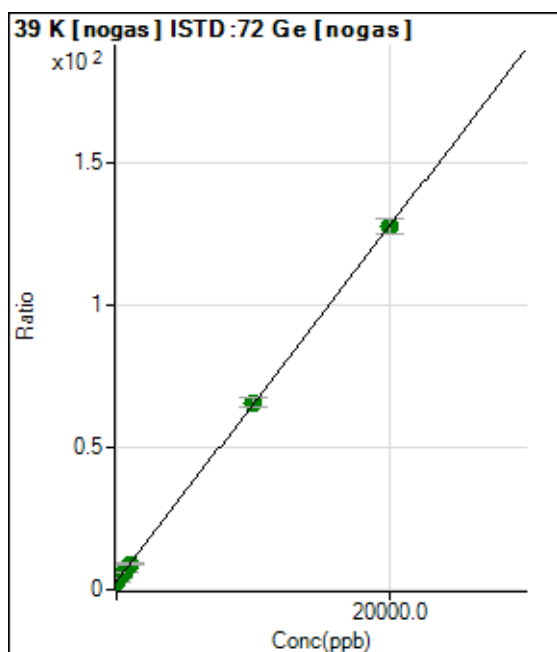
R = -0.8669

DL = -4.048E+04

BEC = -3.596E+05

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	11181446.60	2.8714	A	1.5
2	<input type="checkbox"/>	200.000	215.406	15790872.75	4.2159	A	4.9
3	<input type="checkbox"/>	500.000	506.564	23486986.46	6.0332	A	4.1
4	<input type="checkbox"/>	1000.000	993.539	33477730.96	9.0727	A	2.5
5	<input type="checkbox"/>	10000.00	10077.022	237275705.3	65.7684	A	4.9
6	<input type="checkbox"/>	20000.00	19961.494	448562160.0	127.463	A	4.1
7	<input type="checkbox"/>	100.000					

$y = 0.0062 * x + 2.8714$

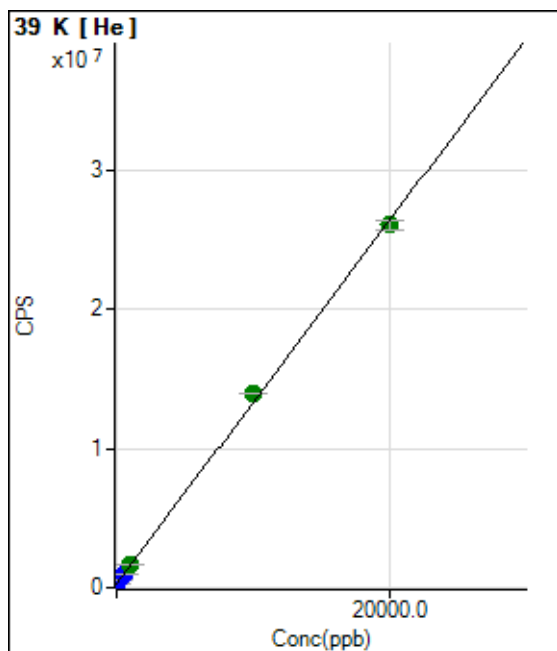
R = 1.0000

DL = 20.72

BEC = 460

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	259703.25		P	0.5
2	<input type="checkbox"/>	200.000	209.964	533829.22		P	0.6
3	<input type="checkbox"/>	500.000	544.169	970162.30		P	0.1
4	<input type="checkbox"/>	1000.000	1067.333	1653198.10		A	1.0
5	<input type="checkbox"/>	10000.00	10473.080	13933214.37		A	0.7
6	<input type="checkbox"/>	20000.00	19758.889	26056640.44		A	2.4
7	<input type="checkbox"/>	100.000					

$y = 1305.5864 * x + 259703.2500$

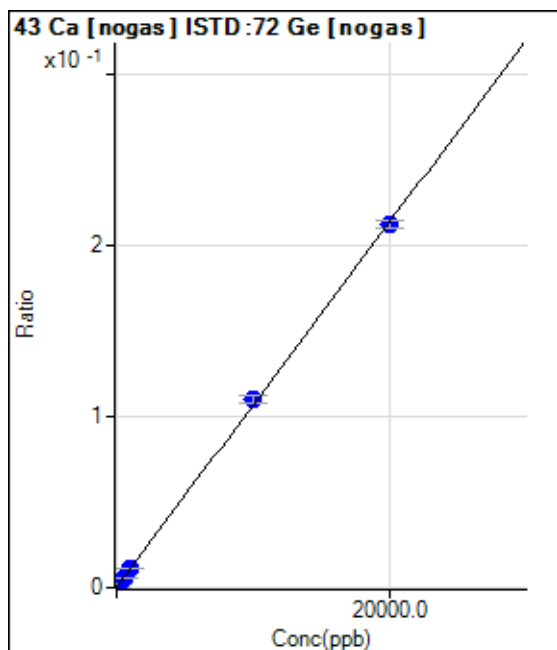
R = 0.9996

DL = 2.837

BEC = 198.9

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	1060.05	0.0003	P	4.0
2	<input type="checkbox"/>	200.000	219.065	9779.38	0.0026	P	4.3
3	<input type="checkbox"/>	500.000	498.967	21803.01	0.0056	P	2.4
4	<input type="checkbox"/>	1000.000	1013.448	40876.06	0.0111	P	6.4
5	<input type="checkbox"/>	10000.00	10281.623	397001.54	0.1100	P	4.3
6	<input type="checkbox"/>	20000.00	19858.351	747071.71	0.2122	P	2.2
7	<input type="checkbox"/>	100.000					

$y = 1.0673E-005 * x + 2.7225E-004$

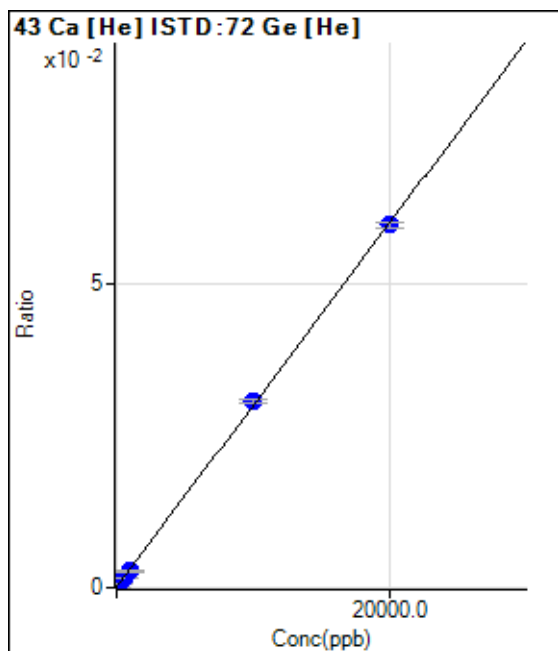
R = 0.9999

DL = 3.057

BEC = 25.51

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	70.00	0.0001	P	36.5
2	<input type="checkbox"/>	200.000	193.909	843.36	0.0006	P	5.9
3	<input type="checkbox"/>	500.000	525.948	2110.15	0.0016	P	8.1
4	<input type="checkbox"/>	1000.000	926.470	3567.07	0.0028	P	10.6
5	<input type="checkbox"/>	10000.00	10197.339	37391.11	0.0306	P	2.0
6	<input type="checkbox"/>	20000.00	19904.419	71038.43	0.0596	P	1.8
7	<input type="checkbox"/>	100.000					

$y = 2.9907E-006 * x + 5.2940E-005$

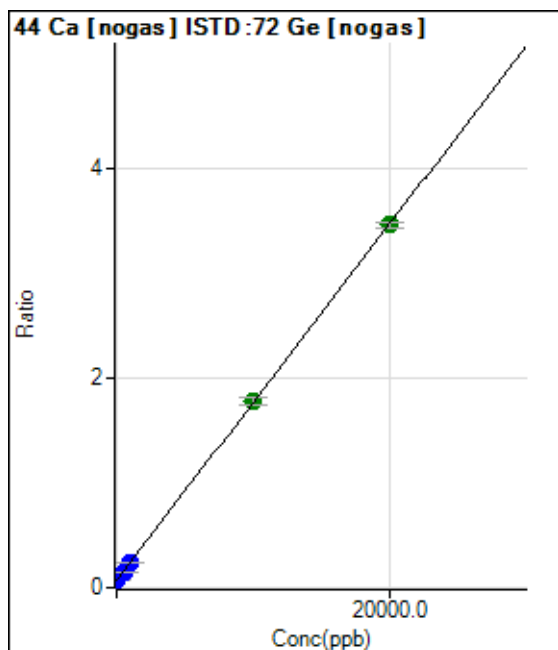
R = 0.9999

DL = 19.37

BEC = 17.7

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	268025.19	0.0688	P	0.4
2	<input type="checkbox"/>	200.000	216.856	395977.39	0.1057	P	3.9
3	<input type="checkbox"/>	500.000	485.264	589260.67	0.1513	P	2.4
4	<input type="checkbox"/>	1000.000	1023.446	895462.57	0.2428	P	4.0
5	<input type="checkbox"/>	10000.00	10091.029	6438344.07	1.7839	A	4.1
6	<input type="checkbox"/>	20000.00	19953.513	12181591.49	3.4601	A	1.9
7	<input type="checkbox"/>	100.000					

$y = 1.6996E-004 * x + 0.0688$

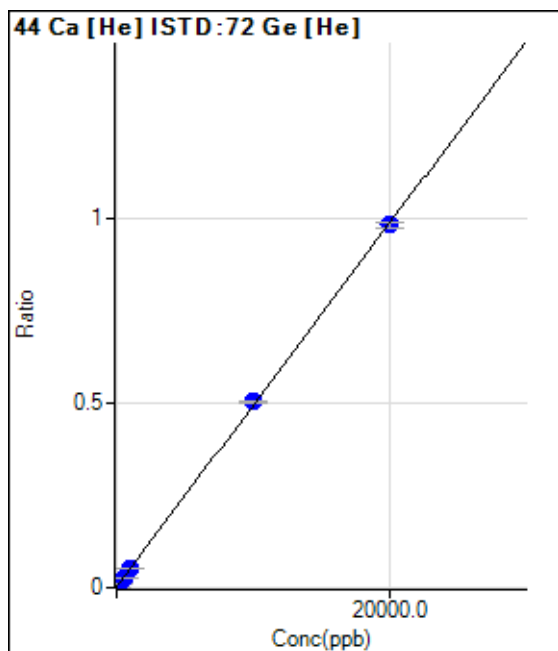
R = 1.0000

DL = 5.347

BEC = 404.9

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	2473.55	0.0019	P	7.2
2	<input type="checkbox"/>	200.000	198.122	15513.32	0.0116	P	6.2
3	<input type="checkbox"/>	500.000	513.295	35263.56	0.0272	P	4.5
4	<input type="checkbox"/>	1000.000	992.988	64243.97	0.0508	P	0.8
5	<input type="checkbox"/>	10000.00	10169.939	615610.68	0.5030	P	0.2
6	<input type="checkbox"/>	20000.00	19915.068	1172323.16	0.9832	P	1.3
7	<input type="checkbox"/>	100.000					

$y = 4.9277E-005 * x + 0.0019$

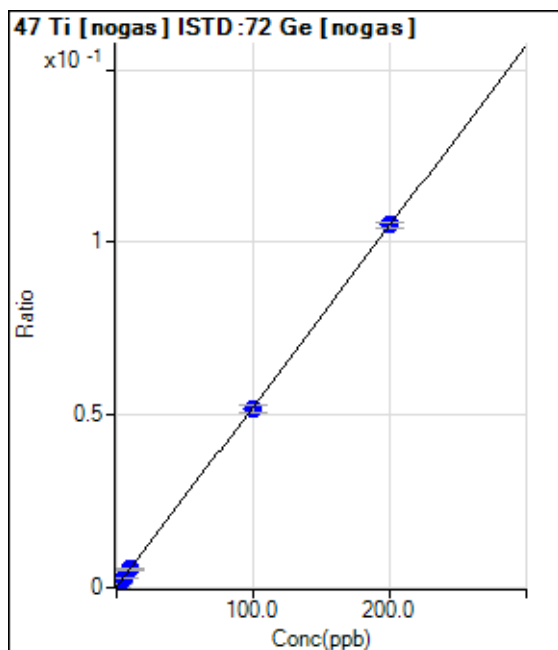
R = 0.9999

DL = 8.281

BEC = 38.15

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	496.68	0.0001	P	8.7
2	<input type="checkbox"/>	2.000	1.877	4153.87	0.0011	P	5.9
3	<input type="checkbox"/>	5.000	4.811	10303.00	0.0026	P	0.9
4	<input type="checkbox"/>	10.000	9.980	19724.07	0.0053	P	4.6
5	<input type="checkbox"/>	100.000	98.848	187024.68	0.0518	P	4.4
6	<input type="checkbox"/>	200.000	200.583	369920.21	0.1050	P	1.9
7	<input type="checkbox"/>	1.000					

$y = 5.2307E-004 * x + 1.2761E-004$

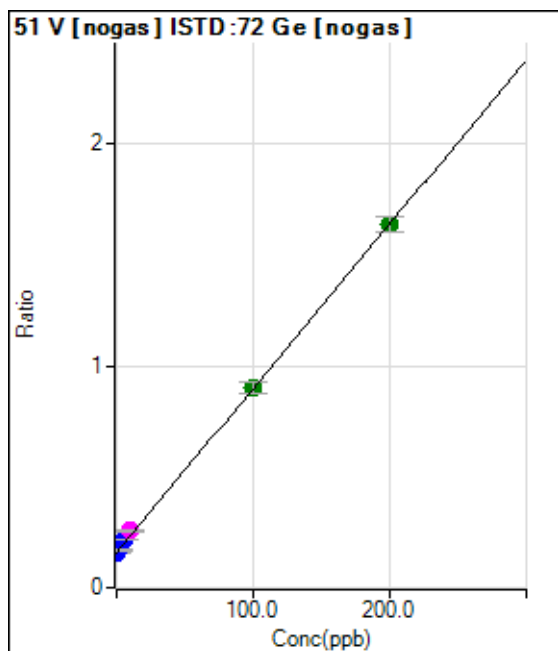
R = 1.0000

DL = 0.06361

BEC = 0.244

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	617617.80	0.1586	P	1.4
2	<input type="checkbox"/>	2.000	1.575	638110.87	0.1702	P	4.4
3	<input type="checkbox"/>	5.000	7.871	844415.94	0.2169	P	3.4
4	<input type="checkbox"/>	10.000	13.538	955757.35	0.2588	M	2.8
5	<input type="checkbox"/>	100.000	100.386	3253842.32	0.9020	A	5.0
6	<input type="checkbox"/>	200.000	199.563	5759198.96	1.6365	A	4.2
7	<input type="checkbox"/>	1.000					

$y = 0.0074 * x + 0.1586$

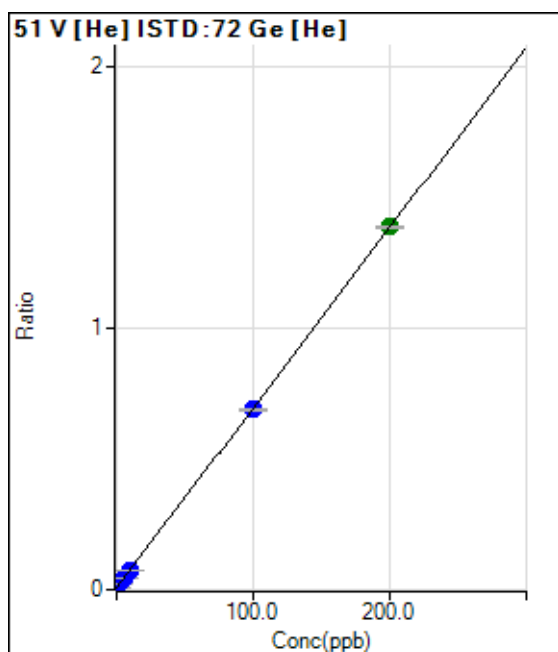
R = 0.9998

DL = 0.8745

BEC = 21.41

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.218	10333.54	0.0079	P	2.9
2	<input type="checkbox"/>	2.000	1.983	26648.32	0.0200	P	0.5
3	<input type="checkbox"/>	5.000	5.283	55399.89	0.0427	P	1.9
4	<input type="checkbox"/>	10.000	9.964	94659.81	0.0749	P	1.7
5	<input type="checkbox"/>	100.000	99.113	841917.40	0.6880	P	1.4
6	<input type="checkbox"/>	200.000	200.438	1651182.46	1.3848	A	0.7
7	<input type="checkbox"/>	1.000					

$y = 0.0069 * x + 0.0063$

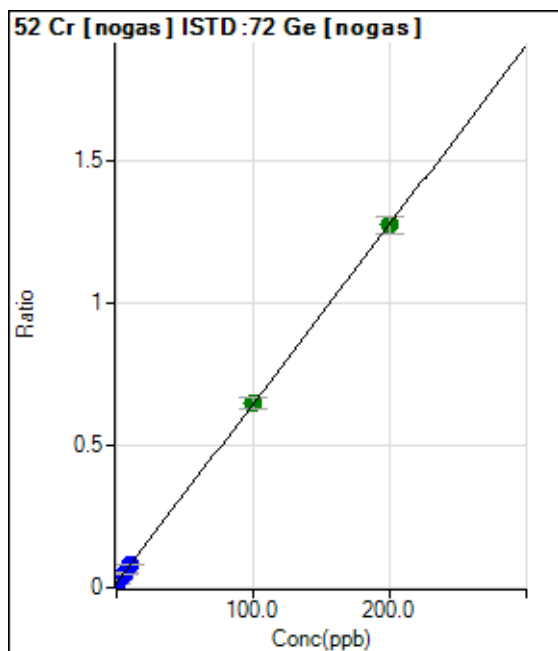
R = 1.0000

DL = 0.09888

BEC = 0.9231

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	63455.38	0.0163	P	2.7
2	<input type="checkbox"/>	2.000	2.040	109264.31	0.0292	P	5.9
3	<input type="checkbox"/>	5.000	5.288	193262.71	0.0497	P	5.2
4	<input type="checkbox"/>	10.000	10.055	294213.69	0.0797	P	3.4
5	<input type="checkbox"/>	100.000	100.451	2345027.46	0.6502	A	5.5
6	<input type="checkbox"/>	200.000	199.764	4493024.10	1.2769	A	5.0
7	<input type="checkbox"/>	1.000					

$y = 0.0063 * x + 0.0163$

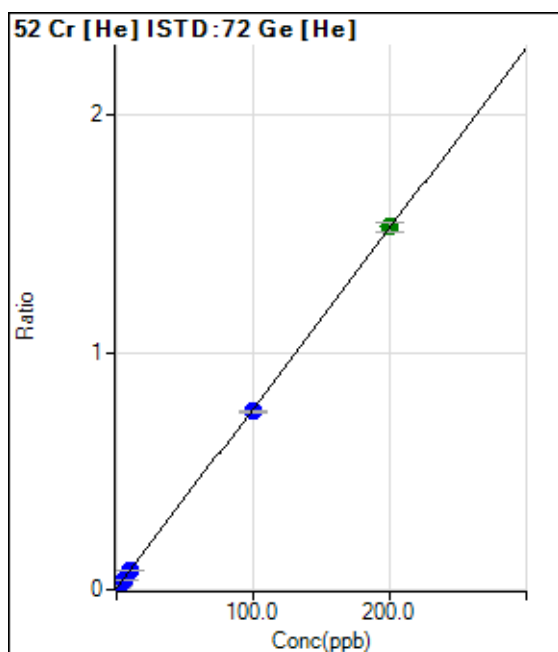
R = 1.0000

DL = 0.2111

BEC = 2.582

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	6324.51	0.0048	P	5.0
2	<input type="checkbox"/>	2.000	1.862	25267.53	0.0190	P	3.4
3	<input type="checkbox"/>	5.000	5.093	56472.97	0.0435	P	2.7
4	<input type="checkbox"/>	10.000	9.914	101316.34	0.0801	P	1.7
5	<input type="checkbox"/>	100.000	98.399	920903.84	0.7525	P	1.6
6	<input type="checkbox"/>	200.000	200.804	1824949.97	1.5307	A	2.5
7	<input type="checkbox"/>	1.000					

$y = 0.0076 * x + 0.0048$

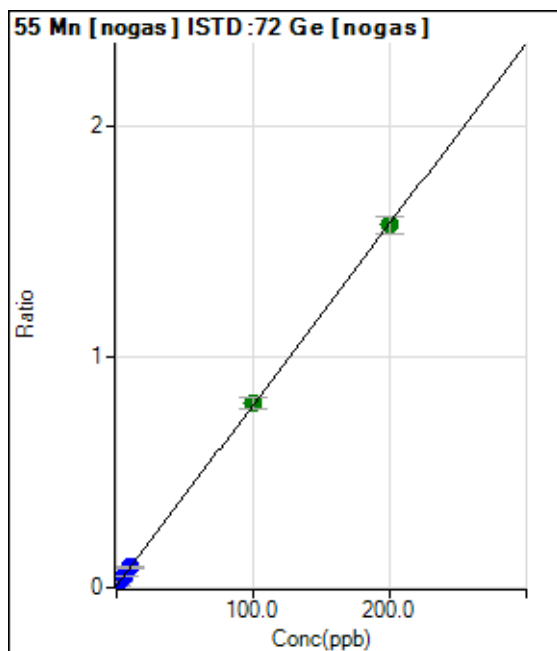
R = 1.0000

DL = 0.09571

BEC = 0.6322

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	31330.00	0.0080	P	2.8
2	<input type="checkbox"/>	2.000	2.161	93468.86	0.0250	P	4.8
3	<input type="checkbox"/>	5.000	5.221	190276.90	0.0489	P	5.3
4	<input type="checkbox"/>	10.000	10.248	325361.28	0.0882	P	4.8
5	<input type="checkbox"/>	100.000	100.838	2874382.46	0.7969	A	6.6
6	<input type="checkbox"/>	200.000	199.561	5522971.58	1.5693	A	4.8
7	<input type="checkbox"/>	1.000					

$y = 0.0078 * x + 0.0080$

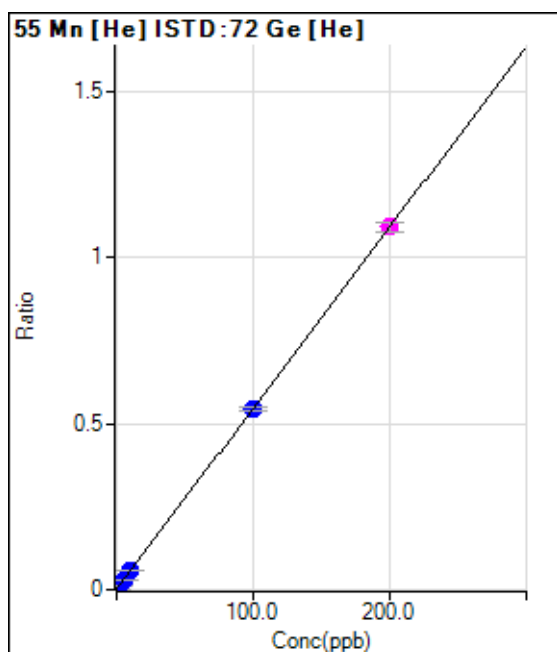
R = 1.0000

DL = 0.08573

BEC = 1.028

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	1763.44	0.0013	P	4.2
2	<input type="checkbox"/>	2.000	1.942	15887.08	0.0119	P	2.7
3	<input type="checkbox"/>	5.000	5.233	38720.74	0.0298	P	3.1
4	<input type="checkbox"/>	10.000	10.122	71371.29	0.0564	P	2.2
5	<input type="checkbox"/>	100.000	99.385	663858.54	0.5424	P	1.7
6	<input type="checkbox"/>	200.000	200.296	1301799.31	1.0919	M	2.9
7	<input type="checkbox"/>	1.000					

$y = 0.0054 * x + 0.0013$

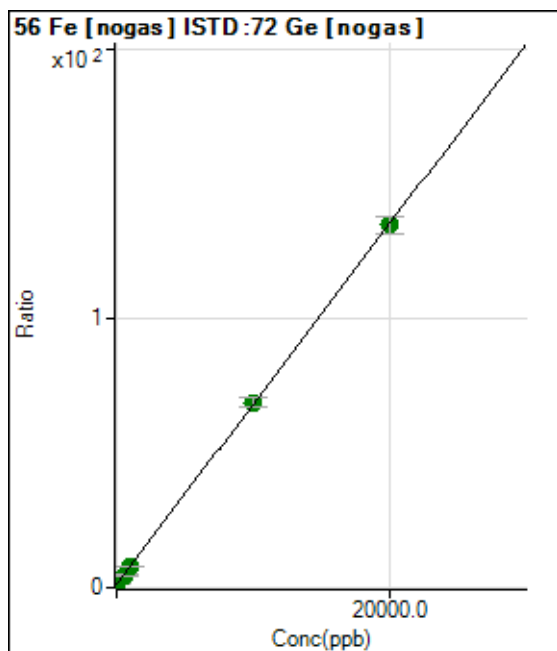
R = 1.0000

DL = 0.03116

BEC = 0.246

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	4466501.66	1.1470	A	1.4
2	<input type="checkbox"/>	200.000	223.778	9914939.28	2.6453	A	4.3
3	<input type="checkbox"/>	500.000	514.628	17879960.30	4.5927	A	4.6
4	<input type="checkbox"/>	1000.000	995.313	28815545.44	7.8111	A	3.5
5	<input type="checkbox"/>	10000.00	10085.824	247743930.5	68.6769	A	4.9
6	<input type="checkbox"/>	20000.00	19956.719	474237110.6	134.767	A	5.0
7	<input type="checkbox"/>	100.000					

$y = 0.0067 * x + 1.1470$

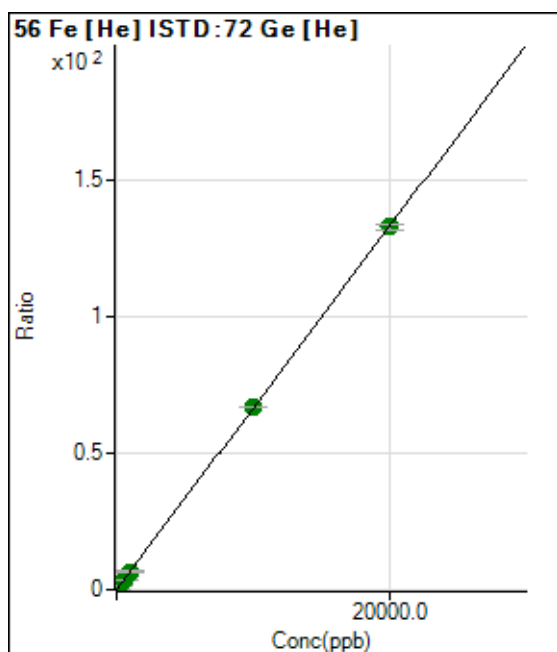
R = 1.0000

DL = 7.309

BEC = 171.3

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	27263.59	0.0207	P	2.1
2	<input type="checkbox"/>	200.000	198.350	1785923.77	1.3398	A	2.7
3	<input type="checkbox"/>	500.000	508.488	4415974.20	3.4023	A	1.9
4	<input type="checkbox"/>	1000.000	994.832	8390843.00	6.6367	A	3.2
5	<input type="checkbox"/>	10000.00	10061.134	81910415.44	66.9305	A	0.5
6	<input type="checkbox"/>	20000.00	19969.496	158366634.3	132.824	A	1.3
7	<input type="checkbox"/>	100.000					

$y = 0.0067 * x + 0.0207$

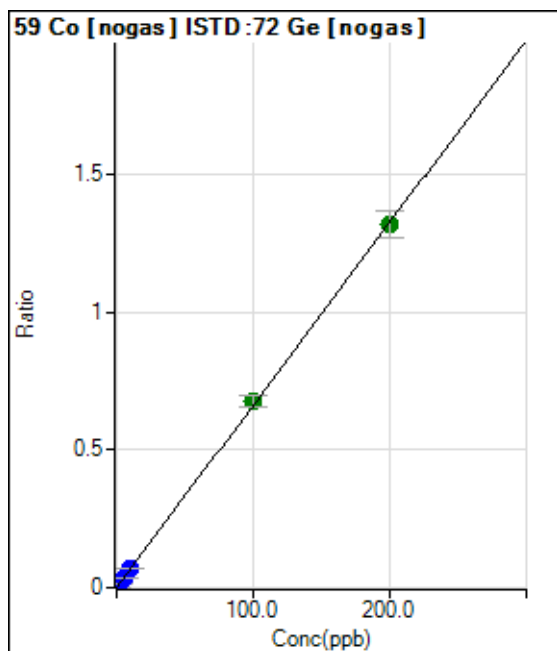
R = 1.0000

DL = 0.197

BEC = 3.114

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	800.03	0.0002	P	20.6
2	<input type="checkbox"/>	2.000	2.153	54217.48	0.0145	P	5.9
3	<input type="checkbox"/>	5.000	5.170	134298.41	0.0345	P	2.7
4	<input type="checkbox"/>	10.000	10.152	249051.50	0.0675	P	2.5
5	<input type="checkbox"/>	100.000	102.259	2445519.44	0.6780	A	5.3
6	<input type="checkbox"/>	200.000	198.857	4636870.14	1.3183	A	7.3
7	<input type="checkbox"/>	1.000					

$y = 0.0066 * x + 2.0568E-004$

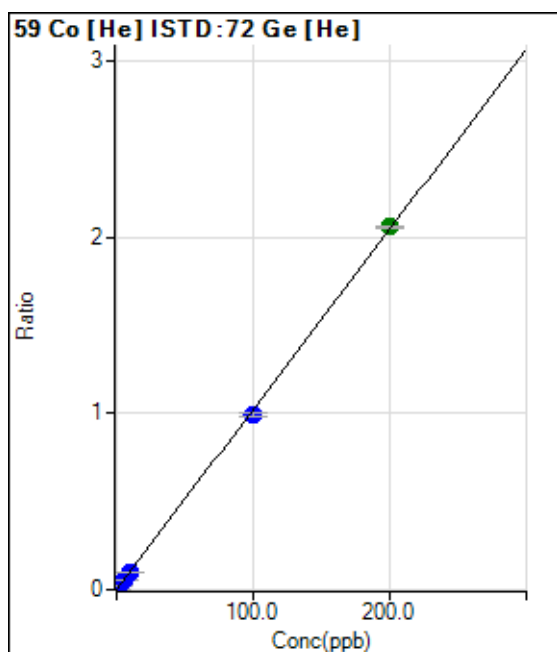
R = 0.9999

DL = 0.0192

BEC = 0.03103

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	186.67	0.0001	P	25.3
2	<input type="checkbox"/>	2.000	1.915	26278.96	0.0197	P	3.6
3	<input type="checkbox"/>	5.000	5.066	67377.17	0.0519	P	1.9
4	<input type="checkbox"/>	10.000	9.662	125015.46	0.0989	P	1.3
5	<input type="checkbox"/>	100.000	97.213	1215961.80	0.9936	P	1.5
6	<input type="checkbox"/>	200.000	201.410	2454301.47	2.0584	A	0.4
7	<input type="checkbox"/>	1.000					

$y = 0.0102 * x + 1.4142E-004$

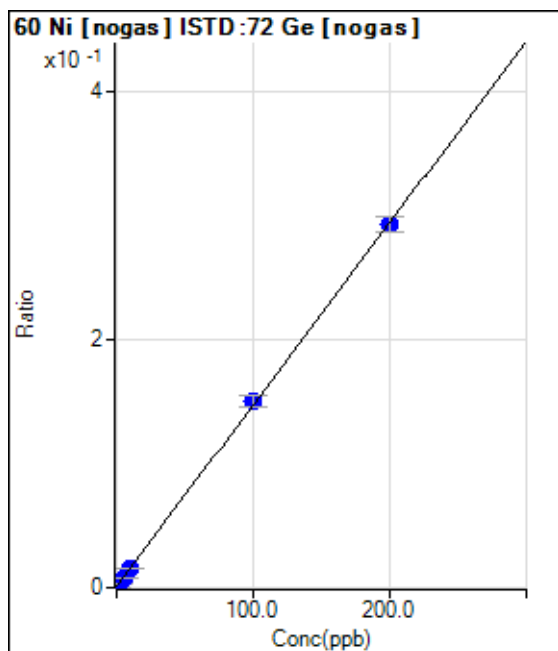
R = 0.9999

DL = 0.01049

BEC = 0.01384

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	-0.431	920.04	0.0002	P	5.3
2	<input type="checkbox"/>	2.000	1.708	12627.88	0.0034	P	4.6
3	<input type="checkbox"/>	5.000	4.897	31320.40	0.0080	P	4.1
4	<input type="checkbox"/>	10.000	9.785	56119.35	0.0152	P	3.0
5	<input type="checkbox"/>	100.000	102.049	542522.66	0.1504	P	6.1
6	<input type="checkbox"/>	200.000	198.991	1029513.37	0.2925	P	4.2
7	<input type="checkbox"/>	1.000					

$y = 0.0015 * x + 8.6784E-004$

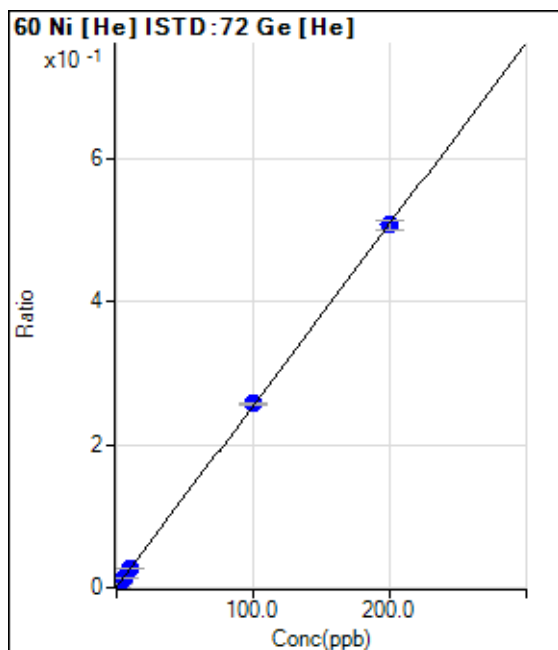
R = 0.9999

DL = 0.02559

BEC = 0.5921

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	-0.219	260.00	0.0002	P	17.2
2	<input type="checkbox"/>	2.000	1.793	7068.14	0.0053	P	6.0
3	<input type="checkbox"/>	5.000	5.009	17478.63	0.0135	P	4.7
4	<input type="checkbox"/>	10.000	9.977	32976.61	0.0261	P	1.3
5	<input type="checkbox"/>	100.000	100.875	314310.48	0.2568	P	0.5
6	<input type="checkbox"/>	200.000	199.565	604889.20	0.5074	P	2.5
7	<input type="checkbox"/>	1.000					

$y = 0.0025 * x + 7.5337E-004$

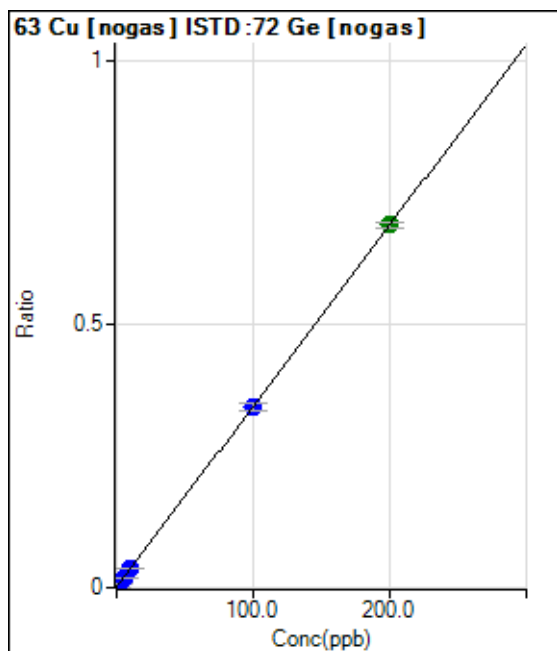
R = 1.0000

DL = 0.0402

BEC = 0.2968

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	3517.06	0.0009	P	4.1
2	<input type="checkbox"/>	2.000	2.048	29671.07	0.0079	P	6.2
3	<input type="checkbox"/>	5.000	5.181	72695.88	0.0187	P	2.8
4	<input type="checkbox"/>	10.000	10.383	134733.00	0.0365	P	0.8
5	<input type="checkbox"/>	100.000	99.362	1232660.55	0.3415	P	4.0
6	<input type="checkbox"/>	200.000	200.295	2421020.17	0.6876	A	1.9
7	<input type="checkbox"/>	1.000					

$y = 0.0034 * x + 9.0284E-004$

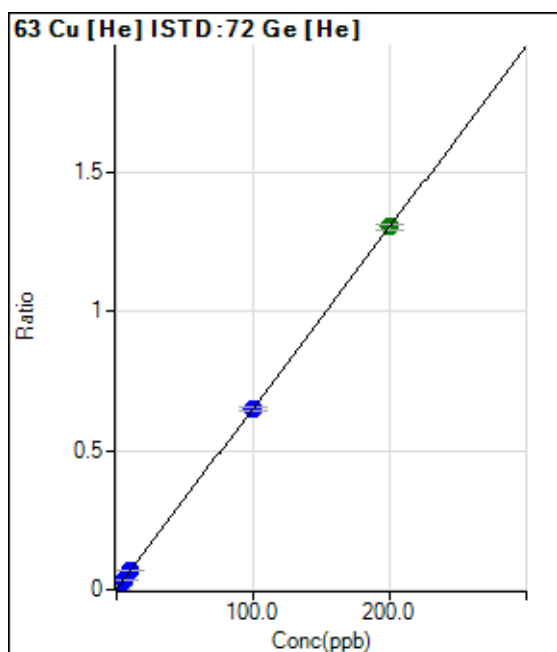
R = 1.0000

DL = 0.03256

BEC = 0.2633

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	-0.102	1390.08	0.0011	P	3.4
2	<input type="checkbox"/>	2.000	1.799	17862.30	0.0134	P	6.4
3	<input type="checkbox"/>	5.000	5.257	46562.78	0.0359	P	1.6
4	<input type="checkbox"/>	10.000	10.203	85970.93	0.0680	P	3.3
5	<input type="checkbox"/>	100.000	99.712	794865.82	0.6495	P	1.8
6	<input type="checkbox"/>	200.000	200.129	1552361.07	1.3019	A	1.6
7	<input type="checkbox"/>	1.000					

$y = 0.0065 * x + 0.0017$

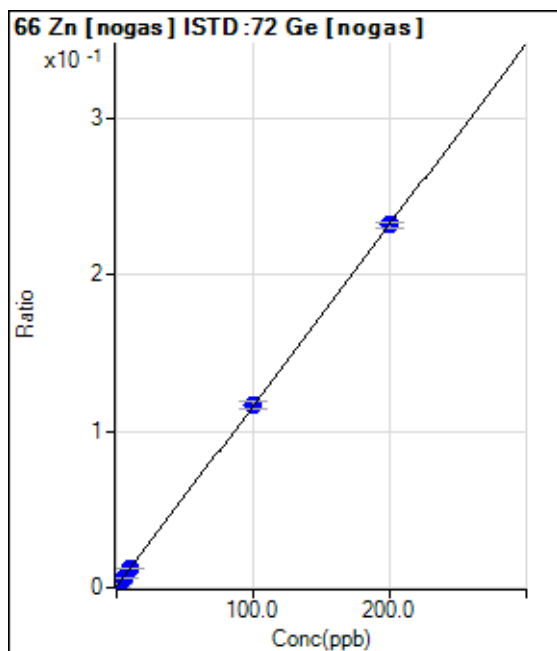
R = 1.0000

DL = 0.01682

BEC = 0.2642

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	-0.156	1690.10	0.0004	P	7.7
2	<input type="checkbox"/>	2.000	2.103	11410.46	0.0030	P	4.5
3	<input type="checkbox"/>	5.000	4.974	24763.84	0.0064	P	3.5
4	<input type="checkbox"/>	10.000	9.997	44899.14	0.0122	P	1.1
5	<input type="checkbox"/>	100.000	100.164	419829.46	0.1163	P	4.1
6	<input type="checkbox"/>	200.000	199.918	815277.62	0.2316	P	1.5
7	<input type="checkbox"/>	1.000					

$y = 0.0012 * x + 6.1416E-004$

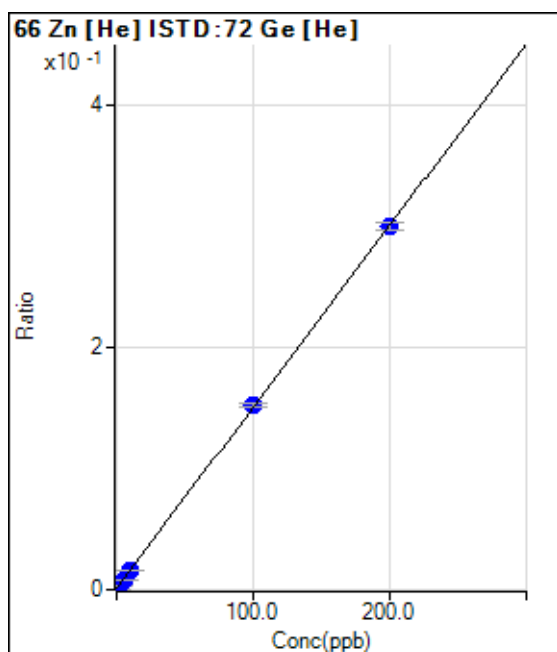
R = 1.0000

DL = 0.08629

BEC = 0.5317

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	-0.343	646.69	0.0005	P	14.8
2	<input type="checkbox"/>	2.000	1.818	4967.42	0.0037	P	1.4
3	<input type="checkbox"/>	5.000	4.941	10903.40	0.0084	P	3.8
4	<input type="checkbox"/>	10.000	9.921	20047.89	0.0159	P	1.5
5	<input type="checkbox"/>	100.000	101.312	186831.36	0.1527	P	2.5
6	<input type="checkbox"/>	200.000	199.351	357024.02	0.2994	P	2.0
7	<input type="checkbox"/>	1.000					

$y = 0.0015 * x + 0.0010$

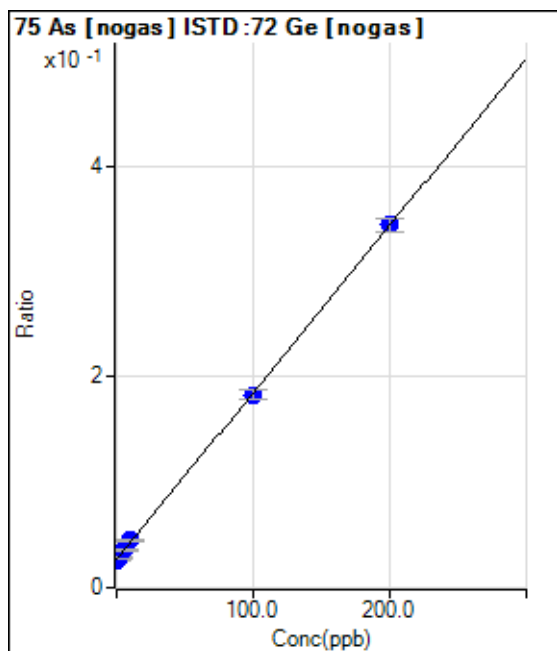
R = 1.0000

DL = 0.1457

BEC = 0.6709

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	-0.698	99889.22	0.0256	P	3.0
2	<input type="checkbox"/>	2.000	0.888	105516.46	0.0282	P	4.1
3	<input type="checkbox"/>	5.000	5.964	140913.10	0.0362	P	3.6
4	<input type="checkbox"/>	10.000	11.499	165910.20	0.0450	P	1.9
5	<input type="checkbox"/>	100.000	98.870	661229.59	0.1832	P	4.1
6	<input type="checkbox"/>	200.000	200.477	1210986.70	0.3441	P	3.7
7	<input type="checkbox"/>	1.000					

$y = 0.0016 * x + 0.0268$

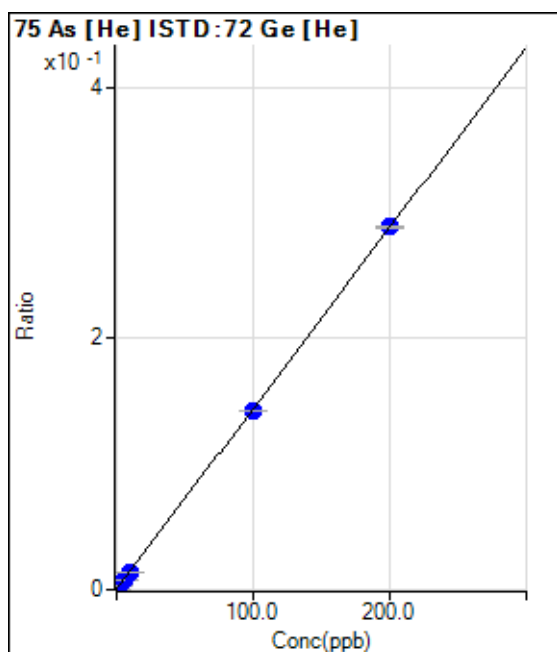
R = 0.9999

DL = 1.482

BEC = 16.9

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	400.01	0.0003	P	4.0
2	<input type="checkbox"/>	2.000	1.936	4113.81	0.0031	P	4.2
3	<input type="checkbox"/>	5.000	4.929	9592.56	0.0074	P	1.4
4	<input type="checkbox"/>	10.000	9.651	17928.83	0.0142	P	1.1
5	<input type="checkbox"/>	100.000	98.849	174292.90	0.1424	P	0.8
6	<input type="checkbox"/>	200.000	200.595	344224.69	0.2887	P	0.6
7	<input type="checkbox"/>	1.000					

$y = 0.0014 * x + 3.0386E-004$

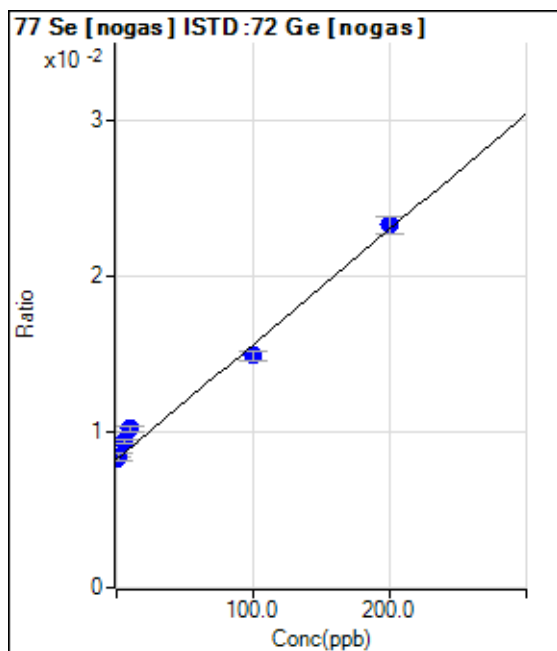
R = 1.0000

DL = 0.02512

BEC = 0.2114

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	32128.59	0.0082	P	2.8
2	<input type="checkbox"/>	2.000	1.578	31330.55	0.0084	P	5.9
3	<input type="checkbox"/>	5.000	15.136	36496.76	0.0094	P	2.8
4	<input type="checkbox"/>	10.000	26.870	37792.91	0.0102	P	3.3
5	<input type="checkbox"/>	100.000	90.578	53993.51	0.0150	P	4.2
6	<input type="checkbox"/>	200.000	203.618	82124.56	0.0233	P	5.0
7	<input type="checkbox"/>	1.000					

$y = 7.4112E-005 * x + 0.0082$

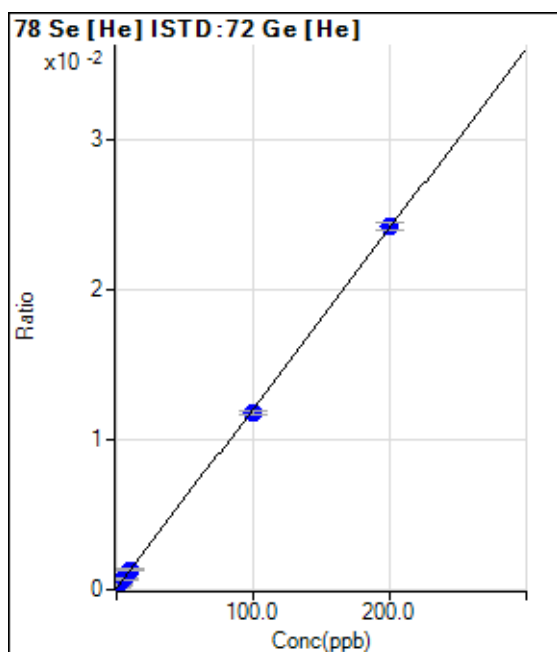
R = 0.9939

DL = 9.508

BEC = 111.3

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.343	160.67	0.0001	P	24.3
2	<input type="checkbox"/>	2.000	2.043	435.34	0.0003	P	12.3
3	<input type="checkbox"/>	5.000	5.288	926.69	0.0007	P	11.6
4	<input type="checkbox"/>	10.000	10.325	1666.08	0.0013	P	5.1
5	<input type="checkbox"/>	100.000	98.050	14471.10	0.0118	P	2.3
6	<input type="checkbox"/>	200.000	200.951	28791.30	0.0241	P	2.2
7	<input type="checkbox"/>	1.000					

$y = 1.1977E-004 * x + 8.1322E-005$

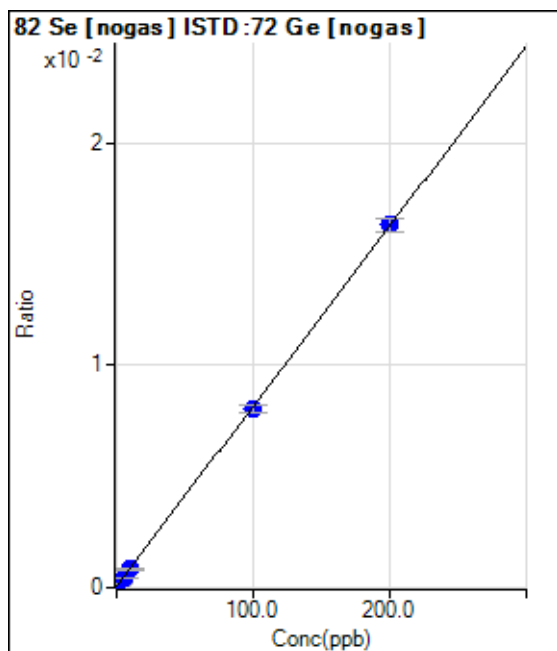
R = 0.9999

DL = 0.7433

BEC = 0.679

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	206.67	0.0001	P	20.6
2	<input type="checkbox"/>	2.000	2.059	823.37	0.0002	P	8.6
3	<input type="checkbox"/>	5.000	4.616	1666.77	0.0004	P	11.1
4	<input type="checkbox"/>	10.000	9.772	3116.99	0.0008	P	7.0
5	<input type="checkbox"/>	100.000	98.583	29043.71	0.0080	P	3.9
6	<input type="checkbox"/>	200.000	200.729	57505.31	0.0163	P	3.7
7	<input type="checkbox"/>	1.000					

$y = 8.1102E-005 * x + 5.3141E-005$

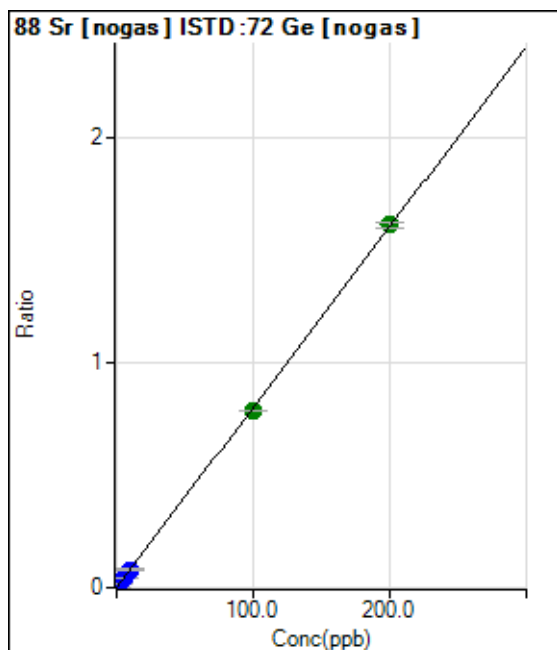
R = 1.0000

DL = 0.4052

BEC = 0.6552

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	1666.96	0.0004	P	34.0
2	<input type="checkbox"/>	2.000	2.093	64407.22	0.0172	P	4.1
3	<input type="checkbox"/>	5.000	4.972	156751.16	0.0403	P	3.2
4	<input type="checkbox"/>	10.000	9.961	295819.14	0.0802	P	4.4
5	<input type="checkbox"/>	100.000	97.762	2830311.41	0.7834	A	0.5
6	<input type="checkbox"/>	200.000	201.121	5672429.29	1.6111	A	1.6
7	<input type="checkbox"/>	1.000					

$y = 0.0080 * x + 4.2898E-004$

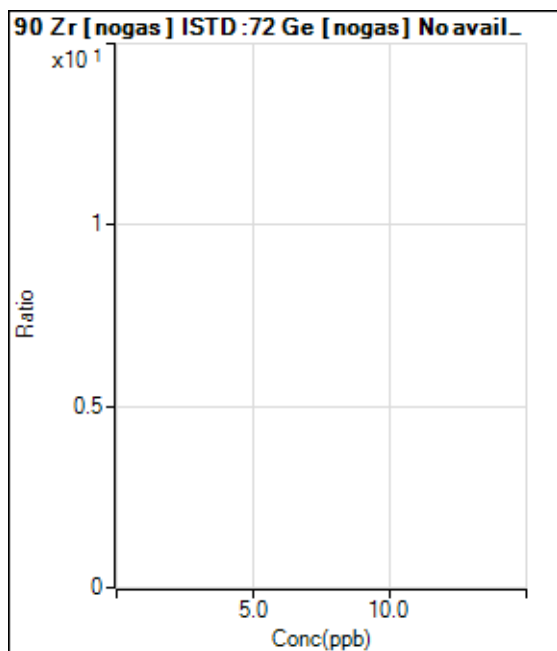
R = 0.9999

DL = 0.05464

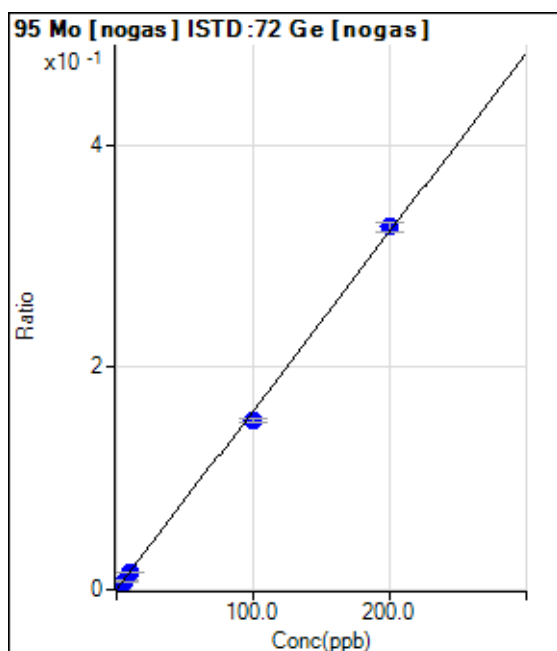
BEC = 0.05356

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000					
2	<input type="checkbox"/>	2.000					
3	<input type="checkbox"/>	5.000					
4	<input type="checkbox"/>	10.000					
5	<input type="checkbox"/>	100.000					
6	<input type="checkbox"/>	200.000					
7	<input type="checkbox"/>	1.000					



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	210.01	0.0001	P	26.3
2	<input type="checkbox"/>	2.000	1.998	12247.69	0.0033	P	4.9
3	<input type="checkbox"/>	5.000	4.742	29919.06	0.0077	P	3.2
4	<input type="checkbox"/>	10.000	9.646	57433.05	0.0156	P	5.7
5	<input type="checkbox"/>	100.000	94.402	548549.72	0.1520	P	2.7
6	<input type="checkbox"/>	200.000	202.823	1149008.68	0.3264	P	2.9
7	<input type="checkbox"/>	1.000					

$y = 0.0016 * x + 5.4022E-005$

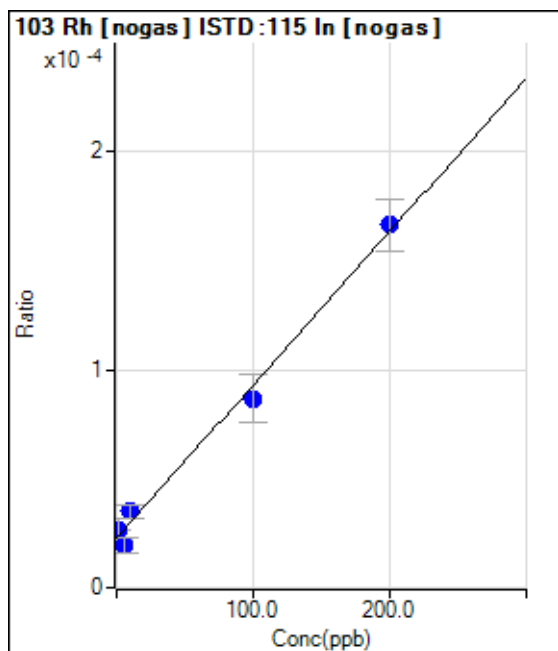
R = 0.9995

DL = 0.0265

BEC = 0.03357

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	80.00	0.0000	P	30.2
2	<input type="checkbox"/>	2.000	5.672	90.00	0.0000	P	34.6
3	<input type="checkbox"/>	5.000	-5.172	70.00	0.0000	P	36.7
4	<input type="checkbox"/>	10.000	17.214	116.67	0.0000	P	16.9
5	<input type="checkbox"/>	100.000	91.036	270.01	0.0001	P	25.4
6	<input type="checkbox"/>	200.000	204.339	500.02	0.0002	P	14.4
7	<input type="checkbox"/>	1.000					

$y = 7.0339E-007 * x + 2.2751E-005$

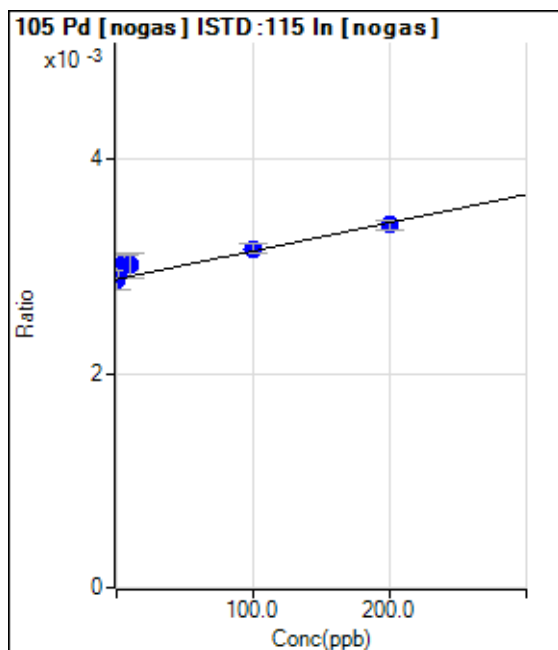
R = 0.9961

DL = 29.26

BEC = 32.34

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	10026.36	0.0029	P	6.4
2	<input type="checkbox"/>	2.000	19.822	9943.04	0.0029	P	3.2
3	<input type="checkbox"/>	5.000	59.972	11063.67	0.0030	P	4.8
4	<input type="checkbox"/>	10.000	48.919	10116.45	0.0030	P	7.7
5	<input type="checkbox"/>	100.000	109.135	9896.29	0.0032	P	2.6
6	<input type="checkbox"/>	200.000	191.934	10133.13	0.0034	P	3.0
7	<input type="checkbox"/>	1.000					

$y = 2.6420E-006 * x + 0.0029$

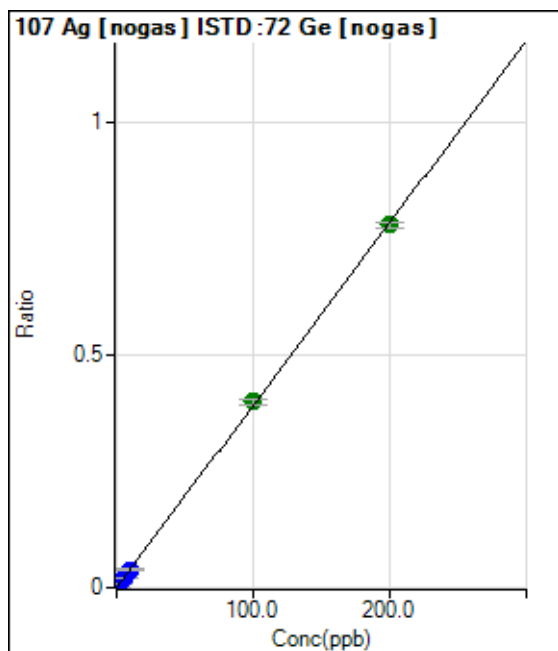
R = 0.9619

DL = 209.2

BEC = 1090

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	140.00	0.0000	P	39.8
2	<input type="checkbox"/>	2.000	2.086	30703.83	0.0082	P	3.4
3	<input type="checkbox"/>	5.000	5.042	76881.08	0.0198	P	5.3
4	<input type="checkbox"/>	10.000	9.847	142197.06	0.0385	P	3.5
5	<input type="checkbox"/>	100.000	101.985	1439920.92	0.3988	A	2.5
6	<input type="checkbox"/>	200.000	199.013	2740582.56	0.7782	A	1.6
7	<input type="checkbox"/>	1.000					

$y = 0.0039 * x + 3.5983E-005$

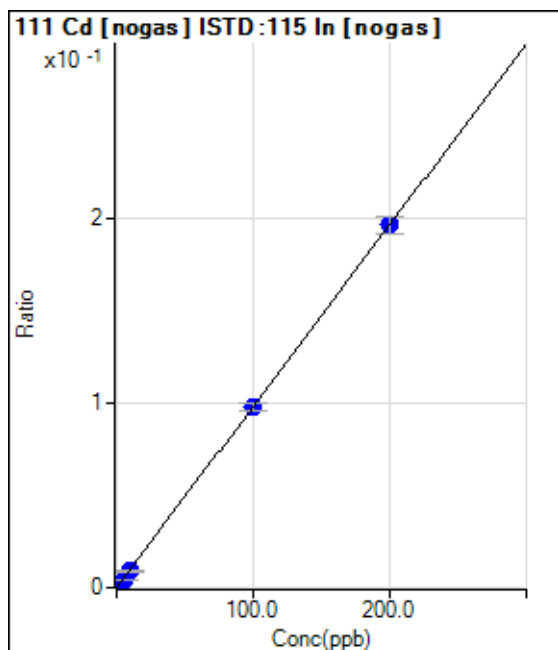
R = 0.9999

DL = 0.011

BEC = 0.009202

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	26.67	0.0000	P	56.2
2	<input type="checkbox"/>	2.000	1.994	6648.04	0.0020	P	3.8
3	<input type="checkbox"/>	5.000	4.511	16167.73	0.0044	P	1.1
4	<input type="checkbox"/>	10.000	9.135	30129.43	0.0090	P	5.3
5	<input type="checkbox"/>	100.000	99.847	305990.20	0.0980	P	4.4
6	<input type="checkbox"/>	200.000	200.132	587523.79	0.1964	P	4.6
7	<input type="checkbox"/>	1.000					

$y = 9.8153E-004 * x + 7.5438E-006$

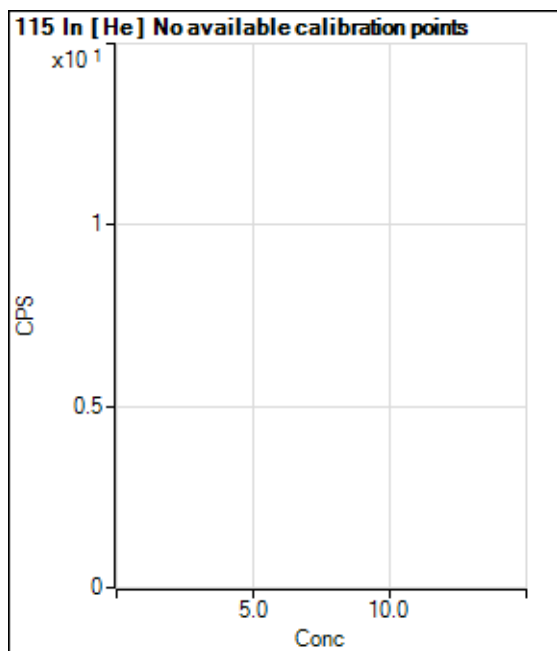
R = 1.0000

DL = 0.01296

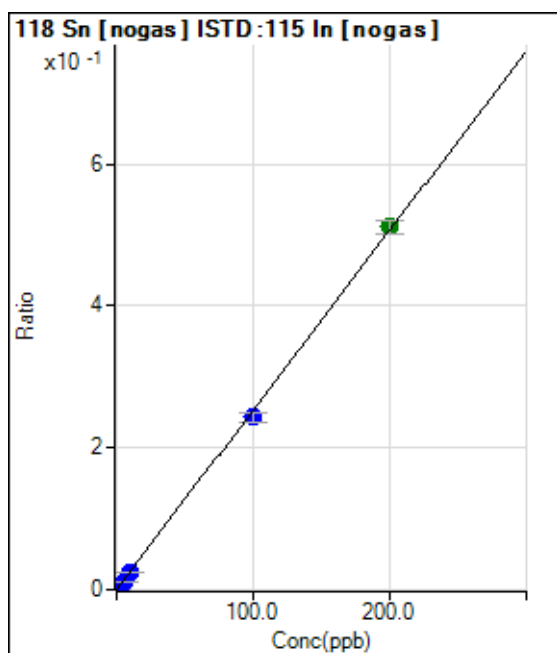
BEC = 0.007686

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>			1813495.03		A	0.3
2	<input type="checkbox"/>			1789090.96		A	1.2
3	<input type="checkbox"/>			1802685.08		A	2.8
4	<input type="checkbox"/>			1728779.80		A	3.5
5	<input type="checkbox"/>			1641805.32		A	2.4
6	<input type="checkbox"/>			1554824.85		A	2.2
7	<input type="checkbox"/>						



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	1420.08	0.0004	P	6.4
2	<input type="checkbox"/>	2.000	1.852	17218.72	0.0051	P	3.9
3	<input type="checkbox"/>	5.000	4.413	42114.51	0.0116	P	4.0
4	<input type="checkbox"/>	10.000	9.068	78386.11	0.0233	P	0.8
5	<input type="checkbox"/>	100.000	95.965	758165.12	0.2429	P	4.9
6	<input type="checkbox"/>	200.000	202.080	1528738.88	0.5111	A	4.0
7	<input type="checkbox"/>	1.000					

$y = 0.0025 * x + 4.0806E-004$

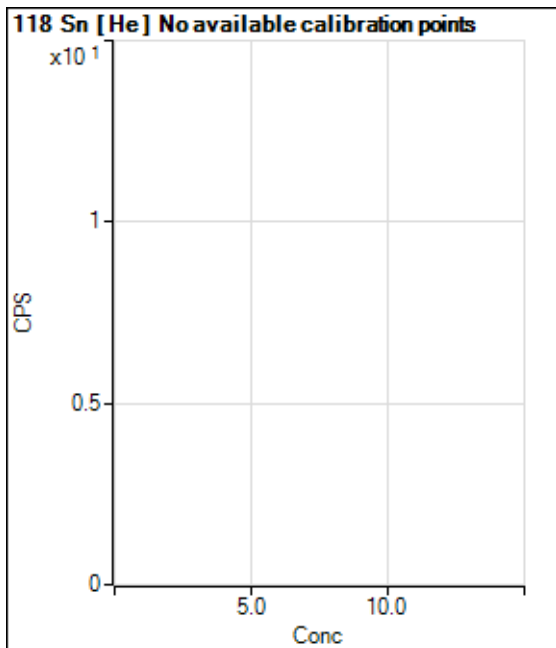
R = 0.9997

DL = 0.03084

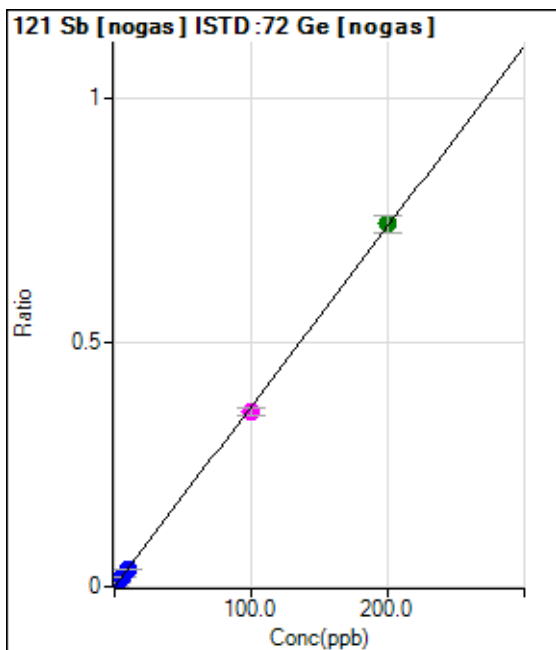
BEC = 0.1615

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>			740.03		P	8.9
2	<input type="checkbox"/>			9252.57		P	7.3
3	<input type="checkbox"/>			23359.19		P	2.1
4	<input type="checkbox"/>			42799.21		P	1.5
5	<input type="checkbox"/>			411337.12		P	2.1
6	<input type="checkbox"/>			821307.88		P	1.8
7	<input type="checkbox"/>						



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	1130.05	0.0003	P	2.2
2	<input type="checkbox"/>	2.000	1.948	27989.43	0.0075	P	5.3
3	<input type="checkbox"/>	5.000	4.841	70637.00	0.0181	P	2.6
4	<input type="checkbox"/>	10.000	9.676	132758.70	0.0360	P	2.3
5	<input type="checkbox"/>	100.000	97.091	1292480.92	0.3583	M	4.8
6	<input type="checkbox"/>	200.000	201.475	2615017.56	0.7431	A	4.9
7	<input type="checkbox"/>	1.000					

$y = 0.0037 * x + 2.9013E-004$

R = 0.9999

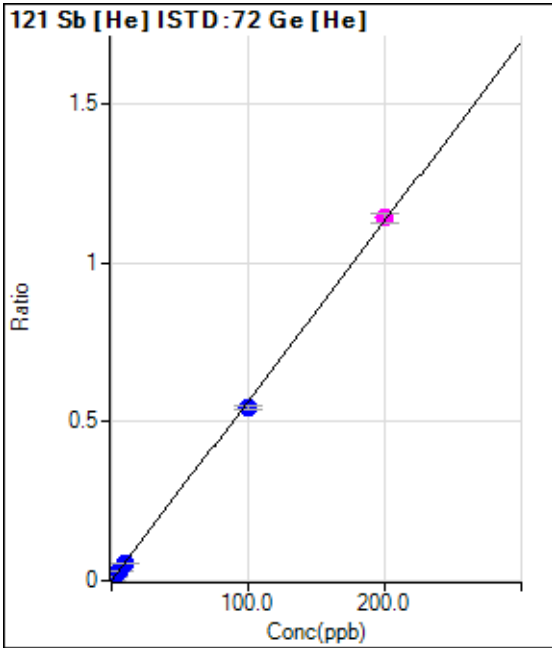
DL = 0.005155

BEC = 0.07869

Weight: <None>

Min Conc: <None>





	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	690.03	0.0005	P	9.0
2	<input type="checkbox"/>	2.000	1.851	14649.68	0.0110	P	3.0
3	<input type="checkbox"/>	5.000	4.834	36161.01	0.0279	P	2.9
4	<input type="checkbox"/>	10.000	9.498	68561.03	0.0542	P	2.6
5	<input type="checkbox"/>	100.000	96.105	665673.30	0.5440	P	1.9
6	<input type="checkbox"/>	200.000	201.978	1362317.90	1.1426	M	3.0
7	<input type="checkbox"/>	1.000					

$y = 0.0057 * x + 5.2453E-004$

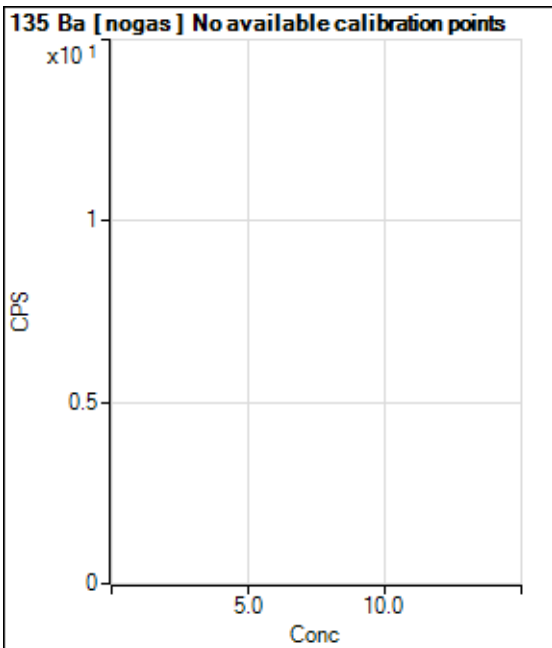
R = 0.9997

DL = 0.02505

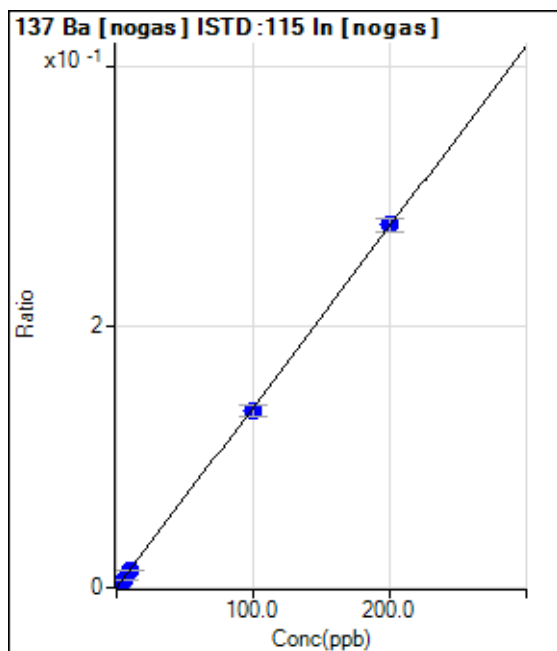
BEC = 0.09276

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>			206.67		P	36.3
2	<input type="checkbox"/>			5170.87		P	3.3
3	<input type="checkbox"/>			13588.89		P	2.0
4	<input type="checkbox"/>			24884.92		P	0.9
5	<input type="checkbox"/>			244431.33		P	2.9
6	<input type="checkbox"/>			474808.48		P	0.5
7	<input type="checkbox"/>						



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	<input type="checkbox"/>	0.000	0.000	343.34	0.0001	P	18.0
2	<input type="checkbox"/>	2.000	1.990	9646.20	0.0029	P	4.9
3	<input type="checkbox"/>	5.000	4.549	23276.06	0.0064	P	4.6
4	<input type="checkbox"/>	10.000	9.285	43452.07	0.0129	P	4.7
5	<input type="checkbox"/>	100.000	98.139	423807.77	0.1359	P	5.9
6	<input type="checkbox"/>	200.000	200.978	831970.59	0.2781	P	4.0
7	<input type="checkbox"/>	1.000					

$y = 0.0014 * x + 9.8721E-005$

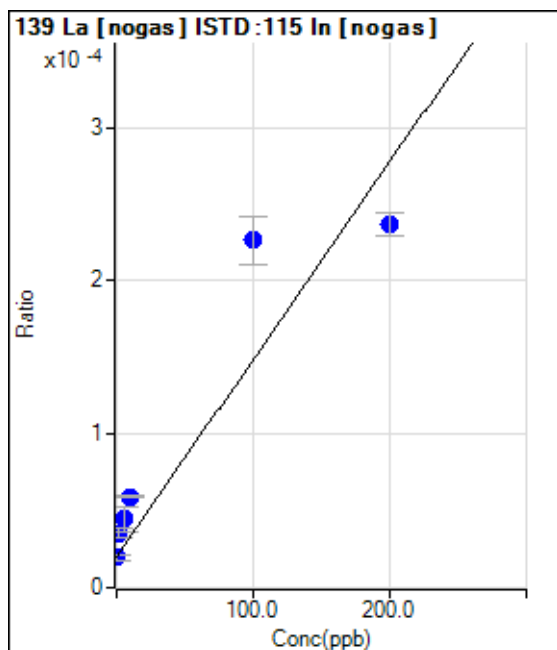
R = 0.9999

DL = 0.03857

BEC = 0.07136

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	<input type="checkbox"/>	0.000	0.000	70.00	0.0000	P	19.3
2	<input type="checkbox"/>	2.000	11.935	120.00	0.0000	P	18.2
3	<input type="checkbox"/>	5.000	19.345	163.33	0.0000	P	36.2
4	<input type="checkbox"/>	10.000	30.751	200.00	0.0001	P	2.9
5	<input type="checkbox"/>	100.000	160.553	710.03	0.0002	P	13.9
6	<input type="checkbox"/>	200.000	168.228	706.69	0.0002	P	6.4
7	<input type="checkbox"/>	1.000					

$y = 1.2864E-006 * x + 1.9944E-005$

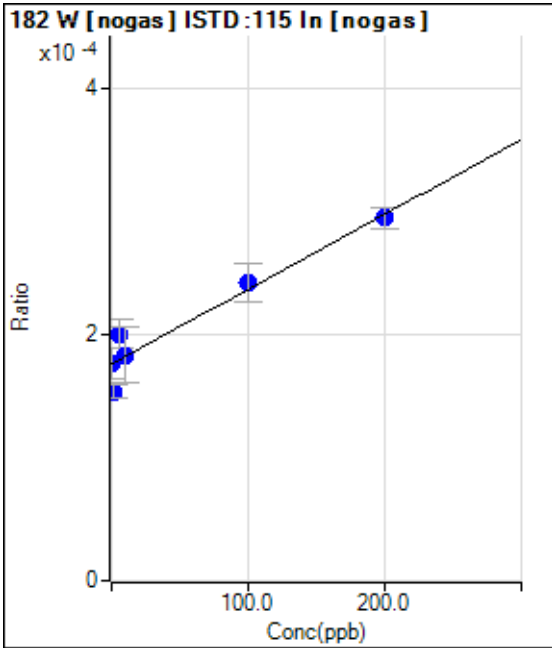
R = 0.9303

DL = 8.981

BEC = 15.5

Weight: <None>

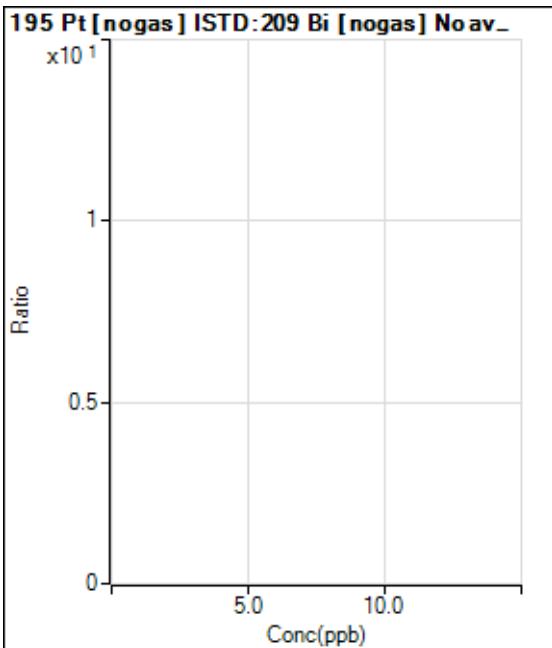
Min Conc: <None>



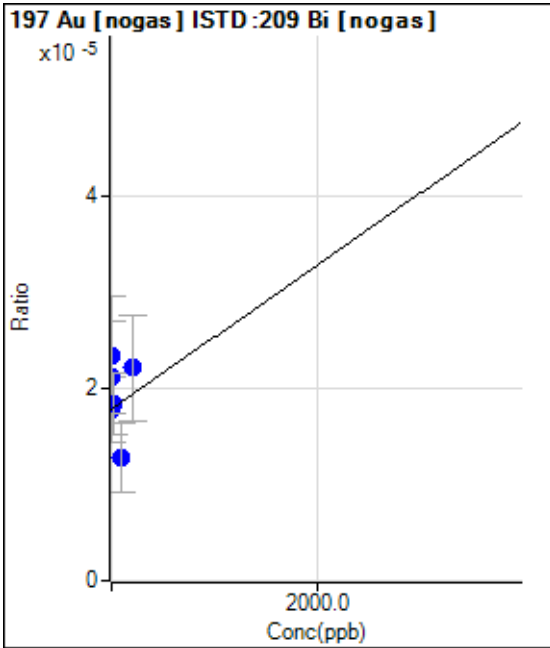
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	616.69	0.0002	P	14.0
2	<input type="checkbox"/>	2.000	-37.149	520.01	0.0002	P	7.4
3	<input type="checkbox"/>	5.000	40.423	733.36	0.0002	P	11.2
4	<input type="checkbox"/>	10.000	11.984	613.36	0.0002	P	24.2
5	<input type="checkbox"/>	100.000	108.583	753.36	0.0002	P	12.4
6	<input type="checkbox"/>	200.000	195.115	883.37	0.0003	P	6.1
7	<input type="checkbox"/>	1.000					

$y = 6.0867E-007 * x + 1.7613E-004$
 R = 0.9591
 DL = 121.6
 BEC = 289.4

Weight: <None>
 Min Conc: <None>



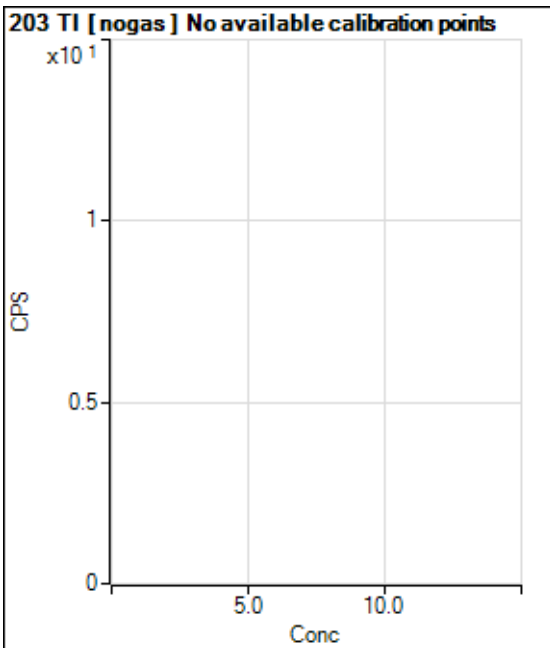
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000					
2	<input type="checkbox"/>	2.000					
3	<input type="checkbox"/>	5.000					
4	<input type="checkbox"/>	10.000					
5	<input type="checkbox"/>	100.000					
6	<input type="checkbox"/>	200.000					
7	<input type="checkbox"/>	1.000					



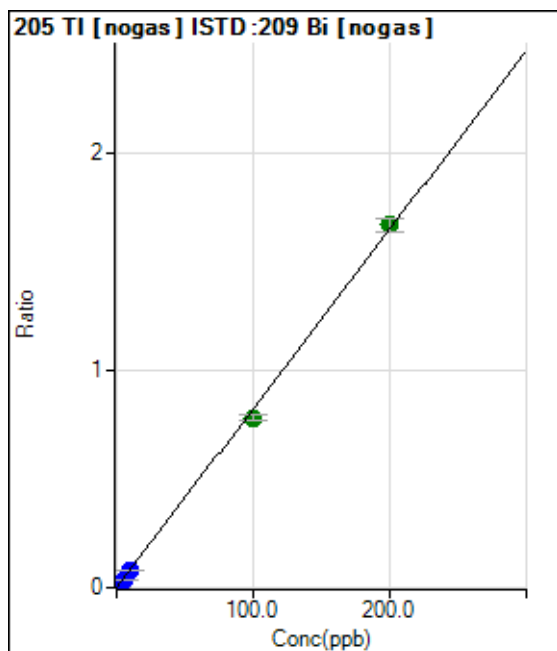
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	43.33	0.0000	P	38.2
2	<input type="checkbox"/>	2.000	749.078	56.67	0.0000	P	52.3
3	<input type="checkbox"/>	5.000	432.298	53.33	0.0000	P	56.4
4	<input type="checkbox"/>	10.000	70.941	43.33	0.0000	P	34.3
5	<input type="checkbox"/>	100.000	-678.351	30.00	0.0000	P	56.0
6	<input type="checkbox"/>	200.000	567.975	46.67	0.0000	P	49.5
7	<input type="checkbox"/>	1.000					

$y = 7.4868E-009 * x + 1.7874E-005$
 R = -0.0486
 DL = 2738
 BEC = 2387

Weight: <None>
Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>			310.01		P	25.8
2	<input type="checkbox"/>			16635.35		P	3.2
3	<input type="checkbox"/>			39648.96		P	2.0
4	<input type="checkbox"/>			75971.07		P	4.9
5	<input type="checkbox"/>			772962.10		P	1.9
6	<input type="checkbox"/>			1522149.66		A	3.6
7	<input type="checkbox"/>						



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	620.02	0.0003	P	24.1
2	<input type="checkbox"/>	2.000	1.917	38426.03	0.0160	P	2.0
3	<input type="checkbox"/>	5.000	4.563	94350.61	0.0378	P	4.8
4	<input type="checkbox"/>	10.000	9.374	181730.20	0.0774	P	3.6
5	<input type="checkbox"/>	100.000	94.758	1817947.84	0.7802	A	3.9
6	<input type="checkbox"/>	200.000	202.664	3570214.22	1.6683	A	4.0
7	<input type="checkbox"/>	1.000					

$y = 0.0082 * x + 2.5432E-004$

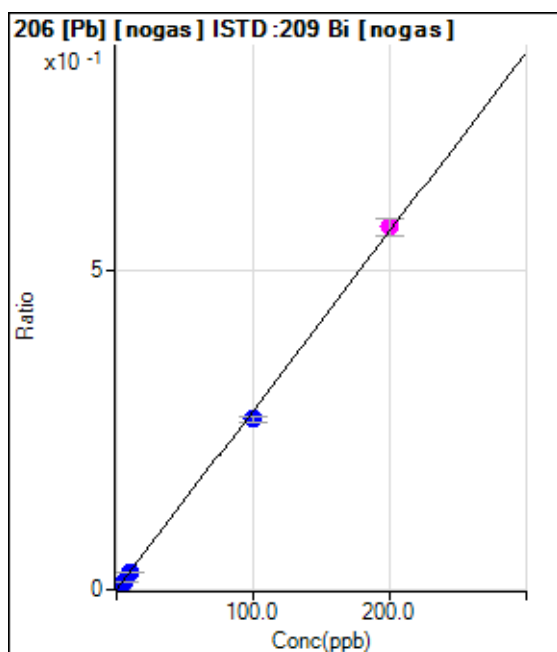
R = 0.9995

DL = 0.02234

BEC = 0.0309

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	213.34	0.0001	P	22.6
2	<input type="checkbox"/>	2.000	1.923	13142.23	0.0055	P	2.8
3	<input type="checkbox"/>	5.000	4.600	32402.79	0.0130	P	7.4
4	<input type="checkbox"/>	10.000	9.724	64284.04	0.0274	P	1.6
5	<input type="checkbox"/>	100.000	94.997	621379.19	0.2667	P	4.1
6	<input type="checkbox"/>	200.000	202.526	1216365.48	0.5684	M	4.5
7	<input type="checkbox"/>	1.000					

$y = 0.0028 * x + 8.7815E-005$

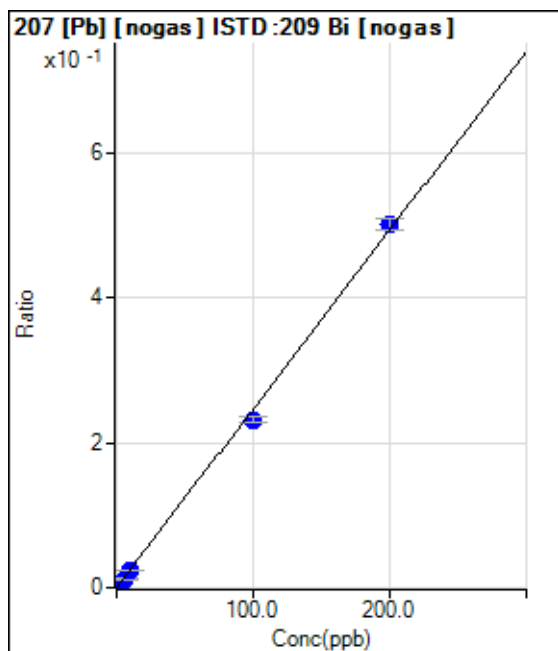
R = 0.9996

DL = 0.02121

BEC = 0.03129

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	143.33	0.0001	P	14.4
2	<input type="checkbox"/>	2.000	1.925	11520.97	0.0048	P	4.2
3	<input type="checkbox"/>	5.000	4.641	28655.69	0.0115	P	8.9
4	<input type="checkbox"/>	10.000	9.421	54679.41	0.0233	P	2.5
5	<input type="checkbox"/>	100.000	94.013	540139.12	0.2318	P	3.9
6	<input type="checkbox"/>	200.000	203.032	1071282.69	0.5006	P	3.3
7	<input type="checkbox"/>	1.000					

$y = 0.0025 * x + 5.8957E-005$

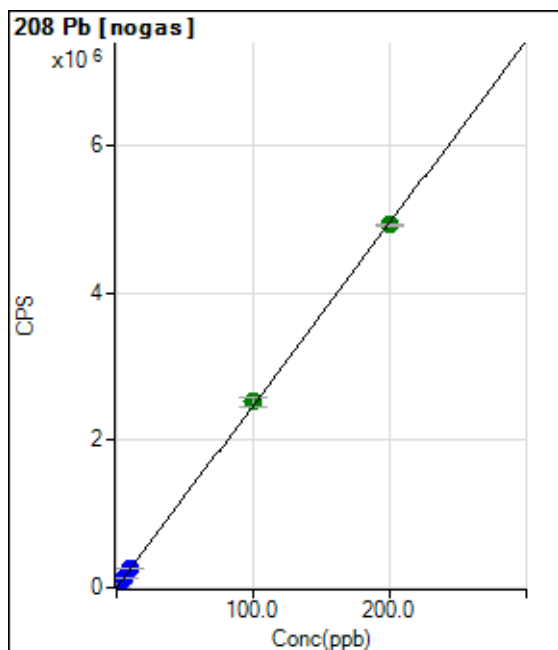
R = 0.9994

DL = 0.01032

BEC = 0.02392

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	606.68		P	9.4
2	<input type="checkbox"/>	2.000	2.118	52904.88		P	1.3
3	<input type="checkbox"/>	5.000	5.300	131495.48		P	2.8
4	<input type="checkbox"/>	10.000	10.140	251043.44		P	1.1
5	<input type="checkbox"/>	100.000	101.876	2516640.03		A	4.5
6	<input type="checkbox"/>	200.000	199.046	4916479.22		A	0.3
7	<input type="checkbox"/>	1.000					

$y = 24697.1065 * x + 606.6833$

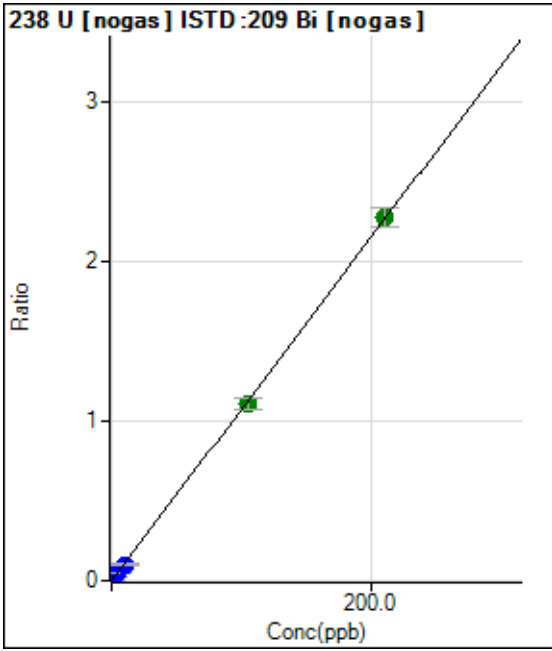
R = 0.9999

DL = 0.006908

BEC = 0.02456

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	120.00	0.0000	P	15.1
2	<input type="checkbox"/>	2.000	1.888	48910.04	0.0204	P	7.2
3	<input type="checkbox"/>	5.000	4.911	132360.52	0.0530	P	3.9
4	<input type="checkbox"/>	10.000	9.449	239305.43	0.1019	P	4.0
5	<input type="checkbox"/>	105.000	103.001	2586883.19	1.1106	A	5.8
6	<input type="checkbox"/>	210.000	211.029	4867270.45	2.2754	A	5.5
7	<input type="checkbox"/>	1.000					

$y = 0.0108 * x + 4.9243E-005$

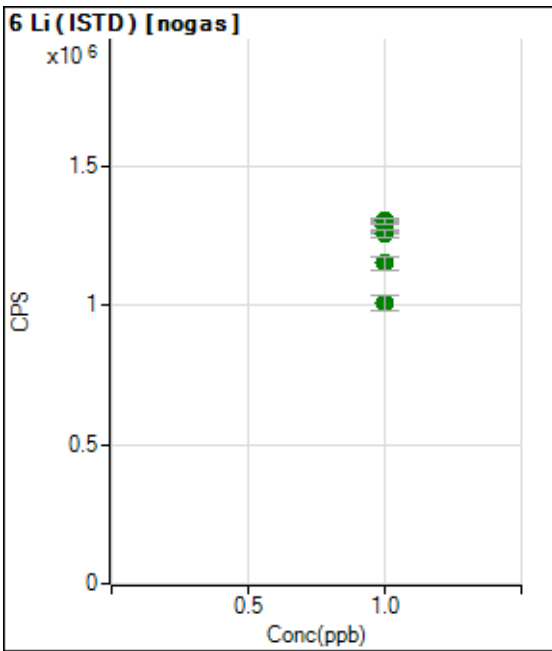
R = 0.9999

DL = 0.00207

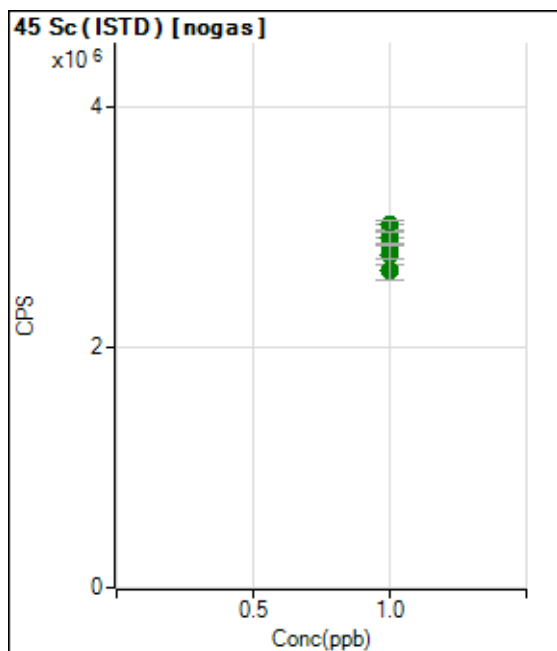
BEC = 0.004567

Weight: <None>

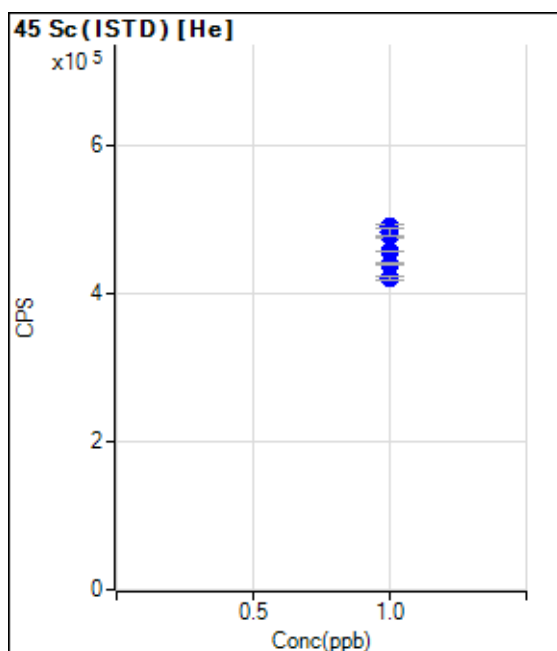
Min Conc: <None>



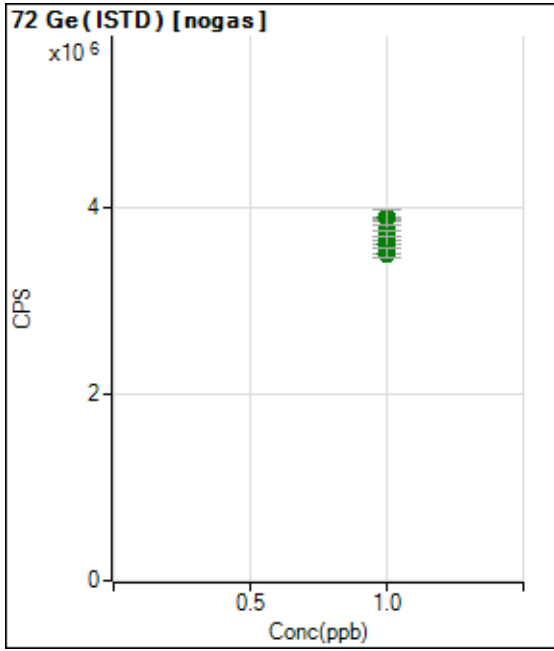
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	1.000		1282255.12		A	3.6
2	<input type="checkbox"/>	1.000		1280489.50		A	2.4
3	<input type="checkbox"/>	1.000		1302121.40		A	1.7
4	<input type="checkbox"/>	1.000		1255823.35		A	2.6
5	<input type="checkbox"/>	1.000		1149486.02		A	4.2
6	<input type="checkbox"/>	1.000		1007704.95		A	5.6
7	<input type="checkbox"/>	1.000					



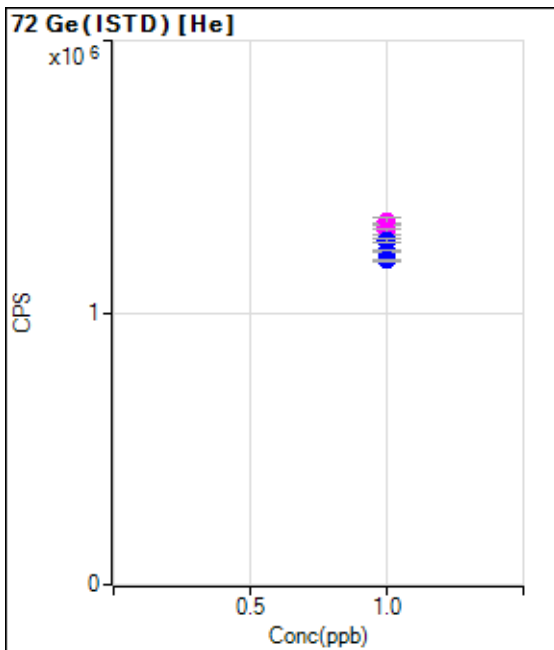
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	1.000		2968203.29		A	3.4
2	<input type="checkbox"/>	1.000		2855821.52		A	8.0
3	<input type="checkbox"/>	1.000		3019990.06		A	2.8
4	<input type="checkbox"/>	1.000		2910610.79		A	3.0
5	<input type="checkbox"/>	1.000		2767853.29		A	5.4
6	<input type="checkbox"/>	1.000		2642384.49		A	6.7
7	<input type="checkbox"/>	1.000					



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	1.000		477492.30		P	0.7
2	<input type="checkbox"/>	1.000		490555.23		P	1.0
3	<input type="checkbox"/>	1.000		483264.12		P	2.5
4	<input type="checkbox"/>	1.000		457424.08		P	0.3
5	<input type="checkbox"/>	1.000		439891.84		P	0.7
6	<input type="checkbox"/>	1.000		420289.21		P	1.2
7	<input type="checkbox"/>	1.000					

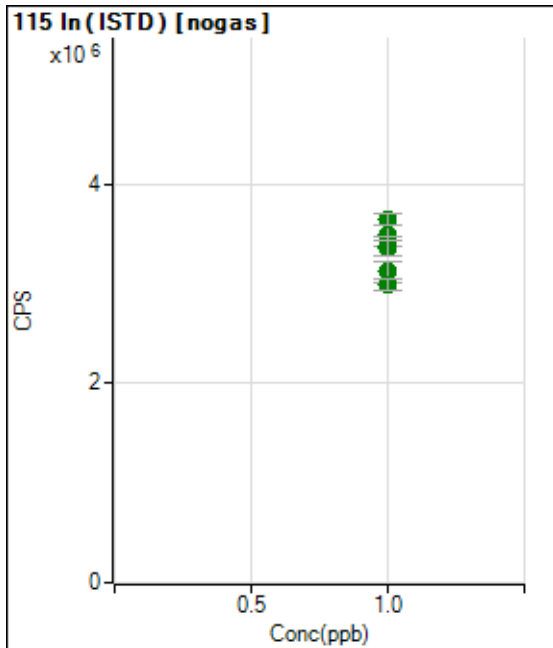


	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	1.000		3894466.92		A	1.0
2	<input type="checkbox"/>	1.000		3752143.59		A	5.4
3	<input type="checkbox"/>	1.000		3897281.92		A	4.1
4	<input type="checkbox"/>	1.000		3692187.55		A	3.7
5	<input type="checkbox"/>	1.000		3613377.44		A	5.1
6	<input type="checkbox"/>	1.000		3521868.59		A	2.9
7	<input type="checkbox"/>	1.000					

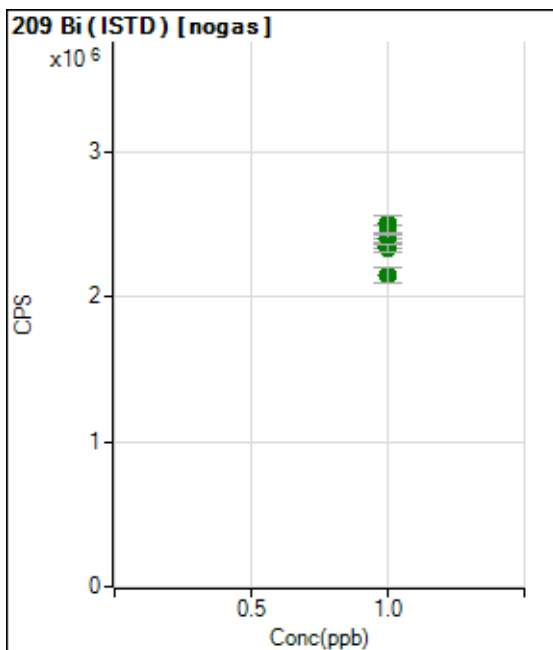


	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	1.000		1316691.70		M	1.8
2	<input type="checkbox"/>	1.000		1333436.96		M	2.0
3	<input type="checkbox"/>	1.000		1298118.16		M	1.4
4	<input type="checkbox"/>	1.000		1264455.79		P	1.4
5	<input type="checkbox"/>	1.000		1223833.89		P	0.7
6	<input type="checkbox"/>	1.000		1192351.34		P	0.6
7	<input type="checkbox"/>	1.000					

Calibration for 077_ICV.d



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	1.000		3488791.32		A	5.9
2	<input type="checkbox"/>	1.000		3388629.20		A	5.7
3	<input type="checkbox"/>	1.000		3645641.59		A	3.3
4	<input type="checkbox"/>	1.000		3361504.00		A	4.3
5	<input type="checkbox"/>	1.000		3127838.66		A	6.9
6	<input type="checkbox"/>	1.000		2994726.25		A	4.3
7	<input type="checkbox"/>	1.000					



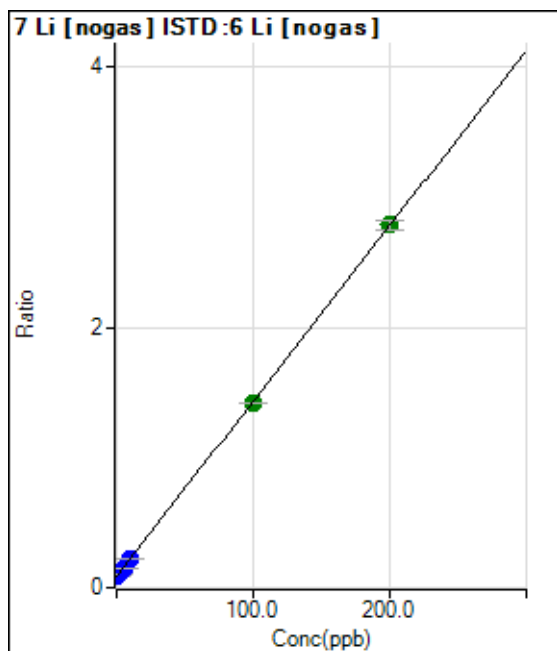
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	1.000		2439864.23		A	3.8
2	<input type="checkbox"/>	1.000		2397681.37		A	2.0
3	<input type="checkbox"/>	1.000		2499074.39		A	4.9
4	<input type="checkbox"/>	1.000		2348628.51		A	1.8
5	<input type="checkbox"/>	1.000		2331004.76		A	2.0
6	<input type="checkbox"/>	1.000		2142228.62		A	4.7
7	<input type="checkbox"/>	1.000					

Calibration for 229_ICV.d

Batch Folder: C:\Agilent\ICPMH\1\DATA\010919B\
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			





	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	96916.32	0.0867	P	3.1
2	<input type="checkbox"/>	2.000	1.748	124716.95	0.1102	P	3.0
3	<input type="checkbox"/>	5.000	4.688	163138.42	0.1498	P	1.4
4	<input type="checkbox"/>	10.000	10.131	228477.20	0.2231	P	5.2
5	<input type="checkbox"/>	100.000	98.899	1482584.14	1.4187	A	0.5
6	<input type="checkbox"/>	200.000	200.554	2884029.23	2.7878	A	2.3
7	<input type="checkbox"/>	1.000					

$y = 0.0135 * x + 0.0867$

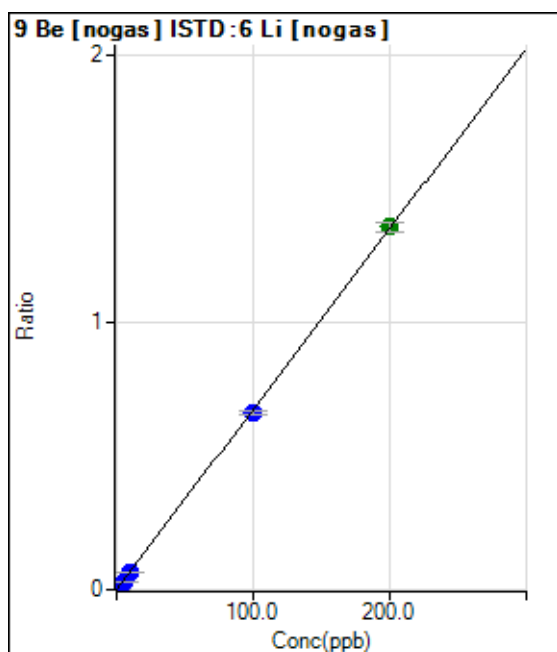
R = 1.0000

DL = 0.5973

BEC = 6.437

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	230.01	0.0002	P	13.2
2	<input type="checkbox"/>	2.000	1.668	12951.20	0.0115	P	9.2
3	<input type="checkbox"/>	5.000	4.386	32414.54	0.0298	P	1.1
4	<input type="checkbox"/>	10.000	9.246	64063.68	0.0625	P	3.1
5	<input type="checkbox"/>	100.000	97.634	687770.64	0.6583	P	2.2
6	<input type="checkbox"/>	200.000	201.239	1403212.95	1.3566	A	2.6
7	<input type="checkbox"/>	1.000					

$y = 0.0067 * x + 2.0528E-004$

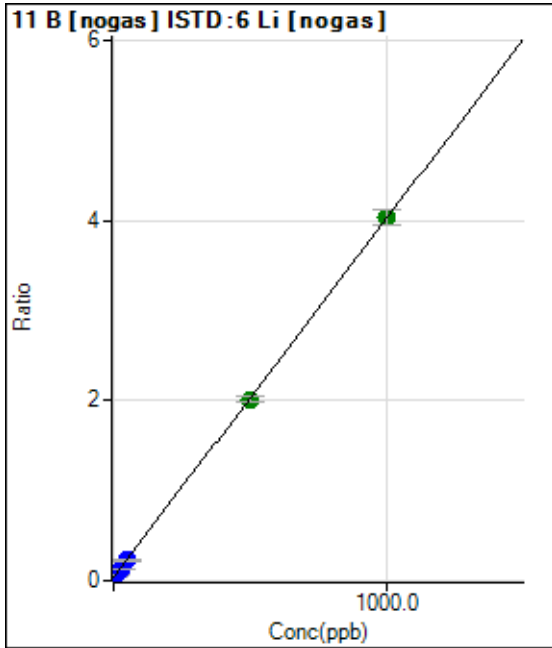
R = 0.9999

DL = 0.01208

BEC = 0.03046

Weight: <None>

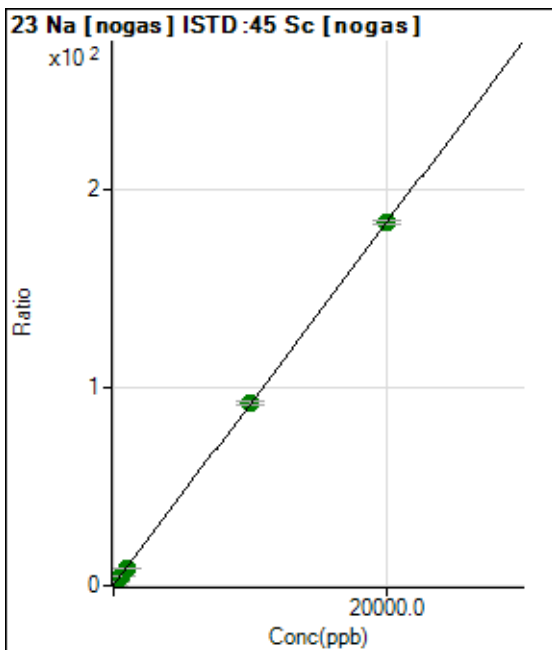
Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	42865.14	0.0384	P	8.0
2	<input type="checkbox"/>	10.000	7.566	77493.50	0.0685	P	3.9
3	<input type="checkbox"/>	25.000	21.429	134649.52	0.1237	P	3.6
4	<input type="checkbox"/>	50.000	47.008	230915.71	0.2255	P	4.6
5	<input type="checkbox"/>	500.000	496.482	2104502.99	2.0143	A	2.7
6	<input type="checkbox"/>	1000.000	1002.022	4165630.67	4.0264	A	4.1
7	<input type="checkbox"/>	5.000					

$y = 0.0040 * x + 0.0384$
 $R = 1.0000$
 $DL = 2.305$
 $BEC = 9.645$

Weight: <None>
 Min Conc: <None>

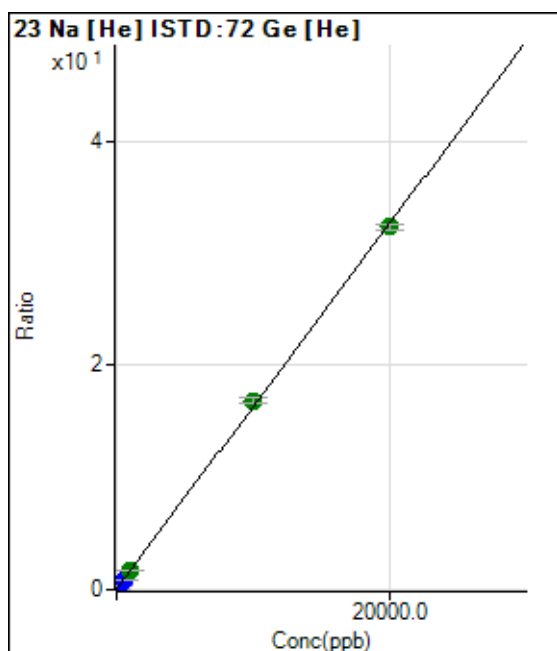


	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	568424.57	0.2180	P	5.3
2	<input type="checkbox"/>	200.000	191.118	5161578.63	1.9679	A	0.8
3	<input type="checkbox"/>	500.000	473.619	12048278.65	4.5545	A	2.3
4	<input type="checkbox"/>	1000.000	932.624	22966980.72	8.7572	A	4.3
5	<input type="checkbox"/>	10000.00	10016.709	238148871.9	91.9315	A	2.2
6	<input type="checkbox"/>	20000.00	19995.763	466021727.0	183.300	A	1.0
7	<input type="checkbox"/>	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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	56680.95	0.0476	P	0.8
2	<input type="checkbox"/>	200.000	201.698	454872.16	0.3762	P	0.9
3	<input type="checkbox"/>	500.000	514.887	1064301.18	0.8865	P	1.1
4	<input type="checkbox"/>	1000.000	1017.934	2003125.85	1.7060	A	0.7
5	<input type="checkbox"/>	10000.00	10337.290	19792255.54	16.8887	A	3.1
6	<input type="checkbox"/>	20000.00	19830.069	37186881.11	32.3539	A	1.8
7	<input type="checkbox"/>	100.000					

$$y = 0.0016 * x + 0.0476$$

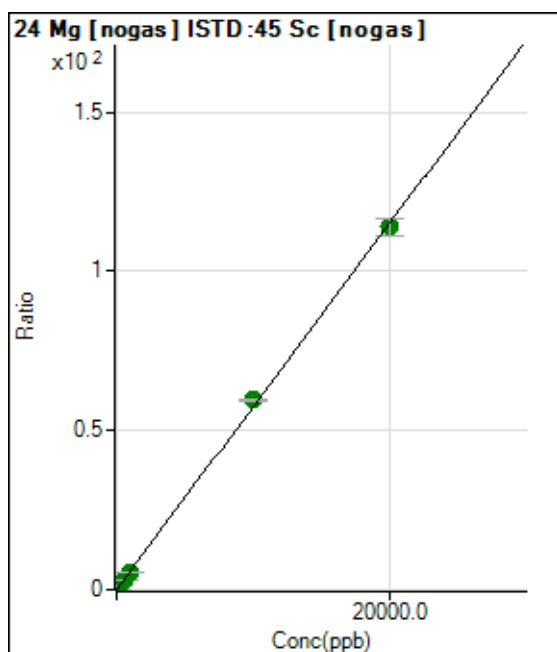
$$R = 0.9998$$

$$DL = 0.7166$$

$$BEC = 29.23$$

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	34770.78	0.0133	P	6.0
2	<input type="checkbox"/>	200.000	200.811	3062202.80	1.1675	A	1.1
3	<input type="checkbox"/>	500.000	493.571	7538755.64	2.8502	A	3.0
4	<input type="checkbox"/>	1000.000	966.733	14609241.99	5.5697	A	3.6
5	<input type="checkbox"/>	10000.00	10364.265	154345107.6	59.5831	A	0.4
6	<input type="checkbox"/>	20000.00	19819.683	289321281.4	113.929	A	5.0
7	<input type="checkbox"/>	100.000					

$$y = 0.0057 * x + 0.0133$$

$$R = 0.9998$$

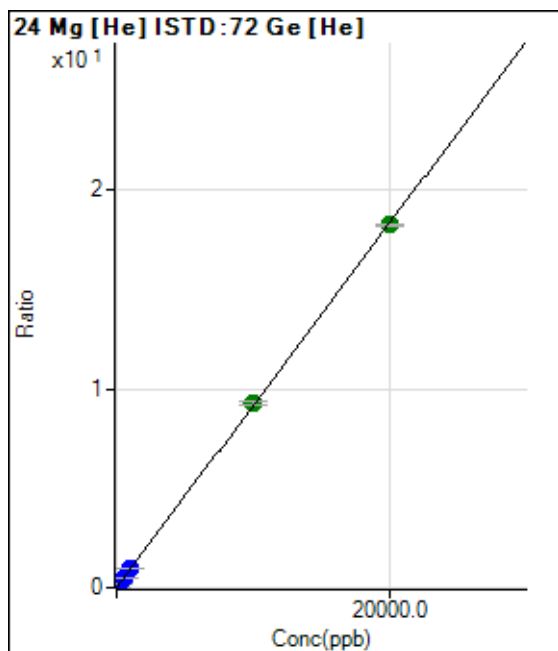
$$DL = 0.4142$$

$$BEC = 2.32$$

Weight: <None>

Min Conc: <None>

Calibration for 229_ICV.d



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	2590.22	0.0022	P	2.1
2	<input type="checkbox"/>	200.000	202.754	227154.01	0.1879	P	0.8
3	<input type="checkbox"/>	500.000	519.712	574076.77	0.4782	P	1.5
4	<input type="checkbox"/>	1000.000	1008.198	1086799.15	0.9256	P	0.5
5	<input type="checkbox"/>	10000.00	10162.798	10911672.34	9.3103	A	1.8
6	<input type="checkbox"/>	20000.00	19917.671	20972272.60	18.2449	A	0.8
7	<input type="checkbox"/>	100.000					

$y = 9.1591E-004 * x + 0.0022$

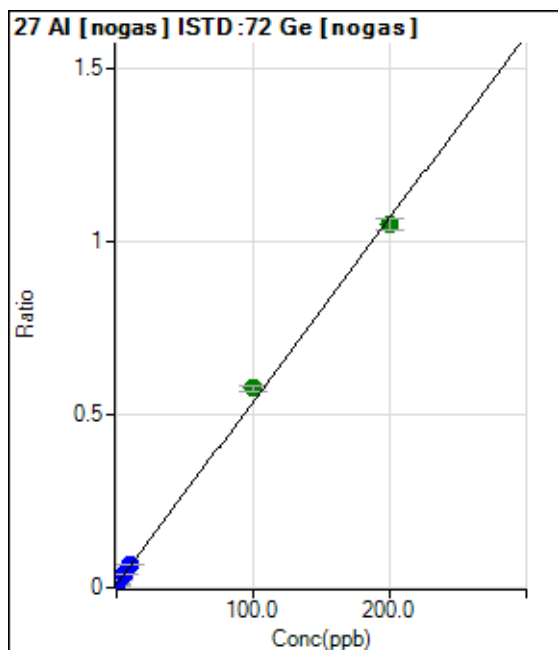
R = 1.0000

DL = 0.1488

BEC = 2.377

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	28582.11	0.0084	P	5.2
2	<input type="checkbox"/>	2.000	2.245	70137.31	0.0203	P	2.7
3	<input type="checkbox"/>	5.000	5.522	129950.90	0.0377	P	1.9
4	<input type="checkbox"/>	10.000	10.617	217773.77	0.0647	P	0.5
5	<input type="checkbox"/>	100.000	107.063	1929165.07	0.5762	A	3.1
6	<input type="checkbox"/>	200.000	196.422	3519046.20	1.0500	A	3.2
7	<input type="checkbox"/>	1.000					

$y = 0.0053 * x + 0.0084$

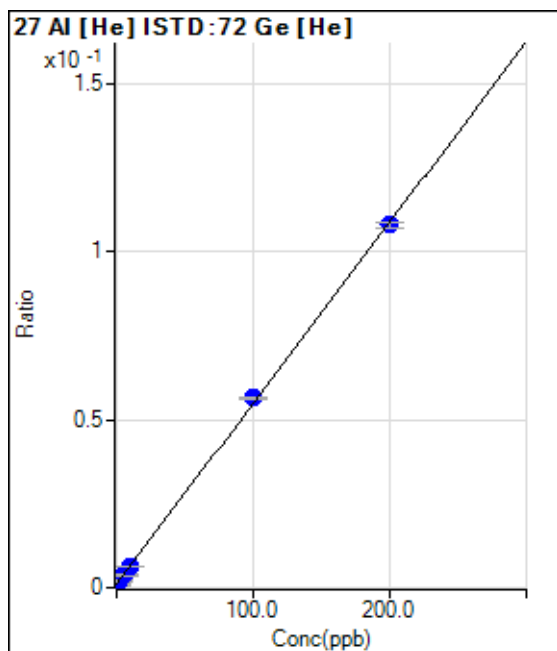
R = 0.9991

DL = 0.2494

BEC = 1.588

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	-0.508	1026.71	0.0009	P	3.5
2	<input type="checkbox"/>	2.000	1.590	2406.85	0.0020	P	4.2
3	<input type="checkbox"/>	5.000	4.946	4560.63	0.0038	P	8.5
4	<input type="checkbox"/>	10.000	9.573	7378.20	0.0063	P	2.4
5	<input type="checkbox"/>	100.000	102.743	66091.91	0.0564	P	0.8
6	<input type="checkbox"/>	200.000	198.655	124093.64	0.1080	P	1.9
7	<input type="checkbox"/>	1.000					

$y = 5.3778E-004 * x + 0.0011$

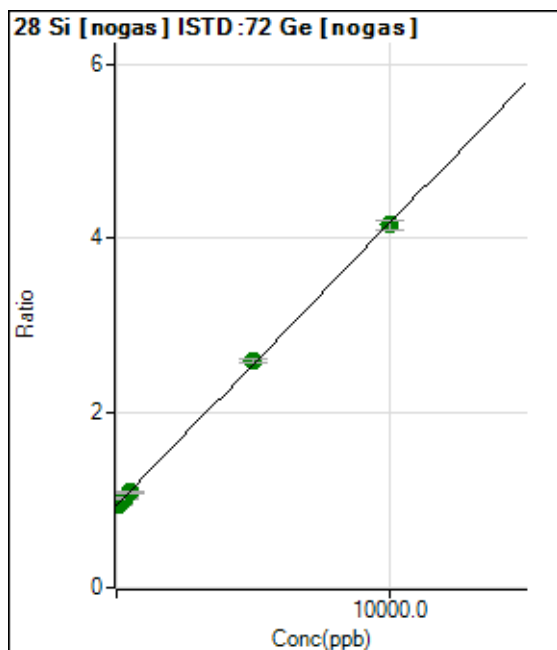
R = 0.9999

DL = 0.1684

BEC = 2.111

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	3213274.12	0.9462	A	1.0
2	<input type="checkbox"/>	100.000	28.030	3296194.12	0.9553	A	2.5
3	<input type="checkbox"/>	250.000	226.115	3513153.07	1.0193	A	1.7
4	<input type="checkbox"/>	500.000	475.811	3700907.34	1.1000	A	1.7
5	<input type="checkbox"/>	5000.000	5137.412	8728679.87	2.6066	A	1.7
6	<input type="checkbox"/>	10000.00	9933.820	13931646.88	4.1569	A	2.5
7	<input type="checkbox"/>	5.000					

$y = 3.2320E-004 * x + 0.9462$

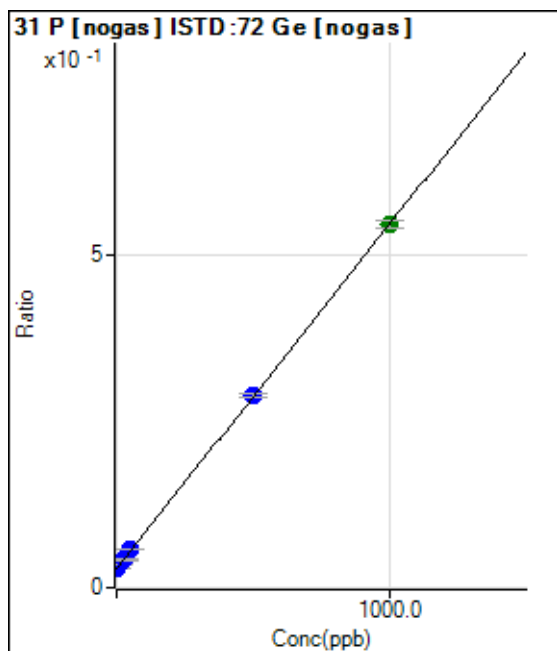
R = 0.9998

DL = 90.7

BEC = 2928

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	96779.74	0.0285	P	0.9
2	<input type="checkbox"/>	10.000	9.973	116174.65	0.0337	P	2.0
3	<input type="checkbox"/>	25.000	25.966	144588.14	0.0419	P	0.1
4	<input type="checkbox"/>	50.000	54.416	190748.30	0.0567	P	0.9
5	<input type="checkbox"/>	500.000	503.157	968398.58	0.2892	P	2.1
6	<input type="checkbox"/>	1000.000	998.177	1828985.08	0.5456	A	2.0
7	<input type="checkbox"/>	5.000					

$y = 5.1807E-004 * x + 0.0285$

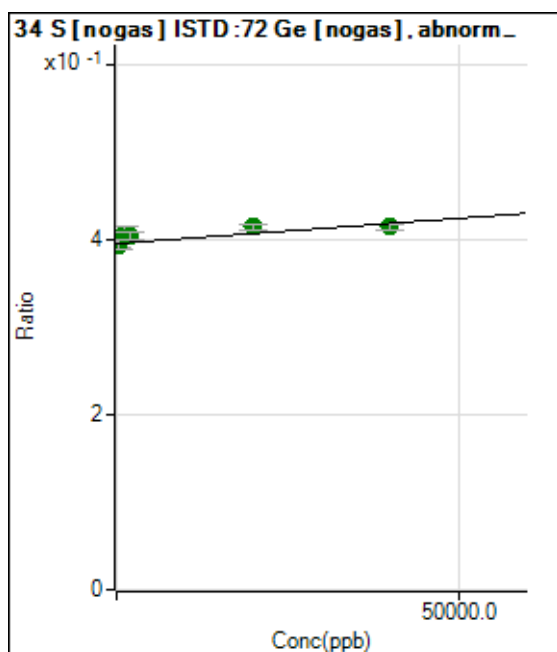
R = 1.0000

DL = 1.507

BEC = 55.01

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	1344045.80	0.3958	A	2.1
2	<input type="checkbox"/>	400.000	-3333.139	1359273.63	0.3939	A	2.6
3	<input type="checkbox"/>	1000.000	20834.498	1405675.58	0.4078	A	3.3
4	<input type="checkbox"/>	2000.000	15752.616	1362181.38	0.4049	A	2.4
5	<input type="checkbox"/>	20000.00	32942.259	1389118.00	0.4148	A	1.6
6	<input type="checkbox"/>	40000.00	32382.708	1389784.73	0.4145	A	1.7
7	<input type="checkbox"/>	100.000					

$y = 5.7589E-007 * x + 0.3958$

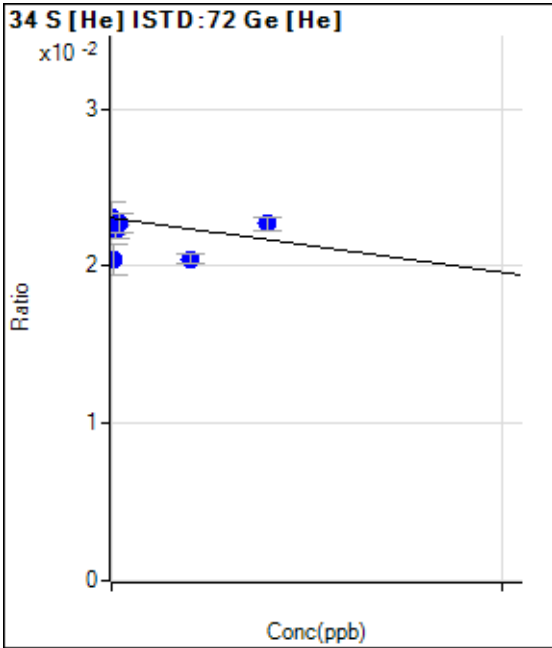
R = 0.7588

DL = 4.308E+04

BEC = 6.873E+05

Weight: <None>

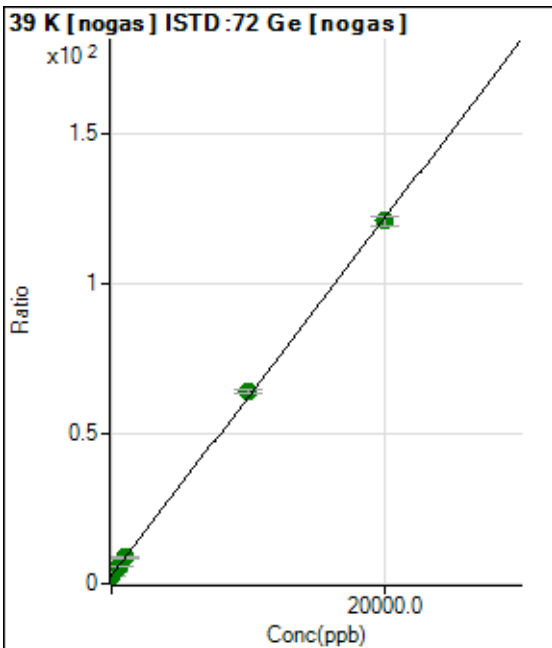
Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	27458.02	0.0231	P	9.3
2	<input type="checkbox"/>	400.000	76177.818	24686.98	0.0204	P	9.4
3	<input type="checkbox"/>	1000.000	24785.165	26657.34	0.0222	P	3.8
4	<input type="checkbox"/>	2000.000	9514.923	26690.27	0.0227	P	5.4
5	<input type="checkbox"/>	20000.00	75871.909	23952.28	0.0204	P	3.0
6	<input type="checkbox"/>	40000.00	10335.892	26089.91	0.0227	P	3.9
7	<input type="checkbox"/>	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>

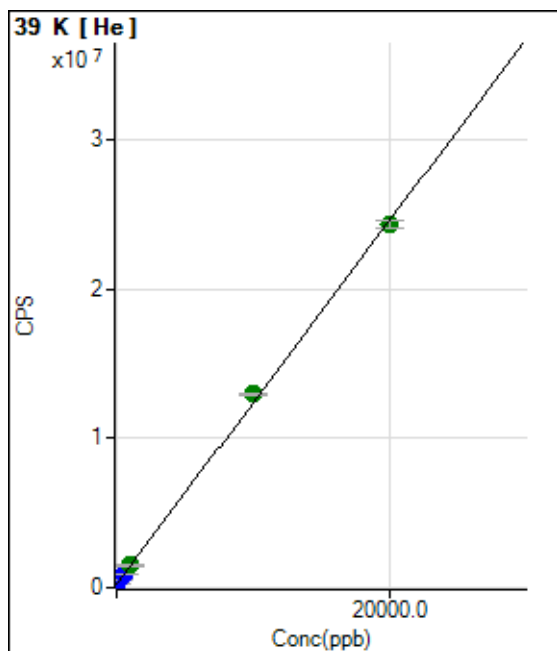


	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	9206419.22	2.7109	A	0.7
2	<input type="checkbox"/>	200.000	188.596	13234495.87	3.8348	A	1.0
3	<input type="checkbox"/>	500.000	477.440	19150063.45	5.5561	A	1.5
4	<input type="checkbox"/>	1000.000	1007.040	29317766.28	8.7122	A	1.9
5	<input type="checkbox"/>	10000.00	10283.102	214283563.1	63.9916	A	1.8
6	<input type="checkbox"/>	20000.00	19858.775	405749434.0	121.056	A	2.8
7	<input type="checkbox"/>	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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	222826.97		P	1.2
2	<input type="checkbox"/>	200.000	206.792	474435.02		P	1.3
3	<input type="checkbox"/>	500.000	513.438	847538.87		P	0.8
4	<input type="checkbox"/>	1000.000	1037.103	1484694.25		A	1.5
5	<input type="checkbox"/>	10000.00	10457.977	12947290.64		A	0.9
6	<input type="checkbox"/>	20000.00	19768.752	24275927.14		A	2.0
7	<input type="checkbox"/>	100.000					

$y = 1216.7232 * x + 222826.9700$

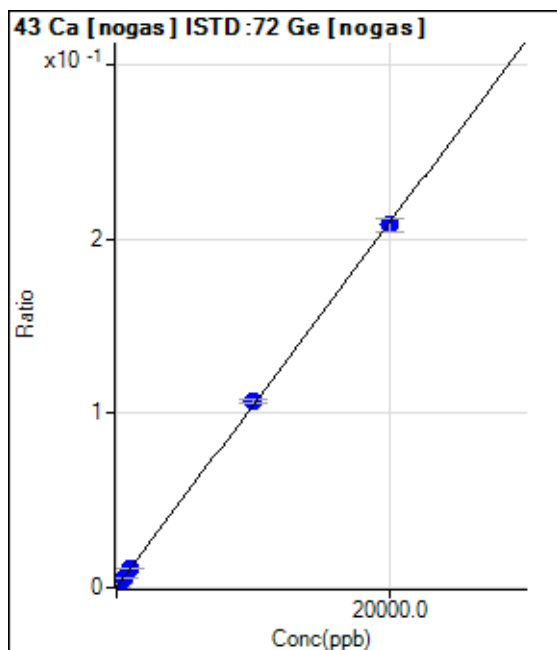
R = 0.9996

DL = 6.343

BEC = 183.1

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	1040.05	0.0003	P	5.5
2	<input type="checkbox"/>	200.000	193.336	8028.52	0.0023	P	3.9
3	<input type="checkbox"/>	500.000	499.488	19040.00	0.0055	P	1.2
4	<input type="checkbox"/>	1000.000	988.644	35781.44	0.0106	P	2.7
5	<input type="checkbox"/>	10000.00	10221.645	358579.49	0.1071	P	2.1
6	<input type="checkbox"/>	20000.00	19889.825	697231.32	0.2081	P	3.5
7	<input type="checkbox"/>	100.000					

$y = 1.0446E-005 * x + 3.0642E-004$

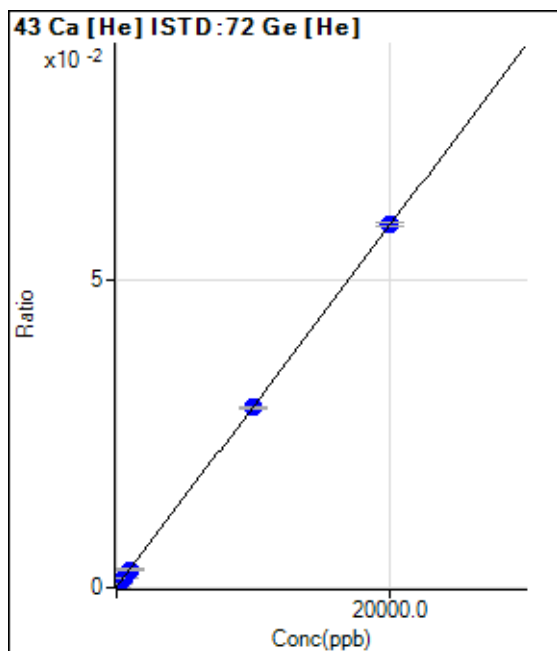
R = 0.9999

DL = 4.86

BEC = 29.33

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	73.33	0.0001	P	31.0
2	<input type="checkbox"/>	200.000	187.685	740.03	0.0006	P	16.4
3	<input type="checkbox"/>	500.000	508.295	1866.79	0.0016	P	4.7
4	<input type="checkbox"/>	1000.000	980.776	3453.70	0.0029	P	5.3
5	<input type="checkbox"/>	10000.00	9924.529	34224.93	0.0292	P	0.7
6	<input type="checkbox"/>	20000.00	20038.612	67699.41	0.0589	P	1.0
7	<input type="checkbox"/>	100.000					

$y = 2.9362E-006 * x + 6.1570E-005$

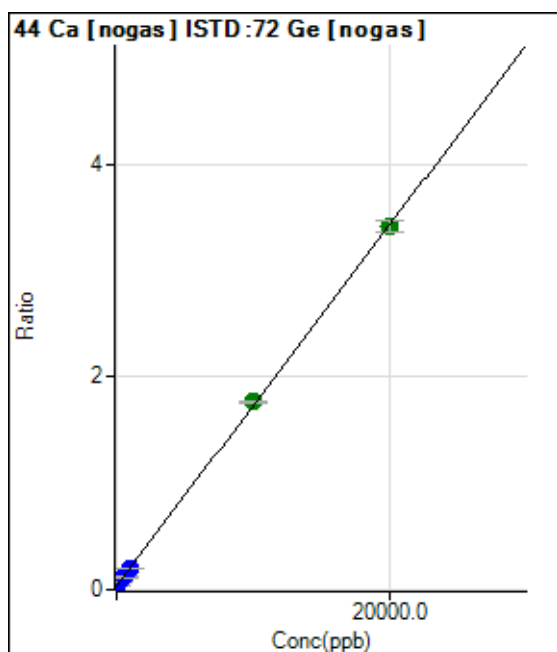
R = 1.0000

DL = 19.48

BEC = 20.97

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	120199.39	0.0354	P	1.9
2	<input type="checkbox"/>	200.000	187.757	231917.85	0.0672	P	2.0
3	<input type="checkbox"/>	500.000	488.296	407153.00	0.1181	P	1.3
4	<input type="checkbox"/>	1000.000	980.192	677819.99	0.2015	P	1.9
5	<input type="checkbox"/>	10000.00	10190.039	5900134.70	1.7618	A	1.1
6	<input type="checkbox"/>	20000.00	19906.386	11421220.66	3.4080	A	3.1
7	<input type="checkbox"/>	100.000					

$y = 1.6942E-004 * x + 0.0354$

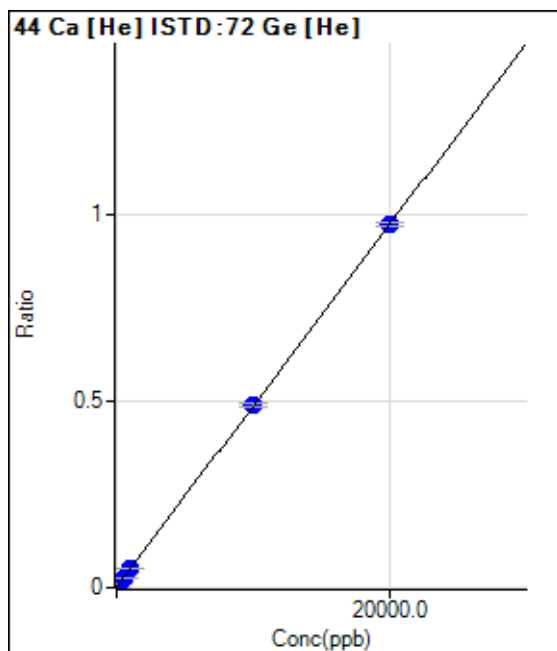
R = 0.9999

DL = 11.89

BEC = 208.9

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	1716.77	0.0014	P	3.9
2	<input type="checkbox"/>	200.000	198.452	13395.03	0.0111	P	6.6
3	<input type="checkbox"/>	500.000	498.689	30805.65	0.0257	P	3.2
4	<input type="checkbox"/>	1000.000	1011.897	59394.50	0.0506	P	1.1
5	<input type="checkbox"/>	10000.00	10015.897	571756.66	0.4879	P	2.2
6	<input type="checkbox"/>	20000.00	19991.505	1117615.29	0.9723	P	1.1
7	<input type="checkbox"/>	100.000					

$y = 4.8566E-005 * x + 0.0014$

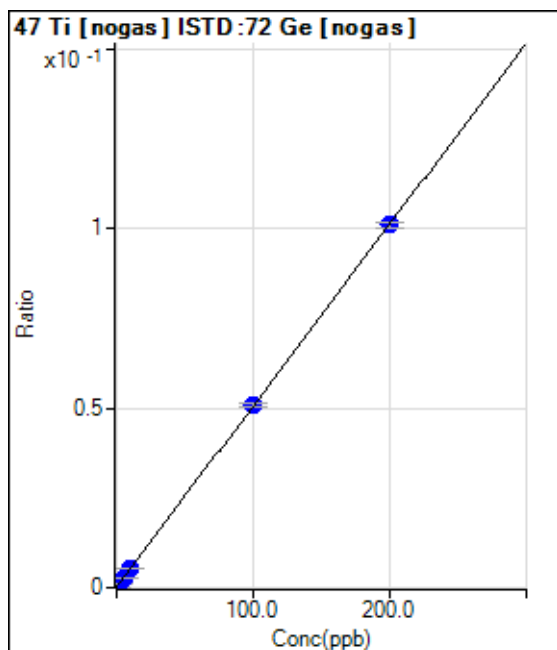
R = 1.0000

DL = 3.473

BEC = 29.71

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	406.68	0.0001	P	36.4
2	<input type="checkbox"/>	2.000	1.904	3723.77	0.0011	P	12.8
3	<input type="checkbox"/>	5.000	4.984	9078.99	0.0026	P	7.9
4	<input type="checkbox"/>	10.000	10.140	17618.63	0.0052	P	0.5
5	<input type="checkbox"/>	100.000	100.436	170134.96	0.0508	P	1.2
6	<input type="checkbox"/>	200.000	199.776	338296.69	0.1009	P	1.3
7	<input type="checkbox"/>	1.000					

$y = 5.0459E-004 * x + 1.1928E-004$

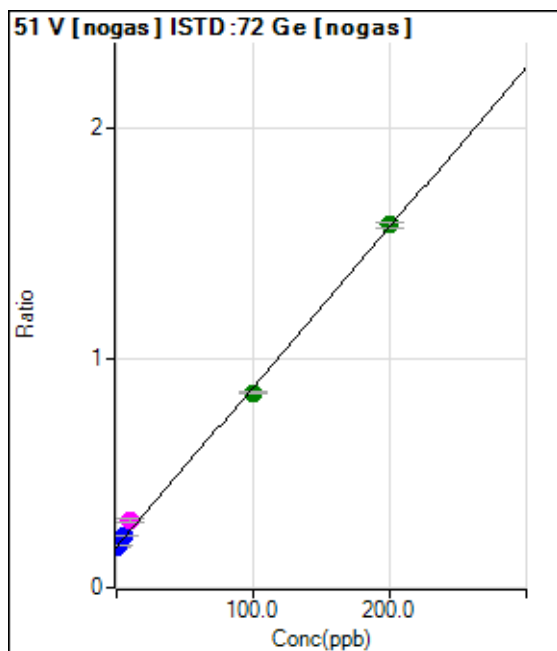
R = 1.0000

DL = 0.2581

BEC = 0.2364

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	605010.33	0.1782	P	3.9
2	<input type="checkbox"/>	2.000	0.519	627480.50	0.1818	P	1.0
3	<input type="checkbox"/>	5.000	6.688	774816.93	0.2248	P	1.3
4	<input type="checkbox"/>	10.000	16.546	988003.93	0.2935	M	6.1
5	<input type="checkbox"/>	100.000	96.500	2848398.05	0.8505	A	1.3
6	<input type="checkbox"/>	200.000	201.395	5299412.23	1.5812	A	1.5
7	<input type="checkbox"/>	1.000					

$y = 0.0070 * x + 0.1782$

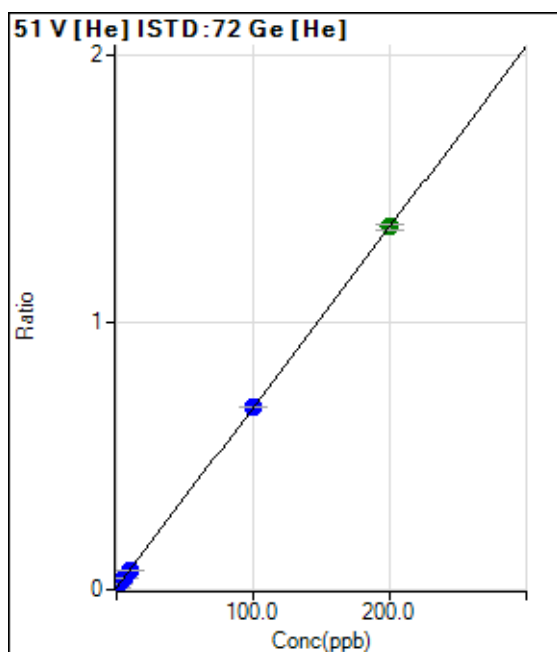
R = 0.9991

DL = 2.971

BEC = 25.58

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.122	9695.20	0.0081	P	3.4
2	<input type="checkbox"/>	2.000	1.919	24526.06	0.0203	P	1.9
3	<input type="checkbox"/>	5.000	4.976	49152.37	0.0409	P	0.5
4	<input type="checkbox"/>	10.000	9.959	87588.16	0.0746	P	0.7
5	<input type="checkbox"/>	100.000	100.040	800663.75	0.6831	P	0.2
6	<input type="checkbox"/>	200.000	199.983	1561300.83	1.3583	A	1.5
7	<input type="checkbox"/>	1.000					

$y = 0.0068 * x + 0.0073$

R = 1.0000

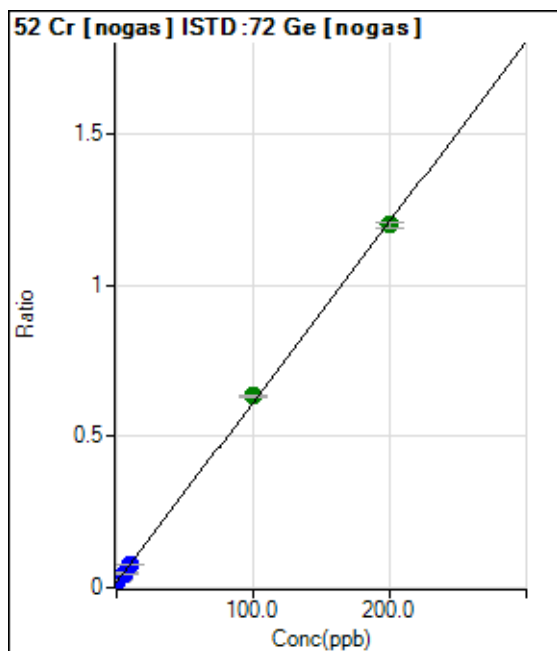
DL = 0.1242

BEC = 1.084

Weight: <None>

Min Conc: <None>

Calibration for 229_ICV.d



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	61174.23	0.0180	P	2.7
2	<input type="checkbox"/>	2.000	1.795	99013.46	0.0287	P	2.4
3	<input type="checkbox"/>	5.000	4.936	163293.84	0.0474	P	1.4
4	<input type="checkbox"/>	10.000	10.181	264415.54	0.0786	P	0.4
5	<input type="checkbox"/>	100.000	103.202	2116404.19	0.6319	A	1.8
6	<input type="checkbox"/>	200.000	198.394	4015507.65	1.1981	A	1.5
7	<input type="checkbox"/>	1.000					

$y = 0.0059 * x + 0.0180$

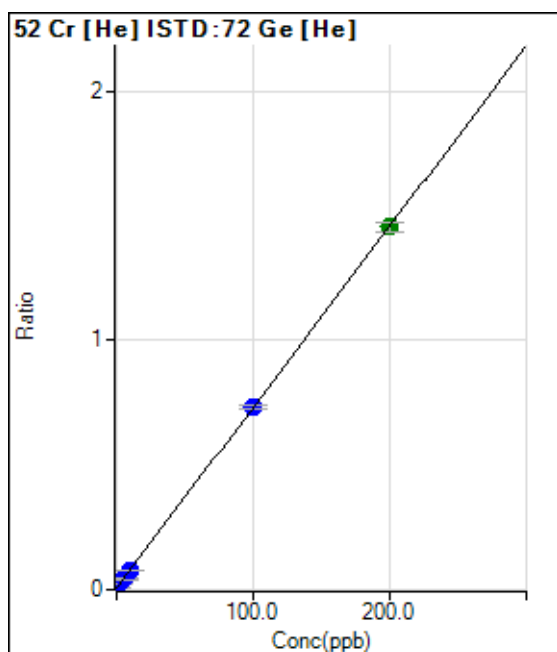
R = 0.9998

DL = 0.2409

BEC = 3.029

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	7561.66	0.0064	P	5.4
2	<input type="checkbox"/>	2.000	1.993	25150.78	0.0208	P	0.9
3	<input type="checkbox"/>	5.000	5.096	51963.27	0.0433	P	4.5
4	<input type="checkbox"/>	10.000	9.854	91311.79	0.0778	P	1.7
5	<input type="checkbox"/>	100.000	100.424	860412.72	0.7341	P	2.6
6	<input type="checkbox"/>	200.000	199.793	1671404.82	1.4543	A	2.7
7	<input type="checkbox"/>	1.000					

$y = 0.0072 * x + 0.0064$

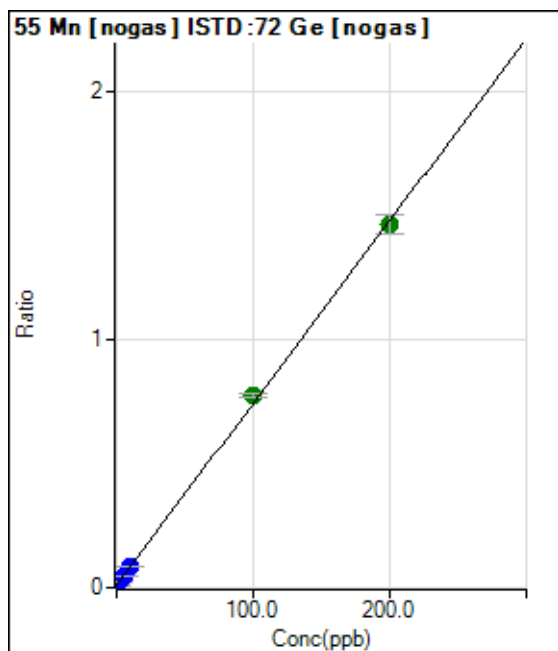
R = 1.0000

DL = 0.1413

BEC = 0.8772

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	31847.65	0.0094	P	3.5
2	<input type="checkbox"/>	2.000	1.931	81311.42	0.0236	P	1.9
3	<input type="checkbox"/>	5.000	4.935	157221.41	0.0456	P	2.1
4	<input type="checkbox"/>	10.000	10.463	290106.77	0.0862	P	2.2
5	<input type="checkbox"/>	100.000	104.146	2592008.81	0.7740	A	1.7
6	<input type="checkbox"/>	200.000	197.906	4899043.78	1.4625	A	5.3
7	<input type="checkbox"/>	1.000					

$y = 0.0073 * x + 0.0094$

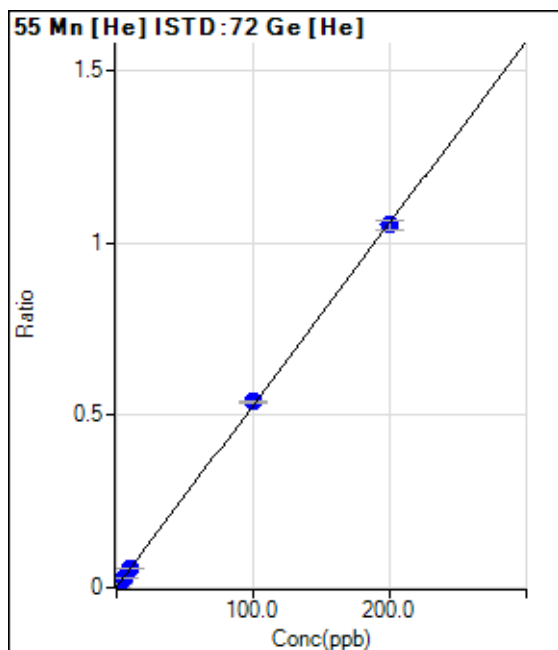
R = 0.9997

DL = 0.1351

BEC = 1.277

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	2273.51	0.0019	P	2.4
2	<input type="checkbox"/>	2.000	1.888	14352.43	0.0119	P	1.2
3	<input type="checkbox"/>	5.000	4.912	33403.82	0.0278	P	2.0
4	<input type="checkbox"/>	10.000	10.043	64448.93	0.0549	P	1.5
5	<input type="checkbox"/>	100.000	101.779	631535.68	0.5389	P	0.8
6	<input type="checkbox"/>	200.000	199.111	1209500.45	1.0523	P	2.4
7	<input type="checkbox"/>	1.000					

$y = 0.0053 * x + 0.0019$

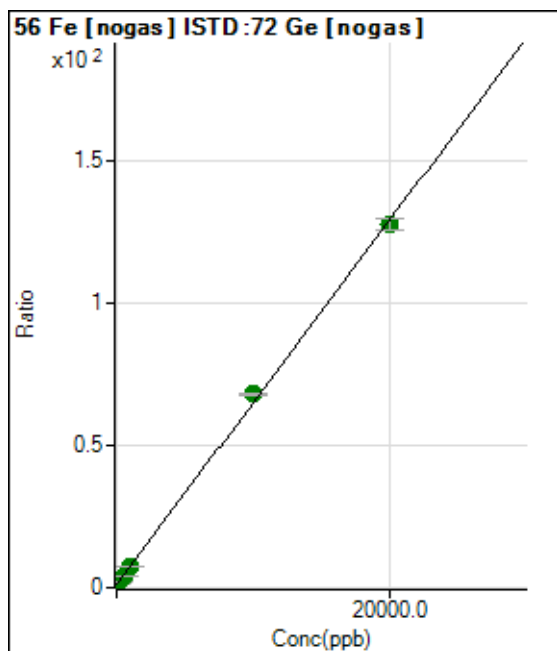
R = 0.9999

DL = 0.02566

BEC = 0.3622

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	3548189.01	1.0448	A	1.9
2	<input type="checkbox"/>	200.000	200.513	8030861.12	2.3269	A	0.4
3	<input type="checkbox"/>	500.000	481.332	14208574.80	4.1224	A	1.9
4	<input type="checkbox"/>	1000.000	1019.209	25443533.38	7.5616	A	1.6
5	<input type="checkbox"/>	10000.00	10494.586	228214013.4	68.1474	A	1.0
6	<input type="checkbox"/>	20000.00	19752.208	426678526.2	127.340	A	3.3
7	<input type="checkbox"/>	100.000					

$y = 0.0064 * x + 1.0448$

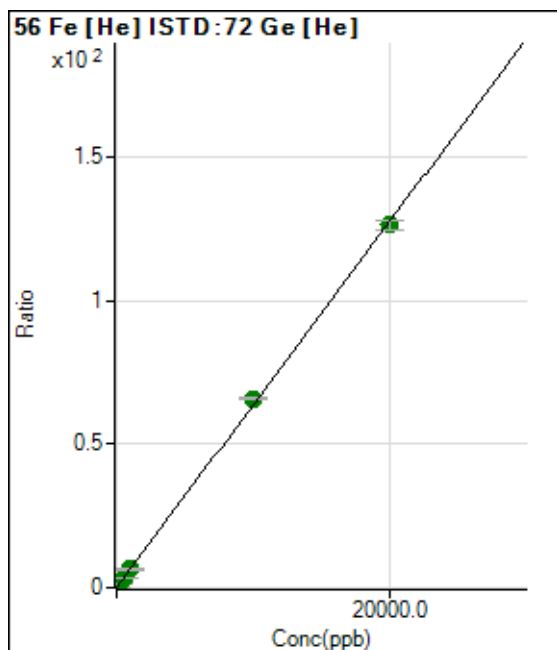
R = 0.9996

DL = 9.392

BEC = 163.4

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	34034.87	0.0286	P	1.7
2	<input type="checkbox"/>	200.000	198.939	1568239.77	1.2973	A	2.8
3	<input type="checkbox"/>	500.000	496.120	3833080.36	3.1926	A	3.3
4	<input type="checkbox"/>	1000.000	1002.159	7537682.18	6.4199	A	2.3
5	<input type="checkbox"/>	10000.00	10330.848	77250812.18	65.9140	A	1.1
6	<input type="checkbox"/>	20000.00	19834.576	145423011.1	126.524	A	2.5
7	<input type="checkbox"/>	100.000					

$y = 0.0064 * x + 0.0286$

R = 0.9998

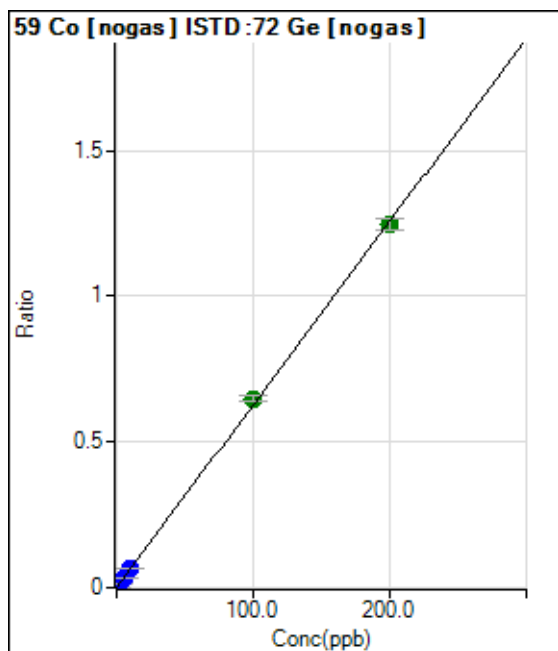
DL = 0.2337

BEC = 4.485

Weight: <None>

Min Conc: <None>

Calibration for 229_ICV.d



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	850.03	0.0003	P	3.9
2	<input type="checkbox"/>	2.000	2.040	45032.09	0.0130	P	2.1
3	<input type="checkbox"/>	5.000	5.063	110360.71	0.0320	P	0.4
4	<input type="checkbox"/>	10.000	10.327	218864.92	0.0651	P	2.2
5	<input type="checkbox"/>	100.000	103.375	2173098.51	0.6489	A	3.1
6	<input type="checkbox"/>	200.000	198.294	4171223.06	1.2445	A	3.2
7	<input type="checkbox"/>	1.000					

$y = 0.0063 * x + 2.5038E-004$

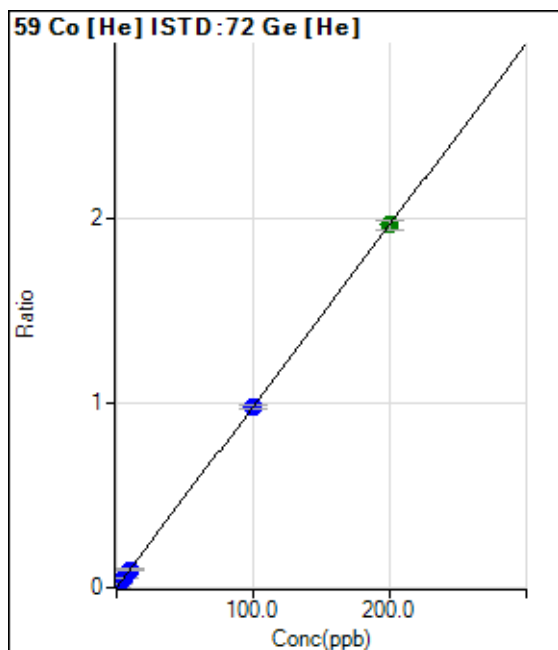
R = 0.9998

DL = 0.004609

BEC = 0.0399

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	200.00	0.0002	P	38.5
2	<input type="checkbox"/>	2.000	1.950	23368.39	0.0193	P	3.6
3	<input type="checkbox"/>	5.000	4.959	58697.59	0.0489	P	3.8
4	<input type="checkbox"/>	10.000	10.020	115806.88	0.0986	P	1.7
5	<input type="checkbox"/>	100.000	99.852	1150183.24	0.9814	P	1.6
6	<input type="checkbox"/>	200.000	200.075	2259984.13	1.9663	A	2.5
7	<input type="checkbox"/>	1.000					

$y = 0.0098 * x + 1.6785E-004$

R = 1.0000

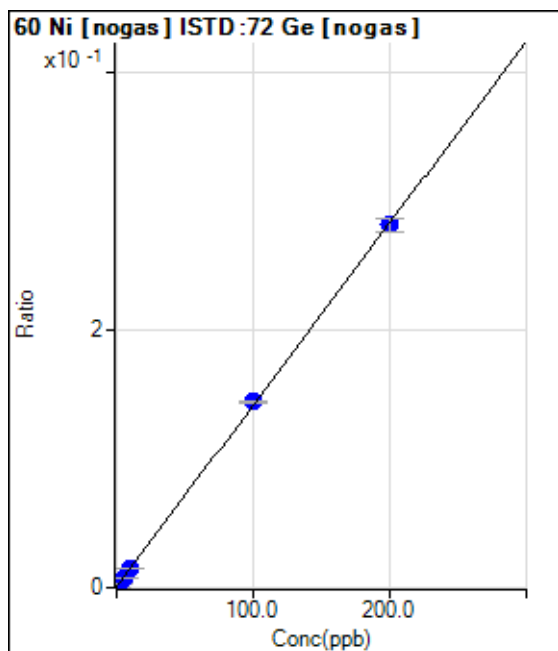
DL = 0.01972

BEC = 0.01708

Weight: <None>

Min Conc: <None>

Calibration for 229_ICV.d



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	-0.301	876.70	0.0003	P	19.8
2	<input type="checkbox"/>	2.000	1.652	10399.77	0.0030	P	6.0
3	<input type="checkbox"/>	5.000	4.814	25755.12	0.0075	P	3.2
4	<input type="checkbox"/>	10.000	9.970	49600.76	0.0147	P	3.4
5	<input type="checkbox"/>	100.000	101.712	482613.35	0.1441	P	1.3
6	<input type="checkbox"/>	200.000	199.154	943418.01	0.2815	P	3.9
7	<input type="checkbox"/>	1.000					

$y = 0.0014 * x + 6.8356E-004$

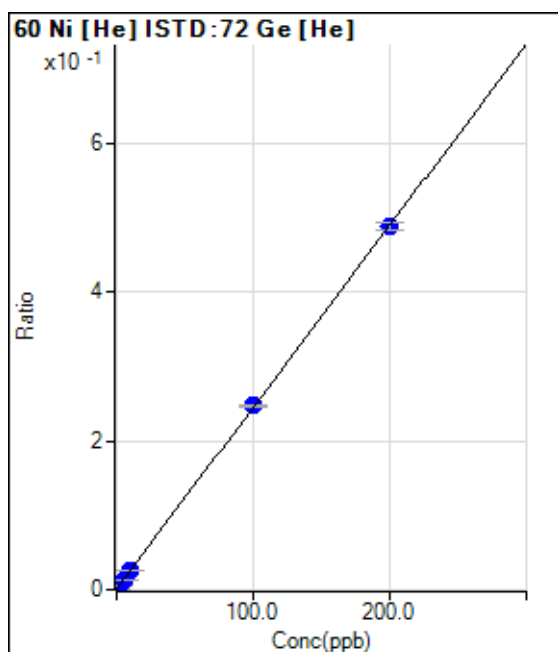
R = 0.9999

DL = 0.109

BEC = 0.4847

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	-0.253	236.67	0.0002	P	26.1
2	<input type="checkbox"/>	2.000	1.724	6081.10	0.0050	P	4.6
3	<input type="checkbox"/>	5.000	4.958	15510.06	0.0129	P	4.7
4	<input type="checkbox"/>	10.000	9.937	29447.33	0.0251	P	2.0
5	<input type="checkbox"/>	100.000	101.255	290728.38	0.2481	P	1.1
6	<input type="checkbox"/>	200.000	199.379	560479.47	0.4877	P	2.1
7	<input type="checkbox"/>	1.000					

$y = 0.0024 * x + 8.1781E-004$

R = 1.0000

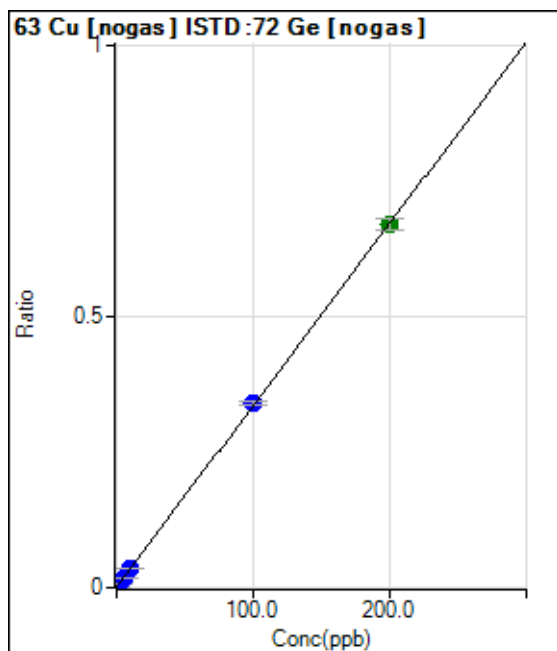
DL = 0.06381

BEC = 0.3349

Weight: <None>

Min Conc: <None>

Calibration for 229_ICV.d



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	2633.57	0.0008	P	6.6
2	<input type="checkbox"/>	2.000	2.079	26676.46	0.0077	P	2.7
3	<input type="checkbox"/>	5.000	5.251	63232.96	0.0183	P	2.1
4	<input type="checkbox"/>	10.000	10.028	115481.81	0.0343	P	2.7
5	<input type="checkbox"/>	100.000	101.144	1135761.88	0.3392	P	2.4
6	<input type="checkbox"/>	200.000	199.419	2238243.66	0.6680	A	3.3
7	<input type="checkbox"/>	1.000					

$y = 0.0033 * x + 7.7595E-004$

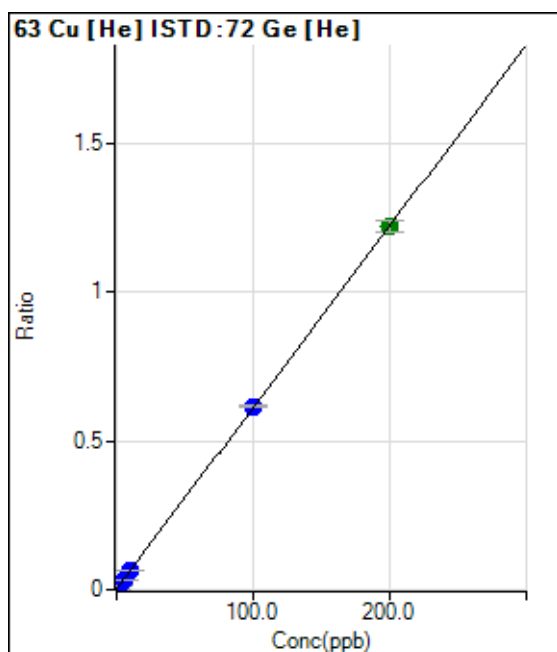
R = 1.0000

DL = 0.04602

BEC = 0.2319

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	-0.231	1466.75	0.0012	P	5.0
2	<input type="checkbox"/>	2.000	1.888	17084.82	0.0141	P	2.7
3	<input type="checkbox"/>	5.000	4.883	38851.62	0.0324	P	1.9
4	<input type="checkbox"/>	10.000	10.085	75173.81	0.0640	P	1.1
5	<input type="checkbox"/>	100.000	100.751	721750.72	0.6158	P	0.4
6	<input type="checkbox"/>	200.000	199.624	1399280.40	1.2176	A	3.1
7	<input type="checkbox"/>	1.000					

$y = 0.0061 * x + 0.0026$

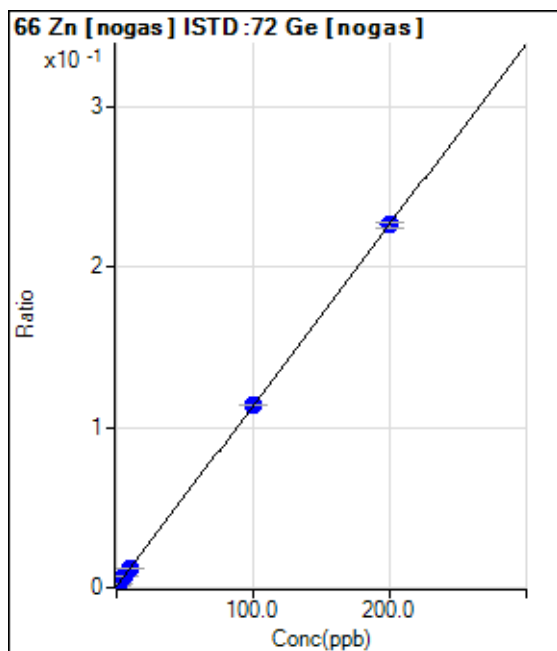
R = 1.0000

DL = 0.03053

BEC = 0.4338

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.050	2586.89	0.0008	P	4.4
2	<input type="checkbox"/>	2.000	1.725	9149.12	0.0027	P	4.5
3	<input type="checkbox"/>	5.000	5.296	23024.90	0.0067	P	0.3
4	<input type="checkbox"/>	10.000	9.849	39760.10	0.0118	P	0.8
5	<input type="checkbox"/>	100.000	100.153	380747.35	0.1137	P	0.4
6	<input type="checkbox"/>	200.000	199.926	758318.35	0.2262	P	1.4
7	<input type="checkbox"/>	1.000					

$y = 0.0011 * x + 7.0527E-004$

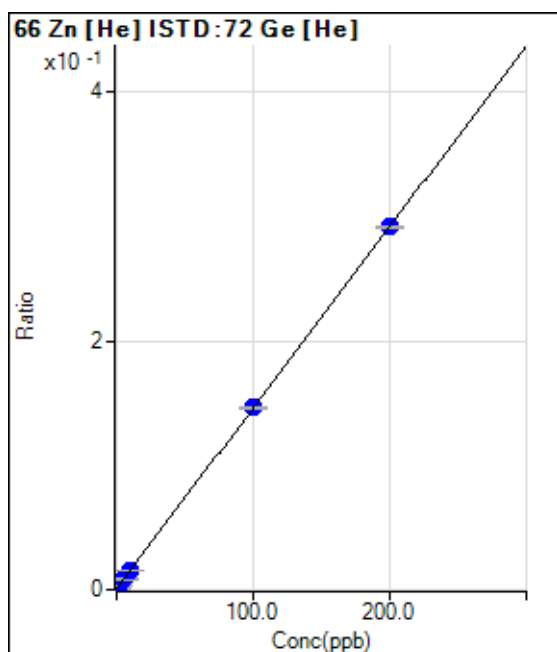
R = 1.0000

DL = 0.08955

BEC = 0.6252

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	-0.062	896.70	0.0008	P	14.6
2	<input type="checkbox"/>	2.000	1.768	4127.20	0.0034	P	6.0
3	<input type="checkbox"/>	5.000	5.424	10486.49	0.0087	P	7.2
4	<input type="checkbox"/>	10.000	9.864	17825.55	0.0152	P	2.0
5	<input type="checkbox"/>	100.000	100.015	171340.82	0.1462	P	1.5
6	<input type="checkbox"/>	200.000	199.991	335066.83	0.2915	P	0.6
7	<input type="checkbox"/>	1.000					

$y = 0.0015 * x + 8.4457E-004$

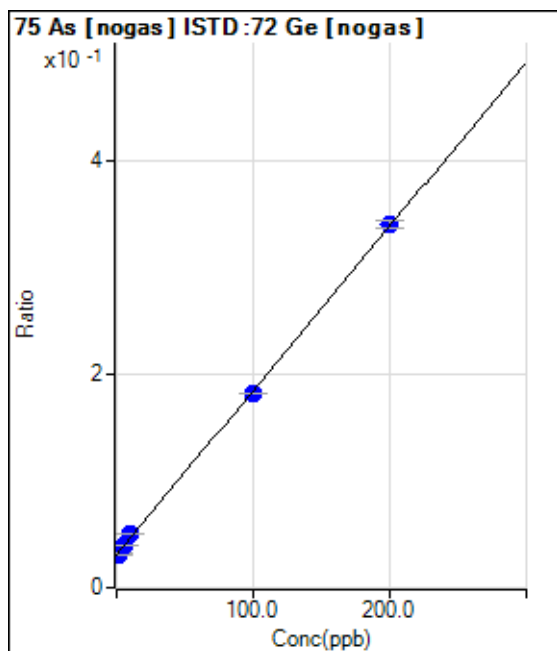
R = 1.0000

DL = 0.2272

BEC = 0.5811

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	-0.071	104709.27	0.0308	P	5.3
2	<input type="checkbox"/>	2.000	0.200	107917.97	0.0313	P	1.6
3	<input type="checkbox"/>	5.000	5.617	136418.51	0.0396	P	1.5
4	<input type="checkbox"/>	10.000	12.378	168099.71	0.0500	P	0.5
5	<input type="checkbox"/>	100.000	97.986	607323.13	0.1813	P	0.4
6	<input type="checkbox"/>	200.000	200.890	1137029.36	0.3393	P	2.1
7	<input type="checkbox"/>	1.000					

$y = 0.0015 * x + 0.0310$

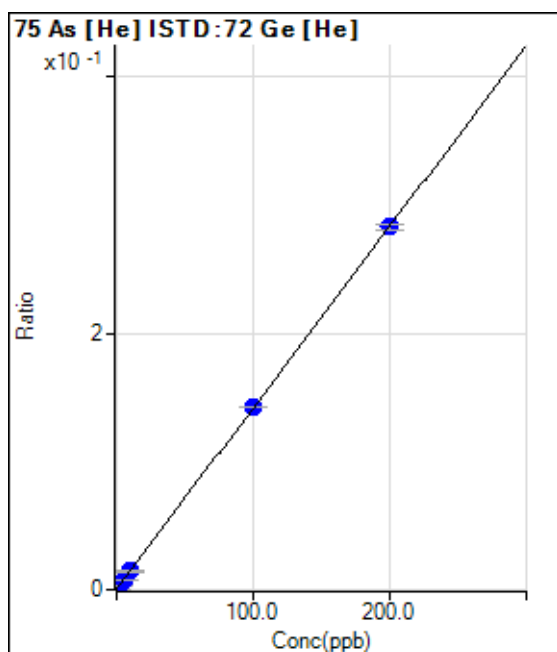
R = 0.9998

DL = 3.199

BEC = 20.17

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	468.90	0.0004	P	15.8
2	<input type="checkbox"/>	2.000	1.911	3740.41	0.0031	P	3.4
3	<input type="checkbox"/>	5.000	4.960	8886.64	0.0074	P	3.5
4	<input type="checkbox"/>	10.000	9.860	16823.34	0.0143	P	3.3
5	<input type="checkbox"/>	100.000	100.215	166408.57	0.1420	P	0.1
6	<input type="checkbox"/>	200.000	199.902	325080.89	0.2828	P	1.6
7	<input type="checkbox"/>	1.000					

$y = 0.0014 * x + 3.9448E-004$

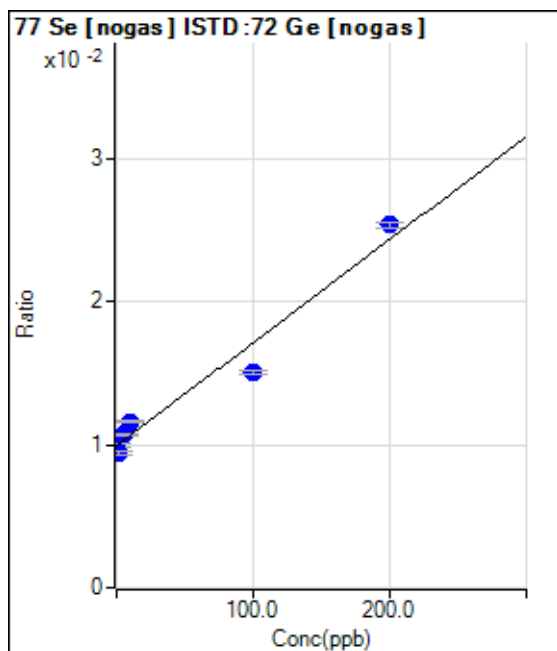
R = 1.0000

DL = 0.1321

BEC = 0.2792

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	33758.32	0.0099	P	3.1
2	<input type="checkbox"/>	2.000	-7.277	32509.45	0.0094	P	2.7
3	<input type="checkbox"/>	5.000	10.692	36924.49	0.0107	P	1.1
4	<input type="checkbox"/>	10.000	23.421	39138.92	0.0116	P	0.2
5	<input type="checkbox"/>	100.000	70.454	50306.18	0.0150	P	1.6
6	<input type="checkbox"/>	200.000	214.053	85051.33	0.0254	P	1.9
7	<input type="checkbox"/>	1.000					

$y = 7.2113E-005 * x + 0.0099$

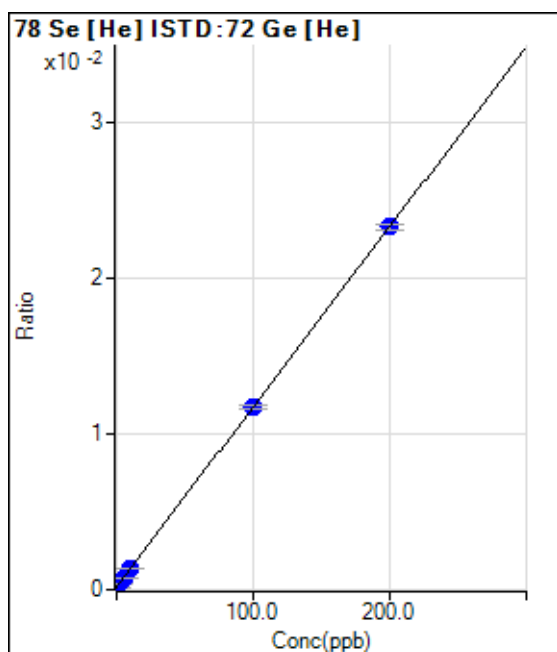
R = 0.9806

DL = 12.62

BEC = 137.9

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.009	212.67	0.0002	P	6.3
2	<input type="checkbox"/>	2.000	1.686	450.01	0.0004	P	13.5
3	<input type="checkbox"/>	5.000	4.827	882.69	0.0007	P	8.3
4	<input type="checkbox"/>	10.000	10.490	1632.08	0.0014	P	4.1
5	<input type="checkbox"/>	100.000	100.010	13752.53	0.0117	P	2.0
6	<input type="checkbox"/>	200.000	199.978	26765.58	0.0233	P	1.8
7	<input type="checkbox"/>	1.000					

$y = 1.1556E-004 * x + 1.7769E-004$

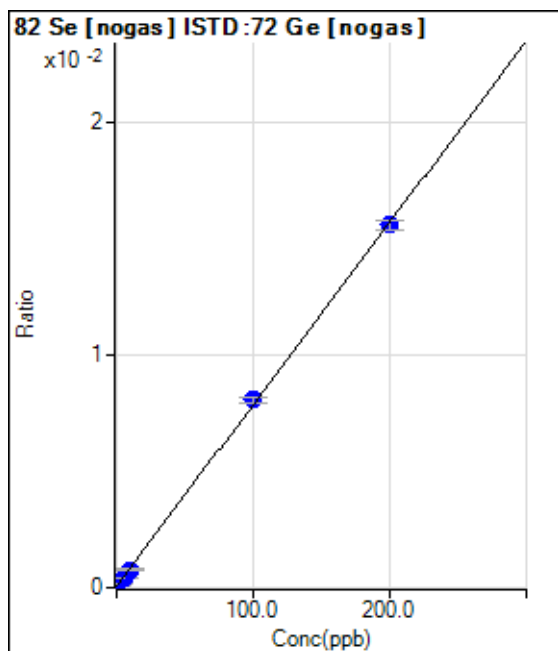
R = 1.0000

DL = 0.2936

BEC = 1.538

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	200.00	0.0001	P	14.9
2	<input type="checkbox"/>	2.000	2.055	756.69	0.0002	P	13.9
3	<input type="checkbox"/>	5.000	4.620	1446.75	0.0004	P	13.1
4	<input type="checkbox"/>	10.000	9.128	2596.89	0.0008	P	4.8
5	<input type="checkbox"/>	100.000	102.442	26990.46	0.0081	P	3.5
6	<input type="checkbox"/>	200.000	198.832	52235.34	0.0156	P	2.9
7	<input type="checkbox"/>	1.000					

$y = 7.8104E-005 * x + 5.8881E-005$

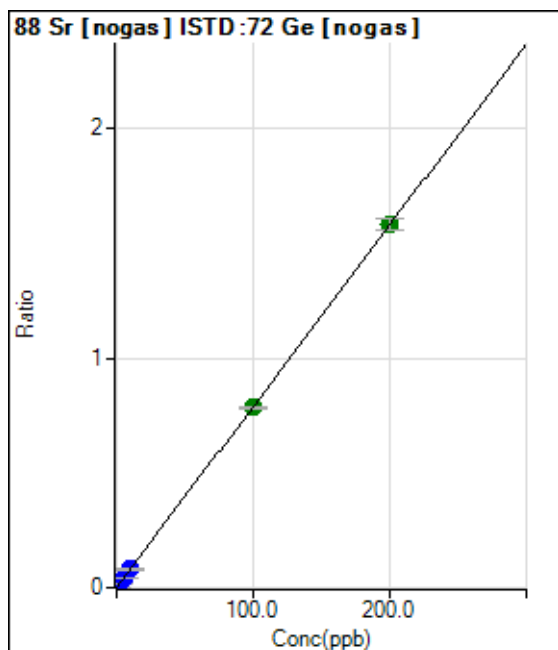
R = 0.9999

DL = 0.3378

BEC = 0.7539

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	1570.10	0.0005	P	6.1
2	<input type="checkbox"/>	2.000	1.997	55907.66	0.0162	P	4.4
3	<input type="checkbox"/>	5.000	4.935	135701.35	0.0394	P	1.2
4	<input type="checkbox"/>	10.000	10.101	269473.84	0.0801	P	2.2
5	<input type="checkbox"/>	100.000	99.388	2626097.10	0.7841	A	1.8
6	<input type="checkbox"/>	200.000	200.303	5293077.21	1.5797	A	3.3
7	<input type="checkbox"/>	1.000					

$y = 0.0079 * x + 4.6256E-004$

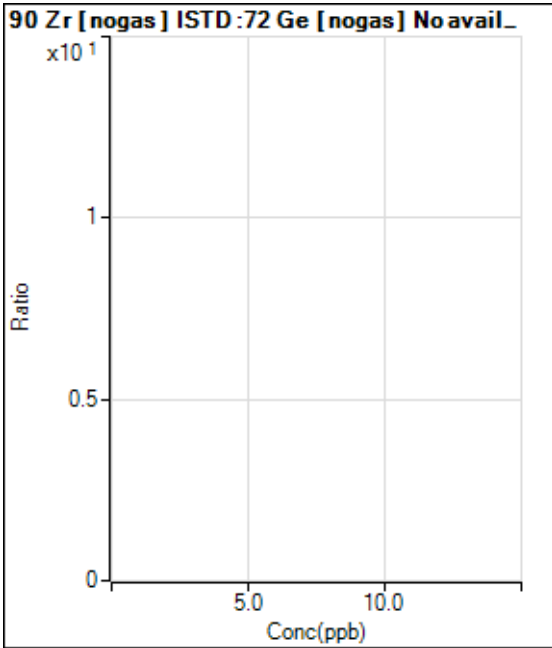
R = 1.0000

DL = 0.01077

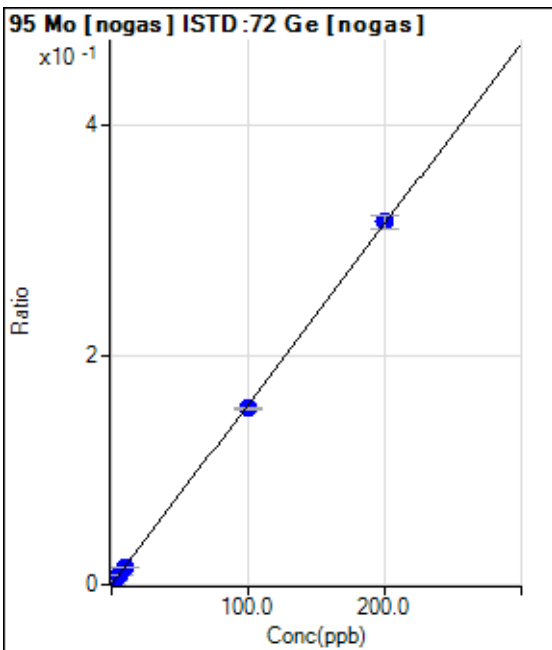
BEC = 0.05867

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000					
2	<input type="checkbox"/>	2.000					
3	<input type="checkbox"/>	5.000					
4	<input type="checkbox"/>	10.000					
5	<input type="checkbox"/>	100.000					
6	<input type="checkbox"/>	200.000					
7	<input type="checkbox"/>	1.000					



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	440.01	0.0001	P	27.4
2	<input type="checkbox"/>	2.000	1.940	10966.87	0.0032	P	2.9
3	<input type="checkbox"/>	5.000	4.861	26767.10	0.0078	P	2.1
4	<input type="checkbox"/>	10.000	9.790	52173.96	0.0155	P	2.7
5	<input type="checkbox"/>	100.000	97.685	514330.28	0.1536	P	1.8
6	<input type="checkbox"/>	200.000	201.172	1059180.38	0.3161	P	3.9
7	<input type="checkbox"/>	1.000					

$y = 0.0016 * x + 1.2990E-004$

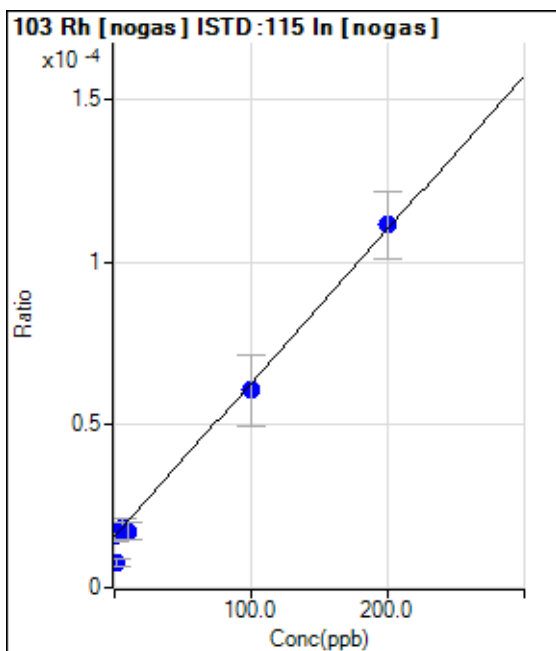
R = 0.9999

DL = 0.06793

BEC = 0.0827

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	50.00	0.0000	P	18.3
2	<input type="checkbox"/>	2.000	-17.181	23.33	0.0000	P	26.5
3	<input type="checkbox"/>	5.000	5.035	56.67	0.0000	P	36.4
4	<input type="checkbox"/>	10.000	3.403	53.33	0.0000	P	29.6
5	<input type="checkbox"/>	100.000	95.361	186.67	0.0001	P	35.8
6	<input type="checkbox"/>	200.000	202.840	336.68	0.0001	P	18.6
7	<input type="checkbox"/>	1.000					

$y = 4.7250E-007 * x + 1.5764E-005$

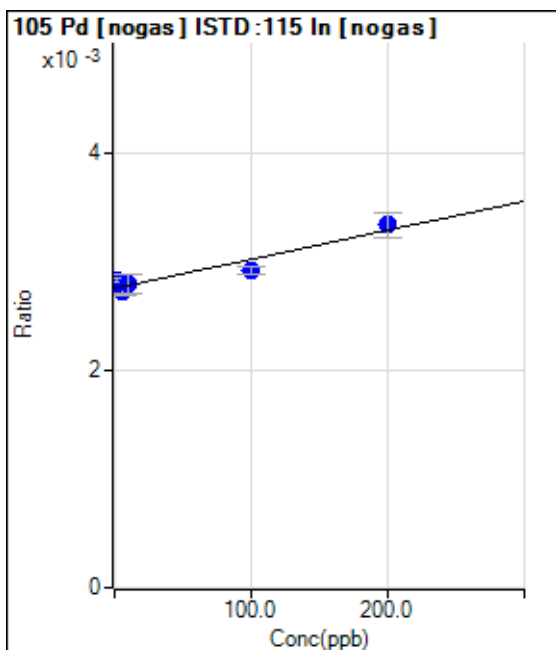
R = 0.9966

DL = 18.33

BEC = 33.36

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	8705.61	0.0028	P	2.5
2	<input type="checkbox"/>	2.000	29.473	8658.93	0.0028	P	1.1
3	<input type="checkbox"/>	5.000	-13.329	8465.50	0.0027	P	2.6
4	<input type="checkbox"/>	10.000	14.055	8575.57	0.0028	P	6.0
5	<input type="checkbox"/>	100.000	63.961	8975.77	0.0029	P	2.3
6	<input type="checkbox"/>	200.000	218.000	10013.02	0.0033	P	7.1
7	<input type="checkbox"/>	1.000					

$y = 2.6735E-006 * x + 0.0028$

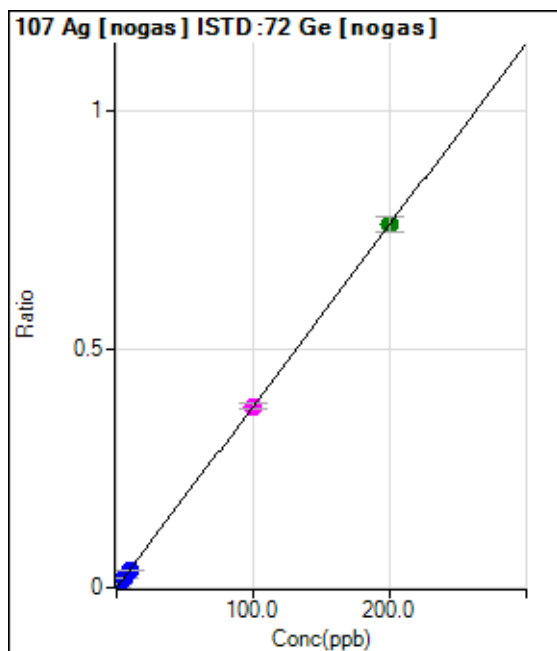
R = 0.9621

DL = 77.85

BEC = 1029

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	<input type="checkbox"/>	0.000	0.000	200.00	0.0001	P	11.3
2	<input type="checkbox"/>	2.000	2.023	26723.95	0.0077	P	3.0
3	<input type="checkbox"/>	5.000	4.929	64756.15	0.0188	P	0.9
4	<input type="checkbox"/>	10.000	9.821	125791.82	0.0374	P	3.0
5	<input type="checkbox"/>	100.000	100.095	1273754.17	0.3804	M	3.6
6	<input type="checkbox"/>	200.000	199.963	2546001.26	0.7598	A	4.3
7	<input type="checkbox"/>	1.000					

$y = 0.0038 * x + 5.8952E-005$

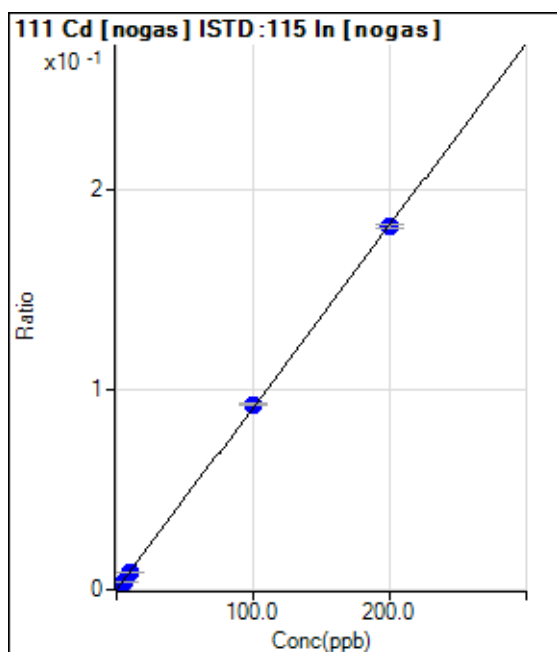
R = 1.0000

DL = 0.00527

BEC = 0.01552

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	<input type="checkbox"/>	0.000	0.000	56.67	0.0000	P	26.1
2	<input type="checkbox"/>	2.000	2.002	5634.34	0.0018	P	0.8
3	<input type="checkbox"/>	5.000	4.581	13065.02	0.0042	P	2.9
4	<input type="checkbox"/>	10.000	9.663	27121.38	0.0088	P	2.8
5	<input type="checkbox"/>	100.000	101.727	284735.46	0.0927	P	1.3
6	<input type="checkbox"/>	200.000	199.164	545439.64	0.1814	P	1.2
7	<input type="checkbox"/>	1.000					

$y = 9.1076E-004 * x + 1.7857E-005$

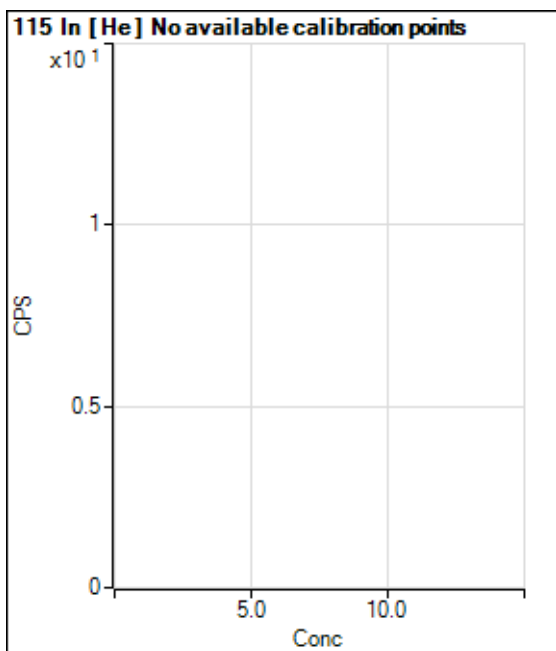
R = 0.9999

DL = 0.01533

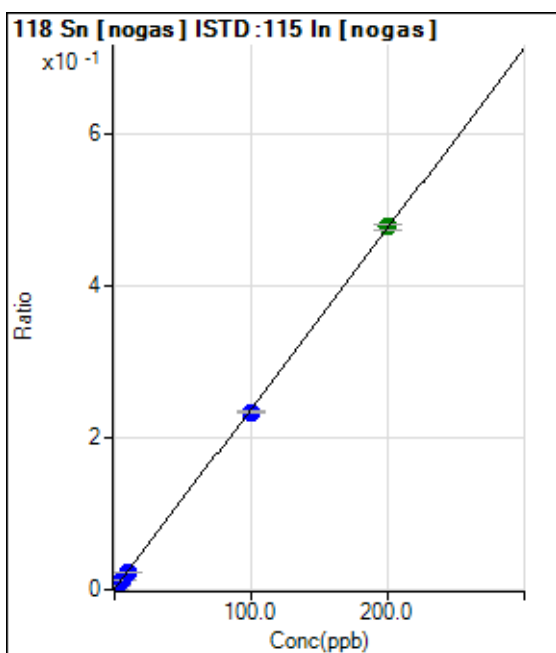
BEC = 0.01961

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>			1649018.64		A	3.5
2	<input type="checkbox"/>			1638547.48		A	6.3
3	<input type="checkbox"/>			1630179.03		A	1.0
4	<input type="checkbox"/>			1631832.54		A	0.8
5	<input type="checkbox"/>			1592477.04		A	0.1
6	<input type="checkbox"/>			1536279.75		A	0.3
7	<input type="checkbox"/>						



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	1440.08	0.0005	P	14.4
2	<input type="checkbox"/>	2.000	1.848	14799.75	0.0048	P	1.9
3	<input type="checkbox"/>	5.000	4.941	37951.57	0.0122	P	3.5
4	<input type="checkbox"/>	10.000	9.149	68110.64	0.0222	P	4.3
5	<input type="checkbox"/>	100.000	98.300	717658.14	0.2336	P	0.8
6	<input type="checkbox"/>	200.000	200.896	1433929.30	0.4769	A	1.4
7	<input type="checkbox"/>	1.000					

$y = 0.0024 * x + 4.5583E-004$

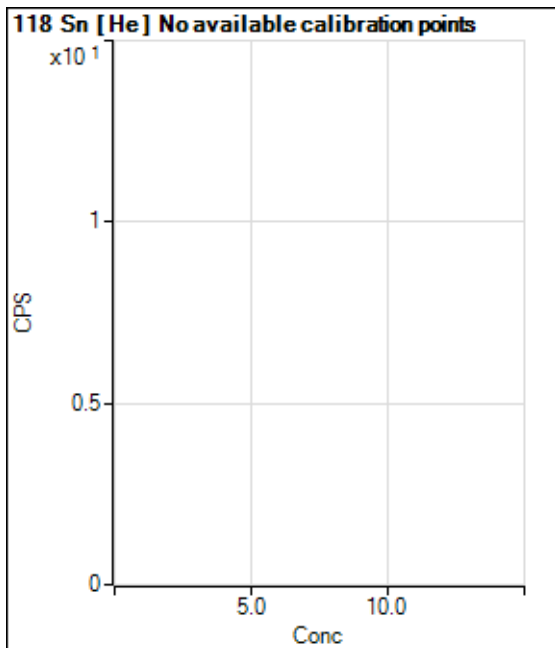
R = 0.9999

DL = 0.08294

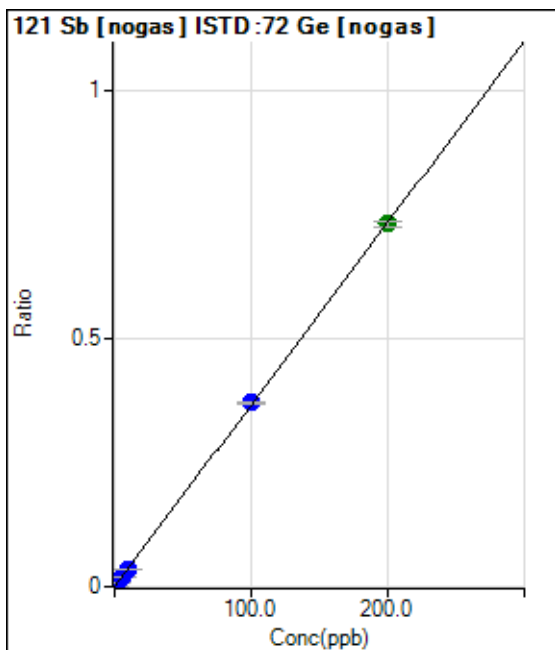
BEC = 0.1922

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>			810.03		P	7.7
2	<input type="checkbox"/>			8708.97		P	5.1
3	<input type="checkbox"/>			21339.93		P	4.1
4	<input type="checkbox"/>			40396.95		P	0.6
5	<input type="checkbox"/>			417720.67		P	0.4
6	<input type="checkbox"/>			797679.73		P	1.2
7	<input type="checkbox"/>						



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	0.000	0.000	436.68	0.0001	P	11.9
2	<input type="checkbox"/>	2.000	1.948	25091.65	0.0073	P	0.4
3	<input type="checkbox"/>	5.000	4.921	62619.22	0.0182	P	2.6
4	<input type="checkbox"/>	10.000	9.439	116824.32	0.0347	P	4.1
5	<input type="checkbox"/>	100.000	101.035	1240755.06	0.3705	P	1.1
6	<input type="checkbox"/>	200.000	199.513	2451600.69	0.7315	A	1.8
7	<input type="checkbox"/>	1.000					

$y = 0.0037 * x + 1.2859E-004$

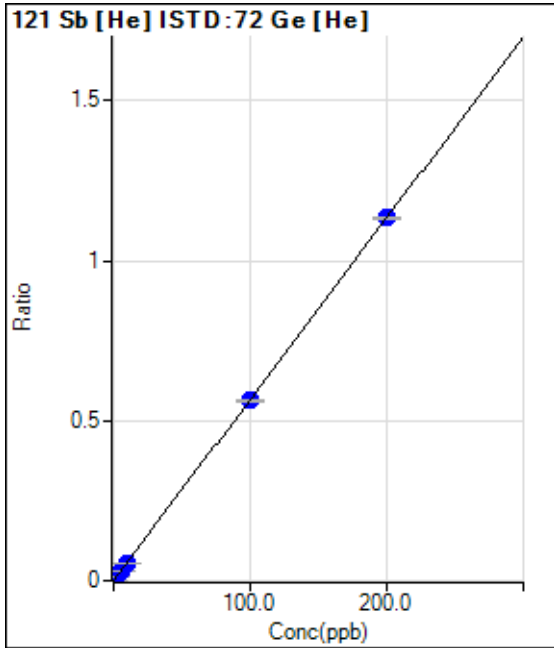
R = 1.0000

DL = 0.01253

BEC = 0.03508

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	250.01	0.0002	P	18.2
2	<input type="checkbox"/>	2.000	1.938	13512.11	0.0112	P	2.0
3	<input type="checkbox"/>	5.000	4.847	33205.24	0.0276	P	4.0
4	<input type="checkbox"/>	10.000	9.621	64181.04	0.0547	P	2.0
5	<input type="checkbox"/>	100.000	99.664	661302.70	0.5643	P	1.2
6	<input type="checkbox"/>	200.000	200.191	1302570.45	1.1332	P	0.7
7	<input type="checkbox"/>	1.000					

$y = 0.0057 * x + 2.1011E-004$

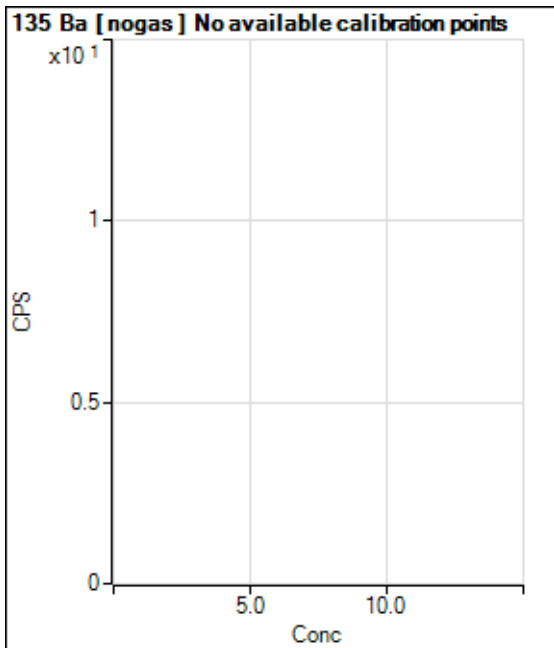
R = 1.0000

DL = 0.02028

BEC = 0.03712

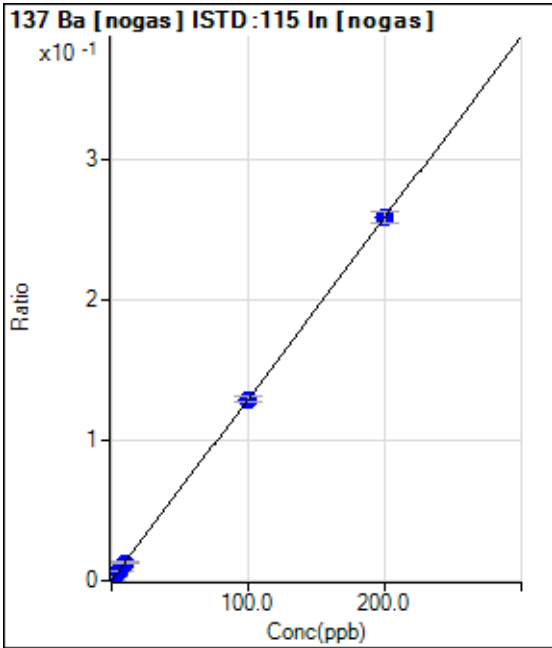
Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>			236.67		P	35.9
2	<input type="checkbox"/>			4860.75		P	2.0
3	<input type="checkbox"/>			11991.01		P	1.4
4	<input type="checkbox"/>			22945.56		P	2.2
5	<input type="checkbox"/>			231224.19		P	1.3
6	<input type="checkbox"/>			442596.22		P	1.1
7	<input type="checkbox"/>						

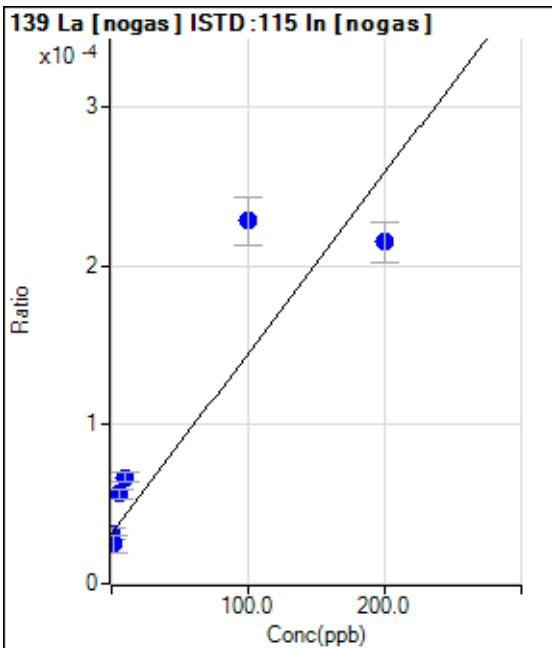
Calibration for 229_ICV.d



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	473.35	0.0001	P	25.0
2	<input type="checkbox"/>	2.000	1.965	8232.10	0.0027	P	2.9
3	<input type="checkbox"/>	5.000	5.083	20959.77	0.0067	P	4.0
4	<input type="checkbox"/>	10.000	9.951	40040.45	0.0130	P	4.6
5	<input type="checkbox"/>	100.000	100.076	397997.91	0.1296	P	2.5
6	<input type="checkbox"/>	200.000	199.963	777655.53	0.2587	P	3.2
7	<input type="checkbox"/>	1.000					

$y = 0.0013 * x + 1.4884E-004$
 R = 1.0000
 DL = 0.08627
 BEC = 0.1151

Weight: <None>
 Min Conc: <None>



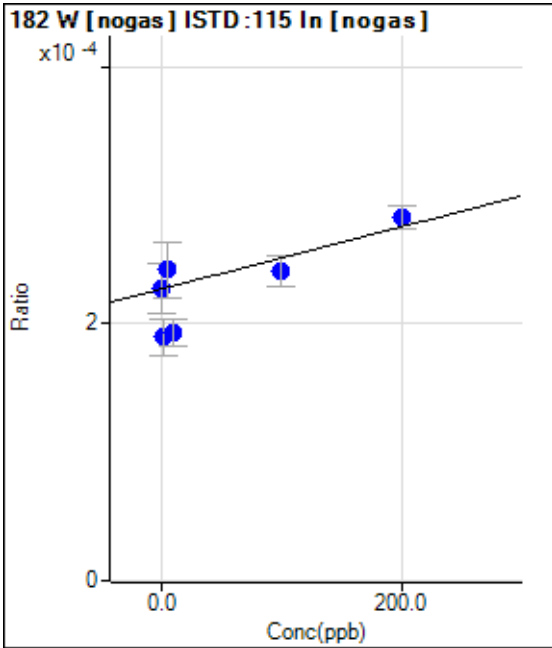
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	100.00	0.0000	P	24.4
2	<input type="checkbox"/>	2.000	-5.652	76.67	0.0000	P	41.6
3	<input type="checkbox"/>	5.000	22.051	176.67	0.0001	P	11.8
4	<input type="checkbox"/>	10.000	31.450	206.67	0.0001	P	9.9
5	<input type="checkbox"/>	100.000	173.505	703.36	0.0002	P	13.3
6	<input type="checkbox"/>	200.000	161.825	646.69	0.0002	P	11.6
7	<input type="checkbox"/>	1.000					

$y = 1.1363E-006 * x + 3.1464E-005$
 R = 0.8960
 DL = 20.3
 BEC = 27.69

Weight: <None>
 Min Conc: <None>



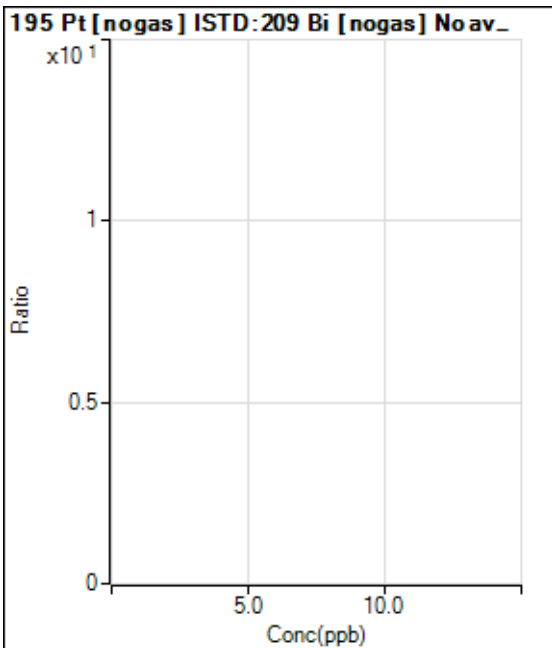
Calibration for 229_ICV.d



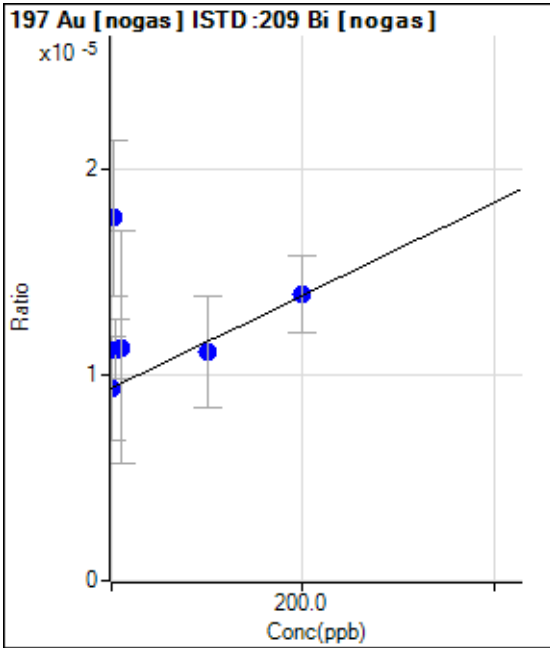
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	<input type="checkbox"/>	0.000	0.000	716.69	0.0002	P	17.2
2	<input type="checkbox"/>	2.000	-154.819	580.02	0.0002	P	15.0
3	<input type="checkbox"/>	5.000	62.739	753.36	0.0002	P	17.8
4	<input type="checkbox"/>	10.000	-140.265	593.35	0.0002	P	11.2
5	<input type="checkbox"/>	100.000	58.016	740.03	0.0002	P	9.7
6	<input type="checkbox"/>	200.000	228.630	850.04	0.0003	P	6.4
7	<input type="checkbox"/>	1.000					

$y = 2.4244E-007 * x + 2.2704E-004$
 R = 0.8071
 DL = 483.8
 BEC = 936.5

Weight: <None>
Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	<input type="checkbox"/>	0.000					
2	<input type="checkbox"/>	2.000					
3	<input type="checkbox"/>	5.000					
4	<input type="checkbox"/>	10.000					
5	<input type="checkbox"/>	100.000					
6	<input type="checkbox"/>	200.000					
7	<input type="checkbox"/>	1.000					



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	20.00	0.0000	P	53.2
2	<input type="checkbox"/>	2.000	366.912	36.67	0.0000	P	43.1
3	<input type="checkbox"/>	5.000	83.709	23.33	0.0000	P	25.8
4	<input type="checkbox"/>	10.000	88.383	23.33	0.0000	P	99.1
5	<input type="checkbox"/>	100.000	77.518	23.33	0.0000	P	48.9
6	<input type="checkbox"/>	200.000	201.705	30.00	0.0000	P	27.2
7	<input type="checkbox"/>	1.000					

$y = 2.2527E-008 * x + 9.3481E-006$

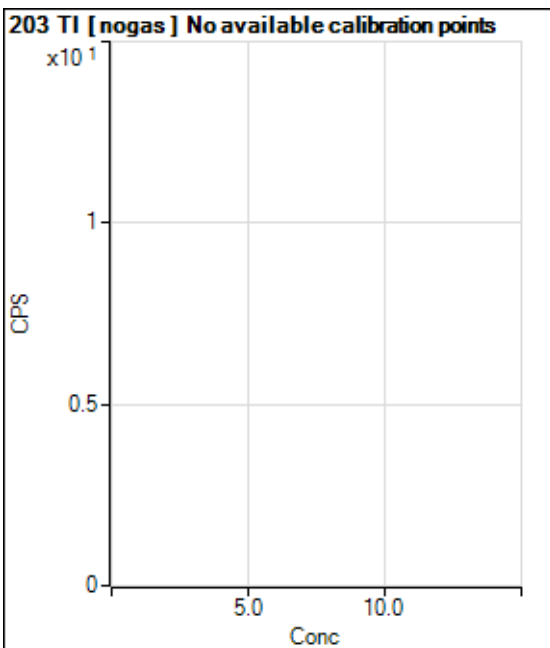
R = 0.1299

DL = 662.5

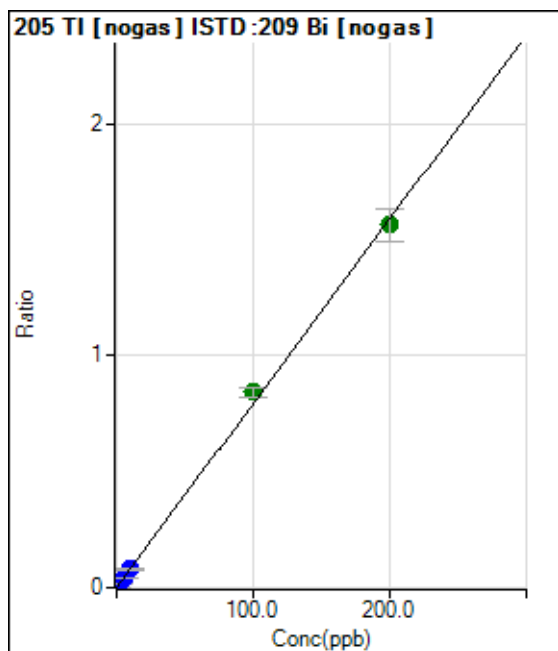
BEC = 415

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>			456.68		P	10.8
2	<input type="checkbox"/>			14583.49		P	3.8
3	<input type="checkbox"/>			35245.32		P	0.2
4	<input type="checkbox"/>			69803.40		P	1.3
5	<input type="checkbox"/>			749851.42		P	0.9
6	<input type="checkbox"/>			1412990.35		A	0.6
7	<input type="checkbox"/>						



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	<input type="checkbox"/>	0.000	0.000	753.37	0.0003	P	8.7
2	<input type="checkbox"/>	2.000	1.969	33284.63	0.0160	P	8.0
3	<input type="checkbox"/>	5.000	5.119	85234.56	0.0410	P	1.8
4	<input type="checkbox"/>	10.000	9.938	163093.01	0.0792	P	2.8
5	<input type="checkbox"/>	100.000	106.015	1761425.96	0.8416	A	4.9
6	<input type="checkbox"/>	200.000	196.993	3325558.39	1.5635	A	9.0
7	<input type="checkbox"/>	1.000					

$y = 0.0079 * x + 3.4980E-004$

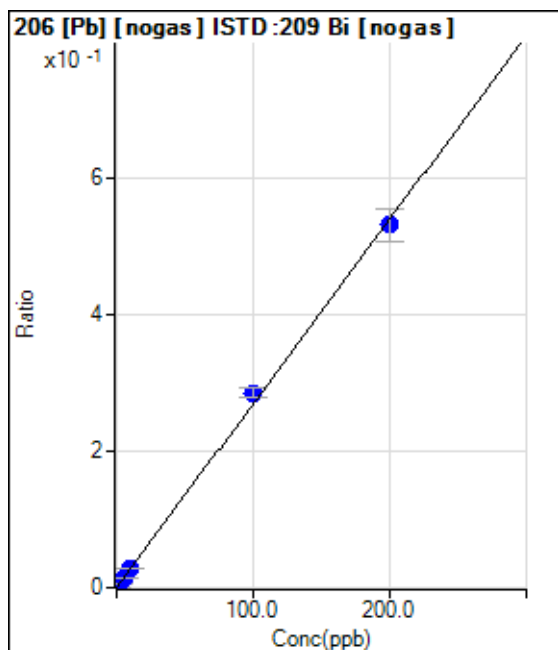
R = 0.9994

DL = 0.01144

BEC = 0.04408

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	<input type="checkbox"/>	0.000	0.000	143.33	0.0001	P	30.2
2	<input type="checkbox"/>	2.000	2.032	11584.34	0.0056	P	6.2
3	<input type="checkbox"/>	5.000	5.165	29133.36	0.0140	P	4.5
4	<input type="checkbox"/>	10.000	10.046	55979.97	0.0272	P	2.3
5	<input type="checkbox"/>	100.000	105.665	597041.44	0.2853	P	5.0
6	<input type="checkbox"/>	200.000	197.161	1132147.22	0.5323	P	8.9
7	<input type="checkbox"/>	1.000					

$y = 0.0027 * x + 6.6802E-005$

R = 0.9994

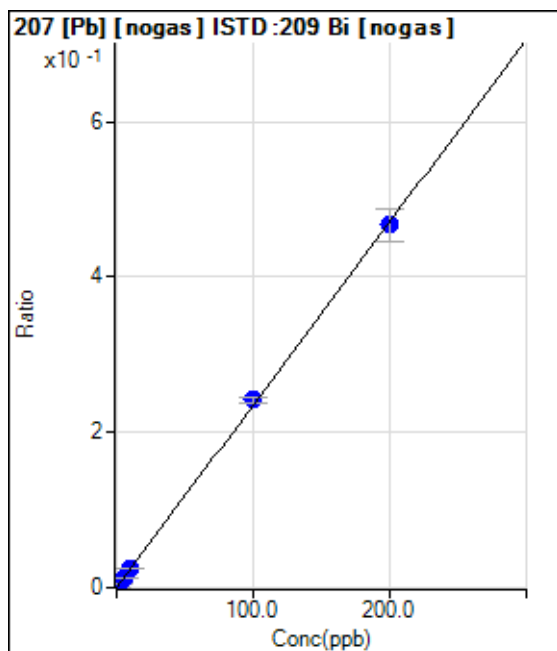
DL = 0.0224

BEC = 0.02475

Weight: <None>

Min Conc: <None>

Calibration for 229_ICV.d



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	123.33	0.0001	P	14.1
2	<input type="checkbox"/>	2.000	1.979	9826.48	0.0047	P	4.2
3	<input type="checkbox"/>	5.000	5.216	25657.38	0.0123	P	4.2
4	<input type="checkbox"/>	10.000	10.022	48653.66	0.0236	P	0.6
5	<input type="checkbox"/>	100.000	102.780	506127.38	0.2418	P	3.4
6	<input type="checkbox"/>	200.000	198.604	993724.28	0.4671	P	8.7
7	<input type="checkbox"/>	1.000					

$y = 0.0024 * x + 5.7260E-005$

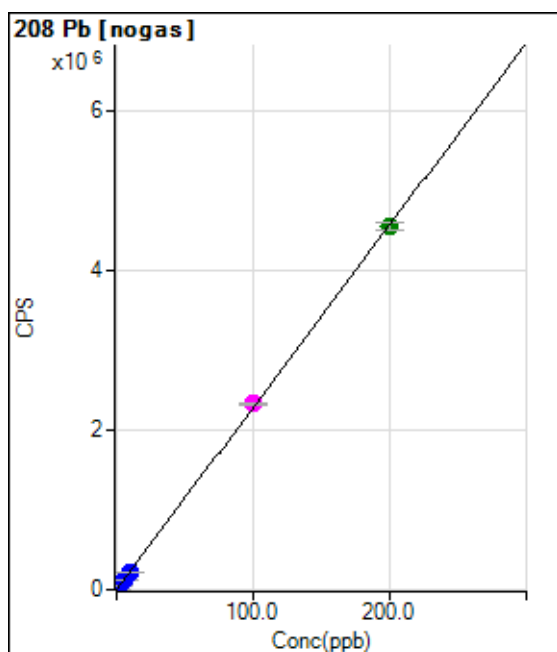
R = 0.9999

DL = 0.01027

BEC = 0.02435

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	510.00		P	3.9
2	<input type="checkbox"/>	2.000	1.976	45619.20		P	3.5
3	<input type="checkbox"/>	5.000	5.054	115890.05		P	3.5
4	<input type="checkbox"/>	10.000	9.833	224997.83		P	0.8
5	<input type="checkbox"/>	100.000	101.873	2326179.24		M	1.4
6	<input type="checkbox"/>	200.000	199.071	4545095.11		A	2.2
7	<input type="checkbox"/>	1.000					

$y = 22829.0200 * x + 510.0033$

R = 0.9999

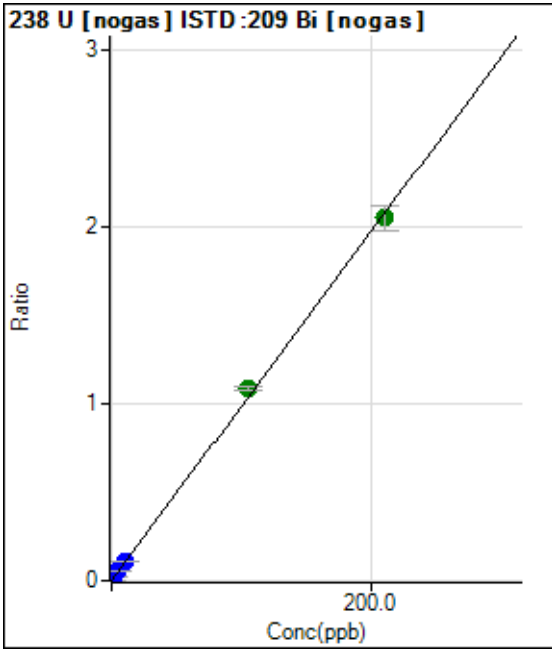
DL = 0.002628

BEC = 0.02234

Weight: <None>

Min Conc: <None>

Calibration for 229_ICV.d



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	0.000	0.000	146.67	0.0001	P	13.4
2	<input type="checkbox"/>	2.000	2.158	44653.46	0.0214	P	2.0
3	<input type="checkbox"/>	5.000	5.177	106568.86	0.0512	P	3.7
4	<input type="checkbox"/>	10.000	10.697	217864.80	0.1058	P	1.7
5	<input type="checkbox"/>	105.000	109.889	2274671.32	1.0862	A	2.8
6	<input type="checkbox"/>	210.000	207.516	4366426.29	2.0511	A	7.2
7	<input type="checkbox"/>	1.000					

$y = 0.0099 * x + 6.8151E-005$

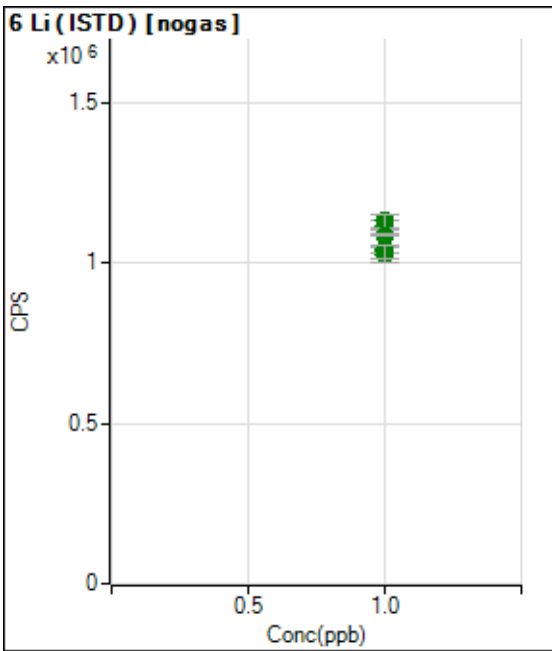
R = 0.9996

DL = 0.002766

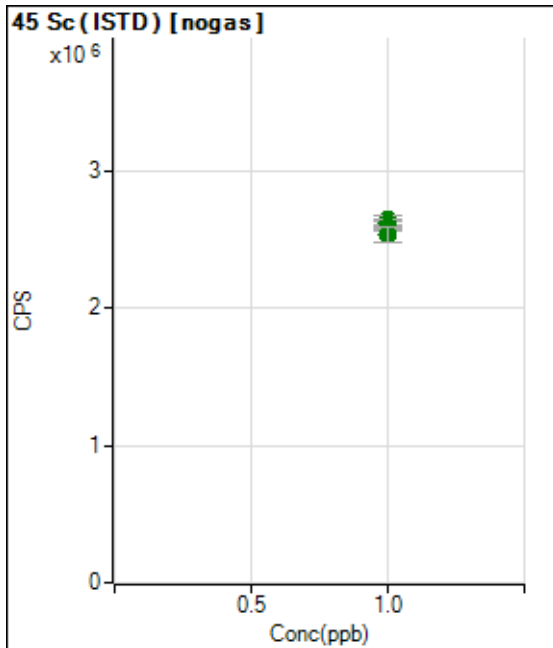
BEC = 0.006895

Weight: <None>

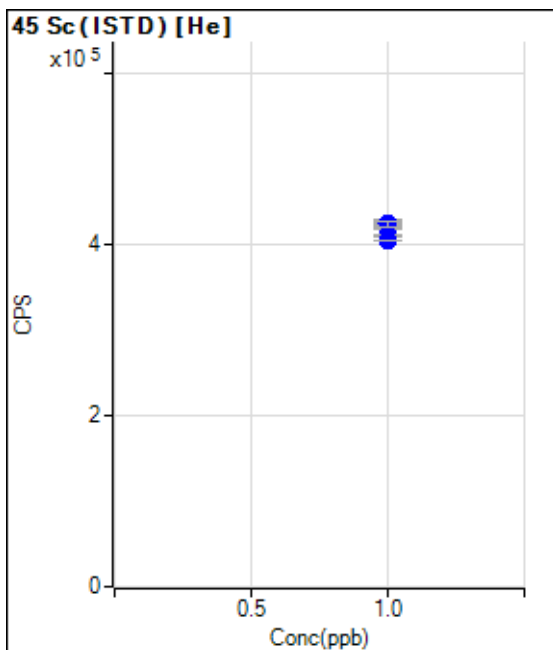
Min Conc: <None>



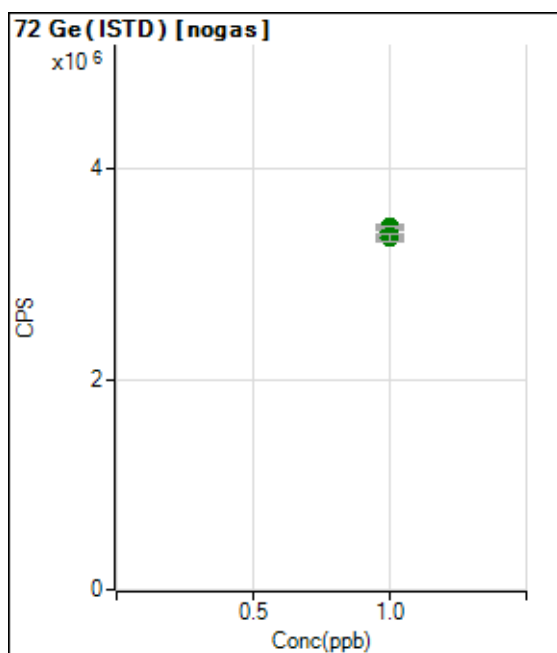
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	1.000		1118107.82		A	2.4
2	<input type="checkbox"/>	1.000		1132002.70		A	3.6
3	<input type="checkbox"/>	1.000		1088809.33		A	0.9
4	<input type="checkbox"/>	1.000		1025689.15		A	5.1
5	<input type="checkbox"/>	1.000		1045106.71		A	2.0
6	<input type="checkbox"/>	1.000		1035061.10		A	3.9
7	<input type="checkbox"/>	1.000					



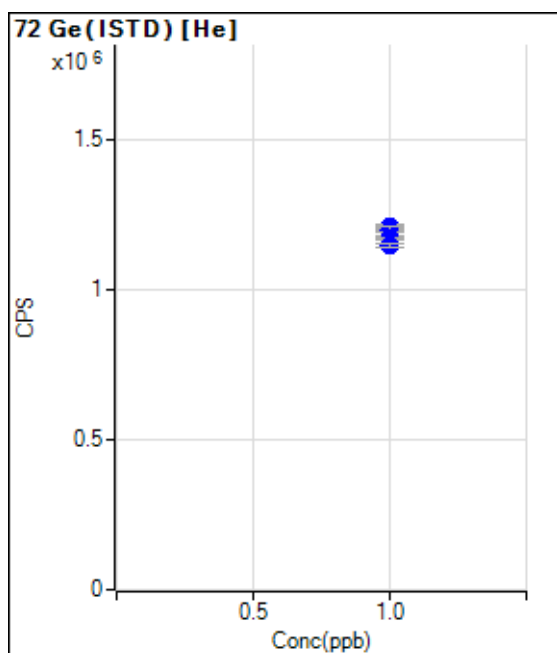
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	1.000		2610153.14		A	3.5
2	<input type="checkbox"/>	1.000		2622962.88		A	1.0
3	<input type="checkbox"/>	1.000		2646547.57		A	3.0
4	<input type="checkbox"/>	1.000		2624362.93		A	2.3
5	<input type="checkbox"/>	1.000		2590429.80		A	0.2
6	<input type="checkbox"/>	1.000		2542686.78		A	4.2
7	<input type="checkbox"/>	1.000					



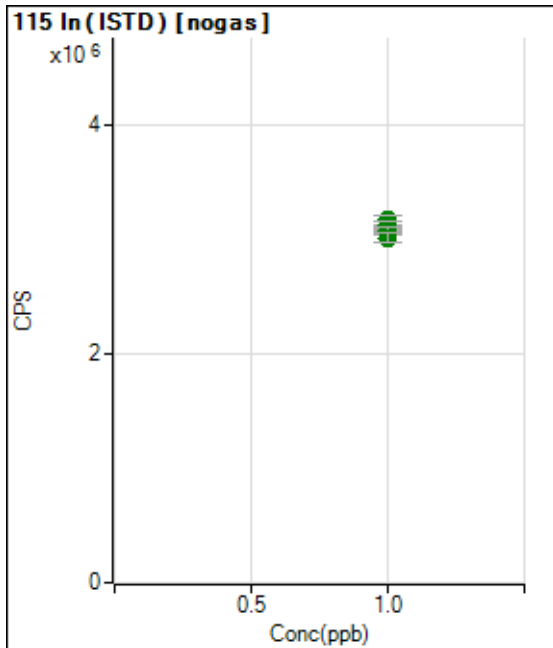
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	1.000		423249.89		P	2.9
2	<input type="checkbox"/>	1.000		420397.44		P	1.9
3	<input type="checkbox"/>	1.000		419873.33		P	1.1
4	<input type="checkbox"/>	1.000		423041.48		P	1.2
5	<input type="checkbox"/>	1.000		409286.99		P	0.3
6	<input type="checkbox"/>	1.000		403557.49		P	0.4
7	<input type="checkbox"/>	1.000					



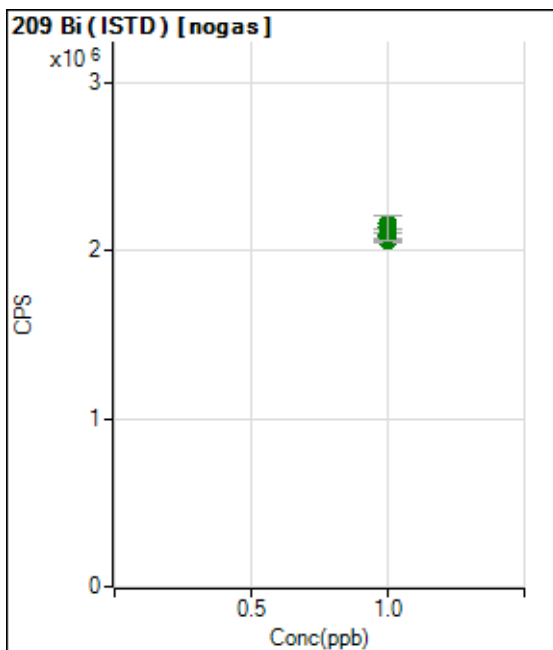
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	1.000		3396393.49		A	1.8
2	<input type="checkbox"/>	1.000		3451423.28		A	1.5
3	<input type="checkbox"/>	1.000		3446696.83		A	0.2
4	<input type="checkbox"/>	1.000		3365060.06		A	1.5
5	<input type="checkbox"/>	1.000		3349000.16		A	1.0
6	<input type="checkbox"/>	1.000		3352289.95		A	2.2
7	<input type="checkbox"/>	1.000					



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	<input type="checkbox"/>	1.000		1189985.92		P	1.3
2	<input type="checkbox"/>	1.000		1209004.80		P	1.0
3	<input type="checkbox"/>	1.000		1200717.82		P	1.5
4	<input type="checkbox"/>	1.000		1174177.48		P	0.7
5	<input type="checkbox"/>	1.000		1172038.42		P	0.6
6	<input type="checkbox"/>	1.000		1149473.58		P	1.0
7	<input type="checkbox"/>	1.000					



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	1.000		3166421.36		A	2.7
2	<input type="checkbox"/>	1.000		3060259.63		A	1.8
3	<input type="checkbox"/>	1.000		3119463.11		A	2.6
4	<input type="checkbox"/>	1.000		3075127.45		A	0.9
5	<input type="checkbox"/>	1.000		3072752.95		A	2.0
6	<input type="checkbox"/>	1.000		3007420.05		A	3.0
7	<input type="checkbox"/>	1.000					



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	<input type="checkbox"/>	1.000		2159119.29		A	4.4
2	<input type="checkbox"/>	1.000		2087427.73		A	3.8
3	<input type="checkbox"/>	1.000		2080979.71		A	2.6
4	<input type="checkbox"/>	1.000		2059322.47		A	0.8
5	<input type="checkbox"/>	1.000		2095006.90		A	3.5
6	<input type="checkbox"/>	1.000		2135782.63		A	6.9
7	<input type="checkbox"/>	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 018CAL.S.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 019CAL.S.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 020CAL.S.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 021CAL.S.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 022CAL.S.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 026LLICV.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 0301CSB.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	
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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	
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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	
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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 071CAL.S.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 072CAL.S.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 073CAL.S.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 074CAL.S.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 075CAL.S.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	
Sr	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	275.5	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	55.1	70	130	LLICV Main CR1 Failed
Au	197	1	nogas	667.093	231.422	47	53.93	5	1334.9	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	222519888	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	
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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	

Sample Report

Sample Table

Sample Name LCS-136231
 Data File Name 097SMPL.d
 Data Path Name C:\Agilent\ICPMH\1\DATA\010
 Acq Date Time 2019-01-09T14:34:55-06:00
 Sample Type Sample
 Dilution 1
 Comment TW B136231Ca
 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	56.321	56.321	3.26	397944	0.01	2000	
Na	23	1	nogas	5869.464	5869.464	1.17	139872866	0.00	200000	
Mg	24	1	nogas	5870.567	5870.567	1.44	90206015	0.01	200000	
Al	27	1	nogas	116.374	116.374	3.28	2181759	0.01	2000	
K	39	1	nogas	5447.630	5447.630	0.32	124119086	0.00	200000	
Ti	47	1	nogas	170.062	170.062	4.26	299784	0.06	2000	
V	51	1	nogas	61.041	61.041	3.82	2055033	0.00	2000	
Cr	52	1	nogas	55.064	55.064	5.43	1224066	0.00	2000	
Mn	55	1	nogas	57.008	57.008	3.53	1528029	0.00	2000	
Co	59	1	nogas	55.187	55.187	2.30	1231826	0.00	2000	
Ni	60	1	nogas	56.484	56.484	1.33	281578	0.02	2000	
Cu	63	1	nogas	57.449	57.449	1.58	665926	0.01	2000	
Zn	66	1	nogas	56.824	56.824	1.34	222999	0.03	2000	
As	75	1	nogas	53.635	53.635	4.48	375784	0.01	2000	
Sr	88	1	nogas	114.248	114.248	4.71	3080669	0.00	2000	
Ag	107	1	nogas	55.669	55.669	3.11	732733	0.01	2000	
Cd	111	1	nogas	55.086	55.086	1.37	155945	0.04	2000	
Sb	121	1	nogas	55.447	55.447	3.37	688983	0.01	2000	
Tl	205	1	nogas	52.258	52.258	11.02	898198	0.01	2000	
Pb	208	1	nogas	51.891	51.891	0.45	1282157	0.00	2000	
U	238	1	nogas	109.517	109.517	8.62	2468012	0.00	2000	
[Pb]	206	1	nogas	55.169	55.169	8.52	323714	0.02	2000	
[Pb]	207	1	nogas	54.149	54.149	8.31	279116	0.02	2000	
Na	23	2	He	5959.024	5959.024	1.36	11746770	0.05	200000	
Mg	24	2	He	5917.818	5917.818	1.17	6451643	0.09	200000	
Al	27	2	He	118.297	118.297	1.92	73924	0.16	2000	
K	39	2	He	5301.510	5301.510	0.99	7181283	0.07	200000	
Ca	43	2	He	5955.440	5955.440	3.07	19404	30.69	200000	
Ca	44	2	He	6062.525	6062.525	0.80	326542	1.86	200000	
V	51	2	He	56.991	56.991	0.49	432632	0.01	2000	
Cr	52	2	He	57.697	57.697	2.13	481412	0.01	2000	
Mn	55	2	He	58.072	58.072	1.31	344881	0.02	2000	
Fe	56	2	He	5798.934	5798.934	2.35	41908707	0.01	200000	
Co	59	2	He	56.599	56.599	1.49	628394	0.01	2000	
Ni	60	2	He	58.476	58.476	0.52	162061	0.04	2000	
Cu	63	2	He	58.564	58.564	1.10	415141	0.01	2000	
Zn	66	2	He	59.048	59.048	0.55	97117	0.06	2000	
As	75	2	He	56.550	56.550	0.87	88640	0.06	2000	
Se	78	2	He	55.746	55.746	1.66	7341	0.76	2000	
B	11	1	nogas	558.830	558.830	3.63	2468793	0.02	2000	
Si	28	1	nogas	53873.109	53873.109	2.05	63128184	0.09	2000	>LDR
Ca	43	1	nogas	5664.760	5664.760	2.19	204405	2.77	200000	
Ca	44	1	nogas	5638.418	5638.418	3.34	3456695	0.16	200000	
Fe	56	1	nogas	5558.460	5558.460	2.89	129120157	0.00	200000	

Sample Report

Se	77	1	nogas	55.361	55.361	17.09	41564	0.13	2000	
Se	82	1	nogas	55.028	55.028	1.65	15200	0.36	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Mo	95	1	nogas	53.572	53.572	3.88	290291	0.02	2000	
Sn	118	1	nogas	109.488	109.488	2.12	799136	0.01	2000	
Ba	137	1	nogas	55.271	55.271	0.14	220789	0.03	2000	
Sb	121	2	He	56.086	56.086	1.86	345035	0.02	2000	
La	139	1	nogas	33.872	33.872	26.82	183	18.48	2000	
Au	197	1	nogas	2052.456	2052.456	48.45	70	2932.08	2000	>LDR

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	1071589	4.51	1282255	83.57	70	125	
Ge	72	1	nogas	3366022	0.92	3894467	86.43	70	125	
In	115	1	nogas	2883920	0.85	3488791	82.66	70	125	
Bi	209	1	nogas	2099630	8.26	2439864	86.06	70	125	
Ge	72	2	He	1086251	0.80	1316692	82.50	70	125	

Sample Report

Sample Table

Sample Name HS18121117-01SD
 Data File Name 099SMPL.d
 Data Path Name C:\Agilent\ICPMH\1\DATA\010
 Acq Date Time 2019-01-09T14:38:52-06:00
 Sample Type Sample
 Dilution 100
 Comment TW B136231 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	0.005	0.545	187.62	120	0.00	2000	
Na	23	1	nogas	2963.353	296335.284	11.54	66510364	0.00	200000	
Mg	24	1	nogas	444.109	44410.914	11.70	6409622	0.01	200000	
Al	27	1	nogas	1.341	134.095	20.64	49506	0.00	2000	
K	39	1	nogas	587.586	58758.615	12.69	20430118	0.00	200000	
Ti	47	1	nogas	-0.003	-0.341	-1664.61	390	0.00	2000	
V	51	1	nogas	7.900	790.019	23.51	678554	0.00	2000	
Cr	52	1	nogas	0.455	45.518	55.97	59840	0.00	2000	
Mn	55	1	nogas	7.314	731.397	8.73	203864	0.00	2000	
Co	59	1	nogas	0.042	4.180	13.38	1517	0.00	2000	
Ni	60	1	nogas	-0.334	-33.393	-4.22	1187	-0.03	2000	
Cu	63	1	nogas	0.032	3.177	50.81	3164	0.00	2000	
Zn	66	1	nogas	0.508	50.789	5.79	3764	0.01	2000	
As	75	1	nogas	2.298	229.774	41.04	95050	0.00	2000	
Sr	88	1	nogas	21.475	2147.489	8.76	538254	0.00	2000	
Ag	107	1	nogas	-0.002	-0.177	-144.97	90	0.00	2000	
Cd	111	1	nogas	-0.002	-0.169	-410.02	17	-0.01	2000	
Sb	121	1	nogas	-0.021	-2.058	-70.54	667	0.00	2000	
Tl	205	1	nogas	0.041	4.086	25.94	1080	0.00	2000	
Pb	208	1	nogas	-0.009	-0.864	-15.07	393	0.00	2000	
U	238	1	nogas	0.013	1.272	40.61	340	0.00	2000	
[Pb]	206	1	nogas	-0.011	-1.089	-39.58	107	-0.01	2000	
[Pb]	207	1	nogas	-0.009	-0.939	-37.68	67	-0.01	2000	
Na	23	2	He	2703.109	270310.930	1.10	5584039	0.05	200000	
Mg	24	2	He	395.833	39583.283	1.82	450576	0.09	200000	
Al	27	2	He	0.296	29.642	128.06	1563	0.02	2000	
K	39	2	He	465.424	46542.416	0.38	867355	0.05	200000	
Ca	43	2	He	632.066	63206.552	5.33	2197	28.77	200000	
Ca	44	2	He	608.238	60823.800	4.77	36018	1.69	200000	
V	51	2	He	0.489	48.940	3.58	10983	0.00	2000	
Cr	52	2	He	0.175	17.452	12.39	6931	0.00	2000	
Mn	55	2	He	6.404	640.437	0.93	40939	0.02	2000	
Fe	56	2	He	27.853	2785.328	72.97	233168	0.01	200000	
Co	59	2	He	0.036	3.608	16.58	577	0.01	2000	
Ni	60	2	He	-0.116	-11.558	-21.88	520	-0.02	2000	
Cu	63	2	He	-0.107	-10.727	-13.94	1153	-0.01	2000	
Zn	66	2	He	0.328	32.767	19.88	1690	0.02	2000	
As	75	2	He	0.071	7.089	47.12	459	0.02	2000	
Se	78	2	He	0.355	35.512	20.76	140	0.25	2000	
B	11	1	nogas	4.081	408.082	27.81	32294	0.01	2000	
Si	28	1	nogas	2213.720	221371.988	16.61	4736801	0.05	2000	>LDR
Ca	43	1	nogas	630.411	63041.077	11.65	21830	2.89	200000	
Ca	44	1	nogas	603.684	60368.409	14.47	535206	0.11	200000	
Fe	56	1	nogas	49.026	4902.611	36.47	4607010	0.00	200000	

Sample Report

Se	77	1	nogas	20.153	2015.276	24.32	30496	0.07	2000	
Se	82	1	nogas	0.128	12.804	270.47	203	0.06	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Mo	95	1	nogas	0.082	8.151	23.75	580	0.01	2000	
Sn	118	1	nogas	0.048	4.770	54.10	1423	0.00	2000	
Ba	137	1	nogas	8.467	846.658	13.92	31709	0.03	2000	
Sb	121	2	He	-0.021	-2.131	-101.63	457	0.00	2000	
La	139	1	nogas	13.685	1368.497	49.55	100	13.68	2000	
Au	197	1	nogas	1082.067	108206.744	173.69	47	2318.72	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	1027847	10.43	1282255	80.16	70	125	
Ge	72	1	nogas	3135068	7.21	3894467	80.50	70	125	
In	115	1	nogas	2716144	12.59	3488791	77.85	70	125	
Bi	209	1	nogas	1846820	11.00	2439864	75.69	70	125	
Ge	72	2	He	1130666	0.59	1316692	85.87	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	
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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	
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Sample Report

Sample Table

Sample Name HS18121123-02
 Data File Name 109SMPL.d
 Data Path Name C:\Agilent\ICPMH\1\DATA\010
 Acq Date Time 2019-01-09T15:00:15-06:00
 Sample Type Sample
 Dilution 20
 Comment TW B136231 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	0.008	0.168	56.92	153	0.01	2000	
Na	23	1	nogas	1113.101	22262.029	5.08	28387320	0.00	200000	
Mg	24	1	nogas	45.985	919.693	2.53	757436	0.01	200000	
Al	27	1	nogas	73.334	1466.682	0.55	1392940	0.01	2000	
K	39	1	nogas	36.557	731.139	41.45	10483224	0.00	200000	
Ti	47	1	nogas	0.299	5.980	14.40	960	0.03	2000	
V	51	1	nogas	3.398	67.952	13.40	621824	0.00	2000	
Cr	52	1	nogas	0.233	4.653	42.59	60061	0.00	2000	
Mn	55	1	nogas	3.760	75.196	2.26	126749	0.00	2000	
Co	59	1	nogas	0.121	2.421	7.52	3414	0.00	2000	
Ni	60	1	nogas	-0.203	-4.051	-15.93	1930	-0.01	2000	
Cu	63	1	nogas	0.015	0.299	63.49	3229	0.00	2000	
Zn	66	1	nogas	0.010	0.196	548.70	2113	0.00	2000	
As	75	1	nogas	1.423	28.459	50.50	98089	0.00	2000	
Sr	88	1	nogas	1.468	29.358	2.71	41221	0.00	2000	
Ag	107	1	nogas	-0.002	-0.048	-110.35	90	0.00	2000	
Cd	111	1	nogas	0.002	0.032	140.77	27	0.01	2000	
Sb	121	1	nogas	0.001	0.017	1268.66	990	0.00	2000	
Tl	205	1	nogas	-0.003	-0.065	-155.96	493	0.00	2000	
Pb	208	1	nogas	0.028	0.553	19.69	1290	0.00	2000	
U	238	1	nogas	0.015	0.298	79.59	460	0.00	2000	
[Pb]	206	1	nogas	0.022	0.446	85.26	323	0.01	2000	
[Pb]	207	1	nogas	0.023	0.456	30.45	250	0.01	2000	
Na	23	2	He	1119.891	22397.825	1.01	2390717	0.05	200000	
Mg	24	2	He	45.376	907.518	1.52	53846	0.08	200000	
Al	27	2	He	69.381	1387.628	1.23	46424	0.15	2000	
K	39	2	He	7.511	150.225	22.17	269510	0.00	200000	
Ca	43	2	He	50.917	1018.336	84.84	237	21.51	200000	
Ca	44	2	He	38.285	765.707	10.14	4324	0.89	200000	
V	51	2	He	0.438	8.768	10.82	10752	0.00	2000	
Cr	52	2	He	0.153	3.069	20.43	6858	0.00	2000	
Mn	55	2	He	3.622	72.447	4.55	24193	0.01	2000	
Fe	56	2	He	98.233	1964.666	0.64	774058	0.01	200000	
Co	59	2	He	0.115	2.296	4.61	1510	0.01	2000	
Ni	60	2	He	0.016	0.315	277.50	910	0.00	2000	
Cu	63	2	He	-0.072	-1.435	-25.31	1437	0.00	2000	
Zn	66	2	He	-0.109	-2.176	-31.72	967	-0.01	2000	
As	75	2	He	0.204	4.080	10.66	686	0.03	2000	
Se	78	2	He	0.363	7.251	17.35	143	0.25	2000	
B	11	1	nogas	2.077	41.534	7.72	26512	0.01	2000	
Si	28	1	nogas	3342.072	66841.431	3.80	6404096	0.05	2000	>LDR
Ca	43	1	nogas	42.114	842.283	7.68	2440	1.73	200000	
Ca	44	1	nogas	-35.291	-705.814	-23.94	212517	-0.02	200000	
Fe	56	1	nogas	99.010	1980.199	3.86	6123279	0.00	200000	
Se	77	1	nogas	13.189	263.771	11.53	31224	0.04	2000	
Se	82	1	nogas	0.048	0.956	407.35	193	0.02	2000	

Sample Report

Mo	95	1	nogas	0.012	0.247	77.38	250	0.00	2000	
Sn	118	1	nogas	-0.038	-0.769	-39.60	913	0.00	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Ba	137	1	nogas	4.053	81.055	6.23	16765	0.02	2000	
Sb	121	2	He	-0.014	-0.273	-91.70	513	0.00	2000	
La	139	1	nogas	861.144	17222.875	8.17	3320	25.94	2000	
Au	197	1	nogas	-1186.560	-23731.196	-132.77	20	-5932.80	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	1126809	1.03	1282255	87.88	70	125	
Ge	72	1	nogas	3384089	2.85	3894467	86.89	70	125	
In	115	1	nogas	2942839	4.00	3488791	84.35	70	125	
Bi	209	1	nogas	2165673	3.25	2439864	88.76	70	125	
Ge	72	2	He	1148477	1.31	1316692	87.22	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	
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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	
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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	

Sample Report

Sample Table

Sample Name HS18121117-01PDS
 Data File Name 136SMPL.d
 Data Path Name C:\Agilent\ICPMH\1\DATA\010
 Acq Date Time 2019-01-09T15:53:52-06:00
 Sample Type Sample
 Dilution 20
 Comment TW B136231 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	104.124	2082.478	3.69	796541	0.01	2000	
Na	23	1	nogas	24814.120	496282.405	5.00	599176447	0.00	200000	
Mg	24	1	nogas	13065.501	261310.026	3.91	204142359	0.01	200000	
Al	27	1	nogas	117.681	2353.615	1.85	2124016	0.01	2000	
K	39	1	nogas	13656.555	273131.105	4.05	285439290	0.00	200000	
Ti	47	1	nogas	117.069	2341.371	2.11	198845	0.06	2000	
V	51	1	nogas	117.890	2357.797	2.29	3343447	0.00	2000	
Cr	52	1	nogas	115.559	2311.171	2.09	2416138	0.00	2000	
Mn	55	1	nogas	145.147	2902.947	2.53	3707491	0.00	2000	
Co	59	1	nogas	117.867	2357.335	4.74	2531545	0.00	2000	
Ni	60	1	nogas	116.652	2333.042	5.32	556651	0.02	2000	
Cu	63	1	nogas	118.972	2379.448	2.47	1324986	0.01	2000	
Zn	66	1	nogas	114.126	2282.518	0.56	429310	0.03	2000	
As	75	1	nogas	113.253	2265.069	2.55	667581	0.02	2000	
Sr	88	1	nogas	102.140	2042.801	3.12	2652031	0.00	2000	
Ag	107	1	nogas	109.752	2195.042	0.49	1391393	0.01	2000	
Cd	111	1	nogas	107.542	2150.833	2.13	307805	0.03	2000	
Sb	121	1	nogas	108.364	2167.287	1.52	1295800	0.01	2000	
Tl	205	1	nogas	114.766	2295.317	5.01	1914997	0.01	2000	
Pb	208	1	nogas	104.163	2083.253	3.95	2573123	0.00	2000	
U	238	1	nogas	0.005	0.092	85.68	200	0.00	2000	
[Pb]	206	1	nogas	113.014	2260.275	2.31	643177	0.02	2000	
[Pb]	207	1	nogas	113.174	2263.487	2.76	565998	0.02	2000	
Na	23	2	He	23897.238	477944.752	1.86	49562728	0.05	200000	
Mg	24	2	He	12767.133	255342.659	1.12	14706081	0.09	200000	
Al	27	2	He	109.544	2190.888	1.46	72445	0.15	2000	
K	39	2	He	13036.706	260734.115	0.62	17280249	0.08	200000	
Ca	43	2	He	13672.149	273442.976	3.87	46976	29.10	200000	
Ca	44	2	He	13941.810	278836.209	2.18	790562	1.76	200000	
V	51	2	He	107.818	2156.365	2.46	858217	0.01	2000	
Cr	52	2	He	106.967	2139.338	2.56	938264	0.01	2000	
Mn	55	2	He	139.072	2781.444	3.42	870345	0.02	2000	
Fe	56	2	He	11089.724	221794.486	2.37	84664272	0.01	200000	
Co	59	2	He	105.721	2114.417	2.62	1240111	0.01	2000	
Ni	60	2	He	109.274	2185.479	2.36	319192	0.03	2000	
Cu	63	2	He	108.629	2172.579	1.89	811921	0.01	2000	
Zn	66	2	He	111.451	2229.026	1.67	192646	0.06	2000	
As	75	2	He	106.713	2134.268	2.53	176403	0.06	2000	
Se	78	2	He	107.511	2150.215	3.75	14866	0.72	2000	
B	11	1	nogas	3.111	62.211	6.24	32188	0.01	2000	
Si	28	1	nogas	8731.839	174636.771	1.96	11964047	0.07	2000	>LDR
Ca	43	1	nogas	14663.087	293261.731	1.56	508092	2.89	200000	
Ca	44	1	nogas	14287.981	285759.619	0.59	8094063	0.18	200000	
Fe	56	1	nogas	11527.451	230549.024	1.69	253867972	0.00	200000	
Se	77	1	nogas	125.418	2508.356	5.58	56859	0.22	2000	
Se	82	1	nogas	114.018	2280.352	3.11	30162	0.38	2000	

Sample Report

Mo	95	1	nogas	111.333	2226.661	2.23	580757	0.02	2000	
Sn	118	1	nogas	0.035	0.696	63.01	1447	0.00	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Ba	137	1	nogas	145.685	2913.701	1.18	587994	0.02	2000	
Sb	121	2	He	99.699	1993.978	3.71	647407	0.02	2000	
La	139	1	nogas	148.030	2960.600	19.90	613	24.13	2000	
Au	197	1	nogas	-840.100	-16801.999	-124.04	23	-3600.43	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	1159775	2.06	1282255	90.45	70	125	
Ge	72	1	nogas	3241594	2.46	3894467	83.24	70	125	
In	115	1	nogas	2916057	0.64	3488791	83.58	70	125	
Bi	209	1	nogas	2028202	2.15	2439864	83.13	70	125	
Ge	72	2	He	1147999	2.46	1316692	87.19	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	
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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	
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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	
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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	
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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	

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	
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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	

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	
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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	

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	
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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	
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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 222CAL.S.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 223CAL.S.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 224CAL.S.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 226CAL.S.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 227CAL.S.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	
Sr	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	

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	
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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	
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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	
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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	
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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	
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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	
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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	
Sb	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	
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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	7353726	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	
Sr	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	
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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	
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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	56	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	
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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	
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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	
Sb	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	123	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	
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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	
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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	
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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	
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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	
Sb	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	
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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	7423237	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	
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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 4021CSB.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

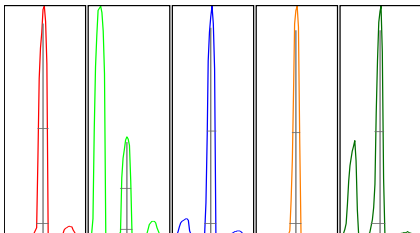
[nogas]

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 Parameters

RF Power 1600 W Carrier Gas 0.40 L/min S/C Temp 2 °C
 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 Parameters

RF Power	1600 W	Carrier Gas	0.40 L/min	S/C Temp	2 °C
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 %		

HS18121264 Cover Page

ALS WO# HS18121264





ALS Environmental
ALS Group USA, Corp
1317 South 13th Avenue
Kelso, WA 98626
T : +1 360 577 7222
F : +1 360 636 1068
www.alsglobal.com

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

WorkOrder: HS18121264

LHAAP 18/24

Bhate Environmental Associates, Inc.

Marcia Olive
445 Union Blvd Ste 129
Lakewood CO 80228

03-Feb-2019



HS18121264 LHAAP 1824 Final

ALS WO# HS18121264





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

January 09, 2019

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

Work Order: **HS18121264**

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

Dear Marcia,

ALS Environmental received 11 sample(s) on Dec 21, 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,

A handwritten signature in black ink, appearing to read "Raj. P. Modashia", enclosed in a simple black oval.

Generated By: JUMOKE.LAWAL
RJ Modashia
Project Manager



ALS Houston, US

Date: 09-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
Work Order: HS18121264

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS18121264-01	MW10_121918	Groundwater		19-Dec-2018 09:10	21-Dec-2018 09:10	<input type="checkbox"/>
HS18121264-02	18CPTMW23_121918	Groundwater		19-Dec-2018 10:05	21-Dec-2018 09:10	<input type="checkbox"/>
HS18121264-03	18CPTMW15_121918	Groundwater		19-Dec-2018 11:00	21-Dec-2018 09:10	<input type="checkbox"/>
HS18121264-04	18WW08_121918	Groundwater		19-Dec-2018 12:00	21-Dec-2018 09:10	<input type="checkbox"/>
HS18121264-05	AWD4_121918	Groundwater		19-Dec-2018 12:55	21-Dec-2018 09:10	<input type="checkbox"/>
HS18121264-06	AWD4_121918-a	Groundwater		19-Dec-2018 12:55	21-Dec-2018 09:10	<input type="checkbox"/>
HS18121264-07	18CPTMW19_121918	Groundwater		19-Dec-2018 13:50	21-Dec-2018 09:10	<input type="checkbox"/>
HS18121264-08	18CPTMW19_121918_a	Groundwater		19-Dec-2018 13:50	21-Dec-2018 09:10	<input type="checkbox"/>
HS18121264-09	18CPTMW22SW_122018	Groundwater		20-Dec-2018 09:15	21-Dec-2018 09:10	<input type="checkbox"/>
HS18121264-10	18CPTMW22R_122018	Groundwater		20-Dec-2018 10:15	21-Dec-2018 09:10	<input type="checkbox"/>
HS18121264-11	MW20_122018	Groundwater		20-Dec-2018 11:05	21-Dec-2018 09:10	<input type="checkbox"/>



ALS Houston, US

Date: 09-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
Work Order: HS18121264

CASE NARRATIVE**Work Order Comments**

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

GCMS Semivolatiles by Method SW8270SIM**Batch ID: 136054****Sample ID: 18CPTMW22R_122018 (HS18121264-10)**

- Surrogate 4-Terphenyl_d14, recovered high. It is not associated with the target compound.

Sample ID: 18CPTMW22SW_122018 (HS18121264-09)

- Surrogate 4-Terphenyl_d14, recovered high. It is not associated with the target compound.

GCMS Volatiles by Method SW8260**Batch ID: R330267****Sample ID: MW10_121918 (HS18121264-01MS)**

- MS/MSD failed QC limits for select target compounds.

Sample ID: MW10_121918 (HS18121264-01MSD)

- The RPD between the MS and MSD was outside of the control limit.

Metals by Method SW7470**Batch ID: 136256**

- 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: 09-Jan-19

Client: Bhate Environmental Associates, Inc.
 Project: LHAAP 18/24
 Sample ID: MW10_121918
 Collection Date: 19-Dec-2018 09:10

ANALYTICAL REPORT

WorkOrder:HS18121264
 Lab ID:HS18121264-01
 Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD		Method:SW8260						
8260C								Analyst: PC
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 12:12
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 12:12
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	UG/L	1	31-Dec-2018 12:12
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 12:12
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 12:12
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 12:12
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 12:12
1,2,3-Trichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	31-Dec-2018 12:12
1,2,3-Trichloropropane	0.50	U	0.50	0.50	1.0	UG/L	1	31-Dec-2018 12:12
1,2,4-Trichlorobenzene	0.50	U	0.50	0.50	1.0	UG/L	1	31-Dec-2018 12:12
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 12:12
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 12:12
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 12:12
1,2-Dichlorobenzene	0.50	U	0.50	0.50	1.0	UG/L	1	31-Dec-2018 12:12
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 12:12
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	UG/L	1	31-Dec-2018 12:12
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 12:12
1,3-Dichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	31-Dec-2018 12:12
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 12:12
1,4-Dichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	31-Dec-2018 12:12
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 12:12
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	31-Dec-2018 12:12
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 12:12
2-Hexanone	1.0	U	1.0	1.0	2.0	UG/L	1	31-Dec-2018 12:12
4-Chlorotoluene	0.50	U	0.40	0.50	1.0	UG/L	1	31-Dec-2018 12:12
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 12:12
4-Methyl-2-pentanone	1.0	U	0.70	1.0	2.0	UG/L	1	31-Dec-2018 12:12
Acetone	2.0	U	0.40	2.0	2.0	UG/L	1	31-Dec-2018 12:12
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 12:12
Bromobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	31-Dec-2018 12:12
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 12:12
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 12:12
Bromoform	0.50	U	0.40	0.50	1.0	UG/L	1	31-Dec-2018 12:12
Bromomethane	0.50	U	0.40	0.50	1.0	UG/L	1	31-Dec-2018 12:12
Carbon disulfide	1.0	U	0.60	1.0	2.0	UG/L	1	31-Dec-2018 12:12
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	UG/L	1	31-Dec-2018 12:12
Chlorobenzene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 12:12
Chloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 12:12
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 12:12

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



ALS Houston, US

Date: 09-Jan-19

Client: Bhate Environmental Associates, Inc.
 Project: LHAAP 18/24
 Sample ID: MW10_121918
 Collection Date: 19-Dec-2018 09:10

ANALYTICAL REPORT
 WorkOrder:HS18121264
 Lab ID:HS18121264-01
 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	31-Dec-2018 12:12	
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 12:12	
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	31-Dec-2018 12:12	
Dibromochloromethane	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 12:12	
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 12:12	
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 12:12	
Ethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 12:12	
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	31-Dec-2018 12:12	
Isopropylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 12:12	
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	31-Dec-2018 12:12	
Methylene chloride	0.50	U	0.40	0.50	2.0	UG/L	1	31-Dec-2018 12:12	
n-Butylbenzene	0.50	U	0.40	0.50	1.0	UG/L	1	31-Dec-2018 12:12	
n-Propylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 12:12	
Naphthalene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 12:12	
o-Xylene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 12:12	
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 12:12	
Styrene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 12:12	
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 12:12	
Tetrachloroethene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 12:12	
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 12:12	
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 12:12	
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 12:12	
Trichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 12:12	
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 12:12	
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 12:12	
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>97.1</i>			0	<i>81-118</i>	%REC	<i>1</i>	<i>31-Dec-2018 12:12</i>	
<i>Surr: 4-Bromofluorobenzene</i>	<i>99.8</i>			0	<i>85-114</i>	%REC	<i>1</i>	<i>31-Dec-2018 12:12</i>	
<i>Surr: Dibromofluoromethane</i>	<i>90.2</i>			0	<i>80-119</i>	%REC	<i>1</i>	<i>31-Dec-2018 12:12</i>	
<i>Surr: Toluene-d8</i>	<i>106</i>			0	<i>89-112</i>	%REC	<i>1</i>	<i>31-Dec-2018 12:12</i>	
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		Method:NA						Analyst: SUB	
Subcontract Analysis	See Attached		0	0		NA	1	04-Jan-2019 09:11	

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



ALS Houston, US

Date: 09-Jan-19

Client: Bhate Environmental Associates, Inc.
 Project: LHAAP 18/24
 Sample ID: 18CPTMW23_121918
 Collection Date: 19-Dec-2018 10:05

ANALYTICAL REPORT
 WorkOrder:HS18121264
 Lab ID:HS18121264-02
 Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD		Method:SW8260						
8260C	Analyst: PC							
1,1,1,2-Tetrachloroethane	2.5	U	1.5	2.5	5.0	UG/L	5	31-Dec-2018 14:15
1,1,1-Trichloroethane	2.5	U	1.0	2.5	5.0	UG/L	5	31-Dec-2018 14:15
1,1,2,2-Tetrachloroethane	2.5	U	2.5	2.5	5.0	UG/L	5	31-Dec-2018 14:15
1,1,2-Trichloroethane	2.5	U	1.5	2.5	5.0	UG/L	5	31-Dec-2018 14:15
1,1-Dichloroethane	2.5	U	1.0	2.5	5.0	UG/L	5	31-Dec-2018 14:15
1,1-Dichloroethene	9.5		1.0	2.5	5.0	UG/L	5	31-Dec-2018 14:15
1,1-Dichloropropene	2.5	U	1.5	2.5	5.0	UG/L	5	31-Dec-2018 14:15
1,2,3-Trichlorobenzene	2.5	U	2.0	2.5	5.0	UG/L	5	31-Dec-2018 14:15
1,2,3-Trichloropropane	2.5	U	2.5	2.5	5.0	UG/L	5	31-Dec-2018 14:15
1,2,4-Trichlorobenzene	2.5	U	2.5	2.5	5.0	UG/L	5	31-Dec-2018 14:15
1,2,4-Trimethylbenzene	2.5	U	1.5	2.5	5.0	UG/L	5	31-Dec-2018 14:15
1,2-Dibromo-3-chloropropane	2.5	U	1.0	2.5	5.0	UG/L	5	31-Dec-2018 14:15
1,2-Dibromoethane	2.5	U	1.0	2.5	5.0	UG/L	5	31-Dec-2018 14:15
1,2-Dichlorobenzene	2.5	U	2.5	2.5	5.0	UG/L	5	31-Dec-2018 14:15
1,2-Dichloroethane	320		1.0	2.5	5.0	UG/L	5	31-Dec-2018 14:15
1,2-Dichloropropane	2.5	U	2.5	2.5	5.0	UG/L	5	31-Dec-2018 14:15
1,3,5-Trimethylbenzene	2.5	U	1.5	2.5	5.0	UG/L	5	31-Dec-2018 14:15
1,3-Dichlorobenzene	2.5	U	2.0	2.5	5.0	UG/L	5	31-Dec-2018 14:15
1,3-Dichloropropane	2.5	U	1.5	2.5	5.0	UG/L	5	31-Dec-2018 14:15
1,4-Dichlorobenzene	2.5	U	2.0	2.5	5.0	UG/L	5	31-Dec-2018 14:15
2,2-Dichloropropane	2.5	U	1.0	2.5	5.0	UG/L	5	31-Dec-2018 14:15
2-Butanone	5.0	U	2.5	5.0	10	UG/L	5	31-Dec-2018 14:15
2-Chlorotoluene	2.5	U	1.5	2.5	5.0	UG/L	5	31-Dec-2018 14:15
2-Hexanone	5.0	U	5.0	5.0	10	UG/L	5	31-Dec-2018 14:15
4-Chlorotoluene	2.5	U	2.0	2.5	5.0	UG/L	5	31-Dec-2018 14:15
4-Isopropyltoluene	2.5	U	1.5	2.5	5.0	UG/L	5	31-Dec-2018 14:15
4-Methyl-2-pentanone	5.0	U	3.5	5.0	10	UG/L	5	31-Dec-2018 14:15
Acetone	10	U	2.0	10	10	UG/L	5	31-Dec-2018 14:15
Benzene	2.5	U	1.0	2.5	5.0	UG/L	5	31-Dec-2018 14:15
Bromobenzene	2.5	U	2.0	2.5	5.0	UG/L	5	31-Dec-2018 14:15
Bromochloromethane	2.5	U	1.0	2.5	5.0	UG/L	5	31-Dec-2018 14:15
Bromodichloromethane	2.5	U	1.0	2.5	5.0	UG/L	5	31-Dec-2018 14:15
Bromoform	2.5	U	2.0	2.5	5.0	UG/L	5	31-Dec-2018 14:15
Bromomethane	2.5	U	2.0	2.5	5.0	UG/L	5	31-Dec-2018 14:15
Carbon disulfide	5.0	U	3.0	5.0	10	UG/L	5	31-Dec-2018 14:15
Carbon tetrachloride	2.5	U	2.5	2.5	5.0	UG/L	5	31-Dec-2018 14:15
Chlorobenzene	2.5	U	1.5	2.5	5.0	UG/L	5	31-Dec-2018 14:15
Chloroethane	2.5	U	1.5	2.5	5.0	UG/L	5	31-Dec-2018 14:15
Chloroform	4.7	J	1.0	2.5	5.0	UG/L	5	31-Dec-2018 14:15

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



ALS Houston, US

Date: 09-Jan-19

Client: Bhate Environmental Associates, Inc.
 Project: LHAAP 18/24
 Sample ID: 18CPTMW23_121918
 Collection Date: 19-Dec-2018 10:05

ANALYTICAL REPORT

WorkOrder:HS18121264
 Lab ID:HS18121264-02
 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	31-Dec-2018 14:15	
cis-1,2-Dichloroethene	240		1.0	2.5	5.0	UG/L	5	31-Dec-2018 14:15	
cis-1,3-Dichloropropene	2.5	U	0.50	2.5	5.0	UG/L	5	31-Dec-2018 14:15	
Dibromochloromethane	2.5	U	1.5	2.5	5.0	UG/L	5	31-Dec-2018 14:15	
Dibromomethane	2.5	U	1.0	2.5	5.0	UG/L	5	31-Dec-2018 14:15	
Dichlorodifluoromethane	2.5	U	1.5	2.5	5.0	UG/L	5	31-Dec-2018 14:15	
Ethylbenzene	2.5	U	1.5	2.5	5.0	UG/L	5	31-Dec-2018 14:15	
Hexachlorobutadiene	5.0	U	5.0	5.0	5.0	UG/L	5	31-Dec-2018 14:15	
Isopropylbenzene	2.5	U	1.5	2.5	5.0	UG/L	5	31-Dec-2018 14:15	
m,p-Xylene	5.0	U	2.5	5.0	10	UG/L	5	31-Dec-2018 14:15	
Methylene chloride	2.5	U	2.0	2.5	10	UG/L	5	31-Dec-2018 14:15	
n-Butylbenzene	2.5	U	2.0	2.5	5.0	UG/L	5	31-Dec-2018 14:15	
n-Propylbenzene	2.5	U	1.5	2.5	5.0	UG/L	5	31-Dec-2018 14:15	
Naphthalene	2.5	U	1.5	2.5	5.0	UG/L	5	31-Dec-2018 14:15	
o-Xylene	2.5	U	1.5	2.5	5.0	UG/L	5	31-Dec-2018 14:15	
sec-Butylbenzene	2.5	U	1.5	2.5	5.0	UG/L	5	31-Dec-2018 14:15	
Styrene	2.5	U	1.5	2.5	5.0	UG/L	5	31-Dec-2018 14:15	
tert-Butylbenzene	2.5	U	1.5	2.5	5.0	UG/L	5	31-Dec-2018 14:15	
Tetrachloroethene	2.5	U	1.5	2.5	5.0	UG/L	5	31-Dec-2018 14:15	
Toluene	2.5	U	1.0	2.5	5.0	UG/L	5	31-Dec-2018 14:15	
trans-1,2-Dichloroethene	2.7	J	1.0	2.5	5.0	UG/L	5	31-Dec-2018 14:15	
trans-1,3-Dichloropropene	2.5	U	1.0	2.5	5.0	UG/L	5	31-Dec-2018 14:15	
Trichloroethene	5,000		20	50	100	UG/L	100	31-Dec-2018 15:54	
Trichlorofluoromethane	2.5	U	1.5	2.5	5.0	UG/L	5	31-Dec-2018 14:15	
Vinyl chloride	6.8		1.0	2.5	5.0	UG/L	5	31-Dec-2018 14:15	
Surr: 1,2-Dichloroethane-d4	97.6			0	81-118	%REC	5	31-Dec-2018 14:15	
Surr: 1,2-Dichloroethane-d4	98.1			0	81-118	%REC	100	31-Dec-2018 15:54	
Surr: 4-Bromofluorobenzene	97.2			0	85-114	%REC	5	31-Dec-2018 14:15	
Surr: 4-Bromofluorobenzene	101			0	85-114	%REC	100	31-Dec-2018 15:54	
Surr: Dibromofluoromethane	91.9			0	80-119	%REC	5	31-Dec-2018 14:15	
Surr: Dibromofluoromethane	89.8			0	80-119	%REC	100	31-Dec-2018 15:54	
Surr: Toluene-d8	105			0	89-112	%REC	100	31-Dec-2018 15:54	
Surr: Toluene-d8	104			0	89-112	%REC	5	31-Dec-2018 14:15	
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		Method:NA						Analyst: SUB	
Subcontract Analysis	See Attached		0	0		NA	1	04-Jan-2019 09:11	

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



ALS Houston, US

Date: 09-Jan-19

Client: Bhate Environmental Associates, Inc.
 Project: LHAAP 18/24
 Sample ID: 18CPTMW15_121918
 Collection Date: 19-Dec-2018 11:00

ANALYTICAL REPORT

WorkOrder:HS18121264
 Lab ID:HS18121264-03
 Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD		Method:SW8260						
8260C								Analyst: PC
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 12:36
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 12:36
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	UG/L	1	31-Dec-2018 12:36
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 12:36
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 12:36
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 12:36
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 12:36
1,2,3-Trichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	31-Dec-2018 12:36
1,2,3-Trichloropropane	0.50	U	0.50	0.50	1.0	UG/L	1	31-Dec-2018 12:36
1,2,4-Trichlorobenzene	0.50	U	0.50	0.50	1.0	UG/L	1	31-Dec-2018 12:36
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 12:36
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 12:36
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 12:36
1,2-Dichlorobenzene	0.50	U	0.50	0.50	1.0	UG/L	1	31-Dec-2018 12:36
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 12:36
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	UG/L	1	31-Dec-2018 12:36
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 12:36
1,3-Dichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	31-Dec-2018 12:36
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 12:36
1,4-Dichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	31-Dec-2018 12:36
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 12:36
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	31-Dec-2018 12:36
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 12:36
2-Hexanone	1.0	U	1.0	1.0	2.0	UG/L	1	31-Dec-2018 12:36
4-Chlorotoluene	0.50	U	0.40	0.50	1.0	UG/L	1	31-Dec-2018 12:36
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 12:36
4-Methyl-2-pentanone	1.0	U	0.70	1.0	2.0	UG/L	1	31-Dec-2018 12:36
Acetone	2.0	U	0.40	2.0	2.0	UG/L	1	31-Dec-2018 12:36
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 12:36
Bromobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	31-Dec-2018 12:36
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 12:36
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 12:36
Bromoform	0.50	U	0.40	0.50	1.0	UG/L	1	31-Dec-2018 12:36
Bromomethane	0.50	U	0.40	0.50	1.0	UG/L	1	31-Dec-2018 12:36
Carbon disulfide	1.0	U	0.60	1.0	2.0	UG/L	1	31-Dec-2018 12:36
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	UG/L	1	31-Dec-2018 12:36
Chlorobenzene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 12:36
Chloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 12:36
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 12:36

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



ALS Houston, US

Date: 09-Jan-19

Client: Bhate Environmental Associates, Inc.
 Project: LHAAP 18/24
 Sample ID: 18CPTMW15_121918
 Collection Date: 19-Dec-2018 11:00

ANALYTICAL REPORT
 WorkOrder:HS18121264
 Lab ID:HS18121264-03
 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	31-Dec-2018 12:36	
cis-1,2-Dichloroethene	0.63	J	0.20	0.50	1.0	UG/L	1	31-Dec-2018 12:36	
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	31-Dec-2018 12:36	
Dibromochloromethane	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 12:36	
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 12:36	
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 12:36	
Ethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 12:36	
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	31-Dec-2018 12:36	
Isopropylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 12:36	
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	31-Dec-2018 12:36	
Methylene chloride	0.50	U	0.40	0.50	2.0	UG/L	1	31-Dec-2018 12:36	
n-Butylbenzene	0.50	U	0.40	0.50	1.0	UG/L	1	31-Dec-2018 12:36	
n-Propylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 12:36	
Naphthalene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 12:36	
o-Xylene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 12:36	
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 12:36	
Styrene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 12:36	
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 12:36	
Tetrachloroethene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 12:36	
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 12:36	
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 12:36	
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 12:36	
Trichloroethene	3.1		0.20	0.50	1.0	UG/L	1	31-Dec-2018 12:36	
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 12:36	
Vinyl chloride	1.2		0.20	0.50	1.0	UG/L	1	31-Dec-2018 12:36	
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>96.8</i>			0	<i>81-118</i>	%REC	<i>1</i>	<i>31-Dec-2018 12:36</i>	
<i>Surr: 4-Bromofluorobenzene</i>	<i>98.0</i>			0	<i>85-114</i>	%REC	<i>1</i>	<i>31-Dec-2018 12:36</i>	
<i>Surr: Dibromofluoromethane</i>	<i>90.5</i>			0	<i>80-119</i>	%REC	<i>1</i>	<i>31-Dec-2018 12:36</i>	
<i>Surr: Toluene-d8</i>	<i>104</i>			0	<i>89-112</i>	%REC	<i>1</i>	<i>31-Dec-2018 12:36</i>	
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		Method:NA						Analyst: SUB	
Subcontract Analysis	See Attached		0	0		NA	1	04-Jan-2019 09:11	

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



ALS Houston, US

Date: 09-Jan-19

Client: Bhate Environmental Associates, Inc.
 Project: LHAAP 18/24
 Sample ID: 18WW08_121918
 Collection Date: 19-Dec-2018 12:00

ANALYTICAL REPORT

WorkOrder:HS18121264
 Lab ID:HS18121264-04
 Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD		Method:SW8260						
8260C								Analyst: PC
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 13:01
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 13:01
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	UG/L	1	31-Dec-2018 13:01
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 13:01
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 13:01
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 13:01
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 13:01
1,2,3-Trichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	31-Dec-2018 13:01
1,2,3-Trichloropropane	0.50	U	0.50	0.50	1.0	UG/L	1	31-Dec-2018 13:01
1,2,4-Trichlorobenzene	0.50	U	0.50	0.50	1.0	UG/L	1	31-Dec-2018 13:01
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 13:01
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 13:01
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 13:01
1,2-Dichlorobenzene	0.50	U	0.50	0.50	1.0	UG/L	1	31-Dec-2018 13:01
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 13:01
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	UG/L	1	31-Dec-2018 13:01
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 13:01
1,3-Dichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	31-Dec-2018 13:01
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 13:01
1,4-Dichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	31-Dec-2018 13:01
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 13:01
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	31-Dec-2018 13:01
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 13:01
2-Hexanone	1.0	U	1.0	1.0	2.0	UG/L	1	31-Dec-2018 13:01
4-Chlorotoluene	0.50	U	0.40	0.50	1.0	UG/L	1	31-Dec-2018 13:01
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 13:01
4-Methyl-2-pentanone	1.0	U	0.70	1.0	2.0	UG/L	1	31-Dec-2018 13:01
Acetone	2.0	U	0.40	2.0	2.0	UG/L	1	31-Dec-2018 13:01
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 13:01
Bromobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	31-Dec-2018 13:01
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 13:01
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 13:01
Bromoform	0.50	U	0.40	0.50	1.0	UG/L	1	31-Dec-2018 13:01
Bromomethane	0.50	U	0.40	0.50	1.0	UG/L	1	31-Dec-2018 13:01
Carbon disulfide	1.0	U	0.60	1.0	2.0	UG/L	1	31-Dec-2018 13:01
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	UG/L	1	31-Dec-2018 13:01
Chlorobenzene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 13:01
Chloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 13:01
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 13:01

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



ALS Houston, US

Date: 09-Jan-19

Client: Bhate Environmental Associates, Inc.
 Project: LHAAP 18/24
 Sample ID: 18WW08_121918
 Collection Date: 19-Dec-2018 12:00

ANALYTICAL REPORT
 WorkOrder:HS18121264
 Lab ID:HS18121264-04
 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	31-Dec-2018 13:01	
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 13:01	
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	31-Dec-2018 13:01	
Dibromochloromethane	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 13:01	
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 13:01	
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 13:01	
Ethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 13:01	
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	31-Dec-2018 13:01	
Isopropylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 13:01	
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	31-Dec-2018 13:01	
Methylene chloride	0.50	U	0.40	0.50	2.0	UG/L	1	31-Dec-2018 13:01	
n-Butylbenzene	0.50	U	0.40	0.50	1.0	UG/L	1	31-Dec-2018 13:01	
n-Propylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 13:01	
Naphthalene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 13:01	
o-Xylene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 13:01	
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 13:01	
Styrene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 13:01	
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 13:01	
Tetrachloroethene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 13:01	
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 13:01	
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 13:01	
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 13:01	
Trichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 13:01	
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 13:01	
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 13:01	
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>97.1</i>			0	<i>81-118</i>	%REC	<i>1</i>	<i>31-Dec-2018 13:01</i>	
<i>Surr: 4-Bromofluorobenzene</i>	<i>100.0</i>			0	<i>85-114</i>	%REC	<i>1</i>	<i>31-Dec-2018 13:01</i>	
<i>Surr: Dibromofluoromethane</i>	<i>90.0</i>			0	<i>80-119</i>	%REC	<i>1</i>	<i>31-Dec-2018 13:01</i>	
<i>Surr: Toluene-d8</i>	<i>109</i>			0	<i>89-112</i>	%REC	<i>1</i>	<i>31-Dec-2018 13:01</i>	
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		Method:NA							Analyst: SUB
Subcontract Analysis	See Attached		0	0		NA	1	04-Jan-2019 09:11	

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



ALS Houston, US

Date: 09-Jan-19

Client: Bhate Environmental Associates, Inc.
 Project: LHAAP 18/24
 Sample ID: AWD4_121918
 Collection Date: 19-Dec-2018 12:55

ANALYTICAL REPORT

WorkOrder:HS18121264
 Lab ID:HS18121264-05
 Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD		Method:SW8260						
8260C								Analyst: PC
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 13:26
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 13:26
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	UG/L	1	31-Dec-2018 13:26
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 13:26
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 13:26
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 13:26
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 13:26
1,2,3-Trichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	31-Dec-2018 13:26
1,2,3-Trichloropropane	0.50	U	0.50	0.50	1.0	UG/L	1	31-Dec-2018 13:26
1,2,4-Trichlorobenzene	0.50	U	0.50	0.50	1.0	UG/L	1	31-Dec-2018 13:26
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 13:26
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 13:26
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 13:26
1,2-Dichlorobenzene	0.50	U	0.50	0.50	1.0	UG/L	1	31-Dec-2018 13:26
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 13:26
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	UG/L	1	31-Dec-2018 13:26
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 13:26
1,3-Dichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	31-Dec-2018 13:26
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 13:26
1,4-Dichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	31-Dec-2018 13:26
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 13:26
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	31-Dec-2018 13:26
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 13:26
2-Hexanone	1.0	U	1.0	1.0	2.0	UG/L	1	31-Dec-2018 13:26
4-Chlorotoluene	0.50	U	0.40	0.50	1.0	UG/L	1	31-Dec-2018 13:26
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 13:26
4-Methyl-2-pentanone	1.0	U	0.70	1.0	2.0	UG/L	1	31-Dec-2018 13:26
Acetone	2.0	U	0.40	2.0	2.0	UG/L	1	31-Dec-2018 13:26
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 13:26
Bromobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	31-Dec-2018 13:26
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 13:26
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 13:26
Bromoform	0.50	U	0.40	0.50	1.0	UG/L	1	31-Dec-2018 13:26
Bromomethane	0.50	U	0.40	0.50	1.0	UG/L	1	31-Dec-2018 13:26
Carbon disulfide	1.0	U	0.60	1.0	2.0	UG/L	1	31-Dec-2018 13:26
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	UG/L	1	31-Dec-2018 13:26
Chlorobenzene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 13:26
Chloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 13:26
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 13:26

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



ALS Houston, US

Date: 09-Jan-19

Client: Bhate Environmental Associates, Inc.
 Project: LHAAP 18/24
 Sample ID: AWD4_121918
 Collection Date: 19-Dec-2018 12:55

ANALYTICAL REPORT
 WorkOrder:HS18121264
 Lab ID:HS18121264-05
 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	31-Dec-2018 13:26	
cis-1,2-Dichloroethene	1.0		0.20	0.50	1.0	UG/L	1	31-Dec-2018 13:26	
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	31-Dec-2018 13:26	
Dibromochloromethane	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 13:26	
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 13:26	
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 13:26	
Ethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 13:26	
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	31-Dec-2018 13:26	
Isopropylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 13:26	
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	31-Dec-2018 13:26	
Methylene chloride	0.50	U	0.40	0.50	2.0	UG/L	1	31-Dec-2018 13:26	
n-Butylbenzene	0.50	U	0.40	0.50	1.0	UG/L	1	31-Dec-2018 13:26	
n-Propylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 13:26	
Naphthalene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 13:26	
o-Xylene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 13:26	
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 13:26	
Styrene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 13:26	
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 13:26	
Tetrachloroethene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 13:26	
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 13:26	
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 13:26	
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 13:26	
Trichloroethene	2.9		0.20	0.50	1.0	UG/L	1	31-Dec-2018 13:26	
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 13:26	
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 13:26	
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>98.2</i>			0	<i>81-118</i>	%REC	1	31-Dec-2018 13:26	
<i>Surr: 4-Bromofluorobenzene</i>	<i>97.0</i>			0	<i>85-114</i>	%REC	1	31-Dec-2018 13:26	
<i>Surr: Dibromofluoromethane</i>	<i>90.9</i>			0	<i>80-119</i>	%REC	1	31-Dec-2018 13:26	
<i>Surr: Toluene-d8</i>	<i>104</i>			0	<i>89-112</i>	%REC	1	31-Dec-2018 13:26	

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



ALS Houston, US

Date: 09-Jan-19

Client: Bhate Environmental Associates, Inc.
 Project: LHAAP 18/24
 Sample ID: AWD4_121918
 Collection Date: 19-Dec-2018 12:55

ANALYTICAL REPORT
 WorkOrder:HS18121264
 Lab ID:HS18121264-05
 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	0.848		0.00180	0.00500	0.0100	mg/L	1	08-Jan-2019 17:17
Antimony	0.000424	J	0.000400	0.00100	0.00200	mg/L	1	08-Jan-2019 17:17
Arsenic	0.000671	J	0.000400	0.00100	0.00200	mg/L	1	08-Jan-2019 17:17
Barium	0.295		0.00190	0.00250	0.00400	mg/L	1	08-Jan-2019 17:17
Beryllium	0.00100	U	0.000200	0.00100	0.00200	mg/L	1	08-Jan-2019 17:17
Cadmium	0.00100	U	0.000200	0.00100	0.00200	mg/L	1	08-Jan-2019 17:17
Calcium	24.8		0.0340	0.100	0.500	mg/L	1	08-Jan-2019 17:17
Chromium	1.27		0.000400	0.00100	0.00400	mg/L	1	08-Jan-2019 17:17
Cobalt	0.0235		0.000200	0.00100	0.00500	mg/L	1	08-Jan-2019 17:17
Copper	0.0120		0.00100	0.00100	0.00200	mg/L	1	08-Jan-2019 17:17
Iron	10.2		0.0120	0.100	0.200	mg/L	1	08-Jan-2019 17:17
Lead	0.00100	U	0.000600	0.00100	0.00200	mg/L	1	08-Jan-2019 17:17
Magnesium	9.90		0.0100	0.100	0.200	mg/L	1	08-Jan-2019 17:17
Manganese	0.199		0.000700	0.00100	0.00500	mg/L	1	08-Jan-2019 17:17
Nickel	1.41		0.000600	0.00100	0.00200	mg/L	1	08-Jan-2019 17:17
Potassium	0.553		0.0180	0.100	0.200	mg/L	1	08-Jan-2019 17:17
Selenium	0.00100	U	0.00110	0.00100	0.00200	mg/L	1	08-Jan-2019 17:17
Silver	0.00100	U	0.000200	0.00100	0.00200	mg/L	1	08-Jan-2019 17:17
Sodium	51.6		0.0140	0.100	0.200	mg/L	1	08-Jan-2019 17:17
Thallium	0.00100	U	0.000200	0.00100	0.00200	mg/L	1	08-Jan-2019 17:17
Vanadium	0.00309	J	0.000600	0.00100	0.00500	mg/L	1	08-Jan-2019 17:17
Zinc	0.00604		0.00200	0.00250	0.00400	mg/L	1	08-Jan-2019 17:17
MERCURY BY SW7470A			Method:SW7470			Prep:SW7470 / 03-Jan-2019		Analyst: OFO
Mercury	0.000109	J	0.0000300	0.000100	0.000200	mg/L	1	03-Jan-2019 14:57
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)			Method:NA			Analyst: SUB		
Subcontract Analysis	See Attached		0	0		NA	1	04-Jan-2019 09:11

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



ALS Houston, US

Date: 09-Jan-19

Client: Bhate Environmental Associates, Inc.
 Project: LHAAP 18/24
 Sample ID: AWD4_121918-a
 Collection Date: 19-Dec-2018 12:55

ANALYTICAL REPORT

WorkOrder:HS18121264
 Lab ID:HS18121264-06
 Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD		Method:SW8260						
8260C								Analyst: PC
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 13:50
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 13:50
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	UG/L	1	31-Dec-2018 13:50
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 13:50
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 13:50
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 13:50
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 13:50
1,2,3-Trichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	31-Dec-2018 13:50
1,2,3-Trichloropropane	0.50	U	0.50	0.50	1.0	UG/L	1	31-Dec-2018 13:50
1,2,4-Trichlorobenzene	0.50	U	0.50	0.50	1.0	UG/L	1	31-Dec-2018 13:50
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 13:50
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 13:50
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 13:50
1,2-Dichlorobenzene	0.50	U	0.50	0.50	1.0	UG/L	1	31-Dec-2018 13:50
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 13:50
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	UG/L	1	31-Dec-2018 13:50
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 13:50
1,3-Dichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	31-Dec-2018 13:50
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 13:50
1,4-Dichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	31-Dec-2018 13:50
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 13:50
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	31-Dec-2018 13:50
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 13:50
2-Hexanone	1.0	U	1.0	1.0	2.0	UG/L	1	31-Dec-2018 13:50
4-Chlorotoluene	0.50	U	0.40	0.50	1.0	UG/L	1	31-Dec-2018 13:50
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 13:50
4-Methyl-2-pentanone	1.0	U	0.70	1.0	2.0	UG/L	1	31-Dec-2018 13:50
Acetone	2.0	U	0.40	2.0	2.0	UG/L	1	31-Dec-2018 13:50
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 13:50
Bromobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	31-Dec-2018 13:50
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 13:50
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 13:50
Bromoform	0.50	U	0.40	0.50	1.0	UG/L	1	31-Dec-2018 13:50
Bromomethane	0.50	U	0.40	0.50	1.0	UG/L	1	31-Dec-2018 13:50
Carbon disulfide	1.0	U	0.60	1.0	2.0	UG/L	1	31-Dec-2018 13:50
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	UG/L	1	31-Dec-2018 13:50
Chlorobenzene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 13:50
Chloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 13:50
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 13:50

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



ALS Houston, US

Date: 09-Jan-19

Client: Bhate Environmental Associates, Inc.
 Project: LHAAP 18/24
 Sample ID: AWD4_121918-a
 Collection Date: 19-Dec-2018 12:55

ANALYTICAL REPORT
 WorkOrder:HS18121264
 Lab ID:HS18121264-06
 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	31-Dec-2018 13:50	
cis-1,2-Dichloroethene	0.98	J	0.20	0.50	1.0	UG/L	1	31-Dec-2018 13:50	
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	31-Dec-2018 13:50	
Dibromochloromethane	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 13:50	
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 13:50	
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 13:50	
Ethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 13:50	
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	31-Dec-2018 13:50	
Isopropylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 13:50	
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	31-Dec-2018 13:50	
Methylene chloride	0.50	U	0.40	0.50	2.0	UG/L	1	31-Dec-2018 13:50	
n-Butylbenzene	0.50	U	0.40	0.50	1.0	UG/L	1	31-Dec-2018 13:50	
n-Propylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 13:50	
Naphthalene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 13:50	
o-Xylene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 13:50	
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 13:50	
Styrene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 13:50	
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 13:50	
Tetrachloroethene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 13:50	
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 13:50	
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 13:50	
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 13:50	
Trichloroethene	2.7		0.20	0.50	1.0	UG/L	1	31-Dec-2018 13:50	
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 13:50	
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 13:50	
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>98.3</i>			0	<i>81-118</i>	<i>%REC</i>	<i>1</i>	<i>31-Dec-2018 13:50</i>	
<i>Surr: 4-Bromofluorobenzene</i>	<i>102</i>			0	<i>85-114</i>	<i>%REC</i>	<i>1</i>	<i>31-Dec-2018 13:50</i>	
<i>Surr: Dibromofluoromethane</i>	<i>92.1</i>			0	<i>80-119</i>	<i>%REC</i>	<i>1</i>	<i>31-Dec-2018 13:50</i>	
<i>Surr: Toluene-d8</i>	<i>109</i>			0	<i>89-112</i>	<i>%REC</i>	<i>1</i>	<i>31-Dec-2018 13:50</i>	

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



ALS Houston, US

Date: 09-Jan-19

Client: Bhate Environmental Associates, Inc.
 Project: LHAAP 18/24
 Sample ID: AWD4_121918-a
 Collection Date: 19-Dec-2018 12:55

ANALYTICAL REPORT
 WorkOrder:HS18121264
 Lab ID:HS18121264-06
 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	0.699		0.00180	0.00500	0.0100	mg/L	1	08-Jan-2019 17:19
Antimony	0.000404	J	0.000400	0.00100	0.00200	mg/L	1	08-Jan-2019 17:19
Arsenic	0.000556	J	0.000400	0.00100	0.00200	mg/L	1	08-Jan-2019 17:19
Barium	0.302		0.00190	0.00250	0.00400	mg/L	1	08-Jan-2019 17:19
Beryllium	0.00100	U	0.000200	0.00100	0.00200	mg/L	1	08-Jan-2019 17:19
Cadmium	0.00100	U	0.000200	0.00100	0.00200	mg/L	1	08-Jan-2019 17:19
Calcium	25.1		0.0340	0.100	0.500	mg/L	1	08-Jan-2019 17:19
Chromium	1.11		0.000400	0.00100	0.00400	mg/L	1	08-Jan-2019 17:19
Cobalt	0.0239		0.000200	0.00100	0.00500	mg/L	1	08-Jan-2019 17:19
Copper	0.0119		0.00100	0.00100	0.00200	mg/L	1	08-Jan-2019 17:19
Iron	9.75		0.0120	0.100	0.200	mg/L	1	08-Jan-2019 17:19
Lead	0.00100	U	0.000600	0.00100	0.00200	mg/L	1	08-Jan-2019 17:19
Magnesium	9.87		0.0100	0.100	0.200	mg/L	1	08-Jan-2019 17:19
Manganese	0.197		0.000700	0.00100	0.00500	mg/L	1	08-Jan-2019 17:19
Nickel	1.43		0.000600	0.00100	0.00200	mg/L	1	08-Jan-2019 17:19
Potassium	0.506		0.0180	0.100	0.200	mg/L	1	08-Jan-2019 17:19
Selenium	0.00100	U	0.00110	0.00100	0.00200	mg/L	1	08-Jan-2019 17:19
Silver	0.00100	U	0.000200	0.00100	0.00200	mg/L	1	08-Jan-2019 17:19
Sodium	51.6		0.0140	0.100	0.200	mg/L	1	08-Jan-2019 17:19
Thallium	0.00100	U	0.000200	0.00100	0.00200	mg/L	1	08-Jan-2019 17:19
Vanadium	0.00272	J	0.000600	0.00100	0.00500	mg/L	1	08-Jan-2019 17:19
Zinc	0.00549		0.00200	0.00250	0.00400	mg/L	1	08-Jan-2019 17:19
MERCURY BY SW7470A			Method:SW7470			Prep:SW7470 / 03-Jan-2019		Analyst: OFO
Mercury	0.000115	J	0.0000300	0.000100	0.000200	mg/L	1	03-Jan-2019 14:59
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)			Method:NA			Analyst: SUB		
Subcontract Analysis	See Attached		0	0		NA	1	04-Jan-2019 09:11

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



ALS Houston, US

Date: 09-Jan-19

Client: Bhate Environmental Associates, Inc.
 Project: LHAAP 18/24
 Sample ID: 18CPTMW19_121918
 Collection Date: 19-Dec-2018 13:50

ANALYTICAL REPORT

WorkOrder:HS18121264
 Lab ID:HS18121264-07
 Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD		Method:SW8260						
8260C								Analyst: PC
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 16:19
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 16:19
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	UG/L	1	31-Dec-2018 16:19
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 16:19
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 16:19
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 16:19
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 16:19
1,2,3-Trichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	31-Dec-2018 16:19
1,2,3-Trichloropropane	0.50	U	0.50	0.50	1.0	UG/L	1	31-Dec-2018 16:19
1,2,4-Trichlorobenzene	0.50	U	0.50	0.50	1.0	UG/L	1	31-Dec-2018 16:19
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 16:19
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 16:19
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 16:19
1,2-Dichlorobenzene	0.50	U	0.50	0.50	1.0	UG/L	1	31-Dec-2018 16:19
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 16:19
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	UG/L	1	31-Dec-2018 16:19
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 16:19
1,3-Dichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	31-Dec-2018 16:19
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 16:19
1,4-Dichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	31-Dec-2018 16:19
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 16:19
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	31-Dec-2018 16:19
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 16:19
2-Hexanone	1.0	U	1.0	1.0	2.0	UG/L	1	31-Dec-2018 16:19
4-Chlorotoluene	0.50	U	0.40	0.50	1.0	UG/L	1	31-Dec-2018 16:19
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 16:19
4-Methyl-2-pentanone	1.0	U	0.70	1.0	2.0	UG/L	1	31-Dec-2018 16:19
Acetone	2.0	U	0.40	2.0	2.0	UG/L	1	31-Dec-2018 16:19
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 16:19
Bromobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	31-Dec-2018 16:19
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 16:19
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 16:19
Bromoform	0.50	U	0.40	0.50	1.0	UG/L	1	31-Dec-2018 16:19
Bromomethane	0.50	U	0.40	0.50	1.0	UG/L	1	31-Dec-2018 16:19
Carbon disulfide	1.0	U	0.60	1.0	2.0	UG/L	1	31-Dec-2018 16:19
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	UG/L	1	31-Dec-2018 16:19
Chlorobenzene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 16:19
Chloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 16:19
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 16:19

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



ALS Houston, US

Date: 09-Jan-19

Client: Bhate Environmental Associates, Inc.
 Project: LHAAP 18/24
 Sample ID: 18CPTMW19_121918
 Collection Date: 19-Dec-2018 13:50

ANALYTICAL REPORT
 WorkOrder:HS18121264
 Lab ID:HS18121264-07
 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	31-Dec-2018 16:19	
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 16:19	
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	31-Dec-2018 16:19	
Dibromochloromethane	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 16:19	
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 16:19	
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 16:19	
Ethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 16:19	
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	31-Dec-2018 16:19	
Isopropylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 16:19	
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	31-Dec-2018 16:19	
Methylene chloride	0.50	U	0.40	0.50	2.0	UG/L	1	31-Dec-2018 16:19	
n-Butylbenzene	0.50	U	0.40	0.50	1.0	UG/L	1	31-Dec-2018 16:19	
n-Propylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 16:19	
Naphthalene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 16:19	
o-Xylene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 16:19	
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 16:19	
Styrene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 16:19	
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 16:19	
Tetrachloroethene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 16:19	
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 16:19	
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 16:19	
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 16:19	
Trichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 16:19	
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 16:19	
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 16:19	
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>97.6</i>			0	<i>81-118</i>	%REC	1	<i>31-Dec-2018 16:19</i>	
<i>Surr: 4-Bromofluorobenzene</i>	<i>97.4</i>			0	<i>85-114</i>	%REC	1	<i>31-Dec-2018 16:19</i>	
<i>Surr: Dibromofluoromethane</i>	<i>90.7</i>			0	<i>80-119</i>	%REC	1	<i>31-Dec-2018 16:19</i>	
<i>Surr: Toluene-d8</i>	<i>103</i>			0	<i>89-112</i>	%REC	1	<i>31-Dec-2018 16:19</i>	
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		Method:NA						Analyst: SUB	
Subcontract Analysis	See Attached		0	0		NA	1	04-Jan-2019 09:11	

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



ALS Houston, US

Date: 09-Jan-19

Client: Bhate Environmental Associates, Inc.
 Project: LHAAP 18/24
 Sample ID: 18CPTMW19_121918_a
 Collection Date: 19-Dec-2018 13:50

ANALYTICAL REPORT

WorkOrder:HS18121264
 Lab ID:HS18121264-08
 Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD		Method:SW8260						
8260C								Analyst: PC
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 16:44
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 16:44
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	UG/L	1	31-Dec-2018 16:44
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 16:44
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 16:44
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 16:44
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 16:44
1,2,3-Trichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	31-Dec-2018 16:44
1,2,3-Trichloropropane	0.50	U	0.50	0.50	1.0	UG/L	1	31-Dec-2018 16:44
1,2,4-Trichlorobenzene	0.50	U	0.50	0.50	1.0	UG/L	1	31-Dec-2018 16:44
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 16:44
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 16:44
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 16:44
1,2-Dichlorobenzene	0.50	U	0.50	0.50	1.0	UG/L	1	31-Dec-2018 16:44
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 16:44
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	UG/L	1	31-Dec-2018 16:44
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 16:44
1,3-Dichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	31-Dec-2018 16:44
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 16:44
1,4-Dichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	31-Dec-2018 16:44
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 16:44
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	31-Dec-2018 16:44
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 16:44
2-Hexanone	1.0	U	1.0	1.0	2.0	UG/L	1	31-Dec-2018 16:44
4-Chlorotoluene	0.50	U	0.40	0.50	1.0	UG/L	1	31-Dec-2018 16:44
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 16:44
4-Methyl-2-pentanone	1.0	U	0.70	1.0	2.0	UG/L	1	31-Dec-2018 16:44
Acetone	2.0	U	0.40	2.0	2.0	UG/L	1	31-Dec-2018 16:44
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 16:44
Bromobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	31-Dec-2018 16:44
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 16:44
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 16:44
Bromoform	0.50	U	0.40	0.50	1.0	UG/L	1	31-Dec-2018 16:44
Bromomethane	0.50	U	0.40	0.50	1.0	UG/L	1	31-Dec-2018 16:44
Carbon disulfide	1.0	U	0.60	1.0	2.0	UG/L	1	31-Dec-2018 16:44
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	UG/L	1	31-Dec-2018 16:44
Chlorobenzene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 16:44
Chloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 16:44
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 16:44

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



ALS Houston, US

Date: 09-Jan-19

Client: Bhate Environmental Associates, Inc.
 Project: LHAAP 18/24
 Sample ID: 18CPTMW19_121918_a
 Collection Date: 19-Dec-2018 13:50

ANALYTICAL REPORT
 WorkOrder:HS18121264
 Lab ID:HS18121264-08
 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	31-Dec-2018 16:44	
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 16:44	
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	31-Dec-2018 16:44	
Dibromochloromethane	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 16:44	
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 16:44	
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 16:44	
Ethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 16:44	
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	31-Dec-2018 16:44	
Isopropylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 16:44	
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	31-Dec-2018 16:44	
Methylene chloride	0.50	U	0.40	0.50	2.0	UG/L	1	31-Dec-2018 16:44	
n-Butylbenzene	0.50	U	0.40	0.50	1.0	UG/L	1	31-Dec-2018 16:44	
n-Propylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 16:44	
Naphthalene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 16:44	
o-Xylene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 16:44	
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 16:44	
Styrene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 16:44	
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 16:44	
Tetrachloroethene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 16:44	
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 16:44	
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 16:44	
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 16:44	
Trichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 16:44	
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 16:44	
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 16:44	
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>98.4</i>			<i>0</i>	<i>81-118</i>	<i>%REC</i>	<i>1</i>	<i>31-Dec-2018 16:44</i>	
<i>Surr: 4-Bromofluorobenzene</i>	<i>97.3</i>			<i>0</i>	<i>85-114</i>	<i>%REC</i>	<i>1</i>	<i>31-Dec-2018 16:44</i>	
<i>Surr: Dibromofluoromethane</i>	<i>90.5</i>			<i>0</i>	<i>80-119</i>	<i>%REC</i>	<i>1</i>	<i>31-Dec-2018 16:44</i>	
<i>Surr: Toluene-d8</i>	<i>106</i>			<i>0</i>	<i>89-112</i>	<i>%REC</i>	<i>1</i>	<i>31-Dec-2018 16:44</i>	
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		Method:NA						Analyst: SUB	
Subcontract Analysis	See Attached		0	0		NA	1	04-Jan-2019 09:11	

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



ALS Houston, US

Date: 09-Jan-19

Client: Bhate Environmental Associates, Inc.
 Project: LHAAP 18/24
 Sample ID: 18CPTMW22SW_122018
 Collection Date: 20-Dec-2018 09:15

ANALYTICAL REPORT

WorkOrder:HS18121264
 Lab ID:HS18121264-09
 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	31-Dec-2018 17:09	
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 17:09	
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	UG/L	1	31-Dec-2018 17:09	
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 17:09	
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 17:09	
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 17:09	
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 17:09	
1,2,3-Trichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	31-Dec-2018 17:09	
1,2,3-Trichloropropane	0.50	U	0.50	0.50	1.0	UG/L	1	31-Dec-2018 17:09	
1,2,4-Trichlorobenzene	0.50	U	0.50	0.50	1.0	UG/L	1	31-Dec-2018 17:09	
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 17:09	
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 17:09	
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 17:09	
1,2-Dichlorobenzene	0.50	U	0.50	0.50	1.0	UG/L	1	31-Dec-2018 17:09	
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 17:09	
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	UG/L	1	31-Dec-2018 17:09	
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 17:09	
1,3-Dichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	31-Dec-2018 17:09	
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 17:09	
1,4-Dichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	31-Dec-2018 17:09	
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 17:09	
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	31-Dec-2018 17:09	
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 17:09	
2-Hexanone	1.0	U	1.0	1.0	2.0	UG/L	1	31-Dec-2018 17:09	
4-Chlorotoluene	0.50	U	0.40	0.50	1.0	UG/L	1	31-Dec-2018 17:09	
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 17:09	
4-Methyl-2-pentanone	1.0	U	0.70	1.0	2.0	UG/L	1	31-Dec-2018 17:09	
Acetone	3.9		0.40	2.0	2.0	UG/L	1	31-Dec-2018 17:09	
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 17:09	
Bromobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	31-Dec-2018 17:09	
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 17:09	
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 17:09	
Bromoform	0.50	U	0.40	0.50	1.0	UG/L	1	31-Dec-2018 17:09	
Bromomethane	0.50	U	0.40	0.50	1.0	UG/L	1	31-Dec-2018 17:09	
Carbon disulfide	1.0	U	0.60	1.0	2.0	UG/L	1	31-Dec-2018 17:09	
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	UG/L	1	31-Dec-2018 17:09	
Chlorobenzene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 17:09	
Chloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 17:09	
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 17:09	

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



ALS Houston, US

Date: 09-Jan-19

Client: Bhate Environmental Associates, Inc.
 Project: LHAAP 18/24
 Sample ID: 18CPTMW22SW_122018
 Collection Date: 20-Dec-2018 09:15

ANALYTICAL REPORT
 WorkOrder:HS18121264
 Lab ID:HS18121264-09
 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	31-Dec-2018 17:09		
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 17:09		
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	31-Dec-2018 17:09		
Dibromochloromethane	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 17:09		
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 17:09		
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 17:09		
Ethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 17:09		
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	31-Dec-2018 17:09		
Isopropylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 17:09		
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	31-Dec-2018 17:09		
Methylene chloride	0.50	U	0.40	0.50	2.0	UG/L	1	31-Dec-2018 17:09		
n-Butylbenzene	0.50	U	0.40	0.50	1.0	UG/L	1	31-Dec-2018 17:09		
n-Propylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 17:09		
Naphthalene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 17:09		
o-Xylene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 17:09		
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 17:09		
Styrene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 17:09		
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 17:09		
Tetrachloroethene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 17:09		
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 17:09		
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 17:09		
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 17:09		
Trichloroethene	1.5		0.20	0.50	1.0	UG/L	1	31-Dec-2018 17:09		
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 17:09		
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 17:09		
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>99.7</i>			0	<i>81-118</i>	%REC	1	31-Dec-2018 17:09		
<i>Surr: 4-Bromofluorobenzene</i>	<i>97.3</i>			0	<i>85-114</i>	%REC	1	31-Dec-2018 17:09		
<i>Surr: Dibromofluoromethane</i>	<i>91.1</i>			0	<i>80-119</i>	%REC	1	31-Dec-2018 17:09		
<i>Surr: Toluene-d8</i>	<i>106</i>			0	<i>89-112</i>	%REC	1	31-Dec-2018 17:09		
SEMIVOLATILES SIM		Method:SW8270SIM							Prep:SW3510 / 27-Dec-2018	Analyst: ACN
1,4-Dioxane	0.30		0.010	0.010	0.010	ug/L	1	31-Dec-2018 20:44		
<i>Surr: 2-Fluorobiphenyl</i>	<i>136</i>			0	<i>40-140</i>	%REC	1	31-Dec-2018 20:44		
<i>Surr: 4-Terphenyl-d14</i>	<i>147</i>	S		0	<i>40-140</i>	%REC	1	31-Dec-2018 20:44		
<i>Surr: Nitrobenzene-d5</i>	<i>117</i>			0	<i>40-140</i>	%REC	1	31-Dec-2018 20:44		

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



ALS Houston, US

Date: 09-Jan-19

Client: Bhate Environmental Associates, Inc.
 Project: LHAAP 18/24
 Sample ID: 18CPTMW22SW_122018
 Collection Date: 20-Dec-2018 09:15

ANALYTICAL REPORT
 WorkOrder:HS18121264
 Lab ID:HS18121264-09
 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	0.134		0.00180	0.00500	0.0100	mg/L	1	08-Jan-2019 17:21
Antimony	0.00100	U	0.000400	0.00100	0.00200	mg/L	1	08-Jan-2019 17:21
Arsenic	0.00132	J	0.000400	0.00100	0.00200	mg/L	1	08-Jan-2019 17:21
Barium	0.330		0.00190	0.00250	0.00400	mg/L	1	08-Jan-2019 17:21
Beryllium	0.00100	U	0.000200	0.00100	0.00200	mg/L	1	08-Jan-2019 17:21
Cadmium	0.00100	U	0.000200	0.00100	0.00200	mg/L	1	08-Jan-2019 17:21
Calcium	154		0.0340	0.100	0.500	mg/L	1	08-Jan-2019 17:21
Chromium	0.0321		0.000400	0.00100	0.00400	mg/L	1	08-Jan-2019 17:21
Cobalt	0.00100	U	0.000200	0.00100	0.00500	mg/L	1	08-Jan-2019 17:21
Copper	0.00100	U	0.00100	0.00100	0.00200	mg/L	1	08-Jan-2019 17:21
Iron	0.272		0.0120	0.100	0.200	mg/L	1	08-Jan-2019 17:21
Lead	0.00100	U	0.000600	0.00100	0.00200	mg/L	1	08-Jan-2019 17:21
Magnesium	9.92		0.0100	0.100	0.200	mg/L	1	08-Jan-2019 17:21
Manganese	0.207		0.000700	0.00100	0.00500	mg/L	1	08-Jan-2019 17:21
Nickel	0.000944	J	0.000600	0.00100	0.00200	mg/L	1	08-Jan-2019 17:21
Potassium	218		0.360	2.00	4.00	mg/L	20	09-Jan-2019 15:02
Selenium	0.00100	U	0.00110	0.00100	0.00200	mg/L	1	08-Jan-2019 17:21
Silver	0.00100	U	0.000200	0.00100	0.00200	mg/L	1	08-Jan-2019 17:21
Sodium	339		0.280	2.00	4.00	mg/L	20	09-Jan-2019 15:02
Thallium	0.00100	U	0.000200	0.00100	0.00200	mg/L	1	08-Jan-2019 17:21
Vanadium	0.00116	J	0.000600	0.00100	0.00500	mg/L	1	08-Jan-2019 17:21
Zinc	0.00584		0.00200	0.00250	0.00400	mg/L	1	08-Jan-2019 17:21
MERCURY BY SW7470A			Method:SW7470			Prep:SW7470 / 03-Jan-2019		Analyst: OFO
Mercury	0.000100	U	0.0000300	0.000100	0.000200	mg/L	1	03-Jan-2019 15:01
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)			Method:NA			Analyst: SUB		
Subcontract Analysis	See Attached		0	0		NA	1	04-Jan-2019 09:11

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



ALS Houston, US

Date: 09-Jan-19

Client: Bhate Environmental Associates, Inc.
 Project: LHAAP 18/24
 Sample ID: 18CPTMW22R_122018
 Collection Date: 20-Dec-2018 10:15

ANALYTICAL REPORT
 WorkOrder:HS18121264
 Lab ID:HS18121264-10
 Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD		Method:SW8260						
8260C								Analyst: PC
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 17:33
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 17:33
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	UG/L	1	31-Dec-2018 17:33
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 17:33
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 17:33
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 17:33
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 17:33
1,2,3-Trichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	31-Dec-2018 17:33
1,2,3-Trichloropropane	0.50	U	0.50	0.50	1.0	UG/L	1	31-Dec-2018 17:33
1,2,4-Trichlorobenzene	0.50	U	0.50	0.50	1.0	UG/L	1	31-Dec-2018 17:33
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 17:33
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 17:33
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 17:33
1,2-Dichlorobenzene	0.50	U	0.50	0.50	1.0	UG/L	1	31-Dec-2018 17:33
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 17:33
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	UG/L	1	31-Dec-2018 17:33
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 17:33
1,3-Dichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	31-Dec-2018 17:33
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 17:33
1,4-Dichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	31-Dec-2018 17:33
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 17:33
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	31-Dec-2018 17:33
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 17:33
2-Hexanone	1.0	U	1.0	1.0	2.0	UG/L	1	31-Dec-2018 17:33
4-Chlorotoluene	0.50	U	0.40	0.50	1.0	UG/L	1	31-Dec-2018 17:33
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 17:33
4-Methyl-2-pentanone	1.0	U	0.70	1.0	2.0	UG/L	1	31-Dec-2018 17:33
Acetone	2.0	U	0.40	2.0	2.0	UG/L	1	31-Dec-2018 17:33
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 17:33
Bromobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	31-Dec-2018 17:33
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 17:33
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 17:33
Bromoform	0.50	U	0.40	0.50	1.0	UG/L	1	31-Dec-2018 17:33
Bromomethane	0.50	U	0.40	0.50	1.0	UG/L	1	31-Dec-2018 17:33
Carbon disulfide	1.0	U	0.60	1.0	2.0	UG/L	1	31-Dec-2018 17:33
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	UG/L	1	31-Dec-2018 17:33
Chlorobenzene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 17:33
Chloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 17:33
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 17:33

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



ALS Houston, US

Date: 09-Jan-19

Client: Bhate Environmental Associates, Inc.
 Project: LHAAP 18/24
 Sample ID: 18CPTMW22R_122018
 Collection Date: 20-Dec-2018 10:15

ANALYTICAL REPORT
 WorkOrder:HS18121264
 Lab ID:HS18121264-10
 Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED	
VOLATILES ORGANICS BY METHOD		Method:SW8260							Analyst: PC
8260C									
Chloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 17:33	
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 17:33	
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	31-Dec-2018 17:33	
Dibromochloromethane	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 17:33	
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 17:33	
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 17:33	
Ethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 17:33	
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	31-Dec-2018 17:33	
Isopropylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 17:33	
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	31-Dec-2018 17:33	
Methylene chloride	0.50	U	0.40	0.50	2.0	UG/L	1	31-Dec-2018 17:33	
n-Butylbenzene	0.50	U	0.40	0.50	1.0	UG/L	1	31-Dec-2018 17:33	
n-Propylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 17:33	
Naphthalene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 17:33	
o-Xylene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 17:33	
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 17:33	
Styrene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 17:33	
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 17:33	
Tetrachloroethene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 17:33	
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 17:33	
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 17:33	
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 17:33	
Trichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 17:33	
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 17:33	
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 17:33	
<i>Surr: 1,2-Dichloroethane-d4</i>	99.5			0	81-118	%REC	1	31-Dec-2018 17:33	
<i>Surr: 4-Bromofluorobenzene</i>	98.3			0	85-114	%REC	1	31-Dec-2018 17:33	
<i>Surr: Dibromofluoromethane</i>	91.5			0	80-119	%REC	1	31-Dec-2018 17:33	
<i>Surr: Toluene-d8</i>	106			0	89-112	%REC	1	31-Dec-2018 17:33	
SEMIVOLATILES SIM		Method:SW8270SIM							Prep:SW3510 / 27-Dec-2018
1,4-Dioxane	0.012		0.010	0.010	0.010	ug/L	1	31-Dec-2018 21:26	
<i>Surr: 2-Fluorobiphenyl</i>	130			0	40-140	%REC	1	31-Dec-2018 21:26	
<i>Surr: 4-Terphenyl-d14</i>	155	S		0	40-140	%REC	1	31-Dec-2018 21:26	
<i>Surr: Nitrobenzene-d5</i>	124			0	40-140	%REC	1	31-Dec-2018 21:26	

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Date: 09-Jan-19

Client: Bhate Environmental Associates, Inc.
 Project: LHAAP 18/24
 Sample ID: 18CPTMW22R_122018
 Collection Date: 20-Dec-2018 10:15

ANALYTICAL REPORT
 WorkOrder:HS18121264
 Lab ID:HS18121264-10
 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	3.60		0.0900	0.250	0.500	mg/L	50	09-Jan-2019 15:04
Antimony	0.00100	U	0.000400	0.00100	0.00200	mg/L	1	08-Jan-2019 17:23
Arsenic	0.000864	J	0.000400	0.00100	0.00200	mg/L	1	08-Jan-2019 17:23
Barium	0.0543		0.00190	0.00250	0.00400	mg/L	1	08-Jan-2019 17:23
Beryllium	0.000331	J	0.000200	0.00100	0.00200	mg/L	1	08-Jan-2019 17:23
Cadmium	0.00100	U	0.000200	0.00100	0.00200	mg/L	1	08-Jan-2019 17:23
Calcium	0.876		0.0340	0.100	0.500	mg/L	1	08-Jan-2019 17:23
Chromium	0.00352	J	0.000400	0.00100	0.00400	mg/L	1	08-Jan-2019 17:23
Cobalt	0.00479	J	0.000200	0.00100	0.00500	mg/L	1	08-Jan-2019 17:23
Copper	0.00195	J	0.00100	0.00100	0.00200	mg/L	1	08-Jan-2019 17:23
Iron	3.21		0.0120	0.100	0.200	mg/L	1	08-Jan-2019 17:23
Lead	0.00157	J	0.000600	0.00100	0.00200	mg/L	1	08-Jan-2019 17:23
Magnesium	0.807		0.0100	0.100	0.200	mg/L	1	08-Jan-2019 17:23
Manganese	0.0361		0.000700	0.00100	0.00500	mg/L	1	08-Jan-2019 17:23
Nickel	0.00284		0.000600	0.00100	0.00200	mg/L	1	08-Jan-2019 17:23
Potassium	0.448		0.0180	0.100	0.200	mg/L	1	08-Jan-2019 17:23
Selenium	0.00100	U	0.00110	0.00100	0.00200	mg/L	1	08-Jan-2019 17:23
Silver	0.00100	U	0.000200	0.00100	0.00200	mg/L	1	08-Jan-2019 17:23
Sodium	21.0		0.0140	0.100	0.200	mg/L	1	08-Jan-2019 17:23
Thallium	0.00100	U	0.000200	0.00100	0.00200	mg/L	1	08-Jan-2019 17:23
Vanadium	0.00570		0.000600	0.00100	0.00500	mg/L	1	08-Jan-2019 17:23
Zinc	0.00982		0.00200	0.00250	0.00400	mg/L	1	08-Jan-2019 17:23
MERCURY BY SW7470A			Method:SW7470			Prep:SW7470 / 03-Jan-2019		Analyst: OFO
Mercury	0.000100	U	0.0000300	0.000100	0.000200	mg/L	1	03-Jan-2019 15:02
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)			Method:NA			Analyst: SUB		
Subcontract Analysis	See Attached		0	0		NA	1	04-Jan-2019 09:11

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



ALS Houston, US

Date: 09-Jan-19

Client: Bhate Environmental Associates, Inc.
 Project: LHAAP 18/24
 Sample ID: MW20_122018
 Collection Date: 20-Dec-2018 11:05

ANALYTICAL REPORT

WorkOrder:HS18121264
 Lab ID:HS18121264-11
 Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD		Method:SW8260						
8260C								Analyst: PC
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 17:58
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 17:58
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	UG/L	1	31-Dec-2018 17:58
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 17:58
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 17:58
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 17:58
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 17:58
1,2,3-Trichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	31-Dec-2018 17:58
1,2,3-Trichloropropane	0.50	U	0.50	0.50	1.0	UG/L	1	31-Dec-2018 17:58
1,2,4-Trichlorobenzene	0.50	U	0.50	0.50	1.0	UG/L	1	31-Dec-2018 17:58
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 17:58
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 17:58
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 17:58
1,2-Dichlorobenzene	0.50	U	0.50	0.50	1.0	UG/L	1	31-Dec-2018 17:58
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 17:58
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	UG/L	1	31-Dec-2018 17:58
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 17:58
1,3-Dichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	31-Dec-2018 17:58
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 17:58
1,4-Dichlorobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	31-Dec-2018 17:58
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 17:58
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	31-Dec-2018 17:58
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 17:58
2-Hexanone	1.0	U	1.0	1.0	2.0	UG/L	1	31-Dec-2018 17:58
4-Chlorotoluene	0.50	U	0.40	0.50	1.0	UG/L	1	31-Dec-2018 17:58
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 17:58
4-Methyl-2-pentanone	1.0	U	0.70	1.0	2.0	UG/L	1	31-Dec-2018 17:58
Acetone	2.0	U	0.40	2.0	2.0	UG/L	1	31-Dec-2018 17:58
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 17:58
Bromobenzene	0.50	U	0.40	0.50	1.0	UG/L	1	31-Dec-2018 17:58
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 17:58
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 17:58
Bromoform	0.50	U	0.40	0.50	1.0	UG/L	1	31-Dec-2018 17:58
Bromomethane	0.50	U	0.40	0.50	1.0	UG/L	1	31-Dec-2018 17:58
Carbon disulfide	1.0	U	0.60	1.0	2.0	UG/L	1	31-Dec-2018 17:58
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	UG/L	1	31-Dec-2018 17:58
Chlorobenzene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 17:58
Chloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 17:58
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 17:58

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



ALS Houston, US

Date: 09-Jan-19

Client: Bhate Environmental Associates, Inc.
 Project: LHAAP 18/24
 Sample ID: MW20_122018
 Collection Date: 20-Dec-2018 11:05

ANALYTICAL REPORT
 WorkOrder:HS18121264
 Lab ID:HS18121264-11
 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	31-Dec-2018 17:58	
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 17:58	
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	31-Dec-2018 17:58	
Dibromochloromethane	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 17:58	
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 17:58	
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 17:58	
Ethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 17:58	
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	31-Dec-2018 17:58	
Isopropylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 17:58	
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	31-Dec-2018 17:58	
Methylene chloride	0.50	U	0.40	0.50	2.0	UG/L	1	31-Dec-2018 17:58	
n-Butylbenzene	0.50	U	0.40	0.50	1.0	UG/L	1	31-Dec-2018 17:58	
n-Propylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 17:58	
Naphthalene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 17:58	
o-Xylene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 17:58	
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 17:58	
Styrene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 17:58	
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 17:58	
Tetrachloroethene	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 17:58	
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 17:58	
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 17:58	
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 17:58	
Trichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 17:58	
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	31-Dec-2018 17:58	
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	31-Dec-2018 17:58	
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>99.9</i>			<i>0</i>	<i>81-118</i>	<i>%REC</i>	<i>1</i>	<i>31-Dec-2018 17:58</i>	
<i>Surr: 4-Bromofluorobenzene</i>	<i>97.6</i>			<i>0</i>	<i>85-114</i>	<i>%REC</i>	<i>1</i>	<i>31-Dec-2018 17:58</i>	
<i>Surr: Dibromofluoromethane</i>	<i>91.1</i>			<i>0</i>	<i>80-119</i>	<i>%REC</i>	<i>1</i>	<i>31-Dec-2018 17:58</i>	
<i>Surr: Toluene-d8</i>	<i>107</i>			<i>0</i>	<i>89-112</i>	<i>%REC</i>	<i>1</i>	<i>31-Dec-2018 17:58</i>	
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		Method:NA						Analyst: SUB	
Subcontract Analysis	See Attached		0	0		NA	1	04-Jan-2019 09:11	

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



WEIGHT LOG

Client: Bhate Environmental Associates, Inc.

Project: LHAAP 18/24

WorkOrder: HS18121264

Batch ID: 136054 Method: SEMIVOLATILES SIM Prep: 3510_B_SIM

SampleID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS18121264-09	1	990	1 (mL)	0.00101
HS18121264-10	1	1000	1 (mL)	0.001

Batch ID: 136231 Method: ICP-MS METALS BY SW6020A Prep: 3010A

SampleID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS18121264-05	1	10	10 (mL)	1
HS18121264-06	1	10	10 (mL)	1
HS18121264-09	1	10	10 (mL)	1
HS18121264-10	1	10	10 (mL)	1

Batch ID: 136256 Method: MERCURY BY SW7470A Prep: HG_WPR

SampleID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS18121264-05	1	10 (mL)	10 (mL)	1
HS18121264-06	1	10 (mL)	10 (mL)	1
HS18121264-09	1	10 (mL)	10 (mL)	1
HS18121264-10	1	10 (mL)	10 (mL)	1



ALS Houston, US

Date: 09-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121264

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID 136054	Test Name : SEMIVOLATILES SIM		Matrix: Groundwater			
HS18121264-09	18CPTMW22SW_122018	20 Dec 2018 09:15		27 Dec 2018 09:44	31 Dec 2018 20:44	1
HS18121264-10	18CPTMW22R_122018	20 Dec 2018 10:15		27 Dec 2018 09:44	31 Dec 2018 21:26	1
Batch ID 136231	Test Name : ICP-MS METALS BY SW6020A		Matrix: Groundwater			
HS18121264-05	AWD4_121918	19 Dec 2018 12:55		02 Jan 2019 13:00	08 Jan 2019 17:17	1
HS18121264-06	AWD4_121918-a	19 Dec 2018 12:55		02 Jan 2019 13:00	08 Jan 2019 17:19	1
HS18121264-09	18CPTMW22SW_122018	20 Dec 2018 09:15		02 Jan 2019 13:00	09 Jan 2019 15:02	20
HS18121264-09	18CPTMW22SW_122018	20 Dec 2018 09:15		02 Jan 2019 13:00	08 Jan 2019 17:21	1
HS18121264-10	18CPTMW22R_122018	20 Dec 2018 10:15		02 Jan 2019 13:00	09 Jan 2019 15:04	50
HS18121264-10	18CPTMW22R_122018	20 Dec 2018 10:15		02 Jan 2019 13:00	08 Jan 2019 17:23	1
Batch ID 136256	Test Name : MERCURY BY SW7470A		Matrix: Groundwater			
HS18121264-05	AWD4_121918	19 Dec 2018 12:55		03 Jan 2019 10:00	03 Jan 2019 14:57	1
HS18121264-06	AWD4_121918-a	19 Dec 2018 12:55		03 Jan 2019 10:00	03 Jan 2019 14:59	1
HS18121264-09	18CPTMW22SW_122018	20 Dec 2018 09:15		03 Jan 2019 10:00	03 Jan 2019 15:01	1
HS18121264-10	18CPTMW22R_122018	20 Dec 2018 10:15		03 Jan 2019 10:00	03 Jan 2019 15:02	1
Batch ID R330267	Test Name : VOLATILES ORGANICS BY METHOD 8260C		Matrix: Groundwater			
HS18121264-01	MW10_121918	19 Dec 2018 09:10			31 Dec 2018 12:12	1
HS18121264-02	18CPTMW23_121918	19 Dec 2018 10:05			31 Dec 2018 15:54	100
HS18121264-02	18CPTMW23_121918	19 Dec 2018 10:05			31 Dec 2018 14:15	5
HS18121264-03	18CPTMW15_121918	19 Dec 2018 11:00			31 Dec 2018 12:36	1
HS18121264-04	18WW08_121918	19 Dec 2018 12:00			31 Dec 2018 13:01	1
HS18121264-05	AWD4_121918	19 Dec 2018 12:55			31 Dec 2018 13:26	1
HS18121264-06	AWD4_121918-a	19 Dec 2018 12:55			31 Dec 2018 13:50	1
HS18121264-07	18CPTMW19_121918	19 Dec 2018 13:50			31 Dec 2018 16:19	1
HS18121264-08	18CPTMW19_121918_a	19 Dec 2018 13:50			31 Dec 2018 16:44	1
HS18121264-09	18CPTMW22SW_122018	20 Dec 2018 09:15			31 Dec 2018 17:09	1
HS18121264-10	18CPTMW22R_122018	20 Dec 2018 10:15			31 Dec 2018 17:33	1
HS18121264-11	MW20_122018	20 Dec 2018 11:05			31 Dec 2018 17:58	1



ALS Houston, US

Date: 09-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121264

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID R330449	Test Name : SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850) Matrix: Groundwater					
HS18121264-01	MW10_121918	19 Dec 2018 09:10			04 Jan 2019 09:11	1
HS18121264-02	18CPTMW23_121918	19 Dec 2018 10:05			04 Jan 2019 09:11	1
HS18121264-03	18CPTMW15_121918	19 Dec 2018 11:00			04 Jan 2019 09:11	1
HS18121264-04	18WW08_121918	19 Dec 2018 12:00			04 Jan 2019 09:11	1
HS18121264-05	AWD4_121918	19 Dec 2018 12:55			04 Jan 2019 09:11	1
HS18121264-06	AWD4_121918-a	19 Dec 2018 12:55			04 Jan 2019 09:11	1
HS18121264-07	18CPTMW19_121918	19 Dec 2018 13:50			04 Jan 2019 09:11	1
HS18121264-08	18CPTMW19_121918_a	19 Dec 2018 13:50			04 Jan 2019 09:11	1
HS18121264-09	18CPTMW22SW_122018	20 Dec 2018 09:15			04 Jan 2019 09:11	1
HS18121264-10	18CPTMW22R_122018	20 Dec 2018 10:15			04 Jan 2019 09:11	1
HS18121264-11	MW20_122018	20 Dec 2018 11:05			04 Jan 2019 09:11	1



ALS Houston, US

Date: 09-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121264

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: 09-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121264

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: 09-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121264

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				



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Date: 09-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121264

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		



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



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Client: Bhate Environmental Associates, Inc.
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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: HS18121264-05 HS18121264-06 HS18121264-09 HS18121264-10



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Client: Bhate Environmental Associates, Inc.
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QC BATCH REPORT

Batch ID:	136256	Instrument:	HG03	Method:	SW7470					
MBLK	Sample ID: MBLK-136256			Units: mg/L		Analysis Date: 03-Jan-2019 14:27				
Client ID:		Run ID: HG03_330439		SeqNo: 4893293		PrepDate: 03-Jan-2019		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Mercury	0.000100	0.000200								U
LCS	Sample ID: LCS-136256			Units: mg/L		Analysis Date: 03-Jan-2019 14:28				
Client ID:		Run ID: HG03_330439		SeqNo: 4893294		PrepDate: 03-Jan-2019		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Mercury	0.00525	0.000200	0.005	0	105	80 - 120				
MS	Sample ID: HS18121216-01MS			Units: mg/L		Analysis Date: 03-Jan-2019 14:32				
Client ID:		Run ID: HG03_330439		SeqNo: 4893296		PrepDate: 03-Jan-2019		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Mercury	0.00517	0.000200	0.005	0.000002	103	75 - 125				
MSD	Sample ID: HS18121216-01MSD			Units: mg/L		Analysis Date: 03-Jan-2019 14:33				
Client ID:		Run ID: HG03_330439		SeqNo: 4893297		PrepDate: 03-Jan-2019		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Mercury	0.00528	0.000200	0.005	0.000002	106	75 - 125	0.00517	2.11	20	
The following samples were analyzed in this batch:										
HS18121264-05 HS18121264-06 HS18121264-09 HS18121264-10										



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Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
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QC BATCH REPORT

Batch ID: 136054		Instrument: SV-5		Method: SW8270SIM						
MBLK	Sample ID: MBLK-136054	Units: ug/L			Analysis Date: 31-Dec-2018 18:20					
Client ID:	Run ID: SV-5_330331	SeqNo: 4890694		PrepDate: 27-Dec-2018		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual	
1,4-Dioxane	0.010	0.010							U	
Surr: 2-Fluorobiphenyl	0.1074	0	0.08	0	134	40 - 140				
Surr: 4-Terphenyl-d14	0.1093	0	0.08	0	137	40 - 140				
Surr: Nitrobenzene-d5	0.1118	0	0.08	0	140	40 - 140				
LCS	Sample ID: LCS-136054	Units: ug/L			Analysis Date: 31-Dec-2018 18:40					
Client ID:	Run ID: SV-5_330331	SeqNo: 4890695		PrepDate: 27-Dec-2018		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual	
1,4-Dioxane	0.06884	0.010	0.08	0	86.0	40 - 140				
Surr: 2-Fluorobiphenyl	0.1021	0	0.08	0	128	40 - 140				
Surr: 4-Terphenyl-d14	0.1004	0	0.08	0	125	40 - 140				
Surr: Nitrobenzene-d5	0.0917	0	0.08	0	115	40 - 140				
LCSD	Sample ID: LCSD-136054	Units: ug/L			Analysis Date: 31-Dec-2018 19:01					
Client ID:	Run ID: SV-5_330331	SeqNo: 4890696		PrepDate: 27-Dec-2018		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual	
1,4-Dioxane	0.0777	0.010	0.08	0	97.1	40 - 140	0.06884	12.1	20	
Surr: 2-Fluorobiphenyl	0.1086	0	0.08	0	136	40 - 140	0.1021	6.23	20	
Surr: 4-Terphenyl-d14	0.1085	0	0.08	0	136	40 - 140	0.1004	7.74	20	
Surr: Nitrobenzene-d5	0.09576	0	0.08	0	120	40 - 140	0.0917	4.33	20	
The following samples were analyzed in this batch: HS18121264-09 HS18121264-10										



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QC BATCH REPORT

Batch ID: R330267		Instrument: VOA9		Method: SW8260						
MBLK	Sample ID: VBLKW-181231	Units: UG/L			Analysis Date: 31-Dec-2018 11:47					
Client ID:	Run ID: VOA9_330267	SeqNo: 4889160	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



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Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
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QC BATCH REPORT

Batch ID: R330267		Instrument: VOA9		Method: SW8260						
MBLK	Sample ID: VBLKW-181231	Units: UG/L			Analysis Date: 31-Dec-2018 11:47					
Client ID:	Run ID: VOA9_330267	SeqNo: 4889160	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	47.45	1.0	50	0	94.9	81 - 118				
Surr: 4-Bromofluorobenzene	49.38	1.0	50	0	98.8	85 - 114				
Surr: Dibromofluoromethane	45.18	1.0	50	0	90.4	80 - 119				
Surr: Toluene-d8	52.68	1.0	50	0	105	89 - 112				



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Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
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QC BATCH REPORT

Batch ID: R330267		Instrument: VOA9		Method: SW8260						
LCS	Sample ID: VLCSW-1812031	Units: UG/L			Analysis Date: 31-Dec-2018 10:58					
Client ID:	Run ID: VOA9_330267	SeqNo: 4889159	PrepDate:	DF: 1						
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	21.01	1.0	20	0	105	78 - 124				
1,1,1-Trichloroethane	21.57	1.0	20	0	108	74 - 131				
1,1,2,2-Tetrachloroethane	20.17	1.0	20	0	101	71 - 121				
1,1,2-Trichloroethane	21.99	1.0	20	0	110	80 - 119				
1,1-Dichloroethane	21.5	1.0	20	0	108	77 - 125				
1,1-Dichloroethene	20.64	1.0	20	0	103	71 - 131				
1,1-Dichloropropene	21.1	1.0	20	0	105	78 - 125				
1,2,3-Trichlorobenzene	19.33	1.0	20	0	96.7	69 - 129				
1,2,3-Trichloropropane	20.54	1.0	20	0	103	73 - 122				
1,2,4-Trichlorobenzene	19.92	1.0	20	0	99.6	69 - 130				
1,2,4-Trimethylbenzene	21.03	1.0	20	0	105	76 - 124				
1,2-Dibromo-3-chloropropane	17.85	1.0	20	0	89.2	62 - 128				
1,2-Dibromoethane	22.16	1.0	20	0	111	77 - 121				
1,2-Dichlorobenzene	20.46	1.0	20	0	102	80 - 119				
1,2-Dichloroethane	22.41	1.0	20	0	112	73 - 128				
1,2-Dichloropropane	21.8	1.0	20	0	109	78 - 122				
1,3,5-Trimethylbenzene	20.81	1.0	20	0	104	75 - 124				
1,3-Dichlorobenzene	20.32	1.0	20	0	102	80 - 119				
1,3-Dichloropropane	22.11	1.0	20	0	111	80 - 119				
1,4-Dichlorobenzene	19.89	1.0	20	0	99.5	79 - 118				
2,2-Dichloropropane	22.68	1.0	20	0	113	60 - 139				
2-Butanone	39.44	2.0	40	0	98.6	56 - 143				
2-Chlorotoluene	20.84	1.0	20	0	104	79 - 122				
2-Hexanone	42.42	2.0	40	0	106	57 - 139				
4-Chlorotoluene	21.17	1.0	20	0	106	78 - 122				
4-Isopropyltoluene	20.1	1.0	20	0	100	77 - 127				
4-Methyl-2-pentanone	42.3	2.0	40	0	106	67 - 130				
Acetone	37.47	2.0	40	0	93.7	39 - 160				
Benzene	22.04	1.0	20	0	110	79 - 120				
Bromobenzene	20.81	1.0	20	0	104	80 - 120				
Bromochloromethane	22.95	1.0	20	0	115	78 - 123				
Bromodichloromethane	22.45	1.0	20	0	112	79 - 125				
Bromoform	19.28	1.0	20	0	96.4	66 - 130				
Bromomethane	25.45	1.0	20	0	127	53 - 141				



ALS Houston, US

Date: 09-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121264

QC BATCH REPORT

Batch ID: R330267		Instrument: VOA9		Method: SW8260						
LCS	Sample ID: VLCSW-1812031	Units: UG/L			Analysis Date: 31-Dec-2018 10:58					
Client ID:	Run ID: VOA9_330267	SeqNo: 4889159	PrepDate:	DF: 1						
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	42.23	2.0	40	0	106	64 - 133				
Carbon tetrachloride	20	1.0	20	0	100	72 - 136				
Chlorobenzene	21.8	1.0	20	0	109	82 - 118				
Chloroethane	21.72	1.0	20	0	109	60 - 138				
Chloroform	21.75	1.0	20	0	109	79 - 124				
Chloromethane	26.43	1.0	20	0	132	50 - 139				
cis-1,2-Dichloroethene	21.48	1.0	20	0	107	78 - 123				
cis-1,3-Dichloropropene	21.22	1.0	20	0	106	75 - 124				
Dibromochloromethane	20.77	1.0	20	0	104	74 - 126				
Dibromomethane	22.12	1.0	20	0	111	79 - 123				
Dichlorodifluoromethane	19.24	1.0	20	0	96.2	32 - 152				
Ethylbenzene	22.02	1.0	20	0	110	79 - 121				
Hexachlorobutadiene	18.3	1.0	20	0	91.5	66 - 134				
Isopropylbenzene	21.32	1.0	20	0	107	72 - 131				
m,p-Xylene	44.34	2.0	40	0	111	80 - 121				
Methylene chloride	21.67	2.0	20	0	108	74 - 124				
Naphthalene	19.18	1.0	20	0	95.9	61 - 128				
n-Butylbenzene	19.39	1.0	20	0	97.0	75 - 128				
n-Propylbenzene	20.43	1.0	20	0	102	76 - 126				
o-Xylene	22.18	1.0	20	0	111	78 - 122				
sec-Butylbenzene	19.64	1.0	20	0	98.2	77 - 126				
Styrene	23.06	1.0	20	0	115	78 - 123				
tert-Butylbenzene	19.86	1.0	20	0	99.3	78 - 124				
Tetrachloroethene	19.81	1.0	20	0	99.0	74 - 129				
Toluene	22.13	1.0	20	0	111	80 - 121				
trans-1,2-Dichloroethene	21.37	1.0	20	0	107	75 - 124				
trans-1,3-Dichloropropene	20.96	1.0	20	0	105	73 - 127				
Trichloroethene	21.57	1.0	20	0	108	79 - 123				
Trichlorofluoromethane	21.14	1.0	20	0	106	65 - 141				
Vinyl chloride	21.49	1.0	20	0	107	58 - 137				
Surr: 1,2-Dichloroethane-d4	50.59	1.0	50	0	101	81 - 118				
Surr: 4-Bromofluorobenzene	53.19	1.0	50	0	106	85 - 114				
Surr: Dibromofluoromethane	51.55	1.0	50	0	103	80 - 119				
Surr: Toluene-d8	47.66	1.0	50	0	95.3	89 - 112				



ALS Houston, US

Date: 09-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121264

QC BATCH REPORT

Batch ID: R330267		Instrument: VOA9		Method: SW8260						
MS	Sample ID: HS18121264-01MS	Units: UG/L			Analysis Date: 31-Dec-2018 14:40					
Client ID: MW10_121918	Run ID: VOA9_330267	SeqNo: 4889329	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	26.19	1.0	20	0	131	78 - 124				S
1,1,1-Trichloroethane	27.17	1.0	20	0	136	74 - 131				S
1,1,2,2-Tetrachloroethane	26.68	1.0	20	0	133	71 - 121				S
1,1,2-Trichloroethane	27.59	1.0	20	0	138	80 - 119				S
1,1-Dichloroethane	26.24	1.0	20	0	131	77 - 125				S
1,1-Dichloroethene	25.85	1.0	20	0	129	71 - 131				S
1,1-Dichloropropene	28.95	1.0	20	0	145	78 - 125				S
1,2,3-Trichlorobenzene	25.44	1.0	20	0	127	69 - 129				S
1,2,3-Trichloropropane	26.31	1.0	20	0	132	73 - 122				S
1,2,4-Trichlorobenzene	26.19	1.0	20	0	131	69 - 130				S
1,2,4-Trimethylbenzene	28.84	1.0	20	0	144	76 - 124				S
1,2-Dibromo-3-chloropropane	22.99	1.0	20	0	115	62 - 128				S
1,2-Dibromoethane	27.66	1.0	20	0	138	77 - 121				S
1,2-Dichlorobenzene	26.75	1.0	20	0	134	80 - 119				S
1,2-Dichloroethane	28.09	1.0	20	0	140	73 - 128				S
1,2-Dichloropropane	27.36	1.0	20	0	137	78 - 122				S
1,3,5-Trimethylbenzene	29.11	1.0	20	0	146	75 - 124				S
1,3-Dichlorobenzene	27.02	1.0	20	0	135	80 - 119				S
1,3-Dichloropropane	27.64	1.0	20	0	138	80 - 119				S
1,4-Dichlorobenzene	26.23	1.0	20	0	131	79 - 118				S
2,2-Dichloropropane	27.09	1.0	20	0	135	60 - 139				S
2-Butanone	48.65	2.0	40	0	122	56 - 143				S
2-Chlorotoluene	28.43	1.0	20	0	142	79 - 122				S
2-Hexanone	54.15	2.0	40	0	135	57 - 139				S
4-Chlorotoluene	28.54	1.0	20	0	143	78 - 122				S
4-Isopropyltoluene	29.28	1.0	20	0	146	77 - 127				S
4-Methyl-2-pentanone	53.68	2.0	40	0	134	67 - 130				S
Acetone	50.88	2.0	40	0	127	39 - 160				S
Benzene	28.2	1.0	20	0	141	79 - 120				S
Bromobenzene	27.08	1.0	20	0	135	80 - 120				S
Bromochloromethane	27.9	1.0	20	0	140	78 - 123				S
Bromodichloromethane	27.08	1.0	20	0	135	79 - 125				S
Bromoform	23.38	1.0	20	0	117	66 - 130				S
Bromomethane	30.14	1.0	20	0	151	53 - 141				S



ALS Houston, US

Date: 09-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121264

QC BATCH REPORT

Batch ID: R330267		Instrument: VOA9		Method: SW8260						
MS	Sample ID: HS18121264-01MS	Units: UG/L			Analysis Date: 31-Dec-2018 14:40					
Client ID: MW10_121918	Run ID: VOA9_330267	SeqNo: 4889329	PrepDate:	DF: 1						
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	50.88	2.0	40	0	127	64 - 133				
Carbon tetrachloride	26.85	1.0	20	0	134	72 - 136				
Chlorobenzene	27.64	1.0	20	0	138	82 - 118				S
Chloroethane	25.74	1.0	20	0	129	60 - 138				
Chloroform	26.27	1.0	20	0	131	79 - 124				S
Chloromethane	27.92	1.0	20	0	140	50 - 139				S
cis-1,2-Dichloroethene	26.41	1.0	20	0	132	78 - 123				S
cis-1,3-Dichloropropene	24.7	1.0	20	0	123	75 - 124				
Dibromochloromethane	24.95	1.0	20	0	125	74 - 126				
Dibromomethane	27.29	1.0	20	0	136	79 - 123				S
Dichlorodifluoromethane	22.22	1.0	20	0	111	32 - 152				
Ethylbenzene	28.77	1.0	20	0	144	79 - 121				S
Hexachlorobutadiene	24.63	1.0	20	0	123	66 - 134				
Isopropylbenzene	29.94	1.0	20	0	150	72 - 131				S
m,p-Xylene	58.23	2.0	40	0	146	80 - 121				S
Methylene chloride	26.15	2.0	20	0	131	74 - 124				S
Naphthalene	24.93	1.0	20	0	125	61 - 128				
n-Butylbenzene	28.82	1.0	20	0	144	75 - 128				S
n-Propylbenzene	29.64	1.0	20	0	148	76 - 126				S
o-Xylene	28.96	1.0	20	0	145	78 - 122				S
sec-Butylbenzene	29.39	1.0	20	0	147	77 - 126				S
Styrene	29.48	1.0	20	0	147	78 - 123				S
tert-Butylbenzene	29.25	1.0	20	0	146	78 - 124				S
Tetrachloroethene	27.41	1.0	20	0	137	74 - 129				S
Toluene	28.9	1.0	20	0	145	80 - 121				S
trans-1,2-Dichloroethene	26.31	1.0	20	0	132	75 - 124				S
trans-1,3-Dichloropropene	24.4	1.0	20	0	122	73 - 127				
Trichloroethene	30.54	1.0	20	0	153	79 - 123				S
Trichlorofluoromethane	27	1.0	20	0	135	65 - 141				
Vinyl chloride	26.26	1.0	20	0	131	58 - 137				
Surr: 1,2-Dichloroethane-d4	47.52	1.0	50	0	95.0	81 - 118				
Surr: 4-Bromofluorobenzene	51.67	1.0	50	0	103	85 - 114				
Surr: Dibromofluoromethane	45.77	1.0	50	0	91.5	80 - 119				
Surr: Toluene-d8	52.87	1.0	50	0	106	89 - 112				



ALS Houston, US

Date: 09-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121264

QC BATCH REPORT

Batch ID: R330267		Instrument: VOA9		Method: SW8260							
MSD		Sample ID: HS18121264-01MSD		Units: UG/L		Analysis Date: 31-Dec-2018 15:05					
Client ID: MW10_121918		Run ID: VOA9_330267		SeqNo: 4889330		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	24.96	1.0	20	0	125	78 - 124	26.19	4.81	20	S	
1,1,1-Trichloroethane	25.56	1.0	20	0	128	74 - 131	27.17	6.1	20		
1,1,2,2-Tetrachloroethane	25.68	1.0	20	0	128	71 - 121	26.68	3.83	20	S	
1,1,2-Trichloroethane	26.47	1.0	20	0	132	80 - 119	27.59	4.16	20	S	
1,1-Dichloroethane	24.72	1.0	20	0	124	77 - 125	26.24	5.96	20		
1,1-Dichloroethene	24.84	1.0	20	0	124	71 - 131	25.85	3.99	20		
1,1-Dichloropropene	27.15	1.0	20	0	136	78 - 125	28.95	6.41	20	S	
1,2,3-Trichlorobenzene	24.52	1.0	20	0	123	69 - 129	25.44	3.66	20		
1,2,3-Trichloropropane	24.73	1.0	20	0	124	73 - 122	26.31	6.19	20	S	
1,2,4-Trichlorobenzene	25.58	1.0	20	0	128	69 - 130	26.19	2.34	20		
1,2,4-Trimethylbenzene	27.37	1.0	20	0	137	76 - 124	28.84	5.23	20	S	
1,2-Dibromo-3-chloropropane	21.83	1.0	20	0	109	62 - 128	22.99	5.2	20		
1,2-Dibromoethane	26.75	1.0	20	0	134	77 - 121	27.66	3.34	20	S	
1,2-Dichlorobenzene	25.49	1.0	20	0	127	80 - 119	26.75	4.83	20	S	
1,2-Dichloroethane	26.65	1.0	20	0	133	73 - 128	28.09	5.29	20	S	
1,2-Dichloropropane	26.12	1.0	20	0	131	78 - 122	27.36	4.63	20	S	
1,3,5-Trimethylbenzene	27.82	1.0	20	0	139	75 - 124	29.11	4.52	20	S	
1,3-Dichlorobenzene	25.46	1.0	20	0	127	80 - 119	27.02	5.97	20	S	
1,3-Dichloropropane	26.39	1.0	20	0	132	80 - 119	27.64	4.62	20	S	
1,4-Dichlorobenzene	25.08	1.0	20	0	125	79 - 118	26.23	4.48	20	S	
2,2-Dichloropropane	25.47	1.0	20	0	127	60 - 139	27.09	6.17	20		
2-Butanone	46.6	2.0	40	0	116	56 - 143	48.65	4.31	20		
2-Chlorotoluene	26.7	1.0	20	0	133	79 - 122	28.43	6.27	20	S	
2-Hexanone	52.41	2.0	40	0	131	57 - 139	54.15	3.26	20		
4-Chlorotoluene	27.28	1.0	20	0	136	78 - 122	28.54	4.53	20	S	
4-Isopropyltoluene	27.98	1.0	20	0	140	77 - 127	29.28	4.53	20	S	
4-Methyl-2-pentanone	52.28	2.0	40	0	131	67 - 130	53.68	2.63	20	S	
Acetone	41.28	2.0	40	0	103	39 - 160	50.88	20.8	20	R	
Benzene	26.52	1.0	20	0	133	79 - 120	28.2	6.14	20	S	
Bromobenzene	25.45	1.0	20	0	127	80 - 120	27.08	6.2	20	S	
Bromochloromethane	25.84	1.0	20	0	129	78 - 123	27.9	7.69	20	S	
Bromodichloromethane	25.69	1.0	20	0	128	79 - 125	27.08	5.28	20	S	
Bromoform	22.41	1.0	20	0	112	66 - 130	23.38	4.21	20		
Bromomethane	28.22	1.0	20	0	141	53 - 141	30.14	6.57	20	S	



ALS Houston, US

Date: 09-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121264

QC BATCH REPORT

Batch ID: R330267		Instrument: VOA9		Method: SW8260						
MSD	Sample ID: HS18121264-01MSD	Units: UG/L			Analysis Date: 31-Dec-2018 15:05					
Client ID: MW10_121918	Run ID: VOA9_330267	SeqNo: 4889330	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	50.88	10.8	20	
Carbon tetrachloride	25.35	1.0	20	0	127	72 - 136	26.85	5.76	20	
Chlorobenzene	26.5	1.0	20	0	133	82 - 118	27.64	4.18	20	S
Chloroethane	25.66	1.0	20	0	128	60 - 138	25.74	0.282	20	
Chloroform	24.67	1.0	20	0	123	79 - 124	26.27	6.3	20	
Chloromethane	26.86	1.0	20	0	134	50 - 139	27.92	3.85	20	
cis-1,2-Dichloroethene	24.5	1.0	20	0	123	78 - 123	26.41	7.48	20	
cis-1,3-Dichloropropene	23.56	1.0	20	0	118	75 - 124	24.7	4.74	20	
Dibromochloromethane	23.79	1.0	20	0	119	74 - 126	24.95	4.75	20	
Dibromomethane	25.29	1.0	20	0	126	79 - 123	27.29	7.61	20	S
Dichlorodifluoromethane	20.51	1.0	20	0	103	32 - 152	22.22	8.02	20	
Ethylbenzene	27.32	1.0	20	0	137	79 - 121	28.77	5.16	20	S
Hexachlorobutadiene	23.44	1.0	20	0	117	66 - 134	24.63	4.95	20	
Isopropylbenzene	28.41	1.0	20	0	142	72 - 131	29.94	5.23	20	S
m,p-Xylene	55.09	2.0	40	0	138	80 - 121	58.23	5.55	20	S
Methylene chloride	24.35	2.0	20	0	122	74 - 124	26.15	7.12	20	
Naphthalene	24.13	1.0	20	0	121	61 - 128	24.93	3.26	20	
n-Butylbenzene	27.44	1.0	20	0	137	75 - 128	28.82	4.9	20	S
n-Propylbenzene	28.34	1.0	20	0	142	76 - 126	29.64	4.49	20	S
o-Xylene	27.27	1.0	20	0	136	78 - 122	28.96	6.01	20	S
sec-Butylbenzene	28.05	1.0	20	0	140	77 - 126	29.39	4.66	20	S
Styrene	27.9	1.0	20	0	139	78 - 123	29.48	5.49	20	S
tert-Butylbenzene	27.54	1.0	20	0	138	78 - 124	29.25	6.02	20	S
Tetrachloroethene	26.05	1.0	20	0	130	74 - 129	27.41	5.09	20	S
Toluene	27.57	1.0	20	0	138	80 - 121	28.9	4.72	20	S
trans-1,2-Dichloroethene	24.48	1.0	20	0	122	75 - 124	26.31	7.21	20	
trans-1,3-Dichloropropene	23.39	1.0	20	0	117	73 - 127	24.4	4.2	20	
Trichloroethene	27.43	1.0	20	0	137	79 - 123	30.54	10.7	20	S
Trichlorofluoromethane	26.21	1.0	20	0	131	65 - 141	27	2.98	20	
Vinyl chloride	25.5	1.0	20	0	128	58 - 137	26.26	2.94	20	
Surr: 1,2-Dichloroethane-d4	47.2	1.0	50	0	94.4	81 - 118	47.52	0.682	20	
Surr: 4-Bromofluorobenzene	51.24	1.0	50	0	102	85 - 114	51.67	0.843	20	
Surr: Dibromofluoromethane	46.19	1.0	50	0	92.4	80 - 119	45.77	0.911	20	
Surr: Toluene-d8	53.15	1.0	50	0	106	89 - 112	52.87	0.524	20	



ALS Houston, US

Date: 09-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121264

QC BATCH REPORT**Batch ID:** R330267**Instrument:** VOA9**Method:** SW8260

The following samples were analyzed in this batch:

HS18121264-01	HS18121264-02	HS18121264-03	HS18121264-04
HS18121264-05	HS18121264-06	HS18121264-07	HS18121264-08
HS18121264-09	HS18121264-10	HS18121264-11	



ALS Houston, US

Date: 09-Jan-19

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS18121264

**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 Quantitation 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



Sample Receipt Checklist

Client Name: Bhate Environmental
 Work Order: HS18121264

Date/Time Received: **21-Dec-2018 09:10**
 Received by: **JRM**

Checklist completed by: Nilesh D. Ranchod 21-Dec-2018 Reviewed by: Sonia West 24-Dec-2018
 eSignature Date eSignature 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): 2.3C / 2.7C UC/C IR # 11
 Cooler(s)/Kit(s): 44159
 Date/Time sample(s) sent to storage: 12/21/2018 4:45PM

- 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:





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: NWQ1312.0150
 COC Number(1): _____
 LIMS Number: _____

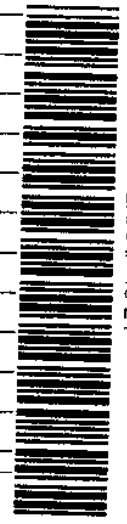
Facility/Base I.D.: LHAAP Sample Analysis Requested ⁽¹⁾ Quality Assurance Samples ⁽²⁾

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-mm-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	1,1-DIOXANE								Ambient Blank Lot Control Number	Equipment Blank Lot Control Number	Trip Blank Lot Control Number	Cooler ID	
MW10-121918		19 Dec 2018	0940	-	N		WG	4	X	X														
18CPTMW23-121918		19 Dec 2018	1005	-	N		WG	4	X	X														
18CPTMW15-121918		19 Dec 2018	1100	-	N		WG	4	X	X														
18W08-121918		19 Dec 2018	1200	-	N		WG	4	X	X														
AWD4-121918		19 Dec 2018	1255	-	N		WG	5	X	X	X													
AWD9-121918-a		19 Dec 2018	1255	-	FD		WG	5	X	X	X													
18CPTMW19-121918		19 Dec 2018	1350	-	N		WG	4	X	X														
18CPTMW19-121918-a		19 Dec 2018	1350	-	FD		WG	4	X	X														
18CPTMW22SW-122018		20 Dec 2018	0915	-	N		WG	6	X	X	X	X												
18CPTMW22R-122018		20 Dec 2018	1015	-	N		WG	6	X	X	X	X												
MW20-122018		20 Dec 2018	1105	-	N		WG	4	X	X														




HS18121264
 LHAAP 18 24
 Bhat Environmental Associates, Inc.

COMMENTS: Carrier - 44159 Temp 2.3 11/11 GEO. 4

Relinquished By (Signed)			Date			Time			Received by (signed)			Date			Time			Sample Delivery Details / Laboratory Receipt		
1. <u>Scott Beesinger</u>			12/20/18			1430			1. <u>S. West</u>			12/20/18			1105			Delivered Directly to Lab: _____ Shipped _____ No.: _____		
2. _____			_____			_____			2. _____			_____			_____			Method of Shipment: _____		
3. _____			_____			_____			3. _____			_____			_____			Fed _____ Ex _____ Airbill _____ Number: _____		
																		Analytical Lab: <u>ALS 10450 Stannett Rd, Suite 210 Houston, TX 77099 (281) 530-6656</u>		
																		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 (-) Sample, FD = Field Duplicate (-) Samples, FR = Field Replicate (-) Samples, EB = Equipment Blank (-) Samples, MS = Matrix Spike, SD = Matrix Spike Duplicate, AB = Ambient Blank (-)
 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, SD = 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 (ddmm-yy) 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 10450 Stancliff Rd., Suite 210 Houston, Texas 77099 Tel. +1 281 530 5656 Fax. +1 281 530 5887	CUSTODY SEAL		Seal Broken By: <i>CSM</i>
	Date: <i>12/20/18</i>	Time: <i>1430</i>	Date: <i>12/20/18</i>
	Name: <i>SCOTT BEESINGER</i>		
	Company: <i>BH&C</i>		

44159 DEC 21 2018

Must Deliver Next Business Day
Time and Temperature Sensitive!



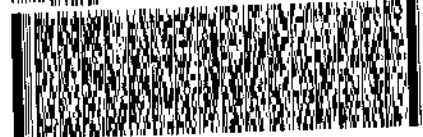
44159

ORIGIN ID:SGRA (903) 930-6193
 SCOTT BEESINGER
 BH&E ENVIRONMENTAL ASSOCIATES
 1203-B EAST GRAND AVE. P#8202
 MARSHALL, TX 75670
 UNITED STATES US

SHIP DATE: 19JUL18
 ACTWT: 1.00 LB MAN
 CAD: 300130/CAFES111
 DIMS: 26x14x14 IN

TO CLIENT SERVICES
 ALS LABORATORY GROUP
 10450 STANCLIFF ROAD
 SUITE 210
 HOUSTON TX 77099
 (281) 530-5656
 REF: LHAAP 50 - BJ

RMA: (|||||)

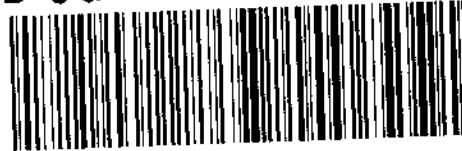


FedEx
 TRACKING 4380 9530 9456

FRI - 21 DEC 10:30A
PRIORITY OVERNIGHT

AB SGRA

77099
TX-US
IAH



FID 6098257 280CC18 GGGA 553C1/F1FC/BCBA





Case Narrative

Method: 6850
Analysis: Perchlorate
Analysis SOP: LC-MS-CLO4
ALS WO ID(s): 1835803; 1835804

Client: ALS Laboratories (Houston, TX)
Matrix: Water
ELMS Batch (HBN): 2190 (230381)

General Set Information: There were eighteen 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. 50 μL 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 0.45 μm Syringe filters.

Holding Times: Holding times were met for all analyses.

Dilutions: Field sample 1835803002 was analyzed and reported from a 1:1,000 dilution. Field sample 1835803003 was analyzed and reported from a 1:10,000 dilution. Field samples 1835804002/05/06/09 were analyzed and reported from 1:100 dilutions. Field samples 1835803004 and 1835804003 were analyzed and reported from a 1:10 dilutions. The reporting limits have been adjusted accordingly.

Method QC data: The method blank (LMB 634843) was less than 1/2 the CRDL. The recovery for the LCS (634844) was within acceptable parameters.





MS/MSD Analysis: MS/MSD was performed on sample 1835803001 (Client ID: HS18121267-01). 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 MS/MSD percent recoveries and relative percent difference (RPD) were within the performance limits.

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 $(A) \times (B)$,

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 03, 2019
Analyst Date





ANALYTICAL REPORT

Report Date: January 03, 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: **34-1835804**

Project ID: 10508/HS18121264

Purchase Order: 10508

Project Manager Kevin W. Griffiths

Client Sample ID	Lab ID	Collect Date	Receive Date	Sampling Site
HS18121264-01	1835804001	12/19/18	12/22/18	HS18121264
HS18121264-02	1835804002	12/19/18	12/22/18	HS18121264
HS18121264-03	1835804003	12/19/18	12/22/18	HS18121264
HS18121264-04	1835804004	12/19/18	12/22/18	HS18121264
HS18121264-05	1835804005	12/19/18	12/22/18	HS18121264
HS18121264-06	1835804006	12/19/18	12/22/18	HS18121264
HS18121264-07	1835804007	12/19/18	12/22/18	HS18121264
HS18121264-08	1835804008	12/19/18	12/22/18	HS18121264
HS18121264-09	1835804009	12/20/18	12/22/18	HS18121264
HS18121264-10	1835804010	12/20/18	12/22/18	HS18121264
HS18121264-11	1835804011	12/20/18	12/22/18	HS18121264

ADDRESS 960 West LeVoy Drive, Salt Lake City, Utah, 84123 USA | PHONE +1 801 266 7700 | FAX +1 801 268 9992

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Environmental 

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

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ANALYTICAL REPORT

Workorder: 34-1835804

Client: ALS Environmental
(Houston)

Project Manager: Kevin W. Griffiths

Analytical Results

Sample ID: HS18121264-01	Sampling Site: HS18121264	Collected: 12/19/2018				
Lab ID: 1835804001	Media: 125 mL Nalgene	Received: 12/22/2018				
Matrix: Water	Sampling Parameter: NA					
Analysis Method - EPA 6850, DoD QSM						
Preparation: Not Applicable	Analysis: EPA 6850, DoD QSM Water Batch: ELMS/2190 (HBN: 230381) Analyzed: 01/02/2019 11:47	Instrument ID: LCMS04 Percent Solid: NA 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: HS18121264-02	Sampling Site: HS18121264	Collected: 12/19/2018				
Lab ID: 1835804002	Media: 125 mL Nalgene	Received: 12/22/2018				
Matrix: Water	Sampling Parameter: NA					
Analysis Method - EPA 6850, DoD QSM						
Preparation: Not Applicable	Analysis: EPA 6850, DoD QSM Water Batch: ELMS/2190 (HBN: 230381) Analyzed: 01/02/2019 12:01	Instrument ID: LCMS04 Percent Solid: NA Report Basis: Wet				
Analyte	Result (ug/L)	DL (ug/L)	LOD (ug/L)	LOQ (ug/L)	Dilution	Qual
Perchlorate	4200	100	200	400	100	

Sample ID: HS18121264-03	Sampling Site: HS18121264	Collected: 12/19/2018				
Lab ID: 1835804003	Media: 125 mL Nalgene	Received: 12/22/2018				
Matrix: Water	Sampling Parameter: NA					
Analysis Method - EPA 6850, DoD QSM						
Preparation: Not Applicable	Analysis: EPA 6850, DoD QSM Water Batch: ELMS/2190 (HBN: 230381) Analyzed: 01/02/2019 12:15	Instrument ID: LCMS04 Percent Solid: NA Report Basis: Wet				
Analyte	Result (ug/L)	DL (ug/L)	LOD (ug/L)	LOQ (ug/L)	Dilution	Qual
Perchlorate	270	10	20	40	10	

Sample ID: HS18121264-04	Sampling Site: HS18121264	Collected: 12/19/2018				
Lab ID: 1835804004	Media: 125 mL Nalgene	Received: 12/22/2018				
Matrix: Water	Sampling Parameter: NA					
Analysis Method - EPA 6850, DoD QSM						
Preparation: Not Applicable	Analysis: EPA 6850, DoD QSM Water Batch: ELMS/2190 (HBN: 230381) Analyzed: 01/02/2019 12:56	Instrument ID: LCMS04 Percent Solid: NA Report Basis: Wet				
Analyte	Result (ug/L)	DL (ug/L)	LOD (ug/L)	LOQ (ug/L)	Dilution	Qual
Perchlorate	45	1.0	2.0	4.0	1	





ANALYTICAL REPORT

Workorder: 34-1835804

Client: ALS Environmental
(Houston)

Project Manager: Kevin W. Griffiths

Analytical Results

Sample ID: HS18121264-05	Sampling Site: HS18121264	Collected: 12/19/2018				
Lab ID: 1835804005	Media: 125 mL Nalgene	Received: 12/22/2018				
Matrix: Water	Sampling Parameter: NA					
Analysis Method - EPA 6850, DoD QSM						
Preparation: Not Applicable	Analysis: EPA 6850, DoD QSM Water Batch: ELMS/2190 (HBN: 230381) Analyzed: 01/02/2019 13:10	Instrument ID: LCMS04 Percent Solid: NA Report Basis: Wet				
Analyte	Result (ug/L)	DL (ug/L)	LOD (ug/L)	LOQ (ug/L)	Dilution	Qual
Perchlorate	1300	100	200	400	100	

Sample ID: HS18121264-06	Sampling Site: HS18121264	Collected: 12/19/2018				
Lab ID: 1835804006	Media: 125 mL Nalgene	Received: 12/22/2018				
Matrix: Water	Sampling Parameter: NA					
Analysis Method - EPA 6850, DoD QSM						
Preparation: Not Applicable	Analysis: EPA 6850, DoD QSM Water Batch: ELMS/2190 (HBN: 230381) Analyzed: 01/02/2019 13:24	Instrument ID: LCMS04 Percent Solid: NA Report Basis: Wet				
Analyte	Result (ug/L)	DL (ug/L)	LOD (ug/L)	LOQ (ug/L)	Dilution	Qual
Perchlorate	1300	100	200	400	100	

Sample ID: HS18121264-07	Sampling Site: HS18121264	Collected: 12/19/2018				
Lab ID: 1835804007	Media: 125 mL Nalgene	Received: 12/22/2018				
Matrix: Water	Sampling Parameter: NA					
Analysis Method - EPA 6850, DoD QSM						
Preparation: Not Applicable	Analysis: EPA 6850, DoD QSM Water Batch: ELMS/2190 (HBN: 230381) Analyzed: 01/02/2019 13:38	Instrument ID: LCMS04 Percent Solid: NA 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: HS18121264-08	Sampling Site: HS18121264	Collected: 12/19/2018				
Lab ID: 1835804008	Media: 125 mL Nalgene	Received: 12/22/2018				
Matrix: Water	Sampling Parameter: NA					
Analysis Method - EPA 6850, DoD QSM						
Preparation: Not Applicable	Analysis: EPA 6850, DoD QSM Water Batch: ELMS/2190 (HBN: 230381) Analyzed: 01/02/2019 13:52	Instrument ID: LCMS04 Percent Solid: NA Report Basis: Wet				
Analyte	Result (ug/L)	DL (ug/L)	LOD (ug/L)	LOQ (ug/L)	Dilution	Qual
Perchlorate	1.1	1.0	2.0	4.0	1	J





ANALYTICAL REPORT

Workorder: 34-1835804

Client: ALS Environmental
(Houston)

Project Manager: Kevin W. Griffiths

Analytical Results

Sample ID: HS18121264-09	Sampling Site: HS18121264	Collected: 12/20/2018				
Lab ID: 1835804009	Media: 125 mL Nalgene	Received: 12/22/2018				
Matrix: Water	Sampling Parameter: NA					
Analysis Method - EPA 6850, DoD QSM						
Preparation: Not Applicable	Analysis: EPA 6850, DoD QSM Water Batch: ELMS/2190 (HBN: 230381) Analyzed: 01/02/2019 14:05	Instrument ID: LCMS04 Percent Solid: NA Report Basis: Wet				
Analyte	Result (ug/L)	DL (ug/L)	LOD (ug/L)	LOQ (ug/L)	Dilution	Qual
Perchlorate	1900	100	200	400	100	

Sample ID: HS18121264-10	Sampling Site: HS18121264	Collected: 12/20/2018				
Lab ID: 1835804010	Media: 125 mL Nalgene	Received: 12/22/2018				
Matrix: Water	Sampling Parameter: NA					
Analysis Method - EPA 6850, DoD QSM						
Preparation: Not Applicable	Analysis: EPA 6850, DoD QSM Water Batch: ELMS/2190 (HBN: 230381) Analyzed: 01/02/2019 14:19	Instrument ID: LCMS04 Percent Solid: NA 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: HS18121264-11	Sampling Site: HS18121264	Collected: 12/20/2018				
Lab ID: 1835804011	Media: 125 mL Nalgene	Received: 12/22/2018				
Matrix: Water	Sampling Parameter: NA					
Analysis Method - EPA 6850, DoD QSM						
Preparation: Not Applicable	Analysis: EPA 6850, DoD QSM Water Batch: ELMS/2190 (HBN: 230381) Analyzed: 01/02/2019 14:33	Instrument ID: LCMS04 Percent Solid: NA 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

Comments

Quality Control: EPA 6850, DoD QSM - (HBN: 230381)

Field sample 1835803002 was analyzed and reported from a 1:1,000 dilution. Field sample 1835803003 was analyzed and reported from a 1:10,000 dilution. Field samples 1835804002/05/06/09 were analyzed and reported from 1:100 dilutions. Field samples 1835803004 and 1835804003 were analyzed and reported from a 1:10 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 01/03/2019 12:39	/S/ Stephen Brose 01/03/2019 14:25





ANALYTICAL REPORT

Workorder: 34-1835804

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: als.lt.lab@ALSGlobal.com
Web: www.alslc.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: 34-1835804

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

00925572

Analysis Information

Workorder: 1835804

Limits: Client SOW/Contract Specified
Basis: DoD QSM

Preparation: NA
Batch: NA
Prepared By: NA

Analysis: EPA 6850, DoD QSM
Batch: ELMS/2190 (HBN: 230381)
Analyzed By: Thomas Bosch

Blank

LMB: 634843 Analyzed: 01/02/2019 09:14 Units: ug/L			
Analyte	Result	MDL	RL
Perchlorate	ND	1	2.00

Laboratory Control Sample

LCS: 634844 Analyzed: 01/02/2019 09:27 Dilution: 1 Units: ug/L				
Analyte	Result	Target	% Rec	QC Limits
Perchlorate	4.81	5.00	96.1	78.8 123.8

Matrix Spike - Matrix Spike Duplicate

Sample: 1835803001 Analyzed: 01/02/2019 09:43 Dilution: 1 Units: ug/L			MS: 634845 Analyzed: 01/02/2019 09:57 Dilution: 1 Units: ug/L			MSD: 634846 Analyzed: 01/02/2019 10:11 Dilution: 1 Units: ug/L			
Analyte	Result	Result	Target	% Rec	QC Limits	Result	% Rec	RPD	QC Limits
Perchlorate	ND	4.18	5	83.6	78.8 123.8	4.15	83.0	0.66	0.0 20.0

Continuing Calibration Verification

CCV: 634840 Analyzed: 01/02/2019 08:31 Units: ug/L Criteria: ± 15%			CCV: 634847 Analyzed: 01/02/2019 12:29 Units: ug/L Criteria: ± 15%			CCV: 634849 Analyzed: 01/02/2019 15:14 Units: ug/L Criteria: ± 15%			
Analyte	Result	Target	% Rec.	Result	Target	% Rec.	Result	Target	% Rec.
Perchlorate	25.6	25.0	102	26.3	25.0	105	26.5	25.0	106

Interference Check Sample

ICSA: 634842 Analyzed: 01/02/2019 09:00 Units: ug/L Criteria: ± 30%			
Analyte	Result	Target	% Rec.
Perchlorate	1.14	1.00	114

Limit of Detection Verification

LODV: 634841 Analyzed: 01/02/2019 08:46 Units: ug/L Criteria: ± 50%			LODV: 634848 Analyzed: 01/02/2019 12:43 Units: ug/L Criteria: ± 50%			LODV: 634850 Analyzed: 01/02/2019 15:28 Units: ug/L Criteria: ± 50%			
Analyte	Result	Target	% Rec.	Result	Target	% Rec.	Result	Target	% Rec.
Perchlorate	1.08	1.00	108	1.09	1.00	109	1.09	1.00	109



Quality Control Sample Batch Report

00925573

Analysis Information

Workorder: 1835804

Limits: Client SOW/Contract Specified

Preparation: NA

Analysis: EPA 6850, DoD QSM

Basis: DoD QSM

Batch: NA

Batch: ELMS/2190 (HBN: 230381)

Prepared By: NA

Analyzed By: Thomas Bosch

Comments

Field sample 1835803002 was analyzed and reported from a 1:1,000 dilution. Field sample 1835803003 was analyzed and reported from a 1:10,000 dilution. Field samples 1835804002/05/06/09 were analyzed and reported from 1:100 dilutions. Field samples 1835803004 and 1835804003 were analyzed and reported from a 1:10 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 01/03/2019 12:39	/S/ Stephen Brose 01/03/2019 14:25

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



1835804



18698/#2

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: 10508

SUBCONTRACT TO:

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

Phone: +1 801 266 7700

1835804

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: HS18121264
TSR: Danielle Winnings

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	HS18121264-01	MW10_121918	Groundwater	19 Dec 2018 09:10
	SUB_Perch-6850			08 Jan 2019
2.	HS18121264-02	18CPTMW23_121918	Groundwater	19 Dec 2018 10:05
	SUB_Perch-6850			08 Jan 2019
3.	HS18121264-03	18CPTMW15_121918	Groundwater	19 Dec 2018 11:00
	SUB_Perch-6850			08 Jan 2019
4.	HS18121264-04	18WW08_121918	Groundwater	19 Dec 2018 12:00
	SUB_Perch-6850			08 Jan 2019
5.	HS18121264-05	AWD4_121918	Groundwater	19 Dec 2018 12:55
	SUB_Perch-6850			08 Jan 2019
6.	HS18121264-06	AWD4_121918-a	Groundwater	19 Dec 2018 12:55
	SUB_Perch-6850			08 Jan 2019
7.	HS18121264-07	18CPTMW19_121918	Groundwater	19 Dec 2018 13:50
	SUB_Perch-6850			08 Jan 2019
8.	HS18121264-08	18CPTMW19_121918_a	Groundwater	19 Dec 2018 13:50
	SUB_Perch-6850			08 Jan 2019
9.	HS18121264-09	18CPTMW22SW_122018	Groundwater	20 Dec 2018 09:15

RIGHT SOLUTIONS | RIGHT PARTNER





Subcontract Chain of Custody

COC ID: 10508

LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
ANALYSIS REQUESTED			DUE DATE
SUB_Perch-6850			08 Jan 2019
10. HS18121264-10	18CPTMW22R_122018	Groundwater	20 Dec 2018 10:15
SUB_Perch-6850			08 Jan 2019
11. HS18121264-11	MW20_122018	Groundwater	20 Dec 2018 11:05
SUB_Perch-6850			08 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: NA
 Received By: *M. Kelly*
 Cooler ID(s): *704*

Date/Time: 12-21-18 18:00
 Date/Time: 12/22/18 18:30
 Temperature(s): 3°



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

COOLER OR CONTAINER INFORMATION CHECKLIST (Fill In or Circle)

Client Name: <u>ALS Hudson</u>		Project/Task/Site: _____							
Date/Time of Receipt: <u>12/22/18 10:20</u>		Number of Coolers Received: <u>1</u>							
Condition of Coolers:	Acceptable/Unacceptable	Temperature Control:	Present/Not Included						
Cooler Custody Seals:	Present/Absent/NA	Location Temp Taken:	Control/Between Samples						
Container Custody Seals:	Intact/Broken/NA	Are all temperatures within project specific guidelines?	Yes/No/NA						
Ice Present:	Present/Absent/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 <u>9154</u>	3 °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: <u>[Signature]</u>		Signature		Printed Name: <u>Murphy</u>		Date: <u>12/22/18</u>		Date	

CLIENT-RELATED INFORMATION

<input type="checkbox"/> Missing Cooler	<input type="checkbox"/> Missing Samples/Bottles	<input type="checkbox"/> Incorrect Preservation	<input type="checkbox"/> Insufficient Sample Volume
<input type="checkbox"/> Cooler Conditions	<input type="checkbox"/> Broken/Leaking Samples	<input type="checkbox"/> pH Criteria Not Met	<input type="checkbox"/> Chain of Custody Problems
<input type="checkbox"/> Missing Paperwork	<input type="checkbox"/> Incorrect Bottle Type	<input type="checkbox"/> Residual Chlorine Present	<input type="checkbox"/> Other:
<input type="checkbox"/> Missing/Incorrect Bottle Labels	<input type="checkbox"/> Cooler Temperatures Out of Range	<input type="checkbox"/> 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: _____ Returned to Sample Receipt by: _____ Date: _____

Printed Name Signature





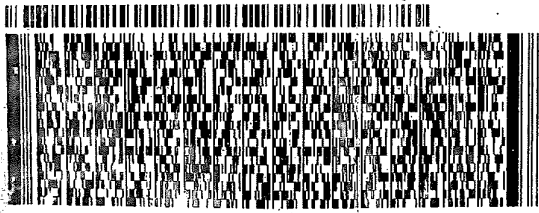
ORIGIN ID: SGRA (28) 530-5656
SHIPPING DEPT
ALS LABORATORY GROUP
10450 STANCLIFF RD
SUITE 210
HOUSTON, TX 77099
UNITED STATES US

SHIP DATE: 21DEC18
ACTWTG: 21.40 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: HS181231264/267 - SUBS RJ



FedEx
Express

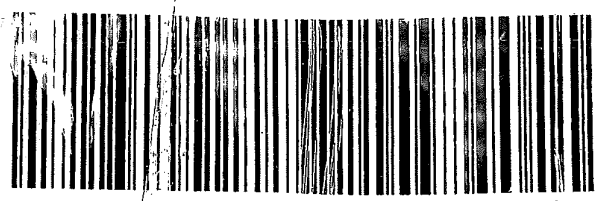


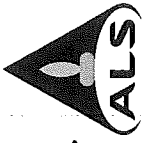
TRK 7 4380 9535 8362
C201

**SATURDAY 12:00
PRIORITY OVERNIGHT**

XO BTFA

84123
UT-US SL





Batch Worklist

HBN: 230381

Instrument:

Created: 1/2/2019 08:19

Batch: ELMS/ 2190



Status: WP

Analyst: T. Bosch

Rule: EPA 6850, DoD QSM Water

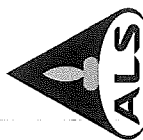
Workorder: 1835803 [ENV_LVL4]

Workorder: 1835804 [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	634840	CCV for HBN 230381 [ELMS/2190]				CCV	3		E685041C3Q	5311		1/7/2019	
2	634841	LODV for HBN 230381 [ELMS/2190]				LODV	3		E6850.D3Q	5311		1/7/2019	
3	634842	ICS for HBN 230381 [ELMS/2190]				ICS	3		E6850.D3Q	5311		1/7/2019	
4	634843	LMB for HBN 230381 [ELMS/2190]				LMB	3		E6850Q413Q	5311		1/7/2019	
5	634844	LCS for HBN 230381 [ELMS/2190]				LCS	3		E6850Q413Q	5311		1/7/2019	
6	1835803001	HS18121267-01				SAMPLE	3	1835803001-A	E6850Q41.3	5480	1/17/2019	1/7/2019	
7	634845	HS18121267-01(1835803001MS)				MS	3		E6850Q413Q	5311		1/7/2019	
8	634846	HS18121267-01(1835803001MSD)				MSD	3		E6850Q413Q	5311		1/7/2019	
9	1835803002	HS18121267-02				SAMPLE	3	1835803002-A	E6850Q41.3	5480	1/17/2019	1/7/2019	
10	1835803003	HS18121267-03				SAMPLE	3	1835803003-A	E6850Q41.3	5480	1/17/2019	1/7/2019	
11	1835803004	HS18121267-05				SAMPLE	3	1835803004-A	E6850Q41.3	5480	1/17/2019	1/7/2019	
12	1835803005	HS18121267-06				SAMPLE	3	1835803005-A	E6850Q41.3	5480	1/17/2019	1/7/2019	
13	1835803006	HS18121267-07				SAMPLE	3	1835803006-A	E6850Q41.3	5480	1/17/2019	1/7/2019	
14	1835803007	HS18121267-08				SAMPLE	3	1835803007-A	E6850Q41.3	5480	1/17/2019	1/7/2019	
15	1835804001	HS18121264-01				SAMPLE	3	1835804001-A	E6850Q41.3	5480	1/16/2019	1/7/2019	
16	1835804002	HS18121264-02				SAMPLE	3	1835804002-A	E6850Q41.3	5480	1/16/2019	1/7/2019	
17	1835804003	HS18121264-03				SAMPLE	3	1835804003-A	E6850Q41.3	5480	1/16/2019	1/7/2019	
18	634847	CCV for HBN 230381 [ELMS/2190]				CCV	3		E685041C3Q	5311		1/7/2019	
19	634848	LODV for HBN 230381 [ELMS/2190]				LODV	3		E6850.D3Q	5311		1/7/2019	
20	1835804004	HS18121264-04				SAMPLE	3	1835804004-A	E6850Q41.3	5480	1/16/2019	1/7/2019	
21	1835804005	HS18121264-05				SAMPLE	3	1835804005-A	E6850Q41.3	5480	1/16/2019	1/7/2019	
22	1835804006	HS18121264-06				SAMPLE	3	1835804006-A	E6850Q41.3	5480	1/16/2019	1/7/2019	
23	1835804007	HS18121264-07				SAMPLE	3	1835804007-A	E6850Q41.3	5480	1/16/2019	1/7/2019	
24	1835804008	HS18121264-08				SAMPLE	3	1835804008-A	E6850Q41.3	5480	1/16/2019	1/7/2019	
25	1835804009	HS18121264-09				SAMPLE	3	1835804009-A	E6850Q41.3	5480	1/17/2019	1/7/2019	
26	1835804010	HS18121264-10				SAMPLE	3	1835804010-A	E6850Q41.3	5480	1/17/2019	1/7/2019	
27	1835804011	HS18121264-11				SAMPLE	3	1835804011-A	E6850Q41.3	5480	1/17/2019	1/7/2019	
28	634849	CCV for HBN 230381 [ELMS/2190]				CCV	3		E685041C3Q	5311		1/7/2019	



Batch Worklist



Pos	Lab ID	Sample ID	Prep Initial	Prep Final	Dust Weight	Type	Mx	Container	Procedure	Mgr	Expire Date	Due Date	Run Date
29	634850	LODV for HBN 230381 [ELMS/2190				LODV	3		E6850..D3Q	5311		17/2019	



ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

Analytical Documentation



ALS Work Order #'s & Sample #()'s: 1835803 (001-07); 1835804 (001-11)
 ELMS Batch/HBN ID: 2190 (230381)
 Prep Date: 12/31/2018 Analysis Date: 01/02/2019 Analyst: T. Bosch
 Analyte: **Perchlorate** Matrix: **Water** Method: **6850**
 Sequence: \\HPCHEM\1\SEQUENCE\CLO4\2019\JAN\02JAN19D.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 634844; Target = 5.0µg/L. ASTM type II water was used for LMB 634843.

MS/MSD: MS/MSD was performed on sample 1835803001 (Client ID: HS18121267-01). 5.0µl of Working Standard Solution Horizon ID 43701 was added to 10.0mL of sample preparation. Spike target = 5.0µg/L.

COMMENTS:

- 1) Results reported in µg/L. Field sample 1835803002 was analyzed and reported from a 1:1,000 dilution. Field sample 1835803003 was analyzed and reported from a 1:10,000 dilution. Field samples 1835804002/05/06/09 were analyzed and reported from 1:100 dilutions. Field samples 1835803004 and 1835804003 were analyzed and reported from a 1:10 dilutions. The reporting limits have been adjusted accordingly.
- 2) All QC, Blank, CCV, and MS/MSD results were within method parameters.
- 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\230381-DoD-ALS-Hstn LCMS4 or through \\ALSLTWS013\DATA\REVIEW\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.

<u>Chromatography (GC, HPLC, LC/MS) Technical Review Criteria</u>	<u>Analyst Initials</u>	<u>Reviewer Initials</u>
Batch(es)/SDG: ELMS: 2190 HBN: 230381		
Sample Set IDs if Applicable: 1835803 1835804		
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	Created By: Thomas Bosch	Amount: 10 mL			
MFG: ALS/SLC	Create Date: 09/18/2018 02:09PM	Expires: 09/18/2019			
MFG Lot: TNB: 09/18/2018		Usable: Yes			
Pipette ID: Not Provided		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	Created By: Thomas Bosch	Amount: 100 mL	
MFG: AccuStandard	Create Date: 09/17/2018 09:09AM	Expires: 07/25/2020	
MFG Lot: 218065075		Usable: No	
Part ID: IC-PER-10X-1		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	Created By: Thomas Bosch	Amount: 10 mL			
MFG: ALS/SLC	Create Date: 09/18/2018 02:09PM	Expires: 09/18/2019			
MFG Lot: TNB: 09/18/2018		Usable: Yes			
Pipette ID: Not Provided		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		Created By: Thomas Bosch		Amount: 10 mL	
MFG: ALS/SLC		Create Date: 05/09/2018 10:05AM		Expires: 05/09/2019	
MFG Lot: TNB: 05/09/2018				Usable: Yes	
Pipette ID: Not Provided				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		Created By: Thomas Bosch		Amount: 10 mL	
MFG: ALS/SLC		Create Date: 05/09/2018 10:05AM		Expires: 05/09/2019	
MFG Lot: TNB: 05/09/2018				Usable: Yes	
Pipette ID: Not Provided				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		Created By: Thomas Bosch	Amount: 100 mL
MFG: Ultra Scientific		Create Date: 05/11/2017 01:05PM	Expires: 03/31/2020
MFG Lot: CP-0860			Usable: Yes
Part ID: ICC-013			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: SDFP-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





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

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.

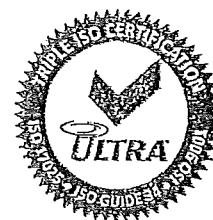
Expiration of Certification:

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.





Certificate of Analysis



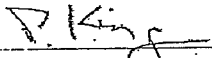
ISO Guide 34 Reference Material

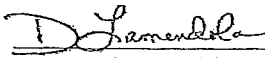
Product Number: ICC-013
Lot Number: CP-0860

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



43659

AccuTrace™ Reference Standard

Catalog No: IC-PER-10X-1
Description: Perchlorate Standard
Element: Perchlorate (ClO₄)
SRM: Ind. Std.
Lot: 218065075
Matrix: Water

Hazards: Refer to SDS for complete safety information

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



Signal Word: None

Component	SRM #	Prepared Concentration (µg/mL)
ClO ₄ Perchlorate	Ind. Std.	1000

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

Page 1 of 1

For use in routine laboratory analysis.

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

QR-ORG/NO-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: PERCHLORIC ACID, SODIUM SALT
(Isotopic Label & Enrichment Specification) (18O4, 90%+) 100 UG/ML IN WATER

Lot Number: SDDG-013

Catalog Number: OLM-7310-S

Product Information

Chemical Purity Specification: $\geq 98\%$

Labeled CAS Number: NA

Unlabeled CAS Number: 7601-89-0

MW*: 130.4

Chemical Formula: NaCl^*O_4

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 $\mu\text{g/mL}$
Chemical Purity of Neat Material(s)	98%
LC/MS for Concentration	109.4 \pm 2.8 $\mu\text{g/mL}$ (k=2)





ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

Raw Data



Batch Report: C:\HPCHEM\1\DATA\02JAN19D\02JAN19S.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	
#*	634840	C	Vial 71	1	Control	1	3.13971e6	8.770	25.61666
#*	634841	L	Vial 72	1	Control	2	1.11085e5	8.793	1.07793
#*	634842	I	Vial 73	1	Control	3	1.14159e5	8.776	1.13765
#*	634843	L	Vial 74	1	Control	4	0.00000	0.000	0.00000
#*	634844	Q	Vial 75	1	Control	5	6.39887e5	8.836	4.80703
#*	1835803001		Vial 76	1	Sample	6	0.00000	0.000	0.00000
#*	634845	3	Vial 77	1	Sample	7	3.09046e5	8.653	4.17790
#*	634846	3	Vial 78	1	Sample	8	3.57526e5	8.643	4.15043
#*	1835803003		Vial 80	1	Sample	10	1.09637e6	8.837	7.62704e4
#*	1835803004		Vial 81	1	Sample	11	6.19138e6	8.548	76.42174 <i>D.H.</i>
#*	1835803005		Vial 82	1	Sample	12	1.95817e4	8.579	4.51222e-1
#*	1835803006		Vial 83	1	Sample	13	0.00000	0.000	0.00000
#*	1835803007		Vial 84	1	Sample	14	2.38805e4	8.649	4.96431e-1
#*	1835804001		Vial 85	1	Sample	15	0.00000	0.000	0.00000
#*	1835804002		Vial 86	1	Sample	16	5.31292e6	8.826	4232.74263
#*	1835804003		Vial 87	1	Sample	17	3.52818e6	8.807	273.54981
#*	634847	C	Vial 71	1	Control	18	3.25892e6	8.799	26.32224
#*	634848	L	Vial 72	1	Control	19	1.10509e5	8.807	1.08511
#*	1835804004		Vial 88	1	Sample	20	4.19669e6	8.712	45.00685
#*	1835804005		Vial 89	1	Sample	21	1.97416e6	8.841	1303.42023
#*	1835804006		Vial 90	1	Sample	22	1.76753e6	8.861	1300.32363
#*	1835804007		Vial 91	1	Sample	23	7.65423e4	8.821	7.83486e-1
#*	1835804008		Vial 92	1	Sample	24	1.29357e5	8.791	1.07045
#*	1835804009		Vial 93	1	Sample	25	2.65596e6	8.841	1877.60201
#*	1835804010		Vial 94	1	Sample	26	6.10464e4	8.832	6.41221e-1
#*	1835804011		Vial 95	1	Sample	27	1.88694e4	8.589	3.79910e-1
#*	1835803002		Vial 96	1	Sample	28	6.59264e6	8.851	4.68399e4
#*	1835803004		Vial 97	1	Sample	29	1.23114e6	8.802	84.46112
#*	634849	C	Vial 71	1	Control	30	3.63727e6	8.817	26.52521
*	634850	L	Vial 72	1	Control	31	1.18393e5	8.851	1.09162

#*	Sample	Location	Inj	SampleType	Run	CLO4-85 Area	CLO4-85 RT	CLO4-85 Amount	
#*	634840	C	Vial 71	1	Control	1	9.01614e5	8.787	24.42735
#*	634841	L	Vial 72	1	Control	2	3.68643e4	8.809	1.06178
#*	634842	I	Vial 73	1	Control	3	4.94335e4	8.798	1.44573
#*	634843	L	Vial 74	1	Control	4	0.00000	0.000	0.00000
#*	634844	Q	Vial 75	1	Control	5	1.97878e5	8.851	4.88305
#*	1835803001		Vial 76	1	Sample	6	0.00000	0.000	0.00000
#*	634845	3	Vial 77	1	Sample	7	1.06690e5	8.666	4.70544
#*	634846	3	Vial 78	1	Sample	8	1.24674e5	8.659	4.71946
#*	1835803003		Vial 80	1	Sample	10	3.31140e5	8.853	7.63099e4
#*	1835803004		Vial 81	1	Sample	11	2.13052e6	8.563	83.49947
#*	1835803005		Vial 82	1	Sample	12	9424.38672	8.616	4.80966e-1
#*	1835803006		Vial 83	1	Sample	13	0.00000	0.000	0.00000
#*	1835803007		Vial 84	1	Sample	14	1.00332e4	8.673	4.95037e-1
#*	1835804001		Vial 85	1	Sample	15	0.00000	0.000	0.00000
#*	1835804002		Vial 86	1	Sample	16	1.55671e6	8.842	4084.79867
#*	1835804003		Vial 87	1	Sample	17	1.05019e6	8.825	269.61528
#*	634847	C	Vial 71	1	Control	18	9.36026e5	8.814	25.09847
#*	634848	L	Vial 72	1	Control	19	3.74319e4	8.823	1.09016
#*	1835804004		Vial 88	1	Sample	20	1.34251e6	8.726	46.97447
#*	1835804005		Vial 89	1	Sample	21	5.70283e5	8.857	1253.08898
#*	1835804006		Vial 90	1	Sample	22	5.10482e5	8.877	1249.83996
#*	1835804007		Vial 91	1	Sample	23	2.98682e4	8.837	8.44733e-1
#*	1835804008		Vial 92	1	Sample	24	4.22791e4	8.808	1.03880
#*	1835804009		Vial 93	1	Sample	25	7.93202e5	8.858	1862.35258
#*	1835804010		Vial 94	1	Sample	26	2.19055e4	8.847	6.11121e-1
#*	1835804011		Vial 95	1	Sample	27	8011.34668	8.602	3.31952e-1
#*	1835803002		Vial 96	1	Sample	28	1.92172e6	8.867	4.49049e4

Batch Report: C:\HPCHEM\1\DATA\02JAN19D\02JAN19S.B

Sample	Location	Inj	SampleType	Run	CLO4-85 Area	CLO4-85 RT	CLO4-85 Amount
#* 1835803004	Vial 97	1	Sample	29	3.75834e5	8.818	85.47038
#* 634849	C Vial 71	1	Control	30	1.04445e6	8.836	25.28456
* 634850	L Vial 72	1	Control	31	3.98543e4	8.870	1.09136

Sample	Location	Inj	SampleType	Run	CLO4-89-ISTD Area	CLO4-89-ISTD RT	CLO4-89-ISTD Amount
#* 634840	C Vial 71	1	Control	1	3.65368e5	8.794	5.00000
#* 634841	L Vial 72	1	Control	2	3.94420e5	8.820	5.00000
#* 634842	I Vial 73	1	Control	3	3.79241e5	8.810	5.00000
#* 634843	L Vial 74	1	Control	4	4.20893e5	8.853	5.00000
#* 634844	Q Vial 75	1	Control	5	4.26710e5	8.864	5.00000
#* 1835803001	Vial 76	1	Sample	6	2.68169e5	8.676	5.00000
#* 634845	3 Vial 77	1	Sample	7	2.39020e5	8.679	5.00000
#* 634846	3 Vial 78	1	Sample	8	2.78456e5	8.668	5.00000
#* 1835803003	Vial 80	1	Sample	10	4.50929e5	8.862	5.00000e4
#* 1835803004	Vial 81	1	Sample	11	2.20890e5	8.571	5.00000
#* 1835803005	Vial 82	1	Sample	12	2.49306e5	8.606	5.00000
#* 1835803006	Vial 83	1	Sample	13	2.52818e5	8.628	5.00000
#* 1835803007	Vial 84	1	Sample	14	2.56283e5	8.674	5.00000
#* 1835804001	Vial 85	1	Sample	15	2.70411e5	8.758	5.00000
#* 1835804002	Vial 86	1	Sample	16	3.62544e5	8.852	500.00000
#* 1835804003	Vial 87	1	Sample	17	3.83138e5	8.834	50.00000
#* 634847	C Vial 71	1	Control	18	3.68547e5	8.823	5.00000
#* 634848	L Vial 72	1	Control	19	3.89154e5	8.835	5.00000
#* 1835804004	Vial 88	1	Sample	20	2.68045e5	8.744	5.00000
#* 1835804005	Vial 89	1	Sample	21	4.65180e5	8.868	500.00000
#* 1835804006	Vial 90	1	Sample	22	4.17523e5	8.886	500.00000
#* 1835804007	Vial 91	1	Sample	23	4.11154e5	8.847	5.00000
#* 1835804008	Vial 92	1	Sample	24	4.63288e5	8.813	5.00000
#* 1835804009	Vial 93	1	Sample	25	4.27982e5	8.865	500.00000
#* 1835804010	Vial 94	1	Sample	26	4.35830e5	8.858	5.00000
#* 1835804011	Vial 95	1	Sample	27	3.40212e5	8.639	5.00000
#* 1835803002	Vial 96	1	Sample	28	4.03292e5	8.875	5000.00000
#* 1835803004	Vial 97	1	Sample	29	4.55349e5	8.826	50.00000
#* 634849	C Vial 71	1	Control	30	4.08019e5	8.845	5.00000
* 634850	L Vial 72	1	Control	31	4.13841e5	8.874	5.00000

*** End of Report ***

Sequence Table:

Method and Injection Info Part:

Line	Location	SampleName	Method	Inj	SampleType	InjVolume	DataFile
====	=====	=====	=====	===	=====	=====	=====
1	Vial 71	634840	CCV@25	CLO4-AQN	1	Ctrl Samp	
2	Vial 72	634841	LODV@1.	CLO4-AQN	1	Ctrl Samp	
3	Vial 73	634842	ICS@1.0	CLO4-AQN	1	Ctrl Samp	
4	Vial 74	634843	LMB	CLO4-AQN	1	Ctrl Samp	
5	Vial 75	634844	QC@5.0	CLO4-AQN	1	Ctrl Samp	
6	Vial 76	1835803001		CLO4-AQN	1	Sample	
7	Vial 77	634845	358031S	CLO4-AQN	1	Sample	
8	Vial 78	634846	358031D	CLO4-AQN	1	Sample	
9	Vial 79	1835803002	10K	CLO4-AQN	1	Sample	
10	Vial 80	1835803003	10K	CLO4-AQN	1	Sample	
11	Vial 81	1835803004		CLO4-AQN	1	Sample	
12	Vial 82	1835803005		CLO4-AQN	1	Sample	
13	Vial 83	1835803006		CLO4-AQN	1	Sample	
14	Vial 84	1835803007		CLO4-AQN	1	Sample	
15	Vial 85	1835804001		CLO4-AQN	1	Sample	
16	Vial 86	1835804002	100	CLO4-AQN	1	Sample	
17	Vial 87	1835804003	10X	CLO4-AQN	1	Sample	
18	Vial 71	634847	CCV@25	CLO4-AQN	1	Ctrl Samp	
19	Vial 72	634848	LODV@1.	CLO4-AQN	1	Ctrl Samp	
20	Vial 88	1835804004		CLO4-AQN	1	Sample	
21	Vial 89	1835804005	100	CLO4-AQN	1	Sample	
22	Vial 90	1835804006	100	CLO4-AQN	1	Sample	
23	Vial 91	1835804007		CLO4-AQN	1	Sample	
24	Vial 92	1835804008		CLO4-AQN	1	Sample	
25	Vial 93	1835804009	100	CLO4-AQN	1	Sample	
26	Vial 94	1835804010		CLO4-AQN	1	Sample	
27	Vial 95	1835804011		CLO4-AQN	1	Sample	
28	Vial 96	1835803002	1K	CLO4-AQN	1	Sample	
29	Vial 97	1835803004	10X	CLO4-AQN	1	Sample	
30	Vial 71	634849	CCV@25	CLO4-AQN	1	Ctrl Samp	
31	Vial 72	634850	LODV@1.	CLO4-AQN	1	Ctrl Samp	

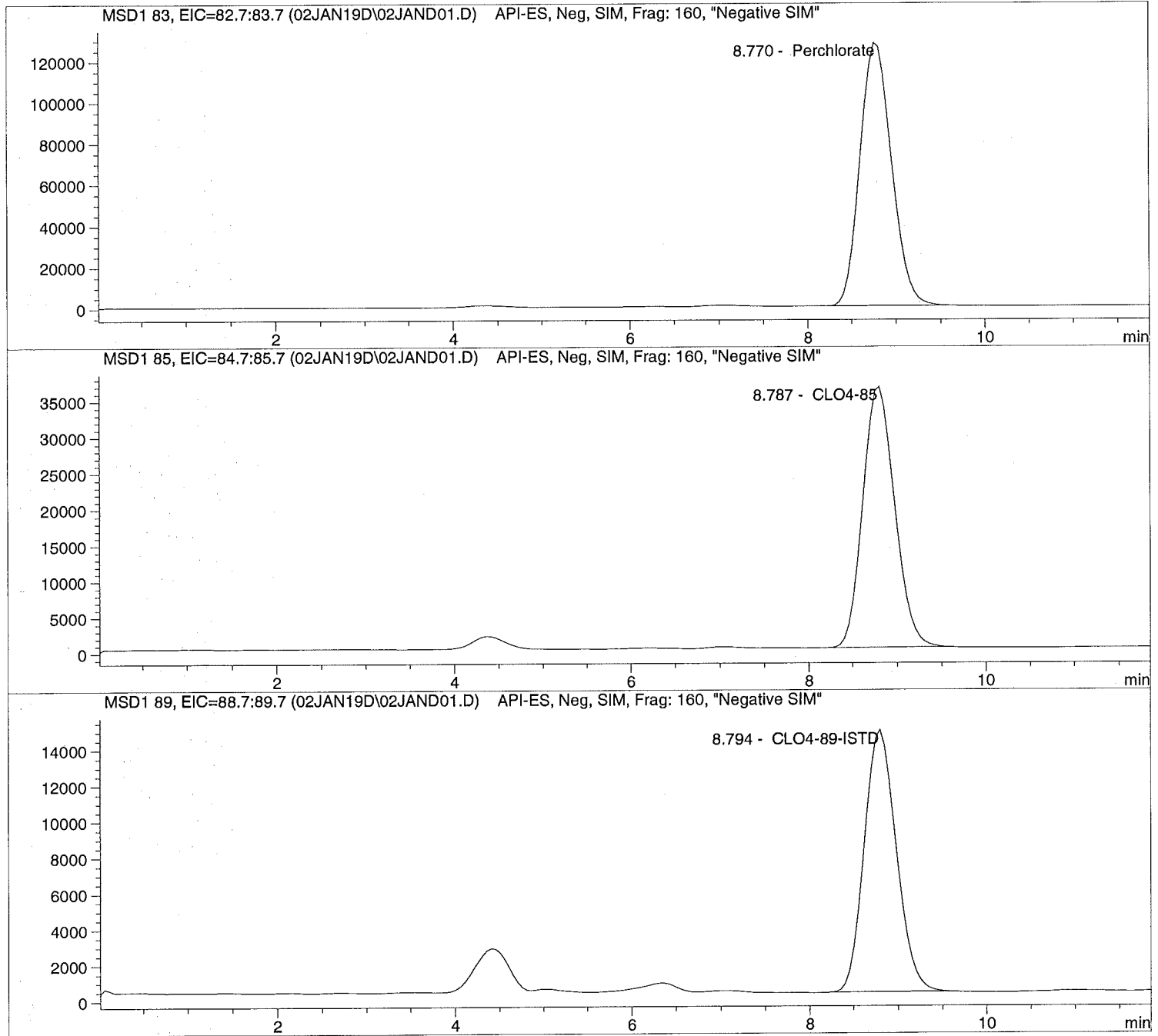


Injection Date: 1/02/2019 08:31:11
Sample Name: 634840 CCV@25
Acq Operator: TNB

Seq Line: 1
Location: Vial 71
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: 1/02/2019 08:31:11      Seq Line: 1
Sample Name: 634840 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
8.770	PBA	3139706.5	25.6167	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.787	BBA	901614.5	24.4274	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.794	PBA	365368.3	5.0000	CLO4-89-ISTD

```

=====
*** End of Report ***
=====

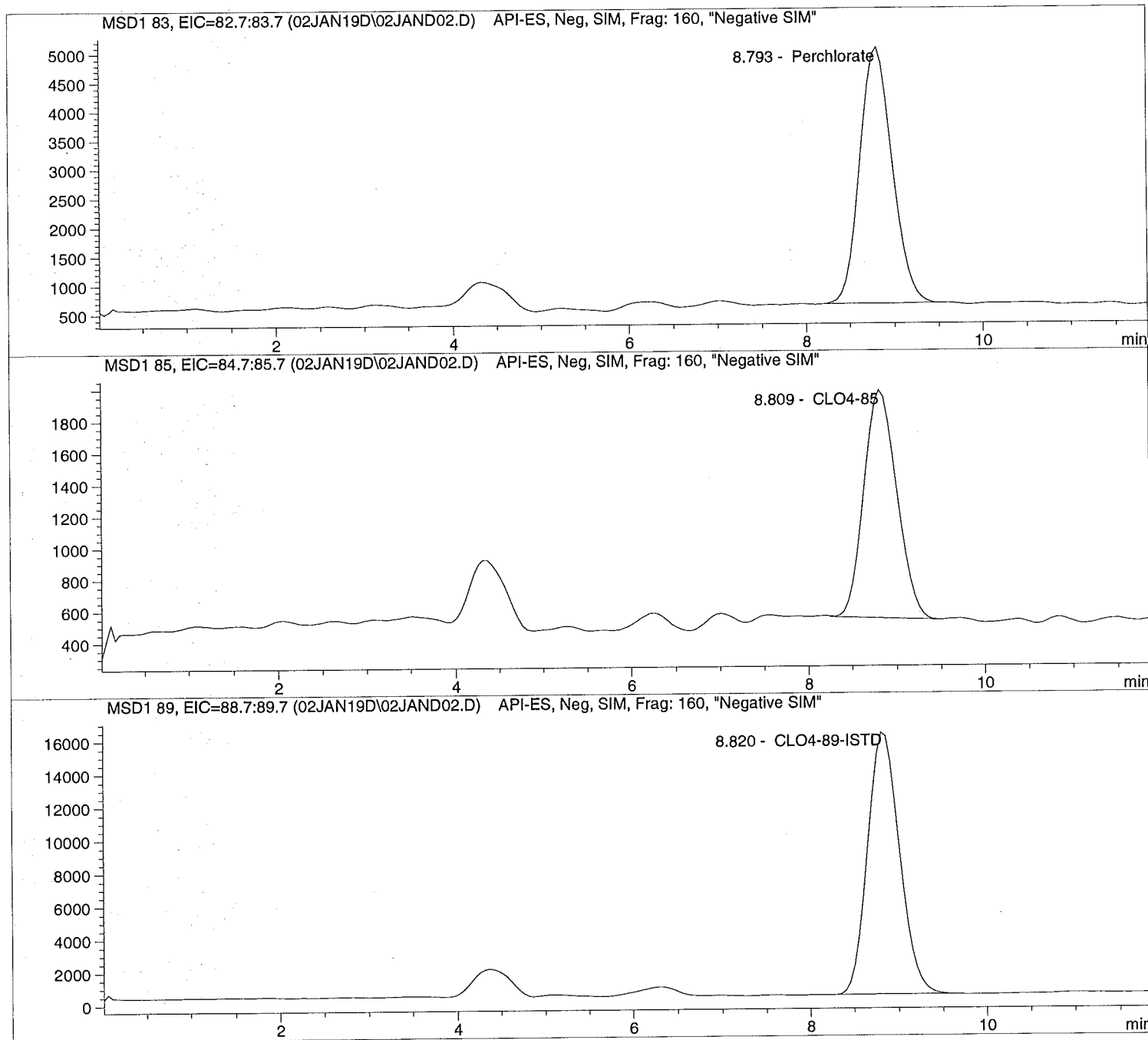
```

Injection Date: 1/02/2019 08:46:28
Sample Name: 634841 LODV@1.
Acq Operator: TNB

Seq Line: 2
Location: Vial 72
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: 1/02/2019 08:46:28      Seq Line:          2
Sample Name:    634841  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
8.793	BBA	111085.5	1.0779	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.809	BBA	36864.3	1.0618	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.820	PBA	394420.2	5.0000	CLO4-89-ISTD

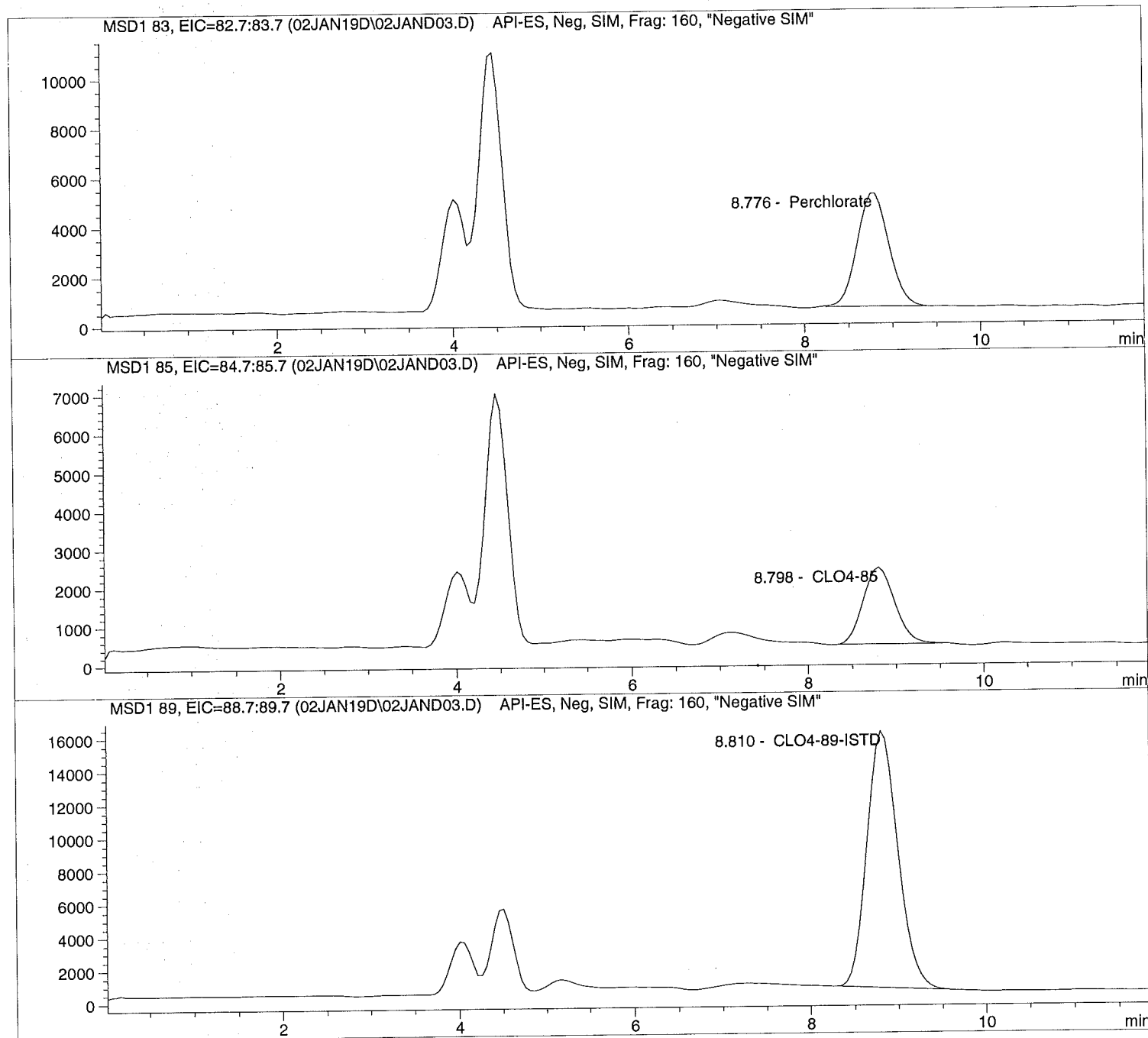
*** End of Report ***

Injection Date: 1/02/2019 09:00:17
Sample Name: 634842 ICS@1.0
Acq Operator: TNB

Seq Line: 3
Location: Vial 73
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: 1/02/2019 09:00:17      Seq Line:          3
Sample Name:    634842 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
8.776	BBA	114159.2	1.1377	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.798	PBA	49433.5	1.4457	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.810	PBA	379240.6	5.0000	CLO4-89-ISTD

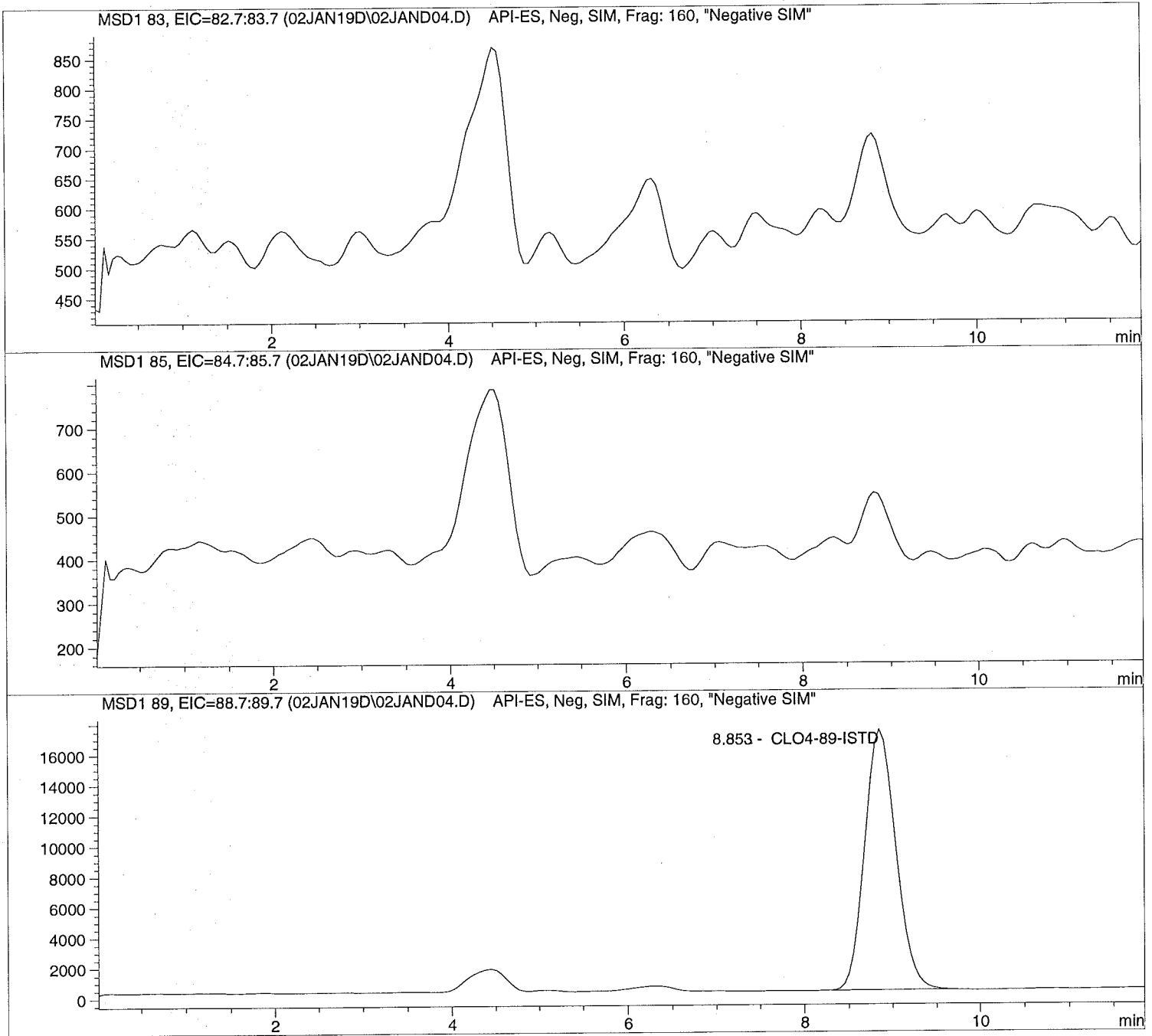
*** End of Report ***

Injection Date: 1/02/2019 09:14:04
Sample Name: 634843 LMB
Acq Operator: TNB

Seq Line: 4
Location: Vial 74
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: 1/02/2019 09:14:04      Seq Line: 4
Sample Name: 634843 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
8.853	PBA	420893.2	5.0000	CLO4-89-ISTD

```

=====
*** End of Report ***
=====

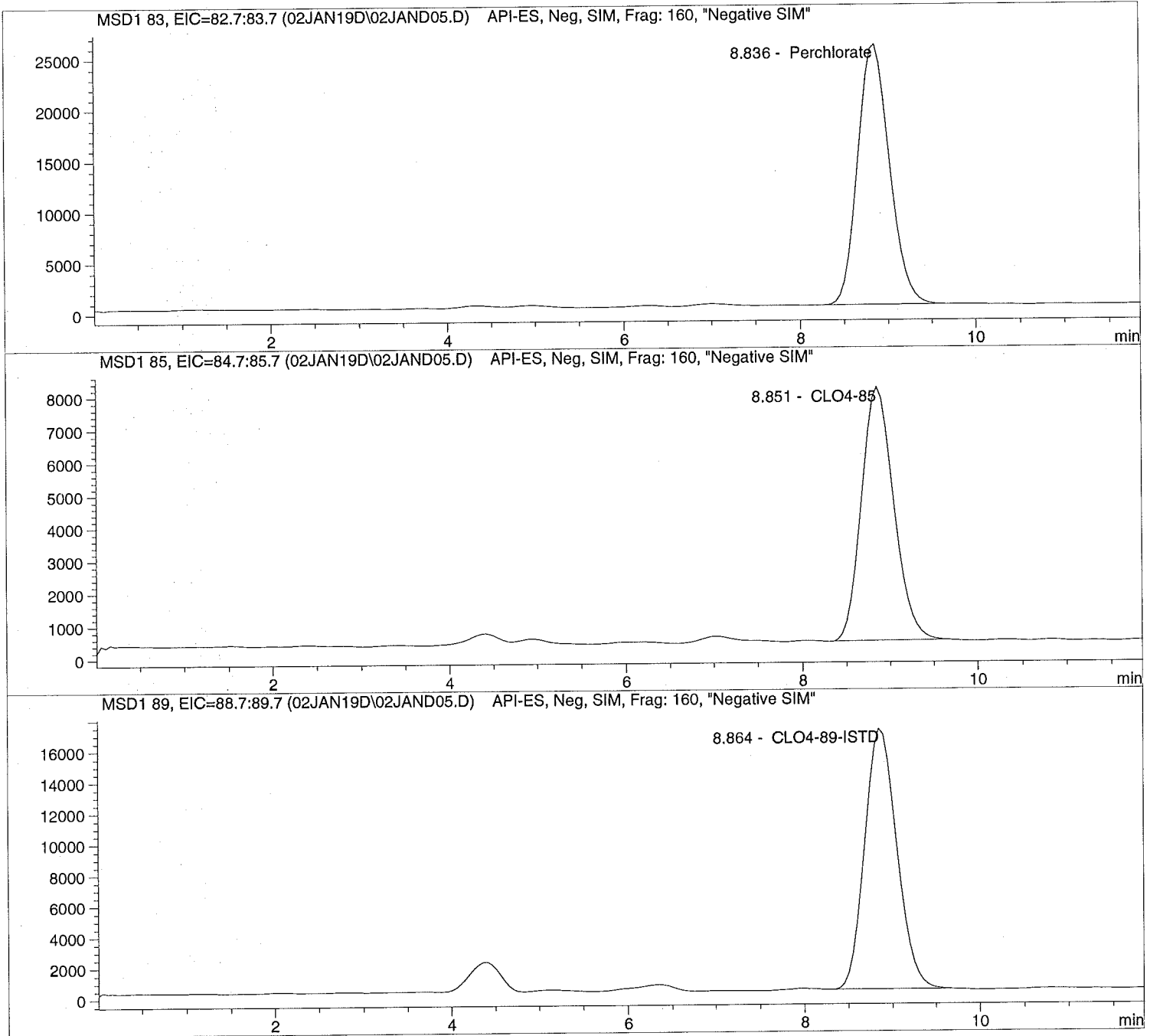
```

Injection Date: 1/02/2019 09:27:52
Sample Name: 634844 QC@5.0
Acq Operator: TNB

Seq Line: 5
Location: Vial 75
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: 1/02/2019 09:27:52      Seq Line:          5
Sample Name:    634844 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
8.836	PBA	639887.2	4.8070	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.851	PBA	197878.5	4.8831	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.864	PBA	426709.7	5.0000	CLO4-89-ISTD

```

=====
*** End of Report ***
=====

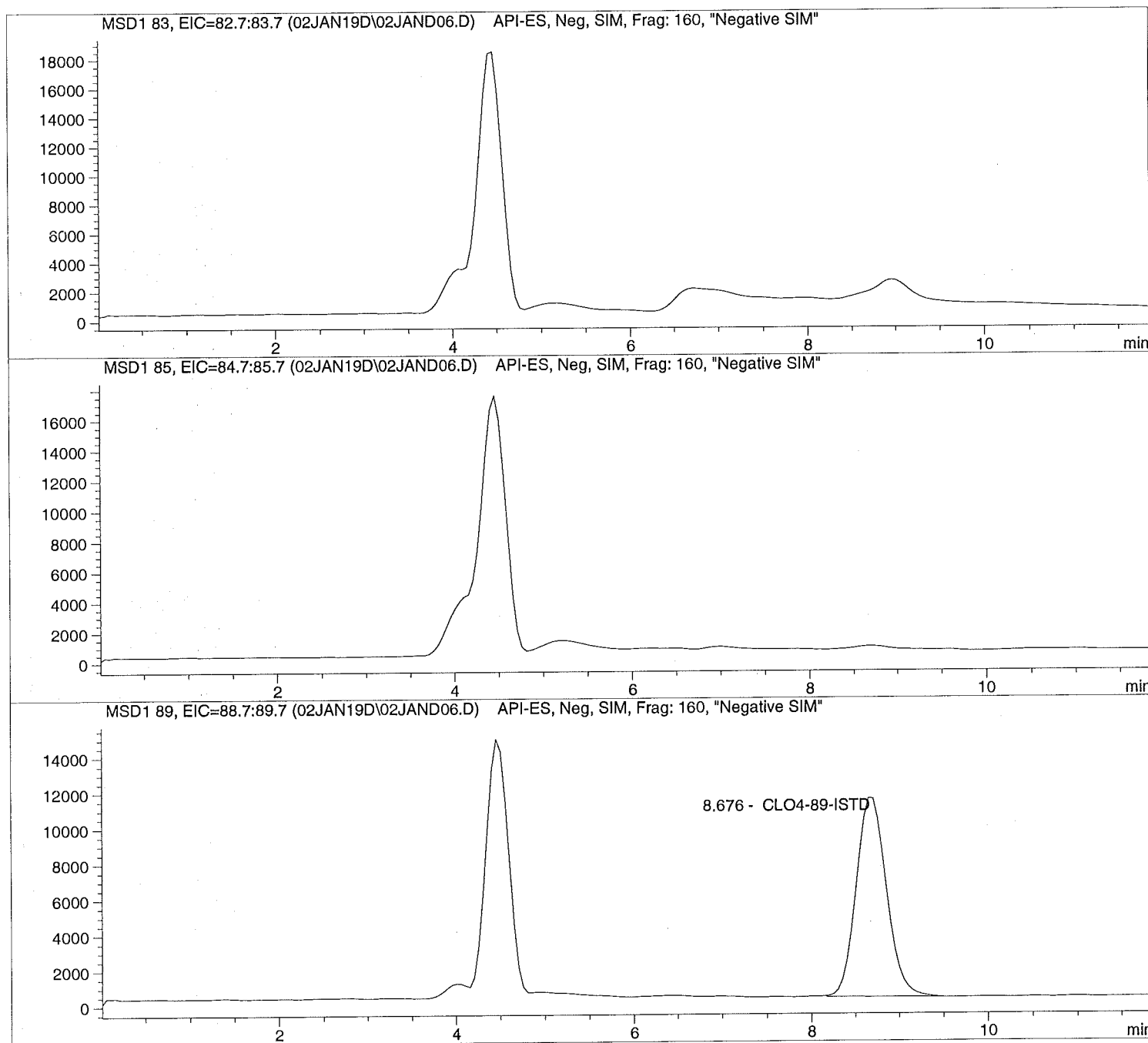
```

Injection Date: 1/02/2019 09:43:45
Sample Name: 1835803001
Acq Operator: TNB

Seq Line: 6
Location: Vial 76
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: 1/02/2019 09:43:45      Seq Line: 6
Sample Name: 1835803001                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
8.676	BBA	268169.1	5.0000	CLO4-89-ISTD

```

=====
*** End of Report ***
=====

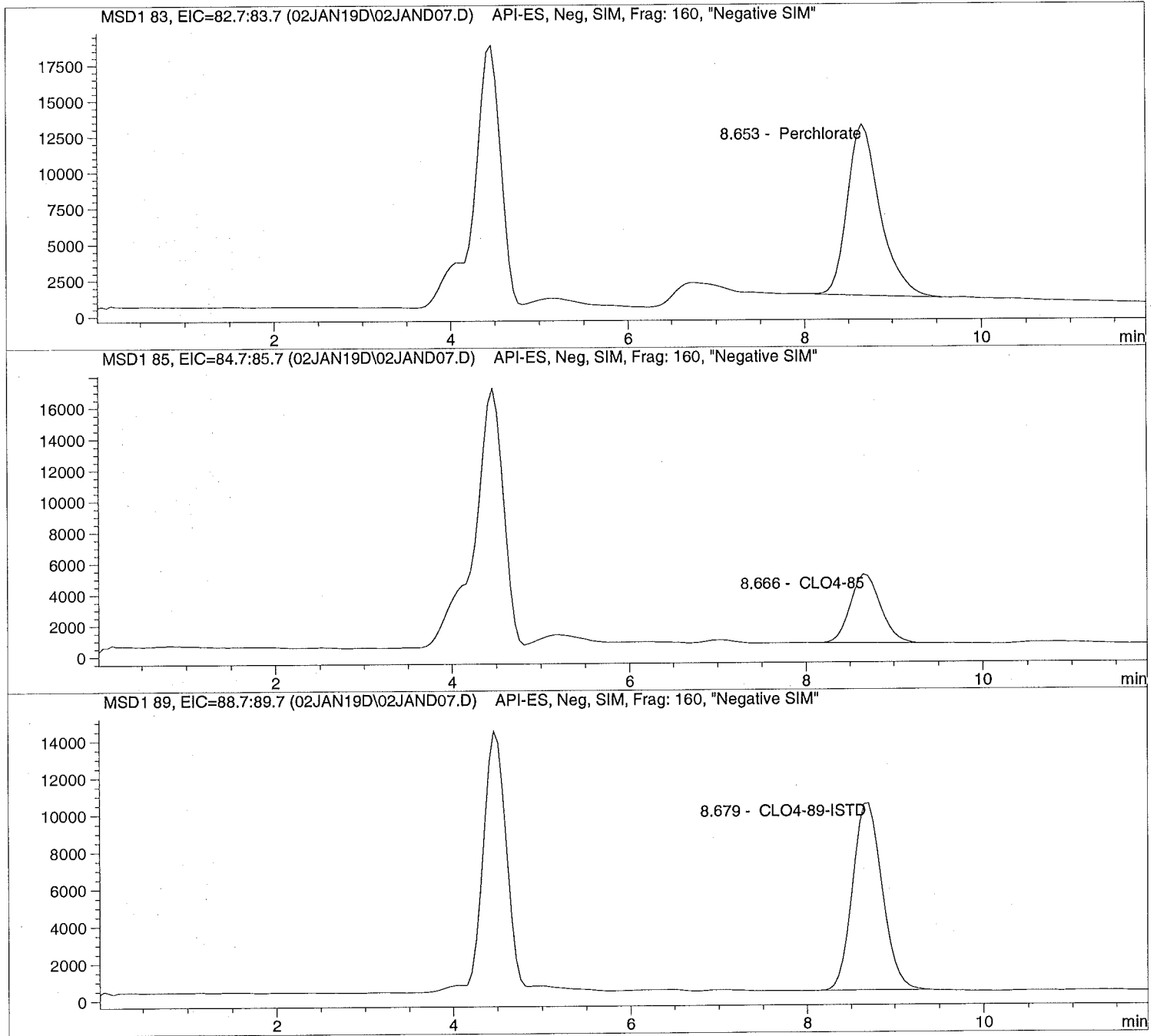
```

Injection Date: 1/02/2019 09:57:32
Sample Name: 634845 358031S
Acq Operator: TNB

Seq Line: 7
Location: Vial 77
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: 1/02/2019 09:57:32      Seq Line: 7
Sample Name:    634845 358031S          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
8.653	BBA	309046.0	4.1779	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.666	BBA	106690.2	4.7054	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.679	PBA	239019.9	5.0000	CLO4-89-ISTD

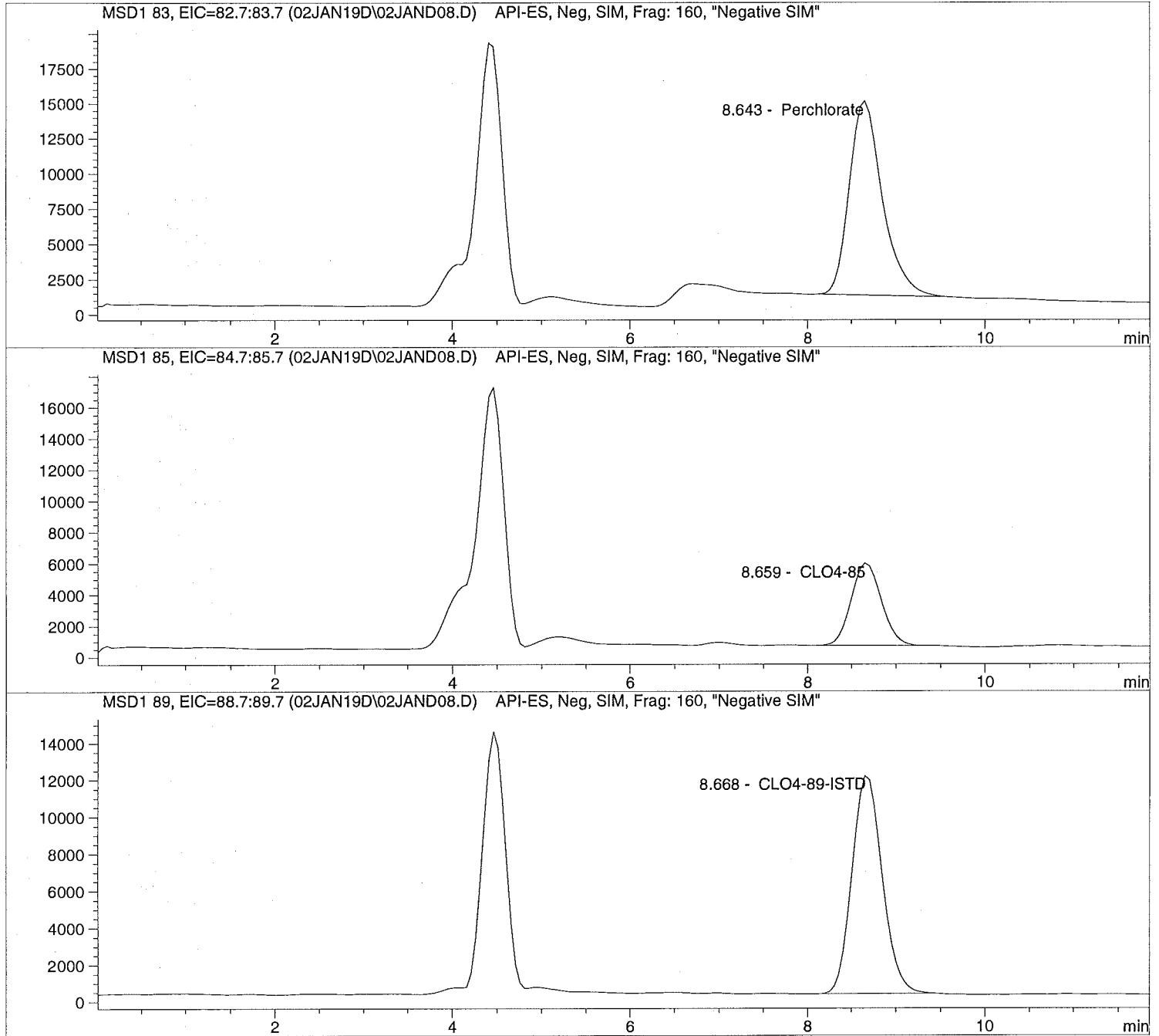
*** End of Report ***

Injection Date: 1/02/2019 10:11:20
Sample Name: 634846 358031D
Acq Operator: TNB

Seq Line: 8
Location: Vial 78
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: 1/02/2019 10:11:20      Seq Line: 8
Sample Name: 634846 358031D            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
8.643	PBA	357526.1	4.1504	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.659	PBA	124674.3	4.7195	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.668	PBA	278455.5	5.0000	CLO4-89-ISTD

```

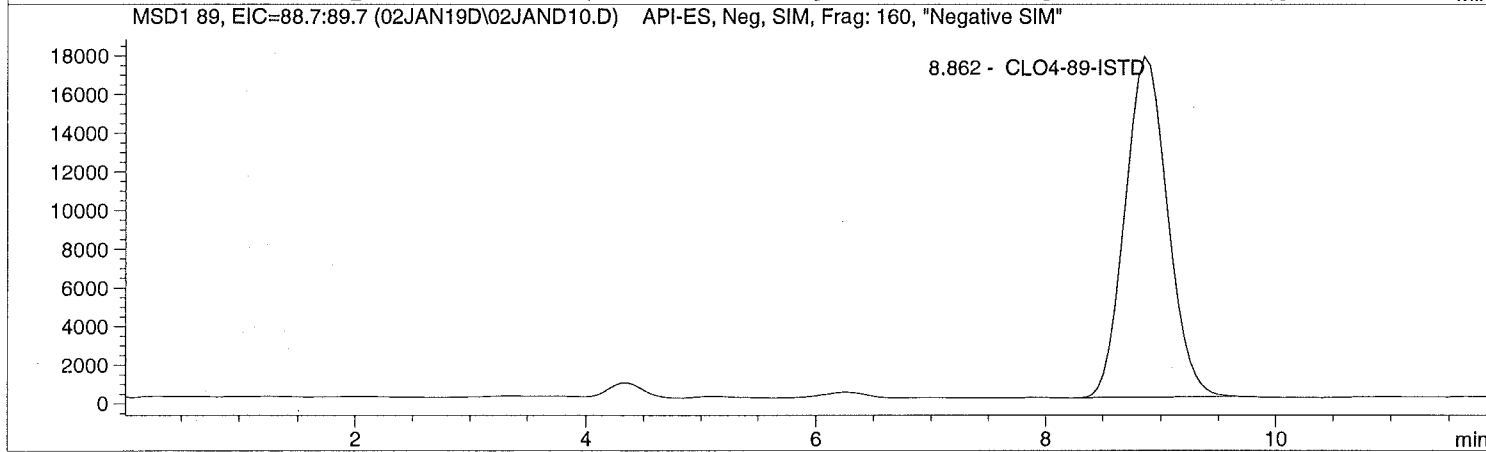
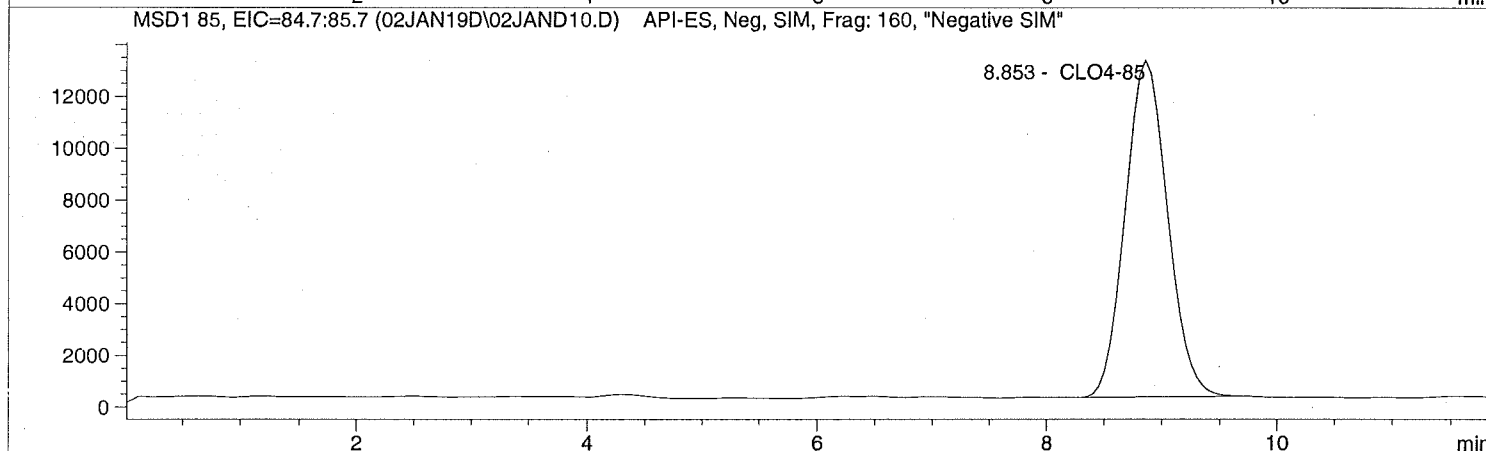
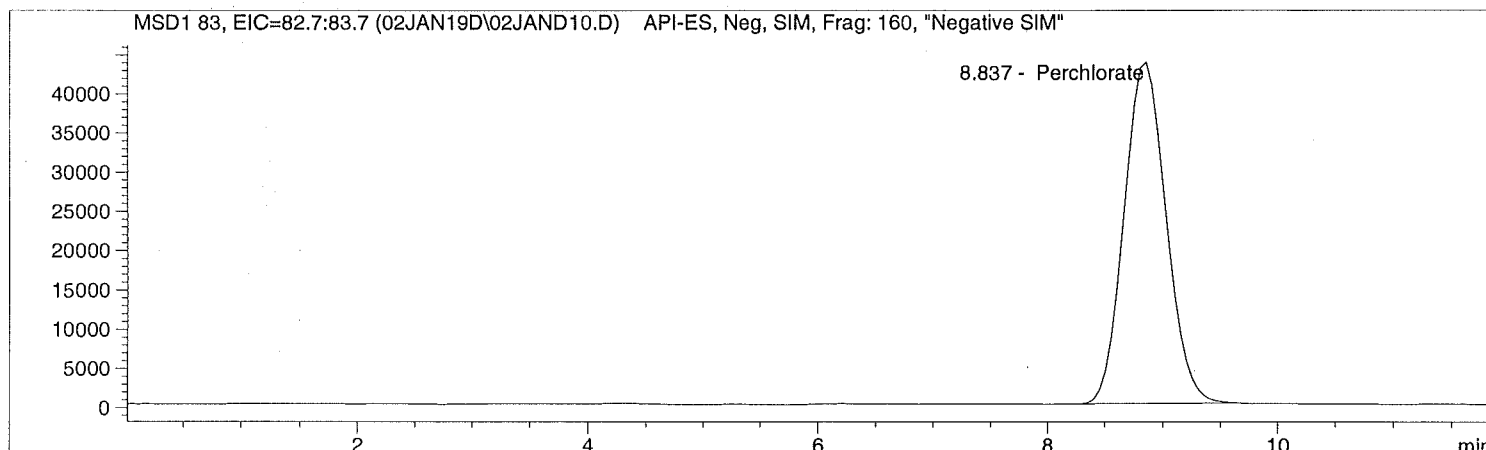
=====
*** End of Report ***
=====

```

=====
Injection Date: 1/02/2019 10:38:53 Seq Line: 10
Sample Name: 1835803003 10K 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
=====




```
=====  
Injection Date: 1/02/2019 10:38:53      Seq Line:          10  
Sample Name:    1835803003 10K          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:      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
8.837	PBA	1096371.9	76270.4153	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.853	PBA	331140.4	76309.8612	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.862	PBA	450929.4	50000.0000	CLO4-89-ISTD

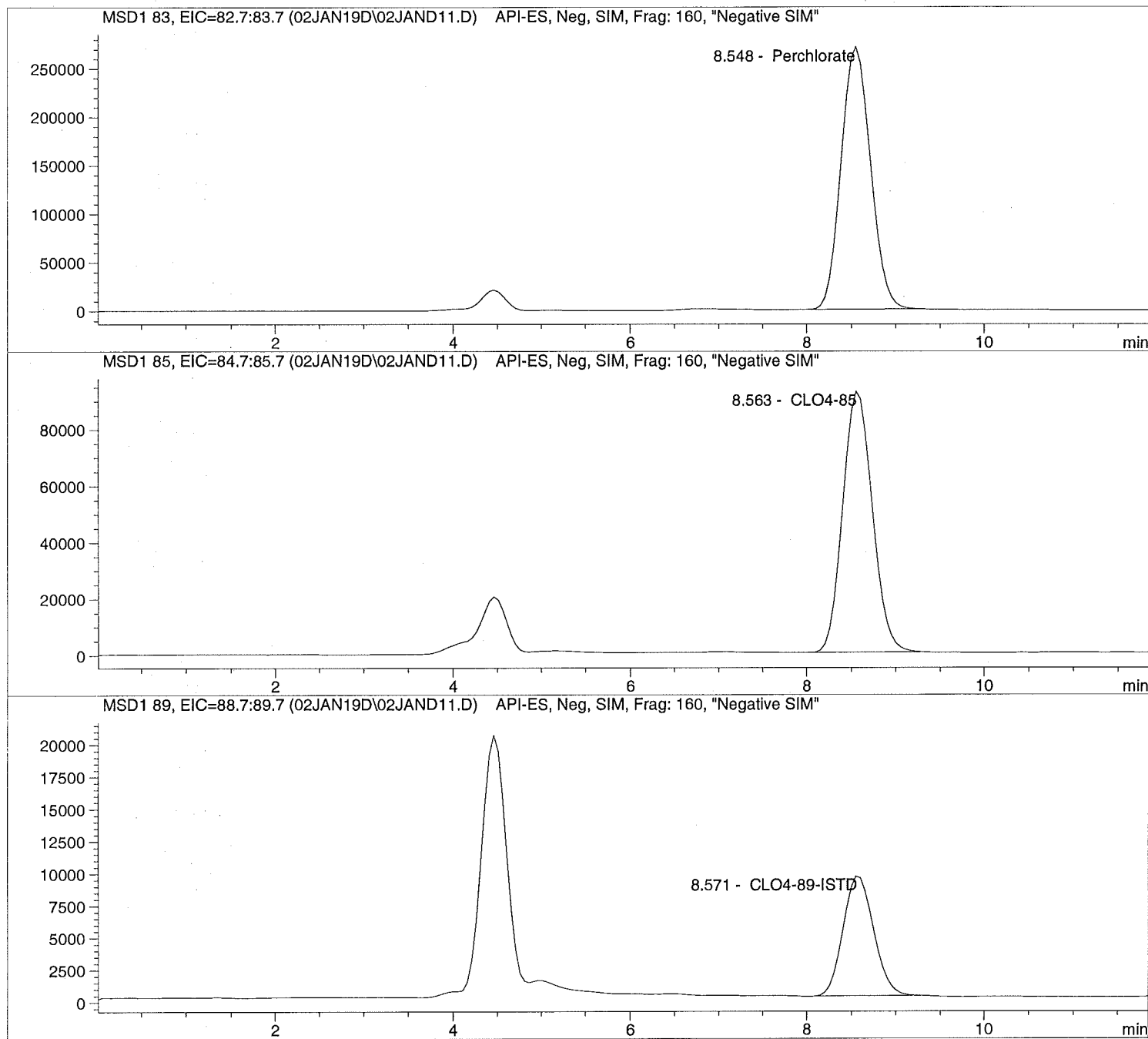
=====
*** End of Report ***
=====

Injection Date: 1/02/2019 10:52:41
Sample Name: 1835803004
Acq Operator: TNB

Seq Line: 11
Location: Vial 81
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: 1/02/2019 10:52:41      Seq Line:      11  
Sample Name:   1835803004              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
8.548	PBA	6191384.0	76.4217	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.563	PBA	2130518.5	83.4995	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.571	PBA	220890.4	5.0000	CLO4-89-ISTD

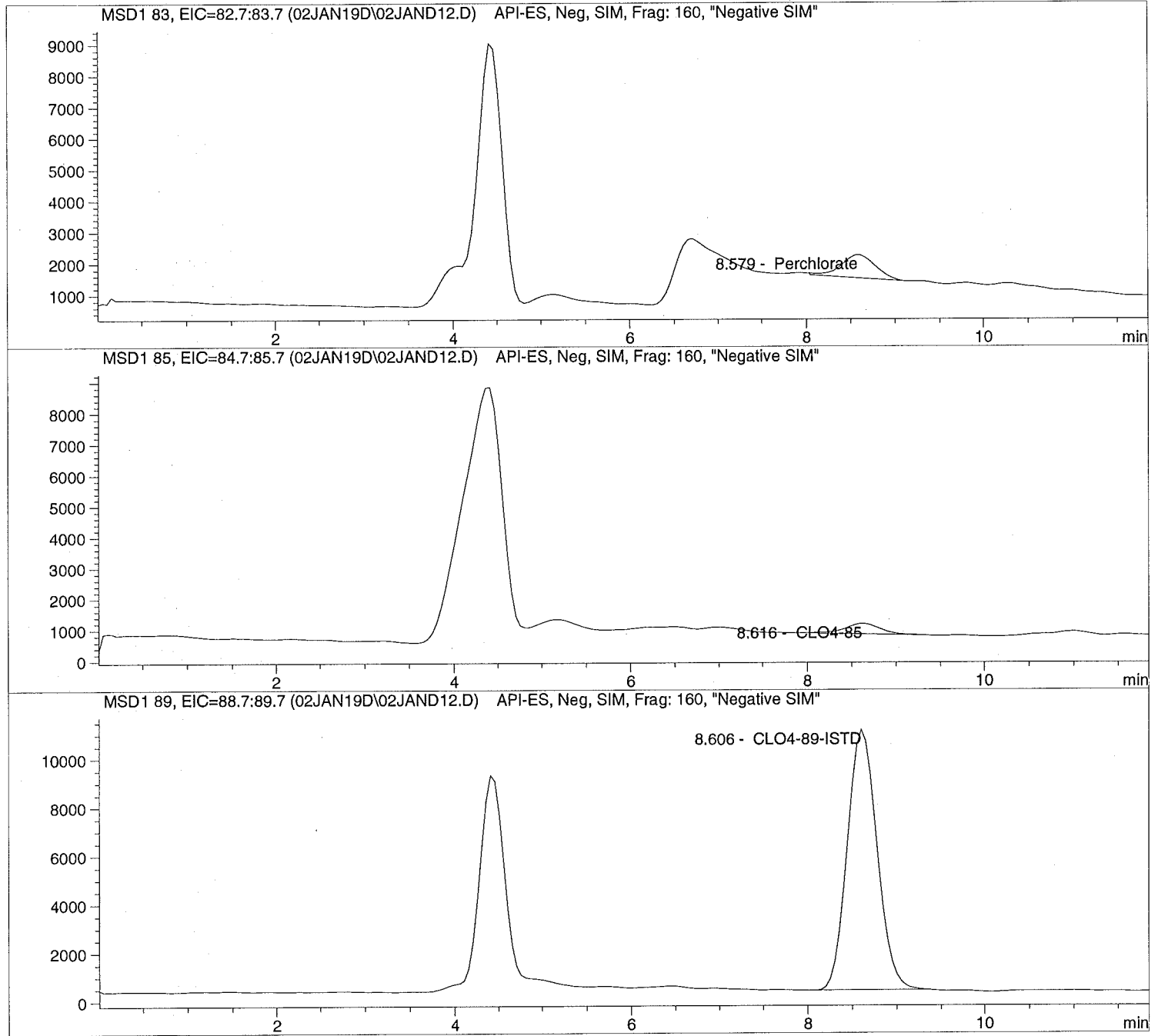
=====
*** End of Report ***

Injection Date: 1/02/2019 11:06:31
Sample Name: 1835803005
Acq Operator: TNB

Seq Line: 12
Location: Vial 82
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: 1/02/2019 11:06:31      Seq Line:      12
Sample Name:   1835803005                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
8.579	BBA	19581.7	0.4512	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.616	BBA	9424.4	0.4810	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.606	PBA	249306.1	5.0000	CLO4-89-ISTD

```

=====
*** End of Report ***
=====

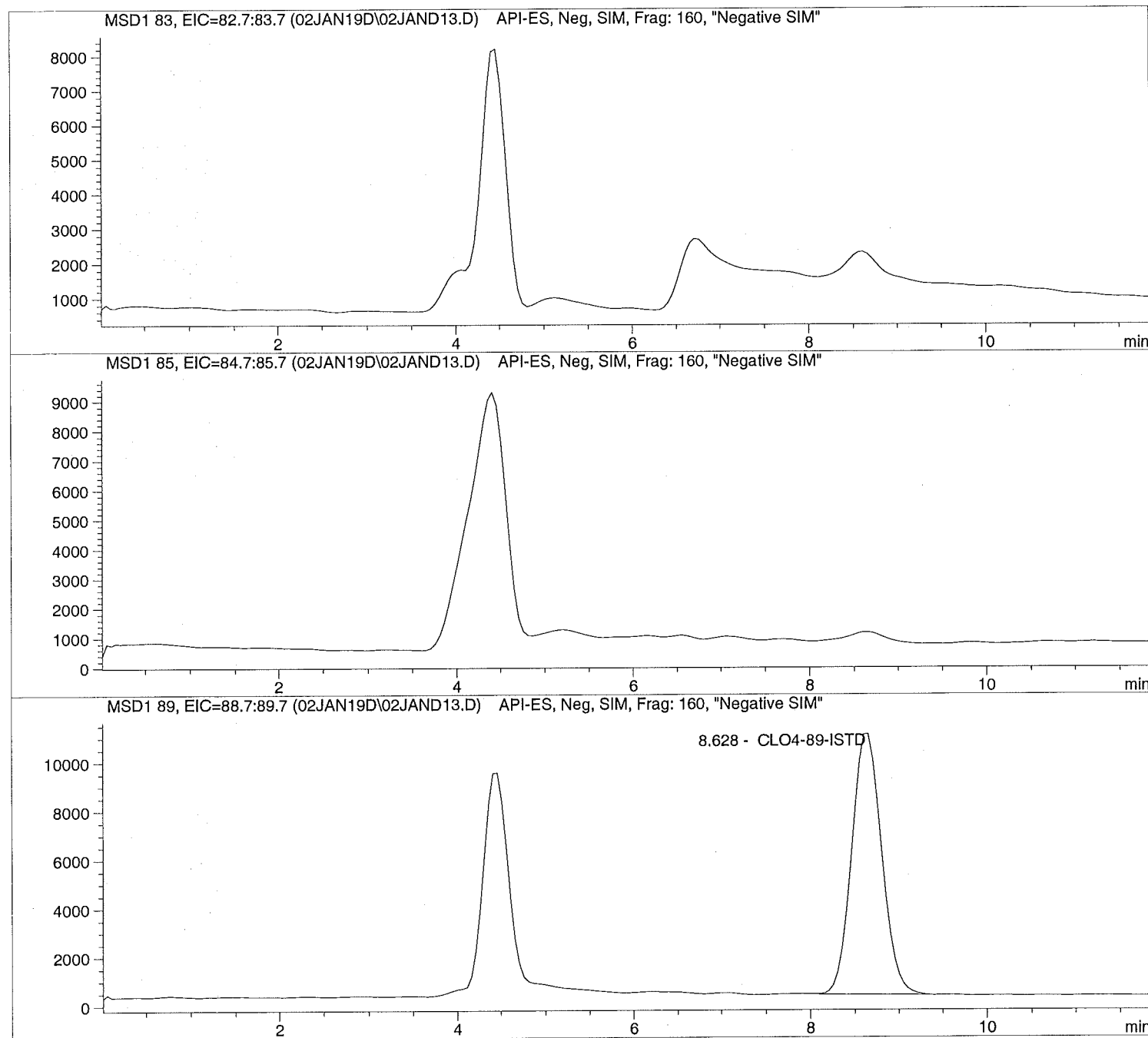
```

Injection Date: 1/02/2019 11:20:19
Sample Name: 1835803006
Acq Operator: TNB

Seq Line: 13
Location: Vial 83
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: 1/02/2019 11:20:19      Seq Line:          13
Sample Name:    1835803006              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
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
8.628	BBA	252818.4	5.0000	CLO4-89-ISTD

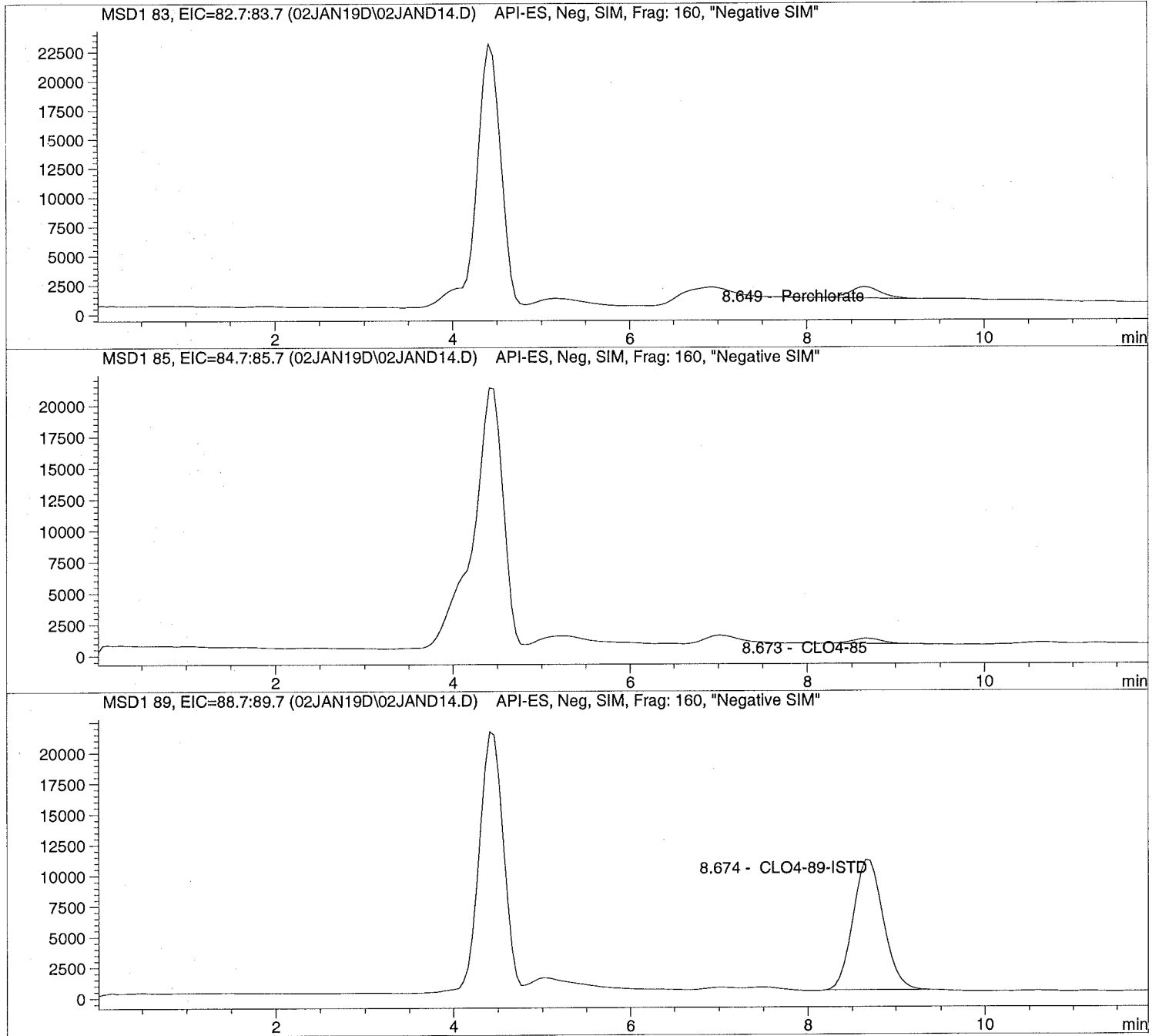
=====
*** End of Report ***

Injection Date: 1/02/2019 11:34:04
Sample Name: 1835803007
Acq Operator: TNB

Seq Line: 14
Location: Vial 84
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: 1/02/2019 11:34:04      Seq Line: 14
Sample Name: 1835803007                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
8.649	PBA	23880.5	0.4964	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.673	PBA	10033.2	0.4950	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.674	PBA	256282.7	5.0000	CLO4-89-ISTD

```

=====
*** End of Report ***
=====

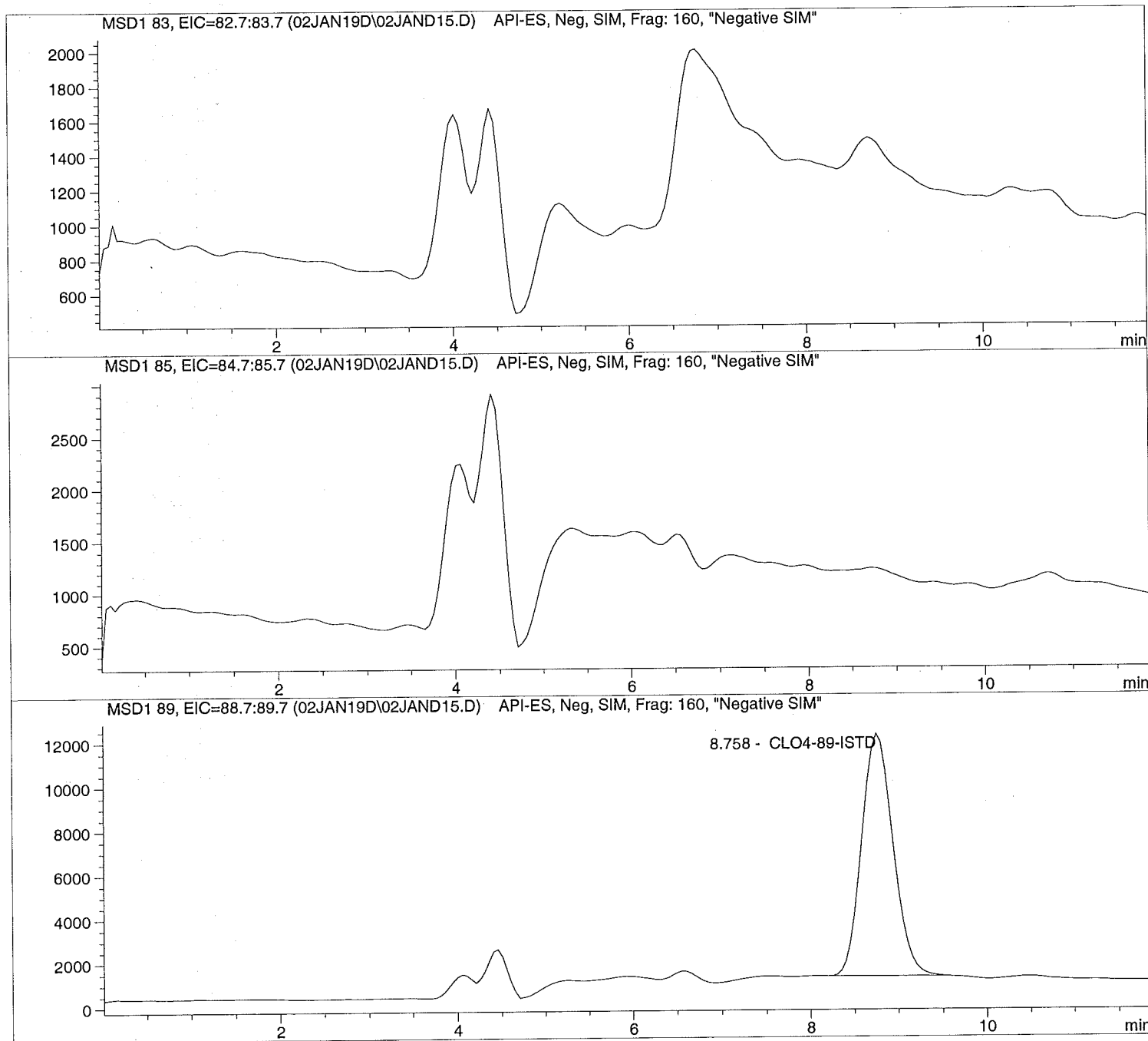
```

Injection Date: 1/02/2019 11:47:46
Sample Name: 1835804001
Acq Operator: TNB

Seq Line: 15
Location: Vial 85
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: 1/02/2019 11:47:46      Seq Line: 15
Sample Name: 1835804001                 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
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
8.758	BBA	270410.5	5.0000	CLO4-89-ISTD

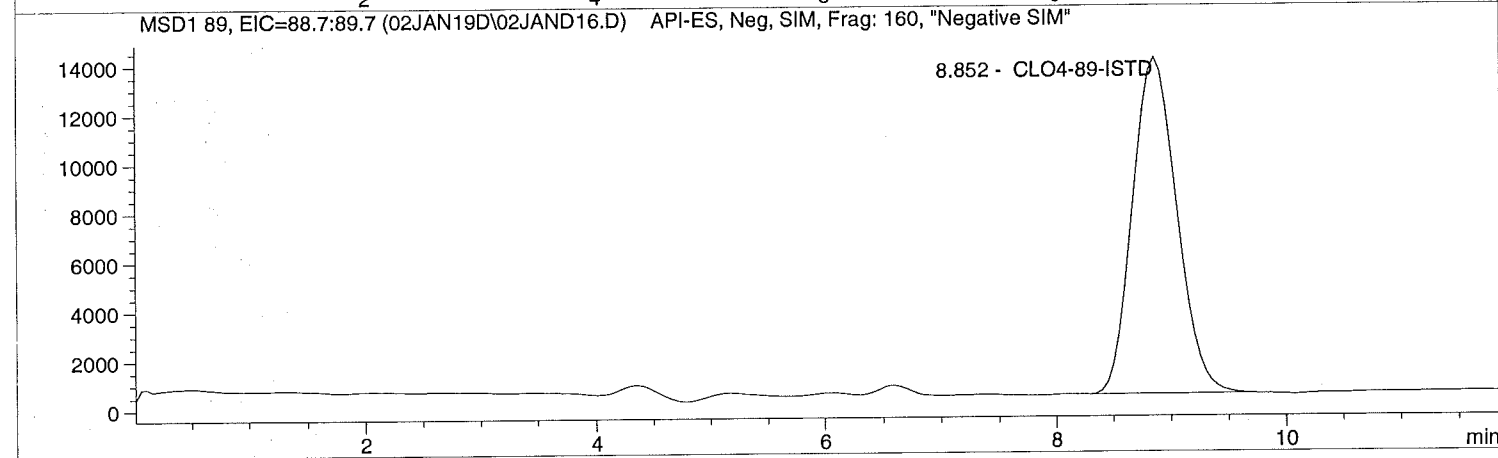
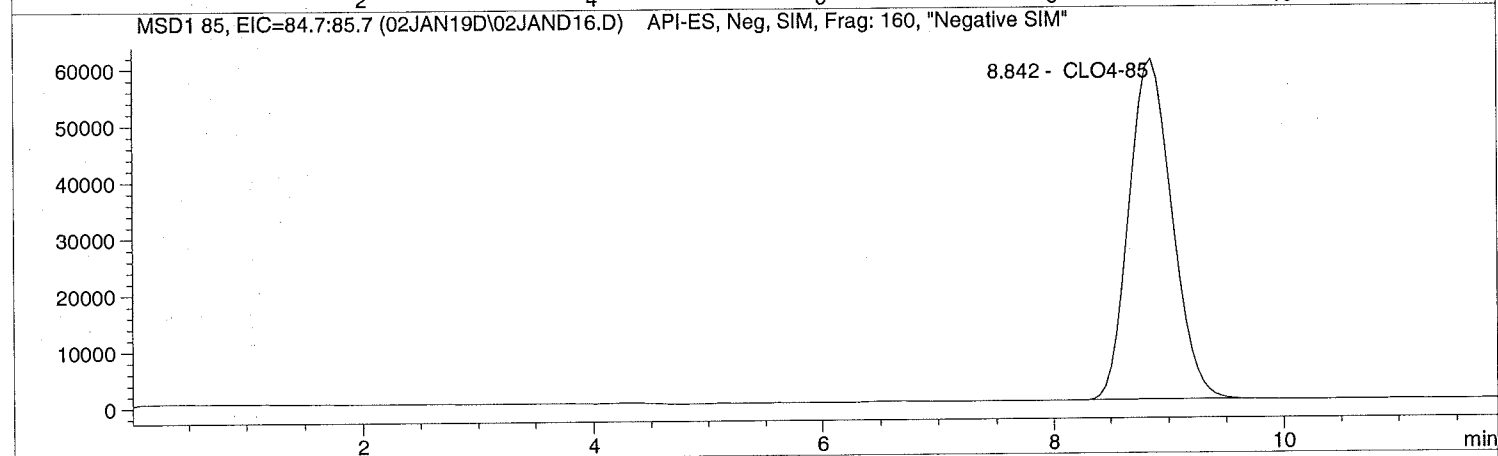
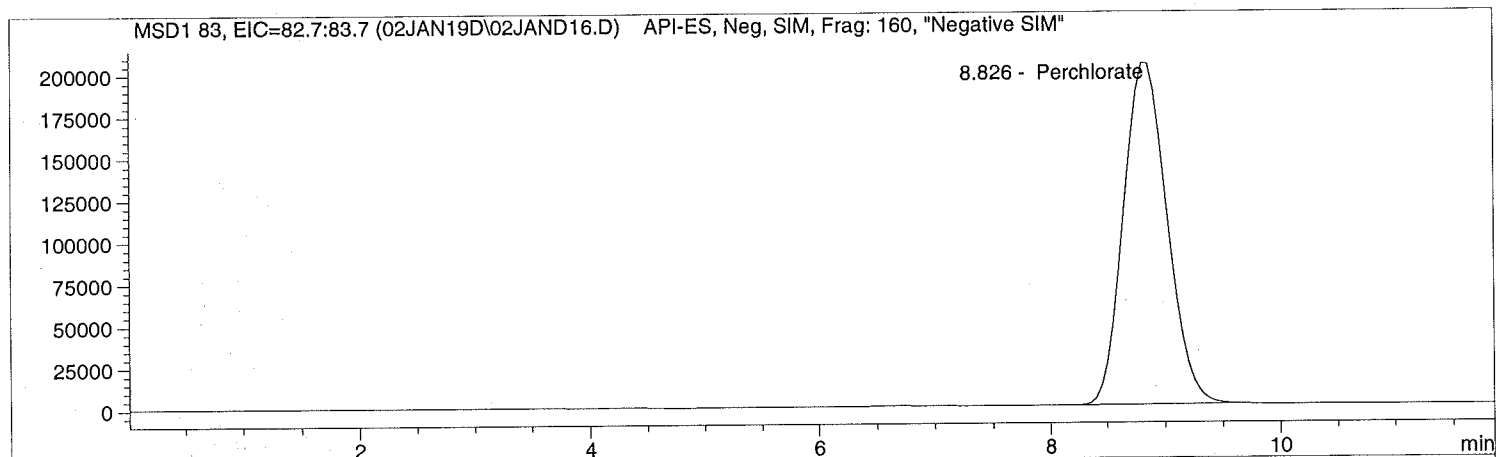
=====
*** End of Report ***

Injection Date: 1/02/2019 12:01:40
Sample Name: 1835804002 100
Acq Operator: TNB

Seq Line: 16
Location: Vial 86
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: 1/02/2019 12:01:40      Seq Line:          16
Sample Name:    1835804002 100          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:       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
8.826	PBA	5312923.5	4232.7426	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.842	PBA	1556711.0	4084.7987	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.852	BBA	362543.7	500.0000	CLO4-89-ISTD

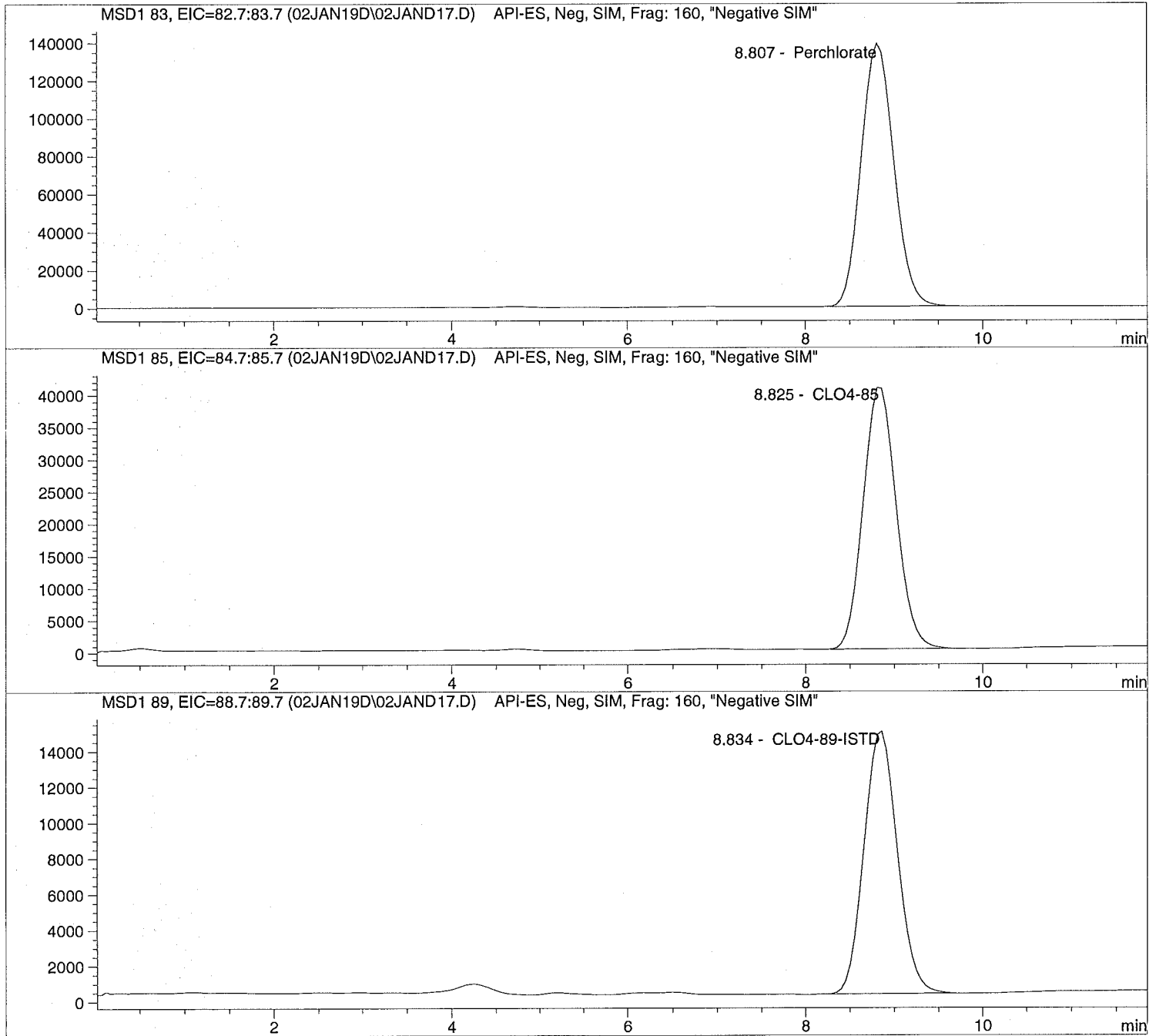
=====
*** End of Report ***

Injection Date: 1/02/2019 12:15:27
Sample Name: 1835804003 10X
Acq Operator: TNB

Seq Line: 17
Location: Vial 87
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: 1/02/2019 12:15:27      Seq Line:          17
Sample Name:   1835804003 10X           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:      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
8.807	PBA	3528184.7	273.5498	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.825	PBA	1050192.6	269.6153	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.834	PBA	383138.5	50.0000	CLO4-89-ISTD

```

=====
*** End of Report ***
=====

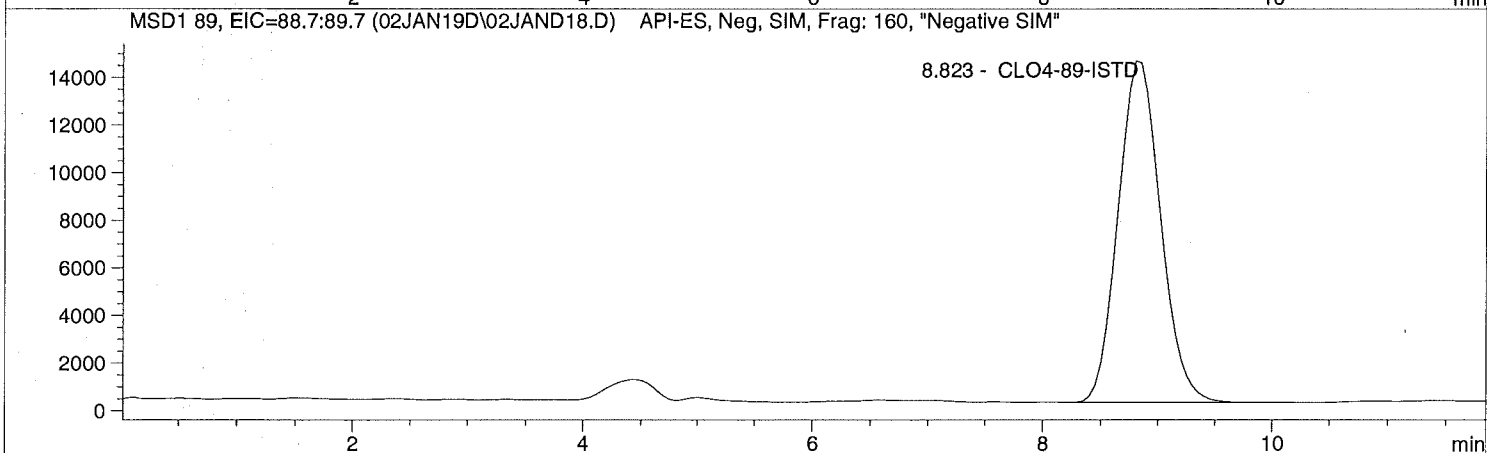
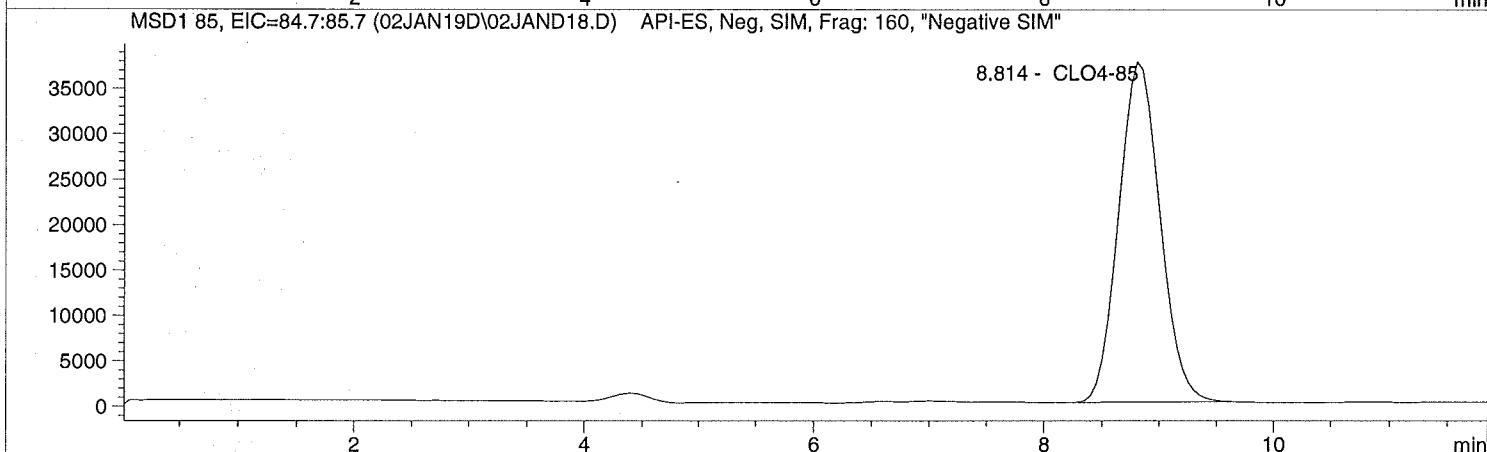
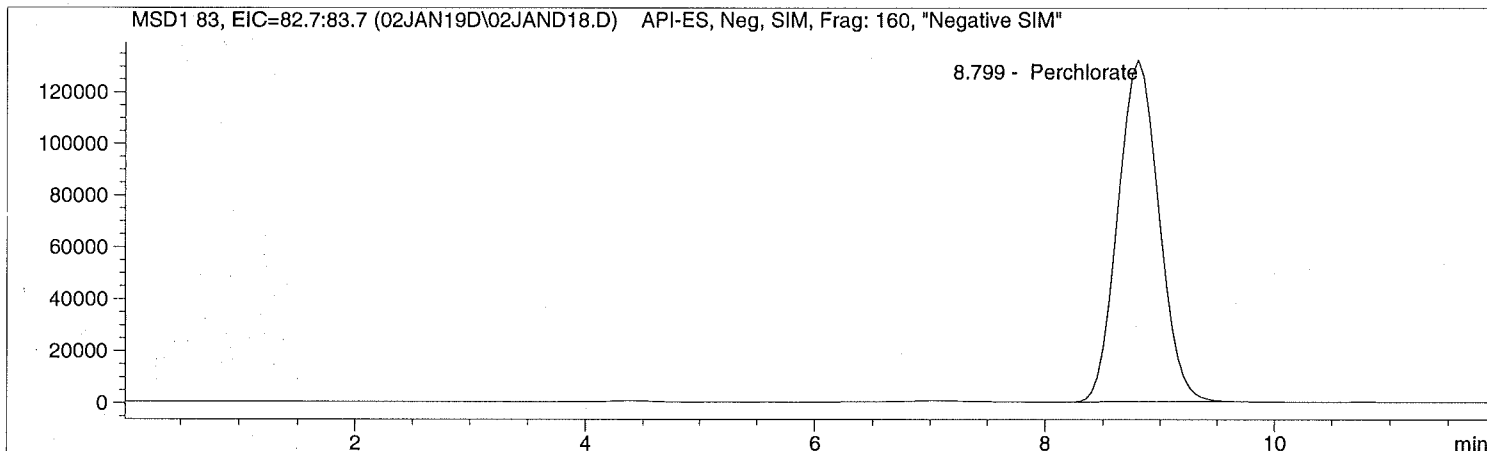
```

Injection Date: 1/02/2019 12:29:15
Sample Name: 634847 CCV@25
Acq Operator: TNB

Seq Line: 18
Location: Vial 71
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: 1/02/2019 12:29:15      Seq Line: 18
Sample Name: 634847 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
8.799	PBA	3258924.7	26.3222	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.814	PBA	936026.5	25.0985	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.823	PBA	368547.4	5.0000	CLO4-89-ISTD

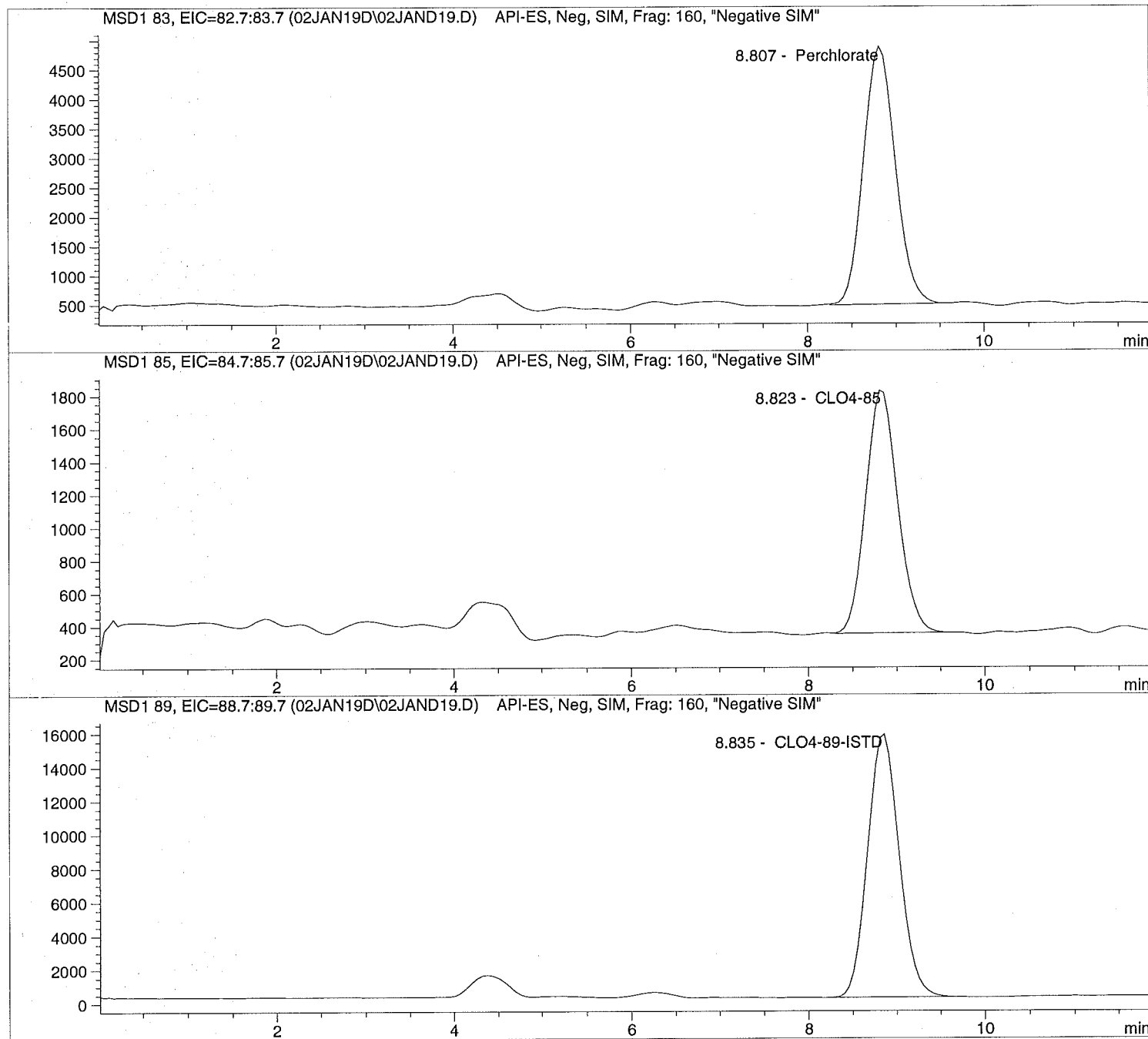
*** End of Report ***

Injection Date: 1/02/2019 12:43:00
Sample Name: 634848 LODV@1.
Acq Operator: TNB

Seq Line: 19
Location: Vial 72
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: 1/02/2019 12:43:00      Seq Line:          19
Sample Name:    634848  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
8.807	BBA	110508.7	1.0851	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.823	BBA	37431.9	1.0902	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.835	PBA	389154.2	5.0000	CLO4-89-ISTD

```

=====
*** End of Report ***
=====

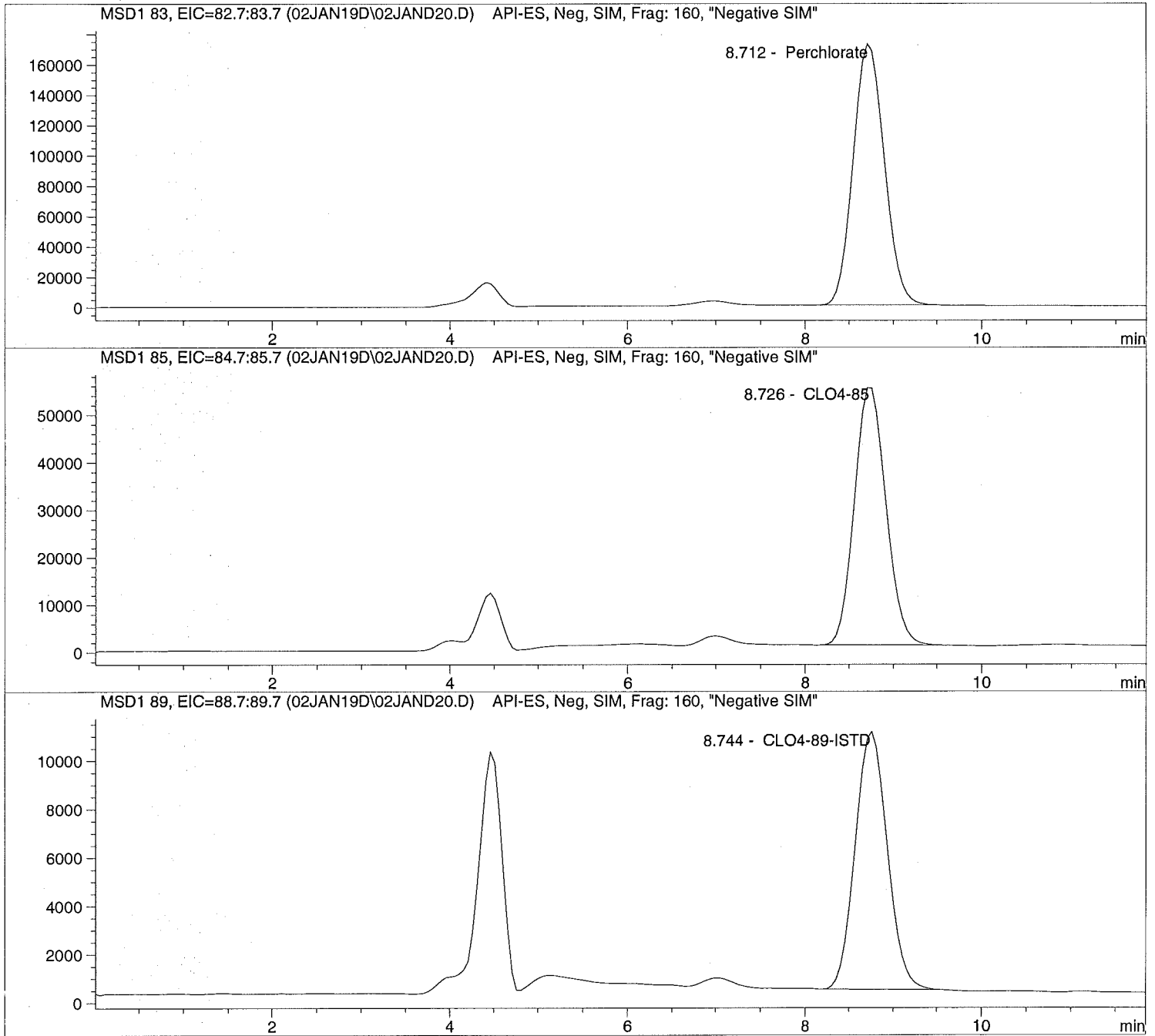
```

Injection Date: 1/02/2019 12:56:49
Sample Name: 1835804004
Acq Operator: TNB

Seq Line: 20
Location: Vial 88
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: 1/02/2019 12:56:49      Seq Line:          20
Sample Name:    1835804004                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:       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
8.712	PBA	4196692.0	45.0069	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.726	PBA	1342508.9	46.9745	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.744	PBA	268044.7	5.0000	CLO4-89-ISTD

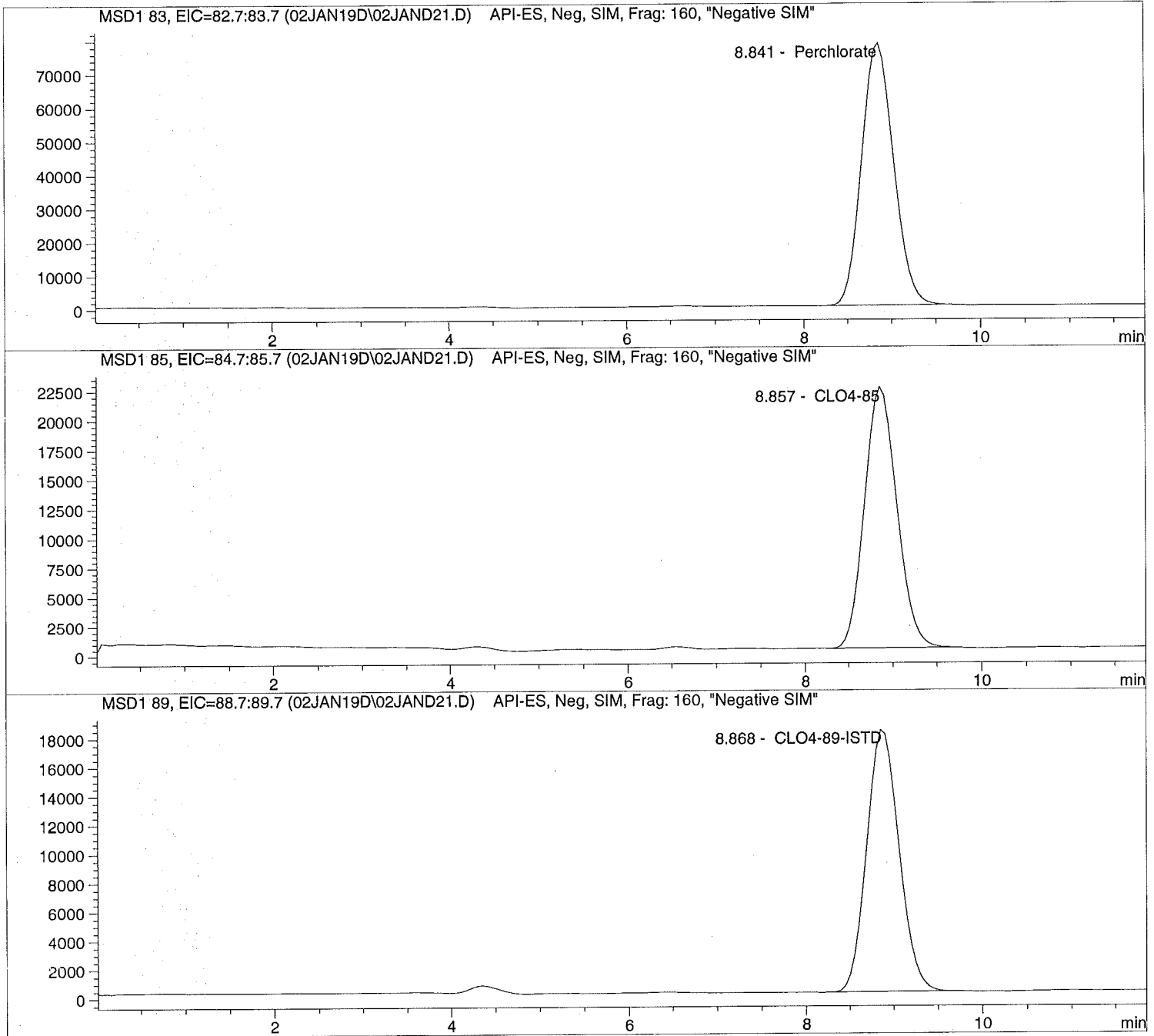
*** End of Report ***

Injection Date: 1/02/2019 13:10:43
Sample Name: 1835804005 100
Acq Operator: TNB

Seq Line: 21
Location: Vial 89
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: 1/02/2019 13:10:43      Seq Line: 21
Sample Name: 1835804005 100            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: 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
8.841	PBA	1974157.2	1303.4202	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.857	PBA	570283.1	1253.0890	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.868	PBA	465179.7	500.0000	CLO4-89-ISTD

```

=====
*** End of Report ***
=====

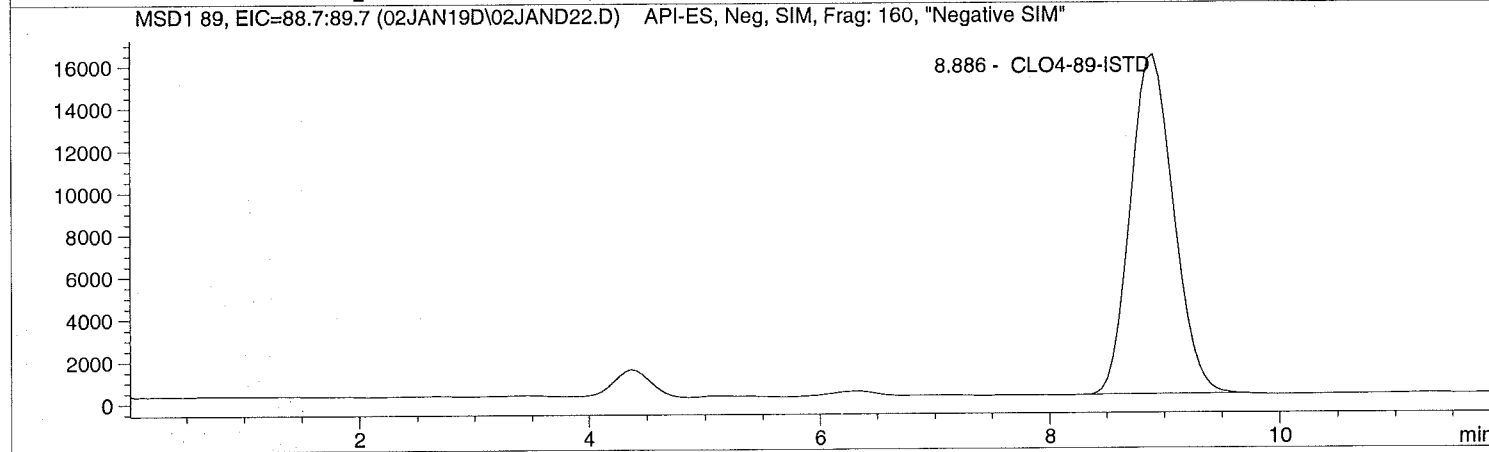
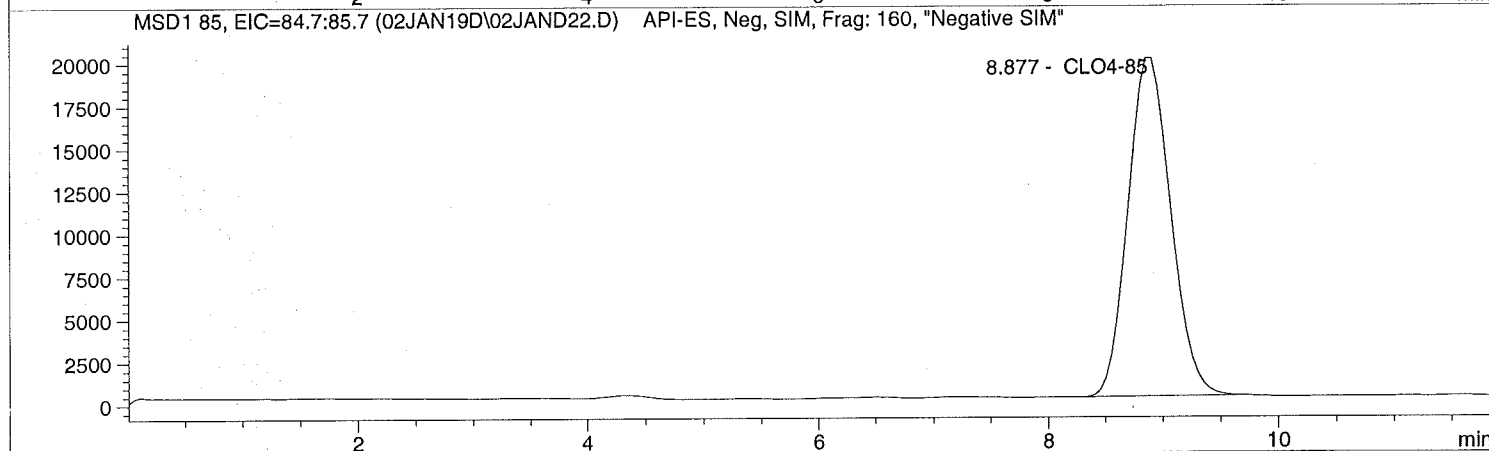
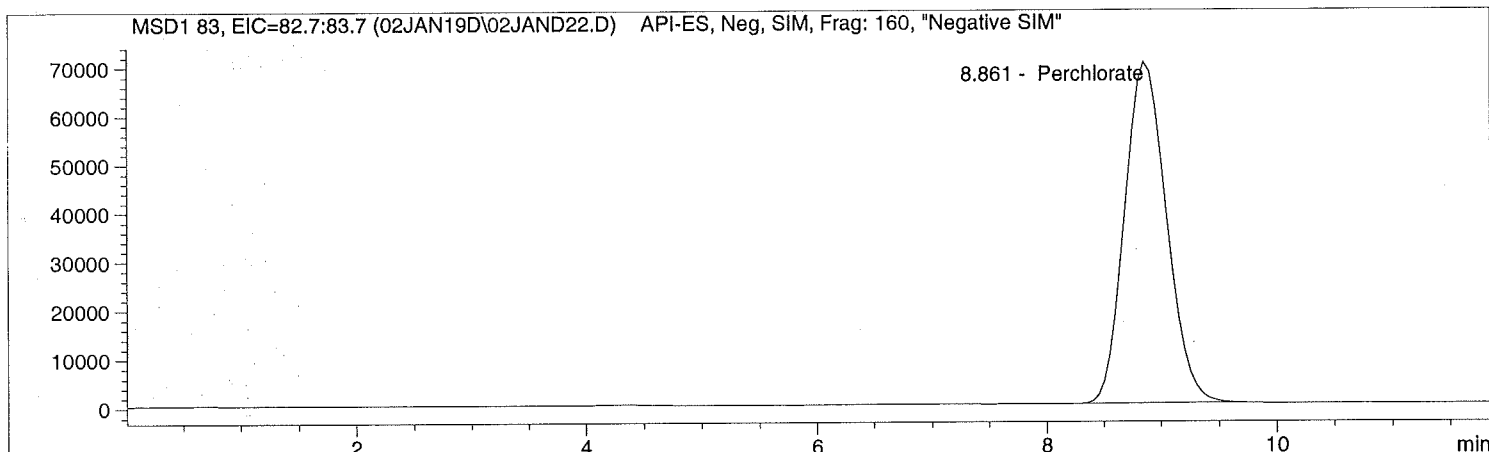
```

Injection Date: 1/02/2019 13:24:33
Sample Name: 1835804006 100
Acq Operator: TNB

Seq Line: 22
Location: Vial 90
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: 1/02/2019 13:24:33      Seq Line:          22
Sample Name:    1835804006 100          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:      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
8.861	PBA	1767534.1	1300.3236	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.877	PBA	510481.8	1249.8400	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.886	PBA	417522.8	500.0000	CLO4-89-ISTD

*** End of Report ***

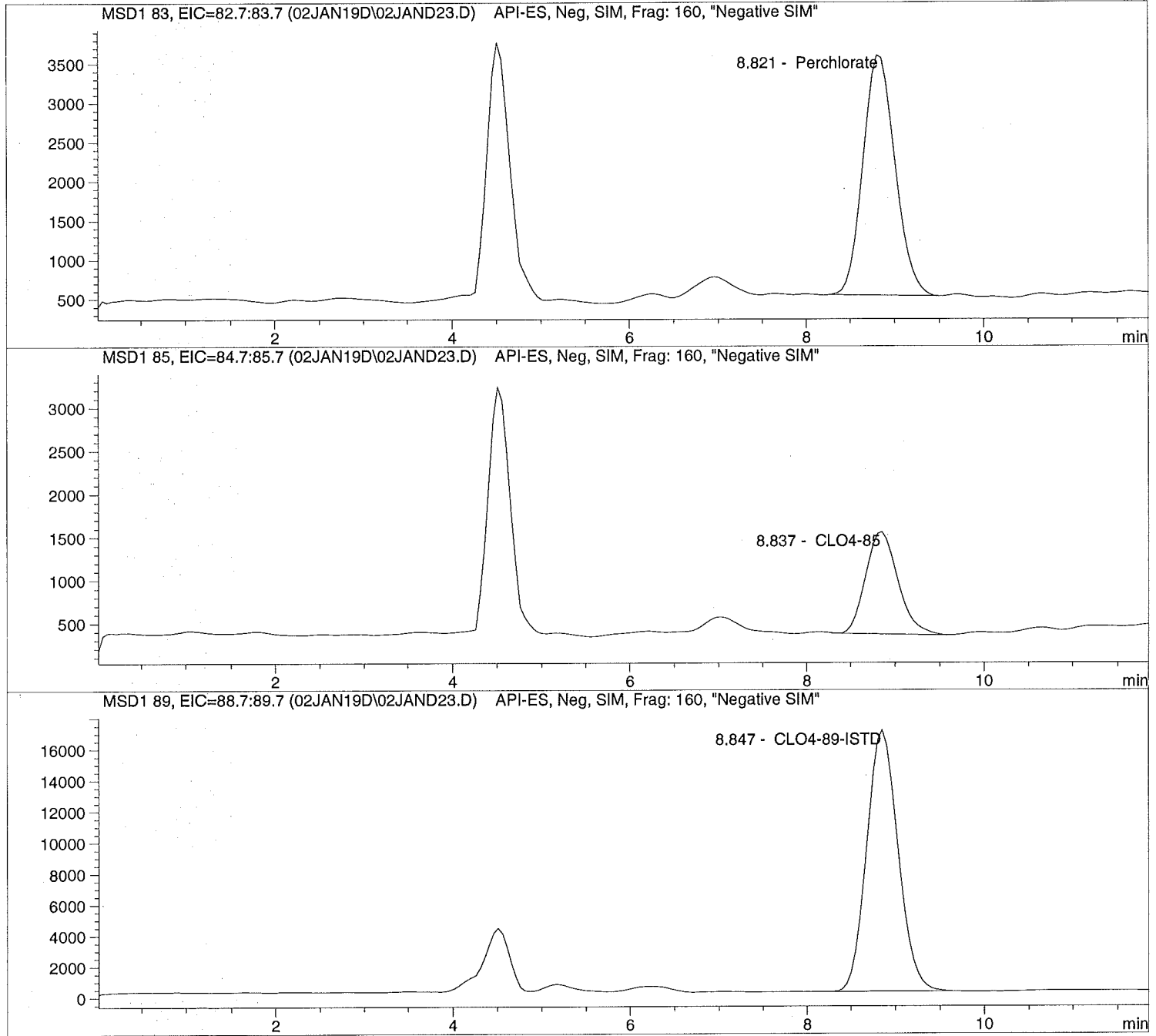


Injection Date: 1/02/2019 13:38:21
Sample Name: 1835804007
Acq Operator: TNB

Seq Line: 23
Location: Vial 91
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: 1/02/2019 13:38:21      Seq Line:          23
Sample Name:   1835804007                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
8.821	PBA	76542.3	0.7835	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.837	BBA	29868.2	0.8447	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.847	PBA	411154.2	5.0000	CLO4-89-ISTD

```

=====
*** End of Report ***
=====

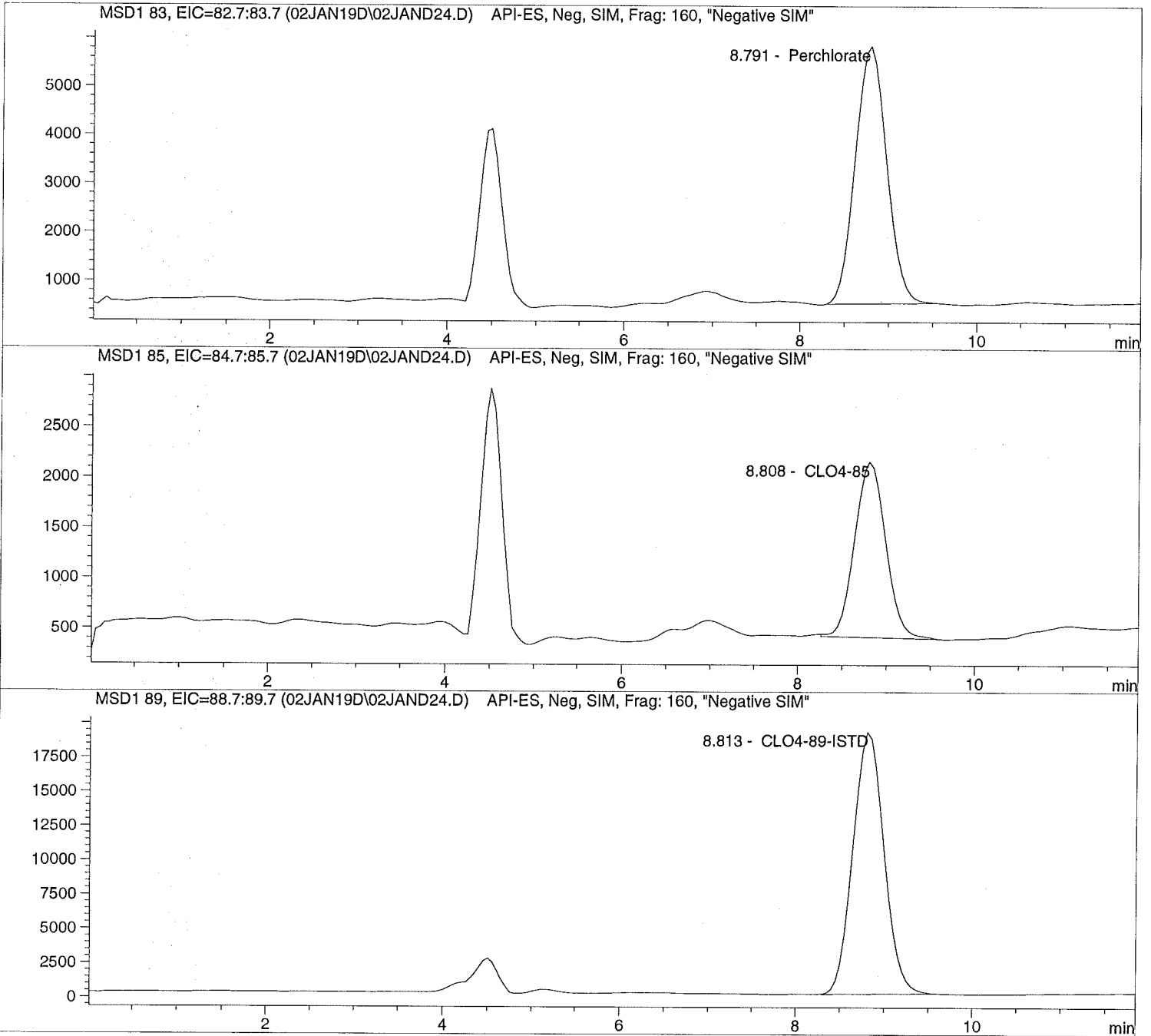
```

Injection Date: 1/02/2019 13:52:06
Sample Name: 1835804008
Acq Operator: TNB

Seq Line: 24
Location: Vial 92
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: 1/02/2019 13:52:06      Seq Line:      24
Sample Name:   1835804008              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
8.791	PBA	129357.4	1.0705	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.808	BBA	42279.1	1.0388	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.813	PBA	463288.0	5.0000	CLO4-89-ISTD

```

=====
*** End of Report ***
=====

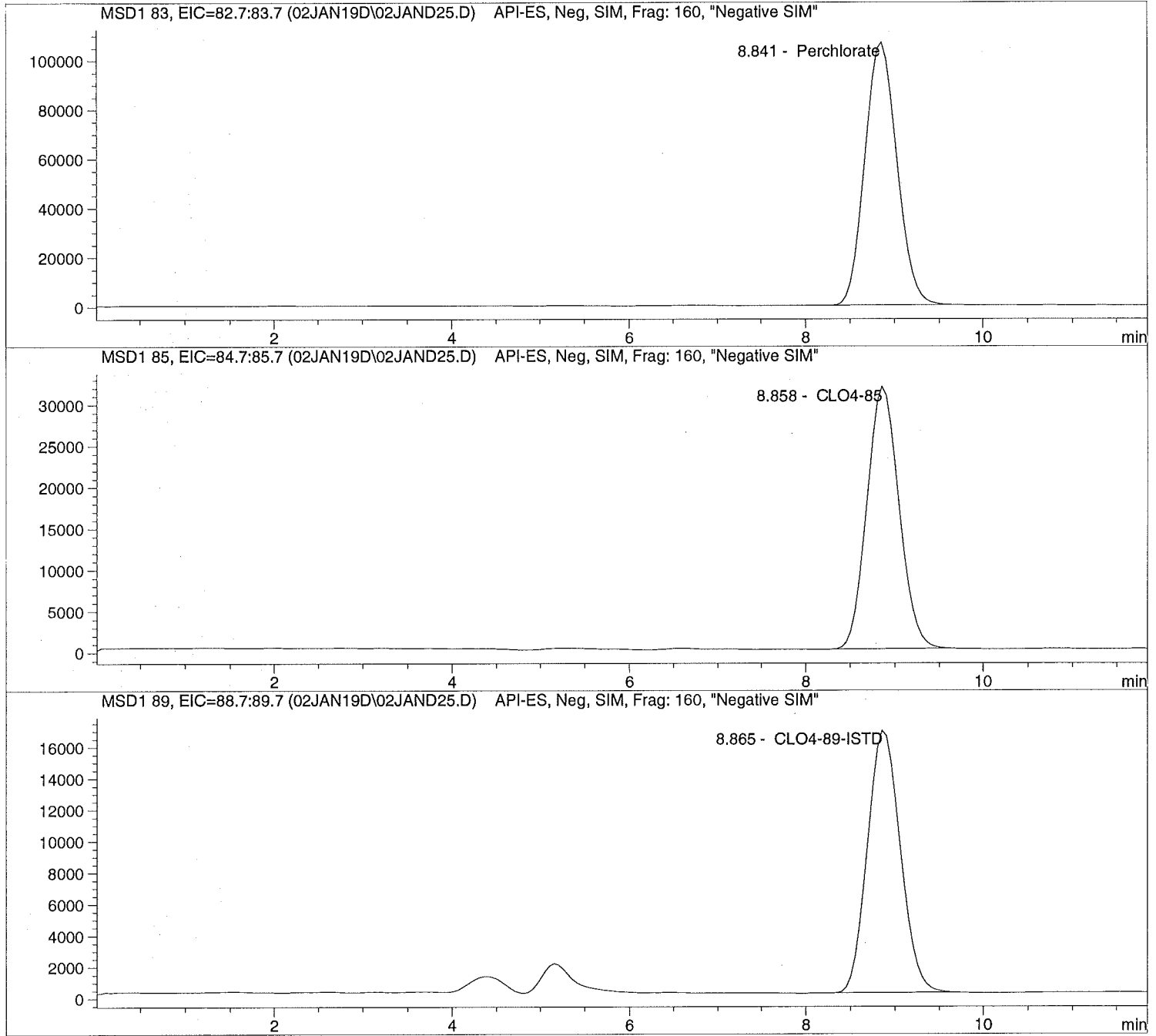
```

Injection Date: 1/02/2019 14:05:50
Sample Name: 1835804009 100
Acq Operator: TNB

Seq Line: 25
Location: Vial 93
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: 1/02/2019 14:05:50      Seq Line:          25
Sample Name:   1835804009 100           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:      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
8.841	PBA	2655964.8	1877.6020	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.858	PBA	793202.1	1862.3526	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.865	PBA	427981.7	500.0000	CLO4-89-ISTD

```

=====
*** End of Report ***
=====

```


Data file: C:\HPCHEM\1\DATA\02JAN19D\02JAND26.D

Sample Name: 1835804010

```

=====
Injection Date: 1/02/2019 14:19:36      Seq Line:          26
Sample Name:    1835804010              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:       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
8.832	BBA	61046.4	0.6412	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.847	PBA	21905.5	0.6111	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.858	PBA	435829.5	5.0000	CLO4-89-ISTD

```

=====
*** End of Report ***
=====

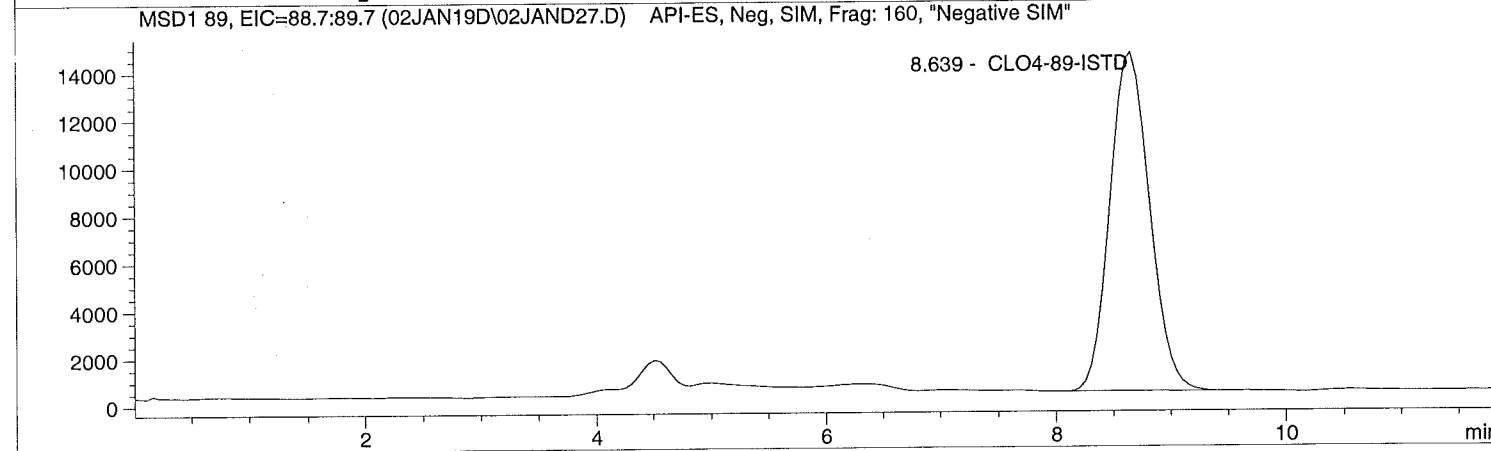
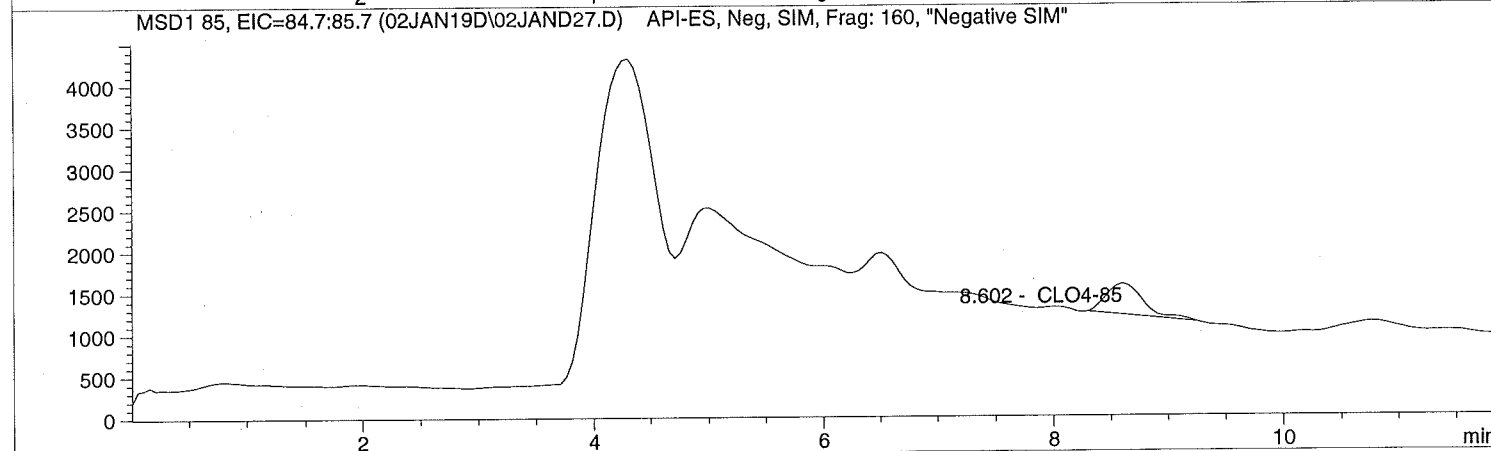
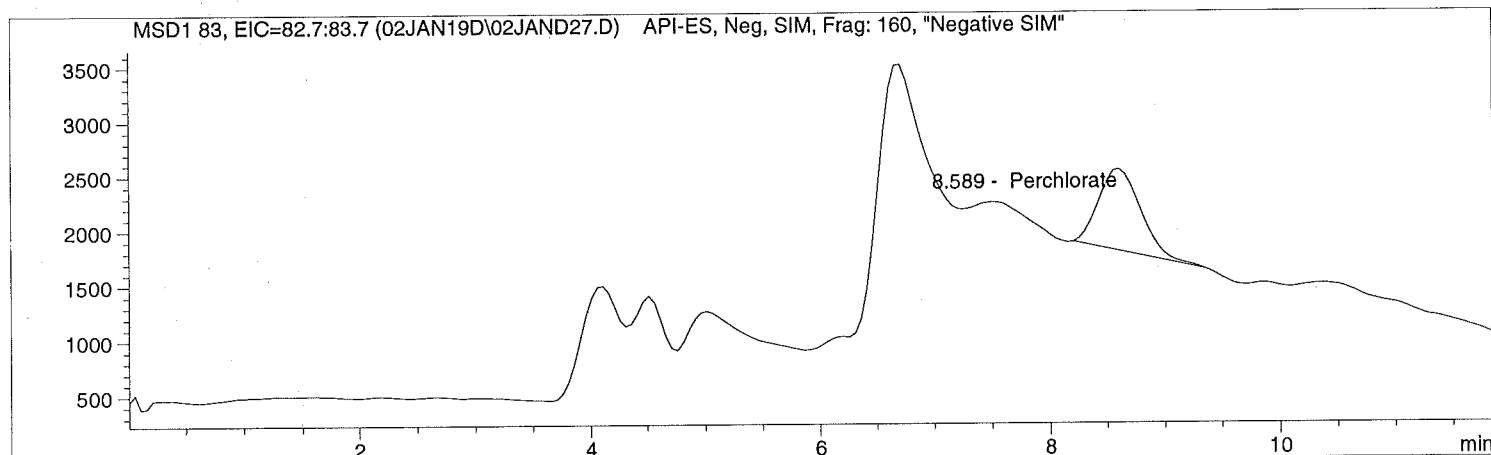
```

Injection Date: 1/02/2019 14:33:23
Sample Name: 1835804011
Acq Operator: TNB

Seq Line: 27
Location: Vial 95
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\02JAN19D\02JAND27.D

Sample Name: 1835804011

```

=====
Injection Date: 1/02/2019 14:33:23      Seq Line:          27
Sample Name:    1835804011              Location:          Vial 95
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
8.589	PBA	18869.4	0.3799	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.602	BBA	8011.3	0.3320	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.639	PBA	340211.7	5.0000	CLO4-89-ISTD

```

=====
*** End of Report ***
=====

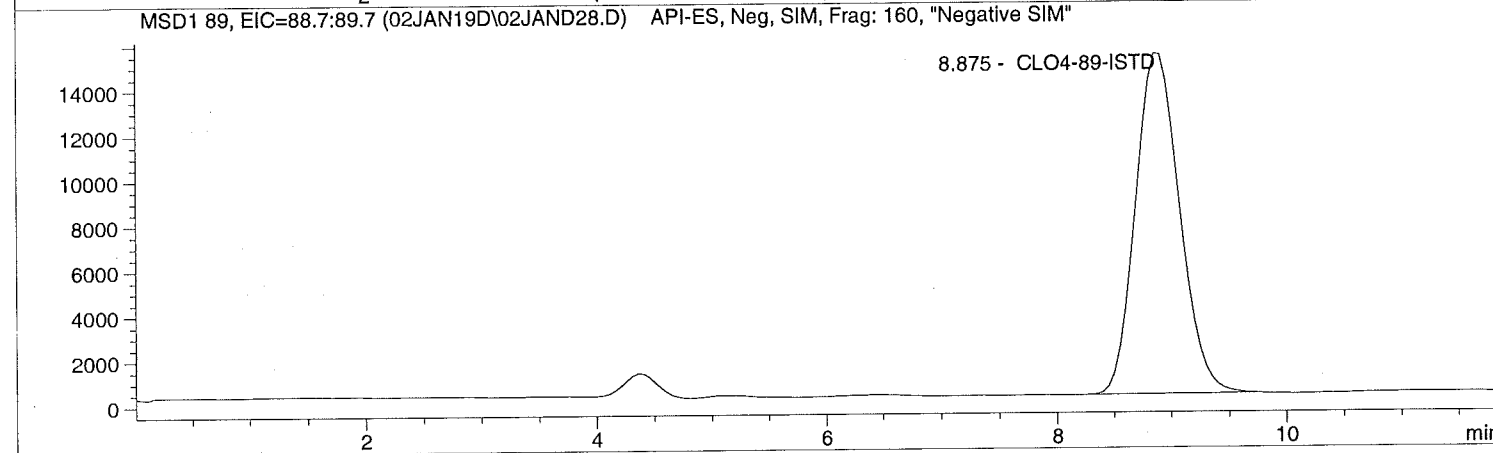
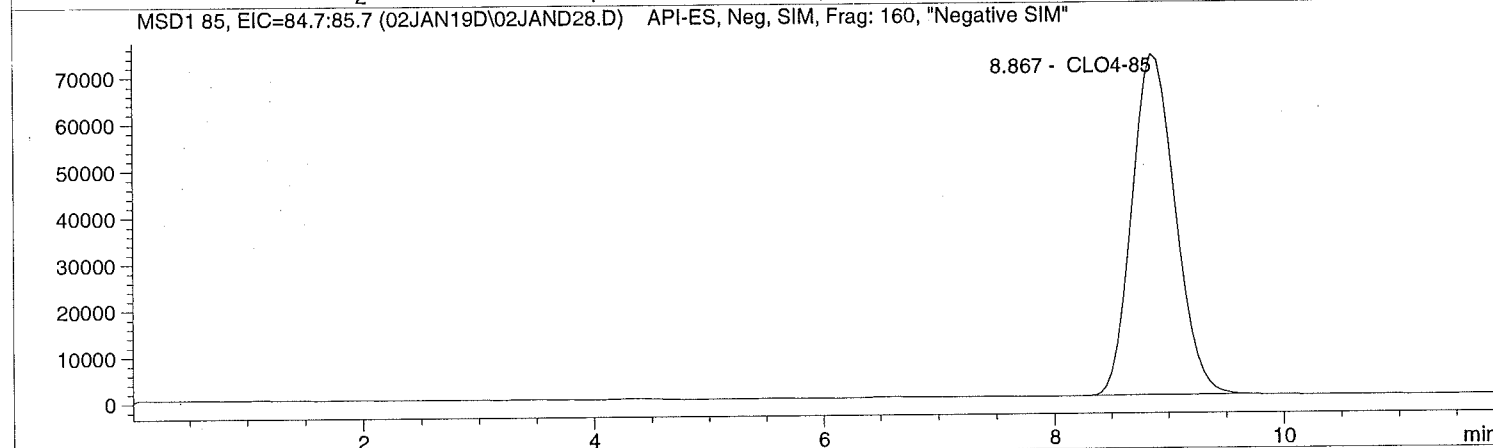
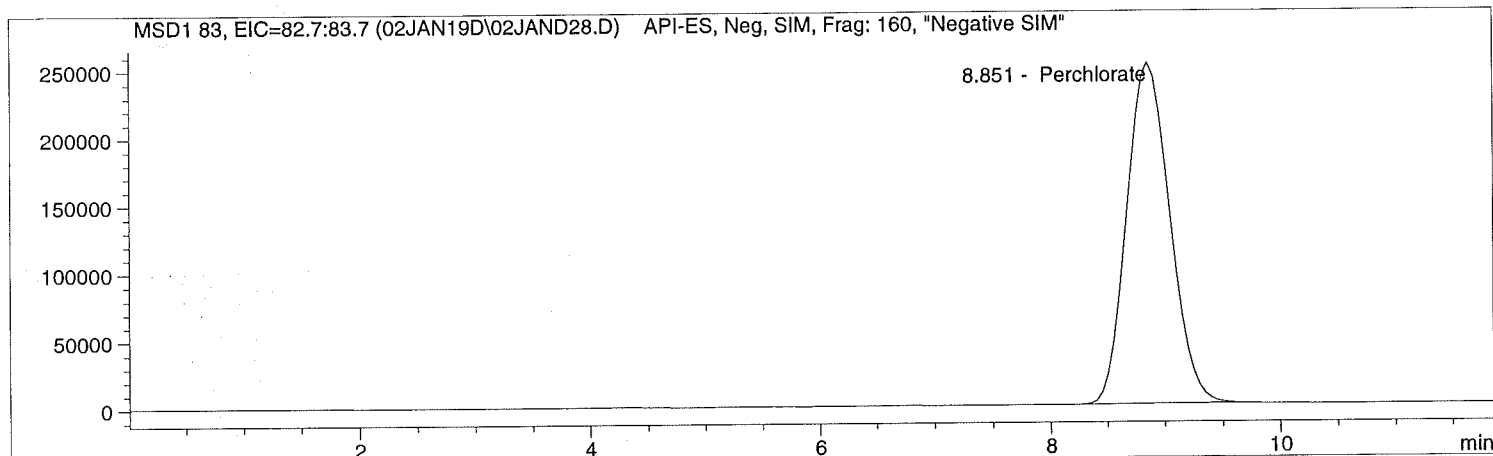
```

=====
Injection Date: 1/02/2019 14:47:11
Sample Name: 1835803002 1K
Acq Operator: TNB

Seq Line: 28
Location: Vial 96
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: 1/02/2019 14:47:11      Seq Line:          28
Sample Name:    1835803002 1K           Location:          Vial 96
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
8.851	PBA	6592644.0	46839.9116	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.867	PBA	1921720.3	44904.9213	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.875	PBA	403292.2	5000.0000	CLO4-89-ISTD

```

=====
*** End of Report ***
=====

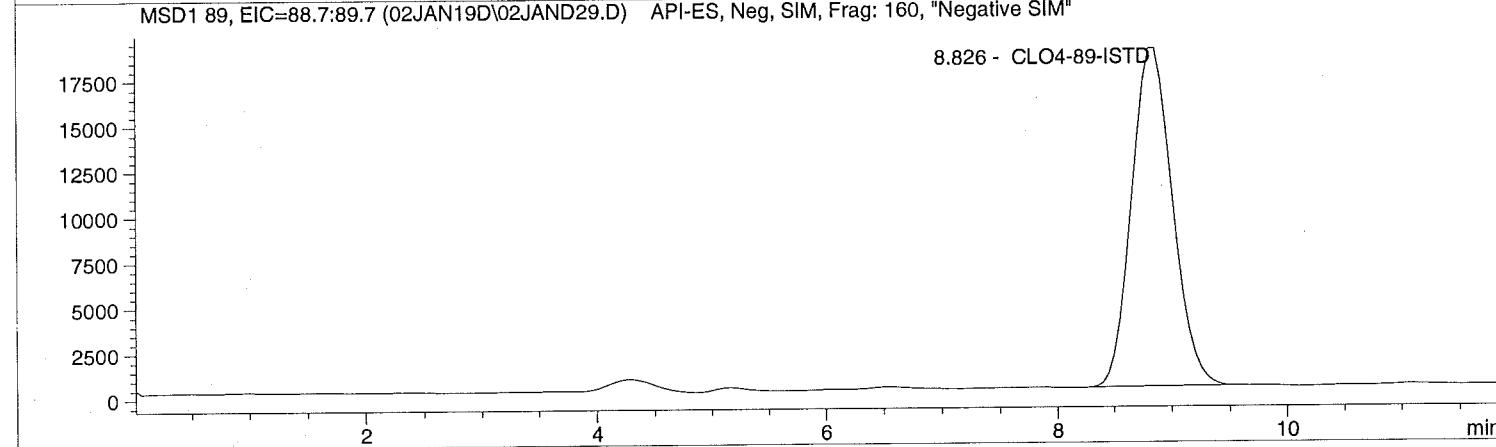
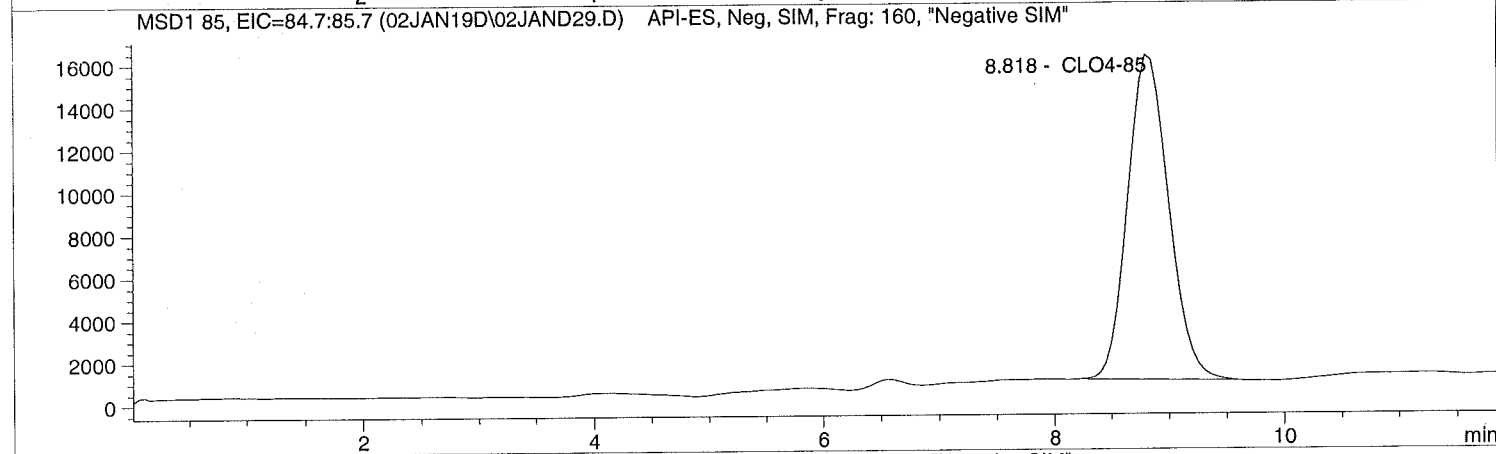
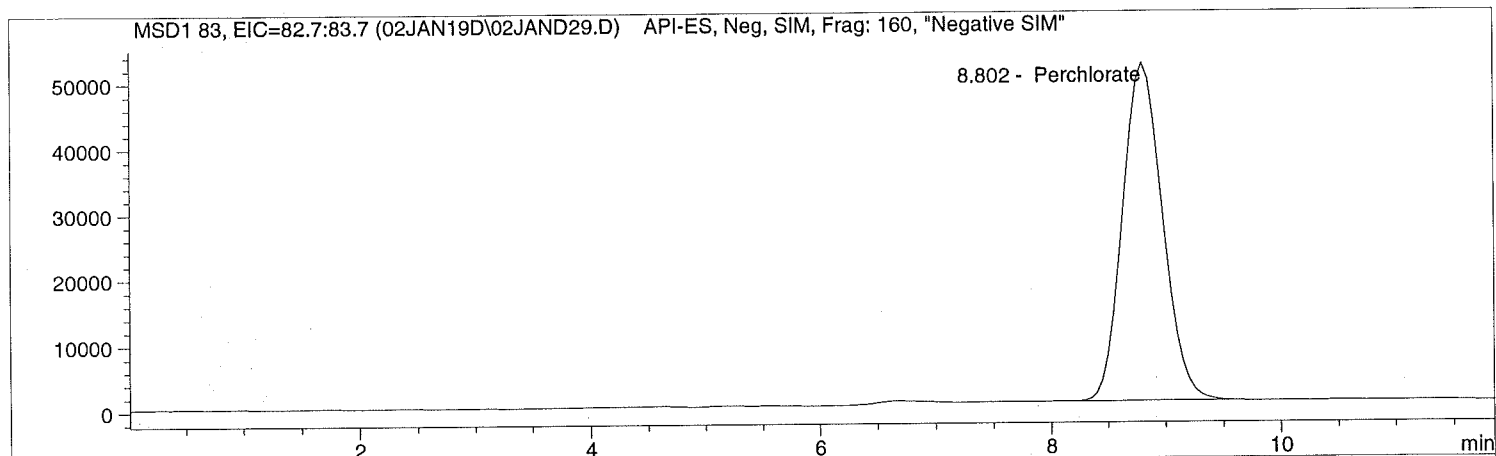
```

=====
Injection Date: 1/02/2019 15:00:54
Sample Name: 1835803004 10X
Acq Operator: TNB

Seq Line: 29
Location: Vial 97
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\02JAN19D\02JAND29.D Sample Name: 1835803004 10X

```

=====
Injection Date: 1/02/2019 15:00:54      Seq Line:          29
Sample Name:    1835803004 10X          Location:         Vial 97
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
8.802	BBA	1231140.9	84.4611	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.818	BBA	375833.8	85.4704	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.826	PBA	455349.2	50.0000	CLO4-89-ISTD

```

=====
*** End of Report ***
=====

```

Data file: C:\HPCHEM\1\DATA\02JAN19D\02JAND30.D

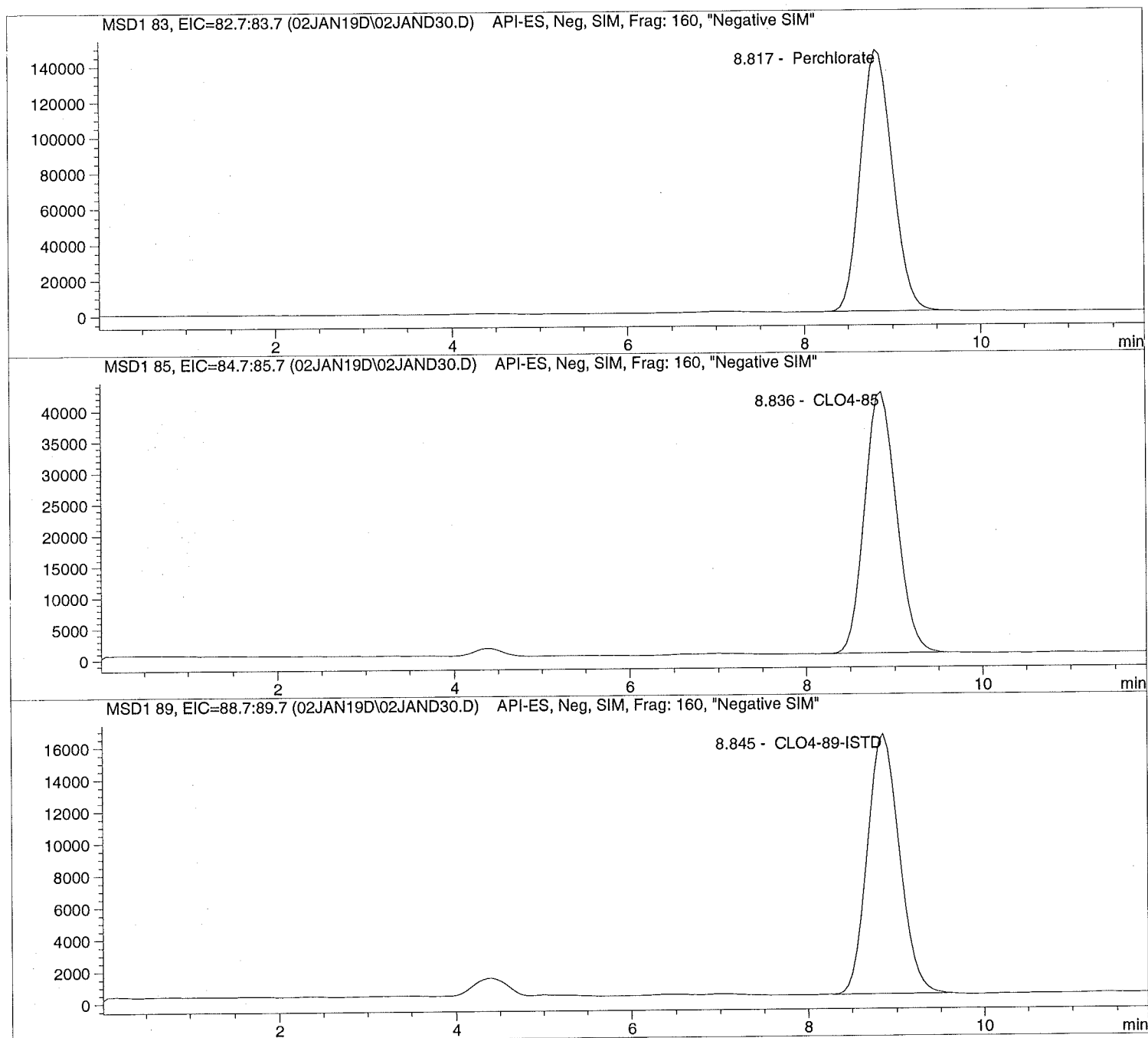
Sample Name: 634849 CCV@25

Injection Date: 1/02/2019 15:14:38
Sample Name: 634849 CCV@25
Acq Operator: TNB

Seq Line: 30
Location: Vial 71
Inj. No.: 1
Inj. Vol.: 30 μ l

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\02JAN19D\02JAND30.D Sample Name: 634849 CCV@25

```

=====
Injection Date: 1/02/2019 15:14:38      Seq Line: 30
Sample Name: 634849 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	3637271.8	26.5252	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.836	PBA	1044447.7	25.2846	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.845	BBA	408019.3	5.0000	CLO4-89-ISTD

```

=====
*** End of Report ***
=====

```

Data file: C:\HPCHEM\1\DATA\02JAN19D\02JAND31.D

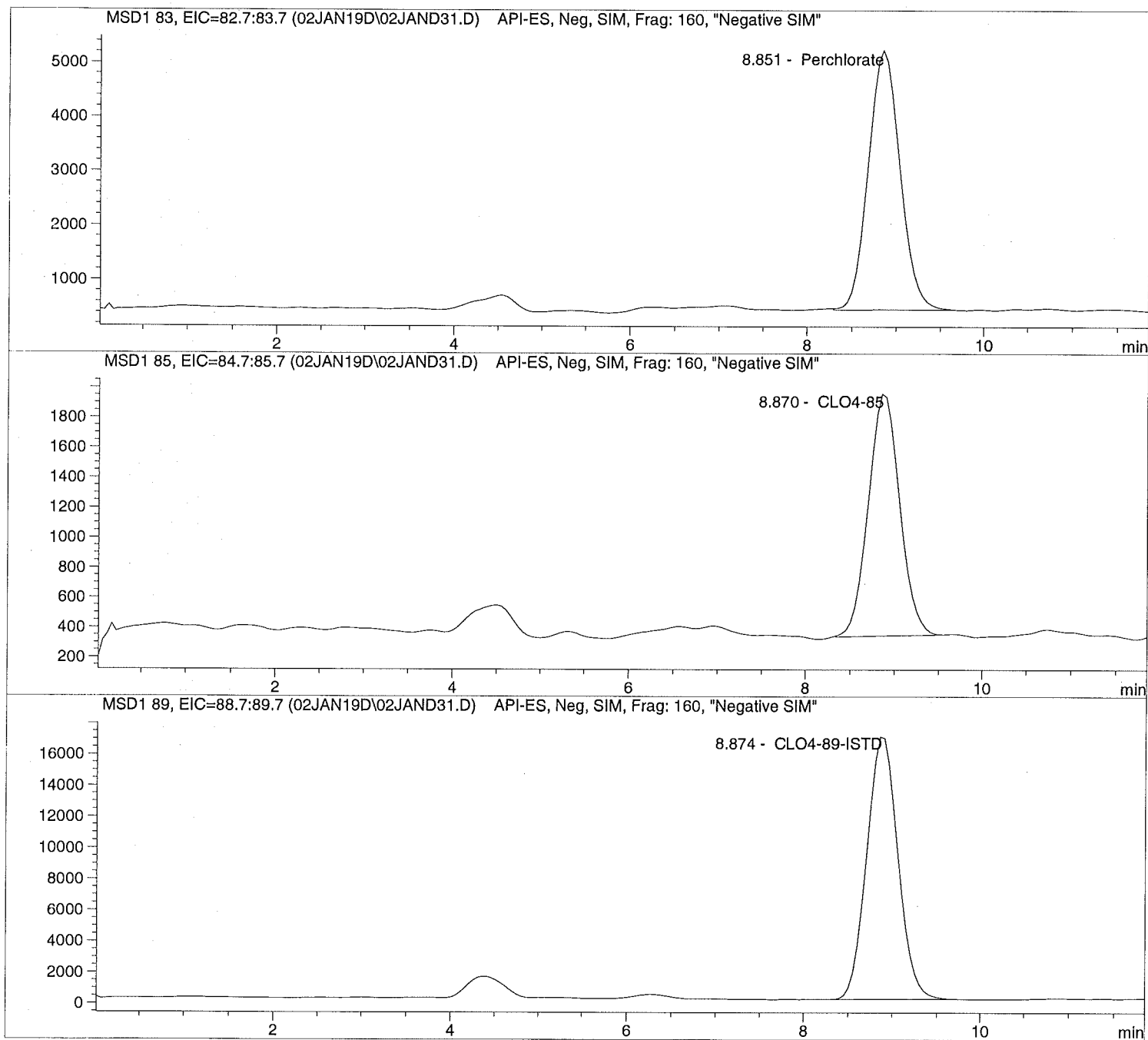
Sample Name: 634850 LODV@1.

Injection Date: 1/02/2019 15:28:24
Sample Name: 634850 LODV@1.
Acq Operator: TNB

Seq Line: 31
Location: Vial 72
Inj. No.: 1
Inj. Vol.: 30 μ l

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\02JAN19D\02JAND31.D Sample Name: 634850 LODV@1.

```

=====
Injection Date: 1/02/2019 15:28:24      Seq Line: 31
Sample Name: 634850 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
8.851	BBA	118393.1	1.0916	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.870	PBA	39854.3	1.0914	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
8.874	BBA	413841.3	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 ***



=====
 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 (Amt) (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]	Lvl	Amount	Area	Amt/Area	Ref	Grp Name
9.287	1	1.00000	9.40790e4	1.06294e-5	1	Perchlorate
		2.00000	2.26957e5	8.81224e-6		
		5.00000	5.50307e5	9.08584e-6		
		10.00000	1.07623e6	9.29172e-6		
		25.00000	2.88097e6	8.67764e-6		
		50.00000	6.29507e6	7.94272e-6		
		75.00000	9.45737e6	7.93033e-6		
9.314	3	5.00000	3.79545e5	1.31737e-5	+I1	CLO4-89-ISTD
		5.00000	3.52582e5	1.41811e-5		
		5.00000	3.66805e5	1.36312e-5		
		5.00000	3.56815e5	1.40129e-5		
		5.00000	3.32340e5	1.50448e-5		
		5.00000	3.59393e5	1.39124e-5		
		5.00000	3.45193e5	1.44847e-5		
9.316	2	1.00000	3.17987e4	3.14479e-5	1	CLO4-85
		2.00000	7.05436e4	2.83513e-5		
		5.00000	1.69833e5	2.94406e-5		
		10.00000	3.31565e5	3.01600e-5		
		25.00000	8.62978e5	2.89695e-5		
		50.00000	1.91847e6	2.60625e-5		

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

RetTime [min]	Lvl Sig	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

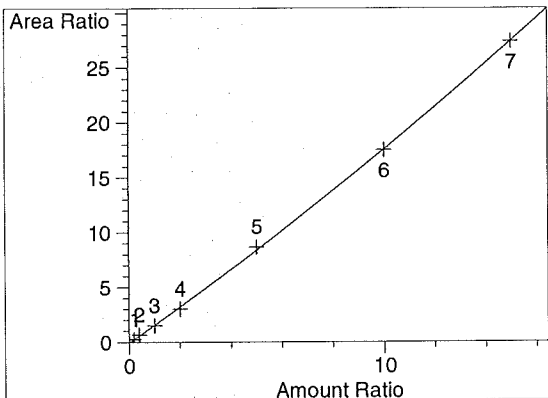
Time Window : From 7.211 min To 11.211 min
 Curve Type : Quadratic
 Origin : Ignored
 Calibration Level Weights:/
 Level 1 : 1
 Level 2 : 0.5
 Level 3 : 0.2
 Level 4 : 0.1
 Level 5 : 0.04
 Level 6 : 0.02
 Level 7 : 0.013333

```
=====
                          Peak Sum Table
=====
```

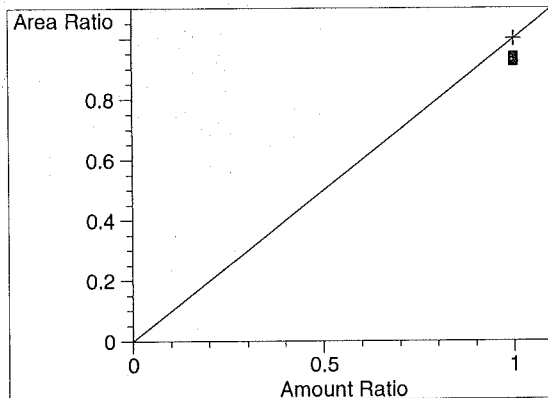
```
***No Entries in table***
=====
```



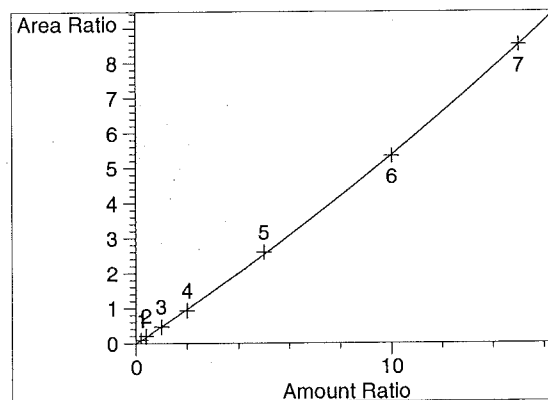
=====
 Calibration Curves
 =====



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 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		

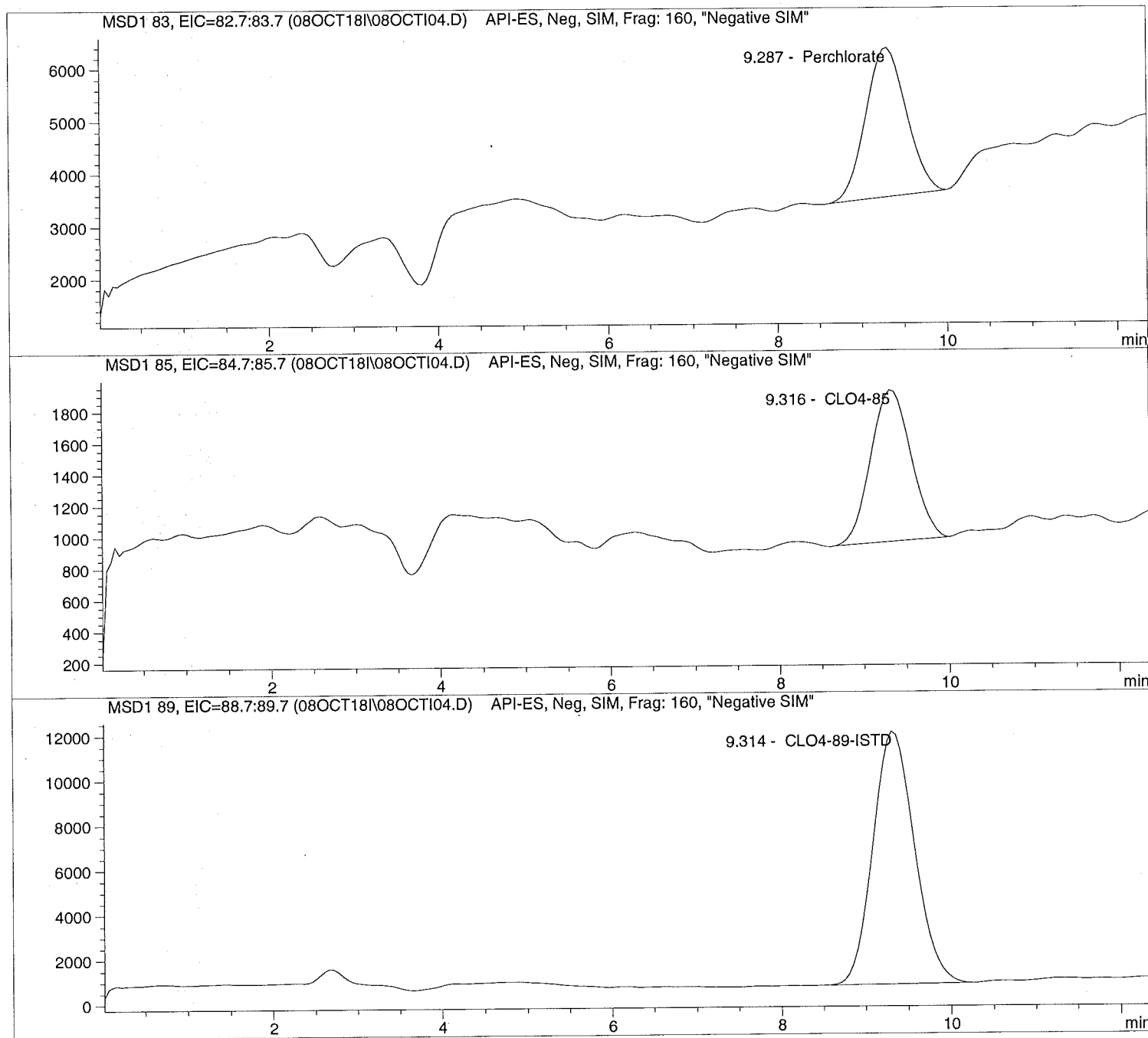


Injection Date: 10/08/2018 11:37:35
Sample Name: CLO4@ 1.0ug/L
Acq Operator: TNB

Seq Line: 4
Location: Vial 74
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 ***
=====

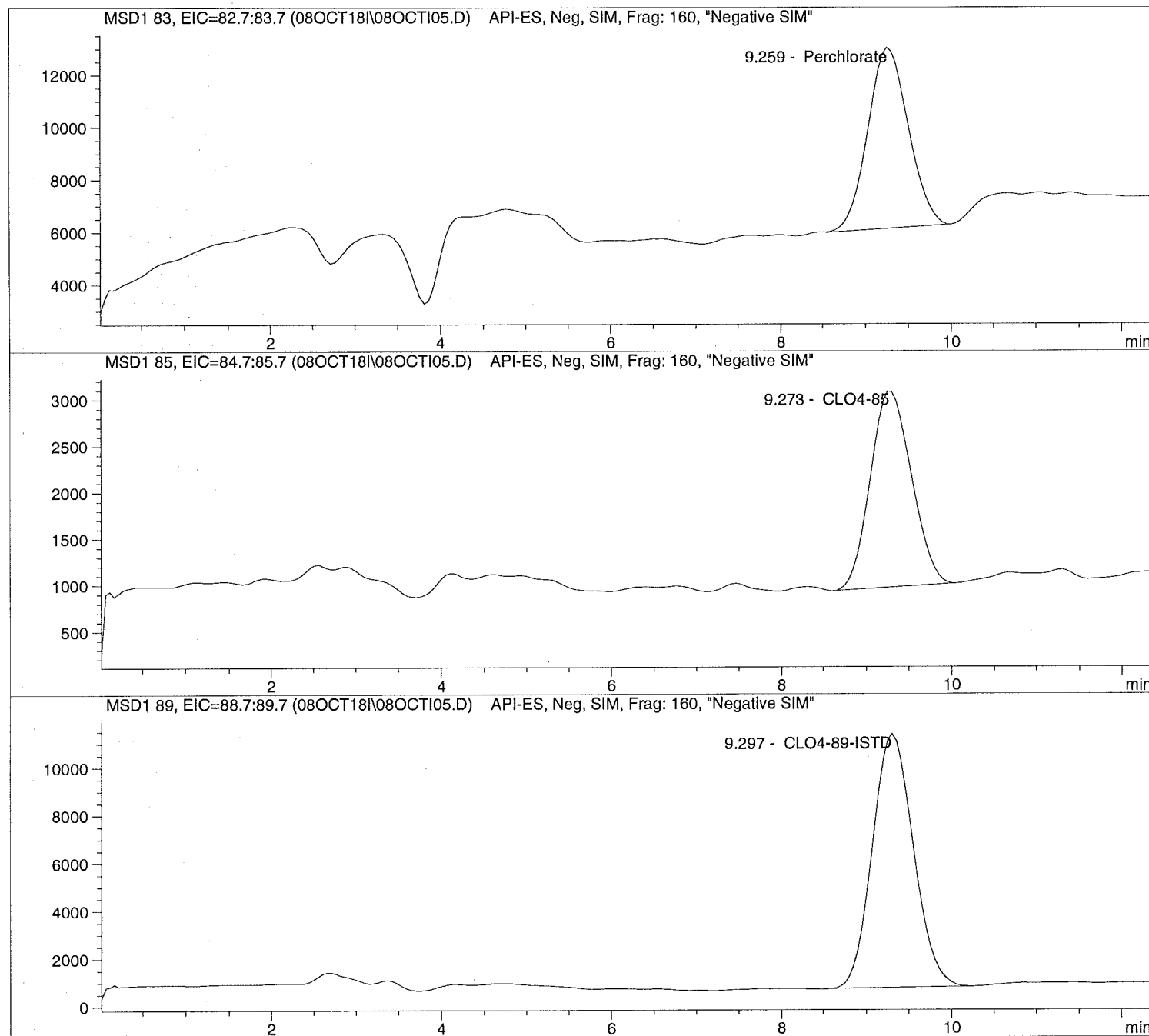
```

Injection Date: 10/08/2018 11:51:45
Sample Name: CLO4@ 2.0ug/L
Acq Operator: TNB

Seq Line: 5
Location: Vial 75
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 ***
=====

```

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

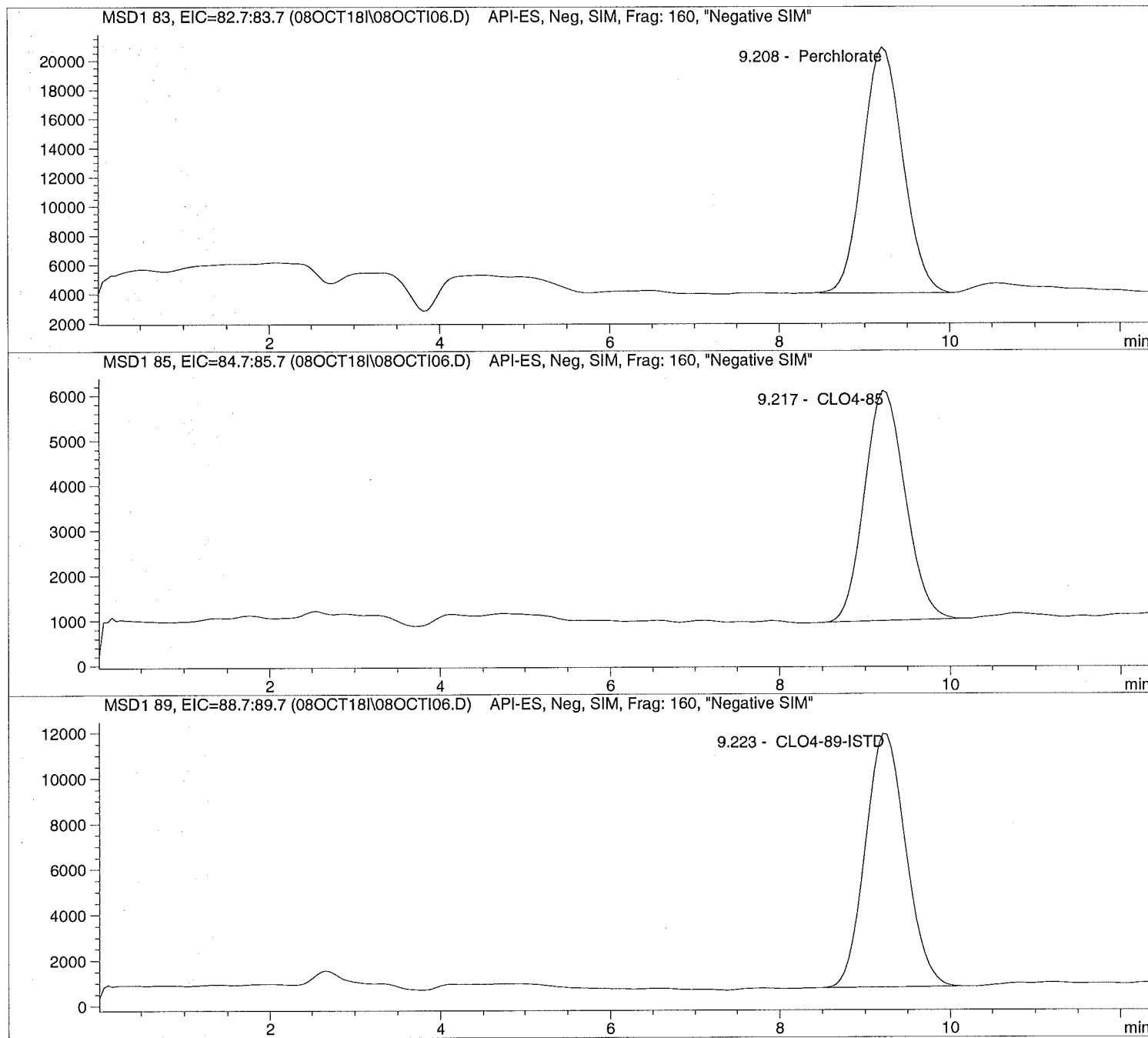
Inj. Vol.: 25 µl

Acq. Method: CLO4-AQN.M

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

Last Changed: 10/9/2018 08:22:51

Perchlorate analysis



```

=====
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 ***
=====

```

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

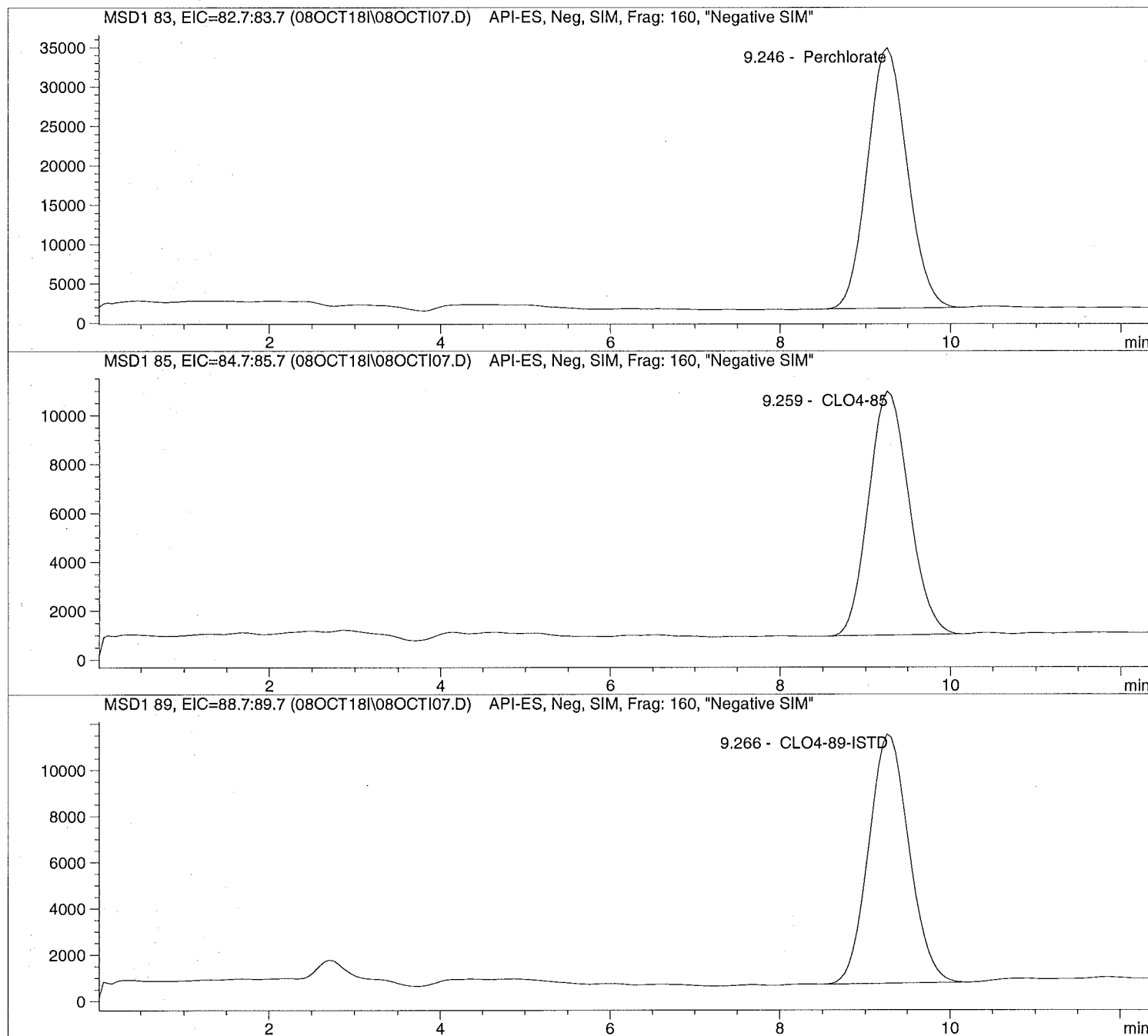
Inj. Vol.: 25 µl

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 ***
=====

```

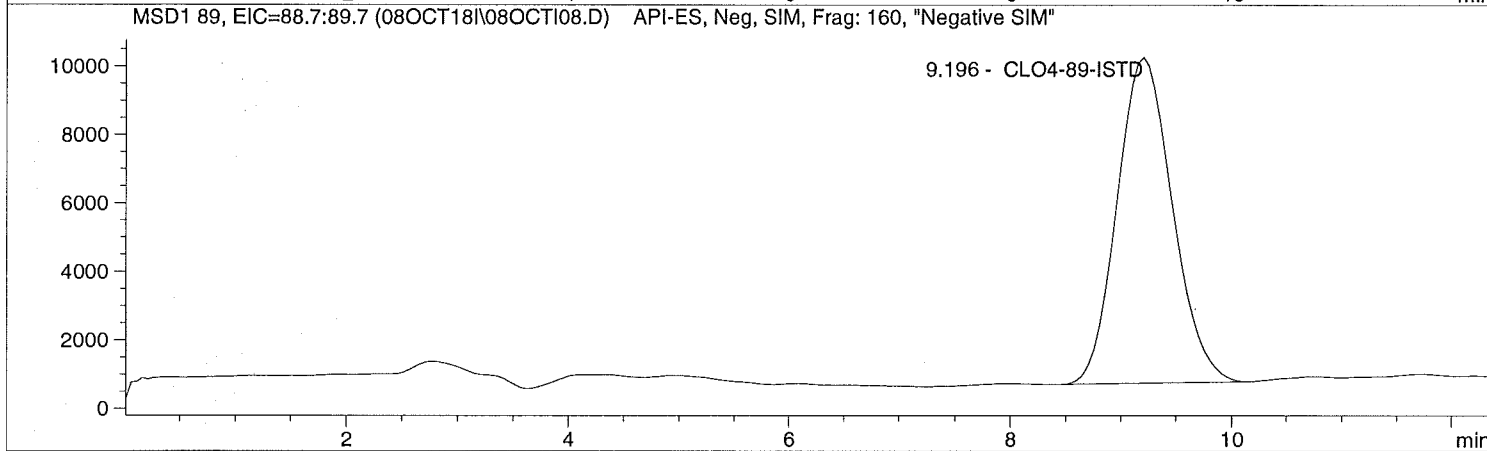
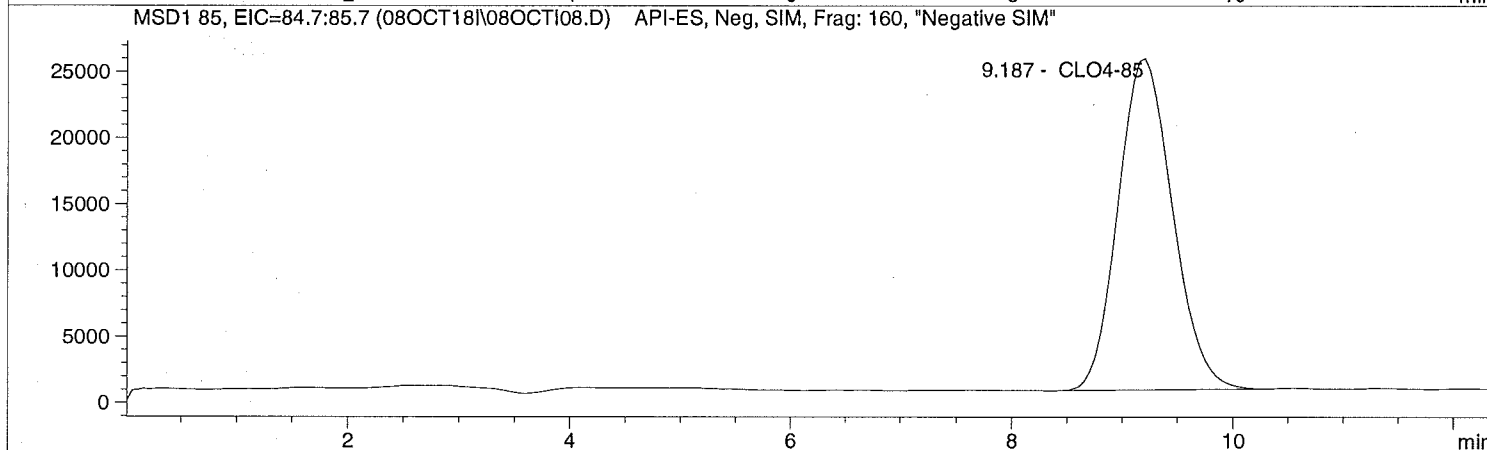
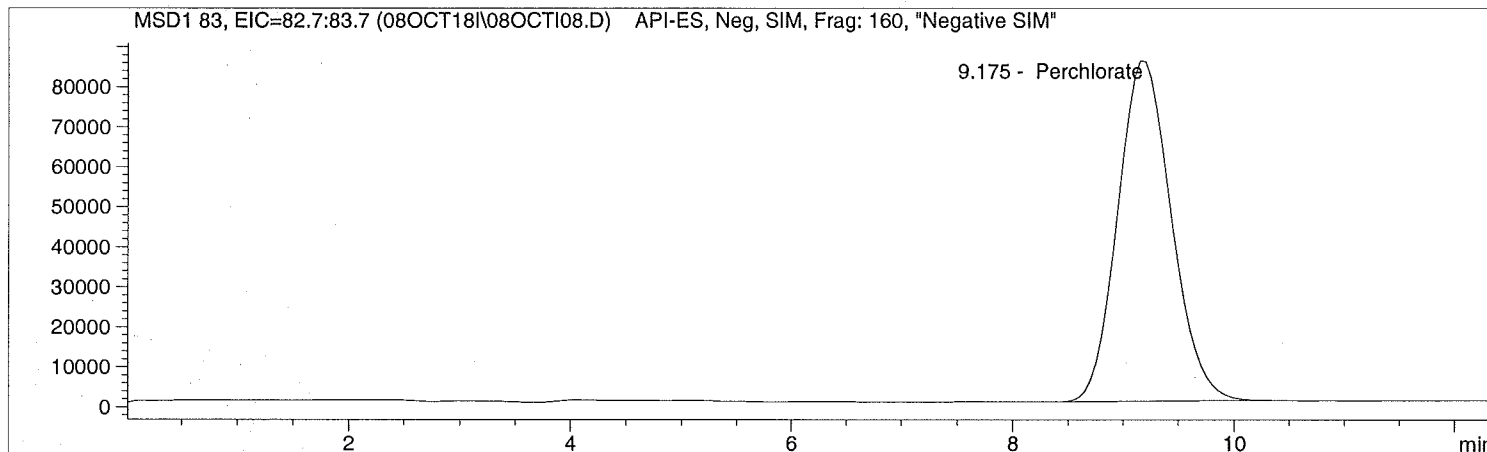


Injection Date: 10/08/2018 12:34:24
Sample Name: CLO4@ 25.ug/L
Acq Operator: TNB

Seq Line: 8
Location: Vial 78
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 ***
=====

```



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

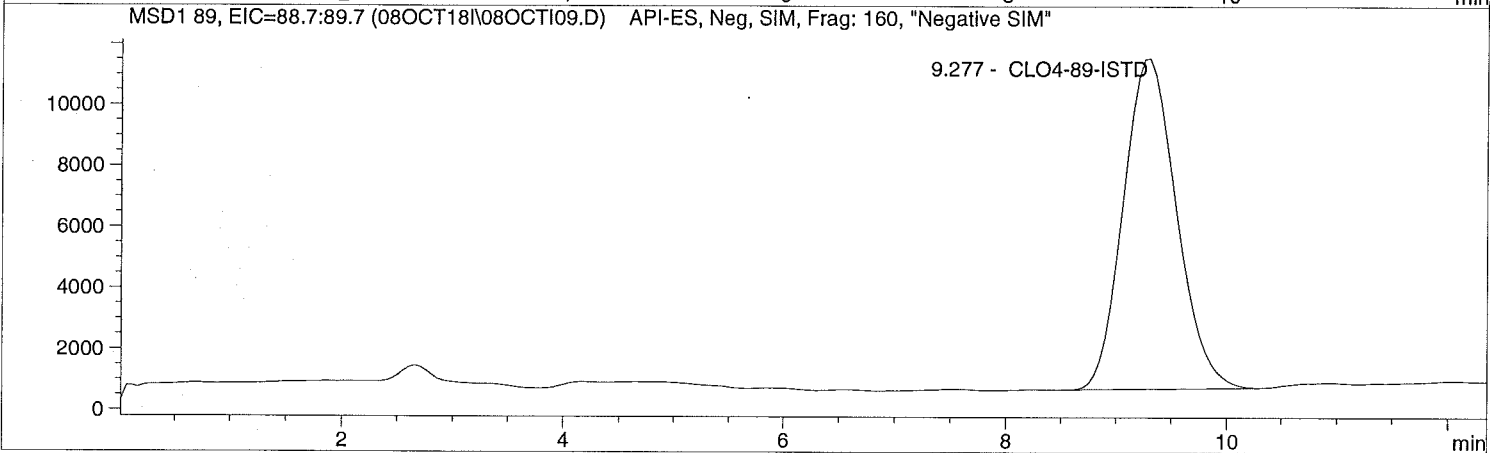
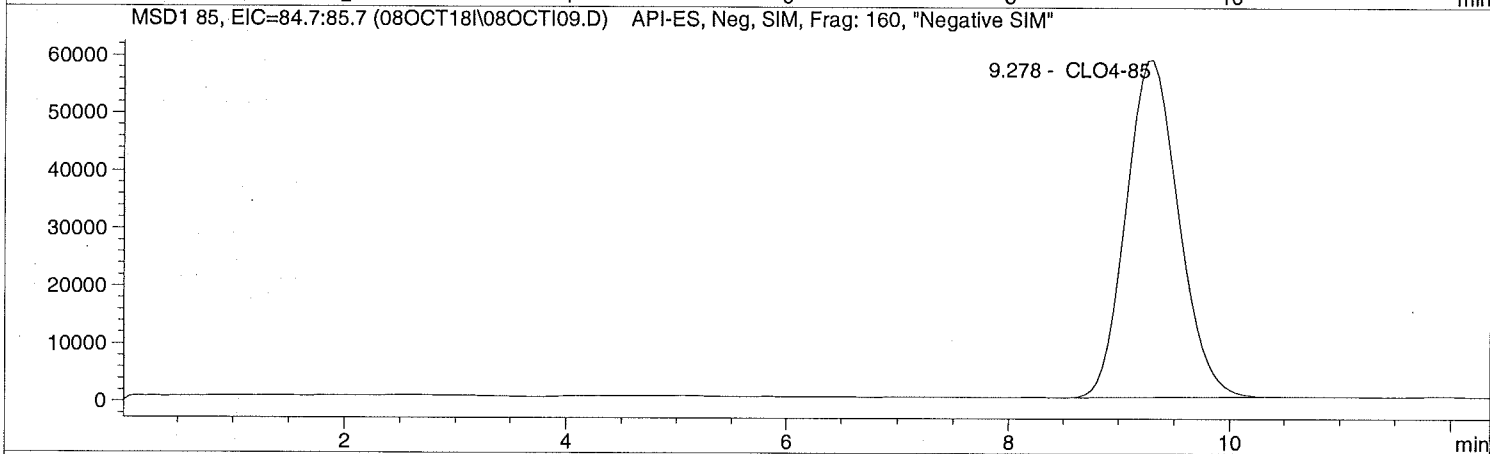
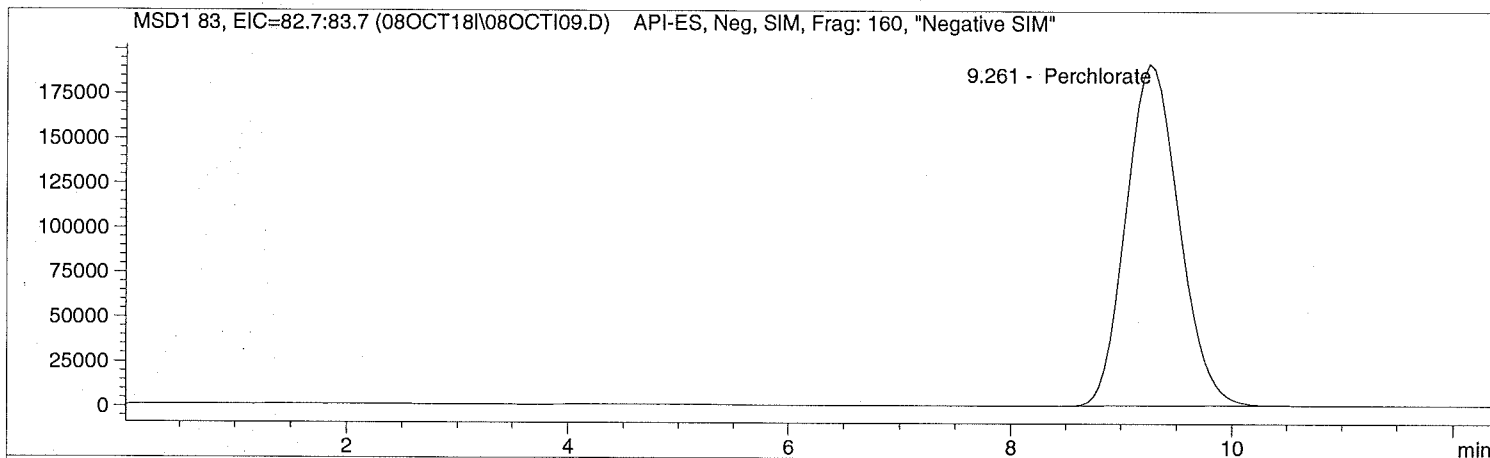
Inj. Vol.: 25 µl

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

```

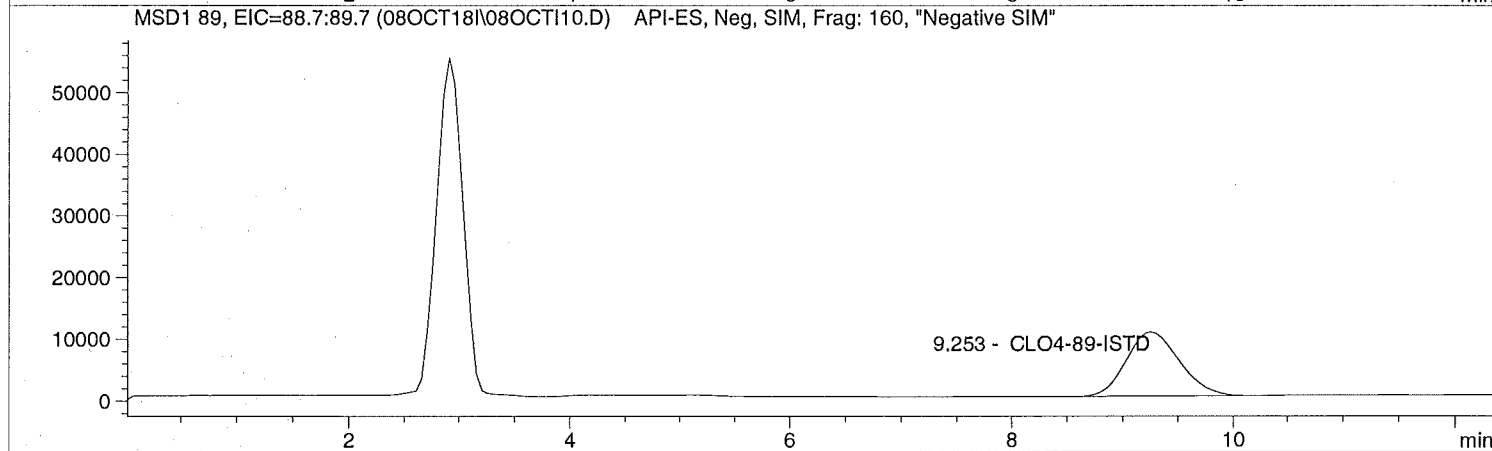
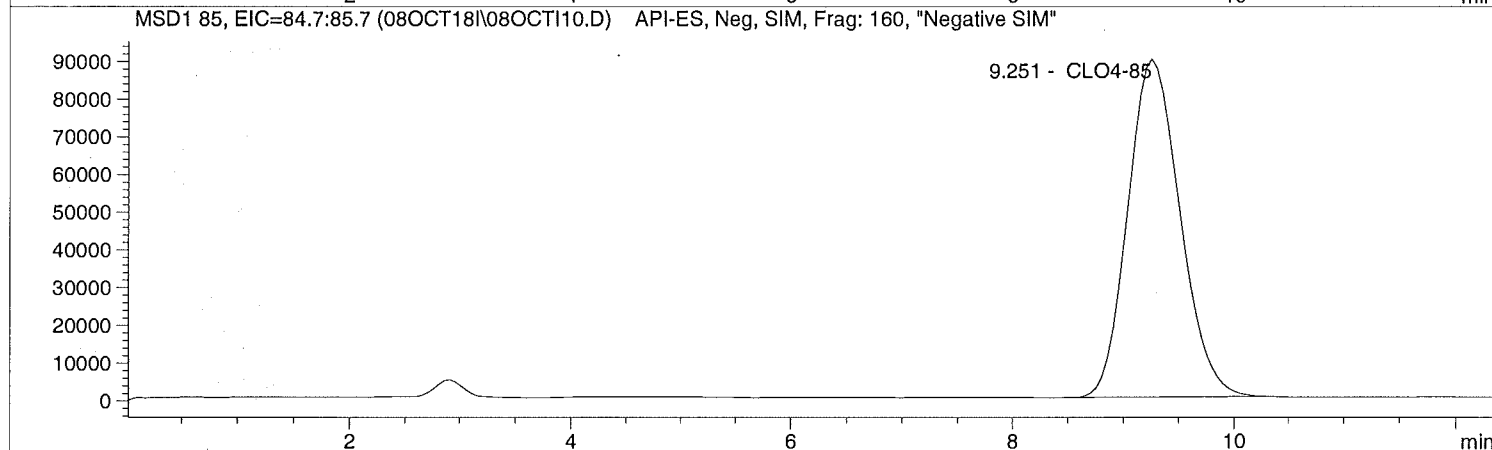
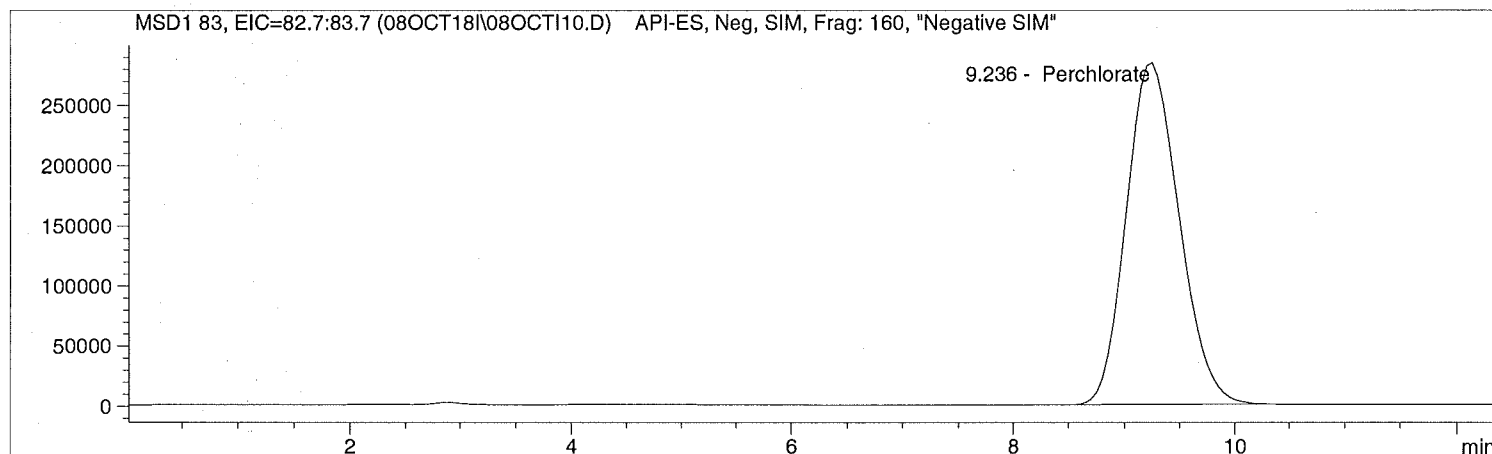
=====
*** End of Report ***
=====

```

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

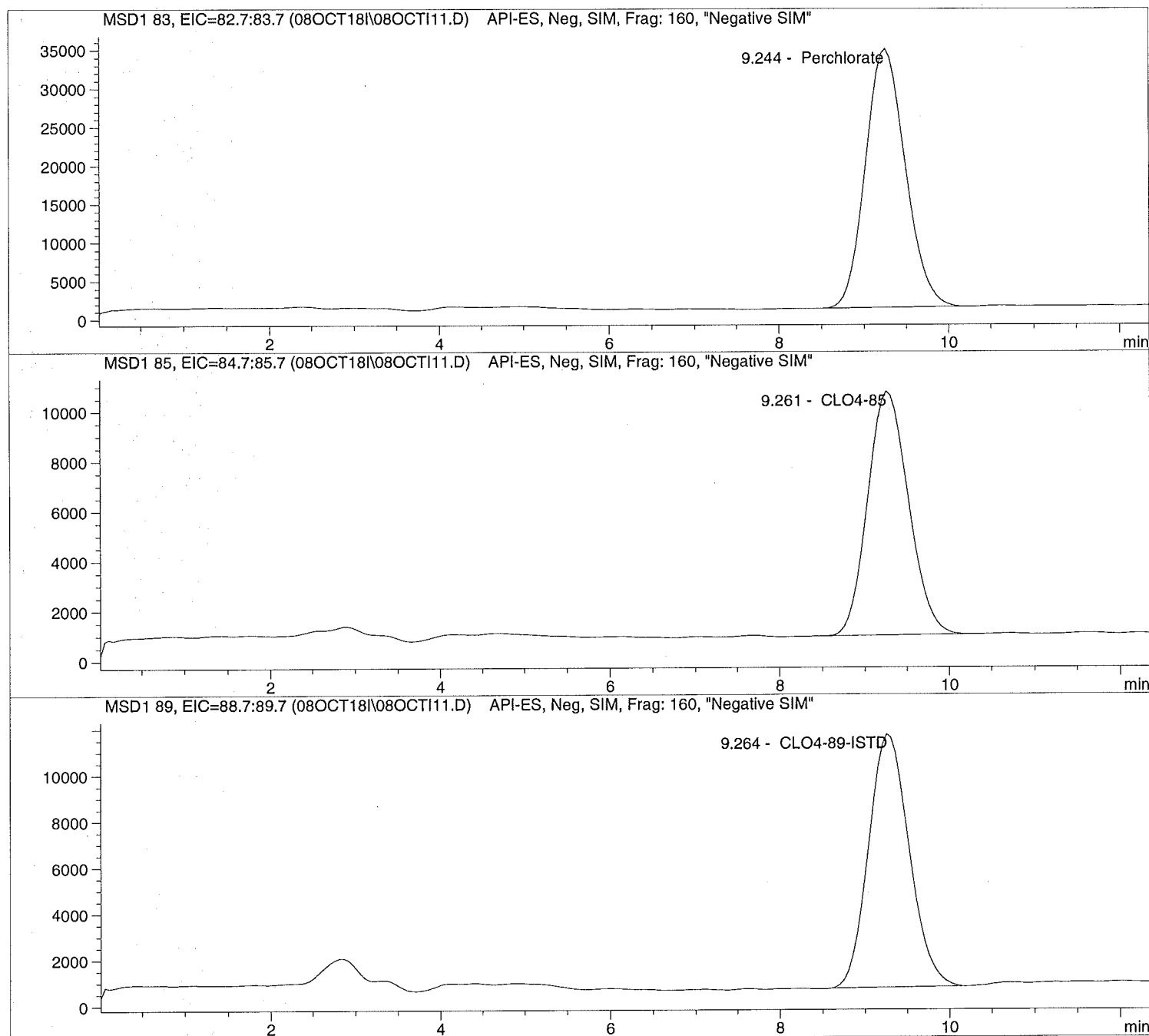
Sample Name: ICAL Verf@10ug/L

Injection Date: 10/08/2018 13:17:00
Sample Name: ICAL Verf@10ug/L
Acq Operator: TNB

Seq Line: 11
Location: Vial 81
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 ***
=====

```

HS18121264 8260 Raw Data

ALS WO# HS18121264



MSVOA09 -Logbook

Batch: 34002
 Date: 12-21-2018
 Method: 8260
 Comments:

Analyst: Presenta Cabascango
 Reviewer:
 Laboratory: Houston

#	<u>Samp ID</u>	<u>Type</u>	<u>Analyzed</u>	<u>DF</u>	<u>Init Wt/Vol</u>	<u>Final Vol</u>	<u>File ID</u>	<u>Matrix</u>	<u>Status</u>	<u>pH</u>
1	BFB	TUNE	12-21-2018 01:25 pm	1.00	50 mL	50 mL	U122101.D	Liquid	Y	NA
	<i>Auto find/purged</i>									
2	VSTD00.25	ICAL1	12-21-2018 01:49 pm	1.00	50 mL	50 mL	U122102.D	Liquid	Y	NA
	<i>0.25 uL cal std/250 mL DI</i>									
3	VSTD00.5	ICAL2	12-21-2018 02:14 pm	1.00	50 mL	50 mL	U122103.D	Liquid	Y	NA
	<i>0.5 uL cal std/250 mL DI</i>									
4	VSTD001	ICAL3	12-21-2018 03:03 pm	1.00	50 mL	50 mL	U122104.D	Liquid	Y	NA
	<i>1 uL cal std/250 mL DI</i>									
5	VSTD002	ICAL4	12-21-2018 03:28 pm	1.00	50 mL	50 mL	U122105.D	Liquid	Y	NA
	<i>2 uL cal std/250 mL DI</i>									
6	VSTD005	ICAL5	12-21-2018 03:52 pm	1.00	50 mL	50 mL	U122106.D	Liquid	Y	NA
	<i>5 uL cal std/250 mL DI</i>									
7	VSTD020	ICAL6	12-21-2018 04:17 pm	1.00	50 mL	50 mL	U122107.D	Liquid	Y	NA
	<i>4 uL cal std/50 mL DI</i>									
8	VSTD050	ICAL7	12-21-2018 04:41 pm	1.00	50 mL	50 mL	U122108.D	Liquid	Y	NA
	<i>10 uL cal std/50 mL DI</i>									
9	VSTD100	ICAL8	12-21-2018 05:06 pm	1.00	50 mL	50 mL	U122109.D	Liquid	Y	NA
	<i>20 uL cal std/50 mL DI</i>									
10	VSTD150	ICAL9	12-21-2018 05:31 pm	1.00	50 mL	50 mL	U122110.D	Liquid	Y	NA
	<i>30 uL cal std/50 mL DI</i>									
11	VSTD200	ICAL	12-21-2018 05:55 pm	1.00	50 mL	50 mL	U122111.D	Liquid	Y	NA
	<i>40 uL cal std/50 mL DI</i>									
12	BLANK	SAMP	12-21-2018 06:20 pm	1.00	50 mL	50 mL	U122112.D	Liquid	Y	NA
	<i>Cleanup blk</i>									
13	VSTD050	ICV	12-21-2018 06:45 pm	1.00	50 mL	50 mL	U122113.D	Liquid	Y	NA
	<i>10 uL ICV std/50 mL DI</i>									
14	BLANK	SAMP	12-21-2018 07:09 pm	1.00	50 mL	50 mL	U122114.D	Liquid	Y	NA
15	VLCSW-1812021	LCS	12-21-2018 07:34 pm	1.00	50 mL	50 mL	U122115.D	Liquid	Y	NA
	<i>4 uL ICV std/50 mL DI</i>									
16	BLANK	SAMP	12-21-2018 07:59 pm	1.00	50 mL	50 mL	U122116.D	Liquid	Y	NA
17	VBLKW-181221	MBLK	12-21-2018 08:24 pm	1.00	50 mL	50 mL	U122117.D	Liquid	Y	NA
18	HS18120782-01	SAMP	12-21-2018 08:48 pm	1.00	50 mL	50 mL	U122118.D	Liquid	Y	<2
19	HS18121172-01	SAMP	12-21-2018 09:13 pm	1.00	50 mL	50 mL	U122119.D	Liquid	Y	<2
20	HS18120947-01	SAMP	12-21-2018 09:38 pm	10.00	5 mL	50 mL	U122120.D	Liquid	Y	<2
21	HS18121172-01MS	MS	12-21-2018 10:03 pm	1.00	50 mL	50 mL	U122121.D	Liquid	Y	<2
	<i>3.5 uL cal std/40 mL Sample</i>									
22	HS18121172-01MSD	MSD	12-21-2018 10:27 pm	1.00	50 mL	50 mL	U122122.D	Liquid	Y	<2
	<i>3.5 uL cal std/40 mL Sample</i>									
23	HS18121172-02	SAMP	12-21-2018 10:52 pm	1.00	50 mL	50 mL	U122123.D	Liquid	Y	<2
24	HS18121172-03	SAMP	12-21-2018 11:17 pm	1.00	50 mL	50 mL	U122124.D	Liquid	Y	<2
25	HS18121172-04	SAMP	12-21-2018 11:42 pm	1.00	50 mL	50 mL	U122125.D	Liquid	Y	<2
26	HS18121172-05	SAMP	12-22-2018 12:06 am	1.00	50 mL	50 mL	U122126.D	Liquid	Y	<2
27	HS18121172-06	SAMP	12-22-2018 12:31 am	1.00	50 mL	50 mL	U122127.D	Liquid	Y	<2



MSVOA09 -Logbook

Chemical	Value
SURR SPK ID	30502-52-03
IS ID	30502-52-04
ICV STD ID	30603-46-01
LCS/MS ID	30603-46-01
CAL STD ID	30502-56-01/02
BFB ID	30502-52-03

FORM 3
WATER VOLATILE METHOD SPIKE RECOVERY

Lab Name: ALS LABORATORY GROUP

Contract:

Lab Code: ALS-HS

Case No.:

SAS No.:

SDG No.: HS18121264

Matrix Spike - Sample No.: VSTD050

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE AMOUNT ()	% REC #	QC. LIMITS REC.
=====	=====	=====	=====	=====
cis-1,3-Dichloropropene	50.00	48.91	98	80-120
trans-1,3-Dichloropropene	50.00	48.93	98	80-120
1,3-Dichlorobenzene	50.00	48.27	96	80-120
2,2-Dichloropropane	50.00	53.09	106	80-120
1,1-Dichloropropene	50.00	47.46	95	80-120
Dibromomethane	50.00	50.89	102	80-120
1,2-Dibromoethane	50.00	51.16	102	80-120
trans-1,2-Dichloroethene	50.00	48.02	96	80-120
1,1,1,2-Tetrachloroethane	50.00	48.43	97	80-120
1,1,1-Trichloroethane	50.00	49.36	99	80-120
1,1,2,2-Tetrachloroethane	50.00	49.55	99	80-120
Freon TF	50.00	45.07	90	80-120
1,1,2-Trichloroethane	50.00	49.30	99	80-120
1,1-Dichloroethane	50.00	47.96	96	80-120
1,1-Dichloroethene	50.00	45.82	92	80-120
Trichlorofluoromethane	50.00	45.85	92	80-120
1,2,3-Trichlorobenzene	50.00	47.80	96	80-120
Toluene	50.00	49.27	98	80-120
1,2,4-Trichlorobenzene	50.00	50.37	101	80-120
1,2,4-Trimethylbenzene	50.00	50.13	100	80-120
Tetrachloroethene	50.00	45.93	92	80-120
Trichloroethene	50.00	48.84	98	80-120
1,2-Dichlorobenzene	50.00	48.36	97	80-120
1,2-Dichloroethane	50.00	50.35	101	80-120
1,2-Dichloropropane	50.00	49.19	98	80-120
1,3,5-Trimethylbenzene	50.00	50.06	100	80-120
1,3-Dichloropropane	50.00	49.40	99	80-120
1,4-Dichlorobenzene	50.00	47.08	94	80-120

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

COMMENTS:

FORM III VOA



FORM 3
WATER VOLATILE METHOD SPIKE RECOVERY

Lab Name: ALS LABORATORY GROUP

Contract:

Lab Code: ALS-HS

Case No.:

SAS No.:

SDG No.: HS18121264

Matrix Spike - Sample No.: VSTD050

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE AMOUNT ()	% REC #	QC. LIMITS REC.
2-Butanone	100.00	104.35	104	80-120
2-Chlorotoluene	50.00	49.32	99	80-120
2-Hexanone	100.00	109.16	109	80-120
4-Chlorotoluene	50.00	49.71	99	80-120
tert-Butylbenzene	50.00	47.93	96	80-120
4-Methyl-2-Pentanone	100.00	106.57	106	80-120
Acetone	100.00	114.45	114	80-120
Benzene	50.00	48.82	98	80-120
Bromobenzene	50.00	49.77	100	80-120
Bromochloromethane	50.00	56.76	114	80-120
Bromodichloromethane	50.00	52.06	104	80-120
Bromoform	50.00	47.92	96	80-120
Bromomethane	50.00	54.05	108	80-120
Carbon Disulfide	100.00	96.00	96	80-120
Carbon Tetrachloride	50.00	44.88	90	80-120
Chlorobenzene	50.00	48.25	96	80-120
Chloroethane	50.00	46.15	92	80-120
Chloroform	50.00	48.45	97	80-120
Chloromethane	50.00	48.96	98	80-120
cis-1,2-Dichloroethene	50.00	48.93	98	80-120
Dibromochloromethane	50.00	48.57	97	80-120
Dichlorodifluoromethane	50.00	46.21	92	80-120
Ethylbenzene	50.00	49.30	99	80-120
Hexachlorobutadiene	50.00	46.17	92	80-120
Isopropylbenzene	50.00	49.07	98	80-120
m,p-Xylenes	100.00	99.88	100	80-120
Methylene Chloride	50.00	49.75	100	80-120
n-Butylbenzene	50.00	46.94	94	80-120

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

COMMENTS:

FORM III VOA



FORM 3
WATER VOLATILE METHOD SPIKE RECOVERY

Lab Name: ALS LABORATORY GROUP

Contract:

Lab Code: ALS-HS

Case No.:

SAS No.:

SDG No.: HS18121264

Matrix Spike - Sample No.: VSTD050

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE AMOUNT ()	% REC #	QC. LIMITS REC.
n-Propylbenzene	50.00	49.11	98	80-120
Naphthalene	50.00	49.46	99	80-120
o-Xylene	50.00	49.89	100	80-120
sec-Butylbenzene	50.00	47.69	95	80-120
Styrene	50.00	52.73	105	80-120
Vinyl Chloride	50.00	46.02	92	80-120
1,2,3-Trichloropropane	50.00	53.26	106	80-120
p-Isopropyltoluene	50.00	49.19	98	80-120
1,2-Dibromo-3-Chloropro	50.00	49.92	100	80-120

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

COMMENTS: _____

FORM III VOA



FORM 5
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: ALS LABORATORY GROUP Contract:
 Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS18121264
 Lab File ID: U122101 BFB Injection Date: 12/21/18
 Instrument ID: VOA9 BFB Injection Time: 1325
 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	19.6
75	30.0 - 60.0% of mass 95	50.4
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	0.5 (0.8)1
174	Greater than 50.0% of mass 95	66.8
175	5.0 - 9.0% of mass 174	5.1 (7.7)1
176	95.0 - 101.0% of mass 174	63.8 (95.6)1
177	5.0 - 9.0% of mass 176	4.5 (7.0)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	VSTD00.25	VSTD00.25	U122102	12/21/18	1349
02	VSTD00.5	VSTD00.5	U122103	12/21/18	1414
03	VSTD001	VSTD001	U122104	12/21/18	1503
04	VSTD002	VSTD002	U122105	12/21/18	1528
05	VSTD005	VSTD005	U122106	12/21/18	1552
06	VSTD020	VSTD020	U122107	12/21/18	1617
07	VSTD050	VSTD050	U122108	12/21/18	1641
08	VSTD100	VSTD100	U122109	12/21/18	1706
09	VSTD150	VSTD150	U122110	12/21/18	1731
10	VSTD200	VSTD200	U122111	12/21/18	1755
11	VSTD050	VSTD050	U122113	12/21/18	1845
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.: HS18121264

Instrument ID: VOA9

Calibration Date(s): 12/21/18 12/21/18

Column: DB624

ID: 0.18 (mm)

Calibration Time(s): 1349

1755

LAB FILE ID:
RF2: U122105RF0.25: U122102
RF5: U122106RF0.5: U122103
RF20: U122107

RF1: U122104

COMPOUND	RF0.25	RF0.5	RF1	RF2	RF5	RF20
===== cis-1,3-Dichloropropene	===== 	2152	7273	13732	38403	162454
trans-1,3-Dichloropropene		1633	5668	10646	30725	135347
1,3-Dichlorobenzene		1.191	1.700	1.605	1.568	1.456
2,2-Dichloropropane		0.485	0.763	0.625	0.645	0.634
1,1-Dichloropropene		0.322	0.521	0.477	0.458	0.439
Dibromomethane		0.143	0.229	0.212	0.217	0.208
1,2-Dibromoethane		0.251	0.393	0.345	0.364	0.358
trans-1,2-Dichloroethene		0.432	0.724	0.620	0.614	0.598
1,1,1,2-Tetrachloroethane		1272	4208	8522	21878	89389
1,1,1-Trichloroethane		0.521	0.866	0.775	0.824	0.806
1,1,2,2-Tetrachloroethane		0.818	1.359	1.245	1.216	1.139
Freon TF		0.306	0.503	0.450	0.439	0.408
1,1,2-Trichloroethane		0.224	0.351	0.317	0.320	0.302
1,1-Dichloroethane		0.726	1.305	1.174	1.154	1.100
1,1-Dichloroethene		0.403	0.563	0.526	0.486	0.447
Trichlorofluoromethane		1919	7922	14026	37144	130957
1,2,3-Trichlorobenzene		1324	6631	12385	31113	126752
Toluene		1.131	1.662	1.581	1.624	1.525
1,2,4-Trichlorobenzene		0.721	1.015	0.905	0.905	0.901
1,2,4-Trimethylbenzene		1.826	2.823	2.656	2.819	2.701
Tetrachloroethene		0.219	0.326	0.277	0.272	0.254
Trichloroethene		0.245	0.382	0.322	0.344	0.317
1,2-Dichlorobenzene		1.166	1.777	1.606	1.586	1.444
1,2-Dichloroethane		2385	8970	15708	41415	149131
1,2-Dichloropropane		0.265	0.415	0.367	0.371	0.353
1,3,5-Trimethylbenzene		1.672	2.689	2.445	2.682	2.616
1,3-Dichloropropane		0.478	0.748	0.679	0.708	0.655
1,4-Dichlorobenzene		1.357	1.906	1.683	1.662	1.508
2-Butanone		2109	6369	11299	29605	119433
2-Chlorotoluene		1.700	2.636	2.392	2.490	2.333
2-Hexanone		0.182	0.278	0.270	0.285	0.300
4-Chlorotoluene		1.938	2.990	2.793	2.876	2.698
tert-Butylbenzene		1.429	2.338	2.197	2.340	2.218
4-Methyl-2-Pentanone		0.264	0.428	0.396	0.407	0.423
Acetone		3366	5582	8219	19230	73380
Benzene		0.975	1.562	1.399	1.435	1.337
Bromobenzene		0.564	0.890	0.814	0.813	0.765
Bromochloromethane		773	2865	5148	13786	51515
Bromodichloromethane		0.250	0.393	0.362	0.383	0.380
Bromoform		762	2343	4574	12962	53922
Bromomethane		822	2293	4588	12245	47148
Carbon Disulfide		1.468	2.043	1.806	1.808	1.714
Carbon Tetrachloride		1510	5463	10077	26439	104210
Chlorobenzene		0.762	1.142	1.012	1.020	0.962

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.: HS1812126

Instrument ID: VOA9

Calibration Date(s): 12/21/18 12/21/18

Column: DB624

ID: 0.18 (mm)

Calibration Time(s): 1349

1755

LAB FILE ID:
RF2: U122105RF0.25: U122102
RF5: U122106RF0.5: U122103
RF20: U122107

RF1: U122104

COMPOUND	RF0.25	RF0.5	RF1	RF2	RF5	RF20
Chloroethane		2753	3213	8179	22172	73150
Chloroform		0.705	1.253	1.110	1.148	1.060
Chloromethane		1695	4689	8693	20682	79075
cis-1,2-Dichloroethene		0.459	0.806	0.684	0.699	0.678
Dibromochloromethane		1194	4051	7740	20846	89836
Dichlorodifluoromethane		2033	6583	11371	26580	98486
Ethylbenzene		0.353	0.556	0.512	0.523	0.497
Hexachlorobutadiene		0.453	0.398	0.322	0.324	0.310
Isopropylbenzene		0.918	1.542	1.455	1.530	1.485
m,p-Xylenes		0.432	0.668	0.621	0.648	0.629
Methylene Chloride		3346	8113	13726	31487	109403
n-Butylbenzene		1.993	2.818	2.596	2.666	2.520
n-Propylbenzene		2.596	4.144	3.755	4.032	3.835
Naphthalene		5535	16505	32897	91300	413229
o-Xylene		0.413	0.703	0.613	0.642	0.637
sec-Butylbenzene		2.047	3.385	3.201	3.334	3.199
Styrene		0.640	1.035	0.996	1.084	1.092
Vinyl Chloride		1815	6308	12656	29272	111713
1,2,3-Trichloropropane		0.777	1.295	1.203	1.184	1.156
p-Isopropyltoluene		1.912	2.733	2.516	2.786	2.704
1,2-Dibromo-3-Chloropropane		272	861	1910	4931	22196
1,2-Dichloroethane-d4		8601	10907	17881	38943	131494
Dibromofluoromethane		6036	8005	12720	28568	98984
Toluene-d8		27052	32175	54444	117010	408521
4-Bromofluorobenzene		9627	12547	20092	42900	153183

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.: HS1812126

Instrument ID: VOA9

Calibration Date(s): 12/21/18 12/21/18

Column: DB624

ID: 0.18 (mm)

Calibration Time(s): 1349

1755

LAB FILE ID:

RF50: U122108

RF100: U122109

RF150: U122110

RF200: U122111

COMPOUND	RF50	RF100	RF150	RF200
===== cis-1,3-Dichloropropene	449225	944095	1468956	1986544
trans-1,3-Dichloropropene	381258	811224	1271771	1721394
1,3-Dichlorobenzene	1.440	1.476	1.485	1.441
2,2-Dichloropropane	0.635	0.683	0.695	0.673
1,1-Dichloropropene	0.427	0.455	0.457	0.448
Dibromomethane	0.207	0.207	0.205	0.205
1,2-Dibromoethane	0.349	0.345	0.342	0.340
trans-1,2-Dichloroethene	0.564	0.579	0.576	0.559
1,1,1,2-Tetrachloroethane	235446	493177	766622	1032567
1,1,1-Trichloroethane	0.788	0.846	0.852	0.826
1,1,2,2-Tetrachloroethane	1.127	1.090	1.080	1.060
Freon TF	0.397	0.445	0.445	0.434
1,1,2-Trichloroethane	0.296	0.295	0.290	0.286
1,1-Dichloroethane	1.058	1.079	1.066	1.028
1,1-Dichloroethene	0.441	0.480	0.472	0.461
Trichlorofluoromethane	330010	753769	1146930	1561606
1,2,3-Trichlorobenzene	334600	694931	1085027	1453309
Toluene	1.488	1.490	1.464	1.421
1,2,4-Trichlorobenzene	0.926	0.982	1.001	0.974
1,2,4-Trimethylbenzene	2.661	2.738	2.712	2.610
Tetrachloroethene	0.243	0.257	0.257	0.251
Trichloroethene	0.311	0.321	0.328	0.321
1,2-Dichlorobenzene	1.442	1.463	1.459	1.417
1,2-Dichloroethane	376591	747337	1129116	1504782
1,2-Dichloropropane	0.350	0.357	0.353	0.348
1,3,5-Trimethylbenzene	2.579	2.685	2.665	2.582
1,3-Dichloropropane	0.642	0.630	0.620	0.613
1,4-Dichlorobenzene	1.482	1.511	1.509	1.472
2-Butanone	304044	587152	880878	1199902
2-Chlorotoluene	2.295	2.323	2.315	2.248
2-Hexanone	0.302	0.295	0.297	0.293
4-Chlorotoluene	2.665	2.704	2.694	2.601
tert-Butylbenzene	2.197	2.301	2.300	2.225
4-Methyl-2-Pentanone	0.427	0.421	0.419	0.415
Acetone	187964	331678	520533	723113
Benzene	1.319	1.335	1.317	1.294
Bromobenzene	0.765	0.778	0.792	0.773
Bromochloromethane	129496	244429	348533	453685
Bromodichloromethane	0.388	0.406	0.411	0.408
Bromoform	154855	331336	522892	718878
Bromomethane	117780	281859	444174	585856
Carbon Disulfide	1.656	1.742	1.730	1.622
Carbon Tetrachloride	274507	601960	939611	1268610
Chlorobenzene	0.940	0.949	0.943	0.916

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.: HS1812126

Instrument ID: VOA9

Calibration Date(s): 12/21/18 12/21/18

Column: DB624

ID: 0.18 (mm)

Calibration Time(s): 1349

1755

LAB FILE ID:
RF200: U122111

RF50: U122108

RF100: U122109

RF150: U122110

COMPOUND	RF50	RF100	RF150	RF200
Chloroethane	179707	384958	684109	859472
Chloroform	1.027	1.035	1.016	0.978
Chloromethane	197328	441603	746873	1095269
cis-1,2-Dichloroethene	0.650	0.655	0.653	0.630
Dibromochloromethane	242061	512845	791728	1081017
Dichlorodifluoromethane	248322	553841	873891	1151588
Ethylbenzene	0.490	0.504	0.504	0.495
Hexachlorobutadiene	0.324	0.352	0.356	
Isopropylbenzene	1.450	1.506	1.482	1.428
m,p-Xylenes	0.612	0.626	0.616	0.600
Methylene Chloride	274258	554902	841220	1131189
n-Butylbenzene	2.535	2.661	2.637	
n-Propylbenzene	3.794	3.919	3.867	3.682
Naphthalene	1107938	2231968	3430934	4589381
o-Xylene	0.622	0.631	0.627	0.612
sec-Butylbenzene	3.182	3.378	3.341	3.190
Styrene	1.084	1.087	1.074	1.044
Vinyl Chloride	283791	629175	1000865	1348117
1,2,3-Trichloropropane	1.210	1.222	1.246	1.245
p-Isopropyltoluene	2.733	2.856	2.837	2.735
1,2-Dibromo-3-Chloropropane	61793	125814	200384	274280
1,2-Dichloroethane-d4	320796	635081	949266	1274051
Dibromofluoromethane	245007	495628	745399	1006329
Toluene-d8	1010127	2029223	3016887	4010125
4-Bromofluorobenzene	382581	764798	1153874	1540801

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.: HS1812126
 Instrument ID: VOA9 Calibration Date(s): 12/21/18 12/21/18
 Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1349 1755

COMPOUND	CURVE	COEFFICIENTS			%RSD	MAX %RSD
		A0	A1	A2	OR R ²	OR R ²
cis-1,3-Dichloropropene	LINR	2.529e-002	1.70725996		0.9997580	0.9900000
trans-1,3-Dichloropropene	LINR	3.3e-002	1.96902158		0.9995927	0.9900000
1,3-Dichlorobenzene	AVRG		1.48472992		9.494	20.000
2,2-Dichloropropane	AVRG		0.64891526		11.509	20.000
1,1-Dichloropropene	AVRG		0.44488137		11.968	20.000
Dibromomethane	AVRG		0.20390294		11.744	20.000
1,2-Dibromoethane	AVRG		0.34310644		11.102	20.000
trans-1,2-Dichloroethene	AVRG		0.58526565		12.993	20.000
1,1,1,2-Tetrachloroethane	LINR	1.17e-002	3.11489679		0.9998991	0.9900000
1,1,1-Trichloroethane	AVRG		0.78949465		13.294	20.000
1,1,2,2-Tetrachloroethane	AVRG		1.12601556		13.302	20.000
Freon TF	AVRG		0.42507305		12.611	20.000
1,1,2-Trichloroethane	AVRG		0.29788801		11.475	20.000
1,1-Dichloroethane	AVRG		1.07678494		14.456	20.000
1,1-Dichloroethene	AVRG		0.47540572		9.911	20.000
Trichlorofluoromethane	LINR	1.25e-002	1.19826122		0.9992799	0.9900000
1,2,3-Trichlorobenzene	LINR	1.266e-002	1.04791842		0.9997493	0.9900000
Toluene	AVRG		1.48733738		10.393	20.000
1,2,4-Trichlorobenzene	AVRG		0.92571167		9.562	20.000
1,2,4-Trimethylbenzene	AVRG		2.61651384		11.645	20.000
Tetrachloroethene	AVRG		0.26176272		11.269	20.000
Trichloroethene	AVRG		0.32119921		11.118	20.000
1,2-Dichlorobenzene	AVRG		1.48461871		11.211	20.000
1,2-Dichloroethane	LINR	-1.47e-002	2.25247271		0.9997943	0.9900000
1,2-Dichloropropane	AVRG		0.35329723		11.023	20.000
1,3,5-Trimethylbenzene	AVRG		2.51283681		12.919	20.000
1,3-Dichloropropane	AVRG		0.64163858		11.739	20.000
1,4-Dichlorobenzene	AVRG		1.56545234		10.298	20.000
2-Butanone	LINR	-4.87e-002	3.13274512		0.9994657	0.9900000
2-Chlorotoluene	AVRG		2.30373097		11.091	20.000
2-Hexanone	AVRG		0.27803053		13.505	20.000
4-Chlorotoluene	AVRG		2.66220268		11.134	20.000
tert-Butylbenzene	AVRG		2.17187412		13.092	20.000
4-Methyl-2-Pentanone	AVRG		0.40004668		13.000	20.000
Acetone	LINR	-6.05e-002	5.27806885		0.9991782	0.9900000
Benzene	AVRG		1.33049482		11.804	20.000
Bromobenzene	AVRG		0.77253354		11.330	20.000
Bromochloromethane	LINR	-6.22e-002	4.05290698		0.9951390	0.9900000
Bromodichloromethane	AVRG		0.37570006		13.249	20.000
Bromoform	LINR	3.523e-002	4.49538839		0.9994690	0.9900000
Bromomethane	LINR	2.677e-002	3.15194291		0.9981331	0.9900000
Carbon Disulfide	AVRG		1.73224763		9.031	20.000
Carbon Tetrachloride	LINR	2.798e-002	2.67309140		0.9994430	0.9900000
Chlorobenzene	AVRG		0.96069061		10.497	20.000

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.: HS1812126
 Instrument ID: VOA9 Calibration Date(s): 12/21/18 12/21/18
 Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1349 1755

COMPOUND	CURVE	COEFFICIENTS			%RSD	MAX %RSD
		A0	A1	A2	OR R ²	OR R ²
Chloroethane	2ORDR	9.363e-003	2.27118996	-8.34e-002	0.9953360	0.9900000
Chloroform	AVRG		1.03699562		14.439	20.000
Chloromethane	LINR	6.638e-002	1.75757606		0.9946541	0.9900000
cis-1,2-Dichloroethene	AVRG		0.65721728		13.730	20.000
Dibromochloromethane	LINR	1.95e-002	2.98429229		0.9998675	0.9900000
Dichlorodifluoromethane	LINR	9.706e-003	1.60963706		0.9988360	0.9900000
Ethylbenzene	AVRG		0.49273054		11.389	20.000
Hexachlorobutadiene	AVRG		0.35465839		13.679	20.000
Isopropylbenzene	AVRG		1.42182513		13.532	20.000
m,p-Xylenes	AVRG		0.60575037		11.285	20.000
Methylene Chloride	LINR	-2.41e-002	1.65721813		0.9996145	0.9900000
n-Butylbenzene	AVRG		2.55335964		9.575	20.000
n-Propylbenzene	AVRG		3.73602785		12.044	20.000
Naphthalene	2ORDR	1.313e-002	0.32140252	9.017e-004	0.9999007	0.9900000
o-Xylene	AVRG		0.61109521		12.917	20.000
sec-Butylbenzene	AVRG		3.13985879		13.327	20.000
Styrene	AVRG		1.01526757		14.203	20.000
Vinyl Chloride	LINR	1.938e-002	1.38661185		0.9992348	0.9900000
1,2,3-Trichloropropane	AVRG		1.17088717		13.058	20.000
p-Isopropyltoluene	AVRG		2.64580193		11.042	20.000
1,2-Dibromo-3-Chloropropane	LINR	2.904e-002	5.59224209		0.9995363	0.9900000
1,2-Dichloroethane-d4	LINR	-4.34e-002	1.47435424		0.9993295	0.9900000
Dibromofluoromethane	LINR	-3.06e-002	1.86777807		0.9996249	0.9900000
Toluene-d8	LINR	-3.57e-002	0.80216996		0.9994439	0.9900000
4-Bromofluorobenzene	LINR	-2.86e-002	2.09274699		0.9997553	0.9900000

FORM VI VOA



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181221.b\U122101.D

Date : 21-DEC-2018 13:25

Client ID: BFB

Instrument: VOA9.i

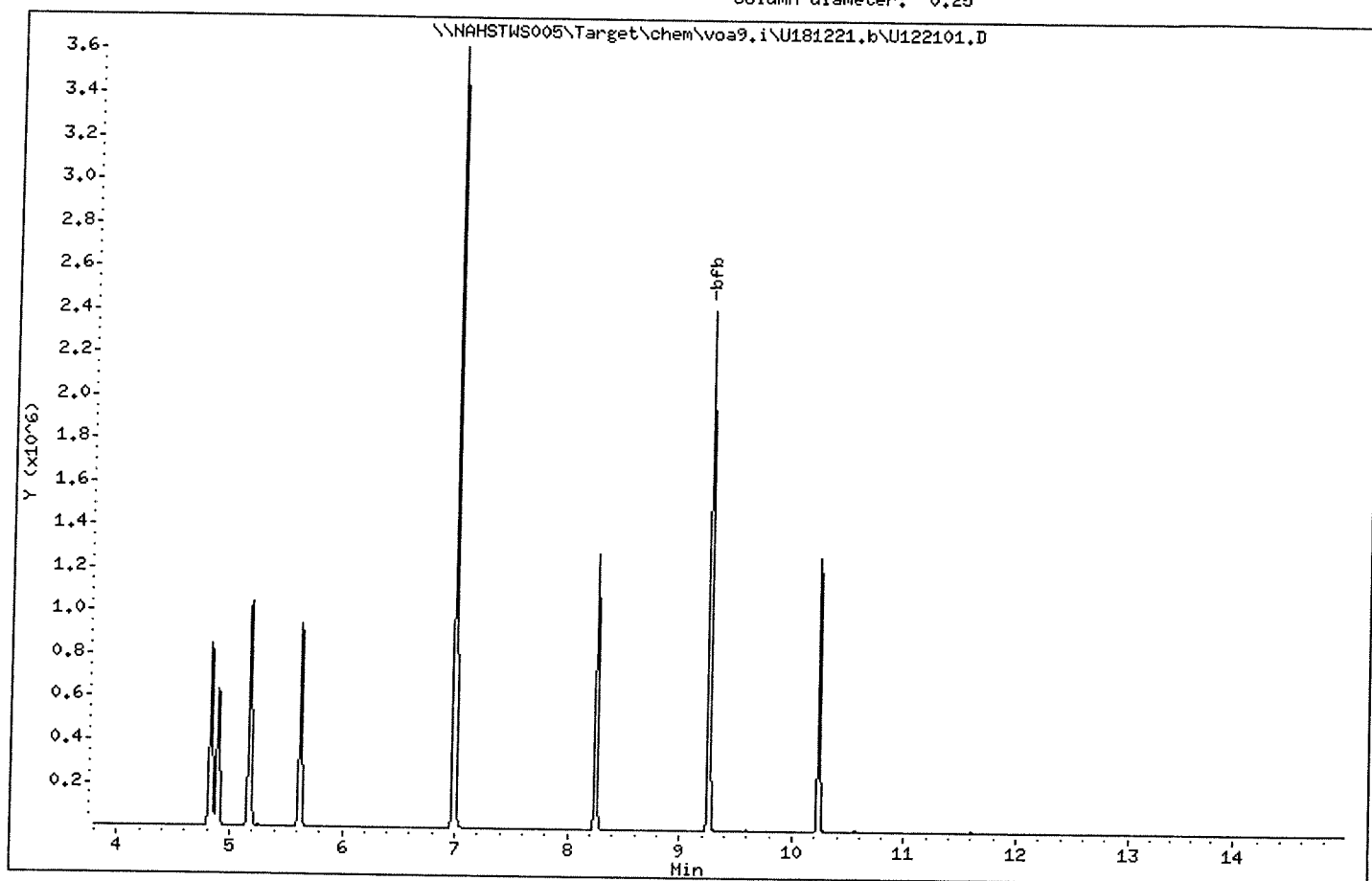
Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181221.b\U122101.D

Page 3

Date : 21-DEC-2018 13:25

Client ID: BFB

Instrument: VOA9.i

Sample Info: BFB;BFB;3;;BFB

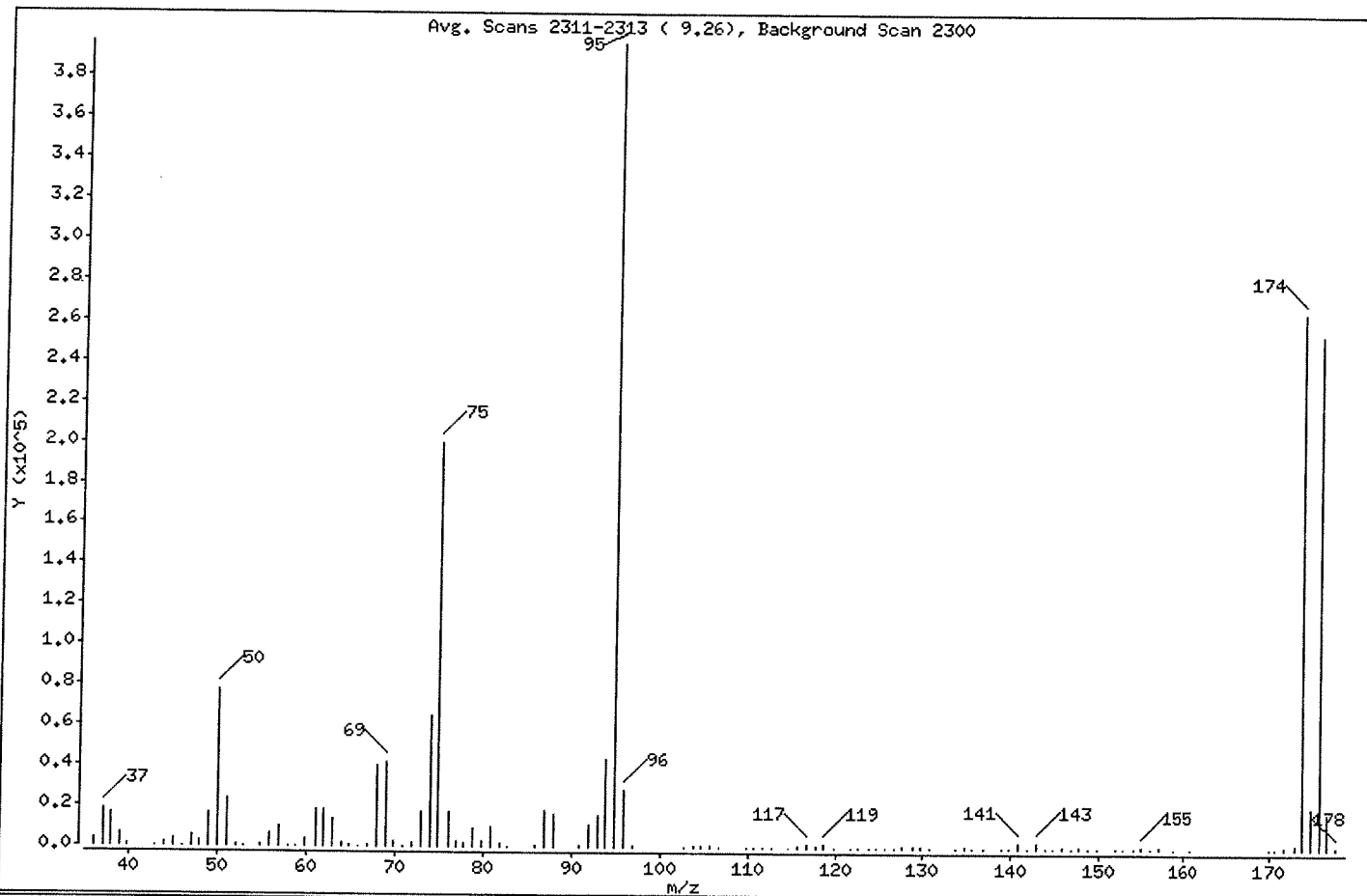
Volume Injected (uL): 2.0

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	19.64
75	30.00 - 60.00% of mass 95	50.36
96	5.00 - 9.00% of mass 95	7.02
173	Less than 2.00% of mass 174	0.53 (0.79)
174	Greater than 50.00% of mass 95	66.76
175	5.00 - 9.00% of mass 174	5.12 (7.67)
176	95.00 - 101.00% of mass 174	63.79 (95.55)
177	5.00 - 9.00% of mass 176	4.47 (7.01)



Data File: \\NAHSTWS005\Target\chem\voa9.i\U122101.D

Page 4

Date : 21-DEC-2018 13:25

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: U122101.D

Spectrum: Avg. Scans 2311-2313 (9.26), Background Scan 2300

Location of Maximum: 94.95

Number of points: 113

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	3522	67.90	40024	105.80	1268	141.70	302
37.00	18528	68.90	41568	106.80	285	142.80	2909
38.00	16159	69.90	3074	109.80	127	143.80	180
39.00	6598	70.90	134	110.70	307	144.70	380
39.90	601	71.90	2102	111.70	156	145.70	457
42.90	115	73.00	17344	112.80	260	146.70	229
43.90	2066	73.90	64968	114.70	321	147.70	676
45.00	3408	74.90	199680	115.70	1039	148.60	185
46.10	284	76.00	17352	116.80	1890	149.70	381
47.00	5059	76.90	2402	117.70	1164	151.70	195
47.90	2352	77.80	1696	118.70	1600	152.70	221
49.00	16317	78.90	8933	119.80	55	153.80	245
50.00	77856	79.90	2552	121.70	99	154.70	869
51.00	23912	80.90	9833	122.70	71	155.70	141
52.00	1198	81.90	1903	123.80	148	156.70	599
52.90	102	82.80	214	124.70	101	158.60	297
54.90	806	85.90	533	125.70	152	160.70	273
55.90	6021	86.90	18088	126.70	123	169.90	51
56.90	10148	87.90	16848	127.70	1127	170.60	105
57.90	434	90.80	1233	128.80	534	171.70	1051
58.70	68	91.90	10521	129.70	1152	172.80	2098
59.90	3925	92.90	15269	130.70	419	173.70	264704
61.00	18160	93.90	43328	133.70	53	174.70	20304
61.90	18216	94.90	396480	134.70	496	175.70	252928
63.00	13327	95.90	27824	135.60	96	176.70	17720
64.00	1507	96.90	709	136.70	369	177.70	520
64.90	816	102.80	137	138.90	62		
65.80	130	103.80	1364	139.70	200		
67.00	910	104.70	463	140.80	2707		



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181221.b\U122102.D Page 1
 Report Date: 28-Jan-2019 11:36

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U181221.b\U122102.D
 Lab Smp Id: VSTD00.25 Client Smp ID: VSTD00.25
 Inj Date : 21-DEC-2018 13:49
 Operator : PC Inst ID: VOA9.i
 Smp Info : VSTD00.25;VSTD00.25;1;1;
 Misc Info : 180315V9;WATER;0;1;
 Comment :
 Method : \\NAHSTWS005\Target\chem\voa9.i\U181221.b\8260C.m
 Meth Date : 28-Jan-2019 11:25 VOA9.i Quant Type: ISTD
 Cal Date : 21-DEC-2018 13:49 Cal File: U122102.D
 Als bottle: 2 Calibration Sample, Level: 1
 Dil Factor: 1.00000
 Integrator: HP RTE Compound Sublist: LHAAP.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	AMOUNTS				CAL-AMT (ug/l)	ON-COL (ug/l)
			MASS	RT	EXP RT	REL RT		
* 1 Pentafluorobenzene	168	4.894	4.890	(1.000)	428138	50.0000		
* 36 1,4-Difluorobenzene	114	5.625	5.625	(1.000)	818709	50.0000		
* 47 Chlorobenzene-d5	117	8.249	8.249	(1.000)	747851	50.0000		
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	340535	50.0000		
\$ 30 Dibromofluoromethane	113	4.830	4.826	(0.987)	4885	0.25000	(a)	
\$ 35 1,2-Dichloroethane-d4	65	5.175	5.171	(1.057)	7874	0.25000	(a)	
\$ 48 Toluene-d8	98	6.986	6.989	(0.847)	25629	0.25000	(a)	
\$ 69 4-Bromofluorobenzene	95	9.257	9.257	(1.122)	9480	0.25000	(a)	
60 1,1,1,2-Tetrachloroethane	131	8.350	8.350	(1.012)	1214	0.25000	0.83(a)	
31 1,1,1-Trichloroethane	97	4.826	4.826	(0.986)	2037	0.25000	0.30(a)	
138 Freon TF	101	2.401	2.394	(0.491)	1292	0.25000	0.35(a)	
53 1,1,2-Trichloroethane	83	7.421	7.421	(0.900)	1492	0.25000	0.33(a)	
22 1,1-Dichloroethane	63	3.601	3.597	(0.736)	2808	0.25000	0.30(Ta)	
11 1,1-Dichloroethene	96	2.397	2.394	(0.490)	1606	0.25000	0.39(a)	
32 1,1-Dichloropropene	75	5.003	5.003	(0.889)	2559	0.25000	0.35(a)	
93 1,2,3-Trichlorobenzene	180	12.335	12.335	(1.205)	2119	0.25000	0.95(a)	
71 1,2,3-Trichloropropane	75	9.426	9.430	(0.921)	2311	0.25000	0.28(a)	
90 1,2,4-Trichlorobenzene	180	11.923	11.926	(1.165)	1867	0.25000	0.29(a)	
79 1,2,4-Trimethylbenzene	105	9.940	9.943	(0.971)	5702	0.25000	0.31(a)	
57 1,2-Dibromoethane	107	7.852	7.852	(0.952)	1463	0.25000	0.28(a)	
88 1,2-Dichlorobenzene	146	10.573	10.573	(1.033)	3604	0.25000	0.35(a)	
33 1,2-Dichloroethane	62	5.254	5.250	(0.934)	2468	0.25000	(a)	
42 1,2-Dichloropropane	63	6.079	6.078	(1.081)	1752	0.25000	0.30(a)	



Compounds	QUANT SIG					AMOUNTS	
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/l)	ON-COL (ug/l)
75 1,3,5-Trimethylbenzene	105	9.625	9.628	(0.940)	5173	0.25000	0.30(a)
83 1,3-Dichlorobenzene	146	10.180	10.180	(0.995)	3530	0.25000	0.34(a)
54 1,3-Dichloropropane	76	7.563	7.563	(0.917)	3033	0.25000	0.31(a)
84 1,4-Dichlorobenzene	146	10.255	10.258	(1.002)	4184	0.25000	0.39(a)
76 2-Chlorotoluene	91	9.546	9.550	(0.933)	5370	0.25000	0.34(a)
52 2-Hexanone	43	7.649	7.653	(0.927)	2221	0.50000	0.53(a)
77 4-Chlorotoluene	91	9.640	9.640	(0.942)	6065	0.25000	0.33(a)
82 p-Isopropyltoluene	119	10.210	10.213	(0.997)	5637	0.25000	0.31(a)
45 4-Methyl-2-Pentanone	43	6.914	6.914	(0.838)	3388	0.50000	0.56(a)
10 Acetone	43	2.480	2.476	(0.507)	3620	0.50000	(a)
37 Benzene	78	5.216	5.216	(0.927)	7659	0.25000	0.35(a)
74 Bromobenzene	156	9.381	9.385	(0.917)	1549	0.25000	0.29(a)
19 Carbon Disulfide	76	2.588	2.585	(0.529)	12805	0.50000	0.86(a)
34 Carbon Tetrachloride	117	4.988	4.991	(0.887)	1501	0.25000	1.64(a)
59 Chlorobenzene	112	8.272	8.275	(1.003)	5314	0.25000	0.36(a)
28 Chloroform	83	4.654	4.654	(0.951)	3005	0.25000	0.33(a)
27 cis-1,2-Dichloroethene	96	4.283	4.283	(0.875)	1960	0.25000	0.34(a)
46 cis-1,3-Dichloropropene	75	6.757	6.757	(1.201)	2017	0.25000	1.47(a)
55 Dibromochloromethane	129	7.758	7.758	(0.940)	1084	0.25000	1.19(a)
2 Dichlorodifluoromethane	85	1.201	1.198	(0.246)	2264	0.25000	0.91(a)
61 Ethylbenzene	106	8.369	8.373	(1.015)	2474	0.25000	0.33(a)
91 Hexachlorobutadiene	225	12.061	12.065	(1.178)	1019	0.25000	0.42(a)
67 Isopropylbenzene	105	9.126	9.126	(1.106)	6811	0.25000	0.32(a)
62 m,p-Xylenes	106	8.474	8.474	(1.027)	5829	0.50000	0.64(a)
17 Methylene Chloride	84	2.870	2.866	(0.586)	3269	0.25000	(a)
87 n-Butylbenzene	91	10.554	10.558	(1.031)	6526	0.25000	0.37(a)
73 n-Propylbenzene	91	9.475	9.479	(0.926)	8427	0.25000	0.33(a)
92 Naphthalene	128	12.133	12.133	(1.185)	4657	0.25000	0.87(a)
63 o-Xylene	106	8.811	8.811	(1.068)	2975	0.25000	0.32(a)
81 sec-Butylbenzene	105	10.086	10.090	(0.985)	6928	0.25000	0.32(a)
64 Styrene	104	8.823	8.826	(1.070)	4467	0.25000	0.29(a)
78 tert-Butylbenzene	119	9.902	9.902	(0.967)	4611	0.25000	0.31(a)
56 Tetrachloroethene	164	7.522	7.525	(0.912)	1622	0.25000	0.41(a)
50 Toluene	91	7.046	7.046	(0.854)	7336	0.25000	0.32(a)
20 trans-1,2-Dichloroethene	96	3.136	3.136	(0.641)	1833	0.25000	0.36(a)
38 Trichloroethene	130	5.861	5.861	(1.042)	2028	0.25000	0.38(a)
8 Trichlorofluoromethane	101	1.955	1.944	(0.400)	2465	0.25000	0.97(a)
5 Vinyl Chloride	62	1.419	1.415	(0.290)	2098	0.25000	1.30(a)

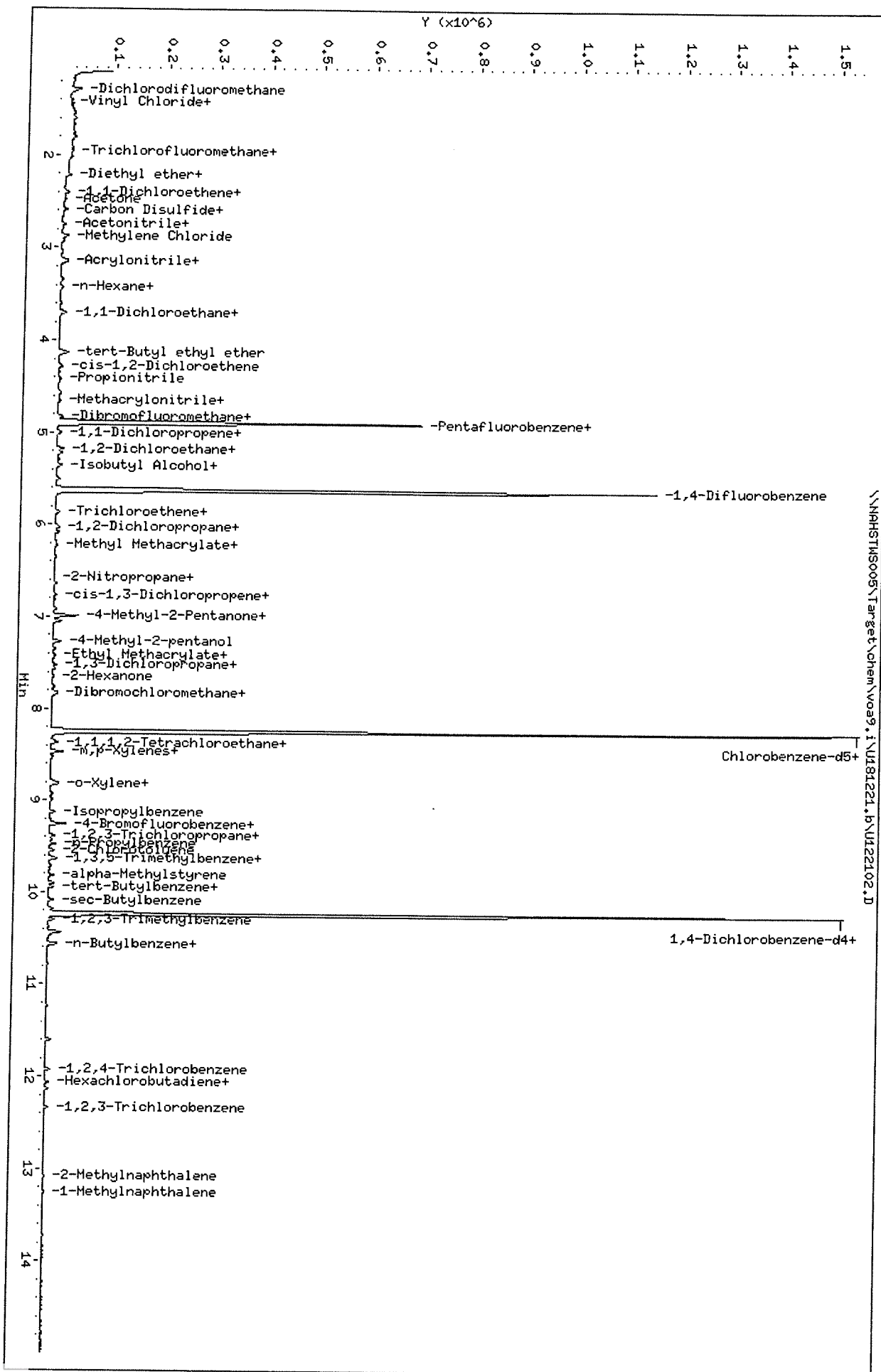
QC Flag Legend

T - Target compound detected outside RT window.
a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).



Data File: \\NAHSTMS006\Target\chem\voa9.i\1181221.b\1122102.D
Date : 21-DEC-2018 13:49
Client ID: VSTD00.25
Sample Info: VSTD00.25;VSTD00.25;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\U181221.b\U122103.D
 Lab Smp Id: VSTD00.5 Client Smp ID: VSTD00.5
 Inj Date : 21-DEC-2018 14:14
 Operator : PC Inst ID: VOA9.i
 Smp Info : VSTD00.5;VSTD00.5;1;2;
 Misc Info : 180315V9;WATER;0;1;
 Comment :
 Method : \\NAHSTWS005\Target\chem\voa9.i\U181221.b\8260C.m
 Meth Date : 28-Jan-2019 11:25 VOA9.i Quant Type: ISTD
 Cal Date : 21-DEC-2018 13:49 Cal File: U122102.D
 Als bottle: 3 Calibration Sample, Level: 2
 Dil Factor: 1.00000
 Integrator: HP RTE Compound Sublist: LHAAP.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				AMOUNTS		
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/l)	ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.898	4.898	(1.000)	422356	50.0000	
* 36 1,4-Difluorobenzene	114	5.629	5.629	(1.000)	796827	50.0000	
* 47 Chlorobenzene-d5	117	8.249	8.249	(1.000)	725774	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	333300	50.0000	
\$ 30 Dibromofluoromethane	113	4.834	4.834	(0.987)	6036	0.50000	(a)
\$ 35 1,2-Dichloroethane-d4	65	5.179	5.179	(1.057)	8601	0.50000	(a)
\$ 48 Toluene-d8	98	6.989	6.989	(0.847)	27052	0.50000	(a)
\$ 69 4-Bromofluorobenzene	95	9.257	9.257	(1.122)	9627	0.50000	(a)
60 1,1,1,2-Tetrachloroethane	131	8.350	8.350	(1.012)	1272	0.50000	0.85(a)
31 1,1,1-Trichloroethane	97	4.830	4.830	(0.986)	2201	0.50000	0.33(a)
68 1,1,2,2-Tetrachloroethane	83	9.392	9.392	(0.918)	2725	0.50000	0.36(aM)
138 Freon TF	101	2.412	2.412	(0.493)	1292	0.50000	0.35(a)
53 1,1,2-Trichloroethane	83	7.421	7.421	(0.900)	1629	0.50000	0.37(a)
22 1,1-Dichloroethane	63	3.612	3.612	(0.737)	3066	0.50000	0.33(Ta)
11 1,1-Dichloroethene	96	2.409	2.409	(0.492)	1703	0.50000	0.42(a)
32 1,1-Dichloropropene	75	5.010	5.010	(0.890)	2565	0.50000	0.36(a)
93 1,2,3-Trichlorobenzene	180	12.335	12.335	(1.205)	1324	0.50000	0.84(a)
71 1,2,3-Trichloropropane	75	9.426	9.426	(0.921)	2591	0.50000	0.33(a)
90 1,2,4-Trichlorobenzene	180	11.923	11.923	(1.165)	2402	0.50000	0.38(a)
79 1,2,4-Trimethylbenzene	105	9.943	9.943	(0.971)	6088	0.50000	0.34(a)
89 1,2-Dibromo-3-Chloropropane	155	11.233	11.233	(1.097)	272	0.50000	1.68(aM)
57 1,2-Dibromoethane	107	7.852	7.852	(0.952)	1825	0.50000	0.36(a)



Compounds	QUANT SIG				AMOUNTS		
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/l)	ON-COL (ug/l)
88 1,2-Dichlorobenzene	146	10.573	10.573	(1.033)	3885	0.50000	0.39(a)
33 1,2-Dichloroethane	62	5.258	5.258	(0.934)	2385	0.50000	(a)
42 1,2-Dichloropropane	63	6.082	6.082	(1.081)	2114	0.50000	0.37(a)
75 1,3,5-Trimethylbenzene	105	9.625	9.625	(0.940)	5574	0.50000	0.33(a)
83 1,3-Dichlorobenzene	146	10.180	10.180	(0.995)	3970	0.50000	0.40(a)
54 1,3-Dichloropropane	76	7.563	7.563	(0.917)	3471	0.50000	0.37(a)
84 1,4-Dichlorobenzene	146	10.255	10.255	(1.002)	4522	0.50000	0.43(a)
26 2,2-Dichloropropane	77	4.279	4.279	(0.874)	2050	0.50000	0.37(aM)
24 2-Butanone	43	4.354	4.354	(0.889)	2109	1.00000	(a)
76 2-Chlorotoluene	91	9.550	9.550	(0.933)	5666	0.50000	0.36(a)
52 2-Hexanone	43	7.649	7.649	(0.927)	2639	1.00000	0.65(a)
77 4-Chlorotoluene	91	9.640	9.640	(0.942)	6459	0.50000	0.36(a)
82 p-Isopropyltoluene	119	10.210	10.210	(0.997)	6372	0.50000	0.36(a)
45 4-Methyl-2-Pentanone	43	6.914	6.914	(0.838)	3831	1.00000	0.65(a)
10 Acetone	43	2.491	2.491	(0.509)	3366	1.00000	(a)
37 Benzene	78	5.220	5.220	(0.927)	7772	0.50000	0.36(a)
74 Bromobenzene	156	9.381	9.381	(0.917)	1879	0.50000	0.36(a)
29 Bromochloromethane	128	4.553	4.553	(0.930)	773	0.50000	(a)
39 Bromodichloromethane	83	6.348	6.348	(1.128)	1990	0.50000	0.33(aM)
66 Bromoform	173	8.984	8.984	(1.089)	762	0.50000	1.99(aM)
6 Bromomethane	94	1.681	1.681	(0.343)	822	0.50000	1.64(a)
19 Carbon Disulfide	76	2.596	2.596	(0.530)	12403	1.00000	0.84(a)
34 Carbon Tetrachloride	117	4.999	4.999	(0.888)	1510	0.50000	1.65(a)
59 Chlorobenzene	112	8.275	8.275	(1.003)	5533	0.50000	0.39(a)
7 Chloroethane	64	1.764	1.764	(0.360)	2753	0.50000	1.20(aM)
28 Chloroform	83	4.662	4.662	(0.952)	2977	0.50000	0.33(a)
3 Chloromethane	50	1.348	1.348	(0.275)	1695	0.50000	3.67(aM)
27 cis-1,2-Dichloroethene	96	4.294	4.294	(0.877)	1939	0.50000	0.34(a)
46 cis-1,3-Dichloropropene	75	6.761	6.761	(1.201)	2152	0.50000	1.49(a)
55 Dibromochloromethane	129	7.758	7.758	(0.940)	1194	0.50000	1.22(a)
44 Dibromomethane	93	6.195	6.195	(1.101)	1143	0.50000	0.35(aM)
2 Dichlorodifluoromethane	85	1.213	1.213	(0.248)	2033	0.50000	0.87(aM)
61 Ethylbenzene	106	8.369	8.369	(1.015)	2560	0.50000	0.35(a)
91 Hexachlorobutadiene	225	12.065	12.065	(1.179)	1509	0.50000	0.63(a)
67 Isopropylbenzene	105	9.126	9.126	(1.106)	6665	0.50000	0.32(a)
62 m,p-Xylenes	106	8.474	8.474	(1.027)	6264	1.00000	0.71(a)
17 Methylene Chloride	84	2.877	2.877	(0.587)	3346	0.50000	(a)
87 n-Butylbenzene	91	10.558	10.558	(1.031)	6644	0.50000	0.39(a)
73 n-Propylbenzene	91	9.475	9.475	(0.926)	8654	0.50000	0.34(a)
92 Naphthalene	128	12.136	12.136	(1.186)	5535	0.50000	0.92(a)
63 o-Xylene	106	8.811	8.811	(1.068)	3001	0.50000	0.33(a)
81 sec-Butylbenzene	105	10.086	10.086	(0.985)	6823	0.50000	0.32(a)
64 Styrene	104	8.826	8.826	(1.070)	4646	0.50000	0.31(a)
78 tert-Butylbenzene	119	9.902	9.902	(0.967)	4764	0.50000	0.32(a)
56 Tetrachloroethene	164	7.526	7.526	(0.912)	1587	0.50000	0.41(a)
50 Toluene	91	7.049	7.049	(0.855)	8207	0.50000	0.38(a)
20 trans-1,2-Dichloroethene	96	3.151	3.151	(0.643)	1825	0.50000	0.36(a)
51 trans-1,3-Dichloropropene	75	7.263	7.263	(1.290)	1633	0.50000	1.85(aM)
38 Trichloroethene	130	5.865	5.865	(1.042)	1953	0.50000	0.38(a)
8 Trichlorofluoromethane	101	1.966	1.966	(0.402)	1919	0.50000	0.89(a)
5 Vinyl Chloride	62	1.430	1.430	(0.292)	1815	0.50000	1.26(a)



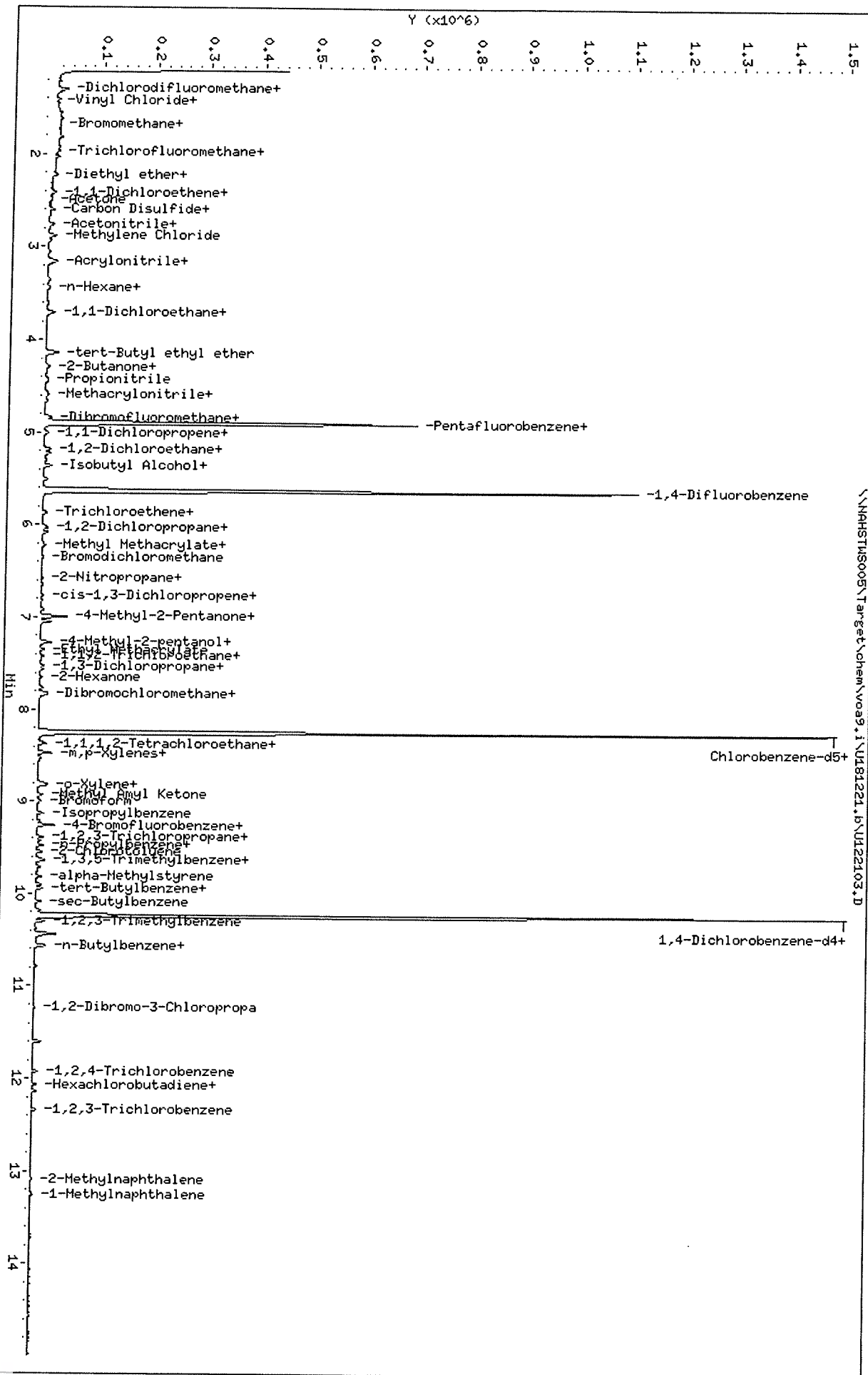
QC Flag Legend

- T - Target compound detected outside RT window.
- a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
- M - Compound response manually integrated.



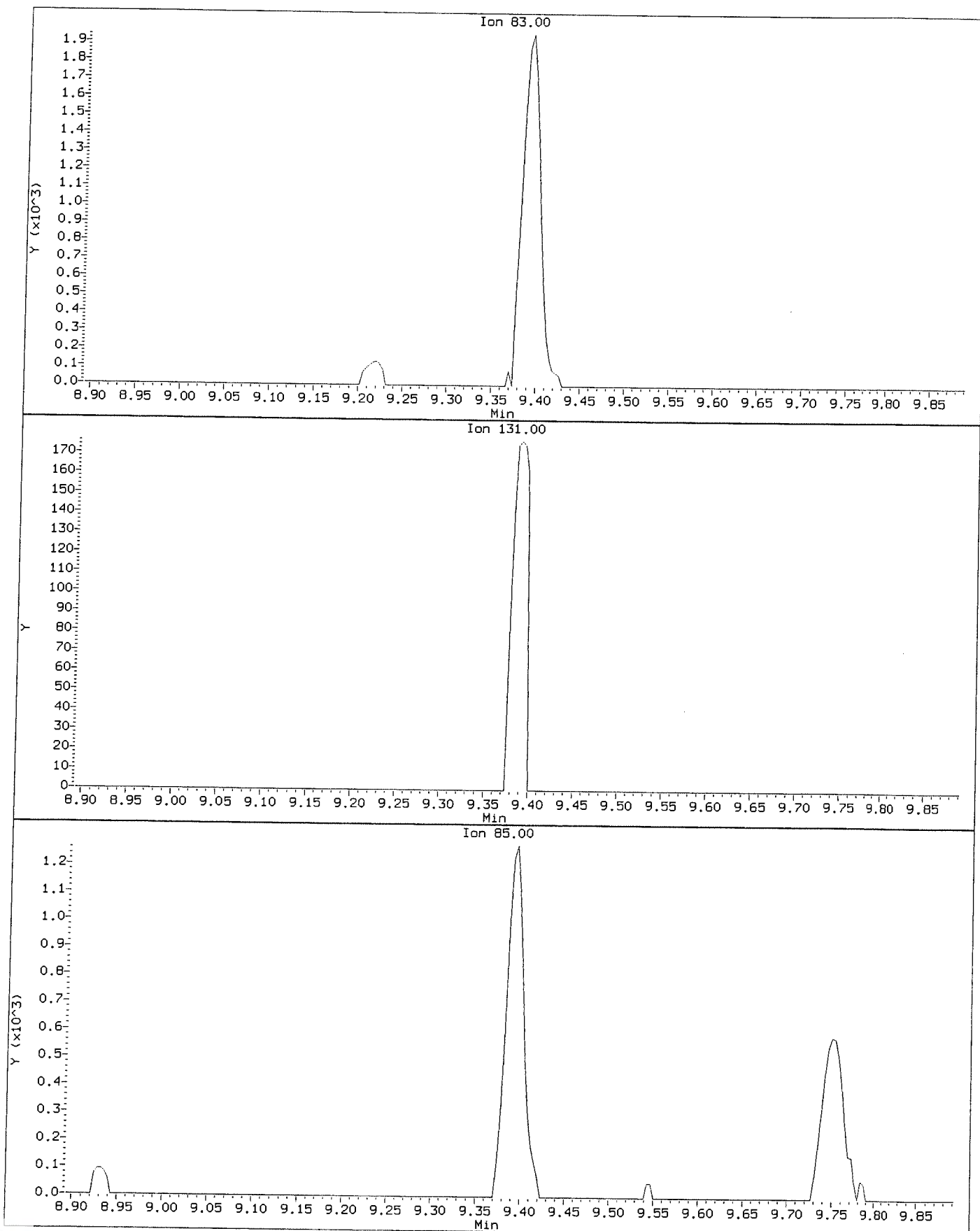
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Client ID: VSTD00.5
Sample Info: VSTD00.5;VSTD00.5;1;2;
Purge Volume: 5.0
Column phase: DB624

Instrument: VDA9.i
Operator: PC
Column diameter: 0.18



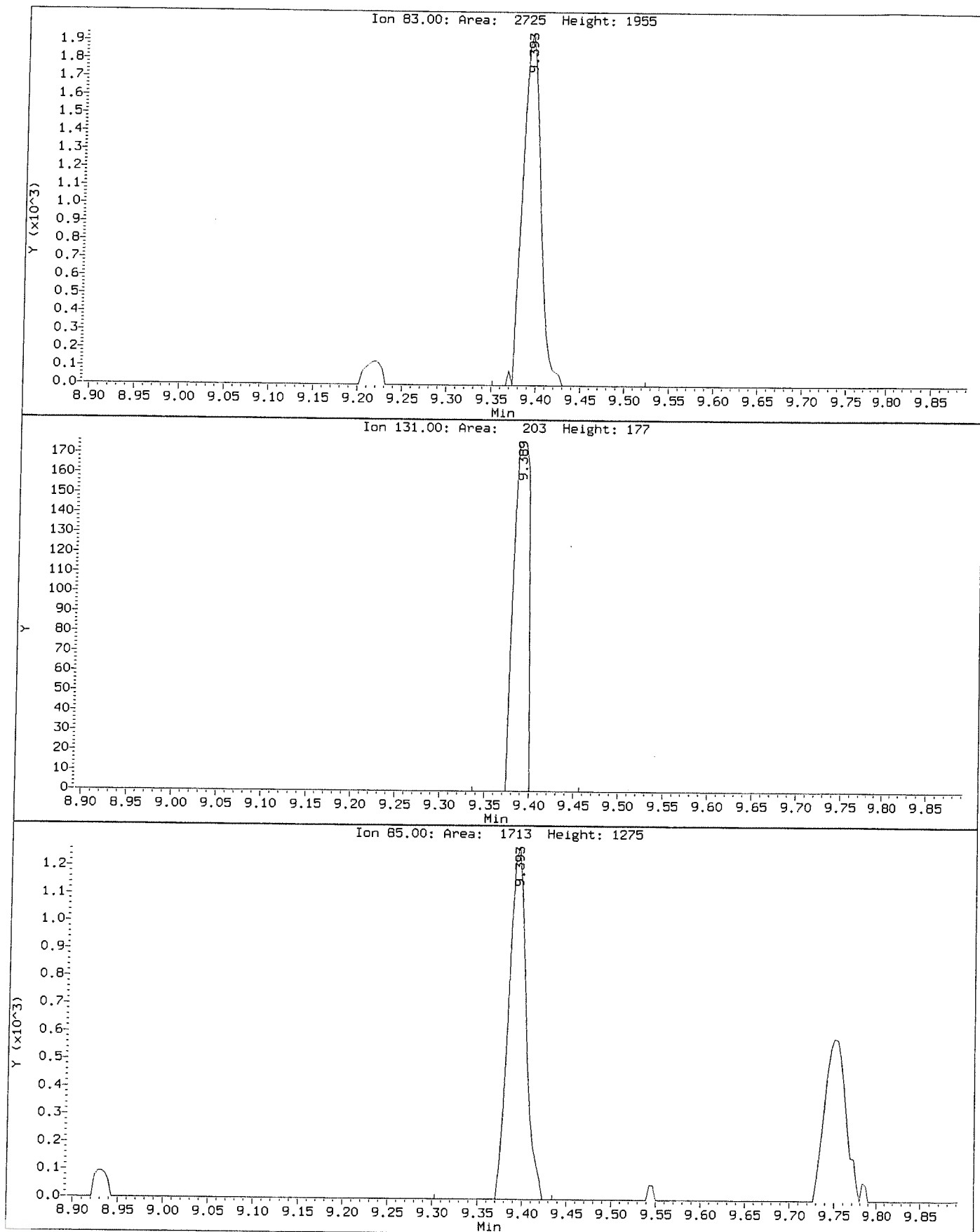
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Injection Date: 21-DEC-2018 14:14
Instrument: VOA9.i
Client Sample ID: VSTD00.5

Compound: 1,1,2,2-Tetrachloroethane
CAS Number: 79-34-5



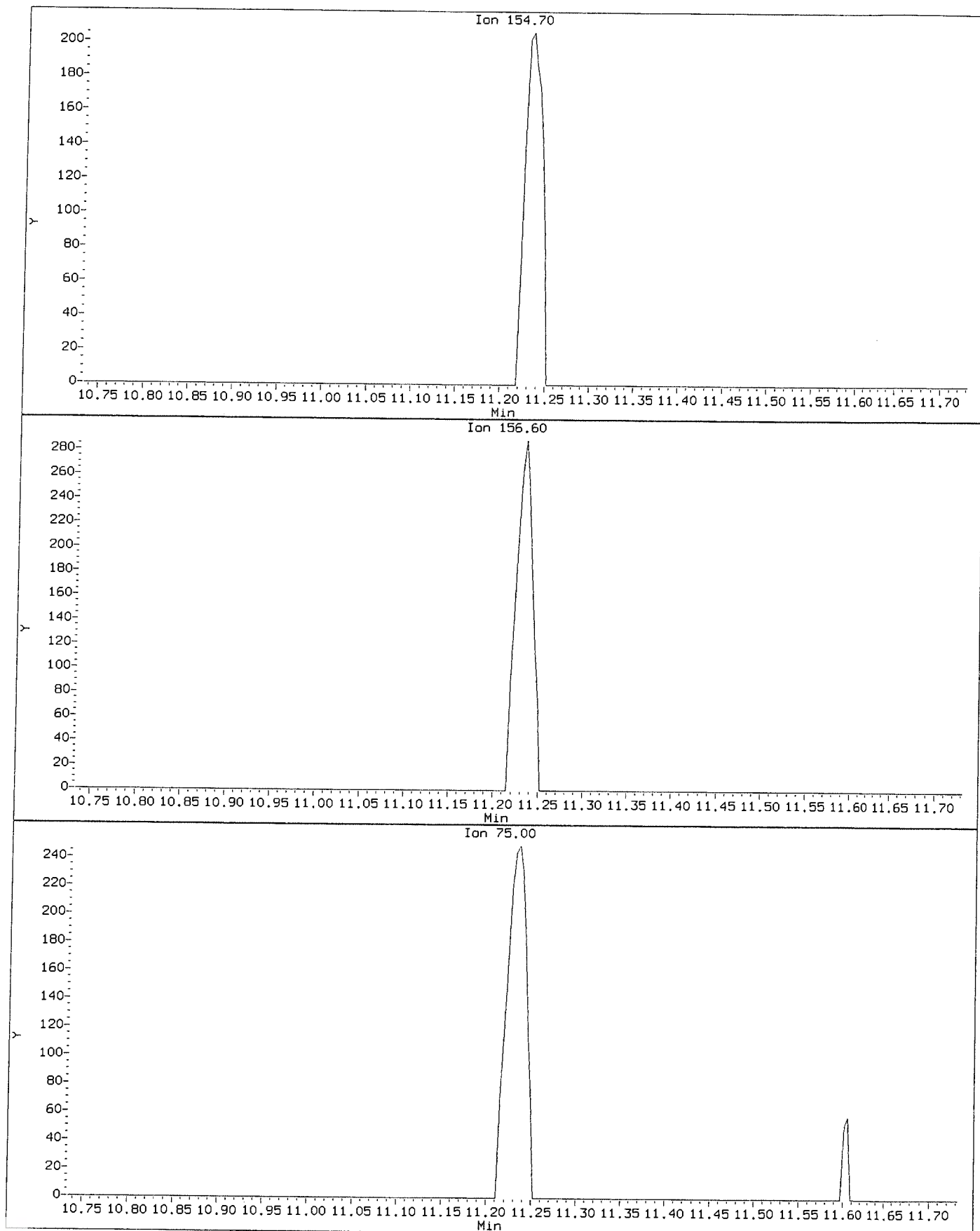
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Injection Date: 21-DEC-2018 14:14
Instrument: VOA9.1
Client Sample ID: VSTD00.5

Compound: 1,1,2,2-Tetrachloroethane
CAS Number: 79-34-5



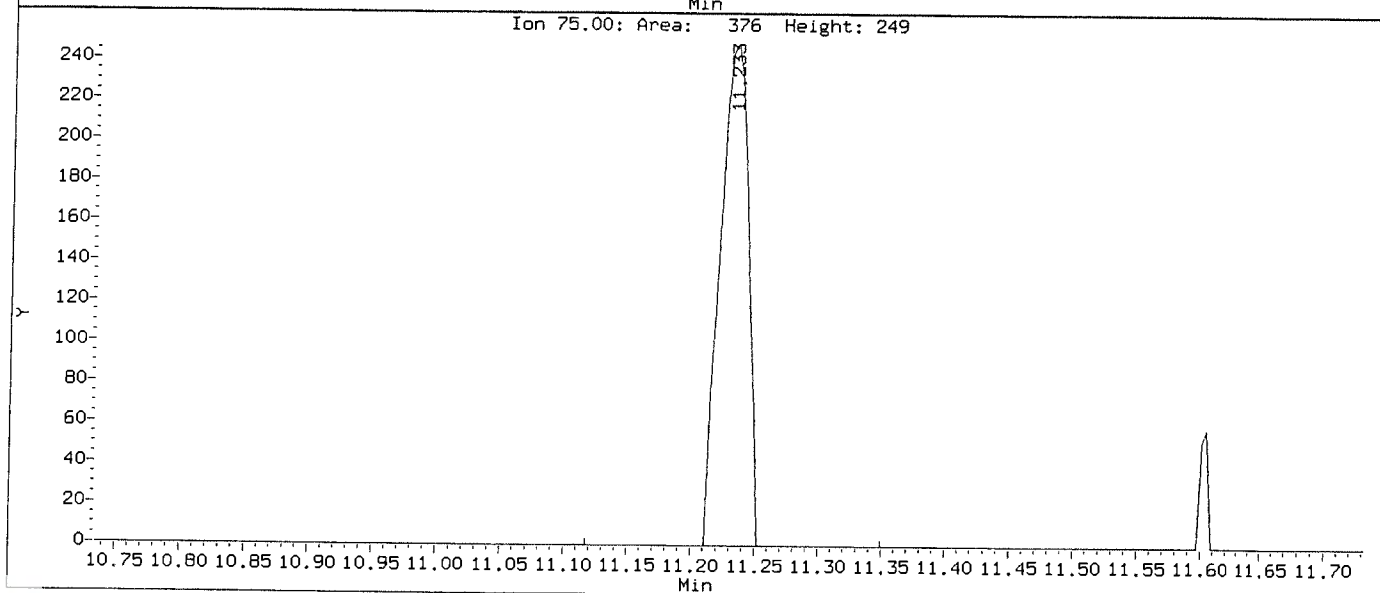
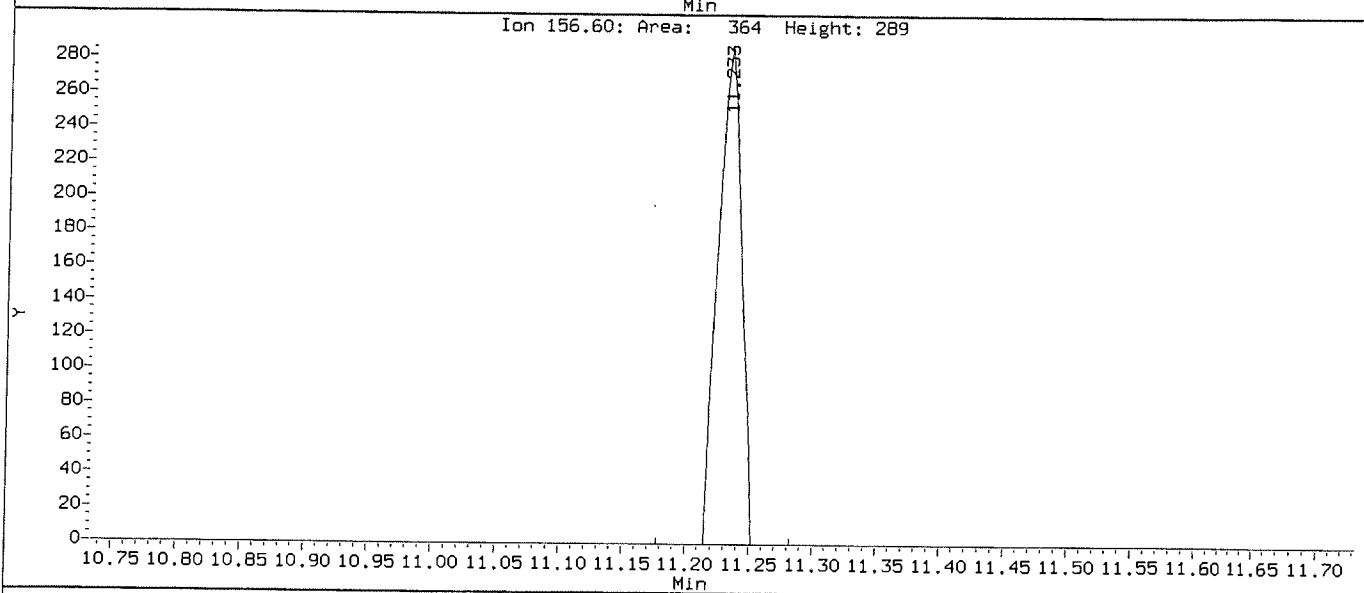
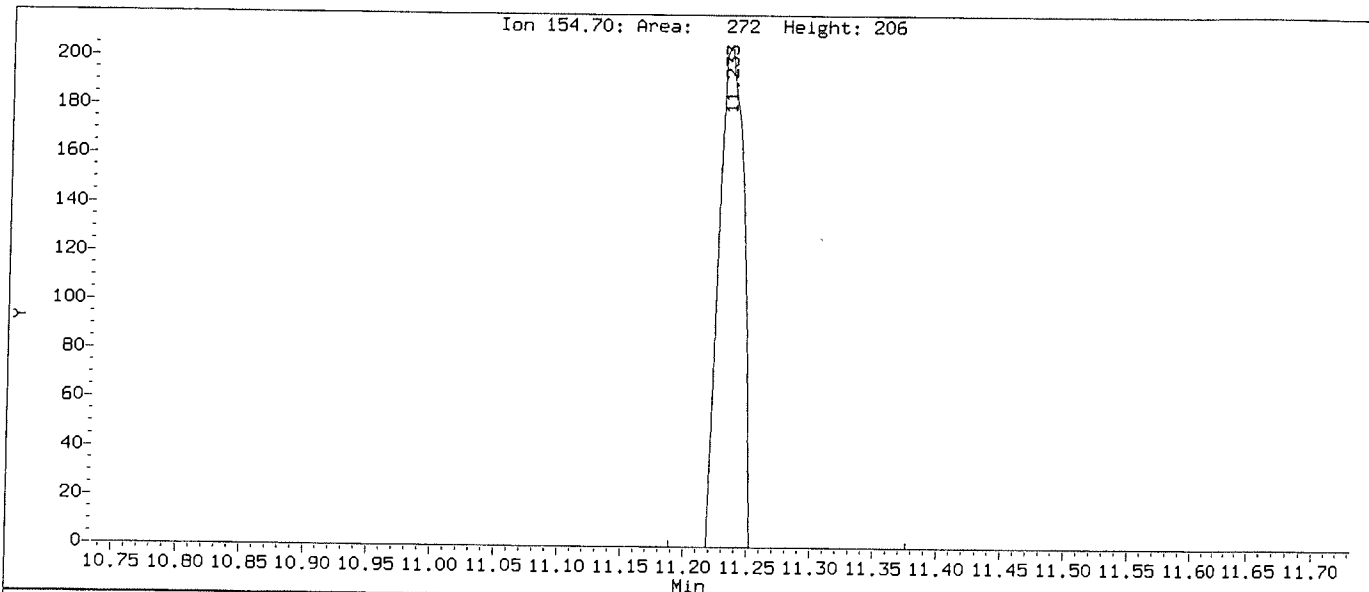
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Instrument: VDA9.i
Client Sample ID: VSTD00.5

Compound: 1,2-Dibromo-3-Chloropropane
CAS Number: 96-12-8



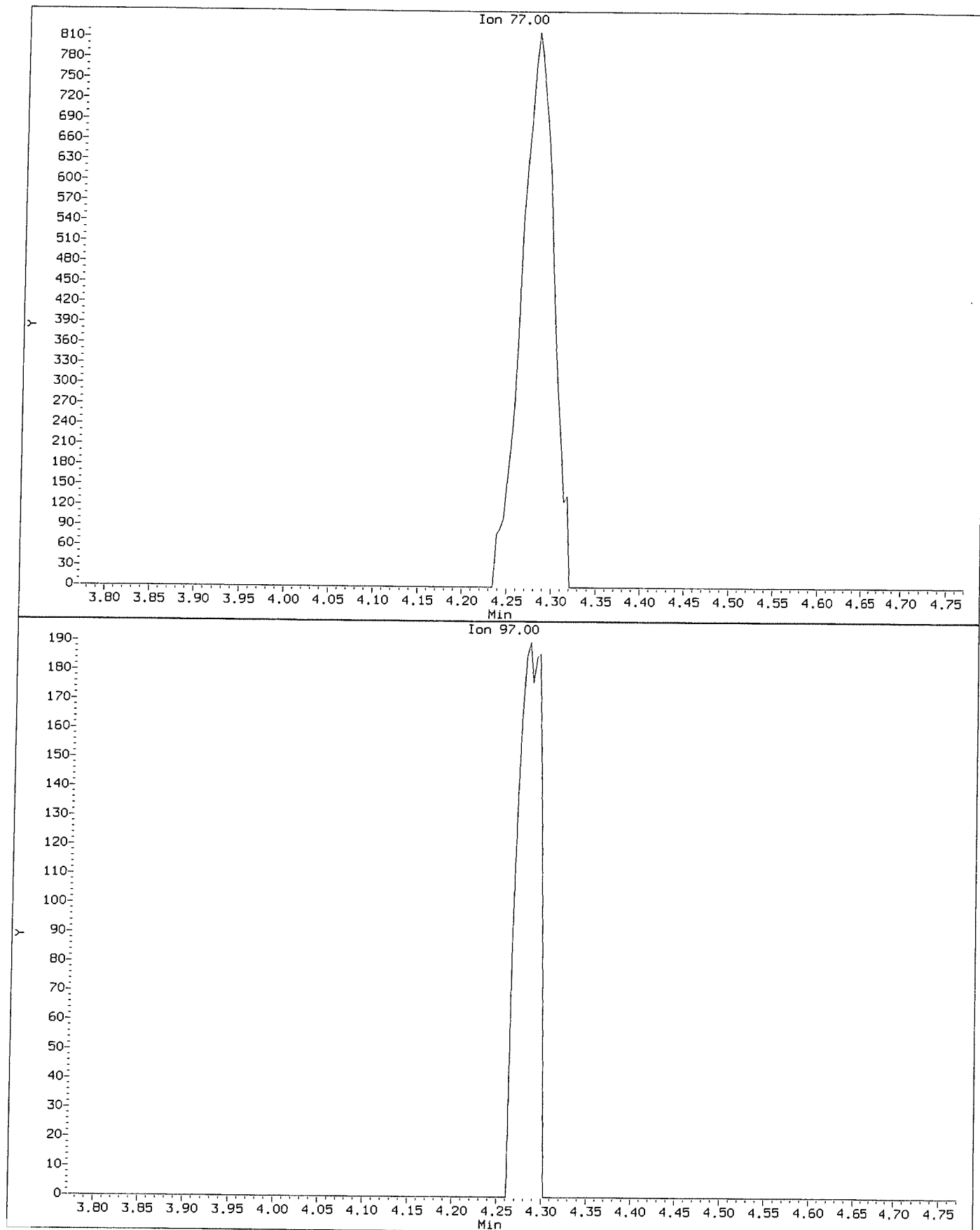
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Client Sample ID: VSTD00.5

Compound: 1,2-Dibromo-3-Chloropropane
CAS Number: 96-12-8



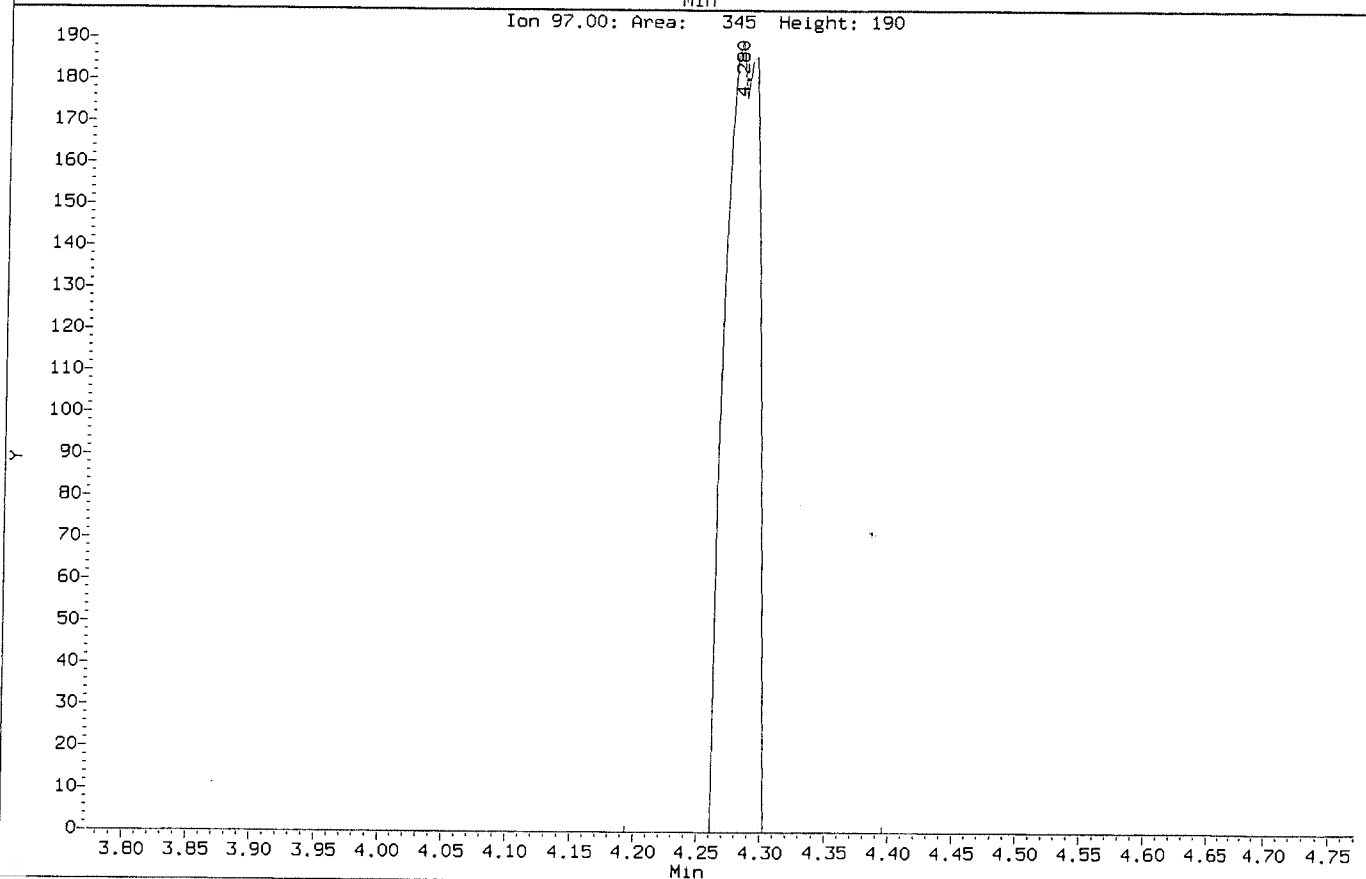
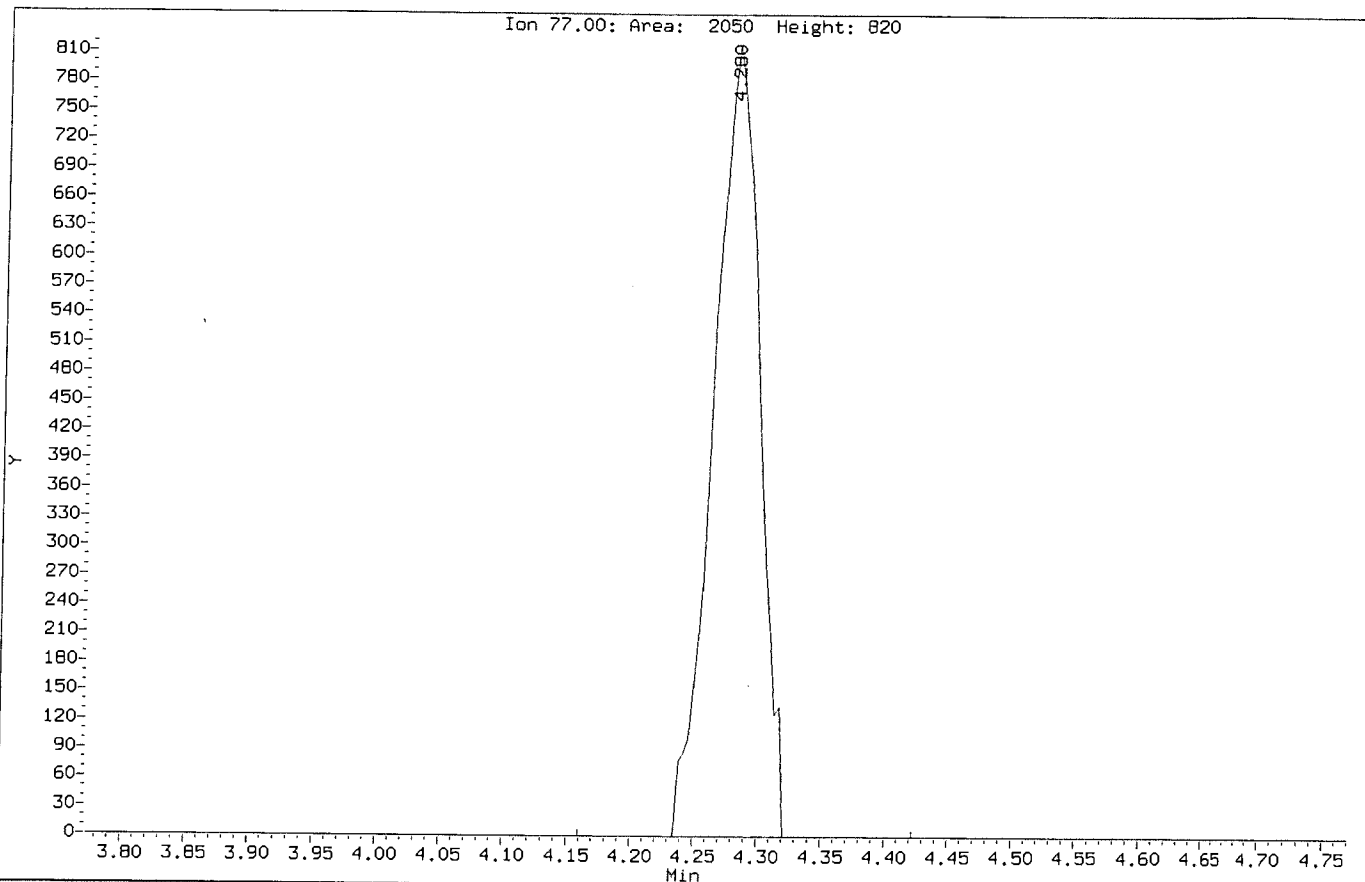
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Client Sample ID: VSTD00.5

Compound: 2,2-Dichloropropane
CAS Number: 594-20-7



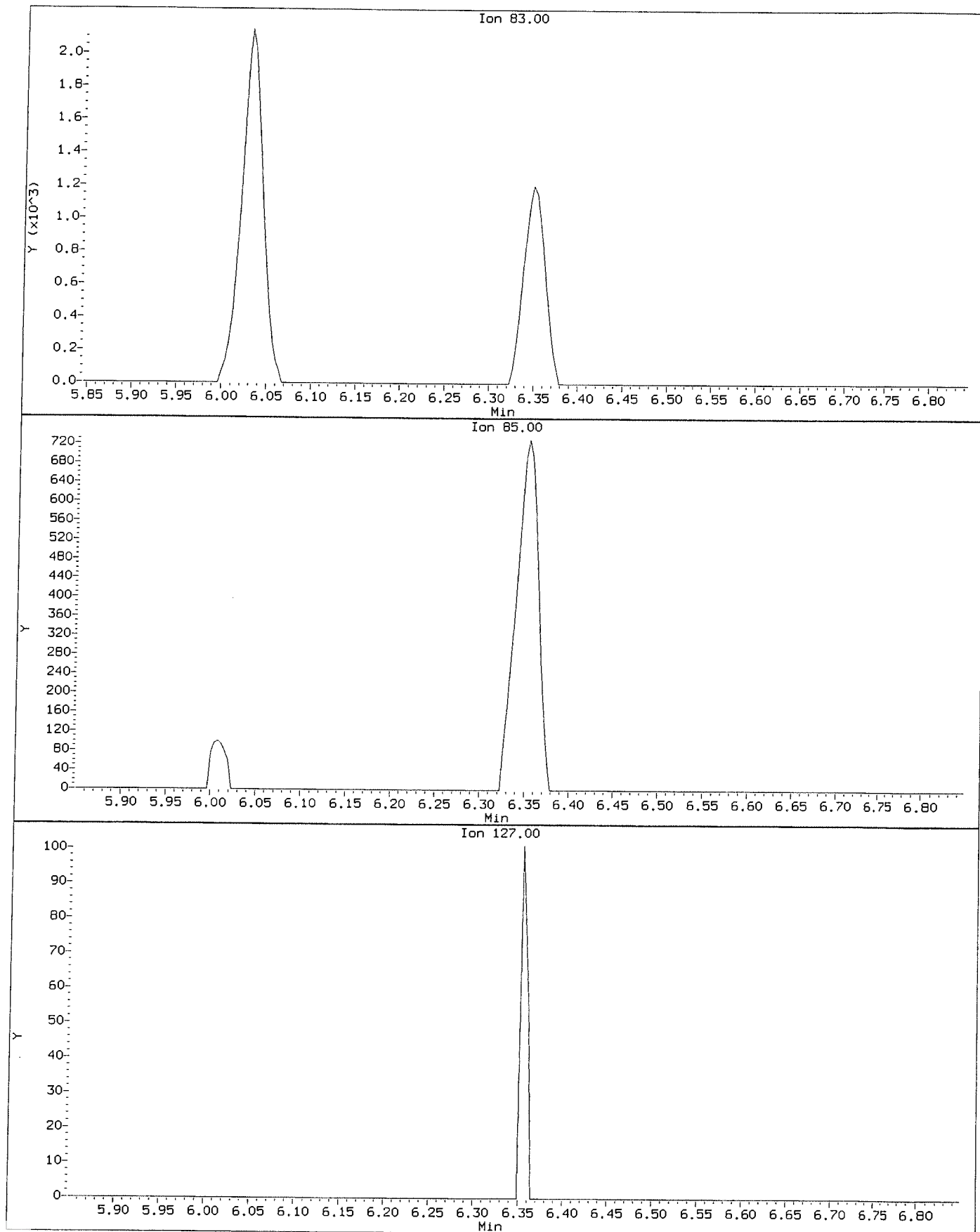
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Instrument: VDA9.i
Client Sample ID: VSTD00.5

Compound: 2,2-Dichloropropane
CAS Number: 594-20-7



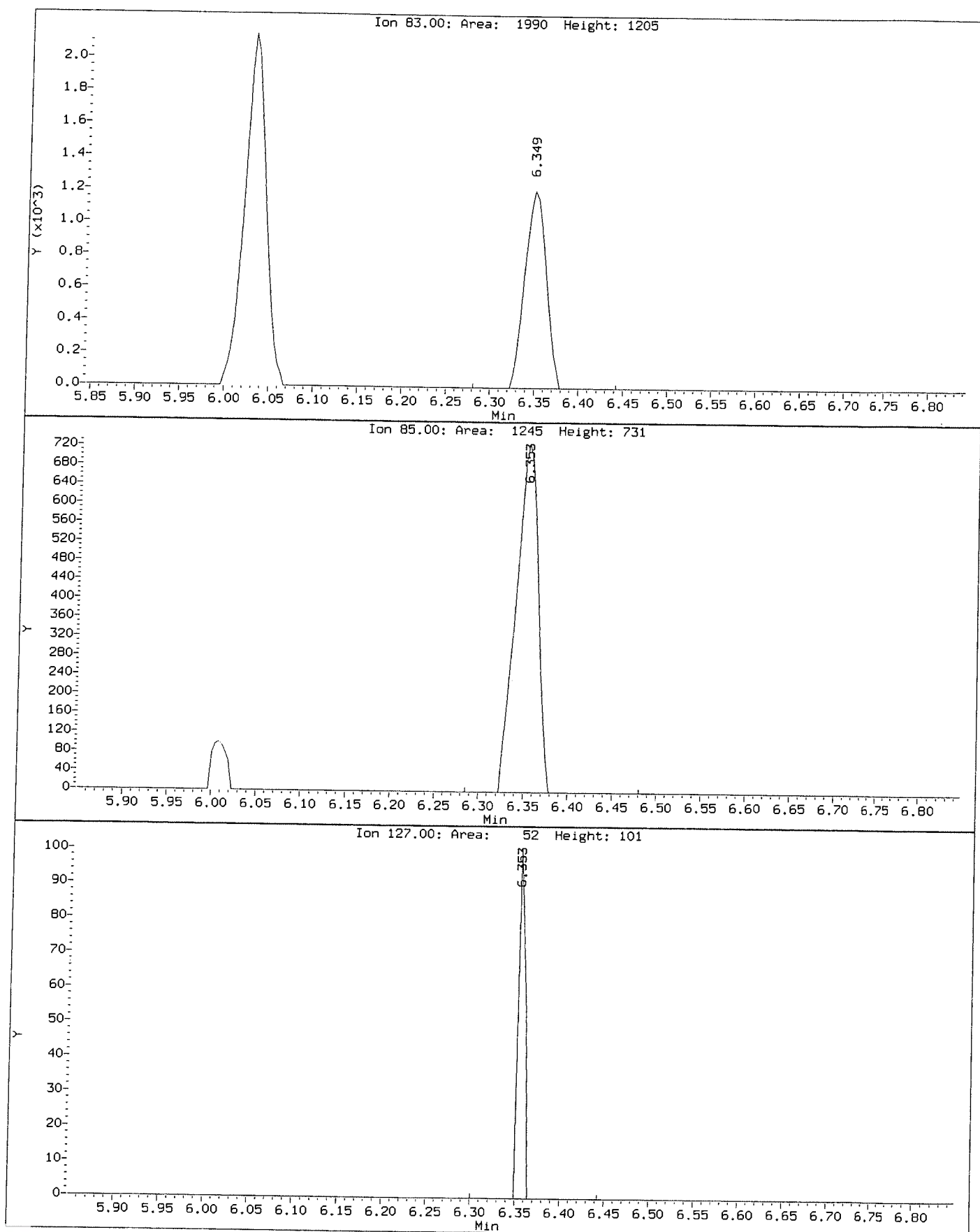
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Client Sample ID: VSTD00.5

Compound: Bromodichloromethane
CAS Number: 75-27-4



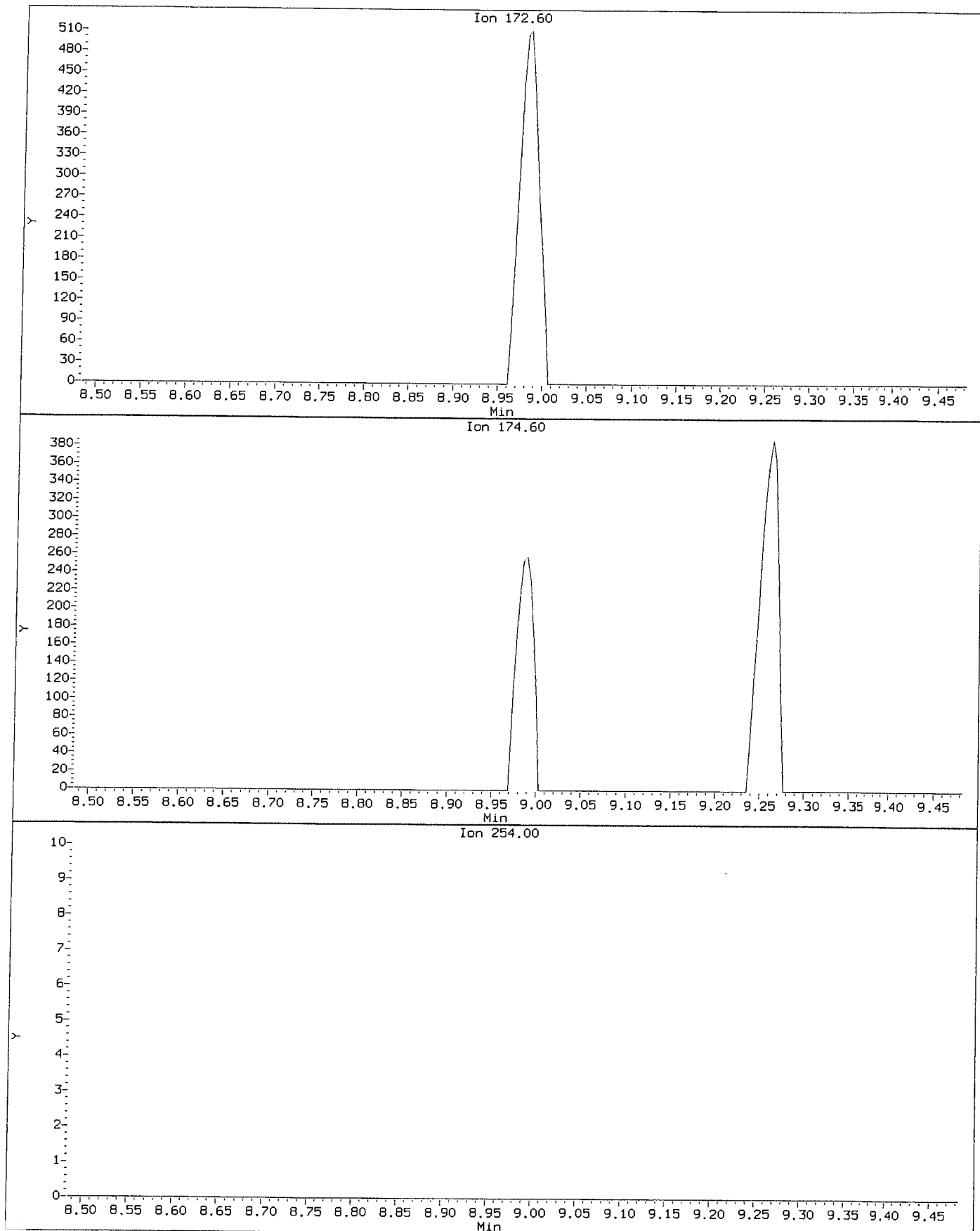
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Compound: Bromodichloromethane
CAS Number: 75-27-4



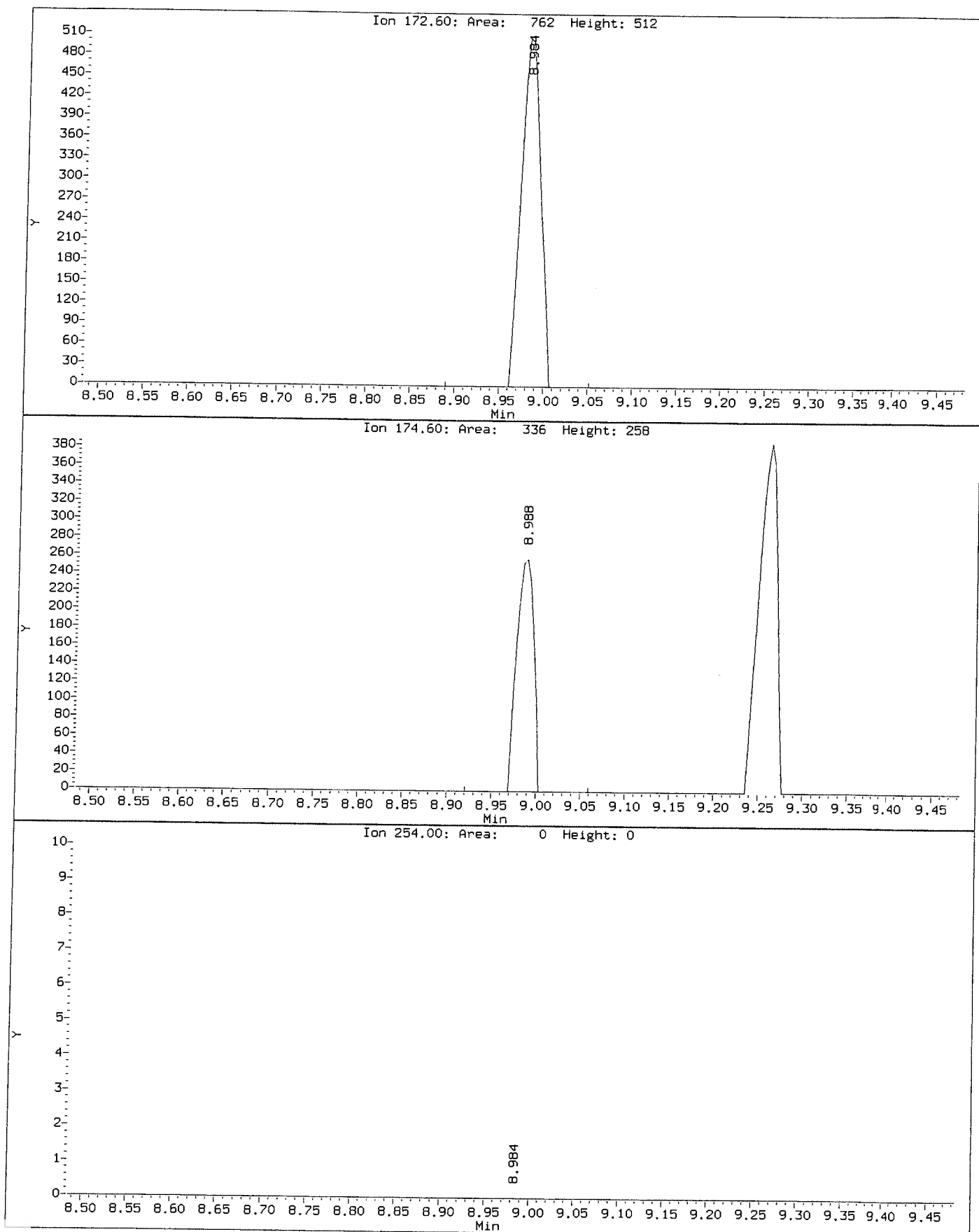
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Client Sample ID: VSTD00.5

Compound: Bromoform
CAS Number: 75-25-2



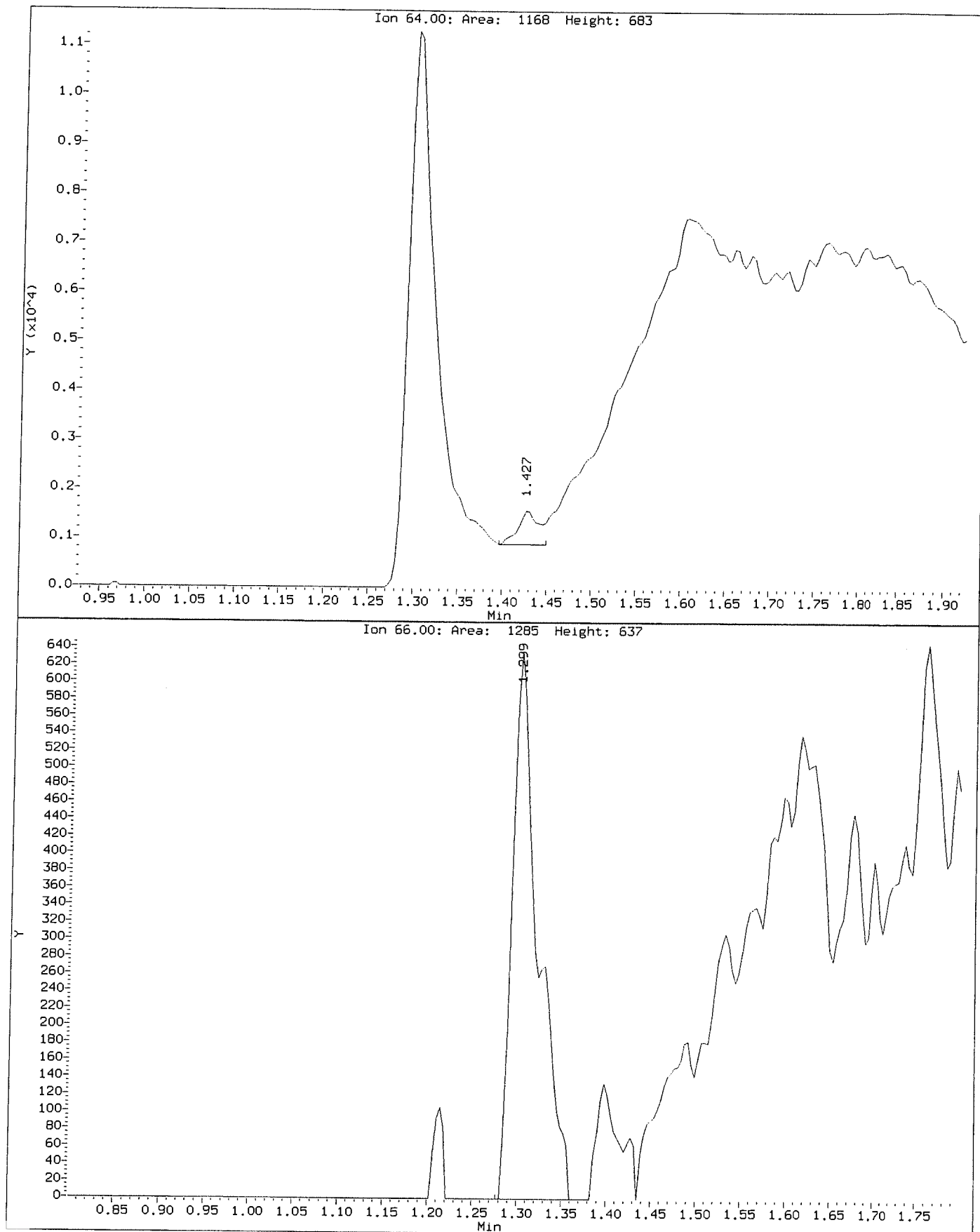
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Compound: Bromoform
CAS Number: 75-25-2



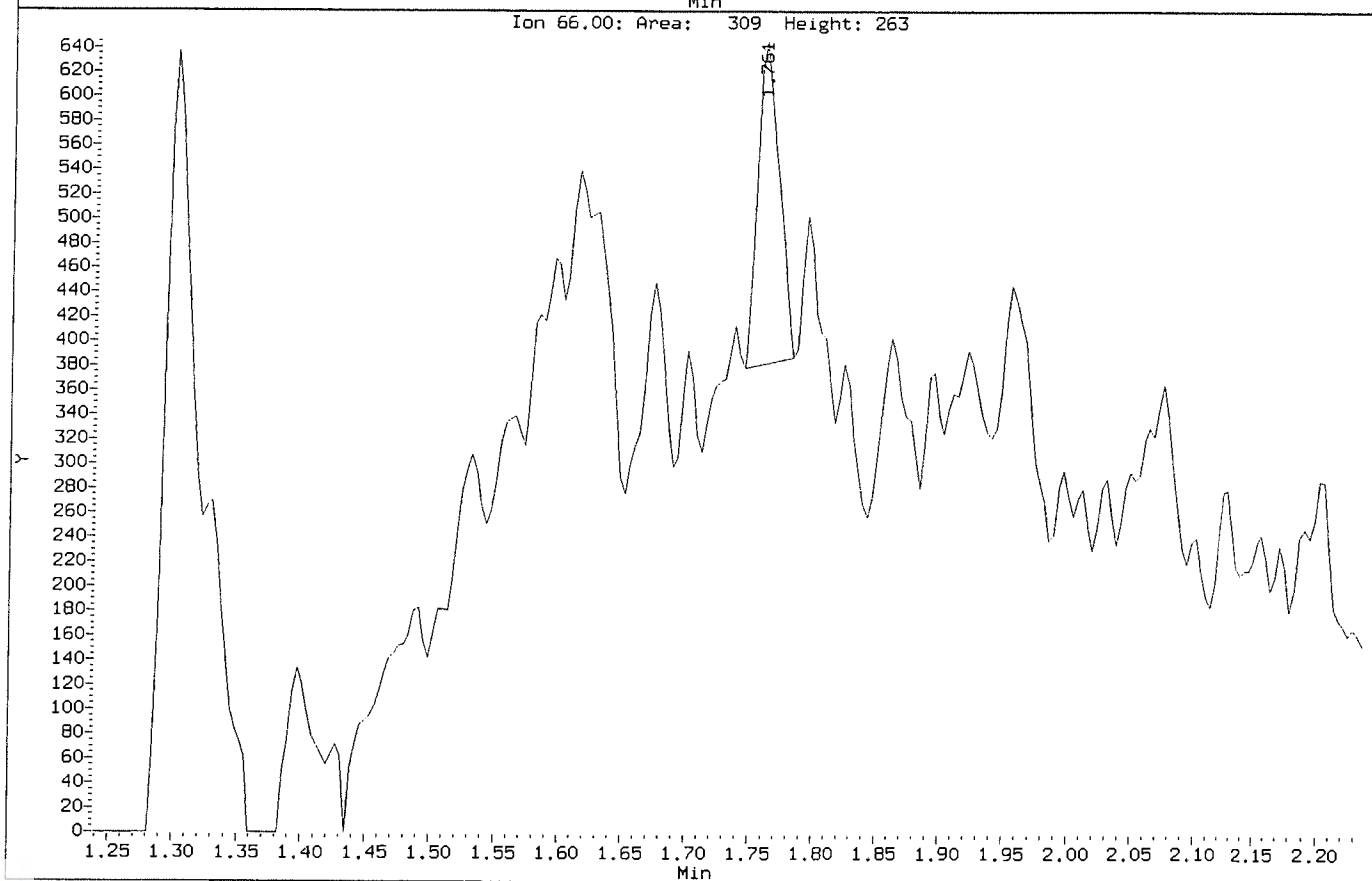
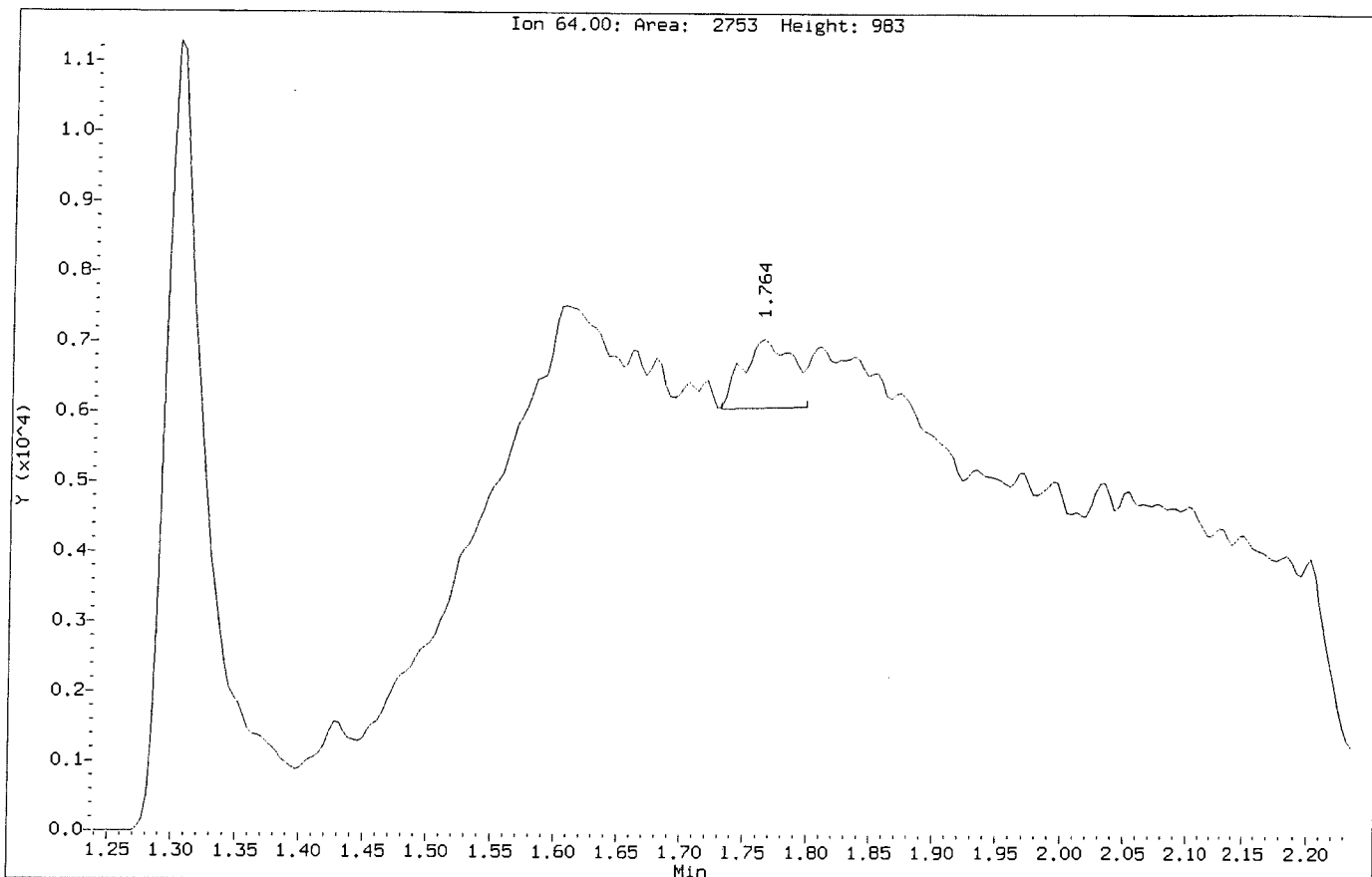
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Client Sample ID: VSTD00.5

Compound: Chloroethane
CAS Number: 75-00-3



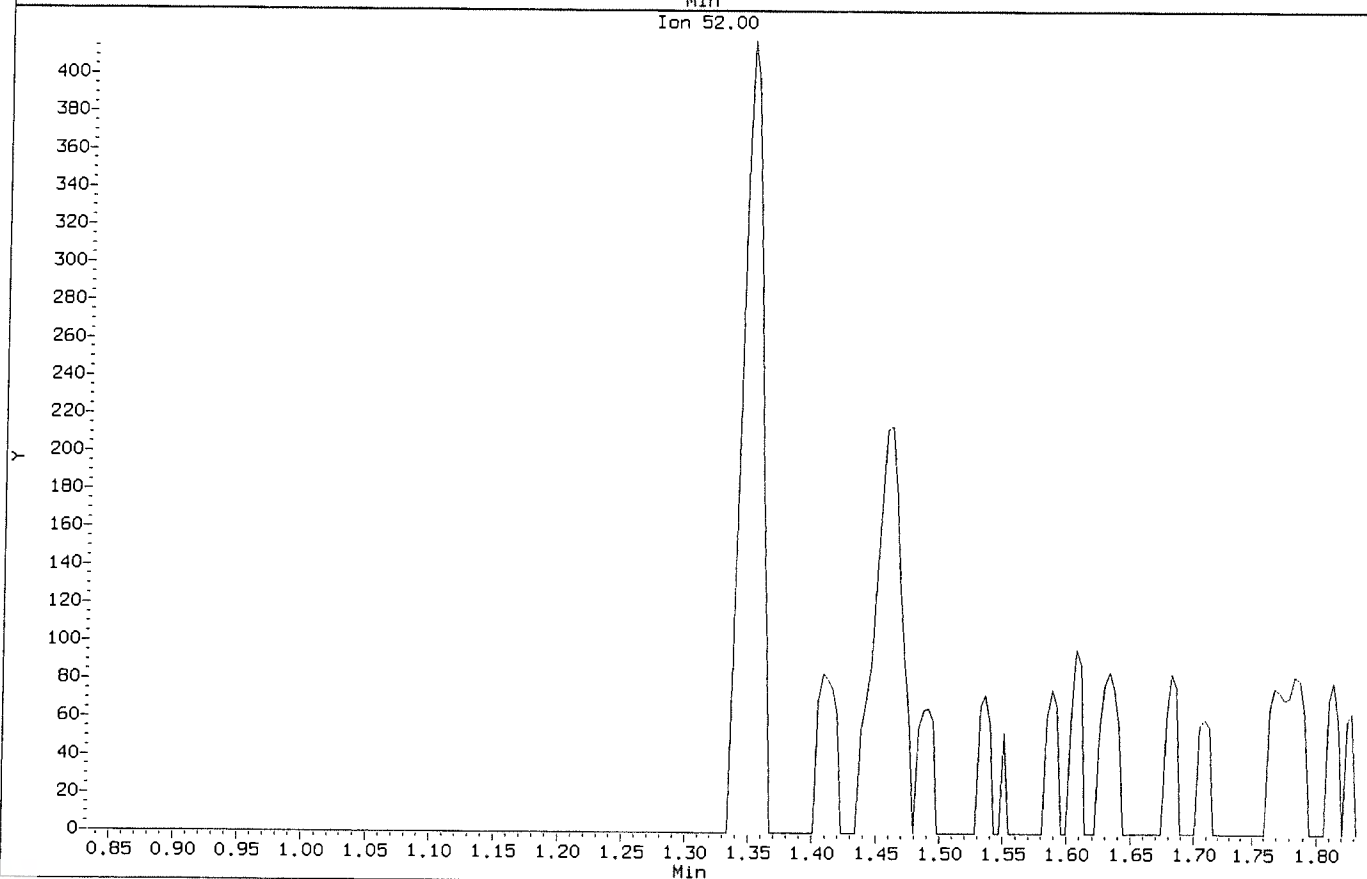
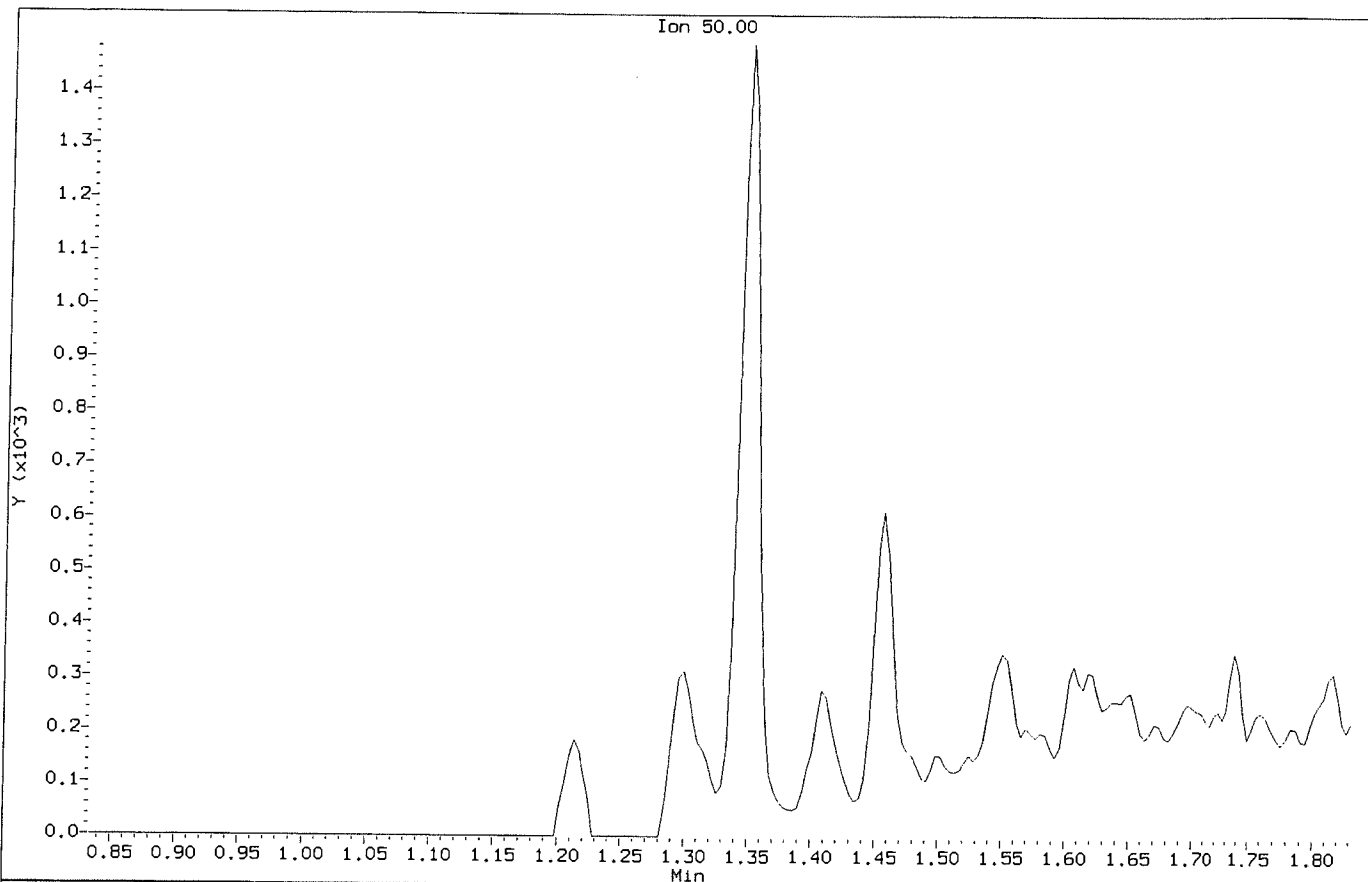
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Client Sample ID: VSTD00.5

Compound: Chloroethane
CAS Number: 75-00-3



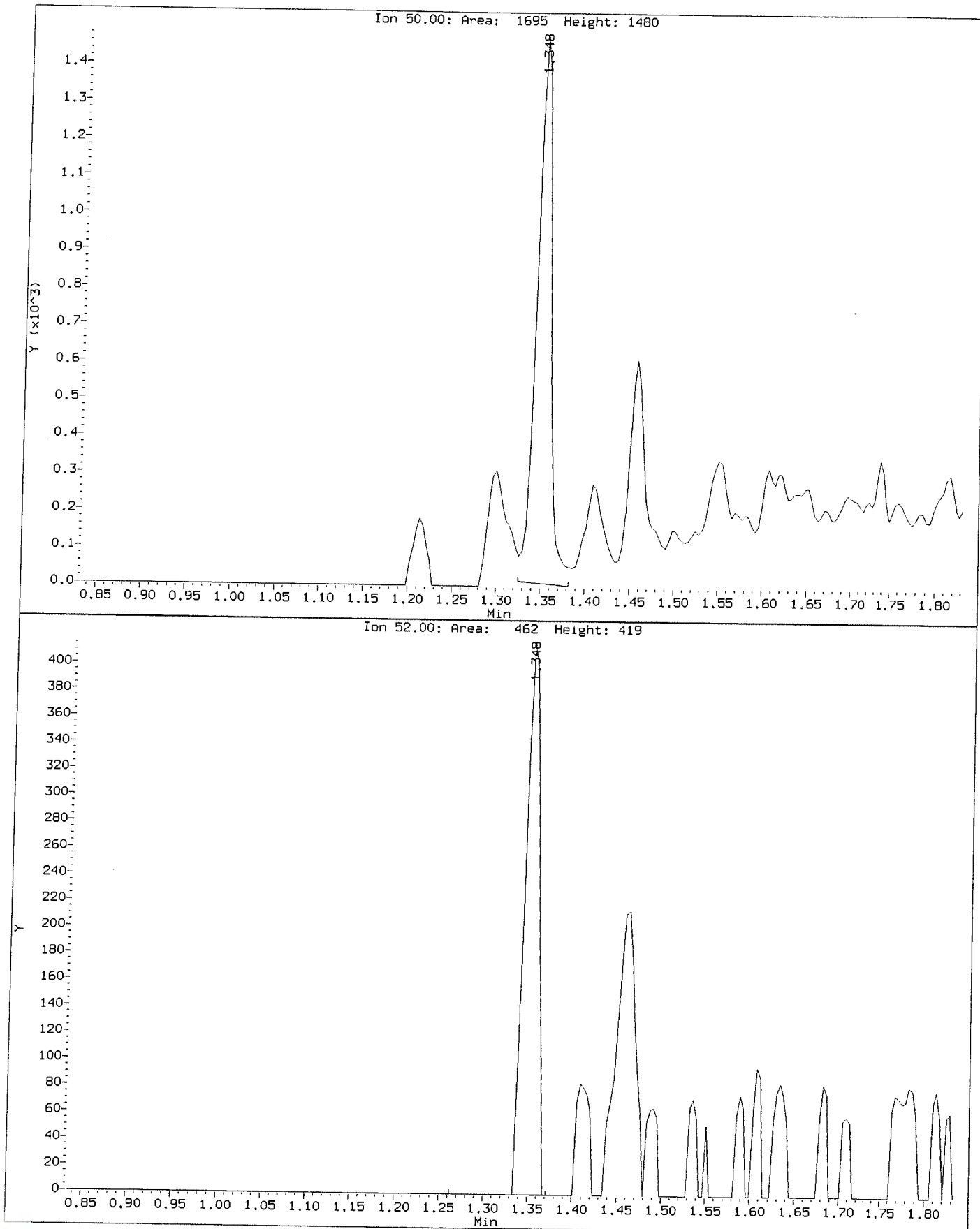
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Client Sample ID: VSTD00.5

Compound: Chloromethane
CAS Number: 74-87-3



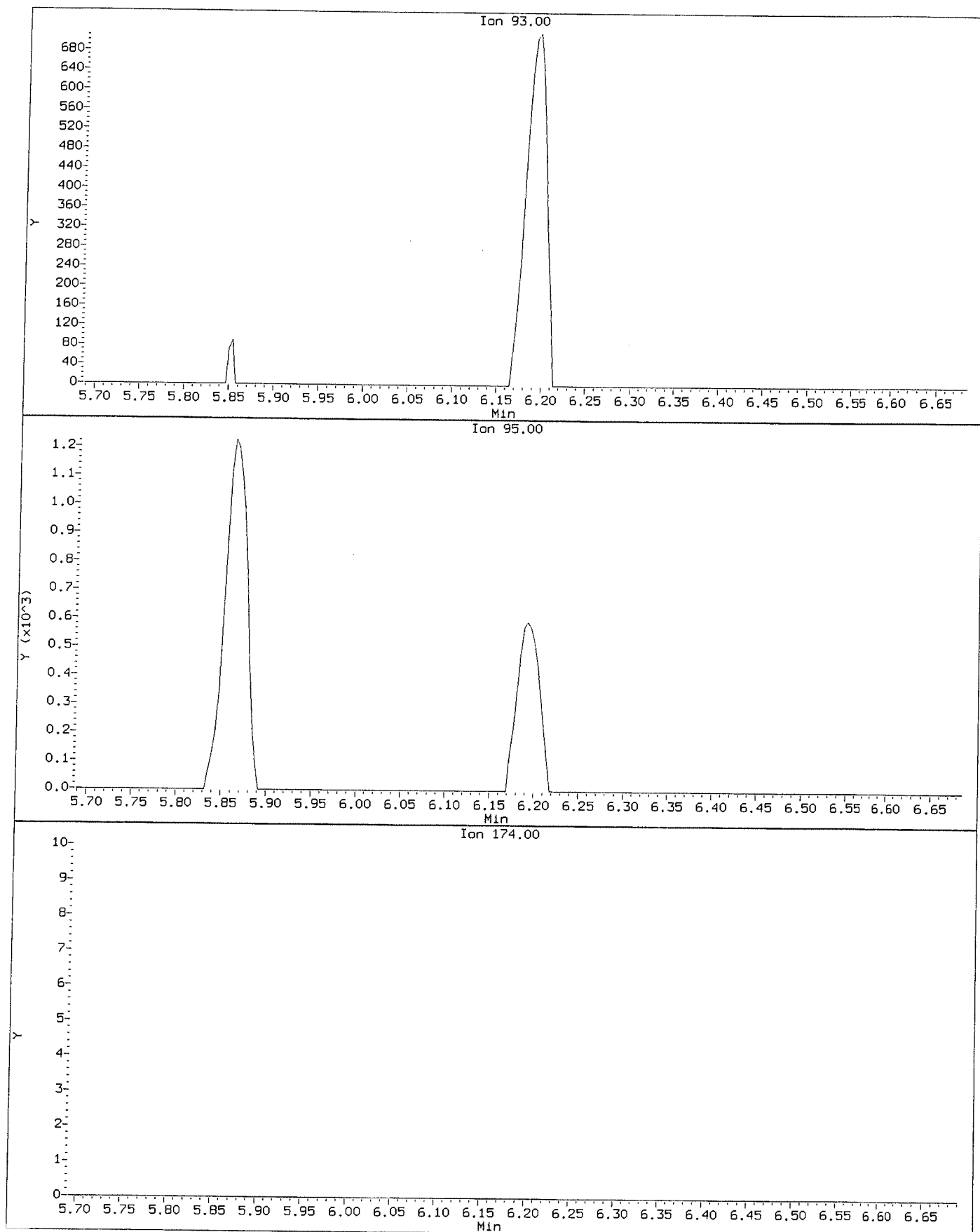
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Client Sample ID: VSTD00.5

Compound: Chloromethane
CAS Number: 74-87-3



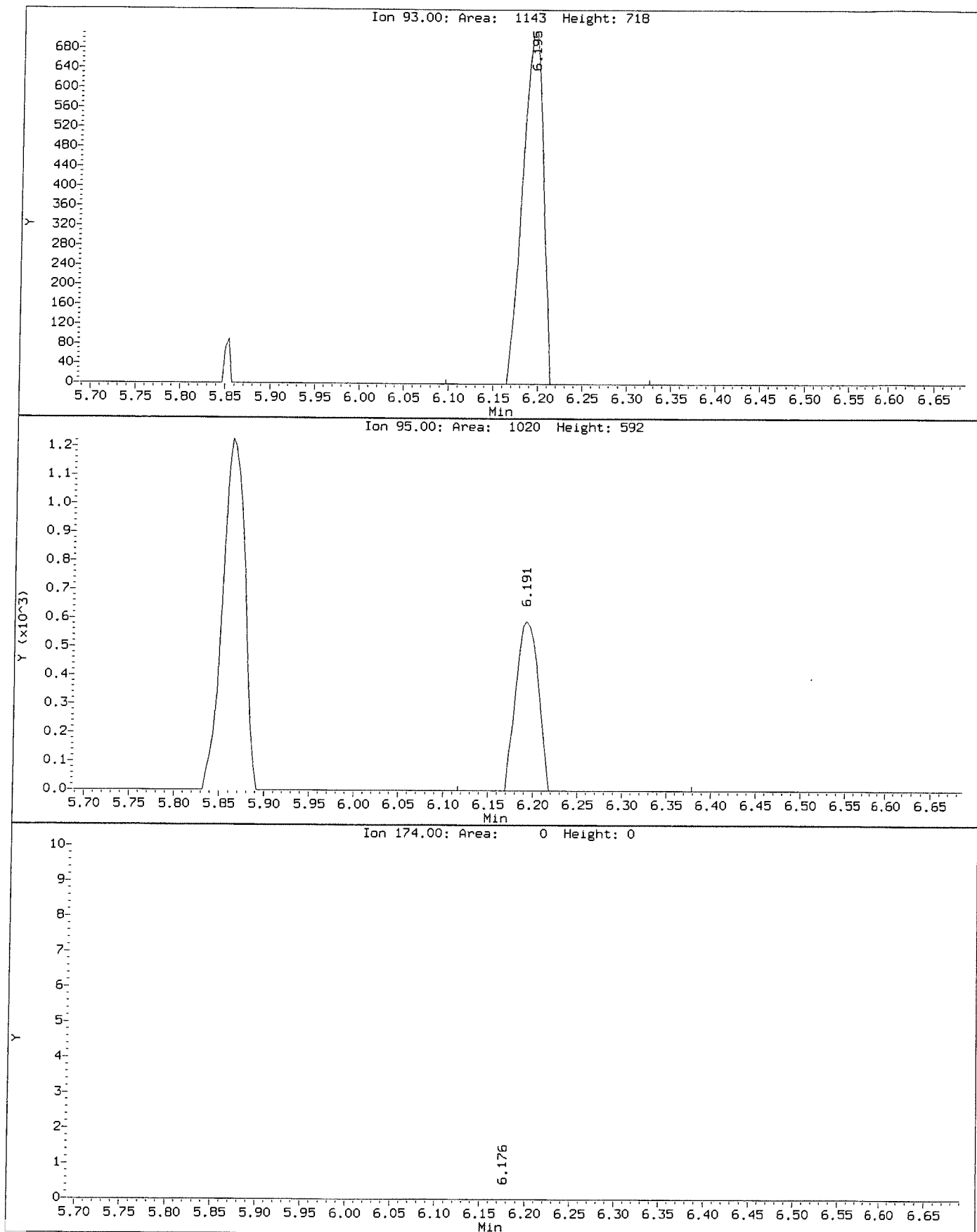
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Client Sample ID: VSTD00.5

Compound: Dibromomethane
CAS Number: 74-95-3



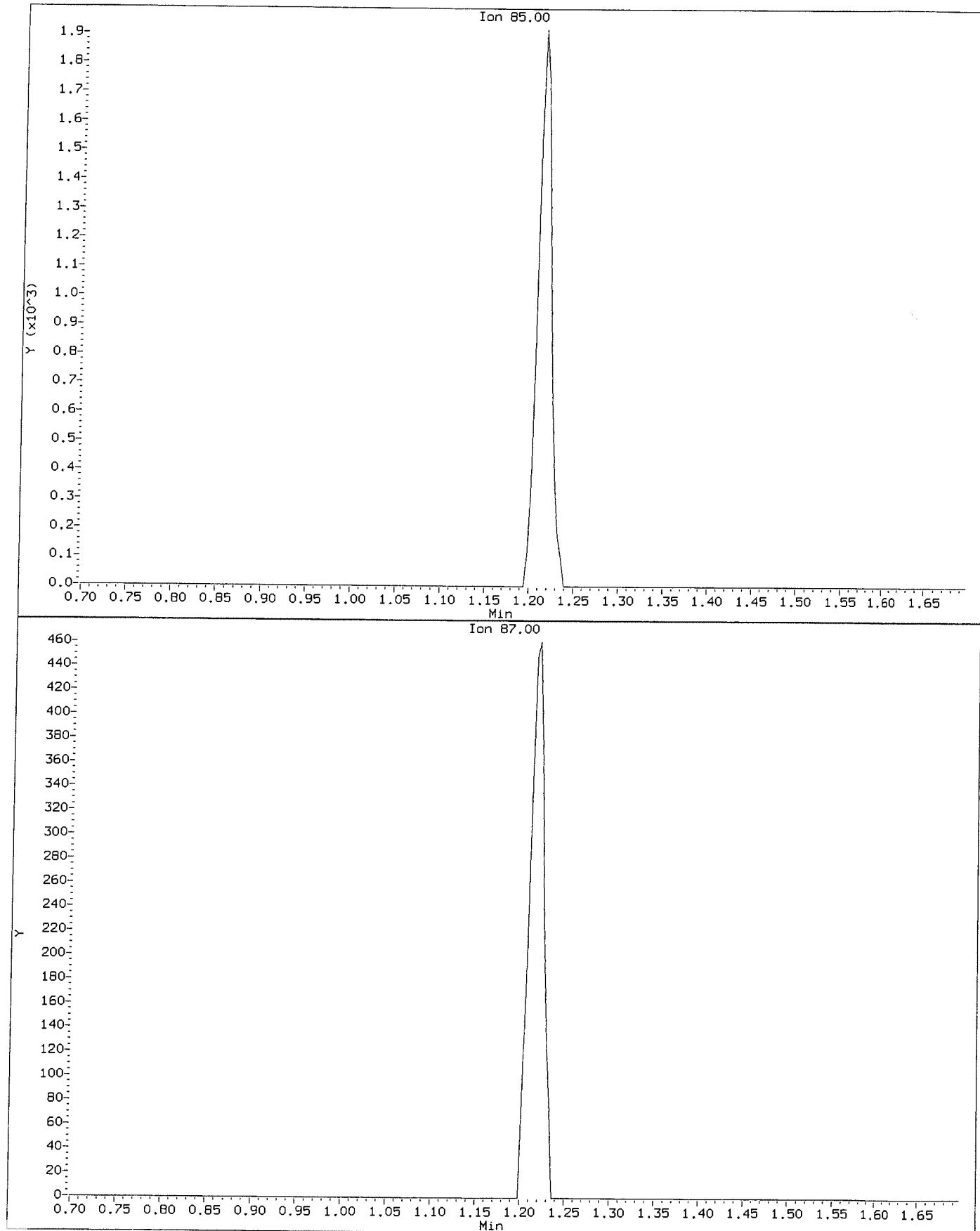
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Client Sample ID: VSTD00.5

Compound: Dibromomethane
CAS Number: 74-95-3



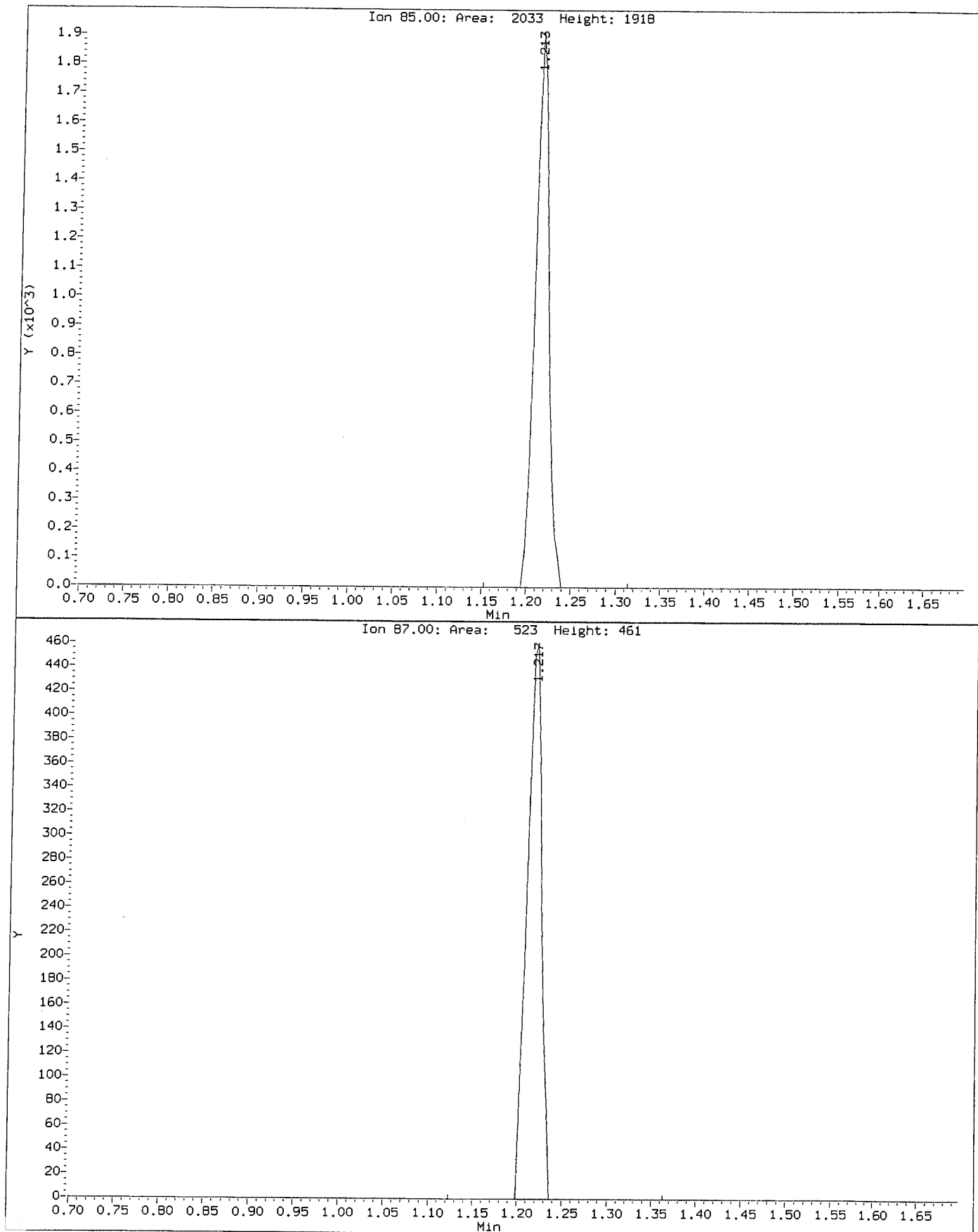
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Client Sample ID: VSTD00.5

Compound: Dichlorodifluoromethane
CAS Number: 75-71-8



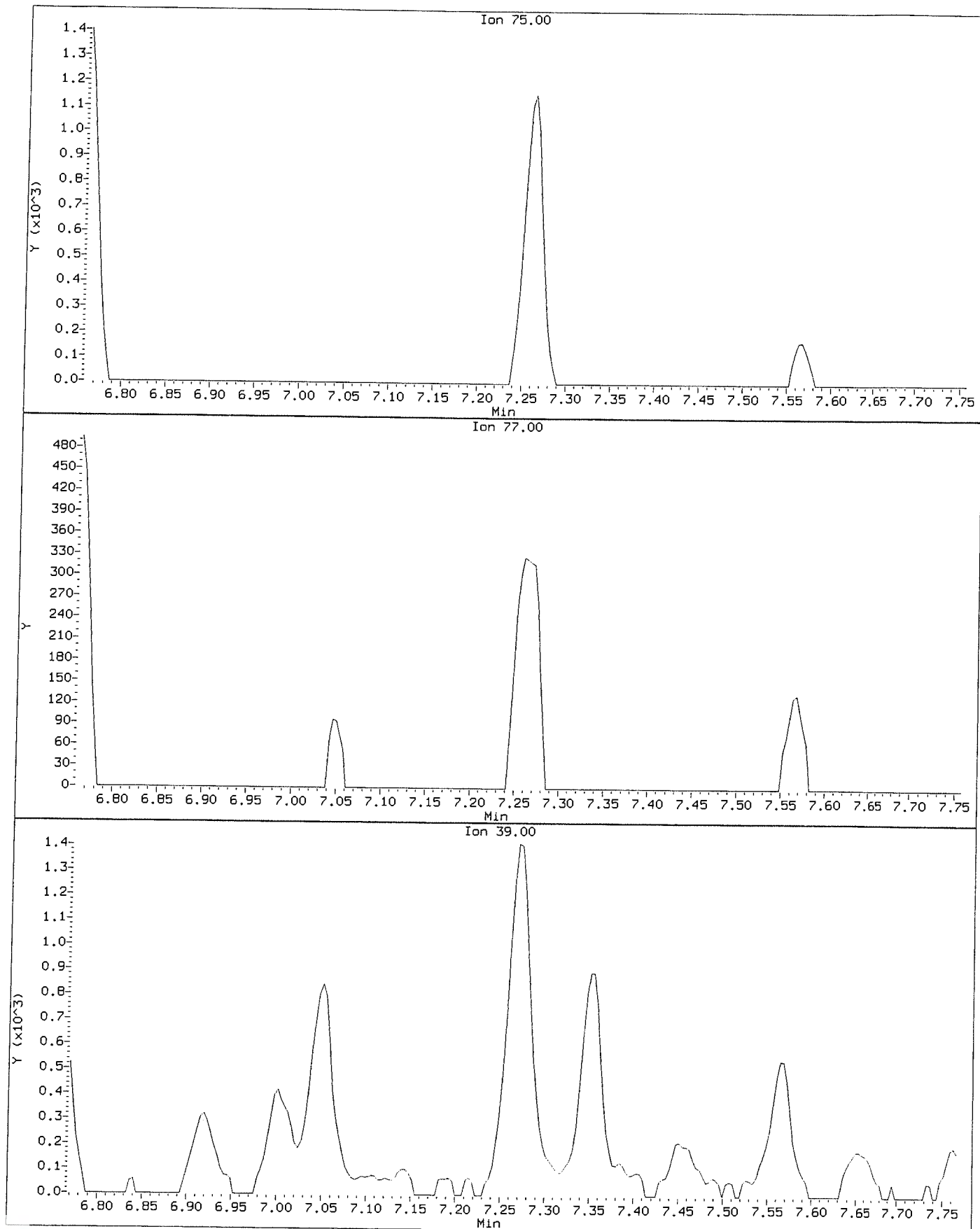
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Compound: Dichlorodifluoromethane
CAS Number: 75-71-8



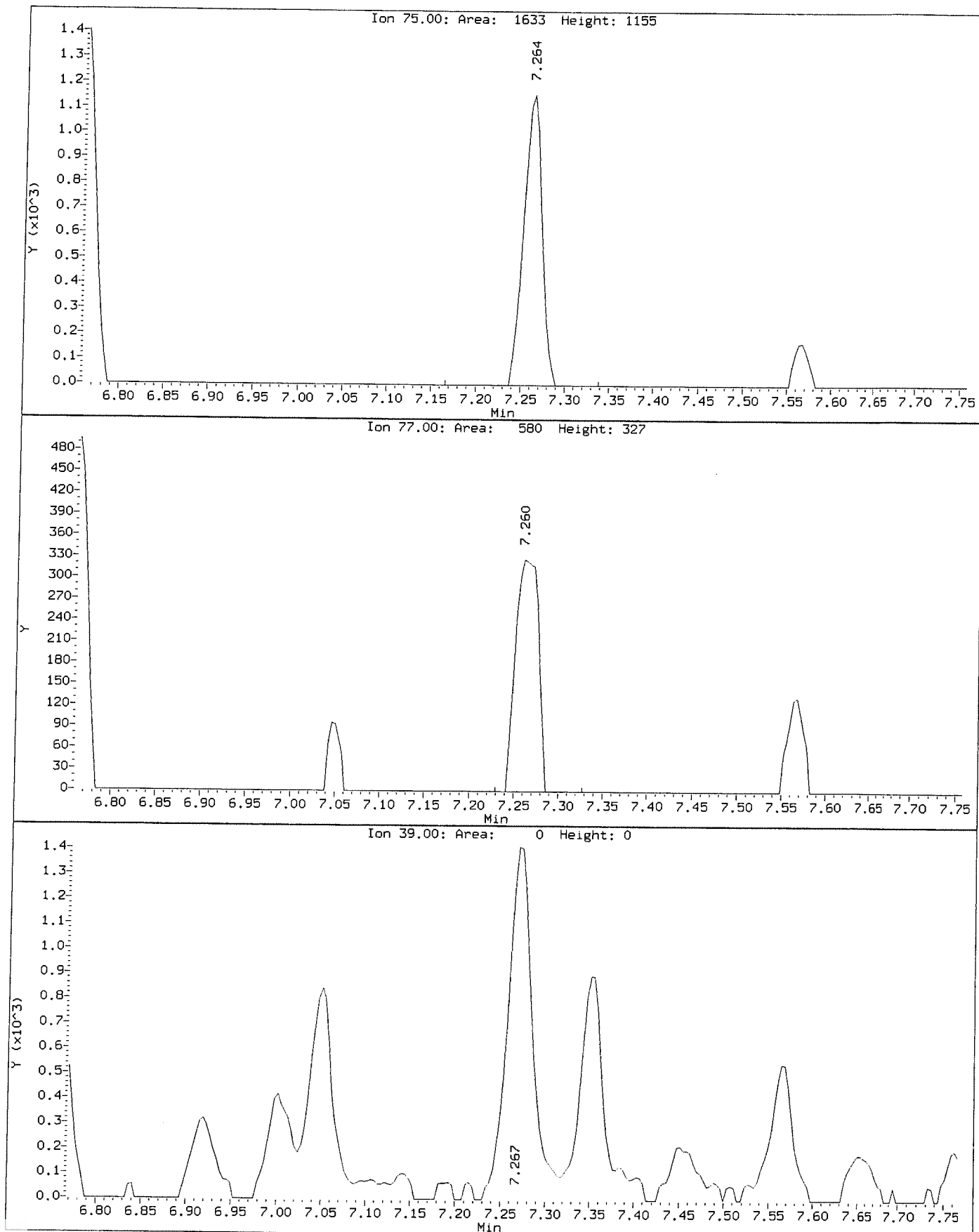
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Injection Date: 21-DEC-2018 14:14
Instrument: VOA9.i
Client Sample ID: VSTD00.5

Compound: trans-1,3-Dichloropropene
CAS Number: 10061-02-6



Data File: \\NAHSTWS005\Target\chem\voa9.1\U181221.b\U122103.D
Injection Date: 21-DEC-2018 14:14
Instrument: VOA9.1
Client Sample ID: VSTD00.5

Compound: trans-1,3-Dichloropropene
CAS Number: 10061-02-6



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181221.b\U122104.D Page 1
 Report Date: 28-Jan-2019 11:25

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U181221.b\U122104.D
 Lab Smp Id: VSTD001 Client Smp ID: VSTD001
 Inj Date : 21-DEC-2018 15:03
 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\U181221.b\8260C.m
 Meth Date : 28-Jan-2019 11:25 VOA9.i Quant Type: ISTD
 Cal Date : 21-DEC-2018 14:14 Cal File: U122103.D
 Als bottle: 5 Calibration Sample, Level: 3
 Dil Factor: 1.00000
 Integrator: HP RTE Compound Sublist: LHAAP.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	AMOUNTS				CAL-AMT (ug/l)	ON-COL (ug/l)
			MASS	RT	EXP RT	REL RT		
* 1 Pentafluorobenzene	168		4.894	4.894	(1.000)	408613	50.0000	
* 36 1,4-Difluorobenzene	114		5.625	5.625	(1.000)	790484	50.0000	
* 47 Chlorobenzene-d5	117		8.249	8.249	(1.000)	731112	50.0000	
* 70 1,4-Dichlorobenzene-d4	152		10.236	10.236	(1.000)	336061	50.0000	
\$ 30 Dibromofluoromethane	113		4.826	4.826	(0.986)	8005	1.00000	0.30(a)
\$ 35 1,2-Dichloroethane-d4	65		5.175	5.175	(1.057)	10907	1.00000	(a)
\$ 48 Toluene-d8	98		6.989	6.989	(0.847)	32175	1.00000	(a)
\$ 69 4-Bromofluorobenzene	95		9.257	9.257	(1.122)	12547	1.00000	0.36(a)
60 1,1,1,2-Tetrachloroethane	131		8.350	8.350	(1.012)	4208	1.00000	1.48(a)
31 1,1,1-Trichloroethane	97		4.826	4.826	(0.986)	7082	1.00000	1.09(a)
68 1,1,2,2-Tetrachloroethane	83		9.392	9.392	(0.918)	9134	1.00000	1.20(a)
138 Freon TF	101		2.401	2.401	(0.491)	4108	1.00000	1.18(a)
53 1,1,2-Trichloroethane	83		7.421	7.421	(0.900)	5137	1.00000	1.17(a)
22 1,1-Dichloroethane	63		3.604	3.604	(0.737)	10662	1.00000	1.21(a)
11 1,1-Dichloroethene	96		2.397	2.397	(0.490)	4598	1.00000	1.18(a)
32 1,1-Dichloropropene	75		5.003	5.003	(0.889)	8232	1.00000	1.17(a)
93 1,2,3-Trichlorobenzene	180		12.335	12.335	(1.205)	6631	1.00000	1.66(a)
71 1,2,3-Trichloropropane	75		9.426	9.426	(0.921)	8706	1.00000	1.10(a)
90 1,2,4-Trichlorobenzene	180		11.923	11.923	(1.165)	6820	1.00000	1.09(a)
79 1,2,4-Trimethylbenzene	105		9.943	9.943	(0.971)	18977	1.00000	1.07(a)
89 1,2-Dibromo-3-Chloropropane	155		11.233	11.233	(1.097)	861	1.00000	2.16(a)
57 1,2-Dibromoethane	107		7.852	7.852	(0.952)	5748	1.00000	1.14(a)



Compounds	QUANT	SIG	AMOUNTS				CAL-AMT (ug/l)	ON-COL (ug/l)
			MASS	RT	EXP RT	REL RT		
88 1,2-Dichlorobenzene	146		10.569	10.569	(1.033)	11945	1.00000	1.19(a)
33 1,2-Dichloroethane	62		5.250	5.250	(0.933)	8970	1.00000	0.54(a)
42 1,2-Dichloropropane	63		6.078	6.078	(1.081)	6565	1.00000	1.17(a)
75 1,3,5-Trimethylbenzene	105		9.625	9.625	(0.940)	18075	1.00000	1.07(a)
83 1,3-Dichlorobenzene	146		10.180	10.180	(0.995)	11430	1.00000	1.14(a)
54 1,3-Dichloropropane	76		7.563	7.563	(0.917)	10939	1.00000	1.16(a)
84 1,4-Dichlorobenzene	146		10.255	10.255	(1.002)	12811	1.00000	1.21(a)
26 2,2-Dichloropropane	77		4.272	4.272	(0.873)	6236	1.00000	1.17(a)
24 2-Butanone	43		4.343	4.343	(0.887)	6369	2.00000	0.00(a)
76 2-Chlorotoluene	91		9.546	9.546	(0.933)	17719	1.00000	1.14(a)
52 2-Hexanone	43		7.649	7.649	(0.927)	8136	2.00000	2.00(a)
77 4-Chlorotoluene	91		9.640	9.640	(0.942)	20099	1.00000	1.12(a)
82 p-Isopropyltoluene	119		10.210	10.210	(0.997)	18371	1.00000	1.03(a)
45 4-Methyl-2-Pentanone	43		6.914	6.914	(0.838)	12526	2.00000	2.14(a)
10 Acetone	43		2.480	2.480	(0.507)	5582	2.00000	0.58(a)
37 Benzene	78		5.216	5.216	(0.927)	24701	1.00000	1.17(a)
74 Bromobenzene	156		9.381	9.381	(0.917)	5982	1.00000	1.15(a)
29 Bromochloromethane	128		4.553	4.553	(0.930)	2865	1.00000	(a)
39 Bromodichloromethane	83		6.348	6.348	(1.129)	6221	1.00000	1.04(aM)
66 Bromoform	173		8.984	8.984	(1.089)	2343	1.00000	2.48(Ta)
6 Bromomethane	94		1.670	1.670	(0.341)	2293	1.00000	2.22(a)
19 Carbon Disulfide	76		2.585	2.585	(0.528)	33391	2.00000	2.35(a)
34 Carbon Tetrachloride	117		4.991	4.991	(0.887)	5463	1.00000	2.32(a)
59 Chlorobenzene	112		8.275	8.275	(1.003)	16703	1.00000	1.18(a)
7 Chloroethane	64		1.749	1.749	(0.357)	3213	1.00000	1.36(aM)
28 Chloroform	83		4.654	4.654	(0.951)	10242	1.00000	1.20(a)
3 Chloromethane	50		1.336	1.336	(0.273)	4689	1.00000	4.32(a)
27 cis-1,2-Dichloroethene	96		4.283	4.283	(0.875)	6586	1.00000	1.22(a)
46 cis-1,3-Dichloropropene	75		6.757	6.757	(1.201)	7273	1.00000	2.04(a)
55 Dibromochloromethane	129		7.758	7.758	(0.940)	4051	1.00000	1.80(a)
44 Dibromomethane	93		6.187	6.187	(1.100)	3627	1.00000	1.12(aM)
2 Dichlorodifluoromethane	85		1.201	1.201	(0.246)	6583	1.00000	1.78(a)
61 Ethylbenzene	106		8.369	8.369	(1.015)	8132	1.00000	1.12(a)
91 Hexachlorobutadiene	225		12.065	12.065	(1.179)	2672	1.00000	1.12(a)
67 Isopropylbenzene	105		9.126	9.126	(1.106)	22547	1.00000	1.08(a)
62 m,p-Xylenes	106		8.470	8.470	(1.027)	19538	2.00000	2.20(a)
17 Methylene Chloride	84		2.866	2.866	(0.586)	8113	1.00000	0.44(a)
87 n-Butylbenzene	91		10.554	10.554	(1.031)	18944	1.00000	1.10(a)
73 n-Propylbenzene	91		9.475	9.475	(0.926)	27852	1.00000	1.10(a)
92 Naphthalene	128		12.133	12.133	(1.185)	16505	1.00000	1.44(a)
63 o-Xylene	106		8.811	8.811	(1.068)	10277	1.00000	1.15(a)
81 sec-Butylbenzene	105		10.086	10.086	(0.985)	22753	1.00000	1.07(a)
64 Styrene	104		8.826	8.826	(1.070)	15133	1.00000	1.01(a)
78 tert-Butylbenzene	119		9.902	9.902	(0.967)	15715	1.00000	1.07(a)
56 Tetrachloroethene	164		7.522	7.522	(0.912)	4775	1.00000	1.24(a)
50 Toluene	91		7.046	7.046	(0.854)	24298	1.00000	1.11(a)
20 trans-1,2-Dichloroethene	96		3.140	3.140	(0.642)	5920	1.00000	1.23(a)
51 trans-1,3-Dichloropropene	75		7.259	7.259	(1.291)	5668	1.00000	2.35(a)
38 Trichloroethene	130		5.861	5.861	(1.042)	6040	1.00000	1.18(a)
8 Trichlorofluoromethane	101		1.951	1.951	(0.399)	7922	1.00000	1.78(a)
5 Vinyl Chloride	62		1.415	1.415	(0.289)	6308	1.00000	2.03(a)



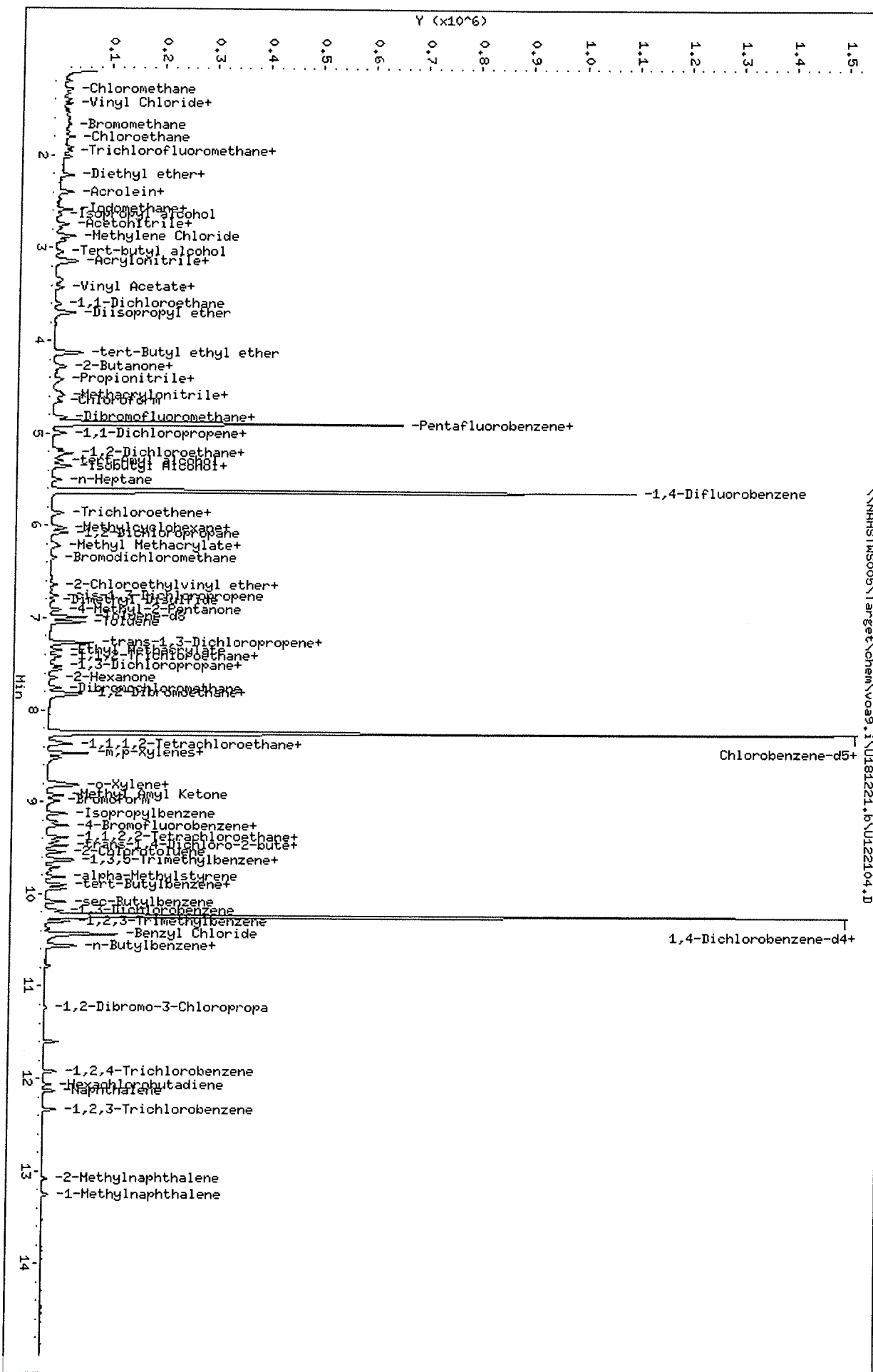
QC Flag Legend

- T - Target compound detected outside RT window.
- a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
- M - Compound response manually integrated.



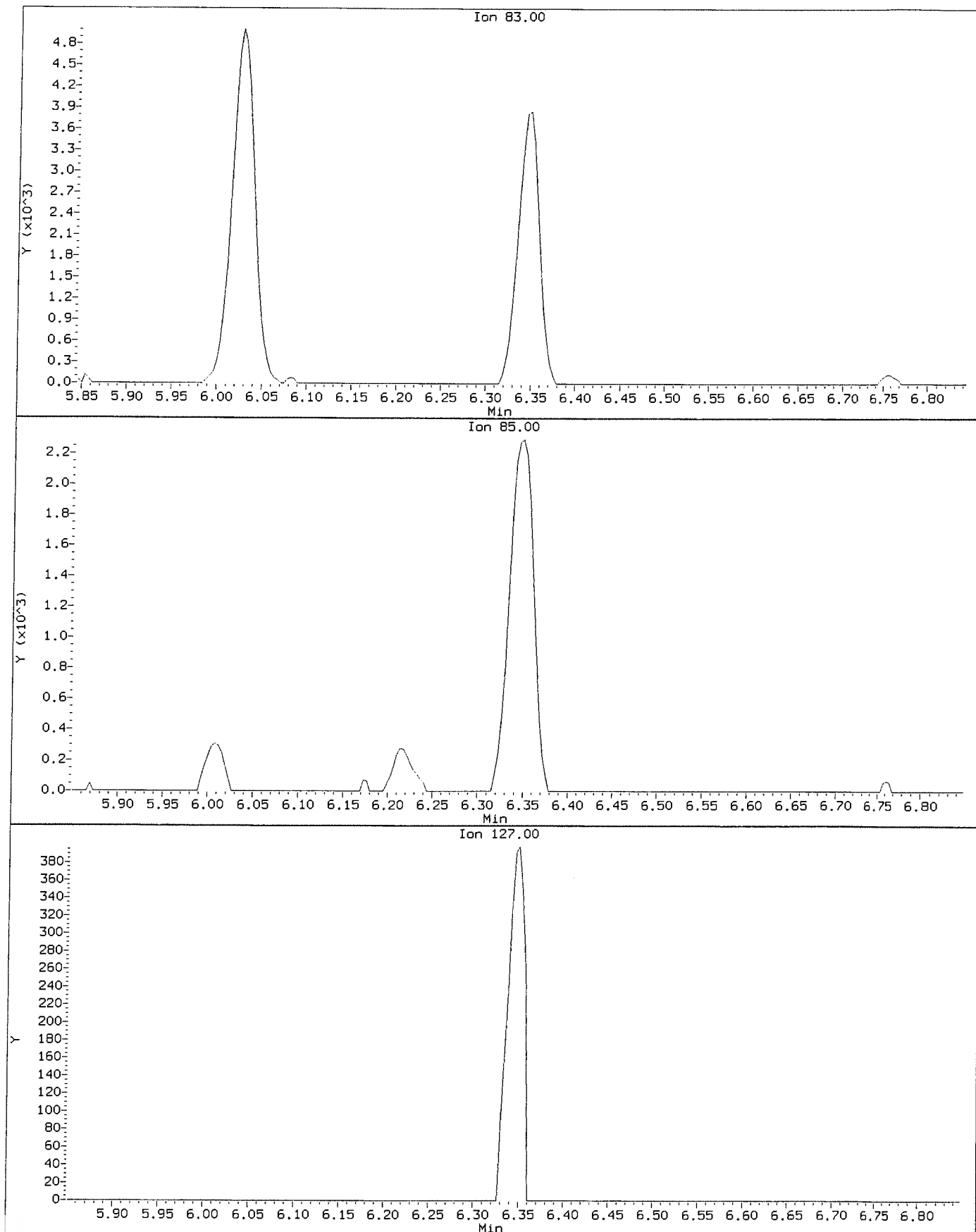
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 Purge Volume: 5.0
 Column phase: DB624

Instrument: W093.i
 Operator: PC
 Column diameter: 0.18



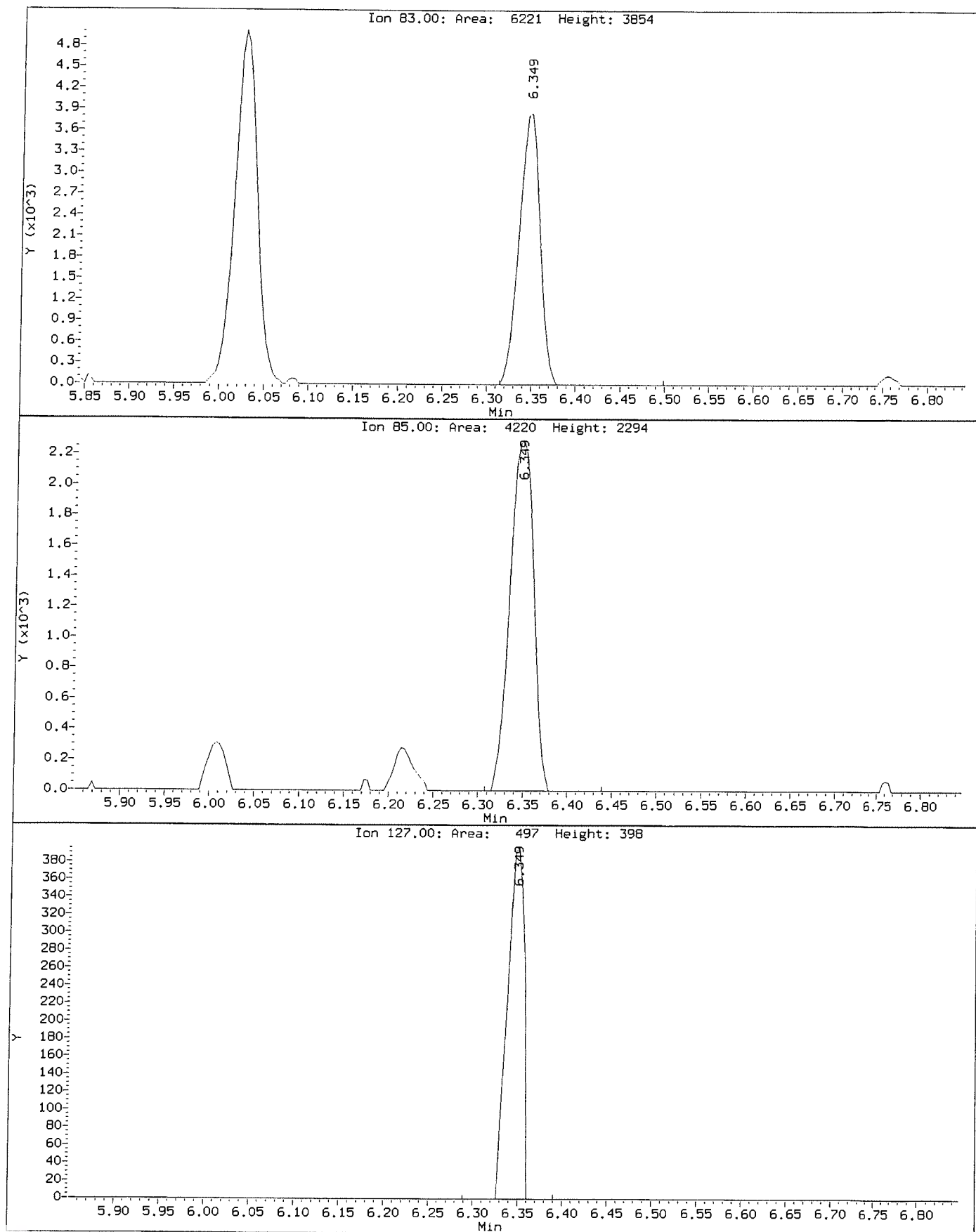
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Instrument: VOA9.i
Client Sample ID: VSTD001

Compound: Bromodichloromethane
CAS Number: 75-27-4



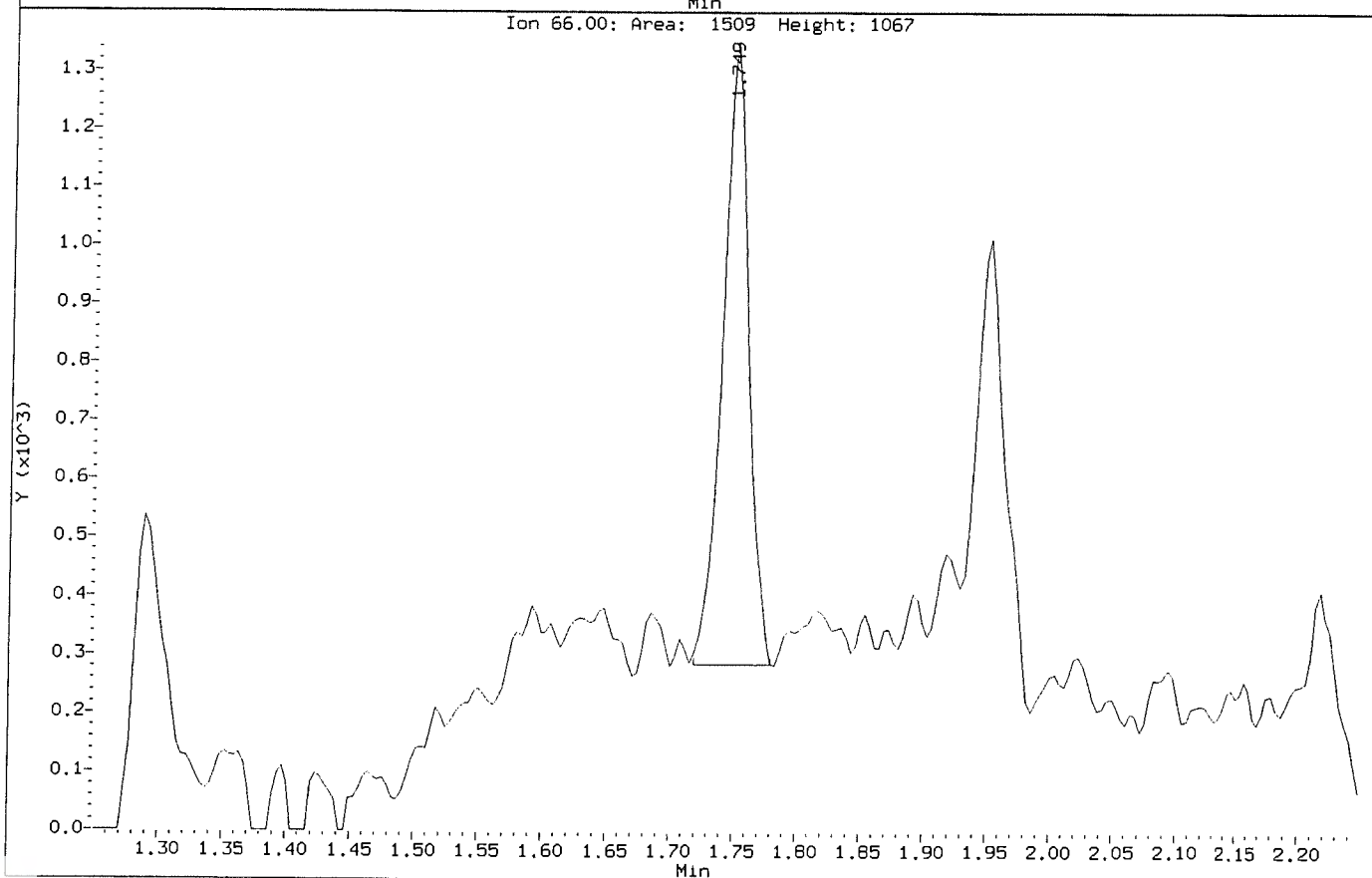
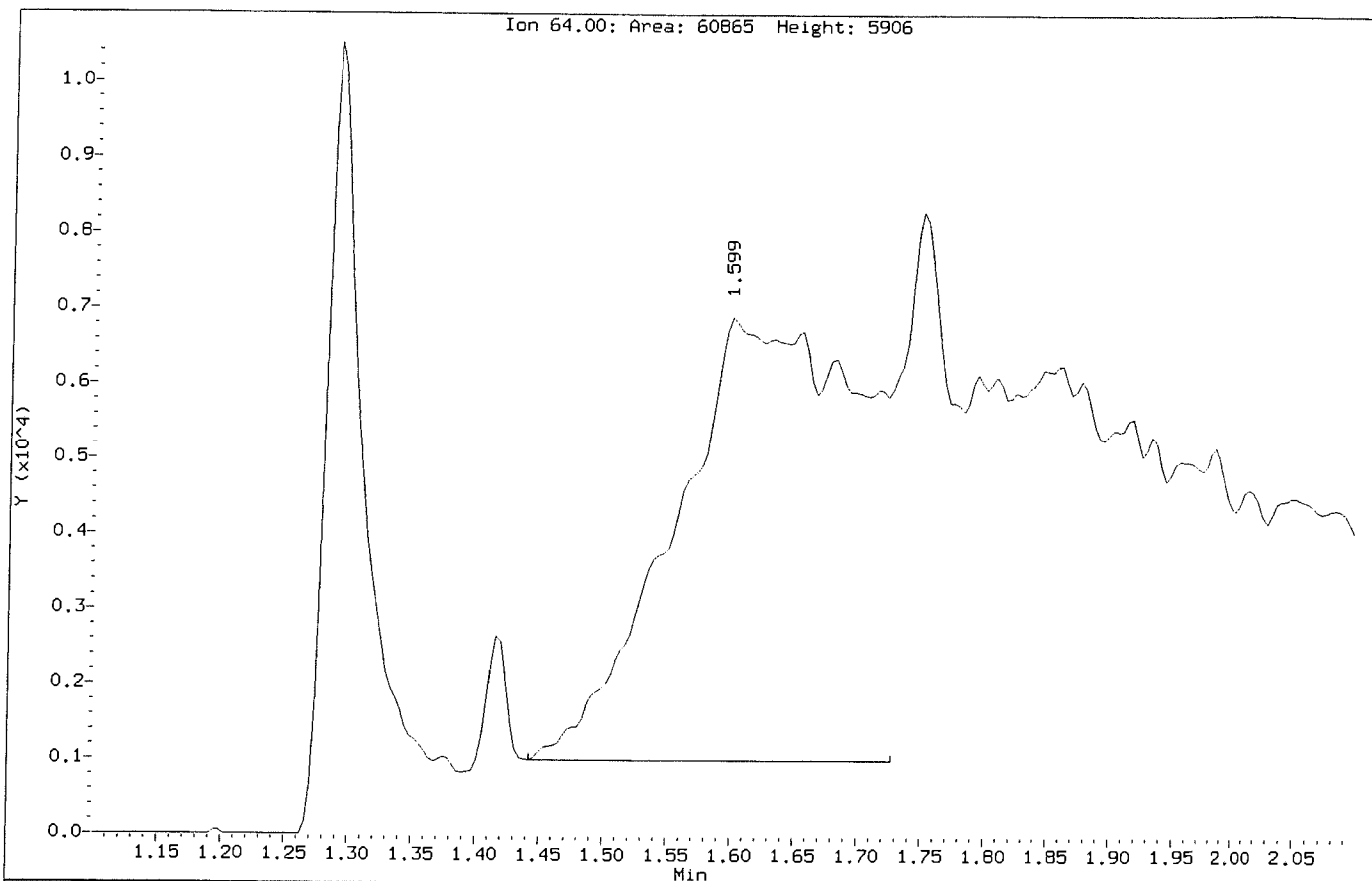
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Client Sample ID: VSTD001

Compound: Bromodichloromethane
CAS Number: 75-27-4



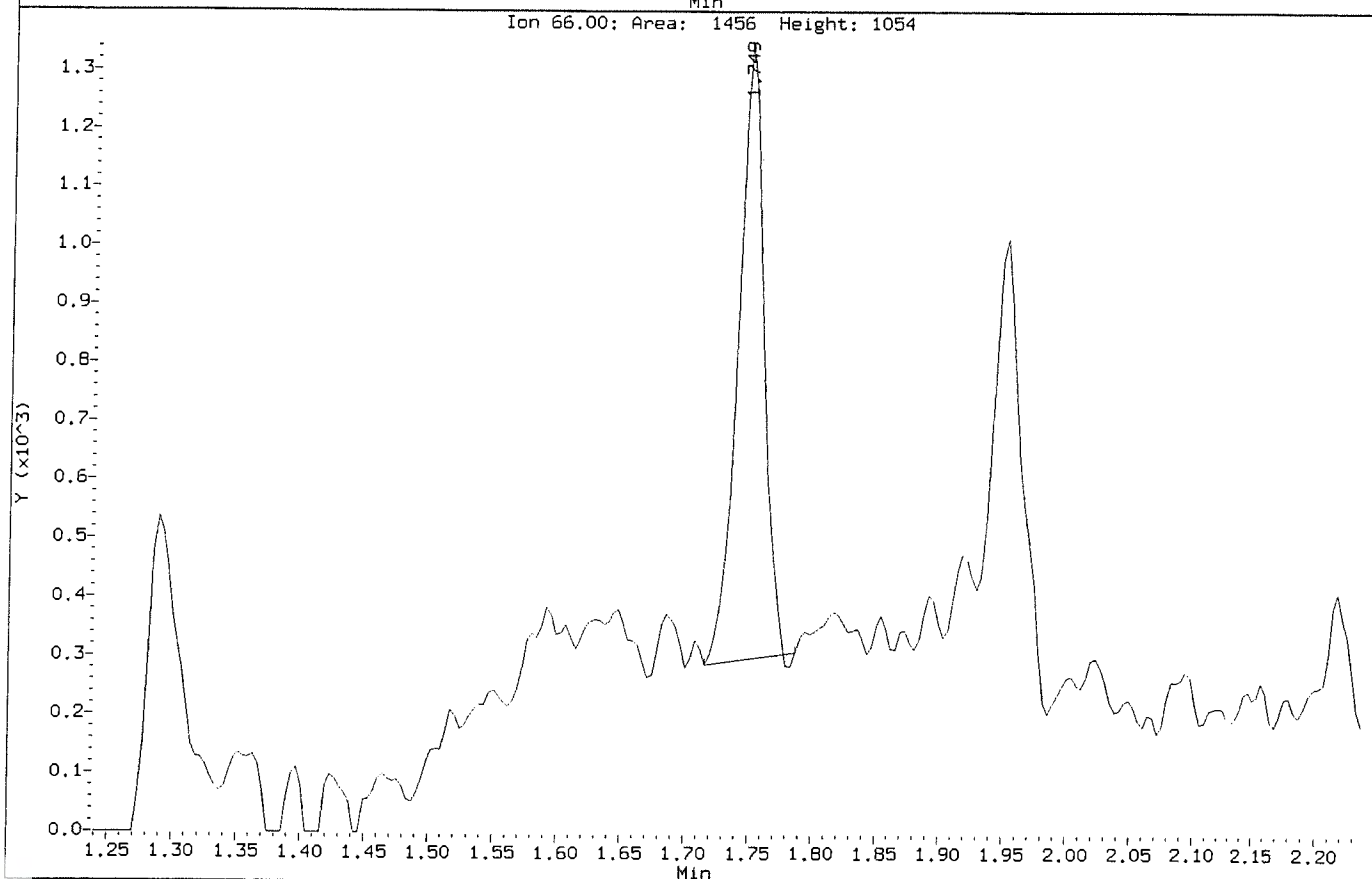
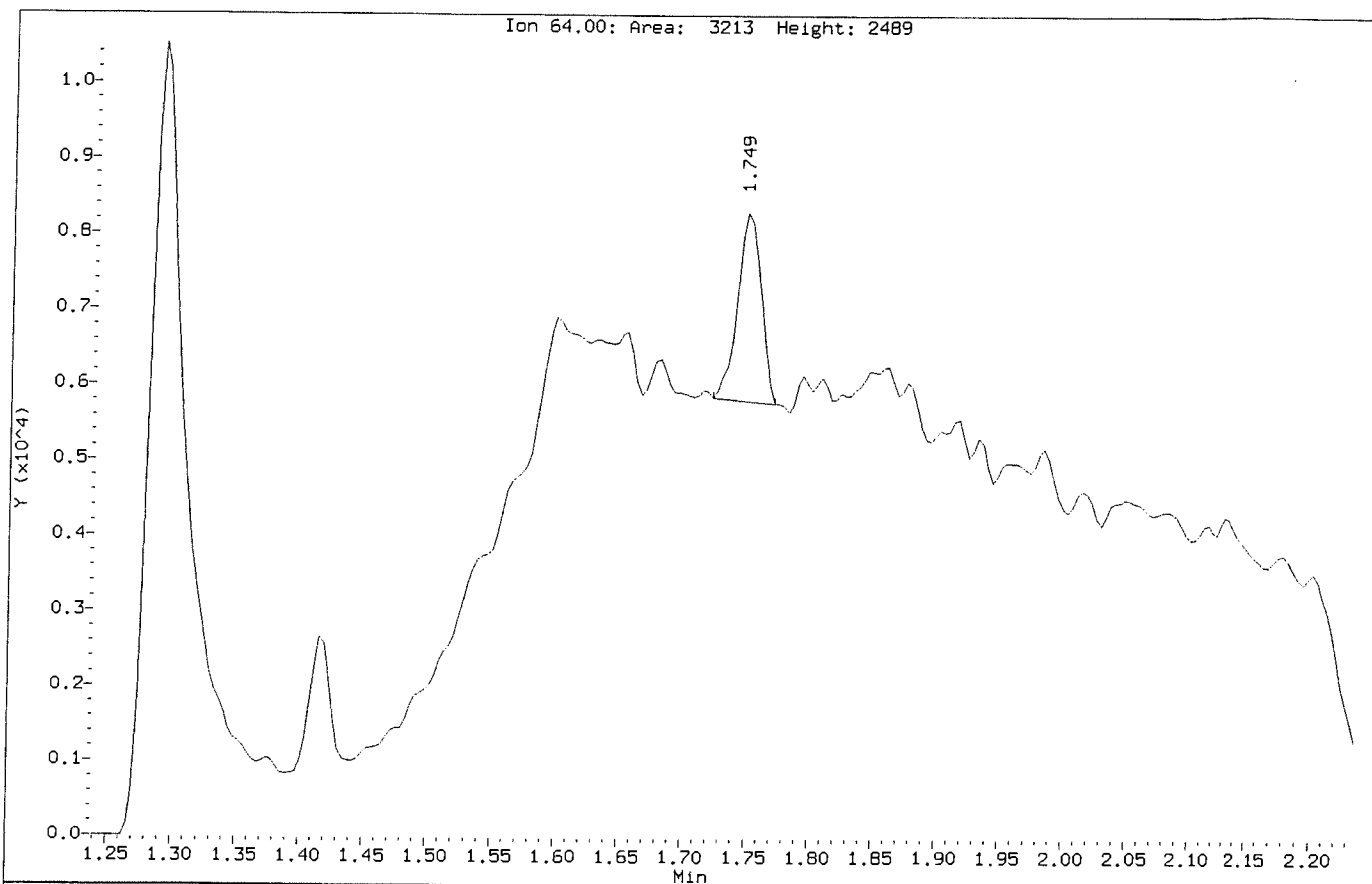
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Injection Date: 21-DEC-2018 15:03
Instrument: VOA9.1
Client Sample ID: VSTD001

Compound: Chloroethane
CAS Number: 75-00-3



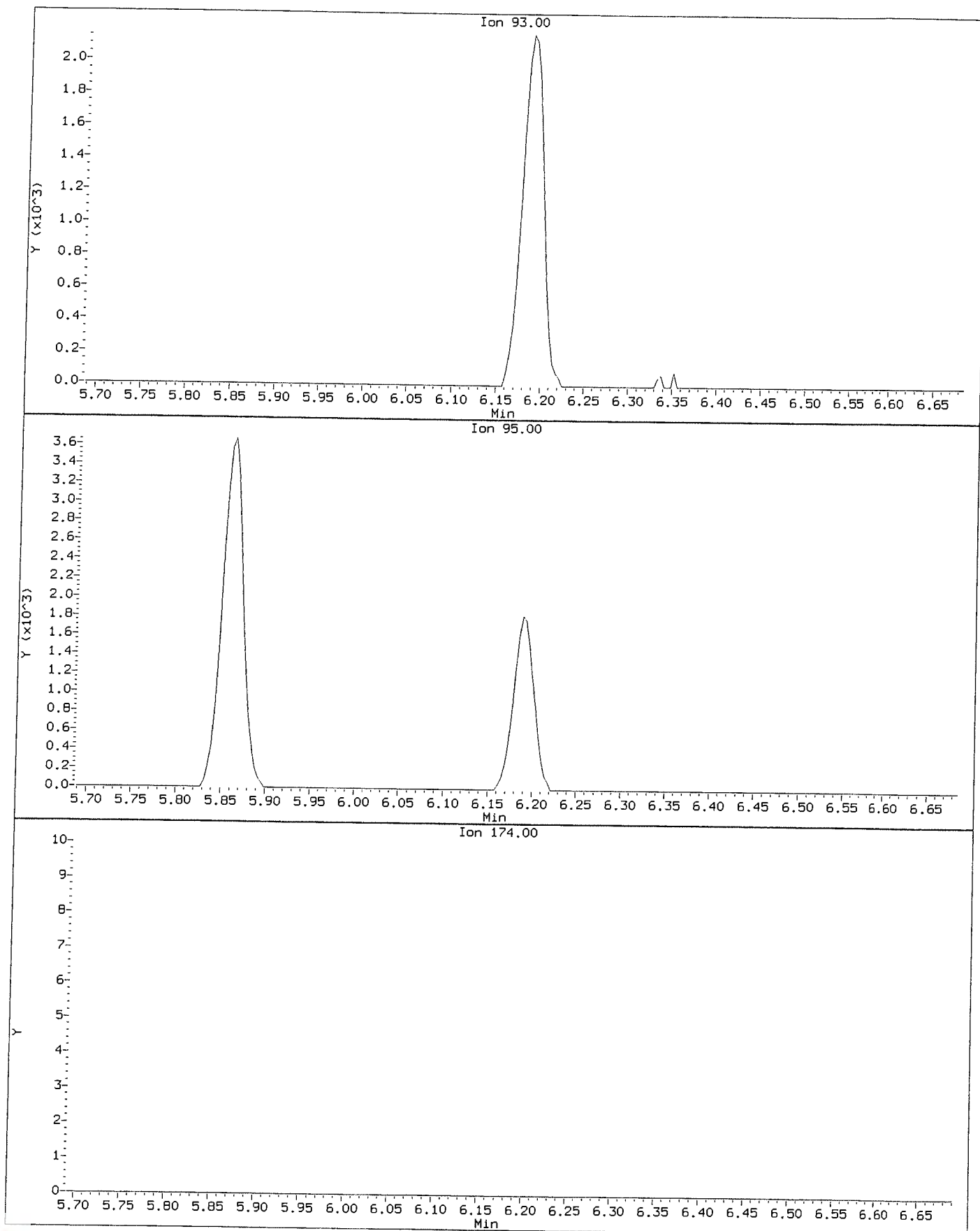
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Injection Date: 21-DEC-2018 15:03
Instrument: VDA9.i
Client Sample ID: VSTD001

Compound: Chloroethane
CAS Number: 75-00-3



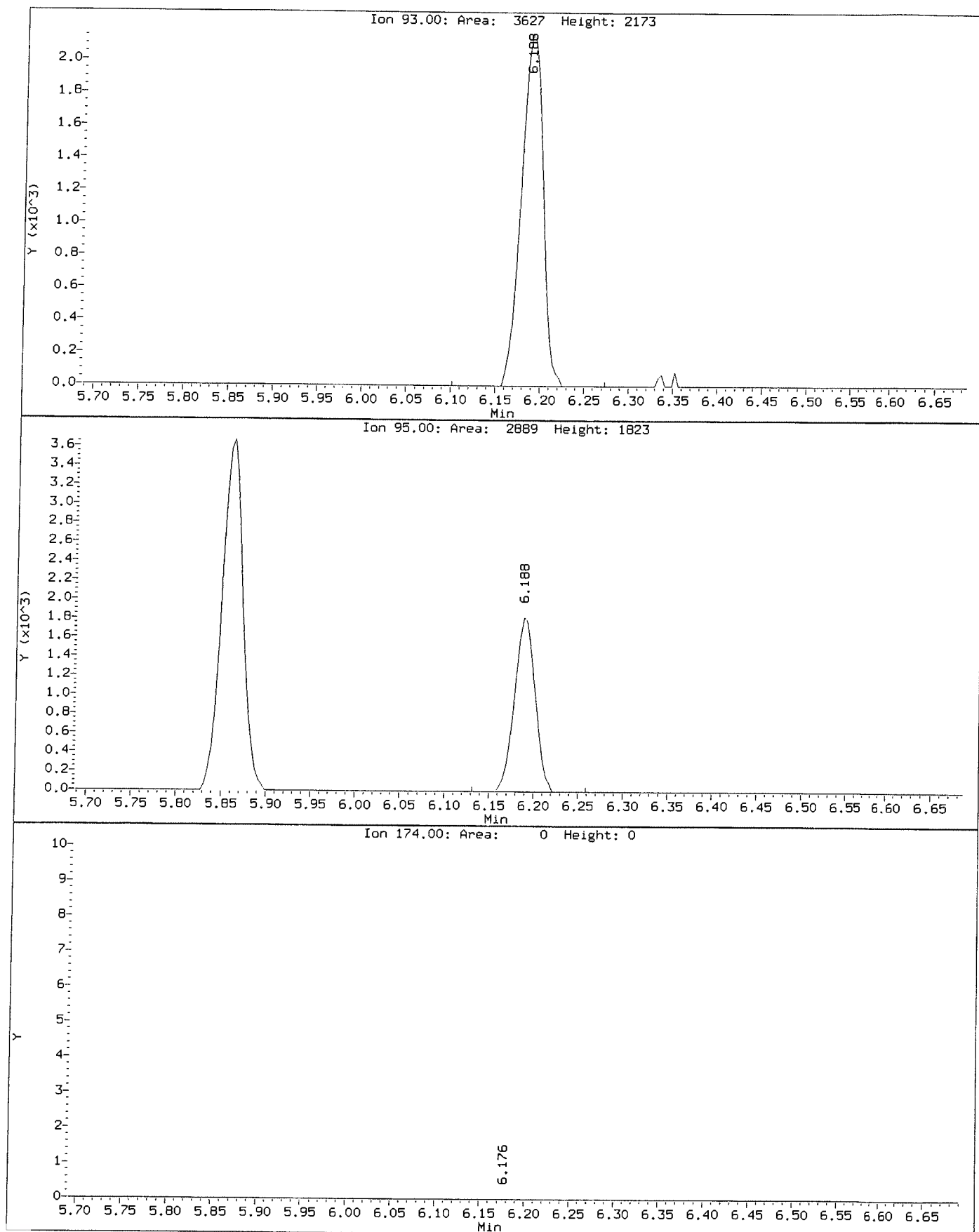
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Injection Date: 21-DEC-2018 15:03
Instrument: V0A9.i
Client Sample ID: VSTD001

Compound: Dibromomethane
CAS Number: 74-95-3



Data File: \\NAHSTW5005\Target\chem\voa9.1\U181221.b\U122104.D
Injection Date: 21-DEC-2018 15:03
Instrument: VOA9.1
Client Sample ID: VSTD001

Compound: Dibromomethane
CAS Number: 74-95-3



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181221.b\U122105.D Page 1
 Report Date: 28-Jan-2019 11:25

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U181221.b\U122105.D
 Lab Smp Id: VSTD002 Client Smp ID: VSTD002
 Inj Date : 21-DEC-2018 15:28
 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\U181221.b\8260C.m
 Meth Date : 28-Jan-2019 11:25 VOA9.i Quant Type: ISTD
 Cal Date : 21-DEC-2018 15:03 Cal File: U122104.D
 Als bottle: 6 Calibration Sample, Level: 4
 Dil Factor: 1.00000
 Integrator: HP RTE Compound Sublist: LHAAP.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	AMOUNTS				CAL-AMT (ug/l)	ON-COL (ug/l)
			MASS	RT	EXP RT	REL RT		
* 1 Pentafluorobenzene	168		4.894	4.894	(1.000)	416245	50.0000	
* 36 1,4-Difluorobenzene	114		5.625	5.625	(1.000)	790380	50.0000	
* 47 Chlorobenzene-d5	117		8.249	8.249	(1.000)	728875	50.0000	
* 70 1,4-Dichlorobenzene-d4	152		10.236	10.236	(1.000)	340088	50.0000	
\$ 30 Dibromofluoromethane	113		4.830	4.830	(0.987)	12720	2.00000	1.32(a)
\$ 35 1,2-Dichloroethane-d4	65		5.175	5.175	(1.057)	17881	2.00000	0.99(a)
\$ 48 Toluene-d8	98		6.989	6.989	(0.847)	54444	2.00000	1.21(a)
\$ 69 4-Bromofluorobenzene	95		9.257	9.257	(1.122)	20092	2.00000	1.45(a)
60 1,1,1,2-Tetrachloroethane	131		8.347	8.347	(1.012)	8522	2.00000	2.40(a)
31 1,1,1-Trichloroethane	97		4.827	4.827	(0.986)	12904	2.00000	1.96(a)
68 1,1,2,2-Tetrachloroethane	83		9.392	9.392	(0.918)	16933	2.00000	2.21(a)
138 Freon TF	101		2.401	2.401	(0.491)	7489	2.00000	2.11(a)
53 1,1,2-Trichloroethane	83		7.421	7.421	(0.900)	9254	2.00000	2.13(a)
22 1,1-Dichloroethane	63		3.604	3.604	(0.737)	19553	2.00000	2.18(a)
11 1,1-Dichloroethene	96		2.401	2.401	(0.491)	8761	2.00000	2.21(a)
32 1,1-Dichloropropene	75		5.006	5.006	(0.890)	15087	2.00000	2.14(a)
93 1,2,3-Trichlorobenzene	180		12.335	12.335	(1.205)	12385	2.00000	2.54(a)
71 1,2,3-Trichloropropane	75		9.426	9.426	(0.921)	16368	2.00000	2.05(a)
90 1,2,4-Trichlorobenzene	180		11.923	11.923	(1.165)	12313	2.00000	1.95(a)
79 1,2,4-Trimethylbenzene	105		9.943	9.943	(0.971)	36129	2.00000	2.03(a)
89 1,2-Dibromo-3-Chloropropane	155		11.233	11.233	(1.097)	1910	2.00000	3.02(a)
57 1,2-Dibromoethane	107		7.852	7.852	(0.952)	10069	2.00000	2.01(a)



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181221.b\U122105.D Page 2
 Report Date: 28-Jan-2019 11:25

Compounds	QUANT SIG				AMOUNTS		
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/l)	ON-COL (ug/l)
88 1,2-Dichlorobenzene	146	10.569	10.569	(1.033)	21852	2.00000	2.16(a)
33 1,2-Dichloroethane	62	5.254	5.254	(0.934)	15708	2.00000	1.50(a)
42 1,2-Dichloropropane	63	6.079	6.079	(1.081)	11593	2.00000	2.07(a)
75 1,3,5-Trimethylbenzene	105	9.625	9.625	(0.940)	33264	2.00000	1.94(a)
83 1,3-Dichlorobenzene	146	10.180	10.180	(0.995)	21833	2.00000	2.16(a)
54 1,3-Dichloropropane	76	7.563	7.563	(0.917)	19804	2.00000	2.11(a)
84 1,4-Dichlorobenzene	146	10.255	10.255	(1.002)	22897	2.00000	2.15(a)
26 2,2-Dichloropropane	77	4.275	4.275	(0.874)	10414	2.00000	1.92(a)
24 2-Butanone	43	4.343	4.343	(0.887)	11299	4.00000	1.81(a)
76 2-Chlorotoluene	91	9.546	9.546	(0.933)	32538	2.00000	2.07(a)
52 2-Hexanone	43	7.653	7.653	(0.928)	15773	4.00000	3.89(a)
77 4-Chlorotoluene	91	9.640	9.640	(0.942)	38000	2.00000	2.09(a)
82 p-Isopropyltoluene	119	10.210	10.210	(0.997)	34224	2.00000	1.90(a)
45 4-Methyl-2-Pentanone	43	6.915	6.915	(0.838)	23124	4.00000	3.96(a)
10 Acetone	43	2.484	2.484	(0.508)	8219	4.00000	2.18(a)
37 Benzene	78	5.220	5.220	(0.928)	44238	2.00000	2.10(a)
74 Bromobenzene	156	9.381	9.381	(0.917)	11074	2.00000	2.10(a)
29 Bromochloromethane	128	4.557	4.557	(0.931)	5148	2.00000	(a)
39 Bromodichloromethane	83	6.348	6.348	(1.129)	11433	2.00000	1.92(a)
66 Bromoform	173	8.984	8.984	(1.089)	4574	2.00000	3.17(Ta)
6 Bromomethane	94	1.674	1.674	(0.342)	4588	2.00000	3.07(a)
19 Carbon Disulfide	76	2.589	2.589	(0.529)	60138	4.00000	4.17(a)
34 Carbon Tetrachloride	117	4.995	4.995	(0.888)	10077	2.00000	3.10(a)
59 Chlorobenzene	112	8.275	8.275	(1.003)	29501	2.00000	2.10(a)
7 Chloroethane	64	1.753	1.753	(0.358)	8179	2.00000	2.69(aM)
28 Chloroform	83	4.658	4.658	(0.952)	18482	2.00000	2.14(a)
3 Chloromethane	50	1.340	1.340	(0.274)	8693	2.00000	5.15
27 cis-1,2-Dichloroethene	96	4.287	4.287	(0.876)	11391	2.00000	2.08(a)
46 cis-1,3-Dichloropropene	75	6.757	6.757	(1.201)	13732	2.00000	2.74(a)
55 Dibromochloromethane	129	7.758	7.758	(0.940)	7740	2.00000	2.55(a)
44 Dibromomethane	93	6.191	6.191	(1.101)	6690	2.00000	2.07(aM)
2 Dichlorodifluoromethane	85	1.205	1.205	(0.246)	11371	2.00000	2.68(a)
61 Ethylbenzene	106	8.373	8.373	(1.015)	14915	2.00000	2.07(a)
91 Hexachlorobutadiene	225	12.065	12.065	(1.179)	4376	2.00000	1.81(a)
67 Isopropylbenzene	105	9.126	9.126	(1.106)	42416	2.00000	2.04(a)
62 m,p-Xylenes	106	8.474	8.474	(1.027)	36211	4.00000	4.10(a)
17 Methylene Chloride	84	2.873	2.873	(0.587)	13726	2.00000	1.52(a)
87 n-Butylbenzene	91	10.558	10.558	(1.031)	35309	2.00000	2.03(a)
73 n-Propylbenzene	91	9.475	9.475	(0.926)	51078	2.00000	2.01(a)
92 Naphthalene	128	12.133	12.133	(1.185)	32897	2.00000	2.21(a)
63 o-Xylene	106	8.811	8.811	(1.068)	17863	2.00000	2.00(a)
81 sec-Butylbenzene	105	10.086	10.086	(0.985)	43551	2.00000	2.03(a)
64 Styrene	104	8.826	8.826	(1.070)	29048	2.00000	1.96(a)
78 tert-Butylbenzene	119	9.902	9.902	(0.967)	29889	2.00000	2.02(a)
56 Tetrachloroethene	164	7.526	7.526	(0.912)	8071	2.00000	2.11(a)
50 Toluene	91	7.049	7.049	(0.855)	46092	2.00000	2.12(a)
20 trans-1,2-Dichloroethene	96	3.143	3.143	(0.642)	10325	2.00000	2.11(a)
51 trans-1,3-Dichloropropene	75	7.259	7.259	(1.291)	10646	2.00000	2.97(a)
38 Trichloroethene	130	5.861	5.861	(1.042)	10169	2.00000	2.00(a)
8 Trichlorofluoromethane	101	1.955	1.955	(0.400)	14026	2.00000	2.64(a)
5 Vinyl Chloride	62	1.419	1.419	(0.290)	12656	2.00000	3.07(a)



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181221.b\U122105.D Page 3
Report Date: 28-Jan-2019 11:25

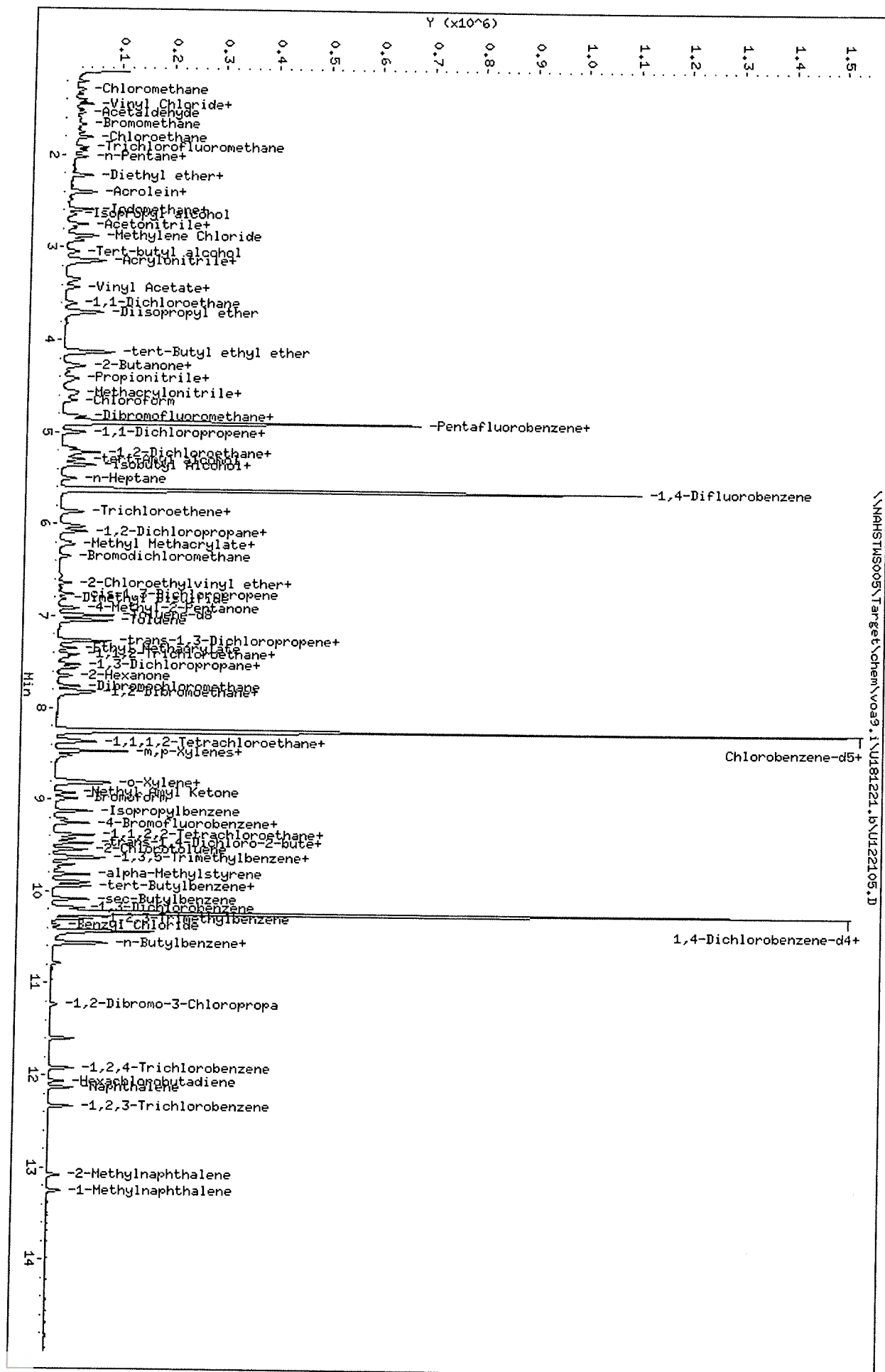
QC Flag Legend

- T - Target compound detected outside RT window.
- a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
- M - Compound response manually integrated.



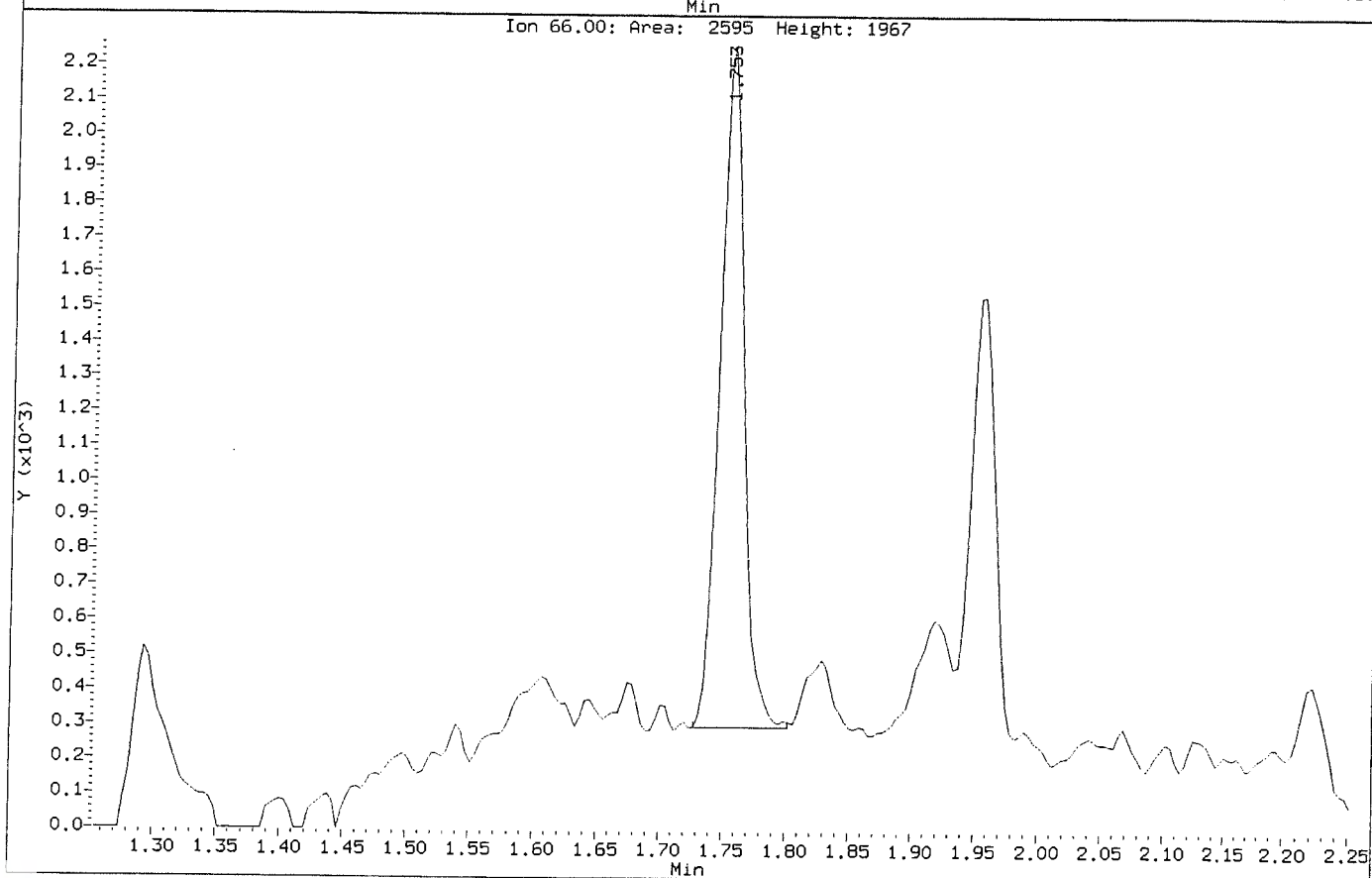
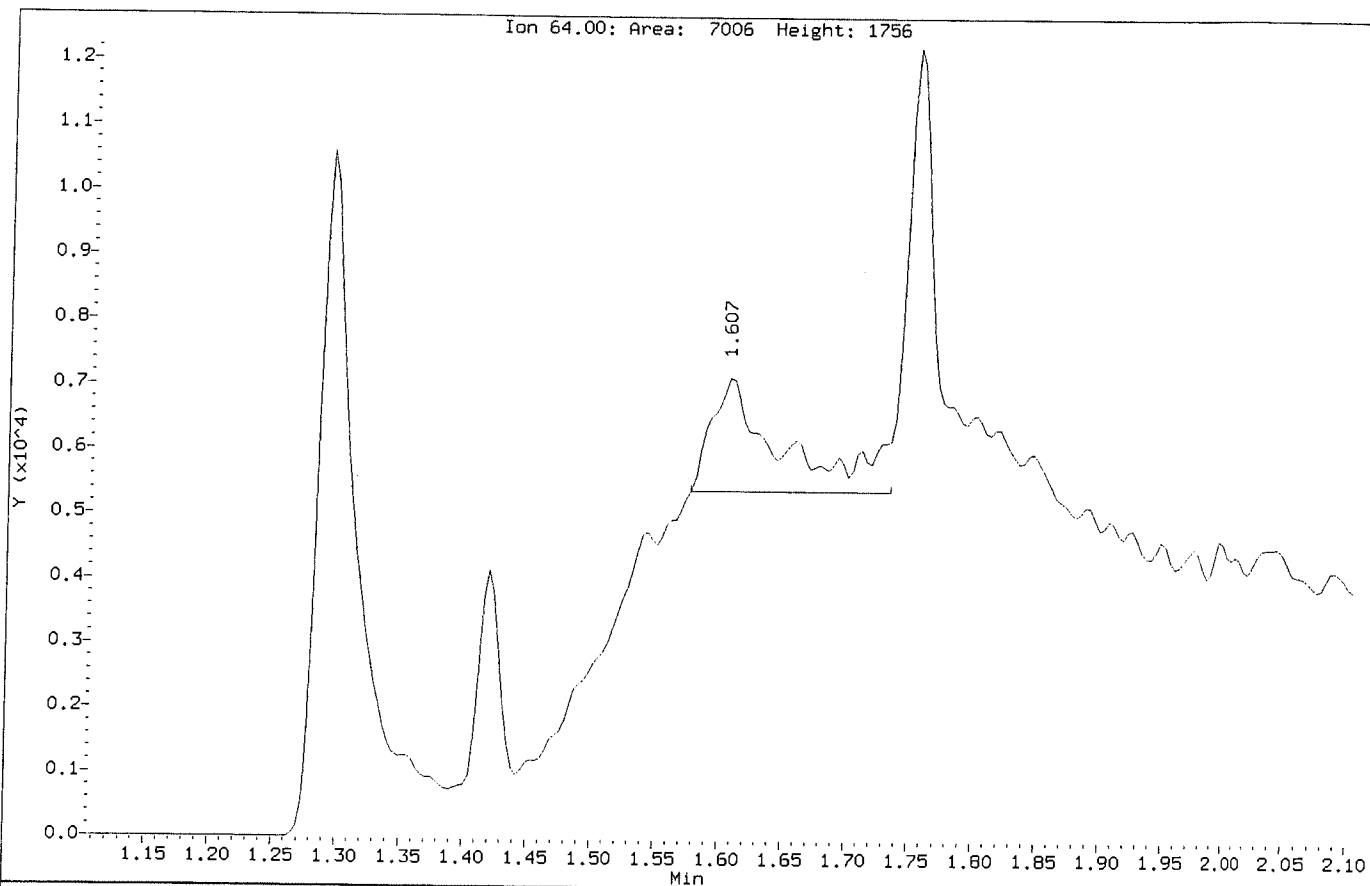
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Date : 21-DEC-2018 15:28
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Sample Info: VSTD002;VSTD002;1;4;
Purge Volume: 5.0
Column phase: DB624

Instrument: V099.i
Operator: PC
Column diameter: 0.18



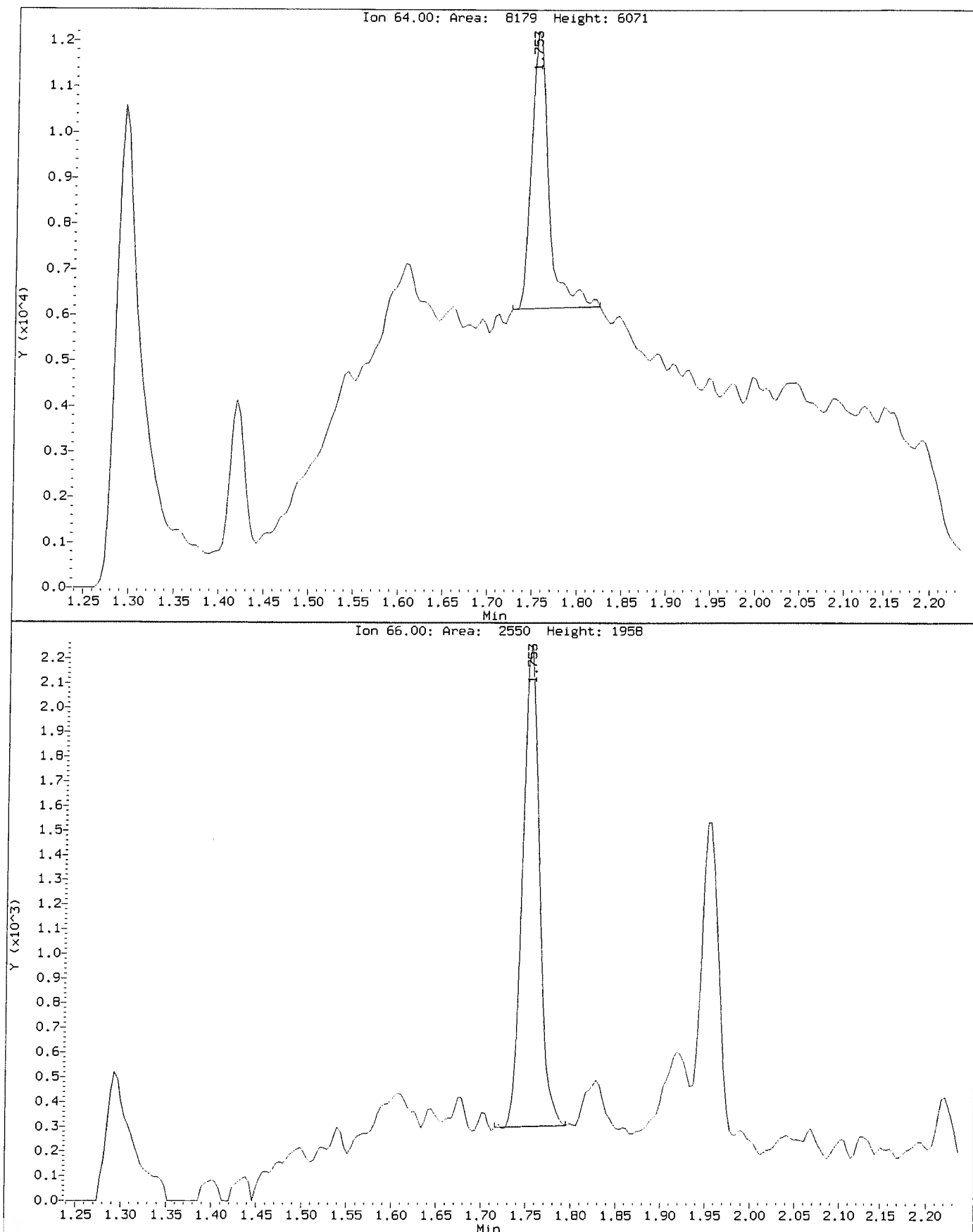
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Injection Date: 21-DEC-2018 15:28
Instrument: VOA9.1
Client Sample ID: VSTD002

Compound: Chloroethane
CAS Number: 75-00-3



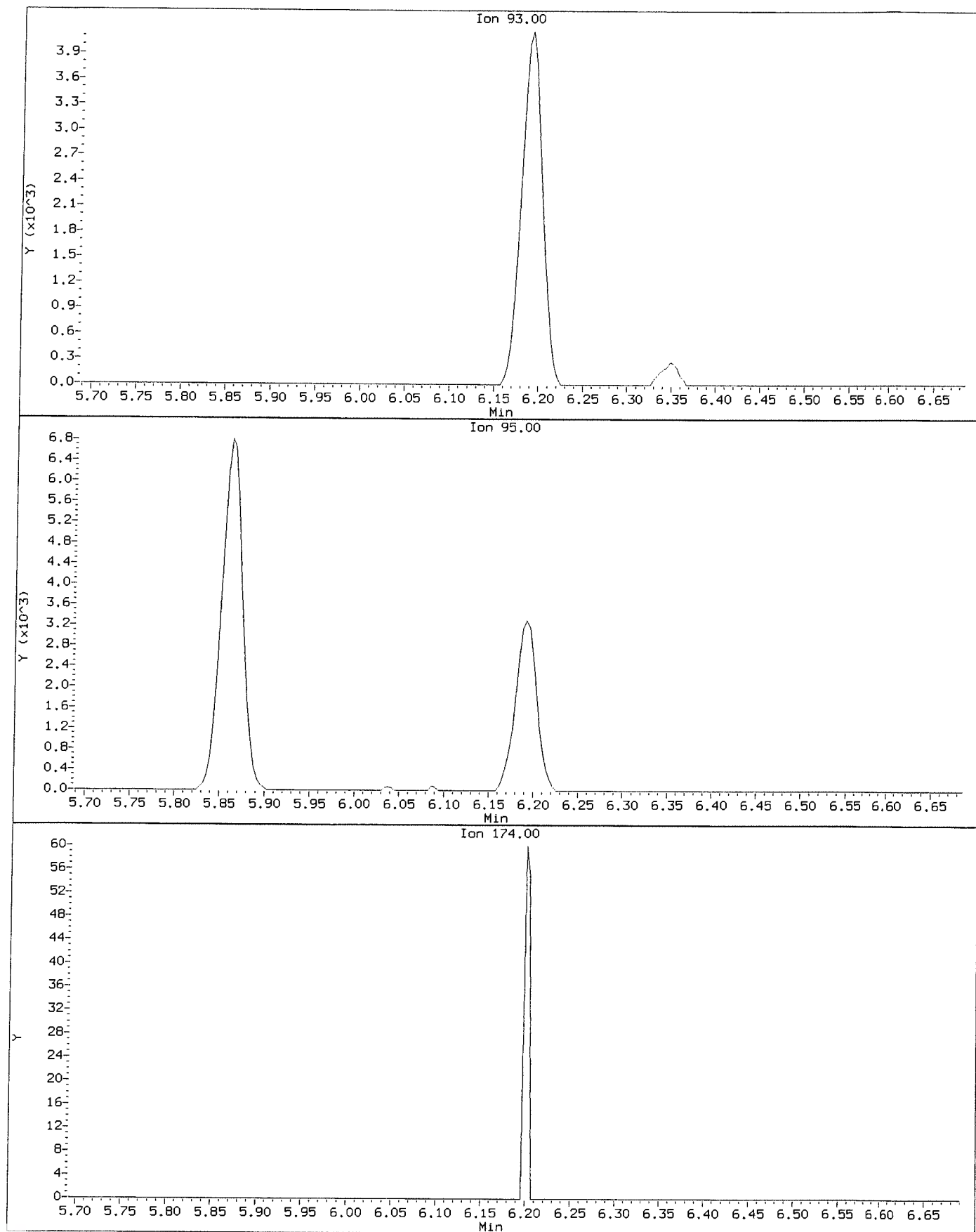
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Instrument: VOA9.1
Client Sample ID: VSTD002

Compound: Chloroethane
CAS Number: 75-00-3



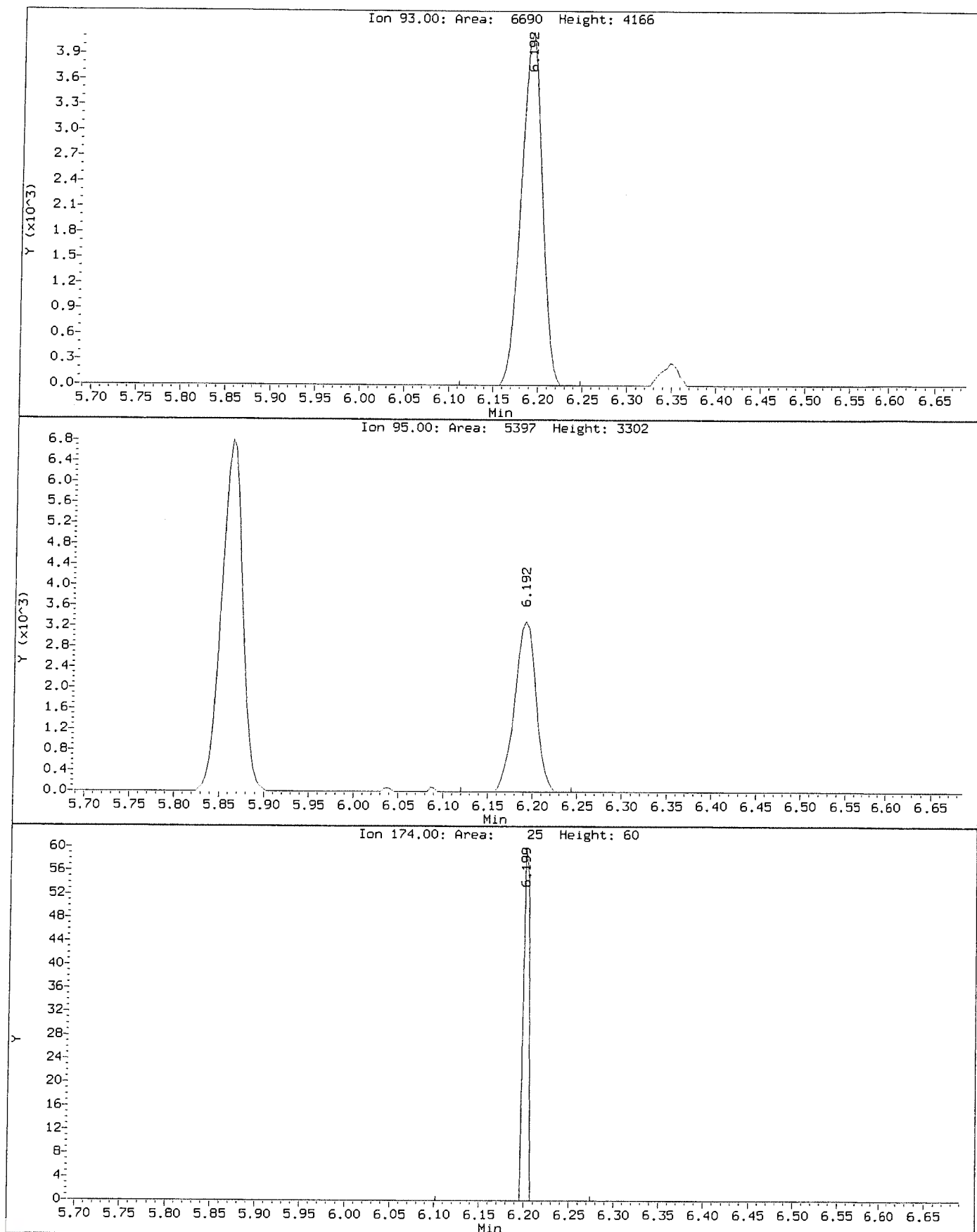
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Injection Date: 21-DEC-2018 15:28
Instrument: VOA9.i
Client Sample ID: VSTD002

Compound: Dibromomethane
CAS Number: 74-95-3



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181221.b\U122105.D
Injection Date: 21-DEC-2018 15:28
Instrument: VOA9.i
Client Sample ID: VSTD002

Compound: Dibromomethane
CAS Number: 74-95-3



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181221.b\U122106.D Page 1
 Report Date: 28-Jan-2019 11:25

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U181221.b\U122106.D
 Lab Smp Id: VSTD005 Client Smp ID: VSTD005
 Inj Date : 21-DEC-2018 15:52
 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\U181221.b\8260C.m
 Meth Date : 28-Jan-2019 11:25 VOA9.i Quant Type: ISTD
 Cal Date : 21-DEC-2018 15:28 Cal File: U122105.D
 Als bottle: 7 Calibration Sample, Level: 5
 Dil Factor: 1.00000
 Integrator: HP RTE Compound Sublist: LHAAP.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	AMOUNTS				
			CAL-AMT	ON-COL	RESPONSE	REL RT	
	MASS	RT	EXP RT	REL RT	RESPONSE	(ug/l)	(ug/l)
* 1 Pentafluorobenzene	168	4.897	4.897	(1.000)	423551	50.0000	
* 36 1,4-Difluorobenzene	114	5.625	5.625	(1.000)	811321	50.0000	
* 47 Chlorobenzene-d5	117	8.249	8.249	(1.000)	744062	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	348718	50.0000	
\$ 30 Dibromofluoromethane	113	4.830	4.830	(0.986)	28568	5.00000	4.77(a)
\$ 35 1,2-Dichloroethane-d4	65	5.175	5.175	(1.057)	38943	5.00000	4.60(a)
\$ 48 Toluene-d8	98	6.989	6.989	(0.847)	117010	5.00000	4.52(a)
\$ 69 4-Bromofluorobenzene	95	9.257	9.257	(1.122)	42900	5.00000	4.60(a)
60 1,1,1,2-Tetrachloroethane	131	8.350	8.350	(1.012)	21878	5.00000	5.16
31 1,1,1-Trichloroethane	97	4.830	4.830	(0.986)	34906	5.00000	5.21
68 1,1,2,2-Tetrachloroethane	83	9.392	9.392	(0.918)	42397	5.00000	5.39
138 Freon TF	101	2.408	2.408	(0.492)	18593	5.00000	5.16
53 1,1,2-Trichloroethane	83	7.420	7.420	(0.900)	23788	5.00000	5.36
22 1,1-Dichloroethane	63	3.608	3.608	(0.737)	48869	5.00000	5.35
11 1,1-Dichloroethene	96	2.405	2.405	(0.491)	20607	5.00000	5.11
32 1,1-Dichloropropene	75	5.006	5.006	(0.890)	37139	5.00000	5.14
93 1,2,3-Trichlorobenzene	180	12.335	12.335	(1.205)	31113	5.00000	5.30
71 1,2,3-Trichloropropane	75	9.426	9.426	(0.921)	41282	5.00000	5.05
90 1,2,4-Trichlorobenzene	180	11.922	11.922	(1.165)	31564	5.00000	4.88(a)
79 1,2,4-Trimethylbenzene	105	9.943	9.943	(0.971)	98307	5.00000	5.38
89 1,2-Dibromo-3-Chloropropane	155	11.233	11.233	(1.097)	4931	5.00000	5.40
57 1,2-Dibromoethane	107	7.851	7.851	(0.952)	27067	5.00000	5.30



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181221.b\U122106.D Page 2
 Report Date: 28-Jan-2019 11:25

Compounds	QUANT	SIG	AMOUNTS				CAL-AMT (ug/l)	ON-COL (ug/l)
			MASS	RT	EXP RT	REL RT		
88 1,2-Dichlorobenzene	146		10.569	10.569	(1.033)	55324	5.00000	5.34
33 1,2-Dichloroethane	62		5.254	5.254	(0.934)	41415	5.00000	5.01
42 1,2-Dichloropropane	63		6.082	6.082	(1.081)	30107	5.00000	5.25
75 1,3,5-Trimethylbenzene	105		9.624	9.624	(0.940)	93516	5.00000	5.33
83 1,3-Dichlorobenzene	146		10.179	10.179	(0.995)	54677	5.00000	5.28
54 1,3-Dichloropropane	76		7.563	7.563	(0.917)	52651	5.00000	5.51
84 1,4-Dichlorobenzene	146		10.254	10.254	(1.002)	57942	5.00000	5.30
26 2,2-Dichloropropane	77		4.275	4.275	(0.873)	27335	5.00000	4.97(a)
24 2-Butanone	43		4.343	4.343	(0.887)	29605	10.0000	8.51
76 2-Chlorotoluene	91		9.546	9.546	(0.933)	86842	5.00000	5.40
52 2-Hexanone	43		7.649	7.649	(0.927)	42401	10.0000	10.24
77 4-Chlorotoluene	91		9.639	9.639	(0.942)	100274	5.00000	5.40
82 p-Isopropyltoluene	119		10.209	10.209	(0.997)	97160	5.00000	5.26
45 4-Methyl-2-Pentanone	43		6.914	6.914	(0.838)	60636	10.0000	10.18
10 Acetone	43		2.487	2.487	(0.508)	19230	10.0000	8.95
37 Benzene	78		5.220	5.220	(0.928)	116462	5.00000	5.39
74 Bromobenzene	156		9.381	9.381	(0.917)	28350	5.00000	5.26
29 Bromochloromethane	128		4.556	4.556	(0.930)	13786	5.00000	3.48(a)
39 Bromodichloromethane	83		6.348	6.348	(1.129)	31104	5.00000	5.10
66 Bromoform	173		8.983	8.983	(1.089)	12962	5.00000	5.67(T)
6 Bromomethane	94		1.674	1.674	(0.342)	12245	5.00000	5.89
19 Carbon Disulfide	76		2.592	2.592	(0.529)	153199	10.0000	10.44
34 Carbon Tetrachloride	117		4.999	4.999	(0.889)	26439	5.00000	5.75
59 Chlorobenzene	112		8.275	8.275	(1.003)	75901	5.00000	5.30
7 Chloroethane	64		1.756	1.756	(0.359)	22172	5.00000	6.40(M)
28 Chloroform	83		4.657	4.657	(0.951)	48639	5.00000	5.53
3 Chloromethane	50		1.344	1.344	(0.274)	20682	5.00000	7.61
27 cis-1,2-Dichloroethene	96		4.290	4.290	(0.876)	29626	5.00000	5.32
46 cis-1,3-Dichloropropene	75		6.760	6.760	(1.202)	38403	5.00000	5.30
55 Dibromochloromethane	129		7.758	7.758	(0.940)	20846	5.00000	5.15
44 Dibromomethane	93		6.191	6.191	(1.101)	17610	5.00000	5.32(M)
2 Dichlorodifluoromethane	85		1.209	1.209	(0.247)	26580	5.00000	5.53
61 Ethylbenzene	106		8.372	8.372	(1.015)	38926	5.00000	5.30
91 Hexachlorobutadiene	225		12.065	12.065	(1.179)	11286	5.00000	4.56(a)
67 Isopropylbenzene	105		9.126	9.126	(1.106)	113805	5.00000	5.37
62 m,p-Xylenes	106		8.474	8.474	(1.027)	96419	10.0000	10.69
17 Methylene Chloride	84		2.877	2.877	(0.587)	31487	5.00000	4.95(a)
87 n-Butylbenzene	91		10.554	10.554	(1.031)	92969	5.00000	5.22
73 n-Propylbenzene	91		9.475	9.475	(0.926)	140607	5.00000	5.39
92 Naphthalene	128		12.132	12.132	(1.185)	91300	5.00000	4.86(a)
63 o-Xylene	106		8.811	8.811	(1.068)	47745	5.00000	5.25
81 sec-Butylbenzene	105		10.086	10.086	(0.985)	116270	5.00000	5.30
64 Styrene	104		8.826	8.826	(1.070)	80690	5.00000	5.34
78 tert-Butylbenzene	119		9.902	9.902	(0.967)	81608	5.00000	5.38
56 Tetrachloroethene	164		7.525	7.525	(0.912)	20249	5.00000	5.19
50 Toluene	91		7.049	7.049	(0.855)	120808	5.00000	5.45
20 trans-1,2-Dichloroethene	96		3.147	3.147	(0.643)	25998	5.00000	5.24
51 trans-1,3-Dichloropropene	75		7.259	7.259	(1.291)	30725	5.00000	5.37
38 Trichloroethene	130		5.865	5.865	(1.043)	27950	5.00000	5.36
8 Trichlorofluoromethane	101		1.958	1.958	(0.400)	37144	5.00000	5.87
5 Vinyl Chloride	62		1.422	1.422	(0.291)	29272	5.00000	5.76



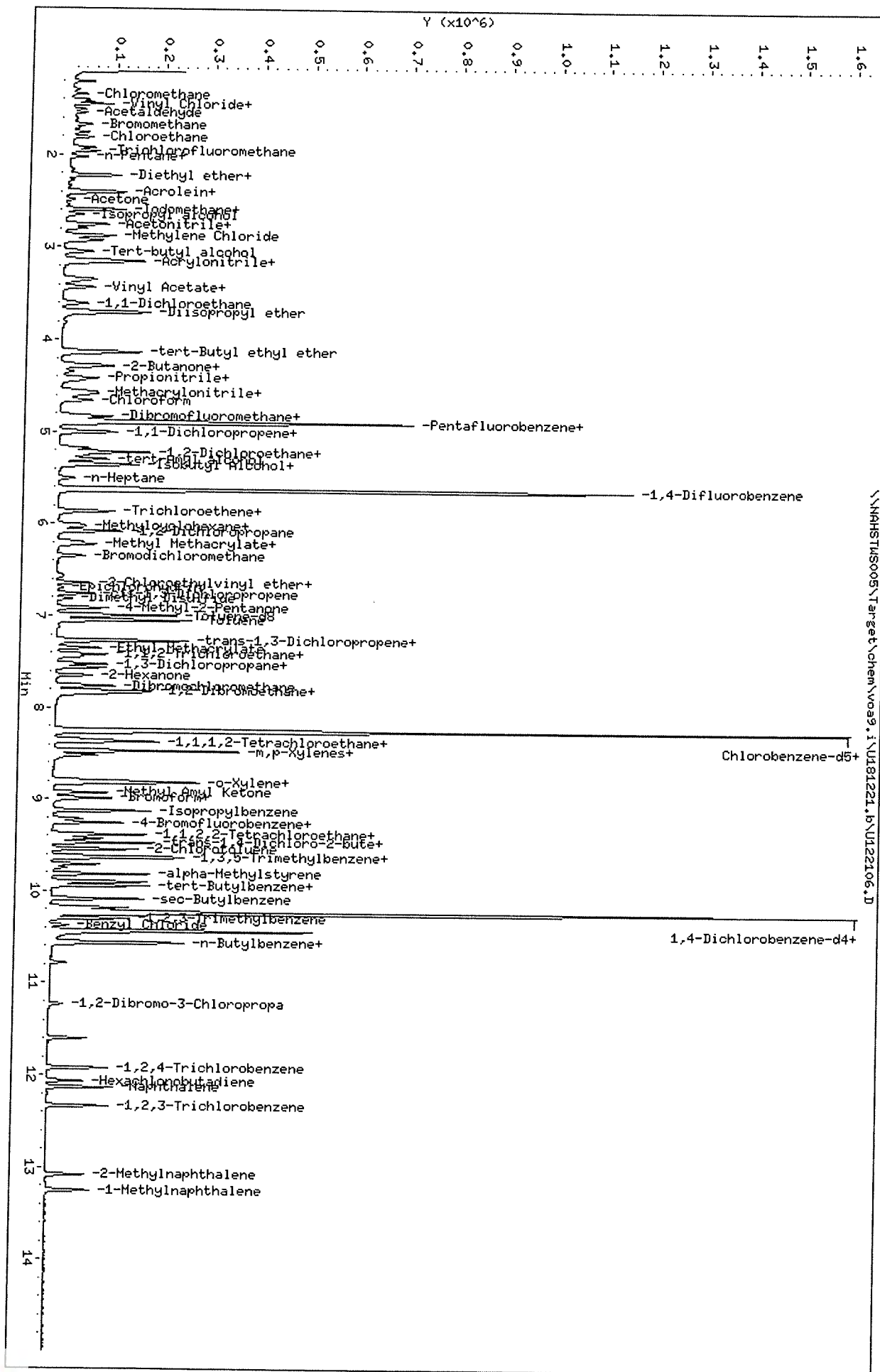
QC Flag Legend

- T - Target compound detected outside RT window.
- a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
- M - Compound response manually integrated.



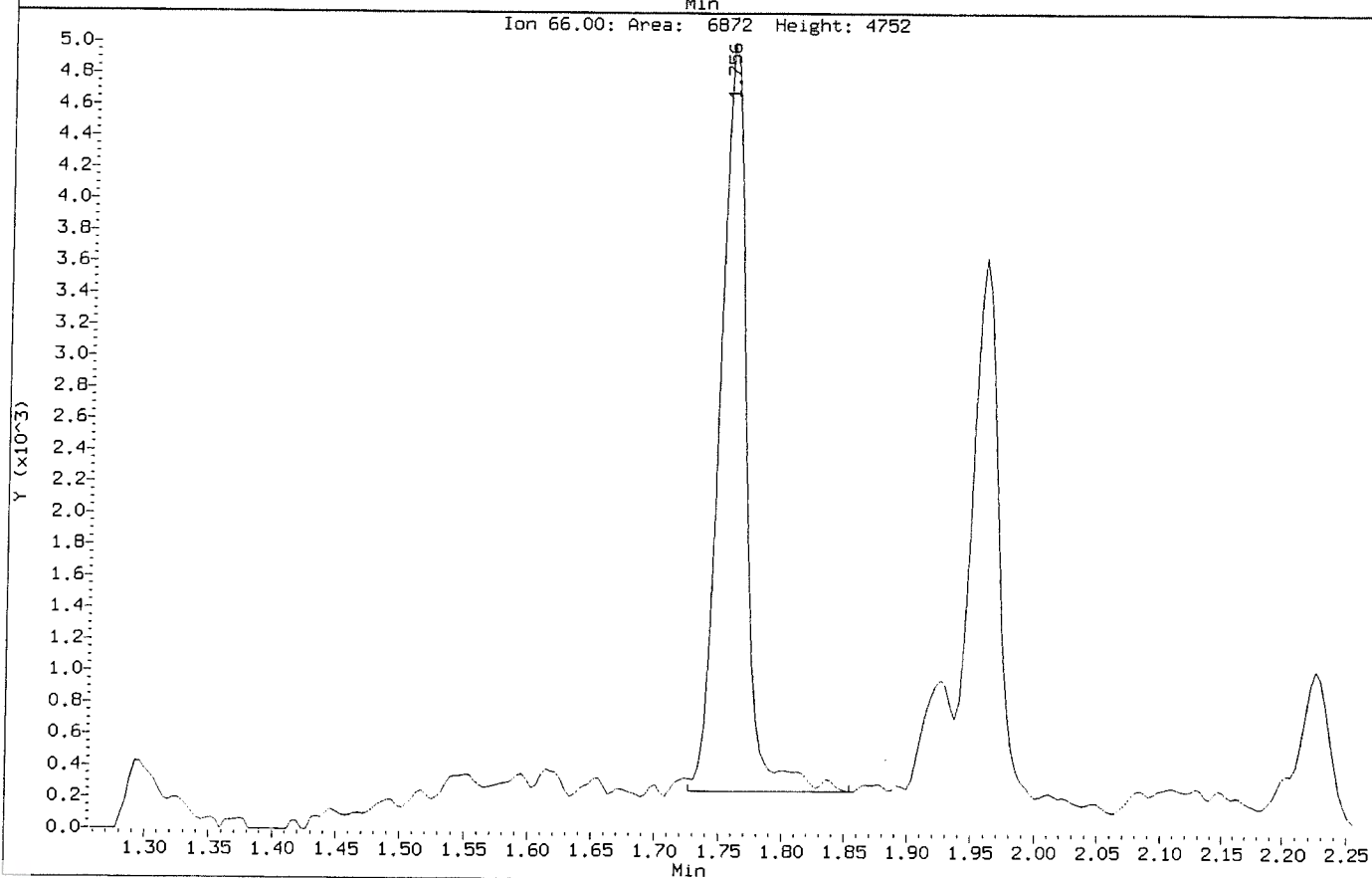
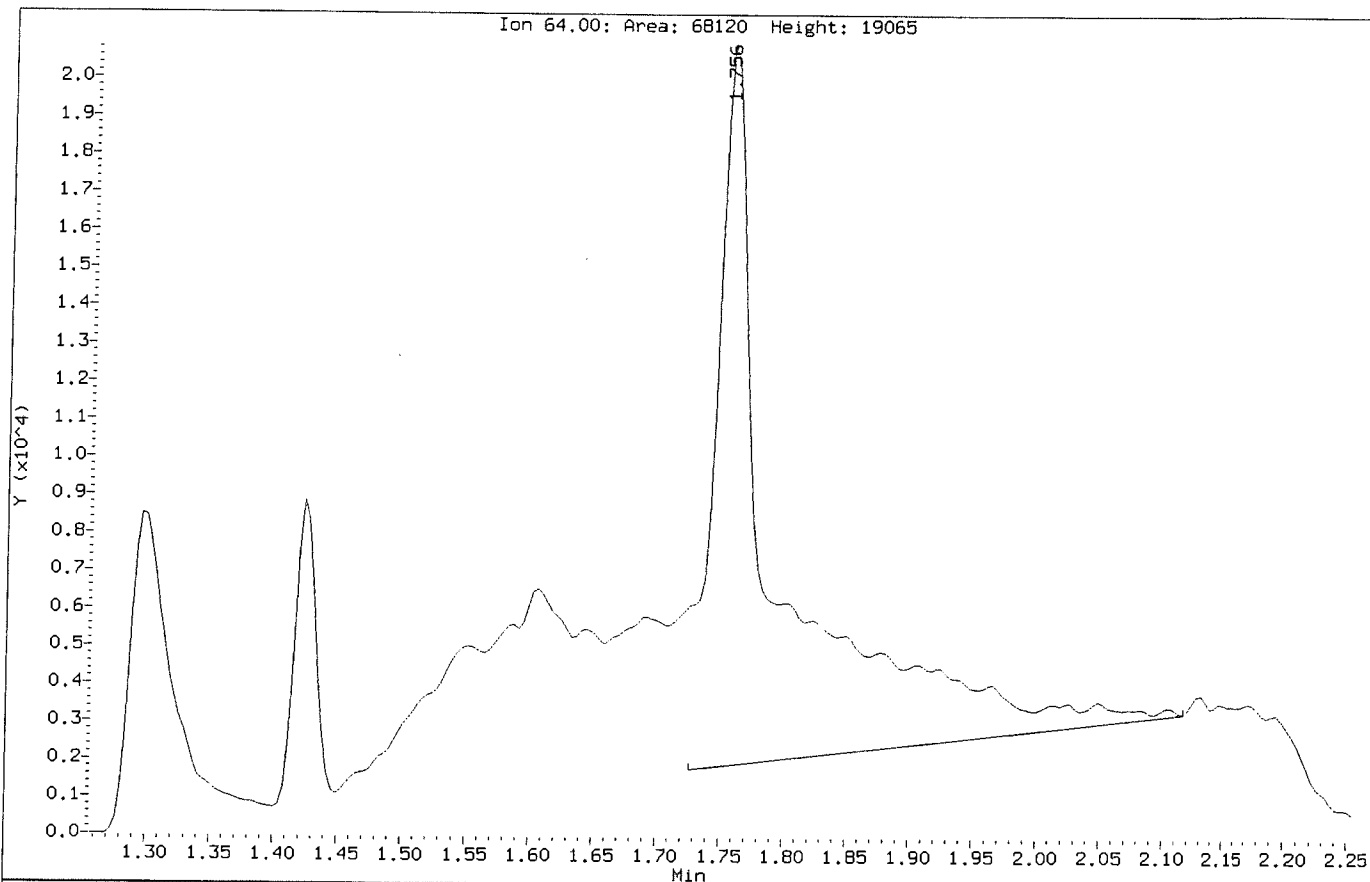
Data File: \\NAHSTJUS005\Target\chem\voa9.1\UJ81221.B\UJ22106.JD
Date : 21-DEC-2018 15:52
Client ID: VSTD005
Sample Info: VSTD005;VSTD005;1;5;
Purge Volume: 5.0
Column phase: DB624

Operator: PC
Instrument: VOA9.1
Column diameter: 0.18



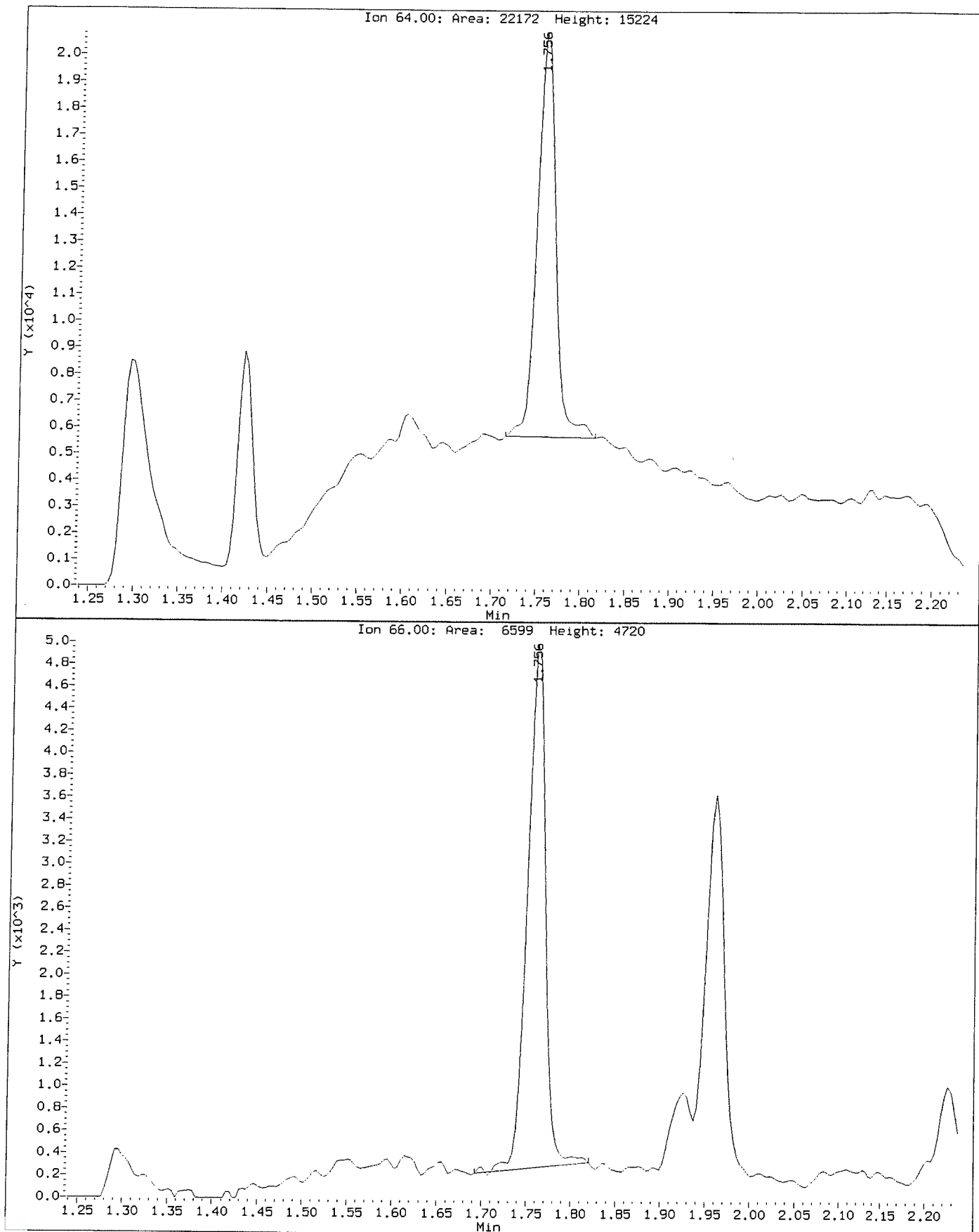
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Injection Date: 21-DEC-2018 15:52
Instrument: VOA9.i
Client Sample ID: VSTD005

Compound: Chloroethane
CAS Number: 75-00-3



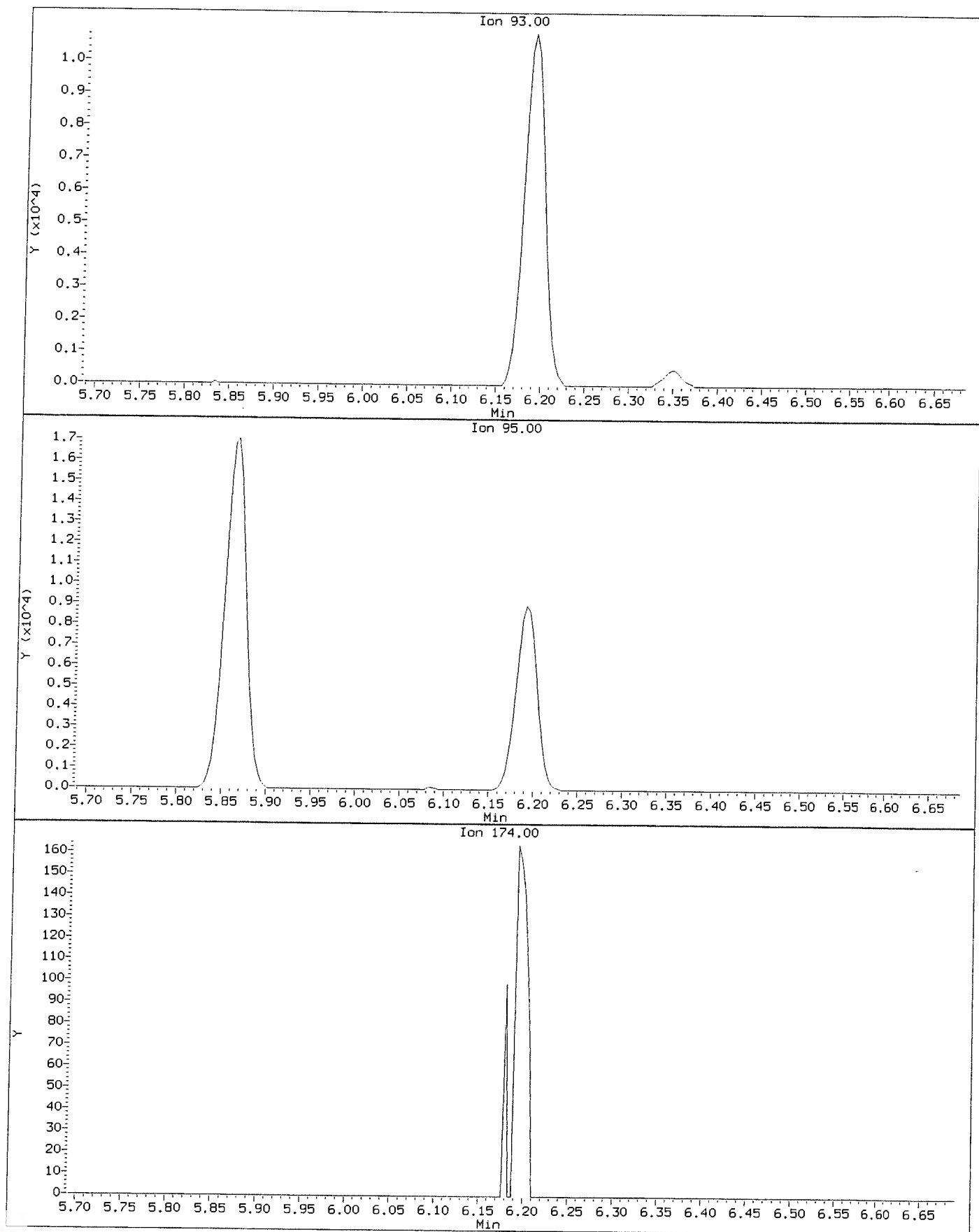
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Injection Date: 21-DEC-2018 15:52
Instrument: VOA9.1
Client Sample ID: VSTD005

Compound: Chloroethane
CAS Number: 75-00-3



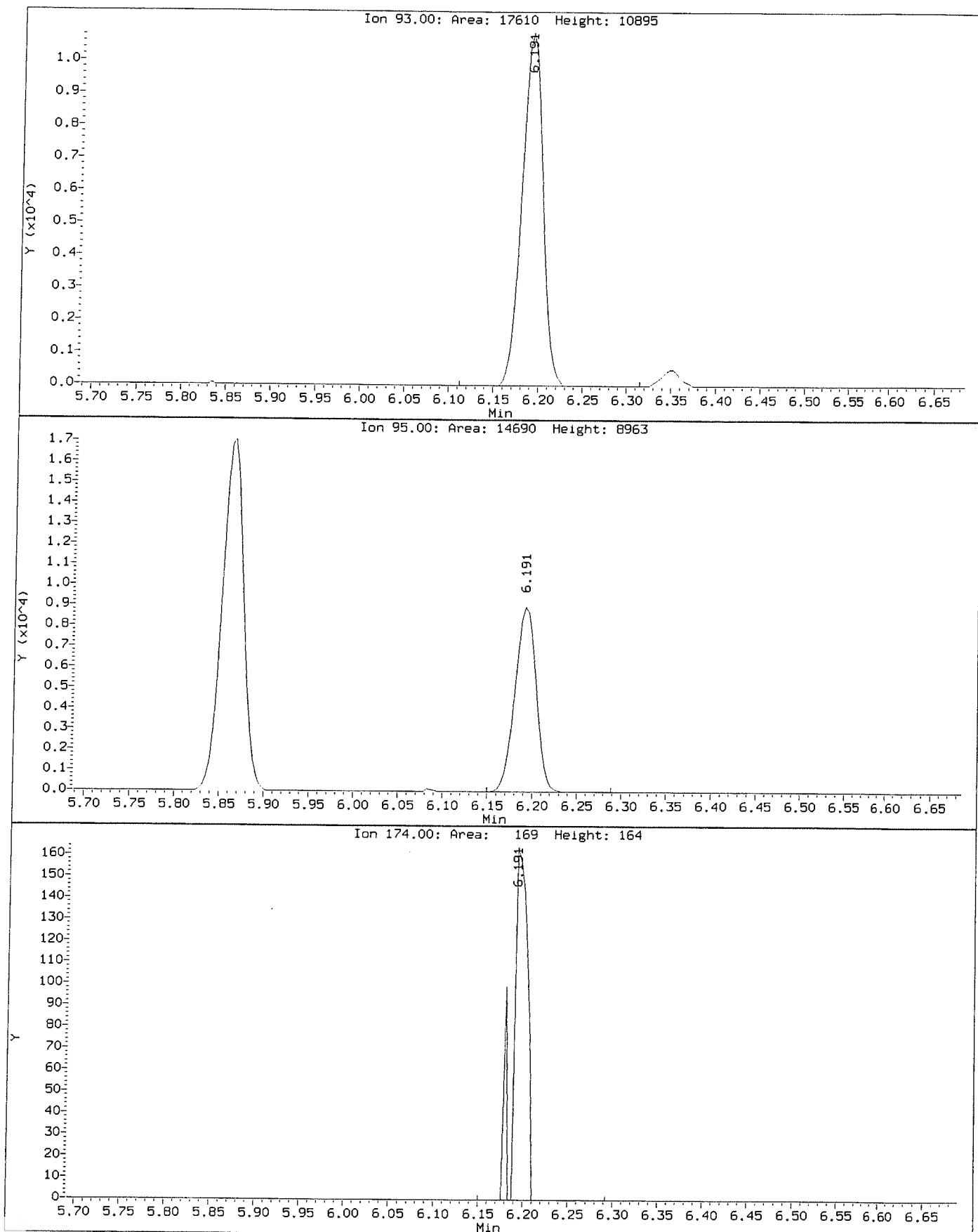
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Injection Date: 21-DEC-2018 15:52
Instrument: VOA9.i
Client Sample ID: VSTD005

Compound: Dibromomethane
CAS Number: 74-95-3



Data File: \\NAHSTWS005\Target\chem\voa9.1\U181221.b\U122106.D
Injection Date: 21-DEC-2018 15:52
Instrument: VOA9.1
Client Sample ID: VSTD005

Compound: Dibromomethane
CAS Number: 74-95-3



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181221.b\U122107.D Page 1
 Report Date: 28-Jan-2019 11:25

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U181221.b\U122107.D
 Lab Smp Id: VSTD020 Client Smp ID: VSTD020
 Inj Date : 21-DEC-2018 16:17
 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\U181221.b\8260C.m
 Meth Date : 28-Jan-2019 11:25 VOA9.i Quant Type: ISTD
 Cal Date : 21-DEC-2018 15:52 Cal File: U122106.D
 Als bottle: 8 Calibration Sample, Level: 6
 Dil Factor: 1.00000
 Integrator: HP RTE Compound Sublist: LHAAP.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	AMOUNTS					
			RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/l)	ON-COL (ug/l)
* 1 Pentafluorobenzene	168		4.894	4.894	(1.000)	420221	50.0000	
* 36 1,4-Difluorobenzene	114		5.625	5.625	(1.000)	802033	50.0000	
* 47 Chlorobenzene-d5	117		8.249	8.249	(1.000)	739775	50.0000	
* 70 1,4-Dichlorobenzene-d4	152		10.236	10.236	(1.000)	359235	50.0000	
\$ 30 Dibromofluoromethane	113		4.830	4.830	(0.987)	98984	20.0000	20.47
\$ 35 1,2-Dichloroethane-d4	65		5.175	5.175	(1.057)	131494	20.0000	20.89
\$ 48 Toluene-d8	98		6.989	6.989	(0.847)	408521	20.0000	20.36
\$ 69 4-Bromofluorobenzene	95		9.257	9.257	(1.122)	153183	20.0000	20.23
60 1,1,1,2-Tetrachloroethane	131		8.350	8.350	(1.012)	89389	20.0000	19.40
31 1,1,1-Trichloroethane	97		4.826	4.826	(0.986)	135496	20.0000	20.42
68 1,1,2,2-Tetrachloroethane	83		9.392	9.392	(0.918)	163701	20.0000	20.23
138 Freon TF	101		2.401	2.401	(0.491)	68573	20.0000	19.19
53 1,1,2-Trichloroethane	83		7.421	7.421	(0.900)	89267	20.0000	20.25
22 1,1-Dichloroethane	63		3.604	3.604	(0.737)	184998	20.0000	20.44
11 1,1-Dichloroethene	96		2.397	2.397	(0.490)	75169	20.0000	18.81
32 1,1-Dichloropropene	75		5.003	5.003	(0.889)	140960	20.0000	19.75
93 1,2,3-Trichlorobenzene	180		12.335	12.335	(1.205)	126752	20.0000	19.12
71 1,2,3-Trichloropropane	75		9.426	9.426	(0.921)	166045	20.0000	19.73
90 1,2,4-Trichlorobenzene	180		11.923	11.923	(1.165)	129526	20.0000	19.47
79 1,2,4-Trimethylbenzene	105		9.943	9.943	(0.971)	388189	20.0000	20.64
89 1,2-Dibromo-3-Chloropropane	155		11.233	11.233	(1.097)	22196	20.0000	18.72
57 1,2-Dibromoethane	107		7.852	7.852	(0.952)	105981	20.0000	20.87



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181221.b\U122107.D Page 2
 Report Date: 28-Jan-2019 11:25

Compounds	QUANT SIG				AMOUNTS		
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/l)	ON-COL (ug/l)
88 1,2-Dichlorobenzene	146	10.569	10.569	(1.033)	207507	20.0000	19.45
33 1,2-Dichloroethane	62	5.250	5.250	(0.933)	149131	20.0000	20.20
42 1,2-Dichloropropane	63	6.079	6.079	(1.081)	113309	20.0000	19.99
75 1,3,5-Trimethylbenzene	105	9.625	9.625	(0.940)	375852	20.0000	20.81
83 1,3-Dichlorobenzene	146	10.180	10.180	(0.995)	209196	20.0000	19.61
54 1,3-Dichloropropane	76	7.563	7.563	(0.917)	193920	20.0000	20.42
84 1,4-Dichlorobenzene	146	10.255	10.255	(1.002)	216649	20.0000	19.26
26 2,2-Dichloropropane	77	4.275	4.275	(0.874)	106667	20.0000	19.55
24 2-Butanone	43	4.339	4.339	(0.887)	119433	40.0000	42.08
76 2-Chlorotoluene	91	9.546	9.546	(0.933)	335289	20.0000	20.25
52 2-Hexanone	43	7.649	7.649	(0.927)	177404	40.0000	43.12
77 4-Chlorotoluene	91	9.640	9.640	(0.942)	387760	20.0000	20.27
82 p-Isopropyltoluene	119	10.210	10.210	(0.997)	388512	20.0000	20.43
45 4-Methyl-2-Pentanone	43	6.914	6.914	(0.838)	250121	40.0000	42.25
10 Acetone	43	2.480	2.480	(0.507)	73380	40.0000	43.05
37 Benzene	78	5.216	5.216	(0.927)	428833	20.0000	20.09
74 Bromobenzene	156	9.381	9.381	(0.917)	109892	20.0000	19.79
29 Bromochloromethane	128	4.553	4.553	(0.930)	51515	20.0000	21.73
39 Bromodichloromethane	83	6.348	6.348	(1.129)	121760	20.0000	20.20
66 Bromoform	173	8.984	8.984	(1.089)	53922	20.0000	18.14(T)
6 Bromomethane	94	1.666	1.666	(0.341)	47148	20.0000	19.02
19 Carbon Disulfide	76	2.588	2.588	(0.529)	576362	40.0000	39.58
34 Carbon Tetrachloride	117	4.995	4.995	(0.888)	104210	20.0000	18.76
59 Chlorobenzene	112	8.275	8.275	(1.003)	284621	20.0000	20.02
7 Chloroethane	64	1.749	1.749	(0.357)	73150	20.0000	20.10(M)
28 Chloroform	83	4.654	4.654	(0.951)	178122	20.0000	20.43
3 Chloromethane	50	1.336	1.336	(0.273)	79075	20.0000	19.85
27 cis-1,2-Dichloroethene	96	4.287	4.287	(0.876)	114056	20.0000	20.64
46 cis-1,3-Dichloropropene	75	6.757	6.757	(1.201)	162454	20.0000	18.55
55 Dibromochloromethane	129	7.758	7.758	(0.940)	89836	20.0000	19.09
44 Dibromomethane	93	6.187	6.187	(1.100)	66878	20.0000	20.44
2 Dichlorodifluoromethane	85	1.201	1.201	(0.246)	98486	20.0000	19.34
61 Ethylbenzene	106	8.369	8.369	(1.015)	147187	20.0000	20.18
91 Hexachlorobutadiene	225	12.065	12.065	(1.179)	44482	20.0000	17.45
67 Isopropylbenzene	105	9.126	9.126	(1.106)	439477	20.0000	20.89
62 m,p-Xylenes	106	8.474	8.474	(1.027)	372108	40.0000	41.51
17 Methylene Chloride	84	2.870	2.870	(0.586)	109403	20.0000	20.36
87 n-Butylbenzene	91	10.554	10.554	(1.031)	362066	20.0000	19.73
73 n-Propylbenzene	91	9.475	9.475	(0.926)	551133	20.0000	20.53
92 Naphthalene	128	12.133	12.133	(1.185)	413229	20.0000	19.20
63 o-Xylene	106	8.811	8.811	(1.068)	188442	20.0000	20.84
81 sec-Butylbenzene	105	10.086	10.086	(0.985)	459645	20.0000	20.37
64 Styrene	104	8.823	8.823	(1.070)	323232	20.0000	21.51
78 tert-Butylbenzene	119	9.902	9.902	(0.967)	318726	20.0000	20.42
56 Tetrachloroethene	164	7.522	7.522	(0.912)	75128	20.0000	19.39
50 Toluene	91	7.046	7.046	(0.854)	451178	20.0000	20.50
20 trans-1,2-Dichloroethene	96	3.140	3.140	(0.642)	100515	20.0000	20.43
51 trans-1,3-Dichloropropene	75	7.259	7.259	(1.291)	135347	20.0000	18.26
38 Trichloroethene	130	5.861	5.861	(1.042)	101824	20.0000	19.76
8 Trichlorofluoromethane	101	1.951	1.951	(0.399)	130957	20.0000	19.29
5 Vinyl Chloride	62	1.419	1.419	(0.290)	111713	20.0000	19.39



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181221.b\U122107.D Page 3
Report Date: 28-Jan-2019 11:25

QC Flag Legend

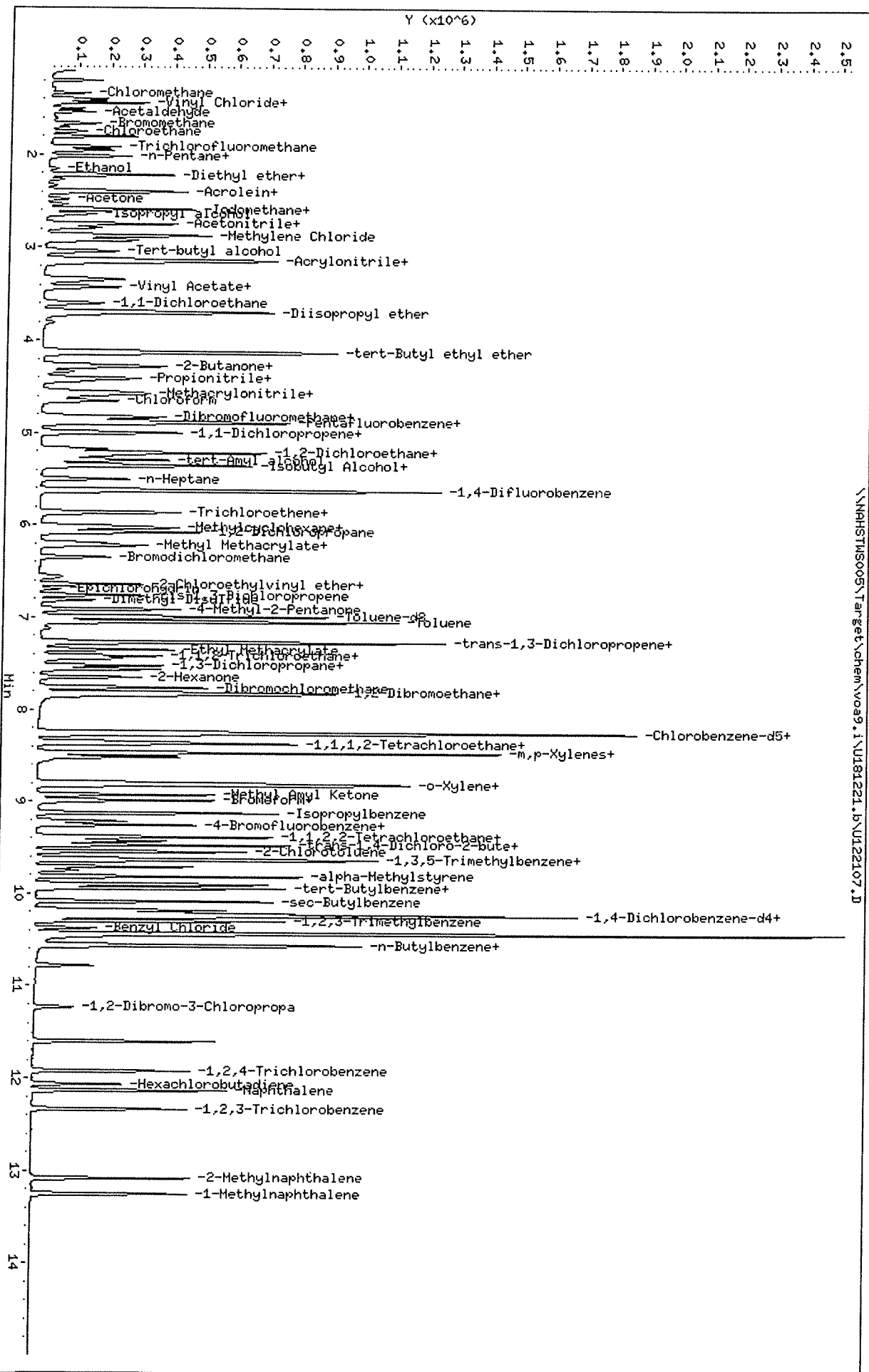
- T - Target compound detected outside RT window.
- M - Compound response manually integrated.



Data File: \\NAHSTMS005\Target\chem\voa9.1\U181221.b\U122107.D
Date: 21-DEC-2018 16:17
Client ID: VSTD020
Sample Info: VSTD020;VSTD020;116;
Purge Volume: 5.0
Column phase: DB624

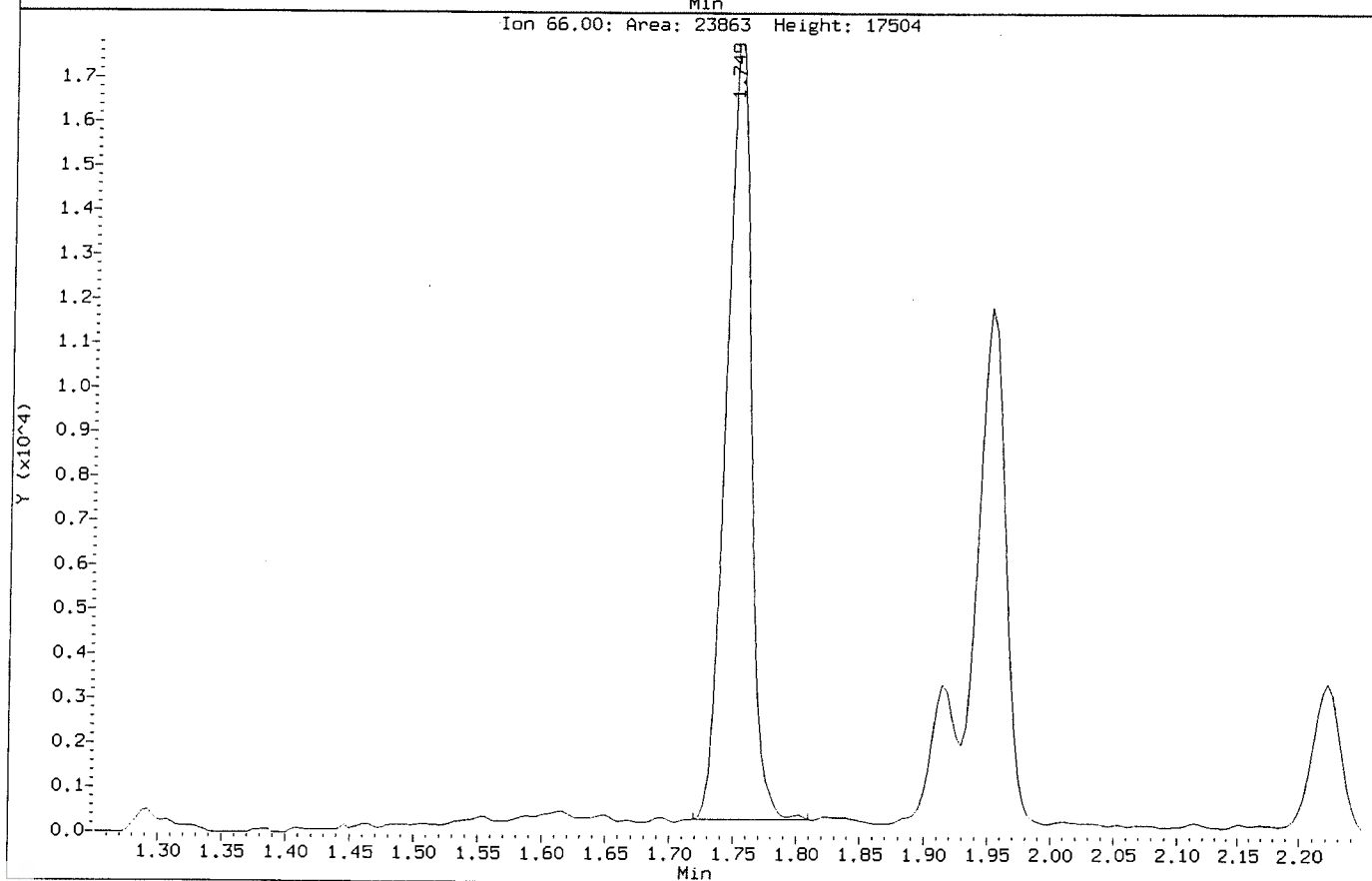
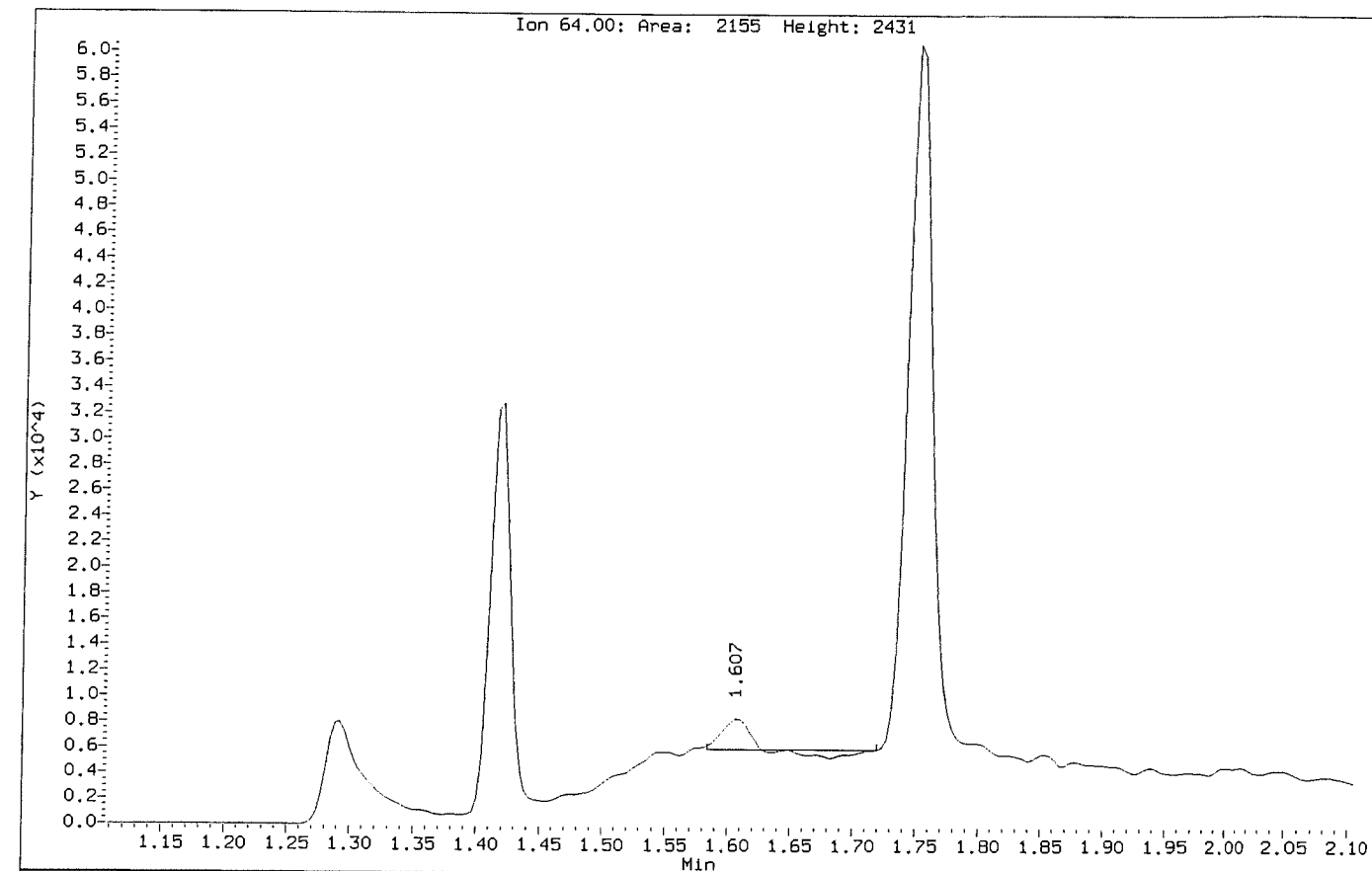
Instrument: V0A9.i
Operator: PC
Column diameter: 0.18

\\NAHSTMS005\Target\chem\voa9.1\U181221.b\U122107.D



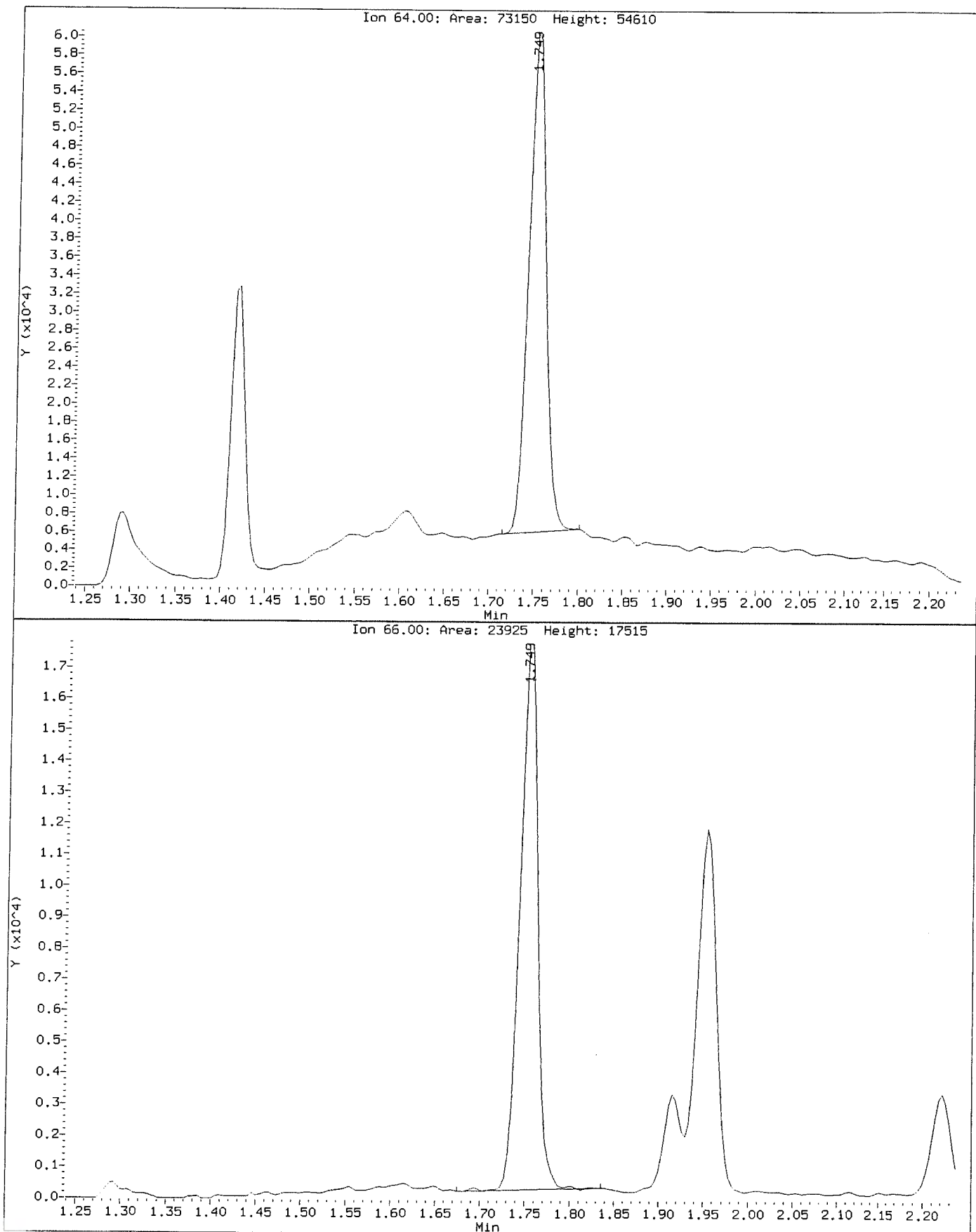
Data File: \\NAHSTW5005\Target\chem\voa9.1\U181221.b\Before\U122107.D
Injection Date: 21-DEC-2018 16:17
Instrument: VOA9.1
Client Sample ID: VSTD020

Compound: Chloroethane
CAS Number: 75-00-3



Data File: \\NAHSTW5005\Target\chem\voa9.1\U181221.b\U122107.D
Injection Date: 21-DEC-2018 16:17
Instrument: VOA9.1
Client Sample ID: VSTD020

Compound: Chloroethane
CAS Number: 75-00-3



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181221.b\U122108.D Page 1
 Report Date: 28-Jan-2019 11:25

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U181221.b\U122108.D
 Lab Smp Id: VSTD050 Client Smp ID: VSTD050
 Inj Date : 21-DEC-2018 16:41
 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\U181221.b\8260C.m
 Meth Date : 28-Jan-2019 11:25 VOA9.i Quant Type: ISTD
 Cal Date : 21-DEC-2018 16:17 Cal File: U122107.D
 Als bottle: 9 Calibration Sample, Level: 7
 Dil Factor: 1.00000
 Integrator: HP RTE Compound Sublist: LHAAP.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	AMOUNTS					
			CAL-AMT	ON-COL	RT	EXP RT	REL RT	RESPONSE
	MASS		(ug/l)	(ug/l)				
* 1 Pentafluorobenzene	168		50.0000		4.898	4.898	(1.000)	441118
* 36 1,4-Difluorobenzene	114		50.0000		5.629	5.629	(1.000)	822734
* 47 Chlorobenzene-d5	117		50.0000		8.249	8.249	(1.000)	764792
* 70 1,4-Dichlorobenzene-d4	152		50.0000		10.236	10.236	(1.000)	367345
\$ 30 Dibromofluoromethane	113		50.0000	50.34	4.834	4.834	(0.987)	245007
\$ 35 1,2-Dichloroethane-d4	65		50.0000	51.44	5.179	5.179	(1.057)	320796
\$ 48 Toluene-d8	98		50.0000	51.19	6.989	6.989	(0.847)	1010127
\$ 69 4-Bromofluorobenzene	95		50.0000	50.91	9.257	9.257	(1.122)	382581
60 1,1,1,2-Tetrachloroethane	131		50.0000	48.53	8.350	8.350	(1.012)	235446
31 1,1,1-Trichloroethane	97		50.0000	49.92	4.830	4.830	(0.986)	347757
68 1,1,2,2-Tetrachloroethane	83		50.0000	50.06	9.392	9.392	(0.918)	414173
138 Freon TF	101		50.0000	46.67	2.412	2.412	(0.493)	175022
53 1,1,2-Trichloroethane	83		50.0000	49.73	7.421	7.421	(0.900)	226615
22 1,1-Dichloroethane	63		50.0000	49.14	3.612	3.612	(0.737)	466899
11 1,1-Dichloroethene	96		50.0000	46.35	2.409	2.409	(0.492)	194403
32 1,1-Dichloropropene	75		50.0000	48.01	5.010	5.010	(0.890)	351519
93 1,2,3-Trichlorobenzene	180		50.0000	48.35	12.335	12.335	(1.205)	334600
71 1,2,3-Trichloropropane	75		50.0000	51.66	9.426	9.426	(0.921)	444407
90 1,2,4-Trichlorobenzene	180		50.0000	50.03	11.923	11.923	(1.165)	340316
79 1,2,4-Trimethylbenzene	105		50.0000	50.85	9.943	9.943	(0.971)	977610
89 1,2-Dibromo-3-Chloropropane	155		50.0000	48.48	11.233	11.233	(1.097)	61793
57 1,2-Dibromoethane	107		50.0000	50.81	7.852	7.852	(0.952)	266705



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181221.b\U122108.D Page 2
 Report Date: 28-Jan-2019 11:25

Compounds	QUANT SIG				AMOUNTS		
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/l)	ON-COL (ug/l)
=====	=====	=====	=====	=====	=====	=====	=====
88 1,2-Dichlorobenzene	146	10.569	10.569	(1.033)	529898	50.0000	48.58
33 1,2-Dichloroethane	62	5.258	5.258	(0.934)	376591	50.0000	50.81
42 1,2-Dichloropropane	63	6.082	6.082	(1.081)	287570	50.0000	49.46
75 1,3,5-Trimethylbenzene	105	9.625	9.625	(0.940)	947470	50.0000	51.32
83 1,3-Dichlorobenzene	146	10.180	10.180	(0.995)	529098	50.0000	48.50
54 1,3-Dichloropropane	76	7.563	7.563	(0.917)	491255	50.0000	50.05
84 1,4-Dichlorobenzene	146	10.255	10.255	(1.002)	544274	50.0000	47.32
26 2,2-Dichloropropane	77	4.279	4.279	(0.874)	280126	50.0000	48.93
24 2-Butanone	43	4.343	4.343	(0.887)	304044	100.000	105.52
76 2-Chlorotoluene	91	9.546	9.546	(0.933)	843166	50.0000	49.81
52 2-Hexanone	43	7.653	7.653	(0.928)	461299	100.000	108.47
77 4-Chlorotoluene	91	9.640	9.640	(0.942)	978873	50.0000	50.04
82 p-Isopropyltoluene	119	10.210	10.210	(0.997)	1003937	50.0000	51.64
45 4-Methyl-2-Pentanone	43	6.914	6.914	(0.838)	653234	100.000	106.75
10 Acetone	43	2.487	2.487	(0.508)	187964	100.000	109.42
37 Benzene	78	5.220	5.220	(0.927)	1084861	50.0000	49.55
74 Bromobenzene	156	9.381	9.381	(0.917)	280874	50.0000	49.48
29 Bromochloromethane	128	4.560	4.560	(0.931)	129496	50.0000	56.37
39 Bromodichloromethane	83	6.348	6.348	(1.128)	319701	50.0000	51.71
66 Bromoform	173	8.984	8.984	(1.089)	154855	50.0000	47.27(T)
6 Bromomethane	94	1.674	1.674	(0.342)	117780	50.0000	43.41
19 Carbon Disulfide	76	2.600	2.600	(0.531)	1460668	100.000	95.57
34 Carbon Tetrachloride	117	4.999	4.999	(0.888)	274507	50.0000	45.99
59 Chlorobenzene	112	8.275	8.275	(1.003)	718560	50.0000	48.89
7 Chloroethane	64	1.760	1.760	(0.359)	179707	50.0000	46.03(M)
28 Chloroform	83	4.661	4.661	(0.952)	453061	50.0000	49.52
3 Chloromethane	50	1.348	1.348	(0.275)	197328	50.0000	42.63
27 cis-1,2-Dichloroethene	96	4.290	4.290	(0.876)	286659	50.0000	49.43
46 cis-1,3-Dichloropropene	75	6.761	6.761	(1.201)	449225	50.0000	47.87
55 Dibromochloromethane	129	7.758	7.758	(0.940)	242061	50.0000	48.20
44 Dibromomethane	93	6.191	6.191	(1.100)	170556	50.0000	50.83
2 Dichlorodifluoromethane	85	1.213	1.213	(0.248)	248322	50.0000	45.79
61 Ethylbenzene	106	8.373	8.373	(1.015)	374921	50.0000	49.74
91 Hexachlorobutadiene	225	12.065	12.065	(1.179)	119140	50.0000	45.72
67 Isopropylbenzene	105	9.126	9.126	(1.106)	1109213	50.0000	51.00
62 m,p-Xylenes	106	8.474	8.474	(1.027)	936911	100.000	101.11
17 Methylene Chloride	84	2.877	2.877	(0.587)	274258	50.0000	50.31
87 n-Butylbenzene	91	10.558	10.558	(1.031)	931396	50.0000	49.64
73 n-Propylbenzene	91	9.475	9.475	(0.926)	1393780	50.0000	50.77
92 Naphthalene	128	12.133	12.133	(1.185)	1107938	50.0000	49.53
63 o-Xylene	106	8.811	8.811	(1.068)	475748	50.0000	50.89
81 sec-Butylbenzene	105	10.086	10.086	(0.985)	1169025	50.0000	50.67
64 Styrene	104	8.826	8.826	(1.070)	828798	50.0000	53.36
78 tert-Butylbenzene	119	9.902	9.902	(0.967)	807157	50.0000	50.58
56 Tetrachloroethene	164	7.525	7.525	(0.912)	186057	50.0000	46.46
50 Toluene	91	7.049	7.049	(0.855)	1138194	50.0000	50.03
20 trans-1,2-Dichloroethene	96	3.147	3.147	(0.643)	248845	50.0000	48.19
51 trans-1,3-Dichloropropene	75	7.263	7.263	(1.290)	381258	50.0000	47.27
38 Trichloroethene	130	5.865	5.865	(1.042)	255628	50.0000	48.36
8 Trichlorofluoromethane	101	1.962	1.962	(0.401)	330010	50.0000	45.44
5 Vinyl Chloride	62	1.426	1.426	(0.291)	283791	50.0000	45.57



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181221.b\U122108.D Page 3
Report Date: 28-Jan-2019 11:25

QC Flag Legend

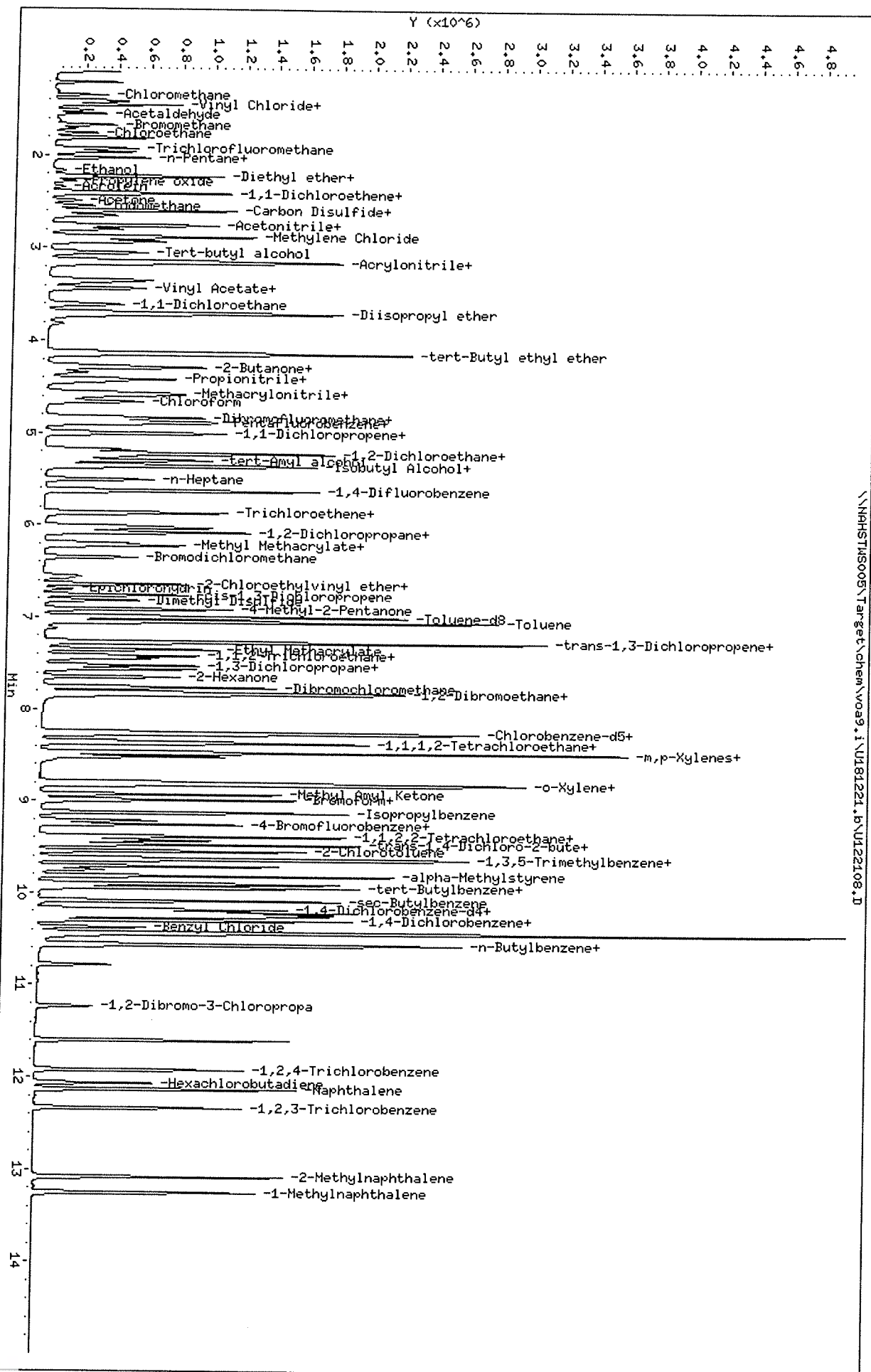
T - Target compound detected outside RT window.
M - Compound response manually integrated.



Data File: \\NAHSTMS005\Target\chem\voa9.1\U181221.b\U122108.D
 Date : 21-DEC-2018 16:44
 Client ID: VSTD0050
 Sample Info: VSTD050;VSTD050;1;7;
 Purge Volume: 5.0
 Column phase: DB624

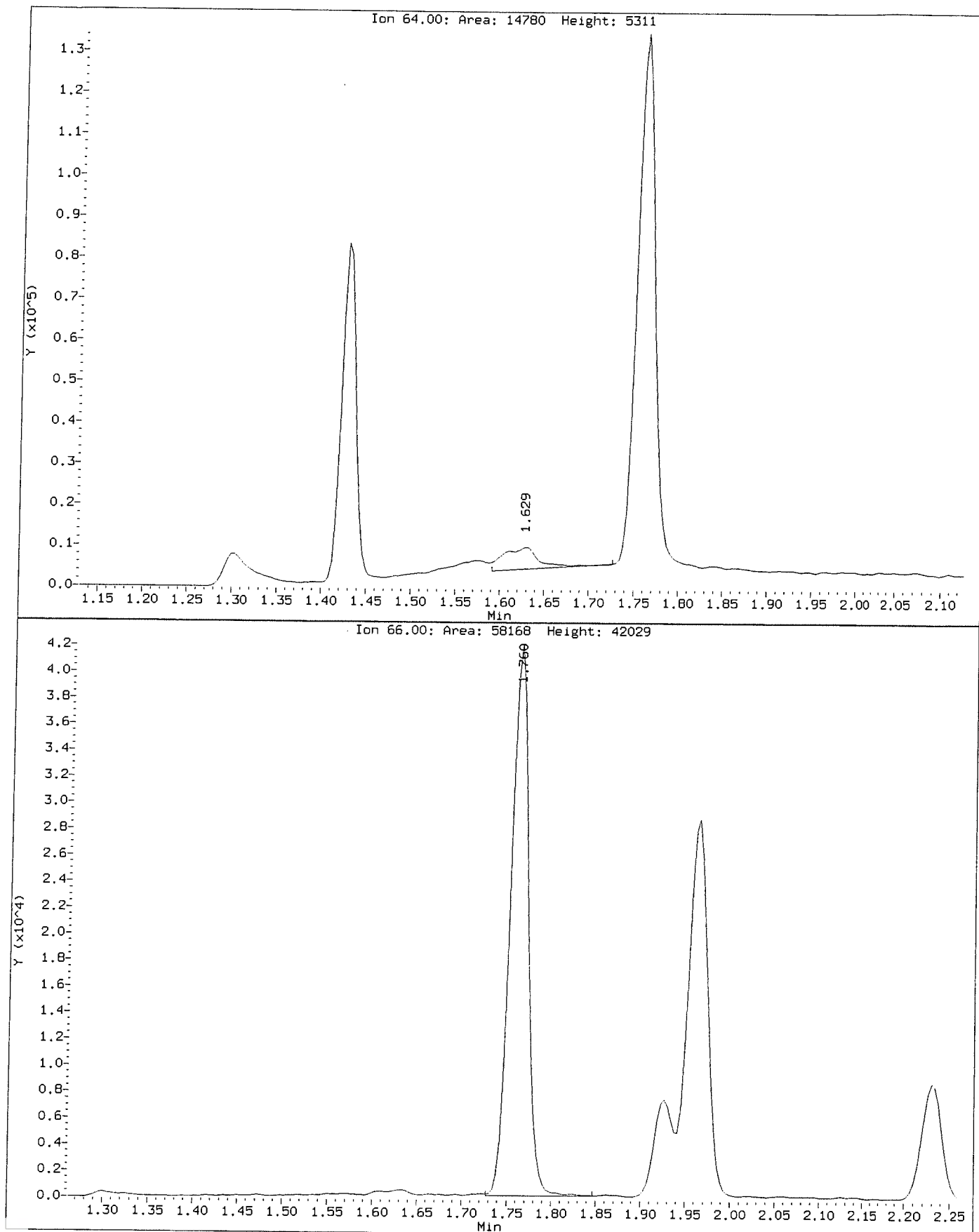
Instrument: W089.i
 Operator: PC
 Column diameter: 0.18

\\NAHSTMS005\Target\chem\voa9.1\U181221.b\U122108.D



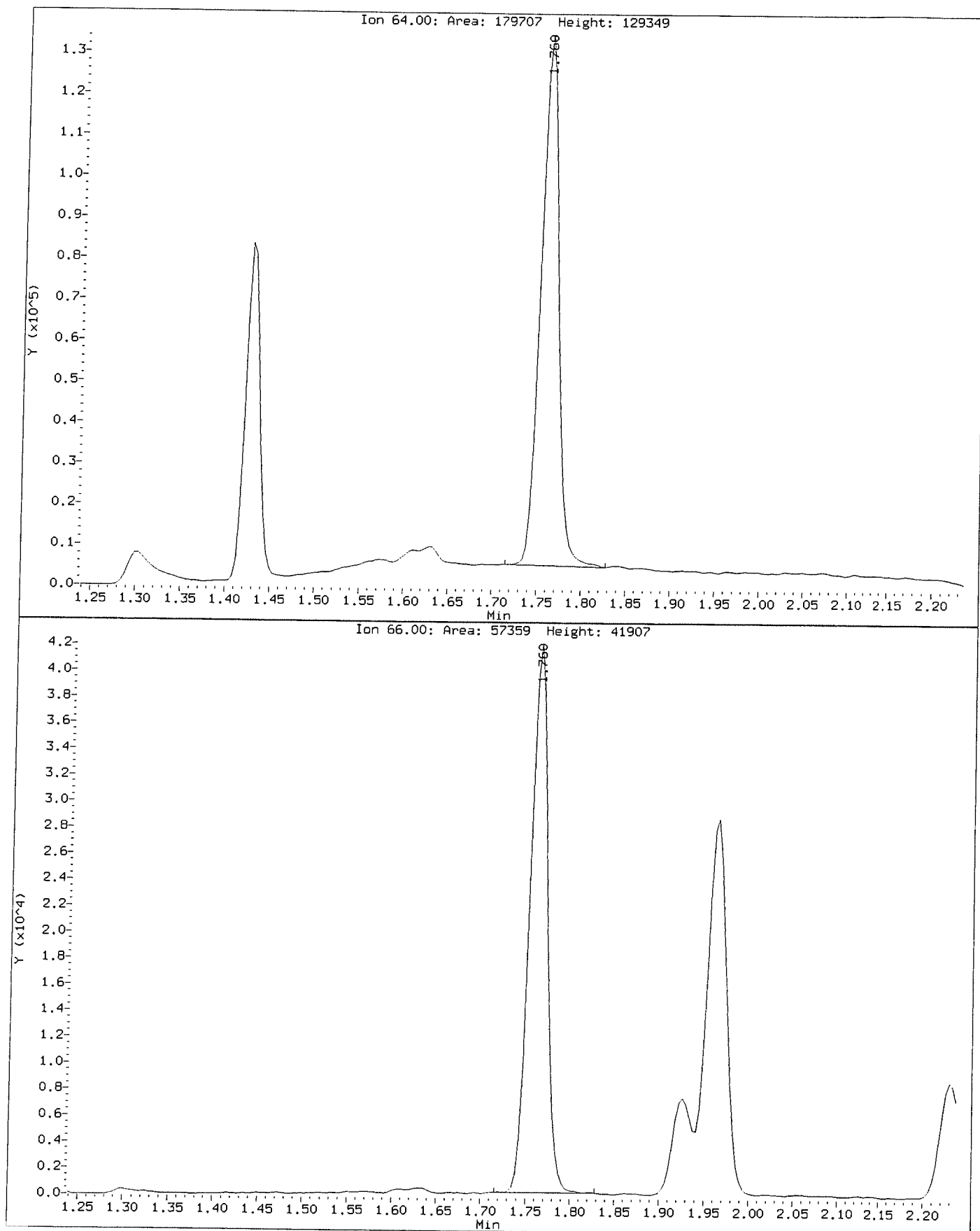
Data File: \\NAHSTWS005\Target\chem\voa9.1\U181221.b\Before\U122108.D
Injection Date: 21-DEC-2018 16:41
Instrument: VOA9.1
Client Sample ID: VSTD050

Compound: Chloroethane
CAS Number: 75-00-3



Data File: \\NAHSTW5005\Target\chem\voa9.i\U181221.b\U122108.D
Injection Date: 21-DEC-2018 16:41
Instrument: VOA9.1
Client Sample ID: VSTD050

Compound: Chloroethane
CAS Number: 75-00-3



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181221.b\U122109.D Page 1
 Report Date: 28-Jan-2019 11:25

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U181221.b\U122109.D
 Lab Smp Id: VSTD100 Client Smp ID: VSTD100
 Inj Date : 21-DEC-2018 17:06
 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\U181221.b\8260C.m
 Meth Date : 28-Jan-2019 11:25 VOA9.i Quant Type: ISTD
 Cal Date : 21-DEC-2018 16:41 Cal File: U122108.D
 Als bottle: 10 Calibration Sample, Level: 8
 Dil Factor: 1.00000
 Integrator: HP RTE Compound Sublist: LHAAP.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	AMOUNTS				
			CAL-AMT	ON-COL			
	MASS	RT	EXP RT	REL RT	RESPONSE	(ug/l)	(ug/l)
* 1 Pentafluorobenzene	168	4.897	4.897	(1.000)	443466	50.0000	
* 36 1,4-Difluorobenzene	114	5.625	5.625	(1.000)	822102	50.0000	
* 47 Chlorobenzene-d5	117	8.252	8.252	(1.000)	772888	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.235	10.235	(1.000)	368944	50.0000	
\$ 30 Dibromofluoromethane	113	4.830	4.830	(0.986)	495628	100.000	102.84
\$ 35 1,2-Dichloroethane-d4	65	5.175	5.175	(1.057)	635081	100.000	103.40
\$ 48 Toluene-d8	98	6.989	6.989	(0.847)	2029223	100.000	103.52
\$ 69 4-Bromofluorobenzene	95	9.257	9.257	(1.122)	764798	100.000	102.11
60 1,1,1,2-Tetrachloroethane	131	8.350	8.350	(1.012)	493177	100.000	99.96
31 1,1,1-Trichloroethane	97	4.830	4.830	(0.986)	750490	100.000	107.17
68 1,1,2,2-Tetrachloroethane	83	9.392	9.392	(0.918)	804056	100.000	96.77
138 Freon TF	101	2.404	2.404	(0.491)	394668	100.000	104.68
53 1,1,2-Trichloroethane	83	7.420	7.420	(0.899)	455612	100.000	98.94
22 1,1-Dichloroethane	63	3.604	3.604	(0.736)	956686	100.000	100.17
11 1,1-Dichloroethene	96	2.401	2.401	(0.490)	425292	100.000	100.86
32 1,1-Dichloropropene	75	5.006	5.006	(0.890)	748488	100.000	102.32
93 1,2,3-Trichlorobenzene	180	12.335	12.335	(1.205)	694931	100.000	99.32
71 1,2,3-Trichloropropane	75	9.430	9.430	(0.921)	901833	100.000	104.38
90 1,2,4-Trichlorobenzene	180	11.926	11.926	(1.165)	724973	100.000	106.13
79 1,2,4-Trimethylbenzene	105	9.943	9.943	(0.971)	2020622	100.000	104.65
89 1,2-Dibromo-3-Chloropropane	155	11.233	11.233	(1.097)	125814	100.000	96.80
57 1,2-Dibromoethane	107	7.851	7.851	(0.951)	533692	100.000	100.62



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181221.b\U122109.D Page 2
 Report Date: 28-Jan-2019 11:25

Compounds	QUANT SIG				AMOUNTS		
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/l)	ON-COL (ug/l)
88 1,2-Dichlorobenzene	146	10.573	10.573	(1.033)	1079683	100.000	98.55
33 1,2-Dichloroethane	62	5.253	5.253	(0.934)	747337	100.000	101.64
42 1,2-Dichloropropane	63	6.082	6.082	(1.081)	587293	100.000	101.10
75 1,3,5-Trimethylbenzene	105	9.628	9.628	(0.941)	1981203	100.000	106.84
83 1,3-Dichlorobenzene	146	10.179	10.179	(0.995)	1088889	100.000	99.39
54 1,3-Dichloropropane	76	7.563	7.563	(0.916)	974518	100.000	98.25
84 1,4-Dichlorobenzene	146	10.258	10.258	(1.002)	1115296	100.000	96.55
26 2,2-Dichloropropane	77	4.275	4.275	(0.873)	606051	100.000	105.30
24 2-Butanone	43	4.339	4.339	(0.886)	587152	200.000	204.95(A)
76 2-Chlorotoluene	91	9.549	9.549	(0.933)	1714248	100.000	100.84
52 2-Hexanone	43	7.649	7.649	(0.927)	912444	200.000	212.30(A)
77 4-Chlorotoluene	91	9.639	9.639	(0.942)	1995109	100.000	101.56
82 p-Isopropyltoluene	119	10.209	10.209	(0.997)	2107729	100.000	107.96
45 4-Methyl-2-Pentanone	43	6.914	6.914	(0.838)	1301011	200.000	210.38(A)
10 Acetone	43	2.483	2.483	(0.507)	331678	200.000	194.35
37 Benzene	78	5.220	5.220	(0.928)	2195227	100.000	100.34
74 Bromobenzene	156	9.385	9.385	(0.917)	573954	100.000	100.68
29 Bromochloromethane	128	4.556	4.556	(0.930)	244429	100.000	108.58
39 Bromodichloromethane	83	6.348	6.348	(1.129)	667511	100.000	108.05
66 Bromoform	173	8.983	8.983	(1.089)	331336	100.000	98.11(T)
6 Bromomethane	94	1.666	1.666	(0.340)	281859	100.000	101.50
19 Carbon Disulfide	76	2.592	2.592	(0.529)	3090544	200.000	201.15(A)
34 Carbon Tetrachloride	117	4.999	4.999	(0.889)	601960	100.000	99.26
59 Chlorobenzene	112	8.275	8.275	(1.003)	1466929	100.000	98.78
7 Chloroethane	64	1.752	1.752	(0.358)	384958	100.000	95.90(M)
28 Chloroform	83	4.657	4.657	(0.951)	918394	100.000	99.85
3 Chloromethane	50	1.344	1.344	(0.274)	441603	100.000	90.82
27 cis-1,2-Dichloroethene	96	4.286	4.286	(0.875)	580958	100.000	99.66
46 cis-1,3-Dichloropropene	75	6.760	6.760	(1.202)	944095	100.000	99.29
55 Dibromochloromethane	129	7.758	7.758	(0.940)	512845	100.000	99.98
44 Dibromomethane	93	6.191	6.191	(1.101)	341140	100.000	101.75
2 Dichlorodifluoromethane	85	1.209	1.209	(0.247)	553841	100.000	100.99
61 Ethylbenzene	106	8.372	8.372	(1.015)	779796	100.000	102.38
91 Hexachlorobutadiene	225	12.065	12.065	(1.179)	259405	100.000	99.12
67 Isopropylbenzene	105	9.126	9.126	(1.106)	2327627	100.000	105.90
62 m,p-Xylenes	106	8.474	8.474	(1.027)	1935465	200.000	206.70(A)
17 Methylene Chloride	84	2.873	2.873	(0.587)	554902	100.000	102.47
87 n-Butylbenzene	91	10.558	10.558	(1.031)	1963594	100.000	104.21
73 n-Propylbenzene	91	9.478	9.478	(0.926)	2891517	100.000	104.88
92 Naphthalene	128	12.132	12.132	(1.185)	2231968	100.000	99.52
63 o-Xylene	106	8.811	8.811	(1.068)	975544	100.000	103.27
81 sec-Butylbenzene	105	10.086	10.086	(0.985)	2492415	100.000	107.57
64 Styrene	104	8.826	8.826	(1.069)	1680613	100.000	107.08
78 tert-Butylbenzene	119	9.902	9.902	(0.967)	1698031	100.000	105.95
56 Tetrachloroethene	164	7.525	7.525	(0.912)	397169	100.000	98.15
50 Toluene	91	7.049	7.049	(0.854)	2304015	100.000	100.21
20 trans-1,2-Dichloroethene	96	3.143	3.143	(0.642)	513822	100.000	98.98
51 trans-1,3-Dichloropropene	75	7.263	7.263	(1.291)	811224	100.000	98.79
38 Trichloroethene	130	5.861	5.861	(1.042)	528149	100.000	100.00
8 Trichlorofluoromethane	101	1.955	1.955	(0.399)	753769	100.000	102.46
5 Vinyl Chloride	62	1.422	1.422	(0.290)	629175	100.000	99.33



QC Flag Legend

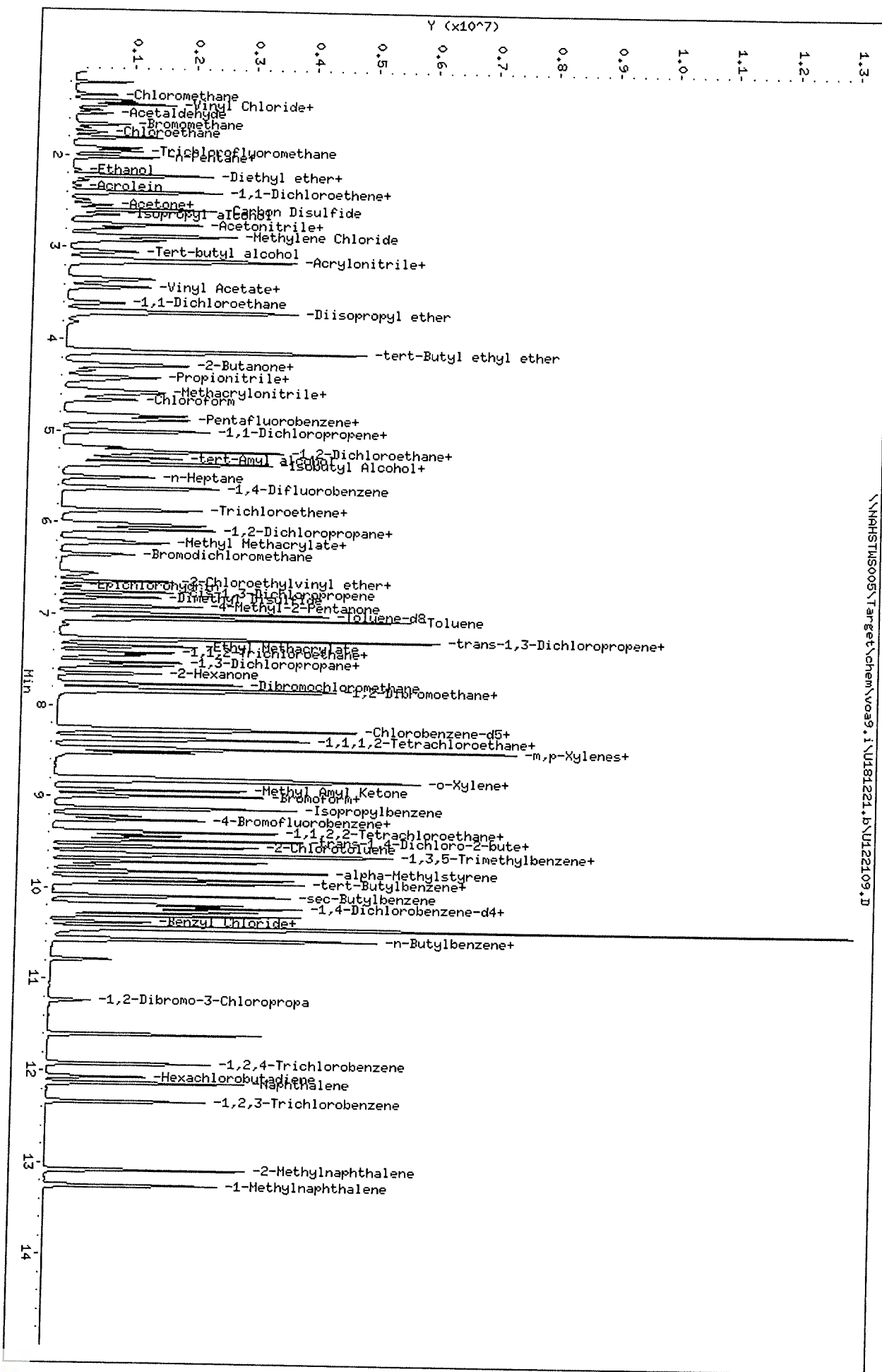
- T - Target compound detected outside RT window.
- A - Target compound detected but, quantitated amount exceeded maximum amount.
- M - Compound response manually integrated.



Data File: \\NAHSTMS005\Target\chem\voa9.1\UJ81221.b\UJ22109.J
Date : 21-DEC-2018 17:06
Client ID: VST100
Sample Info: VSTD100;VSTD100;1;8;
Purge Volume: 5.0
Column phase: DB624

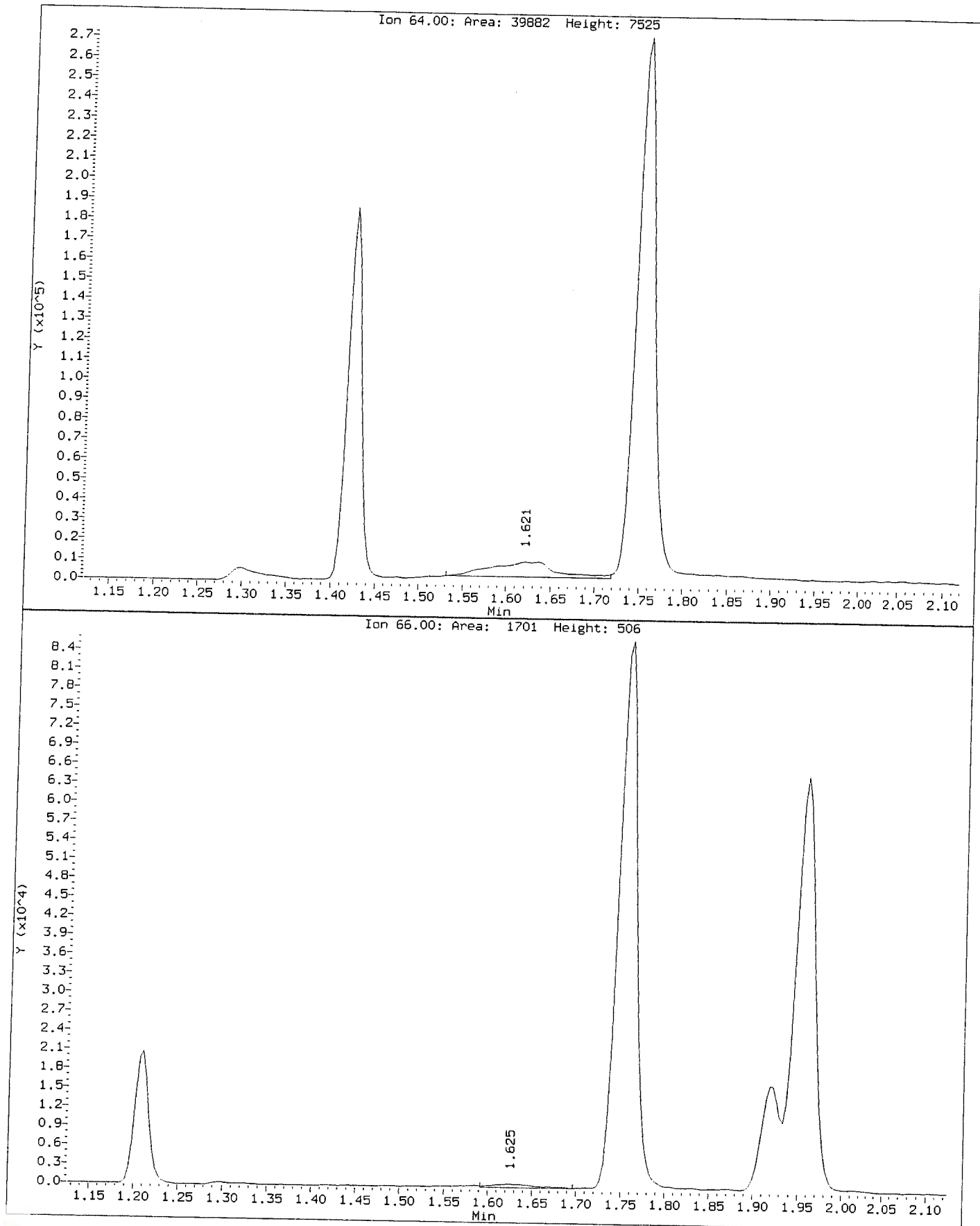
Instrument: VOA9.1
Operator: PC
Column diameter: 0.18

\\NAHSTMS005\Target\chem\voa9.1\UJ81221.b\UJ22109.J



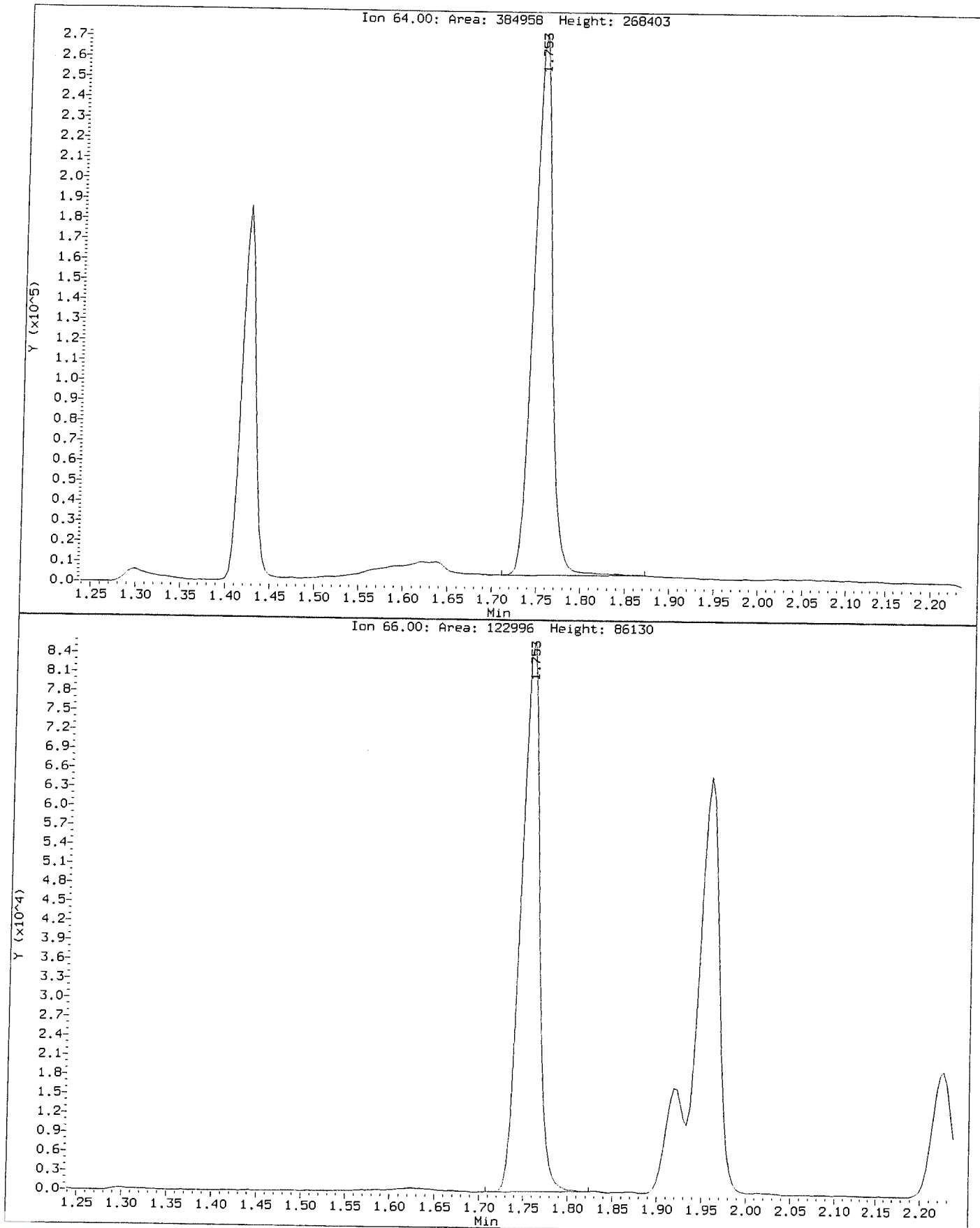
Data File: \\NAHSTW5005\Target\chem\voa9.i\U181221.b\Before\U122109.D
Injection Date: 21-DEC-2018 17:06
Instrument: V0A9.i
Client Sample ID: VSTD100

Compound: Chloroethane
CAS Number: 75-00-3



Data File: \\NAHSTW5005\Target\chem\voa9.i\U181221.b\U122109.D
Injection Date: 21-DEC-2018 17:06
Instrument: VDA9.i
Client Sample ID: VSTD100

Compound: Chloroethane
CAS Number: 75-00-3



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181221.b\U122110.D Page 1
 Report Date: 28-Jan-2019 11:25

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U181221.b\U122110.D
 Lab Smp Id: VSTD150 Client Smp ID: VSTD150
 Inj Date : 21-DEC-2018 17:31
 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\U181221.b\8260C.m
 Meth Date : 28-Jan-2019 11:25 VOA9.i Quant Type: ISTD
 Cal Date : 21-DEC-2018 17:06 Cal File: U122109.D
 Als bottle: 11 Calibration Sample, Level: 9
 Dil Factor: 1.00000 Compound Sublist: LHAAP.sub
 Integrator: HP RTE
 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						AMOUNTS	
		MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/l)	ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.894	4.894	(1.000)	456327	50.0000		
* 36 1,4-Difluorobenzene	114	5.625	5.625	(1.000)	837974	50.0000		
* 47 Chlorobenzene-d5	117	8.249	8.249	(1.000)	793198	50.0000		
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	374825	50.0000		
\$ 30 Dibromofluoromethane	113	4.830	4.830	(0.987)	745399	150.000	151.02	
\$ 35 1,2-Dichloroethane-d4	65	5.175	5.175	(1.057)	949266	150.000	151.18	
\$ 48 Toluene-d8	98	6.989	6.989	(0.847)	3016887	150.000	150.76	
\$ 69 4-Bromofluorobenzene	95	9.257	9.257	(1.122)	1153874	150.000	150.78	
60 1,1,1,2-Tetrachloroethane	131	8.350	8.350	(1.012)	766622	150.000	151.11	
31 1,1,1-Trichloroethane	97	4.826	4.826	(0.986)	1166981	150.000	161.96	
68 1,1,2,2-Tetrachloroethane	83	9.392	9.392	(0.918)	1214939	150.000	143.93	
138 Freon TF	101	2.401	2.401	(0.491)	609198	150.000	157.03	
53 1,1,2-Trichloroethane	83	7.421	7.421	(0.900)	689788	150.000	145.96	
22 1,1-Dichloroethane	63	3.604	3.604	(0.737)	1459691	150.000	148.53	
11 1,1-Dichloroethene	96	2.397	2.397	(0.490)	645721	150.000	148.82	
32 1,1-Dichloropropene	75	5.003	5.003	(0.889)	1147997	150.000	153.96	
93 1,2,3-Trichlorobenzene	180	12.335	12.335	(1.205)	1085027	150.000	152.30	
71 1,2,3-Trichloropropane	75	9.430	9.430	(0.921)	1401190	150.000	159.63	
90 1,2,4-Trichlorobenzene	180	11.923	11.923	(1.165)	1126029	150.000	162.26	
79 1,2,4-Trimethylbenzene	105	9.943	9.943	(0.971)	3050007	150.000	155.49	
89 1,2-Dibromo-3-Chloropropane	155	11.233	11.233	(1.097)	200384	150.000	150.93	
57 1,2-Dibromoethane	107	7.852	7.852	(0.952)	815175	150.000	149.76	



Compounds	QUANT SIG					AMOUNTS	
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/l)	ON-COL (ug/l)
88 1,2-Dichlorobenzene	146	10.573	10.573	(1.033)	1640210	150.000	147.37
33 1,2-Dichloroethane	62	5.254	5.254	(0.934)	1129116	150.000	151.01
42 1,2-Dichloropropane	63	6.082	6.082	(1.081)	888346	150.000	150.03
75 1,3,5-Trimethylbenzene	105	9.625	9.625	(0.940)	2996671	150.000	159.08
83 1,3-Dichlorobenzene	146	10.180	10.180	(0.995)	1669910	150.000	150.03
54 1,3-Dichloropropane	76	7.563	7.563	(0.917)	1476732	150.000	145.07
84 1,4-Dichlorobenzene	146	10.255	10.255	(1.002)	1696761	150.000	144.58
26 2,2-Dichloropropane	77	4.275	4.275	(0.874)	951402	150.000	160.64
24 2-Butanone	43	4.335	4.335	(0.886)	880878	300.000	299.93(A)
76 2-Chlorotoluene	91	9.550	9.550	(0.933)	2603345	150.000	150.74
52 2-Hexanone	43	7.653	7.653	(0.928)	1413890	300.000	320.56(A)
77 4-Chlorotoluene	91	9.640	9.640	(0.942)	3029757	150.000	151.81
82 p-Isopropyltoluene	119	10.210	10.210	(0.997)	3190047	150.000	160.83
45 4-Methyl-2-Pentanone	43	6.914	6.914	(0.838)	1993190	300.000	314.06(A)
10 Acetone	43	2.480	2.480	(0.507)	520533	300.000	298.01(A)
37 Benzene	78	5.216	5.216	(0.927)	3311929	150.000	148.52
74 Bromobenzene	156	9.385	9.385	(0.917)	890701	150.000	153.79
29 Bromochloromethane	128	4.557	4.557	(0.931)	348533	150.000	151.66
39 Bromodichloromethane	83	6.348	6.348	(1.129)	1032680	150.000	164.00
66 Bromoform	173	8.984	8.984	(1.089)	522892	150.000	149.93
6 Bromomethane	94	1.659	1.659	(0.339)	444174	150.000	154.73
19 Carbon Disulfide	76	2.588	2.588	(0.529)	4735575	300.000	299.54(A)
34 Carbon Tetrachloride	117	4.995	4.995	(0.888)	939611	150.000	151.26
59 Chlorobenzene	112	8.275	8.275	(1.003)	2244427	150.000	147.26
7 Chloroethane	64	1.745	1.745	(0.357)	684109	150.000	161.33
28 Chloroform	83	4.658	4.658	(0.952)	1391091	150.000	146.98
3 Chloromethane	50	1.340	1.340	(0.274)	746873	150.000	147.15
27 cis-1,2-Dichloroethene	96	4.287	4.287	(0.876)	893807	150.000	149.01
46 cis-1,3-Dichloropropene	75	6.757	6.757	(1.201)	1468956	150.000	150.90
55 Dibromochloromethane	129	7.758	7.758	(0.940)	791728	150.000	149.91
44 Dibromomethane	93	6.191	6.191	(1.101)	516406	150.000	151.11
2 Dichlorodifluoromethane	85	1.205	1.205	(0.246)	873891	150.000	154.61
61 Ethylbenzene	106	8.373	8.373	(1.015)	1198529	150.000	153.33
91 Hexachlorobutadiene	225	12.065	12.065	(1.179)	400552	150.000	150.65
67 Isopropylbenzene	105	9.126	9.126	(1.106)	3526393	150.000	156.34
62 m,p-Xylenes	106	8.474	8.474	(1.027)	2933161	300.000	305.23(A)
17 Methylene Chloride	84	2.870	2.870	(0.586)	841220	150.000	151.54
87 n-Butylbenzene	91	10.558	10.558	(1.031)	2965307	150.000	154.91
73 n-Propylbenzene	91	9.479	9.479	(0.926)	4348220	150.000	155.25
92 Naphthalene	128	12.133	12.133	(1.185)	3430934	150.000	151.53
63 o-Xylene	106	8.811	8.811	(1.068)	1492877	150.000	153.99
81 sec-Butylbenzene	105	10.090	10.090	(0.986)	3757107	150.000	159.61
64 Styrene	104	8.826	8.826	(1.070)	2556162	150.000	158.70
78 tert-Butylbenzene	119	9.902	9.902	(0.967)	2586354	150.000	158.85
56 Tetrachloroethene	164	7.526	7.526	(0.912)	610669	150.000	147.05
50 Toluene	91	7.049	7.049	(0.855)	3483930	150.000	147.65
20 trans-1,2-Dichloroethene	96	3.140	3.140	(0.642)	789348	150.000	147.77
51 trans-1,3-Dichloropropene	75	7.263	7.263	(1.291)	1271771	150.000	151.06
38 Trichloroethene	130	5.861	5.861	(1.042)	823329	150.000	152.94
8 Trichlorofluoromethane	101	1.951	1.951	(0.399)	1146930	150.000	151.21
5 Vinyl Chloride	62	1.419	1.419	(0.290)	1000865	150.000	153.03



QC Flag Legend

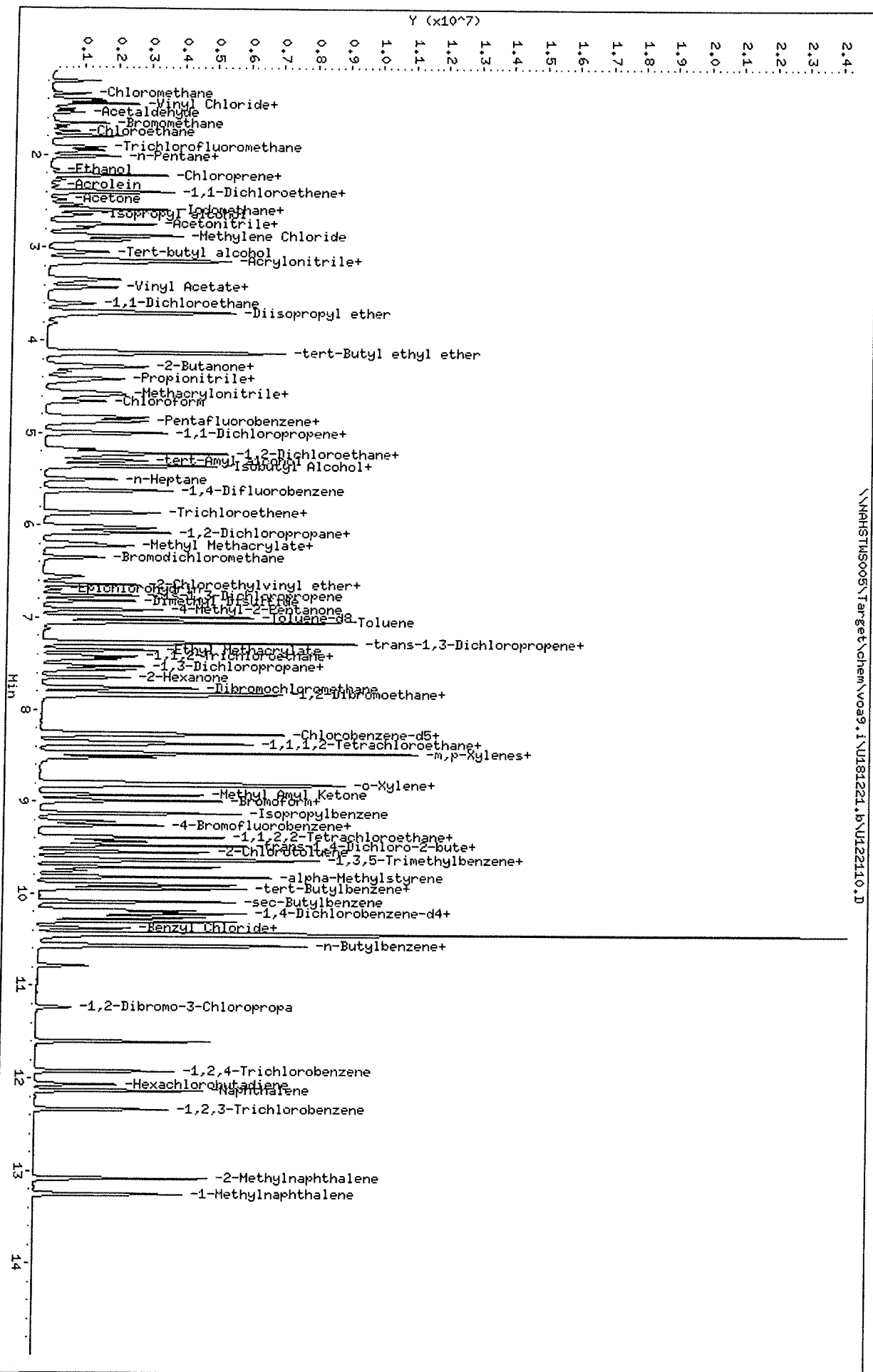
A - Target compound detected but, quantitated amount exceeded maximum amount.



Data File: \\NAHSTMS005\Target\chem\voa9.i\U181221.b\U122110.D
 Date : 21-DEC-2018 17:31
 Client ID: VSTD150
 Sample Info: VSTD150;VSTD150;1:9;
 Purge Volume: 5.0
 Column phase: DB624

Instrument: V049.i
 Operator: PC
 Column diameter: 0.18

\\NAHSTMS005\Target\chem\voa9.i\U181221.b\U122110.D



ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U181221.b\U122111.D
 Lab Smp Id: VSTD200 Client Smp ID: VSTD200
 Inj Date : 21-DEC-2018 17:55
 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\U181221.b\8260C.m
 Meth Date : 28-Jan-2019 11:25 VOA9.i Quant Type: ISTD
 Cal Date : 21-DEC-2018 17:31 Cal File: U122110.D
 Als bottle: 12 Calibration Sample, Level: 10
 Dil Factor: 1.00000
 Integrator: HP RTE Compound Sublist: LHAAP.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	AMOUNTS				CAL-AMT (ug/l)	ON-COL (ug/l)
			MASS	RT	EXP RT	REL RT		
* 1 Pentafluorobenzene	168		4.890	4.890	(1.000)	471928	50.0000	
* 36 1,4-Difluorobenzene	114		5.625	5.625	(1.000)	852109	50.0000	
* 47 Chlorobenzene-d5	117		8.249	8.249	(1.000)	808162	50.0000	
* 70 1,4-Dichlorobenzene-d4	152		10.236	10.236	(1.000)	383807	50.0000	
\$ 30 Dibromofluoromethane	113		4.826	4.826	(0.987)	1006329	200.000	197.61
\$ 35 1,2-Dichloroethane-d4	65		5.171	5.171	(1.057)	1274051	200.000	196.84
\$ 48 Toluene-d8	98		6.989	6.989	(0.847)	4010125	200.000	197.23
\$ 69 4-Bromofluorobenzene	95		9.257	9.257	(1.122)	1540801	200.000	198.06
60 1,1,1,2-Tetrachloroethane	131		8.350	8.350	(1.012)	1032567	200.000	199.57
31 1,1,1-Trichloroethane	97		4.826	4.826	(0.987)	1558350	200.000	209.12(A)
68 1,1,2,2-Tetrachloroethane	83		9.392	9.392	(0.918)	1627647	200.000	188.30
138 Freon TF	101		2.394	2.394	(0.490)	818502	200.000	204.00(A)
53 1,1,2-Trichloroethane	83		7.421	7.421	(0.900)	922969	200.000	191.69
22 1,1-Dichloroethane	63		3.597	3.597	(0.736)	1941260	200.000	191.00
11 1,1-Dichloroethene	96		2.394	2.394	(0.490)	870210	200.000	193.93
32 1,1-Dichloropropene	75		5.003	5.003	(0.889)	1526453	200.000	201.33(A)
93 1,2,3-Trichlorobenzene	180		12.335	12.335	(1.205)	1453309	200.000	199.03
71 1,2,3-Trichloropropane	75		9.430	9.430	(0.921)	1910859	200.000	212.60(A)
90 1,2,4-Trichlorobenzene	180		11.926	11.926	(1.165)	1495400	200.000	210.44(A)
79 1,2,4-Trimethylbenzene	105		9.943	9.943	(0.971)	4007083	200.000	199.50
89 1,2-Dibromo-3-Chloropropane	155		11.233	11.233	(1.097)	274280	200.000	201.27(A)
57 1,2-Dibromoethane	107		7.852	7.852	(0.952)	1097675	200.000	197.93



Compounds	QUANT SIG				AMOUNTS		
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/l)	ON-COL (ug/l)
88 1,2-Dichlorobenzene	146	10.573	10.573	(1.033)	2176108	200.000	190.95
33 1,2-Dichloroethane	62	5.250	5.250	(0.933)	1504782	200.000	198.15
42 1,2-Dichloropropane	63	6.078	6.078	(1.081)	1186343	200.000	197.03
75 1,3,5-Trimethylbenzene	105	9.628	9.628	(0.941)	3964216	200.000	205.51(A)
83 1,3-Dichlorobenzene	146	10.180	10.180	(0.995)	2212350	200.000	194.11
54 1,3-Dichloropropane	76	7.563	7.563	(0.917)	1981022	200.000	191.01
84 1,4-Dichlorobenzene	146	10.258	10.258	(1.002)	2259523	200.000	188.03
26 2,2-Dichloropropane	77	4.272	4.272	(0.874)	1270502	200.000	207.43(A)
24 2-Butanone	43	4.335	4.335	(0.887)	1199902	400.000	395.82(A)
76 2-Chlorotoluene	91	9.550	9.550	(0.933)	3451393	200.000	195.17
52 2-Hexanone	43	7.653	7.653	(0.928)	1896004	400.000	421.90(A)
77 4-Chlorotoluene	91	9.640	9.640	(0.942)	3993483	200.000	195.41
82 p-Isopropyltoluene	119	10.213	10.213	(0.998)	4198944	200.000	206.74(A)
45 4-Methyl-2-Pentanone	43	6.914	6.914	(0.838)	2681840	400.000	414.75(A)
10 Acetone	43	2.476	2.476	(0.506)	723113	400.000	401.34(A)
37 Benzene	78	5.216	5.216	(0.927)	4410809	200.000	194.52
74 Bromobenzene	156	9.385	9.385	(0.917)	1186255	200.000	200.04(A)
29 Bromochloromethane	128	4.553	4.553	(0.931)	453685	200.000	191.69
39 Bromodichloromethane	83	6.345	6.345	(1.128)	1391257	200.000	217.29(A)
66 Bromoform	173	8.984	8.984	(1.089)	718878	200.000	201.69(A)
6 Bromomethane	94	1.651	1.651	(0.338)	585856	200.000	196.98
19 Carbon Disulfide	76	2.585	2.585	(0.529)	6125723	400.000	374.66(A)
34 Carbon Tetrachloride	117	4.991	4.991	(0.887)	1268610	200.000	200.38(A)
59 Chlorobenzene	112	8.275	8.275	(1.003)	2961137	200.000	190.69
7 Chloroethane	64	1.737	1.737	(0.355)	859472	200.000	193.44
28 Chloroform	83	4.654	4.654	(0.952)	1846267	200.000	188.63
3 Chloromethane	50	1.333	1.333	(0.273)	1095269	200.000	207.27(A)
27 cis-1,2-Dichloroethene	96	4.283	4.283	(0.876)	1189323	200.000	191.72
46 cis-1,3-Dichloropropene	75	6.757	6.757	(1.201)	1986544	200.000	200.27(A)
55 Dibromochloromethane	129	7.758	7.758	(0.940)	1081017	200.000	200.56(A)
44 Dibromomethane	93	6.187	6.187	(1.100)	698521	200.000	201.01(A)
2 Dichlorodifluoromethane	85	1.198	1.198	(0.245)	1151588	200.000	196.87
61 Ethylbenzene	106	8.373	8.373	(1.015)	1600834	200.000	201.00(A)
91 Hexachlorobutadiene	225	12.065	12.065	(1.179)	534175	200.000	196.21
67 Isopropylbenzene	105	9.126	9.126	(1.106)	4617933	200.000	200.94(A)
62 m,p-Xylenes	106	8.474	8.474	(1.027)	3876248	400.000	395.90(A)
17 Methylene Chloride	84	2.866	2.866	(0.586)	1131189	200.000	197.41
87 n-Butylbenzene	91	10.558	10.558	(1.031)	3856663	200.000	196.76
73 n-Propylbenzene	91	9.479	9.479	(0.926)	5652456	200.000	197.09
92 Naphthalene	128	12.133	12.133	(1.185)	4589381	200.000	199.26
63 o-Xylene	106	8.811	8.811	(1.068)	1977764	200.000	200.23(A)
81 sec-Butylbenzene	105	10.090	10.090	(0.986)	4898290	200.000	203.23(A)
64 Styrene	104	8.826	8.826	(1.070)	3375201	200.000	205.67(A)
78 tert-Butylbenzene	119	9.902	9.902	(0.967)	3416506	200.000	204.92(A)
56 Tetrachloroethene	164	7.525	7.525	(0.912)	811202	200.000	191.73
50 Toluene	91	7.046	7.046	(0.854)	4594912	200.000	191.13
20 trans-1,2-Dichloroethene	96	3.136	3.136	(0.641)	1055077	200.000	190.99
51 trans-1,3-Dichloropropene	75	7.259	7.259	(1.291)	1721394	200.000	200.53(A)
38 Trichloroethene	130	5.861	5.861	(1.042)	1093007	200.000	199.67
8 Trichlorofluoromethane	101	1.944	1.944	(0.398)	1561606	200.000	198.87
5 Vinyl Chloride	62	1.415	1.415	(0.289)	1348117	200.000	199.01



QC Flag Legend

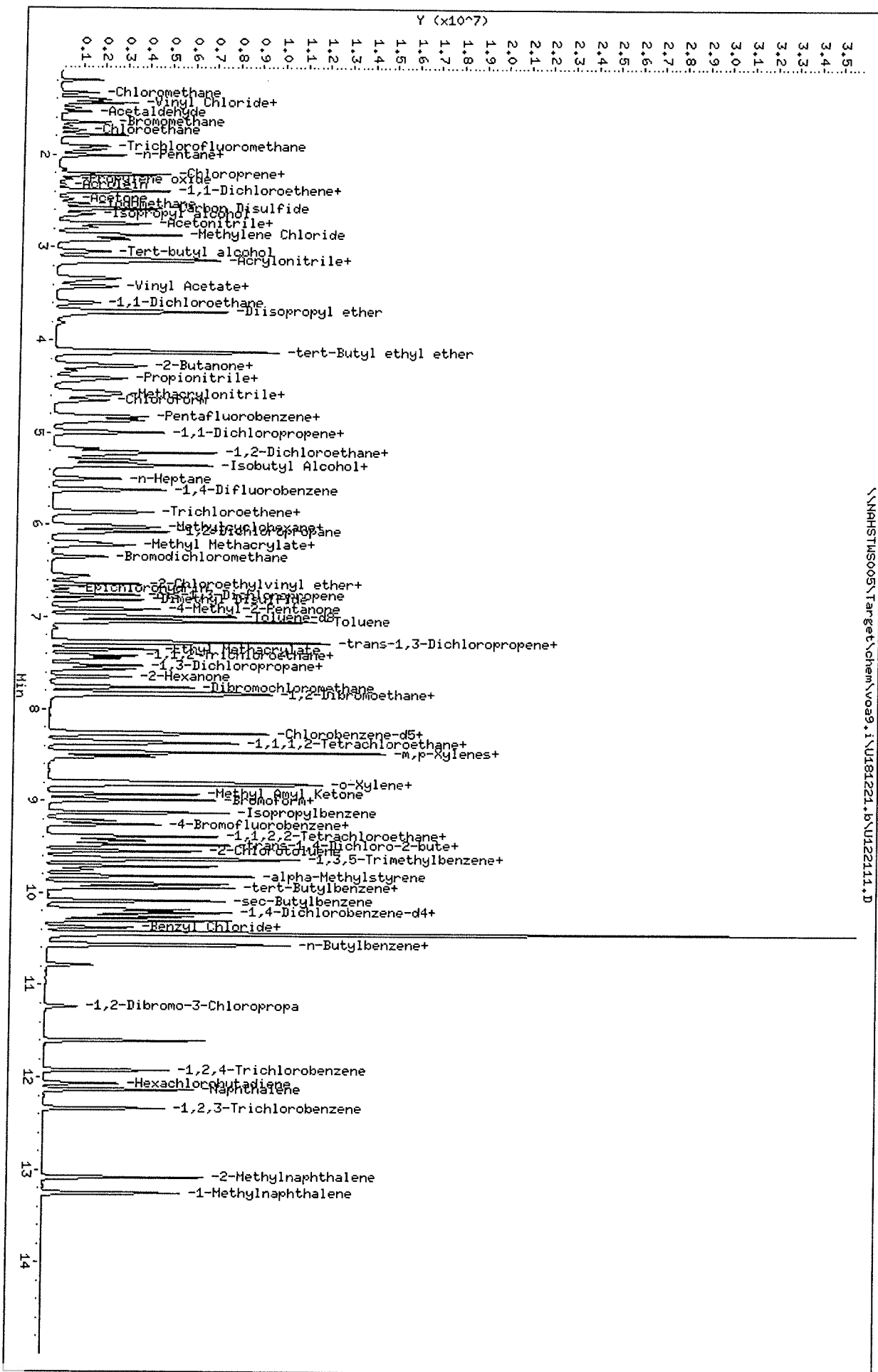
A - Target compound detected but, quantitated amount exceeded maximum amount.



Data File: \\NAHSTMS005\Target\chem\voa9.i\U181221.b\U122111.D
Date : 21-DEC-2018 17:55
Client ID: VSTD200
Sample Info: VSTD200;VSTD200;1;10;
Purge Volume: 5.0
Column phase: DB624

Instrument: VOA9.1
Operator: PC
Column diameter: 0.18

\\NAHSTMS005\Target\chem\voa9.i\U181221.b\U122111.D



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181221.b\U122113.D Page 1
 Report Date: 28-Jan-2019 11:25

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U181221.b\U122113.D
 Lab Smp Id: VSTD050 Client Smp ID: VSTD050
 Inj Date : 21-DEC-2018 18:45
 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\U181221.b\8260C.m
 Meth Date : 28-Jan-2019 11:25 VOA9.i Quant Type: ISTD
 Cal Date : 21-DEC-2018 17:55 Cal File: U122111.D
 Als bottle: 14 QC Sample: METHSPIKE
 Dil Factor: 1.00000
 Integrator: HP RTE Compound Sublist: LHAAP.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	CONCENTRATIONS				
			ON-COLUMN	FINAL			
	MASS	RT	EXP RT	REL RT	RESPONSE	(ug/l)	(ug/l)
* 1 Pentafluorobenzene	168	4.894	4.890	(1.000)	454236	50.0000	
* 36 1,4-Difluorobenzene	114	5.625	5.625	(1.000)	837452	50.0000	
* 47 Chlorobenzene-d5	117	8.249	8.249	(1.000)	785431	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	375418	50.0000	
\$ 30 Dibromofluoromethane	113	4.830	4.826	(0.987)	255609	51.0245	51.02
\$ 35 1,2-Dichloroethane-d4	65	5.175	5.171	(1.057)	329809	51.3551	51.35
\$ 48 Toluene-d8	98	6.989	6.989	(0.847)	1045729	51.6161	51.61
\$ 69 4-Bromofluorobenzene	95	9.257	9.257	(1.122)	396478	51.3902	51.39
60 1,1,1,2-Tetrachloroethane	131	8.350	8.350	(1.012)	241293	48.4317	48.43
31 1,1,1-Trichloroethane	97	4.826	4.826	(0.986)	354032	49.3608	49.36
68 1,1,2,2-Tetrachloroethane	83	9.392	9.392	(0.918)	418971	49.5558	49.55
138 Freon TF	101	2.401	2.394	(0.491)	174050	45.0712	45.07
53 1,1,2-Trichloroethane	83	7.420	7.421	(0.900)	230741	49.3099	49.30
22 1,1-Dichloroethane	63	3.604	3.597	(0.737)	469167	47.9609	47.96
11 1,1-Dichloroethene	96	2.397	2.394	(0.490)	197920	45.8262	45.82
32 1,1-Dichloropropene	75	5.003	5.003	(0.889)	353683	47.4657	47.46
93 1,2,3-Trichlorobenzene	180	12.335	12.335	(1.205)	338004	47.8072	47.80
71 1,2,3-Trichloropropane	75	9.426	9.430	(0.921)	468241	53.2610	53.26
90 1,2,4-Trichlorobenzene	180	11.923	11.926	(1.165)	350114	50.3719	50.37
79 1,2,4-Trimethylbenzene	105	9.943	9.943	(0.971)	985013	50.1388	50.13
89 1,2-Dibromo-3-Chloropropane	155	11.233	11.233	(1.097)	65081	49.9244	49.92
57 1,2-Dibromoethane	107	7.852	7.852	(0.952)	275792	51.1699	51.16



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181221.b\U122113.D Page 2
 Report Date: 28-Jan-2019 11:25

Compounds	QUANT	SIG						CONCENTRATIONS	
			MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/l)	FINAL (ug/l)
88 1,2-Dichlorobenzene	146		10.573	10.573	(1.033)	539129	48.3652	48.36	
33 1,2-Dichloroethane	62		5.254	5.250	(0.934)	379863	50.3501	50.35	
42 1,2-Dichloropropane	63		6.082	6.078	(1.081)	291083	49.1911	49.19	
75 1,3,5-Trimethylbenzene	105		9.625	9.628	(0.940)	944583	50.0646	50.06	
83 1,3-Dichlorobenzene	146		10.180	10.180	(0.995)	538150	48.2737	48.27	
54 1,3-Dichloropropane	76		7.563	7.563	(0.917)	498006	49.4090	49.40	
84 1,4-Dichlorobenzene	146		10.254	10.258	(1.002)	553425	47.0841	47.08	
26 2,2-Dichloropropane	77		4.275	4.272	(0.874)	312995	53.0931	53.09	
24 2-Butanone	43		4.335	4.335	(0.886)	309683	104.354	104.35	
76 2-Chlorotoluene	91		9.546	9.550	(0.933)	853147	49.3227	49.32	
52 2-Hexanone	43		7.649	7.653	(0.927)	476780	109.166	109.16	
77 4-Chlorotoluene	91		9.640	9.640	(0.942)	993815	49.7187	49.71	
82 p-Isopropyltoluene	119		10.209	10.213	(0.997)	977284	49.1947	49.19	
45 4-Methyl-2-Pentanone	43		6.914	6.914	(0.838)	669743	106.576	106.57	
10 Acetone	43		2.480	2.476	(0.507)	202203	114.452	114.45	
37 Benzene	78		5.216	5.216	(0.927)	1087936	48.8203	48.82	
74 Bromobenzene	156		9.381	9.385	(0.917)	288693	49.7707	49.77	
29 Bromochloromethane	128		4.553	4.553	(0.930)	134219	56.7663	56.76	
39 Bromodichloromethane	83		6.348	6.345	(1.129)	327631	52.0660	52.06	
66 Bromoform	173		8.984	8.984	(1.089)	161326	47.9288	47.92(T)	
6 Bromomethane	94		1.666	1.651	(0.341)	151955	54.0592	54.05	
19 Carbon Disulfide	76		2.588	2.585	(0.529)	1510901	96.0096	96.00	
34 Carbon Tetrachloride	117		4.995	4.991	(0.888)	272477	44.8853	44.88	
59 Chlorobenzene	112		8.275	8.275	(1.003)	728193	48.2531	48.25	
7 Chloroethane	64		1.752	1.737	(0.358)	185529	46.1546	46.15(M)	
28 Chloroform	83		4.658	4.654	(0.952)	456472	48.4536	48.45	
3 Chloromethane	50		1.340	1.333	(0.274)	235959	48.9688	48.96	
27 cis-1,2-Dichloroethene	96		4.287	4.283	(0.876)	292150	48.9311	48.93	
46 cis-1,3-Dichloropropene	75		6.757	6.757	(1.201)	467498	48.9175	48.91	
55 Dibromochloromethane	129		7.758	7.758	(0.940)	250542	48.5723	48.57	
44 Dibromomethane	93		6.191	6.187	(1.101)	173822	50.8969	50.89	
2 Dichlorodifluoromethane	85		1.205	1.198	(0.246)	258081	46.2123	46.21	
61 Ethylbenzene	106		8.373	8.373	(1.015)	381593	49.3007	49.30	
91 Hexachlorobutadiene	225		12.065	12.065	(1.179)	122959	46.1748	46.17	
67 Isopropylbenzene	105		9.126	9.126	(1.106)	1096015	49.0718	49.07	
62 m,p-Xylenes	106		8.474	8.474	(1.027)	950452	99.8846	99.88	
17 Methylene Chloride	84		2.870	2.866	(0.586)	279368	49.7584	49.75	
87 n-Butylbenzene	91		10.558	10.558	(1.031)	900081	46.9488	46.94	
73 n-Propylbenzene	91		9.475	9.479	(0.926)	1377655	49.1117	49.11	
92 Naphthalene	128		12.133	12.133	(1.185)	1130612	49.4621	49.46	
63 o-Xylene	106		8.811	8.811	(1.068)	478939	49.8923	49.89	
81 sec-Butylbenzene	105		10.086	10.090	(0.985)	1124348	47.6920	47.69	
64 Styrene	104		8.826	8.826	(1.070)	841070	52.7368	52.73	
78 tert-Butylbenzene	119		9.902	9.902	(0.967)	781669	47.9339	47.93	
56 Tetrachloroethene	164		7.525	7.525	(0.912)	188872	45.9327	45.93	
50 Toluene	91		7.046	7.046	(0.854)	1151259	49.2749	49.27	
20 trans-1,2-Dichloroethene	96		3.139	3.136	(0.642)	255368	48.0288	48.02	
51 trans-1,3-Dichloropropene	75		7.259	7.259	(1.291)	402226	48.9357	48.93	
38 Trichloroethene	130		5.861	5.861	(1.042)	262761	48.8423	48.84	
8 Trichlorofluoromethane	101		1.951	1.944	(0.399)	342884	45.8511	45.85	
5 Vinyl Chloride	62		1.419	1.415	(0.290)	295169	46.0208	46.02	



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181221.b\U122113.D Page 3
Report Date: 28-Jan-2019 11:25

QC Flag Legend

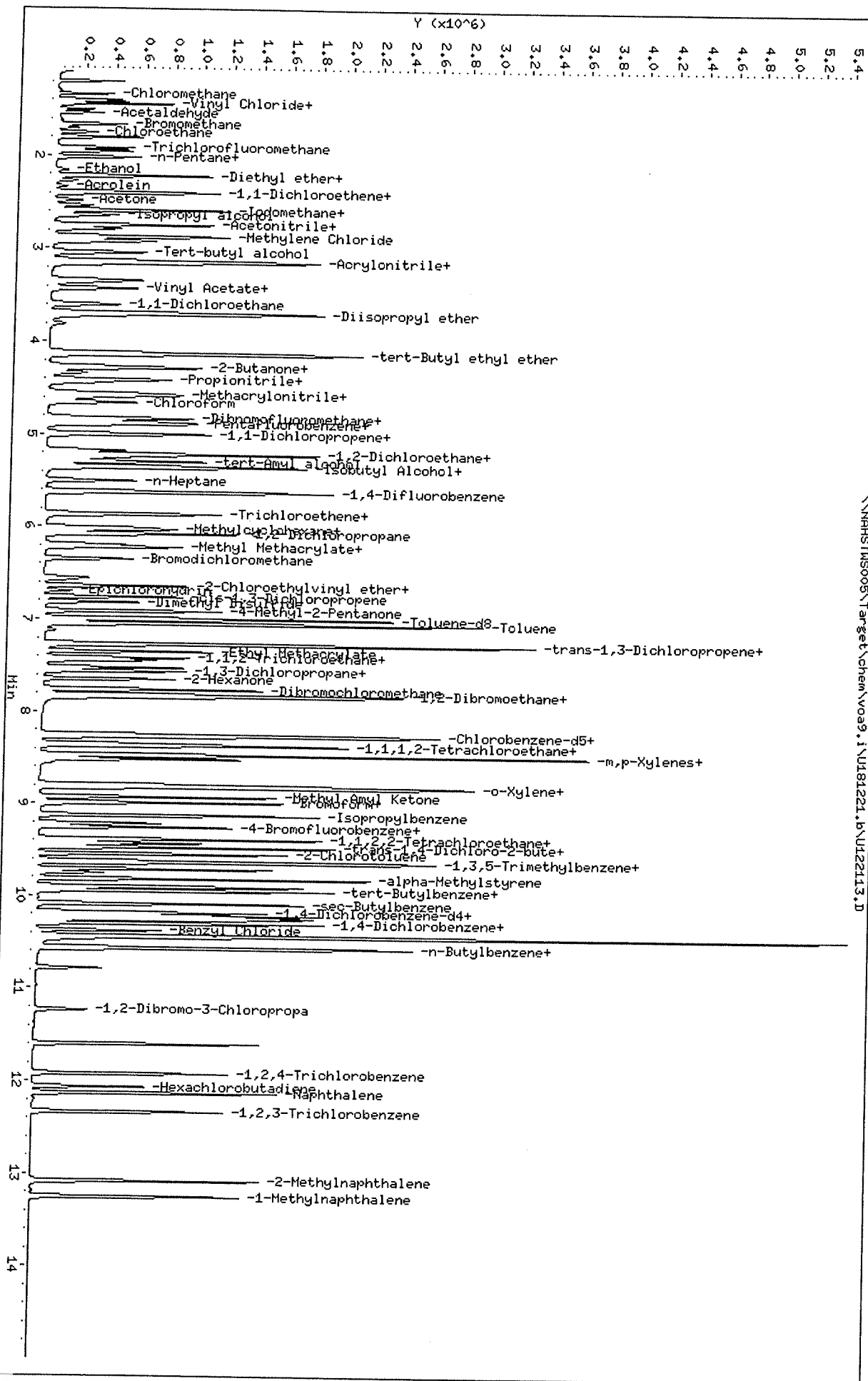
T - Target compound detected outside RT window.
M - Compound response manually integrated.



Data File: \\NAHSTMS005\Target\chem\voa9,1\U181221.b\U122113.D
Date : 21-DEC-2018 18:45
Client ID: VSTID050
Sample Info: VSTID050;VSTID050;2;:ICV
Purge Volume: 5.0
Column phase: DB624

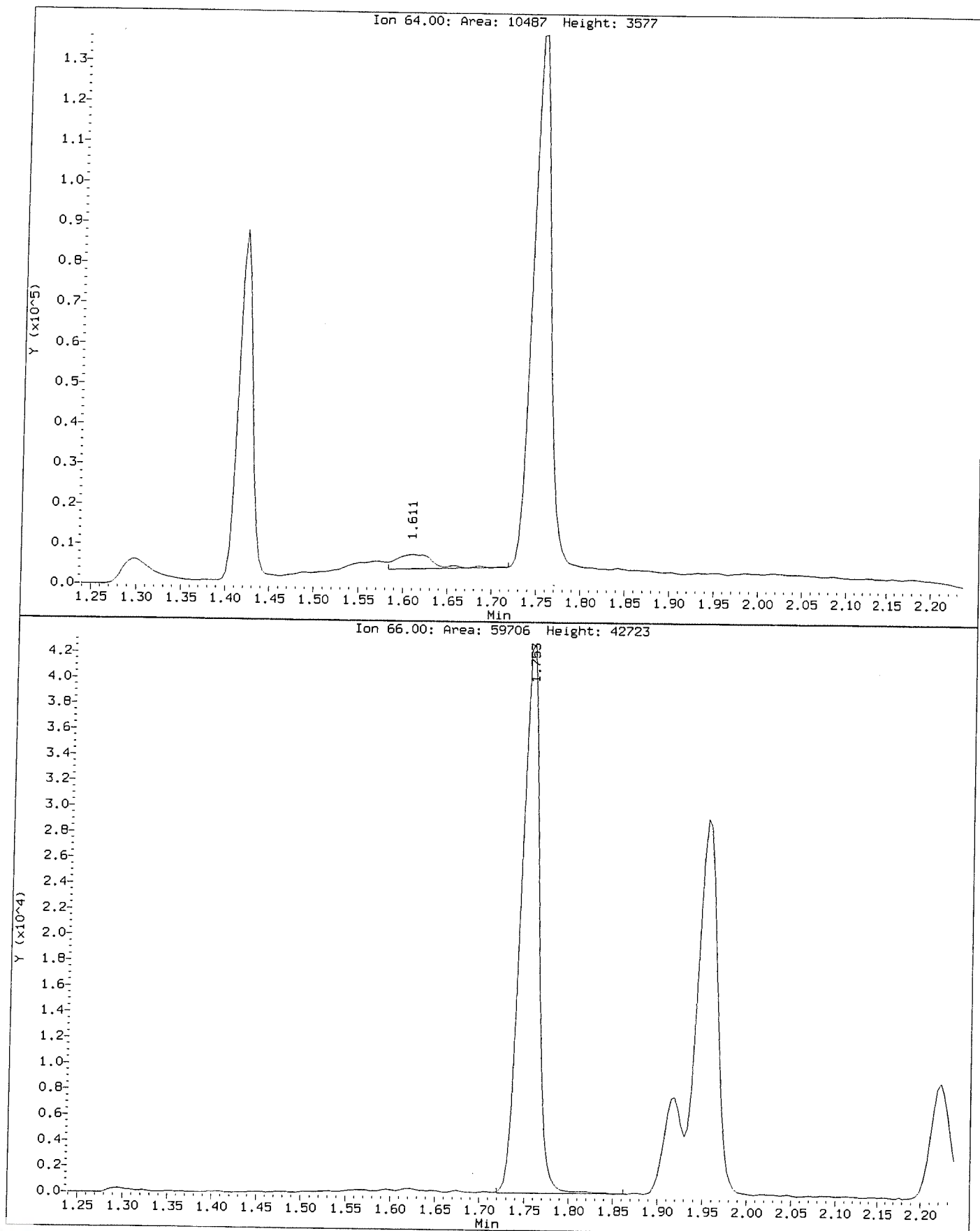
Instrument: V0A9.i
Operator: PC
Column diameter: 0.18

\\NAHSTMS005\Target\chem\voa9,1\U181221.b\U122113.D



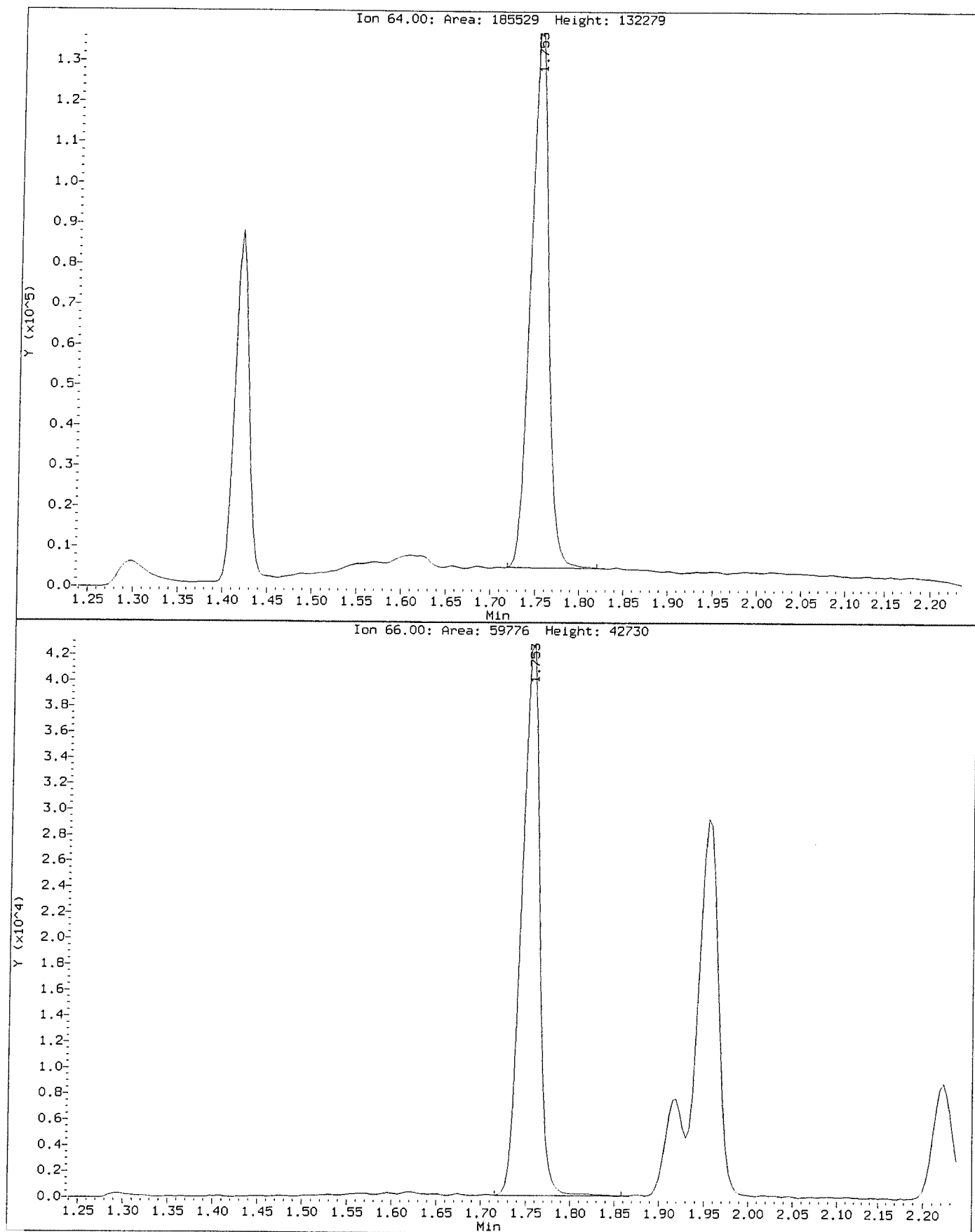
Data File: \\NAHSTW5005\Target\chem\voa9.i\U181221.b\Before\U122113.D
Injection Date: 21-DEC-2018 18:45
Instrument: VDA9.i
Client Sample ID: VSTD050

Compound: Chloroethane
CAS Number: 75-00-3



Data File: \\NAHSTW5005\Target\chem\voa9.i\U181221.b\U122113.D
Injection Date: 21-DEC-2018 18:45
Instrument: VOA9.1
Client Sample ID: VSTD050

Compound: Chloroethane
CAS Number: 75-00-3



MSVOA09 -Logbook

Batch: 34033
 Date: 12-31-2018
 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	12-31-2018 09:44 am	1.00	50 mL	50 mL	U123101a.D	Liquid	Y	r
	<i>not used</i>									
2	BFB	TUNE	12-31-2018 10:09 am	1.00	50 mL	50 mL	U123102.D	Liquid	Y	r
	<i>Auto find/ purged</i>									
3	VSTD050	CCV	12-31-2018 10:33 am	1.00	50 mL	50 mL	U123103.D	Liquid	Y	r
	<i>10 uL cal std/50 mL DI</i>									
4	VLCSW-1812031	LCS	12-31-2018 10:58 am	1.00	50 mL	50 mL	U123104.D	Liquid	Y	r
	<i>4.0 uL cal std/50 mL DI</i>									
5	BLANK	SAMP	12-31-2018 11:22 am	1.00	50 mL	50 mL	U123105.D	Liquid	Y	r
6	VBLKW-181231	MBLK	12-31-2018 11:47 am	1.00	50 mL	50 mL	U123106.D	Liquid	Y	r
7	HS18121264-01	SAMP	12-31-2018 12:12 pm	1.00	50 mL	50 mL	U123107.D	Liquid	Y	>
8	HS18121264-03	SAMP	12-31-2018 12:36 pm	1.00	50 mL	50 mL	U123108.D	Liquid	Y	>
9	HS18121264-04	SAMP	12-31-2018 01:01 pm	1.00	50 mL	50 mL	U123109.D	Liquid	Y	>
10	HS18121264-05	SAMP	12-31-2018 01:26 pm	1.00	50 mL	50 mL	U123110.D	Liquid	Y	>
11	HS18121264-06	SAMP	12-31-2018 01:50 pm	1.00	50 mL	50 mL	U123111.D	Liquid	Y	>
12	HS18121264-02	SAMP	12-31-2018 02:15 pm	5.00	10 mL	50 mL	U123112.D	Liquid	Y	>
13	HS18121264-01MS	MS	12-31-2018 02:40 pm	1.00	50 mL	50 mL	U123113.D	Liquid	Y	>
	<i>3.5 uL cal std/43 mL samp</i>									
14	HS18121264-01MSD	MSD	12-31-2018 03:05 pm	1.00	50 mL	50 mL	U123114.D	Liquid	Y	>
	<i>3.5 uL cal std/43 mL samp</i>									
15	HS18121044-01	SAMP	12-31-2018 03:29 pm	250.00	200 µL	50 mL	U123115.D	Liquid	Y	>
16	HS18121264-02DL	SAMP	12-31-2018 03:54 pm	100.00	500 µL	50 mL	U123116.D	Liquid	Y	>
17	HS18121264-07	SAMP	12-31-2018 04:19 pm	1.00	50 mL	50 mL	U123117.D	Liquid	Y	>
18	HS18121264-08	SAMP	12-31-2018 04:44 pm	1.00	50 mL	50 mL	U123118.D	Liquid	Y	>
19	HS18121264-09	SAMP	12-31-2018 05:09 pm	1.00	50 mL	50 mL	U123119.D	Liquid	Y	>
20	HS18121264-10	SAMP	12-31-2018 05:33 pm	1.00	50 mL	50 mL	U123120.D	Liquid	Y	>
21	HS18121264-11	SAMP	12-31-2018 05:58 pm	1.00	50 mL	50 mL	U123121.D	Liquid	Y	>
22	HS18121267-04	SAMP	12-31-2018 06:23 pm	1.00	50 mL	50 mL	U123122.D	Liquid	Y	>
23	HS18121267-06	SAMP	12-31-2018 06:48 pm	1.00	50 mL	50 mL	U123123.D	Liquid	Y	>
24	HS18121267-07	SAMP	12-31-2018 07:12 pm	1.00	50 mL	50 mL	U123124.D	Liquid	Y	>
25	HS18121267-01	SAMP	12-31-2018 07:37 pm	1.00	50 mL	50 mL	U123125.D	Liquid	Y	>
26	HS18121267-05	SAMP	12-31-2018 08:02 pm	1.00	50 mL	50 mL	U123126.D	Liquid	Y	>
27	HS18121267-02	SAMP	12-31-2018 08:26 pm	20.00	2.5 mL	50 mL	U123127.D	Liquid	Y	>
28	HS18121267-02DL	SAMP	12-31-2018 08:51 pm	200.00	250 µL	50 mL	U123128.D	Liquid	Y	>
29	VSTD050-END	CCV	12-31-2018 09:16 pm	1.00	50 mL	50 mL	U123129.D	Liquid	Y	r
	<i>10 uL cal std/50 mL DI</i>									



MSVOA09 -Logbook

Chemical	Value
SURR SPK ID	30502-57-03
IS ID	30502-57-04
ICV STD ID	30603-48-01
LCS/MS ID	30603-48-01
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.: HS18121264

	CLIENT SAMPLE NO.	SMC1 (DCE) #	SMC2 #	SMC3 (TOL) #	OTHER #	TOT OUT
	=====	=====	=====	=====	=====	=====
01	VLCSW-181231	101	103	95	106	0
02	VBLKW-181231	95	90	105	99	0
03	HS18121264-0	97	90	106	100	0
04	HS18121264-0	97	90	104	98	0
05	HS18121264-0	97	90	108	100	0
06	HS18121264-0	98	91	104	97	0
07	HS18121264-0	98	92	109	102	0
08	HS18121264-0	98	92	104	97	0
09	HS18121264-0	95	92	106	103	0
10	HS18121264-0	94	92	106	102	0
11	HS18121264-0	98	90	105	101	0
12	HS18121264-0	98	91	103	97	0
13	HS18121264-0	98	90	106	97	0
14	HS18121264-0	100	91	106	97	0
15	HS18121264-1	99	91	106	98	0
16	HS18121264-1	100	91	107	98	0
17						
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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.

VBKWK-181231

Lab Name: ALS LABORATORY GROUP

Contract:

Lab Code: ALS-HS

Case No.:

SAS No.:

SDG No.: HS18121264

Lab File ID: U123106

Lab Sample ID: VBKWK-181231

Date Analyzed: 12/31/18

Time Analyzed: 1147

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-181231	VLCSW-1812031	U123104	1058
02	HS18121264-0	HS18121264-01	U123107	1212
03	HS18121264-0	HS18121264-03	U123108	1236
04	HS18121264-0	HS18121264-04	U123109	1301
05	HS18121264-0	HS18121264-05	U123110	1326
06	HS18121264-0	HS18121264-06	U123111	1350
07	HS18121264-0	HS18121264-02	U123112	1415
08	HS18121264-0	HS18121264-01M	U123113	1440
09	HS18121264-0	HS18121264-01M	U123114	1505
10	HS18121264-0	HS18121264-02D	U123116	1554
11	HS18121264-0	HS18121264-07	U123117	1619
12	HS18121264-0	HS18121264-08	U123118	1644
13	HS18121264-0	HS18121264-09	U123119	1709
14	HS18121264-1	HS18121264-10	U123120	1733
15	HS18121264-1	HS18121264-11	U123121	1758
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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.: HS18121264
Lab File ID: U123102 BFB Injection Date: 12/31/18
Instrument ID: VOA9 BFB Injection Time: 1009
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	19.6
75	30.0 - 60.0% of mass 95	50.3
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	0.5 (0.7)1
174	Greater than 50.0% of mass 95	67.3
175	5.0 - 9.0% of mass 174	4.9 (7.3)1
176	95.0 - 101.0% of mass 174	65.2 (96.8)1
177	5.0 - 9.0% of mass 176	4.3 (6.6)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	U123103	12/31/18	1033
02	VLCSW-181231	VLCSW-1812031	U123104	12/31/18	1058
03	VBLKW-181231	VBLKW-181231	U123106	12/31/18	1147
04	HS18121264-0	HS18121264-01	U123107	12/31/18	1212
05	HS18121264-0	HS18121264-03	U123108	12/31/18	1236
06	HS18121264-0	HS18121264-04	U123109	12/31/18	1301
07	HS18121264-0	HS18121264-05	U123110	12/31/18	1326
08	HS18121264-0	HS18121264-06	U123111	12/31/18	1350
09	HS18121264-0	HS18121264-02	U123112	12/31/18	1415
10	HS18121264-0	HS18121264-01M	U123113	12/31/18	1440
11	HS18121264-0	HS18121264-01M	U123114	12/31/18	1505
12	HS18121264-0	HS18121264-02D	U123116	12/31/18	1554
13	HS18121264-0	HS18121264-07	U123117	12/31/18	1619
14	HS18121264-0	HS18121264-08	U123118	12/31/18	1644
15	HS18121264-0	HS18121264-09	U123119	12/31/18	1709
16	HS18121264-1	HS18121264-10	U123120	12/31/18	1733
17	HS18121264-1	HS18121264-11	U123121	12/31/18	1758
18	VSTD050-END	VSTD050-END	U123129	12/31/18	2116
19					
20					
21					
22					

page 1 of 1

FORM V VOA



FORM 7
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: ALS LABORATORY GROUP

Contract:

Lab Code: ALS-HS

Case No.:

SAS No.:

SDG No.: HS18121264

Instrument ID: VOA9

Calibration Date: 12/31/18

Time: 1033

Lab File ID: U123103

Init. Calib. Date(s): 12/21/18

12/21/18

Heated Purge: (Y/N) N

Init. Calib. Times: 1349

1755

GC Column: DB624

ID: 0.18 (mm)

COMPOUND	SAMPLE AMOUNT	CAL50 AMOUNT	CURVE	%D	MAX %d
cis-1,3-Dichloropropene	51.52	50.00	LINR	3.0	20.0
trans-1,3-Dichloropropene	51.47	50.00	LINR	2.9	20.0
1,3-Dichlorobenzene	47.79	50.00	AVRG	4.4	20.0
2,2-Dichloropropane	55.99	50.00	AVRG	11.9	20.0
1,1-Dichloropropene	49.49	50.00	AVRG	1.0	20.0
Dibromomethane	53.10	50.00	AVRG	6.2	20.0
1,2-Dibromoethane	53.23	50.00	AVRG	6.4	20.0
trans-1,2-Dichloroethene	41.94	50.00	AVRG	16.1	20.0
1,1,1,2-Tetrachloroethane	50.72	50.00	LINR	1.4	20.0
1,1,1-Trichloroethane	51.67	50.00	AVRG	3.3	20.0
1,1,2,2-Tetrachloroethane	48.91	50.00	AVRG	2.1	20.0
1,1,2-Trichloroethane	52.12	50.00	AVRG	4.2	20.0
1,1-Dichloroethane	48.72	50.00	AVRG	2.5	20.0
1,1-Dichloroethene	48.67	50.00	AVRG	2.6	20.0
Trichloroethene	50.68	50.00	AVRG	1.3	20.0
1,2,3-Trichlorobenzene	48.06	50.00	LINR	3.8	20.0
Trichlorofluoromethane	48.48	50.00	LINR	3.0	20.0
1,2,4-Trichlorobenzene	50.63	50.00	AVRG	1.2	20.0
1,2,4-Trimethylbenzene	48.36	50.00	AVRG	3.2	20.0
Tetrachloroethene	46.47	50.00	AVRG	7.0	20.0
1,2-Dichlorobenzene	48.81	50.00	AVRG	2.3	20.0
1,2-Dichloroethane	53.94	50.00	LINR	7.8	20.0
1,2-Dichloropropane	52.12	50.00	AVRG	4.2	20.0
1,3,5-Trimethylbenzene	48.43	50.00	AVRG	3.1	20.0
1,3-Dichloropropane	52.80	50.00	AVRG	5.6	20.0
1,4-Dichlorobenzene	47.52	50.00	AVRG	4.9	20.0
Toluene	51.97	50.00	AVRG	3.9	20.0
2-Butanone	98.82	100.00	LINR	1.1	20.0
2-Chlorotoluene	47.80	50.00	AVRG	4.4	20.0
2-Hexanone	103.05	100.00	AVRG	3.0	20.0
4-Chlorotoluene	48.67	50.00	AVRG	2.6	20.0
tert-Butylbenzene	45.88	50.00	AVRG	8.2	20.0
4-Methyl-2-Pentanone	103.73	100.00	AVRG	3.7	20.0
Acetone	91.85	100.00	LINR	8.1	20.0
Benzene	51.66	50.00	AVRG	3.3	20.0
Bromobenzene	49.41	50.00	AVRG	1.1	20.0
Bromochloromethane	59.47	50.00	LINR	18.9	20.0



FORM 7
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: ALS LABORATORY GROUP Contract:
 Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS18121264
 Instrument ID: VOA9 Calibration Date: 12/31/18 Time: 1033
 Lab File ID: U123103 Init. Calib. Date(s): 12/21/18 12/21/18
 Heated Purge: (Y/N) N Init. Calib. Times: 1349 1755
 GC Column: DB624 ID: 0.18 (mm)

COMPOUND	SAMPLE AMOUNT	CAL50 AMOUNT	CURVE	%D	MAX %d
Bromodichloromethane	54.78	50.00	AVRG	9.5	20.0
Bromoform	47.71	50.00	LINR	4.5	20.0
Bromomethane	56.42	50.00	LINR	12.8	20.0
Carbon Disulfide	80.92	100.00	AVRG	19.0	20.0
Carbon Tetrachloride	45.96	50.00	LINR	8.0	20.0
Chlorobenzene	51.03	50.00	AVRG	2.0	20.0
Chloroethane	50.03	50.00	2ORDR	0.0	20.0
Chloroform	51.29	50.00	AVRG	2.5	20.0
Chloromethane	50.96	50.00	LINR	1.9	20.0
cis-1,2-Dichloroethene	51.44	50.00	AVRG	2.8	20.0
Dibromochloromethane	51.58	50.00	LINR	3.1	20.0
Dichlorodifluoromethane	43.54	50.00	LINR	12.9	20.0
Ethylbenzene	50.24	50.00	AVRG	0.4	20.0
Hexachlorobutadiene	42.73	50.00	AVRG	14.5	20.0
Isopropylbenzene	48.72	50.00	AVRG	2.5	20.0
m,p-Xylenes	103.52	100.00	AVRG	3.5	20.0
Methylene Chloride	42.81	50.00	LINR	14.3	20.0
n-Butylbenzene	45.51	50.00	AVRG	8.9	20.0
n-Propylbenzene	47.50	50.00	AVRG	5.0	20.0
Naphthalene	49.55	50.00	2ORDR	0.9	20.0
o-Xylene	51.37	50.00	AVRG	2.7	20.0
sec-Butylbenzene	45.01	50.00	AVRG	9.9	20.0
Styrene	54.21	50.00	AVRG	8.4	20.0
Vinyl Chloride	49.80	50.00	LINR	0.4	20.0
1,2,3-Trichloropropane	50.71	50.00	AVRG	1.4	20.0
p-Isopropyltoluene	46.40	50.00	AVRG	7.2	20.0
1,2-Dibromo-3-Chloropropane	46.85	50.00	LINR	6.3	20.0
1,2-Dichloroethane-d4	49.68	50.00	LINR	0.6	20.0
Dibromofluoromethane	50.93	50.00	LINR	1.8	20.0
Toluene-d8	47.70	50.00	LINR	4.6	20.0
4-Bromofluorobenzene	50.59	50.00	LINR	1.1	20.0



FORM 7
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: ALS LABORATORY GROUP Contract:
 Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS18121264
 Instrument ID: VOA9 Calibration Date: 12/31/18 Time: 2116
 Lab File ID: U123129 Init. Calib. Date(s): 12/21/18 12/21/18
 Heated Purge: (Y/N) N Init. Calib. Times: 1349 1755
 GC Column: DB624 ID: 0.18 (mm)

COMPOUND	SAMPLE AMOUNT	CAL50 AMOUNT	CURVE	%D	MAX %d
cis-1,3-Dichloropropene	51.20	50.00	LINR	2.4	50.0
trans-1,3-Dichloropropene	51.10	50.00	LINR	2.2	50.0
1,3-Dichlorobenzene	50.10	50.00	AVRG	0.2	50.0
2,2-Dichloropropane	49.93	50.00	AVRG	0.1	50.0
1,1-Dichloropropene	52.91	50.00	AVRG	5.8	50.0
Dibromomethane	57.28	50.00	AVRG	14.5	50.0
1,2-Dibromoethane	56.18	50.00	AVRG	12.3	50.0
trans-1,2-Dichloroethene	57.60	50.00	AVRG	15.2	50.0
1,1,1,2-Tetrachloroethane	51.51	50.00	LINR	3.0	50.0
1,1,1-Trichloroethane	56.86	50.00	AVRG	13.7	50.0
1,1,2,2-Tetrachloroethane	55.54	50.00	AVRG	11.0	50.0
1,1,2-Trichloroethane	57.81	50.00	AVRG	15.6	50.0
1,1-Dichloroethane	59.09	50.00	AVRG	18.1	50.0
1,1-Dichloroethene	56.01	50.00	AVRG	12.0	50.0
Trichloroethene	55.09	50.00	AVRG	10.1	50.0
1,2,3-Trichlorobenzene	50.43	50.00	LINR	0.8	50.0
Trichlorofluoromethane	56.54	50.00	LINR	13.0	50.0
1,2,4-Trichlorobenzene	52.69	50.00	AVRG	5.3	50.0
1,2,4-Trimethylbenzene	52.08	50.00	AVRG	4.1	50.0
Tetrachloroethene	49.95	50.00	AVRG	0.0	50.0
1,2-Dichlorobenzene	51.18	50.00	AVRG	2.3	50.0
1,2-Dichloroethane	58.04	50.00	LINR	16.0	50.0
1,2-Dichloropropane	55.95	50.00	AVRG	11.9	50.0
1,3,5-Trimethylbenzene	55.62	50.00	AVRG	11.2	50.0
1,3-Dichloropropane	56.73	50.00	AVRG	13.4	50.0
1,4-Dichlorobenzene	48.95	50.00	AVRG	2.1	50.0
Toluene	55.93	50.00	AVRG	11.8	50.0
2-Butanone	119.73	100.00	LINR	19.7	50.0
2-Chlorotoluene	55.16	50.00	AVRG	10.3	50.0
2-Hexanone	118.74	100.00	AVRG	18.7	50.0
4-Chlorotoluene	55.20	50.00	AVRG	10.4	50.0
tert-Butylbenzene	51.29	50.00	AVRG	2.5	50.0
4-Methyl-2-Pentanone	114.86	100.00	AVRG	14.8	50.0
Acetone	113.02	100.00	LINR	13.0	50.0
Benzene	54.90	50.00	AVRG	9.8	50.0
Bromobenzene	54.12	50.00	AVRG	8.2	50.0
Bromochloromethane	67.36	50.00	LINR	34.7	50.0



FORM 7
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: ALS LABORATORY GROUP

Contract:

Lab Code: ALS-HS

Case No.:

SAS No.:

SDG No.: HS18121264

Instrument ID: VOA9

Calibration Date: 12/31/18

Time: 2116

Lab File ID: U123129

Init. Calib. Date(s): 12/21/18

12/21/18

Heated Purge: (Y/N) N

Init. Calib. Times: 1349

1755

GC Column: DB624

ID: 0.18 (mm)

COMPOUND	SAMPLE AMOUNT	CAL50 AMOUNT	CURVE	%D	MAX %d
Bromodichloromethane	58.59	50.00	AVRG	17.1	50.0
Bromoform	49.66	50.00	LINR	0.6	50.0
Bromomethane	62.94	50.00	LINR	25.8	50.0
Carbon Disulfide	90.69	100.00	AVRG	9.3	50.0
Carbon Tetrachloride	48.98	50.00	LINR	2.0	50.0
Chlorobenzene	52.53	50.00	AVRG	5.0	50.0
Chloroethane	58.47	50.00	2ORDR	16.9	50.0
Chloroform	59.45	50.00	AVRG	18.9	50.0
Chloromethane	58.33	50.00	LINR	16.6	50.0
cis-1,2-Dichloroethene	58.78	50.00	AVRG	17.5	50.0
Dibromochloromethane	52.82	50.00	LINR	5.6	50.0
Dichlorodifluoromethane	49.68	50.00	LINR	0.6	50.0
Ethylbenzene	52.37	50.00	AVRG	4.7	50.0
Hexachlorobutadiene	45.10	50.00	AVRG	9.8	50.0
Isopropylbenzene	55.88	50.00	AVRG	11.7	50.0
m,p-Xylenes	106.22	100.00	AVRG	6.2	50.0
Methylene Chloride	61.23	50.00	LINR	22.4	50.0
n-Butylbenzene	50.31	50.00	AVRG	0.6	50.0
n-Propylbenzene	55.36	50.00	AVRG	10.7	50.0
Naphthalene	52.32	50.00	2ORDR	4.6	50.0
o-Xylene	55.65	50.00	AVRG	11.3	50.0
sec-Butylbenzene	49.64	50.00	AVRG	0.7	50.0
Styrene	58.47	50.00	AVRG	16.9	50.0
Vinyl Chloride	58.44	50.00	LINR	16.8	50.0
1,2,3-Trichloropropane	57.10	50.00	AVRG	14.2	50.0
p-Isopropyltoluene	50.77	50.00	AVRG	1.5	50.0
1,2-Dibromo-3-Chloropropane	47.03	50.00	LINR	5.9	50.0
1,2-Dichloroethane-d4	53.28	50.00	LINR	6.5	50.0
Dibromofluoromethane	53.94	50.00	LINR	7.8	50.0
Toluene-d8	47.63	50.00	LINR	4.7	50.0
4-Bromofluorobenzene	54.92	50.00	LINR	9.8	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.: HS18121264
 Lab File ID (Standard): U123103 Date Analyzed: 12/31/18
 Instrument ID: VOA9 Time Analyzed: 1033
 GC Column: DB624 ID: 0.18 (mm) Heated Purge: (Y/N) N

	IS1 (CBZ)		IS2 (DFB)		IS3 (DCB)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
=====	=====	=====	=====	=====	=====	=====
12 HOUR STD	684821	8.25	742061	5.63	326918	10.24
UPPER LIMIT	1369642	8.75	1484122	6.13	653836	10.74
LOWER LIMIT	342411	7.75	371031	5.13	163459	9.74
=====	=====	=====	=====	=====	=====	=====
CLIENT						
SAMPLE NO.						
=====	=====	=====	=====	=====	=====	=====
01 VLCSW-181231	667519	8.25	714953	5.63	332275	10.24
02 VBLKW-181231	572979	8.25	633285	5.63	261937	10.24
03 HS18121264-0	551162	8.25	611791	5.63	256203	10.24
04 HS18121264-0	517046	8.25	572724	5.63	237333	10.24
05 HS18121264-0	505187	8.25	575227	5.63	238641	10.24
06 HS18121264-0	500797	8.25	550588	5.63	229346	10.24
07 HS18121264-0	493368	8.25	567528	5.63	237208	10.24
08 HS18121264-0	503561	8.25	558587	5.63	229210	10.24
09 HS18121264-0	515534	8.25	562528	5.63	249059	10.24
10 HS18121264-0	537892	8.25	589023	5.63	259267	10.24
11 HS18121264-0	477512	8.25	534748	5.63	221806	10.24
12 HS18121264-0	501479	8.25	547285	5.63	206619	10.24
13 HS18121264-0	487776	8.25	544252	5.63	220262	10.24
14 HS18121264-0	483104	8.25	537498	5.63	218149	10.24
15 HS18121264-1	473469	8.25	526520	5.63	215157	10.24
16 HS18121264-1	502773	8.25	560248	5.63	221905	10.24
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.: HS18121264

Lab File ID (Standard): U123103

Date Analyzed: 12/31/18

Instrument ID: VOA9

Time Analyzed: 1033

GC Column: DB624 ID: 0.18 (mm)

Heated Purge: (Y/N) N

	IS4 AREA #	RT #	AREA #	RT #	AREA #	RT #
=====	=====	=====	=====	=====	=====	=====
12 HOUR STD	402341	4.90				
UPPER LIMIT	804682	5.40				
LOWER LIMIT	201171	4.40				
=====	=====	=====	=====	=====	=====	=====
CLIENT SAMPLE NO.						
=====	=====	=====	=====	=====	=====	=====
01 VLCSW-181231	390822	4.90				
02 VBLKW-181231	362742	4.89				
03 HS18121264-0	344705	4.90				
04 HS18121264-0	323139	4.90				
05 HS18121264-0	327297	4.89				
06 HS18121264-0	311084	4.90				
07 HS18121264-0	320083	4.90				
08 HS18121264-0	315141	4.89				
09 HS18121264-0	320347	4.90				
10 HS18121264-0	337325	4.89				
11 HS18121264-0	309861	4.90				
12 HS18121264-0	311257	4.90				
13 HS18121264-0	305469	4.90				
14 HS18121264-0	301218	4.90				
15 HS18121264-1	294345	4.90				
16 HS18121264-1	314796	4.89				
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\U181231.b\U123102.D

Page 1

Date : 31-DEC-2018 10:09

Client ID: BFB

Instrument: VOA9.i

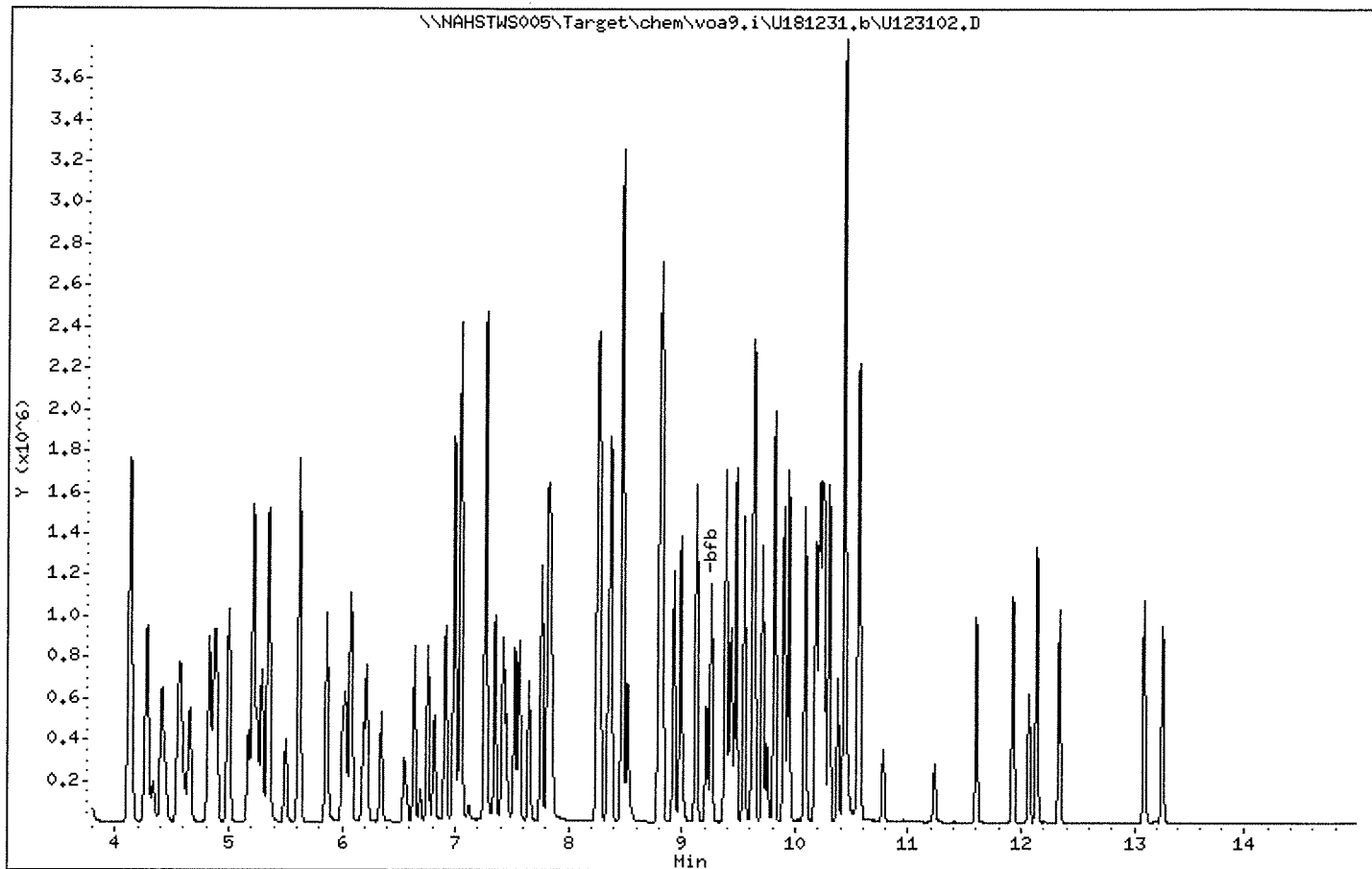
Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25



Data File: \\NAHSTHS005\Target\chem\voa9.i\U181231.b\U123102.D

Page 2

Date : 31-DEC-2018 10:09

Client ID: BFB

Instrument: VOA9.i

Sample Info: BFB;BFB;3;;BFB

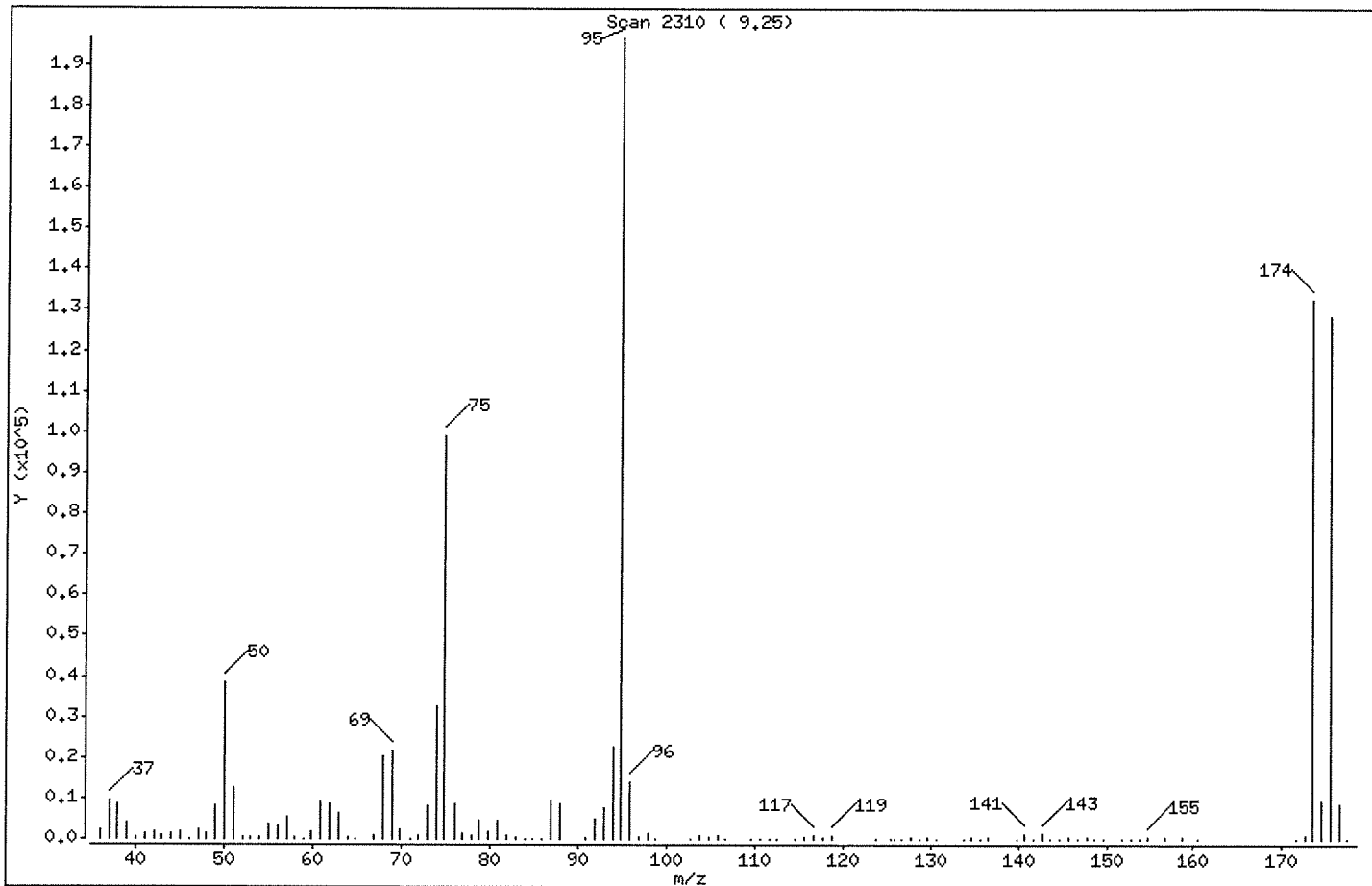
Volume Injected (uL): 2.0

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	19.62
75	30.00 - 60.00% of mass 95	50.25
96	5.00 - 9.00% of mass 95	7.04
173	Less than 2.00% of mass 174	0.48 (0.72)
174	Greater than 50.00% of mass 95	67.33
175	5.00 - 9.00% of mass 174	4.93 (7.33)
176	95.00 - 101.00% of mass 174	65.19 (96.83)
177	5.00 - 9.00% of mass 176	4.30 (6.59)

Data File: \\NAHSTWS005\Target\chem\voa9.i\U181231.b\U123102.D

Page 3

Date : 31-DEC-2018 10:09

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: U123102.D
 Spectrum: Scan 2310 (9.25)
 Location of Maximum: 94.90
 Number of points: 112

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	2134	64.90	226	96.90	512	139.80	96
37.00	9412	66.80	730	97.90	1257	140.70	1527
38.00	8625	67.90	20400	98.70	50	141.70	165
39.00	4284	68.90	21688	102.70	90	142.70	1305
39.90	678	69.90	2442	103.80	753	143.60	128
41.00	1482	71.00	155	104.80	321	144.70	115
42.00	1859	71.90	962	105.80	696	145.70	247
43.00	952	72.90	8293	106.70	187	146.70	109
43.90	1415	73.90	32456	109.70	97	147.70	373
45.00	1953	74.90	98832	110.70	116	148.60	133
46.00	189	76.00	8533	111.80	114	149.70	182
47.00	2470	76.90	1302	112.60	164	151.70	64
47.90	1269	77.90	833	114.70	192	152.70	101
48.90	8266	78.80	4643	115.70	621	153.70	108
50.00	38592	79.90	1637	116.80	868	154.70	399
51.00	12701	80.80	4475	117.70	521	156.70	259
52.00	540	81.80	1069	118.80	816	158.70	229
52.90	273	82.90	412	123.70	114	160.70	161
54.00	330	83.90	75	125.50	53	171.80	169
55.00	3720	84.80	54	125.90	61	172.80	952
56.00	3333	85.90	135	126.70	79	173.70	132416
57.00	5529	86.90	9295	127.80	671	174.70	9704
57.90	393	87.90	8478	128.80	191	175.70	128216
58.90	218	90.90	656	129.70	664	176.70	8449
59.90	1636	91.90	4997	130.70	175	177.60	181
60.90	9107	92.90	7793	133.70	58		
61.90	8669	93.90	22392	134.70	286		
62.90	6536	94.90	196672	135.60	60		
63.90	553	95.90	13851	136.60	296		



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181231.b\U123103.D Page 1
 Report Date: 30-Jan-2019 17:58

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U181231.b\U123103.D
 Lab Smp Id: VSTD050 Client Smp ID: VSTD050
 Inj Date : 31-DEC-2018 10:33
 Operator : PC Inst ID: VOA9.i
 Smp Info : VSTD050;VSTD050;2;;
 Misc Info : 180315V9;WATER;0;1;
 Comment :
 Method : \\NAHSTWS005\Target\chem\voa9.i\U181231.b\8260C.m
 Meth Date : 30-Jan-2019 17:58 VOA9.i Quant Type: ISTD
 Cal Date : 21-DEC-2018 16:41 Cal File: U122108.D
 Als bottle: 3 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	AMOUNTS				CAL-AMT (ug/l)	ON-COL (ug/l)
			MASS	RT	EXP RT	REL RT		
* 1 Pentafluorobenzene	168		4.898	4.898	(1.000)	402341	50.0000	
* 36 1,4-Difluorobenzene	114		5.629	5.629	(1.000)	742061	50.0000	
* 47 Chlorobenzene-d5	117		8.249	8.249	(1.000)	684821	50.0000	
* 70 1,4-Dichlorobenzene-d4	152		10.236	10.236	(1.000)	326918	50.0000	
\$ 30 Dibromofluoromethane	113		4.834	4.834	(0.987)	226018	50.0000	50.93
\$ 35 1,2-Dichloroethane-d4	65		5.179	5.179	(1.057)	283037	50.0000	49.68
\$ 48 Toluene-d8	98		6.990	6.990	(0.847)	844942	50.0000	47.70
\$ 69 4-Bromofluorobenzene	95		9.257	9.257	(1.122)	340476	50.0000	50.59
60 1,1,1,2-Tetrachloroethane	131		8.350	8.350	(1.012)	220450	50.0000	50.72
31 1,1,1-Trichloroethane	97		4.834	4.834	(0.987)	328275	50.0000	51.67
68 1,1,2,2-Tetrachloroethane	83		9.392	9.392	(0.918)	360135	50.0000	48.91
53 1,1,2-Trichloroethane	83		7.421	7.421	(0.900)	212682	50.0000	52.12
22 1,1-Dichloroethane	63		3.612	3.612	(0.737)	422213	50.0000	48.72
11 1,1-Dichloroethene	96		2.412	2.412	(0.493)	186207	50.0000	48.67
32 1,1-Dichloropropene	75		5.010	5.010	(0.890)	326792	50.0000	49.49
93 1,2,3-Trichlorobenzene	180		12.335	12.335	(1.205)	295972	50.0000	48.06
71 1,2,3-Trichloropropane	75		9.426	9.426	(0.921)	388230	50.0000	50.71
90 1,2,4-Trichlorobenzene	180		11.923	11.923	(1.165)	306451	50.0000	50.63
79 1,2,4-Trimethylbenzene	105		9.943	9.943	(0.971)	827345	50.0000	48.36
89 1,2-Dibromo-3-Chloropropane	155		11.233	11.233	(1.097)	53084	50.0000	46.85
57 1,2-Dibromoethane	107		7.852	7.852	(0.952)	250185	50.0000	53.23
88 1,2-Dichlorobenzene	146		10.570	10.570	(1.033)	473845	50.0000	48.81



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181231.b\U123103.D Page 2
 Report Date: 30-Jan-2019 17:58

Compounds	QUANT SIG				AMOUNTS		
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/l)	ON-COL (ug/l)
33 1,2-Dichloroethane	62	5.258	5.258	(0.934)	360286	50.0000	53.94
42 1,2-Dichloropropane	63	6.082	6.082	(1.081)	273316	50.0000	52.12
75 1,3,5-Trimethylbenzene	105	9.625	9.625	(0.940)	795812	50.0000	48.43
83 1,3-Dichlorobenzene	146	10.180	10.180	(0.995)	463975	50.0000	47.79
54 1,3-Dichloropropane	76	7.563	7.563	(0.917)	464087	50.0000	52.80
84 1,4-Dichlorobenzene	146	10.255	10.255	(1.002)	486486	50.0000	47.52
26 2,2-Dichloropropane	77	4.283	4.283	(0.874)	292371	50.0000	55.99
24 2-Butanone	43	4.343	4.343	(0.887)	260108	100.000	98.82
76 2-Chlorotoluene	91	9.546	9.546	(0.933)	720061	50.0000	47.80
52 2-Hexanone	43	7.649	7.649	(0.927)	392453	100.000	103.05
77 4-Chlorotoluene	91	9.640	9.640	(0.942)	847233	50.0000	48.67
82 p-Isopropyltoluene	119	10.210	10.210	(0.997)	802767	50.0000	46.40
45 4-Methyl-2-Pentanone	43	6.915	6.915	(0.838)	568363	100.000	103.73
10 Acetone	43	2.487	2.487	(0.508)	144657	100.000	91.85
37 Benzene	78	5.224	5.224	(0.928)	1020230	50.0000	51.66
74 Bromobenzene	156	9.381	9.381	(0.917)	249621	50.0000	49.41
29 Bromochloromethane	128	4.560	4.560	(0.931)	124257	50.0000	59.47
39 Bromodichloromethane	83	6.348	6.348	(1.128)	305483	50.0000	54.78
66 Bromoform	173	8.984	8.984	(1.089)	140000	50.0000	47.71 (T)
6 Bromomethane	94	1.681	1.681	(0.343)	140629	50.0000	56.42
19 Carbon Disulfide	76	2.600	2.600	(0.531)	1128067	100.000	80.92
34 Carbon Tetrachloride	117	4.999	4.999	(0.888)	247435	50.0000	45.96
59 Chlorobenzene	112	8.275	8.275	(1.003)	671575	50.0000	51.03
7 Chloroethane	64	1.764	1.764	(0.360)	178528	50.0000	50.03 (M)
28 Chloroform	83	4.662	4.662	(0.952)	427996	50.0000	51.29
3 Chloromethane	50	1.351	1.351	(0.276)	218150	50.0000	50.96
27 cis-1,2-Dichloroethene	96	4.294	4.294	(0.877)	272055	50.0000	51.44
46 cis-1,3-Dichloropropene	75	6.761	6.761	(1.201)	436890	50.0000	51.52
55 Dibromochloromethane	129	7.758	7.758	(0.940)	232271	50.0000	51.58
44 Dibromomethane	93	6.191	6.191	(1.100)	160706	50.0000	53.10
2 Dichlorodifluoromethane	85	1.217	1.217	(0.248)	215280	50.0000	43.54
61 Ethylbenzene	106	8.373	8.373	(1.015)	339055	50.0000	50.24
91 Hexachlorobutadiene	225	12.065	12.065	(1.179)	99094	50.0000	42.73
67 Isopropylbenzene	105	9.126	9.126	(1.106)	948838	50.0000	48.72
62 m,p-Xylenes	106	8.474	8.474	(1.027)	858931	100.000	103.52
17 Methylene Chloride	84	2.881	2.881	(0.588)	213737	50.0000	42.81
87 n-Butylbenzene	91	10.555	10.555	(1.031)	759878	50.0000	45.51
73 n-Propylbenzene	91	9.475	9.475	(0.926)	1160336	50.0000	47.50
92 Naphthalene	128	12.133	12.133	(1.185)	986425	50.0000	49.55
63 o-Xylene	106	8.811	8.811	(1.068)	429981	50.0000	51.37
81 sec-Butylbenzene	105	10.086	10.086	(0.985)	924047	50.0000	45.01
64 Styrene	104	8.826	8.826	(1.070)	753849	50.0000	54.21
78 tert-Butylbenzene	119	9.902	9.902	(0.967)	651546	50.0000	45.88
56 Tetrachloroethene	164	7.526	7.526	(0.912)	166613	50.0000	46.47
50 Toluene	91	7.049	7.049	(0.855)	1058726	50.0000	51.97
20 trans-1,2-Dichloroethene	96	3.151	3.151	(0.643)	197538	50.0000	41.94
51 trans-1,3-Dichloropropene	75	7.263	7.263	(1.290)	375520	50.0000	51.47
38 Trichloroethene	130	5.865	5.865	(1.042)	241637	50.0000	50.68
8 Trichlorofluoromethane	101	1.966	1.966	(0.402)	321380	50.0000	48.48
5 Vinyl Chloride	62	1.430	1.430	(0.292)	283395	50.0000	49.80



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181231.b\U123103.D Page 3
Report Date: 30-Jan-2019 17:58

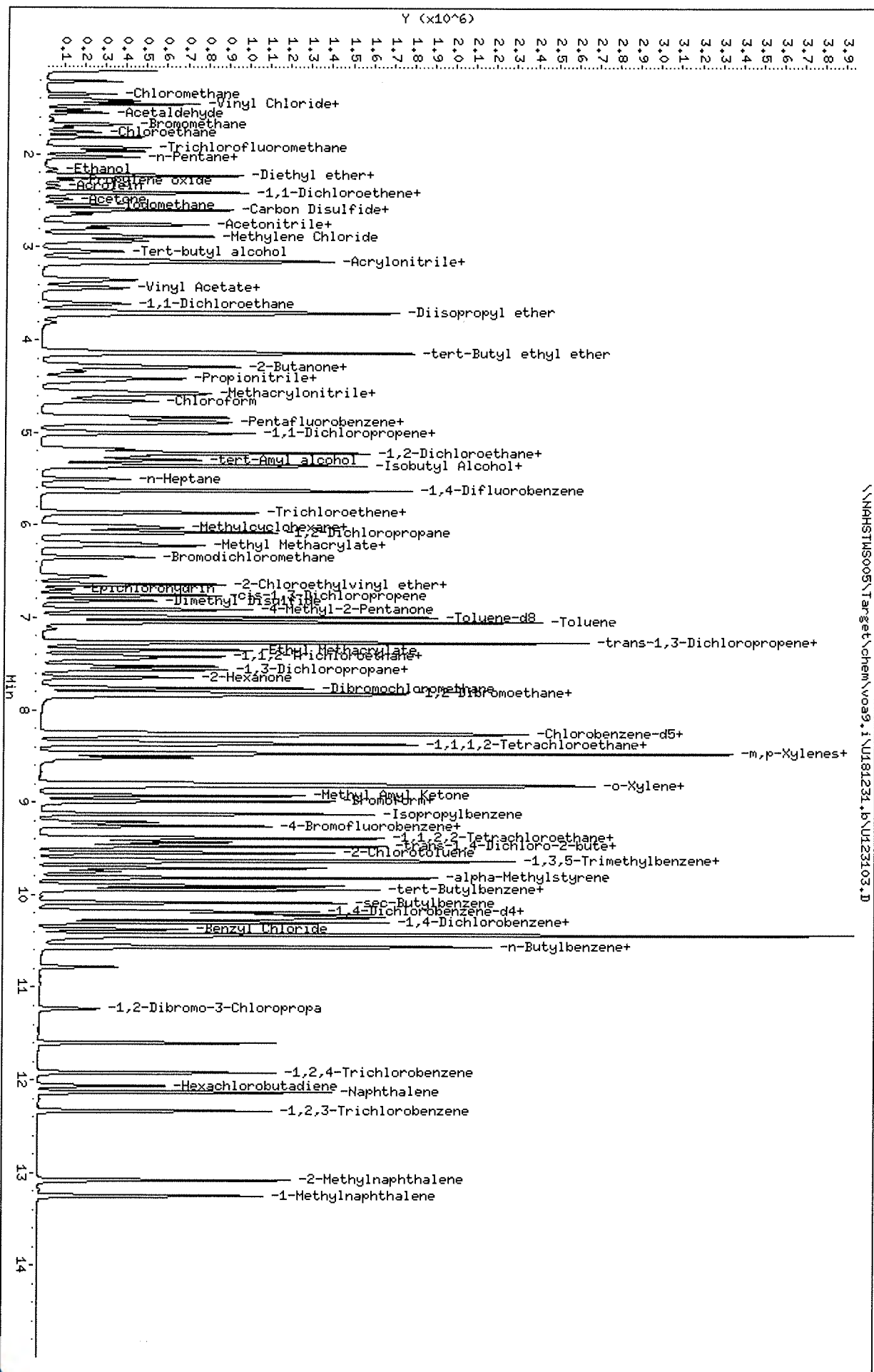
QC Flag Legend

T - Target compound detected outside RT window.
M - Compound response manually integrated.



Data File: \\NAHSTMS005\Target\chem\voa9.i\U181231.b\U123103.D
 Date : 31-DEC-2018 10:33
 Client ID: VSTD050
 Sample Info: VSTD050;VSTD050;2;;
 Purge Volume: 5.0
 Column phase: DB624

Instrument: VOA9.i
 Operator: PC
 Column diameter: 0.18

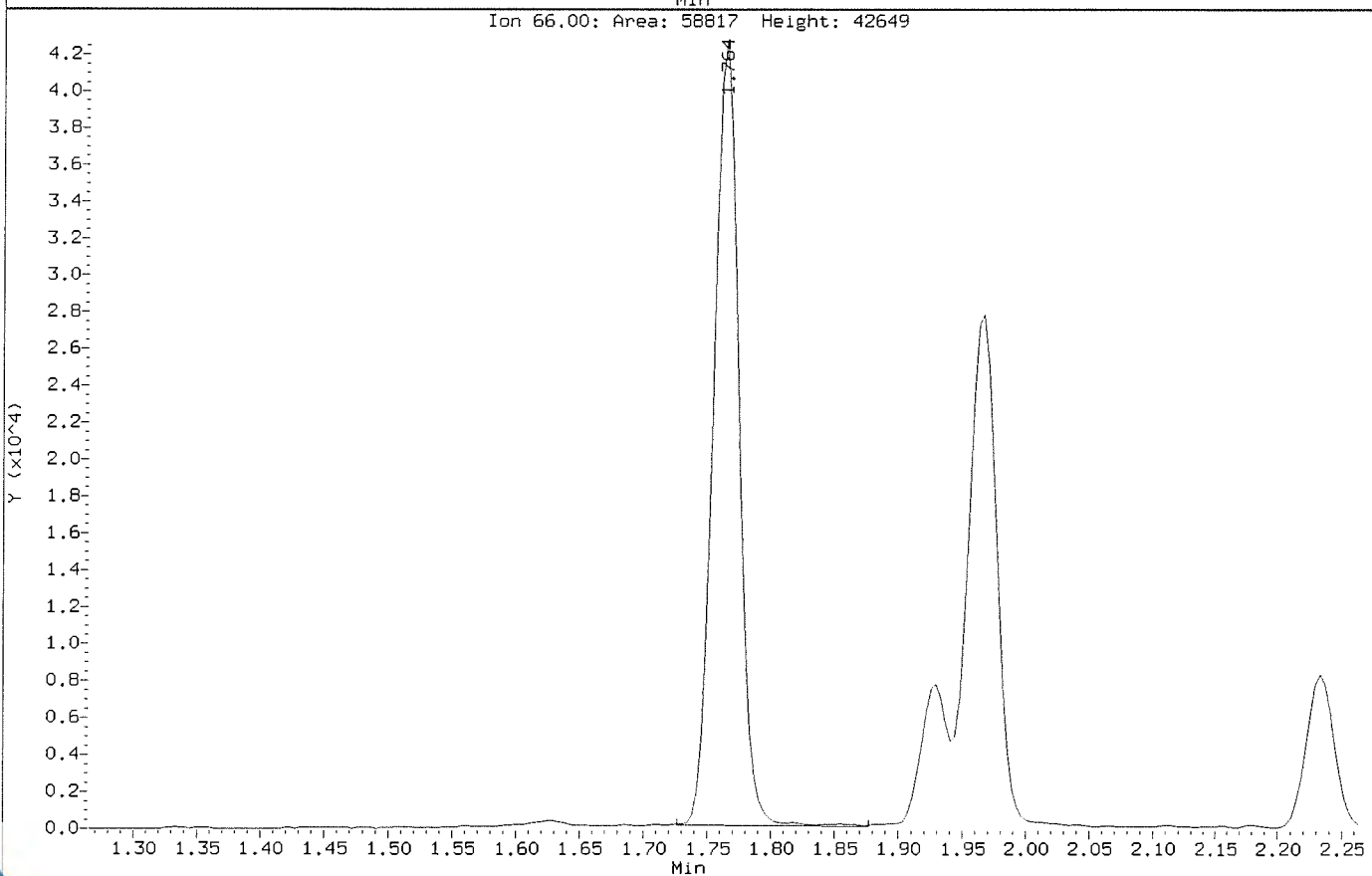
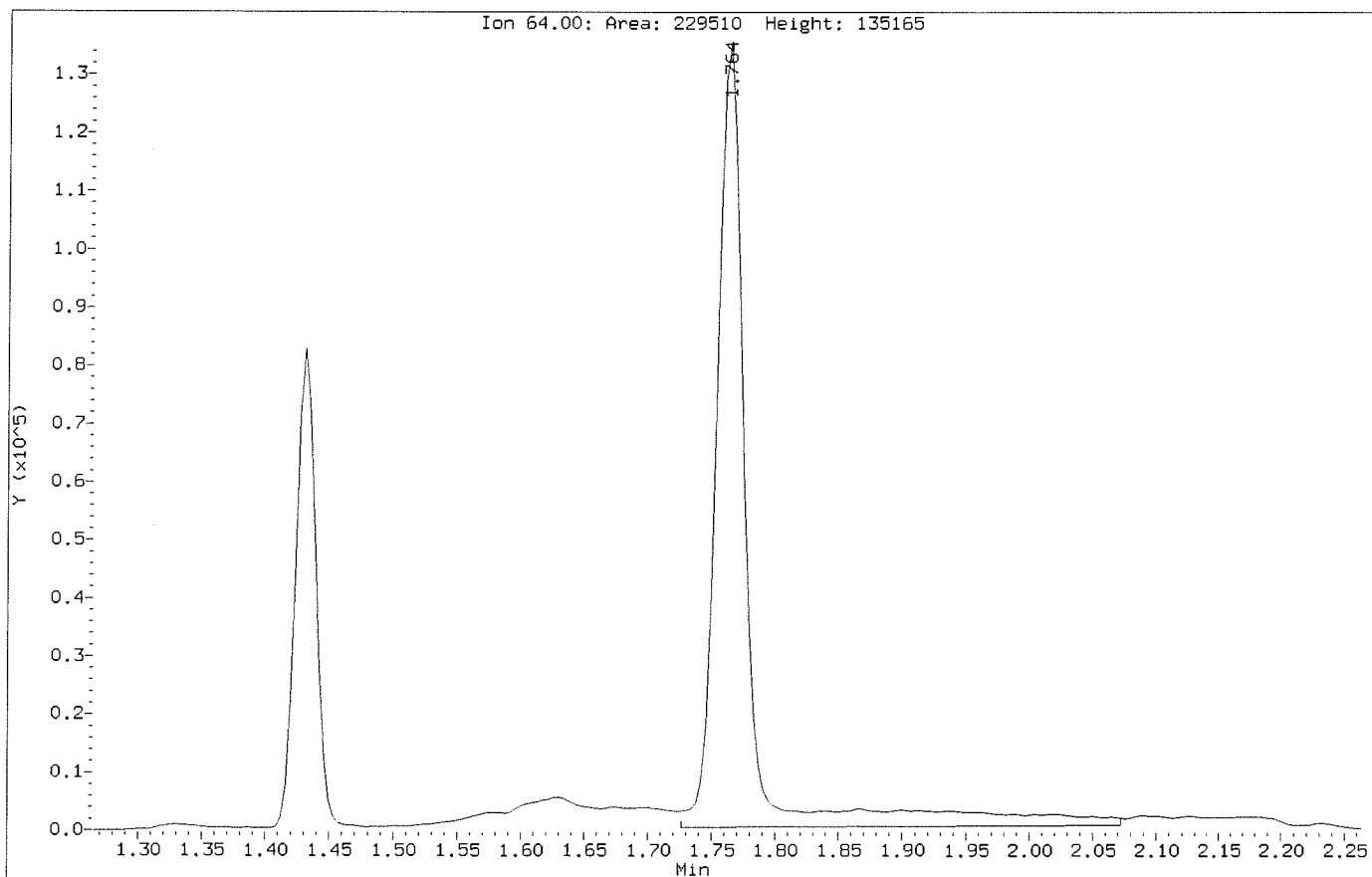


\\NAHSTMS005\Target\chem\voa9.i\U181231.b\U123103.D



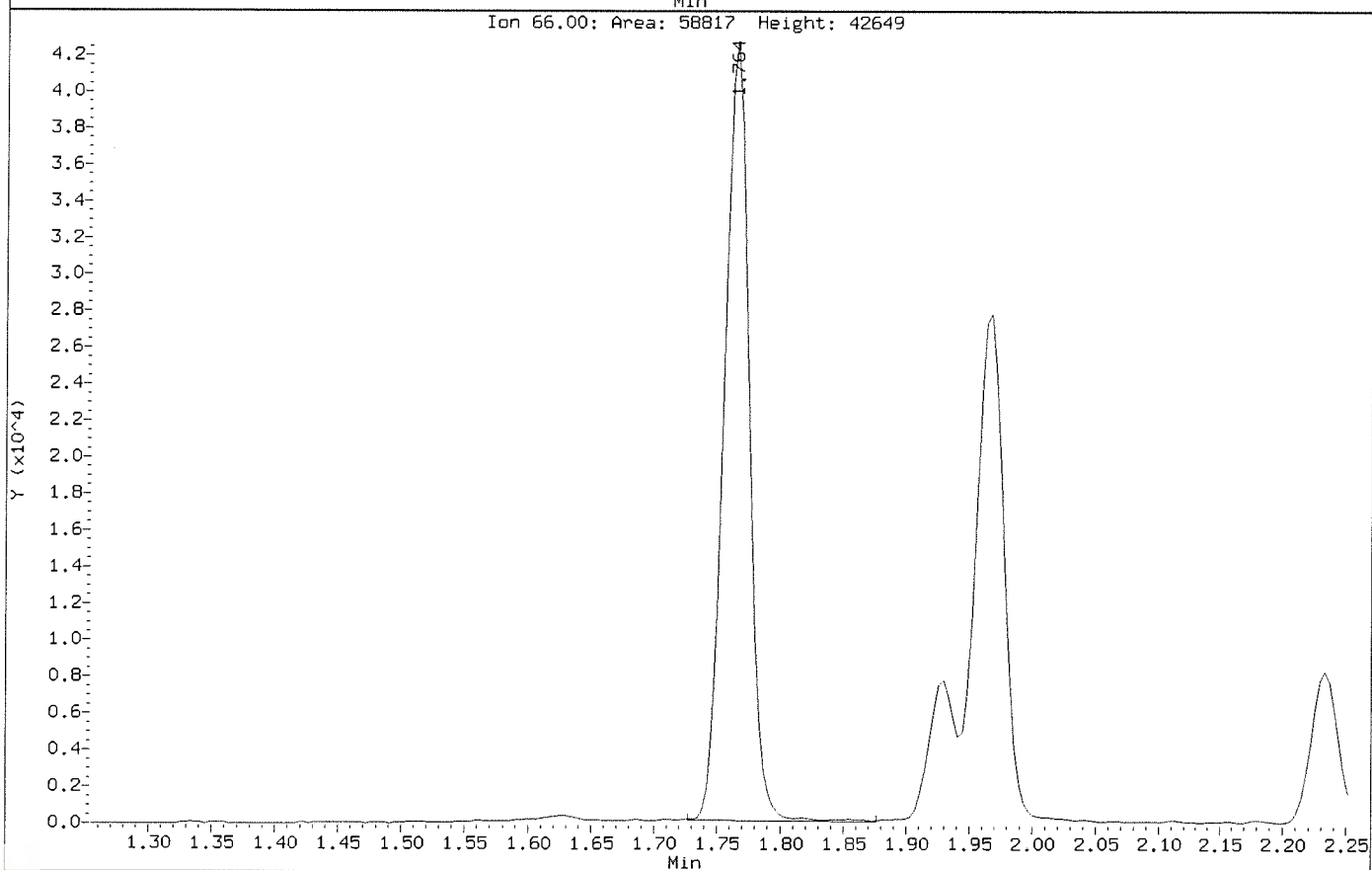
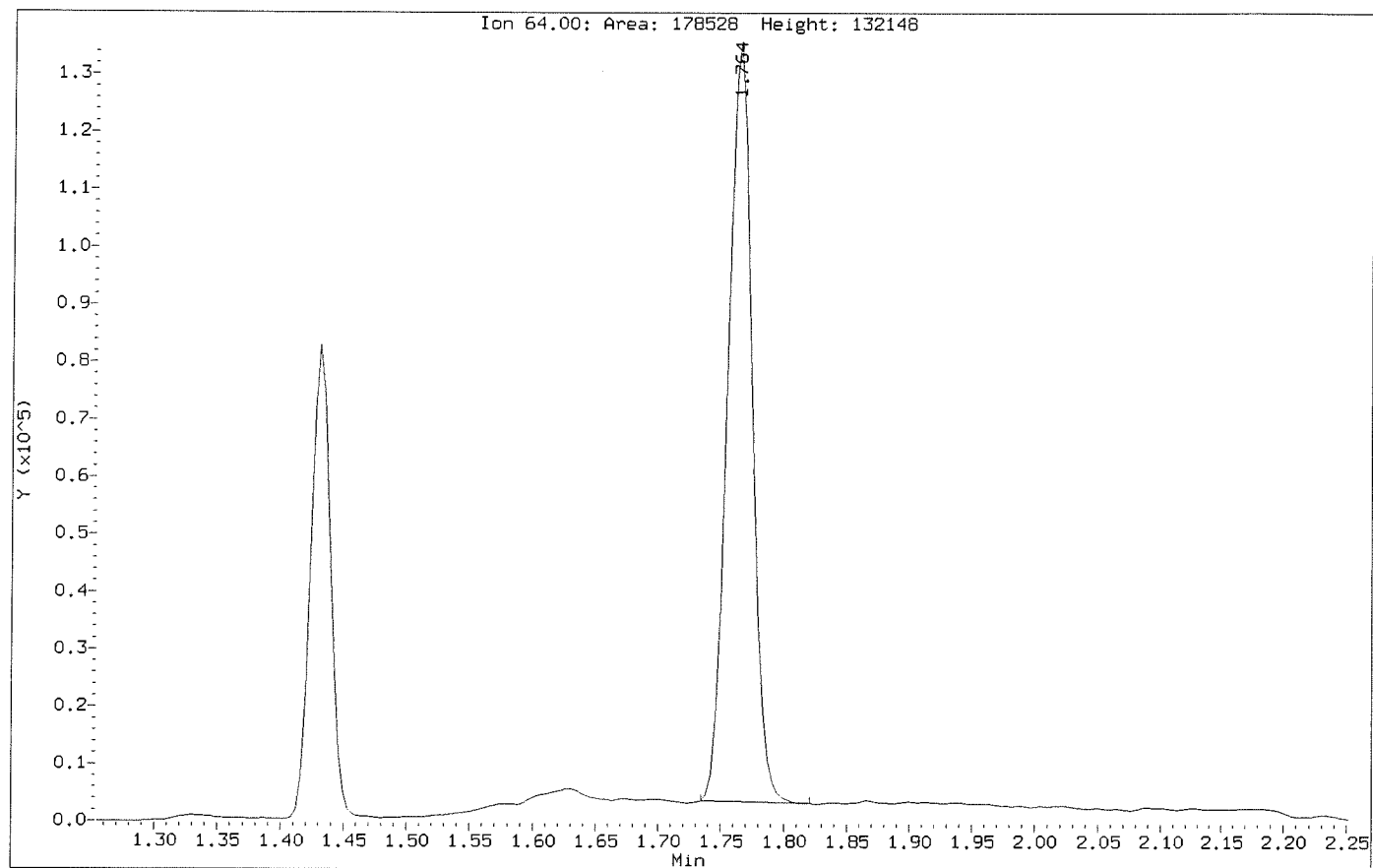
Data File: \\NAHSTWS005\Target\chem\voa9.i\U181231.b\Before\U123103.D
Injection Date: 31-DEC-2018 10:33
Instrument: VDA9.i
Client Sample ID: VSTD050

Compound: Chloroethane
CAS Number: 75-00-3



Data File: \\NAHSTW5005\Target\chem\voa9.i\U181231.b\U123103.D
Injection Date: 31-DEC-2018 10:33
Instrument: VOA9.i
Client Sample ID: VSTD050

Compound: Chloroethane
CAS Number: 75-00-3



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181231.b\U123104.D Page 1
 Report Date: 30-Jan-2019 17:58

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U181231.b\U123104.D
 Lab Smp Id: VLCSW-1812031 Client Smp ID: VLCSW-181231
 Inj Date : 31-DEC-2018 10:58
 Operator : PC Inst ID: VOA9.i
 Smp Info : VLCSW-1812031;VLCSW-181231;3;;LCS
 Misc Info : 180315V9;WATER;0;1;
 Comment :
 Method : \\NAHSTWS005\Target\chem\voa9.i\U181231.b\8260C.m
 Meth Date : 30-Jan-2019 17:58 VOA9.i Quant Type: ISTD
 Cal Date : 21-DEC-2018 16:41 Cal File: U122108.D
 Als bottle: 4 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	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	====	4.898	4.898	(1.000)	390822	50.0000	=====
* 36 1,4-Difluorobenzene	114		5.625	5.629	(1.000)	714953	50.0000	
* 47 Chlorobenzene-d5	117		8.249	8.249	(1.000)	667519	50.0000	
* 70 1,4-Dichlorobenzene-d4	152		10.236	10.236	(1.000)	332275	50.0000	
\$ 30 Dibromofluoromethane	113		4.830	4.834	(0.986)	222110	51.5468	51.54
\$ 35 1,2-Dichloroethane-d4	65		5.175	5.179	(1.057)	279699	50.5880	50.58
\$ 48 Toluene-d8	98		6.989	6.990	(0.847)	822969	47.6641	47.66
\$ 69 4-Bromofluorobenzene	95		9.257	9.257	(1.122)	348458	53.1930	53.19
60 1,1,1,2-Tetrachloroethane	131		8.350	8.350	(1.012)	87536	21.0090	21.00
31 1,1,1-Trichloroethane	97		4.830	4.834	(0.986)	133109	21.5700	21.56
68 1,1,2,2-Tetrachloroethane	83		9.392	9.392	(0.918)	150899	20.1657	20.16
53 1,1,2-Trichloroethane	83		7.421	7.421	(0.900)	87444	21.9879	21.98
22 1,1-Dichloroethane	63		3.608	3.612	(0.737)	180968	21.5013	21.50
11 1,1-Dichloroethene	96		2.405	2.412	(0.491)	76686	20.6368	20.63
32 1,1-Dichloropropene	75		5.006	5.010	(0.890)	134207	21.0971	21.09
93 1,2,3-Trichlorobenzene	180		12.335	12.335	(1.205)	118589	19.3331	19.33
71 1,2,3-Trichloropropane	75		9.426	9.426	(0.921)	159843	20.5424	20.54
90 1,2,4-Trichlorobenzene	180		11.923	11.923	(1.165)	122517	19.9156	19.91
79 1,2,4-Trimethylbenzene	105		9.943	9.943	(0.971)	365605	21.0262	21.02
89 1,2-Dibromo-3-Chloropropane	155		11.233	11.233	(1.097)	19485	17.8487	17.84
57 1,2-Dibromoethane	107		7.852	7.852	(0.952)	101505	22.1598	22.15
88 1,2-Dichlorobenzene	146		10.569	10.570	(1.033)	201894	20.4635	20.46



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181231.b\U123104.D Page 2
 Report Date: 30-Jan-2019 17:58

Compounds	QUANT SIG			CONCENTRATIONS			
	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/l)	FINAL (ug/l)
33 1,2-Dichloroethane	62	5.254	5.258	(0.934)	146961	22.4149	22.41
42 1,2-Dichloropropane	63	6.082	6.082	(1.081)	110138	21.8017	21.80
75 1,3,5-Trimethylbenzene	105	9.625	9.625	(0.940)	347530	20.8114	20.81
83 1,3-Dichlorobenzene	146	10.180	10.180	(0.995)	200474	20.3181	20.31
54 1,3-Dichloropropane	76	7.563	7.563	(0.917)	189414	22.1120	22.11
84 1,4-Dichlorobenzene	146	10.255	10.255	(1.002)	206964	19.8942	19.89
26 2,2-Dichloropropane	77	4.279	4.283	(0.874)	115016	22.6757	22.67
24 2-Butanone	43	4.339	4.343	(0.886)	104485	39.4408	39.44
76 2-Chlorotoluene	91	9.546	9.546	(0.933)	319061	20.8408	20.84
52 2-Hexanone	43	7.649	7.649	(0.927)	157452	42.4192	42.41
77 4-Chlorotoluene	91	9.640	9.640	(0.942)	374610	21.1744	21.17
82 p-Isopropyltoluene	119	10.210	10.210	(0.997)	353354	20.0967	20.09
45 4-Methyl-2-Pentanone	43	6.914	6.915	(0.838)	225898	42.2969	42.29
10 Acetone	43	2.484	2.487	(0.507)	59962	37.4654	37.46
37 Benzene	78	5.220	5.224	(0.928)	419323	22.0408	22.04
74 Bromobenzene	156	9.381	9.381	(0.917)	106813	20.8055	20.80
29 Bromochloromethane	128	4.557	4.560	(0.930)	50260	22.9484	22.94
39 Bromodichloromethane	83	6.348	6.348	(1.129)	120581	22.4455	22.44
66 Bromoform	173	8.984	8.984	(1.089)	52020	19.2780	19.27
6 Bromomethane	94	1.678	1.681	(0.343)	59806	25.4549	25.45
19 Carbon Disulfide	76	2.596	2.600	(0.530)	571750	42.2267	42.22
34 Carbon Tetrachloride	117	4.999	4.999	(0.889)	99520	20.0033	20.00
59 Chlorobenzene	112	8.275	8.275	(1.003)	279546	21.7960	21.79
7 Chloroethane	64	1.760	1.764	(0.359)	73652	21.7207	21.72 (M)
28 Chloroform	83	4.658	4.662	(0.951)	176333	21.7544	21.75
3 Chloromethane	50	1.344	1.351	(0.274)	102766	26.4265	26.42
27 cis-1,2-Dichloroethene	96	4.290	4.294	(0.876)	110339	21.4789	21.47
46 cis-1,3-Dichloropropene	75	6.757	6.761	(1.201)	167162	21.2232	21.22
55 Dibromochloromethane	129	7.758	7.758	(0.940)	88554	20.7699	20.76
44 Dibromomethane	93	6.191	6.191	(1.101)	64495	22.1205	22.12
2 Dichlorodifluoromethane	85	1.209	1.217	(0.247)	91086	19.2426	19.24
61 Ethylbenzene	106	8.373	8.373	(1.015)	144854	22.0205	22.02
91 Hexachlorobutadiene	225	12.065	12.065	(1.179)	43131	18.3000	18.30
67 Isopropylbenzene	105	9.126	9.126	(1.106)	404786	21.3248	21.32
62 m,p-Xylenes	106	8.474	8.474	(1.027)	358548	44.3364	44.33
17 Methylene Chloride	84	2.877	2.881	(0.587)	107899	21.6730	21.67
87 n-Butylbenzene	91	10.554	10.555	(1.031)	329024	19.3905	19.39
73 n-Propylbenzene	91	9.475	9.475	(0.926)	507203	20.4289	20.42
92 Naphthalene	128	12.133	12.133	(1.185)	381680	19.1753	19.17
63 o-Xylene	106	8.811	8.811	(1.068)	180913	22.1752	22.17
81 sec-Butylbenzene	105	10.086	10.086	(0.985)	409770	19.6382	19.63
64 Styrene	104	8.826	8.826	(1.070)	312565	23.0604	23.06
78 tert-Butylbenzene	119	9.902	9.902	(0.967)	286611	19.8578	19.85
56 Tetrachloroethene	164	7.526	7.526	(0.912)	69219	19.8072	19.80
50 Toluene	91	7.049	7.049	(0.855)	439379	22.1277	22.12
20 trans-1,2-Dichloroethene	96	3.147	3.151	(0.643)	97772	21.3724	21.37
51 trans-1,3-Dichloropropene	75	7.259	7.263	(1.291)	140201	20.9560	20.95
38 Trichloroethene	130	5.865	5.865	(1.043)	99065	21.5694	21.56
8 Trichlorofluoromethane	101	1.959	1.966	(0.400)	133808	21.1380	21.13
5 Vinyl Chloride	62	1.426	1.430	(0.291)	115683	21.4906	21.49



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181231.b\U123104.D Page 3
Report Date: 30-Jan-2019 17:58

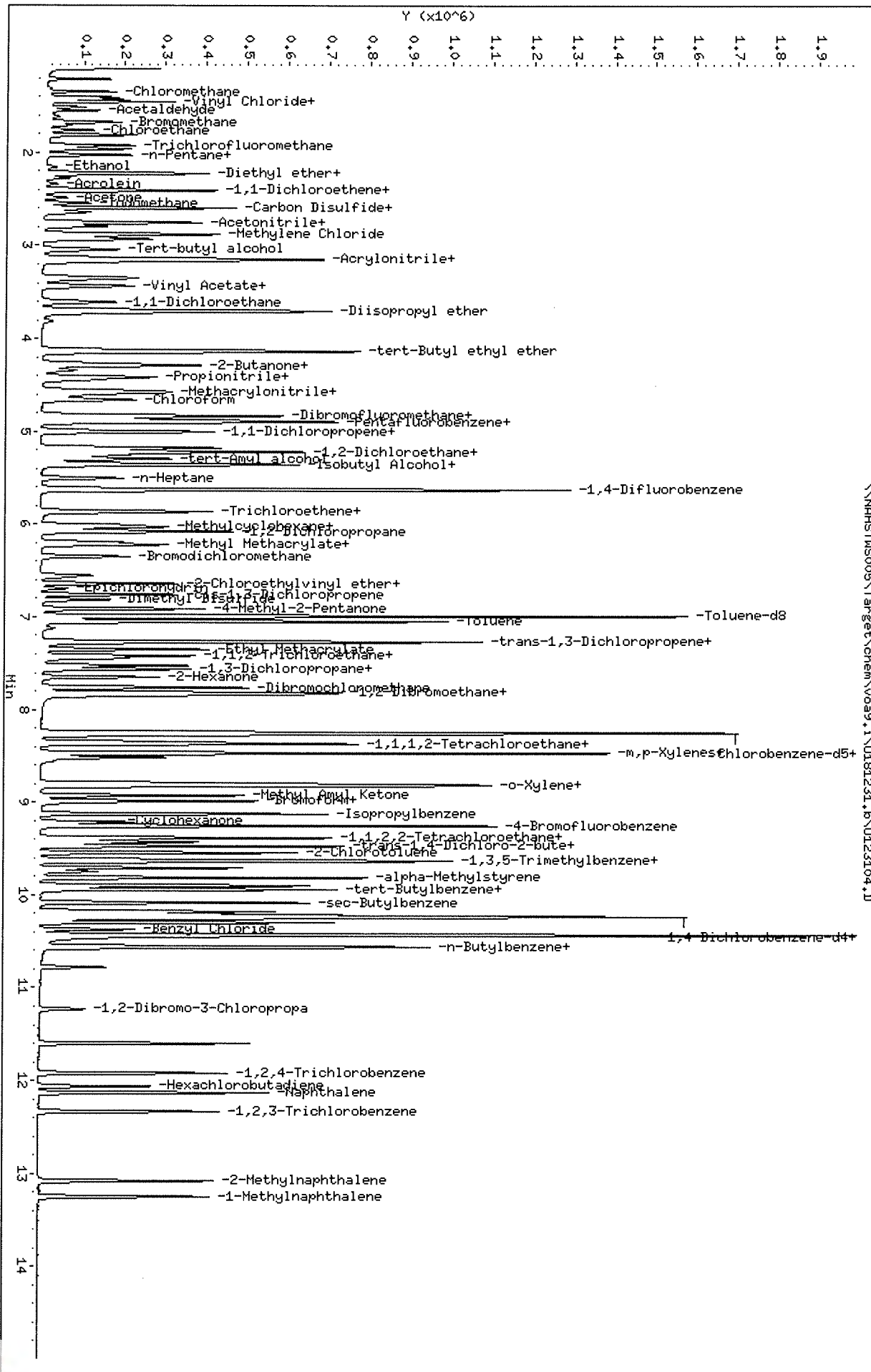
QC Flag Legend

M - Compound response manually integrated.



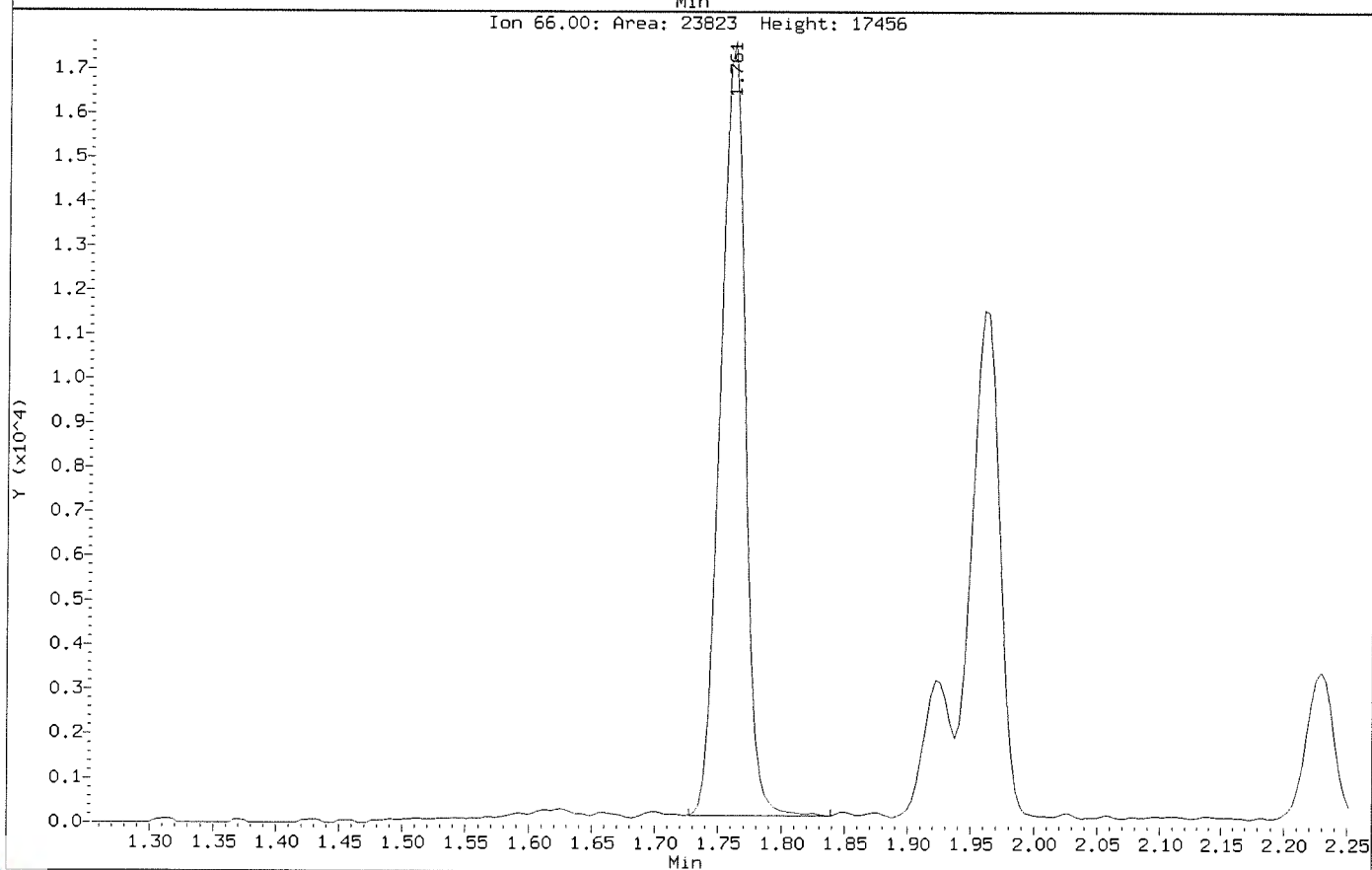
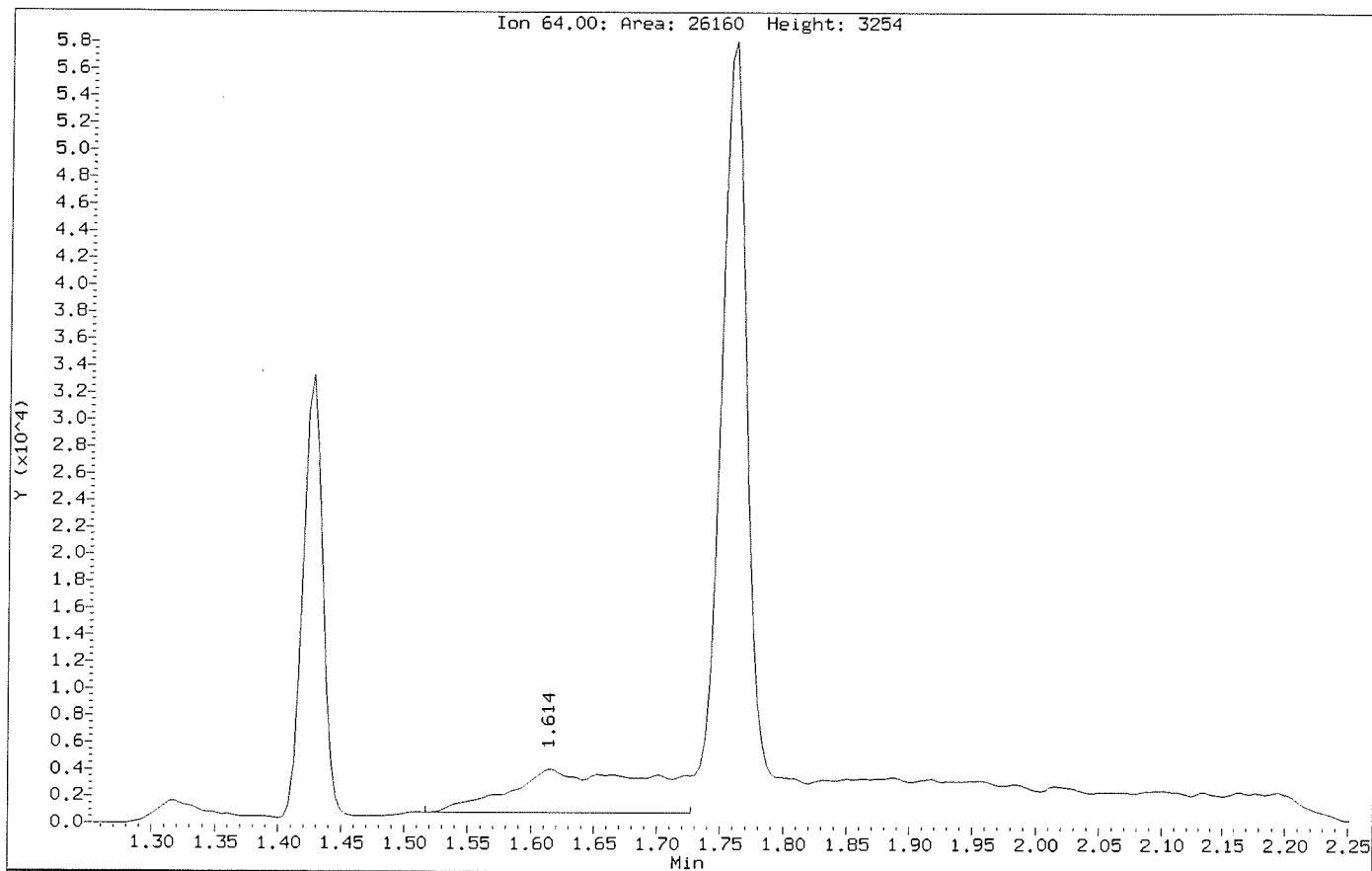
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 Date : 31-DEC-2018 10:58
 Client ID: WLCSM-181231
 Sample Info: WLCSM-1812031;WLCSM-181231;3;LCS
 Purge Volume: 5.0
 Column phase: DB624

Instrument: W089.i
 Operator: PC
 Column diameter: 0.18



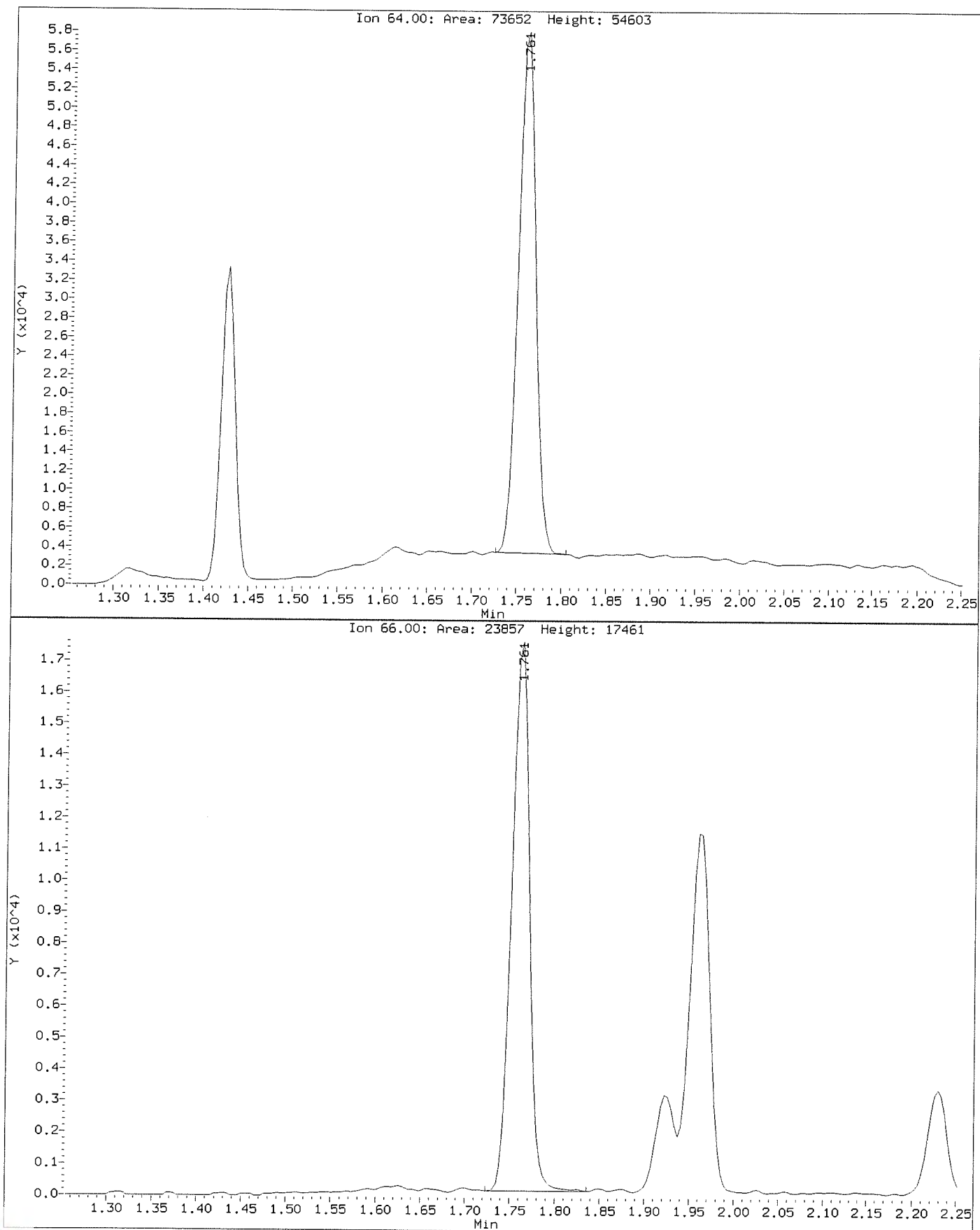
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Injection Date: 31-DEC-2018 10:58
Instrument: VDA9.i
Client Sample ID: VLCSW-181231

Compound: Chloroethane
CAS Number: 75-00-3



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181231.b\U123104.D
Injection Date: 31-DEC-2018 10:58
Instrument: VOA9.i
Client Sample ID: VLCSW-181231

Compound: Chloroethane
CAS Number: 75-00-3



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181231.b\U123106.D Page 1
 Report Date: 30-Jan-2019 17:58

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U181231.b\U123106.D
 Lab Smp Id: VBLKW-181231 Client Smp ID: VBLKW-181231
 Inj Date : 31-DEC-2018 11:47
 Operator : PC Inst ID: VOA9.i
 Smp Info : VBLKW-181231;VBLKW-181231;3;;BLANK
 Misc Info : 180315V9;WATER;0;1;
 Comment :
 Method : \\NAHSTWS005\Target\chem\voa9.i\U181231.b\8260C.m
 Meth Date : 30-Jan-2019 17:58 VOA9.i Quant Type: ISTD
 Cal Date : 21-DEC-2018 16:41 Cal File: U122108.D
 Als bottle: 6 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

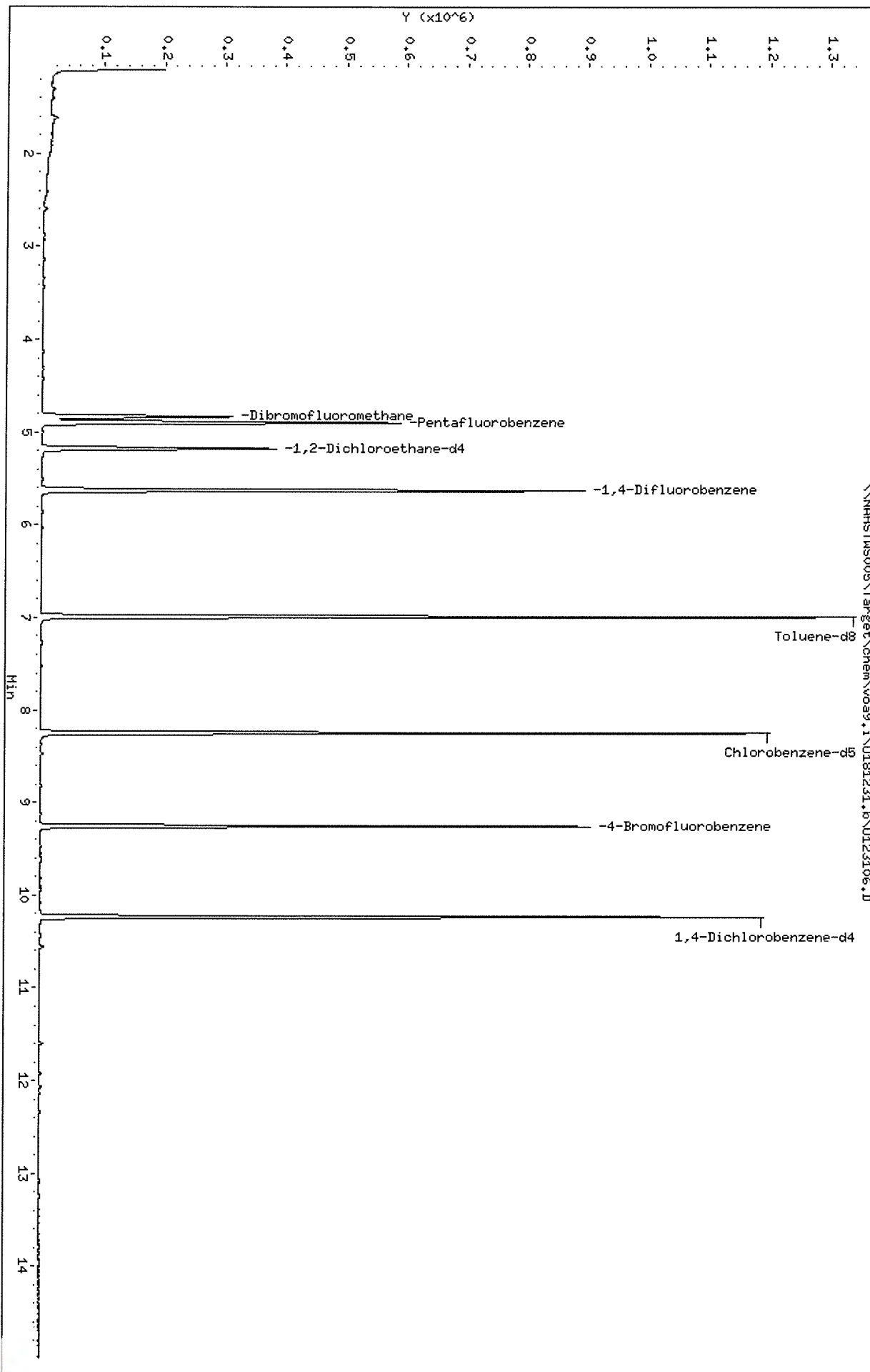
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG	CONCENTRATIONS					
		RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.894	4.898	(1.000)	362742	50.0000	
* 36 1,4-Difluorobenzene	114	5.625	5.629	(1.000)	633285	50.0000	
* 47 Chlorobenzene-d5	117	8.249	8.249	(1.000)	572979	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	261937	50.0000	
\$ 30 Dibromofluoromethane	113	4.830	4.834	(0.987)	181422	45.1800	45.18
\$ 35 1,2-Dichloroethane-d4	65	5.175	5.179	(1.057)	244181	47.4539	47.45
\$ 48 Toluene-d8	98	6.990	6.990	(0.847)	778042	52.6782	52.67
\$ 69 4-Bromofluorobenzene	95	9.257	9.257	(1.122)	278238	49.3821	49.38



Data File: \\NAHSTMS005\Target\chem\voa9.i\U181231.b\U123106.D
Date : 31-DEC-2018 11:47
Client ID: VBLKM-181231
Sample Info: VBLKM-181231;VBLKM-181231;3;BLANK
Purge Volume: 5.0
Column phase: DB624

Instrument: WDA9.i
Operator: PC
Column diameter: 0.18



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181231.b\U123107.D Page 1
 Report Date: 30-Jan-2019 17:58

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U181231.b\U123107.D
 Lab Smp Id: HS18121264-01 Client Smp ID: HS18121264-01
 Inj Date : 31-DEC-2018 12:12
 Operator : PC Inst ID: VOA9.i
 Smp Info : HS18121264-01;HS18121264-01;;;
 Misc Info : 180315V9;WATER;0;1;
 Comment :
 Method : \\NAHSTWS005\Target\chem\voa9.i\U181231.b\8260C.m
 Meth Date : 30-Jan-2019 17:58 VOA9.i Quant Type: ISTD
 Cal Date : 21-DEC-2018 16:41 Cal File: U122108.D
 Als bottle: 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

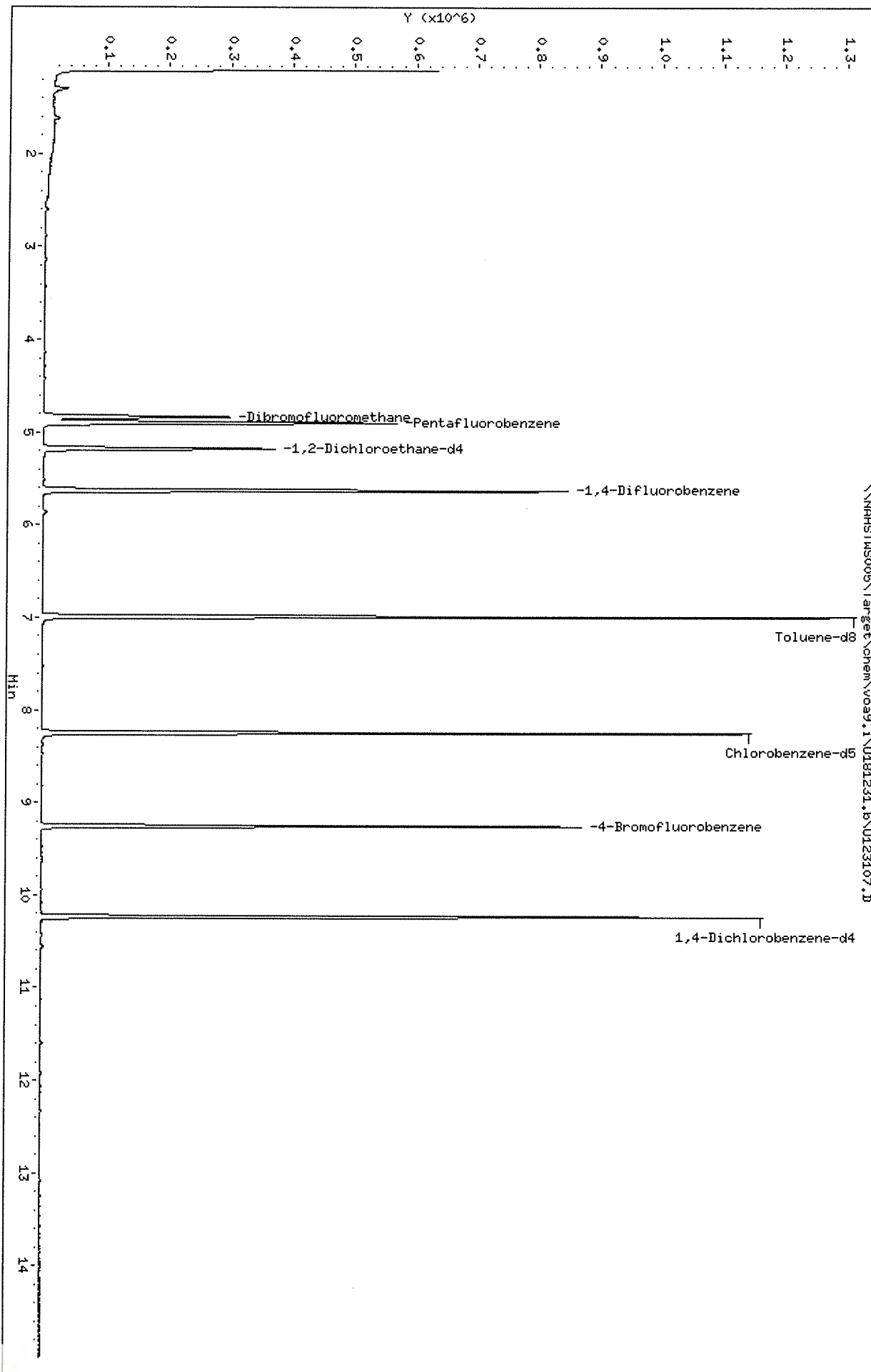
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT	SIG						CONCENTRATIONS	
			MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168		4.898	4.898	(1.000)	344705	50.0000		
* 36 1,4-Difluorobenzene	114		5.629	5.629	(1.000)	611791	50.0000		
* 47 Chlorobenzene-d5	117		8.249	8.249	(1.000)	551162	50.0000		
* 70 1,4-Dichlorobenzene-d4	152		10.236	10.236	(1.000)	256203	50.0000		
\$ 30 Dibromofluoromethane	113		4.834	4.834	(0.987)	172034	45.0806	45.08	
\$ 35 1,2-Dichloroethane-d4	65		5.179	5.179	(1.057)	237074	48.5306	48.53	
\$ 48 Toluene-d8	98		6.989	6.990	(0.847)	750065	52.7981	52.79	
\$ 69 4-Bromofluorobenzene	95		9.257	9.257	(1.122)	270487	49.9219	49.92	



Data File: \\NAHSTMS005\Target\chem\voa9.i\U123107.D
Date: 31-DEC-2018 12:12
Client ID: HS18121264-01
Sample Info: HS18121264-01;HS18121264-01;;
Purge Volume: 5.0
Column phase: DB624

Instrument: VOA9.i
Operator: PC
Column diameter: 0.18



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181231.b\U123108.D Page 1
 Report Date: 30-Jan-2019 17:58

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U181231.b\U123108.D
 Lab Smp Id: HS18121264-03 Client Smp ID: HS18121264-03
 Inj Date : 31-DEC-2018 12:36
 Operator : PC Inst ID: VOA9.i
 Smp Info : HS18121264-03;HS18121264-03;;;
 Misc Info : 180315V9;WATER;0;1;
 Comment :
 Method : \\NAHSTWS005\Target\chem\voa9.i\U181231.b\8260C.m
 Meth Date : 30-Jan-2019 17:58 VOA9.i Quant Type: ISTD
 Cal Date : 21-DEC-2018 16:41 Cal File: U122108.D
 Als bottle: 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	CONCENTRATIONS					
			ON-COLUMN	REL RT		RESPONSE	FINAL	
	MASS		RT	EXP RT	REL RT	RESPONSE	(ug/l)	(ug/l)
=====	====		====	=====	=====	=====	=====	=====
* 1 Pentafluorobenzene	168		4.898	4.898	(1.000)	323139	50.0000	
* 36 1,4-Difluorobenzene	114		5.629	5.629	(1.000)	572724	50.0000	
* 47 Chlorobenzene-d5	117		8.249	8.249	(1.000)	517046	50.0000	
* 70 1,4-Dichlorobenzene-d4	152		10.236	10.236	(1.000)	237333	50.0000	
\$ 30 Dibromofluoromethane	113		4.834	4.834	(0.987)	161914	45.2665	45.26
\$ 35 1,2-Dichloroethane-d4	65		5.179	5.179	(1.057)	221689	48.4045	48.40
\$ 48 Toluene-d8	98		6.989	6.990	(0.847)	695425	52.1611	52.16
\$ 69 4-Bromofluorobenzene	95		9.257	9.257	(1.122)	249097	48.9814	48.98
27 cis-1,2-Dichloroethene	96		4.290	4.294	(0.876)	2680	0.63097	0.63 (a)
38 Trichloroethene	130		5.865	5.865	(1.042)	11372	3.09091	3.09 (a)
5 Vinyl Chloride	62		1.426	1.430	(0.291)	1101	1.20507	1.20 (a)

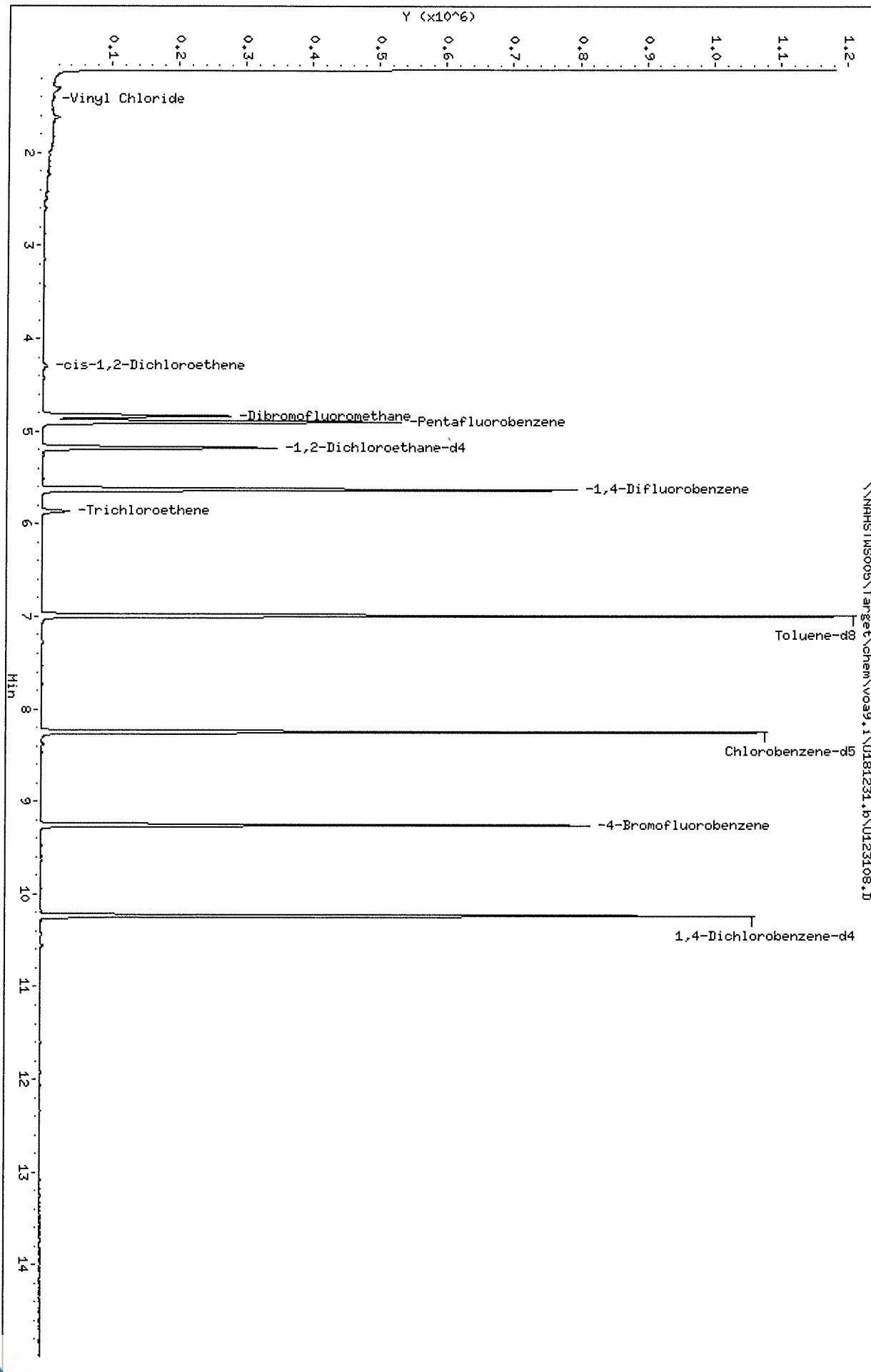
QC Flag Legend

a - Target compound detected but, quantitated amount
 Below Limit Of Quantitation(BLOQ).



Data File: \\NAHSTMS005\Target\chem\voa9.1\U181231.b\U123108.D
Date : 31-DEC-2018 12:36
Client ID: H518121264-03
Sample Info: H518121264-03;H518121264-03;;
Purge Volume: 5.0
Column phase: DB624

Instrument: VOA9.1
Operator: PC
Column diameter: 0.18



Data File: \\NAHSTMS005\Target\chem\voa9.i\U181231.b\U123108.D

Page 3

Date : 31-DEC-2018 12:36

Client ID: HS18121264-03

Instrument: VOA9.i

Sample Info: HS18121264-03;HS18121264-03;;;

Purge Volume: 5.0

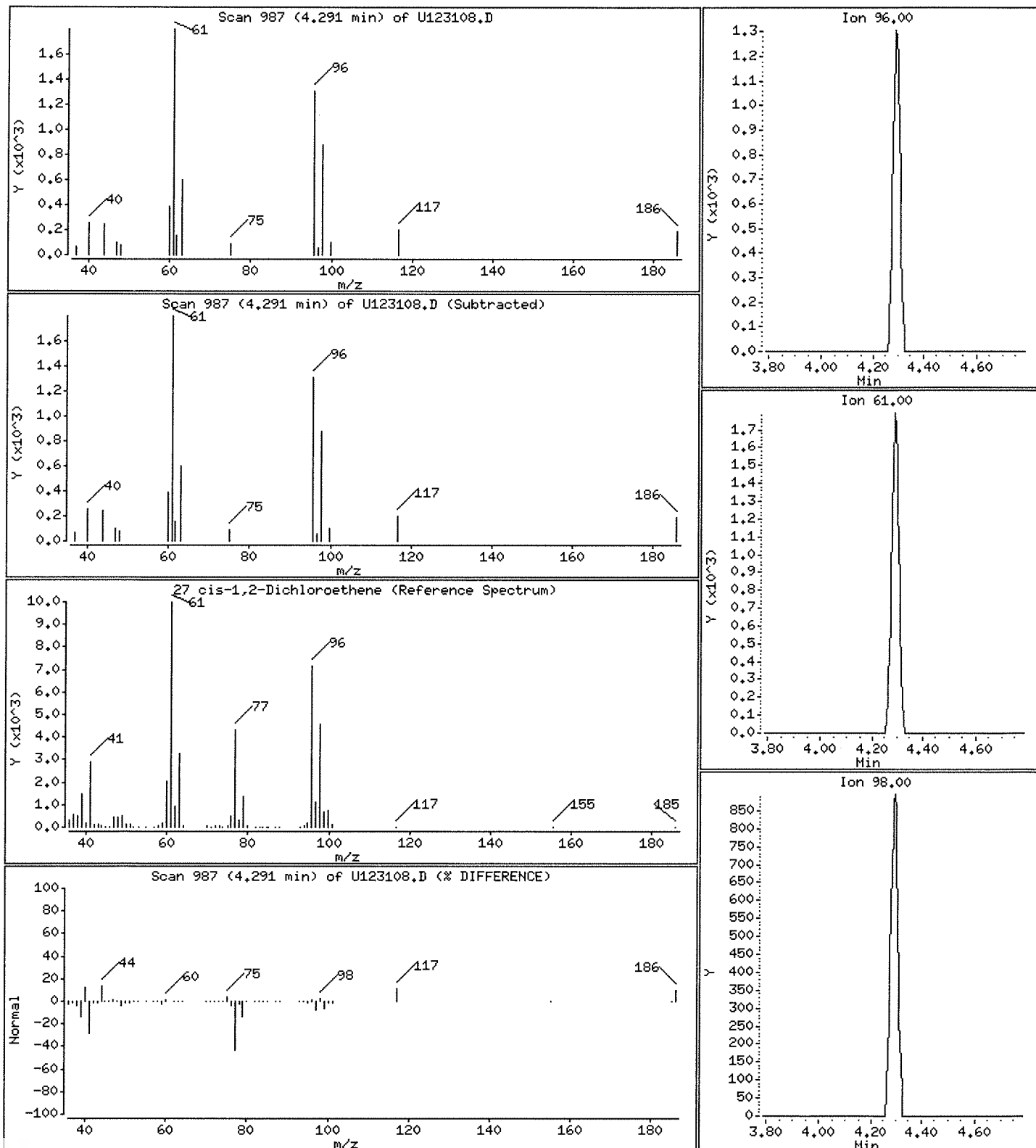
Operator: PC

Column phase: DB624

Column diameter: 0.18

27 cis-1,2-Dichloroethene

Concentration: 0.63 ug/l



Data File: \\NAHSTWS005\Target\chem\voa9.i\U123108.D

Page 4

Date : 31-DEC-2018 12:36

Client ID: HS18121264-03

Instrument: VOA9.i

Sample Info: HS18121264-03;HS18121264-03;;

Purge Volume: 5.0

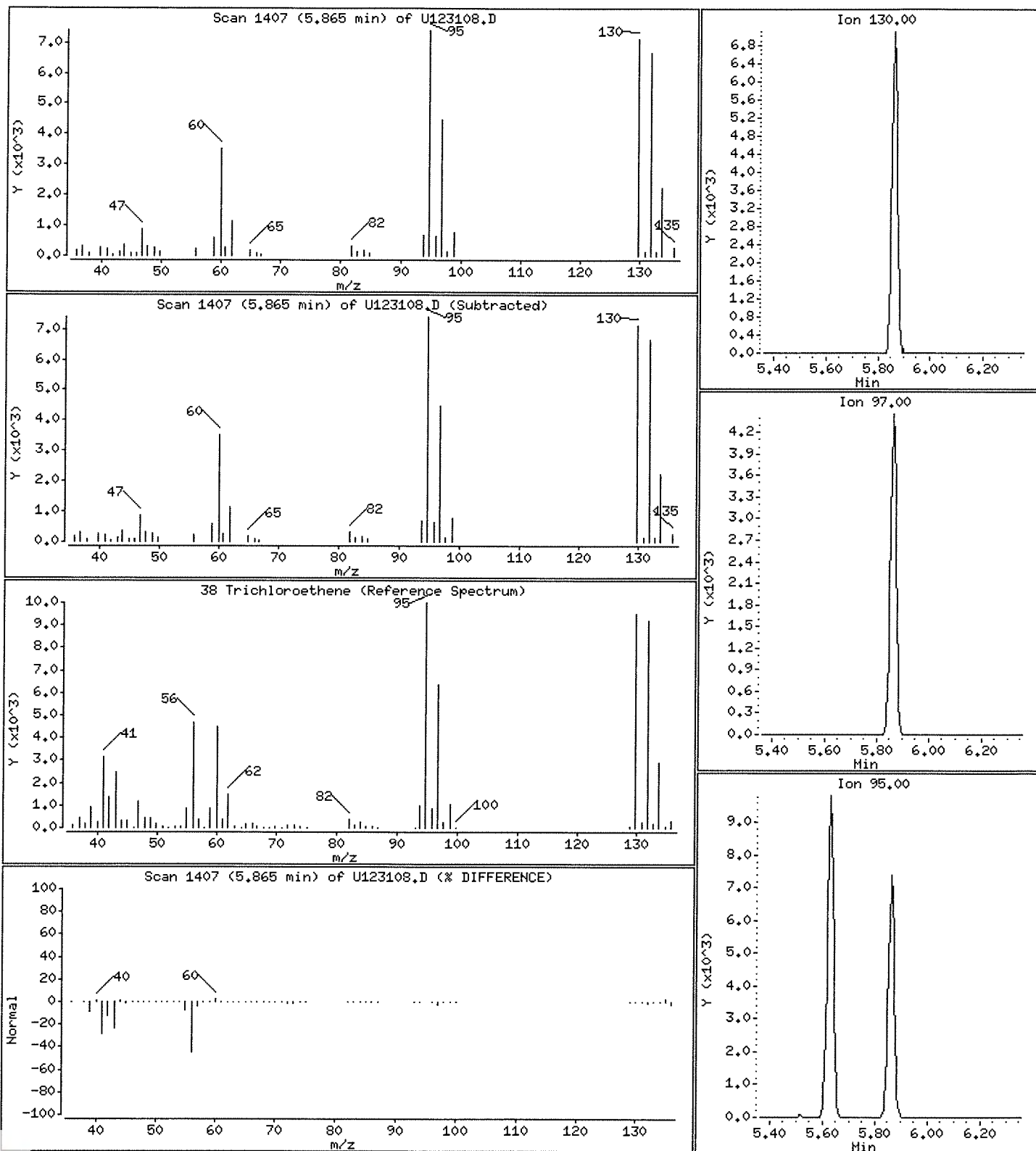
Operator: PC

Column phase: DB624

Column diameter: 0.18

38 Trichloroethene

Concentration: 3.09 ug/l



Data File: \\NAHSTWS005\Target\chem\voa9,i\U181231,b\U123108.D

Page 5

Date : 31-DEC-2018 12:36

Client ID: HS18121264-03

Instrument: VOA9.i

Sample Info: HS18121264-03;HS18121264-03;;

Purge Volume: 5.0

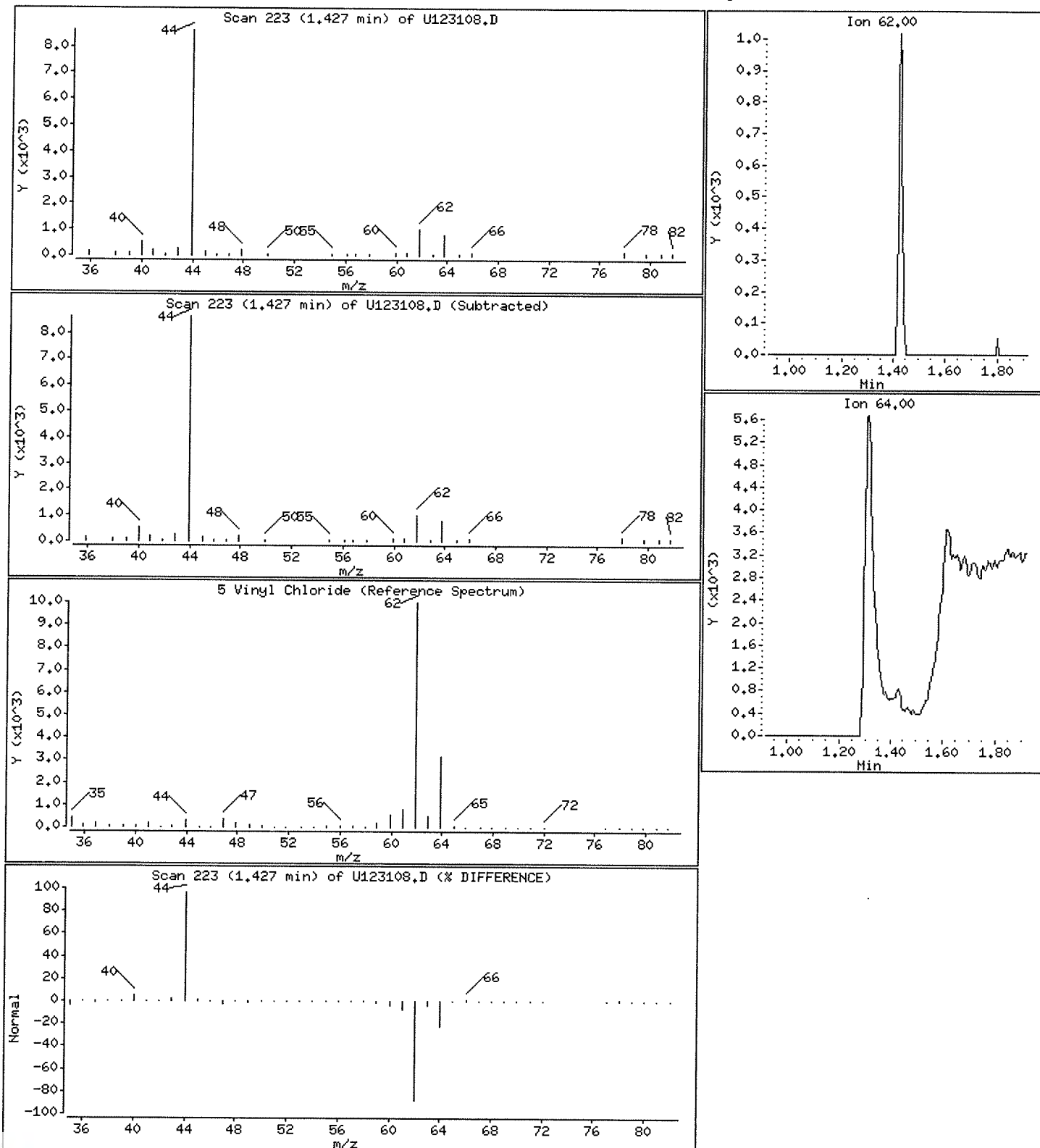
Operator: PC

Column phase: DB624

Column diameter: 0.18

5 Vinyl Chloride

Concentration: 1.20 ug/l



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181231.b\U123109.D Page 1
 Report Date: 30-Jan-2019 17:58

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U181231.b\U123109.D
 Lab Smp Id: HS18121264-04 Client Smp ID: HS18121264-04
 Inj Date : 31-DEC-2018 13:01
 Operator : PC Inst ID: VOA9.i
 Smp Info : HS18121264-04;HS18121264-04;;;
 Misc Info : 180315V9;WATER;0;1;
 Comment :
 Method : \\NAHSTWS005\Target\chem\voa9.i\U181231.b\8260C.m
 Meth Date : 30-Jan-2019 17:58 VOA9.i Quant Type: ISTD
 Cal Date : 21-DEC-2018 16:41 Cal File: U122108.D
 Als bottle: 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

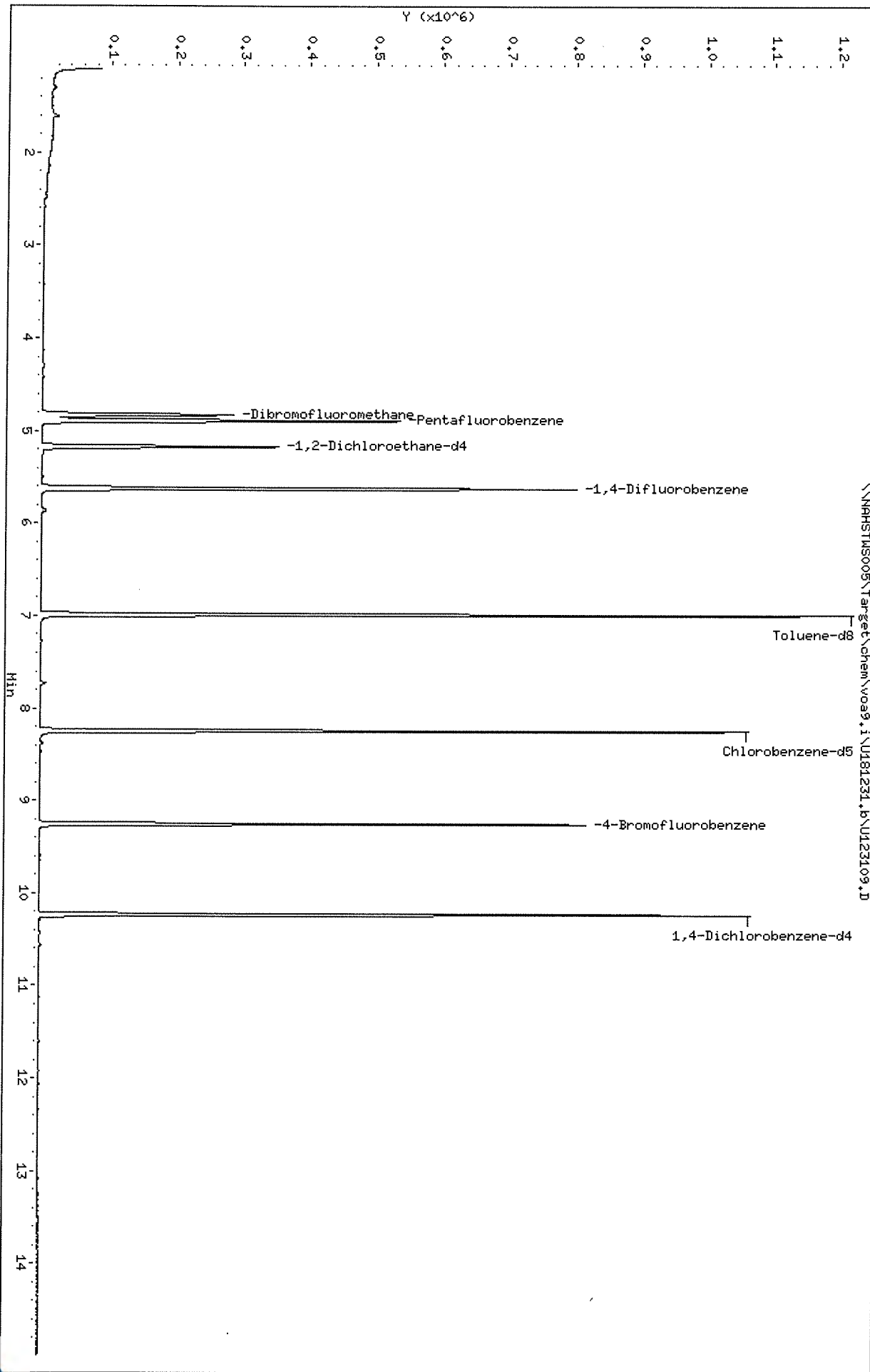
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT	SIG						CONCENTRATIONS	
			MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168		4.890	4.898	(1.000)	327297	50.0000		
* 36 1,4-Difluorobenzene	114		5.625	5.629	(1.000)	575227	50.0000		
* 47 Chlorobenzene-d5	117		8.249	8.249	(1.000)	505187	50.0000		
* 70 1,4-Dichlorobenzene-d4	152		10.236	10.236	(1.000)	238641	50.0000		
\$ 30 Dibromofluoromethane	113		4.827	4.834	(0.987)	163118	45.0155	45.01	
\$ 35 1,2-Dichloroethane-d4	65		5.171	5.179	(1.057)	225150	48.5415	48.54	
\$ 48 Toluene-d8	98		6.990	6.990	(0.847)	705797	54.2509	54.25	
\$ 69 4-Bromofluorobenzene	95		9.258	9.257	(1.122)	248257	49.9907	49.99	



Data File: \\NAHSTMS005\Target\chem\voa9.i\U181231.b\U123109.D
Date : 31-DEC-2018 13:01
Client ID: H518121264-04
Sample Info: H518121264-04#H518121264-04;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: VDA9.i
Operator: PC
Column diameter: 0.18



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181231.b\U123110.D Page 1
 Report Date: 30-Jan-2019 17:58

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U181231.b\U123110.D
 Lab Smp Id: HS18121264-05 Client Smp ID: HS18121264-05
 Inj Date : 31-DEC-2018 13:26
 Operator : PC Inst ID: VOA9.i
 Smp Info : HS18121264-05;HS18121264-05;;;
 Misc Info : 180315V9;WATER;0;1;
 Comment :
 Method : \\NAHSTWS005\Target\chem\voa9.i\U181231.b\8260C.m
 Meth Date : 30-Jan-2019 17:58 VOA9.i Quant Type: ISTD
 Cal Date : 21-DEC-2018 16:41 Cal File: U122108.D
 Als bottle: 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						CONCENTRATIONS	
			MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168		4.898	4.898	(1.000)	311084	50.0000		
* 36 1,4-Difluorobenzene	114		5.625	5.629	(1.000)	550588	50.0000		
* 47 Chlorobenzene-d5	117		8.249	8.249	(1.000)	500797	50.0000		
* 70 1,4-Dichlorobenzene-d4	152		10.236	10.236	(1.000)	229346	50.0000		
\$ 30 Dibromofluoromethane	113		4.834	4.834	(0.987)	156410	45.4275	45.42	
\$ 35 1,2-Dichloroethane-d4	65		5.179	5.179	(1.057)	216440	49.1205	49.12	
\$ 48 Toluene-d8	98		6.990	6.990	(0.847)	673685	52.1703	52.17	
\$ 69 4-Bromofluorobenzene	95		9.257	9.257	(1.122)	238940	48.4948	48.49	
27 cis-1,2-Dichloroethene	96		4.290	4.294	(0.876)	4255	1.04060	1.04 (a)	
38 Trichloroethene	130		5.865	5.865	(1.043)	10291	2.90955	2.90 (a)	

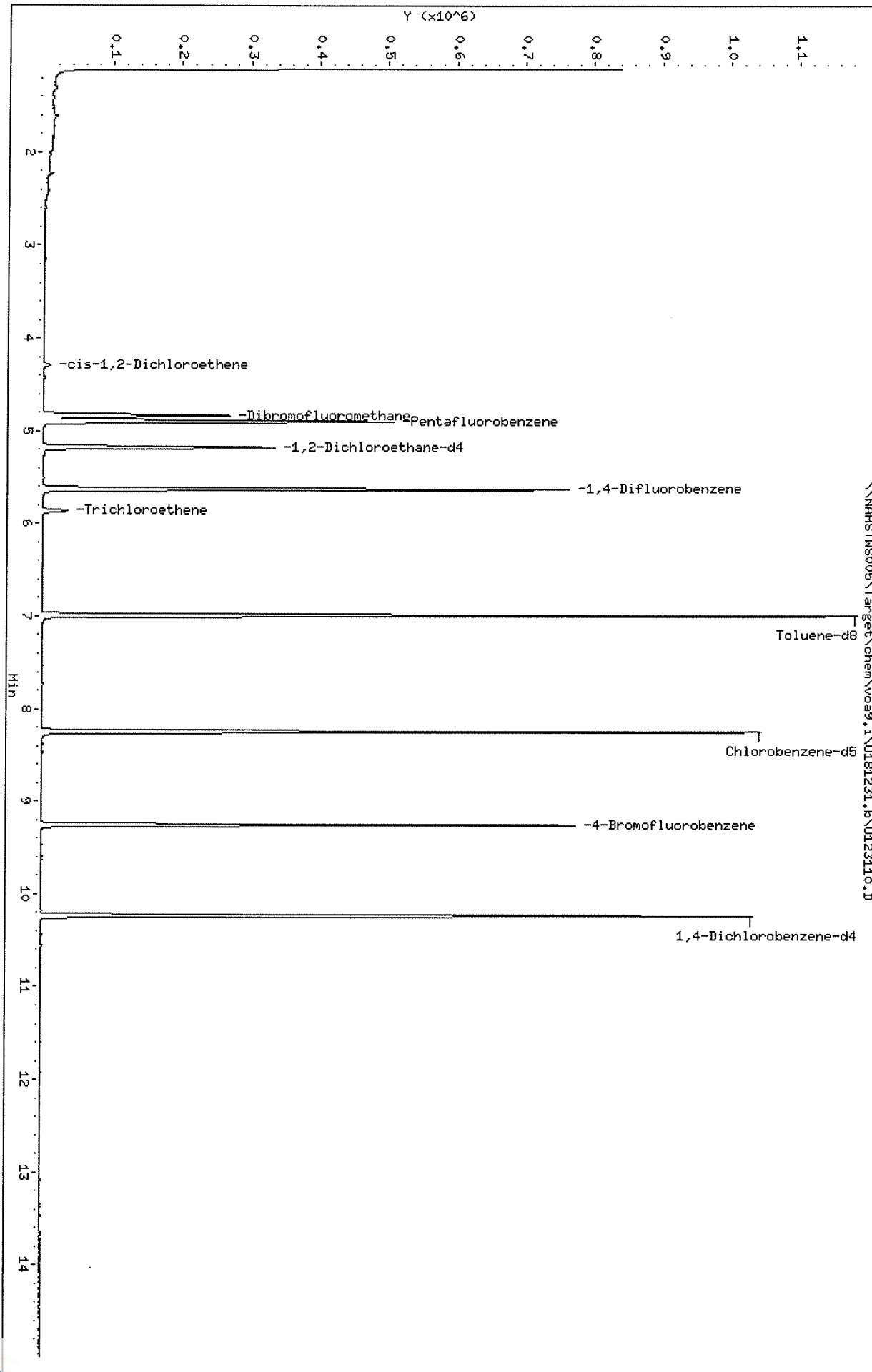
QC Flag Legend

a - Target compound detected but, quantitated amount
 Below Limit Of Quantitation(BLOQ).



Data File: \\NAHSTMS005\Target\chem\voa9.i\U181231.b\U123110.D
Date : 31-DEC-2018 13:26
Client ID: HS18121264-05
Sample Info: HS18121264-05;HS18121264-05;;
Purge Volume: 5.0
Column phase: DB624

Instrument: VOA9.i
Operator: PC
Column diameter: 0.18



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181231.b\U123110.D

Page 3

Date : 31-DEC-2018 13:26

Client ID: HS18121264-05

Instrument: VOA9.i

Sample Info: HS18121264-05;HS18121264-05;;

Purge Volume: 5.0

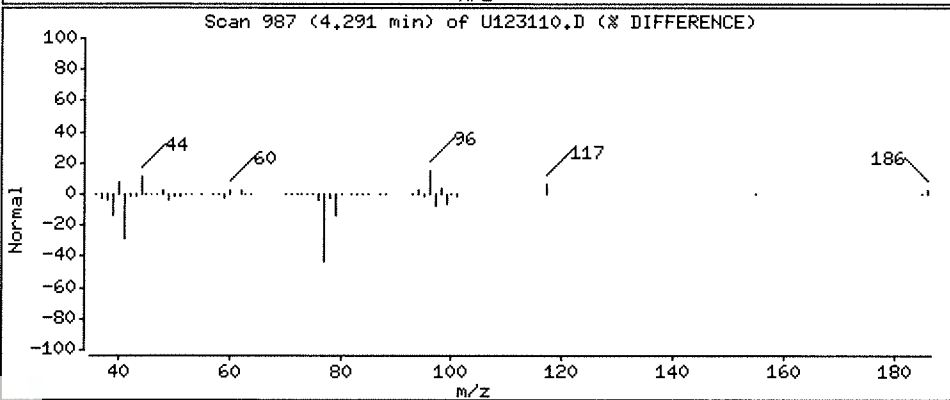
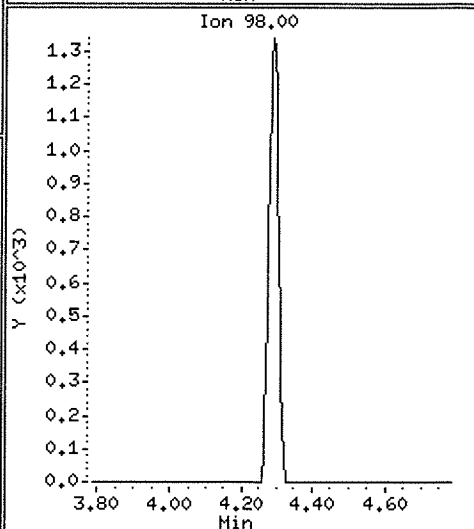
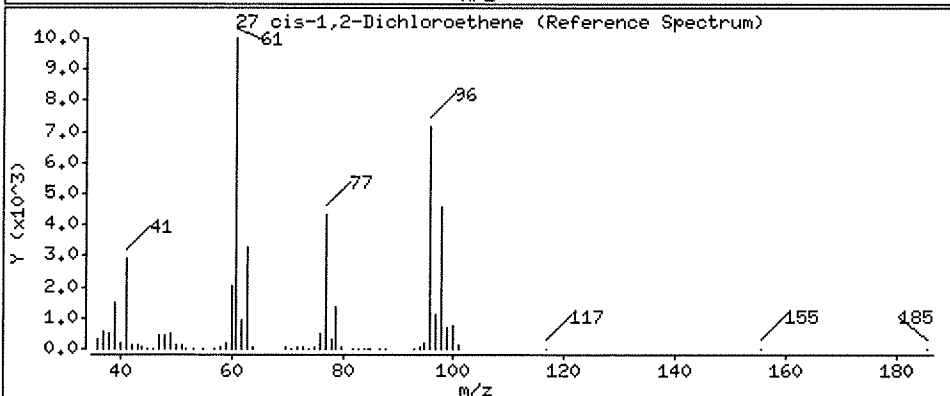
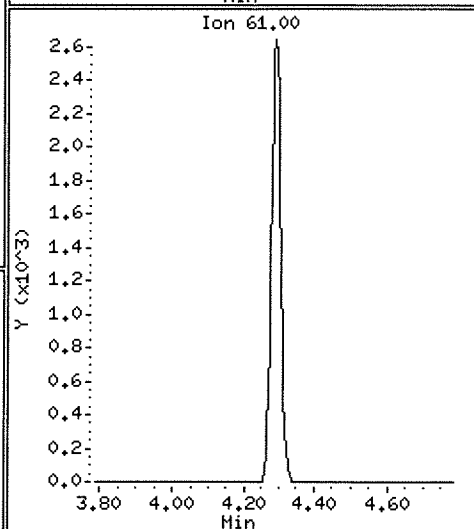
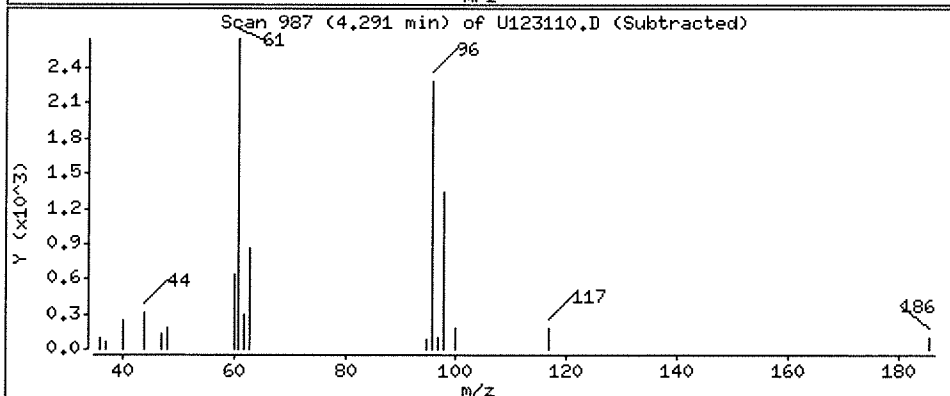
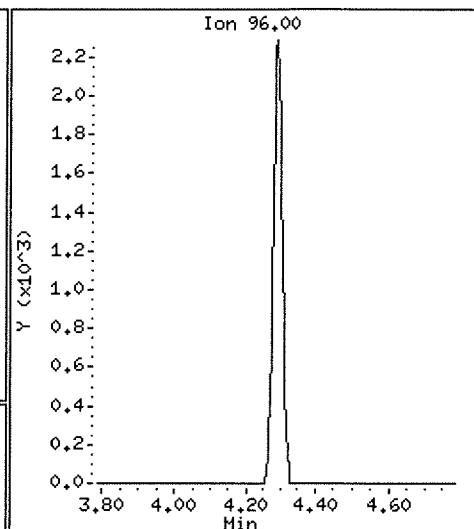
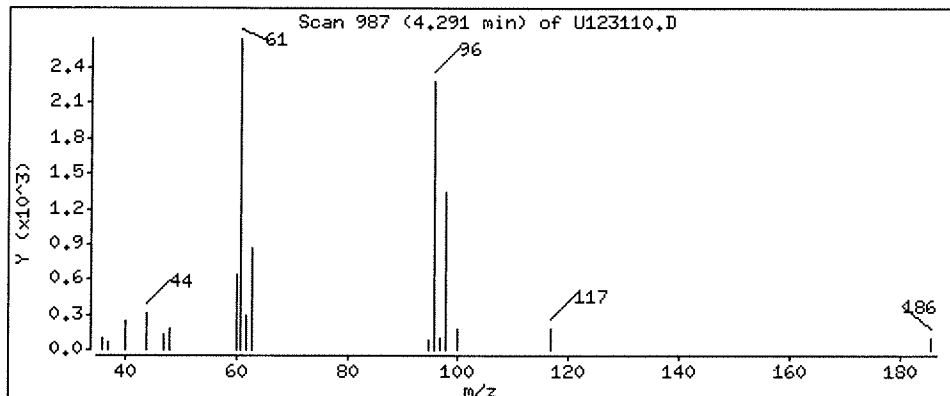
Operator: PC

Column phase: DB624

Column diameter: 0.18

27 cis-1,2-Dichloroethene

Concentration: 1.04 ug/l



Data File: \\NAHSTMS005\Target\chem\voa9.i\U123110.D

Page 4

Date : 31-DEC-2018 13:26

Client ID: HS18121264-05

Instrument: VOA9.i

Sample Info: HS18121264-05;HS18121264-05;;;

Purge Volume: 5.0

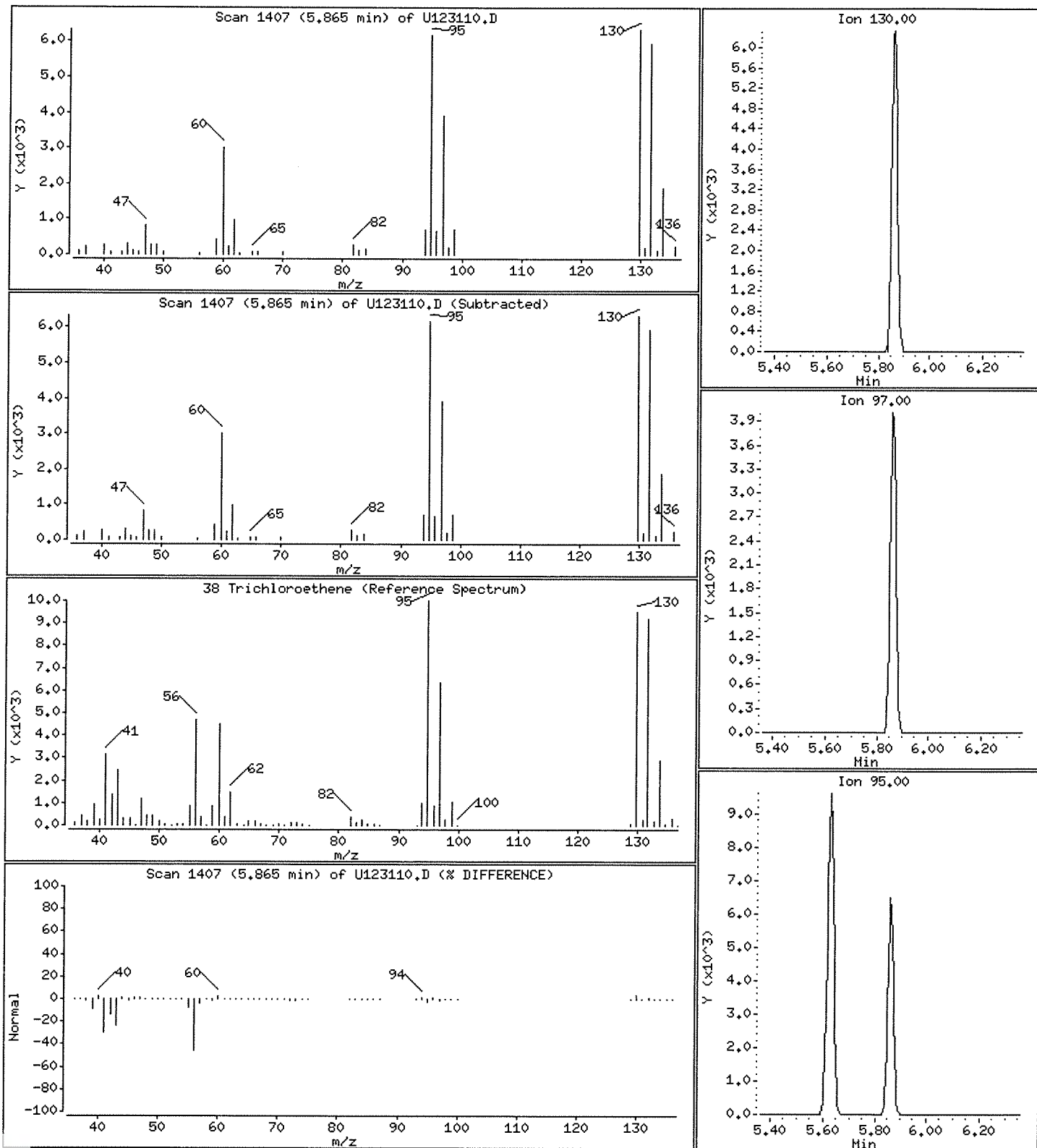
Operator: PC

Column phase: DB624

Column diameter: 0.18

38 Trichloroethene

Concentration: 2.90 ug/l



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181231.b\U123111.D Page 1
 Report Date: 30-Jan-2019 17:58

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U181231.b\U123111.D
 Lab Smp Id: HS18121264-06 Client Smp ID: HS18121264-06
 Inj Date : 31-DEC-2018 13:50
 Operator : PC Inst ID: VOA9.i
 Smp Info : HS18121264-06;HS18121264-06;;;
 Misc Info : 180315V9;WATER;0;1;
 Comment :
 Method : \\NAHSTWS005\Target\chem\voa9.i\U181231.b\8260C.m
 Meth Date : 30-Jan-2019 17:58 VOA9.i Quant Type: ISTD
 Cal Date : 21-DEC-2018 16:41 Cal File: U122108.D
 Als bottle: 11
 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						CONCENTRATIONS	
			MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168		4.898	4.898	(1.000)	320083	50.0000		
* 36 1,4-Difluorobenzene	114		5.629	5.629	(1.000)	567528	50.0000		
* 47 Chlorobenzene-d5	117		8.249	8.249	(1.000)	493368	50.0000		
* 70 1,4-Dichlorobenzene-d4	152		10.236	10.236	(1.000)	237208	50.0000		
\$ 30 Dibromofluoromethane	113		4.834	4.834	(0.987)	163063	46.0485	46.04	
\$ 35 1,2-Dichloroethane-d4	65		5.179	5.179	(1.057)	222845	49.1536	49.15	
\$ 48 Toluene-d8	98		6.990	6.990	(0.847)	694115	54.6436	54.64	
\$ 69 4-Bromofluorobenzene	95		9.258	9.257	(1.122)	247330	51.0260	51.02	
27 cis-1,2-Dichloroethene	96		4.294	4.294	(0.877)	4104	0.97545	0.97(a)	
38 Trichloroethene	130		5.865	5.865	(1.042)	9842	2.69955	2.69(a)	

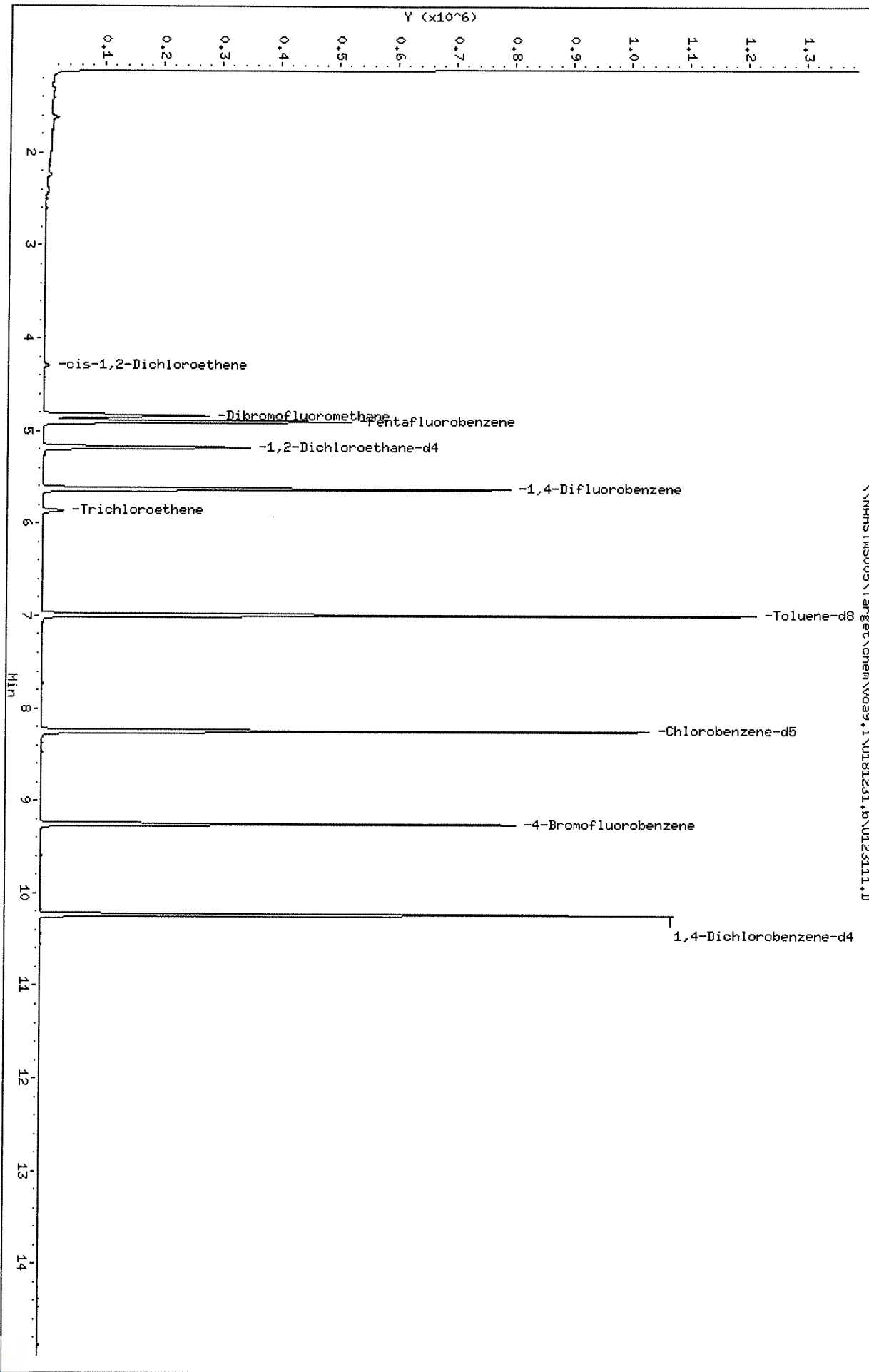
QC Flag Legend

a - Target compound detected but, quantitated amount
 Below Limit Of Quantitation(BLOQ).



Data File: \\NAHSTMS005\Target\chem\voa9.i\U181231.b\U123111.D
Date : 31-DEC-2018 13:50
Client ID: HS18121264-06
Sample Info: HS18121264-06;HS18121264-06;;
Purge Volume: 5.0
Column phase: DB624

Instrument: VDA9.i
Operator: PC
Column diameter: 0.18



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181231.b\U123111.D

Page 3

Date : 31-DEC-2018 13:50

Client ID: HS18121264-06

Instrument: VOA9.i

Sample Info: HS18121264-06;HS18121264-06;;

Purge Volume: 5.0

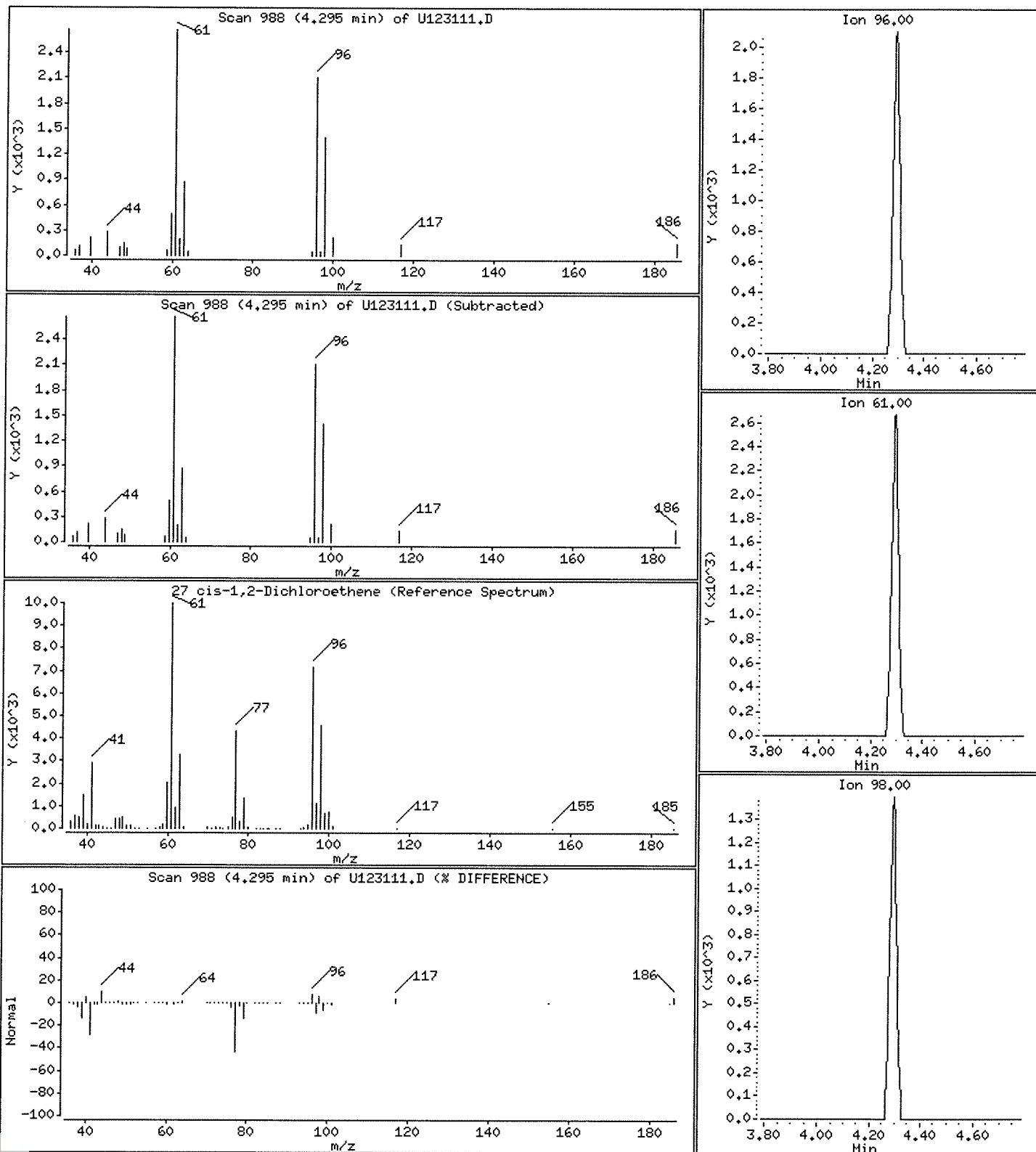
Operator: PC

Column phase: DB624

Column diameter: 0.18

27 cis-1,2-Dichloroethene

Concentration: 0.97 ug/l



Data File: \\NAHSTW005\Target\chem\voa9,i\U181231.b\U123111.D

Page 4

Date : 31-DEC-2018 13:50

Client ID: HS18121264-06

Instrument: VOA9.i

Sample Info: HS18121264-06;HS18121264-06;;;

Purge Volume: 5.0

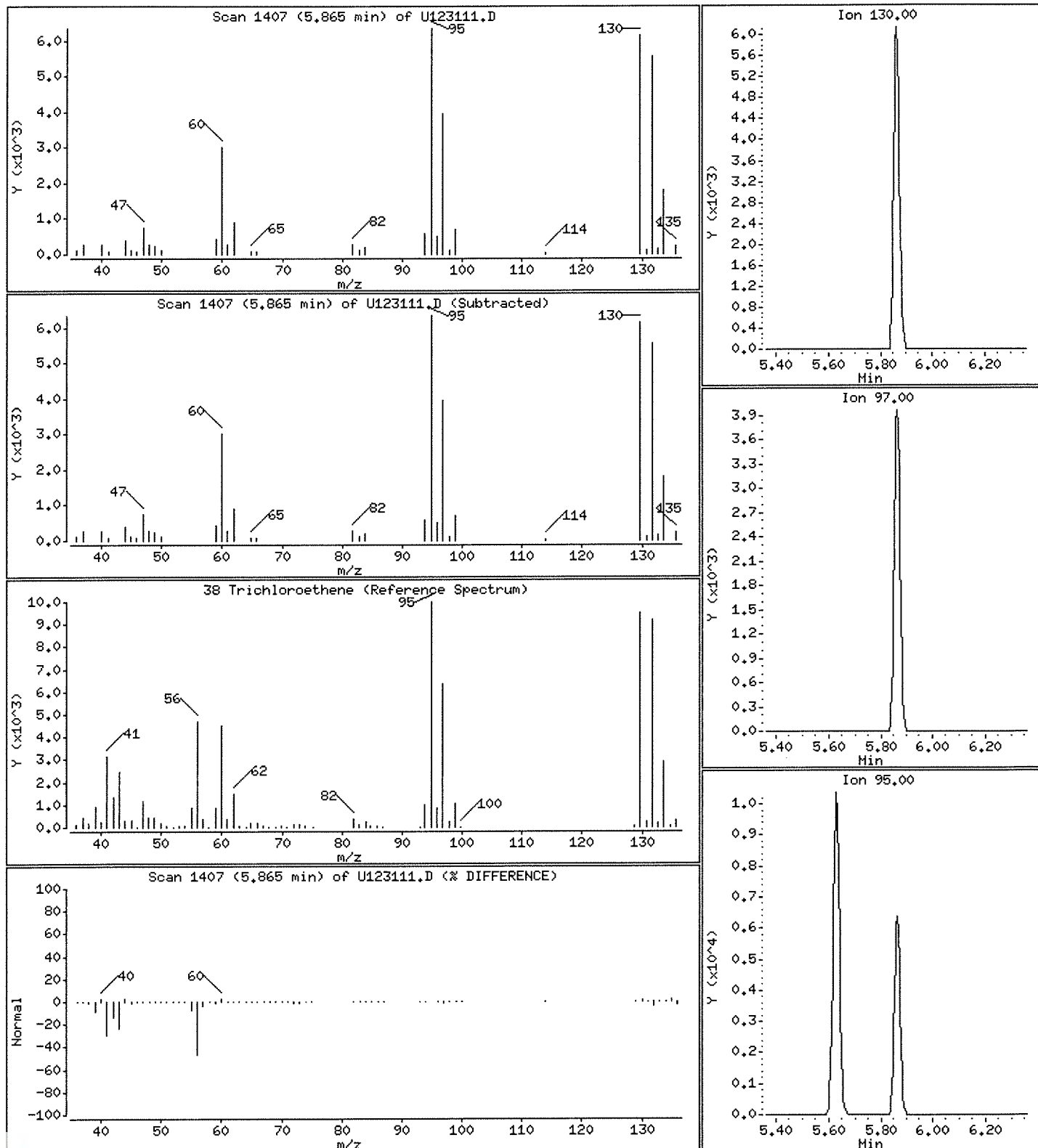
Operator: PC

Column phase: DB624

Column diameter: 0.18

38 Trichloroethene

Concentration: 2.69 ug/l



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181231.b\U123112.D Page 1
 Report Date: 30-Jan-2019 17:58

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U181231.b\U123112.D
 Lab Smp Id: HS18121264-02 Client Smp ID: HS18121264-02
 Inj Date : 31-DEC-2018 14:15
 Operator : PC Inst ID: VOA9.i
 Smp Info : HS18121264-02;HS18121264-02;;
 Misc Info : 180315V9;WATER;0;5;
 Comment :
 Method : \\NAHSTWS005\Target\chem\voa9.i\U181231.b\8260C.m
 Meth Date : 30-Jan-2019 17:58 VOA9.i Quant Type: ISTD
 Cal Date : 21-DEC-2018 16:41 Cal File: U122108.D
 Als bottle: 12
 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	CONCENTRATIONS					
			ON-COLUMN	FINAL				
	MASS		RT	EXP RT	REL RT	RESPONSE	(ug/l)	(ug/l)
* 1 Pentafluorobenzene	168		4.894	4.898	(1.000)	315141	50.0000	
* 36 1,4-Difluorobenzene	114		5.625	5.629	(1.000)	558587	50.0000	
* 47 Chlorobenzene-d5	117		8.249	8.249	(1.000)	503561	50.0000	
* 70 1,4-Dichlorobenzene-d4	152		10.236	10.236	(1.000)	229210	50.0000	
\$ 30 Dibromofluoromethane	113		4.826	4.834	(0.986)	160250	45.9609	45.96
\$ 35 1,2-Dichloroethane-d4	65		5.175	5.179	(1.057)	217807	48.7799	48.77
\$ 48 Toluene-d8	98		6.989	6.990	(0.847)	677182	52.1527	52.15
\$ 69 4-Bromofluorobenzene	95		9.257	9.257	(1.122)	240658	48.5777	48.57
11 1,1-Dichloroethene	96		2.397	2.412	(0.490)	5712	1.90629	9.53(a)
33 1,2-Dichloroethane	62		5.250	5.258	(0.933)	318967	63.5756	317.87
28 Chloroform	83		4.658	4.662	(0.952)	6104	0.93390	4.66(a)
27 cis-1,2-Dichloroethene	96		4.283	4.294	(0.875)	195931	47.2998	236.49
20 trans-1,2-Dichloroethene	96		3.139	3.151	(0.642)	2016	0.54652	2.73(a)
38 Trichloroethene	130		5.861	5.865	(1.042)	3270249	911.351	4556.75(A)
5 Vinyl Chloride	62		1.419	1.430	(0.290)	1775	1.35934	6.79(a)

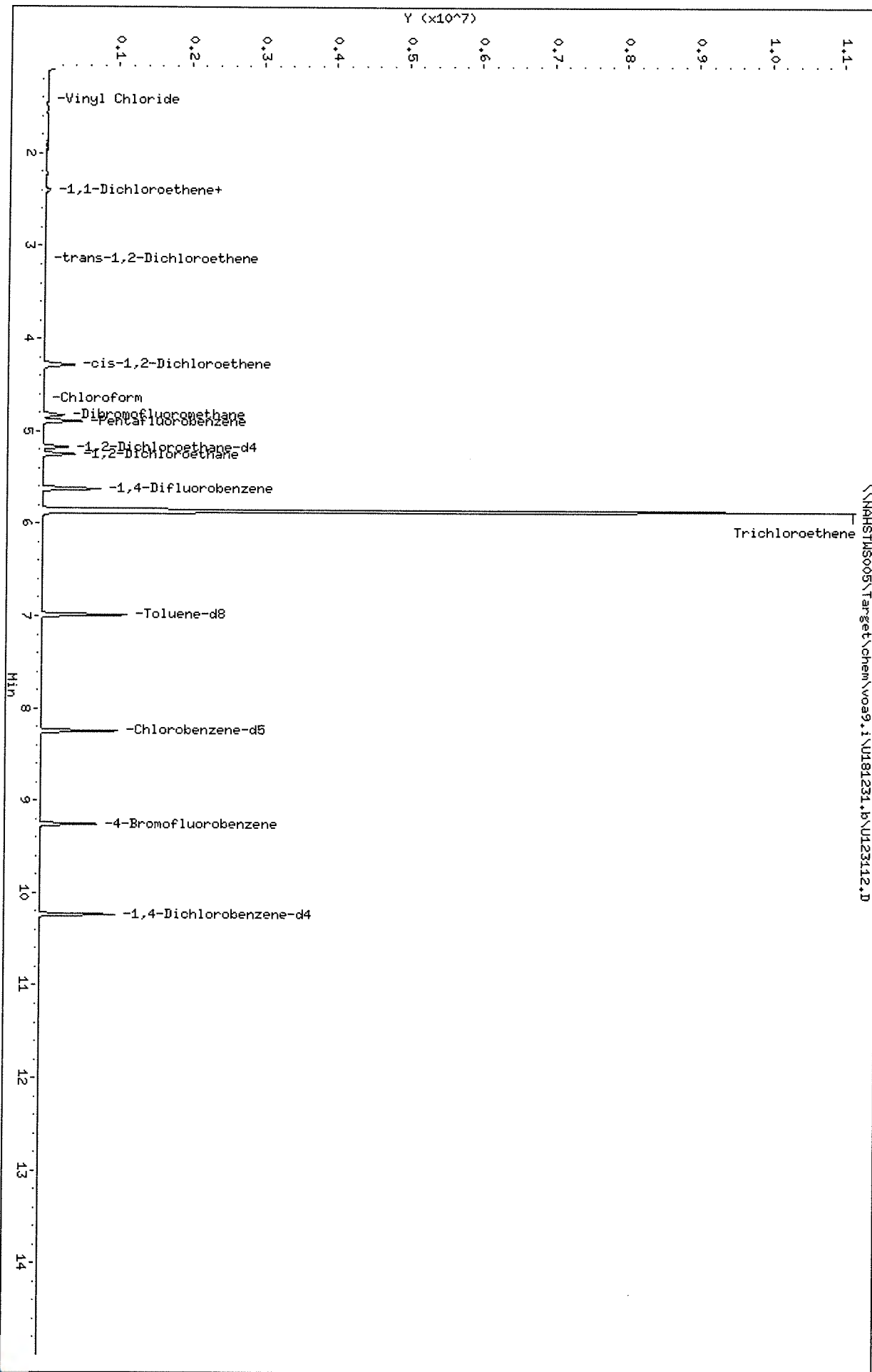
QC Flag Legend

- a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
- A - Target compound detected but, quantitated amount exceeded maximum amount.



Data File: \\NAHSTMS005\Target\chem\voa9.i\U181231.b\U123112.D
 Date: 31-DEC-2018 14:15
 Client ID: H518121264-02
 Sample Info: H518121264-02;H518121264-02;;
 Purge Volume: 5.0
 Column phase: DB624

Instrument: V099.i
 Operator: PC
 Column diameter: 0.18



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181231.b\U123112.D

Page 3

Date : 31-DEC-2018 14:15

Client ID: HS18121264-02

Instrument: VOA9.i

Sample Info: HS18121264-02;HS18121264-02;;

Purge Volume: 5.0

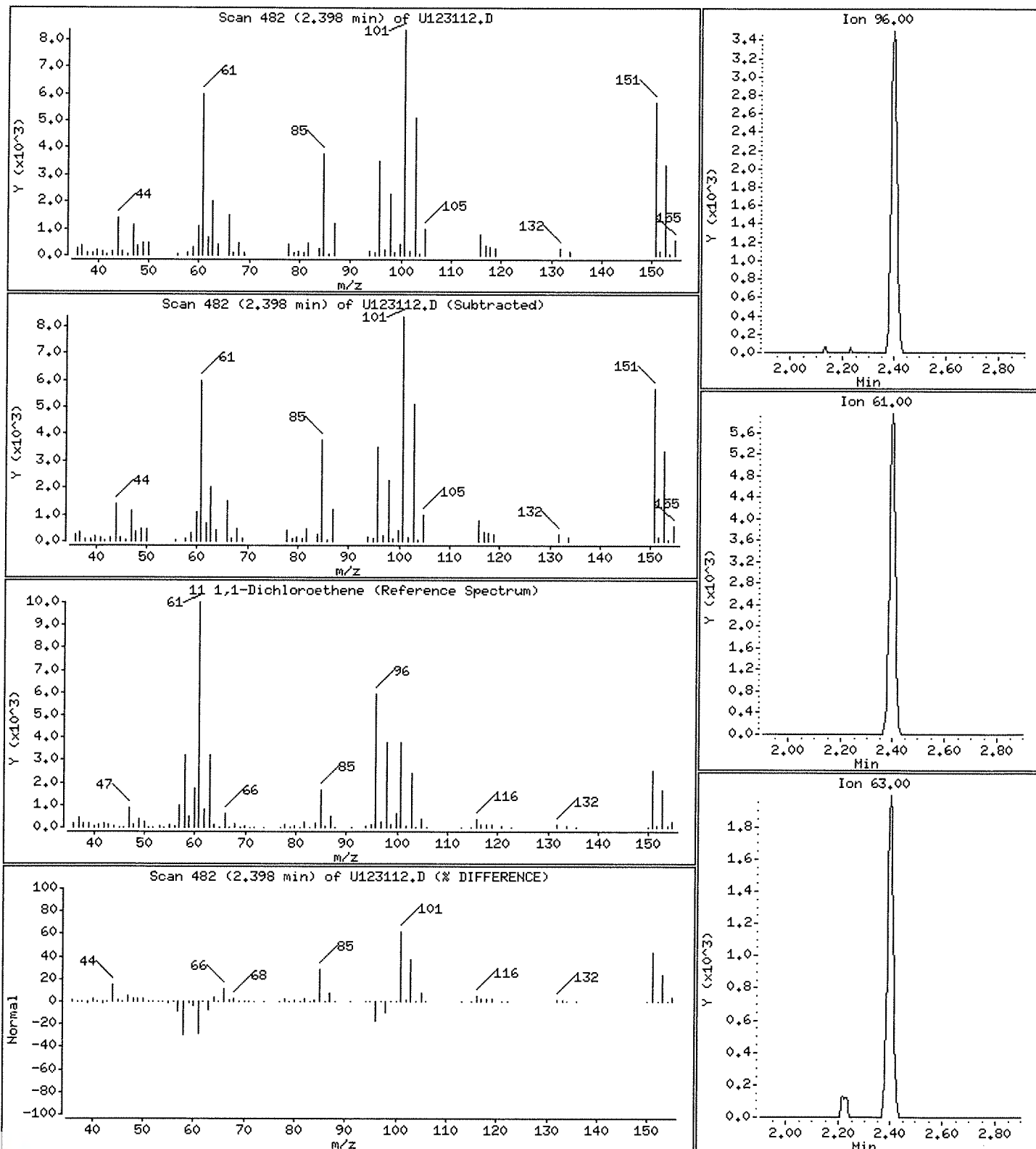
Operator: PC

Column phase: DB624

Column diameter: 0.18

11 1,1-Dichloroethene

Concentration: 9.53 ug/l



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181231.b\U123112.D

Page 4

Date : 31-DEC-2018 14:15

Client ID: HS18121264-02

Instrument: VOA9.i

Sample Info: HS18121264-02;HS18121264-02;;

Purge Volume: 5.0

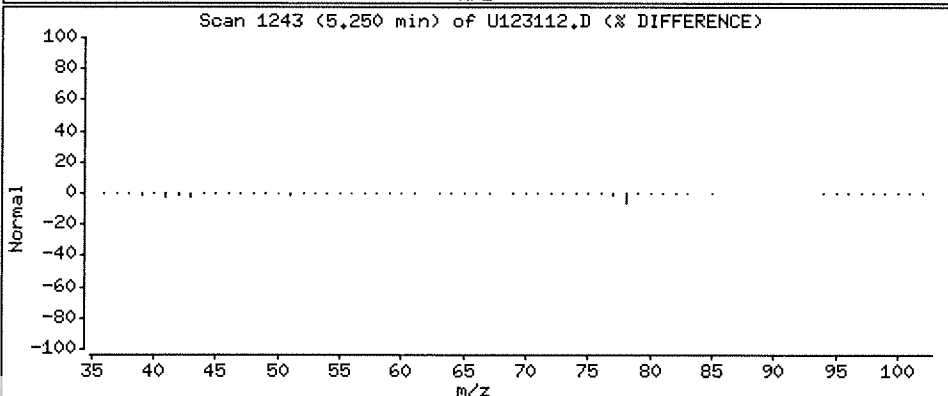
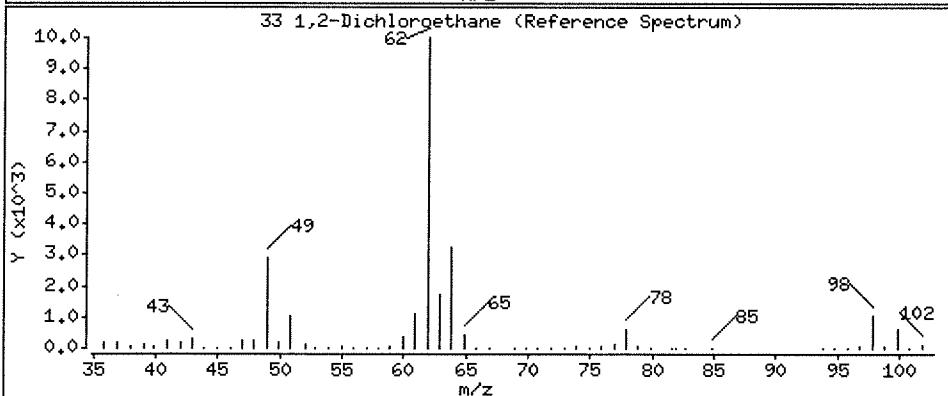
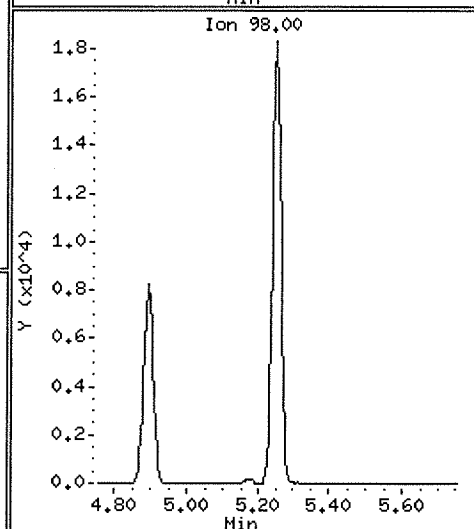
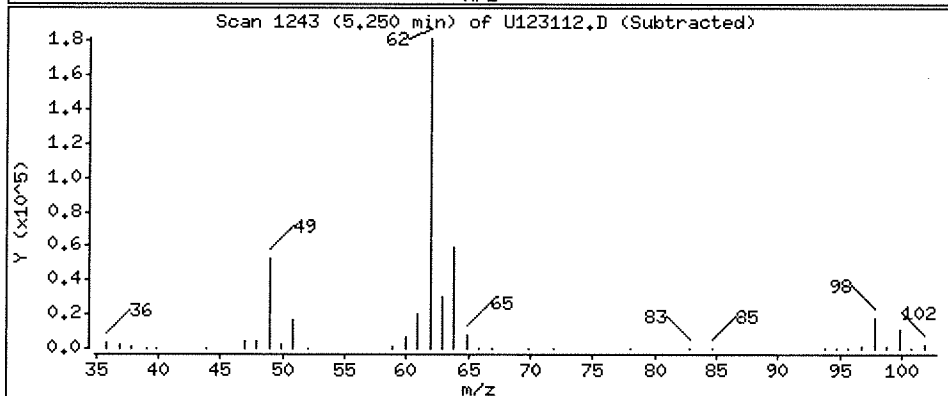
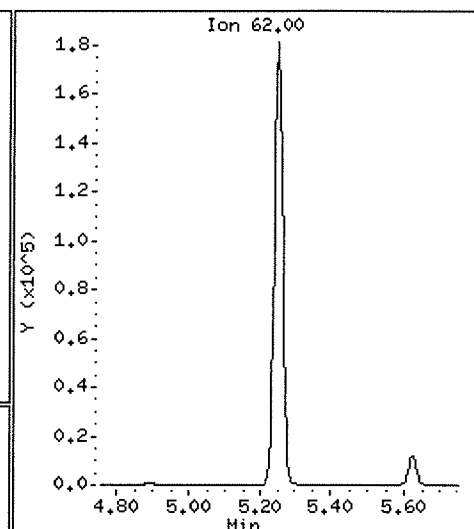
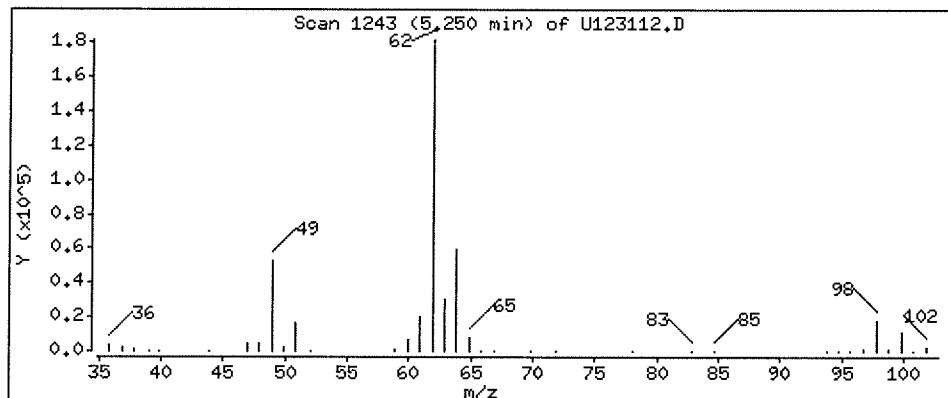
Operator: PC

Column phase: DB624

Column diameter: 0.18

33 1,2-Dichloroethane

Concentration: 317.87 ug/l



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181231.b\U123112.D

Page 5

Date : 31-DEC-2018 14:15

Client ID: HS18121264-02

Instrument: VOA9.i

Sample Info: HS18121264-02;HS18121264-02;;;

Purge Volume: 5.0

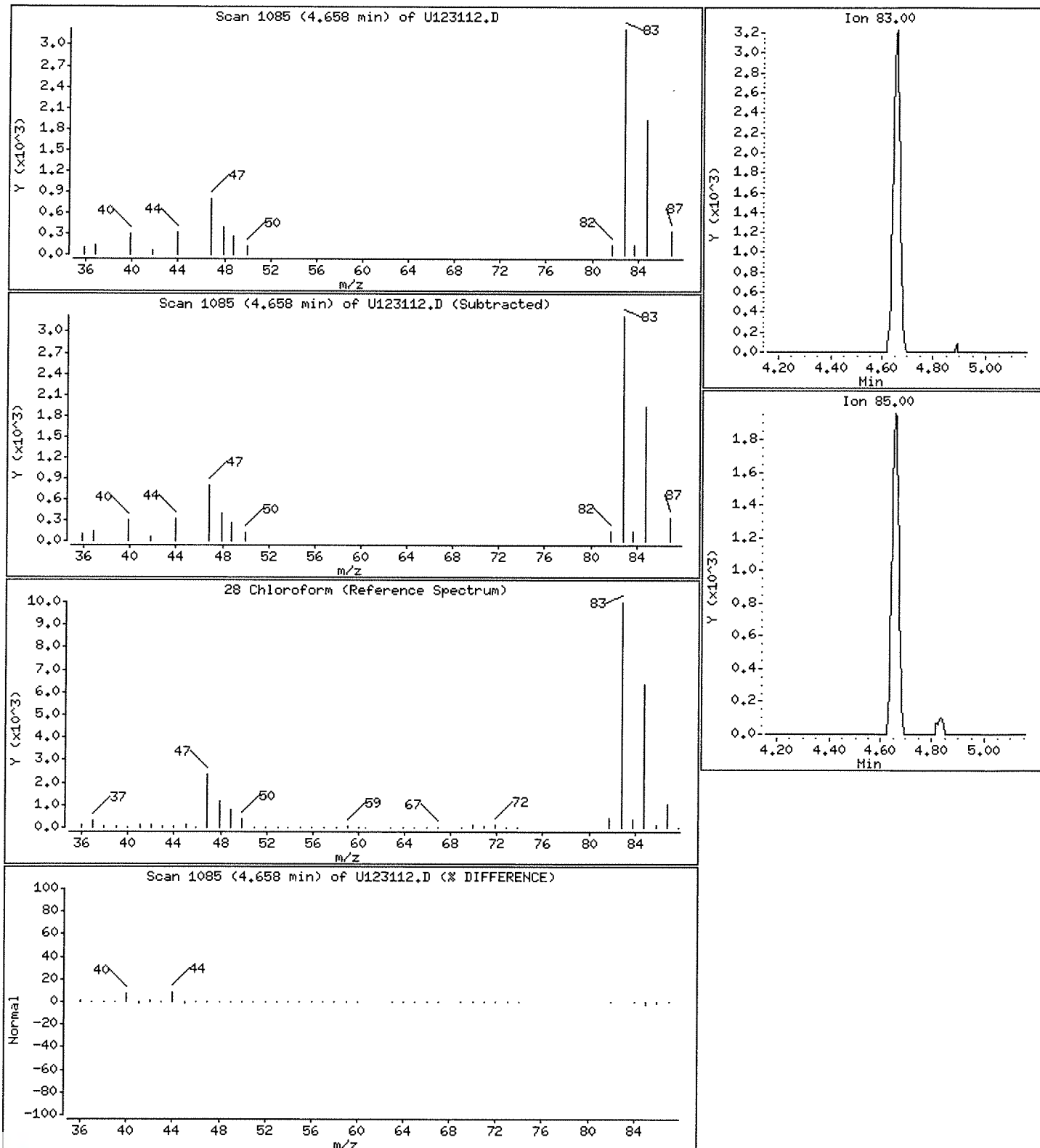
Operator: PC

Column phase: DB624

Column diameter: 0.18

28 Chloroform

Concentration: 4.66 ug/l



Data File: \\NAHSTMS005\Target\chem\voa9,i\U181231,b\U123112.D

Page 6

Date : 31-DEC-2018 14:15

Client ID: HS18121264-02

Instrument: VOA9.i

Sample Info: HS18121264-02;HS18121264-02;;

Purge Volume: 5.0

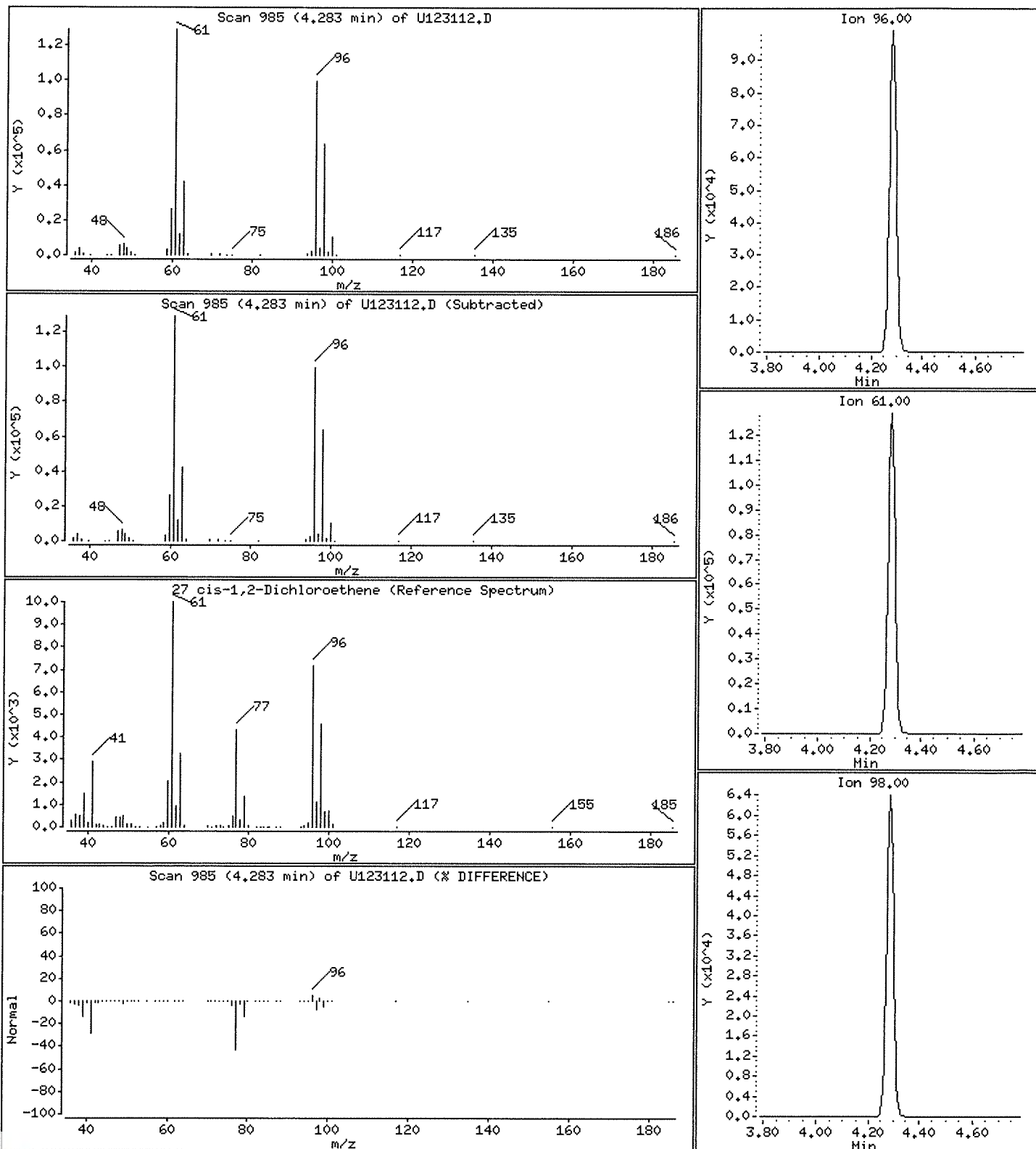
Operator: PC

Column phase: DB624

Column diameter: 0.18

27 cis-1,2-Dichloroethene

Concentration: 236.49 ug/l



Data File: \\NAHSTMS005\Target\chem\voa9.i\U181231.b\U123112.D

Page 7

Date : 31-DEC-2018 14:15

Client ID: HS18121264-02

Instrument: VOA9.i

Sample Info: HS18121264-02;HS18121264-02;;

Purge Volume: 5.0

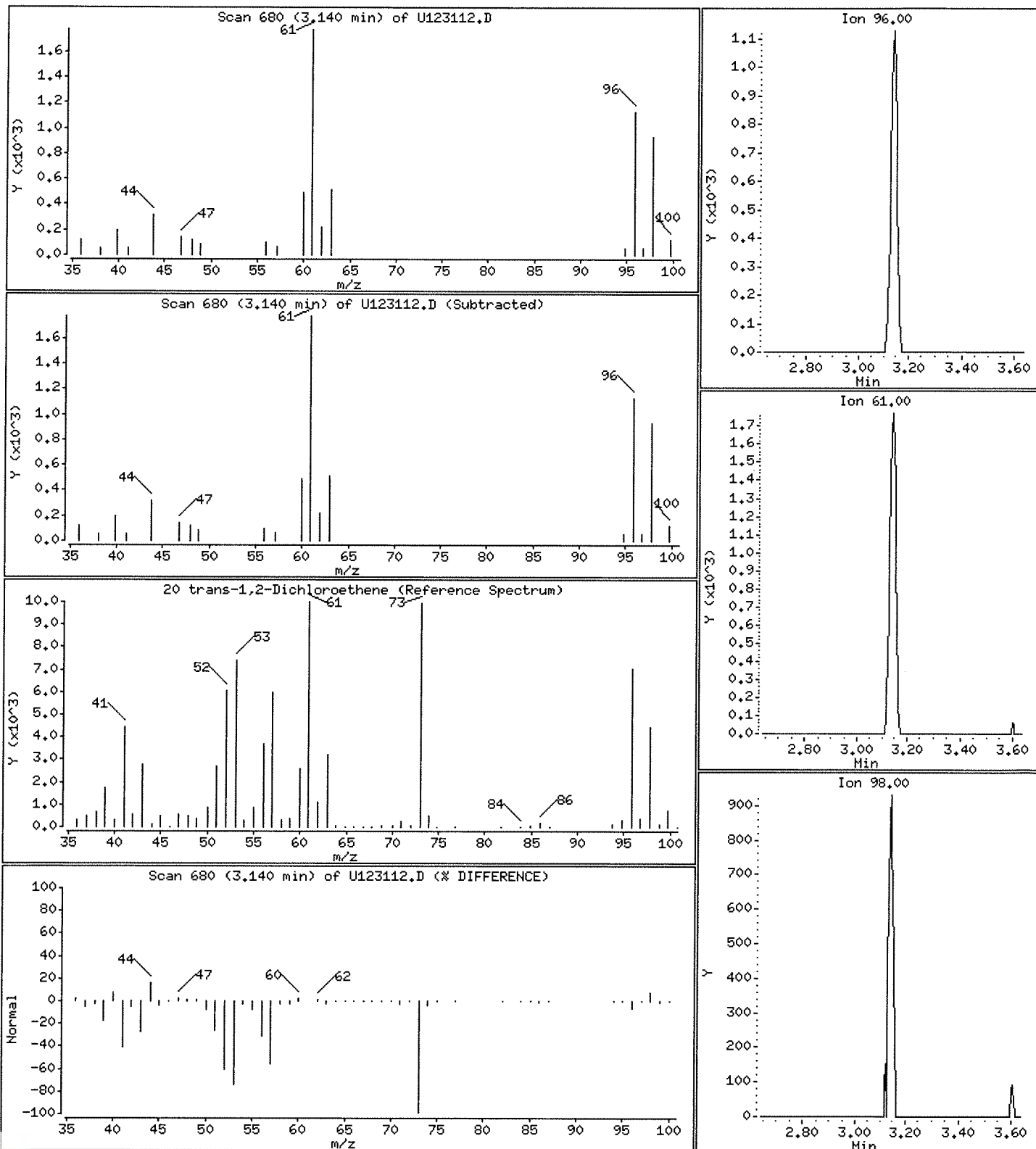
Operator: PC

Column phase: DB624

Column diameter: 0.18

20 trans-1,2-Dichloroethene

Concentration: 2.73 ug/l



Data File: \\NAHSTWS005\Target\chem\voa9.i\U123112.D

Page 8

Date : 31-DEC-2018 14:15

Client ID: HS18121264-02

Instrument: VOA9.i

Sample Info: HS18121264-02;HS18121264-02;;

Purge Volume: 5.0

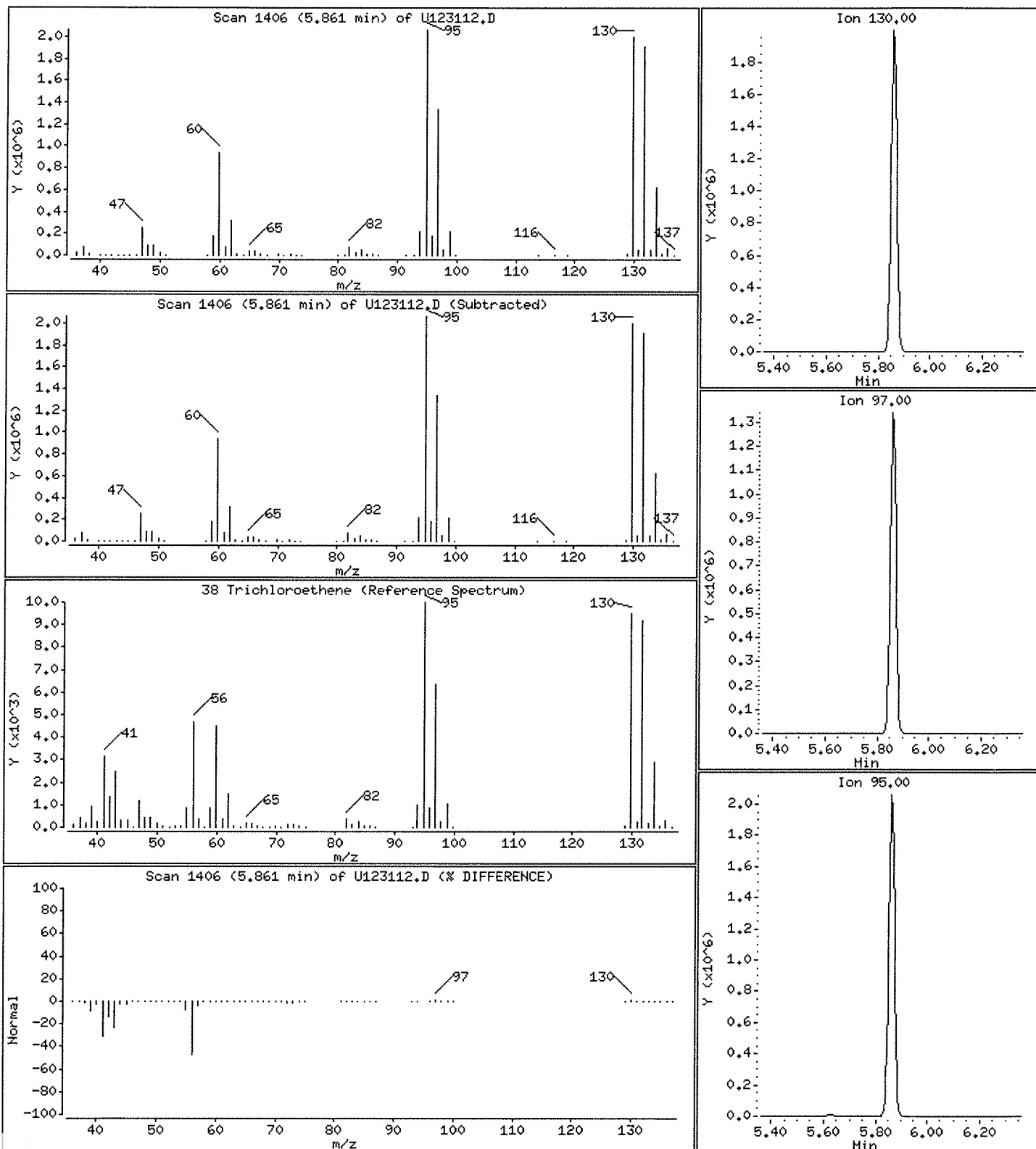
Operator: PC

Column phase: DB624

Column diameter: 0.18

38 Trichloroethene

Concentration: 4556.75 ug/l



Data File: \\NAHSTWS005\Target\chem\voa9,i\U181231,b\U123112.D

Page 9

Date : 31-DEC-2018 14:15

Client ID: HS18121264-02

Instrument: VOA9.i

Sample Info: HS18121264-02;HS18121264-02;;

Purge Volume: 5.0

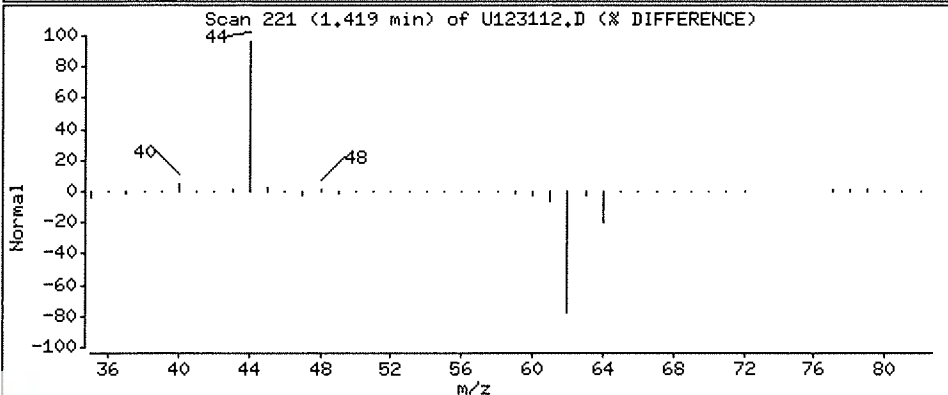
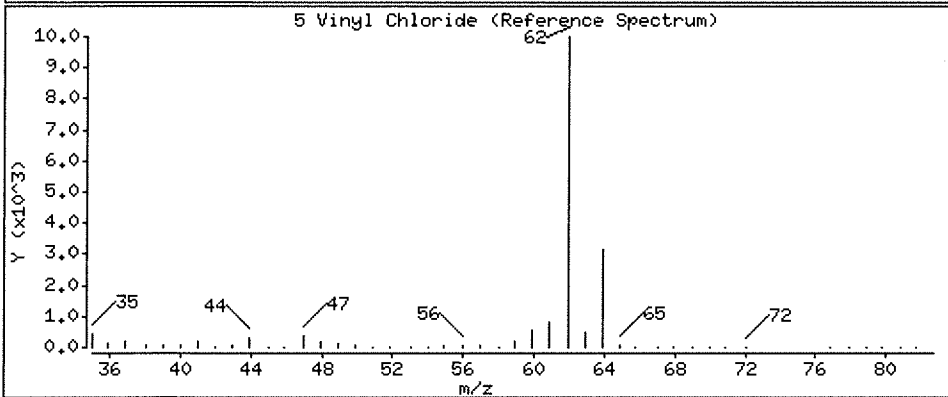
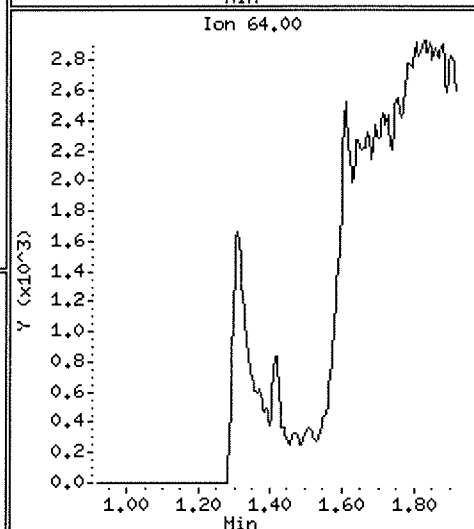
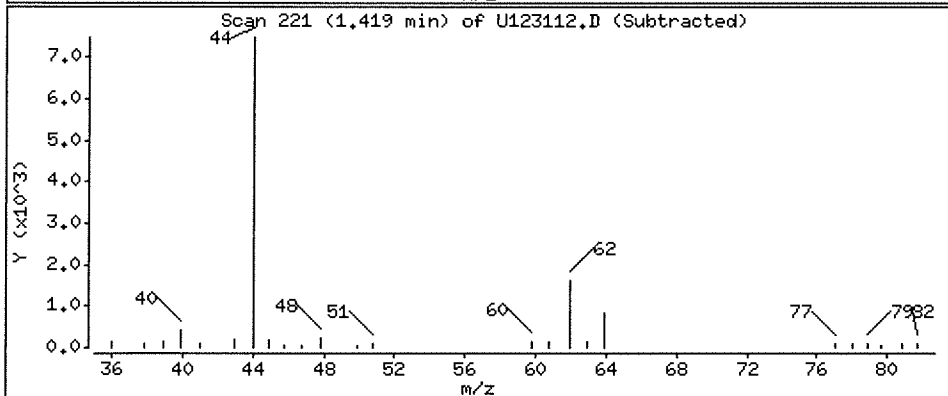
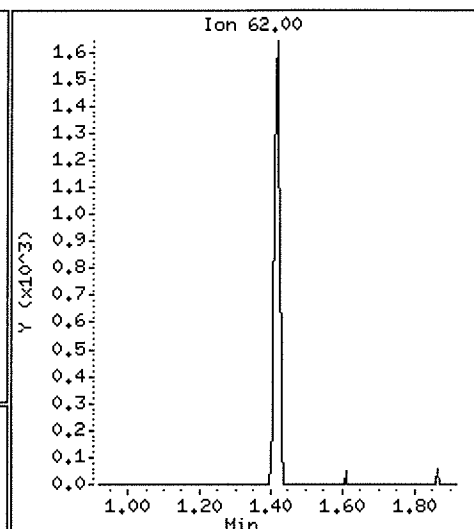
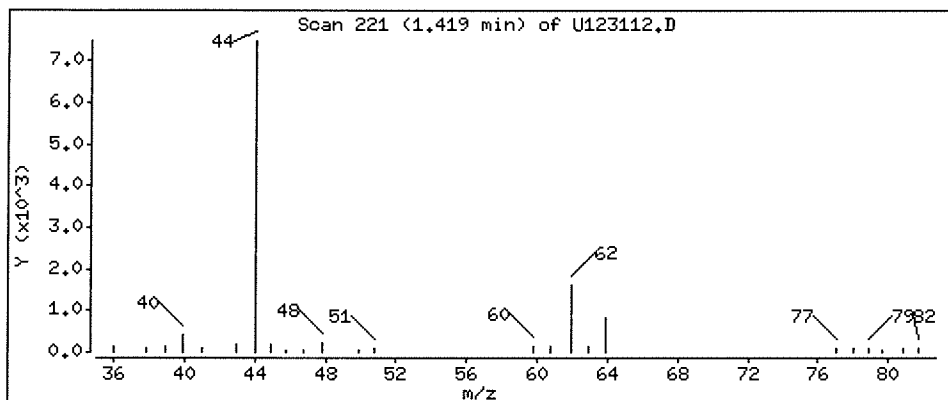
Operator: PC

Column phase: DB624

Column diameter: 0.18

5 Vinyl Chloride

Concentration: 6.79 ug/l



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181231.b\U123113.D Page 1
 Report Date: 30-Jan-2019 17:58

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U181231.b\U123113.D
 Lab Smp Id: HS18121264-01MS Client Smp ID: HS18121264-01MS
 Inj Date : 31-DEC-2018 14:40
 Operator : PC Inst ID: VOA9.i
 Smp Info : HS18121264-01MS;HS18121264-01MS;3;;MS
 Misc Info : 180315V9;WATER;0;1;
 Comment :
 Method : \\NAHSTWS005\Target\chem\voa9.i\U181231.b\8260C.m
 Meth Date : 30-Jan-2019 17:58 VOA9.i Quant Type: ISTD
 Cal Date : 21-DEC-2018 16:41 Cal File: U122108.D
 Als bottle: 13 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						CONCENTRATIONS	
			MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168		4.898	4.898	(1.000)	320347	50.0000		
* 36 1,4-Difluorobenzene	114		5.629	5.629	(1.000)	562528	50.0000		
* 47 Chlorobenzene-d5	117		8.249	8.249	(1.000)	515534	50.0000		
* 70 1,4-Dichlorobenzene-d4	152		10.236	10.236	(1.000)	249059	50.0000		
\$ 30 Dibromofluoromethane	113		4.834	4.834	(0.987)	162242	45.7699	45.76	
\$ 35 1,2-Dichloroethane-d4	65		5.179	5.179	(1.057)	215938	47.5219	47.52	
\$ 48 Toluene-d8	98		6.989	6.990	(0.847)	702529	52.8720	52.87	
\$ 69 4-Bromofluorobenzene	95		9.257	9.257	(1.122)	261634	51.6738	51.67	
60 1,1,1,2-Tetrachloroethane	131		8.350	8.350	(1.012)	84762	26.1921	26.19	
31 1,1,1-Trichloroethane	97		4.834	4.834	(0.987)	137422	27.1679	27.16	
68 1,1,2,2-Tetrachloroethane	83		9.392	9.392	(0.918)	149666	26.6837	26.68	
53 1,1,2-Trichloroethane	83		7.420	7.421	(0.900)	84736	27.5885	27.58	
22 1,1-Dichloroethane	63		3.612	3.612	(0.737)	180994	26.2352	26.23	
11 1,1-Dichloroethene	96		2.408	2.412	(0.492)	78738	25.8505	25.85	
32 1,1-Dichloropropene	75		5.010	5.010	(0.890)	144900	28.9501	28.95	
93 1,2,3-Trichlorobenzene	180		12.335	12.335	(1.205)	117900	25.4363	25.43	
71 1,2,3-Trichloropropane	75		9.426	9.426	(0.921)	153466	26.3127	26.31	
90 1,2,4-Trichlorobenzene	180		11.923	11.923	(1.165)	120755	26.1877	26.18	
79 1,2,4-Trimethylbenzene	105		9.943	9.943	(0.971)	375891	28.8408	28.84	
89 1,2-Dibromo-3-Chloropropane	155		11.233	11.233	(1.097)	19187	22.9927	22.99	
57 1,2-Dibromoethane	107		7.852	7.852	(0.952)	97854	27.6607	27.66	
88 1,2-Dichlorobenzene	146		10.569	10.570	(1.033)	197801	26.7474	26.74	



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181231.b\U123113.D Page 2
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Compounds	QUANT SIG					CONCENTRATIONS	
	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/l)	FINAL (ug/l)
33 1,2-Dichloroethane	62	5.257	5.258	(0.934)	143986	28.0922	28.09
42 1,2-Dichloropropane	63	6.082	6.082	(1.081)	108738	27.3569	27.35
75 1,3,5-Trimethylbenzene	105	9.625	9.625	(0.940)	364348	29.1085	29.10
83 1,3-Dichlorobenzene	146	10.179	10.180	(0.995)	199868	27.0249	27.02
54 1,3-Dichloropropane	76	7.563	7.563	(0.917)	182886	27.6441	27.64
84 1,4-Dichlorobenzene	146	10.254	10.255	(1.002)	204518	26.2277	26.22
26 2,2-Dichloropropane	77	4.279	4.283	(0.874)	112648	27.0947	27.09
24 2-Butanone	43	4.343	4.343	(0.887)	104473	48.6476	48.64
76 2-Chlorotoluene	91	9.546	9.546	(0.933)	326220	28.4280	28.42
52 2-Hexanone	43	7.649	7.649	(0.927)	155224	54.1476	54.14
77 4-Chlorotoluene	91	9.640	9.640	(0.942)	378498	28.5424	28.54
82 p-Isopropyltoluene	119	10.209	10.210	(0.997)	385895	29.2806	29.28
45 4-Methyl-2-Pentanone	43	6.914	6.915	(0.838)	221416	53.6798	53.67
10 Acetone	43	2.491	2.487	(0.509)	65439	50.8849	50.88
37 Benzene	78	5.224	5.224	(0.928)	422189	28.2046	28.20
74 Bromobenzene	156	9.381	9.381	(0.917)	104198	27.0776	27.07
29 Bromochloromethane	128	4.560	4.560	(0.931)	49026	27.9010	27.90
39 Bromodichloromethane	83	6.348	6.348	(1.128)	114456	27.0784	27.07
66 Bromoform	173	8.984	8.984	(1.089)	49581	23.3786	23.37
6 Bromomethane	94	1.677	1.681	(0.343)	58544	30.1396	30.13
19 Carbon Disulfide	76	2.600	2.600	(0.531)	564730	50.8839	50.88
34 Carbon Tetrachloride	117	4.999	4.999	(0.888)	107125	26.8514	26.85
59 Chlorobenzene	112	8.275	8.275	(1.003)	273742	27.6357	27.63
7 Chloroethane	64	1.760	1.764	(0.359)	71871	25.7356	25.73 (M)
28 Chloroform	83	4.661	4.662	(0.952)	174570	26.2750	26.27
3 Chloromethane	50	1.348	1.351	(0.275)	89663	27.9156	27.91
27 cis-1,2-Dichloroethene	96	4.294	4.294	(0.877)	111188	26.4057	26.40
46 cis-1,3-Dichloropropene	75	6.761	6.761	(1.201)	154424	24.6983	24.69
55 Dibromochloromethane	129	7.758	7.758	(0.940)	82826	24.9478	24.94
44 Dibromomethane	93	6.191	6.191	(1.100)	62615	27.2949	27.29
2 Dichlorodifluoromethane	85	1.213	1.217	(0.248)	86511	22.2198	22.21
61 Ethylbenzene	106	8.373	8.373	(1.015)	146165	28.7704	28.77
91 Hexachlorobutadiene	225	12.065	12.065	(1.179)	43514	24.6313	24.63
67 Isopropylbenzene	105	9.126	9.126	(1.106)	438857	29.9357	29.93
62 m,p-Xylenes	106	8.474	8.474	(1.027)	363713	58.2342	58.23
17 Methylene Chloride	84	2.881	2.881	(0.588)	105753	26.1506	26.15
87 n-Butylbenzene	91	10.558	10.555	(1.031)	366560	28.8205	28.82
73 n-Propylbenzene	91	9.475	9.475	(0.926)	551672	29.6441	29.64
92 Naphthalene	128	12.133	12.133	(1.185)	374672	24.9334	24.93
63 o-Xylene	106	8.811	8.811	(1.068)	182476	28.9607	28.96
81 sec-Butylbenzene	105	10.086	10.086	(0.985)	459671	29.3903	29.39
64 Styrene	104	8.826	8.826	(1.070)	308559	29.4761	29.47
78 tert-Butylbenzene	119	9.902	9.902	(0.967)	316423	29.2483	29.24
56 Tetrachloroethene	164	7.525	7.526	(0.912)	73967	27.4058	27.40
50 Toluene	91	7.049	7.049	(0.855)	443265	28.9046	28.90
20 trans-1,2-Dichloroethene	96	3.151	3.151	(0.643)	98671	26.3139	26.31
51 trans-1,3-Dichloropropene	75	7.263	7.263	(1.290)	129969	24.3965	24.39
38 Trichloroethene	130	5.865	5.865	(1.042)	110362	30.5401	30.54
8 Trichlorofluoromethane	101	1.962	1.966	(0.401)	141037	27.0028	27.00
5 Vinyl Chloride	62	1.430	1.430	(0.292)	116868	26.2618	26.26



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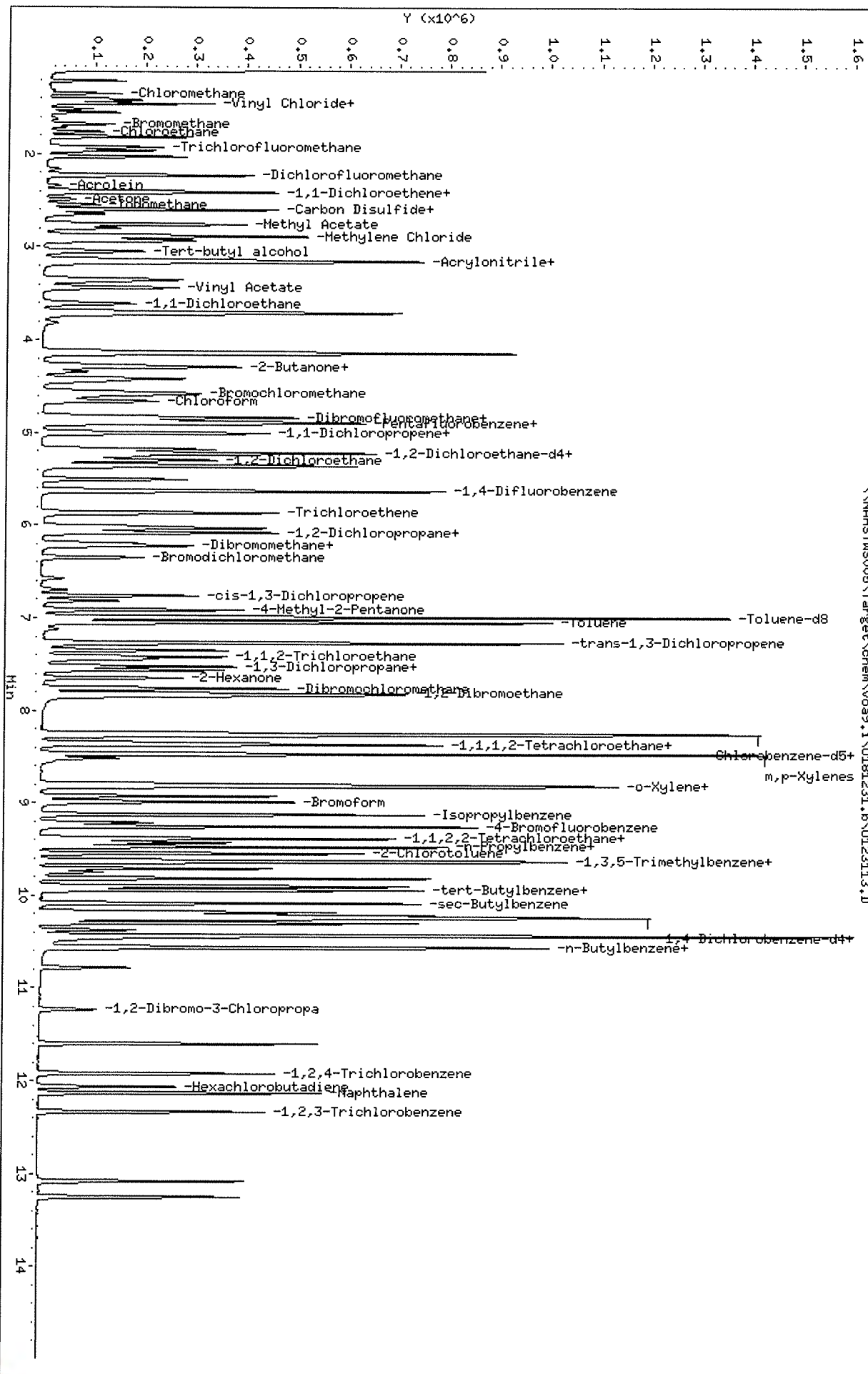
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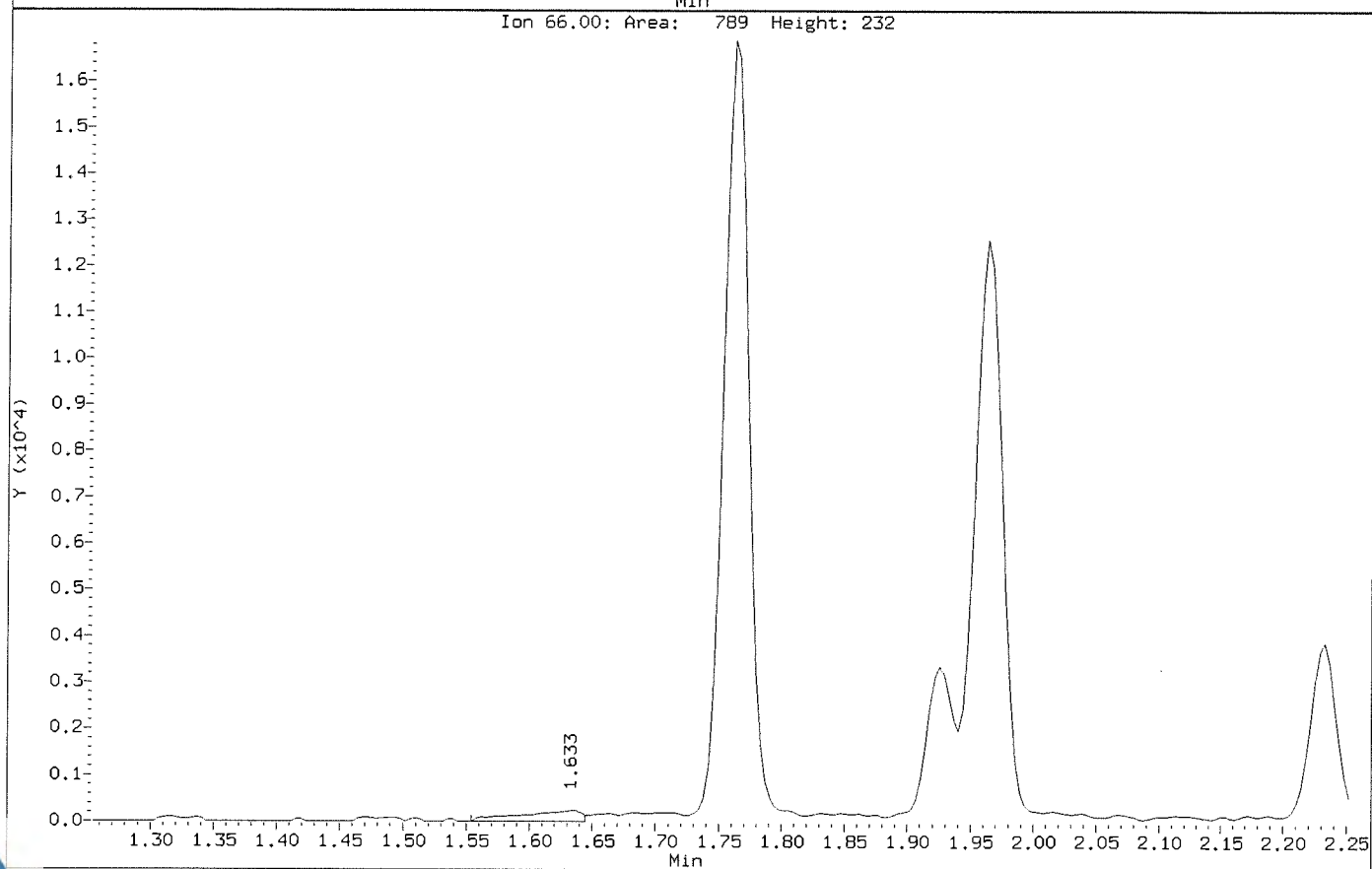
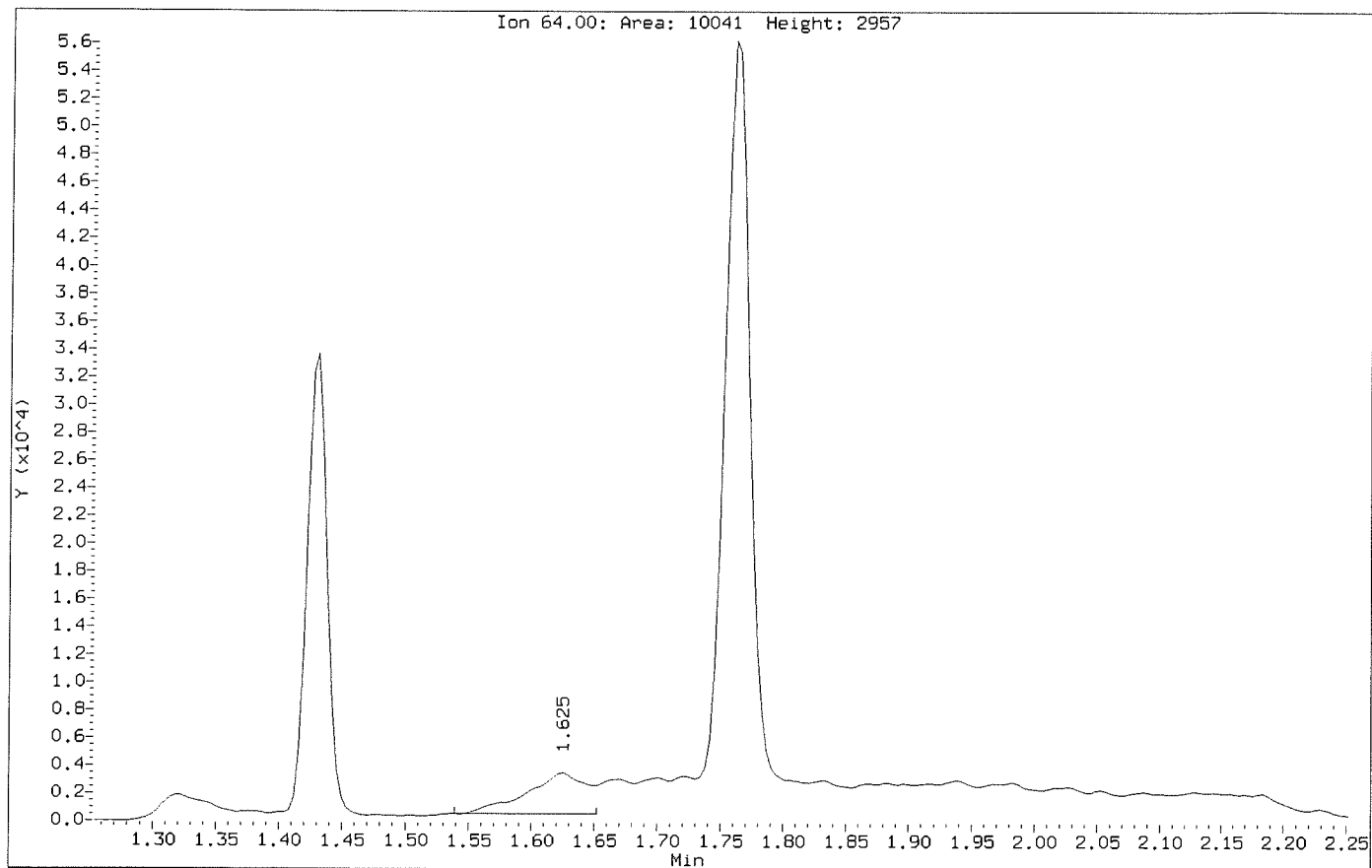
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 Column phase: DB624

Instrument: VOA9.i
 Operator: PC
 Column diameter: 0.18



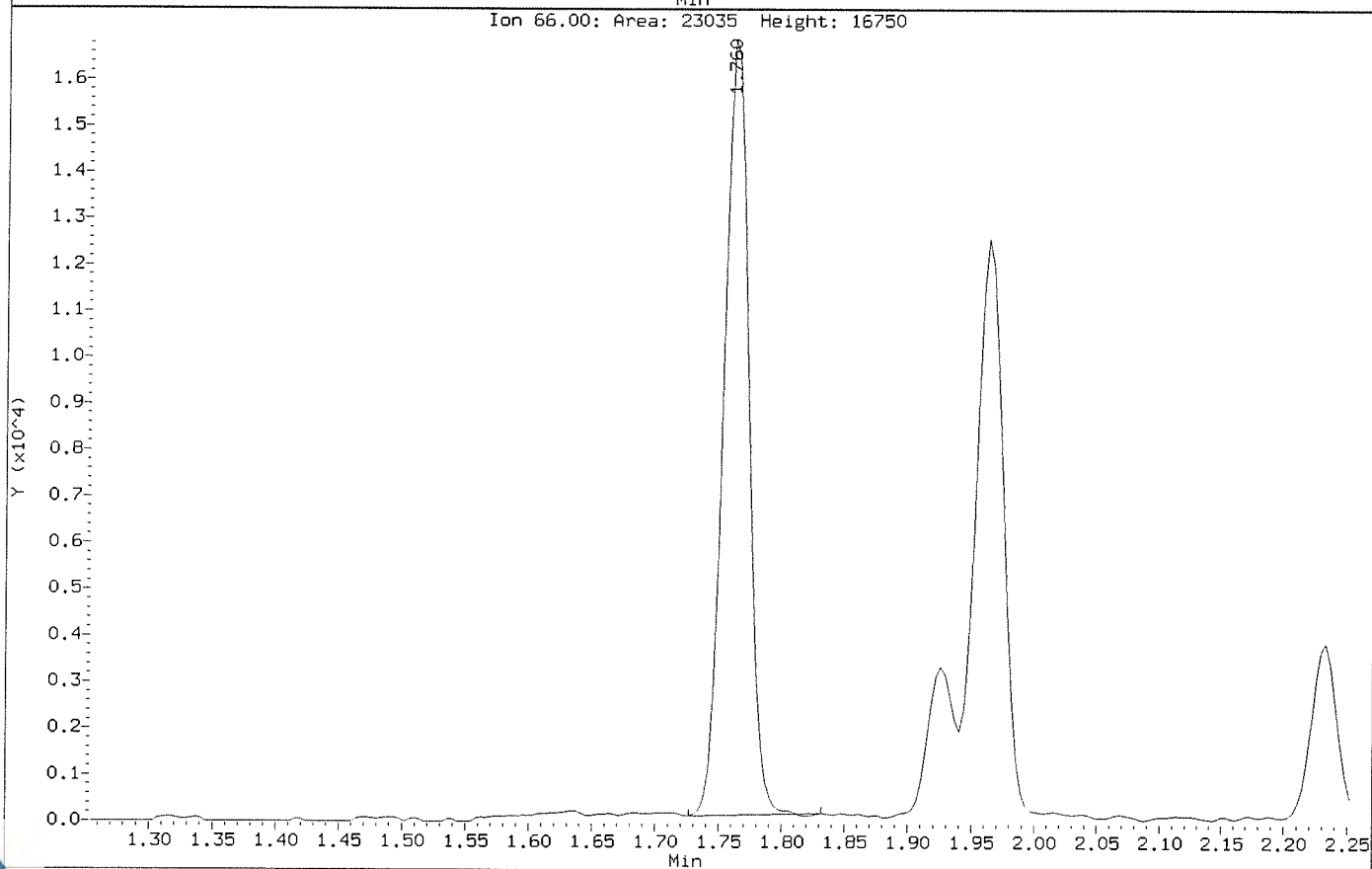
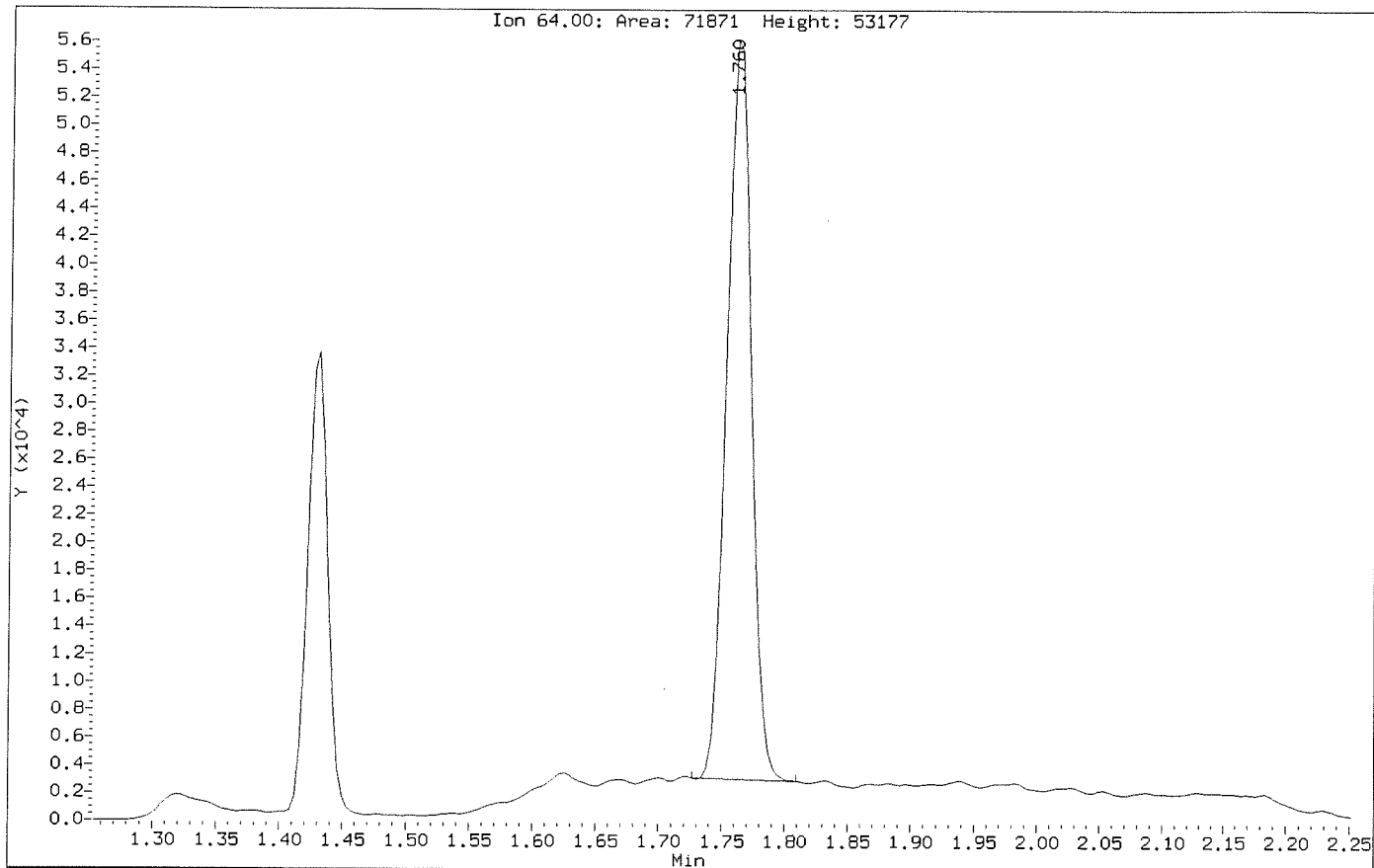
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Instrument: VOA9.i
Client Sample ID: HS18121264-01MS

Compound: Chloroethane
CAS Number: 75-00-3



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Instrument: VOA9.i
Client Sample ID: HS18121264-01MS

Compound: Chloroethane
CAS Number: 75-00-3



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181231.b\U123114.D Page 1
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Data file : \\NAHSTWS005\Target\chem\voa9.i\U181231.b\U123114.D
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 Operator : PC Inst ID: VOA9.i
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 Misc Info : 180315V9;WATER;0;1;
 Comment :
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 Meth Date : 30-Jan-2019 17:58 VOA9.i Quant Type: ISTD
 Cal Date : 21-DEC-2018 16:41 Cal File: U122108.D
 Als bottle: 13 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	CONCENTRATIONS					
			ON-COLUMN	FINAL				
	MASS		RT	EXP RT	REL RT	RESPONSE	(ug/l)	(ug/l)
* 1 Pentafluorobenzene	168		4.894	4.898	(1.000)	337325	50.0000	
* 36 1,4-Difluorobenzene	114		5.625	5.629	(1.000)	589023	50.0000	
* 47 Chlorobenzene-d5	117		8.249	8.249	(1.000)	537892	50.0000	
* 70 1,4-Dichlorobenzene-d4	152		10.236	10.236	(1.000)	259267	50.0000	
\$ 30 Dibromofluoromethane	113		4.826	4.834	(0.986)	172353	46.1886	46.18
\$ 35 1,2-Dichloroethane-d4	65		5.171	5.179	(1.057)	225904	47.1988	47.19
\$ 48 Toluene-d8	98		6.989	6.990	(0.847)	736724	53.1499	53.14
\$ 69 4-Bromofluorobenzene	95		9.257	9.257	(1.122)	270751	51.2401	51.24
60 1,1,1,2-Tetrachloroethane	131		8.350	8.350	(1.012)	84185	24.9606	24.96
31 1,1,1-Trichloroethane	97		4.826	4.834	(0.986)	136134	25.5587	25.55
68 1,1,2,2-Tetrachloroethane	83		9.392	9.392	(0.918)	149943	25.6806	25.68
53 1,1,2-Trichloroethane	83		7.420	7.421	(0.900)	84812	26.4654	26.46
22 1,1-Dichloroethane	63		3.601	3.612	(0.736)	179555	24.7167	24.71
11 1,1-Dichloroethene	96		2.397	2.412	(0.490)	79671	24.8403	24.84
32 1,1-Dichloropropene	75		5.003	5.010	(0.889)	142308	27.1533	27.15
93 1,2,3-Trichlorobenzene	180		12.335	12.335	(1.205)	118205	24.5214	24.52
71 1,2,3-Trichloropropane	75		9.426	9.426	(0.921)	150159	24.7320	24.73
90 1,2,4-Trichlorobenzene	180		11.923	11.923	(1.165)	122798	25.5822	25.58
79 1,2,4-Trimethylbenzene	105		9.943	9.943	(0.971)	371348	27.3704	27.37
89 1,2-Dibromo-3-Chloropropane	155		11.233	11.233	(1.097)	18892	21.8264	21.82
57 1,2-Dibromoethane	107		7.852	7.852	(0.952)	98742	26.7515	26.75
88 1,2-Dichlorobenzene	146		10.569	10.570	(1.033)	196205	25.4870	25.48



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181231.b\U123114.D Page 2
 Report Date: 30-Jan-2019 17:58

Compounds	QUANT SIG					CONCENTRATIONS	
	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/l)	FINAL (ug/l)
33 1,2-Dichloroethane	62	5.250	5.258	(0.933)	143202	26.6456	26.64
42 1,2-Dichloropropane	63	6.078	6.082	(1.081)	108712	26.1201	26.12
75 1,3,5-Trimethylbenzene	105	9.625	9.625	(0.940)	362519	27.8221	27.82
83 1,3-Dichlorobenzene	146	10.179	10.180	(0.995)	195995	25.4578	25.45
54 1,3-Dichloropropane	76	7.563	7.563	(0.917)	182192	26.3945	26.39
84 1,4-Dichlorobenzene	146	10.254	10.255	(1.002)	203570	25.0782	25.07
26 2,2-Dichloropropane	77	4.272	4.283	(0.873)	111515	25.4722	25.47
24 2-Butanone	43	4.335	4.343	(0.886)	105594	46.5971	46.59
76 2-Chlorotoluene	91	9.546	9.546	(0.933)	318943	26.6996	26.69
52 2-Hexanone	43	7.649	7.649	(0.927)	156767	52.4128	52.41
77 4-Chlorotoluene	91	9.640	9.640	(0.942)	376568	27.2788	27.27
82 p-Isopropyltoluene	119	10.209	10.210	(0.997)	383933	27.9847	27.98
45 4-Methyl-2-Pentanone	43	6.914	6.915	(0.838)	225013	52.2844	52.28
10 Acetone	43	2.476	2.487	(0.506)	56627	41.2776	41.27
37 Benzene	78	5.216	5.224	(0.927)	415745	26.5248	26.52
74 Bromobenzene	156	9.381	9.381	(0.917)	101944	25.4488	25.44
29 Bromochloromethane	128	4.553	4.560	(0.930)	48187	25.8360	25.83
39 Bromodichloromethane	83	6.345	6.348	(1.128)	113685	25.6862	25.68
66 Bromoform	173	8.984	8.984	(1.089)	49423	22.4141	22.41
6 Bromomethane	94	1.666	1.681	(0.341)	57542	28.2219	28.22
19 Carbon Disulfide	76	2.585	2.600	(0.528)	533628	45.6615	45.66
34 Carbon Tetrachloride	117	4.995	4.999	(0.888)	105545	25.3480	25.34
59 Chlorobenzene	112	8.275	8.275	(1.003)	273926	26.5048	26.50
7 Chloroethane	64	1.749	1.764	(0.357)	75461	25.6631	25.66 (M)
28 Chloroform	83	4.654	4.662	(0.951)	172591	24.6696	24.66
3 Chloromethane	50	1.336	1.351	(0.273)	90363	26.8600	26.86
27 cis-1,2-Dichloroethene	96	4.283	4.294	(0.875)	108643	24.5027	24.50
46 cis-1,3-Dichloropropene	75	6.757	6.761	(1.201)	153812	23.5555	23.55
55 Dibromochloromethane	129	7.758	7.758	(0.940)	82247	23.7907	23.79
44 Dibromomethane	93	6.191	6.191	(1.101)	60756	25.2932	25.29
2 Dichlorodifluoromethane	85	1.201	1.217	(0.246)	83918	20.5072	20.50
61 Ethylbenzene	106	8.369	8.373	(1.015)	144828	27.3223	27.32
91 Hexachlorobutadiene	225	12.065	12.065	(1.179)	43109	23.4412	23.44
67 Isopropylbenzene	105	9.126	9.126	(1.106)	434555	28.4101	28.41
62 m,p-Xylenes	106	8.474	8.474	(1.027)	358987	55.0884	55.08
17 Methylene Chloride	84	2.866	2.881	(0.586)	104041	24.3533	24.35
87 n-Butylbenzene	91	10.558	10.555	(1.031)	363339	27.4424	27.44
73 n-Propylbenzene	91	9.475	9.475	(0.926)	549061	28.3422	28.34
92 Naphthalene	128	12.133	12.133	(1.185)	377245	24.1345	24.13
63 o-Xylene	106	8.811	8.811	(1.068)	179279	27.2706	27.27
81 sec-Butylbenzene	105	10.086	10.086	(0.985)	456699	28.0506	28.05
64 Styrene	104	8.826	8.826	(1.070)	304726	27.9000	27.89
78 tert-Butylbenzene	119	9.902	9.902	(0.967)	310130	27.5380	27.53
56 Tetrachloroethene	164	7.525	7.526	(0.912)	73347	26.0465	26.04
50 Toluene	91	7.046	7.049	(0.854)	441160	27.5716	27.57
20 trans-1,2-Dichloroethene	96	3.139	3.151	(0.642)	96673	24.4835	24.48
51 trans-1,3-Dichloropropene	75	7.259	7.263	(1.291)	130089	23.3934	23.39
38 Trichloroethene	130	5.861	5.865	(1.042)	103798	27.4317	27.43
8 Trichlorofluoromethane	101	1.951	1.966	(0.399)	144055	26.2112	26.21
5 Vinyl Chloride	62	1.415	1.430	(0.289)	119358	25.5006	25.50



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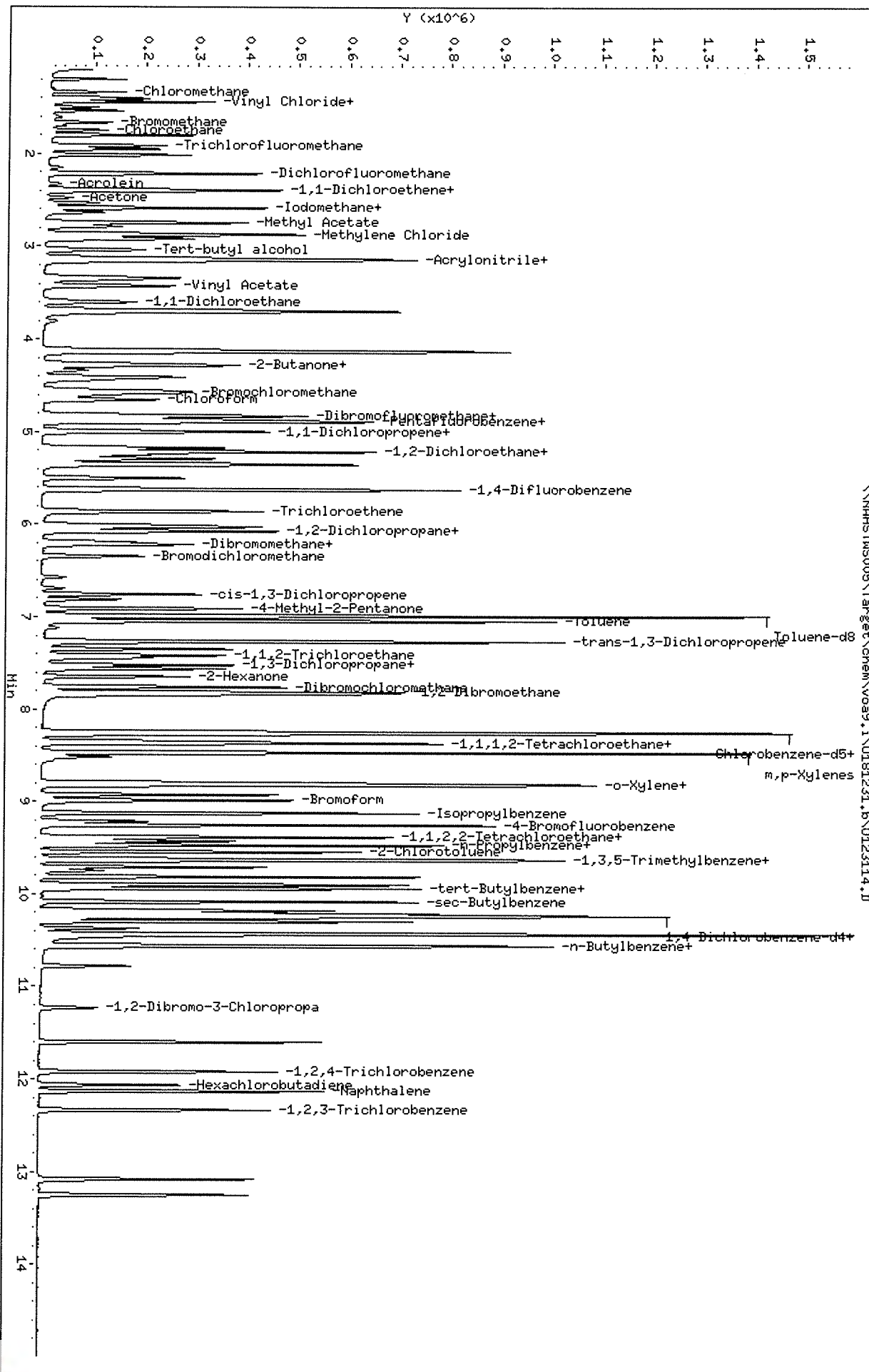
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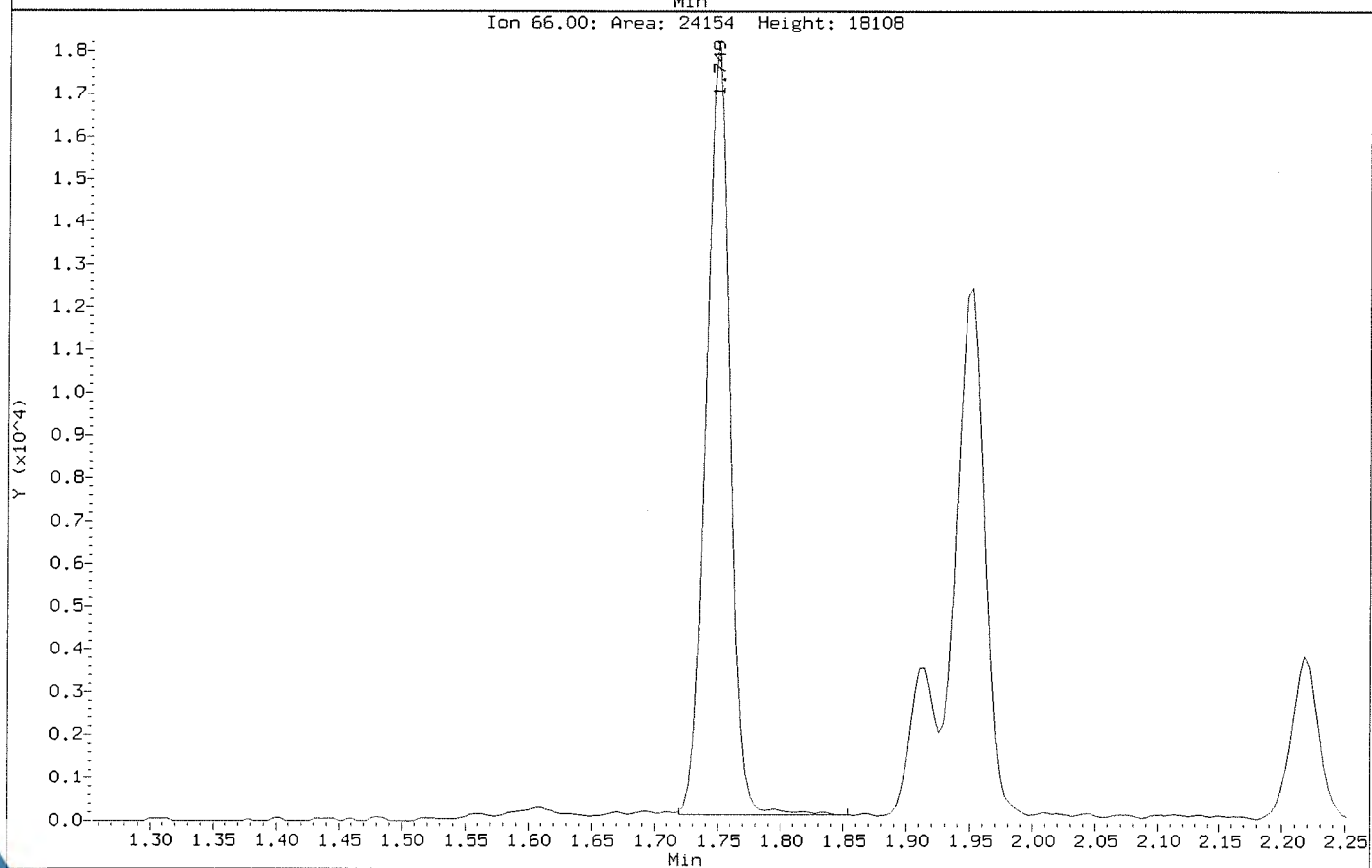
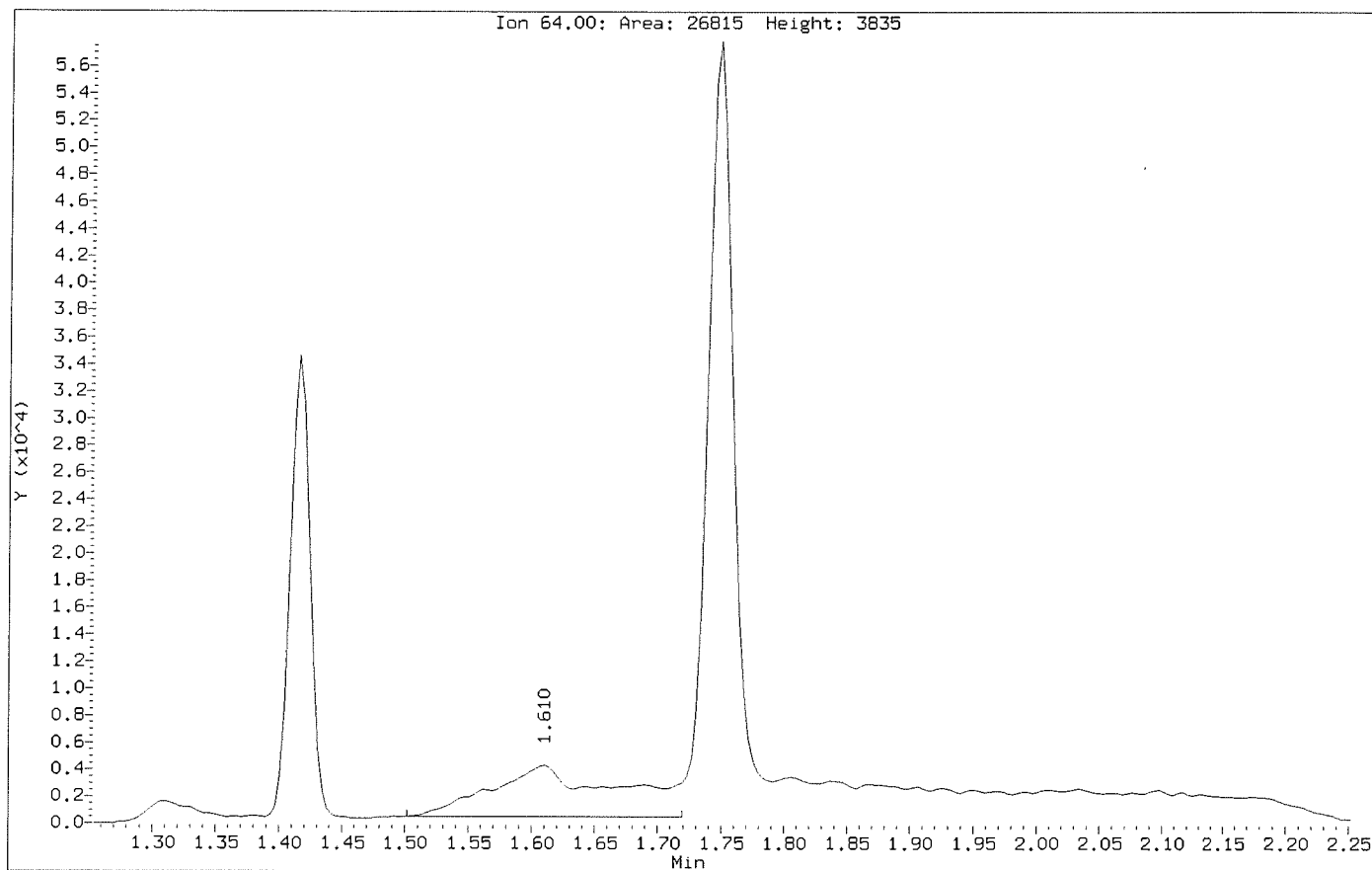
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Instrument: V099.i
Operator: PC
Column diameter: 0.18



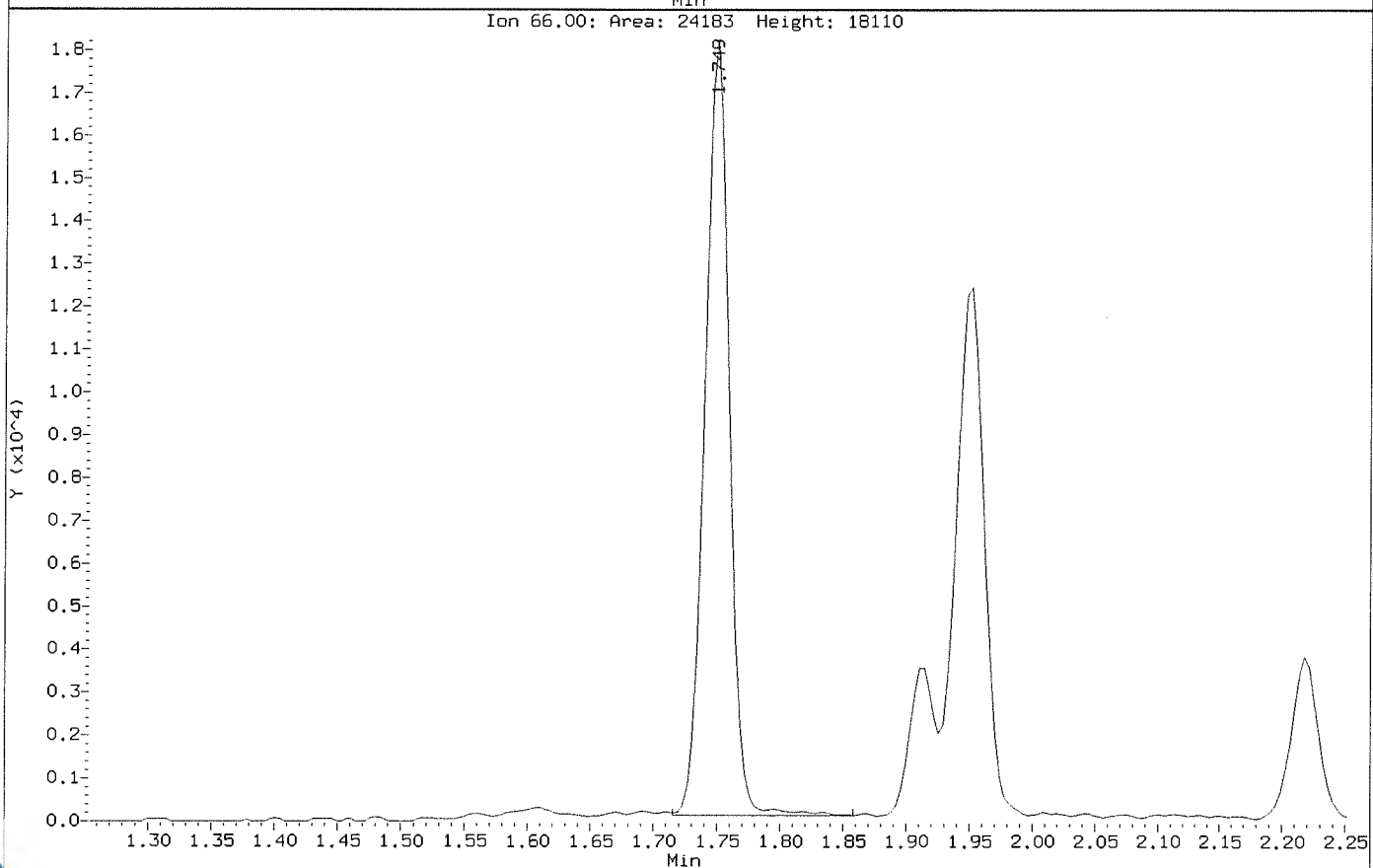
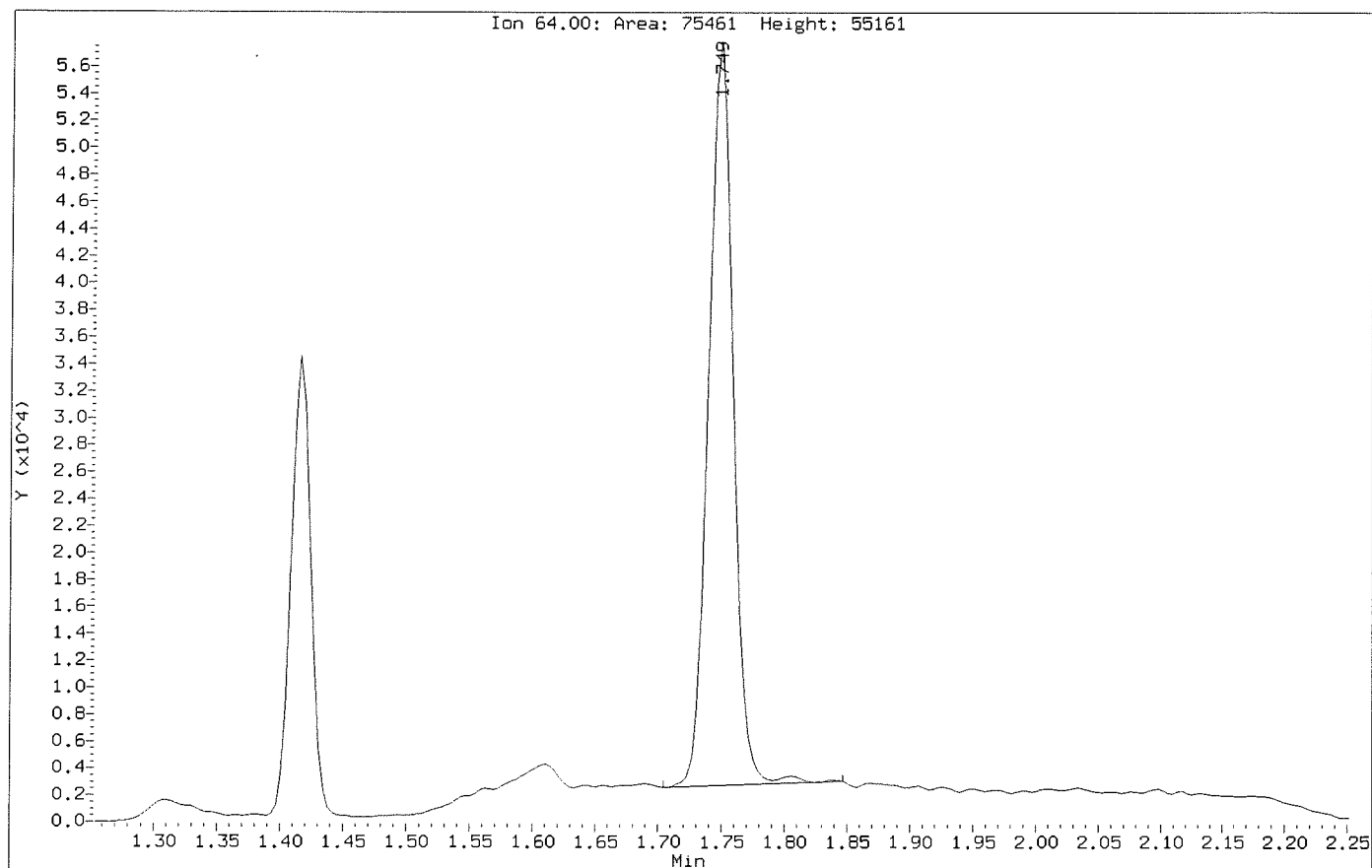
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Compound: Chloroethane
CAS Number: 75-00-3



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Compound: Chloroethane
CAS Number: 75-00-3



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181231.b\U123116.D Page 1
 Report Date: 30-Jan-2019 17:58

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U181231.b\U123116.D
 Lab Smp Id: HS18121264-02DL Client Smp ID: HS18121264-02DL
 Inj Date : 31-DEC-2018 15:54
 Operator : PC Inst ID: VOA9.i
 Smp Info : HS18121264-02;HS18121264-02;;;
 Misc Info : 180315V9;WATER;0;100;
 Comment :
 Method : \\NAHSTWS005\Target\chem\voa9.i\U181231.b\8260C.m
 Meth Date : 30-Jan-2019 17:58 VOA9.i Quant Type: ISTD
 Cal Date : 21-DEC-2018 16:41 Cal File: U122108.D
 Als bottle: 15
 Dil Factor: 100.00000
 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	100.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT	SIG						CONCENTRATIONS	
			MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168		4.898	4.898	(1.000)	309861	50.0000		
* 36 1,4-Difluorobenzene	114		5.629	5.629	(1.000)	534748	50.0000		
* 47 Chlorobenzene-d5	117		8.249	8.249	(1.000)	477512	50.0000		
* 70 1,4-Dichlorobenzene-d4	152		10.236	10.236	(1.000)	221806	50.0000		
\$ 30 Dibromofluoromethane	113		4.834	4.834	(0.987)	154034	44.8967	44.89	
\$ 35 1,2-Dichloroethane-d4	65		5.179	5.179	(1.057)	215270	49.0446	49.04	
\$ 48 Toluene-d8	98		6.989	6.990	(0.847)	647543	52.6055	52.60	
\$ 69 4-Bromofluorobenzene	95		9.257	9.257	(1.122)	237944	50.7110	50.71	
33 1,2-Dichloroethane	62		5.254	5.258	(0.933)	16974	2.83966	283.96(a)	
27 cis-1,2-Dichloroethene	96		4.290	4.294	(0.876)	10594	2.60108	260.10(a)	
38 Trichloroethene	130		5.865	5.865	(1.042)	170212	49.5492	4954.91	

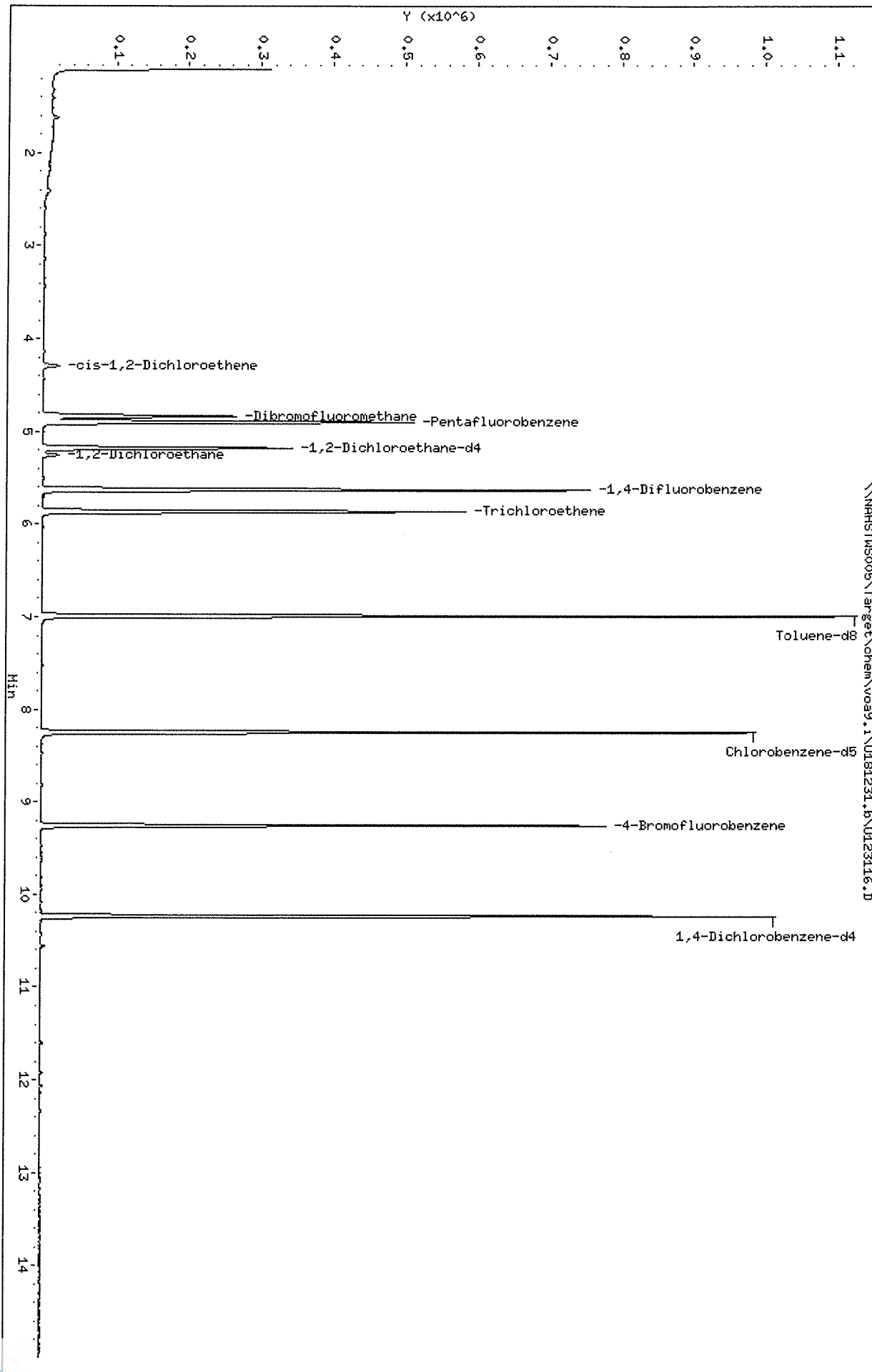
QC Flag Legend

a - Target compound detected but, quantitated amount
 Below Limit Of Quantitation(BLOQ).



Data File: \\NAHSTMS005\Target\chem\voa9.1\U181231.b\U123116.D
Date : 31-DEC-2018 15:54
Client ID: HS18121264-02DL
Sample Info: HS18121264-02;HS18121264-02;;
Purge Volume: 5.0
Column Phase: DB624

Instrument: W0A9.i
Operator: PC
Column diameter: 0.18



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181231.b\U123116.D

Page 3

Date : 31-DEC-2018 15:54

Client ID: HS18121264-02DL

Instrument: VOA9.i

Sample Info: HS18121264-02;HS18121264-02;;;

Purge Volume: 5.0

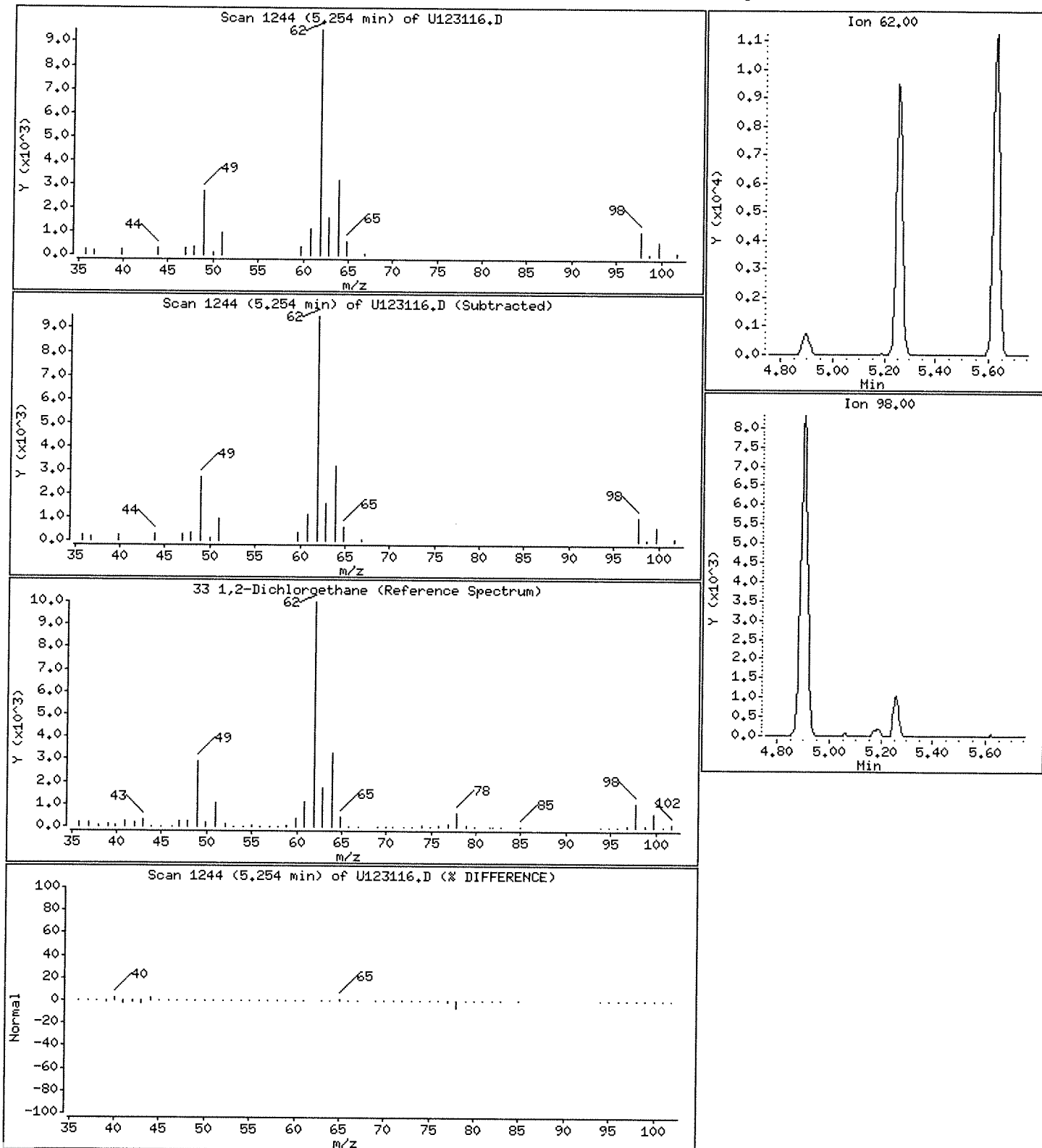
Operator: PC

Column phase: DB624

Column diameter: 0.18

33 1,2-Dichloroethane

Concentration: 283.96 ug/l



Data File: \\NAHSTMS005\Target\chem\voa9.i\U181231.b\U123116.D

Page 4

Date : 31-DEC-2018 15:54

Client ID: HS18121264-02DL

Instrument: VOA9.i

Sample Info: HS18121264-02;HS18121264-02;;

Purge Volume: 5.0

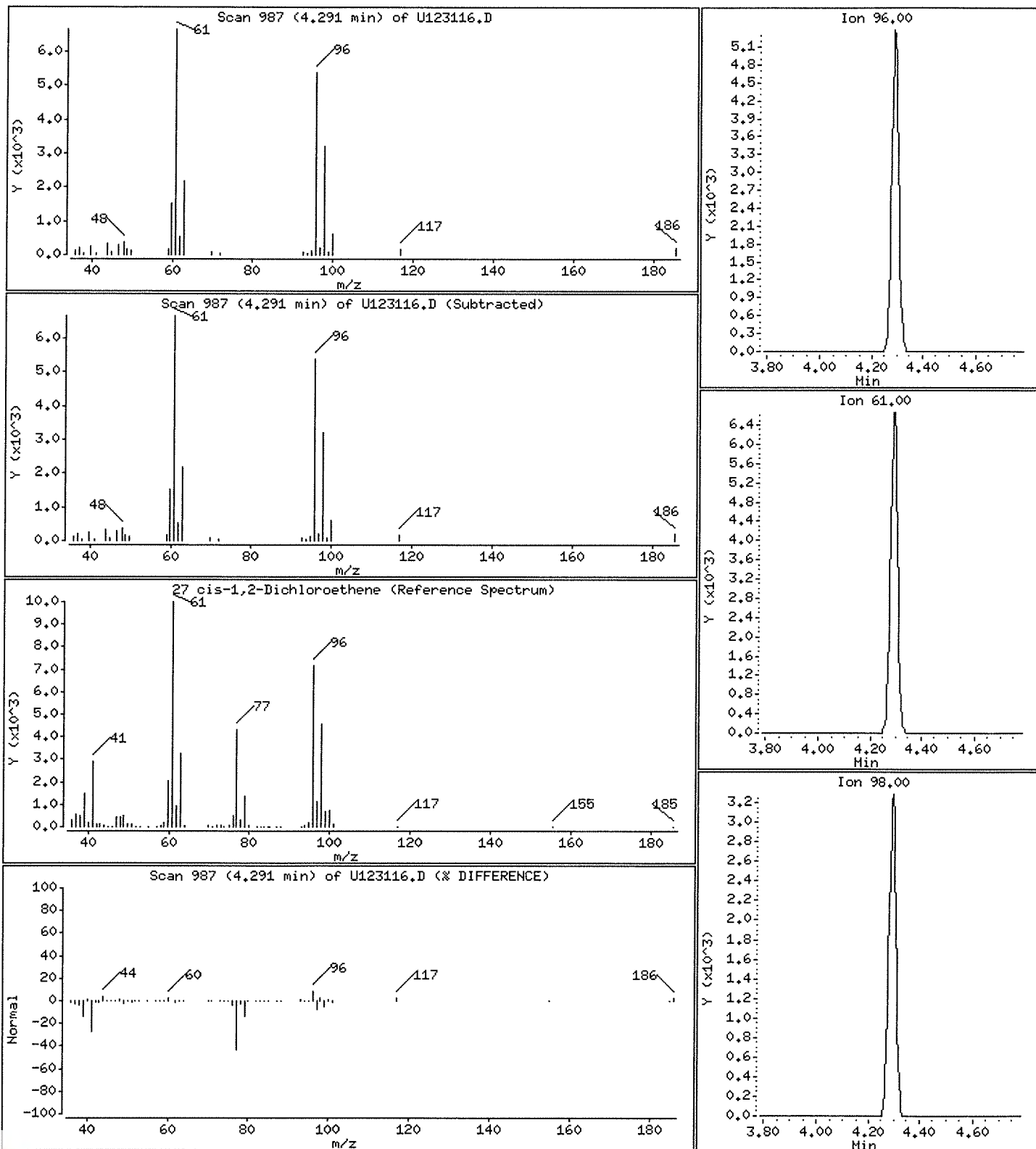
Operator: PC

Column phase: DB624

Column diameter: 0.18

27 cis-1,2-Dichloroethene

Concentration: 260.10 ug/l



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181231.b\U123116.D

Page 5

Date : 31-DEC-2018 15:54

Client ID: HS18121264-02DL

Instrument: V0A9.i

Sample Info: HS18121264-02;HS18121264-02;;;

Purge Volume: 5.0

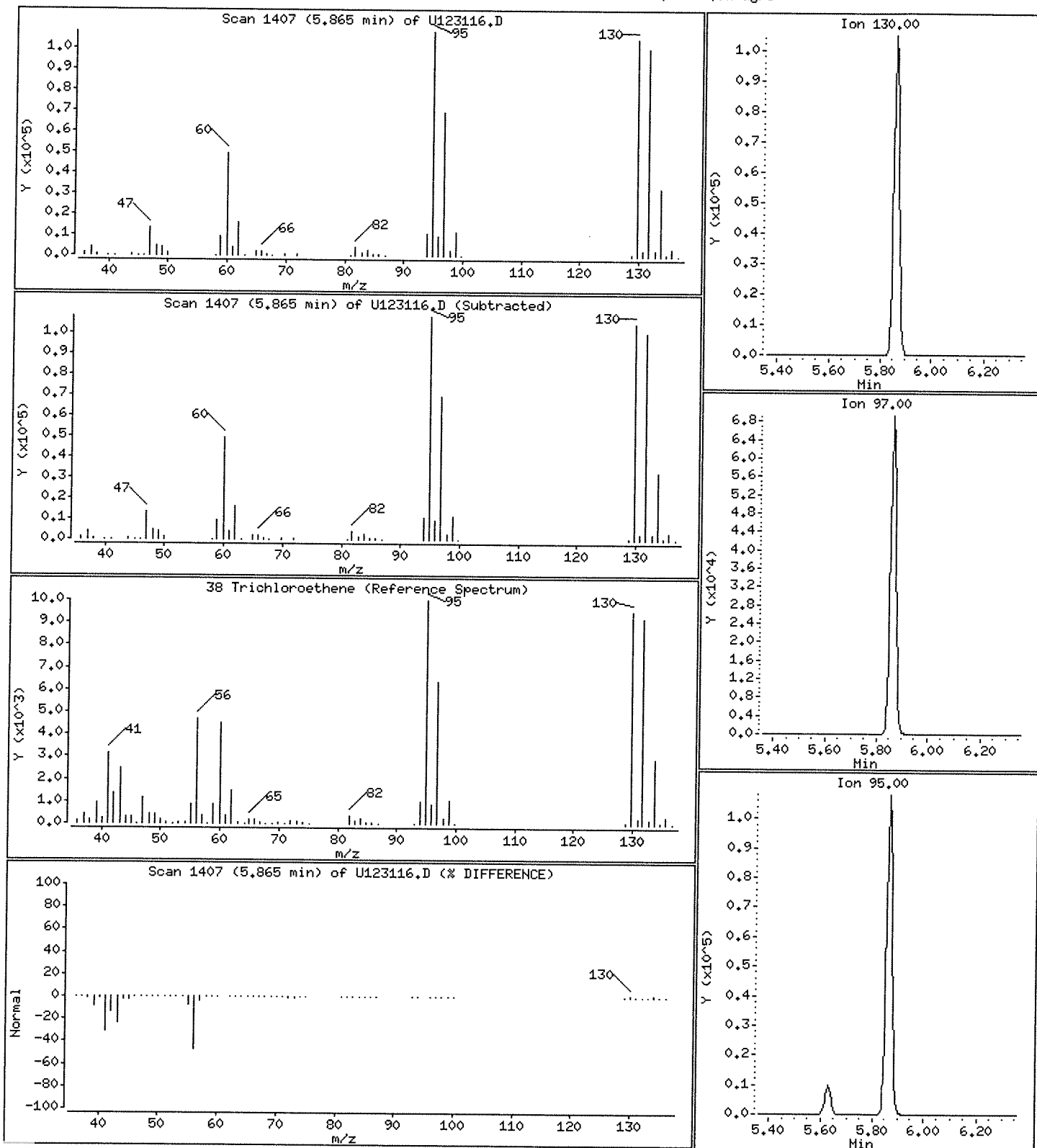
Operator: PC

Column phase: DB624

Column diameter: 0.18

38 Trichloroethene

Concentration: 4954.91 ug/l



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181231.b\U123117.D Page 1
 Report Date: 30-Jan-2019 17:58

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U181231.b\U123117.D
 Lab Smp Id: HS18121264-07 Client Smp ID: HS18121264-07
 Inj Date : 31-DEC-2018 16:19
 Operator : PC Inst ID: VOA9.i
 Smp Info : HS18121264-07;HS18121264-07;;;
 Misc Info : 180315V9;WATER;0;1;
 Comment :
 Method : \\NAHSTWS005\Target\chem\voa9.i\U181231.b\8260C.m
 Meth Date : 30-Jan-2019 17:58 VOA9.i Quant Type: ISTD
 Cal Date : 21-DEC-2018 16:41 Cal File: U122108.D
 Als bottle: 16
 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

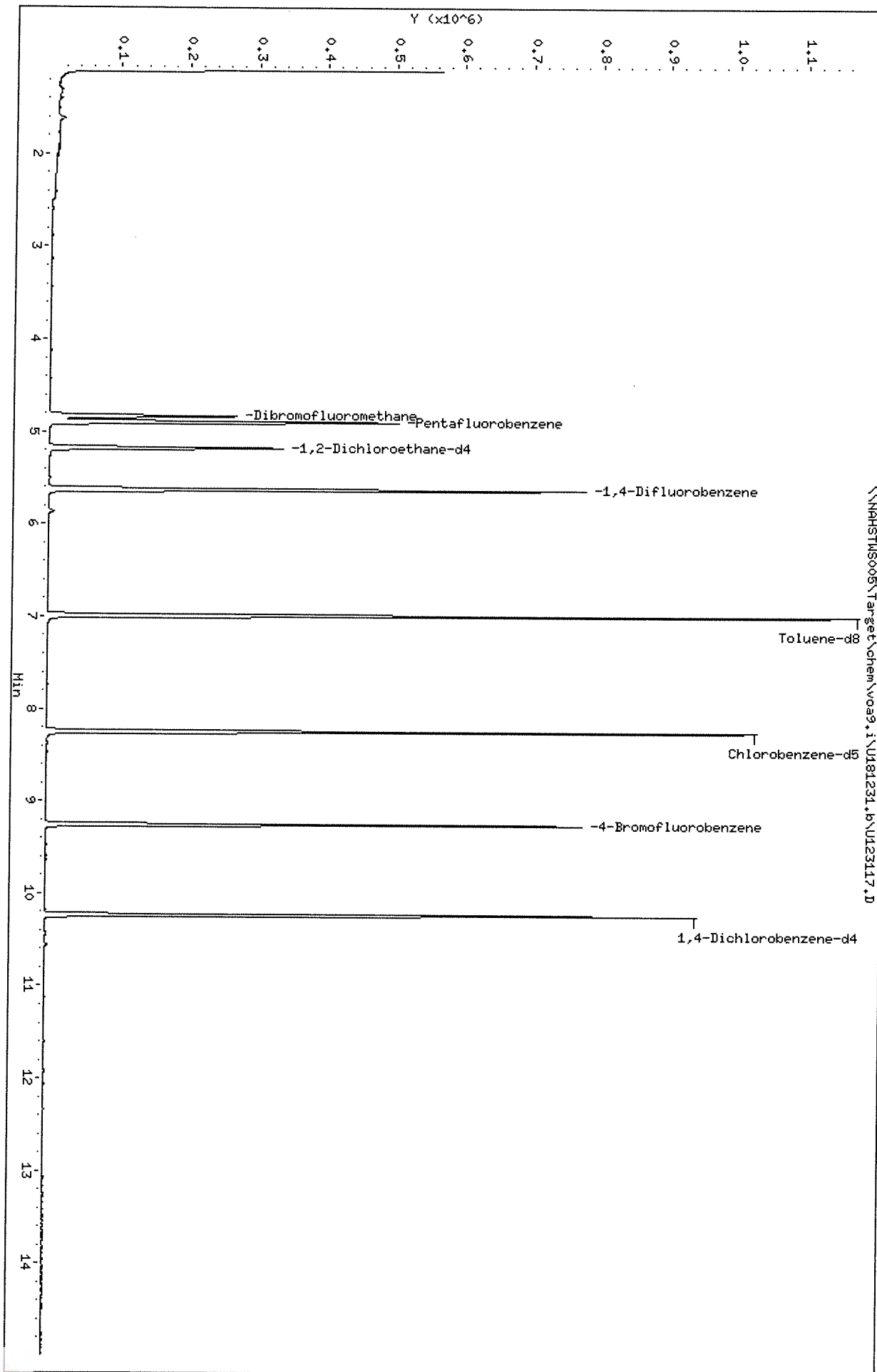
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT	SIG						CONCENTRATIONS	
			MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168		4.898	4.898	(1.000)	311257	50.0000		
* 36 1,4-Difluorobenzene	114		5.625	5.629	(1.000)	547285	50.0000		
* 47 Chlorobenzene-d5	117		8.249	8.249	(1.000)	501479	50.0000		
* 70 1,4-Dichlorobenzene-d4	152		10.236	10.236	(1.000)	206619	50.0000		
\$ 30 Dibromofluoromethane	113		4.830	4.834	(0.986)	156171	45.3297	45.32	
\$ 35 1,2-Dichloroethane-d4	65		5.175	5.179	(1.057)	215170	48.7912	48.79	
\$ 48 Toluene-d8	98		6.989	6.990	(0.847)	668858	51.7108	51.71	
\$ 69 4-Bromofluorobenzene	95		9.257	9.257	(1.122)	240265	48.7034	48.70	



Data File: \\NAHSTMS005\Target\chem\voa9.i\U181231.b\U123117.D
Date: 31-DEC-2018 16:19
Client ID: HS18121264-07
Sample Info: HS18121264-07;HS18121264-07;;
Purge Volume: 5.0
Column Phase: DB624

Instrument: V099.i
Operator: PC
Column diameter: 0.18



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181231.b\U123118.D Page 1
 Report Date: 30-Jan-2019 17:58

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U181231.b\U123118.D
 Lab Smp Id: HS18121264-08 Client Smp ID: HS18121264-08
 Inj Date : 31-DEC-2018 16:44
 Operator : PC Inst ID: VOA9.i
 Smp Info : HS18121264-08;HS18121264-08;;;
 Misc Info : 180315V9;WATER;0;1;
 Comment :
 Method : \\NAHSTWS005\Target\chem\voa9.i\U181231.b\8260C.m
 Meth Date : 30-Jan-2019 17:58 VOA9.i Quant Type: ISTD
 Cal Date : 21-DEC-2018 16:41 Cal File: U122108.D
 Als bottle: 17
 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

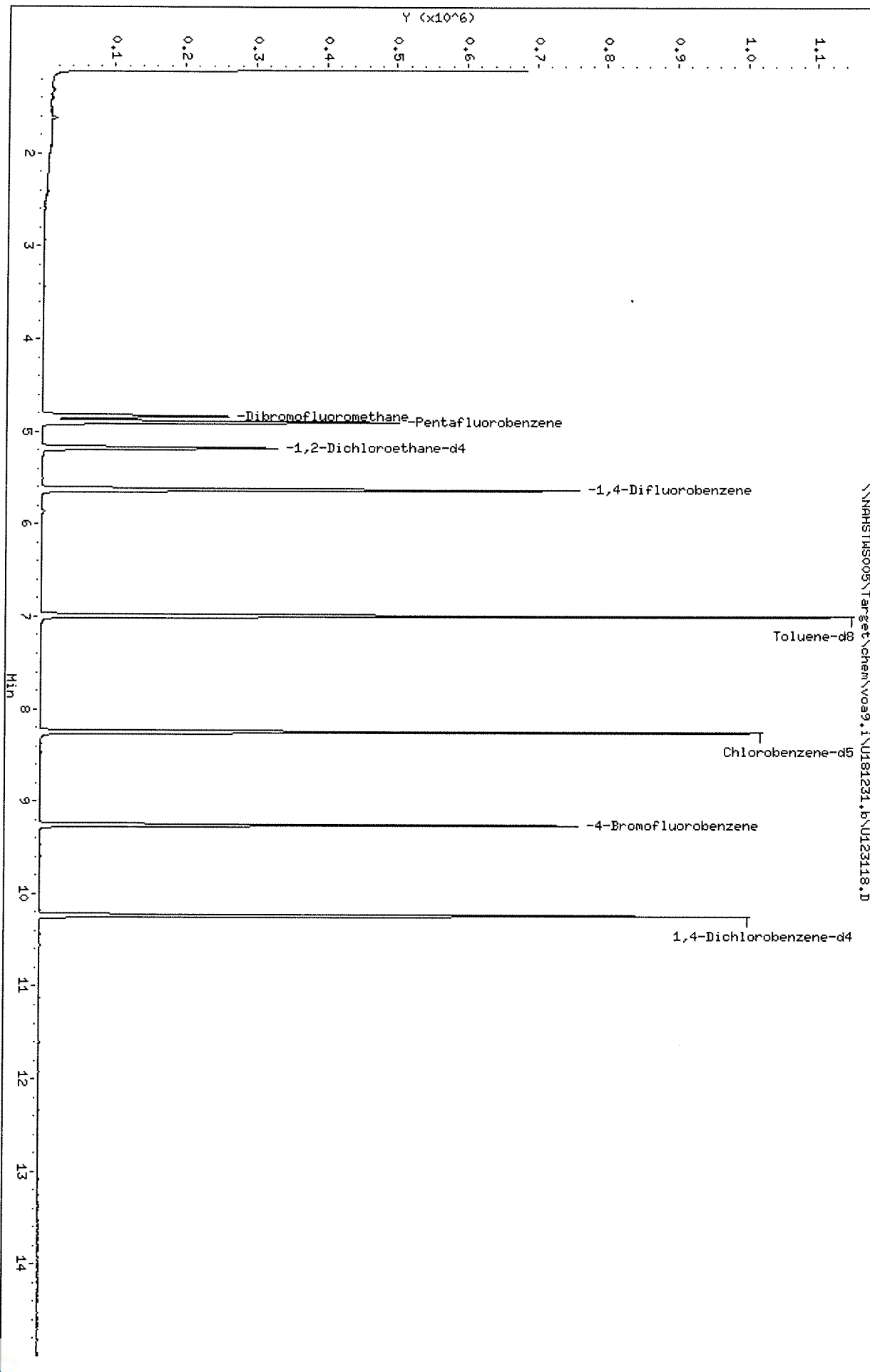
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT	SIG						CONCENTRATIONS	
			MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168		4.898	4.898	(1.000)	305469	50.0000		
* 36 1,4-Difluorobenzene	114		5.629	5.629	(1.000)	544252	50.0000		
* 47 Chlorobenzene-d5	117		8.249	8.249	(1.000)	487776	50.0000		
* 70 1,4-Dichlorobenzene-d4	152		10.236	10.236	(1.000)	220262	50.0000		
\$ 30 Dibromofluoromethane	113		4.834	4.834	(0.987)	152954	45.2340	45.23	
\$ 35 1,2-Dichloroethane-d4	65		5.179	5.179	(1.057)	212949	49.2208	49.22	
\$ 48 Toluene-d8	98		6.989	6.990	(0.847)	663465	52.7702	52.77	
\$ 69 4-Bromofluorobenzene	95		9.257	9.257	(1.122)	233416	48.6425	48.64	



Data File: \\NAHSTMS005\Target\chem\voa9.i\U181231.b\U123118.D
Date : 31-DEC-2018 16:44
Client ID: HS18121264-08
Sample Info: HS18121264-08;HS18121264-08;;
Purge Volume: 5.0
Column phase: DB624

Instrument: VOA9.i
Operator: PC
Column diameter: 0.18



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181231.b\U123119.D Page 1
 Report Date: 30-Jan-2019 17:58

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U181231.b\U123119.D
 Lab Smp Id: HS18121264-09 Client Smp ID: HS18121264-09
 Inj Date : 31-DEC-2018 17:09
 Operator : PC Inst ID: VOA9.i
 Smp Info : HS18121264-09;HS18121264-09;;;
 Misc Info : 180315V9;WATER;0;1;
 Comment :
 Method : \\NAHSTWS005\Target\chem\voa9.i\U181231.b\8260C.m
 Meth Date : 30-Jan-2019 17:58 VOA9.i Quant Type: ISTD
 Cal Date : 21-DEC-2018 16:41 Cal File: U122108.D
 Als bottle: 18
 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						CONCENTRATIONS	
			MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168		4.898	4.898	(1.000)	301218	50.0000		
* 36 1,4-Difluorobenzene	114		5.629	5.629	(1.000)	537498	50.0000		
* 47 Chlorobenzene-d5	117		8.249	8.249	(1.000)	483104	50.0000		
* 70 1,4-Dichlorobenzene-d4	152		10.236	10.236	(1.000)	218149	50.0000		
\$ 30 Dibromofluoromethane	113		4.834	4.834	(0.987)	151788	45.5324	45.53	
\$ 35 1,2-Dichloroethane-d4	65		5.179	5.179	(1.057)	212538	49.8455	49.84	
\$ 48 Toluene-d8	98		6.990	6.990	(0.847)	657834	52.8303	52.83	
\$ 69 4-Bromofluorobenzene	95		9.258	9.257	(1.122)	231250	48.6576	48.65	
10 Acetone	43		2.487	2.487	(0.508)	7855	3.85782	3.85(a)	
38 Trichloroethene	130		5.865	5.865	(1.042)	5203	1.50686	1.50(a)	

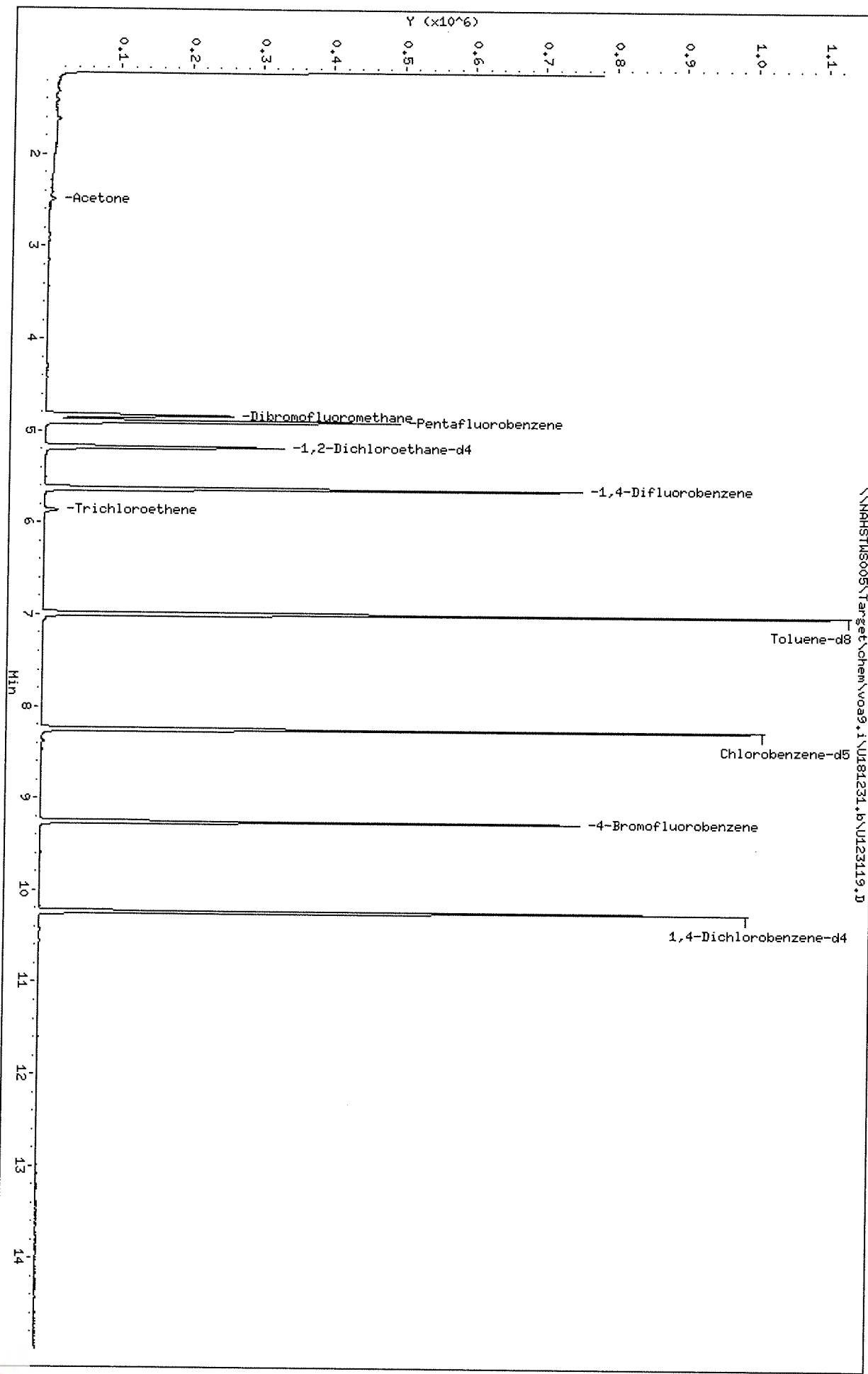
QC Flag Legend

a - Target compound detected but, quantitated amount
 Below Limit Of Quantitation(BLOQ).



Data File: \\NAHSTMS005\Target\chem\voa9.i\U181231.b\U123119.D
Date : 31-DEC-2018 17:09
Client ID: HS18121264-09
Sample Info: HS18121264-09;HS18121264-09;;
Purge Volume: 5.0
Column phase: DB624

Instrument: VOA9.i
Operator: PC
Column diameter: 0.18



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181231.b\U123119.D

Page 3

Date : 31-DEC-2018 17:09

Client ID: HS18121264-09

Instrument: VOA9.i

Sample Info: HS18121264-09;HS18121264-09;;;

Purge Volume: 5.0

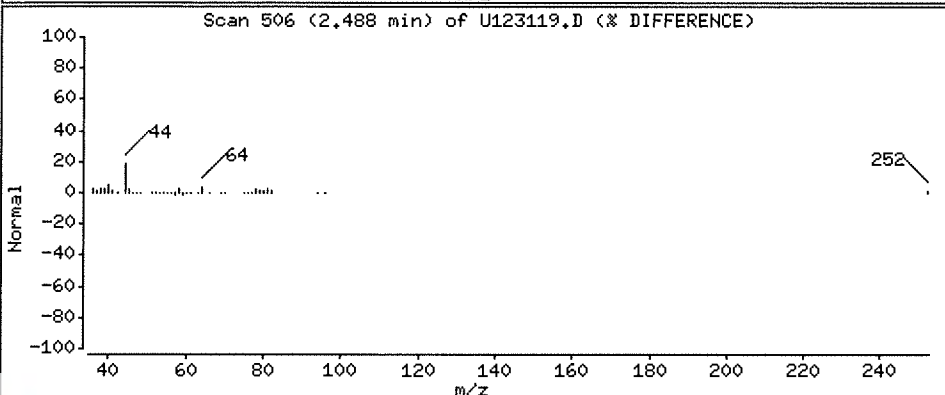
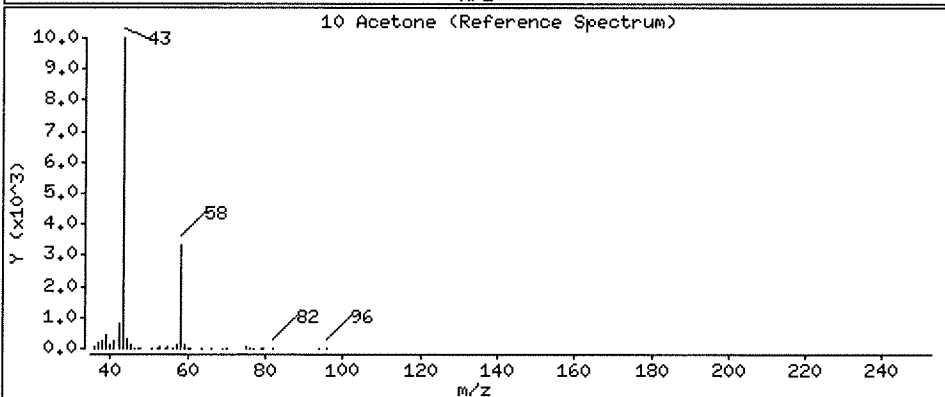
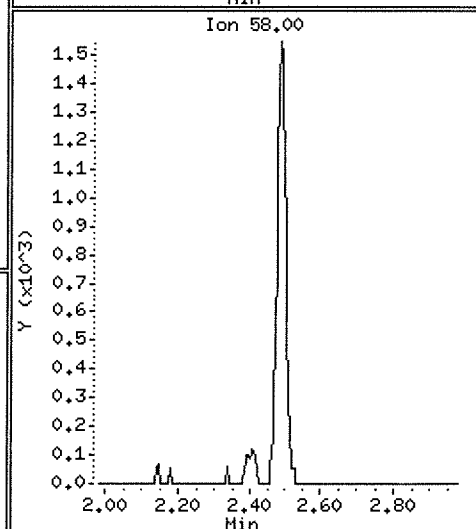
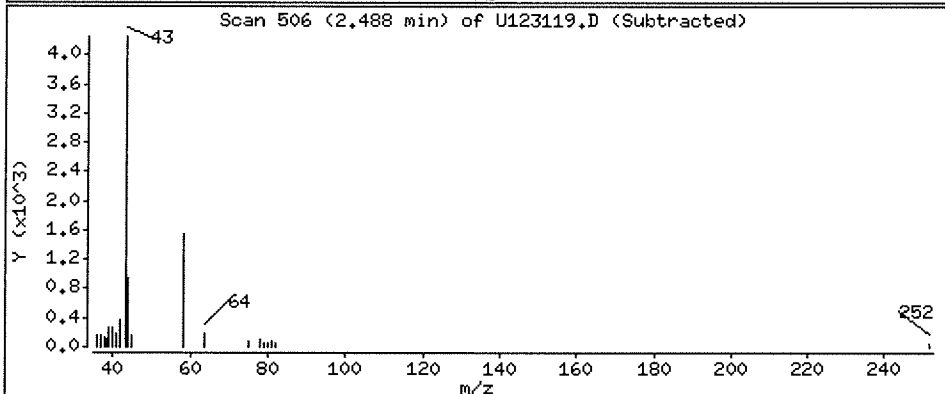
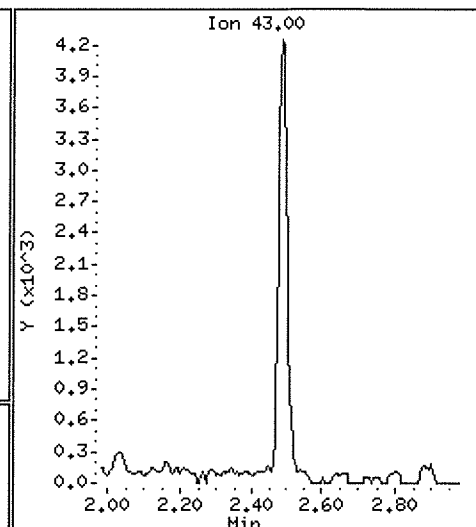
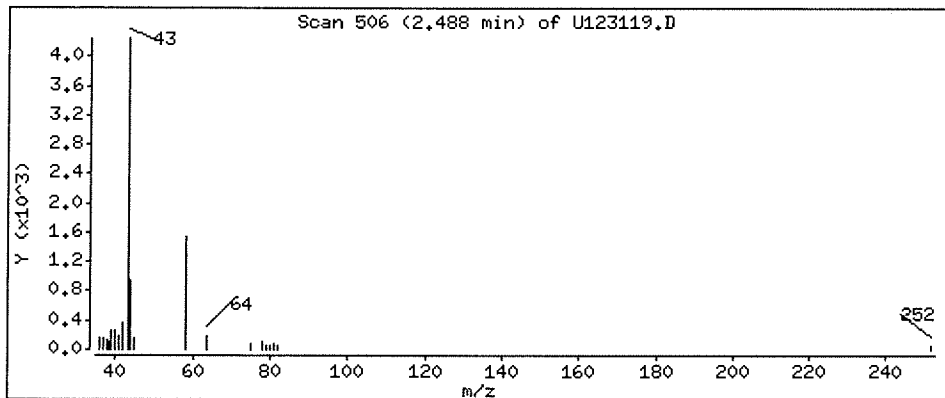
Operator: PC

Column phase: DB624

Column diameter: 0.18

10 Acetone

Concentration: 3.85 ug/l



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181231.b\U123119.D

Page 4

Date : 31-DEC-2018 17:09

Client ID: HS18121264-09

Instrument: VOA9.i

Sample Info: HS18121264-09;HS18121264-09;;

Purge Volume: 5.0

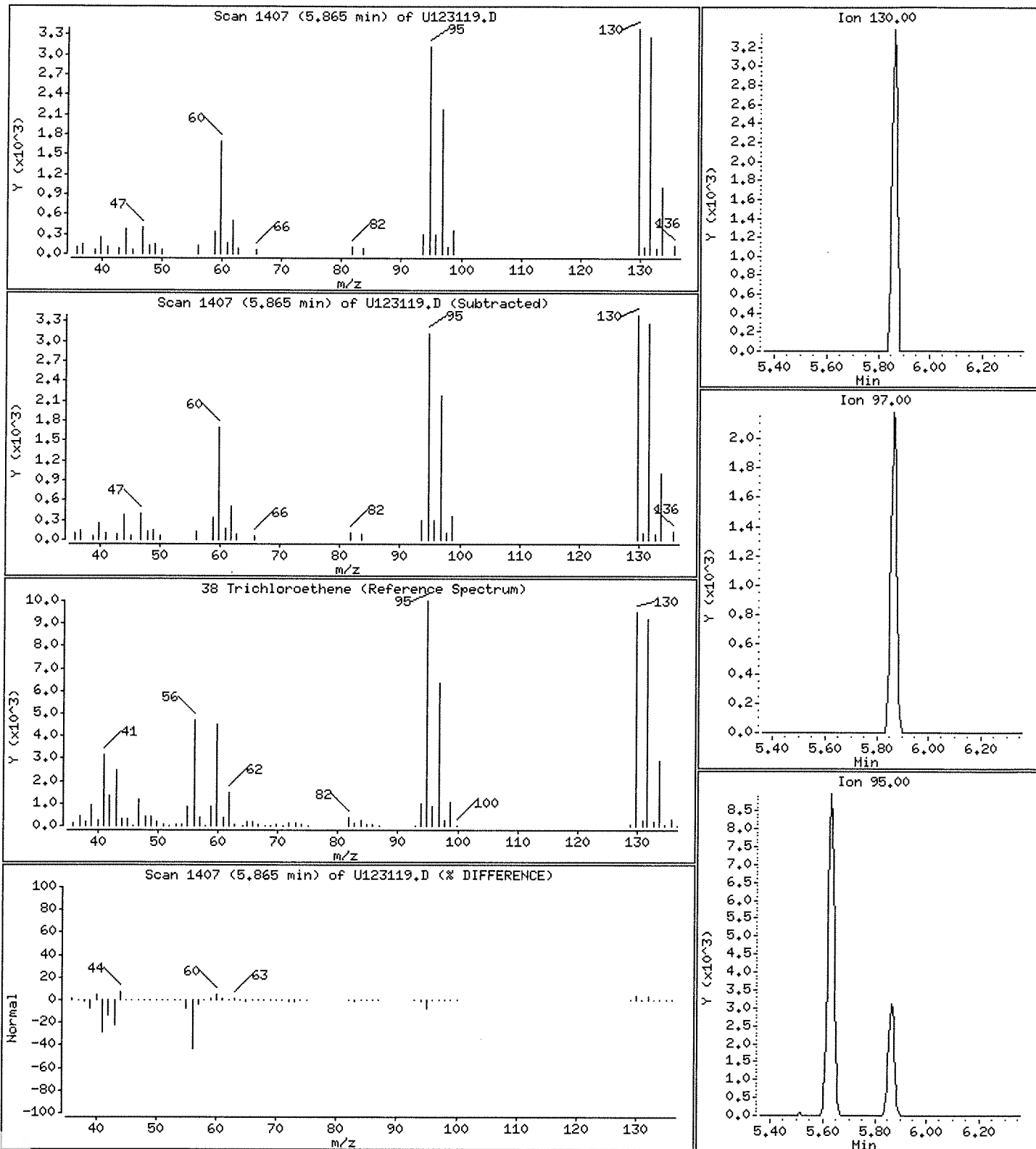
Operator: PC

Column phase: DB624

Column diameter: 0.18

38 Trichloroethene

Concentration: 1.50 ug/l



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181231.b\U123120.D Page 1
 Report Date: 30-Jan-2019 17:58

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U181231.b\U123120.D
 Lab Smp Id: HS18121264-10 Client Smp ID: HS18121264-10
 Inj Date : 31-DEC-2018 17:33
 Operator : PC Inst ID: VOA9.i
 Smp Info : HS18121264-10;HS18121264-10;;;
 Misc Info : 180315V9;WATER;0;1;
 Comment :
 Method : \\NAHSTWS005\Target\chem\voa9.i\U181231.b\8260C.m
 Meth Date : 30-Jan-2019 17:58 VOA9.i Quant Type: ISTD
 Cal Date : 21-DEC-2018 16:41 Cal File: U122108.D
 Als bottle: 19
 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

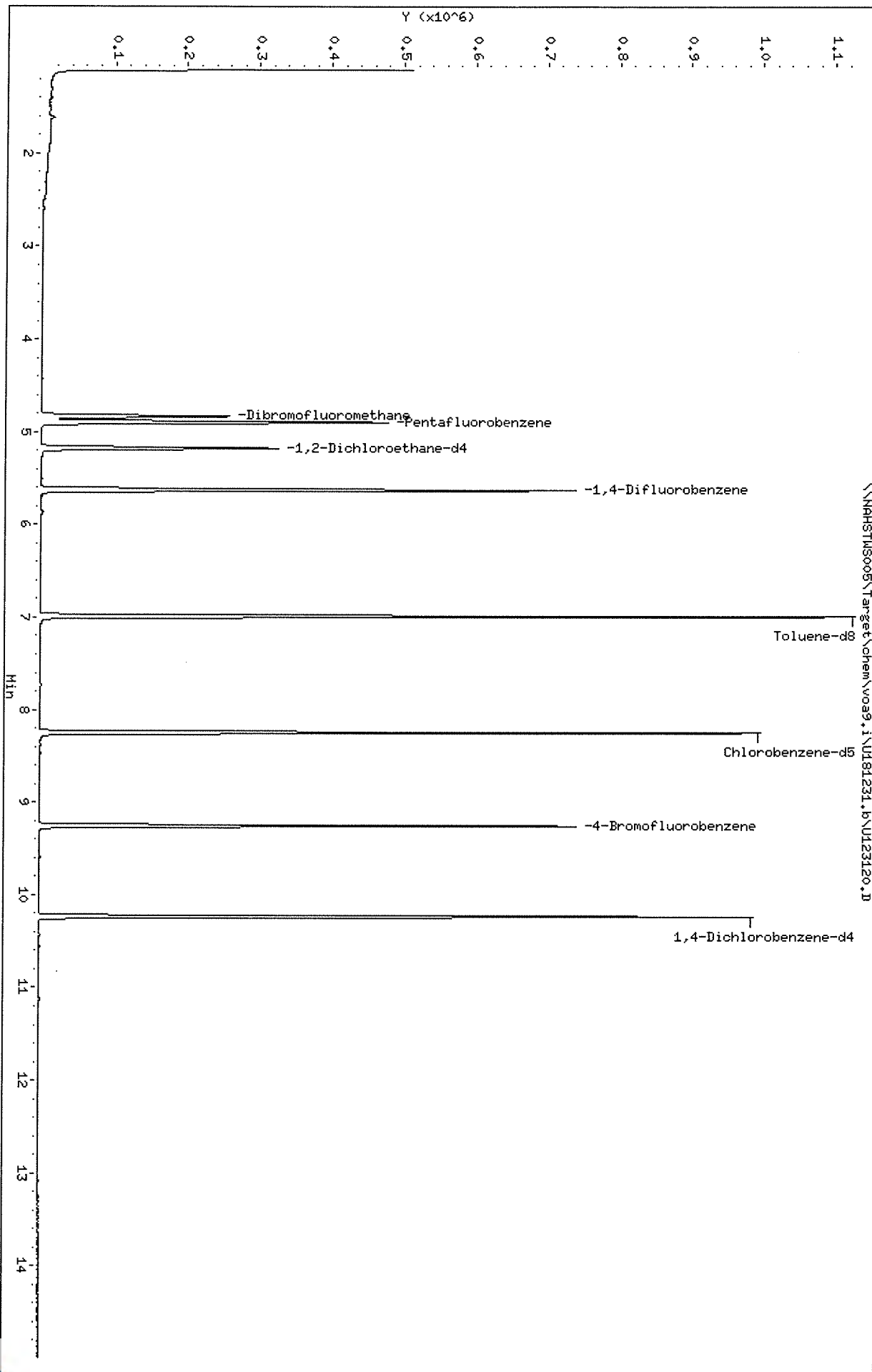
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT	SIG	CONCENTRATIONS					
			ON-COLUMN	FINAL				
	MASS		RT	EXP RT	REL RT	RESPONSE	(ug/l)	(ug/l)
=====	====		====	=====	=====	=====	=====	=====
* 1 Pentafluorobenzene	168		4.898	4.898	(1.000)	294345	50.0000	
* 36 1,4-Difluorobenzene	114		5.625	5.629	(1.000)	526520	50.0000	
* 47 Chlorobenzene-d5	117		8.249	8.249	(1.000)	473469	50.0000	
* 70 1,4-Dichlorobenzene-d4	152		10.236	10.236	(1.000)	215157	50.0000	
\$ 30 Dibromofluoromethane	113		4.830	4.834	(0.986)	148998	45.7461	45.74
\$ 35 1,2-Dichloroethane-d4	65		5.175	5.179	(1.057)	207256	49.7372	49.73
\$ 48 Toluene-d8	98		6.989	6.990	(0.847)	645778	52.9204	52.92
\$ 69 4-Bromofluorobenzene	95		9.257	9.257	(1.122)	228917	49.1613	49.16



Data File: \\NAHSTMS0005\Target\chem\voa9.i\U181231.b\U123120.D
Date : 31-DEC-2018 17:33
Client ID: HS18121264-10
Sample Info: HS18121264-10;HS18121264-10;??
Purge Volume: 5.0
Column phase: DB624

Instrument: VOA9.i
Operator: PC
Column diameter: 0.18



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181231.b\U123121.D Page 1
 Report Date: 30-Jan-2019 17:58

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U181231.b\U123121.D
 Lab Smp Id: HS18121264-11 Client Smp ID: HS18121264-11
 Inj Date : 31-DEC-2018 17:58
 Operator : PC Inst ID: VOA9.i
 Smp Info : HS18121264-11;HS18121264-11;;
 Misc Info : 180315V9;WATER;0;1;
 Comment :
 Method : \\NAHSTWS005\Target\chem\voa9.i\U181231.b\8260C.m
 Meth Date : 30-Jan-2019 17:58 VOA9.i Quant Type: ISTD
 Cal Date : 21-DEC-2018 16:41 Cal File: U122108.D
 Als bottle: 20
 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

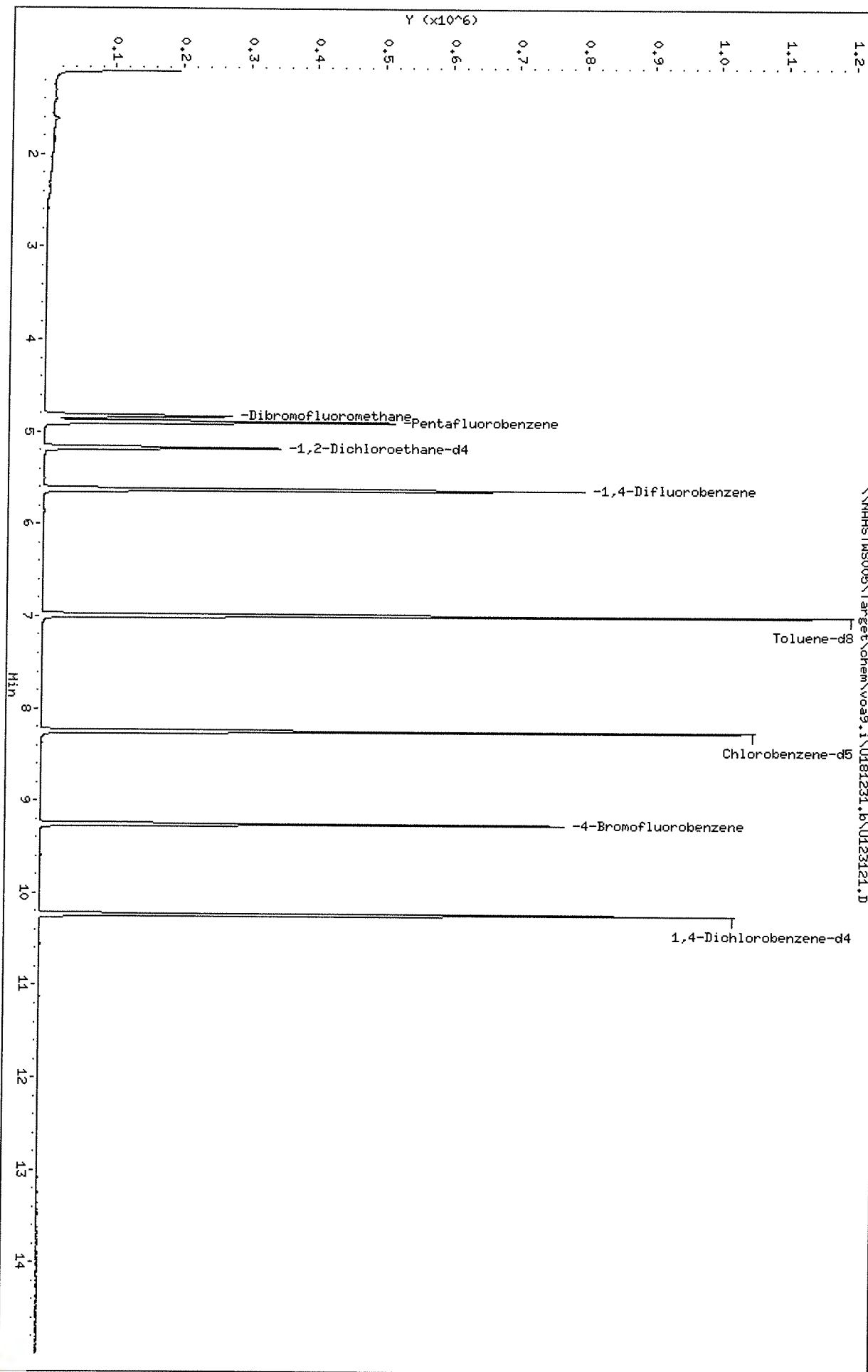
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG	CONCENTRATIONS					
		MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/l)
* 1 Pentafluorobenzene	168	4.894	4.898	(1.000)	314796	50.0000	
* 36 1,4-Difluorobenzene	114	5.625	5.629	(1.000)	560248	50.0000	
* 47 Chlorobenzene-d5	117	8.249	8.249	(1.000)	502773	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	10.236	10.236	(1.000)	221905	50.0000	
\$ 30 Dibromofluoromethane	113	4.830	4.834	(0.987)	158752	45.5686	45.56
\$ 35 1,2-Dichloroethane-d4	65	5.175	5.179	(1.057)	222514	49.9381	49.93
\$ 48 Toluene-d8	98	6.990	6.990	(0.847)	692732	53.4777	53.47
\$ 69 4-Bromofluorobenzene	95	9.257	9.257	(1.122)	241396	48.8097	48.80



Data File: \\NAHSTMS005\Target\chem\voa9.i\U181231.b\U123121.D
Date : 31-DEC-2018 17:58
Client ID: H518121264-11
Sample Info: H518121264-11;H518121264-11;;
Purge Volume: 5.0
Column phase: DB624

Instrument: V0A9.i
Operator: PC
Column diameter: 0.18



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181231.b\U123129.D Page 1
 Report Date: 30-Jan-2019 17:58

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa9.i\U181231.b\U123129.D
 Lab Smp Id: VSTD050-END Client Smp ID: VSTD050-END
 Inj Date : 31-DEC-2018 21:16
 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\U181231.b\8260C.m
 Meth Date : 30-Jan-2019 17:58 VOA9.i Quant Type: ISTD
 Cal Date : 21-DEC-2018 16:41 Cal File: U122108.D
 Als bottle: 28 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	AMOUNTS				CAL-AMT (ug/l)	ON-COL (ug/l)
			MASS	RT	EXP RT	REL RT		
* 1 Pentafluorobenzene	168	====	4.894	4.894	(1.000)	337306	50.0000	
* 36 1,4-Difluorobenzene	114		5.625	5.625	(1.000)	659374	50.0000	
* 47 Chlorobenzene-d5	117		8.249	8.249	(1.000)	604857	50.0000	
* 70 1,4-Dichlorobenzene-d4	152		10.236	10.236	(1.000)	292398	50.0000	
\$ 30 Dibromofluoromethane	113		4.830	4.830	(0.987)	200350	50.0000	53.94
\$ 35 1,2-Dichloroethane-d4	65		5.175	5.175	(1.057)	253730	50.0000	53.28
\$ 48 Toluene-d8	98		6.989	6.989	(0.847)	745201	50.0000	47.63
\$ 69 4-Bromofluorobenzene	95		9.257	9.257	(1.122)	325770	50.0000	54.92
60 1,1,1,2-Tetrachloroethane	131		8.346	8.346	(1.012)	197782	50.0000	51.51
31 1,1,1-Trichloroethane	97		4.826	4.826	(0.986)	302884	50.0000	56.86
68 1,1,2,2-Tetrachloroethane	83		9.392	9.392	(0.918)	365747	50.0000	55.54
53 1,1,2-Trichloroethane	83		7.421	7.421	(0.900)	208357	50.0000	57.81
22 1,1-Dichloroethane	63		3.604	3.604	(0.737)	429244	50.0000	59.09
11 1,1-Dichloroethene	96		2.401	2.401	(0.491)	179634	50.0000	56.01
32 1,1-Dichloropropene	75		5.003	5.003	(0.889)	310434	50.0000	52.91
93 1,2,3-Trichlorobenzene	180		12.335	12.335	(1.205)	277936	50.0000	50.43
71 1,2,3-Trichloropropane	75		9.426	9.426	(0.921)	391006	50.0000	57.10
90 1,2,4-Trichlorobenzene	180		11.923	11.923	(1.165)	285283	50.0000	52.69
79 1,2,4-Trimethylbenzene	105		9.943	9.943	(0.971)	797038	50.0000	52.08
89 1,2-Dibromo-3-Chloropropane	155		11.233	11.233	(1.097)	47664	50.0000	47.03
57 1,2-Dibromoethane	107		7.852	7.852	(0.952)	233203	50.0000	56.18
88 1,2-Dichlorobenzene	146		10.569	10.569	(1.033)	444390	50.0000	51.18



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181231.b\U123129.D Page 2
 Report Date: 30-Jan-2019 17:58

Compounds	QUANT SIG				AMOUNTS		
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/l)	ON-COL (ug/l)
33 1,2-Dichloroethane	62	5.254	5.254	(0.934)	344115	50.0000	58.04
42 1,2-Dichloropropane	63	6.082	6.082	(1.081)	260679	50.0000	55.95
75 1,3,5-Trimethylbenzene	105	9.625	9.625	(0.940)	817437	50.0000	55.62
83 1,3-Dichlorobenzene	146	10.180	10.180	(0.995)	435022	50.0000	50.10
54 1,3-Dichloropropane	76	7.563	7.563	(0.917)	440380	50.0000	56.73
84 1,4-Dichlorobenzene	146	10.255	10.255	(1.002)	448201	50.0000	48.95
26 2,2-Dichloropropane	77	4.275	4.275	(0.874)	218609	50.0000	49.93
24 2-Butanone	43	4.335	4.335	(0.886)	263089	100.000	119.73
76 2-Chlorotoluene	91	9.546	9.546	(0.933)	743252	50.0000	55.16
52 2-Hexanone	43	7.649	7.649	(0.927)	399393	100.000	118.74
77 4-Chlorotoluene	91	9.640	9.640	(0.942)	859508	50.0000	55.20
82 p-Isopropyltoluene	119	10.210	10.210	(0.997)	785625	50.0000	50.77
45 4-Methyl-2-Pentanone	43	6.914	6.914	(0.838)	555898	100.000	114.86
10 Acetone	43	2.480	2.480	(0.507)	148325	100.000	113.02
37 Benzene	78	5.216	5.216	(0.927)	963300	50.0000	54.90
74 Bromobenzene	156	9.381	9.381	(0.917)	244522	50.0000	54.12
29 Bromochloromethane	128	4.553	4.553	(0.930)	117312	50.0000	67.36
39 Bromodichloromethane	83	6.348	6.348	(1.129)	290310	50.0000	58.59
66 Bromoform	173	8.984	8.984	(1.089)	128903	50.0000	49.66(T)
6 Bromomethane	94	1.666	1.666	(0.341)	131850	50.0000	62.94
19 Carbon Disulfide	76	2.589	2.589	(0.529)	1059903	100.000	90.69
34 Carbon Tetrachloride	117	4.995	4.995	(0.888)	234765	50.0000	48.98
59 Chlorobenzene	112	8.275	8.275	(1.003)	610485	50.0000	52.53
7 Chloroethane	64	1.753	1.753	(0.358)	175646	50.0000	58.47(M)
28 Chloroform	83	4.658	4.658	(0.952)	415915	50.0000	59.45
3 Chloromethane	50	1.340	1.340	(0.274)	211175	50.0000	58.33
27 cis-1,2-Dichloroethene	96	4.287	4.287	(0.876)	260653	50.0000	58.78
46 cis-1,3-Dichloropropene	75	6.757	6.757	(1.201)	385732	50.0000	51.20
55 Dibromochloromethane	129	7.758	7.758	(0.940)	210189	50.0000	52.82
44 Dibromomethane	93	6.191	6.191	(1.101)	154031	50.0000	57.28
2 Dichlorodifluoromethane	85	1.205	1.205	(0.246)	206216	50.0000	49.68
61 Ethylbenzene	106	8.369	8.369	(1.015)	312162	50.0000	52.37
91 Hexachlorobutadiene	225	12.065	12.065	(1.179)	93556	50.0000	45.10
67 Isopropylbenzene	105	9.126	9.126	(1.106)	961172	50.0000	55.88
62 m,p-Xylenes	106	8.474	8.474	(1.027)	778373	100.000	106.22
17 Methylene Chloride	84	2.870	2.870	(0.586)	254151	50.0000	61.23
87 n-Butylbenzene	91	10.554	10.554	(1.031)	751281	50.0000	50.31
73 n-Propylbenzene	91	9.475	9.475	(0.926)	1209640	50.0000	55.36
92 Naphthalene	128	12.133	12.133	(1.185)	931749	50.0000	52.32
63 o-Xylene	106	8.811	8.811	(1.068)	411403	50.0000	55.65
81 sec-Butylbenzene	105	10.086	10.086	(0.985)	911553	50.0000	49.64
64 Styrene	104	8.823	8.823	(1.070)	718183	50.0000	58.47
78 tert-Butylbenzene	119	9.902	9.902	(0.967)	651446	50.0000	51.29
56 Tetrachloroethene	164	7.526	7.526	(0.912)	158194	50.0000	49.95
50 Toluene	91	7.046	7.046	(0.854)	1006477	50.0000	55.93
20 trans-1,2-Dichloroethene	96	3.140	3.140	(0.642)	227423	50.0000	57.60
51 trans-1,3-Dichloropropene	75	7.259	7.259	(1.291)	331221	50.0000	51.10
38 Trichloroethene	130	5.861	5.861	(1.042)	233369	50.0000	55.09
8 Trichlorofluoromethane	101	1.955	1.955	(0.400)	314807	50.0000	56.54
5 Vinyl Chloride	62	1.419	1.419	(0.290)	279653	50.0000	58.44



Data File: \\NAHSTWS005\Target\chem\voa9.i\U181231.b\U123129.D Page 3
Report Date: 30-Jan-2019 17:58

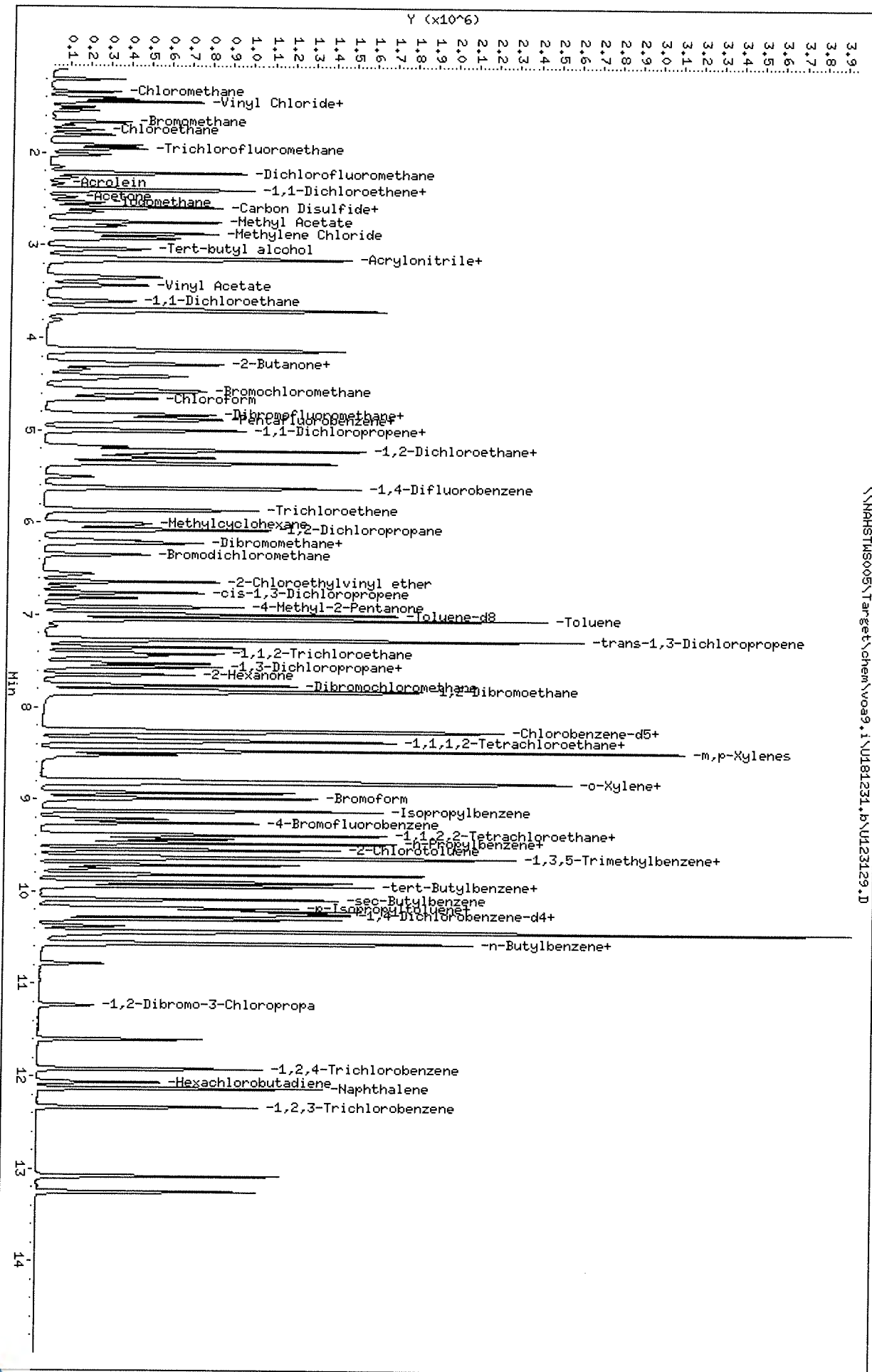
QC Flag Legend

T - Target compound detected outside RT window.
M - Compound response manually integrated.



Data File: \\NAHSTMS005\Target\chem\voa9.i\UJ181231.b\UJ123129.D
 Date : 31-DEC-2018 21:16
 Client ID: VSTD050-END
 Sample Info: VSTD050-END;VSTD050-END;2;;
 Purge Volume: 5.0
 Column phase: DB624

Instrument: V099.i
 Operator: PC
 Column diameter: 0.18

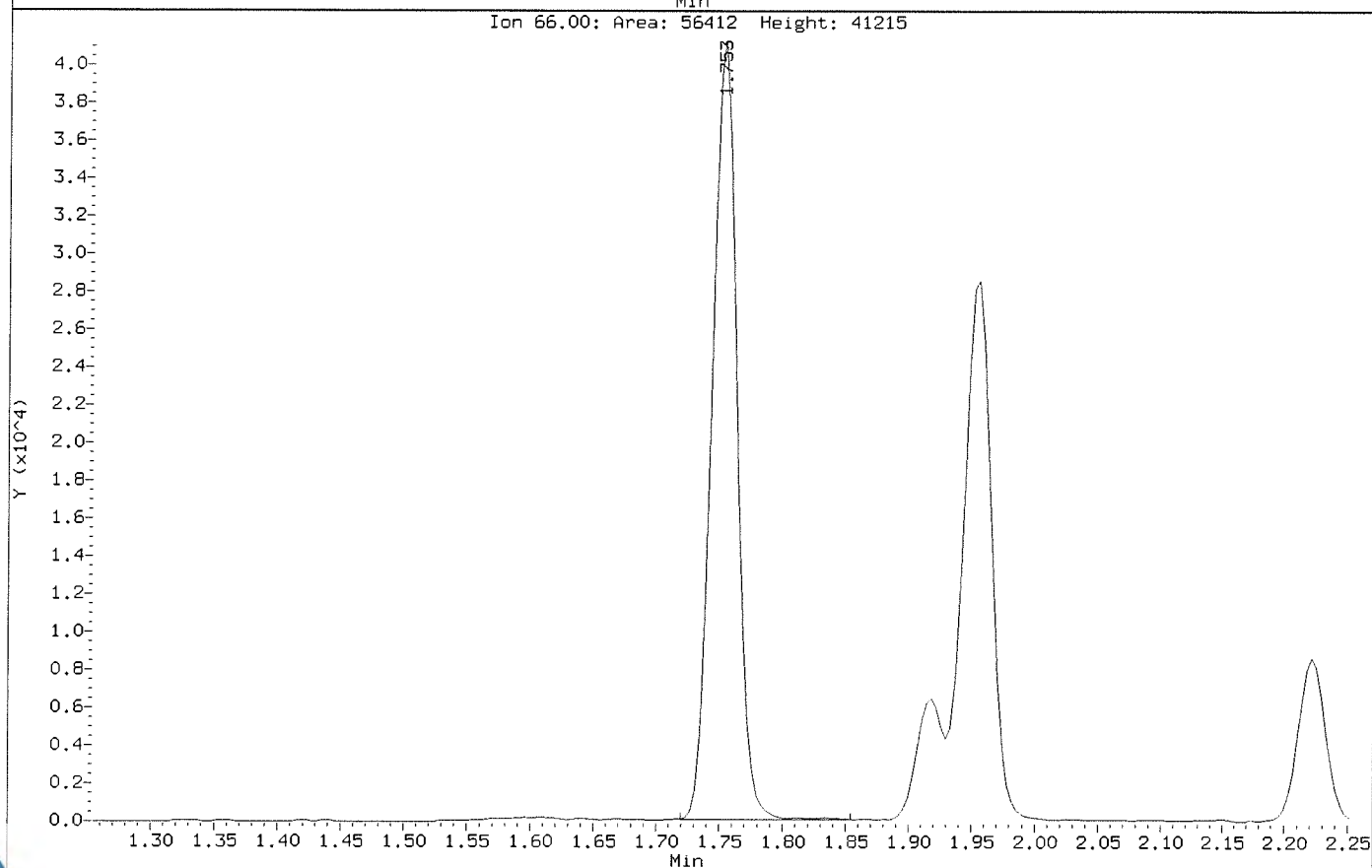
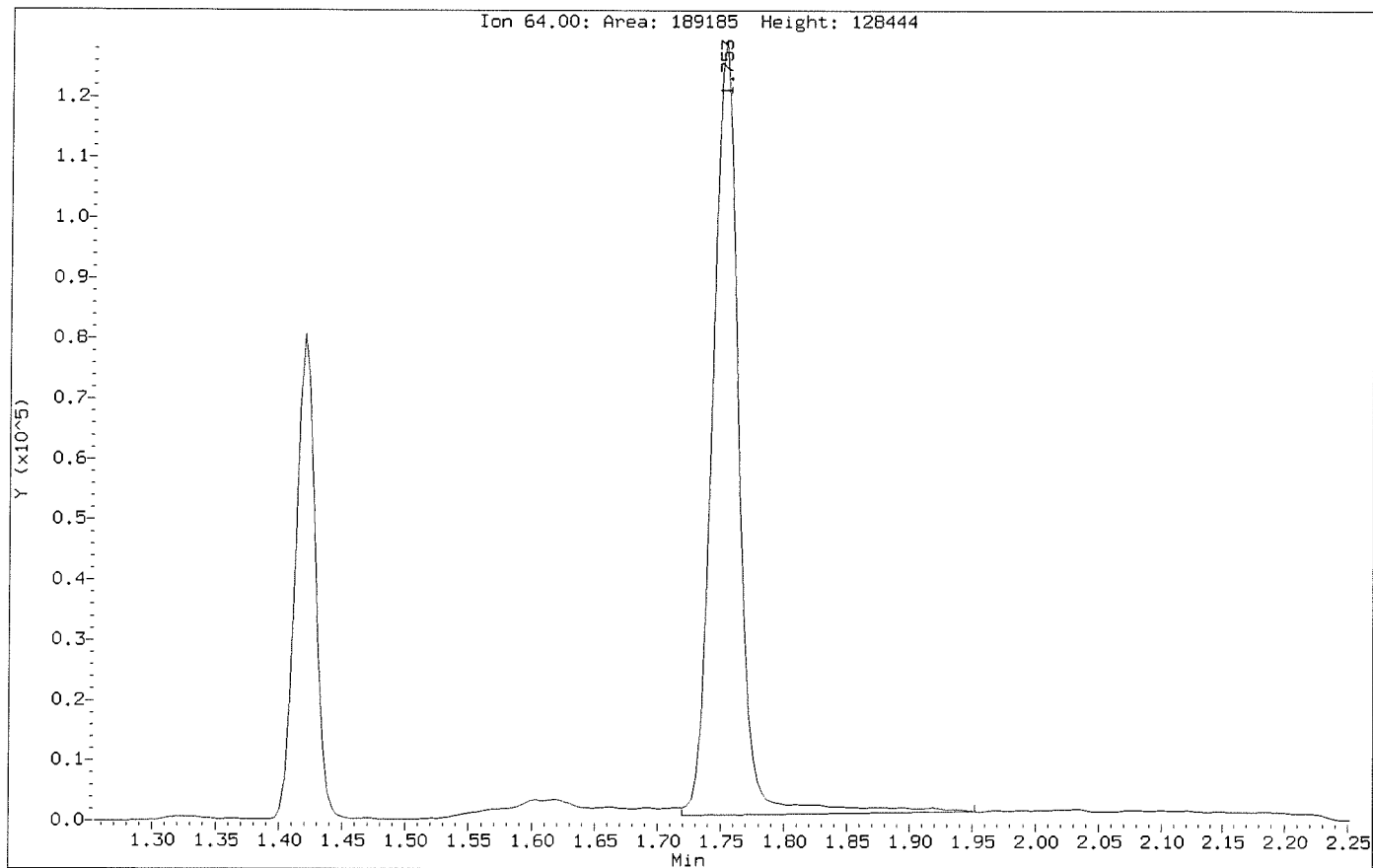


\\NAHSTMS005\Target\chem\voa9.i\UJ181231.b\UJ123129.D



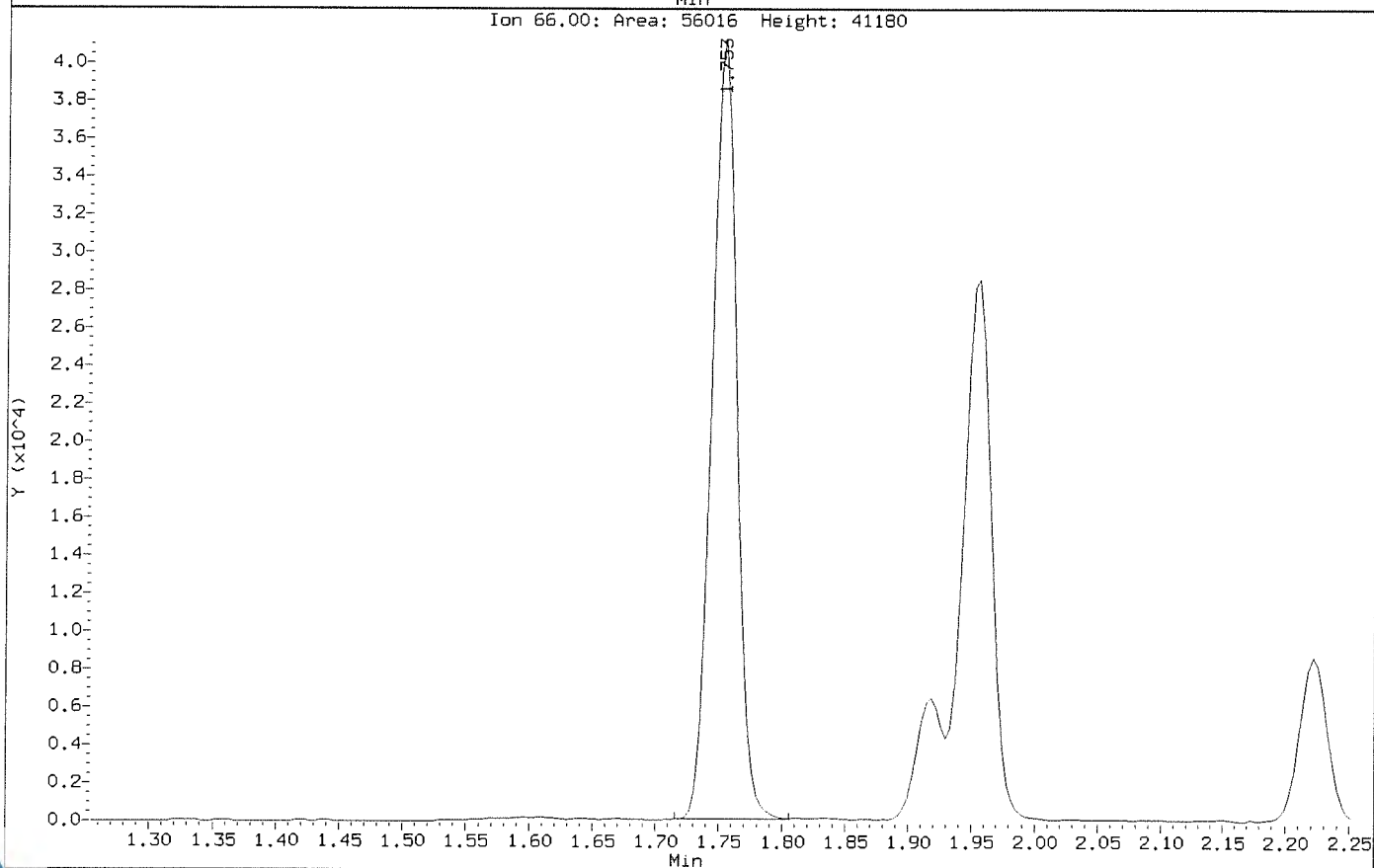
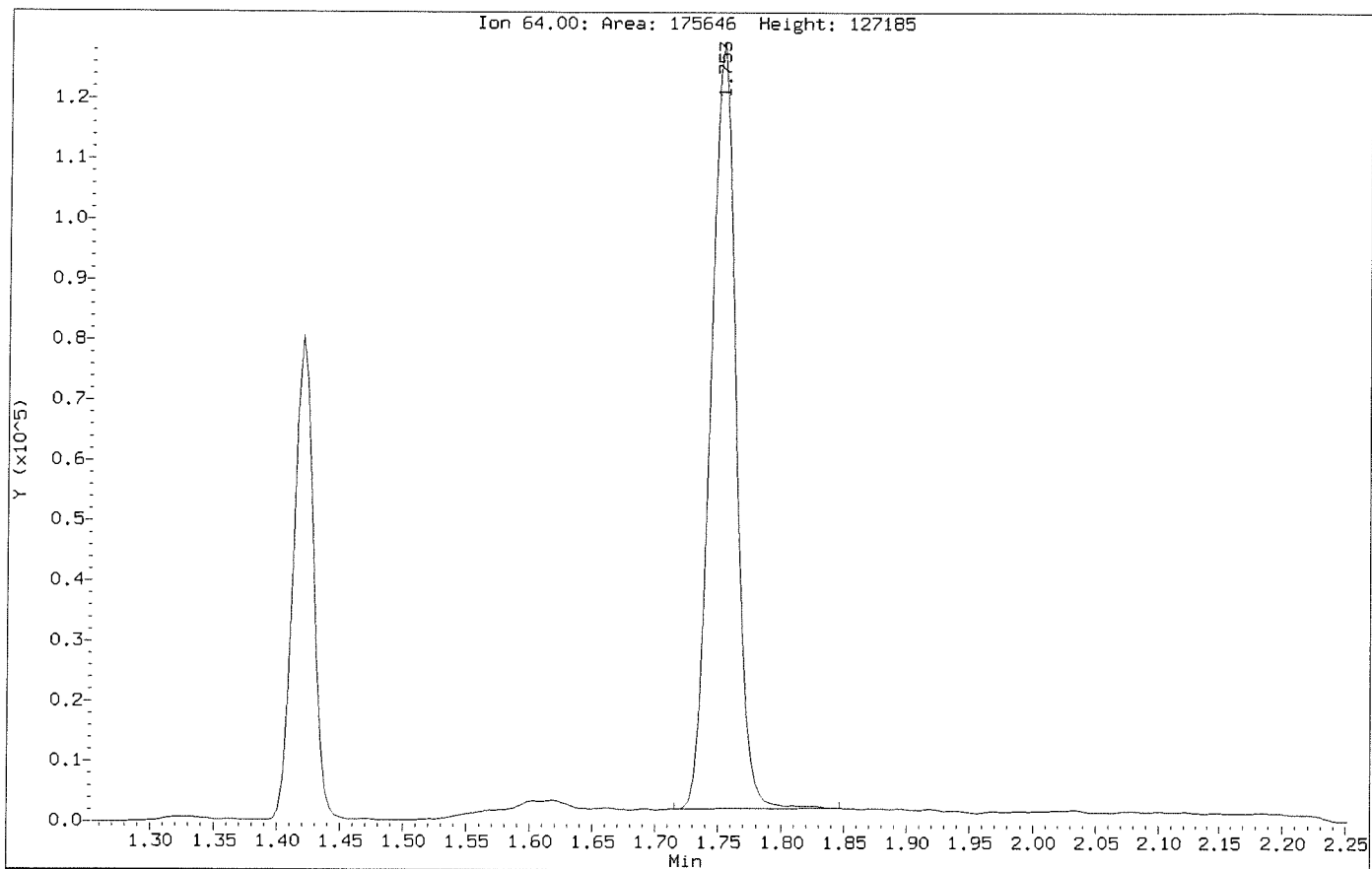
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Injection Date: 31-DEC-2018 21:16
Instrument: VOA9.i
Client Sample ID: VSTD050-END

Compound: Chloroethane
CAS Number: 75-00-3



Data File: \\NAHSTW5005\Target\chem\voa9.i\U181231.b\U123129.D
Injection Date: 31-DEC-2018 21:16
Instrument: VOA9.i
Client Sample ID: VSTD050-END

Compound: Chloroethane
CAS Number: 75-00-3



HS18121264 8270 Raw Data

ALS WO# HS18121264



SV05 -Logbook

Batch: 33757
 Date: 12-31-2018
 Method: 8270SIM
 Comments:

Analyst: Qin Xu
 Reviewer:
 Laboratory: Houston

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pt
1	DFTPP	TUNE	12-31-2018 12:41 pm	1.00			01.D		Y	N/
2	14DXSTTD-0.08	ICAL4	12-31-2018 12:56 pm	1.00			02.D	Liquid	Y	N/
3	14DXSTTD-0.08	SAMP	12-31-2018 01:29 pm	1.00			03.D	Liquid	Y	N/
4	14DXSTTD-0.01	ICAL1	12-31-2018 02:11 pm	1.00			04.D	Liquid	Y	N/
5	14DXSTTD-0.03	ICAL2	12-31-2018 02:32 pm	1.00			05.D	Liquid	Y	N/
6	14DXSTTD-0.05	ICAL3	12-31-2018 02:52 pm	1.00			06.D	Liquid	Y	N/
7	14DXSTTD-0.1	ICAL5	12-31-2018 03:13 pm	1.00			07.D	Liquid	Y	N/
8	14DXSTTD-0.15	ICAL6	12-31-2018 03:34 pm	1.00			08.D	Liquid	Y	N/
9	14DXSTTD-0.2	ICAL7	12-31-2018 03:55 pm	1.00			09.D	Liquid	Y	N/
10	14DXSTTD-0.5	ICAL8	12-31-2018 04:15 pm	1.00			10.D	Liquid	Y	N/
11	14DXICV-0.08	SAMP	12-31-2018 04:36 pm	1.00			11.D	Liquid	Y	N/
12	CCB	SAMP	12-31-2018 04:57 pm	1.00	1000.00 mL	1.00 mL	12.D	Liquid	Y	N/
13	MBLK-135895	MBLK	12-31-2018 05:17 pm	1.00	1000.00 mL	1.00 mL	13.D	Liquid	Y	N/
14	LCS-135895	LCS	12-31-2018 05:38 pm	1.00	1000.00 mL	1.00 mL	14.D	Liquid	Y	N/
15	LCSD-135895	LCSD	12-31-2018 05:59 pm	1.00	1000.00 mL	1.00 mL	15.D	Liquid	Y	N/
16	MBLK-136054	MBLK	12-31-2018 06:20 pm	1.00	1000.00 mL	1.00 mL	16.D	Liquid	Y	N/
17	LCS-136054	LCS	12-31-2018 06:40 pm	1.00	1000.00 mL	1.00 mL	17.D	Liquid	Y	N/
18	LCSD-136054	LCSD	12-31-2018 07:01 pm	1.00	1000.00 mL	1.00 mL	18.D	Liquid	Y	N/
19	HS18121093-01	SAMP	12-31-2018 07:22 pm	1.00	1000.00 mL	1.00 mL	19.D	Liquid	Y	N/
20	HS18121093-01	SAMP	12-31-2018 07:42 pm	10.00	1000.00 mL	1.00 mL	20.D	Liquid	Y	N/
21	HS18121094-01	SAMP	12-31-2018 08:03 pm	1.00	1000.00 mL	100 mL	21.D	Liquid	Y	N/
22	HS18121094-01	SAMP	12-31-2018 08:24 pm	10.00	1000.00 mL	1.00 mL	22.D	Liquid	Y	N/
23	HS18121264-09	SAMP	12-31-2018 08:44 pm	1.00	1000.00 mL	1.00 mL	23.D	Liquid	Y	N/
24	HS18121264-09	SAMP	12-31-2018 09:05 pm	10.00	1000.00 mL	1.00 mL	24.D	Liquid	Y	N/
25	HS18121264-10	SAMP	12-31-2018 09:26 pm	1.00	1000.00 mL	1.00 mL	25.D	Liquid	Y	N/
26	HS18121264-10	SAMP	12-31-2018 09:47 pm	10.00	1000.00 mL	1.00 mL	26.D	Liquid	Y	N/
27	HS18121267-01	SAMP	12-31-2018 10:07 pm	1.00	1000.00 mL	1.00 mL	27.D	Liquid	Y	N/
28	HS18121267-01	SAMP	12-31-2018 10:28 pm	10.00	1000.00 mL	1.00 mL	28.D	Liquid	Y	N/
29	14DXSTTD-0.08	CCV	12-31-2018 10:49 pm	1.00			29.D	Liquid	Y	N/

Chemical	Value
IS ID	308191706
CAL STD ID	308191901
DFTPP ID	3081915-10
PCP Tailing	1.01
Benz. Tailing	0.89
STD-01	3081919(01-08)
Routine SOP Maintenance	QX



FORM 3
WATER SEMIVOLATILE METHOD SPIKE RECOVERY

Lab Name: _____ Contract: _____
 Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: HS18121264
 Matrix Spike - Sample No.: 14DXICV-0.08

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	% REC #	QC. LIMITS REC.
1,4-Dioxane	0.08000	0.08716	109	40-140

Column to be used to flag recovery and RPD values with an asterisk
 * Values outside of QC limits

COMMENTS: _____

FORM III SV



FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Contract:
Lab Code: Case No.: SAS No.: SDG No.: HS18121264
Lab File ID: 01 DFTPP Injection Date: 12/31/18
Instrument ID: SV5 DFTPP Injection Time: 1241

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	35.4
68	Less than 2.0% of mass 69	0.4 (1.0)1
69	Mass 69 relative abundance	37.1
70	Less than 2.0% of mass 69	0.1 (0.4)1
127	10.0 - 80.0% of mass 198	53.0
197	Less than 2.0% of mass 198	0.2
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.7
275	10.0 - 60.0% of mass 198	28.9
365	1.0 - 100.0% of mass 198	3.5
441	Present, but less than mass 443	13.8
442	50.0 - 150.0% of mass 198	87.0
443	15.0 - 24.0% of mass 442	15.6 (17.9)2

1-Value is % mass 69

2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	14DXSTTD-0.0	14DXSTTD-0.08	02	12/31/18	1256
02	14DXSTTD-0.0	14DXSTTD-0.01	04	12/31/18	1411
03	14DXSTTD-0.0	14DXSTTD-0.03	05	12/31/18	1432
04	14DXSTTD-0.0	14DXSTTD-0.05	06	12/31/18	1452
05	14DXSTTD-0.1	14DXSTTD-0.1	07	12/31/18	1513
06	14DXSTTD-0.1	14DXSTTD-0.15	08	12/31/18	1534
07	14DXSTTD-0.2	14DXSTTD-0.2	09	12/31/18	1555
08	14DXSTTD-0.5	14DXSTTD-0.5	10	12/31/18	1615
09	14DXICV-0.08	14DXICV-0.08	11	12/31/18	1636
10	MBLK-136054	MBLK-136054	16	12/31/18	1820
11	LCS-136054	LCS-136054	17	12/31/18	1840
12	LCSD-136054	LCSD-136054	18	12/31/18	1901
13	HS18121264-0	HS18121264-09	23	12/31/18	2044
14	HS18121264-1	HS18121264-10	25	12/31/18	2126
15	14DXSTTD-0.0	14DXSTTD-0.08	29	12/31/18	2249
16					
17					
18					
19					
20					
21					
22					



FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: _____ Contract: _____
 Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: HS18121264
 Instrument ID: SV5 Calibration Date: 12/31/18 Time: 2249
 Lab File ID: 29 Init. Calib. Date(s): 12/31/18 12/31/18
 Init. Calib. Times: 1256 1615
 GC Column: RTX-5SIL MS ID: 0.28 (mm)

COMPOUND	RRF OR AMOUNT	RRF8e-002 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
1,4-Dioxane	5.6e-002	5.53e-002	0.01	-1.25	50.00	AVRG
Nitrobenzene-d5	0.2450000	0.2196499	0.01	-10.35	50.00	AVRG
4-Terphenyl-d14	0.7160000	0.7031290	0.01	-1.80	50.00	AVRG
2-Fluorobiphenyl	1.1790000	1.0701330	0.01	-9.23	50.00	AVRG

FORM VII SV



FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: _____ Contract: _____
 Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: HS18121264
 Instrument ID: SV5 Calibration Date(s): 12/31/18 12/31/18
 Column: RTX-5SIL MS ID: 0.28 (mm) Calibration Time(s): 1256 1615
 LAB FILE ID: RF0.01: 04 RF0.025: 05 RF0.05: 06
 RF0.08: 02 RF0.1: 07 RF0.15: 08

COMPOUND	RF0.01	RF0.025	RF0.05	RF0.08	RF0.1	RF0.15
1,4-Dioxane	0.053	0.057	0.062	0.053	0.058	0.059
Nitrobenzene-d5	0.252	0.293	0.250	0.217	0.255	0.245
4-Terphenyl-d14	0.693	0.804	0.733	0.724	0.684	0.758
2-Fluorobiphenyl	1.280	1.283	1.215	1.183	1.116	1.235

FORM VI SV



FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: Contract:
 Lab Code: Case No.: SAS No.: SDG No.: HS1812126
 Instrument ID: SV5 Calibration Date(s): 12/31/18 12/31/18
 Column: RTX-5SIL MS ID: 0.28 (mm) Calibration Time(s): 1256 1615
 LAB FILE ID: RF0.2: 09 RF0.5: 10

COMPOUND	RF0.2	RF0.5	CURVE	COEFFICIENT A1	%RSD OR R ²	MAX %RSD OR R ²
1,4-Dioxane	0.057	0.048	AVRG	5.591e-002	7.907	20.000
Nitrobenzene-d5	0.244	0.204	AVRG	0.24514018	10.912	20.000
4-Terphenyl-d14	0.721	0.613	AVRG	0.71620935	7.811	20.000
2-Fluorobiphenyl	1.106	1.015	AVRG	1.17932934	7.964	20.000

FORM VI SV



FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: _____ Contract: _____
 Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: HS18121264
 Lab File ID (Standard): 02 Date Analyzed: 12/31/18
 Instrument ID: SV5 Time Analyzed: 1256

	IS1 (NPT) AREA #	RT #	IS2 (ANT) AREA #	RT #	IS3 (PHN) AREA #	RT #
=====	=====	=====	=====	=====	=====	=====
12 HOUR STD	37038	4.47	15880	6.15	26474	7.56
UPPER LIMIT	74076	4.97	31760	6.65	52948	8.06
LOWER LIMIT	18519	3.97	7940	5.65	13237	7.06
=====	=====	=====	=====	=====	=====	=====
CLIENT SAMPLE NO.						
=====	=====	=====	=====	=====	=====	=====
01 MBLK-136054	54030	4.47	26434	6.14	40977	7.55
02 LCS-136054	20551	4.47	8677	6.14	13717	7.56
03 LCSD-136054	29577	4.47	12911	6.14	21435	7.56
04 HS18121264-0	35884	4.47	15888	6.14	26366	7.56
05 HS18121264-1	33921	4.47	16679	6.14	26492	7.56
06						
07						
08						
09						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						

IS1 (NPT) = Naphthalene-d8
 IS2 (ANT) = Acenaphthene-d10
 IS3 (PHN) = Phenanthrene-d10

AREA UPPER LIMIT = +100% of internal standard area
 AREA LOWER LIMIT = - 50% of internal standard area
 RT UPPER LIMIT = + 0.50 minutes of internal standard RT
 RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
 * Values outside of QC limits.



FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Contract:
 Lab Code: Case No.: SAS No.: SDG No.: HS18121264
 Lab File ID (Standard): 02 Date Analyzed: 12/31/18
 Instrument ID: SV5 Time Analyzed: 1256

	IS4 (CRY) AREA #	RT #	IS5 (PRY) AREA #	RT #	AREA #	RT #
=====	=====	=====	=====	=====	=====	=====
12 HOUR STD	19936	9.82	21073	11.64		
UPPER LIMIT	39872	10.32	42146	12.14		
LOWER LIMIT	9968	9.32	10537	11.14		
=====	=====	=====	=====	=====	=====	=====
CLIENT SAMPLE NO.						
=====	=====	=====	=====	=====	=====	=====
01 MBLK-136054	34087	9.82	34329	11.63		
02 LCS-136054	11249	9.83	11556	11.65		
03 LCSD-136054	16985	9.82	18367	11.63		
04 HS18121264-0	20400	9.82	21986	11.63		
05 HS18121264-1	20830	9.82	21922	11.63		
06						
07						
08						
09						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						

IS4 (CRY) = Chrysene-d12
 IS5 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
 AREA LOWER LIMIT = - 50% of internal standard area
 RT UPPER LIMIT = + 0.50 minutes of internal standard RT
 RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
 * Values outside of QC limits.



Data File: \\NAHSTWS005\Target\chem\SV5.i\181231.b\01.D

Page 1

Date : 31-DEC-2018 12:41

Client ID: DFTPP

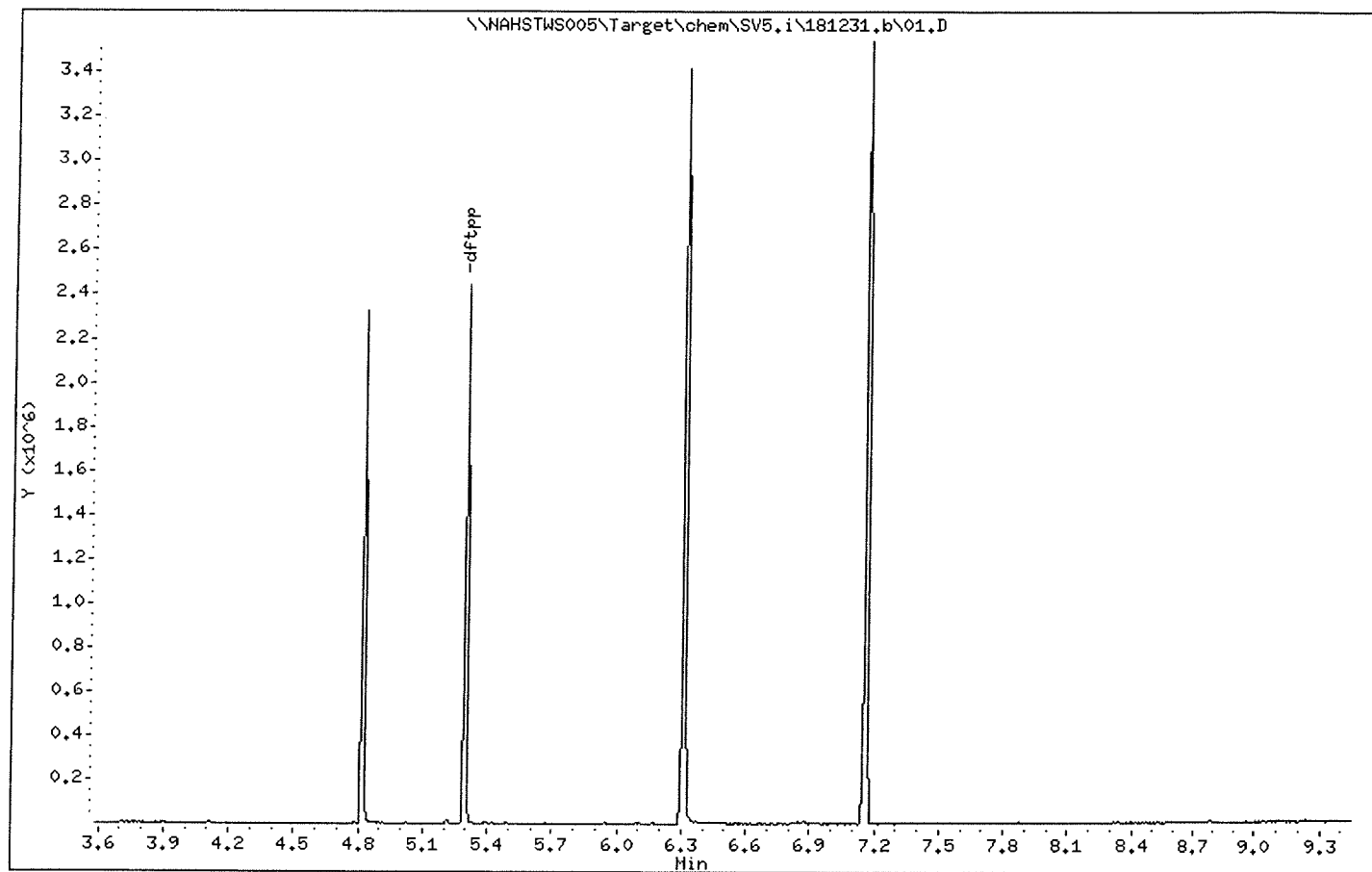
Instrument: SV5.i

Sample Info: DFTPP;DFTPP;3;;DFTPP

Operator: LG

Column phase: DB-5MS

Column diameter: 0.25



Data File: \\NAHSTWS005\Target\chem\SV5.i\181231.b\01.D

Page 2

Date : 31-DEC-2018 12:41

Client ID: DFTPP

Instrument: SV5.i

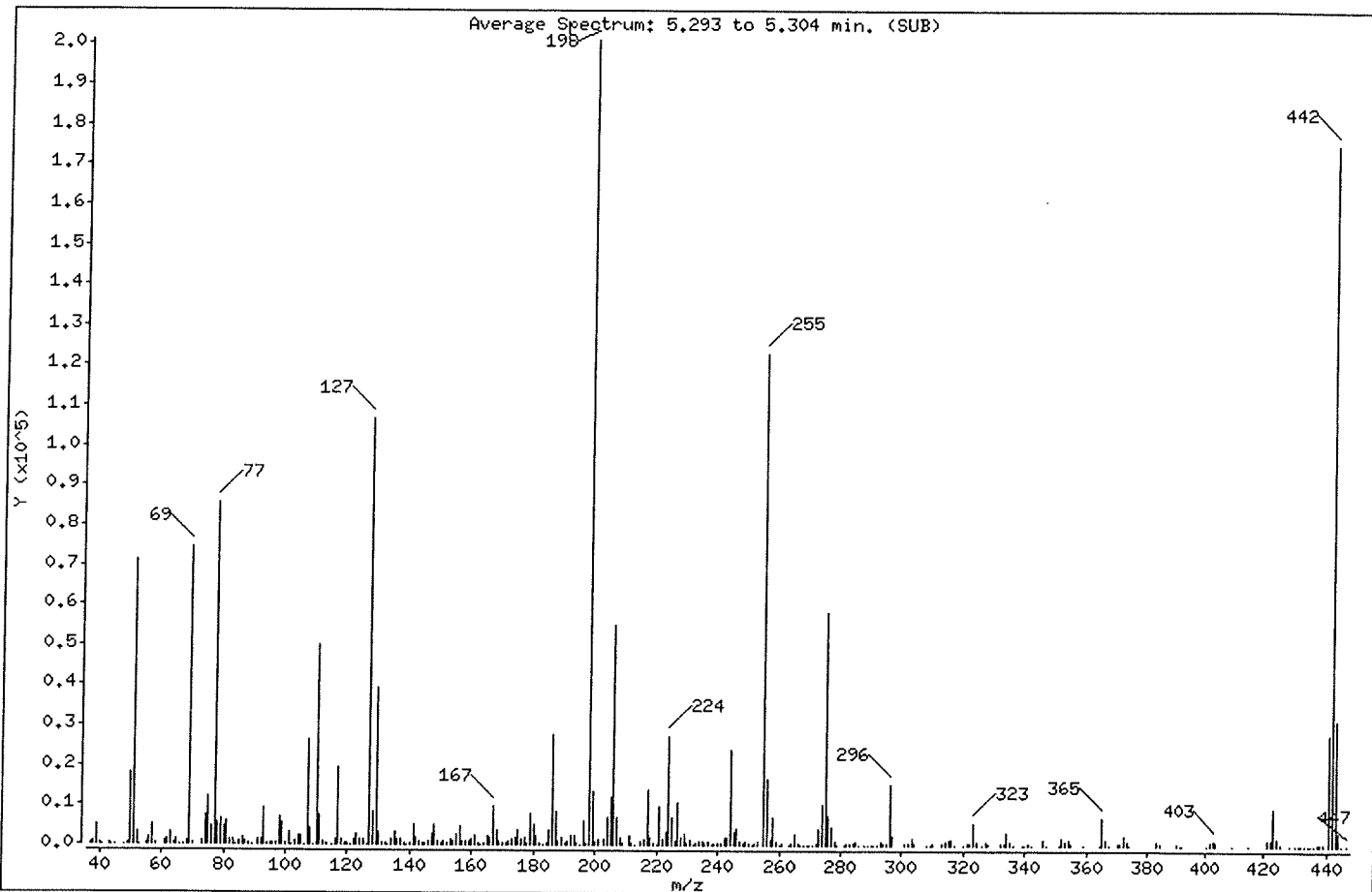
Sample Info: DFTPP;DFTPP;3;;DFTPP

Operator: LG

Column phase: DB-5MS

Column diameter: 0.25

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	35.42
68	Less than 2.00% of mass 69	0.38 (1.01)
69	Mass 69 relative abundance	37.11
70	Less than 2.00% of mass 69	0.14 (0.37)
127	10.00 - 80.00% of mass 198	53.02
197	Less than 2.00% of mass 198	0.19
199	5.00 - 9.00% of mass 198	6.73
275	10.00 - 60.00% of mass 198	28.88
365	1.00 - 100.00% of mass 198	3.50
441	Present, but less than mass 443	13.82
442	50.00 - 150.00% of mass 198	87.01
443	15.00 - 24.00% of mass 442	15.59 (17.91)

Data File: \\NAHSTWS005\Target\chem\SV5.i\181231,b\01.D

Page 3

Date : 31-DEC-2018 12:41

Client ID: DFTPP

Instrument: SV5.i

Sample Info: DFTPP;DFTPP;3;;DFTPP

Operator: LG

Column phase: DB-5MS

Column diameter: 0.25

Data File: 01.D

Spectrum: Average Spectrum: 5.293 to 5.304 min. (SUB)

Location of Maximum: 198.00

Number of points: 323

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	285	128.00	8542	211.00	2231	297.00	2117
38.00	851	129.00	39328	212.00	284	301.00	302
39.00	5137	130.00	3062	213.00	167	302.00	406
40.00	316	131.00	620	215.00	714	303.00	1751
41.00	101	132.00	330	216.00	1340	304.00	615
43.00	257	133.00	211	217.00	13695	308.00	119
44.00	204	134.00	1301	218.00	1672	309.00	114
45.00	181	135.00	3307	219.00	319	310.00	289
48.00	118	136.00	1263	220.00	56	313.00	246
49.00	426	137.00	1358	221.00	9621	314.00	904
50.00	18000	138.00	284	222.00	1352	315.00	1442
51.00	71232	139.00	199	223.00	3235	316.00	1230
52.00	3348	140.00	528	224.00	27112	317.00	85
53.00	154	141.00	5261	225.00	6933	320.00	159
55.00	591	142.00	1847	226.00	809	321.00	552
56.00	2031	143.00	1059	227.00	10810	322.00	377
57.00	5131	144.00	389	228.00	1653	323.00	5391
58.00	339	145.00	354	229.00	2643	324.00	1007
61.00	796	146.00	881	230.00	300	326.00	65
62.00	1196	147.00	2560	231.00	1313	327.00	1004
63.00	3208	148.00	5159	232.00	90	328.00	405
64.00	417	149.00	1143	233.00	267	332.00	446
65.00	1303	150.00	294	234.00	813	333.00	677
66.00	125	151.00	762	235.00	743	334.00	3385
67.00	183	152.00	537	236.00	578	335.00	771
68.00	757	153.00	1581	237.00	914	336.00	57
69.00	74648	154.00	1103	238.00	116	339.00	55
70.00	274	155.00	2955	239.00	374	340.00	65
73.00	718	156.00	4472	240.00	540	341.00	677
74.00	7386	157.00	890	241.00	641	342.00	118
75.00	11993	158.00	1014	242.00	1642	346.00	1158
76.00	4436	159.00	872	243.00	2077	347.00	204
77.00	85320	160.00	1494	244.00	24096	351.00	101
78.00	5712	161.00	2415	245.00	3091	352.00	1775
79.00	6329	162.00	639	246.00	4338	353.00	1128



Data File: \\NAHSTWS005\Target\chem\SV5.i\181231.b\01.D

Page 4

Date : 31-DEC-2018 12:41

Client ID: DFTPP

Instrument: SV5.i

Sample Info: DFTPP;DFTPP;3;;DFTPP

Operator: LG

Column phase: DB-5MS

Column diameter: 0.25

Data File: 01.D

Spectrum: Average Spectrum: 5.293 to 5.304 min. (SUB)

Location of Maximum: 198.00

Number of points: 323

m/z	Y	m/z	Y	m/z	Y	m/z	Y
80.00	4764	163.00	180	247.00	1008	354.00	1574
81.00	6054	164.00	441	248.00	249	355.00	408
82.00	1508	165.00	2204	249.00	805	359.00	193
83.00	1181	166.00	1712	250.00	282	364.00	58
84.00	122	167.00	9886	251.00	204	365.00	7031
85.00	1126	168.00	3497	252.00	349	366.00	1194
86.00	1889	169.00	736	253.00	792	367.00	51
87.00	770	170.00	448	255.00	122880	370.00	307
88.00	255	171.00	536	256.00	16512	371.00	414
89.00	135	172.00	972	257.00	1384	372.00	2465
91.00	1432	173.00	1225	258.00	6964	373.00	704
92.00	1283	174.00	2078	259.00	944	374.00	94
93.00	9473	175.00	3688	260.00	179	383.00	892
94.00	641	176.00	1376	261.00	280	384.00	296
95.00	237	177.00	1842	263.00	150	390.00	343
96.00	446	178.00	693	264.00	273	391.00	162
97.00	259	179.00	7751	265.00	2864	392.00	160
98.00	7067	180.00	5083	266.00	424	401.00	117
99.00	5319	181.00	2420	267.00	60	402.00	1151
100.00	423	182.00	499	268.00	54	403.00	1489
101.00	3428	183.00	219	269.00	58	404.00	782
102.00	129	184.00	591	270.00	78	410.00	119
103.00	886	185.00	3576	271.00	169	415.00	97
104.00	2413	186.00	27720	272.00	497	421.00	1351
105.00	2304	187.00	8164	273.00	4016	422.00	1493
106.00	184	188.00	804	274.00	10353	423.00	9116
107.00	26456	189.00	1679	275.00	58088	424.00	1887
108.00	4065	190.00	351	276.00	7604	425.00	239
109.00	169	191.00	856	277.00	4832	428.00	63
110.00	49984	192.00	2082	278.00	897	430.00	69
111.00	7607	193.00	2457	279.00	116	431.00	53
112.00	867	194.00	357	281.00	66	432.00	71
113.00	359	195.00	80	282.00	242	433.00	68
115.00	66	196.00	6044	283.00	609	434.00	157
116.00	1611	197.00	380	284.00	598	435.00	180



Data File: \\NAHSTWS005\Target\chem\SV5.i\181231.b\01.D

Page 5

Date : 31-DEC-2018 12:41

Client ID: DFTPP

Instrument: SV5.i

Sample Info: DFTPP;DFTPP;3;;DFTPP

Operator: LG

Column phase: DB-5MS

Column diameter: 0.25

Data File: 01.D
 Spectrum: Average Spectrum: 5.293 to 5.304 min. (SUB)
 Location of Maximum: 198.00
 Number of points: 323

m/z	Y	m/z	Y	m/z	Y	m/z	Y
117.00	19584	198.00	201088	285.00	891	436.00	72
118.00	1252	199.00	13540	286.00	101	437.00	354
119.00	269	200.00	1120	288.00	114	438.00	290
120.00	393	201.00	1306	289.00	174	439.00	315
121.00	186	203.00	1512	290.00	86	441.00	27792
122.00	1537	204.00	7136	291.00	137	442.00	174976
123.00	2881	205.00	12093	292.00	159	443.00	31344
124.00	1420	206.00	54824	293.00	1084	444.00	3339
125.00	1385	207.00	6750	294.00	262	445.00	184
126.00	137	208.00	1654	295.00	311	447.00	62
127.00	106632	209.00	424	296.00	15377		



Data File: \\NAHSTWS005\Target\chem\SV5.i\181231.b\02.D
 Report Date: 18-Jan-2019 08:50

Page 1

ALS Laboratory Group

GC/MS Semivolatiles EPA method 8270D

Data file : \\NAHSTWS005\Target\chem\SV5.i\181231.b\02.D
 Lab Smp Id: 14DXSTTD-0.08 Client Smp ID: 14DXSTTD-0.08
 Inj Date : 31-DEC-2018 12:56 MS Autotune Date: 22-JUN-2005 09:10
 Operator : LG Inst ID: SV5.i
 Smp Info : 14DXSTTD-0.08;14DXSTTD-0.08
 Misc Info : ;1;0;1
 Comment :
 Method : \\NAHSTWS005\Target\chem\SV5.i\181231.b\DXSIM.m
 Meth Date : 18-Jan-2019 08:50 aneir Quant Type: ISTD
 Cal Date : 31-DEC-2018 16:15 Cal File: 10.D
 Als bottle: 2 Calibration Sample, Level: 4
 Dil Factor: 1.00000
 Integrator: HP RTE Compound Sublist: 14DX.sub
 Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

Compounds	QUANT	SIG	AMOUNTS					
			CAL-AMT	ON-COL	REL RT	RESPONSE	(NG)	(NG)
=====	====	====	=====	=====	=====	=====	=====	
* 45 Naphthalene-d8	136		4.473	4.473	(1.000)	37038	0.10000	
\$ 33 Nitrobenzene-d5	82		3.828	3.828	(0.856)	6441	0.08000	0.07094 (QM)
* 86 Acenaphthene-d10	164		6.146	6.144	(1.000)	15880	0.10000	
\$ 69 2-Fluorobiphenyl	172		5.494	5.494	(0.894)	15027	0.08000	0.08024
* 126 Phenanthrene-d10	188		7.558	7.556	(1.000)	26474	0.10000	
* 182 Chrysene-d12	240		9.824	9.822	(1.000)	19936	0.10000	
\$ 158 4-Terphenyl-d14	244		8.806	8.804	(0.896)	11553	0.08000	0.08091
* 198 Perylene-d12	264		11.636	11.631	(1.000)	21073	0.10000	
1 1,4-Dioxane	58		1.644	1.638	(0.368)	1562	0.08000	0.07542 (a)

QC Flag Legend

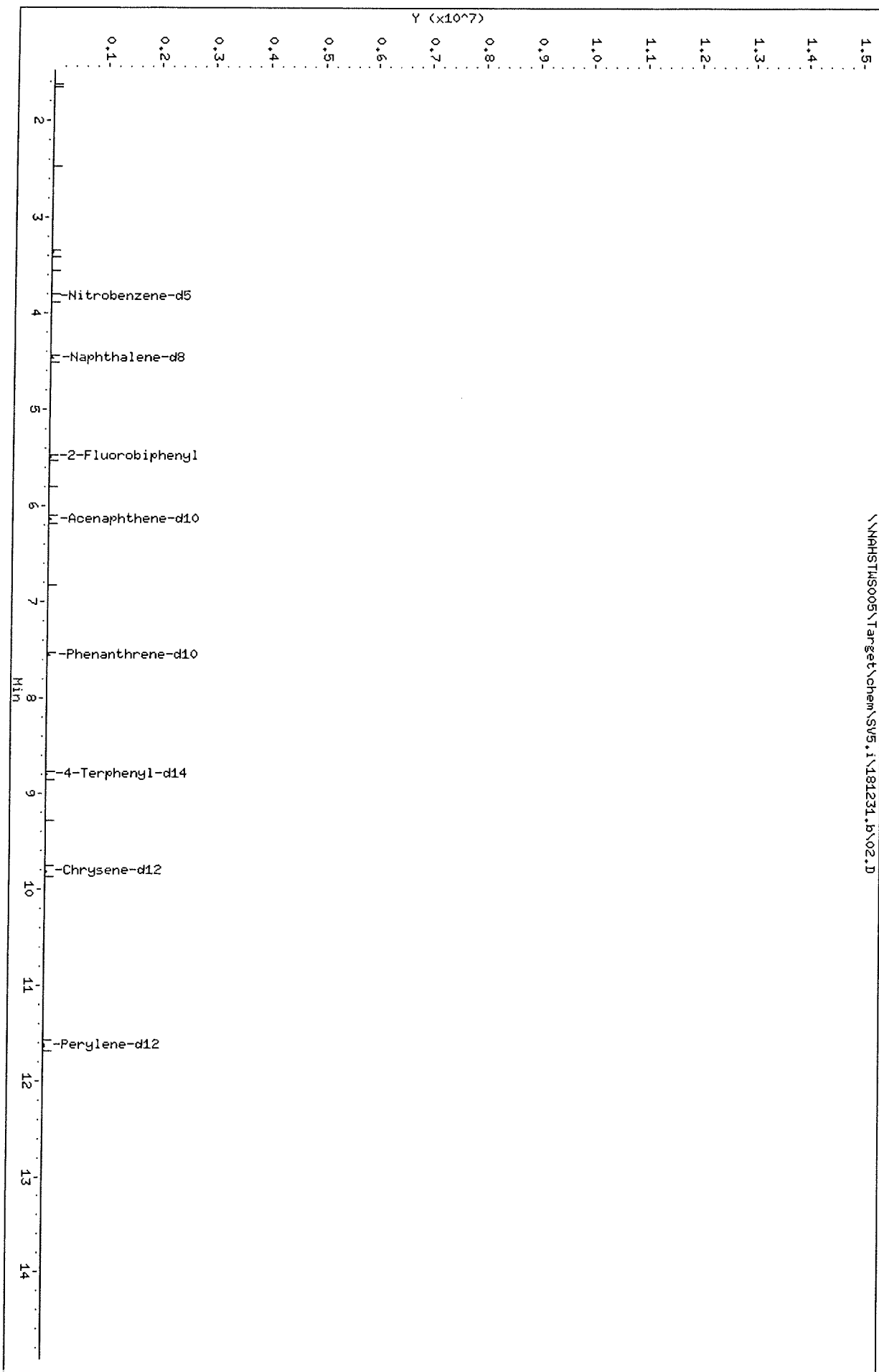
- a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
- Q - Qualifier signal failed the ratio test.
- M - Compound response manually integrated.



Data File: \\NAHSTMS005\Target\chem\SV5.1\181231.b\02.D
Date : 31-DEC-2018 12:56
Client ID: 14DXSTD-0.08
Sample Info: 14DXSTD-0.08;14DXSTD-0.08
Purge Volume: 1000.0
Column Phase: RTX-5SIL MS

Instrument: SV5.1
Operator: LG
Column diameter: 0.28

\\NAHSTMS005\Target\chem\SV5.1\181231.b\02.D



Data File: \\NAHSTWS005\Target\chem\SV5.i\181231.b\04.D
 Report Date: 18-Jan-2019 08:50

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ALS Laboratory Group

GC/MS Semivolatiles EPA method 8270D

Data file : \\NAHSTWS005\Target\chem\SV5.i\181231.b\04.D
 Lab Smp Id: 14DXSTTD-0.01 Client Smp ID: 14DXSTTD-0.01
 Inj Date : 31-DEC-2018 14:11 MS Autotune Date: 22-JUN-2005 09:10
 Operator : LG Inst ID: SV5.i
 Smp Info : 14DXSTTD-0.01;14DXSTTD-0.01
 Misc Info : ;1;0;1
 Comment :
 Method : \\NAHSTWS005\Target\chem\SV5.i\181231.b\DXSIM.m
 Meth Date : 18-Jan-2019 08:50 aneir Quant Type: ISTD
 Cal Date : 31-DEC-2018 16:15 Cal File: 10.D
 Als bottle: 4 Calibration Sample, Level: 1
 Dil Factor: 1.00000
 Integrator: HP RTE Compound Sublist: 14DX.sub
 Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	AMOUNTS	
						CAL-AMT (NG)	ON-COL (NG)
* 45 Naphthalene-d8	136	4.473	4.473	(1.000)	25236	0.10000	
\$ 33 Nitrobenzene-d5	82	3.828	3.828	(0.856)	636	0.01000	0.01028 (QM)
* 86 Acenaphthene-d10	164	6.144	6.144	(1.000)	11464	0.10000	
\$ 69 2-Fluorobiphenyl	172	5.494	5.494	(0.894)	1468	0.01000	0.01086 (Q)
* 126 Phenanthrene-d10	188	7.556	7.556	(1.000)	19241	0.10000	
* 182 Chrysene-d12	240	9.822	9.822	(1.000)	14519	0.10000	
\$ 158 4-Terphenyl-d14	244	8.809	8.804	(0.897)	1006	0.01000	0.009674
* 198 Perylene-d12	264	11.631	11.631	(1.000)	15561	0.10000	

QC Flag Legend

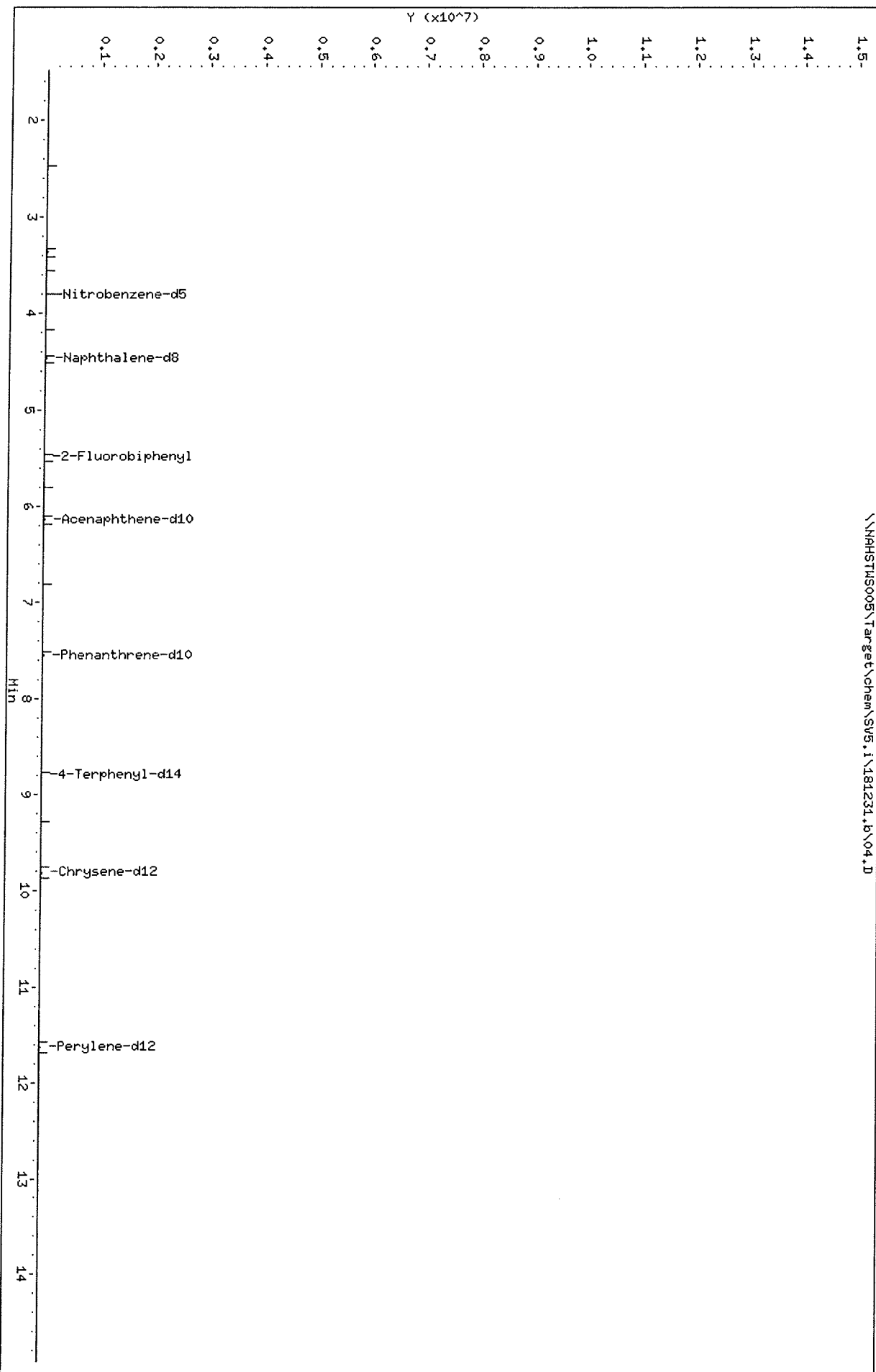
Q - Qualifier signal failed the ratio test.
 M - Compound response manually integrated.



Data File: \\NAHSTMS005\Target\chem\SV5.i\181231.b\04.D
Date : 31-DEC-2018 14:11
Client ID: 14DXSTD-0.01
Sample Info: 14DXSTD-0.01;14DXSTD-0.01
Purge Volume: 1000.0
Column phase: RTX-5SIL MS

Instrument: SV5.i
Operator: LG
Column diameter: 0.28

\\NAHSTMS005\Target\chem\SV5.i\181231.b\04.D



Data File: \\NAHSTWS005\Target\chem\SV5.i\181231.b\05.D
 Report Date: 18-Jan-2019 08:50

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ALS Laboratory Group

GC/MS Semivolatiles EPA method 8270D

Data file : \\NAHSTWS005\Target\chem\SV5.i\181231.b\05.D
 Lab Smp Id: 14DXSTTD-0.03 Client Smp ID: 14DXSTTD-0.03
 Inj Date : 31-DEC-2018 14:32 MS Autotune Date: 22-JUN-2005 09:10
 Operator : LG Inst ID: SV5.i
 Smp Info : 14DXSTTD-0.03;14DXSTTD-0.03
 Misc Info : ;1;0;1
 Comment :
 Method : \\NAHSTWS005\Target\chem\SV5.i\181231.b\DXSIM.m
 Meth Date : 18-Jan-2019 08:50 aneir Quant Type: ISTD
 Cal Date : 31-DEC-2018 16:15 Cal File: 10.D
 Als bottle: 5 Calibration Sample, Level: 2
 Dil Factor: 1.00000
 Integrator: HP RTE Compound Sublist: 14DX.sub
 Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

Compounds	QUANT	SIG	AMOUNTS				CAL-AMT (NG)	ON-COL (NG)
			RT	EXP RT	REL RT	RESPONSE		
* 45 Naphthalene-d8	136	====	4.473	4.473	(1.000)	40166	0.10000	
\$ 33 Nitrobenzene-d5	82		3.829	3.828	(0.856)	2947	0.02500	0.02993(QM)
* 86 Acenaphthene-d10	164		6.144	6.144	(1.000)	18732	0.10000	
\$ 69 2-Fluorobiphenyl	172		5.494	5.494	(0.894)	6010	0.02500	0.02720(Q)
* 126 Phenanthrene-d10	188		7.556	7.556	(1.000)	30173	0.10000	
* 182 Chrysene-d12	240		9.822	9.822	(1.000)	23565	0.10000	
\$ 158 4-Terphenyl-d14	244		8.804	8.804	(0.896)	4734	0.02500	0.02805
* 198 Perylene-d12	264		11.631	11.631	(1.000)	26356	0.10000	

QC Flag Legend

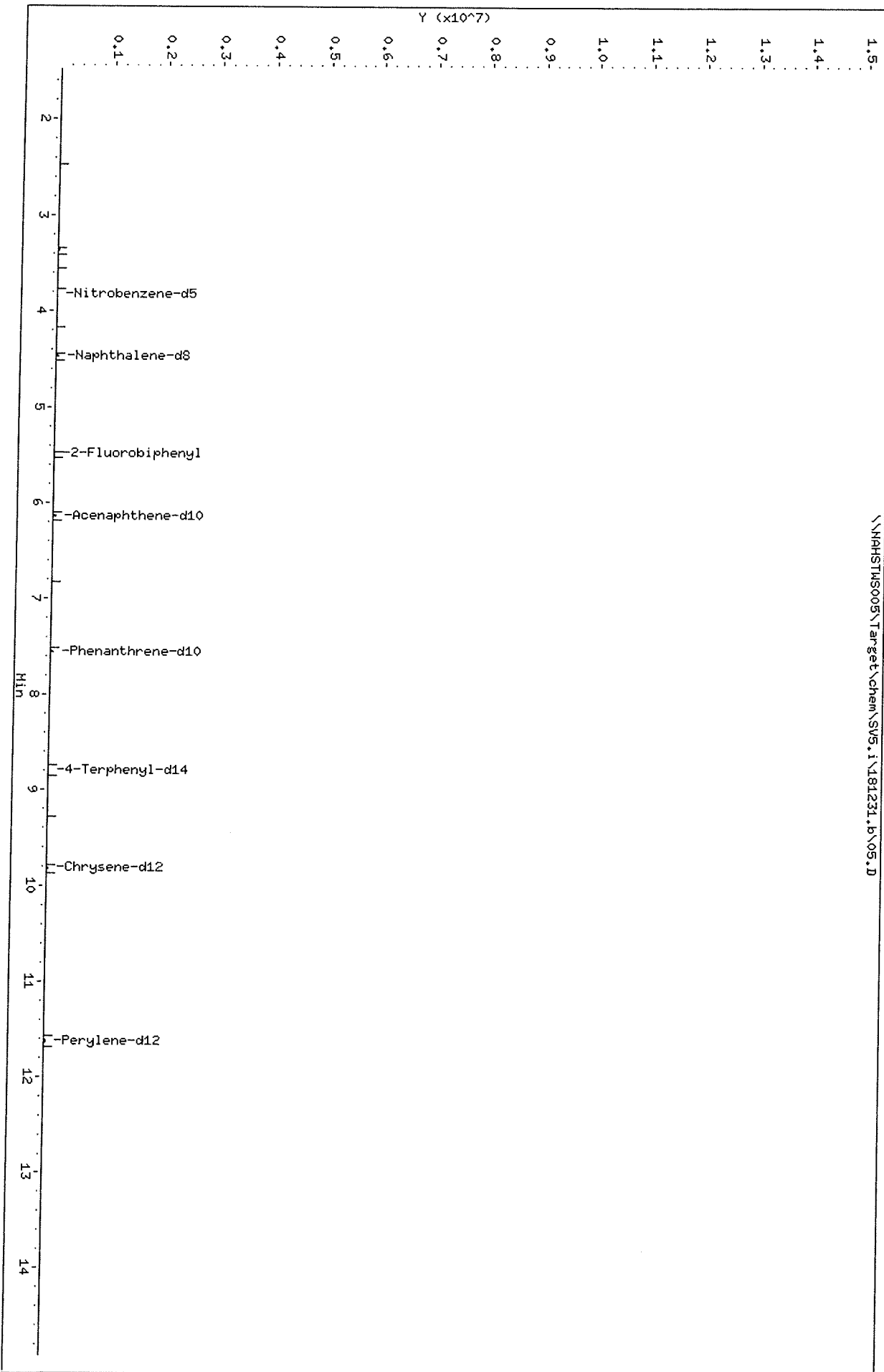
Q - Qualifier signal failed the ratio test.
 M - Compound response manually integrated.



Data File: \\NAHSTMS005\Target\chem\SV5.i\181231.b\05.D
Date : 31-DEC-2018 14:32
Client ID: 14DXSTD-0.03
Sample Info: 14DXSTD-0.03;14DXSTD-0.03
Purge Volume: 1000.0
Column phase: RTX-SSIL HS

Instrument: SV5.i
Operator: LG
Column diameter: 0.28

\\NAHSTMS005\Target\chem\SV5.i\181231.b\05.D



Data File: \\NAHSTWS005\Target\chem\SV5.i\181231.b\06.D
 Report Date: 18-Jan-2019 08:50

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ALS Laboratory Group

GC/MS Semivolatiles EPA method 8270D
 Data file : \\NAHSTWS005\Target\chem\SV5.i\181231.b\06.D
 Lab Smp Id: 14DXSTTD-0.05 Client Smp ID: 14DXSTTD-0.05
 Inj Date : 31-DEC-2018 14:52 MS Autotune Date: 22-JUN-2005 09:10
 Operator : LG Inst ID: SV5.i
 Smp Info : 14DXSTTD-0.05;14DXSTTD-0.05
 Misc Info : ;1;0;1
 Comment :
 Method : \\NAHSTWS005\Target\chem\SV5.i\181231.b\DXSIM.m
 Meth Date : 18-Jan-2019 08:50 aneir Quant Type: ISTD
 Cal Date : 31-DEC-2018 16:15 Cal File: 10.D
 Als bottle: 6 Calibration Sample, Level: 3
 Dil Factor: 1.00000
 Integrator: HP RTE Compound Sublist: 14DX.sub
 Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

Compounds	QUANT	SIG	AMOUNTS				CAL-AMT (NG)	ON-COL (NG)
			RT	EXP RT	REL RT	RESPONSE		
* 45 Naphthalene-d8	136		4.473	4.473	(1.000)	46936	0.10000	
\$ 33 Nitrobenzene-d5	82		3.828	3.828	(0.856)	5881	0.05000	0.05111 (QM)
* 86 Acenaphthene-d10	164		6.144	6.144	(1.000)	21396	0.10000	
\$ 69 2-Fluorobiphenyl	172		5.494	5.494	(0.894)	13001	0.05000	0.05152
* 126 Phenanthrene-d10	188		7.556	7.556	(1.000)	36144	0.10000	
* 182 Chrysene-d12	240		9.822	9.822	(1.000)	28169	0.10000	
\$ 158 4-Terphenyl-d14	244		8.804	8.804	(0.896)	10319	0.05000	0.05115
* 198 Perylene-d12	264		11.631	11.631	(1.000)	30451	0.10000	
1 1,4-Dioxane	58		1.662	1.638	(0.372)	1445	0.05000	0.05506 (aM)

QC Flag Legend

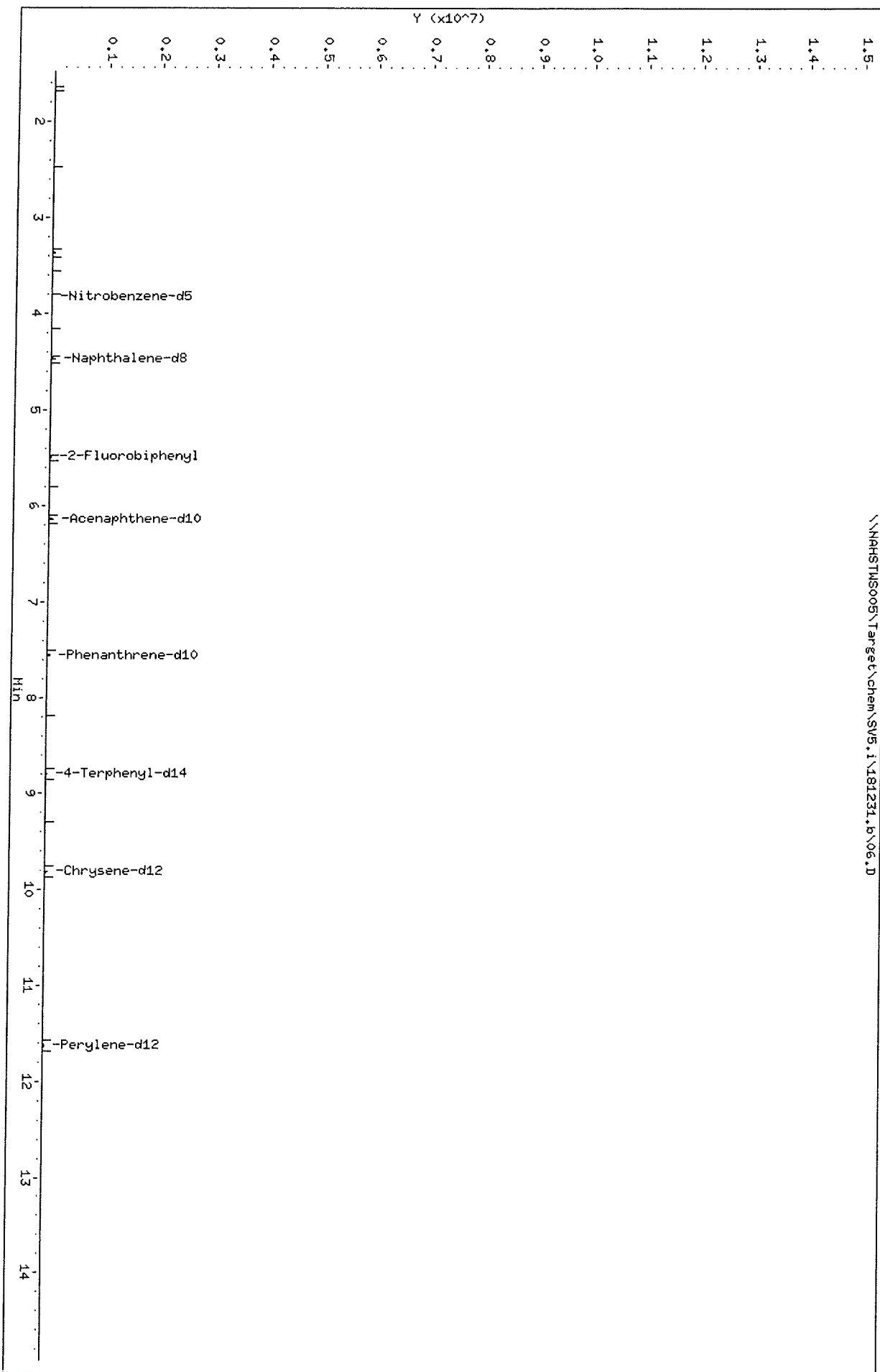
- a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
- Q - Qualifier signal failed the ratio test.
- M - Compound response manually integrated.



Data File: \\NAHSTMS005\Target\chem\SV5.i\181231.b\06.D
Date : 31-DEC-2018 14:52
Client ID: 14DXSTD-0.05
Sample Info: 14DXSTD-0.05;14DXSTD-0.05
Purge Volume: 1000.0
Column phase: RTX-5SIL MS

Instrument: SV5.i
Operator: LG
Column diameter: 0.28

\\NAHSTMS005\Target\chem\SV5.i\181231.b\06.D



Data File: \\NAHSTWS005\Target\chem\SV5.i\181231.b\07.D
 Report Date: 18-Jan-2019 08:50

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ALS Laboratory Group

GC/MS Semivolatiles EPA method 8270D

Data file : \\NAHSTWS005\Target\chem\SV5.i\181231.b\07.D
 Lab Smp Id: 14DXSTTD-0.1 Client Smp ID: 14DXSTTD-0.1
 Inj Date : 31-DEC-2018 15:13 MS Autotune Date: 22-JUN-2005 09:10
 Operator : LG Inst ID: SV5.i
 Smp Info : 14DXSTTD-0.1;14DXSTTD-0.1
 Misc Info : ;1;0;1
 Comment :
 Method : \\NAHSTWS005\Target\chem\SV5.i\181231.b\DXSIM.m
 Meth Date : 18-Jan-2019 08:50 aneir Quant Type: ISTD
 Cal Date : 31-DEC-2018 16:15 Cal File: 10.D
 Als bottle: 7 Calibration Sample, Level: 5
 Dil Factor: 1.00000
 Integrator: HP RTE Compound Sublist: 14DX.sub
 Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

Compounds	QUANT	SIG	AMOUNTS					
			CAL-AMT	ON-COL	RT	EXP RT	REL RT	RESPONSE
	MASS		(NG)	(NG)				
* 45 Naphthalene-d8	136		0.10000		4.473	4.473	(1.000)	86042
\$ 33 Nitrobenzene-d5	82		0.10000	0.1040(Q)	3.828	3.828	(0.856)	21938
* 86 Acenaphthene-d10	164		0.10000		6.140	6.144	(1.000)	40378
\$ 69 2-Fluorobiphenyl	172		0.10000	0.09459	5.494	5.494	(0.895)	45044
* 126 Phenanthrene-d10	188		0.10000		7.552	7.556	(1.000)	66406
* 182 Chrysene-d12	240		0.10000		9.817	9.822	(1.000)	51130
\$ 158 4-Terphenyl-d14	244		0.10000	0.09544	8.806	8.804	(0.897)	34950
* 198 Perylene-d12	264		0.10000		11.627	11.631	(1.000)	54611
1 1,4-Dioxane	58		0.10000	0.1044(aM)	1.706	1.638	(0.382)	5023

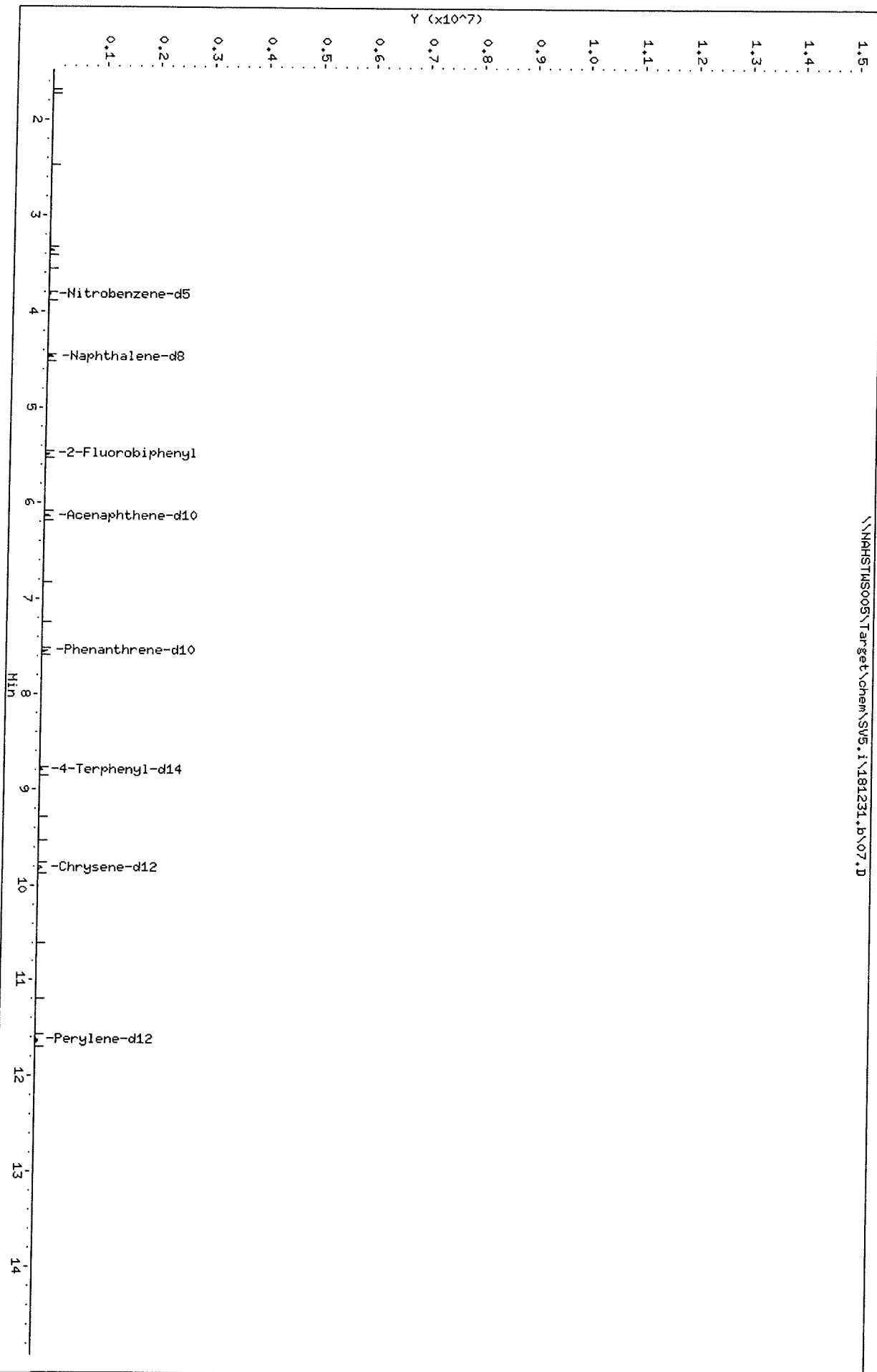
QC Flag Legend

- a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
- Q - Qualifier signal failed the ratio test.
- M - Compound response manually integrated.



Data File: \\NAHSTMS005\Target\chem\SV5.1\181231.b\07.D
Date : 31-DEC-2018 15:13
Client ID: 14DXSTD-0.1
Sample Info: 14DXSTD-0.1;14DXSTD-0.1
Purge Volume: 1000.0
Column phase: RTX-SSIL HS

Instrument: SV5.i
Operator: LG
Column diameter: 0.28



Data File: \\NAHSTWS005\Target\chem\SV5.i\181231.b\08.D
 Report Date: 18-Jan-2019 08:50

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GC/MS Semivolatiles EPA method 8270D

Data file : \\NAHSTWS005\Target\chem\SV5.i\181231.b\08.D
 Lab Smp Id: 14DXSTTD-0.15 Client Smp ID: 14DXSTTD-0.15
 Inj Date : 31-DEC-2018 15:34 MS Autotune Date: 22-JUN-2005 09:10
 Operator : LG Inst ID: SV5.i
 Smp Info : 14DXSTTD-0.15;14DXSTTD-0.15
 Misc Info : ;1;0;1
 Comment :
 Method : \\NAHSTWS005\Target\chem\SV5.i\181231.b\DXSIM.m
 Meth Date : 18-Jan-2019 08:50 aneir Quant Type: ISTD
 Cal Date : 31-DEC-2018 16:15 Cal File: 10.D
 Als bottle: 8 Calibration Sample, Level: 6
 Dil Factor: 1.00000
 Integrator: HP RTE Compound Sublist: 14DX.sub
 Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

Compounds	QUANT	SIG	AMOUNTS				CAL-AMT (NG)	ON-COL (NG)
			RT	EXP RT	REL RT	RESPONSE		
* 45 Naphthalene-d8	136		4.473	4.473	(1.000)	37013	0.10000	
\$ 33 Nitrobenzene-d5	82		3.828	3.828	(0.856)	13623	0.15000	0.1501 (AM)
* 86 Acenaphthene-d10	164		6.144	6.144	(1.000)	16750	0.10000	
\$ 69 2-Fluorobiphenyl	172		5.494	5.494	(0.894)	31034	0.15000	0.1571 (A)
* 126 Phenanthrene-d10	188		7.556	7.556	(1.000)	28012	0.10000	
* 182 Chrysene-d12	240		9.822	9.822	(1.000)	21086	0.10000	
\$ 158 4-Terphenyl-d14	244		8.804	8.804	(0.896)	23971	0.15000	0.1587 (A)
* 198 Perylene-d12	264		11.631	11.631	(1.000)	23495	0.10000	
1 1,4-Dioxane	58		1.644	1.638	(0.368)	3291	0.15000	0.1590 (a)

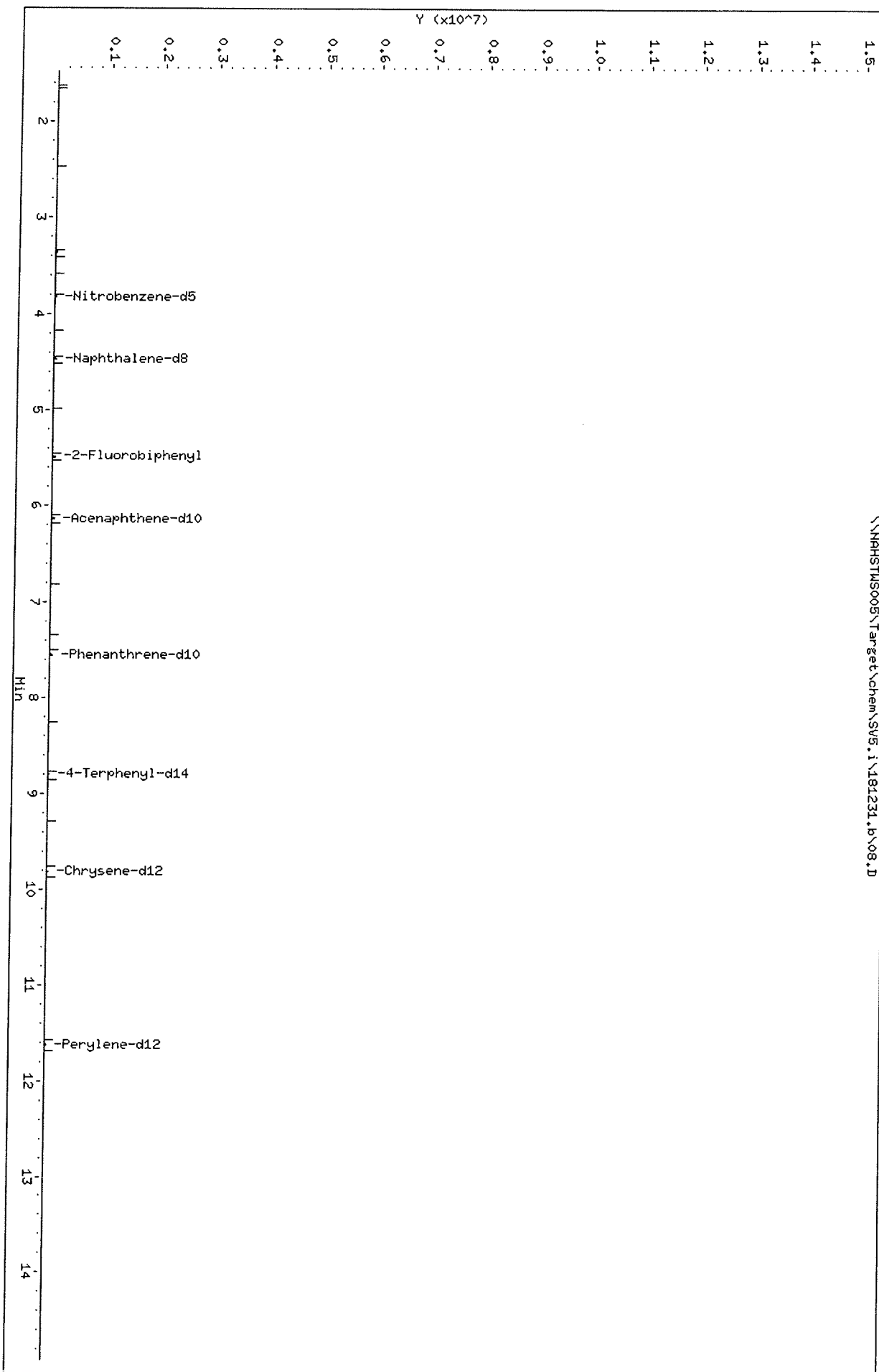
QC Flag Legend

- a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
- A - Target compound detected but, quantitated amount exceeded maximum amount.
- M - Compound response manually integrated.



Data File: \\NHRSTMS005\Target\chem\SV5.i\181231.b\08.D
Date : 31-DEC-2018 15:34
Client ID: 14DXSTD-0.15
Sample Info: 14DXSTD-0.15;14DXSTD-0.15
Purge Volume: 1000.0
Column phase: RTX-5SIL HS

Instrument: SV5.i
Operator: LG
Column diameter: 0.28



Data File: \\NAHSTWS005\Target\chem\SV5.i\181231.b\09.D
 Report Date: 18-Jan-2019 08:50

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ALS Laboratory Group

GC/MS Semivolatiles EPA method 8270D

Data file : \\NAHSTWS005\Target\chem\SV5.i\181231.b\09.D
 Lab Smp Id: 14DXSTTD-0.2 Client Smp ID: 14DXSTTD-0.2
 Inj Date : 31-DEC-2018 15:55 MS Autotune Date: 22-JUN-2005 09:10
 Operator : LG Inst ID: SV5.i
 Smp Info : 14DXSTTD-0.2;14DXSTTD-0.2
 Misc Info : ;1;0;1
 Comment :
 Method : \\NAHSTWS005\Target\chem\SV5.i\181231.b\DXSIM.m
 Meth Date : 18-Jan-2019 08:50 aneir Quant Type: ISTD
 Cal Date : 31-DEC-2018 16:15 Cal File: 10.D
 Als bottle: 9 Calibration Sample, Level: 7
 Dil Factor: 1.00000
 Integrator: HP RTE Compound Sublist: 14DX.sub
 Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

Compounds	QUANT	SIG	AMOUNTS				
			CAL-AMT	ON-COL	REL RT	RESPONSE	(NG)
* 45 Naphthalene-d8	136		4.473	4.473	(1.000)	27468	0.10000
\$ 33 Nitrobenzene-d5	82		3.828	3.828	(0.856)	13388	0.20000 0.1988 (AM)
* 86 Acenaphthene-d10	164		6.144	6.144	(1.000)	13145	0.10000
\$ 69 2-Fluorobiphenyl	172		5.494	5.494	(0.894)	29090	0.20000 0.1876 (A)
* 126 Phenanthrene-d10	188		7.556	7.556	(1.000)	19783	0.10000
* 182 Chrysene-d12	240		9.822	9.822	(1.000)	16323	0.10000
\$ 158 4-Terphenyl-d14	244		8.804	8.804	(0.896)	23549	0.20000 0.2014 (A)
* 198 Perylene-d12	264		11.631	11.631	(1.000)	17136	0.10000
1 1,4-Dioxane	58		1.632	1.638	(0.365)	3156	0.20000 0.2055

QC Flag Legend

- A - Target compound detected but, quantitated amount exceeded maximum amount.
 M - Compound response manually integrated.

