LONGHORN ARMY AMMUNITION PLANT KARNACK, TEXAS

ADMINISTRATIVE RECORD

Volume 25

2018

Bate Stamp Numbers
00873893 - 00875742

Prepared for

Department of the Army
Longhorn Army Ammunition Plant

1976 – 2018

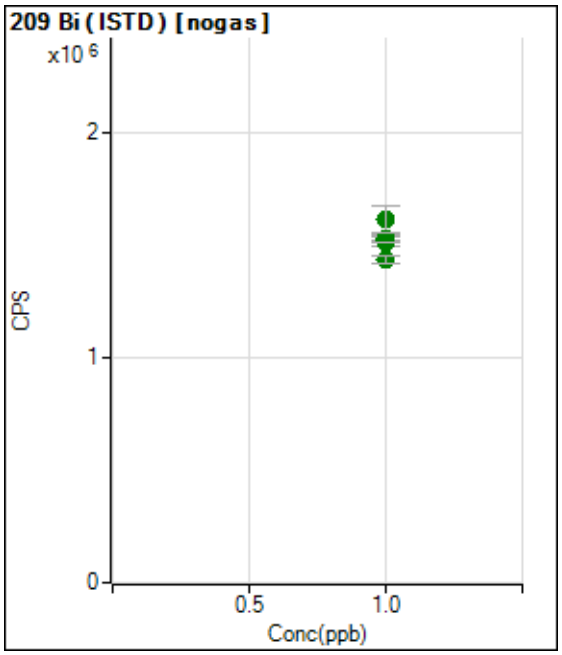
LONGHORN ARMY AMMUNITION PLANT
KARNACK, TEXAS
ADMINISTRATIVE RECORD – CHRONOLOGICAL INDEX

VOLUME 25

2018

A. Title: Report (cont'd) – Draft Quarterly Evaluation Report 4th Quarter (October - December) 2017, Groundwater Treatment Plant, Longhorn Army Ammunition Plant, Karnack, Texas
Author(s): Bhate Environmental Associates, Inc.
Recipient: U. S. Army Corps of Engineers
Date: May 1, 2018
Bate Stamp: 00873893 – 00875742

Calibration for 120_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1610391.75		A	7.6
2	☐	1.000		1530215.08		A	1.2
3	☐	1.000		1513252.11		A	2.7
4	☐	1.000		1522432.95		A	3.9
5	☐	1.000		1509993.11		A	0.4
6	☐	1.000		1434653.42		A	2.0
7	☐	1.000					

ALS Group USA, Corp Date: 12-Jan-18

Form 2 - Initial and Continuing Calibration Verification

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS17121113

Run ID: ICPMS05_308339
Instrument: ICPMS05
Method: SW6020

ICV	Date: 03-Jan-2018 10:42		Seq: 4378022	ICV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Nickel	100	99.504	100	90-110	

CCV1	Date: 03-Jan-2018 11:32		Seq: 4378251	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Nickel	100	101.288	101	90-110	

CCV2	Date: 03-Jan-2018 11:56		Seq: 4378264	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Nickel	100	102.194	102	90-110	

CCV3	Date: 03-Jan-2018 12:20		Seq: 4378276	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Nickel	100	104.663	105	90-110	

CCV4	Date: 03-Jan-2018 12:49		Seq: 4378391	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Nickel	100	106.044	106	90-110	

CCV5	Date: 03-Jan-2018 13:15		Seq: 4378404	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Nickel	100	102.63	103	90-110	

CCV6	Date: 03-Jan-2018 13:42		Seq: 4378453	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Nickel	100	102.014	102	90-110	

CCV7	Date: 03-Jan-2018 14:06		Seq: 4378607	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Nickel	100	105.059	105	90-110	

CCV8	Date: 03-Jan-2018 14:29		Seq: 4378618	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Nickel	100	103.758	104	90-110	

ICCV9	Date: 03-Jan-2018 14:55		Seq: 4378814	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Nickel	100	98.728	99	90-110	

CCV10	Date: 03-Jan-2018 15:15		Seq: 4378824	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Nickel	100	103.896	104	90-110	

CCV11	Date: 03-Jan-2018 15:39		Seq: 4378917	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Nickel	100	99.622	100	90-110	

CCV12	Date: 03-Jan-2018 16:09		Seq: 4379469	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Nickel	100	104.503	105	90-110	

CCV13	Date: 03-Jan-2018 16:33		Seq: 4379481	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Nickel	100	102.209	102	90-110	

CCV14	Date: 03-Jan-2018 16:57		Seq: 4379506	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Nickel	100	103.277	103	90-110	

ALS Group USA, Corp Date: 12-Jan-18

Form 2 - Initial and Continuing Calibration Verification

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS17121113

Run ID: ICPMS05_308339
Instrument: ICPMS05
Method: SW6020

CCV15	Date: 03-Jan-2018 17:21		Seq: 4379518	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Nickel	100	101.768	102	90-110	

CCV16	Date: 03-Jan-2018 17:45		Seq: 4379548	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Nickel	100	105.871	106	90-110	

CCV17	Date: 03-Jan-2018 18:09		Seq: 4379560	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Nickel	100	106.688	107	90-110	

CCV18	Date: 03-Jan-2018 19:41		Seq: 4379651	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Nickel	100	102.547	103	90-110	

CCV19	Date: 03-Jan-2018 19:50		Seq: 4379655	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Nickel	100	101.356	101	90-110	

ICCV20	Date: 03-Jan-2018 21:37		Seq: 4379719	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Nickel	100	101.194	101	90-110	

CCV21	Date: 03-Jan-2018 22:17		Seq: 4379774	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Nickel	100	97.972	98	90-110	

CCV22	Date: 03-Jan-2018 22:41		Seq: 4379786	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Nickel	100	103.505	104	90-110	

CCV23	Date: 03-Jan-2018 23:05		Seq: 4379798	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Nickel	100	100.02	100	90-110	

CCV24	Date: 03-Jan-2018 23:29		Seq: 4379810	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Nickel	100	98.802	99	90-110	

CCV25	Date: 03-Jan-2018 23:54		Seq: 4379822	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Nickel	100	97.902	98	90-110	

CCV26	Date: 04-Jan-2018 00:18		Seq: 4379834	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Nickel	100	97.805	98	90-110	

CCV27	Date: 04-Jan-2018 00:42		Seq: 4379846	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Nickel	100	98.527	99	90-110	

CCV28	Date: 04-Jan-2018 01:06		Seq: 4379858	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Nickel	100	99.775	100	90-110	

CCV29	Date: 04-Jan-2018 01:22		Seq: 4379866	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Nickel	100	97.354	97	90-110	

Form 3 - BLANKS

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS17121113

Run ID: ICPMS05_308339
Instrument: ICPMS05
Method: SW6020

ICB	Date: 03-Jan-2018 10:48		Seq: 4378025	ICB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Nickel	-0.665	0.6	2	J	

CCB1	Date: 03-Jan-2018 11:34		Seq: 4378252	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Nickel	2	0.6	2	U	

CCB2	Date: 03-Jan-2018 11:58		Seq: 4378265	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Nickel	-0.634	0.6	2	J	

CCB3	Date: 03-Jan-2018 12:22		Seq: 4378277	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Nickel	2	0.6	2	U	

CCB4	Date: 03-Jan-2018 12:46		Seq: 4378390	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Nickel	2	0.6	2	U	

CCB5	Date: 03-Jan-2018 13:13		Seq: 4378403	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Nickel	2	0.6	2	U	

CCB6	Date: 03-Jan-2018 13:40		Seq: 4378452	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Nickel	2	0.6	2	U	

CCB7	Date: 03-Jan-2018 14:08		Seq: 4378608	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Nickel	2	0.6	2	U	

CCB8	Date: 03-Jan-2018 14:35		Seq: 4378619	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Nickel	2	0.6	2	U	

ICCB9	Date: 03-Jan-2018 15:01		Seq: 4378817	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Nickel	2	0.6	2	U	

CCB10	Date: 03-Jan-2018 15:17		Seq: 4378825	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Nickel	2	0.6	2	U	

CCB11	Date: 03-Jan-2018 15:41		Seq: 4378918	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Nickel	2	0.6	2	U	

CCB12	Date: 03-Jan-2018 16:11		Seq: 4379470	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Nickel	2	0.6	2	U	

CCB13	Date: 03-Jan-2018 16:35		Seq: 4379482	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Nickel	2	0.6	2	U	

CCB14	Date: 03-Jan-2018 16:59		Seq: 4379507	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Nickel	2	0.6	2	U	

Form 3 - BLANKS

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS17121113

Run ID: ICPMS05_308339
Instrument: ICPMS05
Method: SW6020

CCB15	Date: 03-Jan-2018 17:23		Seq: 4379519	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Nickel	2	0.6	2	U	
CCB16	Date: 03-Jan-2018 17:47		Seq: 4379549	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Nickel	2	0.6	2	U	
CCB17	Date: 03-Jan-2018 18:11		Seq: 4379561	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Nickel	2	0.6	2	U	
CCB18	Date: 03-Jan-2018 19:43		Seq: 4379652	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Nickel	2	0.6	2	U	
CCB19	Date: 03-Jan-2018 19:52		Seq: 4379656	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Nickel	2	0.6	2	U	
ICCB20	Date: 03-Jan-2018 21:52		Seq: 4379722	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Nickel	2	0.6	2	U	
CCB21	Date: 03-Jan-2018 22:19		Seq: 4379775	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Nickel	2	0.6	2	U	
CCB22	Date: 03-Jan-2018 22:43		Seq: 4379787	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Nickel	2	0.6	2	U	
CCB23	Date: 03-Jan-2018 23:07		Seq: 4379799	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Nickel	2	0.6	2	U	
CCB24	Date: 03-Jan-2018 23:31		Seq: 4379811	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Nickel	2	0.6	2	U	
CCB25	Date: 03-Jan-2018 23:56		Seq: 4379823	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Nickel	2	0.6	2	U	
CCB26	Date: 04-Jan-2018 00:20		Seq: 4379835	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Nickel	2	0.6	2	U	
CCB27	Date: 04-Jan-2018 00:44		Seq: 4379847	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Nickel	2	0.6	2	U	
CCB28	Date: 04-Jan-2018 01:08		Seq: 4379859	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Nickel	2	0.6	2	U	
CCB29	Date: 04-Jan-2018 01:24		Seq: 4379867	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Nickel	2	0.6	2	U	

ALS Group USA, Corp Date: 12-Jan-18

Form 4 - ICP Interference Check Sample

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS17121113

Run ID:ICPMS05_308339
Instrument:ICPMS05
Method:SW6020

ICSA	Date: 03-Jan-2018 10:51	Seq: 4378026	ICSA	Units: ug/L
Analyte	**True**	**Found**	**%R**	
Nickel		-0.5	0	
ICSAB	Date: 03-Jan-2018 10:54	Seq: 4378027	ICSAB	Units: ug/L
Analyte	**True**	**Found**	**%R**	
Nickel	100	99.94	99.9	
ICSA	Date: 03-Jan-2018 21:54	Seq: 4379723	ICSA	Units: ug/L
Analyte	**True**	**Found**	**%R**	
Nickel		0.032	0	
ICSAB	Date: 03-Jan-2018 21:56	Seq: 4379724	ICSAB	Units: ug/L
Analyte	**True**	**Found**	**%R**	
Nickel	100	97.57	97.6	
ICSA	Date: 04-Jan-2018 01:30	Seq: 4379870	ICSA	Units: ug/L
Analyte	**True**	**Found**	**%R**	
Nickel		0.016	0	
ICSAB	Date: 04-Jan-2018 01:32	Seq: 4379871	ICSAB	Units: ug/L
Analyte	**True**	**Found**	**%R**	
Nickel	100	98.16	98.2	

ALS Group USA, Corp Date: 12-Jan-18

Form 11 - INTERNAL STANDARD ASSOCIATION

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS17121113

Instrument:ICPMS05

Mass	Analyte	Assoc Int Standard 1	Assoc Int Standard 2	Mode
9	Beryllium	Lithium		Ar
11	Boron	Lithium		Ar
23	Sodium	Germanium		Ar
24	Magnesium	Germanium		Ar
27	Aluminum	Germanium		Ar
39	Potassium	Germanium		Ar
44	Calcium	Germanium		Ar
47	Titanium	Germanium		Ar
51	Vanadium	Germanium		ArHe
52	Chromium	Germanium		ArHe
55	Manganese	Germanium		ArHe
56	Iron	Germanium		ArHe
59	Cobalt	Germanium		ArHe
60	Nickel	Germanium		ArHe
63	Copper	Germanium		ArHe
66	Zinc	Germanium		ArHe
75	Arsenic	Germanium		ArHe
78	Selenium	Germanium		ArHe
88	Strontium	Germanium		Ar
95	Molybdenum	Germanium		Ar
105	Palladium	Germanium		Ar
107	Silver	Germanium		Ar
114	Cadmium	Indium		Ar
118	Tin	Germanium		Ar
121	Antimony	Germanium		ArHe
137	Barium	Indium		Ar
205	Thallium	Bismuth		Ar
208	Lead	Bismuth		Ar

ALS Group USA, Corp Date: 12-Jan-18

FORM 12 - PREPARATION LOG

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS17121113
Start Date: 21-Dec-2017 11:00 End Date: 21-Dec-2017 15:00

Batch ID: 123692
Prep Code: 3010A
Method: SW3010A
Technician:

SampID	ClientID	Matrix	Init Wt	Init Vol	FinalVol (mL)	PrepFac
HS17121008-07MS				10	10	1
HS17121008-07MSD				10	10	1
HS17121008-07PDS				10	10	1
HS17121008-07SD				10	10	1
HS17121113-01	MW14_121817	Water		10	10	1
HS17121113-02	MW14_121817_a	Water		10	10	1
HS17121113-03	MW21_121817	Water		10	10	1
HS17121113-04	MW22_121817	Water		10	10	1
HS17121113-08	AWD3_121817	Water		10	10	1
LCS-123692				10	10	1
MBLK-123692				10	10	1

ALS Group USA, Corp Date: 12-Jan-18

FORM 13 - ANALYSIS RUN LOG

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS17121113
Start Date: 03-Jan-2018 End Date: 04-Jan-2018

Run ID:ICPMS05_308339
Instrument:ICPMS05
Method:

Sample No.	D/F	Time	FileID	Analytes
ICPMS05_308339_Tune	1	03-Jan-2018 00:00	ICPMS05_308339_Tune_1	
CAL BLK	1	03-Jan-2018 10:28	004CALB.d_4378015	NI
2/10/200	1	03-Jan-2018 10:30	005CALS.d_4378016	NI
5/25/500	1	03-Jan-2018 10:32	006CALS.d_4378017	NI
10/50/1000	1	03-Jan-2018 10:34	007CALS.d_4378018	NI
100/500/10K	1	03-Jan-2018 10:36	008CALS.d_4378019	NI
200/1000/20K	1	03-Jan-2018 10:38	009CALS.d_4378020	NI
ICV	1	03-Jan-2018 10:42	011_ICV.d_4378022	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
LLICV2	1	03-Jan-2018 10:44	012SMPL.d_4378023	NI
LLICV5	1	03-Jan-2018 10:46	013LICV.d_4378024	NI
ICB	1	03-Jan-2018 10:48	014_ICB.d_4378025	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
ICSA	1	03-Jan-2018 10:51	015ICSA.d_4378026	NI
ICSAB	1	03-Jan-2018 10:54	016ICSB.d_4378027	NI
AWD3_121817	5	03-Jan-2018 11:24	018SMPL.d_4378247	NI
CCV 1	1	03-Jan-2018 11:32	022_CCV.d_4378251	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	03-Jan-2018 11:34	023_CCB.d_4378252	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	03-Jan-2018 11:56	034_CCV.d_4378264	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	03-Jan-2018 11:58	035_CCB.d_4378265	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	03-Jan-2018 12:20	046_CCV.d_4378276	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	03-Jan-2018 12:22	047_CCB.d_4378277	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	03-Jan-2018 12:46	059_CCB.d_4378390	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	03-Jan-2018 12:49	060_CCV.d_4378391	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	03-Jan-2018 13:13	072_CCB.d_4378403	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	03-Jan-2018 13:15	073_CCV.d_4378404	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	03-Jan-2018 13:40	085_CCB.d_4378452	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	03-Jan-2018 13:42	086_CCV.d_4378453	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	03-Jan-2018 14:06	097_CCV.d_4378607	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	03-Jan-2018 14:08	098_CCB.d_4378608	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 8	1	03-Jan-2018 14:29	108_CCV.d_4378618	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 8	1	03-Jan-2018 14:35	109_CCB.d_4378619	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	03-Jan-2018 14:43	113CALB.d_4378808	NI
2/10/200	1	03-Jan-2018 14:45	114CALS.d_4378809	NI
5/25/500	1	03-Jan-2018 14:47	115CALS.d_4378810	NI
10/50/1000	1	03-Jan-2018 14:49	116CALS.d_4378811	NI
100/500/10K	1	03-Jan-2018 14:51	117CALS.d_4378812	NI
200/1000/20K	1	03-Jan-2018 14:53	118CALS.d_4378813	NI
ICCV 9	1	03-Jan-2018 14:55	119_ICV.d_4378814	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
LLCCV2	1	03-Jan-2018 14:57	120SMPL.d_4378815	NI
LLCCV5	1	03-Jan-2018 14:59	121LICV.d_4378816	NI
ICCB 9	1	03-Jan-2018 15:01	122_ICB.d_4378817	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	03-Jan-2018 15:15	129_CCV.d_4378824	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN

ALS Group USA, Corp Date: 12-Jan-18

FORM 13 - ANALYSIS RUN LOG

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS17121113
Start Date: 03-Jan-2018 End Date: 04-Jan-2018

Run ID:ICPMS05_308339
Instrument:ICPMS05
Method:

Sample No.	D/F	Time	FileID	Analytes
CCB 10	1	03-Jan-2018 15:17	130_CCB.d_4378825	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	03-Jan-2018 15:39	141_CCV.d_4378917	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	03-Jan-2018 15:41	142_CCB.d_4378918	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	03-Jan-2018 16:09	153_CCV.d_4379469	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	03-Jan-2018 16:11	154_CCB.d_4379470	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	03-Jan-2018 16:33	165_CCV.d_4379481	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	03-Jan-2018 16:35	166_CCB.d_4379482	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	03-Jan-2018 16:57	177_CCV.d_4379506	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	03-Jan-2018 16:59	178_CCB.d_4379507	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	03-Jan-2018 17:21	189_CCV.d_4379518	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	03-Jan-2018 17:23	190_CCB.d_4379519	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	03-Jan-2018 17:45	201_CCV.d_4379548	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	03-Jan-2018 17:47	202_CCB.d_4379549	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	03-Jan-2018 18:09	213_CCV.d_4379560	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 17	1	03-Jan-2018 18:11	214_CCB.d_4379561	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	03-Jan-2018 19:41	222_CCV.d_4379651	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	03-Jan-2018 19:43	223_CCB.d_4379652	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	03-Jan-2018 19:50	226_CCV.d_4379655	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	03-Jan-2018 19:52	227_CCB.d_4379656	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	03-Jan-2018 21:25	234CALB.d_4379713	NI
2/10/200	1	03-Jan-2018 21:27	235CALS.d_4379714	NI
5/25/500	1	03-Jan-2018 21:29	236CALS.d_4379715	NI
10/50/1000	1	03-Jan-2018 21:31	237CALS.d_4379716	NI
100/500/10K	1	03-Jan-2018 21:33	238CALS.d_4379717	NI
200/1000/20K	1	03-Jan-2018 21:35	239CALS.d_4379718	NI
ICCV 20	1	03-Jan-2018 21:37	240_ICV.d_4379719	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
LLCCV2	1	03-Jan-2018 21:48	241SMPL.d_4379720	NI
LLCCV5	1	03-Jan-2018 21:50	242LICV.d_4379721	NI
ICCB 20	1	03-Jan-2018 21:52	243_ICB.d_4379722	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
ICSA	1	03-Jan-2018 21:54	244ICSA.d_4379723	NI
ICSAB	1	03-Jan-2018 21:56	245ICSB.d_4379724	NI
CCV 21	1	03-Jan-2018 22:17	253_CCV.d_4379774	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	03-Jan-2018 22:19	254_CCB.d_4379775	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	03-Jan-2018 22:41	265_CCV.d_4379786	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	03-Jan-2018 22:43	266_CCB.d_4379787	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	03-Jan-2018 23:05	277_CCV.d_4379798	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	03-Jan-2018 23:07	278_CCB.d_4379799	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN

ALS Group USA, Corp Date: 12-Jan-18

FORM 13 - ANALYSIS RUN LOG

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS17121113
Start Date: 03-Jan-2018 End Date: 04-Jan-2018

Run ID:ICPMS05_308339
Instrument:ICPMS05
Method:

Sample No.	D/F	Time	FileID	Analytes
CCV 24	1	03-Jan-2018 23:29	289_CCV.d_4379810	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	03-Jan-2018 23:31	290_CCB.d_4379811	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	03-Jan-2018 23:54	301_CCV.d_4379822	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	03-Jan-2018 23:56	302_CCB.d_4379823	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	04-Jan-2018 00:18	313_CCV.d_4379834	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	04-Jan-2018 00:20	314_CCB.d_4379835	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	04-Jan-2018 00:42	325_CCV.d_4379846	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	04-Jan-2018 00:44	326_CCB.d_4379847	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	04-Jan-2018 01:06	337_CCV.d_4379858	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	04-Jan-2018 01:08	338_CCB.d_4379859	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	04-Jan-2018 01:22	345_CCV.d_4379866	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	04-Jan-2018 01:24	346_CCB.d_4379867	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
LLCCV5	1	04-Jan-2018 01:26	347LICV.d_4379868	NI
LLCCV2	1	04-Jan-2018 01:28	348SMPL.d_4379869	NI
ICSA	1	04-Jan-2018 01:30	349ICSA.d_4379870	NI
ICSAB	1	04-Jan-2018 01:32	350ICSB.d_4379871	NI

Tune Report

Batch Folder C:\Agilent\ICPMH\1\DATA\010318A.b
Report Comment
Instrument Name G3281A JP11080910

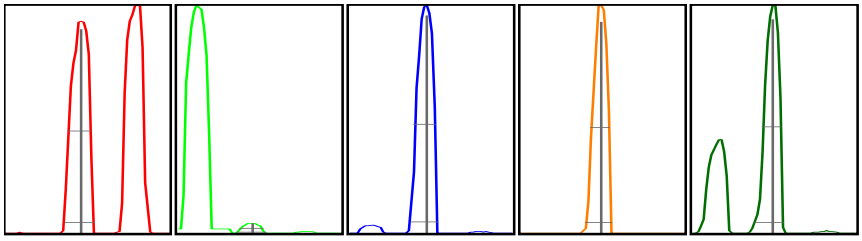
[nogas]

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		5576				NaN	-	
24		15932				NaN	-	
59		25657				NaN	-	
115		32774				NaN	-	
208		20382				NaN	-	

Mass	RSD% (Actual)	RSD% (Required)	RSD% (Flag)	Background (Actual)	Background (Required)	Background (Flag)
9	2.36	5.00				
24	1.10	5.00				
59	1.79	5.00				
115	1.32	5.00				
208	1.39	5.00				

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	5484	5454	5790	5591	5563
24	15841	15772	16230	15911	15905
59	26040	24927	26013	25785	25519
115	32311	32904	33435	32712	32506
208	20395	19990	20721	20562	20242

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	1389.21	8.90	8.9 - 9.1		0.41	0.533	0.750	
24	4159.97	23.90	23.9 - 24.1		0.39	0.518	0.750	
59	6981.20	58.95	58.9 - 59.1		0.38	0.488	0.750	
115	9527.60	115.00	114.9 - 115.1		0.35	0.485	0.750	
208	5816.27	208.00	207.9 - 208.1		0.34	0.526	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	0.35 L/min	S/C Temp	2 ℃
RF Matching	1.70 V	Option Gas	0.0 %	Makeup/Dilution Gas	0.50 L/min
Smpl Depth	8.0 mm	Nebulizer Pump	0.10 rps	Gas Switch	Dilution Gas

Lenses Parameters

Extract 1	0.0 V	Omega Lens	8.0 V	Deflect	15.6 V
Extract 2	-200.0 V	Cell Entrance	-38 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		54				NaN	-	
24		365				NaN	-	
59		6990				NaN	-	

Tune Report

Mass	RSD% (Actual)	RSD% (Required)	RSD% (Flag)	Background (Actual)	Background (Required)	Background (Flag)
9	13.29	5.00	[F]			
24	4.61	5.00				
59	1.28	5.00				

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	62	43	58	53	53
24	377	351	363	347	387
59	7045	7037	7074	6864	6929

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	14.00	8.90	8.9 - 9.1		0.40	0.526	0.750	
24	95.56	23.90	23.9 - 24.1		0.39	0.514	0.750	
59	1943.58	58.95	58.9 - 59.1		0.37	0.485	0.750	

X = 5 **Integration Time [sec]** 0.1 **Acquisition Time [sec]** 100.6 **Y Axis** Linear

Tune Parameters

Plasma Paramters

RF Power	1600 W	Carrier Gas	0.35 L/min	S/C Temp	2 ℃
RF Matching	1.70 V	Option Gas	0.0 %	Makeup/Dilution Gas	0.50 L/min
Smpl Depth	8.0 mm	Nebulizer Pump	0.10 rps	Gas Switch	Dilution Gas

Lenses Parameters

Extract 1	0.0 V	Omega Lens	8.0 V	Deflect	2.0 V
Extract 2	-200.0 V	Cell Entrance	-32 V	Plate Bias	-60 V
Omega Bias	-100 V	Cell Exit	-70 V		

Cell Parameters

OctP Bias	-18.0 V	He Flow	5.5 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 Blank Report

Sample Table

Sample Name	CAL BLK
Data File Name	004CALB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-03T10:28:35-06:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	27	353.90
Na	23	1	nogas	1493610	0.00
Mg	24	1	nogas	2467	1.26
Al	27	1	nogas	13722	0.00
K	39	1	nogas	2856759	0.00
Ti	47	1	nogas	107	41.54
V	51	1	nogas	261992	0.00
Cr	52	1	nogas	10096	0.03
Mn	55	1	nogas	5084	0.14
Co	59	1	nogas	197	1.49
Ni	60	1	nogas	2260	0.56
Cu	63	1	nogas	7865	0.10
Zn	66	1	nogas	560	3.76
As	75	1	nogas	46152	0.01
Sr	88	1	nogas	620	1.71
Ag	107	1	nogas	160	17.03
Cd	111	1	nogas	7	1299.04
Sb	121	1	nogas	490	3.63
Tl	205	1	nogas	240	12.15
Pb	208	1	nogas	1100	0.41
[Pb]	206	1	nogas	290	4.76
[Pb]	207	1	nogas	210	2.27
Na	23	2	He	54686	0.00
Mg	24	2	He	170	12.48
Al	27	2	He	97	80.32
K	39	2	He	9763	0.01
Ca	43	2	He	23	424.18
Ca	44	2	He	117	4.24
V	51	2	He	219	5.88
Cr	52	2	He	1313	1.19
Mn	55	2	He	103	30.11
Fe	56	2	He	2894	0.36
Co	59	2	He	13	649.52
Ni	60	2	He	273	9.87
Cu	63	2	He	1480	0.94
Zn	66	2	He	57	95.14
As	75	2	He	10	333.00
Se	78	2	He	7	774.17
B	11	1	nogas	98112	0.00
Si	28	1	nogas	843391	0.00
Ca	43	1	nogas	340	11.04
Ca	44	1	nogas	77326	0.00

Calibration Blank Report

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	590920	0.00
Se	77	1	nogas	15430	0.03
Se	82	1	nogas	380	3.86
Mo	95	1	nogas	123	26.57
Sn	118	1	nogas	440	8.31
Ba	137	1	nogas	107	25.37
Sb	121	2	He	40	125.00
Li	7	1	nogas	25788	0.01
P	31	1	nogas	34465	0.00
La	139	1	nogas	73	46.80

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	6	1	nogas	249249	1.62
Ge	72	1	nogas	1043848	0.98
In	115	1	nogas	1062572	1.99
Bi	209	1	nogas	1042758	1.11
Ge	72	2	He	111068	3.13

Calibration Standard Report

Sample Table

Sample Name	2/10/200
Data File Name	005CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-03T10:30:36-06:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	3650	0.31
Na	23	1	nogas	2755713	0.00
Mg	24	1	nogas	925518	0.00
Al	27	1	nogas	70265	0.00
K	39	1	nogas	3944244	0.00
Ti	47	1	nogas	1300	0.77
V	51	1	nogas	289261	0.00
Cr	52	1	nogas	25515	0.01
Mn	55	1	nogas	23846	0.01
Co	59	1	nogas	17142	0.01
Ni	60	1	nogas	5688	0.09
Cu	63	1	nogas	17408	0.01
Zn	66	1	nogas	3394	0.18
As	75	1	nogas	51928	0.01
Sr	88	1	nogas	21033	0.02
Ag	107	1	nogas	11901	0.01
Cd	111	1	nogas	2240	0.50
Sb	121	1	nogas	10313	0.03
Tl	205	1	nogas	19809	0.01
Pb	208	1	nogas	28957	0.01
[Pb]	206	1	nogas	7042	0.05
[Pb]	207	1	nogas	6441	0.13
Na	23	2	He	88126	0.00
Mg	24	2	He	17725	0.02
Al	27	2	He	303	1.25
K	39	2	He	19350	0.01
Ca	43	2	He	40	225.35
Ca	44	2	He	657	1.87
V	51	2	He	2205	0.22
Cr	52	2	He	3847	0.14
Mn	55	2	He	1143	0.64
Fe	56	2	He	205983	0.00
Co	59	2	He	4724	0.08
Ni	60	2	He	1597	0.50
Cu	63	2	He	5101	0.03
Zn	66	2	He	613	1.01
As	75	2	He	348	3.17
Se	78	2	He	15	751.51
B	11	1	nogas	103141	0.00
Si	28	1	nogas	1271949	0.00

Calibration Standard Report

Ca	43	1	nogas	2684	0.31
Ca	44	1	nogas	117547	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	2459228	0.00
Se	77	1	nogas	15787	0.02
Se	82	1	nogas	490	2.89
Mo	95	1	nogas	4494	0.11
Sn	118	1	nogas	7592	0.02
Ba	137	1	nogas	3064	0.36
Sb	121	2	He	1560	0.93
P	31	1	nogas	39759	0.01
La	139	1	nogas	210	12.63

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	258478	3.81	249249	103.70	70	125	
Ge	72	1	nogas	1062783	1.49	1043848	101.81	70	125	
In	115	1	nogas	1086715	0.92	1062572	102.27	70	125	
Bi	209	1	nogas	1059606	3.20	1042758	101.62	70	125	
Ge	72	2	He	109924	0.40	111068	98.97	70	125	

Calibration Standard Report

Sample Table

Sample Name	5/25/500
Data File Name	006CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-03T10:32:38-06:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	8766	0.07
Na	23	1	nogas	4864376	0.00
Mg	24	1	nogas	2417576	0.00
Al	27	1	nogas	42910	0.01
K	39	1	nogas	5554337	0.00
Ti	47	1	nogas	3260	0.17
V	51	1	nogas	323939	0.00
Cr	52	1	nogas	48788	0.00
Mn	55	1	nogas	51827	0.01
Co	59	1	nogas	42821	0.01
Ni	60	1	nogas	11264	0.03
Cu	63	1	nogas	31217	0.01
Zn	66	1	nogas	7705	0.05
As	75	1	nogas	58240	0.01
Sr	88	1	nogas	50401	0.00
Ag	107	1	nogas	29088	0.00
Cd	111	1	nogas	5868	0.07
Sb	121	1	nogas	24467	0.01
Tl	205	1	nogas	49553	0.01
Pb	208	1	nogas	72348	0.00
[Pb]	206	1	nogas	17583	0.02
[Pb]	207	1	nogas	16035	0.01
Na	23	2	He	143772	0.00
Mg	24	2	He	43734	0.01
Al	27	2	He	260	9.00
K	39	2	He	32061	0.00
Ca	43	2	He	120	18.38
Ca	44	2	He	1377	0.44
V	51	2	He	4996	0.05
Cr	52	2	He	7865	0.04
Mn	55	2	He	2560	0.06
Fe	56	2	He	513843	0.00
Co	59	2	He	11560	0.01
Ni	60	2	He	3364	0.05
Cu	63	2	He	10383	0.04
Zn	66	2	He	1340	0.99
As	75	2	He	904	1.13
Se	78	2	He	60	9.62
B	11	1	nogas	118997	0.00
Si	28	1	nogas	1655119	0.00

Calibration Standard Report

Ca	43	1	nogas	5881	0.08
Ca	44	1	nogas	171649	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	5137166	0.00
Se	77	1	nogas	16611	0.02
Se	82	1	nogas	737	2.02
Mo	95	1	nogas	10800	0.05
Sn	118	1	nogas	17666	0.03
Ba	137	1	nogas	8392	0.03
Sb	121	2	He	3917	0.13
P	31	1	nogas	46898	0.00
La	139	1	nogas	77	35.42

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	253421	2.86	249249	101.67	70	125	
Ge	72	1	nogas	1038809	2.07	1043848	99.52	70	125	
In	115	1	nogas	1088555	0.49	1062572	102.45	70	125	
Bi	209	1	nogas	1044437	2.12	1042758	100.16	70	125	
Ge	72	2	He	109684	0.49	111068	98.75	70	125	

Calibration Standard Report

Sample Table

Sample Name	10/50/1000
Data File Name	007CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-03T10:34:39-06:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	18539	0.01
Na	23	1	nogas	8408850	0.00
Mg	24	1	nogas	4869182	0.00
Al	27	1	nogas	77496	0.00
K	39	1	nogas	8192014	0.00
Ti	47	1	nogas	6355	0.05
V	51	1	nogas	385802	0.00
Cr	52	1	nogas	87913	0.00
Mn	55	1	nogas	101141	0.00
Co	59	1	nogas	84997	0.00
Ni	60	1	nogas	20675	0.01
Cu	63	1	nogas	55360	0.00
Zn	66	1	nogas	14649	0.02
As	75	1	nogas	67588	0.01
Sr	88	1	nogas	103377	0.00
Ag	107	1	nogas	58825	0.00
Cd	111	1	nogas	11804	0.01
Sb	121	1	nogas	48849	0.00
Tl	205	1	nogas	99892	0.00
Pb	208	1	nogas	142990	0.00
[Pb]	206	1	nogas	34470	0.01
[Pb]	207	1	nogas	31561	0.01
Na	23	2	He	232420	0.00
Mg	24	2	He	87817	0.00
Al	27	2	He	357	7.13
K	39	2	He	54910	0.00
Ca	43	2	He	200	10.90
Ca	44	2	He	3034	0.13
V	51	2	He	9963	0.03
Cr	52	2	He	14309	0.03
Mn	55	2	He	5441	0.08
Fe	56	2	He	1033894	0.00
Co	59	2	He	22885	0.01
Ni	60	2	He	6688	0.12
Cu	63	2	He	18746	0.02
Zn	66	2	He	2467	0.15
As	75	2	He	1748	0.36
Se	78	2	He	63	30.47
B	11	1	nogas	144053	0.00
Si	28	1	nogas	2337032	0.00

Calibration Standard Report

Ca	43	1	nogas	11030	0.00
Ca	44	1	nogas	270954	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	9598766	0.00
Se	77	1	nogas	17455	0.03
Se	82	1	nogas	1280	1.27
Mo	95	1	nogas	21861	0.01
Sn	118	1	nogas	35246	0.01
Ba	137	1	nogas	15711	0.03
Sb	121	2	He	7819	0.08
P	31	1	nogas	55890	0.00
La	139	1	nogas	80	15.63

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	254079	4.03	249249	101.94	70	125	
Ge	72	1	nogas	1078983	1.40	1043848	103.37	70	125	
In	115	1	nogas	1088074	0.26	1062572	102.40	70	125	
Bi	209	1	nogas	1052513	3.62	1042758	100.94	70	125	
Ge	72	2	He	109696	2.35	111068	98.76	70	125	

Calibration Standard Report

Sample Table

Sample Name	100/500/10K
Data File Name	008CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-03T10:36:41-06:00
Sample Type	CalStd
Level	5
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	174271	0.00
Na	23	1	nogas	71944512	0.00
Mg	24	1	nogas	47131794	0.00
Al	27	1	nogas	576944	0.00
K	39	1	nogas	54999526	0.00
Ti	47	1	nogas	58911	0.00
V	51	1	nogas	1127495	0.00
Cr	52	1	nogas	740414	0.00
Mn	55	1	nogas	920358	0.00
Co	59	1	nogas	812142	0.00
Ni	60	1	nogas	186806	0.00
Cu	63	1	nogas	465082	0.00
Zn	66	1	nogas	140343	0.00
As	75	1	nogas	205671	0.00
Sr	88	1	nogas	998826	0.00
Ag	107	1	nogas	564478	0.00
Cd	111	1	nogas	115291	0.00
Sb	121	1	nogas	476807	0.00
Tl	205	1	nogas	984134	0.00
Pb	208	1	nogas	1424513	0.00
[Pb]	206	1	nogas	344622	0.00
[Pb]	207	1	nogas	316173	0.00
Na	23	2	He	1751450	0.00
Mg	24	2	He	841209	0.00
Al	27	2	He	2494	0.24
K	39	2	He	441952	0.00
Ca	43	2	He	1447	0.45
Ca	44	2	He	27020	0.01
V	51	2	He	97246	0.00
Cr	52	2	He	129137	0.00
Mn	55	2	He	52435	0.01
Fe	56	2	He	10360408	0.00
Co	59	2	He	220407	0.00
Ni	60	2	He	61734	0.00
Cu	63	2	He	174727	0.00
Zn	66	2	He	26086	0.02
As	75	2	He	17041	0.01
Se	78	2	He	657	0.43
B	11	1	nogas	615884	0.00
Si	28	1	nogas	13969418	0.00

Calibration Standard Report

Ca	43	1	nogas	110788	0.00
Ca	44	1	nogas	1851842	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	85462400	0.00
Se	77	1	nogas	24553	0.01
Se	82	1	nogas	8042	0.06
Mo	95	1	nogas	210462	0.00
Sn	118	1	nogas	336222	0.00
Ba	137	1	nogas	151454	0.00
Sb	121	2	He	72849	0.00
P	31	1	nogas	214592	0.00
La	139	1	nogas	280	3.83

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	237796	3.44	249249	95.40	70	125	
Ge	72	1	nogas	1066973	2.04	1043848	102.22	70	125	
In	115	1	nogas	1072463	1.06	1062572	100.93	70	125	
Bi	209	1	nogas	1058754	1.75	1042758	101.53	70	125	
Ge	72	2	He	107933	0.91	111068	97.18	70	125	

Calibration Standard Report

Sample Table

Sample Name	200/1000/20K
Data File Name	009CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-03T10:38:40-06:00
Sample Type	CalStd
Level	6
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	353449	0.00
Na	23	1	nogas	141560987	0.00
Mg	24	1	nogas	93432683	0.00
Al	27	1	nogas	1129156	0.00
K	39	1	nogas	108344915	0.00
Ti	47	1	nogas	118149	0.00
V	51	1	nogas	2016314	0.00
Cr	52	1	nogas	1513036	0.00
Mn	55	1	nogas	1862775	0.00
Co	59	1	nogas	1652393	0.00
Ni	60	1	nogas	360051	0.00
Cu	63	1	nogas	914363	0.00
Zn	66	1	nogas	277981	0.00
As	75	1	nogas	360343	0.00
Sr	88	1	nogas	2003832	0.00
Ag	107	1	nogas	988949	0.00
Cd	111	1	nogas	230808	0.00
Sb	121	1	nogas	984959	0.00
Tl	205	1	nogas	1929905	0.00
Pb	208	1	nogas	2823882	0.00
[Pb]	206	1	nogas	664984	0.00
[Pb]	207	1	nogas	613498	0.00
Na	23	2	He	3401685	0.00
Mg	24	2	He	1683669	0.00
Al	27	2	He	4504	0.10
K	39	2	He	867859	0.00
Ca	43	2	He	3147	0.07
Ca	44	2	He	54263	0.00
V	51	2	He	189999	0.00
Cr	52	2	He	253479	0.00
Mn	55	2	He	103289	0.00
Fe	56	2	He	20240416	0.00
Co	59	2	He	433311	0.00
Ni	60	2	He	118574	0.00
Cu	63	2	He	339843	0.00
Zn	66	2	He	50212	0.00
As	75	2	He	33858	0.00
Se	78	2	He	1320	0.14
B	11	1	nogas	1171762	0.00
Si	28	1	nogas	26402974	0.00

Calibration Standard Report

Ca	43	1	nogas	218000	0.00
Ca	44	1	nogas	3593511	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	175478875	0.00
Se	77	1	nogas	32092	0.01
Se	82	1	nogas	15170	0.02
Mo	95	1	nogas	417239	0.00
Sn	118	1	nogas	676406	0.00
Ba	137	1	nogas	310468	0.00
Sb	121	2	He	153259	0.00
P	31	1	nogas	399022	0.00
La	139	1	nogas	307	3.25

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	225680	2.13	249249	90.54	70	125	
Ge	72	1	nogas	1045064	1.98	1043848	100.12	70	125	
In	115	1	nogas	1070702	1.74	1062572	100.77	70	125	
Bi	209	1	nogas	1007752	1.15	1042758	96.64	70	125	
Ge	72	2	He	107695	1.54	111068	96.96	70	125	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	ICV
Data File Name	011_ICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-03T10:42:41-06:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
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	102.476	5.488	182079	2.38	100	102.5	90	110	
Na	23	1	nogas	10457.913	3.111	71923137	2.90	10000	104.6	90	110	
Mg	24	1	nogas	10565.469	2.022	47561378	2.65	10000	105.7	90	110	
Al	27	1	nogas	104.267	3.507	582881	4.28	100	104.3	90	110	
K	39	1	nogas	10416.076	6.654	56234991	0.96	10000	104.2	90	110	
Ti	47	1	nogas	104.804	7.184	60393	2.44	100	104.8	90	110	
V	51	1	nogas	105.091	8.159	1153115	0.04	100	105.1	90	110	
Cr	52	1	nogas	103.821	4.891	766871	1.71	100	103.8	90	110	
Mn	55	1	nogas	106.101	4.535	964263	2.10	100	106.1	90	110	
Co	59	1	nogas	104.709	6.322	841105	1.59	100	104.7	90	110	
Ni	60	1	nogas	107.846	6.657	191583	0.64	100	107.8	90	110	
Cu	63	1	nogas	103.800	6.660	467466	2.75	100	103.8	90	110	
Zn	66	1	nogas	105.172	4.893	143078	1.55	100	105.2	90	110	
As	75	1	nogas	105.510	8.125	208002	0.74	100	105.5	90	110	
Sr	88	1	nogas	105.215	5.574	1028247	2.13	100	105.2	90	110	
Ag	107	1	nogas	104.642	6.452	566906	1.34	100	104.6	90	110	
Cd	111	1	nogas	104.133	2.912	116851	2.32	100	104.1	90	110	
Sb	121	1	nogas	103.025	5.470	492048	0.96	100	103.0	90	110	
Tl	205	1	nogas	104.753	4.914	999201	1.12	100	104.8	90	110	
Pb	208	1	nogas	99.912	2.225	1413672	2.22	100	99.9	90	110	
U	238	1	nogas	109.677	3.078	1607689	3.44	100	109.7	90	110	
[Pb]	206	1	nogas	105.390	4.125	347597	0.63	100	105.4	90	110	
[Pb]	207	1	nogas	102.289	3.950	310928	1.96	100	102.3	90	110	
Na	23	2	He	10072.770	2.493	1784294	1.31	10000	100.7	90	110	
Mg	24	2	He	9662.219	2.041	831910	1.28	10000	96.6	90	110	
Al	27	2	He	102.275	9.300	2474	8.29	100	102.3	90	110	
K	39	2	He	10031.455	1.594	440846	1.56	10000	100.3	90	110	
Ca	43	2	He	10086.271	5.743	1607	5.22	10000	100.9	90	110	
Ca	44	2	He	9667.201	5.023	26850	3.92	10000	96.7	90	110	
V	51	2	He	98.184	2.300	96015	1.54	100	98.2	90	110	
Cr	52	2	He	97.763	1.483	127746	1.15	100	97.8	90	110	
Mn	55	2	He	98.381	2.247	52161	1.07	100	98.4	90	110	
Fe	56	2	He	9723.152	1.423	10112157	1.26	10000	97.2	90	110	
Co	59	2	He	98.949	1.531	220035	0.42	100	98.9	90	110	
Ni	60	2	He	99.504	1.898	61076	0.90	100	99.5	90	110	
Cu	63	2	He	101.299	0.931	177796	1.87	100	101.3	90	110	
Zn	66	2	He	101.386	2.201	26279	2.18	100	101.4	90	110	
As	75	2	He	98.733	1.323	17123	0.31	100	98.7	90	110	
Se	78	2	He	95.236	2.765	645	1.56	100	95.2	90	110	
B	11	1	nogas	501.045	7.472	627486	2.24	500	100.2	90	110	
Si	28	1	nogas	5241.811	3.583	13984665	3.36	5000	104.8	90	110	
Ca	43	1	nogas	10655.871	5.576	113811	1.11	10000	106.6	90	110	
Ca	44	1	nogas	10760.131	7.716	1923853	1.59	10000	107.6	90	110	
Fe	56	1	nogas	10531.322	6.875	89859810	0.70	10000	105.3	90	110	
Se	77	1	nogas	107.723	17.889	24013	6.31	100	107.7	90	110	
Se	82	1	nogas	101.663	7.577	7752	1.27	100	101.7	90	110	
Mo	95	1	nogas	105.816	6.070	215786	1.49	100	105.8	90	110	
Sn	118	1	nogas	102.496	6.111	336570	0.99	100	102.5	90	110	
Ba	137	1	nogas	105.903	4.099	159092	1.29	100	105.9	90	110	
Sb	121	2	He	96.854	0.829	75185	1.36	100	96.9	90	110	
Li	7	1	nogas	104.383	3.518	468554	3.34	100	104.4	90	110	
P	31	1	nogas	527.984	5.559	221159	2.02	500	105.6	90	110	
La	139	1	nogas	188.416	12.358	320	14.32	100	188.4	90	110	ICV Main CR1 Failed
Au	197	1	nogas	-41.871	-209.212	3	173.21	100	-41.9	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	242812	6.06	249249	97.42	70	125	
Ge	72	1	nogas	1025833	6.10	1043848	98.27	70	125	
In	115	1	nogas	1042697	5.16	1062572	98.13	70	125	
Bi	209	1	nogas	1003368	4.26	1042758	96.22	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	110200	1.17	111068	99.22	70	125	

Sample Report

Sample Table

Sample Name	LLICV2
Data File Name	012SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-03T10:44:40-06:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	004CALB.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	1.879	1.879	5.08	3767	0.05	2000	
Na	23	1	nogas	165.467	165.467	6.20	2680453	0.01	200000	
Mg	24	1	nogas	211.061	211.061	4.34	1000004	0.02	200000	
Al	27	1	nogas	10.145	10.145	3.65	71406	0.01	2000	
K	39	1	nogas	182.956	182.956	9.10	3882611	0.00	200000	
Ti	47	1	nogas	2.118	2.118	16.85	1377	0.15	2000	
V	51	1	nogas	2.307	2.307	34.23	287187	0.00	2000	
Cr	52	1	nogas	2.018	2.018	2.30	25558	0.01	2000	
Mn	55	1	nogas	2.207	2.207	7.26	25869	0.01	2000	
Co	59	1	nogas	2.130	2.130	6.98	17956	0.01	2000	
Ni	60	1	nogas	1.779	1.779	10.70	5641	0.03	2000	
Cu	63	1	nogas	1.668	1.668	6.69	15680	0.01	2000	
Zn	66	1	nogas	2.222	2.222	8.04	3527	0.06	2000	
As	75	1	nogas	2.749	2.749	26.25	53559	0.01	2000	
Sr	88	1	nogas	2.138	2.138	4.58	22318	0.01	2000	
Ag	107	1	nogas	2.297	2.297	2.21	13082	0.02	2000	
Cd	111	1	nogas	2.254	2.254	4.72	2700	0.08	2000	
Sb	121	1	nogas	3.388	3.388	6.88	17279	0.02	2000	
Tl	205	1	nogas	2.147	2.147	5.20	22109	0.01	2000	
Pb	208	1	nogas	2.157	2.157	3.04	31600	0.01	2000	
U	238	1	nogas	2.092	2.092	0.40	32948	0.01	2000	
[Pb]	206	1	nogas	2.058	2.058	0.83	7539	0.03	2000	
[Pb]	207	1	nogas	2.098	2.098	7.02	7015	0.03	2000	
Na	23	2	He	172.398	172.398	5.74	83596	0.21	200000	
Mg	24	2	He	208.158	208.158	6.43	18009	1.16	200000	
Al	27	2	He	11.144	11.144	42.53	423	2.63	2000	
K	39	2	He	198.801	198.801	4.92	18306	1.09	200000	
Ca	43	2	He	24.187	24.187	417.75	27	90.70	200000	
Ca	44	2	He	193.641	193.641	9.36	650	29.79	200000	
V	51	2	He	1.753	1.753	6.35	2115	0.08	2000	
Cr	52	2	He	1.803	1.803	6.73	3624	0.05	2000	
Mn	55	2	He	1.652	1.652	14.67	973	0.17	2000	
Fe	56	2	He	195.883	195.883	2.34	205767	0.10	200000	
Co	59	2	He	2.104	2.104	5.59	4674	0.05	2000	
Ni	60	2	He	1.655	1.655	4.00	1620	0.10	2000	
Cu	63	2	He	1.839	1.839	2.31	5124	0.04	2000	
Zn	66	2	He	2.055	2.055	7.44	647	0.32	2000	
As	75	2	He	1.913	1.913	7.03	340	0.56	2000	
Se	78	2	He	1.528	1.528	94.38	17	8.82	2000	
B	11	1	nogas	2.079	2.079	179.09	109226	0.00	2000	

Sample Report

Si	28	1	nogas	172.707	172.707	9.20	1307924	0.01	2000	
Ca	43	1	nogas	220.935	220.935	2.90	2790	7.92	200000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Ca	44	1	nogas	237.024	237.024	4.02	121018	0.20	200000	
Fe	56	1	nogas	209.141	209.141	4.08	2443114	0.01	200000	
Se	77	1	nogas	11.057	11.057	60.83	16651	0.07	2000	
Se	82	1	nogas	0.479	0.479	191.17	423	0.11	2000	
Mo	95	1	nogas	2.186	2.186	2.34	4751	0.05	2000	
Sn	118	1	nogas	2.103	2.103	1.87	7812	0.03	2000	
Ba	137	1	nogas	2.030	2.030	7.70	3357	0.06	2000	
Sb	121	2	He	3.024	3.024	6.89	2377	0.13	2000	
La	139	1	nogas	98.086	98.086	29.23	213	45.98	2000	
Au	197	1	nogas	-1.794	-1.794	-4376.98	7	-26.90	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	271231	1.57	249249	108.82	70	125	
Ge	72	1	nogas	1062780	1.80	1043848	101.81	70	125	
In	115	1	nogas	1108886	0.76	1062572	104.36	70	125	
Bi	209	1	nogas	1069867	0.66	1042758	102.60	70	125	
Ge	72	2	He	109826	2.57	111068	98.88	70	125	

Low Level Initial Calibration Verification (LLICV) Report

Sample Table

Sample Name	LLICV5
Data File Name	013LICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-03T10:46:41-06:00
Sample Type	LLICV
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
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	4.879	4.760	9593	4.75	5	97.6	70	130	
Na	23	1	nogas	484.656	1.627	4933320	0.92	500	96.9	70	130	
Mg	24	1	nogas	529.696	2.177	2502289	1.74	500	105.9	70	130	
Al	27	1	nogas	5.204	3.116	44399	2.59	5	104.1	70	130	
K	39	1	nogas	472.907	1.408	5547249	0.51	500	94.6	70	130	
Ti	47	1	nogas	5.009	5.223	3170	5.50	5	100.2	70	130	
V	51	1	nogas	4.440	11.142	312809	2.01	5	88.8	70	130	
Cr	52	1	nogas	5.111	4.886	50035	4.20	5	102.2	70	130	
Mn	55	1	nogas	5.292	3.496	56039	3.53	5	105.8	70	130	
Co	59	1	nogas	5.158	2.967	44177	3.64	5	103.2	70	130	
Ni	60	1	nogas	5.016	3.165	11797	1.46	5	100.3	70	130	
Cu	63	1	nogas	4.753	1.550	30533	2.20	5	95.1	70	130	
Zn	66	1	nogas	5.182	5.076	7865	4.04	5	103.6	70	130	
As	75	1	nogas	5.114	12.264	58557	2.54	5	102.3	70	130	
Sr	88	1	nogas	5.171	0.833	54229	0.31	5	103.4	70	130	
Ag	107	1	nogas	5.379	1.367	31085	0.51	5	107.6	70	130	
Cd	111	1	nogas	5.221	3.796	6245	4.92	5	104.4	70	130	
Sb	121	1	nogas	5.525	0.645	28480	1.69	5	110.5	70	130	
Tl	205	1	nogas	5.065	2.150	52919	0.96	5	101.3	70	130	
Pb	208	1	nogas	5.284	0.497	75803	0.49	5	105.7	70	130	
U	238	1	nogas	4.990	3.369	79921	2.41	5	99.8	70	130	
[Pb]	206	1	nogas	5.033	2.866	18387	3.22	5	100.7	70	130	
[Pb]	207	1	nogas	5.164	4.748	17323	5.09	5	103.3	70	130	
Na	23	2	He	502.461	5.803	140954	1.19	500	100.5	70	130	
Mg	24	2	He	539.839	6.918	46739	4.80	500	108.0	70	130	
Al	27	2	He	5.968	19.991	310	8.53	5	119.4	70	130	
K	39	2	He	537.460	2.493	32859	1.75	500	107.5	70	130	
Ca	43	2	He	471.762	64.792	97	46.65	500	94.4	70	130	
Ca	44	2	He	543.341	18.212	1620	15.08	500	108.7	70	130	
V	51	2	He	4.975	3.735	5274	1.60	5	99.5	70	130	
Cr	52	2	He	4.848	1.870	7595	2.02	5	97.0	70	130	
Mn	55	2	He	5.028	8.938	2767	5.43	5	100.6	70	130	
Fe	56	2	He	487.763	5.025	511220	2.92	500	97.6	70	130	
Co	59	2	He	5.136	5.176	11460	2.23	5	102.7	70	130	
Ni	60	2	He	4.526	9.244	3377	4.89	5	90.5	70	130	
Cu	63	2	He	4.852	5.252	10396	1.64	5	97.0	70	130	
Zn	66	2	He	4.681	5.084	1330	1.50	5	93.6	70	130	
As	75	2	He	4.799	12.786	842	9.39	5	96.0	70	130	
Se	78	2	He	7.108	31.649	55	30.10	5	142.2	70	130	LLICV Main CR1 Failed
B	11	1	nogas	19.128	16.276	127698	2.20	25	76.5	70	130	
Si	28	1	nogas	315.051	2.970	1715628	0.47	25	1260.2	70	130	LLICV Main CR1 Failed
Ca	43	1	nogas	496.755	1.557	5968	2.29	500	99.4	70	130	
Ca	44	1	nogas	532.294	3.332	177517	1.09	500	106.5	70	130	
Fe	56	1	nogas	508.958	3.268	5195759	3.14	500	101.8	70	130	
Se	77	1	nogas	8.472	57.098	16798	3.32	5	169.4	70	130	LLICV Main CR1 Failed
Se	82	1	nogas	5.419	24.233	813	13.54	5	108.4	70	130	
Mo	95	1	nogas	5.203	2.547	11384	3.58	5	104.1	70	130	
Sn	118	1	nogas	5.139	3.230	18417	1.98	5	102.8	70	130	
Ba	137	1	nogas	4.940	1.733	8009	2.36	5	98.8	70	130	
Sb	121	2	He	5.431	5.817	4264	4.66	5	108.6	70	130	
Li	7	1	nogas	4.618	7.008	49292	2.80	5	92.4	70	130	
P	31	1	nogas	28.943	8.929	46758	3.15	25	115.8	70	130	
La	139	1	nogas	-2.323	-1436.216	73	64.44	5	-46.5	70	130	LLICV Main CR1 Failed
Au	197	1	nogas	-47.712	-162.391	3	173.21	5	-954.2	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	267407	1.04	249249	107.29	70	125	
Ge	72	1	nogas	1086048	1.06	1043848	104.04	70	125	

Low Level Initial Calibration Verification (LLICV) Report

In	115	1	nogas	1108735	1.27	1062572	104.34	70	125	
Bi	209	1	nogas	1092720	1.18	1042758	104.79	70	125	
Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	2	He	110551	3.11	111068	99.53	70	125	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	ICB
Data File Name	014_ICB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-03T10:48:42-06:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
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	0.026	47.8	80	25.0	1	
Na	23	1	nogas	-39.927	-36.4	1218795	1.5	100	
Mg	24	1	nogas	1.142	52.5	7904	38.8	100	
Al	27	1	nogas	-0.209	-103.3	13060	7.6	5	
K	39	1	nogas	-25.992	-136.6	2827395	1.4	100	
Ti	47	1	nogas	0.069	94.4	153	24.7	2.5	
V	51	1	nogas	-0.328	-968.4	268967	6.2	2.5	
Cr	52	1	nogas	0.005	2253.9	10523	1.5	2.5	
Mn	55	1	nogas	0.144	21.6	6668	2.8	2.5	
Co	59	1	nogas	0.009	106.7	283	35.7	2.5	
Ni	60	1	nogas	-0.469	-32.9	1570	11.7	2.5	
Cu	63	1	nogas	-0.486	-21.7	5891	1.9	2.5	
Zn	66	1	nogas	0.150	40.6	630	20.6	2.5	
As	75	1	nogas	0.614	510.5	51145	3.9	2.5	
Sr	88	1	nogas	-0.004	-306.6	607	30.9	2.5	
Ag	107	1	nogas	0.079	18.4	623	20.6	2.5	
Cd	111	1	nogas	0.010	122.4	20	86.6	1	
Sb	121	1	nogas	0.245	21.6	1763	22.3	2.5	
Tl	205	1	nogas	0.022	84.3	487	46.7	1	
Pb	208	1	nogas	0.003	648.9	1137	20.9	2.5	
U	238	1	nogas	0.000	2443.5	257	62.1	2.5	
[Pb]	206	1	nogas	0.001	1135.7	307	13.6	2.5	
[Pb]	207	1	nogas	-0.004	-429.3	207	27.9	2.5	
Na	23	2	He	-47.715	-26.3	47409	3.9	100	
Mg	24	2	He	-0.373	-80.1	140	18.9	100	
Al	27	2	He	-5.747	-29.4	47	81.1	5	
K	39	2	He	-1.707	-411.4	9689	3.1	100	
Ca	43	2	He	-86.515	-71.3	10	100.0	100	
Ca	44	2	He	6.064	111.5	137	15.2	100	
V	51	2	He	-0.225	-9.1	203	10.1	2.5	
Cr	52	2	He	-0.173	-23.4	1110	6.5	2.5	
Mn	55	2	He	0.059	126.4	137	27.7	2.5	
Fe	56	2	He	0.434	42.7	3414	4.1	100	
Co	59	2	He	0.001	183.8	17	34.6	2.5	
Ni	60	2	He	-0.665	-5.4	223	10.3	2.5	
Cu	63	2	He	-0.418	-12.8	1260	8.8	2.5	
Zn	66	2	He	-0.150	-84.5	83	42.1	2.5	
As	75	2	He	-0.014	-148.7	8	49.5	2.5	
Se	78	2	He	-0.793	-36.5	2	100.0	2.5	
B	11	1	nogas	-1.837	-404.3	103467	2.8	10	
Si	28	1	nogas	1.403	1460.9	880364	0.9	5	
Ca	43	1	nogas	5.315	62.4	413	3.7	100	
Ca	44	1	nogas	6.553	521.9	81514	1.0	100	
Fe	56	1	nogas	-11.514	-28.6	510860	1.1	100	

Initial Calibration Blank (ICB) Report

Se	77	1	nogas	6.728	256.7	16611	4.5	2.5	ICB Main CR1 Failed
Se	82	1	nogas	-0.393	-103.5	367	15.0	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Mo	95	1	nogas	-0.012	-123.1	103	39.1	2.5	
Sn	118	1	nogas	0.040	29.5	617	12.0	5	
Ba	137	1	nogas	-0.013	-249.6	97	63.2	2.5	
Sb	121	2	He	0.253	13.9	243	13.2	2.5	
P	31	1	nogas	4.058	79.8	37397	3.8	10	
La	139	1	nogas	-25.308	-55.7	43	58.1	2.5	
Au	197	1	nogas	-92.446	0.0	0	#DIV/0!	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	269244	6.91	249249	108.02	70	125	
Ge	72	1	nogas	1088033	6.99	1043848	104.23	70	125	
In	115	1	nogas	1135261	11.17	1062572	106.84	70	125	
Bi	209	1	nogas	1092294	7.71	1042758	104.75	70	125	
Ge	72	2	He	113383	1.85	111068	102.08	70	125	

Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	ICSA
Data File Name	015ICSA.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-03T10:51:58-06:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
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	0.018	97.7	67	56.8	0	ICSA Main CR1 Failed
Na	23	1	nogas	96570.871	1.9	688810415	3.4	0	
Mg	24	1	nogas	99759.537	0.5	474048344	1.9	0	
Al	27	1	nogas	95801.150	3.2	541044192	3.8	0	
K	39	1	nogas	100555.653	1.3	537039012	0.3	0	
Ti	47	1	nogas	1978.009	3.4	1178386	2.6	0	
V	51	1	nogas	2.661	34.8	289474	3.1	0	ICSA Main CR1 Failed
Cr	52	1	nogas	0.531	5.7	14259	2.5	0	ICSA Main CR1 Failed
Mn	55	1	nogas	0.374	10.5	8662	4.8	0	ICSA Main CR1 Failed
Co	59	1	nogas	0.064	13.5	730	10.9	0	ICSA Main CR1 Failed
Ni	60	1	nogas	0.168	37.7	2700	4.9	0	ICSA Main CR1 Failed
Cu	63	1	nogas	0.234	53.9	9056	5.8	0	ICSA Main CR1 Failed
Zn	66	1	nogas	1.526	6.3	2544	6.4	0	ICSA Main CR1 Failed
As	75	1	nogas	3.622	30.3	54769	2.8	0	ICSA Main CR1 Failed
Sr	88	1	nogas	0.882	4.6	9543	4.5	0	ICSA Main CR1 Failed
Ag	107	1	nogas	0.075	24.0	580	16.4	0	ICSA Main CR1 Failed
Cd	111	1	nogas	1.159	15.9	1330	15.5	0	ICSA Main CR1 Failed
Sb	121	1	nogas	0.250	13.4	1733	10.4	0	ICSA Main CR1 Failed
Tl	205	1	nogas	0.001	451.2	257	27.6	0	ICSA Main CR1 Failed
Pb	208	1	nogas	0.089	8.0	2357	4.3	0	ICSA Main CR1 Failed
[Pb]	206	1	nogas	0.082	5.4	573	1.0	0	ICSA Main CR1 Failed
[Pb]	207	1	nogas	0.109	12.8	557	11.0	0	ICSA Main CR1 Failed
Na	23	2	He	94993.889	1.0	16350913	1.8	0	
Mg	24	2	He	92534.147	1.1	7956273	2.0	0	
Al	27	2	He	97043.023	2.3	2178544	1.8	0	
K	39	2	He	95984.810	1.2	4134536	1.2	0	
Ca	43	2	He	87924.408	7.0	13805	6.1	0	
Ca	44	2	He	88889.286	1.1	245666	0.3	0	
V	51	2	He	-0.180	-7.5	241	4.6	0	ICSA Main CR1 Failed
Cr	52	2	He	0.000	-9977.7	1300	5.8	0	ICSA Main CR1 Failed
Mn	55	2	He	0.268	34.8	243	19.4	0	ICSA Main CR1 Failed
Fe	56	2	He	92615.646	1.3	96167829	1.4	0	
Co	59	2	He	0.015	74.3	47	53.9	0	ICSA Main CR1 Failed
Ni	60	2	He	-0.500	-23.0	317	22.2	0	ICSA Main CR1 Failed
Cu	63	2	He	-0.230	-24.9	1547	5.6	0	ICSA Main CR1 Failed
Zn	66	2	He	0.184	61.0	167	18.3	0	ICSA Main CR1 Failed
As	75	2	He	0.084	113.7	24	67.3	0	ICSA Main CR1 Failed
Se	78	2	He	-0.387	-118.2	5	65.5	0	ICSA Main CR1 Failed
B	11	1	nogas	2.493	175.7	111052	2.5	0	ICSA Main CR1 Failed
Si	28	1	nogas	147.558	5.8	1239059	0.8	0	
Ca	43	1	nogas	100638.652	3.8	1109786	3.8	0	
Ca	44	1	nogas	103142.317	1.4	18430648	1.5	0	
Fe	56	1	nogas	97186.552	3.9	854075819	4.4	0	
Se	77	1	nogas	30.635	11.7	18276	2.6	0	
Se	82	1	nogas	-0.243	-742.3	367	36.3	0	ICSA Main CR1 Failed
Mo	95	1	nogas	2069.784	1.1	4367697	1.0	0	
Sn	118	1	nogas	0.089	45.6	740	19.9	0	ICSA Main CR1 Failed
Ba	137	1	nogas	0.046	11.8	177	3.3	0	ICSA Main CR1 Failed
Sb	121	2	He	0.194	18.6	190	13.9	0	ICSA Main CR1 Failed

Interference Check Solution A (ICS-A) Report

P	31	1	nogas	93579.510	2.3	34398194	2.5	0	
La	139	1	nogas	63.260	123.0	157	65.5	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	274623	2.60	249249	110.18	70	125	
Ge	72	1	nogas	1059586	1.01	1043848	101.51	70	125	
In	115	1	nogas	1060097	1.46	1062572	99.77	70	125	
Bi	209	1	nogas	1047021	3.64	1042758	100.41	70	125	
Ge	72	2	He	110048	0.95	111068	99.08	70	125	

Interference Check Solution AB (ICS-AB) Report

Sample Table

Sample Name	ICSAB
Data File Name	016ICSB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-03T10:54:05-06:00
Sample Type	ICSB
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
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	97.746	8.648	182386	2.67	100	97.7	80	120	
Na	23	1	nogas	114739.581	7.995	803403835	2.21	100	114739.6	80	120	ICSB Main CR1 Failed
Mg	24	1	nogas	113508.798	10.543	529240128	5.04	100	113508.8	80	120	ICSB Main CR1 Failed
Al	27	1	nogas	100567.014	6.766	557750298	2.92	100	100567.0	80	120	ICSB Main CR1 Failed
K	39	1	nogas	115050.962	5.913	603360080	3.24	100	115051.0	80	120	ICSB Main CR1 Failed
Ti	47	1	nogas	2209.781	8.157	1292433	3.37	100	2209.8	80	120	ICSB Main CR1 Failed
V	51	1	nogas	106.940	9.514	1188397	2.51	100	106.9	80	120	
Cr	52	1	nogas	101.510	5.598	762518	0.75	100	101.5	80	120	
Mn	55	1	nogas	103.280	5.820	954178	0.75	100	103.3	80	120	
Co	59	1	nogas	101.380	7.091	828036	2.61	100	101.4	80	120	
Ni	60	1	nogas	104.022	7.510	187983	2.84	100	104.0	80	120	
Cu	63	1	nogas	100.187	5.666	459223	1.36	100	100.2	80	120	
Zn	66	1	nogas	103.844	5.693	143638	1.80	100	103.8	80	120	
As	75	1	nogas	105.303	9.951	211138	3.10	100	105.3	80	120	
Sr	88	1	nogas	106.753	5.664	1060862	1.47	100	106.8	80	120	
Ag	107	1	nogas	97.159	7.255	535199	2.51	100	97.2	80	120	
Cd	111	1	nogas	99.550	10.645	116854	3.58	100	99.6	80	120	
Sb	121	1	nogas	103.975	6.227	504881	1.43	100	104.0	80	120	
Tl	205	1	nogas	97.635	6.855	957427	1.07	100	97.6	80	120	
Pb	208	1	nogas	99.179	1.933	1403301	1.93	100	99.2	80	120	
U	238	1	nogas	110.635	10.738	1662505	3.30	100	110.6	80	120	
[Pb]	206	1	nogas	100.409	8.084	340194	1.41	100	100.4	80	120	
[Pb]	207	1	nogas	99.411	9.098	310185	1.62	100	99.4	80	120	
Na	23	2	He	106426.410	1.808	18177993	1.09	100	106426.4	80	120	
Mg	24	2	He	103204.437	1.419	8808677	0.69	100	103204.4	80	120	
Al	27	2	He	98593.952	0.978	2197595	0.85	100	98594.0	80	120	ICSB Main CR1 Failed
K	39	2	He	108537.471	1.059	4673964	1.06	100	108537.5	80	120	ICSB Main CR1 Failed
Ca	43	2	He	97982.843	4.137	15280	4.67	100	97982.8	80	120	
Ca	44	2	He	100425.889	1.353	275577	2.10	100	100425.9	80	120	
V	51	2	He	98.430	1.721	95438	1.12	100	98.4	80	120	
Cr	52	2	He	96.890	1.313	125544	1.69	100	96.9	80	120	
Mn	55	2	He	95.193	1.470	50052	1.84	100	95.2	80	120	
Fe	56	2	He	103623.541	0.247	106824772	0.51	100	103623.5	80	120	
Co	59	2	He	97.376	1.488	214701	1.34	100	97.4	80	120	
Ni	60	2	He	99.943	0.610	60828	1.37	100	99.9	80	120	
Cu	63	2	He	96.909	0.286	168713	0.95	100	96.9	80	120	
Zn	66	2	He	97.633	0.957	25094	0.33	100	97.6	80	120	
As	75	2	He	94.891	0.337	16317	0.66	100	94.9	80	120	
Se	78	2	He	93.627	3.529	629	4.05	100	93.6	80	120	
B	11	1	nogas	487.704	5.878	645270	1.25	100	487.7	80	120	
Si	28	1	nogas	5392.617	6.108	14592074	1.19	100	5392.6	80	120	ICSB Main CR1 Failed
Ca	43	1	nogas	118288.386	8.037	1280396	3.11	100	118288.4	80	120	ICSB Main CR1 Failed
Ca	44	1	nogas	114488.196	6.230	20084581	1.04	100	114488.2	80	120	
Fe	56	1	nogas	110525.707	6.435	953706888	1.32	100	110525.7	80	120	ICSB Main CR1 Failed
Se	77	1	nogas	129.980	20.351	26263	6.58	100	130.0	80	120	
Se	82	1	nogas	103.988	4.254	8065	2.22	100	104.0	80	120	
Mo	95	1	nogas	2210.064	5.104	4582597	1.62	100	2210.1	80	120	ICSB Main CR1 Failed
Sn	118	1	nogas	101.701	10.278	349798	3.16	100	101.7	80	120	
Ba	137	1	nogas	97.671	6.704	153859	1.03	100	97.7	80	120	
Sb	121	2	He	98.924	0.936	76136	1.39	100	98.9	80	120	
La	139	1	nogas	193.779	11.083	343	13.76	100	193.8	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	255371	6.15	249249	102.46	70	125	
Ge	72	1	nogas	1042826	5.02	1043848	99.90	70	125	
In	115	1	nogas	1095440	7.46	1062572	103.09	70	125	
Bi	209	1	nogas	1033752	7.76	1042758	99.14	70	125	
Ge	72	2	He	109257	0.76	111068	98.37	70	125	

Sample Report

Sample Table

Sample Name	HS17121113-08
Data File Name	018SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-03T11:24:19-06:00
Sample Type	Sample
Dilution	5
Comment	TW B123692
ISTD Ref FileName	004CALB.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	0.049	0.244	59.01	130	0.04	2000	
Na	23	1	nogas	10802.332	54011.660	6.63	80446239	0.01	200000	
Mg	24	1	nogas	775.351	3876.754	6.74	3783416	0.02	200000	
Al	27	1	nogas	7.387	36.936	5.15	56977	0.01	2000	
K	39	1	nogas	198.553	992.763	2.78	4049562	0.00	200000	
Ti	47	1	nogas	0.338	1.688	29.46	317	0.11	2000	
V	51	1	nogas	18.360	91.802	16.62	438417	0.00	2000	
Cr	52	1	nogas	61.455	307.273	2.17	485353	0.01	2000	
Mn	55	1	nogas	52.001	260.005	4.79	503402	0.01	2000	
Co	59	1	nogas	6.626	33.129	0.56	56625	0.01	2000	
Ni	60	1	nogas	404.093	2020.463	2.58	754607	0.05	2000	
Cu	63	1	nogas	5.773	28.864	3.05	35288	0.02	2000	
Zn	66	1	nogas	1.299	6.495	1.64	2277	0.06	2000	
As	75	1	nogas	11.285	56.425	31.03	68456	0.02	2000	
Sr	88	1	nogas	20.908	104.538	3.30	217102	0.01	2000	
Ag	107	1	nogas	0.016	0.079	78.36	257	0.01	2000	
Cd	111	1	nogas	0.018	0.088	77.12	30	0.06	2000	
Sb	121	1	nogas	0.126	0.631	16.83	1147	0.01	2000	
Tl	205	1	nogas	0.015	0.073	53.35	430	0.00	2000	
Pb	208	1	nogas	0.000	-0.001	-6252.53	1097	0.00	2000	
U	238	1	nogas	0.015	0.075	50.05	513	0.00	2000	
[Pb]	206	1	nogas	-0.016	-0.082	-141.66	260	-0.01	2000	
[Pb]	207	1	nogas	0.009	0.043	359.56	263	0.00	2000	
Na	23	2	He	10627.044	53135.220	2.04	1907039	0.56	200000	
Mg	24	2	He	740.432	3702.162	4.27	64828	1.14	200000	
Al	27	2	He	1.284	6.421	175.90	207	0.62	2000	
K	39	2	He	228.775	1143.877	5.69	19594	1.17	200000	
Ca	43	2	He	942.395	4711.977	56.11	173	543.68	200000	
Ca	44	2	He	1145.786	5728.930	8.45	3334	34.37	200000	
V	51	2	He	0.134	0.668	39.03	554	0.02	2000	
Cr	52	2	He	60.222	301.111	1.80	80338	0.07	2000	
Mn	55	2	He	50.150	250.748	4.95	27023	0.19	2000	
Fe	56	2	He	380.550	1902.748	2.17	404295	0.09	200000	
Co	59	2	He	6.581	32.904	3.00	14860	0.04	2000	
Ni	60	2	He	396.969	1984.844	1.46	245350	0.16	2000	
Cu	63	2	He	5.908	29.542	2.63	12381	0.05	2000	
Zn	66	2	He	1.219	6.096	25.36	440	0.28	2000	
As	75	2	He	0.094	0.471	69.86	27	0.35	2000	
Se	78	2	He	0.486	2.428	92.78	11	4.55	2000	
B	11	1	nogas	55.769	278.845	2.95	177926	0.03	2000	
Si	28	1	nogas	3983.903	19919.517	1.68	11466136	0.03	2000	>LDR
Ca	43	1	nogas	1119.961	5599.806	4.10	12995	8.62	200000	
Ca	44	1	nogas	1090.776	5453.878	3.49	279095	0.39	200000	
Fe	56	1	nogas	399.553	1997.763	5.24	4206177	0.01	200000	

Sample Report

Se	77	1	nogas	74.760	373.802	22.82	22561	0.33	2000	
Se	82	1	nogas	-0.020	-0.098	-6403.19	393	-0.01	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Mo	95	1	nogas	0.114	0.568	5.80	373	0.03	2000	
Sn	118	1	nogas	0.023	0.116	75.59	580	0.00	2000	
Ba	137	1	nogas	41.856	209.278	2.57	71783	0.06	2000	
Sb	121	2	He	0.224	1.122	43.12	217	0.10	2000	
La	139	1	nogas	485.122	2425.611	8.77	807	60.14	2000	
Au	197	1	nogas	74.352	371.760	194.31	13	557.64	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	278797	1.90	249249	111.85	70	125	
Ge	72	1	nogas	1084999	0.74	1043848	103.94	70	125	
In	115	1	nogas	1188236	3.52	1062572	111.83	70	125	
Bi	209	1	nogas	1162179	1.07	1042758	111.45	70	125	
Ge	72	2	He	111795	0.69	111068	100.65	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	022_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-03T11:32:21-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
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	94.318	1.790	182612	1.67	100	94.3	90	110	
Na	23	1	nogas	11108.230	4.688	79624618	1.73	10000	111.1	90	110	CCV Main CR1-2 Failed
Mg	24	1	nogas	10572.139	2.032	49683157	1.84	10000	105.7	90	110	
Al	27	1	nogas	104.203	3.580	606109	3.22	100	104.2	90	110	
K	39	1	nogas	10234.094	2.879	57623818	2.18	10000	102.3	90	110	
Ti	47	1	nogas	98.593	6.119	59235	6.60	100	98.6	90	110	
V	51	1	nogas	129.514	0.893	1418755	0.58	100	129.5	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	99.889	1.714	768784	1.47	100	99.9	90	110	
Mn	55	1	nogas	101.890	0.372	964450	0.51	100	101.9	90	110	
Co	59	1	nogas	98.366	2.010	823314	1.19	100	98.4	90	110	
Ni	60	1	nogas	103.163	1.535	191096	0.86	100	103.2	90	110	
Cu	63	1	nogas	99.543	2.176	467404	1.47	100	99.5	90	110	
Zn	66	1	nogas	102.164	4.138	144742	3.50	100	102.2	90	110	
As	75	1	nogas	104.568	0.802	215267	1.06	100	104.6	90	110	
Sr	88	1	nogas	103.553	1.111	1054131	0.25	100	103.6	90	110	
Ag	107	1	nogas	101.968	3.877	575621	3.38	100	102.0	90	110	
Cd	111	1	nogas	100.037	1.367	117592	1.81	100	100.0	90	110	
Sb	121	1	nogas	99.306	1.823	494099	1.79	100	99.3	90	110	
Tl	205	1	nogas	99.208	3.248	1019266	1.21	100	99.2	90	110	
Pb	208	1	nogas	100.878	0.919	1427317	0.92	100	100.9	90	110	
U	238	1	nogas	105.617	3.198	1666295	1.91	100	105.6	90	110	
[Pb]	206	1	nogas	98.537	4.412	349932	2.21	100	98.5	90	110	
[Pb]	207	1	nogas	94.662	3.841	309805	1.70	100	94.7	90	110	
Na	23	2	He	10811.936	2.181	1864252	3.43	10000	108.1	90	110	
Mg	24	2	He	9954.683	1.424	835709	0.31	10000	99.5	90	110	
Al	27	2	He	105.157	5.429	2477	6.44	100	105.2	90	110	
K	39	2	He	10093.368	1.350	443507	1.32	10000	100.9	90	110	
Ca	43	2	He	9879.499	12.393	1533	10.54	10000	98.8	90	110	
Ca	44	2	He	9750.154	0.915	26416	2.34	10000	97.5	90	110	
V	51	2	He	101.858	0.887	97120	1.46	100	101.9	90	110	
Cr	52	2	He	98.923	1.055	126029	1.58	100	98.9	90	110	
Mn	55	2	He	102.070	2.897	52769	2.91	100	102.1	90	110	
Fe	56	2	He	10086.128	2.035	10226959	1.20	10000	100.9	90	110	
Co	59	2	He	100.300	1.513	217476	0.91	100	100.3	90	110	
Ni	60	2	He	101.288	2.379	60614	2.41	100	101.3	90	110	
Cu	63	2	He	100.553	1.856	172069	1.19	100	100.6	90	110	
Zn	66	2	He	101.581	1.429	25675	2.25	100	101.6	90	110	
As	75	2	He	99.580	0.898	16840	1.53	100	99.6	90	110	
Se	78	2	He	101.040	0.428	667	1.99	100	101.0	90	110	
B	11	1	nogas	514.914	0.981	700040	0.51	500	103.0	90	110	
Si	28	1	nogas	5291.462	0.423	14684522	0.70	5000	105.8	90	110	
Ca	43	1	nogas	10054.367	3.142	111876	2.37	10000	100.5	90	110	
Ca	44	1	nogas	10241.239	2.168	1912726	1.82	10000	102.4	90	110	
Fe	56	1	nogas	9939.091	1.246	88428442	0.96	10000	99.4	90	110	
Se	77	1	nogas	124.101	10.548	26396	3.68	100	124.1	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	102.514	2.482	8145	2.30	100	102.5	90	110	
Mo	95	1	nogas	101.456	1.727	215565	1.16	100	101.5	90	110	
Sn	118	1	nogas	98.334	2.546	338604	1.98	100	98.3	90	110	
Ba	137	1	nogas	99.298	1.278	156331	1.65	100	99.3	90	110	
Sb	121	2	He	99.473	2.223	75289	2.46	100	99.5	90	110	
Li	7	1	nogas	100.708	1.421	493179	1.60	100	100.7	90	110	
P	31	1	nogas	502.783	2.729	220977	1.53	500	100.6	90	110	
La	139	1	nogas	158.818	36.733	293	27.55	100	158.8	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	-3.127	-2475.791	7	86.60	100	-3.1	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	264051	0.42	249249	105.94	70	125	
Ge	72	1	nogas	1066315	0.87	1043848	102.15	70	125	
In	115	1	nogas	1091156	0.58	1062572	102.69	70	125	
Bi	209	1	nogas	1079752	2.23	1042758	103.55	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	107453	1.58	111068	96.75	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	023_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-03T11:34:20-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
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	0.068	84.7	180	69.4	1	
Na	23	1	nogas	98.956	6.6	2226485	2.7	100	
Mg	24	1	nogas	9.574	50.8	48183	48.8	100	
Al	27	1	nogas	-0.137	-42.8	13435	3.8	5	
K	39	1	nogas	-1.592	-418.0	2951679	0.4	100	
Ti	47	1	nogas	0.098	4.8	170	0.0	2.5	
V	51	1	nogas	31.889	5.9	558920	2.2	2.5	CCB Main CR1 Failed
Cr	52	1	nogas	0.447	13.9	13912	5.0	2.5	
Mn	55	1	nogas	0.213	23.3	7302	7.6	2.5	
Co	59	1	nogas	0.065	85.3	753	63.0	2.5	
Ni	60	1	nogas	-0.209	-2.9	2057	1.1	2.5	
Cu	63	1	nogas	0.145	38.1	8829	1.8	2.5	
Zn	66	1	nogas	0.216	37.4	717	15.6	2.5	
As	75	1	nogas	16.552	13.3	76718	4.5	2.5	CCB Main CR1 Failed
Sr	88	1	nogas	0.273	12.0	3464	10.3	2.5	
Ag	107	1	nogas	0.096	18.6	717	14.0	2.5	
Cd	111	1	nogas	0.067	27.0	87	24.0	1	
Sb	121	1	nogas	1.199	19.8	6551	18.4	2.5	
Tl	205	1	nogas	0.140	42.1	1713	37.3	1	
Pb	208	1	nogas	0.062	79.8	1983	35.5	2.5	
U	238	1	nogas	0.079	57.4	1527	50.0	2.5	
[Pb]	206	1	nogas	0.056	91.0	510	38.2	2.5	
[Pb]	207	1	nogas	0.041	102.7	360	40.9	2.5	
Na	23	2	He	108.068	12.4	71297	3.0	100	CCB Main CR1 Failed
Mg	24	2	He	5.716	12.3	647	10.3	100	
Al	27	2	He	-4.902	-21.8	63	36.5	5	
K	39	2	He	7.295	97.9	10076	3.0	100	
Ca	43	2	He	-61.012	-62.6	13	43.3	100	
Ca	44	2	He	19.644	28.4	167	9.2	100	
V	51	2	He	0.167	28.5	566	7.6	2.5	
Cr	52	2	He	-0.248	-20.8	960	5.8	2.5	
Mn	55	2	He	0.104	49.5	153	16.4	2.5	
Fe	56	2	He	6.397	9.6	9316	6.3	100	
Co	59	2	He	0.028	25.7	73	20.8	2.5	
Ni	60	2	He	-0.534	-8.5	290	10.3	2.5	
Cu	63	2	He	-0.094	-30.2	1747	2.2	2.5	
Zn	66	2	He	-0.238	-18.0	57	20.4	2.5	
As	75	2	He	0.041	145.6	17	60.0	2.5	
Se	78	2	He	-0.267	-176.6	5	57.3	2.5	
B	11	1	nogas	21.507	19.9	145165	3.8	10	CCB Main CR1 Failed
Si	28	1	nogas	10.499	55.7	901719	0.2	5	CCB Main CR1 Failed
Ca	43	1	nogas	27.289	19.2	660	9.5	100	
Ca	44	1	nogas	-15.712	-137.8	77242	3.4	100	
Fe	56	1	nogas	6.707	88.1	672507	7.8	100	
Se	77	1	nogas	109.995	10.7	25552	3.7	2.5	CCB Main CR1 Failed
Se	82	1	nogas	-0.691	-94.6	340	13.5	2.5	

Continuing Calibration Blank (CCB) Report

Mo	95	1	nogas	0.235	44.1	633	35.8	2.5	
Sn	118	1	nogas	0.190	9.7	1117	4.9	5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Ba	137	1	nogas	0.056	34.6	200	15.0	2.5	
Sb	121	2	He	0.881	16.1	707	14.2	2.5	
P	31	1	nogas	-0.709	-700.1	35434	4.1	10	
La	139	1	nogas	-6.444	-397.5	67	52.7	2.5	
Au	197	1	nogas	-4.228	-3613.5	7	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	297445	0.52	249249	119.34	70	125	
Ge	72	1	nogas	1081739	1.65	1043848	103.63	70	125	
In	115	1	nogas	1101542	0.91	1062572	103.67	70	125	
Bi	209	1	nogas	1096311	1.91	1042758	105.14	70	125	
Ge	72	2	He	107852	1.12	111068	97.10	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	034_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-03T11:56:29-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
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	94.265	2.802	189203	1.10	100	94.3	90	110	
Na	23	1	nogas	10727.406	1.878	78064383	3.01	10000	107.3	90	110	
Mg	24	1	nogas	10853.246	2.578	51719059	3.77	10000	108.5	90	110	
Al	27	1	nogas	104.255	1.329	615265	1.69	100	104.3	90	110	
K	39	1	nogas	10530.944	0.862	60074308	0.21	10000	105.3	90	110	
Ti	47	1	nogas	97.850	2.472	59633	2.63	100	97.9	90	110	
V	51	1	nogas	132.991	3.043	1470828	2.93	100	133.0	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	99.809	3.510	779426	3.90	100	99.8	90	110	
Mn	55	1	nogas	103.659	1.864	995341	1.84	100	103.7	90	110	
Co	59	1	nogas	101.441	1.629	861403	1.12	100	101.4	90	110	
Ni	60	1	nogas	103.219	2.061	193994	2.40	100	103.2	90	110	
Cu	63	1	nogas	99.457	0.413	473835	0.96	100	99.5	90	110	
Zn	66	1	nogas	103.101	1.672	148213	1.91	100	103.1	90	110	
As	75	1	nogas	118.869	1.994	241398	1.37	100	118.9	90	110	CCV Main CR1-2 Failed
Sr	88	1	nogas	105.712	0.533	1091751	0.34	100	105.7	90	110	
Ag	107	1	nogas	101.592	1.954	581886	1.94	100	101.6	90	110	
Cd	111	1	nogas	99.393	2.110	122322	0.65	100	99.4	90	110	
Sb	121	1	nogas	101.607	3.854	512859	3.69	100	101.6	90	110	
Tl	205	1	nogas	100.938	4.848	1076262	1.88	100	100.9	90	110	
Pb	208	1	nogas	106.023	1.170	1500062	1.17	100	106.0	90	110	
U	238	1	nogas	104.715	5.195	1714359	2.54	100	104.7	90	110	
[Pb]	206	1	nogas	99.925	4.389	368385	1.43	100	99.9	90	110	
[Pb]	207	1	nogas	97.056	4.892	329693	2.35	100	97.1	90	110	
Na	23	2	He	10839.966	1.827	1888456	1.48	10000	108.4	90	110	
Mg	24	2	He	10072.862	1.026	854746	1.02	10000	100.7	90	110	
Al	27	2	He	104.537	7.034	2487	5.00	100	104.5	90	110	
K	39	2	He	9900.484	1.093	435218	1.07	10000	99.0	90	110	
Ca	43	2	He	10162.788	11.815	1593	9.81	10000	101.6	90	110	
Ca	44	2	He	9621.998	1.179	26352	3.06	10000	96.2	90	110	
V	51	2	He	99.207	0.596	95620	1.53	100	99.2	90	110	
Cr	52	2	He	99.289	1.200	127837	0.78	100	99.3	90	110	
Mn	55	2	He	99.210	2.450	51837	1.52	100	99.2	90	110	
Fe	56	2	He	10148.775	3.372	10398515	1.49	10000	101.5	90	110	
Co	59	2	He	102.386	4.041	224300	2.13	100	102.4	90	110	
Ni	60	2	He	102.194	3.200	61788	1.21	100	102.2	90	110	
Cu	63	2	He	101.027	1.242	174733	1.03	100	101.0	90	110	
Zn	66	2	He	101.643	2.002	25962	1.53	100	101.6	90	110	
As	75	2	He	98.272	1.409	16796	0.92	100	98.3	90	110	
Se	78	2	He	95.485	12.179	637	11.15	100	95.5	90	110	
B	11	1	nogas	498.279	4.127	705650	1.21	500	99.7	90	110	
Si	28	1	nogas	5312.527	0.620	14953179	0.28	5000	106.3	90	110	
Ca	43	1	nogas	10500.887	1.501	118544	1.73	10000	105.0	90	110	
Ca	44	1	nogas	10371.077	2.084	1964145	2.02	10000	103.7	90	110	
Fe	56	1	nogas	10414.993	2.516	93979223	2.44	10000	104.1	90	110	
Se	77	1	nogas	209.263	6.675	34186	3.31	100	209.3	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	103.964	1.221	8375	1.76	100	104.0	90	110	
Mo	95	1	nogas	103.894	2.262	223964	2.45	100	103.9	90	110	
Sn	118	1	nogas	98.932	1.697	356730	0.97	100	98.9	90	110	
Ba	137	1	nogas	98.241	1.888	161953	1.76	100	98.2	90	110	
Sb	121	2	He	100.275	2.340	76712	2.68	100	100.3	90	110	
Li	7	1	nogas	99.842	2.160	507143	0.91	100	99.8	90	110	
P	31	1	nogas	507.774	1.972	226095	2.27	500	101.6	90	110	
La	139	1	nogas	156.100	15.586	303	12.48	100	156.1	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	300.777	89.785	30	66.67	100	300.8	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	273845	2.50	249249	109.87	70	125	
Ge	72	1	nogas	1081777	0.62	1043848	103.63	70	125	
In	115	1	nogas	1142669	1.48	1062572	107.54	70	125	
Bi	209	1	nogas	1121151	2.98	1042758	107.52	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	108610	1.98	111068	97.79	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	035_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-03T11:58:28-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
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	0.054	30.8	150	23.1	1	
Na	23	1	nogas	21.639	1.2	1707431	0.5	100	
Mg	24	1	nogas	10.161	46.7	51958	45.0	100	
Al	27	1	nogas	0.129	712.9	15218	36.0	5	
K	39	1	nogas	-3.835	-170.6	2985679	0.7	100	
Ti	47	1	nogas	0.061	70.7	150	17.6	2.5	
V	51	1	nogas	25.291	10.6	507457	5.4	2.5	CCB Main CR1 Failed
Cr	52	1	nogas	0.514	7.2	14646	1.7	2.5	
Mn	55	1	nogas	0.255	26.6	7822	8.0	2.5	
Co	59	1	nogas	0.061	63.9	733	45.4	2.5	
Ni	60	1	nogas	-0.481	-12.0	1577	7.3	2.5	
Cu	63	1	nogas	-0.131	-40.4	7655	2.8	2.5	
Zn	66	1	nogas	0.181	52.1	677	19.8	2.5	
As	75	1	nogas	20.474	11.1	84352	5.0	2.5	CCB Main CR1 Failed
Sr	88	1	nogas	0.404	4.7	4884	3.8	2.5	
Ag	107	1	nogas	0.104	22.3	770	16.9	2.5	
Cd	111	1	nogas	0.051	68.9	70	62.3	1	
Sb	121	1	nogas	1.126	24.4	6278	21.9	2.5	
Tl	205	1	nogas	0.156	52.8	1984	48.1	1	
Pb	208	1	nogas	0.072	66.5	2120	32.0	2.5	
U	238	1	nogas	0.086	52.9	1703	46.5	2.5	
[Pb]	206	1	nogas	0.040	81.2	470	26.7	2.5	
[Pb]	207	1	nogas	0.051	93.7	410	42.9	2.5	
Na	23	2	He	26.953	65.1	58019	1.9	100	
Mg	24	2	He	6.538	14.0	720	10.0	100	
Al	27	2	He	-4.677	-58.1	70	89.2	5	
K	39	2	He	-8.304	-108.7	9406	4.1	100	
Ca	43	2	He	-125.511	-30.9	3	173.2	100	
Ca	44	2	He	4.824	456.1	127	46.3	100	
V	51	2	He	-0.010	-226.7	400	2.0	2.5	
Cr	52	2	He	-0.140	-97.0	1107	17.6	2.5	
Mn	55	2	He	0.004	1881.1	103	40.3	2.5	
Fe	56	2	He	5.772	12.1	8729	4.9	100	
Co	59	2	He	0.025	61.2	67	45.8	2.5	
Ni	60	2	He	-0.634	-14.3	233	26.2	2.5	
Cu	63	2	He	-0.100	-25.4	1750	4.7	2.5	
Zn	66	2	He	-0.253	-47.0	53	57.3	2.5	
As	75	2	He	0.094	110.7	26	65.7	2.5	
Se	78	2	He	-0.688	-49.8	3	86.6	2.5	
B	11	1	nogas	19.778	30.7	142858	2.7	10	CCB Main CR1 Failed
Si	28	1	nogas	-2.700	-179.9	880400	1.0	5	
Ca	43	1	nogas	30.784	9.7	710	4.2	100	
Ca	44	1	nogas	-75.629	-22.0	67431	4.3	100	
Fe	56	1	nogas	8.798	70.8	701953	7.5	100	
Se	77	1	nogas	127.156	9.2	27474	4.4	2.5	CCB Main CR1 Failed
Se	82	1	nogas	-0.506	-115.2	360	12.1	2.5	
Mo	95	1	nogas	0.183	55.3	530	41.4	2.5	
Sn	118	1	nogas	0.138	29.7	970	15.2	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.110	43.0	297	27.2	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.742	16.9	607	16.5	2.5	
P	31	1	nogas	4.710	36.0	38069	2.2	10	
La	139	1	nogas	3.326	305.6	83	18.3	2.5	CCB Main CR1 Failed
Au	197	1	nogas	-4.835	-3138.2	7	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	297666	3.29	249249	119.43	70	125	
Ge	72	1	nogas	1098627	0.60	1043848	105.25	70	125	
In	115	1	nogas	1141870	1.41	1062572	107.46	70	125	
Bi	209	1	nogas	1149069	3.53	1042758	110.20	70	125	
Ge	72	2	He	108637	3.45	111068	97.81	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	046_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-03T12:20:36-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
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	96.692	5.398	187525	3.46	100	96.7	90	110	
Na	23	1	nogas	11083.521	1.859	79538737	1.38	10000	110.8	90	110	CCV Main CR1-2 Failed
Mg	24	1	nogas	10816.105	1.142	50876464	3.40	10000	108.2	90	110	
Al	27	1	nogas	106.404	1.966	613373	1.86	100	106.4	90	110	
K	39	1	nogas	10318.806	1.668	57594578	2.55	10000	103.2	90	110	
Ti	47	1	nogas	100.581	0.688	59911	2.34	100	100.6	90	110	
V	51	1	nogas	106.669	1.765	1205632	2.95	100	106.7	90	110	
Cr	52	1	nogas	101.735	2.637	775975	0.35	100	101.7	90	110	
Mn	55	1	nogas	104.087	3.324	976432	1.17	100	104.1	90	110	
Co	59	1	nogas	100.222	2.500	831599	0.42	100	100.2	90	110	
Ni	60	1	nogas	102.024	1.763	187398	0.92	100	102.0	90	110	
Cu	63	1	nogas	99.703	1.850	464140	0.53	100	99.7	90	110	
Zn	66	1	nogas	104.899	3.240	147321	1.44	100	104.9	90	110	
As	75	1	nogas	101.028	1.786	207874	2.01	100	101.0	90	110	
Sr	88	1	nogas	104.258	2.315	1052294	2.27	100	104.3	90	110	
Ag	107	1	nogas	102.563	1.810	574055	0.61	100	102.6	90	110	
Cd	111	1	nogas	100.440	1.479	116697	1.00	100	100.4	90	110	
Sb	121	1	nogas	106.135	2.003	523632	3.00	100	106.1	90	110	
Tl	205	1	nogas	101.962	6.181	1044990	2.62	100	102.0	90	110	
Pb	208	1	nogas	104.771	0.792	1482369	0.79	100	104.8	90	110	
U	238	1	nogas	104.765	3.251	1649913	1.07	100	104.8	90	110	
[Pb]	206	1	nogas	103.396	5.386	366416	1.85	100	103.4	90	110	
[Pb]	207	1	nogas	99.941	4.247	326452	0.62	100	99.9	90	110	
Na	23	2	He	10879.577	1.030	1823735	0.80	10000	108.8	90	110	
Mg	24	2	He	9983.733	2.036	815151	0.95	10000	99.8	90	110	
Al	27	2	He	113.399	4.962	2584	4.87	100	113.4	90	110	CCV Main CR1-2 Failed
K	39	2	He	9974.905	3.384	438416	3.31	10000	99.7	90	110	
Ca	43	2	He	9927.237	11.903	1500	11.55	10000	99.3	90	110	
Ca	44	2	He	9847.047	2.794	25938	1.81	10000	98.5	90	110	
V	51	2	He	101.239	1.163	93882	0.83	100	101.2	90	110	
Cr	52	2	He	102.144	1.076	126519	0.74	100	102.1	90	110	
Mn	55	2	He	100.382	3.352	50466	2.18	100	100.4	90	110	
Fe	56	2	He	10336.297	2.401	10192942	1.24	10000	103.4	90	110	
Co	59	2	He	102.227	1.926	215572	0.87	100	102.2	90	110	
Ni	60	2	He	104.663	0.973	60898	0.97	100	104.7	90	110	
Cu	63	2	He	102.579	2.088	170716	2.66	100	102.6	90	110	
Zn	66	2	He	104.467	3.194	25675	3.11	100	104.5	90	110	
As	75	2	He	99.570	1.452	16377	2.07	100	99.6	90	110	
Se	78	2	He	108.547	12.045	697	13.06	100	108.5	90	110	
B	11	1	nogas	577.705	2.126	774386	0.31	500	115.5	90	110	CCV Main CR1-2 Failed
Si	28	1	nogas	5414.189	1.439	14877202	1.44	5000	108.3	90	110	
Ca	43	1	nogas	10261.913	1.805	113214	1.15	10000	102.6	90	110	
Ca	44	1	nogas	10781.337	2.554	1992237	2.01	10000	107.8	90	110	
Fe	56	1	nogas	10147.703	1.876	89495635	0.74	10000	101.5	90	110	
Se	77	1	nogas	113.345	1.816	25268	2.91	100	113.3	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	106.421	1.613	8369	1.07	100	106.4	90	110	
Mo	95	1	nogas	104.383	2.554	219865	1.26	100	104.4	90	110	
Sn	118	1	nogas	102.267	0.721	348156	2.21	100	102.3	90	110	
Ba	137	1	nogas	103.688	1.201	161378	2.47	100	103.7	90	110	
Sb	121	2	He	103.388	1.548	76099	0.43	100	103.4	90	110	
Li	7	1	nogas	101.632	5.430	498311	3.37	100	101.6	90	110	
P	31	1	nogas	513.390	1.860	222999	1.46	500	102.7	90	110	
La	139	1	nogas	195.487	34.889	340	28.06	100	195.5	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	88.346	239.449	13	114.56	100	88.3	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	264674	1.94	249249	106.19	70	125	
Ge	72	1	nogas	1057378	2.24	1043848	101.30	70	125	
In	115	1	nogas	1078679	1.61	1062572	101.52	70	125	
Bi	209	1	nogas	1078247	3.71	1042758	103.40	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	104505	1.16	111068	94.09	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	047_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-03T12:22:35-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
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	18.8	203	17.3	1	
Na	23	1	nogas	81.069	5.9	2084956	1.4	100	
Mg	24	1	nogas	10.497	38.7	52052	36.2	100	
Al	27	1	nogas	-0.479	-27.0	11510	5.9	5	
K	39	1	nogas	6.657	26.5	3010009	0.8	100	
Ti	47	1	nogas	0.118	42.2	183	17.5	2.5	
V	51	1	nogas	9.731	26.9	360987	7.4	2.5	CCB Main CR1 Failed
Cr	52	1	nogas	0.281	18.6	12691	4.2	2.5	
Mn	55	1	nogas	0.413	14.5	9252	5.5	2.5	
Co	59	1	nogas	0.062	75.4	730	53.4	2.5	
Ni	60	1	nogas	-0.489	-12.2	1543	6.2	2.5	
Cu	63	1	nogas	-0.242	-16.9	7055	3.8	2.5	
Zn	66	1	nogas	0.105	61.0	560	15.6	2.5	
As	75	1	nogas	11.942	12.6	69633	4.5	2.5	CCB Main CR1 Failed
Sr	88	1	nogas	0.343	5.4	4197	4.1	2.5	
Ag	107	1	nogas	0.098	39.0	730	29.7	2.5	
Cd	111	1	nogas	0.051	30.3	70	28.6	1	
Sb	121	1	nogas	1.392	25.0	7548	22.3	2.5	
Tl	205	1	nogas	0.215	42.0	2520	38.8	1	
Pb	208	1	nogas	0.094	55.6	2430	30.4	2.5	
U	238	1	nogas	0.089	49.7	1680	43.3	2.5	
[Pb]	206	1	nogas	0.080	63.0	600	31.8	2.5	
[Pb]	207	1	nogas	0.109	50.9	587	32.6	2.5	
Na	23	2	He	85.885	11.6	65870	1.0	100	
Mg	24	2	He	6.855	12.1	723	8.9	100	
Al	27	2	He	-2.958	-27.3	103	14.8	5	
K	39	2	He	4.270	87.0	9946	1.6	100	
Ca	43	2	He	6.440	3277.4	23	137.8	100	
Ca	44	2	He	22.476	43.6	170	15.6	100	
V	51	2	He	-0.081	-15.8	321	1.8	2.5	
Cr	52	2	He	-0.288	-14.5	887	6.4	2.5	
Mn	55	2	He	0.243	29.5	220	15.7	2.5	
Fe	56	2	He	6.507	4.0	9192	1.7	100	
Co	59	2	He	0.043	49.4	103	43.6	2.5	
Ni	60	2	He	-0.492	-12.3	307	10.5	2.5	
Cu	63	2	He	-0.198	-54.5	1530	10.3	2.5	
Zn	66	2	He	-0.246	-52.3	53	60.3	2.5	
As	75	2	He	0.071	122.3	21	65.7	2.5	
Se	78	2	He	-0.154	-690.2	6	115.5	2.5	
B	11	1	nogas	40.908	18.1	172157	3.1	10	CCB Main CR1 Failed
Si	28	1	nogas	17.175	32.9	923544	0.6	5	CCB Main CR1 Failed
Ca	43	1	nogas	29.079	13.2	683	7.4	100	
Ca	44	1	nogas	-63.216	-10.9	68950	0.8	100	
Fe	56	1	nogas	0.821	535.2	622362	5.4	100	
Se	77	1	nogas	74.152	19.8	22548	6.7	2.5	CCB Main CR1 Failed
Se	82	1	nogas	0.366	238.5	423	15.7	2.5	

Continuing Calibration Blank (CCB) Report

Mo	95	1	nogas	0.488	22.1	1183	19.1	2.5	
Sn	118	1	nogas	0.179	22.6	1113	13.5	5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Ba	137	1	nogas	0.084	76.3	253	42.2	2.5	
Sb	121	2	He	1.311	12.7	1007	10.4	2.5	
P	31	1	nogas	8.268	29.5	38981	1.4	10	
La	139	1	nogas	1.149	1758.2	80	37.5	2.5	
Au	197	1	nogas	299.851	86.8	30	66.7	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	300689	2.64	249249	120.64	70	125	
Ge	72	1	nogas	1086524	1.04	1043848	104.09	70	125	
In	115	1	nogas	1136826	1.48	1062572	106.99	70	125	
Bi	209	1	nogas	1103881	1.28	1042758	105.86	70	125	
Ge	72	2	He	105166	1.90	111068	94.69	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	059_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-03T12:46:42-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	004CALB.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	0.055	59.5	160	47.2	1	
Na	23	1	nogas	-11.997	-59.3	1476369	0.8	100	
Mg	24	1	nogas	10.262	37.9	52590	33.5	100	
Al	27	1	nogas	-0.471	-11.3	11670	2.3	5	
K	39	1	nogas	0.746	233.0	3006706	0.2	100	
Ti	47	1	nogas	0.169	33.0	217	16.2	2.5	
V	51	1	nogas	19.297	9.6	451837	3.8	2.5	CCB Main CR1 Failed
Cr	52	1	nogas	0.454	10.0	14159	2.4	2.5	
Mn	55	1	nogas	0.458	11.1	9783	5.3	2.5	
Co	59	1	nogas	0.069	55.0	797	40.6	2.5	
Ni	60	1	nogas	-0.683	-12.0	1193	13.0	2.5	
Cu	63	1	nogas	-0.678	-5.8	5047	3.5	2.5	
Zn	66	1	nogas	0.117	15.7	583	4.3	2.5	
As	75	1	nogas	16.839	15.9	78281	5.5	2.5	CCB Main CR1 Failed
Sr	88	1	nogas	0.244	16.5	3210	13.1	2.5	
Ag	107	1	nogas	0.120	9.1	863	7.4	2.5	
Cd	111	1	nogas	0.055	62.0	73	55.1	1	
Sb	121	1	nogas	1.127	16.6	6278	15.2	2.5	
Tl	205	1	nogas	0.162	36.3	1990	32.1	1	
Pb	208	1	nogas	0.070	56.5	2097	26.9	2.5	
U	238	1	nogas	0.075	53.8	1473	45.1	2.5	
[Pb]	206	1	nogas	0.044	75.0	473	26.1	2.5	
[Pb]	207	1	nogas	0.057	62.2	420	29.3	2.5	
Na	23	2	He	-6.297	-164.5	51831	1.2	100	
Mg	24	2	He	7.903	3.6	827	0.7	100	
Al	27	2	He	-3.054	-63.6	103	40.3	5	
K	39	2	He	6.054	130.2	10023	3.4	100	
Ca	43	2	He	-103.532	-74.3	7	173.2	100	
Ca	44	2	He	17.514	59.3	160	16.5	100	
V	51	2	He	-0.023	-109.7	383	4.1	2.5	
Cr	52	2	He	-0.166	-30.1	1060	7.7	2.5	
Mn	55	2	He	0.254	33.0	230	17.4	2.5	
Fe	56	2	He	6.719	3.0	9606	3.5	100	
Co	59	2	He	0.048	41.7	117	38.7	2.5	
Ni	60	2	He	-0.593	-17.2	253	21.7	2.5	
Cu	63	2	He	-0.487	-6.4	1077	6.0	2.5	
Zn	66	2	He	-0.267	-76.5	50	105.8	2.5	
As	75	2	He	0.112	79.1	29	54.5	2.5	
Se	78	2	He	-0.155	-537.4	6	88.2	2.5	
B	11	1	nogas	35.224	5.9	171196	1.6	10	CCB Main CR1 Failed
Si	28	1	nogas	-7.707	-7.2	865725	0.5	5	
Ca	43	1	nogas	26.774	8.4	663	3.8	100	
Ca	44	1	nogas	-81.968	-6.7	66173	1.7	100	
Fe	56	1	nogas	11.517	50.1	725826	7.1	100	
Se	77	1	nogas	101.292	16.6	25151	6.0	2.5	CCB Main CR1 Failed
Se	82	1	nogas	-0.630	-18.5	350	2.9	2.5	
Mo	95	1	nogas	0.214	49.3	597	38.5	2.5	
Sn	118	1	nogas	0.201	29.1	1183	16.6	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.078	49.8	240	25.0	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.853	17.9	683	17.0	2.5	
P	31	1	nogas	10.298	11.2	40136	1.2	10	CCB Main CR1 Failed
La	139	1	nogas	-10.462	-361.1	63	87.0	2.5	
Au	197	1	nogas	36.372	613.4	10	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	312299	0.16	249249	125.30	70	125	ISTD Failed
Ge	72	1	nogas	1097049	0.33	1043848	105.10	70	125	
In	115	1	nogas	1128858	1.88	1062572	106.24	70	125	
Bi	209	1	nogas	1119081	0.82	1042758	107.32	70	125	
Ge	72	2	He	107400	2.23	111068	96.70	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	060_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-03T12:49:20-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
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	93.359	4.641	191095	1.28	100	93.4	90	110	
Na	23	1	nogas	10856.734	3.610	81079285	1.41	10000	108.6	90	110	
Mg	24	1	nogas	11037.973	2.713	53995045	0.35	10000	110.4	90	110	CCV Main CR1-2 Failed
Al	27	1	nogas	107.187	1.282	632820	1.86	100	107.2	90	110	
K	39	1	nogas	10643.327	0.574	60748233	1.11	10000	106.4	90	110	
Ti	47	1	nogas	103.288	0.282	63004	0.92	100	103.3	90	110	
V	51	1	nogas	112.817	1.216	1290164	1.59	100	112.8	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	101.412	0.644	792524	1.31	100	101.4	90	110	
Mn	55	1	nogas	104.977	0.751	1008930	0.24	100	105.0	90	110	
Co	59	1	nogas	101.566	1.984	863429	2.42	100	101.6	90	110	
Ni	60	1	nogas	103.685	3.681	195050	3.73	100	103.7	90	110	
Cu	63	1	nogas	101.188	3.946	482453	4.22	100	101.2	90	110	
Zn	66	1	nogas	103.388	1.584	148776	1.97	100	103.4	90	110	
As	75	1	nogas	102.027	1.864	214529	2.09	100	102.0	90	110	
Sr	88	1	nogas	101.778	0.700	1052209	0.53	100	101.8	90	110	
Ag	107	1	nogas	103.334	0.888	592496	1.58	100	103.3	90	110	
Cd	111	1	nogas	98.620	1.306	123582	3.60	100	98.6	90	110	
Sb	121	1	nogas	100.470	1.658	507662	1.77	100	100.5	90	110	
Tl	205	1	nogas	98.777	5.376	1063646	2.24	100	98.8	90	110	
Pb	208	1	nogas	105.583	0.925	1493838	0.92	100	105.6	90	110	
U	238	1	nogas	104.195	5.329	1722675	1.80	100	104.2	90	110	
[Pb]	206	1	nogas	97.663	4.331	363650	0.98	100	97.7	90	110	
[Pb]	207	1	nogas	96.472	3.979	331029	0.50	100	96.5	90	110	
Na	23	2	He	10644.442	0.663	1826507	1.07	10000	106.4	90	110	
Mg	24	2	He	10157.970	2.302	848392	0.95	10000	101.6	90	110	
Al	27	2	He	102.930	5.639	2414	4.09	100	102.9	90	110	
K	39	2	He	9970.947	1.481	438246	1.45	10000	99.7	90	110	
Ca	43	2	He	10268.301	9.043	1587	9.01	10000	102.7	90	110	
Ca	44	2	He	9947.298	1.815	26810	2.47	10000	99.5	90	110	
V	51	2	He	100.473	3.471	95291	1.89	100	100.5	90	110	
Cr	52	2	He	100.256	1.214	127054	0.60	100	100.3	90	110	
Mn	55	2	He	98.181	0.800	50506	0.85	100	98.2	90	110	
Fe	56	2	He	10365.160	1.118	10458319	1.81	10000	103.7	90	110	
Co	59	2	He	102.828	2.433	221808	1.22	100	102.8	90	110	
Ni	60	2	He	106.044	2.913	63099	1.62	100	106.0	90	110	
Cu	63	2	He	103.885	2.922	176783	1.36	100	103.9	90	110	
Zn	66	2	He	100.559	1.785	25284	0.47	100	100.6	90	110	
As	75	2	He	99.075	1.943	16668	1.06	100	99.1	90	110	
Se	78	2	He	94.127	5.150	619	3.56	100	94.1	90	110	
B	11	1	nogas	525.456	7.835	752385	0.86	500	105.1	90	110	
Si	28	1	nogas	5403.739	0.240	15210496	0.54	5000	108.1	90	110	
Ca	43	1	nogas	10697.983	0.557	120882	0.62	10000	107.0	90	110	
Ca	44	1	nogas	10769.248	2.217	2038688	2.64	10000	107.7	90	110	
Fe	56	1	nogas	10534.179	1.115	95150758	1.80	10000	105.3	90	110	
Se	77	1	nogas	119.383	19.556	26410	8.37	100	119.4	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	103.080	2.774	8315	2.63	100	103.1	90	110	
Mo	95	1	nogas	104.217	0.781	224875	0.07	100	104.2	90	110	
Sn	118	1	nogas	97.962	3.307	359393	0.83	100	98.0	90	110	
Ba	137	1	nogas	97.268	3.434	163132	0.92	100	97.3	90	110	
Sb	121	2	He	97.665	1.392	73562	2.94	100	97.7	90	110	
Li	7	1	nogas	99.373	0.399	515751	5.77	100	99.4	90	110	
P	31	1	nogas	523.208	0.181	232102	0.85	500	104.6	90	110	
La	139	1	nogas	142.235	33.825	290	27.37	100	142.2	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	170.604	267.060	20	173.21	100	170.6	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	279640	5.72	249249	112.19	70	125	
Ge	72	1	nogas	1082874	0.71	1043848	103.74	70	125	
In	115	1	nogas	1163460	4.05	1062572	109.49	70	125	
Bi	209	1	nogas	1132557	3.69	1042758	108.61	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	106910	1.55	111068	96.26	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	072_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-03T13:13:17-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	004CALB.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	0.102	30.1	280	28.6	1	
Na	23	1	nogas	25.182	24.1	1832619	0.8	100	
Mg	24	1	nogas	13.844	20.3	73591	17.7	100	
Al	27	1	nogas	-0.458	-6.3	12451	1.3	5	
K	39	1	nogas	-9.022	-120.5	3129412	0.3	100	
Ti	47	1	nogas	0.220	38.0	263	22.3	2.5	
V	51	1	nogas	16.809	22.4	454383	6.2	2.5	CCB Main CR1 Failed
Cr	52	1	nogas	0.437	15.4	14859	1.9	2.5	
Mn	55	1	nogas	0.457	13.6	10343	4.0	2.5	
Co	59	1	nogas	0.059	8.2	760	8.0	2.5	
Ni	60	1	nogas	-0.594	-8.8	1443	7.4	2.5	
Cu	63	1	nogas	-0.651	-10.8	5491	7.7	2.5	
Zn	66	1	nogas	0.266	39.5	850	20.4	2.5	
As	75	1	nogas	14.230	17.0	78429	4.2	2.5	CCB Main CR1 Failed
Sr	88	1	nogas	0.300	10.3	4017	8.0	2.5	
Ag	107	1	nogas	0.153	9.9	1120	10.3	2.5	
Cd	111	1	nogas	0.105	35.9	143	35.1	1	
Sb	121	1	nogas	1.525	21.7	8816	20.8	2.5	
Tl	205	1	nogas	0.202	36.6	2540	32.7	1	
Pb	208	1	nogas	0.119	39.2	2780	23.7	2.5	
U	238	1	nogas	0.113	34.8	2214	30.9	2.5	
[Pb]	206	1	nogas	0.087	31.7	667	15.0	2.5	
[Pb]	207	1	nogas	0.106	55.1	617	34.3	2.5	
Na	23	2	He	24.830	50.8	59399	1.5	100	
Mg	24	2	He	7.858	7.0	857	3.4	100	
Al	27	2	He	-3.991	-26.7	87	29.0	5	
K	39	2	He	8.305	52.6	10120	1.9	100	
Ca	43	2	He	-105.616	-34.7	7	86.6	100	
Ca	44	2	He	22.448	76.2	180	24.2	100	
V	51	2	He	-0.020	-110.4	403	4.5	2.5	
Cr	52	2	He	-0.204	-8.9	1053	2.4	2.5	
Mn	55	2	He	0.143	71.0	180	29.4	2.5	
Fe	56	2	He	8.325	14.9	11694	11.0	100	
Co	59	2	He	0.053	38.7	133	37.0	2.5	
Ni	60	2	He	-0.436	-35.4	360	24.1	2.5	
Cu	63	2	He	-0.399	-27.1	1273	14.3	2.5	
Zn	66	2	He	-0.171	-80.5	77	49.4	2.5	
As	75	2	He	0.191	72.4	43	53.3	2.5	
Se	78	2	He	-0.986	-17.2	1	173.2	2.5	
B	11	1	nogas	43.061	6.5	190667	1.4	10	CCB Main CR1 Failed
Si	28	1	nogas	-7.615	-104.9	917647	0.5	5	
Ca	43	1	nogas	22.191	26.9	647	8.8	100	
Ca	44	1	nogas	-107.031	-6.6	65234	1.0	100	
Fe	56	1	nogas	5.980	38.1	715956	2.9	100	
Se	77	1	nogas	91.365	15.6	25728	5.2	2.5	CCB Main CR1 Failed
Se	82	1	nogas	-1.054	-48.5	337	14.7	2.5	
Mo	95	1	nogas	0.282	33.2	790	27.1	2.5	
Sn	118	1	nogas	0.246	19.2	1430	12.0	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.079	99.3	257	52.9	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	1.029	17.2	850	16.3	2.5	
P	31	1	nogas	6.151	57.0	40854	1.1	10	
La	139	1	nogas	-32.667	-50.4	33	75.5	2.5	
Au	197	1	nogas	107.525	169.4	17	91.7	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	327420	2.90	249249	131.36	70	125	ISTD Failed
Ge	72	1	nogas	1162948	2.29	1043848	111.41	70	125	
In	115	1	nogas	1200717	1.89	1062572	113.00	70	125	
Bi	209	1	nogas	1183013	3.50	1042758	113.45	70	125	
Ge	72	2	He	111850	2.32	111068	100.70	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	073_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-03T13:15:42-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
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	93.419	3.799	199147	2.61	100	93.4	90	110	
Na	23	1	nogas	11004.131	3.570	82882275	0.92	10000	110.0	90	110	CCV Main CR1-2 Failed
Mg	24	1	nogas	11267.785	5.187	55578662	2.28	10000	112.7	90	110	CCV Main CR1-2 Failed
Al	27	1	nogas	107.676	2.215	654799	0.86	100	107.7	90	110	
K	39	1	nogas	10530.962	4.362	61938278	2.59	10000	105.3	90	110	
Ti	47	1	nogas	100.329	0.826	63058	1.03	100	100.3	90	110	
V	51	1	nogas	113.755	2.535	1338387	3.70	100	113.8	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	100.058	2.480	805735	2.17	100	100.1	90	110	
Mn	55	1	nogas	102.735	3.134	1017363	2.54	100	102.7	90	110	
Co	59	1	nogas	98.160	2.677	859550	0.86	100	98.2	90	110	
Ni	60	1	nogas	101.284	4.404	196300	3.00	100	101.3	90	110	
Cu	63	1	nogas	101.213	3.393	497052	2.11	100	101.2	90	110	
Zn	66	1	nogas	104.377	1.497	154737	0.94	100	104.4	90	110	
As	75	1	nogas	103.972	2.559	224221	0.72	100	104.0	90	110	
Sr	88	1	nogas	103.075	3.225	1097649	1.53	100	103.1	90	110	
Ag	107	1	nogas	101.655	2.393	600411	0.61	100	101.7	90	110	
Cd	111	1	nogas	100.180	1.409	124584	1.58	100	100.2	90	110	
Sb	121	1	nogas	100.533	4.084	523201	2.50	100	100.5	90	110	
Tl	205	1	nogas	101.180	3.830	1086746	1.50	100	101.2	90	110	
Pb	208	1	nogas	108.160	0.819	1530270	0.82	100	108.2	90	110	
U	238	1	nogas	103.909	6.090	1713331	4.28	100	103.9	90	110	
[Pb]	206	1	nogas	101.273	3.668	376062	1.39	100	101.3	90	110	
[Pb]	207	1	nogas	98.379	3.783	336629	1.70	100	98.4	90	110	
Na	23	2	He	10334.677	0.616	1843023	0.73	10000	103.3	90	110	
Mg	24	2	He	9864.900	1.584	855639	0.87	10000	98.6	90	110	
Al	27	2	He	99.712	5.265	2434	3.82	100	99.7	90	110	
K	39	2	He	10193.370	1.829	447804	1.79	10000	101.9	90	110	
Ca	43	2	He	10322.037	7.188	1657	7.85	10000	103.2	90	110	
Ca	44	2	He	9170.941	3.339	25675	3.53	10000	91.7	90	110	
V	51	2	He	99.573	0.254	98099	1.06	100	99.6	90	110	
Cr	52	2	He	99.170	4.103	130496	3.17	100	99.2	90	110	
Mn	55	2	He	97.446	2.929	52051	2.61	100	97.4	90	110	
Fe	56	2	He	10105.837	2.117	10586517	1.09	10000	101.1	90	110	
Co	59	2	He	100.855	1.585	225929	0.90	100	100.9	90	110	
Ni	60	2	He	102.630	1.405	63450	2.16	100	102.6	90	110	
Cu	63	2	He	101.020	2.574	178582	1.78	100	101.0	90	110	
Zn	66	2	He	99.988	3.032	26106	2.08	100	100.0	90	110	
As	75	2	He	98.821	2.962	17263	2.17	100	98.8	90	110	
Se	78	2	He	99.454	3.803	679	3.73	100	99.5	90	110	
B	11	1	nogas	519.535	2.467	776745	0.37	500	103.9	90	110	
Si	28	1	nogas	5450.195	1.801	15797233	0.34	5000	109.0	90	110	
Ca	43	1	nogas	10463.219	4.905	121775	3.53	10000	104.6	90	110	
Ca	44	1	nogas	10338.643	1.987	2019625	1.70	10000	103.4	90	110	
Fe	56	1	nogas	10183.798	2.945	94772338	1.64	10000	101.8	90	110	
Se	77	1	nogas	127.748	13.702	27935	3.85	100	127.7	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	97.406	8.015	8115	6.90	100	97.4	90	110	
Mo	95	1	nogas	102.552	3.041	227993	2.89	100	102.6	90	110	
Sn	118	1	nogas	100.193	2.970	364925	0.56	100	100.2	90	110	
Ba	137	1	nogas	98.844	4.057	164564	1.97	100	98.8	90	110	
Sb	121	2	He	96.650	2.434	75573	2.08	100	96.7	90	110	
Li	7	1	nogas	100.001	0.963	539543	1.47	100	100.0	90	110	
P	31	1	nogas	523.247	3.969	239109	2.48	500	104.6	90	110	
La	139	1	nogas	199.778	20.912	370	16.88	100	199.8	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	37.877	344.373	10	100.00	100	37.9	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	290829	1.79	249249	116.68	70	125	
Ge	72	1	nogas	1115825	1.84	1043848	106.90	70	125	
In	115	1	nogas	1154641	2.50	1062572	108.66	70	125	
Bi	209	1	nogas	1128982	2.49	1042758	108.27	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	111011	1.09	111068	99.95	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	085_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-03T13:40:00-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	004CALB.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	0.063	35.9	193	28.5	1	
Na	23	1	nogas	-25.276	-23.5	1438893	0.9	100	
Mg	24	1	nogas	10.609	34.0	56634	29.7	100	
Al	27	1	nogas	-0.442	-1.9	12778	3.2	5	
K	39	1	nogas	-23.727	-49.4	3098209	0.7	100	
Ti	47	1	nogas	0.120	90.8	200	34.6	2.5	
V	51	1	nogas	26.713	19.6	559836	6.4	2.5	CCB Main CR1 Failed
Cr	52	1	nogas	0.547	17.7	16047	2.7	2.5	
Mn	55	1	nogas	0.426	6.0	10223	4.6	2.5	
Co	59	1	nogas	0.064	45.1	820	34.9	2.5	
Ni	60	1	nogas	-0.679	-10.1	1293	7.8	2.5	
Cu	63	1	nogas	-0.936	-2.9	4127	2.8	2.5	
Zn	66	1	nogas	0.164	10.7	703	5.9	2.5	
As	75	1	nogas	21.038	25.4	91711	7.6	2.5	CCB Main CR1 Failed
Sr	88	1	nogas	0.247	4.1	3494	2.4	2.5	
Ag	107	1	nogas	0.113	13.1	890	13.0	2.5	
Cd	111	1	nogas	0.033	47.3	50	40.0	1	
Sb	121	1	nogas	1.377	20.0	8169	20.5	2.5	
Tl	205	1	nogas	0.195	30.6	2467	30.4	1	
Pb	208	1	nogas	0.061	62.0	1960	27.2	2.5	
U	238	1	nogas	0.080	45.9	1653	41.7	2.5	
[Pb]	206	1	nogas	0.037	120.3	473	40.0	2.5	
[Pb]	207	1	nogas	0.064	12.6	463	6.6	2.5	
Na	23	2	He	-36.542	-26.1	48068	1.8	100	
Mg	24	2	He	5.826	11.7	670	6.8	100	
Al	27	2	He	-5.275	-8.5	57	20.4	5	
K	39	2	He	-1.706	-713.8	9689	5.4	100	
Ca	43	2	He	-42.162	-85.3	17	34.6	100	
Ca	44	2	He	8.428	185.2	140	32.7	100	
V	51	2	He	0.030	53.8	446	2.5	2.5	
Cr	52	2	He	-0.124	-83.4	1143	11.5	2.5	
Mn	55	2	He	0.184	36.2	200	18.0	2.5	
Fe	56	2	He	6.036	11.6	9152	6.7	100	
Co	59	2	He	0.033	56.6	87	48.0	2.5	
Ni	60	2	He	-0.497	-11.8	320	13.6	2.5	
Cu	63	2	He	-0.573	-6.3	957	7.0	2.5	
Zn	66	2	He	-0.218	-36.6	63	32.9	2.5	
As	75	2	He	0.129	40.1	32	26.0	2.5	
Se	78	2	He	-0.298	-199.7	5	78.1	2.5	
B	11	1	nogas	28.126	10.5	176805	1.5	10	CCB Main CR1 Failed
Si	28	1	nogas	-35.121	-20.3	854363	0.5	5	
Ca	43	1	nogas	20.575	21.9	640	10.2	100	
Ca	44	1	nogas	-133.669	-4.8	61123	2.8	100	
Fe	56	1	nogas	9.795	35.0	767024	7.0	100	
Se	77	1	nogas	133.366	18.2	30155	5.4	2.5	CCB Main CR1 Failed
Se	82	1	nogas	-0.694	-106.0	373	19.0	2.5	
Mo	95	1	nogas	0.193	33.1	597	27.7	2.5	
Sn	118	1	nogas	0.173	34.6	1140	19.5	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.074	79.3	247	40.6	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	1.103	7.5	897	7.6	2.5	
P	31	1	nogas	10.134	21.5	43230	0.8	10	CCB Main CR1 Failed
La	139	1	nogas	-23.407	-86.8	47	65.5	2.5	
Au	197	1	nogas	118.690	224.0	17	124.9	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	342011	1.49	249249	137.22	70	125	ISTD Failed
Ge	72	1	nogas	1183903	2.81	1043848	113.42	70	125	
In	115	1	nogas	1187657	0.31	1062572	111.77	70	125	
Bi	209	1	nogas	1173911	3.20	1042758	112.58	70	125	
Ge	72	2	He	110377	2.36	111068	99.38	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	086_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-03T13:42:07-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
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	92.069	4.090	203169	1.31	100	92.1	90	110	
Na	23	1	nogas	11118.686	2.783	86097600	2.40	10000	111.2	90	110	CCV Main CR1-2 Failed
Mg	24	1	nogas	11371.236	1.813	57696812	1.37	10000	113.7	90	110	CCV Main CR1-2 Failed
Al	27	1	nogas	103.657	3.671	665330	1.65	100	103.7	90	110	
K	39	1	nogas	10259.909	3.648	63737031	1.79	10000	102.6	90	110	
Ti	47	1	nogas	96.441	4.096	63911	1.92	100	96.4	90	110	
V	51	1	nogas	117.029	6.130	1442770	3.31	100	117.0	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	97.779	4.572	830310	1.56	100	97.8	90	110	
Mn	55	1	nogas	100.404	5.890	1048061	2.88	100	100.4	90	110	
Co	59	1	nogas	95.939	4.670	885751	1.62	100	95.9	90	110	
Ni	60	1	nogas	97.862	4.500	200094	1.35	100	97.9	90	110	
Cu	63	1	nogas	95.944	5.316	497256	2.97	100	95.9	90	110	
Zn	66	1	nogas	100.854	3.741	157671	1.77	100	100.9	90	110	
As	75	1	nogas	105.991	5.229	239950	1.34	100	106.0	90	110	
Sr	88	1	nogas	98.636	5.007	1107445	1.93	100	98.6	90	110	
Ag	107	1	nogas	99.340	4.935	618558	1.87	100	99.3	90	110	
Cd	111	1	nogas	99.812	1.673	127393	2.35	100	99.8	90	110	
Sb	121	1	nogas	98.865	4.616	542605	2.17	100	98.9	90	110	
Tl	205	1	nogas	104.296	1.742	1146690	0.87	100	104.3	90	110	
Pb	208	1	nogas	112.025	0.346	1584924	0.35	100	112.0	90	110	CCV Main CR1-2 Failed
U	238	1	nogas	107.768	4.929	1818925	3.86	100	107.8	90	110	
[Pb]	206	1	nogas	104.341	2.194	396566	0.75	100	104.3	90	110	
[Pb]	207	1	nogas	99.738	2.442	349300	0.98	100	99.7	90	110	
Na	23	2	He	10771.034	2.572	1926769	3.37	10000	107.7	90	110	
Mg	24	2	He	10091.208	2.078	879081	3.09	10000	100.9	90	110	
Al	27	2	He	105.673	17.323	2580	16.20	100	105.7	90	110	
K	39	2	He	10338.900	1.952	454058	1.91	10000	103.4	90	110	
Ca	43	2	He	9068.974	18.924	1463	18.36	10000	90.7	90	110	
Ca	44	2	He	9238.736	4.570	25965	4.01	10000	92.4	90	110	
V	51	2	He	101.861	1.636	100769	2.71	100	101.9	90	110	
Cr	52	2	He	101.683	1.660	134340	0.63	100	101.7	90	110	
Mn	55	2	He	95.606	1.864	51279	0.72	100	95.6	90	110	
Fe	56	2	He	9967.091	2.350	10484037	1.24	10000	99.7	90	110	
Co	59	2	He	99.709	1.044	224297	1.09	100	99.7	90	110	
Ni	60	2	He	102.014	0.627	63333	1.65	100	102.0	90	110	
Cu	63	2	He	105.125	2.540	186585	3.53	100	105.1	90	110	
Zn	66	2	He	101.865	2.456	26713	3.54	100	101.9	90	110	
As	75	2	He	99.212	1.496	17405	1.61	100	99.2	90	110	
Se	78	2	He	91.557	1.464	628	2.21	100	91.6	90	110	
B	11	1	nogas	519.148	5.835	803330	2.26	500	103.8	90	110	
Si	28	1	nogas	5268.301	3.963	16133673	1.60	5000	105.4	90	110	
Ca	43	1	nogas	10267.445	2.995	126085	2.29	10000	102.7	90	110	
Ca	44	1	nogas	10187.482	5.703	2098873	2.76	10000	101.9	90	110	
Fe	56	1	nogas	10057.426	6.520	98648311	3.40	10000	100.6	90	110	
Se	77	1	nogas	160.996	13.372	32599	3.80	100	161.0	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	101.547	9.362	8899	6.75	100	101.5	90	110	
Mo	95	1	nogas	100.114	3.810	234675	1.18	100	100.1	90	110	
Sn	118	1	nogas	100.582	2.379	376002	0.87	100	100.6	90	110	
Ba	137	1	nogas	98.753	2.364	168769	0.69	100	98.8	90	110	
Sb	121	2	He	97.892	0.412	76869	1.56	100	97.9	90	110	
Li	7	1	nogas	99.395	2.540	555344	1.25	100	99.4	90	110	
P	31	1	nogas	504.165	5.330	244331	1.77	500	100.8	90	110	
La	139	1	nogas	173.432	37.498	340	28.06	100	173.4	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	34.483	368.323	10	100.00	100	34.5	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	301167	2.73	249249	120.83	70	125	
Ge	72	1	nogas	1177220	3.19	1043848	112.78	70	125	
In	115	1	nogas	1184836	1.84	1062572	111.51	70	125	
Bi	209	1	nogas	1155179	1.92	1042758	110.78	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	111470	1.14	111068	100.36	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	097_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-03T14:06:57-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
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	96.609	3.322	208636	0.23	100	96.6	90	110	
Na	23	1	nogas	11486.810	2.373	89785250	1.76	10000	114.9	90	110	CCV Main CR1-2 Failed
Mg	24	1	nogas	11554.224	2.640	59211572	2.10	10000	115.5	90	110	CCV Main CR1-2 Failed
Al	27	1	nogas	104.455	2.868	683378	0.80	100	104.5	90	110	
K	39	1	nogas	10436.780	3.133	66036774	1.06	10000	104.4	90	110	
Ti	47	1	nogas	100.351	3.715	67788	1.44	100	100.4	90	110	
V	51	1	nogas	168.791	1.954	1988853	1.39	100	168.8	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	102.532	3.826	887167	1.64	100	102.5	90	110	
Mn	55	1	nogas	104.451	3.274	1111812	1.09	100	104.5	90	110	
Co	59	1	nogas	95.041	3.640	894691	1.31	100	95.0	90	110	
Ni	60	1	nogas	97.878	2.677	204102	1.84	100	97.9	90	110	
Cu	63	1	nogas	95.983	3.359	507234	1.00	100	96.0	90	110	
Zn	66	1	nogas	101.355	1.719	161566	0.84	100	101.4	90	110	
As	75	1	nogas	128.771	4.157	285314	2.15	100	128.8	90	110	CCV Main CR1-2 Failed
Sr	88	1	nogas	100.723	0.554	1153740	2.01	100	100.7	90	110	
Ag	107	1	nogas	98.274	4.060	623953	1.95	100	98.3	90	110	
Cd	111	1	nogas	98.355	1.649	131006	1.53	100	98.4	90	110	
Sb	121	1	nogas	99.379	3.268	556105	0.85	100	99.4	90	110	
Tl	205	1	nogas	96.678	3.788	1153229	2.83	100	96.7	90	110	
Pb	208	1	nogas	117.449	1.343	1661610	1.34	100	117.4	90	110	CCV Main CR1-2 Failed
U	238	1	nogas	102.638	3.641	1879626	1.48	100	102.6	90	110	
[Pb]	206	1	nogas	97.356	5.934	401129	0.98	100	97.4	90	110	
[Pb]	207	1	nogas	96.784	6.106	367441	1.57	100	96.8	90	110	
Na	23	2	He	11354.652	3.826	2093798	1.78	10000	113.5	90	110	CCV Main CR1-2 Failed
Mg	24	2	He	10359.995	2.797	931789	0.83	10000	103.6	90	110	
Al	27	2	He	103.967	6.718	2624	5.12	100	104.0	90	110	
K	39	2	He	10972.809	0.840	481299	0.82	10000	109.7	90	110	
Ca	43	2	He	10524.798	4.677	1750	2.62	10000	105.2	90	110	
Ca	44	2	He	9734.486	0.653	28262	2.57	10000	97.3	90	110	
V	51	2	He	103.251	1.733	105485	1.97	100	103.3	90	110	
Cr	52	2	He	105.026	0.575	143296	1.52	100	105.0	90	110	
Mn	55	2	He	100.811	2.625	55838	1.26	100	100.8	90	110	
Fe	56	2	He	10427.452	2.266	11328739	0.89	10000	104.3	90	110	
Co	59	2	He	102.325	1.836	237726	0.46	100	102.3	90	110	
Ni	60	2	He	105.059	2.270	67334	0.86	100	105.1	90	110	
Cu	63	2	He	103.271	1.756	189329	2.14	100	103.3	90	110	
Zn	66	2	He	102.659	2.736	27801	3.10	100	102.7	90	110	
As	75	2	He	101.776	2.565	18438	1.08	100	101.8	90	110	
Se	78	2	He	104.919	2.459	742	0.71	100	104.9	90	110	
B	11	1	nogas	555.736	3.821	833552	0.14	500	111.1	90	110	CCV Main CR1-2 Failed
Si	28	1	nogas	5353.595	3.512	16697640	1.08	5000	107.1	90	110	
Ca	43	1	nogas	10081.111	3.077	126190	1.74	10000	100.8	90	110	
Ca	44	1	nogas	10242.196	0.698	2152356	1.81	10000	102.4	90	110	
Fe	56	1	nogas	10202.754	3.199	102076442	0.83	10000	102.0	90	110	
Se	77	1	nogas	294.814	4.242	46159	2.36	100	294.8	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	100.220	1.933	8969	2.25	100	100.2	90	110	
Mo	95	1	nogas	98.646	2.977	235751	0.57	100	98.6	90	110	
Sn	118	1	nogas	97.292	2.446	379633	1.71	100	97.3	90	110	
Ba	137	1	nogas	99.667	3.132	177780	2.44	100	99.7	90	110	
Sb	121	2	He	100.714	2.813	81661	1.17	100	100.7	90	110	
Li	7	1	nogas	101.752	3.214	555622	2.69	100	101.8	90	110	
P	31	1	nogas	514.469	3.892	253404	0.84	500	102.9	90	110	
La	139	1	nogas	152.488	53.099	320	36.04	100	152.5	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	20.304	961.842	10	173.21	100	20.3	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	294740	3.37	249249	118.25	70	125	
Ge	72	1	nogas	1199858	2.47	1043848	114.95	70	125	
In	115	1	nogas	1236862	3.09	1062572	116.40	70	125	
Bi	209	1	nogas	1254362	4.98	1042758	120.29	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	115145	1.96	111068	103.67	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	098_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-03T14:08:57-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	004CALB.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	0.054	51.9	163	43.4	1	
Na	23	1	nogas	233.214	4.3	3507772	1.4	100	CCB Main CR1 Failed
Mg	24	1	nogas	8.383	34.3	46772	32.6	100	
Al	27	1	nogas	-0.384	-18.5	12951	2.3	5	
K	39	1	nogas	12.534	147.5	3267037	0.8	100	
Ti	47	1	nogas	0.069	133.1	163	33.7	2.5	
V	51	1	nogas	54.852	2.8	827180	4.6	2.5	CCB Main CR1 Failed
Cr	52	1	nogas	0.904	9.4	18800	2.9	2.5	
Mn	55	1	nogas	0.449	10.5	10310	3.9	2.5	
Co	59	1	nogas	0.054	88.4	703	58.7	2.5	
Ni	60	1	nogas	-0.380	-18.3	1877	6.4	2.5	
Cu	63	1	nogas	-0.798	-5.7	4764	2.0	2.5	
Zn	66	1	nogas	0.251	26.5	827	10.6	2.5	
As	75	1	nogas	35.791	1.1	116232	2.6	2.5	CCB Main CR1 Failed
Sr	88	1	nogas	0.265	12.9	3637	8.2	2.5	
Ag	107	1	nogas	0.134	23.3	1007	17.5	2.5	
Cd	111	1	nogas	0.063	60.1	93	55.0	1	
Sb	121	1	nogas	1.177	24.5	6922	19.8	2.5	
Tl	205	1	nogas	0.169	46.3	2294	43.4	1	
Pb	208	1	nogas	0.083	62.9	2273	32.4	2.5	
U	238	1	nogas	0.078	29.2	1683	25.9	2.5	
[Pb]	206	1	nogas	0.042	105.3	520	38.4	2.5	
[Pb]	207	1	nogas	0.079	47.8	547	29.1	2.5	
Na	23	2	He	274.529	10.8	102396	1.9	100	CCB Main CR1 Failed
Mg	24	2	He	6.349	18.0	720	10.5	100	
Al	27	2	He	-3.927	-69.1	87	69.6	5	
K	39	2	He	16.067	28.0	10453	1.8	100	
Ca	43	2	He	-45.482	-276.1	17	124.9	100	
Ca	44	2	He	2.787	1048.5	123	63.0	100	
V	51	2	He	0.267	33.3	681	10.7	2.5	
Cr	52	2	He	-0.148	-80.6	1123	15.1	2.5	
Mn	55	2	He	0.219	49.3	220	25.3	2.5	
Fe	56	2	He	6.397	9.8	9613	5.8	100	
Co	59	2	He	0.026	37.8	73	34.3	2.5	
Ni	60	2	He	-0.402	-9.9	380	4.6	2.5	
Cu	63	2	He	-0.572	-10.9	963	8.7	2.5	
Zn	66	2	He	-0.298	-36.5	43	66.6	2.5	
As	75	2	He	0.184	22.5	42	16.4	2.5	
Se	78	2	He	-0.477	-220.6	4	173.2	2.5	
B	11	1	nogas	37.744	8.4	181476	0.7	10	CCB Main CR1 Failed
Si	28	1	nogas	-37.820	-28.4	834660	0.9	5	
Ca	43	1	nogas	26.667	23.8	703	8.2	100	
Ca	44	1	nogas	-144.414	-10.5	58127	2.3	100	
Fe	56	1	nogas	16.715	31.9	821959	3.8	100	
Se	77	1	nogas	223.094	3.9	38207	4.5	2.5	CCB Main CR1 Failed
Se	82	1	nogas	-0.932	-52.5	347	8.8	2.5	
Mo	95	1	nogas	0.194	59.2	583	42.6	2.5	
Sn	118	1	nogas	0.151	20.8	1127	9.3	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.045	41.9	210	16.5	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.937	8.1	773	5.8	2.5	
P	31	1	nogas	7.585	40.1	41596	0.6	10	
La	139	1	nogas	-27.059	-51.2	43	48.0	2.5	
Au	197	1	nogas	-10.684	-1325.4	7	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	324648	2.69	249249	130.25	70	125	ISTD Failed
Ge	72	1	nogas	1167579	2.85	1043848	111.85	70	125	
In	115	1	nogas	1264147	3.37	1062572	118.97	70	125	
Bi	209	1	nogas	1238341	4.07	1042758	118.76	70	125	
Ge	72	2	He	111353	3.49	111068	100.26	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	2018-01-03T14:29:59-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
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	97.687	4.352	211927	2.15	100	97.7	90	110	
Na	23	1	nogas	11539.787	3.136	93451283	2.57	10000	115.4	90	110	CCV Main CR1-2 Failed
Mg	24	1	nogas	11280.422	3.049	59901470	2.84	10000	112.8	90	110	CCV Main CR1-2 Failed
Al	27	1	nogas	118.221	4.140	781980	1.63	100	118.2	90	110	CCV Main CR1-2 Failed
K	39	1	nogas	10801.709	2.062	69200593	1.74	10000	108.0	90	110	
Ti	47	1	nogas	105.163	4.861	72014	2.77	100	105.2	90	110	
V	51	1	nogas	143.173	4.366	1756343	1.54	100	143.2	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	101.186	1.816	888249	1.75	100	101.2	90	110	
Mn	55	1	nogas	108.974	0.302	1176693	3.24	100	109.0	90	110	
Co	59	1	nogas	99.800	4.475	952423	1.75	100	99.8	90	110	
Ni	60	1	nogas	103.864	5.587	219303	2.93	100	103.9	90	110	
Cu	63	1	nogas	99.178	3.633	531110	1.19	100	99.2	90	110	
Zn	66	1	nogas	104.020	3.061	168081	0.27	100	104.0	90	110	
As	75	1	nogas	121.904	4.091	276844	0.89	100	121.9	90	110	CCV Main CR1-2 Failed
Sr	88	1	nogas	105.464	7.167	1224114	5.90	100	105.5	90	110	
Ag	107	1	nogas	101.369	2.148	652787	1.10	100	101.4	90	110	
Cd	111	1	nogas	99.405	2.159	137803	1.08	100	99.4	90	110	
Sb	121	1	nogas	101.855	5.389	577671	2.52	100	101.9	90	110	
Tl	205	1	nogas	101.790	3.816	1186312	0.66	100	101.8	90	110	
Pb	208	1	nogas	118.355	2.228	1674416	2.23	100	118.4	90	110	CCV Main CR1-2 Failed
U	238	1	nogas	106.965	5.617	1913440	2.39	100	107.0	90	110	
[Pb]	206	1	nogas	101.092	2.945	407395	0.94	100	101.1	90	110	
[Pb]	207	1	nogas	99.526	4.259	369525	2.34	100	99.5	90	110	
Na	23	2	He	11432.387	1.627	2201910	2.17	10000	114.3	90	110	CCV Main CR1-2 Failed
Mg	24	2	He	10238.554	1.527	961756	0.34	10000	102.4	90	110	
Al	27	2	He	118.766	2.953	3104	2.62	100	118.8	90	110	CCV Main CR1-2 Failed
K	39	2	He	11595.947	0.753	508078	0.74	10000	116.0	90	110	CCV Main CR1-2 Failed
Ca	43	2	He	9240.988	9.312	1610	10.78	10000	92.4	90	110	
Ca	44	2	He	9696.134	1.756	29397	3.21	10000	97.0	90	110	
V	51	2	He	102.689	2.226	109534	0.80	100	102.7	90	110	
Cr	52	2	He	104.162	3.414	148366	1.93	100	104.2	90	110	
Mn	55	2	He	99.514	1.744	57567	1.36	100	99.5	90	110	
Fe	56	2	He	10404.402	2.619	11803780	1.67	10000	104.0	90	110	
Co	59	2	He	101.597	2.832	246447	1.28	100	101.6	90	110	
Ni	60	2	He	103.758	2.970	69452	2.19	100	103.8	90	110	
Cu	63	2	He	103.485	0.732	198099	0.86	100	103.5	90	110	
Zn	66	2	He	105.128	2.923	29718	1.38	100	105.1	90	110	
As	75	2	He	102.630	2.178	19416	0.62	100	102.6	90	110	
Se	78	2	He	109.958	6.750	811	5.30	100	110.0	90	110	
B	11	1	nogas	526.642	8.741	798824	3.52	500	105.3	90	110	
Si	28	1	nogas	5403.950	3.093	17082630	1.28	5000	108.1	90	110	
Ca	43	1	nogas	10495.216	2.782	133188	0.59	10000	105.0	90	110	
Ca	44	1	nogas	10720.817	2.826	2279446	0.52	10000	107.2	90	110	
Fe	56	1	nogas	10515.315	2.271	106675717	1.51	10000	105.2	90	110	
Se	77	1	nogas	231.423	10.420	40585	4.01	100	231.4	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	109.328	4.765	9883	5.42	100	109.3	90	110	
Mo	95	1	nogas	102.855	2.309	249307	2.28	100	102.9	90	110	
Sn	118	1	nogas	98.263	1.417	399116	0.68	100	98.3	90	110	
Ba	137	1	nogas	99.708	3.218	185126	2.55	100	99.7	90	110	
Sb	121	2	He	98.830	2.878	83690	2.37	100	98.8	90	110	
Li	7	1	nogas	101.801	2.836	558650	3.83	100	101.8	90	110	
P	31	1	nogas	532.090	3.237	264419	1.69	500	106.4	90	110	
La	139	1	nogas	147.695	60.065	327	42.89	100	147.7	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	-54.066	-122.956	3	173.21	100	-54.1	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	296165	4.05	249249	118.82	70	125	
Ge	72	1	nogas	1216796	3.23	1043848	116.57	70	125	
In	115	1	nogas	1287102	1.40	1062572	121.13	70	125	
Bi	209	1	nogas	1225264	3.23	1042758	117.50	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	120233	1.59	111068	108.25	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	109_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-03T14:35:07-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	004CALB.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	0.012	129.1	63	59.8	1	
Na	23	1	nogas	354.022	5.9	4412438	2.3	100	CCB Main CR1 Failed
Mg	24	1	nogas	9.903	40.0	54108	37.5	100	
Al	27	1	nogas	-0.616	-24.5	12274	4.2	5	
K	39	1	nogas	-8.421	-317.7	3356631	1.1	100	
Ti	47	1	nogas	0.110	107.9	203	37.2	2.5	
V	51	1	nogas	15.859	6.3	478183	6.0	2.5	CCB Main CR1 Failed
Cr	52	1	nogas	0.390	13.0	15530	4.9	2.5	
Mn	55	1	nogas	0.333	5.1	9743	5.4	2.5	
Co	59	1	nogas	0.009	17.0	327	4.7	2.5	
Ni	60	1	nogas	-0.458	-10.0	1840	7.8	2.5	
Cu	63	1	nogas	-1.194	-1.6	2957	7.0	2.5	
Zn	66	1	nogas	0.112	22.4	653	2.3	2.5	
As	75	1	nogas	10.202	19.1	76775	8.5	2.5	CCB Main CR1 Failed
Sr	88	1	nogas	0.183	13.7	2914	8.1	2.5	
Ag	107	1	nogas	0.107	13.5	893	8.7	2.5	
Cd	111	1	nogas	0.017	47.4	30	33.3	1	
Sb	121	1	nogas	0.717	23.5	4727	16.7	2.5	
Tl	205	1	nogas	0.128	47.7	1967	46.4	1	
Pb	208	1	nogas	0.037	4.4	1627	1.4	2.5	
U	238	1	nogas	0.026	27.6	817	19.8	2.5	
[Pb]	206	1	nogas	0.008	196.4	407	22.8	2.5	
[Pb]	207	1	nogas	0.034	18.9	407	3.8	2.5	
Na	23	2	He	391.716	4.9	128902	0.1	100	CCB Main CR1 Failed
Mg	24	2	He	7.295	11.5	843	6.7	100	
Al	27	2	He	-5.570	-22.2	53	57.3	5	
K	39	2	He	37.953	33.6	11394	4.8	100	
Ca	43	2	He	-69.265	-129.6	13	114.6	100	
Ca	44	2	He	3.497	132.6	133	11.5	100	
V	51	2	He	0.004	812.0	445	8.1	2.5	
Cr	52	2	He	-0.243	-45.7	1050	16.9	2.5	
Mn	55	2	He	0.091	64.3	160	22.5	2.5	
Fe	56	2	He	4.868	7.9	8405	2.6	100	
Co	59	2	He	0.027	11.6	77	7.5	2.5	
Ni	60	2	He	-0.541	-19.2	310	22.3	2.5	
Cu	63	2	He	-0.729	-3.0	727	7.9	2.5	
Zn	66	2	He	-0.280	-25.4	50	40.0	2.5	
As	75	2	He	0.159	37.9	40	30.0	2.5	
Se	78	2	He	-0.610	-72.0	3	91.7	2.5	
B	11	1	nogas	29.257	18.3	166427	3.1	10	CCB Main CR1 Failed
Si	28	1	nogas	-68.923	-18.5	796178	1.1	5	
Ca	43	1	nogas	15.070	47.2	603	17.0	100	
Ca	44	1	nogas	-171.667	-3.3	56415	2.1	100	
Fe	56	1	nogas	24.100	19.3	954107	1.9	100	
Se	77	1	nogas	65.298	26.6	25014	9.8	2.5	CCB Main CR1 Failed
Se	82	1	nogas	0.067	1957.3	457	22.2	2.5	
Mo	95	1	nogas	0.105	86.9	403	52.0	2.5	
Sn	118	1	nogas	0.112	26.7	953	12.1	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.004	327.3	133	21.7	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.620	11.1	553	12.7	2.5	
P	31	1	nogas	3.763	88.7	42769	0.7	10	
La	139	1	nogas	-28.851	-39.9	40	43.3	2.5	
Au	197	1	nogas	45.928	333.5	13	114.6	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	318953	1.79	249249	127.97	70	125	ISTD Failed
Ge	72	1	nogas	1247280	4.06	1043848	119.49	70	125	
In	115	1	nogas	1240395	3.95	1062572	116.74	70	125	
Bi	209	1	nogas	1334144	6.61	1042758	127.94	70	125	ISTD Failed
Ge	72	2	He	116891	2.59	111068	105.24	70	125	

Calibration Blank Report

Sample Table

Sample Name	CAL BLK
Data File Name	113CALB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-03T14:43:08-06:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	30	222.22
Na	23	1	nogas	2522939	0.00
Mg	24	1	nogas	10705	0.15
Al	27	1	nogas	15283	0.03
K	39	1	nogas	3367237	0.00
Ti	47	1	nogas	180	14.14
V	51	1	nogas	566883	0.00
Cr	52	1	nogas	16074	0.02
Mn	55	1	nogas	10130	0.03
Co	59	1	nogas	173	13.86
Ni	60	1	nogas	1357	0.74
Cu	63	1	nogas	2760	0.19
Zn	66	1	nogas	483	4.87
As	75	1	nogas	84596	0.00
Sr	88	1	nogas	663	2.66
Ag	107	1	nogas	310	3.75
Cd	111	1	nogas	7	1299.04
Sb	121	1	nogas	580	1.95
Tl	205	1	nogas	143	18.43
Pb	208	1	nogas	580	1.86
[Pb]	206	1	nogas	190	5.54
[Pb]	207	1	nogas	123	24.89
Na	23	2	He	85156	0.00
Mg	24	2	He	337	5.60
Al	27	2	He	80	102.46
K	39	2	He	10823	0.03
Ca	43	2	He	17	207.85
Ca	44	2	He	120	48.61
V	51	2	He	405	0.62
Cr	52	2	He	1003	0.73
Mn	55	2	He	143	14.87
Fe	56	2	He	3317	0.26
Co	59	2	He	20	433.01
Ni	60	2	He	317	5.84
Cu	63	2	He	600	2.90
Zn	66	2	He	87	65.67
As	75	2	He	14	368.92
Se	78	2	He	1	6495.19
B	11	1	nogas	141361	0.00
Si	28	1	nogas	766220	0.00
Ca	43	1	nogas	553	1.61
Ca	44	1	nogas	55864	0.00

Calibration Blank Report

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	883803	0.00
Se	77	1	nogas	28132	0.01
Se	82	1	nogas	453	4.52
Mo	95	1	nogas	70	20.41
Sn	118	1	nogas	590	3.00
Ba	137	1	nogas	150	16.03
Sb	121	2	He	93	28.89
Li	7	1	nogas	29984	0.01
P	31	1	nogas	44626	0.00
La	139	1	nogas	43	81.35

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	6	1	nogas	324345	4.99
Ge	72	1	nogas	1246287	5.74
In	115	1	nogas	1264981	5.15
Bi	209	1	nogas	1207455	3.14
Ge	72	2	He	122874	0.30

Calibration Standard Report

Sample Table

Sample Name	2/10/200
Data File Name	114CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-03T14:45:08-06:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	113CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	4077	0.16
Na	23	1	nogas	4178509	0.00
Mg	24	1	nogas	1295648	0.00
Al	27	1	nogas	87306	0.00
K	39	1	nogas	4711398	0.00
Ti	47	1	nogas	1380	0.74
V	51	1	nogas	556748	0.00
Cr	52	1	nogas	34403	0.00
Mn	55	1	nogas	32736	0.01
Co	59	1	nogas	19547	0.02
Ni	60	1	nogas	5681	0.10
Cu	63	1	nogas	13102	0.01
Zn	66	1	nogas	4124	0.04
As	75	1	nogas	81907	0.01
Sr	88	1	nogas	25716	0.01
Ag	107	1	nogas	13809	0.02
Cd	111	1	nogas	3040	0.23
Sb	121	1	nogas	12948	0.03
Tl	205	1	nogas	24131	0.03
Pb	208	1	nogas	35039	0.00
[Pb]	206	1	nogas	8639	0.02
[Pb]	207	1	nogas	7739	0.04
Na	23	2	He	124097	0.00
Mg	24	2	He	20695	0.02
Al	27	2	He	400	2.72
K	39	2	He	21763	0.01
Ca	43	2	He	50	144.22
Ca	44	2	He	737	2.32
V	51	2	He	2660	0.23
Cr	52	2	He	4261	0.06
Mn	55	2	He	1303	0.19
Fe	56	2	He	231929	0.00
Co	59	2	He	5278	0.04
Ni	60	2	He	1723	0.10
Cu	63	2	He	4594	0.09
Zn	66	2	He	670	2.23
As	75	2	He	389	1.55
Se	78	2	He	15	177.08
B	11	1	nogas	150500	0.00
Si	28	1	nogas	1273931	0.00

Calibration Standard Report

Ca	43	1	nogas	3344	0.25
Ca	44	1	nogas	100151	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	3206196	0.00
Se	77	1	nogas	25966	0.02
Se	82	1	nogas	510	1.68
Mo	95	1	nogas	5411	0.08
Sn	118	1	nogas	8802	0.09
Ba	137	1	nogas	3787	0.25
Sb	121	2	He	1857	0.45
P	31	1	nogas	51547	0.01
La	139	1	nogas	213	2.54

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	319650	2.55	324345	98.55	70	125	
Ge	72	1	nogas	1263446	4.44	1246287	101.38	70	125	
In	115	1	nogas	1319052	0.71	1264981	104.27	70	125	
Bi	209	1	nogas	1354125	2.58	1207455	112.15	70	125	
Ge	72	2	He	121061	1.66	122874	98.52	70	125	

Calibration Standard Report

Sample Table

Sample Name	5/25/500
Data File Name	115CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-03T14:47:08-06:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	
ISTD Ref File Name	113CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	10847	0.03
Na	23	1	nogas	6615153	0.00
Mg	24	1	nogas	3117493	0.00
Al	27	1	nogas	85721	0.00
K	39	1	nogas	6668596	0.00
Ti	47	1	nogas	3850	0.17
V	51	1	nogas	589683	0.00
Cr	52	1	nogas	60239	0.01
Mn	55	1	nogas	66237	0.00
Co	59	1	nogas	48278	0.00
Ni	60	1	nogas	12725	0.03
Cu	63	1	nogas	30586	0.01
Zn	66	1	nogas	9306	0.03
As	75	1	nogas	87777	0.01
Sr	88	1	nogas	60483	0.00
Ag	107	1	nogas	35059	0.01
Cd	111	1	nogas	6758	0.10
Sb	121	1	nogas	31315	0.01
Tl	205	1	nogas	60944	0.00
Pb	208	1	nogas	87126	0.00
[Pb]	206	1	nogas	21288	0.00
[Pb]	207	1	nogas	19402	0.01
Na	23	2	He	182983	0.00
Mg	24	2	He	50705	0.01
Al	27	2	He	323	7.43
K	39	2	He	36900	0.01
Ca	43	2	He	113	31.46
Ca	44	2	He	1673	0.60
V	51	2	He	5946	0.01
Cr	52	2	He	8962	0.06
Mn	55	2	He	3127	0.13
Fe	56	2	He	579751	0.00
Co	59	2	He	13252	0.05
Ni	60	2	He	4047	0.21
Cu	63	2	He	11003	0.03
Zn	66	2	He	1643	0.31
As	75	2	He	1053	0.61
Se	78	2	He	39	60.32
B	11	1	nogas	169107	0.00
Si	28	1	nogas	1781707	0.00

Calibration Standard Report

Ca	43	1	nogas	7005	0.05
Ca	44	1	nogas	167610	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	6375435	0.00
Se	77	1	nogas	25912	0.02
Se	82	1	nogas	700	1.87
Mo	95	1	nogas	12848	0.03
Sn	118	1	nogas	20860	0.00
Ba	137	1	nogas	9700	0.05
Sb	121	2	He	4307	0.08
P	31	1	nogas	57708	0.00
La	139	1	nogas	60	55.56

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	328298	1.78	324345	101.22	70	125	
Ge	72	1	nogas	1254288	1.17	1246287	100.64	70	125	
In	115	1	nogas	1307578	1.52	1264981	103.37	70	125	
Bi	209	1	nogas	1310836	0.73	1207455	108.56	70	125	
Ge	72	2	He	123919	3.10	122874	100.85	70	125	

Calibration Standard Report

Sample Table

Sample Name	10/50/1000
Data File Name	116CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-03T14:49:08-06:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	
ISTD Ref File Name	113CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	21686	0.00
Na	23	1	nogas	11178741	0.00
Mg	24	1	nogas	6244881	0.00
Al	27	1	nogas	90977	0.00
K	39	1	nogas	9995718	0.00
Ti	47	1	nogas	7292	0.03
V	51	1	nogas	639629	0.00
Cr	52	1	nogas	106299	0.00
Mn	55	1	nogas	126052	0.00
Co	59	1	nogas	99742	0.00
Ni	60	1	nogas	24016	0.02
Cu	63	1	nogas	57922	0.01
Zn	66	1	nogas	17669	0.01
As	75	1	nogas	98445	0.01
Sr	88	1	nogas	122627	0.00
Ag	107	1	nogas	70793	0.00
Cd	111	1	nogas	14703	0.02
Sb	121	1	nogas	61412	0.00
Tl	205	1	nogas	126869	0.00
Pb	208	1	nogas	176149	0.00
[Pb]	206	1	nogas	43719	0.01
[Pb]	207	1	nogas	38927	0.00
Na	23	2	He	285927	0.00
Mg	24	2	He	101198	0.00
Al	27	2	He	390	1.31
K	39	2	He	61842	0.00
Ca	43	2	He	263	7.94
Ca	44	2	He	3217	0.08
V	51	2	He	11629	0.01
Cr	52	2	He	15840	0.02
Mn	55	2	He	5904	0.16
Fe	56	2	He	1213756	0.00
Co	59	2	He	25625	0.01
Ni	60	2	He	7835	0.05
Cu	63	2	He	21883	0.02
Zn	66	2	He	3054	0.23
As	75	2	He	2095	0.22
Se	78	2	He	81	23.07
B	11	1	nogas	204908	0.00
Si	28	1	nogas	2634455	0.00

Calibration Standard Report

Ca	43	1	nogas	14049	0.00
Ca	44	1	nogas	282823	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	11962158	0.00
Se	77	1	nogas	27134	0.02
Se	82	1	nogas	1283	0.36
Mo	95	1	nogas	26183	0.01
Sn	118	1	nogas	42205	0.01
Ba	137	1	nogas	19421	0.02
Sb	121	2	He	9156	0.07
P	31	1	nogas	71485	0.00
La	139	1	nogas	90	32.66

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	327895	2.18	324345	101.09	70	125	
Ge	72	1	nogas	1292028	1.37	1246287	103.67	70	125	
In	115	1	nogas	1352877	4.45	1264981	106.95	70	125	
Bi	209	1	nogas	1289178	1.78	1207455	106.77	70	125	
Ge	72	2	He	122526	4.93	122874	99.72	70	125	

Calibration Standard Report

Sample Table

Sample Name	100/500/10K
Data File Name	117CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-03T14:51:05-06:00
Sample Type	CalStd
Level	5
Dilution	1
Comment	
ISTD Ref File Name	113CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	211775	0.00
Na	23	1	nogas	92489800	0.00
Mg	24	1	nogas	62479381	0.00
Al	27	1	nogas	729782	0.00
K	39	1	nogas	68267539	0.00
Ti	47	1	nogas	70987	0.00
V	51	1	nogas	1657731	0.00
Cr	52	1	nogas	908714	0.00
Mn	55	1	nogas	1176382	0.00
Co	59	1	nogas	953423	0.00
Ni	60	1	nogas	215443	0.00
Cu	63	1	nogas	525599	0.00
Zn	66	1	nogas	170199	0.00
As	75	1	nogas	269645	0.00
Sr	88	1	nogas	1253162	0.00
Ag	107	1	nogas	660624	0.00
Cd	111	1	nogas	140573	0.00
Sb	121	1	nogas	580015	0.00
Tl	205	1	nogas	1242947	0.00
Pb	208	1	nogas	1692769	0.00
[Pb]	206	1	nogas	415135	0.00
[Pb]	207	1	nogas	374936	0.00
Na	23	2	He	2160334	0.00
Mg	24	2	He	970141	0.00
Al	27	2	He	2634	0.25
K	39	2	He	499498	0.00
Ca	43	2	He	1663	0.53
Ca	44	2	He	29464	0.01
V	51	2	He	110819	0.00
Cr	52	2	He	147180	0.00
Mn	55	2	He	57396	0.00
Fe	56	2	He	12003205	0.00
Co	59	2	He	254655	0.00
Ni	60	2	He	72628	0.00
Cu	63	2	He	199637	0.00
Zn	66	2	He	29127	0.01
As	75	2	He	19883	0.01
Se	78	2	He	761	0.39
B	11	1	nogas	788099	0.00
Si	28	1	nogas	17496711	0.00

Calibration Standard Report

Ca	43	1	nogas	133792	0.00
Ca	44	1	nogas	2290274	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	107408582	0.00
Se	77	1	nogas	37823	0.01
Se	82	1	nogas	9276	0.04
Mo	95	1	nogas	248526	0.00
Sn	118	1	nogas	404280	0.00
Ba	137	1	nogas	184356	0.00
Sb	121	2	He	84892	0.00
P	31	1	nogas	266820	0.00
La	139	1	nogas	323	1.46

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	310751	3.94	324345	95.81	70	125	
Ge	72	1	nogas	1233884	3.42	1246287	99.00	70	125	
In	115	1	nogas	1279438	3.21	1264981	101.14	70	125	
Bi	209	1	nogas	1204168	3.57	1207455	99.73	70	125	
Ge	72	2	He	120719	1.17	122874	98.25	70	125	

Calibration Standard Report

Sample Table

Sample Name	200/1000/20K
Data File Name	118CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-03T14:53:04-06:00
Sample Type	CalStd
Level	6
Dilution	1
Comment	
ISTD Ref File Name	113CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	432071	0.00
Na	23	1	nogas	182495583	0.00
Mg	24	1	nogas	122628719	0.00
Al	27	1	nogas	1437428	0.00
K	39	1	nogas	129402090	0.00
Ti	47	1	nogas	137110	0.00
V	51	1	nogas	2584405	0.00
Cr	52	1	nogas	1816345	0.00
Mn	55	1	nogas	2294675	0.00
Co	59	1	nogas	1895775	0.00
Ni	60	1	nogas	410036	0.00
Cu	63	1	nogas	1025696	0.00
Zn	66	1	nogas	337073	0.00
As	75	1	nogas	449535	0.00
Sr	88	1	nogas	2449075	0.00
Ag	107	1	nogas	1299957	0.00
Cd	111	1	nogas	269576	0.00
Sb	121	1	nogas	1191412	0.00
Tl	205	1	nogas	2468561	0.00
Pb	208	1	nogas	3418343	0.00
[Pb]	206	1	nogas	804236	0.00
[Pb]	207	1	nogas	735171	0.00
Na	23	2	He	4100406	0.00
Mg	24	2	He	1981921	0.00
Al	27	2	He	5644	0.07
K	39	2	He	986237	0.00
Ca	43	2	He	3457	0.38
Ca	44	2	He	60215	0.00
V	51	2	He	219028	0.00
Cr	52	2	He	287984	0.00
Mn	55	2	He	111805	0.00
Fe	56	2	He	23304042	0.00
Co	59	2	He	490969	0.00
Ni	60	2	He	138002	0.00
Cu	63	2	He	390906	0.00
Zn	66	2	He	57494	0.00
As	75	2	He	39510	0.00
Se	78	2	He	1475	0.07
B	11	1	nogas	1533041	0.00
Si	28	1	nogas	32372525	0.00

Calibration Standard Report

Ca	43	1	nogas	260312	0.00
Ca	44	1	nogas	4342621	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	210772434	0.00
Se	77	1	nogas	45788	0.01
Se	82	1	nogas	18503	0.01
Mo	95	1	nogas	492092	0.00
Sn	118	1	nogas	788455	0.00
Ba	137	1	nogas	365756	0.00
Sb	121	2	He	169068	0.00
P	31	1	nogas	479728	0.00
La	139	1	nogas	423	4.75

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	281925	2.39	324345	86.92	70	125	
Ge	72	1	nogas	1272089	2.02	1246287	102.07	70	125	
In	115	1	nogas	1296099	3.12	1264981	102.46	70	125	
Bi	209	1	nogas	1243984	4.82	1207455	103.03	70	125	
Ge	72	2	He	119025	0.63	122874	96.87	70	125	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	ICCV
Data File Name	119_ICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-03T14:55:05-06:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	113CALB.d
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	105.033	7.500	217993	2.69	100	105.0	90	110	
Na	23	1	nogas	10346.612	5.625	94069704	1.33	10000	103.5	90	110	
Mg	24	1	nogas	10309.612	5.572	62400274	0.96	10000	103.1	90	110	
Al	27	1	nogas	100.557	6.241	716646	1.21	100	100.6	90	110	
K	39	1	nogas	10559.128	6.943	68849412	1.60	10000	105.6	90	110	
Ti	47	1	nogas	106.116	6.342	71816	2.10	100	106.1	90	110	
V	51	1	nogas	99.431	7.519	1558047	3.00	100	99.4	90	110	
Cr	52	1	nogas	102.355	5.889	916600	2.81	100	102.4	90	110	
Mn	55	1	nogas	103.221	8.871	1167796	2.93	100	103.2	90	110	
Co	59	1	nogas	102.076	7.590	948077	0.88	100	102.1	90	110	
Ni	60	1	nogas	105.349	8.169	214780	1.56	100	105.3	90	110	
Cu	63	1	nogas	105.420	7.820	532733	1.73	100	105.4	90	110	
Zn	66	1	nogas	104.284	6.202	172845	1.27	100	104.3	90	110	
As	75	1	nogas	98.543	8.137	258299	1.72	100	98.5	90	110	
Sr	88	1	nogas	103.146	10.095	1240174	2.96	100	103.1	90	110	
Ag	107	1	nogas	104.057	7.096	664419	0.32	100	104.1	90	110	
Cd	111	1	nogas	103.173	5.488	139448	0.64	100	103.2	90	110	
Sb	121	1	nogas	102.030	7.877	591677	1.09	100	102.0	90	110	
Tl	205	1	nogas	103.004	11.845	1232139	3.96	100	103.0	90	110	
Pb	208	1	nogas	99.671	0.810	1700627	0.81	100	99.7	90	110	
U	238	1	nogas	107.083	4.432	1931140	3.55	100	107.1	90	110	
[Pb]	206	1	nogas	105.855	8.145	415358	0.10	100	105.9	90	110	
[Pb]	207	1	nogas	104.968	8.379	375385	0.86	100	105.0	90	110	
Na	23	2	He	10230.270	2.910	2122715	1.47	10000	102.3	90	110	
Mg	24	2	He	9778.198	2.645	952262	1.19	10000	97.8	90	110	
Al	27	2	He	92.093	12.820	2594	11.24	100	92.1	90	110	
K	39	2	He	9709.903	1.010	484634	0.99	10000	97.1	90	110	
Ca	43	2	He	10332.048	13.176	1760	15.28	10000	103.3	90	110	
Ca	44	2	He	10067.102	6.236	29804	3.53	10000	100.7	90	110	
V	51	2	He	99.053	3.017	107400	0.73	100	99.1	90	110	
Cr	52	2	He	98.738	2.690	141283	0.62	100	98.7	90	110	
Mn	55	2	He	103.271	2.165	57316	0.96	100	103.3	90	110	
Fe	56	2	He	10185.106	4.628	11776381	2.46	10000	101.9	90	110	
Co	59	2	He	101.354	3.569	247307	2.31	100	101.4	90	110	
Ni	60	2	He	98.728	5.041	68157	2.90	100	98.7	90	110	
Cu	63	2	He	99.676	1.992	193495	1.82	100	99.7	90	110	
Zn	66	2	He	102.390	4.791	29154	4.09	100	102.4	90	110	
As	75	2	He	98.915	3.005	19310	0.99	100	98.9	90	110	
Se	78	2	He	102.109	3.820	749	6.59	100	102.1	90	110	
B	11	1	nogas	559.938	4.941	848976	0.80	500	112.0	90	110	ICV Main CR1 Failed
Si	28	1	nogas	5282.769	6.463	17310367	1.21	5000	105.7	90	110	
Ca	43	1	nogas	10550.937	6.905	135360	0.46	10000	105.5	90	110	
Ca	44	1	nogas	10614.757	9.997	2298616	2.90	10000	106.1	90	110	
Fe	56	1	nogas	10357.644	7.131	107566944	0.93	10000	103.6	90	110	
Se	77	1	nogas	66.215	25.187	33648	4.34	100	66.2	90	110	ICV Main CR1 Failed
Se	82	1	nogas	105.684	11.216	9719	3.28	100	105.7	90	110	
Mo	95	1	nogas	102.478	7.346	247247	0.27	100	102.5	90	110	
Sn	118	1	nogas	105.234	6.069	397043	0.74	100	105.2	90	110	
Ba	137	1	nogas	108.649	3.555	189683	2.16	100	108.6	90	110	
Sb	121	2	He	100.173	4.384	83630	1.38	100	100.2	90	110	
Li	7	1	nogas	104.819	4.850	585288	0.66	100	104.8	90	110	
P	31	1	nogas	523.913	8.531	268201	1.36	500	104.8	90	110	
La	139	1	nogas	181.280	37.857	400	29.47	100	181.3	90	110	ICV Main CR1 Failed
Au	197	1	nogas	461.454	213.972	17	124.90	100	461.5	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	305120	4.64	324345	94.07	70	125	
Ge	72	1	nogas	1241015	7.16	1246287	99.58	70	125	
In	115	1	nogas	1232136	5.26	1264981	97.40	70	125	
Bi	209	1	nogas	1200559	7.86	1207455	99.43	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	117819	3.00	122874	95.89	70	125	

Sample Report

Sample Table

Sample Name	LLCCV2
Data File Name	120SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-03T14:57:04-06:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	113CALB.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	2.132	2.132	4.11	4811	0.04	2000	
Na	23	1	nogas	120.081	120.081	4.94	3812138	0.00	200000	
Mg	24	1	nogas	213.263	213.263	5.30	1368348	0.02	200000	
Al	27	1	nogas	10.162	10.162	4.62	89996	0.01	2000	
K	39	1	nogas	193.050	193.050	11.18	4757206	0.00	200000	
Ti	47	1	nogas	2.065	2.065	7.06	1643	0.13	2000	
V	51	1	nogas	-18.077	-18.077	-4.94	401416	0.00	2000	
Cr	52	1	nogas	1.657	1.657	4.86	31961	0.01	2000	
Mn	55	1	nogas	1.981	1.981	4.97	33795	0.01	2000	
Co	59	1	nogas	2.104	2.104	6.40	20618	0.01	2000	
Ni	60	1	nogas	1.072	1.072	8.76	6044	0.02	2000	
Cu	63	1	nogas	2.211	2.211	4.98	14526	0.02	2000	
Zn	66	1	nogas	1.566	1.566	3.38	4057	0.04	2000	
As	75	1	nogas	-7.005	-7.005	-20.94	70299	-0.01	2000	
Sr	88	1	nogas	2.040	2.040	2.61	26380	0.01	2000	
Ag	107	1	nogas	2.216	2.216	1.51	15123	0.01	2000	
Cd	111	1	nogas	2.013	2.013	9.42	2987	0.07	2000	
Sb	121	1	nogas	3.383	3.383	8.84	21100	0.02	2000	
Tl	205	1	nogas	2.114	2.114	3.31	28044	0.01	2000	
Pb	208	1	nogas	2.176	2.176	2.59	37691	0.01	2000	
U	238	1	nogas	1.882	1.882	1.56	39289	0.00	2000	
[Pb]	206	1	nogas	2.069	2.069	2.71	9139	0.02	2000	
[Pb]	207	1	nogas	2.133	2.133	1.51	8526	0.03	2000	
Na	23	2	He	121.499	121.499	4.29	109834	0.11	200000	
Mg	24	2	He	199.082	199.082	3.03	20441	0.97	200000	
Al	27	2	He	8.347	8.347	6.50	380	2.20	2000	
K	39	2	He	207.090	207.090	8.71	20929	0.99	200000	
Ca	43	2	He	228.770	228.770	79.65	57	403.71	200000	
Ca	44	2	He	213.754	213.754	10.98	773	27.64	200000	
V	51	2	He	2.001	2.001	2.75	2579	0.08	2000	
Cr	52	2	He	2.199	2.199	16.69	4237	0.05	2000	
Mn	55	2	He	1.951	1.951	4.46	1263	0.15	2000	
Fe	56	2	He	196.700	196.700	0.38	239296	0.08	200000	
Co	59	2	He	2.238	2.238	3.40	5684	0.04	2000	
Ni	60	2	He	1.546	1.546	10.04	1787	0.09	2000	
Cu	63	2	He	1.849	1.849	1.85	4764	0.04	2000	
Zn	66	2	He	2.062	2.062	13.88	707	0.29	2000	
As	75	2	He	1.867	1.867	3.96	392	0.48	2000	
Se	78	2	He	1.646	1.646	73.94	15	10.74	2000	
B	11	1	nogas	24.988	24.988	33.80	178117	0.01	2000	

Sample Report

Si	28	1	nogas	210.396	210.396	7.93	1486614	0.01	2000	
Ca	43	1	nogas	214.437	214.437	2.60	3444	6.23	200000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Ca	44	1	nogas	208.979	208.979	6.23	104440	0.20	200000	
Fe	56	1	nogas	196.089	196.089	3.20	3032834	0.01	200000	
Se	77	1	nogas	-77.804	-77.804	-2.98	22317	-0.35	2000	
Se	82	1	nogas	0.770	0.770	30.45	540	0.14	2000	
Mo	95	1	nogas	2.331	2.331	2.30	5958	0.04	2000	
Sn	118	1	nogas	2.078	2.078	4.26	9206	0.02	2000	
Ba	137	1	nogas	1.922	1.922	3.36	3827	0.05	2000	
Sb	121	2	He	3.039	3.039	2.03	2724	0.11	2000	
La	139	1	nogas	93.436	93.436	34.39	250	37.37	2000	
Au	197	1	nogas	126.104	126.104	610.81	10	1261.04	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	329216	3.76	324345	101.50	70	125	
Ge	72	1	nogas	1294784	2.85	1246287	103.89	70	125	
In	115	1	nogas	1346087	1.43	1264981	106.41	70	125	
Bi	209	1	nogas	1315460	2.28	1207455	108.94	70	125	
Ge	72	2	He	122195	1.15	122874	99.45	70	125	

Low Level Initial Calibration Verification (LLICV) Report

Sample Table

Sample Name	LLCCV5
Data File Name	121LICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-03T14:59:05-06:00
Sample Type	LLICV
Dilution	1
Comment	
ISTD Ref File Name	113CALB.d
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	4.677	5.146	10970	5.36	5	93.5	70	130	
Na	23	1	nogas	409.838	4.024	6514142	1.00	500	82.0	70	130	
Mg	24	1	nogas	503.622	2.482	3220058	2.16	500	100.7	70	130	
Al	27	1	nogas	10.079	3.246	89651	1.25	5	201.6	70	130	LLICV Main CR1 Failed
K	39	1	nogas	490.184	3.031	6704251	0.17	500	98.0	70	130	
Ti	47	1	nogas	5.086	6.125	3787	5.10	5	101.7	70	130	
V	51	1	nogas	-15.151	-11.308	432861	3.25	5	-303.0	70	130	LLICV Main CR1 Failed
Cr	52	1	nogas	4.618	1.800	59369	1.58	5	92.4	70	130	
Mn	55	1	nogas	5.014	5.002	69595	2.83	5	100.3	70	130	
Co	59	1	nogas	5.170	3.268	50570	2.98	5	103.4	70	130	
Ni	60	1	nogas	4.200	3.722	12641	3.14	5	84.0	70	130	
Cu	63	1	nogas	5.139	3.561	29995	2.75	5	102.8	70	130	
Zn	66	1	nogas	4.379	3.801	8922	4.23	5	87.6	70	130	
As	75	1	nogas	-4.507	-36.093	75228	3.40	5	-90.1	70	130	LLICV Main CR1 Failed
Sr	88	1	nogas	4.903	1.656	62596	0.65	5	98.1	70	130	
Ag	107	1	nogas	5.339	4.084	36067	2.73	5	106.8	70	130	
Cd	111	1	nogas	4.746	6.161	7092	4.24	5	94.9	70	130	
Sb	121	1	nogas	5.434	3.062	33646	1.62	5	108.7	70	130	
Tl	205	1	nogas	4.686	5.776	61851	1.37	5	93.7	70	130	
Pb	208	1	nogas	5.096	1.394	87493	1.38	5	101.9	70	130	
U	238	1	nogas	4.483	4.575	93425	0.65	5	89.7	70	130	
[Pb]	206	1	nogas	4.943	5.395	21511	2.21	5	98.9	70	130	
[Pb]	207	1	nogas	4.898	4.105	19385	1.84	5	98.0	70	130	
Na	23	2	He	415.866	4.995	169736	1.05	500	83.2	70	130	
Mg	24	2	He	485.059	5.106	49018	3.29	500	97.0	70	130	
Al	27	2	He	6.587	37.834	330	21.85	5	131.7	70	130	LLICV Main CR1 Failed
K	39	2	He	535.969	2.052	36977	1.45	500	107.2	70	130	
Ca	43	2	He	499.295	16.054	103	14.78	500	99.9	70	130	
Ca	44	2	He	567.101	11.739	1843	9.77	500	113.4	70	130	
V	51	2	He	5.000	0.403	5908	2.17	5	100.0	70	130	
Cr	52	2	He	5.155	3.178	8549	2.34	5	103.1	70	130	
Mn	55	2	He	5.100	11.541	3050	9.37	5	102.0	70	130	
Fe	56	2	He	478.189	3.717	573410	1.81	500	95.6	70	130	
Co	59	2	He	5.188	2.699	13075	1.54	5	103.8	70	130	
Ni	60	2	He	4.649	3.660	3964	1.79	5	93.0	70	130	
Cu	63	2	He	5.042	4.018	11094	3.44	5	100.8	70	130	
Zn	66	2	He	5.015	6.531	1567	5.93	5	100.3	70	130	
As	75	2	He	4.711	11.581	961	9.53	5	94.2	70	130	
Se	78	2	He	4.952	25.659	40	22.91	5	99.0	70	130	
B	11	1	nogas	25.172	10.405	186169	0.83	25	100.7	70	130	
Si	28	1	nogas	340.452	4.895	1918237	2.09	25	1361.8	70	130	LLICV Main CR1 Failed
Ca	43	1	nogas	543.482	6.430	7862	5.96	500	108.7	70	130	
Ca	44	1	nogas	515.249	3.542	172692	0.93	500	103.0	70	130	
Fe	56	1	nogas	503.021	3.352	6357587	1.48	500	100.6	70	130	
Se	77	1	nogas	-79.647	-22.514	22204	6.73	5	-1592.9	70	130	LLICV Main CR1 Failed
Se	82	1	nogas	4.592	26.410	893	12.48	5	91.8	70	130	
Mo	95	1	nogas	5.258	7.442	13379	6.89	5	105.2	70	130	
Sn	118	1	nogas	4.824	5.410	20716	3.67	5	96.5	70	130	
Ba	137	1	nogas	5.020	3.054	9833	3.68	5	100.4	70	130	
Sb	121	2	He	5.353	2.751	4701	4.24	5	107.1	70	130	
Li	7	1	nogas	4.759	4.107	60226	2.49	5	95.2	70	130	
P	31	1	nogas	30.559	14.570	60263	2.02	25	122.2	70	130	
La	139	1	nogas	1.748	254.587	50	20.00	5	35.0	70	130	LLICV Main CR1 Failed
Au	197	1	nogas	859.569	34.386	27	21.65	5	17191.4	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	343118	1.23	324345	105.79	70	125	
Ge	72	1	nogas	1297950	1.41	1246287	104.15	70	125	

Low Level Initial Calibration Verification (LLICV) Report

In	115	1	nogas	1359269	1.98	1264981	107.45	70	125	
Bi	209	1	nogas	1315636	4.44	1207455	108.96	70	125	
Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	2	He	121484	1.96	122874	98.87	70	125	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	ICCB
Data File Name	122_ICB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-03T15:01:05-06:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	113CALB.d
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	0.008	51.6	50	20.0	1	
Na	23	1	nogas	-100.877	-4.1	1792864	1.2	100	
Mg	24	1	nogas	0.453	90.2	14575	19.7	100	
Al	27	1	nogas	-0.328	-26.3	13592	2.6	5	
K	39	1	nogas	-26.401	-36.8	3361267	0.5	100	
Ti	47	1	nogas	-0.054	-89.4	150	24.0	2.5	
V	51	1	nogas	-20.267	-8.3	381407	3.9	2.5	
Cr	52	1	nogas	-0.400	-9.5	13148	2.8	2.5	
Mn	55	1	nogas	-0.016	-311.1	10423	4.4	2.5	
Co	59	1	nogas	0.008	34.9	263	9.6	2.5	
Ni	60	1	nogas	-1.180	-4.8	1330	11.4	2.5	
Cu	63	1	nogas	-0.012	-70.4	2834	2.6	2.5	
Zn	66	1	nogas	-0.336	-30.3	787	20.2	2.5	
As	75	1	nogas	-9.476	-19.4	66140	3.4	2.5	
Sr	88	1	nogas	0.005	190.5	750	12.7	2.5	
Ag	107	1	nogas	0.013	120.0	417	27.6	2.5	
Cd	111	1	nogas	0.009	158.3	20	100.0	1	
Sb	121	1	nogas	0.220	4.9	1953	3.4	2.5	
Tl	205	1	nogas	0.031	1.4	553	1.0	1	
Pb	208	1	nogas	0.021	11.0	947	4.3	2.5	
U	238	1	nogas	0.008	24.9	210	21.8	2.5	
[Pb]	206	1	nogas	0.011	89.7	250	17.4	2.5	
[Pb]	207	1	nogas	0.012	69.1	180	16.7	2.5	
Na	23	2	He	-96.427	-8.2	63947	2.3	100	
Mg	24	2	He	0.528	116.6	383	15.7	100	
Al	27	2	He	-1.870	-20.7	97	11.9	5	
K	39	2	He	0.685	402.4	10857	1.2	100	
Ca	43	2	He	21.658	277.0	20	50.0	100	
Ca	44	2	He	3.089	670.0	127	47.6	100	
V	51	2	He	-0.029	-101.7	298	12.6	2.5	
Cr	52	2	He	0.035	102.5	1037	6.3	2.5	
Mn	55	2	He	0.010	601.6	147	23.9	2.5	
Fe	56	2	He	1.156	16.6	4631	5.8	100	
Co	59	2	He	0.007	221.3	37	103.3	2.5	
Ni	60	2	He	-0.574	-27.7	280	41.2	2.5	
Cu	63	2	He	-0.125	-33.2	800	10.0	2.5	
Zn	66	2	He	-0.095	-135.6	70	51.5	2.5	
As	75	2	He	-0.004	-1198.1	13	66.1	2.5	
Se	78	2	He	0.167	5.6	4	0.0	2.5	
B	11	1	nogas	-2.854	-9.9	144270	1.2	10	
Si	28	1	nogas	15.695	35.2	856103	1.0	5	ICB Main CR1 Failed
Ca	43	1	nogas	-6.333	-47.6	493	7.7	100	
Ca	44	1	nogas	2.617	194.2	59234	0.5	100	
Fe	56	1	nogas	-24.094	-10.2	665028	3.5	100	
Se	77	1	nogas	-86.989	-17.9	21660	4.8	2.5	
Se	82	1	nogas	-1.289	-103.4	353	35.4	2.5	

Initial Calibration Blank (ICB) Report

Mo	95	1	nogas	0.019	60.2	120	22.0	2.5	
Sn	118	1	nogas	0.005	364.3	650	13.1	5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Ba	137	1	nogas	0.017	53.7	190	9.1	2.5	
Sb	121	2	He	0.155	61.9	223	34.8	2.5	
P	31	1	nogas	2.356	149.9	47888	2.0	10	
La	139	1	nogas	-2.454	-195.7	40	25.0	2.5	
Au	197	1	nogas	863.301	28.0	27	21.7	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	339376	1.12	324345	104.63	70	125	
Ge	72	1	nogas	1305321	2.40	1246287	104.74	70	125	
In	115	1	nogas	1339365	1.87	1264981	105.88	70	125	
Bi	209	1	nogas	1299714	1.60	1207455	107.64	70	125	
Ge	72	2	He	120750	1.72	122874	98.27	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	129_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-03T15:15:17-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	113CALB.d
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	104.008	1.331	218170	0.50	100	104.0	90	110	
Na	23	1	nogas	10321.819	3.543	99349923	2.22	10000	103.2	90	110	
Mg	24	1	nogas	9997.364	4.109	64043629	1.39	10000	100.0	90	110	
Al	27	1	nogas	112.484	5.367	814429	0.61	100	112.5	90	110	CCV Main CR1-2 Failed
K	39	1	nogas	10483.907	5.698	69645049	1.61	10000	104.8	90	110	
Ti	47	1	nogas	108.192	4.770	74563	0.65	100	108.2	90	110	
V	51	1	nogas	146.530	9.968	2063206	3.38	100	146.5	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	100.737	5.106	918722	2.21	100	100.7	90	110	
Mn	55	1	nogas	102.527	4.468	1182897	1.57	100	102.5	90	110	
Co	59	1	nogas	102.252	6.305	967460	2.20	100	102.3	90	110	
Ni	60	1	nogas	107.562	5.350	223433	2.14	100	107.6	90	110	
Cu	63	1	nogas	106.293	9.000	546637	3.92	100	106.3	90	110	
Zn	66	1	nogas	103.060	5.297	173948	0.48	100	103.1	90	110	
As	75	1	nogas	122.012	6.194	306276	1.11	100	122.0	90	110	CCV Main CR1-2 Failed
Sr	88	1	nogas	102.943	7.440	1261639	2.38	100	102.9	90	110	
Ag	107	1	nogas	102.093	5.492	664022	0.45	100	102.1	90	110	
Cd	111	1	nogas	97.690	0.790	140533	2.26	100	97.7	90	110	
Sb	121	1	nogas	101.045	7.214	596739	1.82	100	101.0	90	110	
Tl	205	1	nogas	100.307	4.362	1268506	2.54	100	100.3	90	110	
Pb	208	1	nogas	99.525	0.326	1698129	0.33	100	99.5	90	110	
U	238	1	nogas	97.078	0.835	1942679	2.17	100	97.1	90	110	
[Pb]	206	1	nogas	99.329	4.483	411197	1.74	100	99.3	90	110	
[Pb]	207	1	nogas	100.124	3.348	377878	0.75	100	100.1	90	110	
Na	23	2	He	10822.953	4.119	2228474	3.56	10000	108.2	90	110	
Mg	24	2	He	10331.293	3.987	1000673	4.26	10000	103.3	90	110	
Al	27	2	He	114.510	9.967	3174	9.11	100	114.5	90	110	CCV Main CR1-2 Failed
K	39	2	He	10167.990	1.669	506987	1.63	10000	101.7	90	110	
Ca	43	2	He	10392.977	13.678	1757	13.38	10000	103.9	90	110	
Ca	44	2	He	10273.835	2.867	30265	2.41	10000	102.7	90	110	
V	51	2	He	102.610	1.306	110643	0.89	100	102.6	90	110	
Cr	52	2	He	102.814	0.245	146276	0.34	100	102.8	90	110	
Mn	55	2	He	106.464	1.792	58754	1.41	100	106.5	90	110	
Fe	56	2	He	10449.324	2.462	12018996	2.23	10000	104.5	90	110	
Co	59	2	He	103.777	2.607	251835	2.36	100	103.8	90	110	
Ni	60	2	He	103.896	2.823	71326	3.10	100	103.9	90	110	
Cu	63	2	He	103.575	1.363	199886	1.03	100	103.6	90	110	
Zn	66	2	He	103.228	2.051	29230	1.82	100	103.2	90	110	
As	75	2	He	100.959	1.168	19603	1.21	100	101.0	90	110	
Se	78	2	He	102.904	7.668	750	7.26	100	102.9	90	110	
B	11	1	nogas	545.236	2.395	838160	1.42	500	109.0	90	110	
Si	28	1	nogas	5373.808	4.532	17923316	1.65	5000	107.5	90	110	
Ca	43	1	nogas	10482.804	5.821	136975	1.47	10000	104.8	90	110	
Ca	44	1	nogas	10771.661	5.800	2378387	2.77	10000	107.7	90	110	
Fe	56	1	nogas	10377.114	4.103	109826998	1.32	10000	103.8	90	110	
Se	77	1	nogas	237.970	7.087	49170	2.85	100	238.0	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	105.327	8.757	9876	3.15	100	105.3	90	110	
Mo	95	1	nogas	101.761	3.980	250255	1.43	100	101.8	90	110	
Sn	118	1	nogas	101.127	1.711	406148	1.80	100	101.1	90	110	
Ba	137	1	nogas	101.099	1.066	187723	2.08	100	101.1	90	110	
Sb	121	2	He	101.334	1.106	84166	0.79	100	101.3	90	110	
Li	7	1	nogas	103.474	2.287	583730	0.52	100	103.5	90	110	
P	31	1	nogas	524.448	5.573	273502	0.76	500	104.9	90	110	
La	139	1	nogas	154.536	12.502	373	12.37	100	154.5	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	-8.854	-3030.460	7	86.60	100	-8.9	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	307710	1.75	324345	94.87	70	125	
Ge	72	1	nogas	1262296	5.31	1246287	101.28	70	125	
In	115	1	nogas	1308922	2.24	1264981	103.47	70	125	
Bi	209	1	nogas	1262282	2.95	1207455	104.54	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	117118	0.45	122874	95.32	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	130_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-03T15:17:16-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	113CALB.d
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	0.043	24.5	127	24.1	1	
Na	23	1	nogas	347.719	8.9	5579418	1.4	100	CCB Main CR1 Failed
Mg	24	1	nogas	5.811	44.4	45201	30.6	100	
Al	27	1	nogas	-0.480	-16.4	11557	3.0	5	
K	39	1	nogas	18.746	35.5	3389114	1.2	100	
Ti	47	1	nogas	0.070	119.5	220	24.1	2.5	
V	51	1	nogas	18.299	10.4	730157	4.0	2.5	CCB Main CR1 Failed
Cr	52	1	nogas	0.327	17.9	18433	3.6	2.5	
Mn	55	1	nogas	0.045	169.1	10330	6.6	2.5	
Co	59	1	nogas	0.062	45.5	730	33.8	2.5	
Ni	60	1	nogas	-0.647	-13.3	2274	6.9	2.5	
Cu	63	1	nogas	0.223	30.4	3784	8.0	2.5	
Zn	66	1	nogas	-0.332	-21.9	737	14.6	2.5	
As	75	1	nogas	18.585	18.2	111017	6.6	2.5	CCB Main CR1 Failed
Sr	88	1	nogas	0.187	13.4	2837	8.9	2.5	
Ag	107	1	nogas	0.091	19.3	870	11.3	2.5	
Cd	111	1	nogas	0.041	44.1	63	39.7	1	
Sb	121	1	nogas	0.873	21.5	5498	17.9	2.5	
Tl	205	1	nogas	0.184	32.7	2277	28.6	1	
Pb	208	1	nogas	0.085	36.8	2030	26.3	2.5	
U	238	1	nogas	0.072	50.6	1353	47.4	2.5	
[Pb]	206	1	nogas	0.071	50.9	453	28.4	2.5	
[Pb]	207	1	nogas	0.087	46.3	420	31.1	2.5	
Na	23	2	He	346.620	2.3	150586	0.6	100	CCB Main CR1 Failed
Mg	24	2	He	2.679	28.2	583	13.7	100	
Al	27	2	He	-2.527	-22.7	77	19.9	5	
K	39	2	He	11.483	103.3	11384	5.1	100	
Ca	43	2	He	-74.780	-46.3	3	173.2	100	
Ca	44	2	He	13.085	35.3	153	7.5	100	
V	51	2	He	0.246	15.6	586	5.8	2.5	
Cr	52	2	He	0.060	139.6	1047	12.2	2.5	
Mn	55	2	He	0.060	115.3	170	21.2	2.5	
Fe	56	2	He	3.962	3.3	7752	3.3	100	
Co	59	2	He	0.025	27.8	80	21.7	2.5	
Ni	60	2	He	-0.552	-12.8	287	17.9	2.5	
Cu	63	2	He	-0.204	-23.5	627	14.4	2.5	
Zn	66	2	He	-0.101	-167.9	67	70.9	2.5	
As	75	2	He	0.106	10.9	34	5.6	2.5	
Se	78	2	He	0.084	666.3	3	124.9	2.5	
B	11	1	nogas	16.294	44.4	166731	1.7	10	CCB Main CR1 Failed
Si	28	1	nogas	31.993	25.5	843164	1.3	5	CCB Main CR1 Failed
Ca	43	1	nogas	8.510	44.4	643	9.1	100	
Ca	44	1	nogas	14.083	78.5	57251	2.3	100	
Fe	56	1	nogas	1.132	322.2	870160	2.7	100	
Se	77	1	nogas	107.861	9.5	36327	3.6	2.5	CCB Main CR1 Failed
Se	82	1	nogas	-0.710	-95.4	377	14.6	2.5	

Continuing Calibration Blank (CCB) Report

Mo	95	1	nogas	0.173	43.9	473	36.4	2.5	
Sn	118	1	nogas	0.102	44.3	977	18.9	5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Ba	137	1	nogas	0.022	244.2	183	45.7	2.5	
Sb	121	2	He	0.629	10.9	613	9.0	2.5	
P	31	1	nogas	5.259	107.9	45579	3.5	10	
La	139	1	nogas	10.607	144.5	63	48.2	2.5	CCB Main CR1 Failed
Au	197	1	nogas	345.967	85.8	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	330679	6.27	324345	101.95	70	125	
Ge	72	1	nogas	1209570	1.75	1246287	97.05	70	125	
In	115	1	nogas	1246433	4.23	1264981	98.53	70	125	
Bi	209	1	nogas	1162678	2.94	1207455	96.29	70	125	
Ge	72	2	He	117629	1.43	122874	95.73	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	141_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-03T15:39:17-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	113CALB.d
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	101.676	1.494	205433	1.11	100	101.7	90	110	
Na	23	1	nogas	11575.400	2.442	107875486	0.81	10000	115.8	90	110	CCV Main CR1-2 Failed
Mg	24	1	nogas	9819.476	2.422	61103237	1.16	10000	98.2	90	110	
Al	27	1	nogas	111.173	0.335	795787	2.58	100	111.2	90	110	CCV Main CR1-2 Failed
K	39	1	nogas	10618.193	4.919	69619954	2.22	10000	106.2	90	110	
Ti	47	1	nogas	105.406	5.344	71800	6.11	100	105.4	90	110	
V	51	1	nogas	102.154	2.440	1594324	3.03	100	102.2	90	110	
Cr	52	1	nogas	99.400	1.959	895982	2.86	100	99.4	90	110	
Mn	55	1	nogas	103.407	1.013	1178852	3.20	100	103.4	90	110	
Co	59	1	nogas	101.908	3.435	952697	0.95	100	101.9	90	110	
Ni	60	1	nogas	107.810	2.754	221227	1.71	100	107.8	90	110	
Cu	63	1	nogas	104.621	3.468	532203	1.64	100	104.6	90	110	
Zn	66	1	nogas	101.558	0.123	169442	2.44	100	101.6	90	110	
As	75	1	nogas	97.849	3.471	258558	1.89	100	97.8	90	110	
Sr	88	1	nogas	102.178	2.271	1238228	0.65	100	102.2	90	110	
Ag	107	1	nogas	103.243	2.311	663590	1.94	100	103.2	90	110	
Cd	111	1	nogas	99.697	1.100	140936	1.78	100	99.7	90	110	
Sb	121	1	nogas	98.610	0.582	575957	1.89	100	98.6	90	110	
Tl	205	1	nogas	96.527	8.760	1191763	3.64	100	96.5	90	110	
Pb	208	1	nogas	96.491	2.314	1646385	2.31	100	96.5	90	110	
U	238	1	nogas	96.347	3.623	1884701	2.45	100	96.3	90	110	
[Pb]	206	1	nogas	98.389	4.638	398265	1.16	100	98.4	90	110	
[Pb]	207	1	nogas	98.832	3.484	364791	2.20	100	98.8	90	110	
Na	23	2	He	11782.089	1.053	2510847	2.21	10000	117.8	90	110	CCV Main CR1-2 Failed
Mg	24	2	He	9606.874	0.792	965787	2.17	10000	96.1	90	110	
Al	27	2	He	108.169	1.803	3120	1.70	100	108.2	90	110	
K	39	2	He	10448.380	1.000	520669	0.98	10000	104.5	90	110	
Ca	43	2	He	8454.131	9.743	1487	10.10	10000	84.5	90	110	CCV Main CR1-2 Failed
Ca	44	2	He	10123.412	3.602	30946	2.30	10000	101.2	90	110	
V	51	2	He	99.686	0.895	111567	0.51	100	99.7	90	110	
Cr	52	2	He	101.032	3.871	149153	2.56	100	101.0	90	110	
Mn	55	2	He	102.466	1.349	58691	0.14	100	102.5	90	110	
Fe	56	2	He	10152.828	2.255	12118444	0.85	10000	101.5	90	110	
Co	59	2	He	99.818	1.889	251373	0.53	100	99.8	90	110	
Ni	60	2	He	99.622	2.660	70991	1.42	100	99.6	90	110	
Cu	63	2	He	100.039	2.660	200368	1.25	100	100.0	90	110	
Zn	66	2	He	98.278	0.959	28887	0.91	100	98.3	90	110	
As	75	2	He	97.144	3.904	19571	2.61	100	97.1	90	110	
Se	78	2	He	106.674	9.100	807	8.56	100	106.7	90	110	
B	11	1	nogas	518.235	2.035	773768	1.29	500	103.6	90	110	
Si	28	1	nogas	5270.954	1.447	17385949	3.21	5000	105.4	90	110	
Ca	43	1	nogas	10483.965	4.195	135324	1.70	10000	104.8	90	110	
Ca	44	1	nogas	10723.587	2.676	2339266	0.13	10000	107.2	90	110	
Fe	56	1	nogas	10224.622	3.150	106876719	1.48	10000	102.2	90	110	
Se	77	1	nogas	61.009	25.315	33364	3.36	100	61.0	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	102.296	5.041	9496	2.32	100	102.3	90	110	
Mo	95	1	nogas	102.355	1.859	248605	0.62	100	102.4	90	110	
Sn	118	1	nogas	100.762	1.480	397723	1.88	100	100.8	90	110	
Ba	137	1	nogas	100.986	2.022	184290	2.96	100	101.0	90	110	
Sb	121	2	He	97.210	1.940	83790	0.56	100	97.2	90	110	
Li	7	1	nogas	101.980	2.052	554581	1.56	100	102.0	90	110	
P	31	1	nogas	510.610	1.973	264271	1.84	500	102.1	90	110	
La	139	1	nogas	143.460	18.244	343	16.04	100	143.5	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	598.704	127.238	20	86.60	100	598.7	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	296357	0.43	324345	91.37	70	125	
Ge	72	1	nogas	1245333	2.46	1246287	99.92	70	125	
In	115	1	nogas	1286202	1.19	1264981	101.68	70	125	
Bi	209	1	nogas	1235019	4.96	1207455	102.28	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	121555	1.40	122874	98.93	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	142_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-03T15:41:15-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	113CALB.d
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	0.072	52.6	197	43.8	1	
Na	23	1	nogas	1461.609	2.6	15902498	1.9	100	CCB Main CR1 Failed
Mg	24	1	nogas	5.643	56.3	46040	41.7	100	
Al	27	1	nogas	-0.476	-10.4	12064	2.4	5	
K	39	1	nogas	22.997	96.7	3553345	2.0	100	
Ti	47	1	nogas	0.002	3641.2	183	32.0	2.5	
V	51	1	nogas	-1.453	-205.5	558722	2.4	2.5	
Cr	52	1	nogas	-0.057	-124.1	15744	0.4	2.5	
Mn	55	1	nogas	-0.073	-46.5	9403	3.0	2.5	
Co	59	1	nogas	0.061	52.5	750	40.1	2.5	
Ni	60	1	nogas	0.810	10.8	5341	1.2	2.5	
Cu	63	1	nogas	1.484	5.3	10390	2.1	2.5	
Zn	66	1	nogas	-0.070	-92.1	1210	12.7	2.5	
As	75	1	nogas	3.671	69.3	87995	3.2	2.5	CCB Main CR1 Failed
Sr	88	1	nogas	0.130	33.6	2264	23.1	2.5	
Ag	107	1	nogas	0.092	27.4	907	14.0	2.5	
Cd	111	1	nogas	0.065	34.6	100	30.0	1	
Sb	121	1	nogas	0.892	18.0	5838	15.1	2.5	
Tl	205	1	nogas	0.192	51.1	2547	49.3	1	
Pb	208	1	nogas	0.065	52.4	1690	34.4	2.5	
U	238	1	nogas	0.075	53.6	1527	53.5	2.5	
[Pb]	206	1	nogas	0.050	85.7	400	45.2	2.5	
[Pb]	207	1	nogas	0.058	63.8	340	39.8	2.5	
Na	23	2	He	1597.930	3.1	396831	0.6	100	CCB Main CR1 Failed
Mg	24	2	He	1.851	58.4	500	23.1	100	
Al	27	2	He	-2.640	-27.9	73	28.4	5	
K	39	2	He	35.135	21.6	12538	3.0	100	
Ca	43	2	He	-74.455	-47.3	3	173.2	100	
Ca	44	2	He	-4.634	-395.5	100	52.0	100	
V	51	2	He	0.130	20.9	457	3.7	2.5	
Cr	52	2	He	0.045	107.1	1017	5.6	2.5	
Mn	55	2	He	0.063	155.3	170	29.4	2.5	
Fe	56	2	He	4.249	4.8	8019	0.3	100	
Co	59	2	He	0.038	49.7	110	39.6	2.5	
Ni	60	2	He	-0.433	-30.9	367	27.3	2.5	
Cu	63	2	He	-0.087	-54.3	847	10.0	2.5	
Zn	66	2	He	-0.006	-1268.8	93	22.3	2.5	
As	75	2	He	0.106	77.9	34	48.7	2.5	
Se	78	2	He	0.274	114.2	5	49.5	2.5	
B	11	1	nogas	-0.396	-949.4	148258	2.5	10	
Si	28	1	nogas	42.699	30.4	911432	0.9	5	CCB Main CR1 Failed
Ca	43	1	nogas	-0.423	-2811.2	550	25.8	100	
Ca	44	1	nogas	21.161	70.9	61090	1.6	100	
Fe	56	1	nogas	-16.628	-27.2	719192	3.7	100	
Se	77	1	nogas	3.423	189.8	28750	2.3	2.5	CCB Main CR1 Failed
Se	82	1	nogas	-1.037	-134.3	360	30.6	2.5	
Mo	95	1	nogas	0.177	65.1	503	55.9	2.5	
Sn	118	1	nogas	0.133	46.0	1137	20.0	5	
Ba	137	1	nogas	0.062	54.9	267	22.0	2.5	

Continuing Calibration Blank (CCB) Report

Sb	121	2	He	0.634	2.8	613	3.4	2.5	
P	31	1	nogas	-4.202	-135.5	43313	1.9	10	
La	139	1	nogas	20.069	45.5	87	24.0	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	645.169	152.6	20	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	340642	2.32	324345	105.02	70	125	
Ge	72	1	nogas	1259653	3.97	1246287	101.07	70	125	
In	115	1	nogas	1299591	2.27	1264981	102.74	70	125	
Bi	209	1	nogas	1238395	4.86	1207455	102.56	70	125	
Ge	72	2	He	116757	2.78	122874	95.02	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	153_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-03T16:09:15-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	113CALB.d
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	95.741	3.182	220429	2.43	100	95.7	90	110	
Na	23	1	nogas	10557.179	3.576	97442248	2.76	10000	105.6	90	110	
Mg	24	1	nogas	10306.764	0.220	63381481	1.24	10000	103.1	90	110	
Al	27	1	nogas	114.561	1.486	812848	2.70	100	114.6	90	110	CCV Main CR1-2 Failed
K	39	1	nogas	11129.227	3.554	72233439	1.64	10000	111.3	90	110	CCV Main CR1-2 Failed
Ti	47	1	nogas	104.504	0.473	70598	2.42	100	104.5	90	110	
V	51	1	nogas	105.757	3.601	1616567	0.47	100	105.8	90	110	
Cr	52	1	nogas	101.112	1.982	903480	1.03	100	101.1	90	110	
Mn	55	1	nogas	111.132	3.414	1255119	1.92	100	111.1	90	110	CCV Main CR1-2 Failed
Co	59	1	nogas	106.766	2.250	990151	0.35	100	106.8	90	110	
Ni	60	1	nogas	110.931	1.461	225690	0.68	100	110.9	90	110	CCV Main CR1-2 Failed
Cu	63	1	nogas	108.175	1.175	545849	0.92	100	108.2	90	110	
Zn	66	1	nogas	103.939	0.679	171943	1.44	100	103.9	90	110	
As	75	1	nogas	98.436	2.200	257529	1.60	100	98.4	90	110	
Sr	88	1	nogas	104.659	4.221	1257790	3.18	100	104.7	90	110	
Ag	107	1	nogas	105.329	0.616	671547	1.51	100	105.3	90	110	
Cd	111	1	nogas	99.658	2.228	142038	3.54	100	99.7	90	110	
Sb	121	1	nogas	103.083	2.669	596944	0.73	100	103.1	90	110	
Tl	205	1	nogas	92.274	2.034	1217143	1.74	100	92.3	90	110	
Pb	208	1	nogas	99.656	1.476	1700368	1.48	100	99.7	90	110	
U	238	1	nogas	96.304	1.688	2008892	0.69	100	96.3	90	110	
[Pb]	206	1	nogas	96.159	1.898	415252	0.99	100	96.2	90	110	
[Pb]	207	1	nogas	95.166	2.353	374569	1.45	100	95.2	90	110	
Na	23	2	He	11111.921	1.278	2214771	1.19	10000	111.1	90	110	CCV Main CR1-2 Failed
Mg	24	2	He	10122.147	0.293	949789	0.31	10000	101.2	90	110	
Al	27	2	He	104.294	6.544	2814	6.32	100	104.3	90	110	
K	39	2	He	9668.382	0.913	482608	0.89	10000	96.7	90	110	
Ca	43	2	He	9866.108	8.370	1617	8.35	10000	98.7	90	110	
Ca	44	2	He	10196.309	0.641	29103	0.58	10000	102.0	90	110	
V	51	2	He	103.915	0.722	108557	0.72	100	103.9	90	110	
Cr	52	2	He	104.600	1.273	144162	1.32	100	104.6	90	110	
Mn	55	2	He	106.262	2.760	56818	2.80	100	106.3	90	110	
Fe	56	2	He	10504.107	0.878	11705692	0.77	10000	105.0	90	110	
Co	59	2	He	105.893	0.529	248970	0.59	100	105.9	90	110	
Ni	60	2	He	104.503	1.129	69498	1.04	100	104.5	90	110	
Cu	63	2	He	105.520	1.068	197277	1.03	100	105.5	90	110	
Zn	66	2	He	103.150	3.153	28299	3.21	100	103.2	90	110	
As	75	2	He	101.204	1.048	19038	1.15	100	101.2	90	110	
Se	78	2	He	100.904	5.913	713	5.79	100	100.9	90	110	
B	11	1	nogas	506.354	3.094	865007	2.55	500	101.3	90	110	
Si	28	1	nogas	5454.628	1.158	17813372	1.15	5000	109.1	90	110	
Ca	43	1	nogas	10938.722	2.807	140062	1.73	10000	109.4	90	110	
Ca	44	1	nogas	10899.196	4.880	2356708	2.95	10000	109.0	90	110	
Fe	56	1	nogas	10702.594	2.123	110932686	0.77	10000	107.0	90	110	
Se	77	1	nogas	77.391	12.241	34493	2.74	100	77.4	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	105.430	0.870	9699	1.38	100	105.4	90	110	
Mo	95	1	nogas	103.834	2.803	250113	1.37	100	103.8	90	110	
Sn	118	1	nogas	103.020	2.018	409858	1.90	100	103.0	90	110	
Ba	137	1	nogas	99.992	3.446	183855	1.60	100	100.0	90	110	
Sb	121	2	He	102.033	1.938	82106	2.03	100	102.0	90	110	
Li	7	1	nogas	103.005	1.159	638133	1.91	100	103.0	90	110	
P	31	1	nogas	531.415	1.129	271009	1.97	500	106.3	90	110	
La	139	1	nogas	138.874	29.235	337	25.95	100	138.9	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	120.101	3.746	10	0.00	100	120.1	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	337753	1.29	324345	104.13	70	125	
Ge	72	1	nogas	1235075	1.97	1246287	99.10	70	125	
In	115	1	nogas	1296603	1.85	1264981	102.50	70	125	
Bi	209	1	nogas	1315743	1.03	1207455	108.97	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	113466	0.11	122874	92.34	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	154_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-03T16:11:16-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	113CALB.d
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	58.4	173	50.4	1	
Na	23	1	nogas	223.519	1.7	4739048	1.9	100	CCB Main CR1 Failed
Mg	24	1	nogas	6.613	30.5	52918	22.1	100	
Al	27	1	nogas	-0.480	-13.7	12047	2.3	5	
K	39	1	nogas	15.638	51.7	3512632	0.2	100	
Ti	47	1	nogas	0.032	125.7	203	12.4	2.5	
V	51	1	nogas	-2.964	-64.1	544548	3.8	2.5	
Cr	52	1	nogas	0.023	162.9	16484	1.0	2.5	
Mn	55	1	nogas	0.307	18.5	13762	3.1	2.5	
Co	59	1	nogas	0.047	44.0	623	30.4	2.5	
Ni	60	1	nogas	-0.582	-8.2	2504	2.4	2.5	
Cu	63	1	nogas	0.779	2.2	6791	2.1	2.5	
Zn	66	1	nogas	-0.101	-133.0	1157	20.0	2.5	
As	75	1	nogas	4.037	51.5	88836	4.3	2.5	CCB Main CR1 Failed
Sr	88	1	nogas	0.168	22.4	2720	15.5	2.5	
Ag	107	1	nogas	0.064	35.8	730	19.0	2.5	
Cd	111	1	nogas	0.071	51.3	113	51.7	1	
Sb	121	1	nogas	0.935	20.1	6105	17.2	2.5	
Tl	205	1	nogas	0.173	44.5	2440	39.8	1	
Pb	208	1	nogas	0.066	34.2	1703	22.5	2.5	
U	238	1	nogas	0.072	44.5	1550	41.7	2.5	
[Pb]	206	1	nogas	0.042	56.2	390	24.5	2.5	
[Pb]	207	1	nogas	0.074	18.2	430	10.7	2.5	
Na	23	2	He	283.515	4.9	135722	0.6	100	CCB Main CR1 Failed
Mg	24	2	He	3.596	22.4	660	9.9	100	
Al	27	2	He	-2.737	-36.8	70	37.8	5	
K	39	2	He	-4.510	-190.4	10603	4.0	100	
Ca	43	2	He	-13.255	-1065.1	13	173.2	100	
Ca	44	2	He	43.039	72.8	237	36.9	100	
V	51	2	He	0.108	9.4	431	3.5	2.5	
Cr	52	2	He	0.121	56.2	1113	7.5	2.5	
Mn	55	2	He	0.404	61.1	353	36.5	2.5	
Fe	56	2	He	4.327	13.8	8032	7.2	100	
Co	59	2	He	0.043	70.1	120	58.3	2.5	
Ni	60	2	He	-0.460	-11.9	343	9.4	2.5	
Cu	63	2	He	-0.057	-169.5	893	18.8	2.5	
Zn	66	2	He	-0.025	-603.5	87	46.6	2.5	
As	75	2	He	0.062	101.7	26	49.4	2.5	
Se	78	2	He	0.462	157.6	6	88.2	2.5	
B	11	1	nogas	29.864	16.8	204075	1.0	10	CCB Main CR1 Failed
Si	28	1	nogas	45.556	13.5	922257	1.4	5	CCB Main CR1 Failed
Ca	43	1	nogas	22.745	41.0	857	15.9	100	
Ca	44	1	nogas	18.722	29.0	60692	1.3	100	
Fe	56	1	nogas	-14.340	-16.9	744771	2.7	100	
Se	77	1	nogas	-7.152	-214.1	27878	5.9	2.5	
Se	82	1	nogas	-0.919	-99.4	373	20.5	2.5	

Continuing Calibration Blank (CCB) Report

Mo	95	1	nogas	0.178	55.9	507	47.1	2.5	
Sn	118	1	nogas	0.134	24.9	1183	7.2	5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Ba	137	1	nogas	0.064	75.9	283	36.7	2.5	
Sb	121	2	He	0.698	21.3	660	18.4	2.5	
P	31	1	nogas	-2.313	-165.2	44225	2.8	10	
La	139	1	nogas	21.026	135.5	93	68.9	2.5	CCB Main CR1 Failed
Au	197	1	nogas	-25.698	-987.2	7	86.6	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	363190	3.38	324345	111.98	70	125	
Ge	72	1	nogas	1260735	1.61	1246287	101.16	70	125	
In	115	1	nogas	1347890	4.38	1264981	106.55	70	125	
Bi	209	1	nogas	1325878	1.84	1207455	109.81	70	125	
Ge	72	2	He	115697	1.93	122874	94.16	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	165_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-03T16:33:38-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	113CALB.d
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	91.313	2.896	214286	2.13	100	91.3	90	110	
Na	23	1	nogas	11846.177	1.865	122425511	0.43	10000	118.5	90	110	CCV Main CR1-2 Failed
Mg	24	1	nogas	9533.614	2.842	65828493	2.72	10000	95.3	90	110	
Al	27	1	nogas	109.566	4.886	856622	1.62	100	109.6	90	110	
K	39	1	nogas	10622.375	6.378	76097435	3.74	10000	106.2	90	110	
Ti	47	1	nogas	105.125	6.071	78142	0.10	100	105.1	90	110	
V	51	1	nogas	121.607	9.238	1953111	0.69	100	121.6	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	96.513	6.925	949706	0.78	100	96.5	90	110	
Mn	55	1	nogas	104.206	5.261	1296779	1.82	100	104.2	90	110	
Co	59	1	nogas	100.666	6.346	1027589	1.81	100	100.7	90	110	
Ni	60	1	nogas	108.076	4.969	242245	2.20	100	108.1	90	110	
Cu	63	1	nogas	113.174	3.010	629196	3.47	100	113.2	90	110	CCV Main CR1-2 Failed
Zn	66	1	nogas	100.121	2.545	182588	3.66	100	100.1	90	110	
As	75	1	nogas	104.686	6.264	296045	1.80	100	104.7	90	110	
Sr	88	1	nogas	105.027	8.257	1388463	2.80	100	105.0	90	110	
Ag	107	1	nogas	100.268	4.451	703989	1.67	100	100.3	90	110	
Cd	111	1	nogas	96.514	2.251	148971	2.13	100	96.5	90	110	
Sb	121	1	nogas	100.260	4.673	639575	2.53	100	100.3	90	110	
Tl	205	1	nogas	92.498	2.214	1256220	1.18	100	92.5	90	110	
Pb	208	1	nogas	100.971	2.427	1722807	2.43	100	101.0	90	110	
U	238	1	nogas	93.004	3.733	1997194	2.07	100	93.0	90	110	
[Pb]	206	1	nogas	94.921	1.605	422160	2.47	100	94.9	90	110	
[Pb]	207	1	nogas	94.220	2.962	381923	3.27	100	94.2	90	110	
Na	23	2	He	12955.316	1.180	2804297	0.79	10000	129.6	90	110	CCV Main CR1-2 Failed
Mg	24	2	He	9798.586	2.302	1003702	2.82	10000	98.0	90	110	
Al	27	2	He	107.131	5.069	3150	4.68	100	107.1	90	110	
K	39	2	He	10756.394	1.844	535699	1.81	10000	107.6	90	110	
Ca	43	2	He	9951.513	2.181	1780	2.97	10000	99.5	90	110	
Ca	44	2	He	9604.943	2.922	29938	3.75	10000	96.0	90	110	
V	51	2	He	101.048	1.951	115225	1.14	100	101.0	90	110	
Cr	52	2	He	102.728	0.269	154566	1.04	100	102.7	90	110	
Mn	55	2	He	101.464	2.940	59236	3.74	100	101.5	90	110	
Fe	56	2	He	10103.825	1.703	12292100	2.53	10000	101.0	90	110	
Co	59	2	He	102.887	1.330	264057	1.68	100	102.9	90	110	
Ni	60	2	He	102.209	1.121	74211	1.06	100	102.2	90	110	
Cu	63	2	He	102.047	3.390	208257	2.67	100	102.0	90	110	
Zn	66	2	He	101.582	3.553	30416	2.67	100	101.6	90	110	
As	75	2	He	99.255	1.925	20381	2.18	100	99.3	90	110	
Se	78	2	He	96.708	9.366	745	8.46	100	96.7	90	110	
B	11	1	nogas	440.793	6.131	786518	2.57	500	88.2	90	110	CCV Main CR1-2 Failed
Si	28	1	nogas	5274.429	4.950	18996102	1.99	5000	105.5	90	110	
Ca	43	1	nogas	10642.653	4.169	150155	3.02	10000	106.4	90	110	
Ca	44	1	nogas	10692.596	6.147	2547078	1.33	10000	106.9	90	110	
Fe	56	1	nogas	10190.362	7.799	116254115	3.45	10000	101.9	90	110	
Se	77	1	nogas	124.494	18.108	42400	3.35	100	124.5	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	99.559	5.466	10133	8.33	100	99.6	90	110	
Mo	95	1	nogas	97.799	5.343	259401	1.30	100	97.8	90	110	
Sn	118	1	nogas	101.565	1.179	437719	0.60	100	101.6	90	110	
Ba	137	1	nogas	99.362	0.377	198000	2.06	100	99.4	90	110	
Sb	121	2	He	95.997	2.925	84323	2.80	100	96.0	90	110	
Li	7	1	nogas	101.472	0.843	641321	2.82	100	101.5	90	110	
P	31	1	nogas	520.087	6.488	292988	0.69	500	104.0	90	110	
La	139	1	nogas	177.658	8.121	453	8.91	100	177.7	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	386.264	225.676	17	124.90	100	386.3	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	344314	2.57	324345	106.16	70	125	
Ge	72	1	nogas	1362409	6.05	1246287	109.32	70	125	
In	115	1	nogas	1404551	1.70	1264981	111.03	70	125	
Bi	209	1	nogas	1354909	1.84	1207455	112.21	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	123857	0.86	122874	100.80	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	166_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-03T16:35:37-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	113CALB.d
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	106.9	167	85.3	1	
Na	23	1	nogas	2230.434	1.1	25192327	1.2	100	CCB Main CR1 Failed
Mg	24	1	nogas	11.199	26.7	88562	20.8	100	
Al	27	1	nogas	-0.533	-4.6	12725	1.6	5	
K	39	1	nogas	74.531	1.8	4233111	0.1	100	
Ti	47	1	nogas	0.852	21.2	837	16.3	2.5	
V	51	1	nogas	12.171	12.2	761028	2.1	2.5	CCB Main CR1 Failed
Cr	52	1	nogas	0.011	168.2	17849	0.9	2.5	
Mn	55	1	nogas	0.038	100.0	11651	4.0	2.5	
Co	59	1	nogas	0.075	49.6	967	39.9	2.5	
Ni	60	1	nogas	3.181	8.5	11107	5.4	2.5	CCB Main CR1 Failed
Cu	63	1	nogas	12.678	4.1	73844	3.8	2.5	CCB Main CR1 Failed
Zn	66	1	nogas	-0.214	-56.0	1053	20.7	2.5	
As	75	1	nogas	9.054	16.8	106868	2.7	2.5	CCB Main CR1 Failed
Sr	88	1	nogas	0.254	9.4	4127	7.9	2.5	
Ag	107	1	nogas	0.068	50.1	823	29.4	2.5	
Cd	111	1	nogas	0.044	79.3	77	71.8	1	
Sb	121	1	nogas	0.858	23.1	6165	20.9	2.5	
Tl	205	1	nogas	0.204	44.0	2927	43.5	1	
Pb	208	1	nogas	0.082	57.3	1980	40.5	2.5	
U	238	1	nogas	0.083	46.9	1833	47.9	2.5	
[Pb]	206	1	nogas	0.060	52.2	480	30.3	2.5	
[Pb]	207	1	nogas	0.080	65.4	463	48.1	2.5	
Na	23	2	He	2661.554	1.0	654009	0.6	100	CCB Main CR1 Failed
Mg	24	2	He	8.896	11.4	1270	9.6	100	
Al	27	2	He	-1.550	-102.1	110	41.7	5	
K	39	2	He	124.350	5.2	16891	1.9	100	CCB Main CR1 Failed
Ca	43	2	He	34.091	337.8	23	89.2	100	
Ca	44	2	He	21.131	109.7	190	39.7	100	
V	51	2	He	0.248	10.6	630	6.0	2.5	
Cr	52	2	He	0.181	97.8	1303	21.9	2.5	
Mn	55	2	He	0.281	18.7	313	11.2	2.5	
Fe	56	2	He	4.569	15.2	9026	8.1	100	
Co	59	2	He	0.041	43.9	127	35.6	2.5	
Ni	60	2	He	-0.551	-2.3	307	1.9	2.5	
Cu	63	2	He	-0.085	-115.7	917	23.2	2.5	
Zn	66	2	He	-0.040	-160.0	90	22.2	2.5	
As	75	2	He	0.121	21.0	40	14.4	2.5	
Se	78	2	He	0.147	178.9	4	50.0	2.5	
B	11	1	nogas	-20.441	-27.7	129407	5.2	10	
Si	28	1	nogas	105.576	4.4	1213661	1.5	5	CCB Main CR1 Failed
Ca	43	1	nogas	4.997	163.9	680	17.0	100	
Ca	44	1	nogas	-1.393	-780.8	61404	4.0	100	
Fe	56	1	nogas	-15.364	-19.9	799912	4.5	100	
Se	77	1	nogas	41.515	21.9	34967	2.3	2.5	CCB Main CR1 Failed
Se	82	1	nogas	-1.476	-38.1	353	15.6	2.5	
Mo	95	1	nogas	0.223	20.1	673	18.0	2.5	
Sn	118	1	nogas	0.123	44.3	1210	20.1	5	
Ba	137	1	nogas	0.038	118.7	247	37.7	2.5	

Continuing Calibration Blank (CCB) Report

Sb	121	2	He	0.596	10.0	627	8.8	2.5	
P	31	1	nogas	6.851	29.3	52543	1.7	10	
La	139	1	nogas	-0.663	-1410.6	47	44.6	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Au	197	1	nogas	102.724	407.2	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	368614	1.68	324345	113.65	70	125	
Ge	72	1	nogas	1373542	0.15	1246287	110.21	70	125	
In	115	1	nogas	1427444	1.52	1264981	112.84	70	125	
Bi	209	1	nogas	1348617	2.39	1207455	111.69	70	125	
Ge	72	2	He	125723	1.37	122874	102.32	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	177_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-03T16:57:36-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	113CALB.d
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	93.105	2.438	207470	0.86	100	93.1	90	110	
Na	23	1	nogas	11336.886	2.375	105524415	2.01	10000	113.4	90	110	CCV Main CR1-2 Failed
Mg	24	1	nogas	9819.527	1.680	60997401	1.33	10000	98.2	90	110	
Al	27	1	nogas	107.864	4.655	783706	2.18	100	107.9	90	110	
K	39	1	nogas	10583.543	2.406	70487549	0.71	10000	105.8	90	110	
Ti	47	1	nogas	100.478	3.697	69451	2.11	100	100.5	90	110	
V	51	1	nogas	104.745	4.566	1644162	0.48	100	104.7	90	110	
Cr	52	1	nogas	95.695	3.049	876089	2.36	100	95.7	90	110	
Mn	55	1	nogas	101.953	2.299	1179884	3.01	100	102.0	90	110	
Co	59	1	nogas	96.904	1.977	919946	1.02	100	96.9	90	110	
Ni	60	1	nogas	104.077	1.541	216998	2.31	100	104.1	90	110	
Cu	63	1	nogas	104.484	2.076	539779	2.38	100	104.5	90	110	
Zn	66	1	nogas	99.359	2.328	168278	1.79	100	99.4	90	110	
As	75	1	nogas	92.476	3.608	252555	1.79	100	92.5	90	110	
Sr	88	1	nogas	103.560	3.658	1273911	2.28	100	103.6	90	110	
Ag	107	1	nogas	100.370	1.735	654949	1.16	100	100.4	90	110	
Cd	111	1	nogas	96.558	1.383	137909	3.24	100	96.6	90	110	
Sb	121	1	nogas	101.409	4.875	600899	2.65	100	101.4	90	110	
Tl	205	1	nogas	96.284	5.142	1164010	1.31	100	96.3	90	110	
Pb	208	1	nogas	95.784	0.757	1634324	0.76	100	95.8	90	110	
U	238	1	nogas	98.060	7.744	1873294	3.42	100	98.1	90	110	
[Pb]	206	1	nogas	100.877	5.106	399270	1.17	100	100.9	90	110	
[Pb]	207	1	nogas	99.779	3.070	360179	1.57	100	99.8	90	110	
Na	23	2	He	12145.494	2.018	2358038	0.66	10000	121.5	90	110	CCV Main CR1-2 Failed
Mg	24	2	He	9862.281	1.436	904205	0.52	10000	98.6	90	110	
Al	27	2	He	103.524	7.400	2730	7.35	100	103.5	90	110	
K	39	2	He	9295.114	0.398	464394	0.39	10000	93.0	90	110	
Ca	43	2	He	8947.527	8.932	1433	8.09	10000	89.5	90	110	CCV Main CR1-2 Failed
Ca	44	2	He	9932.262	2.942	27704	2.95	10000	99.3	90	110	
V	51	2	He	101.967	2.866	104072	1.45	100	102.0	90	110	
Cr	52	2	He	102.182	2.828	137616	2.15	100	102.2	90	110	
Mn	55	2	He	100.791	1.658	52662	0.55	100	100.8	90	110	
Fe	56	2	He	10124.205	1.781	11023727	0.87	10000	101.2	90	110	
Co	59	2	He	103.223	2.472	237104	0.95	100	103.2	90	110	
Ni	60	2	He	103.277	1.823	67120	1.72	100	103.3	90	110	
Cu	63	2	He	105.054	1.869	191899	0.44	100	105.1	90	110	
Zn	66	2	He	103.305	3.678	27688	2.88	100	103.3	90	110	
As	75	2	He	101.481	3.623	18650	2.62	100	101.5	90	110	
Se	78	2	He	99.837	3.354	689	4.81	100	99.8	90	110	
B	11	1	nogas	507.296	3.773	838327	1.69	500	101.5	90	110	
Si	28	1	nogas	5171.121	2.815	17321797	0.37	5000	103.4	90	110	
Ca	43	1	nogas	10465.347	2.655	137175	0.71	10000	104.7	90	110	
Ca	44	1	nogas	10684.151	1.967	2366707	1.34	10000	106.8	90	110	
Fe	56	1	nogas	9965.661	2.370	105785811	0.61	10000	99.7	90	110	
Se	77	1	nogas	58.760	29.885	33668	2.95	100	58.8	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	101.536	5.081	9586	6.98	100	101.5	90	110	
Mo	95	1	nogas	98.753	1.607	243533	1.66	100	98.8	90	110	
Sn	118	1	nogas	101.307	1.899	403964	2.94	100	101.3	90	110	
Ba	137	1	nogas	99.720	4.396	183678	0.52	100	99.7	90	110	
Sb	121	2	He	100.345	1.950	78895	0.91	100	100.3	90	110	
Li	7	1	nogas	102.110	2.162	612509	2.34	100	102.1	90	110	
P	31	1	nogas	505.024	2.317	265834	1.53	500	101.0	90	110	
La	139	1	nogas	130.867	19.770	320	16.54	100	130.9	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	160.054	307.014	10	100.00	100	160.1	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	326918	1.68	324345	100.79	70	125	
Ge	72	1	nogas	1264375	2.92	1246287	101.45	70	125	
In	115	1	nogas	1300056	4.55	1264981	102.77	70	125	
Bi	209	1	nogas	1207646	4.54	1207455	100.02	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	110881	1.52	122874	90.24	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	178_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-03T16:59:34-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	113CALB.d
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	72.8	227	58.8	1	
Na	23	1	nogas	1137.554	5.9	13238876	1.2	100	CCB Main CR1 Failed
Mg	24	1	nogas	9.152	38.3	68849	27.1	100	
Al	27	1	nogas	-0.227	-162.3	13424	12.1	5	
K	39	1	nogas	78.518	62.3	3807929	0.3	100	
Ti	47	1	nogas	0.377	35.9	427	13.3	2.5	
V	51	1	nogas	5.598	51.4	616055	2.8	2.5	CCB Main CR1 Failed
Cr	52	1	nogas	0.002	6883.1	15874	0.6	2.5	
Mn	55	1	nogas	0.060	216.9	10627	5.9	2.5	
Co	59	1	nogas	0.074	67.9	837	46.0	2.5	
Ni	60	1	nogas	2.605	6.2	8806	5.8	2.5	CCB Main CR1 Failed
Cu	63	1	nogas	5.841	1.6	31988	6.5	2.5	CCB Main CR1 Failed
Zn	66	1	nogas	-0.071	-69.1	1177	8.4	2.5	
As	75	1	nogas	6.489	51.8	90972	1.4	2.5	CCB Main CR1 Failed
Sr	88	1	nogas	0.250	17.6	3630	7.0	2.5	
Ag	107	1	nogas	0.096	34.2	907	15.5	2.5	
Cd	111	1	nogas	0.066	37.7	100	36.1	1	
Sb	121	1	nogas	0.842	31.2	5364	20.6	2.5	
Tl	205	1	nogas	0.214	46.9	2650	41.8	1	
Pb	208	1	nogas	0.076	45.7	1880	31.6	2.5	
U	238	1	nogas	0.088	46.7	1673	42.9	2.5	
[Pb]	206	1	nogas	0.075	49.7	473	27.6	2.5	
[Pb]	207	1	nogas	0.099	57.1	467	39.6	2.5	
Na	23	2	He	1424.510	2.9	353216	0.7	100	CCB Main CR1 Failed
Mg	24	2	He	6.512	11.2	923	6.3	100	
Al	27	2	He	-2.038	-48.5	87	29.0	5	
K	39	2	He	72.800	6.5	14376	1.6	100	
Ca	43	2	He	7.530	464.4	17	34.6	100	
Ca	44	2	He	29.863	49.9	197	23.5	100	
V	51	2	He	0.189	17.5	507	5.2	2.5	
Cr	52	2	He	0.282	33.9	1317	11.5	2.5	
Mn	55	2	He	0.069	164.2	170	36.7	2.5	
Fe	56	2	He	5.174	7.6	8849	5.6	100	
Co	59	2	He	0.033	75.6	97	60.6	2.5	
Ni	60	2	He	-0.552	-2.8	277	2.1	2.5	
Cu	63	2	He	0.006	699.6	997	6.1	2.5	
Zn	66	2	He	0.017	907.2	97	43.1	2.5	
As	75	2	He	0.123	40.5	37	27.3	2.5	
Se	78	2	He	0.201	376.1	4	132.3	2.5	
B	11	1	nogas	-0.293	-2474.4	160218	4.0	10	
Si	28	1	nogas	61.702	42.1	948086	1.0	5	CCB Main CR1 Failed
Ca	43	1	nogas	2.242	432.4	570	15.6	100	
Ca	44	1	nogas	14.819	132.2	58311	0.5	100	
Fe	56	1	nogas	-13.788	-66.3	729285	5.0	100	
Se	77	1	nogas	11.101	195.3	28713	3.7	2.5	CCB Main CR1 Failed
Se	82	1	nogas	-1.809	-21.7	287	8.8	2.5	
Mo	95	1	nogas	0.185	52.8	503	38.7	2.5	
Sn	118	1	nogas	0.111	61.8	1037	23.7	5	
Ba	137	1	nogas	0.078	27.3	293	10.4	2.5	

Continuing Calibration Blank (CCB) Report

Sb	121	2	He	0.542	16.3	523	14.1	2.5	
P	31	1	nogas	7.315	124.2	47156	1.6	10	
La	139	1	nogas	5.633	320.8	57	71.3	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	-155.900	-180.8	3	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	368119	3.18	324345	113.50	70	125	
Ge	72	1	nogas	1232325	7.25	1246287	98.88	70	125	
In	115	1	nogas	1287385	5.47	1264981	101.77	70	125	
Bi	209	1	nogas	1180458	2.75	1207455	97.76	70	125	
Ge	72	2	He	113732	1.70	122874	92.56	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	189_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-03T17:21:33-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	113CALB.d
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	88.299	1.342	188797	2.14	100	88.3	90	110	CCV Main CR1-2 Failed
Na	23	1	nogas	11135.266	3.533	96926100	2.12	10000	111.4	90	110	CCV Main CR1-2 Failed
Mg	24	1	nogas	9762.236	2.864	56683414	1.04	10000	97.6	90	110	
Al	27	1	nogas	116.345	0.503	725259	1.47	100	116.3	90	110	CCV Main CR1-2 Failed
K	39	1	nogas	11220.523	1.127	64002820	1.22	10000	112.2	90	110	CCV Main CR1-2 Failed
Ti	47	1	nogas	110.213	3.238	65420	3.38	100	110.2	90	110	CCV Main CR1-2 Failed
V	51	1	nogas	111.111	1.639	1467941	0.77	100	111.1	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	102.282	1.108	803194	1.35	100	102.3	90	110	
Mn	55	1	nogas	104.292	1.719	1036014	1.40	100	104.3	90	110	
Co	59	1	nogas	102.338	1.660	834246	0.83	100	102.3	90	110	
Ni	60	1	nogas	110.183	1.428	197048	0.83	100	110.2	90	110	CCV Main CR1-2 Failed
Cu	63	1	nogas	109.039	1.375	483622	2.16	100	109.0	90	110	
Zn	66	1	nogas	105.040	0.934	152708	1.31	100	105.0	90	110	
As	75	1	nogas	102.434	0.565	232704	1.36	100	102.4	90	110	
Sr	88	1	nogas	105.306	2.260	1112499	1.46	100	105.3	90	110	
Ag	107	1	nogas	106.295	0.999	595585	0.14	100	106.3	90	110	
Cd	111	1	nogas	100.719	3.349	127756	0.34	100	100.7	90	110	
Sb	121	1	nogas	105.723	1.562	538224	1.89	100	105.7	90	110	
Tl	205	1	nogas	99.013	1.302	1072549	1.14	100	99.0	90	110	
Pb	208	1	nogas	88.756	2.384	1514447	2.38	100	88.8	90	110	CCV Main CR1-2 Failed
U	238	1	nogas	103.557	3.828	1773607	2.46	100	103.6	90	110	
[Pb]	206	1	nogas	104.832	1.252	371791	1.50	100	104.8	90	110	
[Pb]	207	1	nogas	102.862	1.643	332536	2.33	100	102.9	90	110	
Na	23	2	He	11881.815	2.354	2124892	2.27	10000	118.8	90	110	CCV Main CR1-2 Failed
Mg	24	2	He	9747.510	1.035	822553	0.91	10000	97.5	90	110	
Al	27	2	He	99.363	3.059	2417	3.62	100	99.4	90	110	
K	39	2	He	8455.031	0.956	423400	0.93	10000	84.6	90	110	CCV Main CR1-2 Failed
Ca	43	2	He	9265.652	4.838	1367	5.68	10000	92.7	90	110	
Ca	44	2	He	9510.233	2.125	24416	1.21	10000	95.1	90	110	
V	51	2	He	100.106	0.861	94062	1.24	100	100.1	90	110	
Cr	52	2	He	100.701	0.120	124849	0.99	100	100.7	90	110	
Mn	55	2	He	100.055	1.501	48117	0.82	100	100.1	90	110	
Fe	56	2	He	9980.388	0.964	10002404	0.83	10000	99.8	90	110	
Co	59	2	He	101.088	1.814	213729	1.08	100	101.1	90	110	
Ni	60	2	He	101.768	2.265	60875	1.43	100	101.8	90	110	
Cu	63	2	He	102.490	1.576	172337	0.92	100	102.5	90	110	
Zn	66	2	He	99.494	2.184	24553	2.94	100	99.5	90	110	
As	75	2	He	96.673	0.737	16355	0.90	100	96.7	90	110	
Se	78	2	He	95.713	2.762	608	1.83	100	95.7	90	110	
B	11	1	nogas	506.471	1.531	803349	2.07	500	101.3	90	110	
Si	28	1	nogas	5667.276	0.829	16240496	0.60	5000	113.3	90	110	CCV Main CR1-2 Failed
Ca	43	1	nogas	11199.604	1.374	126065	2.44	10000	112.0	90	110	CCV Main CR1-2 Failed
Ca	44	1	nogas	11513.266	1.803	2186206	1.37	10000	115.1	90	110	CCV Main CR1-2 Failed
Fe	56	1	nogas	10502.151	2.640	95694623	2.22	10000	105.0	90	110	
Se	77	1	nogas	77.287	12.016	30312	3.31	100	77.3	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	111.995	3.732	9029	2.57	100	112.0	90	110	CCV Main CR1-2 Failed
Mo	95	1	nogas	103.627	2.642	219431	2.60	100	103.6	90	110	
Sn	118	1	nogas	103.360	6.811	365789	3.57	100	103.4	90	110	
Ba	137	1	nogas	104.104	4.173	170415	0.73	100	104.1	90	110	
Sb	121	2	He	97.171	1.323	70331	2.23	100	97.2	90	110	
Li	7	1	nogas	97.846	2.210	564170	1.48	100	97.8	90	110	
P	31	1	nogas	545.249	1.166	243357	1.08	500	109.0	90	110	
La	139	1	nogas	164.174	17.382	347	14.23	100	164.2	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	567.962	106.567	17	69.28	100	568.0	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	313578	0.80	324345	96.68	70	125	
Ge	72	1	nogas	1085426	1.09	1246287	87.09	70	125	
In	115	1	nogas	1154992	3.42	1264981	91.31	70	125	
Bi	209	1	nogas	1080583	1.79	1207455	89.49	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	102045	0.91	122874	83.05	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	190_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-03T17:23:32-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	113CALB.d
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	0.080	48.3	220	40.9	1	
Na	23	1	nogas	1179.404	1.4	12466491	0.3	100	CCB Main CR1 Failed
Mg	24	1	nogas	10.087	33.1	69049	28.8	100	
Al	27	1	nogas	-0.388	-26.8	11234	6.5	5	
K	39	1	nogas	94.187	13.9	3543268	0.5	100	
Ti	47	1	nogas	0.289	34.9	337	19.1	2.5	
V	51	1	nogas	-1.550	-197.5	493762	4.1	2.5	
Cr	52	1	nogas	-0.176	-26.1	13001	3.5	2.5	
Mn	55	1	nogas	0.056	101.2	9636	7.5	2.5	
Co	59	1	nogas	0.076	65.6	793	53.5	2.5	
Ni	60	1	nogas	2.336	1.8	7485	1.9	2.5	
Cu	63	1	nogas	4.096	8.3	21019	6.1	2.5	CCB Main CR1 Failed
Zn	66	1	nogas	0.028	306.3	1213	11.5	2.5	
As	75	1	nogas	3.278	65.2	77250	2.7	2.5	CCB Main CR1 Failed
Sr	88	1	nogas	0.253	15.8	3330	13.5	2.5	
Ag	107	1	nogas	0.088	13.7	783	9.9	2.5	
Cd	111	1	nogas	0.062	13.0	87	13.3	1	
Sb	121	1	nogas	0.951	21.9	5491	20.7	2.5	
Tl	205	1	nogas	0.233	46.1	2730	44.9	1	
Pb	208	1	nogas	0.069	39.8	1760	26.7	2.5	
U	238	1	nogas	0.092	44.4	1653	44.5	2.5	
[Pb]	206	1	nogas	0.086	26.1	490	18.1	2.5	
[Pb]	207	1	nogas	0.077	49.6	370	35.4	2.5	
Na	23	2	He	1449.965	2.5	327457	0.5	100	CCB Main CR1 Failed
Mg	24	2	He	7.685	25.8	947	18.9	100	
Al	27	2	He	-3.563	-18.7	43	35.3	5	
K	39	2	He	59.470	13.8	13725	2.9	100	
Ca	43	2	He	40.164	169.8	20	50.0	100	
Ca	44	2	He	27.865	117.5	173	48.0	100	
V	51	2	He	0.128	50.0	406	13.9	2.5	
Cr	52	2	He	0.229	37.3	1137	10.0	2.5	
Mn	55	2	He	0.065	65.2	153	15.1	2.5	
Fe	56	2	He	5.622	4.5	8545	2.2	100	
Co	59	2	He	0.042	24.7	107	19.5	2.5	
Ni	60	2	He	-0.481	-28.3	297	29.1	2.5	
Cu	63	2	He	-0.003	-2792.7	897	12.2	2.5	
Zn	66	2	He	-0.070	-146.1	67	37.7	2.5	
As	75	2	He	0.084	83.7	27	45.1	2.5	
Se	78	2	He	-0.159	-113.4	1	86.6	2.5	
B	11	1	nogas	20.926	22.2	182067	2.6	10	CCB Main CR1 Failed
Si	28	1	nogas	85.033	3.8	926598	1.3	5	CCB Main CR1 Failed
Ca	43	1	nogas	-0.408	-1939.4	490	19.5	100	
Ca	44	1	nogas	34.363	15.5	56622	0.4	100	
Fe	56	1	nogas	-11.242	-24.2	687124	3.8	100	
Se	77	1	nogas	1.570	480.8	25298	1.5	2.5	
Se	82	1	nogas	-0.854	-130.6	337	27.6	2.5	
Mo	95	1	nogas	0.202	35.0	503	31.9	2.5	
Sn	118	1	nogas	0.180	27.8	1210	13.6	5	
Ba	137	1	nogas	0.051	45.6	227	17.8	2.5	

Continuing Calibration Blank (CCB) Report

Sb	121	2	He	0.725	8.2	613	8.4	2.5	
P	31	1	nogas	2.388	183.8	40891	2.3	10	
La	139	1	nogas	1.748	490.6	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	554.551	145.3	17	91.7	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	346991	1.39	324345	106.98	70	125	
Ge	72	1	nogas	1114345	1.78	1246287	89.41	70	125	
In	115	1	nogas	1186026	2.53	1264981	93.76	70	125	
Bi	209	1	nogas	1110014	1.50	1207455	91.93	70	125	
Ge	72	2	He	103987	1.48	122874	84.63	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	201_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-03T17:45:29-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	113CALB.d
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	88.513	2.638	203703	0.78	100	88.5	90	110	CCV Main CR1-2 Failed
Na	23	1	nogas	10409.837	3.196	92198690	1.18	10000	104.1	90	110	
Mg	24	1	nogas	9933.558	2.095	58594839	1.27	10000	99.3	90	110	
Al	27	1	nogas	111.695	2.508	736988	1.38	100	111.7	90	110	CCV Main CR1-2 Failed
K	39	1	nogas	10955.654	4.581	66170568	3.67	10000	109.6	90	110	
Ti	47	1	nogas	104.833	3.373	65811	0.59	100	104.8	90	110	
V	51	1	nogas	85.739	6.511	1317589	3.04	100	85.7	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	99.148	5.128	823449	1.59	100	99.1	90	110	
Mn	55	1	nogas	104.399	2.045	1097331	3.04	100	104.4	90	110	
Co	59	1	nogas	101.860	3.776	878070	0.63	100	101.9	90	110	
Ni	60	1	nogas	105.894	3.536	200419	1.73	100	105.9	90	110	
Cu	63	1	nogas	106.873	2.881	501369	1.69	100	106.9	90	110	
Zn	66	1	nogas	105.800	1.134	162767	3.59	100	105.8	90	110	
As	75	1	nogas	87.647	4.969	221260	1.43	100	87.6	90	110	CCV Main CR1-2 Failed
Sr	88	1	nogas	101.575	3.793	1134913	1.83	100	101.6	90	110	
Ag	107	1	nogas	104.381	3.703	618457	0.08	100	104.4	90	110	
Cd	111	1	nogas	100.026	3.141	130678	2.78	100	100.0	90	110	
Sb	121	1	nogas	106.403	3.646	572811	1.61	100	106.4	90	110	
Tl	205	1	nogas	99.315	7.570	1153455	2.83	100	99.3	90	110	
Pb	208	1	nogas	93.676	1.058	1598372	1.06	100	93.7	90	110	
U	238	1	nogas	98.744	7.108	1813836	1.91	100	98.7	90	110	
[Pb]	206	1	nogas	102.769	5.322	391070	1.37	100	102.8	90	110	
[Pb]	207	1	nogas	101.970	5.769	353604	0.78	100	102.0	90	110	
Na	23	2	He	11399.665	3.917	2024672	1.68	10000	114.0	90	110	CCV Main CR1-2 Failed
Mg	24	2	He	9893.778	2.942	828106	0.95	10000	98.9	90	110	
Al	27	2	He	97.713	10.938	2360	10.70	100	97.7	90	110	
K	39	2	He	8550.131	0.938	428041	0.91	10000	85.5	90	110	CCV Main CR1-2 Failed
Ca	43	2	He	11140.208	4.335	1627	3.76	10000	111.4	90	110	CCV Main CR1-2 Failed
Ca	44	2	He	9667.733	5.571	24607	2.71	10000	96.7	90	110	
V	51	2	He	103.442	2.265	96407	1.24	100	103.4	90	110	
Cr	52	2	He	104.713	2.021	128755	1.41	100	104.7	90	110	
Mn	55	2	He	100.892	2.809	48127	0.85	100	100.9	90	110	
Fe	56	2	He	10197.992	2.858	10137389	0.69	10000	102.0	90	110	
Co	59	2	He	105.342	4.035	220900	2.32	100	105.3	90	110	
Ni	60	2	He	105.871	2.996	62795	0.13	100	105.9	90	110	
Cu	63	2	He	107.212	4.075	178743	1.47	100	107.2	90	110	
Zn	66	2	He	101.562	2.347	24857	0.63	100	101.6	90	110	
As	75	2	He	100.775	0.280	16919	2.94	100	100.8	90	110	
Se	78	2	He	91.763	7.371	579	7.91	100	91.8	90	110	
B	11	1	nogas	449.262	3.384	783669	0.87	500	89.9	90	110	CCV Main CR1-2 Failed
Si	28	1	nogas	5304.844	1.899	16129688	2.77	5000	106.1	90	110	
Ca	43	1	nogas	10820.795	3.076	128837	2.45	10000	108.2	90	110	
Ca	44	1	nogas	11107.079	2.411	2233117	2.45	10000	111.1	90	110	CCV Main CR1-2 Failed
Fe	56	1	nogas	10496.955	3.602	101155936	1.56	10000	105.0	90	110	
Se	77	1	nogas	12.461	188.262	26920	5.66	100	12.5	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	102.635	7.421	8779	3.68	100	102.6	90	110	
Mo	95	1	nogas	103.796	4.758	232374	2.21	100	103.8	90	110	
Sn	118	1	nogas	103.721	3.385	378322	2.75	100	103.7	90	110	
Ba	137	1	nogas	103.878	5.561	175033	2.14	100	103.9	90	110	
Sb	121	2	He	99.495	4.130	71402	1.61	100	99.5	90	110	
Li	7	1	nogas	98.349	0.446	610480	1.56	100	98.3	90	110	
P	31	1	nogas	505.132	4.671	241510	3.44	500	101.0	90	110	
La	139	1	nogas	157.461	23.379	343	18.50	100	157.5	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	1023.393	106.864	27	78.06	100	1023.4	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	337658	1.96	324345	104.10	70	125	
Ge	72	1	nogas	1148774	3.84	1246287	92.18	70	125	
In	115	1	nogas	1189496	4.25	1264981	94.03	70	125	
Bi	209	1	nogas	1161480	5.42	1207455	96.19	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	101267	2.92	122874	82.42	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	202_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-03T17:47:28-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	113CALB.d
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	17.0	263	19.5	1	
Na	23	1	nogas	531.331	2.3	7422140	2.0	100	CCB Main CR1 Failed
Mg	24	1	nogas	7.931	50.0	59783	38.5	100	
Al	27	1	nogas	-0.412	-8.4	11787	4.8	5	
K	39	1	nogas	32.600	81.8	3398815	0.3	100	
Ti	47	1	nogas	0.320	15.8	377	5.5	2.5	
V	51	1	nogas	-14.934	-18.2	396679	2.2	2.5	
Cr	52	1	nogas	-0.324	-25.5	12561	3.8	2.5	
Mn	55	1	nogas	0.034	223.8	9983	3.8	2.5	
Co	59	1	nogas	0.084	50.1	927	46.1	2.5	
Ni	60	1	nogas	1.279	28.9	5914	8.9	2.5	
Cu	63	1	nogas	3.897	13.1	21336	7.2	2.5	CCB Main CR1 Failed
Zn	66	1	nogas	0.075	108.8	1367	13.5	2.5	
As	75	1	nogas	-5.124	-70.2	67451	4.8	2.5	
Sr	88	1	nogas	0.185	16.0	2774	17.2	2.5	
Ag	107	1	nogas	0.104	15.6	937	14.8	2.5	
Cd	111	1	nogas	0.101	43.1	150	40.6	1	
Sb	121	1	nogas	0.993	16.2	6091	19.7	2.5	
Tl	205	1	nogas	0.252	48.1	3137	47.4	1	
Pb	208	1	nogas	0.075	48.9	1863	33.7	2.5	
U	238	1	nogas	0.082	47.7	1587	48.2	2.5	
[Pb]	206	1	nogas	0.058	41.5	410	24.0	2.5	
[Pb]	207	1	nogas	0.076	40.8	390	29.6	2.5	
Na	23	2	He	763.200	4.8	212829	0.3	100	CCB Main CR1 Failed
Mg	24	2	He	4.196	21.0	667	13.9	100	
Al	27	2	He	-2.636	-71.4	67	67.6	5	
K	39	2	He	37.321	35.9	12644	5.2	100	
Ca	43	2	He	-8.991	-826.5	13	86.6	100	
Ca	44	2	He	11.119	265.5	133	56.3	100	
V	51	2	He	-0.003	-773.4	290	9.7	2.5	
Cr	52	2	He	0.293	30.3	1257	12.1	2.5	
Mn	55	2	He	-0.004	-2242.1	123	40.8	2.5	
Fe	56	2	He	5.421	6.7	8606	6.7	100	
Co	59	2	He	0.031	45.0	87	33.3	2.5	
Ni	60	2	He	-0.500	-9.1	293	10.4	2.5	
Cu	63	2	He	-0.005	-1815.2	920	15.3	2.5	
Zn	66	2	He	0.048	303.6	100	40.0	2.5	
As	75	2	He	0.046	186.3	21	74.6	2.5	
Se	78	2	He	0.122	496.5	3	124.9	2.5	
B	11	1	nogas	-2.389	-218.7	159814	1.5	10	
Si	28	1	nogas	55.517	17.3	896206	1.4	5	CCB Main CR1 Failed
Ca	43	1	nogas	3.213	417.5	563	27.5	100	
Ca	44	1	nogas	16.492	84.9	56529	0.8	100	
Fe	56	1	nogas	-21.767	-3.9	627297	6.0	100	
Se	77	1	nogas	-62.622	-26.7	21633	2.5	2.5	
Se	82	1	nogas	-1.072	-100.5	337	23.8	2.5	

Continuing Calibration Blank (CCB) Report

Mo	95	1	nogas	0.227	53.6	600	52.6	2.5	
Sn	118	1	nogas	0.144	46.1	1170	21.8	5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Ba	137	1	nogas	0.050	67.4	243	24.8	2.5	
Sb	121	2	He	0.589	27.5	527	20.5	2.5	
P	31	1	nogas	-7.608	-36.1	39388	1.7	10	
La	139	1	nogas	6.216	42.3	57	10.2	2.5	CCB Main CR1 Failed
Au	197	1	nogas	970.078	151.1	27	114.6	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	374791	4.57	324345	115.55	70	125	
Ge	72	1	nogas	1185282	4.66	1246287	95.11	70	125	
In	115	1	nogas	1286878	0.53	1264981	101.73	70	125	
Bi	209	1	nogas	1181793	1.42	1207455	97.87	70	125	
Ge	72	2	He	107225	2.88	122874	87.26	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	2018-01-03T18:09:48-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	113CALB.d
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	88.727	4.188	213419	3.12	100	88.7	90	110	CCV Main CR1-2 Failed
Na	23	1	nogas	10503.879	1.362	97950079	1.78	10000	105.0	90	110	
Mg	24	1	nogas	10069.326	2.424	62535328	2.32	10000	100.7	90	110	
Al	27	1	nogas	118.051	2.702	791437	2.88	100	118.1	90	110	CCV Main CR1-2 Failed
K	39	1	nogas	11257.016	2.185	69059972	1.26	10000	112.6	90	110	CCV Main CR1-2 Failed
Ti	47	1	nogas	110.742	1.731	70709	1.20	100	110.7	90	110	CCV Main CR1-2 Failed
V	51	1	nogas	95.500	3.655	1431994	1.57	100	95.5	90	110	
Cr	52	1	nogas	101.719	2.535	859275	1.63	100	101.7	90	110	
Mn	55	1	nogas	106.881	4.452	1141769	3.65	100	106.9	90	110	
Co	59	1	nogas	105.015	2.457	920919	1.79	100	105.0	90	110	
Ni	60	1	nogas	108.875	3.609	209474	2.61	100	108.9	90	110	
Cu	63	1	nogas	111.062	4.382	529701	3.44	100	111.1	90	110	CCV Main CR1-2 Failed
Zn	66	1	nogas	107.141	2.776	167513	1.80	100	107.1	90	110	
As	75	1	nogas	91.796	1.782	232148	0.39	100	91.8	90	110	
Sr	88	1	nogas	104.834	6.040	1191138	5.10	100	104.8	90	110	
Ag	107	1	nogas	105.986	0.911	638867	0.25	100	106.0	90	110	
Cd	111	1	nogas	97.904	2.126	135783	2.27	100	97.9	90	110	
Sb	121	1	nogas	107.256	2.941	587287	1.98	100	107.3	90	110	
Tl	205	1	nogas	96.158	9.061	1165809	2.95	100	96.2	90	110	
Pb	208	1	nogas	96.502	2.003	1646569	2.00	100	96.5	90	110	
U	238	1	nogas	97.066	5.717	1863718	1.15	100	97.1	90	110	
[Pb]	206	1	nogas	101.203	7.032	402052	1.73	100	101.2	90	110	
[Pb]	207	1	nogas	100.139	5.219	362883	1.94	100	100.1	90	110	
Na	23	2	He	11714.650	0.680	2146691	1.56	10000	117.1	90	110	CCV Main CR1-2 Failed
Mg	24	2	He	10157.935	1.742	877941	2.44	10000	101.6	90	110	
Al	27	2	He	104.359	17.466	2594	16.99	100	104.4	90	110	
K	39	2	He	8787.571	0.346	439627	0.34	10000	87.9	90	110	CCV Main CR1-2 Failed
Ca	43	2	He	10678.964	3.582	1610	2.15	10000	106.8	90	110	
Ca	44	2	He	9764.151	2.802	25668	1.53	10000	97.6	90	110	
V	51	2	He	104.033	0.856	100095	0.88	100	104.0	90	110	
Cr	52	2	He	106.520	0.946	135192	0.59	100	106.5	90	110	
Mn	55	2	He	102.485	2.664	50466	1.76	100	102.5	90	110	
Fe	56	2	He	10312.197	0.513	10585098	1.68	10000	103.1	90	110	
Co	59	2	He	104.982	2.201	227357	2.90	100	105.0	90	110	
Ni	60	2	He	106.688	2.618	65333	2.49	100	106.7	90	110	
Cu	63	2	He	109.096	2.207	187794	0.78	100	109.1	90	110	
Zn	66	2	He	104.630	3.416	26429	2.06	100	104.6	90	110	
As	75	2	He	101.435	0.940	17575	1.83	100	101.4	90	110	
Se	78	2	He	93.408	3.094	608	4.30	100	93.4	90	110	
B	11	1	nogas	460.102	5.437	834977	2.54	500	92.0	90	110	
Si	28	1	nogas	5522.495	0.907	17043676	1.00	5000	110.4	90	110	CCV Main CR1-2 Failed
Ca	43	1	nogas	11196.963	4.257	135537	3.34	10000	112.0	90	110	CCV Main CR1-2 Failed
Ca	44	1	nogas	11462.634	3.742	2341398	2.71	10000	114.6	90	110	CCV Main CR1-2 Failed
Fe	56	1	nogas	10796.720	1.018	105817634	0.89	10000	108.0	90	110	
Se	77	1	nogas	7.655	88.889	27000	1.15	100	7.7	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	101.147	5.951	8812	4.72	100	101.1	90	110	
Mo	95	1	nogas	106.023	2.649	241489	1.78	100	106.0	90	110	
Sn	118	1	nogas	102.285	2.794	396080	2.72	100	102.3	90	110	
Ba	137	1	nogas	101.945	0.045	182507	1.13	100	101.9	90	110	
Sb	121	2	He	101.971	2.491	75576	2.69	100	102.0	90	110	
Li	7	1	nogas	97.940	2.497	635451	1.42	100	97.9	90	110	
P	31	1	nogas	528.370	4.092	254984	3.27	500	105.7	90	110	
La	139	1	nogas	149.800	7.489	350	7.56	100	149.8	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	306.707	224.401	13	114.56	100	306.7	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	352934	2.05	324345	108.81	70	125	
Ge	72	1	nogas	1167679	0.98	1246287	93.69	70	125	
In	115	1	nogas	1261921	1.17	1264981	99.76	70	125	
Bi	209	1	nogas	1213890	6.44	1207455	100.53	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	104510	1.41	122874	85.05	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	214_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-03T18:11:46-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	113CALB.d
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	0.047	46.4	163	35.9	1	
Na	23	1	nogas	388.162	1.7	6262050	0.1	100	CCB Main CR1 Failed
Mg	24	1	nogas	7.726	50.4	59990	40.0	100	
Al	27	1	nogas	-0.307	-19.8	12881	5.3	5	
K	39	1	nogas	15.566	96.8	3402432	0.3	100	
Ti	47	1	nogas	0.282	38.9	363	17.9	2.5	
V	51	1	nogas	-9.954	-18.2	458541	2.3	2.5	
Cr	52	1	nogas	-0.274	-39.0	13388	4.7	2.5	
Mn	55	1	nogas	-0.032	-103.7	9583	4.9	2.5	
Co	59	1	nogas	0.085	45.2	953	37.9	2.5	
Ni	60	1	nogas	0.832	28.5	5221	6.9	2.5	
Cu	63	1	nogas	3.819	8.8	21680	7.7	2.5	CCB Main CR1 Failed
Zn	66	1	nogas	-0.125	-53.8	1080	10.2	2.5	
As	75	1	nogas	-4.549	-34.1	70707	1.6	2.5	
Sr	88	1	nogas	0.162	11.3	2570	8.2	2.5	
Ag	107	1	nogas	0.110	26.2	997	18.0	2.5	
Cd	111	1	nogas	0.059	70.3	93	65.5	1	
Sb	121	1	nogas	0.946	29.1	5991	27.4	2.5	
Tl	205	1	nogas	0.243	55.3	3120	51.7	1	
Pb	208	1	nogas	0.089	43.3	2100	31.3	2.5	
U	238	1	nogas	0.095	56.4	1874	54.4	2.5	
[Pb]	206	1	nogas	0.067	60.8	460	33.5	2.5	
[Pb]	207	1	nogas	0.099	57.3	483	40.9	2.5	
Na	23	2	He	571.793	8.4	176609	0.6	100	CCB Main CR1 Failed
Mg	24	2	He	3.753	18.0	623	13.6	100	
Al	27	2	He	-2.249	-40.8	77	32.8	5	
K	39	2	He	9.706	113.9	11297	4.8	100	
Ca	43	2	He	-28.126	-233.4	10	100.0	100	
Ca	44	2	He	5.648	253.7	120	36.3	100	
V	51	2	He	0.033	113.1	322	9.3	2.5	
Cr	52	2	He	0.265	28.0	1207	3.9	2.5	
Mn	55	2	He	0.091	48.0	170	15.6	2.5	
Fe	56	2	He	5.496	2.9	8612	3.0	100	
Co	59	2	He	0.051	19.3	130	20.4	2.5	
Ni	60	2	He	-0.595	-13.5	233	23.6	2.5	
Cu	63	2	He	-0.018	-536.5	897	23.0	2.5	
Zn	66	2	He	-0.024	-201.1	80	12.5	2.5	
As	75	2	He	0.011	73.3	14	13.4	2.5	
Se	78	2	He	0.653	77.6	7	45.8	2.5	
B	11	1	nogas	1.898	94.7	175885	1.6	10	
Si	28	1	nogas	33.500	21.4	856297	1.9	5	CCB Main CR1 Failed
Ca	43	1	nogas	-7.041	-89.7	453	18.5	100	
Ca	44	1	nogas	17.689	31.9	58592	1.8	100	
Fe	56	1	nogas	-20.079	-18.7	663444	6.2	100	
Se	77	1	nogas	-59.424	-31.5	22598	6.5	2.5	
Se	82	1	nogas	-1.826	-26.9	283	13.4	2.5	

Continuing Calibration Blank (CCB) Report

Mo	95	1	nogas	0.214	41.4	580	37.8	2.5	
Sn	118	1	nogas	0.171	36.0	1317	19.5	5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Ba	137	1	nogas	0.082	79.7	310	39.1	2.5	
Sb	121	2	He	0.646	23.5	567	19.4	2.5	
P	31	1	nogas	-5.169	-39.0	41656	2.3	10	
La	139	1	nogas	7.030	133.0	60	33.3	2.5	CCB Main CR1 Failed
Au	197	1	nogas	-6.074	-4464.0	7	86.6	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	395227	0.65	324345	121.85	70	125	
Ge	72	1	nogas	1221676	2.38	1246287	98.03	70	125	
In	115	1	nogas	1324178	0.65	1264981	104.68	70	125	
Bi	209	1	nogas	1227322	3.52	1207455	101.65	70	125	
Ge	72	2	He	106428	4.34	122874	86.62	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	222_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-03T19:41:56-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	113CALB.d
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	85.614	6.497	205600	5.28	100	85.6	90	110	CCV Main CR1-2 Failed
Na	23	1	nogas	10235.373	1.751	91977502	2.02	10000	102.4	90	110	
Mg	24	1	nogas	10076.013	2.693	60267503	3.18	10000	100.8	90	110	
Al	27	1	nogas	115.675	2.955	768409	1.75	100	115.7	90	110	CCV Main CR1-2 Failed
K	39	1	nogas	11139.141	2.650	67730316	1.46	10000	111.4	90	110	CCV Main CR1-2 Failed
Ti	47	1	nogas	105.808	2.504	66928	0.62	100	105.8	90	110	
V	51	1	nogas	82.298	10.232	1294713	4.18	100	82.3	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	101.703	5.152	850800	3.14	100	101.7	90	110	
Mn	55	1	nogas	109.122	8.224	1153867	6.28	100	109.1	90	110	
Co	59	1	nogas	104.998	3.164	912105	1.92	100	105.0	90	110	
Ni	60	1	nogas	107.727	1.759	205395	0.64	100	107.7	90	110	
Cu	63	1	nogas	107.256	2.170	506919	0.28	100	107.3	90	110	
Zn	66	1	nogas	103.902	2.897	160965	1.50	100	103.9	90	110	
As	75	1	nogas	83.493	7.230	215843	2.79	100	83.5	90	110	CCV Main CR1-2 Failed
Sr	88	1	nogas	106.152	5.904	1194566	4.04	100	106.2	90	110	
Ag	107	1	nogas	105.503	3.007	629894	1.15	100	105.5	90	110	
Cd	111	1	nogas	100.078	0.567	135795	1.89	100	100.1	90	110	
Sb	121	1	nogas	106.276	2.823	576537	2.11	100	106.3	90	110	
Tl	205	1	nogas	100.292	0.672	1156228	1.77	100	100.3	90	110	
Pb	208	1	nogas	94.164	1.814	1606690	1.81	100	94.2	90	110	
U	238	1	nogas	98.721	2.303	1799774	2.27	100	98.7	90	110	
[Pb]	206	1	nogas	104.792	1.660	395462	0.96	100	104.8	90	110	
[Pb]	207	1	nogas	102.536	1.732	352739	2.15	100	102.5	90	110	
Na	23	2	He	10781.707	1.059	1998073	1.06	10000	107.8	90	110	
Mg	24	2	He	9654.468	1.483	841344	0.66	10000	96.5	90	110	
Al	27	2	He	99.595	7.888	2504	9.20	100	99.6	90	110	
K	39	2	He	8654.161	1.910	433117	1.86	10000	86.5	90	110	CCV Main CR1-2 Failed
Ca	43	2	He	9265.754	9.540	1410	8.18	10000	92.7	90	110	
Ca	44	2	He	9166.628	1.709	24310	1.01	10000	91.7	90	110	
V	51	2	He	101.181	2.016	98166	0.31	100	101.2	90	110	
Cr	52	2	He	102.343	1.676	131012	0.50	100	102.3	90	110	
Mn	55	2	He	97.142	1.193	48253	1.58	100	97.1	90	110	
Fe	56	2	He	9819.751	1.617	10163049	0.52	10000	98.2	90	110	
Co	59	2	He	101.917	1.479	222562	1.76	100	101.9	90	110	
Ni	60	2	He	102.547	0.413	63360	2.08	100	102.5	90	110	
Cu	63	2	He	104.011	2.284	180604	1.60	100	104.0	90	110	
Zn	66	2	He	101.262	2.515	25798	0.81	100	101.3	90	110	
As	75	2	He	99.794	1.673	17434	0.51	100	99.8	90	110	
Se	78	2	He	90.561	7.989	594	6.91	100	90.6	90	110	
B	11	1	nogas	391.478	5.775	732580	3.92	500	78.3	90	110	CCV Main CR1-2 Failed
Si	28	1	nogas	5395.265	1.627	16511249	0.61	5000	107.9	90	110	
Ca	43	1	nogas	10935.675	2.167	131166	0.52	10000	109.4	90	110	
Ca	44	1	nogas	11150.760	2.801	2257897	1.02	10000	111.5	90	110	CCV Main CR1-2 Failed
Fe	56	1	nogas	10795.184	4.330	104775982	2.46	10000	108.0	90	110	
Se	77	1	nogas	-40.791	-46.258	22875	4.63	100	-40.8	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	106.862	3.936	9203	3.49	100	106.9	90	110	
Mo	95	1	nogas	104.640	4.500	236045	2.57	100	104.6	90	110	
Sn	118	1	nogas	102.792	1.815	389475	2.99	100	102.8	90	110	
Ba	137	1	nogas	101.662	1.062	178049	1.66	100	101.7	90	110	
Sb	121	2	He	96.697	0.593	72276	1.14	100	96.7	90	110	
Li	7	1	nogas	96.221	3.216	623909	1.52	100	96.2	90	110	
P	31	1	nogas	533.743	4.158	254683	1.53	500	106.7	90	110	
La	139	1	nogas	125.568	39.468	293	33.46	100	125.6	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	1028.606	113.427	27	86.60	100	1028.6	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	352428	2.01	324345	108.66	70	125	
Ge	72	1	nogas	1156926	1.96	1246287	92.83	70	125	
In	115	1	nogas	1234536	1.34	1264981	97.59	70	125	
Bi	209	1	nogas	1149836	1.11	1207455	95.23	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	105394	1.72	122874	85.77	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	223_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-03T19:43:56-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	113CALB.d
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	0.105	36.6	297	30.6	1	
Na	23	1	nogas	235.866	3.9	4722811	1.8	100	CCB Main CR1 Failed
Mg	24	1	nogas	7.234	51.1	55032	38.0	100	
Al	27	1	nogas	-0.398	-36.3	12044	7.2	5	
K	39	1	nogas	8.770	107.2	3308294	0.7	100	
Ti	47	1	nogas	0.148	39.1	270	13.4	2.5	
V	51	1	nogas	-22.076	-3.2	333879	2.5	2.5	
Cr	52	1	nogas	-0.437	-5.5	11791	1.0	2.5	
Mn	55	1	nogas	0.001	2573.8	9793	2.6	2.5	
Co	59	1	nogas	0.086	55.1	943	44.4	2.5	
Ni	60	1	nogas	0.253	66.0	4017	9.0	2.5	
Cu	63	1	nogas	3.845	5.2	21469	5.4	2.5	CCB Main CR1 Failed
Zn	66	1	nogas	-0.257	-1.6	853	1.8	2.5	
As	75	1	nogas	-12.993	-4.9	54779	2.7	2.5	
Sr	88	1	nogas	0.151	24.6	2407	17.2	2.5	
Ag	107	1	nogas	0.118	17.3	1033	11.3	2.5	
Cd	111	1	nogas	0.078	51.8	113	48.6	1	
Sb	121	1	nogas	0.798	26.6	5048	22.7	2.5	
Tl	205	1	nogas	0.239	43.2	3064	47.1	1	
Pb	208	1	nogas	0.082	41.1	1987	29.1	2.5	
U	238	1	nogas	0.084	22.1	1660	28.7	2.5	
[Pb]	206	1	nogas	0.081	26.9	510	23.9	2.5	
[Pb]	207	1	nogas	0.076	46.7	400	39.3	2.5	
Na	23	2	He	381.915	1.3	138966	1.6	100	CCB Main CR1 Failed
Mg	24	2	He	5.357	21.9	743	13.5	100	
Al	27	2	He	-1.305	-186.5	97	59.7	5	
K	39	2	He	2.392	140.9	10940	1.5	100	
Ca	43	2	He	-3.741	-2107.3	13	86.6	100	
Ca	44	2	He	8.310	176.8	123	32.8	100	
V	51	2	He	-0.023	-15.5	261	0.9	2.5	
Cr	52	2	He	0.447	7.3	1407	5.1	2.5	
Mn	55	2	He	0.065	149.5	153	32.8	2.5	
Fe	56	2	He	5.885	2.7	8792	3.0	100	
Co	59	2	He	0.025	86.9	70	65.5	2.5	
Ni	60	2	He	-0.422	-27.0	330	18.9	2.5	
Cu	63	2	He	0.026	72.7	943	4.0	2.5	
Zn	66	2	He	-0.043	-121.0	73	15.7	2.5	
As	75	2	He	0.026	198.2	17	52.9	2.5	
Se	78	2	He	0.251	118.8	4	50.0	2.5	
B	11	1	nogas	-46.034	-9.5	90125	3.5	10	
Si	28	1	nogas	21.163	24.8	805253	1.1	5	CCB Main CR1 Failed
Ca	43	1	nogas	-2.667	-160.3	500	10.4	100	
Ca	44	1	nogas	-9.080	-78.3	52156	1.8	100	
Fe	56	1	nogas	-23.477	-18.9	618590	6.2	100	
Se	77	1	nogas	-110.630	-3.9	18009	3.0	2.5	
Se	82	1	nogas	-0.681	-137.6	377	20.3	2.5	
Mo	95	1	nogas	0.201	60.2	537	51.8	2.5	
Sn	118	1	nogas	0.151	22.8	1167	10.8	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.074	76.6	280	36.2	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.565	19.6	493	15.7	2.5	
P	31	1	nogas	-2.337	-109.1	42167	1.5	10	
La	139	1	nogas	-7.773	-72.5	27	43.3	2.5	
Au	197	1	nogas	181.884	276.6	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	370373	5.61	324345	114.19	70	125	
Ge	72	1	nogas	1202204	1.01	1246287	96.46	70	125	
In	115	1	nogas	1251077	0.54	1264981	98.90	70	125	
Bi	209	1	nogas	1201432	6.56	1207455	99.50	70	125	
Ge	72	2	He	103708	2.19	122874	84.40	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	226_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-03T19:50:01-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	113CALB.d
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	88.034	2.331	207137	1.50	100	88.0	90	110	CCV Main CR1-2 Failed
Na	23	1	nogas	10801.666	2.172	102083850	2.75	10000	108.0	90	110	
Mg	24	1	nogas	9671.684	3.210	60927512	3.86	10000	96.7	90	110	
Al	27	1	nogas	108.883	1.200	772525	2.19	100	108.9	90	110	
K	39	1	nogas	10753.036	3.200	69842704	1.63	10000	107.5	90	110	
Ti	47	1	nogas	104.631	1.028	70609	1.92	100	104.6	90	110	
V	51	1	nogas	81.180	2.125	1370590	0.94	100	81.2	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	98.455	2.089	879370	1.80	100	98.5	90	110	
Mn	55	1	nogas	104.149	1.255	1176073	1.38	100	104.1	90	110	
Co	59	1	nogas	100.490	2.026	931163	1.48	100	100.5	90	110	
Ni	60	1	nogas	105.231	0.575	214106	1.74	100	105.2	90	110	
Cu	63	1	nogas	101.894	0.423	513874	1.59	100	101.9	90	110	
Zn	66	1	nogas	101.424	0.161	167654	1.29	100	101.4	90	110	
As	75	1	nogas	83.491	1.181	230340	2.02	100	83.5	90	110	CCV Main CR1-2 Failed
Sr	88	1	nogas	101.635	2.106	1220636	2.21	100	101.6	90	110	
Ag	107	1	nogas	103.544	1.733	659442	0.69	100	103.5	90	110	
Cd	111	1	nogas	97.562	1.006	140895	1.20	100	97.6	90	110	
Sb	121	1	nogas	101.725	1.968	588597	0.86	100	101.7	90	110	
Tl	205	1	nogas	94.048	4.094	1149030	1.46	100	94.0	90	110	
Pb	208	1	nogas	95.822	1.288	1634971	1.29	100	95.8	90	110	
U	238	1	nogas	94.561	5.772	1826000	1.00	100	94.6	90	110	
[Pb]	206	1	nogas	99.361	4.774	397324	0.13	100	99.4	90	110	
[Pb]	207	1	nogas	98.785	7.333	359755	2.57	100	98.8	90	110	
Na	23	2	He	11567.789	4.509	2265386	4.63	10000	115.7	90	110	CCV Main CR1-2 Failed
Mg	24	2	He	9689.244	1.828	894566	2.41	10000	96.9	90	110	
Al	27	2	He	100.079	4.274	2662	4.38	100	100.1	90	110	
K	39	2	He	9081.211	0.774	453956	0.76	10000	90.8	90	110	
Ca	43	2	He	10006.801	3.117	1613	4.03	10000	100.1	90	110	
Ca	44	2	He	9578.382	3.512	26900	2.68	10000	95.8	90	110	
V	51	2	He	100.961	1.463	103773	1.22	100	101.0	90	110	
Cr	52	2	He	102.185	2.356	138570	1.93	100	102.2	90	110	
Mn	55	2	He	99.207	2.260	52194	1.97	100	99.2	90	110	
Fe	56	2	He	9884.118	1.055	10836834	0.69	10000	98.8	90	110	
Co	59	2	He	102.118	2.567	236197	2.09	100	102.1	90	110	
Ni	60	2	He	101.356	2.225	66331	1.64	100	101.4	90	110	
Cu	63	2	He	102.720	2.782	189002	3.65	100	102.7	90	110	
Zn	66	2	He	98.338	3.933	26556	5.09	100	98.3	90	110	
As	75	2	He	98.631	0.680	18256	1.77	100	98.6	90	110	
Se	78	2	He	95.838	3.027	666	2.10	100	95.8	90	110	
B	11	1	nogas	400.547	5.617	730480	2.79	500	80.1	90	110	CCV Main CR1-2 Failed
Si	28	1	nogas	5174.339	0.382	16921814	1.31	5000	103.5	90	110	
Ca	43	1	nogas	10835.166	2.132	138616	1.03	10000	108.4	90	110	
Ca	44	1	nogas	10877.652	1.097	2350929	0.58	10000	108.8	90	110	
Fe	56	1	nogas	10233.843	2.258	106009432	0.81	10000	102.3	90	110	
Se	77	1	nogas	-21.191	-37.458	26082	3.04	100	-21.2	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	104.645	6.245	9616	4.56	100	104.6	90	110	
Mo	95	1	nogas	101.463	1.279	244267	2.72	100	101.5	90	110	
Sn	118	1	nogas	99.400	3.508	400768	2.79	100	99.4	90	110	
Ba	137	1	nogas	98.798	1.687	184173	1.63	100	98.8	90	110	
Sb	121	2	He	99.522	2.669	78790	2.46	100	99.5	90	110	
Li	7	1	nogas	98.188	2.238	623037	1.70	100	98.2	90	110	
P	31	1	nogas	528.812	2.631	269576	0.79	500	105.8	90	110	
La	139	1	nogas	198.048	13.256	467	10.13	100	198.0	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	594.154	198.510	20	132.29	100	594.2	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	345171	1.72	324345	106.42	70	125	
Ge	72	1	nogas	1233823	1.45	1246287	99.00	70	125	
In	115	1	nogas	1314187	2.21	1264981	103.89	70	125	
Bi	209	1	nogas	1220144	4.90	1207455	101.05	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	111638	1.22	122874	90.86	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	227_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-03T19:52:00-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	113CALB.d
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	86.0	243	74.6	1	
Na	23	1	nogas	767.664	0.9	9981690	0.8	100	CCB Main CR1 Failed
Mg	24	1	nogas	8.221	37.5	64799	32.1	100	
Al	27	1	nogas	-0.534	-22.3	11874	7.7	5	
K	39	1	nogas	-13.511	-40.9	3385781	0.6	100	
Ti	47	1	nogas	0.317	53.5	407	29.1	2.5	
V	51	1	nogas	-19.233	-11.5	385454	5.4	2.5	
Cr	52	1	nogas	-0.354	-15.7	13338	3.9	2.5	
Mn	55	1	nogas	0.057	95.5	11104	6.2	2.5	
Co	59	1	nogas	0.073	38.4	883	31.1	2.5	
Ni	60	1	nogas	0.924	6.0	5678	2.3	2.5	
Cu	63	1	nogas	2.120	9.4	13899	6.9	2.5	
Zn	66	1	nogas	-0.265	-29.3	897	15.2	2.5	
As	75	1	nogas	-8.312	-22.6	67194	4.8	2.5	
Sr	88	1	nogas	0.204	13.2	3227	10.9	2.5	
Ag	107	1	nogas	0.074	27.8	810	17.0	2.5	
Cd	111	1	nogas	0.048	34.5	77	30.1	1	
Sb	121	1	nogas	0.739	24.8	5038	22.4	2.5	
Tl	205	1	nogas	0.236	41.2	3164	42.9	1	
Pb	208	1	nogas	0.085	55.9	2033	40.0	2.5	
U	238	1	nogas	0.084	55.0	1750	57.3	2.5	
[Pb]	206	1	nogas	0.064	85.7	470	52.4	2.5	
[Pb]	207	1	nogas	0.071	55.0	400	40.2	2.5	
Na	23	2	He	920.769	2.3	254636	0.2	100	CCB Main CR1 Failed
Mg	24	2	He	5.324	14.7	807	8.1	100	
Al	27	2	He	-0.823	-248.5	117	43.1	5	
K	39	2	He	14.559	12.0	11534	0.7	100	
Ca	43	2	He	-74.201	-48.0	3	173.2	100	
Ca	44	2	He	23.322	40.3	177	16.3	100	
V	51	2	He	-0.008	-368.0	300	10.1	2.5	
Cr	52	2	He	0.361	47.9	1417	17.3	2.5	
Mn	55	2	He	0.097	35.1	183	8.3	2.5	
Fe	56	2	He	5.390	6.2	9036	5.3	100	
Co	59	2	He	0.025	76.4	77	58.8	2.5	
Ni	60	2	He	-0.515	-7.6	300	10.0	2.5	
Cu	63	2	He	-0.135	-25.7	730	8.3	2.5	
Zn	66	2	He	-0.093	-117.5	67	45.8	2.5	
As	75	2	He	0.048	143.9	22	56.8	2.5	
Se	78	2	He	0.014	1201.0	3	43.3	2.5	
B	11	1	nogas	-54.867	-2.2	79339	3.5	10	
Si	28	1	nogas	10.618	18.2	824809	1.3	5	CCB Main CR1 Failed
Ca	43	1	nogas	1.567	825.7	590	29.6	100	
Ca	44	1	nogas	-3.036	-152.1	56970	2.2	100	
Fe	56	1	nogas	-20.668	-17.1	690205	5.9	100	
Se	77	1	nogas	-82.444	-5.0	21696	1.8	2.5	
Se	82	1	nogas	-1.107	-109.9	363	30.4	2.5	

Continuing Calibration Blank (CCB) Report

Mo	95	1	nogas	0.199	32.6	570	29.0	2.5	
Sn	118	1	nogas	0.098	41.5	1013	11.1	5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Ba	137	1	nogas	0.046	114.6	240	35.6	2.5	
Sb	121	2	He	0.504	9.5	490	8.9	2.5	
P	31	1	nogas	-2.361	-99.9	44970	1.8	10	
La	139	1	nogas	-2.583	-323.6	40	50.0	2.5	
Au	197	1	nogas	-15.501	-3386.9	7	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	383380	1.11	324345	118.20	70	125	
Ge	72	1	nogas	1282311	0.52	1246287	102.89	70	125	
In	115	1	nogas	1324169	5.34	1264981	104.68	70	125	
Bi	209	1	nogas	1262031	4.09	1207455	104.52	70	125	
Ge	72	2	He	113036	1.50	122874	91.99	70	125	

Calibration Blank Report

Sample Table

Sample Name	CAL BLK
Data File Name	234CALB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-03T21:25:09-06:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	3	5196.15
Na	23	1	nogas	3896346	0.00
Mg	24	1	nogas	6402	0.32
Al	27	1	nogas	9176	0.02
K	39	1	nogas	3163864	0.00
Ti	47	1	nogas	190	21.64
V	51	1	nogas	271156	0.00
Cr	52	1	nogas	9339	0.01
Mn	55	1	nogas	7989	0.05
Co	59	1	nogas	167	8.31
Ni	60	1	nogas	2377	0.45
Cu	63	1	nogas	17715	0.02
Zn	66	1	nogas	333	1.37
As	75	1	nogas	42059	0.01
Sr	88	1	nogas	513	2.44
Ag	107	1	nogas	143	2.81
Cd	111	1	nogas	13	1299.04
Sb	121	1	nogas	757	1.31
Tl	205	1	nogas	93	17.54
Pb	208	1	nogas	283	8.29
[Pb]	206	1	nogas	83	50.57
[Pb]	207	1	nogas	80	0.00
Na	23	2	He	116165	0.00
Mg	24	2	He	243	9.75
Al	27	2	He	53	53.70
K	39	2	He	10550	0.03
Ca	44	2	He	120	12.03
V	51	2	He	183	4.81
Cr	52	2	He	1530	0.27
Mn	55	2	He	147	9.68
Fe	56	2	He	3144	0.44
Co	59	2	He	17	415.69
Ni	60	2	He	150	13.33
Cu	63	2	He	313	2.12
Zn	66	2	He	20	433.01
As	75	2	He	7	1499.63
Se	78	2	He	2	8660.25
B	11	1	nogas	62696	0.00
Si	28	1	nogas	716770	0.00
Ca	43	1	nogas	287	9.45
Ca	44	1	nogas	48389	0.00
Fe	56	1	nogas	555564	0.00

Calibration Blank Report

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Se	77	1	nogas	13555	0.02
Se	82	1	nogas	337	0.51
Mo	95	1	nogas	37	154.83
Sn	118	1	nogas	607	3.09
Ba	137	1	nogas	93	65.28
Sb	121	2	He	83	22.00
Li	7	1	nogas	32538	0.01
P	31	1	nogas	41740	0.00
La	139	1	nogas	20	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	6	1	nogas	345803	2.84
Ge	72	1	nogas	1142873	3.03
In	115	1	nogas	1119741	3.54
Bi	209	1	nogas	1122197	2.02
Ge	72	2	He	104250	1.76

Calibration Standard Report

Sample Table

Sample Name	2/10/200
Data File Name	235CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-03T21:27:11-06:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	234CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	4171	0.10
Na	23	1	nogas	5419005	0.00
Mg	24	1	nogas	1172176	0.00
Al	27	1	nogas	72356	0.00
K	39	1	nogas	4395856	0.00
Ti	47	1	nogas	1413	0.60
V	51	1	nogas	271467	0.00
Cr	52	1	nogas	26516	0.02
Mn	55	1	nogas	29447	0.01
Co	59	1	nogas	18179	0.02
Ni	60	1	nogas	6478	0.05
Cu	63	1	nogas	26857	0.01
Zn	66	1	nogas	3534	0.12
As	75	1	nogas	43151	0.01
Sr	88	1	nogas	23072	0.01
Ag	107	1	nogas	12335	0.03
Cd	111	1	nogas	2510	0.36
Sb	121	1	nogas	11781	0.05
Tl	205	1	nogas	22052	0.01
Pb	208	1	nogas	31479	0.00
[Pb]	206	1	nogas	7702	0.04
[Pb]	207	1	nogas	6942	0.07
Na	23	2	He	151065	0.00
Mg	24	2	He	17028	0.01
Al	27	2	He	270	4.95
K	39	2	He	18072	0.01
Ca	43	2	He	17	207.85
Ca	44	2	He	603	1.68
V	51	2	He	2077	0.11
Cr	52	2	He	4077	0.05
Mn	55	2	He	927	1.15
Fe	56	2	He	192036	0.00
Co	59	2	He	4377	0.02
Ni	60	2	He	1553	0.48
Cu	63	2	He	3844	0.09
Zn	66	2	He	493	2.89
As	75	2	He	319	3.68
Se	78	2	He	19	172.00
B	11	1	nogas	71434	0.00
Si	28	1	nogas	1006005	0.00

Calibration Standard Report

Ca	43	1	nogas	2924	0.17
Ca	44	1	nogas	90378	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	2622318	0.00
Se	77	1	nogas	13328	0.05
Se	82	1	nogas	507	0.81
Mo	95	1	nogas	4601	0.12
Sn	118	1	nogas	8399	0.10
Ba	137	1	nogas	3577	0.26
Sb	121	2	He	1557	0.62
P	31	1	nogas	45618	0.00
La	139	1	nogas	190	2.77

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	357853	1.41	345803	103.48	70	125	
Ge	72	1	nogas	1192718	4.45	1142873	104.36	70	125	
In	115	1	nogas	1135374	1.95	1119741	101.40	70	125	
Bi	209	1	nogas	1130177	2.02	1122197	100.71	70	125	
Ge	72	2	He	102574	2.25	104250	98.39	70	125	

Calibration Standard Report

Sample Table

Sample Name	5/25/500
Data File Name	236CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-03T21:29:13-06:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	
ISTD Ref File Name	234CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	10049	0.04
Na	23	1	nogas	7910199	0.00
Mg	24	1	nogas	2938727	0.00
Al	27	1	nogas	74582	0.00
K	39	1	nogas	6198003	0.00
Ti	47	1	nogas	3384	0.10
V	51	1	nogas	306577	0.00
Cr	52	1	nogas	50363	0.00
Mn	55	1	nogas	61577	0.00
Co	59	1	nogas	45116	0.01
Ni	60	1	nogas	12238	0.02
Cu	63	1	nogas	39770	0.00
Zn	66	1	nogas	8009	0.03
As	75	1	nogas	47993	0.00
Sr	88	1	nogas	55707	0.00
Ag	107	1	nogas	31422	0.01
Cd	111	1	nogas	6678	0.01
Sb	121	1	nogas	28437	0.01
Tl	205	1	nogas	55873	0.00
Pb	208	1	nogas	79090	0.00
[Pb]	206	1	nogas	19625	0.02
[Pb]	207	1	nogas	17286	0.02
Na	23	2	He	203012	0.00
Mg	24	2	He	42298	0.01
Al	27	2	He	307	8.85
K	39	2	He	30315	0.01
Ca	43	2	He	63	71.97
Ca	44	2	He	1320	1.62
V	51	2	He	4728	0.01
Cr	52	2	He	7702	0.11
Mn	55	2	He	2574	0.42
Fe	56	2	He	482477	0.00
Co	59	2	He	11437	0.03
Ni	60	2	He	3674	0.02
Cu	63	2	He	9166	0.04
Zn	66	2	He	1237	0.45
As	75	2	He	839	0.85
Se	78	2	He	31	132.54
B	11	1	nogas	90738	0.00
Si	28	1	nogas	1564032	0.00

Calibration Standard Report

Ca	43	1	nogas	6608	0.01
Ca	44	1	nogas	154261	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	5550001	0.00
Se	77	1	nogas	13288	0.05
Se	82	1	nogas	817	1.71
Mo	95	1	nogas	11390	0.07
Sn	118	1	nogas	19388	0.03
Ba	137	1	nogas	9159	0.06
Sb	121	2	He	3740	0.06
P	31	1	nogas	53055	0.01
La	139	1	nogas	70	40.82

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	345428	1.15	345803	99.89	70	125	
Ge	72	1	nogas	1144079	2.57	1142873	100.11	70	125	
In	115	1	nogas	1155795	3.10	1119741	103.22	70	125	
Bi	209	1	nogas	1139649	0.22	1122197	101.56	70	125	
Ge	72	2	He	100654	1.88	104250	96.55	70	125	

Calibration Standard Report

Sample Table

Sample Name	10/50/1000
Data File Name	237CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-03T21:31:14-06:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	
ISTD Ref File Name	234CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	20381	0.01
Na	23	1	nogas	12013070	0.00
Mg	24	1	nogas	5708357	0.00
Al	27	1	nogas	77708	0.00
K	39	1	nogas	9484190	0.00
Ti	47	1	nogas	7062	0.08
V	51	1	nogas	351272	0.00
Cr	52	1	nogas	93015	0.00
Mn	55	1	nogas	114838	0.00
Co	59	1	nogas	87057	0.00
Ni	60	1	nogas	22414	0.01
Cu	63	1	nogas	63637	0.00
Zn	66	1	nogas	16464	0.01
As	75	1	nogas	57146	0.01
Sr	88	1	nogas	113881	0.00
Ag	107	1	nogas	62280	0.00
Cd	111	1	nogas	12565	0.03
Sb	121	1	nogas	57970	0.00
Tl	205	1	nogas	111375	0.00
Pb	208	1	nogas	158243	0.00
[Pb]	206	1	nogas	38917	0.00
[Pb]	207	1	nogas	34961	0.00
Na	23	2	He	289855	0.00
Mg	24	2	He	83932	0.00
Al	27	2	He	317	5.49
K	39	2	He	50017	0.00
Ca	43	2	He	133	42.59
Ca	44	2	He	2470	0.39
V	51	2	He	9805	0.00
Cr	52	2	He	14159	0.02
Mn	55	2	He	4811	0.15
Fe	56	2	He	946539	0.00
Co	59	2	He	21953	0.00
Ni	60	2	He	6465	0.02
Cu	63	2	He	18129	0.01
Zn	66	2	He	2607	0.13
As	75	2	He	1619	0.33
Se	78	2	He	63	36.84
B	11	1	nogas	119332	0.00
Si	28	1	nogas	2376658	0.00

Calibration Standard Report

Ca	43	1	nogas	12895	0.02
Ca	44	1	nogas	260304	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	10475218	0.00
Se	77	1	nogas	13539	0.02
Se	82	1	nogas	1253	0.49
Mo	95	1	nogas	23409	0.00
Sn	118	1	nogas	39224	0.00
Ba	137	1	nogas	17279	0.01
Sb	121	2	He	7402	0.07
P	31	1	nogas	65818	0.00
La	139	1	nogas	83	43.99

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	350106	2.09	345803	101.24	70	125	
Ge	72	1	nogas	1138435	0.70	1142873	99.61	70	125	
In	115	1	nogas	1128475	1.74	1119741	100.78	70	125	
Bi	209	1	nogas	1103029	1.98	1122197	98.29	70	125	
Ge	72	2	He	103384	2.88	104250	99.17	70	125	

Calibration Standard Report

Sample Table

Sample Name	100/500/10K
Data File Name	238CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-03T21:33:15-06:00
Sample Type	CalStd
Level	5
Dilution	1
Comment	
ISTD Ref File Name	234CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	189177	0.00
Na	23	1	nogas	86128742	0.00
Mg	24	1	nogas	55381610	0.00
Al	27	1	nogas	622304	0.00
K	39	1	nogas	62486956	0.00
Ti	47	1	nogas	62302	0.01
V	51	1	nogas	1177904	0.00
Cr	52	1	nogas	781653	0.00
Mn	55	1	nogas	1022411	0.00
Co	59	1	nogas	839070	0.00
Ni	60	1	nogas	190852	0.00
Cu	63	1	nogas	471857	0.00
Zn	66	1	nogas	152654	0.00
As	75	1	nogas	199263	0.00
Sr	88	1	nogas	1094651	0.00
Ag	107	1	nogas	592642	0.00
Cd	111	1	nogas	126144	0.00
Sb	121	1	nogas	540441	0.00
Tl	205	1	nogas	1084495	0.00
Pb	208	1	nogas	1524356	0.00
[Pb]	206	1	nogas	375490	0.00
[Pb]	207	1	nogas	337291	0.00
Na	23	2	He	1836187	0.00
Mg	24	2	He	782367	0.00
Al	27	2	He	1910	0.92
K	39	2	He	392886	0.00
Ca	43	2	He	1370	1.55
Ca	44	2	He	22451	0.01
V	51	2	He	90372	0.00
Cr	52	2	He	120307	0.00
Mn	55	2	He	44641	0.01
Fe	56	2	He	9349063	0.00
Co	59	2	He	208445	0.00
Ni	60	2	He	59949	0.01
Cu	63	2	He	169675	0.00
Zn	66	2	He	23776	0.01
As	75	2	He	16197	0.01
Se	78	2	He	590	1.75
B	11	1	nogas	659341	0.00
Si	28	1	nogas	14941670	0.00

Calibration Standard Report

Ca	43	1	nogas	120639	0.00
Ca	44	1	nogas	2033815	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	95823017	0.00
Se	77	1	nogas	21777	0.02
Se	82	1	nogas	8422	0.06
Mo	95	1	nogas	223364	0.00
Sn	118	1	nogas	363270	0.00
Ba	137	1	nogas	166636	0.00
Sb	121	2	He	66286	0.00
P	31	1	nogas	235530	0.00
La	139	1	nogas	290	6.29

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	324100	1.47	345803	93.72	70	125	
Ge	72	1	nogas	1116196	0.99	1142873	97.67	70	125	
In	115	1	nogas	1080110	1.25	1119741	96.46	70	125	
Bi	209	1	nogas	1099782	1.52	1122197	98.00	70	125	
Ge	72	2	He	100230	1.61	104250	96.14	70	125	

Calibration Standard Report

Sample Table

Sample Name	200/1000/20K
Data File Name	239CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-03T21:35:16-06:00
Sample Type	CalStd
Level	6
Dilution	1
Comment	
ISTD Ref File Name	234CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	377787	0.00
Na	23	1	nogas	169964741	0.00
Mg	24	1	nogas	109825998	0.00
Al	27	1	nogas	1220892	0.00
K	39	1	nogas	121856353	0.00
Ti	47	1	nogas	127541	0.00
V	51	1	nogas	2120120	0.00
Cr	52	1	nogas	1676325	0.00
Mn	55	1	nogas	2120071	0.00
Co	59	1	nogas	1713634	0.00
Ni	60	1	nogas	364733	0.00
Cu	63	1	nogas	914970	0.00
Zn	66	1	nogas	297120	0.00
As	75	1	nogas	359087	0.00
Sr	88	1	nogas	2189334	0.00
Ag	107	1	nogas	1147142	0.00
Cd	111	1	nogas	249556	0.00
Sb	121	1	nogas	1096967	0.00
Tl	205	1	nogas	2230852	0.00
Pb	208	1	nogas	3100175	0.00
[Pb]	206	1	nogas	726260	0.00
[Pb]	207	1	nogas	670094	0.00
Na	23	2	He	3471609	0.00
Mg	24	2	He	1560591	0.00
Al	27	2	He	3947	0.13
K	39	2	He	783311	0.00
Ca	43	2	He	2717	0.25
Ca	44	2	He	44898	0.00
V	51	2	He	180868	0.00
Cr	52	2	He	238687	0.00
Mn	55	2	He	89155	0.00
Fe	56	2	He	18738636	0.00
Co	59	2	He	414285	0.00
Ni	60	2	He	119125	0.00
Cu	63	2	He	334540	0.00
Zn	66	2	He	46997	0.00
As	75	2	He	31743	0.01
Se	78	2	He	1169	0.30
B	11	1	nogas	1356604	0.00
Si	28	1	nogas	28402820	0.00

Calibration Standard Report

Ca	43	1	nogas	246951	0.00
Ca	44	1	nogas	4161015	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	190922154	0.00
Se	77	1	nogas	29995	0.02
Se	82	1	nogas	16354	0.01
Mo	95	1	nogas	439476	0.00
Sn	118	1	nogas	737144	0.00
Ba	137	1	nogas	334318	0.00
Sb	121	2	He	135082	0.00
P	31	1	nogas	435629	0.00
La	139	1	nogas	290	13.24

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	283763	1.44	345803	82.06	70	125	
Ge	72	1	nogas	1078690	1.87	1142873	94.38	70	125	
In	115	1	nogas	1053713	3.39	1119741	94.10	70	125	
Bi	209	1	nogas	1038954	3.47	1122197	92.58	70	125	
Ge	72	2	He	98761	0.29	104250	94.73	70	125	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	ICCV
Data File Name	240_ICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-03T21:37:16-06:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	234CALB.d
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	93.681	3.797	193850	1.62	100	93.7	90	110	
Na	23	1	nogas	10590.094	6.577	89062848	1.73	10000	105.9	90	110	
Mg	24	1	nogas	10802.684	6.257	57798368	2.27	10000	108.0	90	110	
Al	27	1	nogas	103.083	7.137	648133	2.47	100	103.1	90	110	
K	39	1	nogas	9687.084	3.441	61817641	1.61	10000	96.9	90	110	
Ti	47	1	nogas	98.435	6.367	63801	1.42	100	98.4	90	110	
V	51	1	nogas	96.904	5.702	1180147	1.11	100	96.9	90	110	
Cr	52	1	nogas	93.669	5.724	794080	1.15	100	93.7	90	110	
Mn	55	1	nogas	97.793	3.677	1053560	1.40	100	97.8	90	110	
Co	59	1	nogas	97.396	4.092	848047	1.90	100	97.4	90	110	
Ni	60	1	nogas	101.239	4.273	191136	0.67	100	101.2	90	110	
Cu	63	1	nogas	98.257	6.026	468271	1.14	100	98.3	90	110	
Zn	66	1	nogas	100.672	4.704	153466	0.22	100	100.7	90	110	
As	75	1	nogas	101.787	4.605	205404	2.61	100	101.8	90	110	
Sr	88	1	nogas	97.705	3.785	1091479	1.18	100	97.7	90	110	
Ag	107	1	nogas	101.566	5.070	598150	1.18	100	101.6	90	110	
Cd	111	1	nogas	101.783	5.243	130061	1.52	100	101.8	90	110	
Sb	121	1	nogas	99.059	3.735	553090	1.17	100	99.1	90	110	
Tl	205	1	nogas	98.546	5.340	1107457	1.55	100	98.5	90	110	
Pb	208	1	nogas	100.695	0.801	1555878	0.80	100	100.7	90	110	
U	238	1	nogas	105.604	2.382	1731934	2.58	100	105.6	90	110	
[Pb]	206	1	nogas	104.128	6.543	385303	1.96	100	104.1	90	110	
[Pb]	207	1	nogas	101.644	6.903	345009	2.21	100	101.6	90	110	
Na	23	2	He	10277.604	3.606	1846503	1.76	10000	102.8	90	110	
Mg	24	2	He	9939.340	2.905	776096	1.51	10000	99.4	90	110	
Al	27	2	He	99.111	4.875	1997	2.93	100	99.1	90	110	
K	39	2	He	10041.853	1.436	397757	1.40	10000	100.4	90	110	
Ca	43	2	He	9405.451	4.319	1280	3.12	10000	94.1	90	110	
Ca	44	2	He	10511.060	3.535	23649	4.09	10000	105.1	90	110	
V	51	2	He	99.755	1.444	90251	1.88	100	99.8	90	110	
Cr	52	2	He	102.182	1.433	122729	0.69	100	102.2	90	110	
Mn	55	2	He	101.158	4.897	45156	3.52	100	101.2	90	110	
Fe	56	2	He	10201.953	2.754	9556710	2.81	10000	102.0	90	110	
Co	59	2	He	102.406	2.952	212410	1.76	100	102.4	90	110	
Ni	60	2	He	101.194	3.080	60460	1.50	100	101.2	90	110	
Cu	63	2	He	101.250	3.462	170101	4.27	100	101.3	90	110	
Zn	66	2	He	99.395	1.467	23435	2.38	100	99.4	90	110	
As	75	2	He	102.212	0.892	16294	1.70	100	102.2	90	110	
Se	78	2	He	97.461	6.065	572	5.82	100	97.5	90	110	
B	11	1	nogas	458.932	1.586	704320	0.89	500	91.8	90	110	
Si	28	1	nogas	5109.890	6.361	15226360	1.57	5000	102.2	90	110	
Ca	43	1	nogas	9688.581	4.545	121607	0.66	10000	96.9	90	110	
Ca	44	1	nogas	9841.797	3.367	2099988	1.60	10000	98.4	90	110	
Fe	56	1	nogas	10011.961	3.656	97801771	1.60	10000	100.1	90	110	
Se	77	1	nogas	104.799	9.427	22307	4.00	100	104.8	90	110	
Se	82	1	nogas	101.300	4.863	8632	2.65	100	101.3	90	110	
Mo	95	1	nogas	100.267	4.626	225526	0.59	100	100.3	90	110	
Sn	118	1	nogas	100.472	3.857	377778	2.05	100	100.5	90	110	
Ba	137	1	nogas	100.402	6.094	171432	0.37	100	100.4	90	110	
Sb	121	2	He	102.608	5.284	69064	3.80	100	102.6	90	110	
Li	7	1	nogas	93.467	2.492	594925	0.27	100	93.5	90	110	
P	31	1	nogas	487.855	7.047	237033	0.97	500	97.6	90	110	
La	139	1	nogas	199.315	29.471	357	30.24	100	199.3	90	110	ICV Main CR1 Failed
Au	197	1	nogas	-59.788	-219.320	3	173.21	100	-59.8	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	318939	2.17	345803	92.23	70	125	
Ge	72	1	nogas	1109310	4.76	1142873	97.06	70	125	
In	115	1	nogas	1083883	5.75	1119741	96.80	70	125	
Bi	209	1	nogas	1064982	4.61	1122197	94.90	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	99073	1.67	104250	95.03	70	125	

Sample Report

Sample Table

Sample Name	LLCCV2
Data File Name	241SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-03T21:48:10-06:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	234CALB.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	1.927	1.927	6.11	4141	0.05	2000	
Na	23	1	nogas	31.261	31.261	97.38	4152267	0.00	200000	
Mg	24	1	nogas	199.007	199.007	5.40	1144004	0.02	200000	
Al	27	1	nogas	9.865	9.865	2.31	71894	0.01	2000	
K	39	1	nogas	175.630	175.630	10.07	4237609	0.00	200000	
Ti	47	1	nogas	2.105	2.105	11.11	1583	0.13	2000	
V	51	1	nogas	-11.012	-11.012	-17.40	162400	-0.01	2000	
Cr	52	1	nogas	1.700	1.700	8.24	23892	0.01	2000	
Mn	55	1	nogas	1.891	1.891	6.44	28656	0.01	2000	
Co	59	1	nogas	1.959	1.959	1.83	17645	0.01	2000	
Ni	60	1	nogas	1.360	1.360	8.81	5318	0.03	2000	
Cu	63	1	nogas	-0.803	-0.803	-15.30	13822	-0.01	2000	
Zn	66	1	nogas	2.021	2.021	4.87	3414	0.06	2000	
As	75	1	nogas	-5.219	-5.219	-33.54	30329	-0.02	2000	
Sr	88	1	nogas	1.975	1.975	0.79	23125	0.01	2000	
Ag	107	1	nogas	2.111	2.111	5.42	12888	0.02	2000	
Cd	111	1	nogas	2.030	2.030	7.38	2634	0.08	2000	
Sb	121	1	nogas	2.543	2.543	1.38	15287	0.02	2000	
Tl	205	1	nogas	1.791	1.791	11.43	23801	0.01	2000	
Pb	208	1	nogas	2.071	2.071	1.81	32270	0.01	2000	
U	238	1	nogas	1.697	1.697	12.25	32764	0.01	2000	
[Pb]	206	1	nogas	1.740	1.740	9.60	7689	0.02	2000	
[Pb]	207	1	nogas	1.773	1.773	10.14	7185	0.02	2000	
Na	23	2	He	40.095	40.095	37.80	121363	0.03	200000	
Mg	24	2	He	198.509	198.509	4.89	16287	1.22	200000	
Al	27	2	He	8.187	8.187	31.31	297	2.76	2000	
K	39	2	He	180.897	180.897	5.90	17525	1.03	200000	
Ca	43	2	He	311.575	311.575	93.43	43	719.02	200000	
Ca	44	2	He	186.119	186.119	3.18	550	33.84	200000	
V	51	2	He	1.966	1.966	6.91	1914	0.10	2000	
Cr	52	2	He	1.922	1.922	7.23	3870	0.05	2000	
Mn	55	2	He	2.043	2.043	13.69	1087	0.19	2000	
Fe	56	2	He	194.094	194.094	2.89	191306	0.10	200000	
Co	59	2	He	2.144	2.144	10.06	4617	0.05	2000	
Ni	60	2	He	1.714	1.714	8.51	1337	0.13	2000	
Cu	63	2	He	1.831	1.831	9.21	3644	0.05	2000	
Zn	66	2	He	1.762	1.762	2.94	473	0.37	2000	
As	75	2	He	2.138	2.138	11.66	359	0.60	2000	
Se	78	2	He	1.980	1.980	11.62	15	13.50	2000	
B	11	1	nogas	23.839	23.839	10.40	89125	0.03	2000	
Si	28	1	nogas	170.724	170.724	9.48	1210537	0.01	2000	
Ca	43	1	nogas	193.581	193.581	0.41	2770	6.99	200000	

Sample Report

Ca	44	1	nogas	190.636	190.636	7.47	88864	0.21	200000	
Fe	56	1	nogas	198.349	198.349	4.12	2527036	0.01	200000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Se	77	1	nogas	-52.780	-52.780	-17.30	8739	-0.60	2000	
Se	82	1	nogas	1.252	1.252	8.37	440	0.28	2000	
Mo	95	1	nogas	2.043	2.043	3.75	4751	0.04	2000	
Sn	118	1	nogas	1.957	1.957	6.14	8012	0.02	2000	
Ba	137	1	nogas	1.934	1.934	6.48	3427	0.06	2000	
Sb	121	2	He	2.689	2.689	8.91	1953	0.14	2000	
La	139	1	nogas	106.116	106.116	34.32	200	53.06	2000	
Au	197	1	nogas	-67.968	-67.968	-172.08	3	-2039.04	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	330649	1.27	345803	95.62	70	125	
Ge	72	1	nogas	1135980	1.69	1142873	99.40	70	125	
In	115	1	nogas	1092885	0.69	1119741	97.60	70	125	
Bi	209	1	nogas	1263906	12.49	1122197	112.63	70	125	
Ge	72	2	He	102625	2.30	104250	98.44	70	125	

Low Level Initial Calibration Verification (LLICV) Report

Sample Table

Sample Name	LLCCV5
Data File Name	242LICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-03T21:50:11-06:00
Sample Type	LLICV
Dilution	1
Comment	
ISTD Ref File Name	234CALB.d
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	4.374	4.117	9989	4.28	5	87.5	70	130	
Na	23	1	nogas	365.883	2.598	7023688	2.37	500	73.2	70	130	
Mg	24	1	nogas	516.151	2.850	2950421	2.52	500	103.2	70	130	
Al	27	1	nogas	9.521	1.928	73886	2.73	5	190.4	70	130	LLICV Main CR1 Failed
K	39	1	nogas	425.609	5.697	6137198	1.52	500	85.1	70	130	
Ti	47	1	nogas	4.492	2.901	3357	2.86	5	89.8	70	130	
V	51	1	nogas	-4.977	-10.940	234505	4.76	5	-99.5	70	130	LLICV Main CR1 Failed
Cr	52	1	nogas	4.186	4.418	47953	0.82	5	83.7	70	130	
Mn	55	1	nogas	4.558	1.714	61376	2.44	5	91.2	70	130	
Co	59	1	nogas	4.590	4.864	43556	1.15	5	91.8	70	130	
Ni	60	1	nogas	4.479	7.218	11937	2.21	5	89.6	70	130	
Cu	63	1	nogas	2.111	3.778	29220	5.20	5	42.2	70	130	LLICV Main CR1 Failed
Zn	66	1	nogas	4.840	5.612	8272	2.75	5	96.8	70	130	
As	75	1	nogas	0.850	95.656	43038	6.08	5	17.0	70	130	LLICV Main CR1 Failed
Sr	88	1	nogas	4.612	3.397	56476	2.88	5	92.2	70	130	
Ag	107	1	nogas	4.821	3.976	30994	3.31	5	96.4	70	130	
Cd	111	1	nogas	5.178	3.977	6821	3.05	5	103.6	70	130	
Sb	121	1	nogas	5.035	1.026	31312	3.74	5	100.7	70	130	
Tl	205	1	nogas	4.681	1.383	55431	2.12	5	93.6	70	130	
Pb	208	1	nogas	5.121	0.141	79397	0.14	5	102.4	70	130	
U	238	1	nogas	4.730	2.148	81576	1.60	5	94.6	70	130	
[Pb]	206	1	nogas	5.035	2.929	19685	2.27	5	100.7	70	130	
[Pb]	207	1	nogas	4.854	3.337	17416	2.60	5	97.1	70	130	
Na	23	2	He	363.163	2.425	181558	0.59	500	72.6	70	130	
Mg	24	2	He	504.012	4.066	41830	3.30	500	100.8	70	130	
Al	27	2	He	9.070	11.868	320	6.25	5	181.4	70	130	LLICV Main CR1 Failed
K	39	2	He	480.897	4.026	29093	2.57	500	96.2	70	130	
Ca	43	2	He	486.637	24.972	70	24.74	500	97.3	70	130	
Ca	44	2	He	503.092	16.280	1310	14.14	500	100.6	70	130	
V	51	2	He	4.883	2.704	4739	1.68	5	97.7	70	130	
Cr	52	2	He	5.246	7.255	8122	6.82	5	104.9	70	130	
Mn	55	2	He	5.213	10.545	2600	9.89	5	104.3	70	130	
Fe	56	2	He	478.973	0.587	477238	0.57	500	95.8	70	130	
Co	59	2	He	4.937	6.064	10837	5.11	5	98.7	70	130	
Ni	60	2	He	4.802	0.559	3307	1.15	5	96.0	70	130	
Cu	63	2	He	4.867	1.812	9099	2.71	5	97.3	70	130	
Zn	66	2	He	5.035	11.707	1297	10.97	5	100.7	70	130	
As	75	2	He	5.023	7.401	852	6.37	5	100.5	70	130	
Se	78	2	He	6.258	32.308	41	29.57	5	125.2	70	130	
B	11	1	nogas	27.238	8.482	99230	1.36	25	109.0	70	130	
Si	28	1	nogas	286.854	9.027	1641259	2.29	25	1147.4	70	130	LLICV Main CR1 Failed
Ca	43	1	nogas	452.540	3.374	6468	7.02	500	90.5	70	130	
Ca	44	1	nogas	467.171	1.260	156891	3.10	500	93.4	70	130	
Fe	56	1	nogas	465.952	2.693	5503569	3.30	500	93.2	70	130	
Se	77	1	nogas	-23.545	-9.034	12047	3.46	5	-470.9	70	130	LLICV Main CR1 Failed
Se	82	1	nogas	2.966	45.495	617	16.56	5	59.3	70	130	LLICV Main CR1 Failed
Mo	95	1	nogas	4.748	8.319	11634	7.15	5	95.0	70	130	
Sn	118	1	nogas	4.892	4.400	19491	3.45	5	97.8	70	130	
Ba	137	1	nogas	4.723	6.484	8392	6.24	5	94.5	70	130	
Sb	121	2	He	5.129	7.194	3730	7.01	5	102.6	70	130	
Li	7	1	nogas	4.058	1.468	60169	2.34	5	81.2	70	130	
P	31	1	nogas	20.054	33.914	52714	1.66	25	80.2	70	130	
La	139	1	nogas	36.496	38.562	83	30.20	5	729.9	70	130	LLICV Main CR1 Failed
Au	197	1	nogas	346.965	192.191	23	137.77	5	6939.3	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	351754	1.68	345803	101.72	70	125	
Ge	72	1	nogas	1204302	3.88	1142873	105.38	70	125	

Low Level Initial Calibration Verification (LLICV) Report

In	115	1	nogas	1113436	0.97	1119741	99.44	70	125	
Bi	209	1	nogas	1118628	0.79	1122197	99.68	70	125	
Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	2	He	104710	1.03	104250	100.44	70	125	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	ICCB
Data File Name	243_ICB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-03T21:52:12-06:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	234CALB.d
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	0.030	22.3	73	20.8	1	
Na	23	1	nogas	-117.427	-1.8	2898062	1.8	100	
Mg	24	1	nogas	0.223	54.1	7736	9.9	100	
Al	27	1	nogas	-0.241	-27.1	7832	3.3	5	
K	39	1	nogas	-24.178	-52.2	3092868	1.3	100	
Ti	47	1	nogas	-0.060	-168.9	153	43.4	2.5	
V	51	1	nogas	-6.012	-5.9	218002	2.8	2.5	
Cr	52	1	nogas	-0.105	-49.5	8652	3.9	2.5	
Mn	55	1	nogas	0.117	45.0	9519	4.5	2.5	
Co	59	1	nogas	-0.001	-703.5	163	33.7	2.5	
Ni	60	1	nogas	-0.410	-30.3	2003	11.8	2.5	
Cu	63	1	nogas	-2.272	-7.9	7125	11.2	2.5	
Zn	66	1	nogas	0.139	4.7	490	4.1	2.5	
As	75	1	nogas	-1.041	-122.1	38601	5.3	2.5	
Sr	88	1	nogas	-0.001	-1502.1	517	36.6	2.5	
Ag	107	1	nogas	0.012	81.4	220	27.6	2.5	
Cd	111	1	nogas	0.005	323.4	20	100.0	1	
Sb	121	1	nogas	0.064	18.4	1153	4.8	2.5	
Tl	205	1	nogas	0.033	37.5	487	31.9	1	
Pb	208	1	nogas	0.019	32.4	583	16.7	2.5	
U	238	1	nogas	0.004	147.7	120	86.6	2.5	
[Pb]	206	1	nogas	0.020	82.5	163	40.8	2.5	
[Pb]	207	1	nogas	0.019	34.7	150	17.6	2.5	
Na	23	2	He	-133.788	-4.6	92718	2.3	100	
Mg	24	2	He	-0.373	-168.3	213	24.1	100	
Al	27	2	He	-3.333	-45.9	73	41.7	5	
K	39	2	He	-20.411	-49.5	9763	4.0	100	
Ca	43	2	He	23.312	173.2	3	173.2	100	
Ca	44	2	He	9.761	114.6	143	17.6	100	
V	51	2	He	0.060	13.2	131	4.4	2.5	
Cr	52	2	He	-0.060	-238.7	1460	11.0	2.5	
Mn	55	2	He	-0.107	-81.5	97	41.8	2.5	
Fe	56	2	He	0.258	101.9	3407	9.0	100	
Co	59	2	He	0.012	45.1	43	26.6	2.5	
Ni	60	2	He	-0.250	-35.7	130	42.8	2.5	
Cu	63	2	He	-0.083	-62.2	333	28.5	2.5	
Zn	66	2	He	-0.060	-132.2	30	66.7	2.5	
As	75	2	He	0.000	-21674.9	7	86.6	2.5	
Se	78	2	He	0.204	161.3	4	50.0	2.5	
B	11	1	nogas	2.472	85.3	68650	2.7	10	
Si	28	1	nogas	-0.173	-4910.6	735163	0.5	5	
Ca	43	1	nogas	-1.757	-223.3	270	18.5	100	
Ca	44	1	nogas	3.065	232.6	50335	0.5	100	
Fe	56	1	nogas	-5.746	-31.7	511088	1.2	100	
Se	77	1	nogas	-15.913	-10.0	12444	3.8	2.5	
Se	82	1	nogas	0.120	342.1	357	12.6	2.5	

Initial Calibration Blank (ICB) Report

Mo	95	1	nogas	0.027	100.1	100	60.8	2.5	
Sn	118	1	nogas	0.009	250.9	643	14.4	5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Ba	137	1	nogas	0.041	63.4	167	27.7	2.5	
Sb	121	2	He	0.116	61.5	167	30.8	2.5	
P	31	1	nogas	0.851	252.8	43206	1.6	10	
La	139	1	nogas	24.985	136.4	63	92.5	2.5	ICB Main CR1 Failed
Au	197	1	nogas	-69.142	-166.2	3	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	360364	1.54	345803	104.21	70	125	
Ge	72	1	nogas	1173143	3.49	1142873	102.65	70	125	
In	115	1	nogas	1122532	1.07	1119741	100.25	70	125	
Bi	209	1	nogas	1133855	1.62	1122197	101.04	70	125	
Ge	72	2	He	104600	1.39	104250	100.34	70	125	

Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	ICSA
Data File Name	244ICSA.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-03T21:54:14-06:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	234CALB.d
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	0.015	16.0	37	15.7	0	ICSA Main CR1 Failed
Na	23	1	nogas	98833.961	0.7	823530685	1.3	0	
Mg	24	1	nogas	98968.078	4.7	544102512	3.0	0	
Al	27	1	nogas	95720.642	3.0	608591884	2.1	0	
K	39	1	nogas	94476.384	4.0	589821330	2.7	0	
Ti	47	1	nogas	1941.594	2.2	1286632	2.0	0	
V	51	1	nogas	-0.248	-221.6	266835	0.3	0	ICSA Main CR1 Failed
Cr	52	1	nogas	0.494	9.8	13532	4.5	0	ICSA Main CR1 Failed
Mn	55	1	nogas	0.357	9.3	11841	1.6	0	ICSA Main CR1 Failed
Co	59	1	nogas	0.073	10.5	817	10.2	0	ICSA Main CR1 Failed
Ni	60	1	nogas	0.627	13.0	3917	4.4	0	ICSA Main CR1 Failed
Cu	63	1	nogas	-1.245	-14.0	11734	6.6	0	ICSA Main CR1 Failed
Zn	66	1	nogas	1.391	4.5	2427	2.3	0	ICSA Main CR1 Failed
As	75	1	nogas	8.563	6.3	53529	2.3	0	
Sr	88	1	nogas	0.874	7.8	10510	8.2	0	ICSA Main CR1 Failed
Ag	107	1	nogas	0.031	66.7	327	36.5	0	ICSA Main CR1 Failed
Cd	111	1	nogas	1.060	2.3	1377	1.8	0	ICSA Main CR1 Failed
Sb	121	1	nogas	0.122	15.6	1447	6.2	0	ICSA Main CR1 Failed
Tl	205	1	nogas	0.018	48.0	290	33.3	0	ICSA Main CR1 Failed
Pb	208	1	nogas	0.093	2.2	1723	1.9	0	ICSA Main CR1 Failed
[Pb]	206	1	nogas	0.106	14.0	470	11.8	0	ICSA Main CR1 Failed
[Pb]	207	1	nogas	0.092	25.8	387	19.8	0	ICSA Main CR1 Failed
Na	23	2	He	99034.725	0.3	17031528	1.8	0	
Mg	24	2	He	97940.683	1.0	7731168	0.9	0	
Al	27	2	He	101758.157	1.7	1937156	3.5	0	
K	39	2	He	100425.481	1.2	3882895	1.2	0	
Ca	43	2	He	87215.764	3.9	12001	2.5	0	
Ca	44	2	He	96460.187	1.7	218435	1.7	0	
V	51	2	He	0.099	23.2	161	13.7	0	ICSA Main CR1 Failed
Cr	52	2	He	0.130	133.6	1627	12.4	0	ICSA Main CR1 Failed
Mn	55	2	He	0.287	50.1	270	22.5	0	ICSA Main CR1 Failed
Fe	56	2	He	97881.096	2.4	92670362	2.2	0	
Co	59	2	He	0.023	80.3	63	59.8	0	ICSA Main CR1 Failed
Ni	60	2	He	0.032	236.0	293	13.8	0	ICSA Main CR1 Failed
Cu	63	2	He	0.189	14.6	780	7.8	0	ICSA Main CR1 Failed
Zn	66	2	He	0.536	64.2	170	47.1	0	ICSA Main CR1 Failed
As	75	2	He	0.146	56.5	30	44.4	0	ICSA Main CR1 Failed
Se	78	2	He	0.909	2.7	8	0.0	0	ICSA Main CR1 Failed
B	11	1	nogas	5.650	35.1	70306	2.4	0	ICSA Main CR1 Failed
Si	28	1	nogas	68.994	9.1	913401	1.3	0	
Ca	43	1	nogas	94697.349	2.8	1215474	3.1	0	
Ca	44	1	nogas	92655.922	2.5	19841161	0.7	0	
Fe	56	1	nogas	97546.289	3.3	971345522	3.8	0	
Se	77	1	nogas	41.504	10.2	17175	0.8	0	
Se	82	1	nogas	-0.128	-578.2	323	18.1	0	ICSA Main CR1 Failed
Mo	95	1	nogas	2038.478	1.0	4697455	1.0	0	
Sn	118	1	nogas	0.025	128.4	683	17.1	0	ICSA Main CR1 Failed
Ba	137	1	nogas	0.044	32.0	167	15.1	0	ICSA Main CR1 Failed
Sb	121	2	He	0.136	86.8	173	47.0	0	ICSA Main CR1 Failed

Interference Check Solution A (ICS-A) Report

P	31	1	nogas	92806.376	3.8	38363147	2.3	0	
La	139	1	nogas	94.574	28.1	180	25.5	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	347586	1.42	345803	100.52	70	125	
Ge	72	1	nogas	1135158	1.94	1142873	99.32	70	125	
In	115	1	nogas	1088568	0.75	1119741	97.22	70	125	
Bi	209	1	nogas	1063287	1.51	1122197	94.75	70	125	
Ge	72	2	He	100165	1.82	104250	96.08	70	125	

Interference Check Solution AB (ICS-AB) Report

Sample Table

Sample Name	ICSAB
Data File Name	245ICSB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-03T21:56:19-06:00
Sample Type	ICSB
Dilution	1
Comment	
ISTD Ref File Name	234CALB.d
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	84.690	3.860	188578	2.99	100	84.7	80	120	
Na	23	1	nogas	103616.813	4.545	877878753	2.27	100	103616.8	80	120	ICSB Main CR1 Failed
Mg	24	1	nogas	107894.106	0.751	603900097	1.57	100	107894.1	80	120	
Al	27	1	nogas	96736.464	2.913	606957671	2.17	100	96736.5	80	120	ICSB Main CR1 Failed
K	39	1	nogas	107819.963	3.853	664185315	4.79	100	107820.0	80	120	ICSB Main CR1 Failed
Ti	47	1	nogas	2118.160	0.496	1385238	1.37	100	2118.2	80	120	ICSB Main CR1 Failed
V	51	1	nogas	100.370	3.180	1226634	3.45	100	100.4	80	120	
Cr	52	1	nogas	93.619	1.126	802851	2.04	100	93.6	80	120	
Mn	55	1	nogas	93.967	1.630	1023765	2.61	100	94.0	80	120	
Co	59	1	nogas	97.069	1.831	854351	0.91	100	97.1	80	120	
Ni	60	1	nogas	101.275	1.366	193305	0.42	100	101.3	80	120	
Cu	63	1	nogas	96.101	1.838	463719	2.64	100	96.1	80	120	
Zn	66	1	nogas	97.916	0.353	150951	1.35	100	97.9	80	120	
As	75	1	nogas	101.014	2.987	206301	1.71	100	101.0	80	120	
Sr	88	1	nogas	100.045	2.119	1129923	2.87	100	100.0	80	120	
Ag	107	1	nogas	94.868	0.897	564998	0.21	100	94.9	80	120	
Cd	111	1	nogas	97.115	3.784	127804	0.89	100	97.1	80	120	
Sb	121	1	nogas	98.571	1.083	556347	0.66	100	98.6	80	120	
Tl	205	1	nogas	90.072	2.448	1023808	1.14	100	90.1	80	120	
Pb	208	1	nogas	95.787	2.609	1480061	2.61	100	95.8	80	120	
U	238	1	nogas	104.245	1.263	1728221	2.69	100	104.2	80	120	
[Pb]	206	1	nogas	96.383	4.653	360815	3.38	100	96.4	80	120	
[Pb]	207	1	nogas	94.826	4.662	325676	3.51	100	94.8	80	120	
Na	23	2	He	106756.886	2.098	18435336	1.73	100	106756.9	80	120	ICSB Main CR1 Failed
Mg	24	2	He	107922.530	2.137	8559058	1.57	100	107922.5	80	120	
Al	27	2	He	98824.387	2.805	1889348	1.67	100	98824.4	80	120	ICSB Main CR1 Failed
K	39	2	He	111921.967	0.251	4326192	0.25	100	111922.0	80	120	
Ca	43	2	He	96353.690	0.802	13325	0.72	100	96353.7	80	120	
Ca	44	2	He	105380.450	3.187	239719	2.20	100	105380.5	80	120	
V	51	2	He	100.076	1.715	91962	0.84	100	100.1	80	120	
Cr	52	2	He	101.406	3.023	123723	2.10	100	101.4	80	120	
Mn	55	2	He	98.829	4.362	44818	2.97	100	98.8	80	120	
Fe	56	2	He	105829.425	3.302	100651748	2.09	100	105829.4	80	120	ICSB Main CR1 Failed
Co	59	2	He	99.753	3.725	210188	3.12	100	99.8	80	120	
Ni	60	2	He	97.570	0.838	59250	2.23	100	97.6	80	120	
Cu	63	2	He	97.851	2.461	166965	2.31	100	97.9	80	120	
Zn	66	2	He	101.790	2.524	24373	1.86	100	101.8	80	120	
As	75	2	He	102.277	3.556	16556	2.11	100	102.3	80	120	
Se	78	2	He	97.968	6.108	584	5.66	100	98.0	80	120	
B	11	1	nogas	475.412	0.503	665666	1.17	100	475.4	80	120	
Si	28	1	nogas	5229.114	2.286	15744295	1.22	100	5229.1	80	120	ICSB Main CR1 Failed
Ca	43	1	nogas	109797.065	5.672	1390215	4.91	100	109797.1	80	120	ICSB Main CR1 Failed
Ca	44	1	nogas	103968.942	3.726	21964171	2.73	100	103968.9	80	120	
Fe	56	1	nogas	104826.938	2.998	1030134156	3.90	100	104826.9	80	120	ICSB Main CR1 Failed
Se	77	1	nogas	109.480	15.187	22945	5.41	100	109.5	80	120	ICSB Main CR1 Failed
Se	82	1	nogas	100.076	2.738	8626	2.70	100	100.1	80	120	
Mo	95	1	nogas	2109.019	2.274	4795630	1.74	100	2109.0	80	120	ICSB Main CR1 Failed
Sn	118	1	nogas	96.996	1.989	375642	2.54	100	97.0	80	120	
Ba	137	1	nogas	94.600	5.024	166387	2.47	100	94.6	80	120	
Sb	121	2	He	102.801	1.204	70318	0.65	100	102.8	80	120	
La	139	1	nogas	260.050	16.471	470	12.77	100	260.1	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	343095	1.00	345803	99.22	70	125	
Ge	72	1	nogas	1120097	1.00	1142873	98.01	70	125	
In	115	1	nogas	1115098	3.74	1119741	99.59	70	125	
Bi	209	1	nogas	1075691	1.45	1122197	95.86	70	125	
Ge	72	2	He	100638	1.52	104250	96.53	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	253_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-03T22:17:37-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	234CALB.d
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	90.643	3.264	193789	2.38	100	90.6	90	110	
Na	23	1	nogas	10552.468	1.541	93084269	2.08	10000	105.5	90	110	
Mg	24	1	nogas	10281.351	2.651	57670453	1.48	10000	102.8	90	110	
Al	27	1	nogas	111.932	2.132	735509	1.70	100	111.9	90	110	CCV Main CR1-2 Failed
K	39	1	nogas	9420.753	2.231	62911216	1.33	10000	94.2	90	110	
Ti	47	1	nogas	95.662	4.152	64833	1.11	100	95.7	90	110	
V	51	1	nogas	100.209	8.018	1265421	3.83	100	100.2	90	110	
Cr	52	1	nogas	90.798	4.796	805223	4.26	100	90.8	90	110	
Mn	55	1	nogas	95.805	4.770	1078845	4.31	100	95.8	90	110	
Co	59	1	nogas	94.293	1.008	858375	2.63	100	94.3	90	110	
Ni	60	1	nogas	99.484	2.597	196362	0.90	100	99.5	90	110	
Cu	63	1	nogas	96.739	2.808	482377	0.87	100	96.7	90	110	
Zn	66	1	nogas	97.772	2.197	155827	1.31	100	97.8	90	110	
As	75	1	nogas	97.921	4.257	207964	1.73	100	97.9	90	110	
Sr	88	1	nogas	96.663	3.465	1128310	1.18	100	96.7	90	110	
Ag	107	1	nogas	98.928	2.318	609139	1.33	100	98.9	90	110	
Cd	111	1	nogas	99.627	0.366	128857	1.24	100	99.6	90	110	
Sb	121	1	nogas	94.843	2.946	553401	1.08	100	94.8	90	110	
Tl	205	1	nogas	94.396	2.153	1089105	0.80	100	94.4	90	110	
Pb	208	1	nogas	99.612	0.486	1539141	0.49	100	99.6	90	110	
U	238	1	nogas	103.361	2.104	1738792	0.95	100	103.4	90	110	
[Pb]	206	1	nogas	100.157	1.544	380681	0.79	100	100.2	90	110	
[Pb]	207	1	nogas	96.830	2.522	337592	0.66	100	96.8	90	110	
Na	23	2	He	10369.219	3.022	1907151	1.66	10000	103.7	90	110	
Mg	24	2	He	9917.783	2.344	793184	1.30	10000	99.2	90	110	
Al	27	2	He	113.154	0.851	2317	2.04	100	113.2	90	110	CCV Main CR1-2 Failed
K	39	2	He	10357.315	0.612	409921	0.60	10000	103.6	90	110	
Ca	43	2	He	8757.719	11.076	1220	9.97	10000	87.6	90	110	CCV Main CR1-2 Failed
Ca	44	2	He	10212.503	2.644	23529	1.69	10000	102.1	90	110	
V	51	2	He	101.002	1.383	93576	0.56	100	101.0	90	110	
Cr	52	2	He	101.589	0.391	124987	1.37	100	101.6	90	110	
Mn	55	2	He	102.995	2.407	47097	1.78	100	103.0	90	110	
Fe	56	2	He	10123.694	1.982	9712652	2.18	10000	101.2	90	110	
Co	59	2	He	100.970	0.624	214534	1.11	100	101.0	90	110	
Ni	60	2	He	97.972	2.629	59965	1.74	100	98.0	90	110	
Cu	63	2	He	101.562	2.388	174682	1.19	100	101.6	90	110	
Zn	66	2	He	102.543	0.797	24757	0.68	100	102.5	90	110	
As	75	2	He	102.587	0.908	16748	0.99	100	102.6	90	110	
Se	78	2	He	104.085	9.205	626	10.45	100	104.1	90	110	
B	11	1	nogas	518.521	2.254	691555	1.15	500	103.7	90	110	
Si	28	1	nogas	5145.595	3.134	16028484	0.99	5000	102.9	90	110	
Ca	43	1	nogas	9694.888	2.986	127195	1.49	10000	96.9	90	110	
Ca	44	1	nogas	9735.204	3.680	2171042	2.65	10000	97.4	90	110	
Fe	56	1	nogas	9659.679	1.440	98658140	2.55	10000	96.6	90	110	
Se	77	1	nogas	92.727	8.686	22197	1.23	100	92.7	90	110	
Se	82	1	nogas	99.447	6.581	8869	7.26	100	99.4	90	110	
Mo	95	1	nogas	97.286	6.426	228544	3.18	100	97.3	90	110	
Sn	118	1	nogas	99.469	2.182	378363	2.09	100	99.5	90	110	
Ba	137	1	nogas	98.957	1.633	171068	0.75	100	99.0	90	110	
Sb	121	2	He	101.280	0.719	69850	0.66	100	101.3	90	110	
Li	7	1	nogas	87.970	1.559	580291	0.95	100	88.0	90	110	CCV Main CR1-2 Failed
P	31	1	nogas	463.762	3.528	237704	0.49	500	92.8	90	110	
La	139	1	nogas	250.146	18.898	447	18.78	100	250.1	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	7.598	3262.004	7	173.21	100	7.6	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	329409	0.95	345803	95.26	70	125	
Ge	72	1	nogas	1158578	3.43	1142873	101.37	70	125	
In	115	1	nogas	1094921	0.89	1119741	97.78	70	125	
Bi	209	1	nogas	1091909	1.86	1122197	97.30	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	101462	1.23	104250	97.32	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	254_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-03T22:19:35-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	234CALB.d
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	0.106	48.7	247	47.0	1	
Na	23	1	nogas	54.864	9.0	4438575	0.9	100	
Mg	24	1	nogas	10.330	36.3	66706	33.3	100	
Al	27	1	nogas	-0.143	-127.6	8572	9.6	5	
K	39	1	nogas	-26.418	-77.5	3123665	0.5	100	
Ti	47	1	nogas	0.117	64.6	280	19.9	2.5	
V	51	1	nogas	-0.205	-1164.6	279783	4.1	2.5	
Cr	52	1	nogas	0.051	64.6	10196	4.2	2.5	
Mn	55	1	nogas	0.031	80.4	8679	2.6	2.5	
Co	59	1	nogas	0.082	47.2	953	42.5	2.5	
Ni	60	1	nogas	0.036	379.2	2924	8.0	2.5	
Cu	63	1	nogas	-1.746	-9.4	9816	3.7	2.5	
Zn	66	1	nogas	0.275	25.9	723	20.0	2.5	
As	75	1	nogas	7.425	40.6	54004	5.3	2.5	CCB Main CR1 Failed
Sr	88	1	nogas	0.179	15.9	2697	16.9	2.5	
Ag	107	1	nogas	0.107	28.2	830	27.2	2.5	
Cd	111	1	nogas	0.048	79.6	80	66.1	1	
Sb	121	1	nogas	0.604	17.8	4424	18.8	2.5	
Tl	205	1	nogas	0.266	50.0	3384	50.5	1	
Pb	208	1	nogas	0.119	35.5	2123	30.7	2.5	
U	238	1	nogas	0.100	50.3	1864	50.8	2.5	
[Pb]	206	1	nogas	0.112	36.5	543	33.2	2.5	
[Pb]	207	1	nogas	0.127	23.1	553	21.6	2.5	
Na	23	2	He	35.827	53.4	122363	1.2	100	
Mg	24	2	He	6.297	11.3	760	8.6	100	
Al	27	2	He	-3.326	-61.5	73	56.8	5	
K	39	2	He	9.947	108.0	10933	3.8	100	
Ca	43	2	He	93.194	173.2	13	173.2	100	
Ca	44	2	He	1.501	214.1	123	4.7	100	
V	51	2	He	0.164	27.7	230	20.3	2.5	
Cr	52	2	He	-0.188	-87.2	1297	17.1	2.5	
Mn	55	2	He	-0.065	-62.7	117	17.8	2.5	
Fe	56	2	He	6.378	6.0	9409	2.9	100	
Co	59	2	He	0.043	23.2	110	18.2	2.5	
Ni	60	2	He	-0.265	-5.6	120	8.3	2.5	
Cu	63	2	He	0.038	158.5	543	19.7	2.5	
Zn	66	2	He	0.237	85.1	103	49.7	2.5	
As	75	2	He	0.086	74.3	21	50.8	2.5	
Se	78	2	He	0.423	44.6	5	21.7	2.5	
B	11	1	nogas	15.462	20.8	84812	3.6	10	CCB Main CR1 Failed
Si	28	1	nogas	26.966	30.0	829367	1.6	5	CCB Main CR1 Failed
Ca	43	1	nogas	13.036	61.0	477	27.1	100	
Ca	44	1	nogas	30.649	39.2	57251	0.2	100	
Fe	56	1	nogas	-1.910	-180.9	560460	10.9	100	
Se	77	1	nogas	31.227	16.4	17048	1.7	2.5	CCB Main CR1 Failed
Se	82	1	nogas	-0.759	-61.0	283	12.4	2.5	

Continuing Calibration Blank (CCB) Report

Mo	95	1	nogas	0.305	40.6	783	42.9	2.5	
Sn	118	1	nogas	0.123	41.1	1130	19.9	5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Ba	137	1	nogas	0.090	38.8	263	25.3	2.5	
Sb	121	2	He	0.510	27.1	443	21.4	2.5	
P	31	1	nogas	-10.750	-40.4	38807	0.6	10	
La	139	1	nogas	21.508	48.5	60	33.3	2.5	CCB Main CR1 Failed
Au	197	1	nogas	-7.535	-2941.2	7	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	355583	1.59	345803	102.83	70	125	
Ge	72	1	nogas	1191209	4.53	1142873	104.23	70	125	
In	115	1	nogas	1162899	2.11	1119741	103.85	70	125	
Bi	209	1	nogas	1162118	4.29	1122197	103.56	70	125	
Ge	72	2	He	104110	1.57	104250	99.87	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	265_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-03T22:41:39-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	234CALB.d
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	90.016	1.025	191169	0.92	100	90.0	90	110	
Na	23	1	nogas	10046.551	2.397	85684583	2.97	10000	100.5	90	110	
Mg	24	1	nogas	10158.028	2.387	54989078	2.97	10000	101.6	90	110	
Al	27	1	nogas	111.467	3.677	700953	2.97	100	111.5	90	110	CCV Main CR1-2 Failed
K	39	1	nogas	10058.960	1.570	64082795	1.19	10000	100.6	90	110	
Ti	47	1	nogas	96.827	0.954	62834	0.68	100	96.8	90	110	
V	51	1	nogas	87.918	5.390	1095465	3.43	100	87.9	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	92.478	2.382	784781	2.08	100	92.5	90	110	
Mn	55	1	nogas	97.003	1.880	1045423	1.93	100	97.0	90	110	
Co	59	1	nogas	97.871	2.779	852402	2.18	100	97.9	90	110	
Ni	60	1	nogas	101.649	2.422	191975	1.69	100	101.6	90	110	
Cu	63	1	nogas	98.733	3.498	470892	3.17	100	98.7	90	110	
Zn	66	1	nogas	99.941	2.669	152449	2.59	100	99.9	90	110	
As	75	1	nogas	102.053	2.668	205856	1.39	100	102.1	90	110	
Sr	88	1	nogas	99.196	2.971	1108539	3.11	100	99.2	90	110	
Ag	107	1	nogas	102.606	1.251	604698	1.07	100	102.6	90	110	
Cd	111	1	nogas	99.974	0.877	129216	1.54	100	100.0	90	110	
Sb	121	1	nogas	99.226	1.230	554206	1.28	100	99.2	90	110	
Tl	205	1	nogas	93.406	7.856	1090347	1.15	100	93.4	90	110	
Pb	208	1	nogas	98.501	0.585	1521981	0.58	100	98.5	90	110	
U	238	1	nogas	101.551	7.448	1728880	1.75	100	101.6	90	110	
[Pb]	206	1	nogas	97.700	7.495	375754	1.14	100	97.7	90	110	
[Pb]	207	1	nogas	94.727	8.439	334067	1.52	100	94.7	90	110	
Na	23	2	He	10119.205	1.488	1821288	0.63	10000	101.2	90	110	
Mg	24	2	He	9881.375	0.583	772228	1.06	10000	98.8	90	110	
Al	27	2	He	115.832	16.213	2312	14.42	100	115.8	90	110	CCV Main CR1-2 Failed
K	39	2	He	9938.150	0.329	393759	0.32	10000	99.4	90	110	
Ca	43	2	He	9447.503	11.000	1287	10.72	10000	94.5	90	110	
Ca	44	2	He	10065.383	2.294	22661	2.16	10000	100.7	90	110	
V	51	2	He	99.963	1.774	90484	1.04	100	100.0	90	110	
Cr	52	2	He	100.269	1.224	120548	1.83	100	100.3	90	110	
Mn	55	2	He	100.788	0.867	45039	1.60	100	100.8	90	110	
Fe	56	2	He	10203.099	3.064	9562212	2.25	10000	102.0	90	110	
Co	59	2	He	103.496	2.065	214822	1.21	100	103.5	90	110	
Ni	60	2	He	103.505	3.454	61878	2.60	100	103.5	90	110	
Cu	63	2	He	103.260	1.959	173525	1.28	100	103.3	90	110	
Zn	66	2	He	101.616	1.595	23969	1.25	100	101.6	90	110	
As	75	2	He	103.406	1.756	16495	2.60	100	103.4	90	110	
Se	78	2	He	99.664	7.477	585	7.62	100	99.7	90	110	
B	11	1	nogas	512.851	0.826	680150	2.24	500	102.6	90	110	
Si	28	1	nogas	5193.256	2.071	15478482	1.36	5000	103.9	90	110	
Ca	43	1	nogas	9769.757	2.189	122686	1.65	10000	97.7	90	110	
Ca	44	1	nogas	9803.668	2.704	2092437	2.66	10000	98.0	90	110	
Fe	56	1	nogas	9811.371	3.056	95871219	2.63	10000	98.1	90	110	
Se	77	1	nogas	109.711	8.543	22731	2.97	100	109.7	90	110	
Se	82	1	nogas	99.392	1.907	8479	1.25	100	99.4	90	110	
Mo	95	1	nogas	99.371	2.501	223644	2.46	100	99.4	90	110	
Sn	118	1	nogas	98.218	1.333	373369	1.74	100	98.2	90	110	
Ba	137	1	nogas	96.175	1.837	166149	1.36	100	96.2	90	110	
Sb	121	2	He	103.914	0.694	70020	1.38	100	103.9	90	110	
Li	7	1	nogas	90.234	0.368	590455	1.66	100	90.2	90	110	
P	31	1	nogas	483.843	2.803	235637	1.85	500	96.8	90	110	
La	139	1	nogas	201.036	24.404	363	24.97	100	201.0	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	272.449	66.165	20	50.00	100	272.4	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	327192	1.86	345803	94.62	70	125	
Ge	72	1	nogas	1108390	0.84	1142873	96.98	70	125	
In	115	1	nogas	1094274	2.00	1119741	97.73	70	125	
Bi	209	1	nogas	1108718	7.37	1122197	98.80	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	99127	0.85	104250	95.09	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	266_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-03T22:43:39-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	234CALB.d
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	0.103	5.1	243	6.3	1	
Na	23	1	nogas	-39.961	-31.6	3483064	0.7	100	
Mg	24	1	nogas	9.243	39.6	58173	34.5	100	
Al	27	1	nogas	-0.293	-10.2	7465	2.6	5	
K	39	1	nogas	-21.153	-34.7	3102492	1.0	100	
Ti	47	1	nogas	0.061	123.0	237	21.7	2.5	
V	51	1	nogas	-3.772	-9.9	239633	2.1	2.5	
Cr	52	1	nogas	0.091	82.4	10363	6.4	2.5	
Mn	55	1	nogas	0.090	38.2	9182	4.2	2.5	
Co	59	1	nogas	0.088	44.4	977	36.4	2.5	
Ni	60	1	nogas	-0.376	-14.7	2063	4.7	2.5	
Cu	63	1	nogas	-1.802	-2.4	9386	2.6	2.5	
Zn	66	1	nogas	0.211	56.4	603	31.3	2.5	
As	75	1	nogas	8.966	21.6	55833	6.6	2.5	CCB Main CR1 Failed
Sr	88	1	nogas	0.169	27.7	2520	21.7	2.5	
Ag	107	1	nogas	0.129	35.6	950	29.6	2.5	
Cd	111	1	nogas	0.099	55.6	143	49.5	1	
Sb	121	1	nogas	0.701	23.8	4897	19.9	2.5	
Tl	205	1	nogas	0.267	35.1	3280	37.6	1	
Pb	208	1	nogas	0.120	29.7	2130	25.7	2.5	
U	238	1	nogas	0.105	43.1	1877	45.1	2.5	
[Pb]	206	1	nogas	0.110	25.2	517	24.5	2.5	
[Pb]	207	1	nogas	0.119	54.1	510	48.8	2.5	
Na	23	2	He	-42.552	-21.5	102993	1.3	100	
Mg	24	2	He	5.727	7.8	677	4.3	100	
Al	27	2	He	-6.125	-18.4	17	124.9	5	
K	39	2	He	-9.426	-107.9	10186	3.9	100	
Ca	43	2	He	48.751	86.6	7	86.6	100	
Ca	44	2	He	1.467	1572.8	117	43.1	100	
V	51	2	He	0.152	23.3	207	15.1	2.5	
Cr	52	2	He	-0.206	-60.9	1207	11.3	2.5	
Mn	55	2	He	0.235	36.5	243	14.4	2.5	
Fe	56	2	He	7.641	8.7	10110	4.4	100	
Co	59	2	He	0.068	15.9	157	13.3	2.5	
Ni	60	2	He	-0.103	-26.8	210	9.5	2.5	
Cu	63	2	He	0.043	230.0	527	33.2	2.5	
Zn	66	2	He	0.104	28.1	67	8.7	2.5	
As	75	2	He	0.113	68.7	24	51.6	2.5	
Se	78	2	He	0.011	3716.9	3	86.6	2.5	
B	11	1	nogas	9.313	32.2	77192	4.9	10	
Si	28	1	nogas	51.947	12.7	889470	1.8	5	CCB Main CR1 Failed
Ca	43	1	nogas	10.685	73.2	433	23.3	100	
Ca	44	1	nogas	41.442	15.6	58625	1.8	100	
Fe	56	1	nogas	-5.467	-67.5	512378	7.0	100	
Se	77	1	nogas	43.455	20.9	17872	5.2	2.5	CCB Main CR1 Failed
Se	82	1	nogas	0.527	43.2	390	5.1	2.5	

Continuing Calibration Blank (CCB) Report

Mo	95	1	nogas	0.236	42.9	597	40.0	2.5	
Sn	118	1	nogas	0.138	42.8	1137	18.8	5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Ba	137	1	nogas	0.124	41.3	313	29.7	2.5	
Sb	121	2	He	0.628	18.3	500	14.4	2.5	
P	31	1	nogas	-10.416	-19.5	38276	2.2	10	
La	139	1	nogas	17.191	66.5	50	40.0	2.5	CCB Main CR1 Failed
Au	197	1	nogas	141.622	228.8	13	114.6	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	357632	1.87	345803	103.42	70	125	
Ge	72	1	nogas	1168858	0.63	1142873	102.27	70	125	
In	115	1	nogas	1117570	2.64	1119741	99.81	70	125	
Bi	209	1	nogas	1121652	3.29	1122197	99.95	70	125	
Ge	72	2	He	98858	1.82	104250	94.83	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	277_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-03T23:05:46-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	234CALB.d
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	90.286	5.409	186664	3.60	100	90.3	90	110	
Na	23	1	nogas	9866.937	2.411	83955839	1.76	10000	98.7	90	110	
Mg	24	1	nogas	10060.893	2.266	54302543	2.74	10000	100.6	90	110	
Al	27	1	nogas	112.885	0.758	694652	1.46	100	112.9	90	110	CCV Main CR1-2 Failed
K	39	1	nogas	9834.982	1.295	61376074	0.24	10000	98.3	90	110	
Ti	47	1	nogas	96.826	0.705	61486	0.90	100	96.8	90	110	
V	51	1	nogas	90.608	5.592	1097342	5.10	100	90.6	90	110	
Cr	52	1	nogas	93.116	1.844	773148	1.07	100	93.1	90	110	
Mn	55	1	nogas	105.909	4.841	1115787	3.53	100	105.9	90	110	
Co	59	1	nogas	97.411	2.475	830163	1.58	100	97.4	90	110	
Ni	60	1	nogas	101.950	1.636	188421	1.67	100	102.0	90	110	
Cu	63	1	nogas	97.887	1.560	456974	0.88	100	97.9	90	110	
Zn	66	1	nogas	100.555	2.523	150066	1.12	100	100.6	90	110	
As	75	1	nogas	101.121	1.898	199946	1.05	100	101.1	90	110	
Sr	88	1	nogas	101.913	4.662	1114119	3.77	100	101.9	90	110	
Ag	107	1	nogas	102.536	2.861	591220	1.84	100	102.5	90	110	
Cd	111	1	nogas	98.108	2.369	125039	2.50	100	98.1	90	110	
Sb	121	1	nogas	98.712	3.470	539362	2.12	100	98.7	90	110	
Tl	205	1	nogas	95.156	2.047	1076141	0.92	100	95.2	90	110	
Pb	208	1	nogas	98.249	1.624	1518088	1.62	100	98.2	90	110	
U	238	1	nogas	105.151	3.190	1733709	2.08	100	105.2	90	110	
[Pb]	206	1	nogas	100.803	0.851	375566	0.95	100	100.8	90	110	
[Pb]	207	1	nogas	98.616	1.352	337076	1.54	100	98.6	90	110	
Na	23	2	He	9917.343	2.456	1756890	3.12	10000	99.2	90	110	
Mg	24	2	He	9819.912	0.673	754275	1.06	10000	98.2	90	110	
Al	27	2	He	97.365	8.554	1933	9.11	100	97.4	90	110	
K	39	2	He	9696.792	2.709	384452	2.63	10000	97.0	90	110	
Ca	43	2	He	10015.744	8.596	1340	7.35	10000	100.2	90	110	
Ca	44	2	He	10289.405	1.694	22764	0.40	10000	102.9	90	110	
V	51	2	He	99.959	1.339	88932	0.26	100	100.0	90	110	
Cr	52	2	He	102.487	1.803	121056	1.06	100	102.5	90	110	
Mn	55	2	He	104.074	2.688	45694	1.19	100	104.1	90	110	
Fe	56	2	He	10284.888	1.353	9474641	0.74	10000	102.8	90	110	
Co	59	2	He	101.240	1.615	206550	1.10	100	101.2	90	110	
Ni	60	2	He	100.020	2.218	58781	1.02	100	100.0	90	110	
Cu	63	2	He	100.553	1.321	166099	0.79	100	100.6	90	110	
Zn	66	2	He	104.834	1.245	24303	0.32	100	104.8	90	110	
As	75	2	He	101.174	3.328	15857	1.91	100	101.2	90	110	
Se	78	2	He	105.183	6.125	607	4.80	100	105.2	90	110	
B	11	1	nogas	508.872	4.644	657456	2.51	500	101.8	90	110	
Si	28	1	nogas	5249.870	1.082	15304616	0.79	5000	105.0	90	110	
Ca	43	1	nogas	9865.256	0.085	121238	1.36	10000	98.7	90	110	
Ca	44	1	nogas	10312.146	2.518	2151381	2.64	10000	103.1	90	110	
Fe	56	1	nogas	10015.782	2.841	95759863	2.59	10000	100.2	90	110	
Se	77	1	nogas	101.742	0.509	21566	1.60	100	101.7	90	110	
Se	82	1	nogas	103.730	5.745	8649	6.54	100	103.7	90	110	
Mo	95	1	nogas	101.853	1.798	224339	2.66	100	101.9	90	110	
Sn	118	1	nogas	98.801	1.538	370341	1.38	100	98.8	90	110	
Ba	137	1	nogas	98.459	2.102	167728	1.66	100	98.5	90	110	
Sb	121	2	He	102.212	1.207	67701	2.38	100	102.2	90	110	
Li	7	1	nogas	90.541	2.922	576798	0.69	100	90.5	90	110	
P	31	1	nogas	481.120	1.414	229512	0.77	500	96.2	90	110	
La	139	1	nogas	178.915	20.204	320	19.01	100	178.9	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	78.750	273.345	10	100.00	100	78.8	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	318715	2.14	345803	92.17	70	125	
Ge	72	1	nogas	1084636	1.42	1142873	94.90	70	125	
In	115	1	nogas	1078929	0.54	1119741	96.36	70	125	
Bi	209	1	nogas	1070191	1.14	1122197	95.37	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	97434	1.53	104250	93.46	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	278_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-03T23:07:44-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	234CALB.d
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	0.107	106.5	250	104.0	1	
Na	23	1	nogas	-115.928	-5.0	2813714	1.5	100	
Mg	24	1	nogas	14.037	22.9	84577	21.8	100	
Al	27	1	nogas	-0.340	-4.5	6981	0.5	5	
K	39	1	nogas	-37.551	-12.6	2923074	1.1	100	
Ti	47	1	nogas	0.060	130.2	230	23.0	2.5	
V	51	1	nogas	-3.899	-41.6	232381	6.4	2.5	
Cr	52	1	nogas	0.064	34.6	9866	1.9	2.5	
Mn	55	1	nogas	0.512	14.5	13599	6.7	2.5	
Co	59	1	nogas	0.093	50.6	997	41.9	2.5	
Ni	60	1	nogas	-0.546	-15.3	1687	8.6	2.5	
Cu	63	1	nogas	-2.299	-0.7	6801	0.3	2.5	
Zn	66	1	nogas	0.243	26.1	640	15.6	2.5	
As	75	1	nogas	8.797	17.5	54137	4.5	2.5	CCB Main CR1 Failed
Sr	88	1	nogas	0.335	0.9	4364	1.3	2.5	
Ag	107	1	nogas	0.091	27.2	697	22.1	2.5	
Cd	111	1	nogas	0.056	112.2	90	96.2	1	
Sb	121	1	nogas	0.581	23.3	4084	18.7	2.5	
Tl	205	1	nogas	0.262	43.4	3237	47.0	1	
Pb	208	1	nogas	0.124	53.0	2193	46.1	2.5	
U	238	1	nogas	0.103	51.3	1863	54.8	2.5	
[Pb]	206	1	nogas	0.091	61.7	447	54.7	2.5	
[Pb]	207	1	nogas	0.129	37.8	547	37.1	2.5	
Na	23	2	He	-139.408	-3.9	86945	0.6	100	
Mg	24	2	He	11.414	18.5	1123	14.5	100	
Al	27	2	He	-5.252	-15.2	33	45.8	5	
K	39	2	He	-27.590	-20.6	9486	2.3	100	
Ca	43	2	He	49.041	173.2	7	173.2	100	
Ca	44	2	He	23.390	38.1	167	12.5	100	
V	51	2	He	0.120	26.4	179	15.7	2.5	
Cr	52	2	He	-0.202	-23.1	1217	4.7	2.5	
Mn	55	2	He	0.419	40.3	327	23.0	2.5	
Fe	56	2	He	8.335	4.4	10800	3.2	100	
Co	59	2	He	0.047	15.8	113	13.5	2.5	
Ni	60	2	He	-0.266	-7.6	113	10.2	2.5	
Cu	63	2	He	0.075	85.4	580	18.2	2.5	
Zn	66	2	He	0.131	66.6	73	28.4	2.5	
As	75	2	He	0.030	81.9	11	34.6	2.5	
Se	78	2	He	0.467	43.1	5	21.7	2.5	
B	11	1	nogas	7.252	49.5	74626	5.4	10	
Si	28	1	nogas	36.730	10.8	822795	1.2	5	CCB Main CR1 Failed
Ca	43	1	nogas	23.925	27.9	593	14.3	100	
Ca	44	1	nogas	44.221	11.2	57763	1.3	100	
Fe	56	1	nogas	-0.166	-3703.5	552666	11.1	100	
Se	77	1	nogas	48.026	9.5	17836	2.6	2.5	CCB Main CR1 Failed
Se	82	1	nogas	0.166	319.5	350	13.1	2.5	
Mo	95	1	nogas	0.222	43.9	550	40.9	2.5	
Sn	118	1	nogas	0.137	42.4	1150	21.5	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.138	64.7	343	48.1	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.565	9.7	460	7.8	2.5	
P	31	1	nogas	-7.025	-43.4	38723	2.6	10	
La	139	1	nogas	20.752	84.8	57	53.9	2.5	CCB Main CR1 Failed
Au	197	1	nogas	210.108	62.1	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	358486	1.25	345803	103.67	70	125	
Ge	72	1	nogas	1139750	0.93	1142873	99.73	70	125	
In	115	1	nogas	1129968	1.64	1119741	100.91	70	125	
Bi	209	1	nogas	1121475	4.51	1122197	99.94	70	125	
Ge	72	2	He	99169	0.49	104250	95.13	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	289_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-03T23:29:59-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	234CALB.d
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	92.908	5.583	187996	1.84	100	92.9	90	110	
Na	23	1	nogas	10881.261	3.925	92294408	3.80	10000	108.8	90	110	
Mg	24	1	nogas	10174.750	0.875	54965768	2.19	10000	101.7	90	110	
Al	27	1	nogas	110.133	1.282	698273	1.85	100	110.1	90	110	CCV Main CR1-2 Failed
K	39	1	nogas	9816.502	1.071	63111710	1.73	10000	98.2	90	110	
Ti	47	1	nogas	95.214	4.467	62252	2.70	100	95.2	90	110	
V	51	1	nogas	125.733	2.373	1465851	3.92	100	125.7	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	93.924	2.982	803024	0.98	100	93.9	90	110	
Mn	55	1	nogas	96.141	3.065	1044084	1.03	100	96.1	90	110	
Co	59	1	nogas	96.234	2.293	844709	0.80	100	96.2	90	110	
Ni	60	1	nogas	99.255	1.563	189016	1.71	100	99.3	90	110	
Cu	63	1	nogas	94.748	2.065	456139	1.45	100	94.7	90	110	
Zn	66	1	nogas	98.470	3.895	151347	2.45	100	98.5	90	110	
As	75	1	nogas	114.365	0.043	227918	2.03	100	114.4	90	110	CCV Main CR1-2 Failed
Sr	88	1	nogas	98.058	5.181	1104129	4.37	100	98.1	90	110	
Ag	107	1	nogas	99.403	1.374	590458	1.49	100	99.4	90	110	
Cd	111	1	nogas	98.908	3.422	125356	2.10	100	98.9	90	110	
Sb	121	1	nogas	96.166	1.844	541310	0.19	100	96.2	90	110	
Tl	205	1	nogas	92.450	3.674	1038541	1.76	100	92.4	90	110	
Pb	208	1	nogas	94.860	1.418	1465741	1.42	100	94.9	90	110	
U	238	1	nogas	100.736	2.300	1650277	0.89	100	100.7	90	110	
[Pb]	206	1	nogas	95.571	2.654	353723	1.54	100	95.6	90	110	
[Pb]	207	1	nogas	95.470	1.992	324185	1.06	100	95.5	90	110	
Na	23	2	He	10838.845	2.234	1908887	2.31	10000	108.4	90	110	
Mg	24	2	He	10058.058	0.683	772192	1.20	10000	100.6	90	110	
Al	27	2	He	108.680	4.260	2140	2.92	100	108.7	90	110	
K	39	2	He	9900.198	0.588	392295	0.57	10000	99.0	90	110	
Ca	43	2	He	9913.110	4.565	1327	4.85	10000	99.1	90	110	
Ca	44	2	He	10436.856	4.272	23088	5.38	10000	104.4	90	110	
V	51	2	He	99.795	1.538	88763	2.72	100	99.8	90	110	
Cr	52	2	He	100.753	1.847	118974	1.20	100	100.8	90	110	
Mn	55	2	He	99.364	0.458	43622	1.48	100	99.4	90	110	
Fe	56	2	He	10055.622	0.849	9259232	0.53	10000	100.6	90	110	
Co	59	2	He	101.100	2.133	206211	3.20	100	101.1	90	110	
Ni	60	2	He	98.802	0.434	58052	1.62	100	98.8	90	110	
Cu	63	2	He	98.803	3.115	163188	4.25	100	98.8	90	110	
Zn	66	2	He	98.902	3.806	22928	4.97	100	98.9	90	110	
As	75	2	He	100.340	1.987	15726	3.14	100	100.3	90	110	
Se	78	2	He	96.686	4.563	558	5.30	100	96.7	90	110	
B	11	1	nogas	503.174	6.939	636663	2.61	500	100.6	90	110	
Si	28	1	nogas	5019.167	0.916	15104368	2.31	5000	100.4	90	110	
Ca	43	1	nogas	9789.497	1.239	123911	1.23	10000	97.9	90	110	
Ca	44	1	nogas	9703.200	3.117	2087326	1.61	10000	97.0	90	110	
Fe	56	1	nogas	9795.227	2.996	96454829	1.48	10000	98.0	90	110	
Se	77	1	nogas	194.676	6.507	30402	4.39	100	194.7	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	98.465	3.059	8472	4.18	100	98.5	90	110	
Mo	95	1	nogas	97.724	3.276	221666	3.11	100	97.7	90	110	
Sn	118	1	nogas	96.989	1.418	361683	2.48	100	97.0	90	110	
Ba	137	1	nogas	96.527	3.119	163551	2.36	100	96.5	90	110	
Sb	121	2	He	102.448	0.852	67815	0.87	100	102.4	90	110	
Li	7	1	nogas	91.228	4.740	568598	1.74	100	91.2	90	110	
P	31	1	nogas	465.425	1.451	230033	1.64	500	93.1	90	110	
La	139	1	nogas	169.966	24.517	303	23.15	100	170.0	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	436.611	121.597	27	94.37	100	436.6	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	312143	3.75	345803	90.27	70	125	
Ge	72	1	nogas	1117252	2.00	1142873	97.76	70	125	
In	115	1	nogas	1073271	1.53	1119741	95.85	70	125	
Bi	209	1	nogas	1063553	2.95	1122197	94.77	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	97383	1.19	104250	93.41	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	290_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-03T23:31:58-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	234CALB.d
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	0.095	89.2	203	88.2	1	
Na	23	1	nogas	374.305	8.1	6706475	1.5	100	CCB Main CR1 Failed
Mg	24	1	nogas	18.174	28.3	103648	24.2	100	
Al	27	1	nogas	-0.340	-16.4	6581	5.6	5	
K	39	1	nogas	4.342	103.1	3001304	0.6	100	
Ti	47	1	nogas	0.050	115.1	210	16.5	2.5	
V	51	1	nogas	19.637	11.4	435060	4.3	2.5	CCB Main CR1 Failed
Cr	52	1	nogas	0.488	15.2	12745	3.9	2.5	
Mn	55	1	nogas	0.175	25.2	9326	5.1	2.5	
Co	59	1	nogas	0.100	37.0	1000	31.6	2.5	
Ni	60	1	nogas	0.290	34.2	3100	6.3	2.5	
Cu	63	1	nogas	-2.947	-1.4	3524	5.4	2.5	
Zn	66	1	nogas	0.390	9.3	820	7.3	2.5	
As	75	1	nogas	19.892	9.0	68686	3.4	2.5	CCB Main CR1 Failed
Sr	88	1	nogas	0.222	24.8	2887	20.9	2.5	
Ag	107	1	nogas	0.104	3.6	730	3.6	2.5	
Cd	111	1	nogas	0.064	93.1	93	81.1	1	
Sb	121	1	nogas	0.504	21.3	3437	17.3	2.5	
Tl	205	1	nogas	0.282	55.0	3320	54.8	1	
Pb	208	1	nogas	0.100	43.5	1827	36.8	2.5	
U	238	1	nogas	0.103	44.4	1767	44.6	2.5	
[Pb]	206	1	nogas	0.100	35.7	457	31.0	2.5	
[Pb]	207	1	nogas	0.104	44.7	437	38.4	2.5	
Na	23	2	He	424.860	5.5	174288	1.0	100	CCB Main CR1 Failed
Mg	24	2	He	13.333	7.8	1217	5.6	100	
Al	27	2	He	-1.857	-101.0	93	37.6	5	
K	39	2	He	7.438	134.4	10837	3.6	100	
Ca	43	2	He	25.337	173.2	3	173.2	100	
Ca	44	2	He	20.534	69.1	153	21.0	100	
V	51	2	He	0.324	5.9	347	3.7	2.5	
Cr	52	2	He	-0.201	-72.8	1167	16.2	2.5	
Mn	55	2	He	-0.031	-249.4	120	25.0	2.5	
Fe	56	2	He	6.763	7.7	8909	3.8	100	
Co	59	2	He	0.049	70.8	113	62.6	2.5	
Ni	60	2	He	-0.105	-37.1	200	8.7	2.5	
Cu	63	2	He	-0.044	-69.6	363	13.0	2.5	
Zn	66	2	He	0.030	615.5	47	86.6	2.5	
As	75	2	He	0.119	90.8	24	68.6	2.5	
Se	78	2	He	-0.083	-442.7	2	100.0	2.5	
B	11	1	nogas	3.805	17.6	63639	1.8	10	
Si	28	1	nogas	18.142	17.0	724249	1.3	5	CCB Main CR1 Failed
Ca	43	1	nogas	20.700	12.2	520	5.1	100	
Ca	44	1	nogas	12.789	34.3	48089	1.6	100	
Fe	56	1	nogas	33.872	16.0	841657	6.5	100	
Se	77	1	nogas	109.255	19.2	21990	7.6	2.5	CCB Main CR1 Failed
Se	82	1	nogas	-0.840	-57.0	250	16.0	2.5	

Continuing Calibration Blank (CCB) Report

Mo	95	1	nogas	0.195	34.4	460	32.0	2.5	
Sn	118	1	nogas	0.139	5.7	1087	3.7	5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Ba	137	1	nogas	0.107	99.2	270	67.4	2.5	
Sb	121	2	He	0.504	22.5	400	17.3	2.5	
P	31	1	nogas	-5.985	-24.4	36913	2.3	10	
La	139	1	nogas	18.672	111.6	50	69.3	2.5	CCB Main CR1 Failed
Au	197	1	nogas	77.067	271.9	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	325527	1.97	345803	94.14	70	125	
Ge	72	1	nogas	1074244	0.81	1142873	94.00	70	125	
In	115	1	nogas	1061878	1.14	1119741	94.83	70	125	
Bi	209	1	nogas	1079781	2.30	1122197	96.22	70	125	
Ge	72	2	He	94790	2.28	104250	90.93	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	301_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-03T23:54:21-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	234CALB.d
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	99.152	3.971	179634	2.86	100	99.2	90	110	
Na	23	1	nogas	11380.102	8.466	90533794	3.76	10000	113.8	90	110	CCV Main CR1-2 Failed
Mg	24	1	nogas	10488.555	5.463	53270282	1.03	10000	104.9	90	110	
Al	27	1	nogas	114.033	1.809	684036	0.59	100	114.0	90	110	CCV Main CR1-2 Failed
K	39	1	nogas	9973.160	2.119	60641897	0.83	10000	99.7	90	110	
Ti	47	1	nogas	100.175	0.700	62024	1.64	100	100.2	90	110	
V	51	1	nogas	136.929	2.978	1488401	2.81	100	136.9	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	96.334	1.965	779631	1.31	100	96.3	90	110	
Mn	55	1	nogas	97.926	2.037	1006769	0.83	100	97.9	90	110	
Co	59	1	nogas	97.702	3.320	811862	2.56	100	97.7	90	110	
Ni	60	1	nogas	103.746	0.910	186909	0.35	100	103.7	90	110	
Cu	63	1	nogas	99.259	0.440	451656	1.60	100	99.3	90	110	
Zn	66	1	nogas	101.718	2.322	148027	1.60	100	101.7	90	110	
As	75	1	nogas	124.085	5.096	230903	3.09	100	124.1	90	110	CCV Main CR1-2 Failed
Sr	88	1	nogas	101.957	3.299	1087052	3.19	100	102.0	90	110	
Ag	107	1	nogas	101.587	2.574	571202	2.13	100	101.6	90	110	
Cd	111	1	nogas	104.157	3.027	122782	1.47	100	104.2	90	110	
Sb	121	1	nogas	99.523	0.665	530366	0.53	100	99.5	90	110	
Tl	205	1	nogas	99.246	5.033	1022813	1.72	100	99.2	90	110	
Pb	208	1	nogas	92.583	0.788	1430554	0.79	100	92.6	90	110	
U	238	1	nogas	107.307	3.646	1613212	2.27	100	107.3	90	110	
[Pb]	206	1	nogas	104.900	4.415	356162	1.19	100	104.9	90	110	
[Pb]	207	1	nogas	101.093	3.337	314992	1.64	100	101.1	90	110	
Na	23	2	He	10908.794	3.536	1922960	2.90	10000	109.1	90	110	
Mg	24	2	He	9929.723	1.313	763390	1.41	10000	99.3	90	110	
Al	27	2	He	123.004	12.306	2407	10.30	100	123.0	90	110	CCV Main CR1-2 Failed
K	39	2	He	9875.257	3.661	391334	3.56	10000	98.8	90	110	
Ca	43	2	He	9867.880	11.321	1323	12.31	10000	98.7	90	110	
Ca	44	2	He	10289.665	2.924	22784	2.07	10000	102.9	90	110	
V	51	2	He	98.540	2.020	87752	1.71	100	98.5	90	110	
Cr	52	2	He	99.939	2.096	118198	2.12	100	99.9	90	110	
Mn	55	2	He	100.473	1.334	44173	2.60	100	100.5	90	110	
Fe	56	2	He	10037.288	3.121	9257056	3.90	10000	100.4	90	110	
Co	59	2	He	100.338	0.592	204910	1.06	100	100.3	90	110	
Ni	60	2	He	97.902	2.750	57618	3.95	100	97.9	90	110	
Cu	63	2	He	97.817	0.491	161747	0.85	100	97.8	90	110	
Zn	66	2	He	99.312	2.895	23048	3.15	100	99.3	90	110	
As	75	2	He	99.849	1.909	15667	1.51	100	99.8	90	110	
Se	78	2	He	94.081	6.438	544	7.68	100	94.1	90	110	
B	11	1	nogas	532.372	2.915	600403	2.25	500	106.5	90	110	
Si	28	1	nogas	5162.885	2.450	14685231	1.31	5000	103.3	90	110	
Ca	43	1	nogas	9882.566	2.713	118406	2.25	10000	98.8	90	110	
Ca	44	1	nogas	9995.942	1.579	2034820	1.92	10000	100.0	90	110	
Fe	56	1	nogas	10100.121	3.757	94135198	2.54	10000	101.0	90	110	
Se	77	1	nogas	234.410	2.771	32089	1.81	100	234.4	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	101.908	3.812	8285	2.54	100	101.9	90	110	
Mo	95	1	nogas	100.779	2.162	216384	0.97	100	100.8	90	110	
Sn	118	1	nogas	104.142	3.745	360962	0.68	100	104.1	90	110	
Ba	137	1	nogas	102.238	0.550	161173	2.64	100	102.2	90	110	
Sb	121	2	He	101.868	0.889	67533	2.06	100	101.9	90	110	
Li	7	1	nogas	95.008	2.921	528921	0.35	100	95.0	90	110	
P	31	1	nogas	499.791	3.624	230939	1.88	500	100.0	90	110	
La	139	1	nogas	195.079	20.733	320	16.24	100	195.1	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	179.629	77.963	13	43.30	100	179.6	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	279219	2.51	345803	80.75	70	125	
Ge	72	1	nogas	1057578	1.19	1142873	92.54	70	125	
In	115	1	nogas	998499	3.11	1119741	89.17	70	125	
Bi	209	1	nogas	976209	3.43	1122197	86.99	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	97521	1.33	104250	93.54	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	302_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-03T23:56:20-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	234CALB.d
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	32.9	187	31.4	1	
Na	23	1	nogas	553.133	2.8	7995401	1.1	100	CCB Main CR1 Failed
Mg	24	1	nogas	18.995	35.5	106304	34.0	100	
Al	27	1	nogas	-0.360	-24.2	6545	8.4	5	
K	39	1	nogas	13.160	96.0	3091381	1.3	100	
Ti	47	1	nogas	-0.022	-727.4	167	60.1	2.5	
V	51	1	nogas	27.601	7.6	514560	3.1	2.5	CCB Main CR1 Failed
Cr	52	1	nogas	0.645	10.1	14202	3.3	2.5	
Mn	55	1	nogas	0.140	28.2	9072	5.7	2.5	
Co	59	1	nogas	0.100	40.5	1017	34.9	2.5	
Ni	60	1	nogas	0.508	8.4	3537	3.1	2.5	
Cu	63	1	nogas	-2.805	-3.9	4214	12.6	2.5	
Zn	66	1	nogas	0.354	4.1	777	3.9	2.5	
As	75	1	nogas	24.340	6.3	76731	2.6	2.5	CCB Main CR1 Failed
Sr	88	1	nogas	0.212	23.5	2817	20.1	2.5	
Ag	107	1	nogas	0.100	31.1	717	25.9	2.5	
Cd	111	1	nogas	0.110	73.6	147	67.3	1	
Sb	121	1	nogas	0.515	32.8	3544	27.1	2.5	
Tl	205	1	nogas	0.309	53.3	3547	55.0	1	
Pb	208	1	nogas	0.096	48.1	1773	40.4	2.5	
U	238	1	nogas	0.122	50.5	2040	52.4	2.5	
[Pb]	206	1	nogas	0.103	54.5	457	48.3	2.5	
[Pb]	207	1	nogas	0.079	49.0	340	40.4	2.5	
Na	23	2	He	607.114	5.6	211222	0.8	100	CCB Main CR1 Failed
Mg	24	2	He	13.116	14.3	1247	13.2	100	
Al	27	2	He	-3.092	-43.9	73	34.3	5	
K	39	2	He	27.940	75.5	11627	7.0	100	
Ca	43	2	He	49.202	86.7	7	86.6	100	
Ca	44	2	He	-6.160	-322.3	100	45.8	100	
V	51	2	He	0.393	9.4	421	6.0	2.5	
Cr	52	2	He	-0.158	-55.2	1257	8.4	2.5	
Mn	55	2	He	-0.057	-13.8	113	5.1	2.5	
Fe	56	2	He	6.290	4.4	8806	4.9	100	
Co	59	2	He	0.059	39.2	137	33.0	2.5	
Ni	60	2	He	-0.027	-233.7	253	13.9	2.5	
Cu	63	2	He	-0.083	-53.9	313	25.6	2.5	
Zn	66	2	He	0.075	196.9	60	60.1	2.5	
As	75	2	He	0.199	29.3	38	25.5	2.5	
Se	78	2	He	0.591	60.0	6	33.3	2.5	
B	11	1	nogas	-3.094	-73.8	49926	3.6	10	
Si	28	1	nogas	10.349	29.9	711644	1.4	5	CCB Main CR1 Failed
Ca	43	1	nogas	7.121	77.2	360	19.4	100	
Ca	44	1	nogas	-5.951	-32.7	44864	1.6	100	
Fe	56	1	nogas	37.462	10.9	886527	5.0	100	
Se	77	1	nogas	146.389	9.9	25455	4.4	2.5	CCB Main CR1 Failed
Se	82	1	nogas	0.538	205.3	363	23.4	2.5	

Continuing Calibration Blank (CCB) Report

Mo	95	1	nogas	0.248	27.4	583	25.8	2.5	
Sn	118	1	nogas	0.134	36.5	1037	17.0	5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Ba	137	1	nogas	0.111	49.7	267	33.6	2.5	
Sb	121	2	He	0.316	15.7	290	12.4	2.5	
P	31	1	nogas	-5.646	-50.1	37504	1.9	10	
La	139	1	nogas	23.860	91.7	57	62.0	2.5	CCB Main CR1 Failed
Au	197	1	nogas	-58.655	-226.9	3	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	293838	1.43	345803	84.97	70	125	
Ge	72	1	nogas	1087862	1.16	1142873	95.19	70	125	
In	115	1	nogas	1028989	0.11	1119741	91.90	70	125	
Bi	209	1	nogas	1046225	4.13	1122197	93.23	70	125	
Ge	72	2	He	98275	2.08	104250	94.27	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	313_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-04T00:18:30-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	234CALB.d
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	98.518	0.232	178689	1.17	100	98.5	90	110	
Na	23	1	nogas	10473.943	1.807	84757987	0.93	10000	104.7	90	110	
Mg	24	1	nogas	10459.077	1.349	53818018	0.88	10000	104.6	90	110	
Al	27	1	nogas	121.167	1.663	729402	3.06	100	121.2	90	110	CCV Main CR1-2 Failed
K	39	1	nogas	9594.633	2.180	58695287	2.74	10000	95.9	90	110	
Ti	47	1	nogas	95.930	4.391	59614	3.03	100	95.9	90	110	
V	51	1	nogas	108.755	3.425	1238346	1.32	100	108.8	90	110	
Cr	52	1	nogas	92.435	4.943	751171	3.67	100	92.4	90	110	
Mn	55	1	nogas	95.167	3.448	982374	2.27	100	95.2	90	110	
Co	59	1	nogas	92.476	3.083	771449	1.91	100	92.5	90	110	
Ni	60	1	nogas	98.002	3.461	177359	2.00	100	98.0	90	110	
Cu	63	1	nogas	95.372	1.871	436251	0.37	100	95.4	90	110	
Zn	66	1	nogas	99.532	1.240	145432	0.84	100	99.5	90	110	
As	75	1	nogas	109.890	4.310	209486	2.13	100	109.9	90	110	
Sr	88	1	nogas	97.365	2.739	1042135	2.08	100	97.4	90	110	
Ag	107	1	nogas	101.034	1.644	570351	1.19	100	101.0	90	110	
Cd	111	1	nogas	99.859	1.957	121434	2.43	100	99.9	90	110	
Sb	121	1	nogas	98.496	2.495	526886	1.11	100	98.5	90	110	
Tl	205	1	nogas	91.615	0.954	1016795	1.18	100	91.6	90	110	
Pb	208	1	nogas	94.444	2.656	1459311	2.66	100	94.4	90	110	
U	238	1	nogas	101.200	4.181	1637027	2.70	100	101.2	90	110	
[Pb]	206	1	nogas	97.192	1.437	355429	3.32	100	97.2	90	110	
[Pb]	207	1	nogas	95.824	1.691	321481	3.44	100	95.8	90	110	
Na	23	2	He	10318.868	0.912	1777923	0.74	10000	103.2	90	110	
Mg	24	2	He	9947.864	3.352	744889	2.17	10000	99.5	90	110	
Al	27	2	He	117.934	9.799	2254	7.84	100	117.9	90	110	CCV Main CR1-2 Failed
K	39	2	He	9548.938	2.301	378751	2.24	10000	95.5	90	110	
Ca	43	2	He	10365.894	7.139	1353	7.25	10000	103.7	90	110	
Ca	44	2	He	10584.956	3.402	22831	2.84	10000	105.8	90	110	
V	51	2	He	98.495	1.630	85445	0.48	100	98.5	90	110	
Cr	52	2	He	102.456	2.113	117995	0.51	100	102.5	90	110	
Mn	55	2	He	103.414	2.667	44293	3.83	100	103.4	90	110	
Fe	56	2	He	10156.365	0.944	9125011	2.36	10000	101.6	90	110	
Co	59	2	He	101.278	3.095	201485	3.03	100	101.3	90	110	
Ni	60	2	He	97.805	2.302	56053	1.11	100	97.8	90	110	
Cu	63	2	He	99.097	0.604	159646	1.93	100	99.1	90	110	
Zn	66	2	He	100.565	3.610	22734	3.42	100	100.6	90	110	
As	75	2	He	101.309	2.132	15487	2.22	100	101.3	90	110	
Se	78	2	He	89.815	9.245	505	7.78	100	89.8	90	110	CCV Main CR1-2 Failed
B	11	1	nogas	535.962	2.050	604741	2.76	500	107.2	90	110	
Si	28	1	nogas	5154.487	3.173	14719283	1.78	5000	103.1	90	110	
Ca	43	1	nogas	9988.349	0.814	120165	1.93	10000	99.9	90	110	
Ca	44	1	nogas	10006.192	0.718	2044835	0.79	10000	100.1	90	110	
Fe	56	1	nogas	9589.915	2.584	89765585	1.15	10000	95.9	90	110	
Se	77	1	nogas	160.500	6.479	26022	1.99	100	160.5	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	103.086	1.464	8412	0.12	100	103.1	90	110	
Mo	95	1	nogas	98.016	1.981	211286	0.56	100	98.0	90	110	
Sn	118	1	nogas	99.021	2.093	354148	2.34	100	99.0	90	110	
Ba	137	1	nogas	98.802	2.410	160589	2.11	100	98.8	90	110	
Sb	121	2	He	103.766	4.031	66985	2.45	100	103.8	90	110	
Li	7	1	nogas	93.242	1.974	520109	1.19	100	93.2	90	110	
P	31	1	nogas	471.934	3.680	221084	1.67	500	94.4	90	110	
La	139	1	nogas	265.263	27.652	443	26.05	100	265.3	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	12.169	2101.809	7	173.21	100	12.2	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	279406	1.07	345803	80.80	70	125	
Ge	72	1	nogas	1061783	1.45	1142873	92.90	70	125	
In	115	1	nogas	1029413	0.59	1119741	91.93	70	125	
Bi	209	1	nogas	1050213	2.01	1122197	93.59	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	95007	1.60	104250	91.13	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	314_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-04T00:20:29-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	234CALB.d
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	0.135	27.7	277	26.6	1	
Na	23	1	nogas	326.426	5.9	6119274	1.0	100	CCB Main CR1 Failed
Mg	24	1	nogas	18.149	25.2	100729	24.1	100	
Al	27	1	nogas	0.000	47120.4	8657	10.2	5	
K	39	1	nogas	3.317	143.8	3004438	0.1	100	
Ti	47	1	nogas	-0.004	-1489.8	177	22.9	2.5	
V	51	1	nogas	19.373	10.5	433970	4.0	2.5	CCB Main CR1 Failed
Cr	52	1	nogas	0.465	23.9	12598	6.8	2.5	
Mn	55	1	nogas	0.175	30.5	9356	6.1	2.5	
Co	59	1	nogas	0.099	46.8	1000	40.0	2.5	
Ni	60	1	nogas	-0.267	-13.3	2100	3.1	2.5	
Cu	63	1	nogas	-3.041	-2.2	3117	9.9	2.5	
Zn	66	1	nogas	0.389	26.7	820	18.0	2.5	
As	75	1	nogas	21.738	12.0	71845	5.3	2.5	CCB Main CR1 Failed
Sr	88	1	nogas	0.270	20.6	3414	17.6	2.5	
Ag	107	1	nogas	0.096	27.3	687	22.6	2.5	
Cd	111	1	nogas	0.108	59.4	147	52.1	1	
Sb	121	1	nogas	0.548	27.7	3687	22.8	2.5	
Tl	205	1	nogas	0.321	43.5	3801	43.8	1	
Pb	208	1	nogas	0.109	48.6	1963	41.6	2.5	
U	238	1	nogas	0.131	45.6	2254	45.9	2.5	
[Pb]	206	1	nogas	0.101	37.4	467	32.1	2.5	
[Pb]	207	1	nogas	0.110	56.0	463	47.6	2.5	
Na	23	2	He	376.648	8.1	169707	0.9	100	CCB Main CR1 Failed
Mg	24	2	He	13.336	16.1	1243	15.1	100	
Al	27	2	He	-1.022	-165.2	110	27.3	5	
K	39	2	He	-1.902	-441.0	10476	3.1	100	
Ca	43	2	He	0.000	#DIV/0!	0	#DIV/0!	100	
Ca	44	2	He	23.922	19.4	163	3.5	100	
V	51	2	He	0.300	11.0	333	11.4	2.5	
Cr	52	2	He	-0.176	-70.0	1213	10.2	2.5	
Mn	55	2	He	-0.076	-111.9	103	36.6	2.5	
Fe	56	2	He	7.158	1.9	9453	4.5	100	
Co	59	2	He	0.052	28.6	120	22.0	2.5	
Ni	60	2	He	-0.175	-9.8	163	3.5	2.5	
Cu	63	2	He	-0.052	-86.9	360	23.7	2.5	
Zn	66	2	He	0.288	57.5	107	32.9	2.5	
As	75	2	He	0.155	87.6	30	67.6	2.5	
Se	78	2	He	-0.087	-413.3	2	100.0	2.5	
B	11	1	nogas	-12.583	-16.4	42164	4.9	10	
Si	28	1	nogas	24.918	15.8	745204	1.2	5	CCB Main CR1 Failed
Ca	43	1	nogas	41.596	13.9	777	9.8	100	
Ca	44	1	nogas	25.486	48.1	50799	3.9	100	
Fe	56	1	nogas	20.450	21.0	717374	6.0	100	
Se	77	1	nogas	126.284	4.4	23509	1.9	2.5	CCB Main CR1 Failed
Se	82	1	nogas	0.068	1573.6	323	27.0	2.5	

Continuing Calibration Blank (CCB) Report

Mo	95	1	nogas	0.254	30.2	590	28.9	2.5	
Sn	118	1	nogas	0.125	56.8	1027	23.1	5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Ba	137	1	nogas	0.135	16.3	313	9.7	2.5	
Sb	121	2	He	0.509	17.7	410	11.2	2.5	
P	31	1	nogas	-6.705	-33.2	36736	1.4	10	
La	139	1	nogas	20.855	72.0	53	47.2	2.5	CCB Main CR1 Failed
Au	197	1	nogas	216.039	56.8	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	312686	0.76	345803	90.42	70	125	
Ge	72	1	nogas	1077559	1.02	1142873	94.29	70	125	
In	115	1	nogas	1055094	2.07	1119741	94.23	70	125	
Bi	209	1	nogas	1090959	1.52	1122197	97.22	70	125	
Ge	72	2	He	96657	3.61	104250	92.72	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	325_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-04T00:42:20-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	234CALB.d
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	91.529	3.230	177043	2.10	100	91.5	90	110	
Na	23	1	nogas	9814.513	1.615	80022341	1.74	10000	98.1	90	110	
Mg	24	1	nogas	9971.475	3.039	51553020	3.18	10000	99.7	90	110	
Al	27	1	nogas	108.389	2.218	666980	3.39	100	108.4	90	110	
K	39	1	nogas	9330.304	3.022	58333920	1.96	10000	93.3	90	110	
Ti	47	1	nogas	92.779	1.849	58894	3.14	100	92.8	90	110	
V	51	1	nogas	104.639	2.556	1226375	2.73	100	104.6	90	110	
Cr	52	1	nogas	89.561	1.505	743550	2.08	100	89.6	90	110	CCV Main CR1-2 Failed
Mn	55	1	nogas	93.039	0.941	980826	1.47	100	93.0	90	110	
Co	59	1	nogas	93.987	2.783	800487	2.55	100	94.0	90	110	
Ni	60	1	nogas	97.094	2.369	179427	1.74	100	97.1	90	110	
Cu	63	1	nogas	93.580	4.636	437231	3.72	100	93.6	90	110	
Zn	66	1	nogas	96.688	2.195	144210	0.94	100	96.7	90	110	
As	75	1	nogas	107.235	4.009	209668	3.88	100	107.2	90	110	
Sr	88	1	nogas	93.972	1.190	1026842	0.42	100	94.0	90	110	
Ag	107	1	nogas	98.508	1.366	567792	2.64	100	98.5	90	110	
Cd	111	1	nogas	97.149	2.233	118545	2.77	100	97.1	90	110	
Sb	121	1	nogas	97.133	1.037	530516	1.19	100	97.1	90	110	
Tl	205	1	nogas	92.535	2.638	1033709	1.91	100	92.5	90	110	
Pb	208	1	nogas	95.403	1.947	1474119	1.95	100	95.4	90	110	
U	238	1	nogas	102.740	2.268	1673393	1.39	100	102.7	90	110	
[Pb]	206	1	nogas	98.871	1.607	363857	1.43	100	98.9	90	110	
[Pb]	207	1	nogas	96.506	1.946	325794	0.75	100	96.5	90	110	
Na	23	2	He	9773.073	2.963	1681636	3.45	10000	97.7	90	110	
Mg	24	2	He	9510.321	2.037	708912	2.34	10000	95.1	90	110	
Al	27	2	He	116.407	7.624	2217	6.89	100	116.4	90	110	CCV Main CR1-2 Failed
K	39	2	He	9266.956	1.081	367878	1.05	10000	92.7	90	110	
Ca	43	2	He	10128.665	3.614	1317	5.39	10000	101.3	90	110	
Ca	44	2	He	10151.306	5.238	21790	4.07	10000	101.5	90	110	
V	51	2	He	97.960	2.397	84566	0.24	100	98.0	90	110	
Cr	52	2	He	99.805	2.612	114420	0.14	100	99.8	90	110	
Mn	55	2	He	99.967	0.903	42616	2.83	100	100.0	90	110	
Fe	56	2	He	9968.107	1.804	8910921	0.78	10000	99.7	90	110	
Co	59	2	He	100.581	0.911	199158	1.66	100	100.6	90	110	
Ni	60	2	He	98.527	2.206	56193	0.38	100	98.5	90	110	
Cu	63	2	He	97.371	3.495	156056	1.68	100	97.4	90	110	
Zn	66	2	He	102.780	1.014	23128	2.59	100	102.8	90	110	
As	75	2	He	100.020	0.881	15220	2.72	100	100.0	90	110	
Se	78	2	He	95.779	11.615	537	11.89	100	95.8	90	110	
B	11	1	nogas	492.194	3.318	596618	1.84	500	98.4	90	110	
Si	28	1	nogas	4909.689	1.242	14348066	1.83	5000	98.2	90	110	
Ca	43	1	nogas	9359.503	2.229	114946	2.08	10000	93.6	90	110	
Ca	44	1	nogas	9344.529	3.540	1952025	2.56	10000	93.4	90	110	
Fe	56	1	nogas	9548.821	1.957	91271400	2.77	10000	95.5	90	110	
Se	77	1	nogas	151.972	4.595	25842	2.47	100	152.0	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	96.669	2.423	8072	1.10	100	96.7	90	110	
Mo	95	1	nogas	97.857	0.874	215357	0.71	100	97.9	90	110	
Sn	118	1	nogas	98.683	0.679	354171	1.86	100	98.7	90	110	
Ba	137	1	nogas	100.381	2.781	163693	1.73	100	100.4	90	110	
Sb	121	2	He	101.363	1.459	65145	1.45	100	101.4	90	110	
Li	7	1	nogas	89.292	2.848	532469	2.09	100	89.3	90	110	CCV Main CR1-2 Failed
P	31	1	nogas	457.171	0.907	219926	1.61	500	91.4	90	110	
La	139	1	nogas	197.748	17.082	337	16.36	100	197.7	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	512.850	83.318	30	66.67	100	512.8	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	298043	1.18	345803	86.19	70	125	
Ge	72	1	nogas	1083869	1.35	1142873	94.84	70	125	
In	115	1	nogas	1033081	2.18	1119741	92.26	70	125	
Bi	209	1	nogas	1057151	1.59	1122197	94.20	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	94566	2.55	104250	90.71	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	326_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-04T00:44:19-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	234CALB.d
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	0.120	46.3	260	45.3	1	
Na	23	1	nogas	98.888	15.7	4488279	0.9	100	
Mg	24	1	nogas	16.973	27.8	97679	23.8	100	
Al	27	1	nogas	-0.359	-18.0	6638	6.3	5	
K	39	1	nogas	-12.004	-34.8	2982055	0.9	100	
Ti	47	1	nogas	0.102	163.1	250	44.0	2.5	
V	51	1	nogas	14.512	12.0	398194	2.8	2.5	CCB Main CR1 Failed
Cr	52	1	nogas	0.376	5.0	12154	1.8	2.5	
Mn	55	1	nogas	0.136	32.0	9156	6.5	2.5	
Co	59	1	nogas	0.122	54.3	1223	48.4	2.5	
Ni	60	1	nogas	-0.439	-24.9	1830	10.5	2.5	
Cu	63	1	nogas	-2.303	-3.2	6561	4.2	2.5	
Zn	66	1	nogas	0.369	11.8	810	7.7	2.5	
As	75	1	nogas	17.043	8.5	65842	2.5	2.5	CCB Main CR1 Failed
Sr	88	1	nogas	0.228	26.5	3030	23.5	2.5	
Ag	107	1	nogas	0.115	23.6	817	21.1	2.5	
Cd	111	1	nogas	0.113	28.5	157	24.2	1	
Sb	121	1	nogas	0.655	22.9	4367	20.2	2.5	
Tl	205	1	nogas	0.323	52.9	3791	52.9	1	
Pb	208	1	nogas	0.141	54.4	2457	48.2	2.5	
U	238	1	nogas	0.127	35.8	2167	36.3	2.5	
[Pb]	206	1	nogas	0.137	40.3	597	36.1	2.5	
[Pb]	207	1	nogas	0.113	75.3	470	63.9	2.5	
Na	23	2	He	137.923	6.4	130845	0.8	100	CCB Main CR1 Failed
Mg	24	2	He	12.137	7.1	1153	5.3	100	
Al	27	2	He	-4.126	-30.1	53	43.3	5	
K	39	2	He	-6.487	-137.2	10300	3.3	100	
Ca	43	2	He	50.408	86.6	7	86.6	100	
Ca	44	2	He	6.812	92.1	127	12.1	100	
V	51	2	He	0.272	14.8	309	10.7	2.5	
Cr	52	2	He	-0.221	-11.3	1167	2.2	2.5	
Mn	55	2	He	-0.130	-16.2	80	12.5	2.5	
Fe	56	2	He	7.487	4.2	9779	2.7	100	
Co	59	2	He	0.065	17.6	147	14.2	2.5	
Ni	60	2	He	-0.079	-116.7	220	25.3	2.5	
Cu	63	2	He	0.060	109.4	543	20.9	2.5	
Zn	66	2	He	0.152	84.5	77	39.8	2.5	
As	75	2	He	0.081	98.0	19	66.8	2.5	
Se	78	2	He	0.017	2375.6	3	86.6	2.5	
B	11	1	nogas	-10.791	-16.9	46925	2.8	10	
Si	28	1	nogas	23.313	3.0	758071	1.3	5	CCB Main CR1 Failed
Ca	43	1	nogas	21.949	19.3	550	11.1	100	
Ca	44	1	nogas	22.417	8.2	51361	1.0	100	
Fe	56	1	nogas	15.198	34.8	683692	8.8	100	
Se	77	1	nogas	91.478	9.6	21026	2.3	2.5	CCB Main CR1 Failed
Se	82	1	nogas	-0.300	-201.6	300	15.3	2.5	

Continuing Calibration Blank (CCB) Report

Mo	95	1	nogas	0.313	25.9	737	26.0	2.5	
Sn	118	1	nogas	0.166	33.6	1207	16.2	5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Ba	137	1	nogas	0.157	49.8	357	35.1	2.5	
Sb	121	2	He	0.449	19.1	373	15.5	2.5	
P	31	1	nogas	-7.086	-57.4	37431	3.0	10	
La	139	1	nogas	4.427	343.4	27	94.4	2.5	CCB Main CR1 Failed
Au	197	1	nogas	213.620	283.1	17	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	331858	2.91	345803	95.97	70	125	
Ge	72	1	nogas	1102693	1.43	1142873	96.48	70	125	
In	115	1	nogas	1081785	2.15	1119741	96.61	70	125	
Bi	209	1	nogas	1081985	1.53	1122197	96.42	70	125	
Ge	72	2	He	96948	1.69	104250	93.00	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	337_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-04T01:06:17-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	234CALB.d
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	91.886	4.361	172474	1.37	100	91.9	90	110	
Na	23	1	nogas	9416.960	0.409	76808454	1.92	10000	94.2	90	110	
Mg	24	1	nogas	9567.682	0.911	49394615	2.51	10000	95.7	90	110	
Al	27	1	nogas	103.653	2.983	625068	2.40	100	103.7	90	110	
K	39	1	nogas	9601.574	3.388	58723899	2.07	10000	96.0	90	110	
Ti	47	1	nogas	93.633	2.183	58219	2.49	100	93.6	90	110	
V	51	1	nogas	102.545	4.649	1182284	3.39	100	102.5	90	110	
Cr	52	1	nogas	89.692	3.629	729367	2.93	100	89.7	90	110	CCV Main CR1-2 Failed
Mn	55	1	nogas	94.105	4.905	971501	3.70	100	94.1	90	110	
Co	59	1	nogas	93.669	4.618	781388	3.45	100	93.7	90	110	
Ni	60	1	nogas	97.219	4.715	175973	3.53	100	97.2	90	110	
Cu	63	1	nogas	92.810	4.665	425001	3.97	100	92.8	90	110	
Zn	66	1	nogas	96.277	1.744	140699	1.49	100	96.3	90	110	
As	75	1	nogas	104.880	1.538	201671	0.66	100	104.9	90	110	
Sr	88	1	nogas	96.759	4.035	1035614	2.91	100	96.8	90	110	
Ag	107	1	nogas	98.737	3.668	557347	2.59	100	98.7	90	110	
Cd	111	1	nogas	97.825	3.531	119244	1.79	100	97.8	90	110	
Sb	121	1	nogas	98.617	2.350	527614	1.35	100	98.6	90	110	
Tl	205	1	nogas	92.298	2.628	1021777	1.87	100	92.3	90	110	
Pb	208	1	nogas	93.399	2.496	1443171	2.50	100	93.4	90	110	
U	238	1	nogas	101.498	2.081	1638541	2.42	100	101.5	90	110	
[Pb]	206	1	nogas	96.423	1.944	351633	1.15	100	96.4	90	110	
[Pb]	207	1	nogas	94.855	2.879	317341	2.32	100	94.9	90	110	
Na	23	2	He	9637.096	2.160	1635990	1.81	10000	96.4	90	110	
Mg	24	2	He	9517.180	1.871	699308	0.94	10000	95.2	90	110	
Al	27	2	He	103.832	18.835	1960	16.21	100	103.8	90	110	
K	39	2	He	9174.298	1.888	364305	1.83	10000	91.7	90	110	
Ca	43	2	He	9602.809	5.662	1230	5.69	10000	96.0	90	110	
Ca	44	2	He	10025.076	0.322	21226	1.59	10000	100.3	90	110	
V	51	2	He	97.331	1.397	82847	0.44	100	97.3	90	110	
Cr	52	2	He	99.102	3.642	112022	2.76	100	99.1	90	110	
Mn	55	2	He	101.790	2.256	42767	2.15	100	101.8	90	110	
Fe	56	2	He	9972.542	2.038	8788727	0.93	10000	99.7	90	110	
Co	59	2	He	100.253	2.549	195660	1.35	100	100.3	90	110	
Ni	60	2	He	99.775	3.090	56113	3.61	100	99.8	90	110	
Cu	63	2	He	97.344	2.287	153867	2.65	100	97.3	90	110	
Zn	66	2	He	97.807	1.048	21696	1.20	100	97.8	90	110	
As	75	2	He	100.358	1.693	15051	0.32	100	100.4	90	110	
Se	78	2	He	93.729	6.681	518	7.71	100	93.7	90	110	
B	11	1	nogas	502.306	7.417	589491	3.74	500	100.5	90	110	
Si	28	1	nogas	4744.614	1.403	13605478	0.85	5000	94.9	90	110	
Ca	43	1	nogas	9616.326	2.089	115687	0.98	10000	96.2	90	110	
Ca	44	1	nogas	9640.087	4.021	1971386	2.84	10000	96.4	90	110	
Fe	56	1	nogas	9484.388	4.153	88784789	2.98	10000	94.8	90	110	
Se	77	1	nogas	127.371	4.565	23255	0.97	100	127.4	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	100.389	5.783	8199	4.47	100	100.4	90	110	
Mo	95	1	nogas	97.353	2.138	209890	1.58	100	97.4	90	110	
Sn	118	1	nogas	97.880	0.813	351087	2.41	100	97.9	90	110	
Ba	137	1	nogas	97.319	4.090	158562	2.22	100	97.3	90	110	
Sb	121	2	He	103.502	3.888	65563	2.90	100	103.5	90	110	
Li	7	1	nogas	91.031	1.990	526615	3.25	100	91.0	90	110	
P	31	1	nogas	457.152	3.336	215420	2.06	500	91.4	90	110	
La	139	1	nogas	164.054	32.331	283	31.64	100	164.1	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	-62.703	-201.073	3	173.21	100	-62.7	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	289530	4.67	345803	83.73	70	125	
Ge	72	1	nogas	1061867	1.14	1142873	92.91	70	125	
In	115	1	nogas	1032381	2.03	1119741	92.20	70	125	
Bi	209	1	nogas	1047589	1.10	1122197	93.35	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	93215	1.37	104250	89.41	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	338_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-04T01:08:17-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	234CALB.d
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	0.122	46.7	253	43.7	1	
Na	23	1	nogas	-38.389	-25.9	3393143	0.3	100	
Mg	24	1	nogas	13.435	39.7	79060	34.2	100	
Al	27	1	nogas	-0.380	-8.5	6365	2.9	5	
K	39	1	nogas	-15.687	-38.9	2895518	0.7	100	
Ti	47	1	nogas	0.154	49.7	277	17.1	2.5	
V	51	1	nogas	9.762	9.1	345881	2.0	2.5	CCB Main CR1 Failed
Cr	52	1	nogas	0.305	3.4	11307	1.3	2.5	
Mn	55	1	nogas	0.107	24.1	8659	3.6	2.5	
Co	59	1	nogas	0.092	36.4	937	30.0	2.5	
Ni	60	1	nogas	-0.458	-14.0	1757	6.9	2.5	
Cu	63	1	nogas	-2.123	-6.5	7225	8.7	2.5	
Zn	66	1	nogas	0.298	40.6	687	25.7	2.5	
As	75	1	nogas	13.432	4.2	58654	1.6	2.5	CCB Main CR1 Failed
Sr	88	1	nogas	0.202	20.1	2680	16.3	2.5	
Ag	107	1	nogas	0.109	43.5	757	35.3	2.5	
Cd	111	1	nogas	0.067	72.4	97	63.2	1	
Sb	121	1	nogas	0.564	27.9	3774	22.3	2.5	
Tl	205	1	nogas	0.334	36.6	3991	39.4	1	
Pb	208	1	nogas	0.127	42.0	2243	36.7	2.5	
U	238	1	nogas	0.110	47.8	1924	50.4	2.5	
[Pb]	206	1	nogas	0.125	49.3	563	45.8	2.5	
[Pb]	207	1	nogas	0.110	59.3	467	52.9	2.5	
Na	23	2	He	-8.678	-253.7	104387	2.1	100	
Mg	24	2	He	9.391	29.4	923	21.7	100	
Al	27	2	He	-4.626	-34.3	43	66.6	5	
K	39	2	He	-18.250	-24.7	9846	1.8	100	
Ca	43	2	He	76.134	99.1	10	100.0	100	
Ca	44	2	He	-1.323	-1439.9	107	39.0	100	
V	51	2	He	0.218	18.7	255	13.5	2.5	
Cr	52	2	He	-0.121	-40.3	1257	5.6	2.5	
Mn	55	2	He	-0.001	-10624.8	133	38.5	2.5	
Fe	56	2	He	6.803	10.1	8969	7.8	100	
Co	59	2	He	0.068	37.1	150	33.3	2.5	
Ni	60	2	He	0.012	1696.4	267	43.3	2.5	
Cu	63	2	He	0.045	66.7	507	10.1	2.5	
Zn	66	2	He	0.027	252.1	47	32.7	2.5	
As	75	2	He	0.098	63.9	21	45.6	2.5	
Se	78	2	He	0.384	138.5	5	65.5	2.5	
B	11	1	nogas	-7.938	-39.3	48332	5.1	10	
Si	28	1	nogas	36.993	13.3	779476	1.6	5	CCB Main CR1 Failed
Ca	43	1	nogas	27.633	28.1	607	15.3	100	
Ca	44	1	nogas	17.525	25.4	49252	1.7	100	
Fe	56	1	nogas	9.299	50.2	612496	6.8	100	
Se	77	1	nogas	70.709	8.3	18810	3.0	2.5	CCB Main CR1 Failed
Se	82	1	nogas	0.110	983.6	327	26.4	2.5	

Continuing Calibration Blank (CCB) Report

Mo	95	1	nogas	0.269	50.5	623	47.4	2.5	
Sn	118	1	nogas	0.159	31.1	1157	16.8	5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Ba	137	1	nogas	0.110	31.7	273	22.4	2.5	
Sb	121	2	He	0.446	20.0	363	15.6	2.5	
P	31	1	nogas	-7.715	-40.8	36389	3.9	10	
La	139	1	nogas	12.769	93.3	40	50.0	2.5	CCB Main CR1 Failed
Au	197	1	nogas	133.828	348.6	13	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	318241	2.57	345803	92.03	70	125	
Ge	72	1	nogas	1078712	0.58	1142873	94.39	70	125	
In	115	1	nogas	1056118	0.99	1119741	94.32	70	125	
Bi	209	1	nogas	1095871	3.92	1122197	97.65	70	125	
Ge	72	2	He	94948	1.41	104250	91.08	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	345_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-04T01:22:20-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	234CALB.d
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	91.872	2.333	178144	1.78	100	91.9	90	110	
Na	23	1	nogas	9651.299	1.287	78629962	1.46	10000	96.5	90	110	
Mg	24	1	nogas	9910.622	2.836	51158626	2.81	10000	99.1	90	110	
Al	27	1	nogas	109.170	4.658	663994	3.75	100	109.2	90	110	
K	39	1	nogas	9571.132	1.293	59116033	2.06	10000	95.7	90	110	
Ti	47	1	nogas	95.215	1.591	59750	0.49	100	95.2	90	110	
V	51	1	nogas	105.945	1.116	1224666	1.08	100	105.9	90	110	
Cr	52	1	nogas	92.134	1.485	756126	1.03	100	92.1	90	110	
Mn	55	1	nogas	95.110	1.313	991348	1.04	100	95.1	90	110	
Co	59	1	nogas	94.650	1.651	797193	0.29	100	94.7	90	110	
Ni	60	1	nogas	99.879	1.289	182467	0.43	100	99.9	90	110	
Cu	63	1	nogas	97.051	1.242	447979	2.36	100	97.1	90	110	
Zn	66	1	nogas	97.847	2.399	144373	3.53	100	97.8	90	110	
As	75	1	nogas	106.013	1.639	205399	2.13	100	106.0	90	110	
Sr	88	1	nogas	96.844	1.510	1046731	2.68	100	96.8	90	110	
Ag	107	1	nogas	100.231	3.545	571171	3.04	100	100.2	90	110	
Cd	111	1	nogas	98.523	1.737	123011	3.75	100	98.5	90	110	
Sb	121	1	nogas	98.976	0.529	534626	1.57	100	99.0	90	110	
Tl	205	1	nogas	95.172	1.274	1051704	1.16	100	95.2	90	110	
Pb	208	1	nogas	94.113	2.330	1454202	2.33	100	94.1	90	110	
U	238	1	nogas	101.819	2.905	1640573	3.03	100	101.8	90	110	
[Pb]	206	1	nogas	98.800	1.104	359653	1.20	100	98.8	90	110	
[Pb]	207	1	nogas	95.857	3.078	320127	3.22	100	95.9	90	110	
Na	23	2	He	9695.008	3.309	1680469	2.14	10000	97.0	90	110	
Mg	24	2	He	9611.284	2.644	721423	1.67	10000	96.1	90	110	
Al	27	2	He	123.663	4.880	2364	3.42	100	123.7	90	110	CCV Main CR1-2 Failed
K	39	2	He	9262.029	1.067	367688	1.04	10000	92.6	90	110	
Ca	43	2	He	9278.341	5.483	1213	3.33	10000	92.8	90	110	
Ca	44	2	He	10044.360	1.413	21726	2.46	10000	100.4	90	110	
V	51	2	He	97.162	2.293	84480	0.92	100	97.2	90	110	
Cr	52	2	He	97.550	0.596	112706	2.15	100	97.6	90	110	
Mn	55	2	He	100.321	2.545	43054	1.01	100	100.3	90	110	
Fe	56	2	He	10002.321	1.912	9005085	0.36	10000	100.0	90	110	
Co	59	2	He	101.034	2.774	201421	0.52	100	101.0	90	110	
Ni	60	2	He	97.354	3.486	55919	2.23	100	97.4	90	110	
Cu	63	2	He	96.625	1.937	156013	1.63	100	96.6	90	110	
Zn	66	2	He	100.222	1.960	22718	3.64	100	100.2	90	110	
As	75	2	He	99.614	3.872	15259	2.63	100	99.6	90	110	
Se	78	2	He	96.885	4.612	547	4.87	100	96.9	90	110	
B	11	1	nogas	475.122	3.442	579165	2.18	500	95.0	90	110	
Si	28	1	nogas	4879.314	4.502	14101493	3.31	5000	97.6	90	110	
Ca	43	1	nogas	9560.921	0.697	116122	1.14	10000	95.6	90	110	
Ca	44	1	nogas	9420.002	1.695	1946437	2.96	10000	94.2	90	110	
Fe	56	1	nogas	9702.908	0.253	91706527	1.59	10000	97.0	90	110	
Se	77	1	nogas	127.720	3.306	23509	2.30	100	127.7	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	100.050	6.687	8249	5.41	100	100.1	90	110	
Mo	95	1	nogas	97.928	0.920	213146	1.60	100	97.9	90	110	
Sn	118	1	nogas	98.277	1.354	360794	2.01	100	98.3	90	110	
Ba	137	1	nogas	98.026	0.482	163576	2.42	100	98.0	90	110	
Sb	121	2	He	103.280	2.316	66837	0.30	100	103.3	90	110	
Li	7	1	nogas	89.378	1.615	534241	1.25	100	89.4	90	110	CCV Main CR1-2 Failed
P	31	1	nogas	461.239	2.345	219046	0.85	500	92.2	90	110	
La	139	1	nogas	189.206	24.016	330	21.85	100	189.2	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	84.471	260.642	10	100.00	100	84.5	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	298751	1.57	345803	86.39	70	125	
Ge	72	1	nogas	1071895	1.37	1142873	93.79	70	125	
In	115	1	nogas	1056749	2.06	1119741	94.37	70	125	
Bi	209	1	nogas	1045566	0.14	1122197	93.17	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	95236	2.26	104250	91.35	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	346_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-04T01:24:19-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	234CALB.d
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	0.118	48.1	253	47.7	1	
Na	23	1	nogas	-57.184	-17.1	3076574	1.1	100	
Mg	24	1	nogas	13.338	41.3	74742	36.8	100	
Al	27	1	nogas	-0.345	-1.5	6531	1.0	5	
K	39	1	nogas	-9.100	-69.1	2914537	1.4	100	
Ti	47	1	nogas	0.055	112.9	213	18.9	2.5	
V	51	1	nogas	10.437	12.3	349674	2.7	2.5	CCB Main CR1 Failed
Cr	52	1	nogas	0.298	14.6	11174	3.7	2.5	
Mn	55	1	nogas	0.137	20.3	8906	3.6	2.5	
Co	59	1	nogas	0.107	57.7	1057	49.5	2.5	
Ni	60	1	nogas	-0.453	-12.3	1753	5.9	2.5	
Cu	63	1	nogas	-1.796	-5.7	8629	4.5	2.5	
Zn	66	1	nogas	0.294	25.7	677	16.6	2.5	
As	75	1	nogas	13.302	13.3	58036	4.2	2.5	CCB Main CR1 Failed
Sr	88	1	nogas	0.200	16.9	2647	14.4	2.5	
Ag	107	1	nogas	0.116	18.8	797	15.9	2.5	
Cd	111	1	nogas	0.103	32.7	143	28.2	1	
Sb	121	1	nogas	0.630	28.7	4107	24.3	2.5	
Tl	205	1	nogas	0.353	56.1	4061	55.8	1	
Pb	208	1	nogas	0.126	39.8	2233	34.8	2.5	
U	238	1	nogas	0.124	47.5	2090	47.4	2.5	
[Pb]	206	1	nogas	0.120	37.5	523	33.0	2.5	
[Pb]	207	1	nogas	0.140	28.4	550	25.6	2.5	
Na	23	2	He	-53.164	-15.6	97006	1.3	100	
Mg	24	2	He	7.445	21.8	777	15.1	100	
Al	27	2	He	-5.352	-10.4	30	33.3	5	
K	39	2	He	-31.742	-69.0	9326	9.1	100	
Ca	43	2	He	76.779	100.4	10	100.0	100	
Ca	44	2	He	6.683	165.4	123	18.7	100	
V	51	2	He	0.237	0.9	271	0.4	2.5	
Cr	52	2	He	-0.204	-15.1	1160	3.8	2.5	
Mn	55	2	He	0.117	74.6	183	20.7	2.5	
Fe	56	2	He	6.834	7.2	8976	5.7	100	
Co	59	2	He	0.068	36.4	150	33.3	2.5	
Ni	60	2	He	-0.117	-19.4	193	6.0	2.5	
Cu	63	2	He	0.072	116.3	550	25.0	2.5	
Zn	66	2	He	0.176	101.7	80	50.0	2.5	
As	75	2	He	0.070	55.4	17	34.6	2.5	
Se	78	2	He	0.031	653.2	3	43.3	2.5	
B	11	1	nogas	-22.609	-3.0	32017	2.8	10	
Si	28	1	nogas	29.513	3.8	753612	1.0	5	CCB Main CR1 Failed
Ca	43	1	nogas	27.411	21.1	600	11.7	100	
Ca	44	1	nogas	18.087	16.0	49028	0.6	100	
Fe	56	1	nogas	12.066	37.8	634478	7.0	100	
Se	77	1	nogas	65.844	3.2	18269	0.8	2.5	CCB Main CR1 Failed
Se	82	1	nogas	0.439	312.5	350	30.2	2.5	

Continuing Calibration Blank (CCB) Report

Mo	95	1	nogas	0.253	49.8	587	47.3	2.5	
Sn	118	1	nogas	0.113	44.7	1003	17.4	5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Ba	137	1	nogas	0.131	7.7	313	6.6	2.5	
Sb	121	2	He	0.369	9.7	313	8.0	2.5	
P	31	1	nogas	-9.940	-15.9	35270	2.1	10	
La	139	1	nogas	12.432	50.5	40	25.0	2.5	CCB Main CR1 Failed
Au	197	1	nogas	-63.977	-193.6	3	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	327390	0.91	345803	94.68	70	125	
Ge	72	1	nogas	1071362	0.74	1142873	93.74	70	125	
In	115	1	nogas	1076428	1.34	1119741	96.13	70	125	
Bi	209	1	nogas	1061544	1.69	1122197	94.60	70	125	
Ge	72	2	He	94747	0.75	104250	90.88	70	125	

Low Level Initial Calibration Verification (LLICV) Report

Sample Table

Sample Name	LLCCV5
Data File Name	347LICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-04T01:26:19-06:00
Sample Type	LLICV
Dilution	1
Comment	
ISTD Ref File Name	234CALB.d
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	4.248	0.730	8629	2.69	5	85.0	70	130	
Na	23	1	nogas	375.075	3.231	6599897	1.73	500	75.0	70	130	
Mg	24	1	nogas	495.322	3.066	2631805	3.41	500	99.1	70	130	
Al	27	1	nogas	9.895	3.137	69379	1.94	5	197.9	70	130	LLICV Main CR1 Failed
K	39	1	nogas	450.883	7.927	5724162	1.25	500	90.2	70	130	
Ti	47	1	nogas	4.324	1.753	2944	4.64	5	86.5	70	130	
V	51	1	nogas	9.141	9.594	344735	1.14	5	182.8	70	130	LLICV Main CR1 Failed
Cr	52	1	nogas	4.495	4.311	46128	2.65	5	89.9	70	130	
Mn	55	1	nogas	4.755	4.064	57798	0.74	5	95.1	70	130	
Co	59	1	nogas	4.762	4.013	41053	2.40	5	95.2	70	130	
Ni	60	1	nogas	4.350	9.605	10603	4.41	5	87.0	70	130	
Cu	63	1	nogas	2.715	4.145	29254	1.41	5	54.3	70	130	LLICV Main CR1 Failed
Zn	66	1	nogas	5.133	3.736	7959	2.77	5	102.7	70	130	
As	75	1	nogas	9.902	9.739	53713	0.10	5	198.0	70	130	LLICV Main CR1 Failed
Sr	88	1	nogas	4.836	3.552	53748	0.67	5	96.7	70	130	
Ag	107	1	nogas	5.150	0.825	30073	2.19	5	103.0	70	130	
Cd	111	1	nogas	4.981	3.768	6355	4.61	5	99.6	70	130	
Sb	121	1	nogas	5.113	3.152	28861	3.70	5	102.3	70	130	
Tl	205	1	nogas	4.506	4.241	51679	2.75	5	90.1	70	130	
Pb	208	1	nogas	4.817	1.381	74695	1.38	5	96.3	70	130	
U	238	1	nogas	4.670	2.863	78011	0.86	5	93.4	70	130	
[Pb]	206	1	nogas	4.806	3.759	18200	1.64	5	96.1	70	130	
[Pb]	207	1	nogas	4.779	6.844	16602	5.05	5	95.6	70	130	
Na	23	2	He	376.798	1.881	170111	1.79	500	75.4	70	130	
Mg	24	2	He	497.788	2.152	38202	2.21	500	99.6	70	130	
Al	27	2	He	8.554	72.754	287	40.43	5	171.1	70	130	LLICV Main CR1 Failed
K	39	2	He	444.100	3.832	27674	2.37	500	88.8	70	130	
Ca	43	2	He	577.826	54.911	77	54.30	500	115.6	70	130	
Ca	44	2	He	486.254	21.835	1173	18.52	500	97.3	70	130	
V	51	2	He	5.074	3.301	4549	2.74	5	101.5	70	130	
Cr	52	2	He	4.583	5.738	6735	3.59	5	91.7	70	130	
Mn	55	2	He	4.737	4.825	2197	4.13	5	94.7	70	130	
Fe	56	2	He	484.882	0.868	446622	1.64	500	97.0	70	130	
Co	59	2	He	5.141	1.977	10436	1.82	5	102.8	70	130	
Ni	60	2	He	4.931	7.597	3130	5.86	5	98.6	70	130	
Cu	63	2	He	4.997	9.267	8619	7.88	5	99.9	70	130	
Zn	66	2	He	5.361	6.636	1273	5.23	5	107.2	70	130	
As	75	2	He	4.900	5.844	769	5.24	5	98.0	70	130	
Se	78	2	He	5.986	21.725	37	19.16	5	119.7	70	130	
B	11	1	nogas	-3.380	-76.564	52803	3.65	25	-13.5	70	130	LLICV Main CR1 Failed
Si	28	1	nogas	288.347	3.829	1495813	1.70	25	1153.4	70	130	LLICV Main CR1 Failed
Ca	43	1	nogas	475.842	5.758	6154	5.25	500	95.2	70	130	
Ca	44	1	nogas	479.981	3.640	145070	0.54	500	96.0	70	130	
Fe	56	1	nogas	498.376	1.598	5309369	2.18	500	99.7	70	130	
Se	77	1	nogas	32.167	12.704	15744	2.98	5	643.3	70	130	LLICV Main CR1 Failed
Se	82	1	nogas	4.691	29.981	700	13.63	5	93.8	70	130	
Mo	95	1	nogas	4.743	5.277	10560	4.40	5	94.9	70	130	
Sn	118	1	nogas	4.759	1.258	18377	2.10	5	95.2	70	130	
Ba	137	1	nogas	4.864	3.420	8366	4.55	5	97.3	70	130	
Sb	121	2	He	5.166	4.043	3474	5.07	5	103.3	70	130	
Li	7	1	nogas	4.174	7.373	54168	1.74	5	83.5	70	130	
P	31	1	nogas	14.515	31.865	45699	1.10	25	58.1	70	130	LLICV Main CR1 Failed
La	139	1	nogas	24.208	88.421	60	60.09	5	484.2	70	130	LLICV Main CR1 Failed
Au	197	1	nogas	219.599	113.573	17	69.28	5	4392.0	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	312817	2.04	345803	90.46	70	125	
Ge	72	1	nogas	1093643	2.99	1142873	95.69	70	125	

Low Level Initial Calibration Verification (LLICV) Report

In	115	1	nogas	1077729	1.17	1119741	96.25	70	125	
Bi	209	1	nogas	1083802	2.16	1122197	96.58	70	125	
Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	2	He	96801	1.15	104250	92.85	70	125	

Sample Report

Sample Table

Sample Name	LLCCV2
Data File Name	348SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-04T01:28:19-06:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	234CALB.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	1.855	1.855	7.92	3854	0.05	2000	
Na	23	1	nogas	67.449	67.449	17.31	4239976	0.00	200000	
Mg	24	1	nogas	205.160	205.160	1.08	1120107	0.02	200000	
Al	27	1	nogas	9.608	9.608	4.25	68365	0.01	2000	
K	39	1	nogas	158.773	158.773	8.77	4022972	0.00	200000	
Ti	47	1	nogas	1.839	1.839	14.63	1370	0.13	2000	
V	51	1	nogas	4.505	4.505	30.29	304704	0.00	2000	
Cr	52	1	nogas	1.888	1.888	8.12	24824	0.01	2000	
Mn	55	1	nogas	1.876	1.876	0.58	27748	0.01	2000	
Co	59	1	nogas	1.897	1.897	4.33	16634	0.01	2000	
Ni	60	1	nogas	1.164	1.164	26.55	4807	0.02	2000	
Cu	63	1	nogas	-0.375	-0.375	-20.67	15423	0.00	2000	
Zn	66	1	nogas	1.906	1.906	3.87	3147	0.06	2000	
As	75	1	nogas	5.334	5.334	9.66	46847	0.01	2000	
Sr	88	1	nogas	1.976	1.976	6.69	22494	0.01	2000	
Ag	107	1	nogas	1.998	1.998	10.53	11874	0.02	2000	
Cd	111	1	nogas	1.941	1.941	2.52	2504	0.08	2000	
Sb	121	1	nogas	1.935	1.935	4.67	11501	0.02	2000	
Tl	205	1	nogas	1.751	1.751	3.35	20517	0.01	2000	
Pb	208	1	nogas	1.949	1.949	1.75	30398	0.01	2000	
U	238	1	nogas	1.889	1.889	1.68	32190	0.01	2000	
[Pb]	206	1	nogas	1.880	1.880	1.39	7308	0.03	2000	
[Pb]	207	1	nogas	1.836	1.836	3.03	6548	0.03	2000	
Na	23	2	He	69.346	69.346	39.01	118429	0.06	200000	
Mg	24	2	He	204.446	204.446	5.17	15700	1.30	200000	
Al	27	2	He	6.623	6.623	25.06	250	2.65	2000	
K	39	2	He	150.613	150.613	10.55	16357	0.92	200000	
Ca	43	2	He	434.272	434.272	47.37	57	766.36	200000	
Ca	44	2	He	218.425	218.425	18.30	583	37.44	200000	
V	51	2	He	2.116	2.116	4.90	1922	0.11	2000	
Cr	52	2	He	1.768	1.768	10.88	3447	0.05	2000	
Mn	55	2	He	2.003	2.003	15.14	1000	0.20	2000	
Fe	56	2	He	198.387	198.387	6.69	182943	0.11	200000	
Co	59	2	He	2.182	2.182	13.86	4394	0.05	2000	
Ni	60	2	He	1.992	1.992	15.23	1410	0.14	2000	
Cu	63	2	He	1.921	1.921	9.45	3557	0.05	2000	
Zn	66	2	He	1.726	1.726	23.31	437	0.40	2000	
As	75	2	He	2.072	2.072	25.99	324	0.64	2000	
Se	78	2	He	3.182	3.182	20.79	21	15.40	2000	
B	11	1	nogas	-19.758	-19.758	-8.32	34642	-0.06	2000	

Sample Report

Si	28	1	nogas	99.483	99.483	6.75	976152	0.01	2000	
Ca	43	1	nogas	197.381	197.381	10.81	2740	7.20	200000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Ca	44	1	nogas	189.700	189.700	10.01	86258	0.22	200000	
Fe	56	1	nogas	202.582	202.582	1.47	2501258	0.01	200000	
Se	77	1	nogas	17.268	17.268	33.63	14613	0.12	2000	
Se	82	1	nogas	1.319	1.319	54.39	433	0.30	2000	
Mo	95	1	nogas	1.962	1.962	6.14	4437	0.04	2000	
Sn	118	1	nogas	1.935	1.935	4.13	7882	0.02	2000	
Ba	137	1	nogas	1.957	1.957	3.56	3447	0.06	2000	
Sb	121	2	He	2.206	2.206	1.68	1517	0.15	2000	
La	139	1	nogas	67.424	67.424	56.04	133	50.57	2000	
Au	197	1	nogas	68.592	68.592	515.35	10	685.92	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	320024	2.34	345803	92.55	70	125	
Ge	72	1	nogas	1105685	2.38	1142873	96.75	70	125	
In	115	1	nogas	1086373	0.46	1119741	97.02	70	125	
Bi	209	1	nogas	1104118	1.85	1122197	98.39	70	125	
Ge	72	2	He	96158	4.01	104250	92.24	70	125	

Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	ICSA
Data File Name	349ICSA.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-04T01:30:18-06:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	234CALB.d
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	0.021	39.8	43	35.3	0	ICSA Main CR1 Failed
Na	23	1	nogas	93806.781	0.5	750602383	1.9	0	
Mg	24	1	nogas	92572.703	3.2	488679261	1.9	0	
Al	27	1	nogas	91833.640	0.9	549247512	1.4	0	
K	39	1	nogas	96653.224	3.6	567619679	3.7	0	
Ti	47	1	nogas	1970.788	2.2	1228548	3.2	0	
V	51	1	nogas	8.990	9.1	335264	2.2	0	
Cr	52	1	nogas	0.612	5.2	13669	1.0	0	ICSA Main CR1 Failed
Mn	55	1	nogas	0.356	23.3	11127	7.4	0	ICSA Main CR1 Failed
Co	59	1	nogas	0.062	7.5	677	6.7	0	ICSA Main CR1 Failed
Ni	60	1	nogas	0.178	91.7	2880	11.0	0	ICSA Main CR1 Failed
Cu	63	1	nogas	-1.830	-7.7	8452	8.5	0	ICSA Main CR1 Failed
Zn	66	1	nogas	1.402	4.0	2300	4.6	0	ICSA Main CR1 Failed
As	75	1	nogas	17.295	8.7	64143	2.5	0	
Sr	88	1	nogas	0.887	5.4	10023	4.4	0	ICSA Main CR1 Failed
Ag	107	1	nogas	0.026	46.3	283	23.5	0	ICSA Main CR1 Failed
Cd	111	1	nogas	0.960	11.3	1187	8.4	0	ICSA Main CR1 Failed
Sb	121	1	nogas	0.050	28.6	973	8.9	0	ICSA Main CR1 Failed
Tl	205	1	nogas	0.019	45.5	293	34.3	0	ICSA Main CR1 Failed
Pb	208	1	nogas	0.077	18.3	1470	14.8	0	ICSA Main CR1 Failed
[Pb]	206	1	nogas	0.084	23.3	377	17.7	0	ICSA Main CR1 Failed
[Pb]	207	1	nogas	0.098	31.7	393	25.7	0	ICSA Main CR1 Failed
Na	23	2	He	93685.885	1.5	15296008	2.2	0	
Mg	24	2	He	93499.487	1.1	7005127	2.0	0	
Al	27	2	He	96679.272	1.3	1746312	2.2	0	
K	39	2	He	92112.830	1.7	3562364	1.7	0	
Ca	43	2	He	89227.629	2.5	11654	1.6	0	
Ca	44	2	He	93510.498	0.7	200964	0.1	0	
V	51	2	He	0.156	11.3	203	8.2	0	ICSA Main CR1 Failed
Cr	52	2	He	-0.091	-169.7	1293	14.1	0	ICSA Main CR1 Failed
Mn	55	2	He	0.209	26.3	223	11.3	0	ICSA Main CR1 Failed
Fe	56	2	He	94050.323	2.2	84499464	1.5	0	
Co	59	2	He	0.013	107.1	40	66.1	0	ICSA Main CR1 Failed
Ni	60	2	He	0.016	108.5	270	3.7	0	ICSA Main CR1 Failed
Cu	63	2	He	0.163	10.8	697	4.6	0	ICSA Main CR1 Failed
Zn	66	2	He	0.426	109.9	137	76.9	0	ICSA Main CR1 Failed
As	75	2	He	0.156	50.6	30	40.1	0	ICSA Main CR1 Failed
Se	78	2	He	-0.206	-100.4	1	86.6	0	ICSA Main CR1 Failed
B	11	1	nogas	-27.545	-4.0	24116	2.7	0	ICSA Main CR1 Failed
Si	28	1	nogas	79.149	3.4	887029	1.5	0	
Ca	43	1	nogas	95990.220	3.5	1158421	2.3	0	
Ca	44	1	nogas	93269.597	1.3	18786839	0.1	0	
Fe	56	1	nogas	96340.877	1.9	902249854	2.4	0	
Se	77	1	nogas	85.991	17.6	19891	5.3	0	
Se	82	1	nogas	0.567	172.1	360	22.7	0	ICSA Main CR1 Failed
Mo	95	1	nogas	2040.822	4.8	4423666	5.2	0	
Sn	118	1	nogas	0.030	86.4	667	11.7	0	ICSA Main CR1 Failed
Ba	137	1	nogas	0.071	28.8	203	18.6	0	ICSA Main CR1 Failed
Sb	121	2	He	0.017	473.3	87	58.1	0	ICSA Main CR1 Failed

Interference Check Solution A (ICS-A) Report

P	31	1	nogas	91443.049	1.9	35564028	2.2	0	
La	139	1	nogas	110.015	29.5	197	28.0	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	303531	3.56	345803	87.78	70	125	
Ge	72	1	nogas	1067558	1.24	1142873	93.41	70	125	
In	115	1	nogas	1037000	2.61	1119741	92.61	70	125	
Bi	209	1	nogas	1026595	2.82	1122197	91.48	70	125	
Ge	72	2	He	95052	0.86	104250	91.18	70	125	

Interference Check Solution AB (ICS-AB) Report

Sample Table

Sample Name	ICSAB
Data File Name	350ICSB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-04T01:32:24-06:00
Sample Type	ICSB
Dilution	1
Comment	
ISTD Ref File Name	234CALB.d
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	92.547	4.393	177074	4.15	100	92.5	80	120	
Na	23	1	nogas	101830.878	0.525	819304368	1.28	100	101830.9	80	120	
Mg	24	1	nogas	104929.172	0.826	557341079	0.81	100	104929.2	80	120	ICSB Main CR1 Failed
Al	27	1	nogas	94082.267	1.855	561201232	0.34	100	94082.3	80	120	ICSB Main CR1 Failed
K	39	1	nogas	106180.550	3.815	621499031	2.09	100	106180.6	80	120	
Ti	47	1	nogas	2076.596	3.363	1290724	2.15	100	2076.6	80	120	
V	51	1	nogas	102.630	0.454	1186578	1.57	100	102.6	80	120	
Cr	52	1	nogas	92.356	2.529	752860	0.66	100	92.4	80	120	
Mn	55	1	nogas	95.345	3.342	987030	1.59	100	95.3	80	120	
Co	59	1	nogas	94.218	5.339	787997	3.44	100	94.2	80	120	
Ni	60	1	nogas	99.030	3.937	179697	1.99	100	99.0	80	120	
Cu	63	1	nogas	95.122	3.774	436366	2.45	100	95.1	80	120	
Zn	66	1	nogas	99.578	1.543	145929	1.48	100	99.6	80	120	
As	75	1	nogas	106.080	3.038	204105	0.59	100	106.1	80	120	
Sr	88	1	nogas	98.416	3.548	1056251	1.80	100	98.4	80	120	
Ag	107	1	nogas	96.461	3.296	546035	1.85	100	96.5	80	120	
Cd	111	1	nogas	100.683	3.015	119703	2.58	100	100.7	80	120	
Sb	121	1	nogas	101.550	4.292	544701	2.86	100	101.6	80	120	
Tl	205	1	nogas	92.285	2.272	980406	1.08	100	92.3	80	120	
Pb	208	1	nogas	91.971	1.455	1421100	1.45	100	92.0	80	120	
U	238	1	nogas	103.411	3.131	1601624	1.63	100	103.4	80	120	
[Pb]	206	1	nogas	99.397	2.316	347832	0.78	100	99.4	80	120	
[Pb]	207	1	nogas	97.382	2.094	312643	0.79	100	97.4	80	120	
Na	23	2	He	105987.693	0.805	16892554	0.74	100	105987.7	80	120	ICSB Main CR1 Failed
Mg	24	2	He	106129.159	0.460	7768351	0.62	100	106129.2	80	120	ICSB Main CR1 Failed
Al	27	2	He	97516.543	1.852	1720945	2.17	100	97516.5	80	120	ICSB Main CR1 Failed
K	39	2	He	102204.703	0.487	3951501	0.49	100	102204.7	80	120	
Ca	43	2	He	99833.176	1.216	12741	0.91	100	99833.2	80	120	
Ca	44	2	He	107018.557	3.057	224695	2.73	100	107018.6	80	120	ICSB Main CR1 Failed
V	51	2	He	100.439	1.039	85184	1.01	100	100.4	80	120	
Cr	52	2	He	98.993	0.699	111516	1.02	100	99.0	80	120	
Mn	55	2	He	100.992	2.692	42279	2.64	100	101.0	80	120	
Fe	56	2	He	108102.648	0.459	94905505	0.18	100	108102.6	80	120	ICSB Main CR1 Failed
Co	59	2	He	101.110	1.138	196645	1.12	100	101.1	80	120	
Ni	60	2	He	98.157	2.708	55000	2.70	100	98.2	80	120	
Cu	63	2	He	98.158	1.454	154573	1.31	100	98.2	80	120	
Zn	66	2	He	102.144	1.049	22574	1.28	100	102.1	80	120	
As	75	2	He	102.009	1.053	15244	1.34	100	102.0	80	120	
Se	78	2	He	99.370	5.676	547	5.31	100	99.4	80	120	
B	11	1	nogas	482.936	2.136	580089	1.76	100	482.9	80	120	
Si	28	1	nogas	5009.600	1.480	14368585	0.87	100	5009.6	80	120	ICSB Main CR1 Failed
Ca	43	1	nogas	107446.383	4.009	1293218	2.17	100	107446.4	80	120	
Ca	44	1	nogas	106307.813	4.283	21349174	3.37	100	106307.8	80	120	ICSB Main CR1 Failed
Fe	56	1	nogas	106981.042	3.137	999002356	1.64	100	106981.0	80	120	
Se	77	1	nogas	139.455	13.439	24323	4.91	100	139.5	80	120	ICSB Main CR1 Failed
Se	82	1	nogas	103.186	10.265	8439	8.56	100	103.2	80	120	
Mo	95	1	nogas	2186.250	2.021	4725965	1.11	100	2186.2	80	120	ICSB Main CR1 Failed
Sn	118	1	nogas	101.630	2.315	355424	2.85	100	101.6	80	120	
Ba	137	1	nogas	102.333	1.610	162652	2.03	100	102.3	80	120	
Sb	121	2	He	106.121	1.231	66992	1.50	100	106.1	80	120	
La	139	1	nogas	256.076	31.914	420	31.14	100	256.1	80	120	ICSB Main CR1 Failed

QC ISTD Table

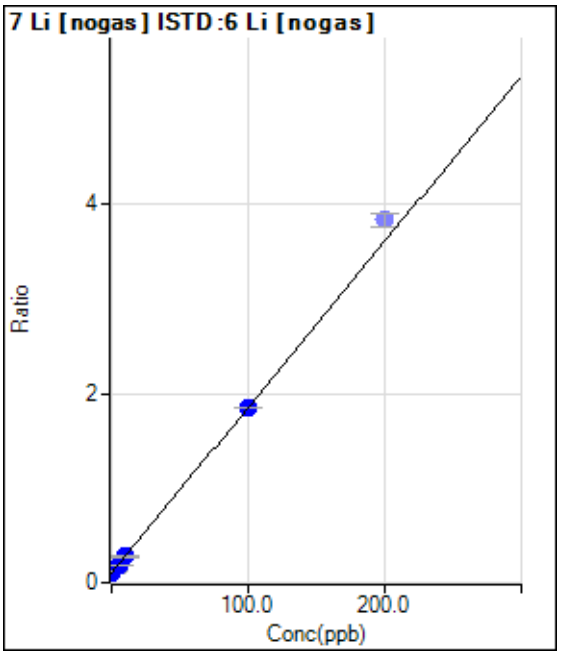
Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	294774	0.90	345803	85.24	70	125	
Ge	72	1	nogas	1064954	1.90	1142873	93.18	70	125	
In	115	1	nogas	1006584	0.56	1119741	89.89	70	125	
Bi	209	1	nogas	1005376	1.55	1122197	89.59	70	125	
Ge	72	2	He	92870	0.35	104250	89.08	70	125	

Calibration for 011_ICV.d

Batch Folder: C:\Agilent\ICPMH\1\DATA\010318A.b\
Analysis File: 010318A.batch.bin
DA Date-Time: 2018-01-03 21:45:27
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	004CALB.d	CAL BLK	2018-01-03 10:28:35
2	005CALS.d	2/10/200	2018-01-03 10:30:36
3	006CALS.d	5/25/500	2018-01-03 10:32:38
4	007CALS.d	10/50/1000	2018-01-03 10:34:39
5	008CALS.d	100/500/10K	2018-01-03 10:36:41
6	009CALS.d	200/1000/20K	2018-01-03 10:38:40
7			

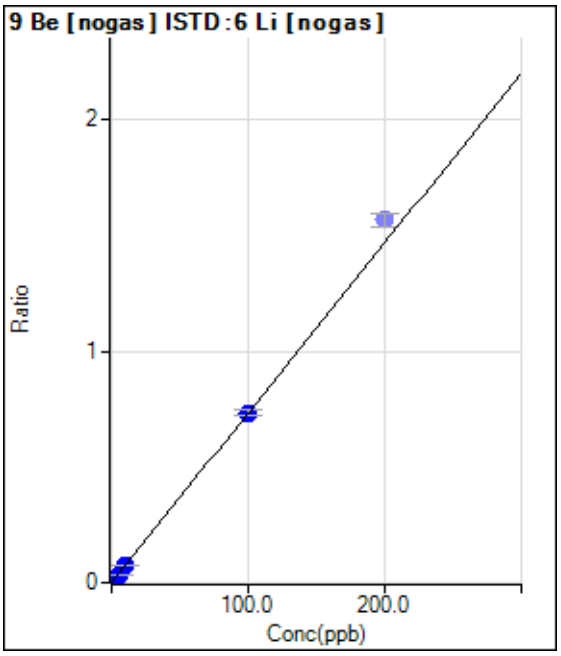
Calibration for 011_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	25787.83	0.1034	P	1.8
2	☐	2.000	1.680	34335.29	0.1329	P	1.5
3	☐	5.000	4.719	47176.06	0.1861	P	4.8
4	☐	10.000	9.801	69883.73	0.2751	P	1.3
5	☐	100.000	100.040	441323.77	1.8560	P	0.3
6	☑	200.000		865577.07	3.8373	P	3.6
7	☐	1.000					

y = 0.0175 * x + 0.1034
R = 1.0000
DL = 0.3127
BEC = 5.905

Weight: <None>
Min Conc: <None>

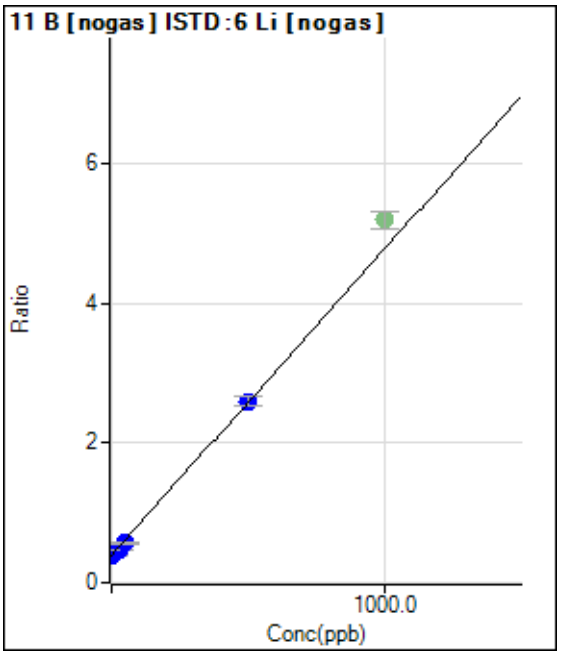


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	26.67	0.0001	P	93.6
2	☐	2.000	1.908	3650.42	0.0141	P	7.2
3	☐	5.000	4.705	8765.54	0.0346	P	5.9
4	☐	10.000	9.946	18539.41	0.0730	P	3.2
5	☐	100.000	100.022	174271.36	0.7334	P	3.3
6	☑	200.000		353449.24	1.5667	P	3.7
7	☐	1.000					

y = 0.0073 * x + 1.0706E-004
R = 1.0000
DL = 0.04099
BEC = 0.0146

Weight: <None>
Min Conc: <None>

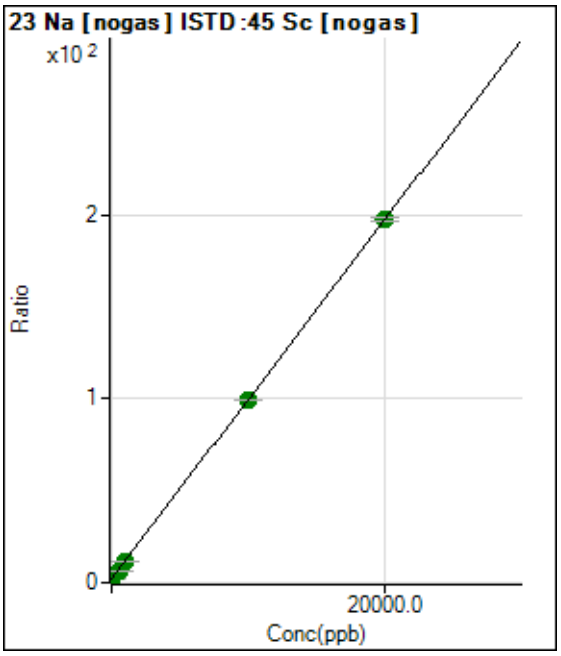
Calibration for 011_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	98112.36	0.3938	P	3.5
2	☐	10.000	1.310	103141.03	0.3995	P	4.6
3	☐	25.000	17.347	118997.15	0.4698	P	2.7
4	☐	50.000	39.760	144052.90	0.5681	P	7.4
5	☐	500.000	501.580	615884.04	2.5928	P	5.0
6	☑	1000.000		1171762.07	5.1933	A	4.8
7	☐	5.000					

y = 0.0044 * x + 0.3938
R = 0.9998
DL = 9.326
BEC = 89.81

Weight: <None>
Min Conc: <None>

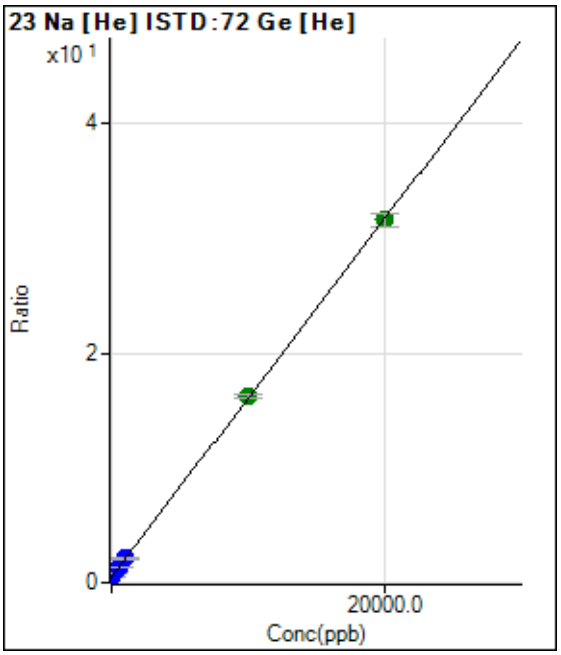


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1493609.90	2.0810	A	0.4
2	☐	200.000	179.398	2755712.89	3.8305	A	2.9
3	☐	500.000	477.853	4864375.63	6.7410	A	1.3
4	☐	1000.000	954.267	8408850.45	11.3870	A	1.2
5	☐	10000.00	9983.062	71944512.02	99.4360	A	0.7
6	☐	20000.00	20011.516	141560986.5	197.233	A	1.1
7	☐	100.000					

y = 0.0098 * x + 2.0810
R = 1.0000
DL = 2.453
BEC = 213.4

Weight: <None>
Min Conc: <None>

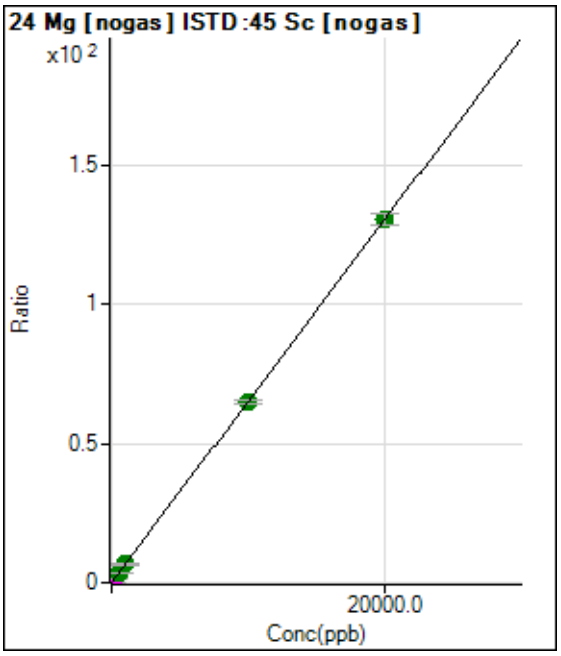
Calibration for 011_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	54685.53	0.4926	P	3.3
2	☐	200.000	198.267	88125.87	0.8017	P	0.8
3	☐	500.000	524.818	143771.82	1.3108	P	1.4
4	☐	1000.000	1043.814	232419.93	2.1198	P	3.6
5	☐	10000.00	10094.779	1751449.77	16.2287	A	1.9
6	☐	20000.00	19949.816	3401684.64	31.5911	A	3.7
7	☐	100.000					

y = 0.0016 * x + 0.4926
R = 1.0000
DL = 31.39
BEC = 316

Weight: <None>
Min Conc: <None>

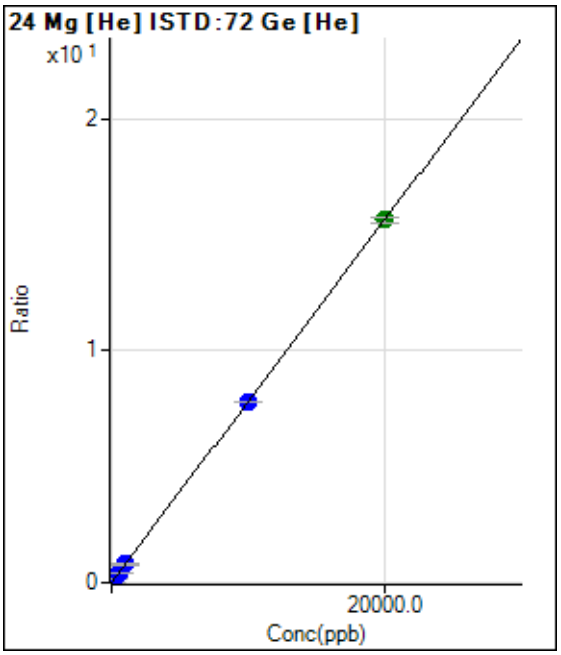


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2467.34	0.0035	P	32.6
2	☐	200.000	196.984	925518.32	1.2863	M	2.8
3	☐	500.000	513.847	2417576.16	3.3498	A	2.1
4	☐	1000.000	1011.918	4869182.40	6.5933	A	2.1
5	☐	10000.00	10000.134	47131793.76	65.1270	A	2.0
6	☐	20000.00	19999.021	93432683.34	130.242	A	3.3
7	☐	100.000					

y = 0.0065 * x + 0.0035
R = 1.0000
DL = 0.5183
BEC = 0.5298

Weight: <None>
Min Conc: <None>

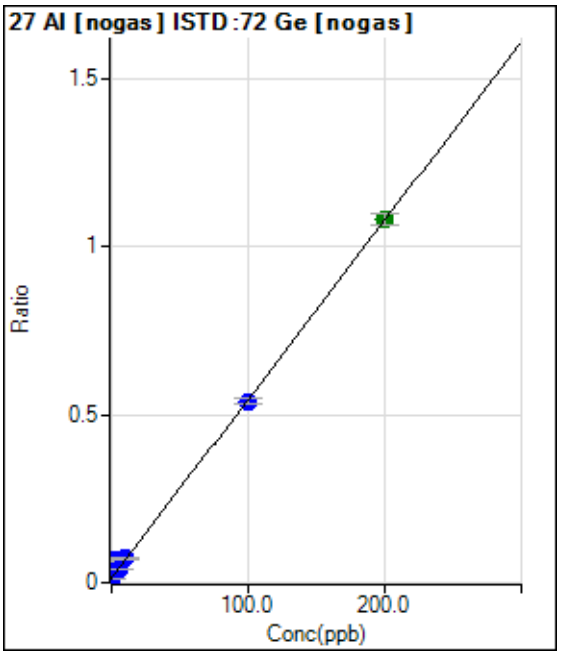
Calibration for 011_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	170.00	0.0015	P	18.6
2	☐	200.000	204.460	17725.32	0.1613	P	4.4
3	☐	500.000	508.394	43734.26	0.3987	P	2.0
4	☐	1000.000	1023.405	87816.86	0.8011	P	4.2
5	☐	10000.00	9974.269	841209.15	7.7939	P	0.6
6	☐	20000.00	20011.441	1683668.57	15.6354	A	1.9
7	☐	100.000					

y = 7.8125E-004 * x + 0.0015
R = 1.0000
DL = 1.089
BEC = 1.954

Weight: <None>
Min Conc: <None>

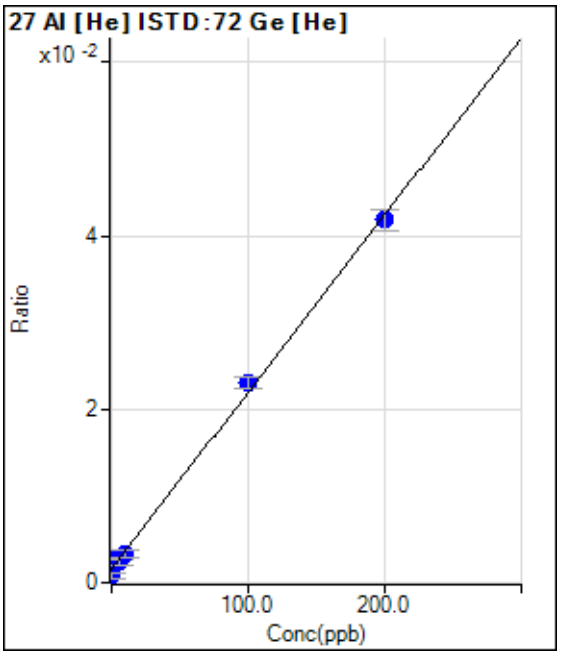


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	13721.88	0.0131	P	1.5
2	☐	2.000	9.942	70265.02	0.0661	P	3.9
3	☐	5.000	5.286	42909.55	0.0413	P	3.4
4	☐	10.000	11.011	77496.49	0.0718	P	1.5
5	☐	100.000	99.022	576944.08	0.5409	P	2.6
6	☐	200.000	200.352	1129155.69	1.0809	A	3.0
7	☐	1.000					

y = 0.0053 * x + 0.0131
R = 0.9993
DL = 0.1121
BEC = 2.467

Weight: <None>
Min Conc: <None>

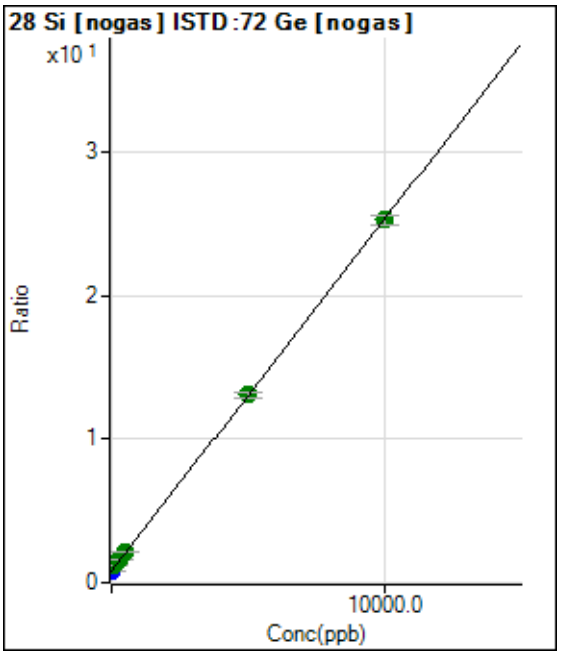
Calibration for 011_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-3.544	96.67	0.0009	P	78.2
2	☐	2.000	5.742	303.34	0.0028	P	3.6
3	☐	5.000	3.831	260.01	0.0024	P	23.2
4	☐	10.000	8.154	356.68	0.0033	P	25.1
5	☐	100.000	105.468	2493.54	0.0231	P	6.1
6	☐	200.000	197.350	4503.94	0.0418	P	6.0
7	☐	1.000					

y = 2.0400E-004 * x + 0.0016
R = 0.9990
DL = 9.953
BEC = 7.785

Weight: <None>
Min Conc: <None>

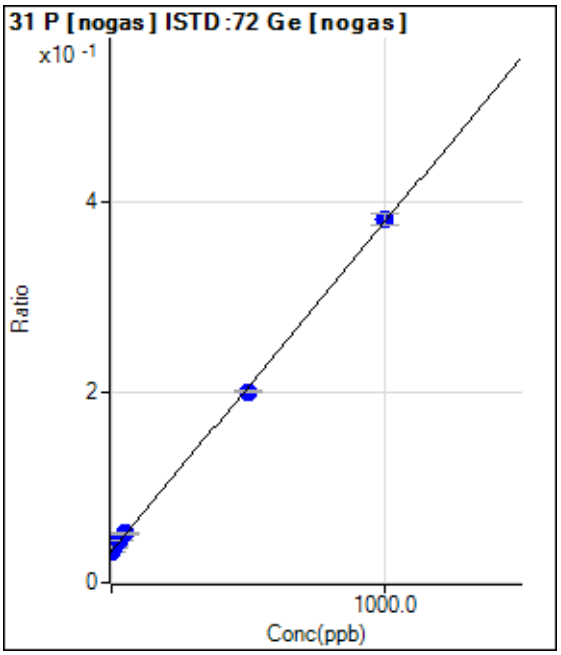


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	843391.03	0.8080	P	1.0
2	☐	100.000	158.795	1271949.22	1.1970	A	2.8
3	☐	250.000	320.755	1655118.57	1.5938	A	3.2
4	☐	500.000	554.320	2337032.26	2.1660	A	2.0
5	☐	5000.000	5016.467	13969418.12	13.0978	A	2.9
6	☐	10000.00	9986.693	26402973.77	25.2742	A	2.9
7	☐	5.000					

y = 0.0024 * x + 0.8080
R = 1.0000
DL = 10.34
BEC = 329.8

Weight: <None>
Min Conc: <None>

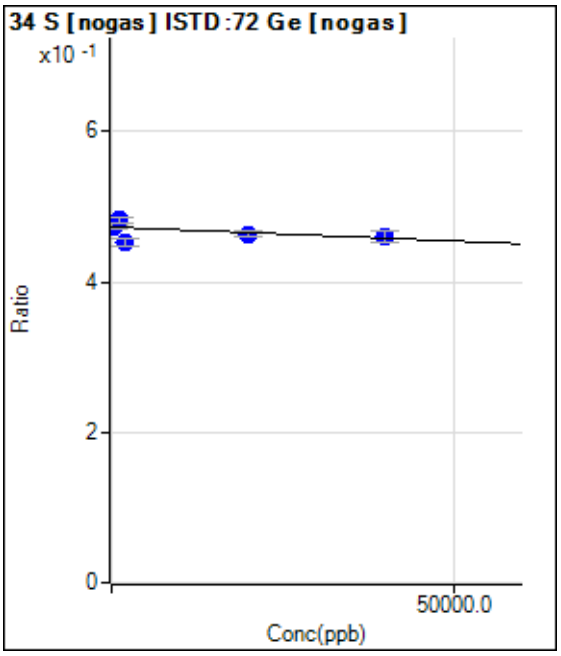
Calibration for 011_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	34465.17	0.0330	P	1.2
2	☐	10.000	12.667	39758.75	0.0374	P	1.1
3	☐	25.000	35.027	46898.48	0.0452	P	1.6
4	☐	50.000	54.207	55889.57	0.0518	P	2.0
5	☐	500.000	485.208	214592.37	0.2012	P	1.7
6	☐	1000.000	1006.909	399021.66	0.3820	P	3.0
7	☐	5.000					

y = 3.4656E-004 * x + 0.0330
R = 0.9998
DL = 3.357
BEC = 95.27

Weight: <None>
Min Conc: <None>

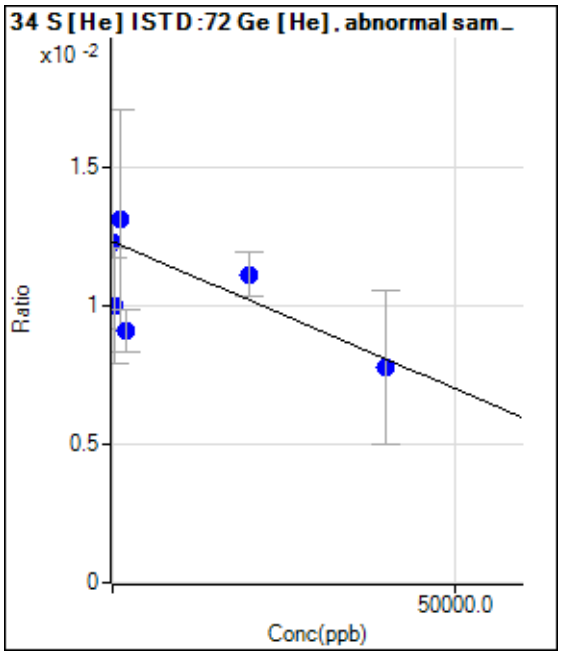


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	493578.04	0.4728	P	1.3
2	☐	400.000	-646.725	502777.47	0.4731	P	0.7
3	☐	1000.000	-25499.697	500881.10	0.4823	P	1.9
4	☐	2000.000	53953.215	488681.52	0.4529	P	2.4
5	☐	20000.00	25483.775	494366.57	0.4634	P	1.4
6	☐	40000.00	35333.411	480308.64	0.4598	P	3.1
7	☐	100.000					

y = -3.7001E-007 * x + 0.4728
R = -0.4540
DL = -5.109E+04
BEC = -1.278E+06

Weight: <None>
Min Conc: <None>

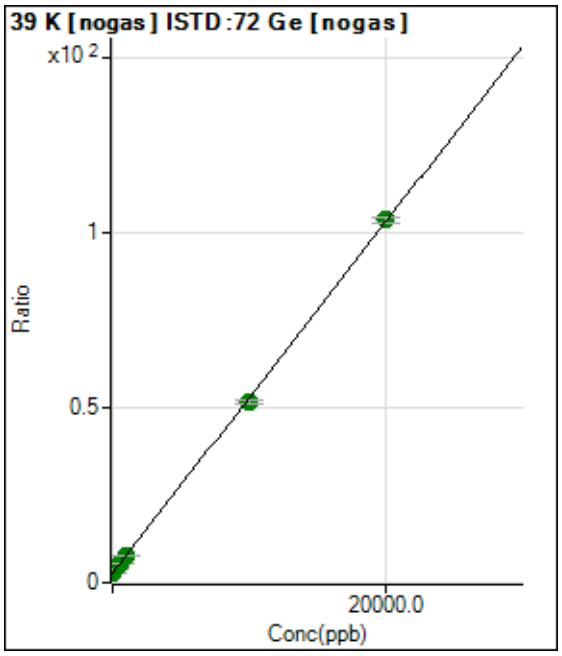
Calibration for 011_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1367.01	0.0123	P	9.3
2	☐	400.000	21882.920	1100.27	0.0100	P	41.4
3	☐	1000.000	-7332.748	1433.67	0.0131	P	60.4
4	☐	2000.000	30228.214	1000.25	0.0091	P	16.8
5	☐	20000.00	11283.550	1200.28	0.0111	P	14.6
6	☐	40000.00	42940.304	833.56	0.0078	P	70.8
7	☐	100.000					

y = -1.0597E-007 * x + 0.0123
R = -0.6214
DL = -3.26E+04
BEC = -1.162E+05

Weight: <None>
Min Conc: <None>

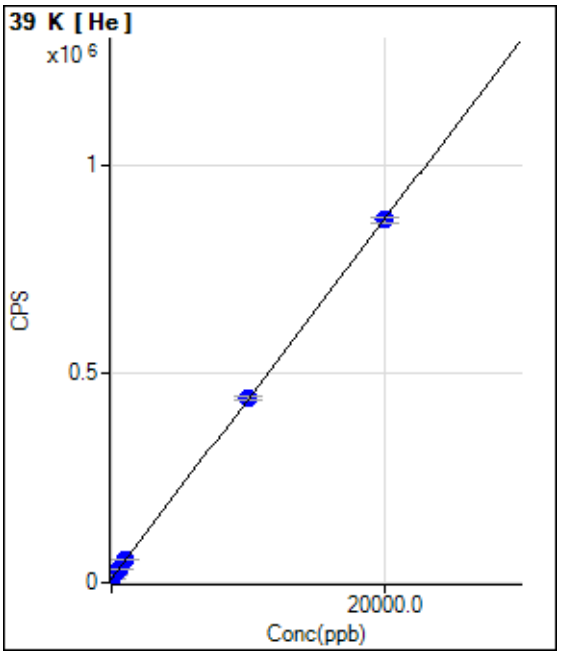


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2856758.92	2.7370	A	1.6
2	☐	200.000	194.456	3944243.84	3.7119	A	2.0
3	☐	500.000	520.703	5554336.97	5.3476	A	1.7
4	☐	1000.000	968.577	8192013.98	7.5930	A	1.7
5	☐	10000.00	9737.169	54999526.23	51.5552	A	1.9
6	☐	20000.00	20132.525	108344914.9	103.673	A	1.6
7	☐	100.000					

y = 0.0050 * x + 2.7370
R = 0.9999
DL = 25.9
BEC = 545.9

Weight: <None>
Min Conc: <None>

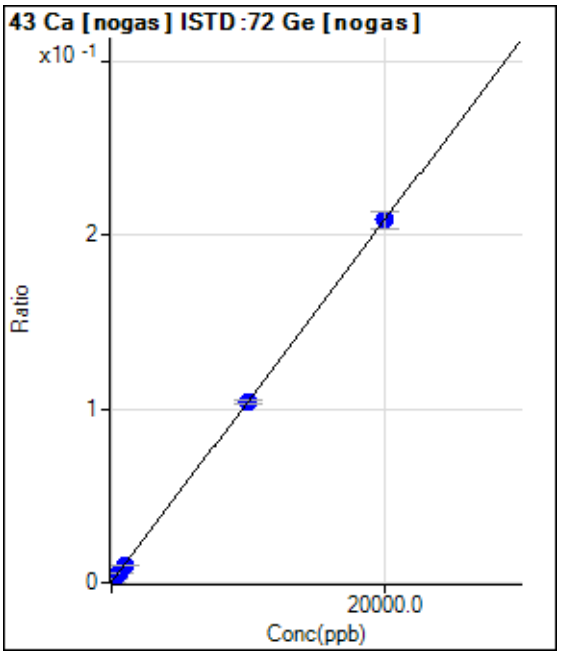
Calibration for 011_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	9762.68		P	0.6
2	☐	200.000	223.106	19350.24		P	2.8
3	☐	500.000	518.890	32061.04		P	0.6
4	☐	1000.000	1050.603	54910.45		P	0.2
5	☐	10000.00	10057.196	441952.49		P	1.4
6	☐	20000.00	19968.168	867858.61		P	1.3
7	☐	100.000					

y = 42.9732 * x + 9762.6767
R = 1.0000
DL = 3.89
BEC = 227.2

Weight: <None>
Min Conc: <None>

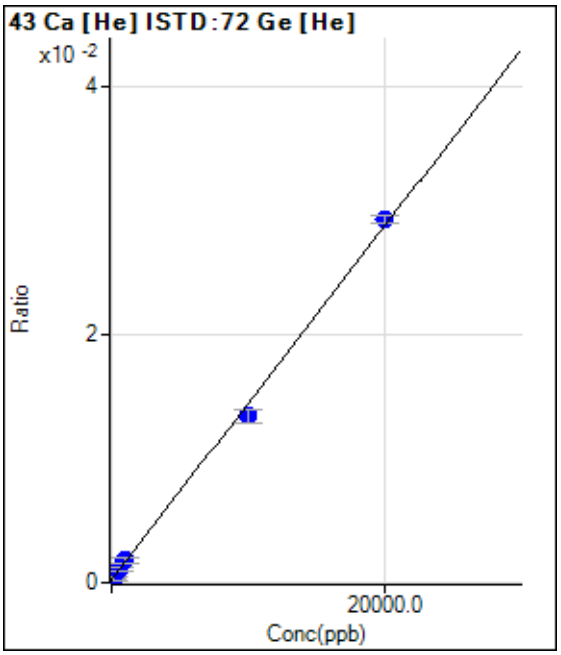


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	340.01	0.0003	P	37.9
2	☐	200.000	211.213	2683.57	0.0025	P	7.1
3	☐	500.000	512.607	5881.04	0.0057	P	2.7
4	☐	1000.000	951.316	11030.11	0.0102	P	1.4
5	☐	10000.00	9949.710	110787.69	0.1038	P	1.8
6	☐	20000.00	20027.152	218000.13	0.2087	P	5.0
7	☐	100.000					

y = 1.0404E-005 * x + 3.2612E-004
R = 1.0000
DL = 35.62
BEC = 31.34

Weight: <None>
Min Conc: <None>

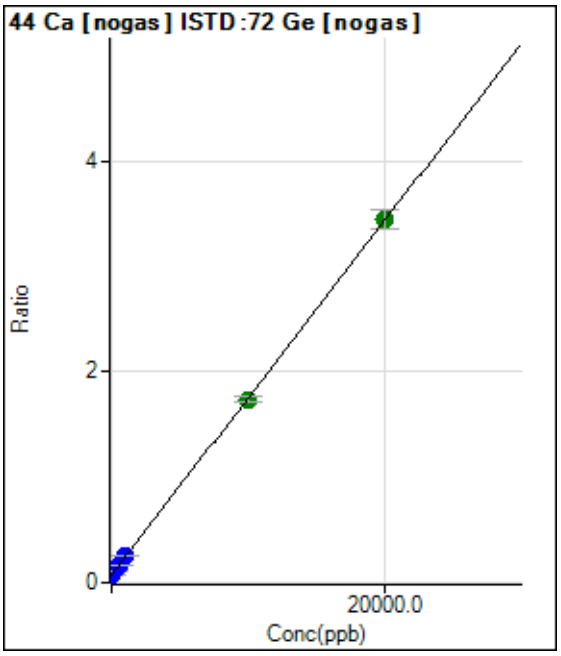
Calibration for 011_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	23.33	0.0002	P	99.4
2	☐	200.000	107.440	40.00	0.0004	P	90.3
3	☐	500.000	620.027	120.00	0.0011	P	22.2
4	☐	1000.000	1132.706	200.01	0.0018	P	22.1
5	☐	10000.00	9262.350	1446.76	0.0134	P	7.3
6	☐	20000.00	20360.115	3146.99	0.0292	P	2.1
7	☐	100.000					

y = 1.4250E-006 * x + 2.1078E-004
R = 0.9990
DL = 440.9
BEC = 147.9

Weight: <None>
Min Conc: <None>

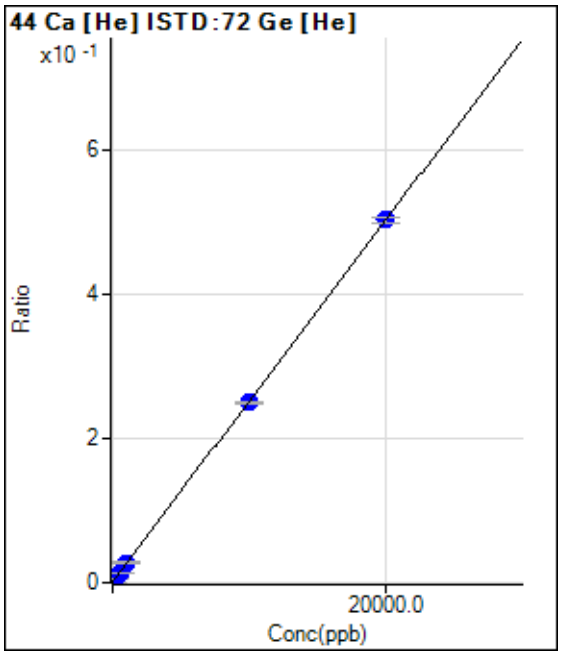


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	77326.06	0.0741	P	1.8
2	☐	200.000	217.497	117546.97	0.1106	P	0.9
3	☐	500.000	542.904	171648.79	0.1653	P	1.1
4	☐	1000.000	1054.261	270953.95	0.2511	P	1.1
5	☐	10000.00	9894.412	1851842.06	1.7356	A	3.3
6	☐	20000.00	20048.833	3593511.40	3.4408	A	5.4
7	☐	100.000					

y = 1.6793E-004 * x + 0.0741
R = 1.0000
DL = 24.29
BEC = 441.2

Weight: <None>
Min Conc: <None>

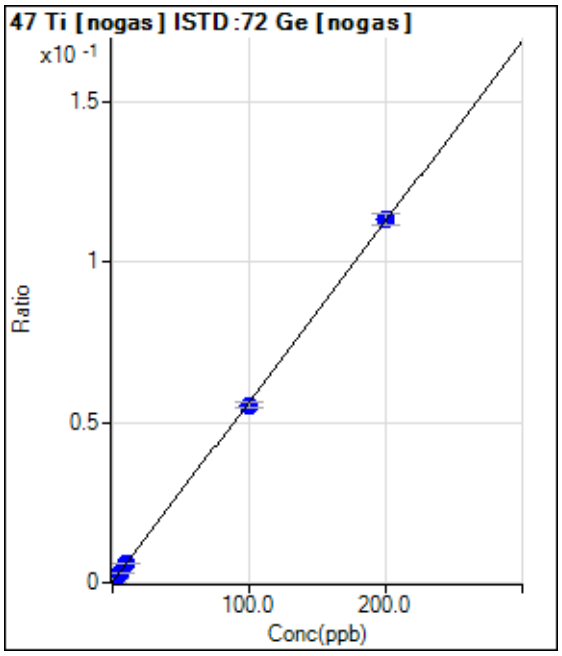
Calibration for 011_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	116.67	0.0011	P	7.8
2	☐	200.000	196.039	656.69	0.0060	P	12.2
3	☐	500.000	458.050	1376.74	0.0126	P	5.9
4	☐	1000.000	1060.815	3033.63	0.0277	P	6.4
5	☐	10000.00	9930.648	27020.04	0.2503	P	1.5
6	☐	20000.00	20032.724	54262.99	0.5039	P	1.8
7	☐	100.000					

y = 2.5104E-005 * x + 0.0011
R = 1.0000
DL = 9.838
BEC = 41.91

Weight: <None>
Min Conc: <None>

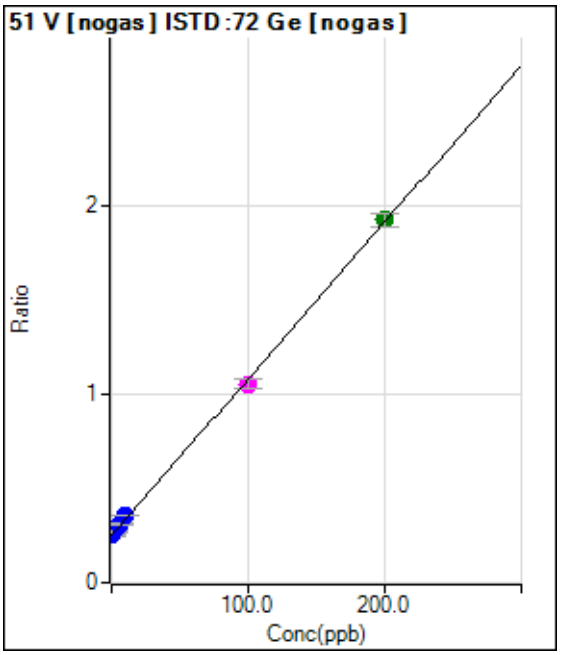


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	106.67	0.0001	P	44.6
2	☐	2.000	1.992	1300.08	0.0012	P	8.7
3	☐	5.000	5.404	3260.34	0.0031	P	7.2
4	☐	10.000	10.294	6354.57	0.0059	P	3.9
5	☐	100.000	98.054	58911.13	0.0552	P	3.6
6	☐	200.000	200.948	118148.70	0.1131	P	3.1
7	☐	1.000					

y = 5.6231E-004 * x + 1.0230E-004
R = 0.9999
DL = 0.2432
BEC = 0.1819

Weight: <None>
Min Conc: <None>

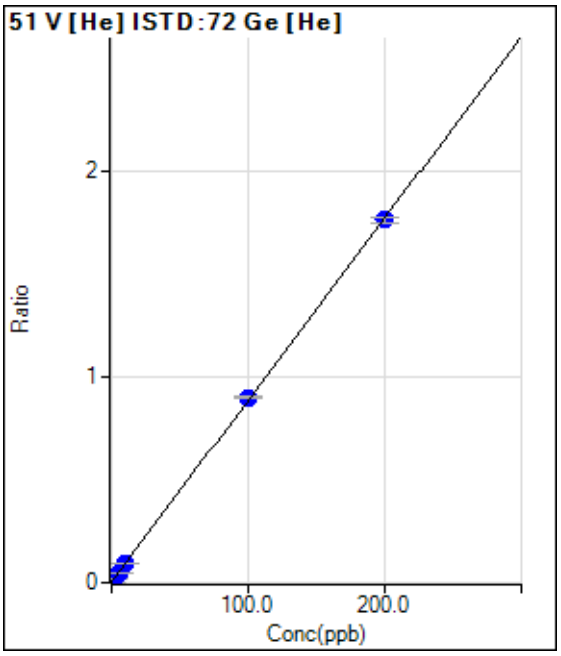
Calibration for 011_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	261992.40	0.2510	P	1.2
2	☐	2.000	2.550	289261.47	0.2723	P	4.3
3	☐	5.000	7.296	323938.66	0.3118	P	1.8
4	☐	10.000	12.775	385802.31	0.3575	P	2.1
5	☐	100.000	96.738	1127495.21	1.0574	M	4.5
6	☐	200.000	201.429	2016314.17	1.9300	A	3.9
7	☐	1.000					

y = 0.0083 * x + 0.2510
R = 0.9997
DL = 1.053
BEC = 30.11

Weight: <None>
Min Conc: <None>

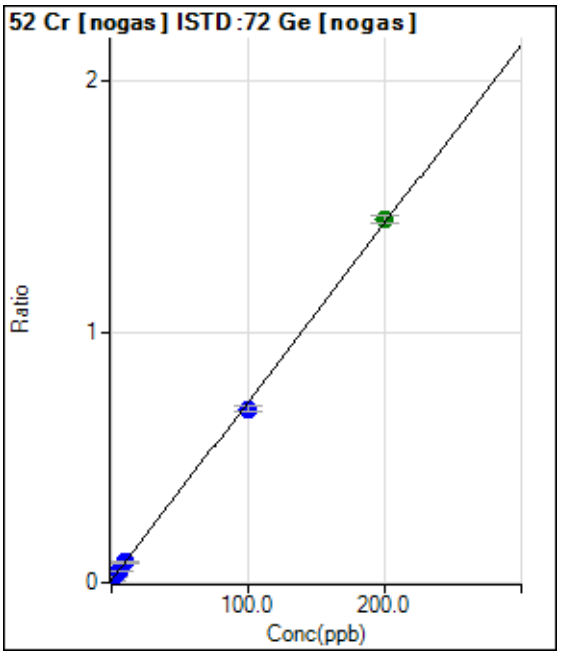


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.205	218.67	0.0020	P	9.7
2	☐	2.000	1.843	2204.81	0.0201	P	5.0
3	☐	5.000	4.727	4996.02	0.0456	P	2.5
4	☐	10.000	9.851	9962.69	0.0908	P	1.7
5	☐	100.000	101.536	97245.99	0.9010	P	1.0
6	☐	200.000	199.248	189999.30	1.7645	P	1.4
7	☐	1.000					

y = 0.0088 * x + 0.0038
R = 1.0000
DL = 0.06479
BEC = 0.4272

Weight: <None>
Min Conc: <None>

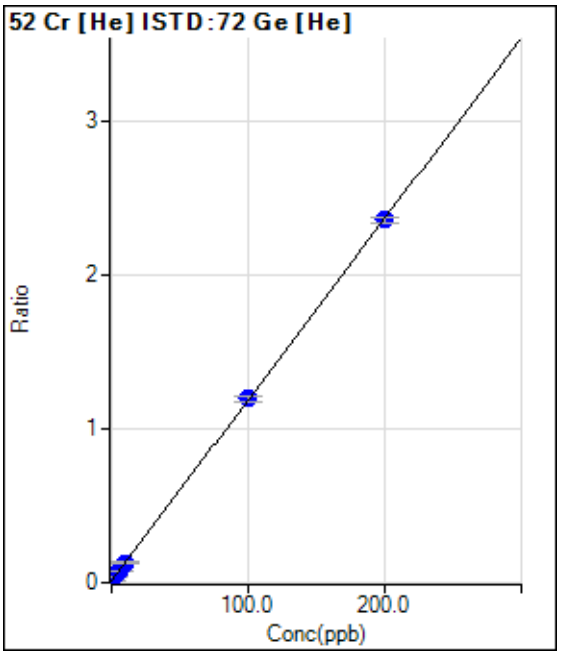
Calibration for 011_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	10096.25	0.0097	P	3.1
2	☐	2.000	2.013	25514.60	0.0240	P	1.3
3	☐	5.000	5.239	48788.47	0.0470	P	2.1
4	☐	10.000	10.082	87912.76	0.0815	P	2.6
5	☐	100.000	96.130	740413.94	0.6942	P	3.4
6	☐	200.000	201.925	1513036.44	1.4476	A	2.0
7	☐	1.000					

y = 0.0071 * x + 0.0097
R = 0.9997
DL = 0.1263
BEC = 1.358

Weight: <None>
Min Conc: <None>

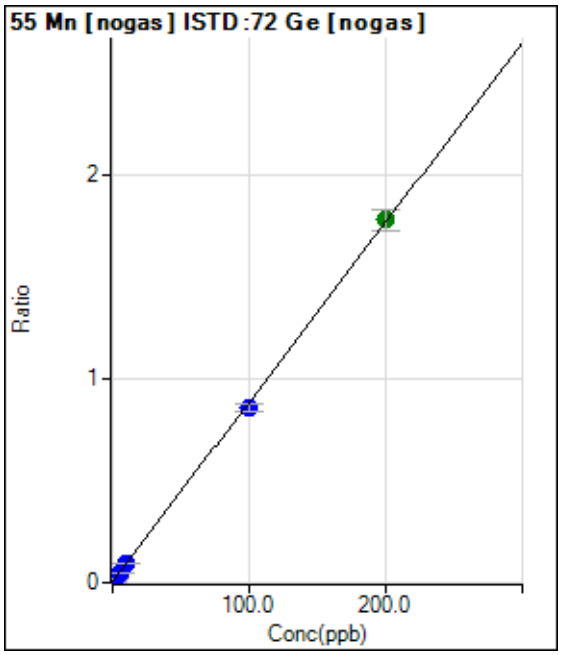


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1313.40	0.0118	P	14.8
2	☐	2.000	1.975	3847.15	0.0350	P	5.5
3	☐	5.000	5.103	7865.12	0.0717	P	3.9
4	☐	10.000	10.111	14309.16	0.1305	P	4.7
5	☐	100.000	100.945	129136.65	1.1967	P	3.2
6	☐	200.000	199.520	253478.94	2.3537	P	1.3
7	☐	1.000					

y = 0.0117 * x + 0.0118
R = 1.0000
DL = 0.4472
BEC = 1.007

Weight: <None>
Min Conc: <None>

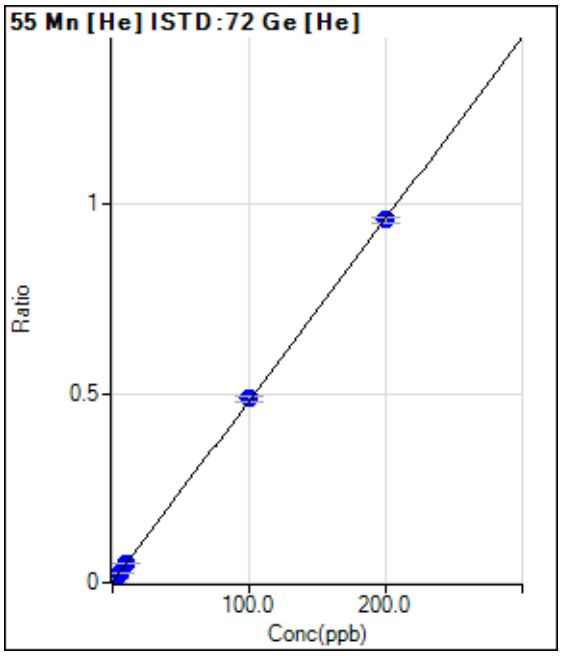
Calibration for 011_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	5084.11	0.0049	P	7.0
2	☐	2.000	1.990	23845.75	0.0224	P	2.4
3	☐	5.000	5.101	51826.86	0.0499	P	5.6
4	☐	10.000	10.066	101140.91	0.0937	P	1.2
5	☐	100.000	97.204	920357.62	0.8631	P	4.7
6	☐	200.000	201.392	1862774.61	1.7830	A	5.8
7	☐	1.000					

y = 0.0088 * x + 0.0049
R = 0.9999
DL = 0.1151
BEC = 0.5516

Weight: <None>
Min Conc: <None>

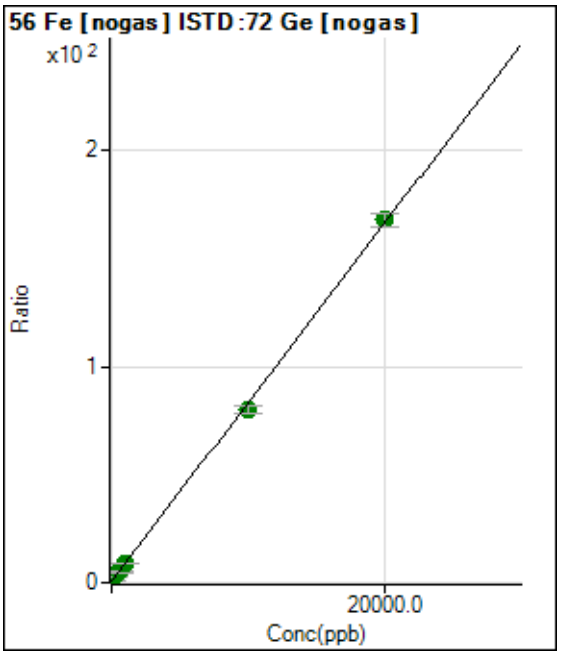


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	103.33	0.0009	P	28.1
2	☐	2.000	1.973	1143.40	0.0104	P	7.4
3	☐	5.000	4.668	2560.22	0.0233	P	1.8
4	☐	10.000	10.134	5440.90	0.0496	P	3.1
5	☐	100.000	100.982	52435.01	0.4859	P	3.6
6	☐	200.000	199.511	103289.14	0.9591	P	1.5
7	☐	1.000					

y = 0.0048 * x + 9.2585E-004
R = 1.0000
DL = 0.1625
BEC = 0.1928

Weight: <None>
Min Conc: <None>

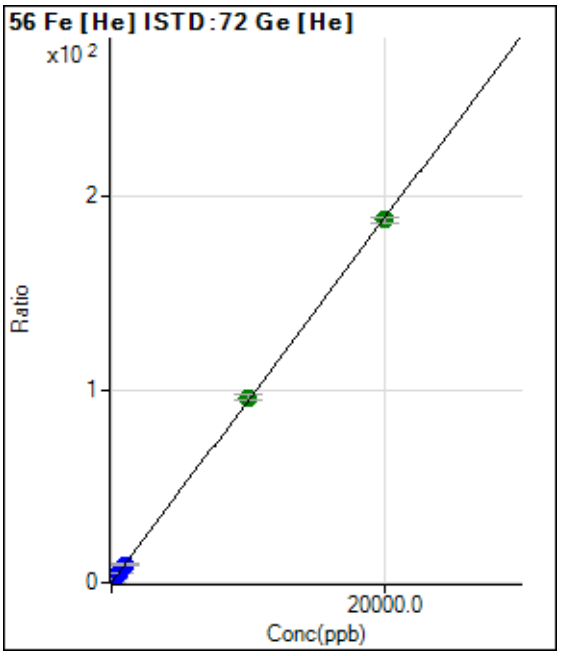
Calibration for 011_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	590919.56	0.5662	P	4.4
2	☐	200.000	210.966	2459227.92	2.3145	A	2.5
3	☐	500.000	528.690	5137165.74	4.9475	A	3.4
4	☐	1000.000	1005.235	9598766.10	8.8967	A	1.7
5	☐	10000.00	9601.745	85462399.83	80.1371	A	4.1
6	☐	20000.00	20198.039	175478874.7	167.950	A	3.5
7	☐	100.000					

y = 0.0083 * x + 0.5662
R = 0.9997
DL = 9.114
BEC = 68.32

Weight: <None>
Min Conc: <None>

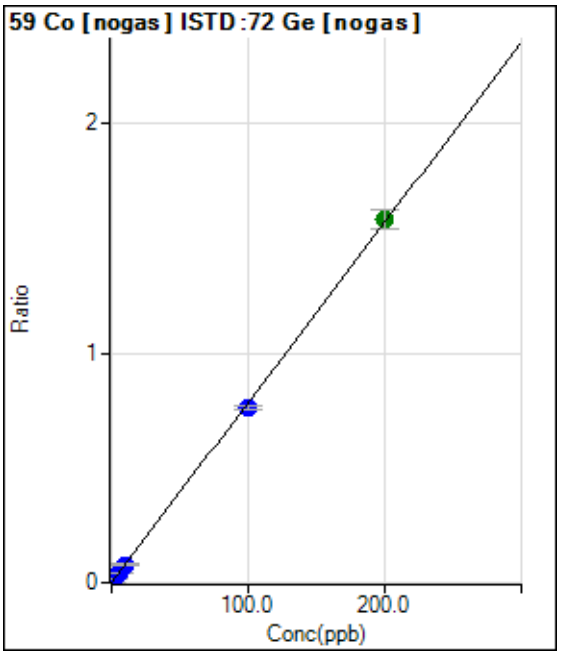


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2893.62	0.0260	P	8.8
2	☐	200.000	195.847	205982.98	1.8739	P	1.3
3	☐	500.000	493.747	513842.55	4.6847	P	0.9
4	☐	1000.000	996.492	1033894.23	9.4283	P	2.2
5	☐	10000.00	10172.565	10360407.55	96.0082	A	3.3
6	☐	20000.00	19914.091	20240415.95	187.923	A	1.3
7	☐	100.000					

y = 0.0094 * x + 0.0260
R = 0.9999
DL = 0.728
BEC = 2.759

Weight: <None>
Min Conc: <None>

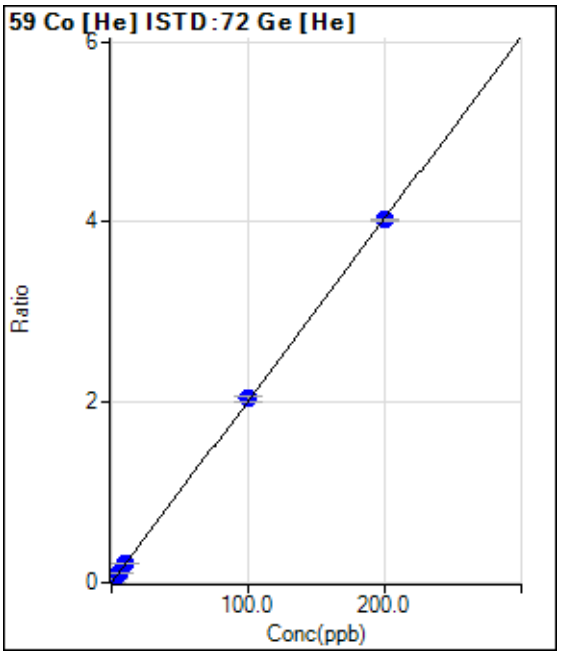
Calibration for 011_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	196.67	0.0002	P	2.3
2	☐	2.000	2.032	17141.60	0.0161	P	3.1
3	☐	5.000	5.232	42820.57	0.0412	P	5.2
4	☐	10.000	10.015	84997.07	0.0788	P	3.3
5	☐	100.000	96.989	812142.49	0.7614	P	2.5
6	☐	200.000	201.498	1652392.73	1.5816	A	5.1
7	☐	1.000					

y = 0.0078 * x + 1.8839E-004
R = 0.9998
DL = 0.001647
BEC = 0.024

Weight: <None>
Min Conc: <None>

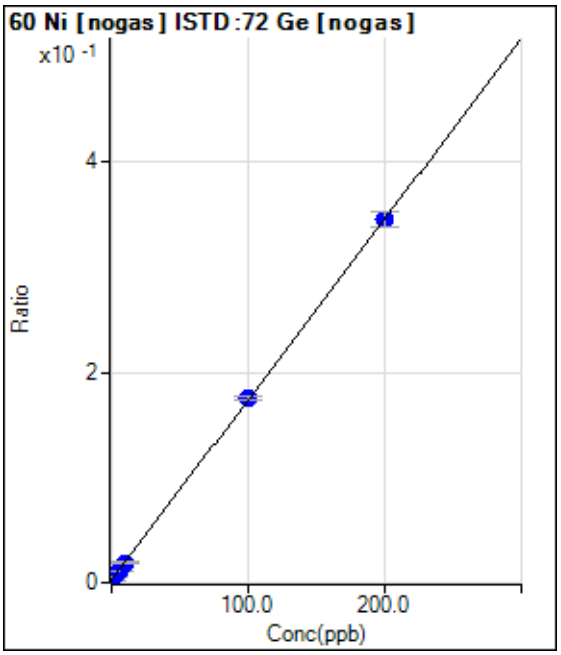


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	13.33	0.0001	P	86.7
2	☐	2.000	2.124	4724.02	0.0430	P	3.7
3	☐	5.000	5.217	11560.48	0.1054	P	0.9
4	☐	10.000	10.339	22884.69	0.2088	P	4.6
5	☐	100.000	101.201	220407.23	2.0424	P	2.7
6	☐	200.000	199.376	433310.74	4.0236	P	0.4
7	☐	1.000					

y = 0.0202 * x + 1.1984E-004
R = 1.0000
DL = 0.01545
BEC = 0.005939

Weight: <None>
Min Conc: <None>

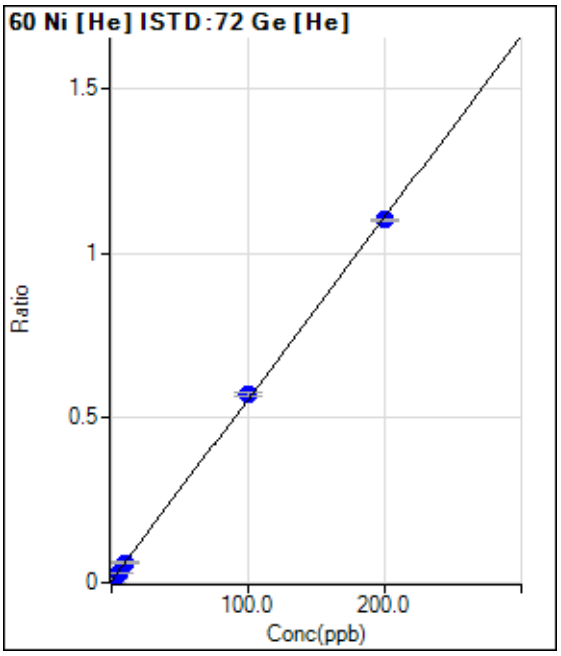
Calibration for 011_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.054	2260.21	0.0022	P	13.5
2	☐	2.000	1.804	5687.63	0.0054	P	6.4
3	☐	5.000	5.004	11263.64	0.0108	P	3.4
4	☐	10.000	9.856	20675.22	0.0192	P	2.6
5	☐	100.000	100.763	186806.09	0.1751	P	1.7
6	☐	200.000	199.628	360050.62	0.3447	P	4.2
7	☐	1.000					

y = 0.0017 * x + 0.0023
R = 1.0000
DL = 0.512
BEC = 1.318

Weight: <None>
Min Conc: <None>

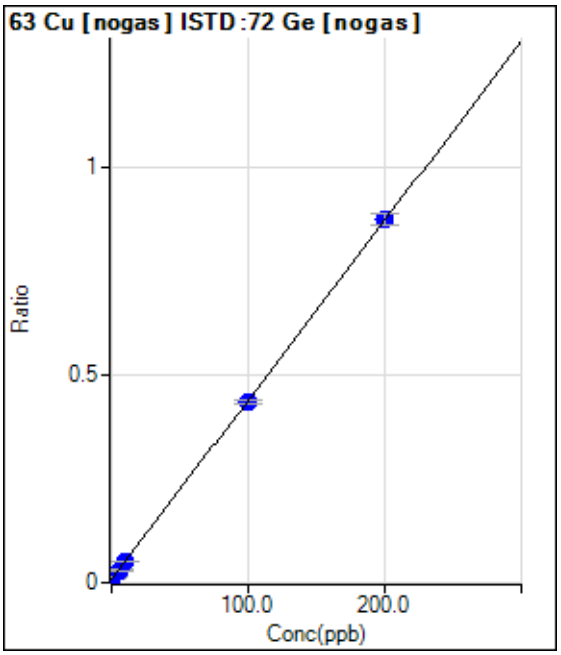


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.576	273.34	0.0025	P	26.1
2	☐	2.000	1.613	1596.76	0.0145	P	8.0
3	☐	5.000	4.540	3363.70	0.0307	P	1.1
4	☐	10.000	10.051	6688.01	0.0611	P	10.3
5	☐	100.000	102.719	61733.97	0.5720	P	1.9
6	☐	200.000	198.653	118574.08	1.1010	P	0.4
7	☐	1.000					

y = 0.0055 * x + 0.0056
R = 0.9999
DL = 0.3488
BEC = 1.022

Weight: <None>
Min Conc: <None>

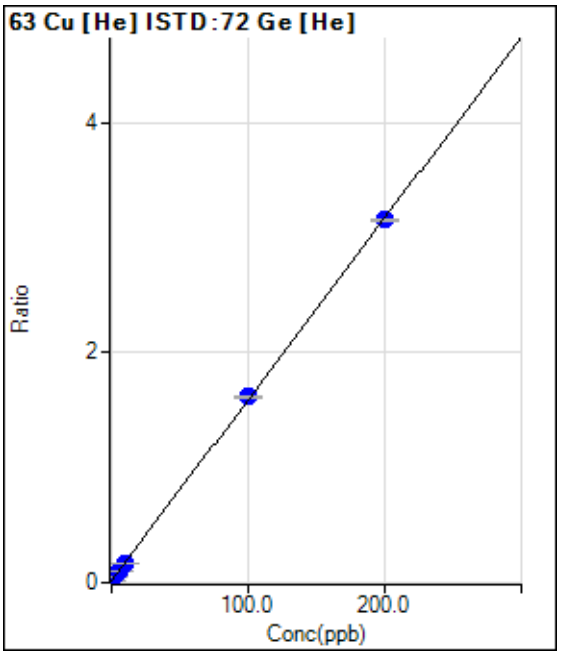
Calibration for 011_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	7865.19	0.0075	P	8.7
2	☐	2.000	2.044	17408.45	0.0164	P	2.1
3	☐	5.000	5.205	31216.85	0.0301	P	4.3
4	☐	10.000	10.115	55360.46	0.0513	P	1.9
5	☐	100.000	99.004	465081.89	0.4360	P	2.8
6	☐	200.000	200.487	914363.32	0.8753	P	3.1
7	☐	1.000					

y = 0.0043 * x + 0.0075
R = 1.0000
DL = 0.4536
BEC = 1.741

Weight: <None>
Min Conc: <None>

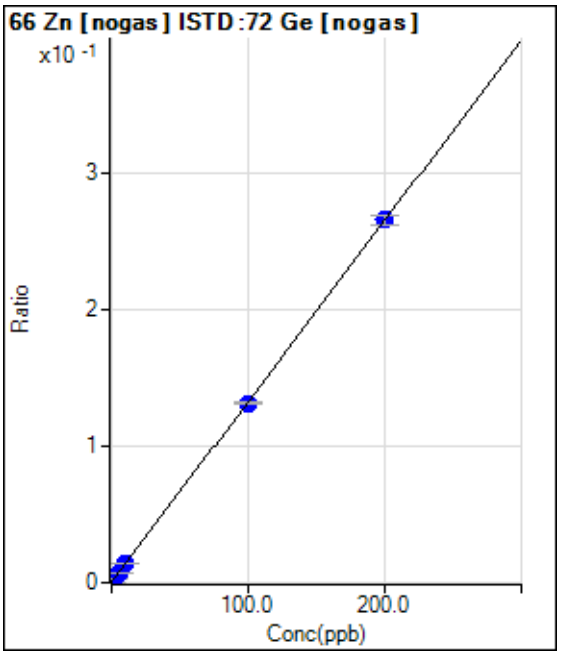


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.279	1480.09	0.0133	P	10.8
2	☐	2.000	1.823	5100.80	0.0464	P	1.4
3	☐	5.000	4.888	10383.09	0.0947	P	4.7
4	☐	10.000	9.728	18746.48	0.1709	P	3.3
5	☐	100.000	101.643	174726.63	1.6188	P	0.9
6	☐	200.000	199.197	339842.85	3.1554	P	0.8
7	☐	1.000					

y = 0.0158 * x + 0.0177
R = 0.9999
DL = 0.2725
BEC = 1.123

Weight: <None>
Min Conc: <None>

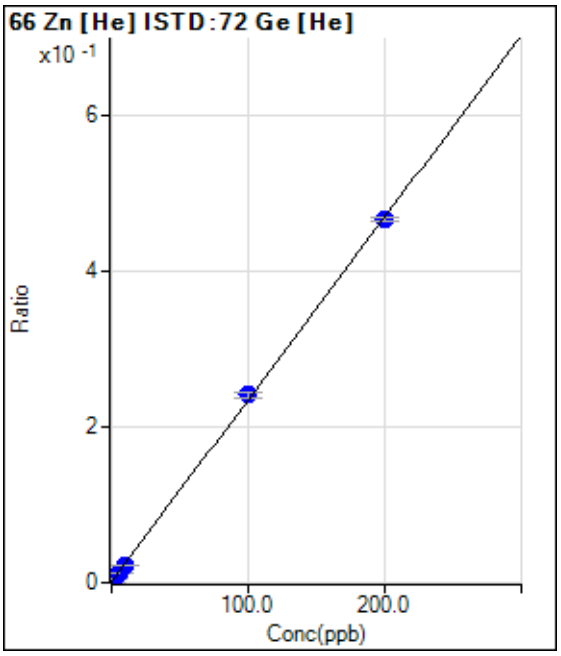
Calibration for 011_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.120	560.02	0.0005	P	20.2
2	☐	2.000	2.124	3393.70	0.0032	P	4.7
3	☐	5.000	5.313	7705.10	0.0074	P	3.3
4	☐	10.000	9.960	14649.38	0.0136	P	1.6
5	☐	100.000	98.981	140343.28	0.1315	P	0.7
6	☐	200.000	200.502	277981.43	0.2661	P	2.9
7	☐	1.000					

y = 0.0013 * x + 3.7684E-004
R = 1.0000
DL = 0.245
BEC = 0.2844

Weight: <None>
Min Conc: <None>

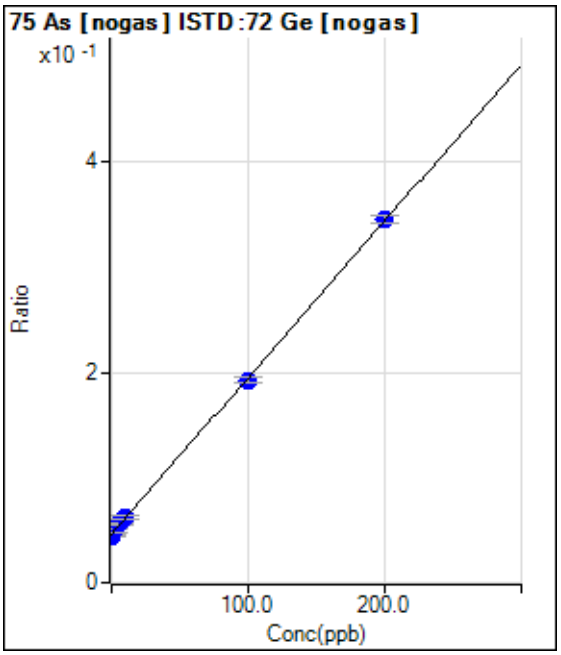


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.243	56.67	0.0005	P	54.6
2	☐	2.000	1.920	613.35	0.0056	P	6.0
3	☐	5.000	4.755	1340.07	0.0122	P	13.1
4	☐	10.000	9.151	2466.88	0.0225	P	6.1
5	☐	100.000	102.736	26085.80	0.2416	P	3.2
6	☐	200.000	198.681	50212.36	0.4663	P	1.2
7	☐	1.000					

y = 0.0023 * x + 0.0011
R = 0.9998
DL = 0.3588
BEC = 0.4624

Weight: <None>
Min Conc: <None>

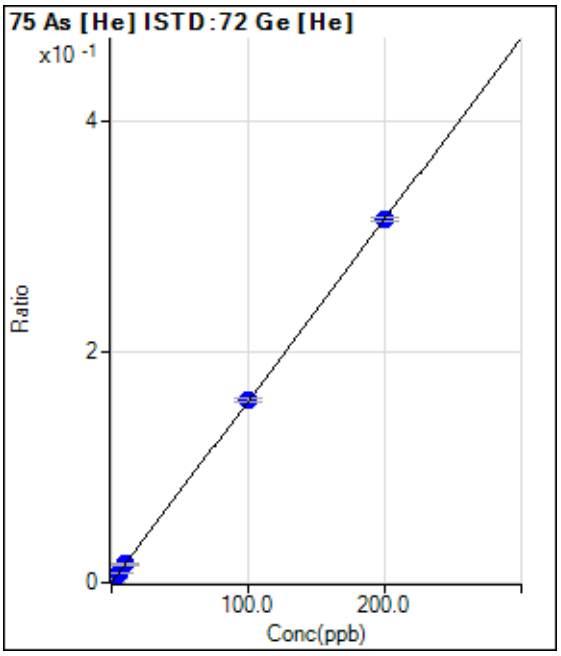
Calibration for 011_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-1.398	46151.92	0.0442	P	4.7
2	☐	2.000	1.735	51927.89	0.0489	P	7.6
3	☐	5.000	6.554	58239.63	0.0561	P	1.5
4	☐	10.000	10.964	67588.46	0.0626	P	4.5
5	☐	100.000	98.459	205671.46	0.1928	P	2.2
6	☐	200.000	200.686	360342.69	0.3449	P	2.2
7	☐	1.000					

y = 0.0015 * x + 0.0463
R = 0.9999
DL = 4.148
BEC = 31.12

Weight: <None>
Min Conc: <None>

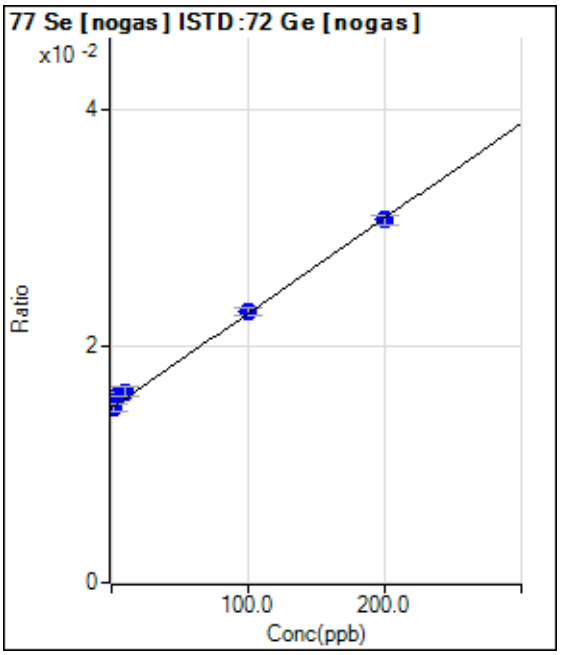


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	10.00	0.0001	P	34.6
2	☐	2.000	1.954	347.78	0.0032	P	11.2
3	☐	5.000	5.184	904.47	0.0082	P	9.8
4	☐	10.000	10.085	1747.87	0.0160	P	8.5
5	☐	100.000	100.315	17041.34	0.1579	P	2.0
6	☐	200.000	199.834	33858.13	0.3144	P	1.0
7	☐	1.000					

y = 0.0016 * x + 9.0472E-005
R = 1.0000
DL = 0.05977
BEC = 0.05752

Weight: <None>
Min Conc: <None>

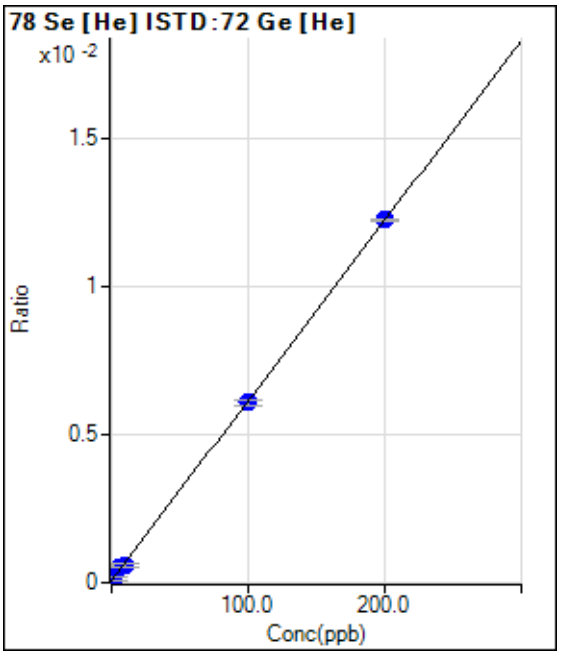
Calibration for 011_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	15430.14	0.0148	P	4.6
2	☐	2.000	0.889	15787.08	0.0149	P	3.9
3	☐	5.000	14.970	16611.12	0.0160	P	2.2
4	☐	10.000	17.251	17455.30	0.0162	P	4.4
5	☐	100.000	102.437	24553.48	0.0230	P	2.8
6	☐	200.000	198.181	32091.98	0.0307	P	2.8
7	☐	1.000					

y = 8.0373E-005 * x + 0.0148
R = 0.9985
DL = 25.52
BEC = 183.9

Weight: <None>
Min Conc: <None>

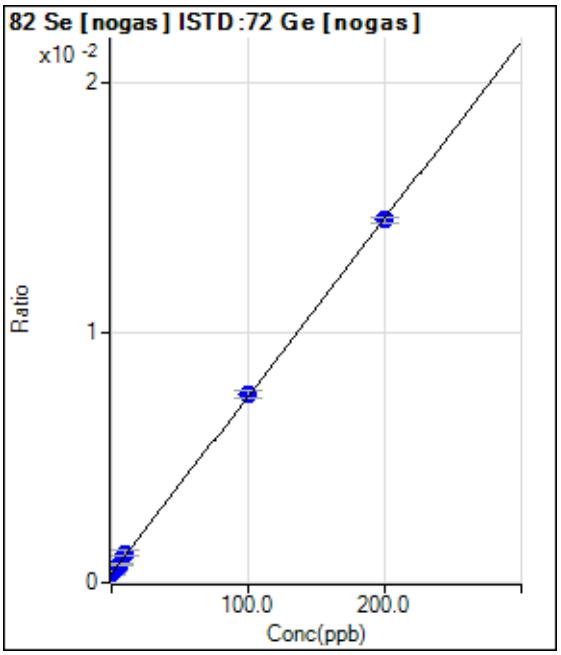


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.001	7.33	0.0001	P	57.1
2	☐	2.000	1.104	14.67	0.0001	P	110.
3	☐	5.000	7.911	60.00	0.0005	P	5.5
4	☐	10.000	8.430	63.33	0.0006	P	20.8
5	☐	100.000	99.079	657.34	0.0061	P	3.3
6	☐	200.000	200.475	1320.05	0.0123	P	0.7
7	☐	1.000					

y = 6.0811E-005 * x + 6.5916E-005
R = 0.9998
DL = 1.86
BEC = 1.084

Weight: <None>
Min Conc: <None>

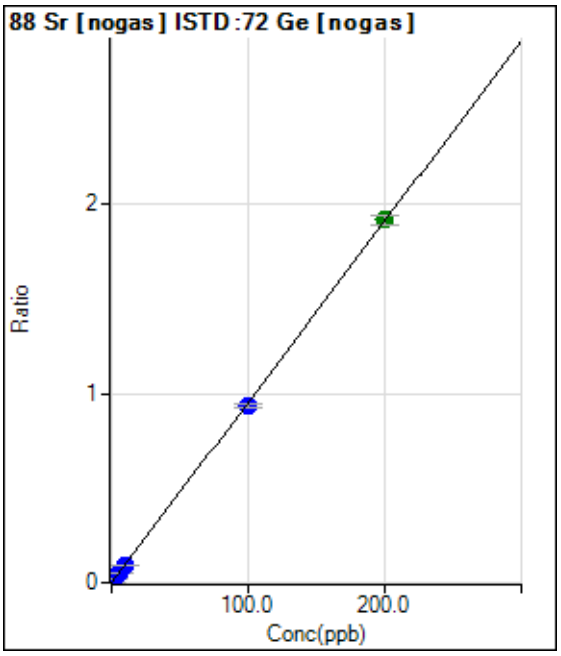
Calibration for 011_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	380.01	0.0004	P	13.8
2	☐	2.000	1.380	490.01	0.0005	P	15.5
3	☐	5.000	4.852	736.69	0.0007	P	13.3
4	☐	10.000	11.571	1280.07	0.0012	P	15.0
5	☐	100.000	101.065	8041.92	0.0075	P	3.5
6	☐	200.000	199.399	15169.96	0.0145	P	1.8
7	☐	1.000					

y = 7.0968E-005 * x + 3.6374E-004
R = 0.9999
DL = 2.115
BEC = 5.125

Weight: <None>
Min Conc: <None>

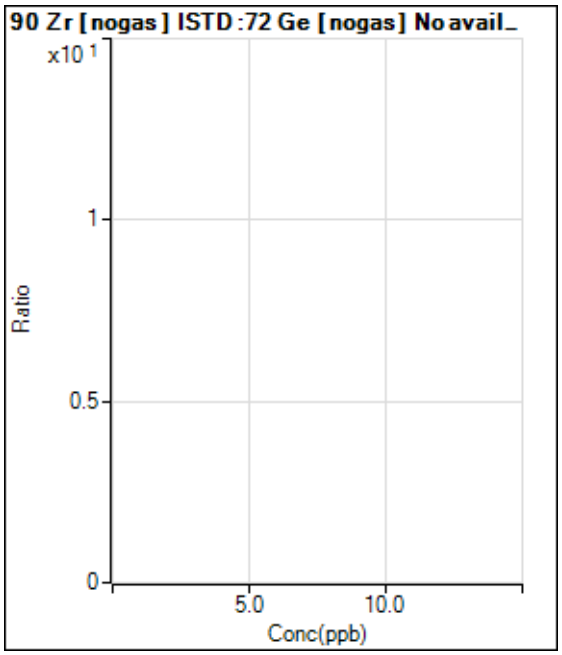


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	620.02	0.0006	P	11.5
2	☐	2.000	2.013	21032.65	0.0198	P	4.8
3	☐	5.000	5.023	50401.37	0.0485	P	2.0
4	☐	10.000	9.980	103377.22	0.0958	P	1.4
5	☐	100.000	98.077	998825.79	0.9364	P	2.0
6	☐	200.000	200.962	2003832.42	1.9181	A	2.9
7	☐	1.000					

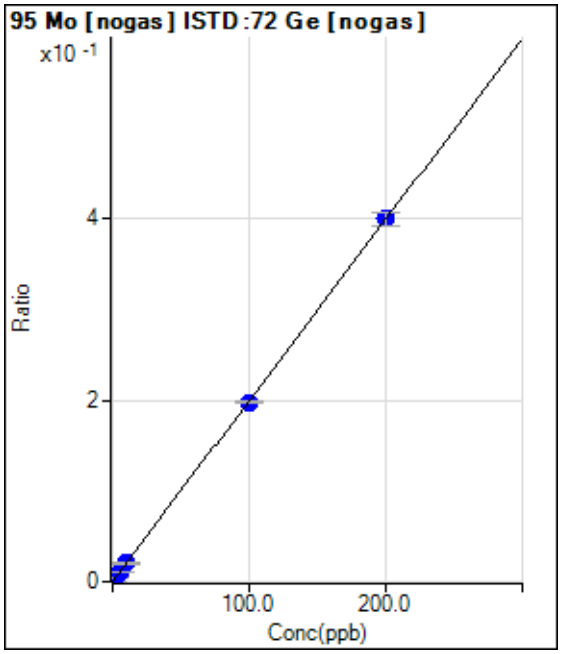
y = 0.0095 * x + 5.9441E-004
R = 0.9999
DL = 0.02152
BEC = 0.0623

Weight: <None>
Min Conc: <None>

Calibration for 011_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

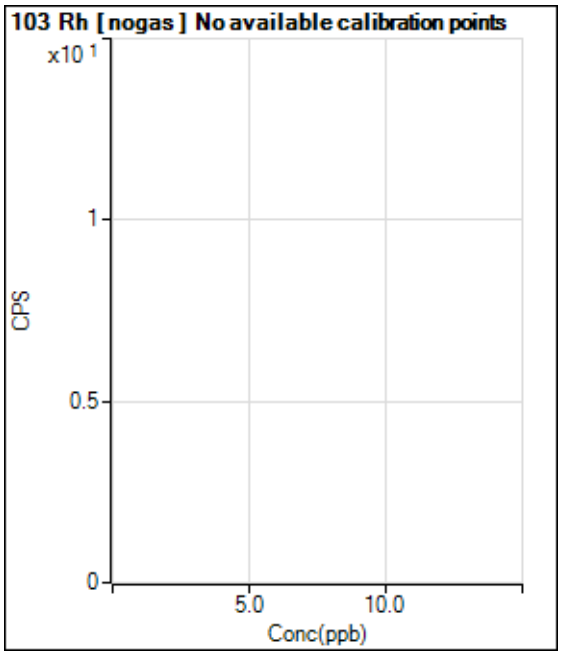


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	123.33	0.0001	P	31.7
2	☐	2.000	2.063	4493.99	0.0042	P	3.9
3	☐	5.000	5.162	10800.10	0.0104	P	5.3
4	☐	10.000	10.115	21860.62	0.0203	P	2.3
5	☐	100.000	98.979	210462.28	0.1972	P	0.8
6	☐	200.000	200.500	417238.59	0.3994	P	3.5
7	☐	1.000					

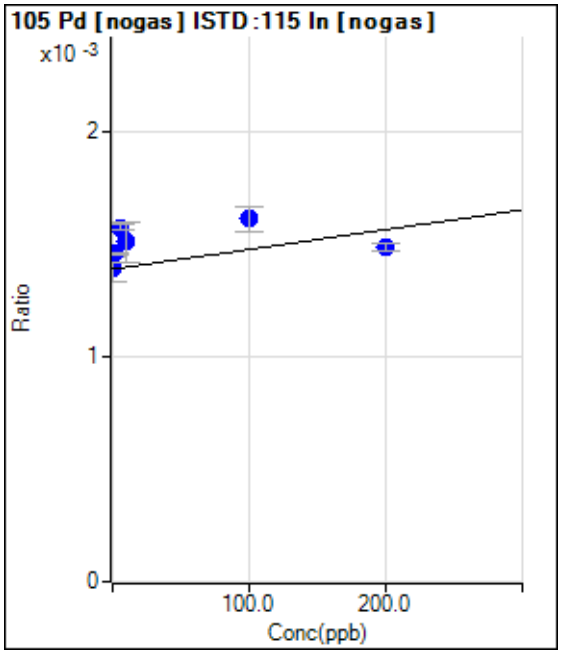
y = 0.0020 * x + 1.1792E-004
R = 1.0000
DL = 0.05638
BEC = 0.05921

Weight: <None>
Min Conc: <None>

Calibration for 011_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			160.00		P	18.8
2	☐			273.34		P	37.5
3	☐			243.34		P	28.0
4	☐			170.00		P	5.9
5	☐			156.67		P	22.4
6	☐			213.34		P	22.2
7	☐						

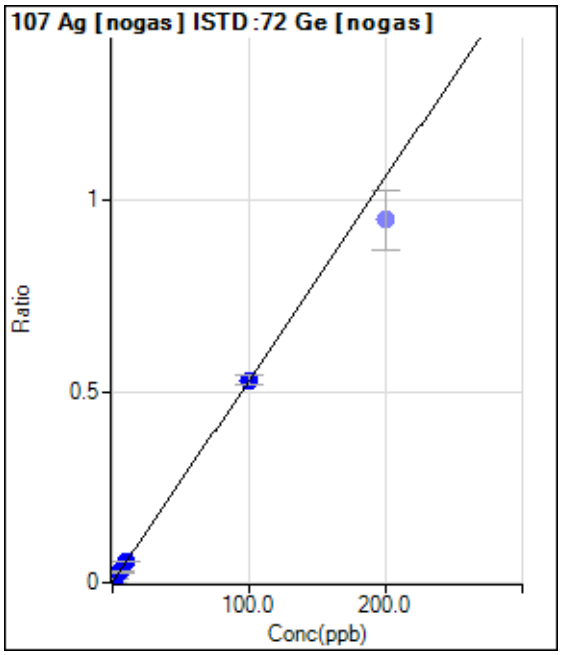


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1476.76	0.0014	P	7.5
2	☐	2.000	78.894	1586.77	0.0015	P	0.4
3	☐	5.000	211.992	1716.78	0.0016	P	2.0
4	☐	10.000	135.763	1643.45	0.0015	P	11.8
5	☐	100.000	253.836	1730.12	0.0016	P	7.2
6	☐	200.000	110.850	1593.43	0.0015	P	2.5
7	☐	1.000					

y = 8.7957E-007 * x + 0.0014
R = 0.2223
DL = 356.1
BEC = 1581

Weight: <None>
Min Conc: <None>

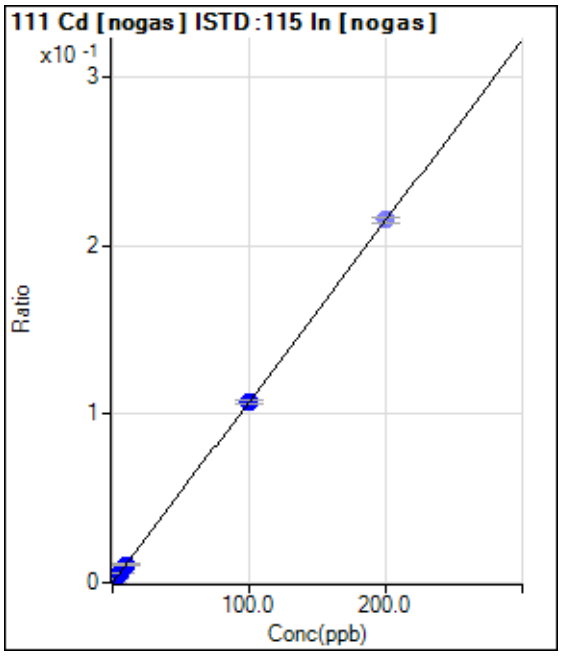
Calibration for 011_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	160.00	0.0002	P	27.4
2	☐	2.000	2.087	11900.88	0.0112	P	1.2
3	☐	5.000	5.263	29087.62	0.0280	P	3.1
4	☐	10.000	10.270	58825.10	0.0545	P	0.9
5	☐	100.000	99.958	564478.19	0.5293	P	4.5
6	☑	200.000		988949.21	0.9481	P	16.4
7	☐	1.000					

y = 0.0053 * x + 1.5330E-004
R = 1.0000
DL = 0.02378
BEC = 0.02896

Weight: <None>
Min Conc: <None>

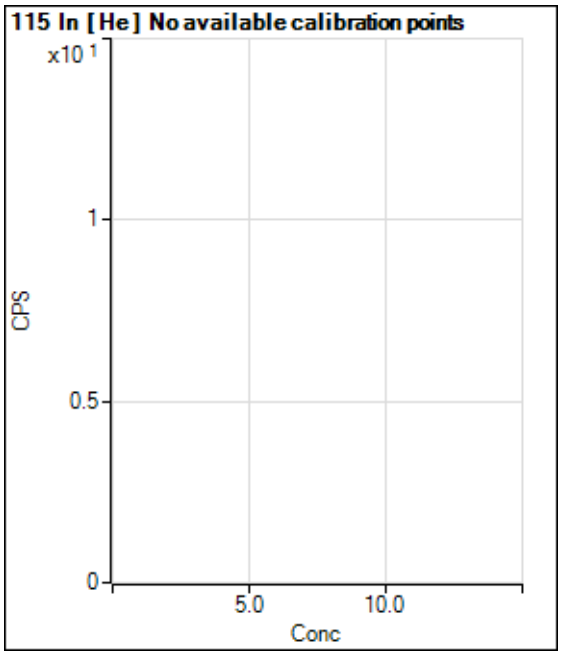


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6.67	0.0000	P	86.6
2	☐	2.000	1.911	2240.18	0.0021	P	10.6
3	☐	5.000	5.008	5867.73	0.0054	P	3.6
4	☐	10.000	10.087	11804.16	0.0108	P	1.2
5	☐	100.000	99.993	115290.92	0.1075	P	2.3
6	☑	200.000		230807.86	0.2156	P	1.8
7	☐	1.000					

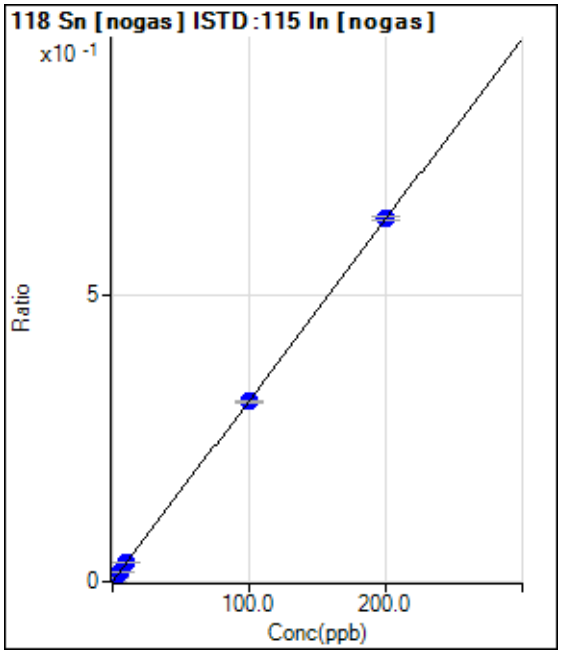
y = 0.0011 * x + 6.3359E-006
R = 1.0000
DL = 0.01532
BEC = 0.005895

Weight: <None>
Min Conc: <None>

Calibration for 011_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			132473.18		P	1.0
2	☐			133004.83		P	0.7
3	☐			133088.28		P	0.8
4	☐			132881.00		P	0.9
5	☐			127380.27		P	0.7
6	☐			126369.45		P	1.5
7	☐						

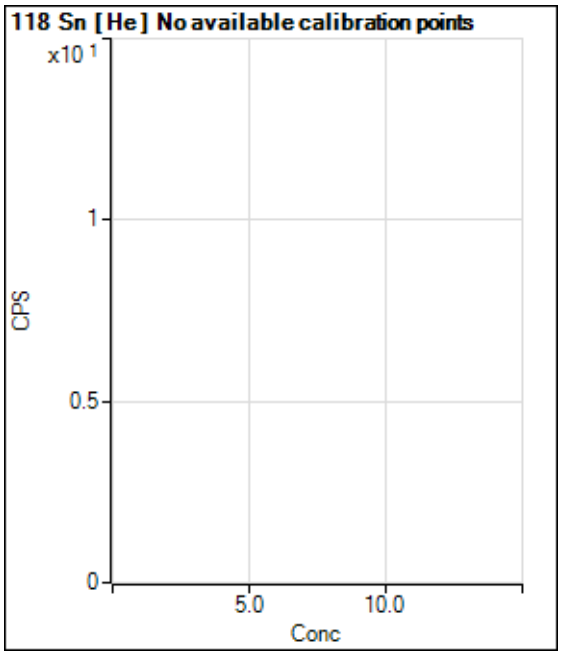


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	440.02	0.0004	P	38.5
2	☐	2.000	2.085	7591.81	0.0070	P	1.9
3	☐	5.000	5.016	17665.82	0.0162	P	5.4
4	☐	10.000	10.145	35246.01	0.0324	P	2.8
5	☐	100.000	99.335	336222.46	0.3135	P	0.5
6	☐	200.000	200.324	676406.08	0.6318	P	1.1
7	☐	1.000					

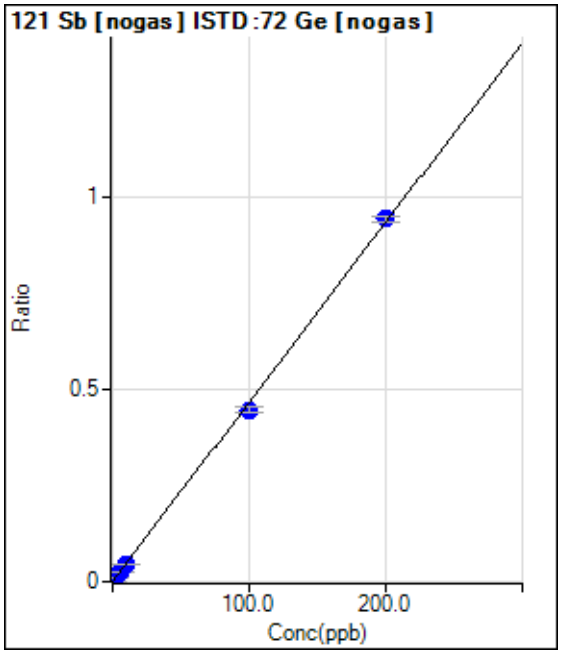
y = 0.0032 * x + 4.1622E-004
R = 1.0000
DL = 0.1525
BEC = 0.1321

Weight: <None>
Min Conc: <None>

Calibration for 011_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			73.33		P	20.8
2	☐			1156.73		P	13.5
3	☐			3040.32		P	7.0
4	☐			5854.43		P	5.7
5	☐			56839.43		P	3.4
6	☐			112873.00		P	1.4
7	☐						

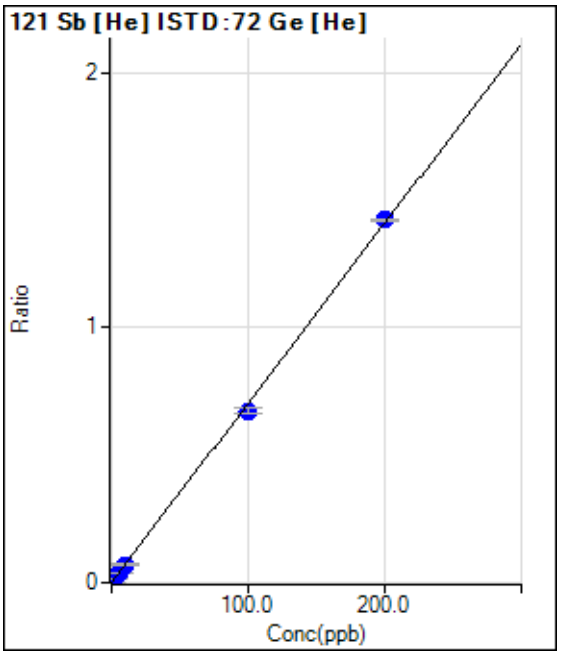


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	490.02	0.0005	P	17.2
2	☐	2.000	1.981	10313.24	0.0097	P	3.0
3	☐	5.000	4.953	24467.46	0.0236	P	1.7
4	☐	10.000	9.613	48848.69	0.0453	P	2.5
5	☐	100.000	95.779	476806.50	0.4469	P	2.9
6	☐	200.000	202.131	984959.26	0.9427	P	1.8
7	☐	1.000					

y = 0.0047 * x + 4.6909E-004
R = 0.9997
DL = 0.05204
BEC = 0.1006

Weight: <None>
Min Conc: <None>

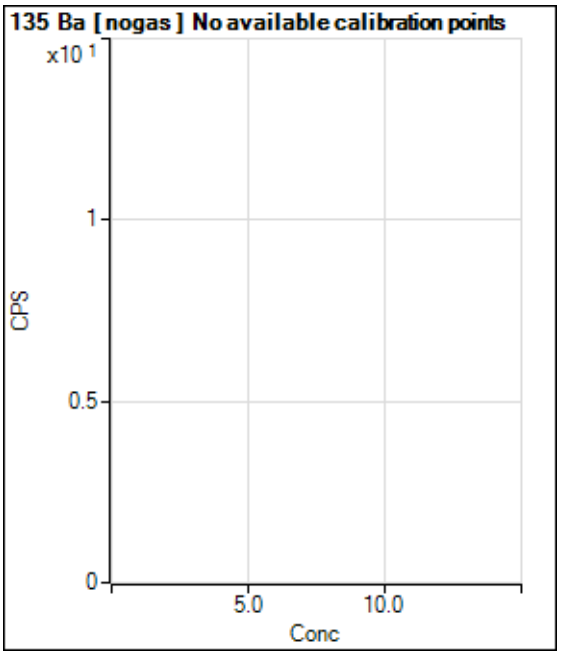
Calibration for 011_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	40.00	0.0004	P	49.9
2	☐	2.000	1.965	1560.10	0.0142	P	14.6
3	☐	5.000	5.022	3917.18	0.0357	P	5.6
4	☐	10.000	10.069	7818.55	0.0713	P	4.7
5	☐	100.000	95.822	72848.63	0.6750	P	3.0
6	☐	200.000	202.085	153258.63	1.4232	P	0.5
7	☐	1.000					

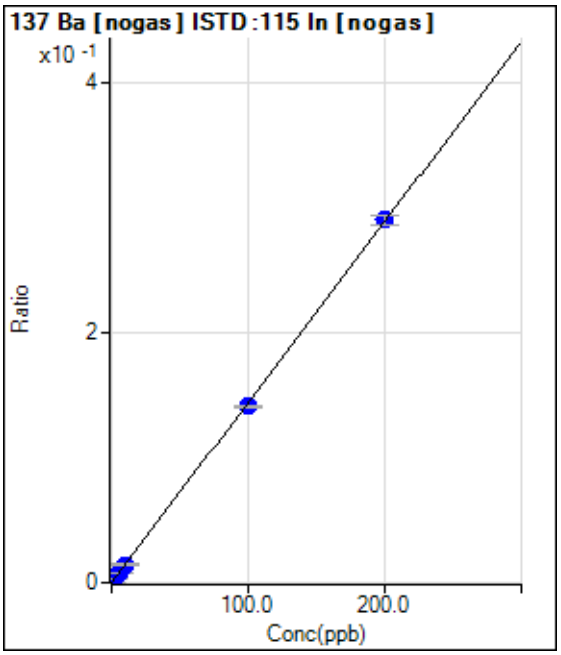
y = 0.0070 * x + 3.5895E-004
R = 0.9997
DL = 0.07633
BEC = 0.05098

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			50.00		P	34.6
2	☐			1806.79		P	8.7
3	☐			4727.40		P	5.1
4	☐			9182.61		P	4.8
5	☐			90550.64		P	2.8
6	☐			178286.79		P	2.3
7	☐						

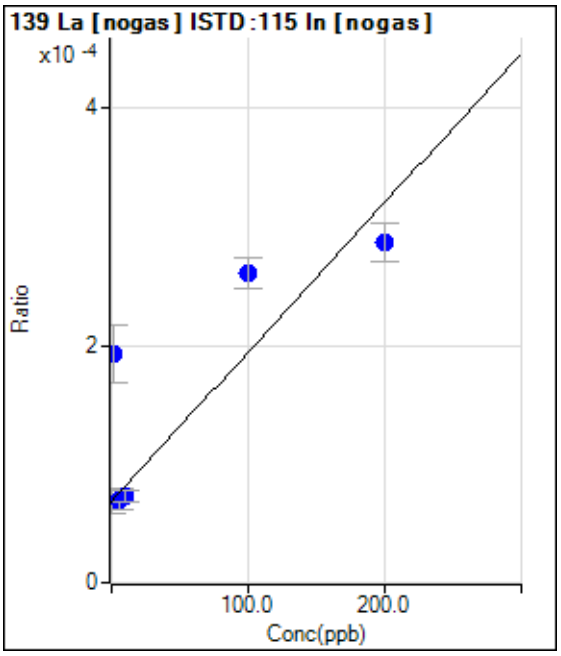
Calibration for 011_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	106.67	0.0001	P	29.0
2	☐	2.000	1.885	3063.68	0.0028	P	10.7
3	☐	5.000	5.278	8392.19	0.0077	P	2.9
4	☐	10.000	9.944	15710.66	0.0144	P	4.4
5	☐	100.000	97.885	151453.93	0.1412	P	1.1
6	☐	200.000	201.055	310467.70	0.2900	P	2.8
7	☐	1.000					

y = 0.0014 * x + 1.0074E-004
R = 0.9999
DL = 0.06087
BEC = 0.06987

Weight: <None>
Min Conc: <None>

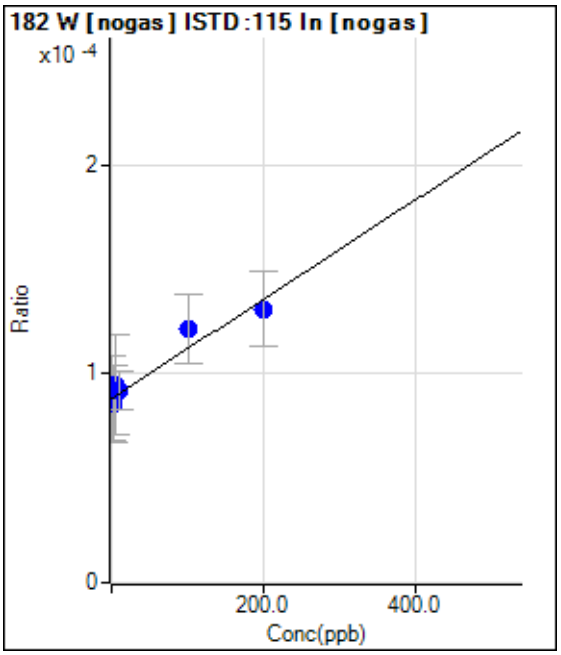


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	73.33	0.0001	P	32.4
2	☐	2.000	98.672	210.00	0.0002	P	25.7
3	☐	5.000	1.309	76.67	0.0001	P	26.6
4	☐	10.000	3.816	80.00	0.0001	P	12.6
5	☐	100.000	152.641	280.01	0.0003	P	9.7
6	☐	200.000	173.114	306.68	0.0003	P	11.1
7	☐	100.000					

y = 1.2592E-006 * x + 6.8724E-005
R = 0.8359
DL = 53.11
BEC = 54.58

Weight: <None>
Min Conc: <None>

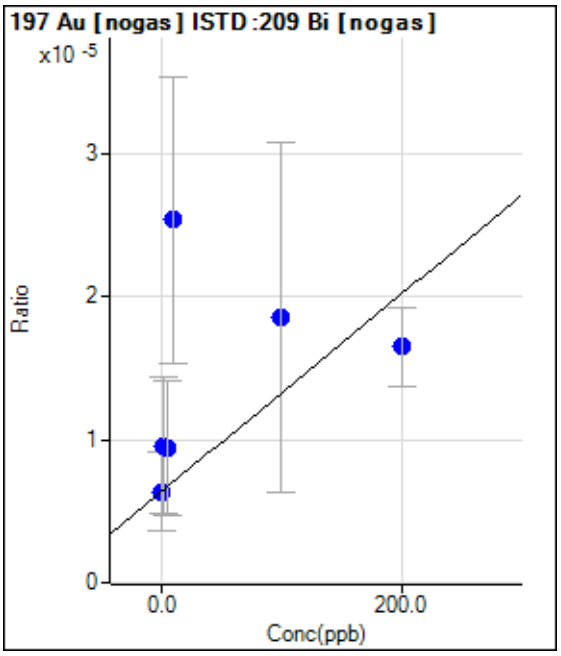
Calibration for 011_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	93.34	0.0001	P	46.5
2	☐	2.000	-10.858	93.33	0.0001	P	42.3
3	☐	5.000	28.158	103.33	0.0001	P	49.9
4	☐	10.000	15.205	100.00	0.0001	P	19.8
5	☐	100.000	139.000	130.00	0.0001	P	27.2
6	☐	200.000	179.789	140.00	0.0001	P	27.1
7	☐	1.000					

y = 2.3824E-007 * x + 8.8261E-005
R = 0.9626
DL = 516.3
BEC = 370.5

Weight: <None>
Min Conc: <None>

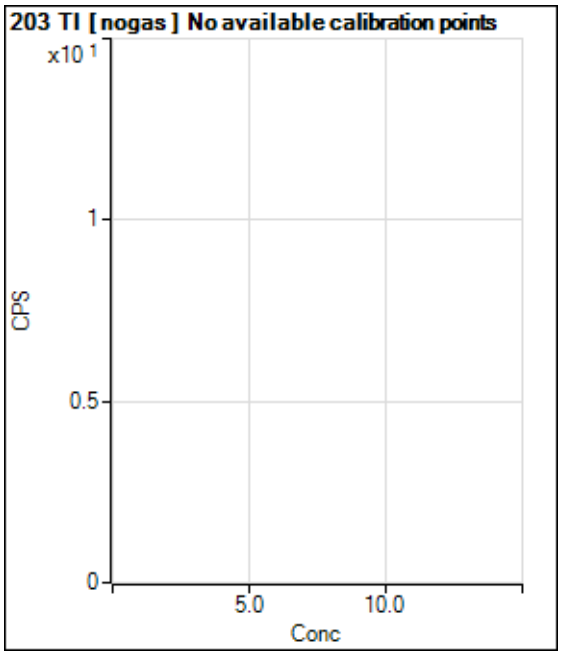


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6.67	0.0000	P	86.6
2	☐	2.000	46.793	10.00	0.0000	P	99.8
3	☐	5.000	44.487	10.00	0.0000	P	99.0
4	☐	10.000	275.158	26.67	0.0000	P	79.2
5	☐	100.000	177.256	20.00	0.0000	P	131.
6	☐	200.000	146.679	16.67	0.0000	P	33.8
7	☐	100.000					

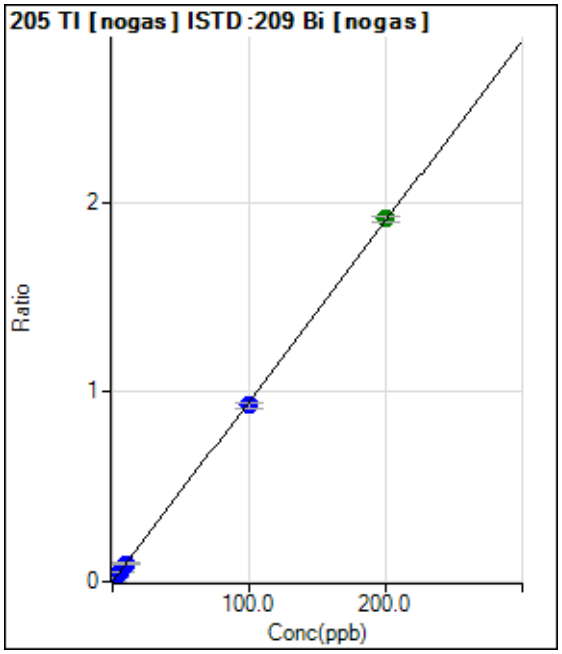
y = 6.8988E-008 * x + 6.3776E-006
R = 0.3235
DL = 240.2
BEC = 92.45

Weight: <None>
Min Conc: <None>

Calibration for 011_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			86.67		P	24.0
2	☐			8539.00		P	1.1
3	☐			21157.27		P	4.5
4	☐			42238.04		P	3.9
5	☐			423582.11		P	0.6
6	☐			830329.44		P	0.2
7	☐						

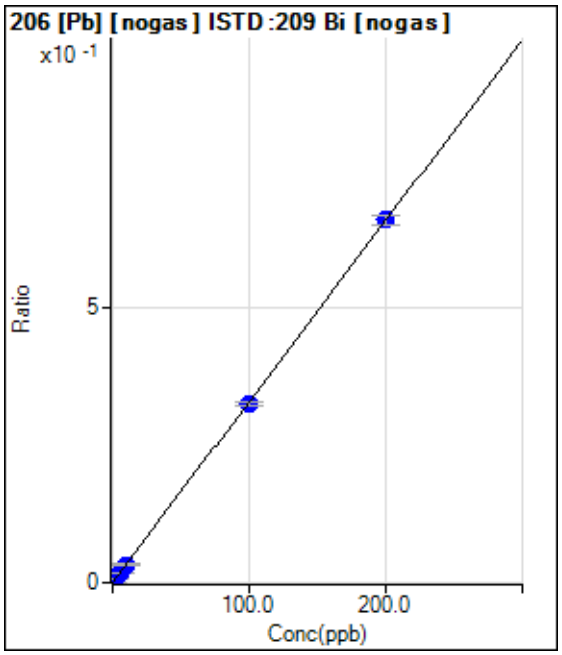


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	240.00	0.0002	P	30.0
2	☐	2.000	1.942	19808.87	0.0187	P	4.6
3	☐	5.000	4.963	49552.51	0.0475	P	4.6
4	☐	10.000	9.962	99892.21	0.0950	P	5.8
5	☐	100.000	97.670	984134.44	0.9298	P	2.5
6	☐	200.000	201.169	1929905.34	1.9148	A	1.8
7	☐	1.000					

y = 0.0095 * x + 2.3053E-004
R = 0.9999
DL = 0.02178
BEC = 0.02422

Weight: <None>
Min Conc: <None>

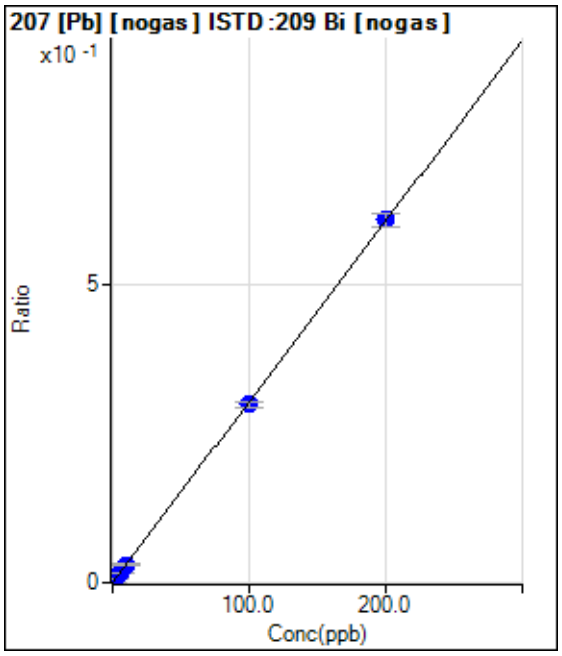
Calibration for 011_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	290.01	0.0003	P	12.9
2	☐	2.000	1.939	7041.63	0.0067	P	6.6
3	☐	5.000	5.038	17583.06	0.0168	P	4.8
4	☐	10.000	9.890	34470.16	0.0328	P	6.2
5	☐	100.000	98.926	344621.66	0.3256	P	2.4
6	☐	200.000	200.542	664983.77	0.6597	P	2.9
7	☐	1.000					

y = 0.0033 * x + 2.7791E-004
R = 1.0000
DL = 0.03266
BEC = 0.08452

Weight: <None>
Min Conc: <None>

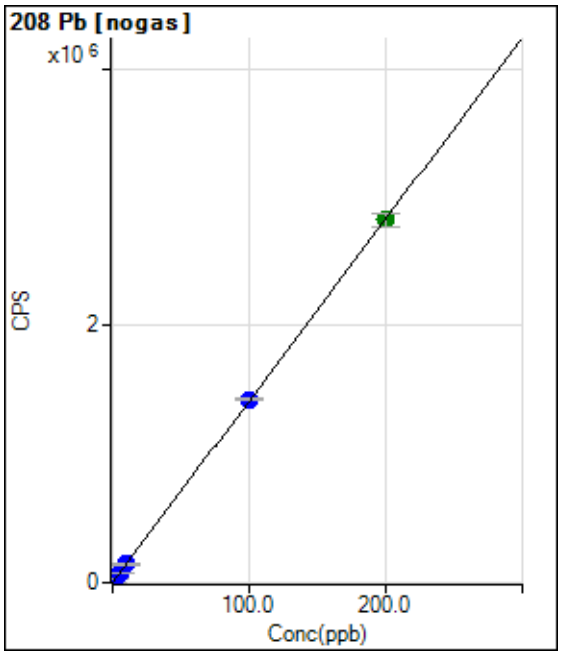


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	210.00	0.0002	P	3.9
2	☐	2.000	1.941	6441.38	0.0061	P	9.3
3	☐	5.000	5.000	16034.83	0.0154	P	1.6
4	☐	10.000	9.840	31560.90	0.0300	P	5.4
5	☐	100.000	98.508	316172.87	0.2987	P	3.4
6	☐	200.000	200.754	613498.02	0.6086	P	3.7
7	☐	1.000					

y = 0.0030 * x + 2.0135E-004
R = 1.0000
DL = 0.007806
BEC = 0.06644

Weight: <None>
Min Conc: <None>

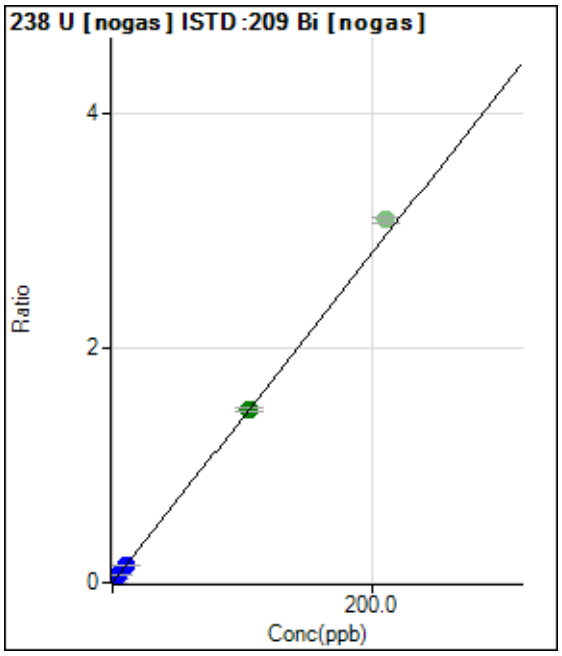
Calibration for 011_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1100.03		P	4.5
2	☐	2.000	1.970	28957.32		P	4.1
3	☐	5.000	5.039	72348.09		P	1.7
4	☐	10.000	10.036	142990.11		P	1.5
5	☐	100.000	100.679	1424513.27		P	1.2
6	☐	200.000	199.658	2823882.29		A	4.0
7	☐	1.000					

y = 14138.0963 * x + 1100.0333
R = 1.0000
DL = 0.01061
BEC = 0.07781

Weight: <None>
Min Conc: <None>

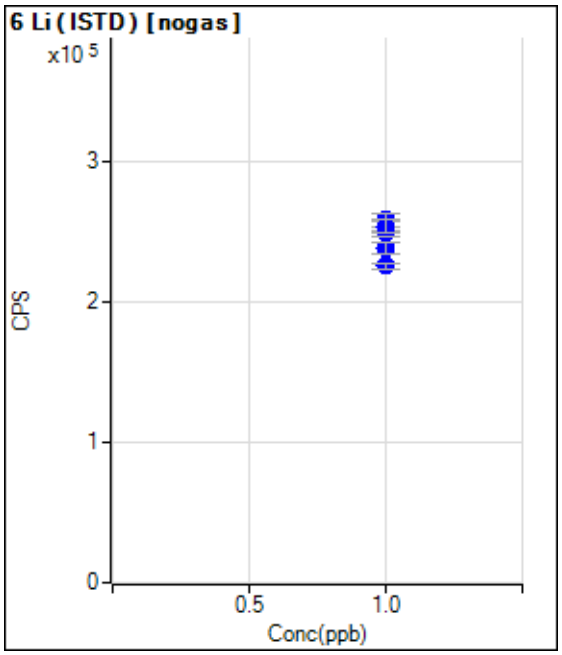


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	233.34	0.0002	P	10.0
2	☐	2.000	2.043	30689.93	0.0290	P	6.7
3	☐	5.000	5.117	75506.11	0.0723	P	2.0
4	☐	10.000	10.235	151895.40	0.1444	P	2.1
5	☐	105.000	104.971	1565413.36	1.4787	A	1.8
6	☑	210.000		3121500.27	3.0976	A	1.5
7	☐	1.000					

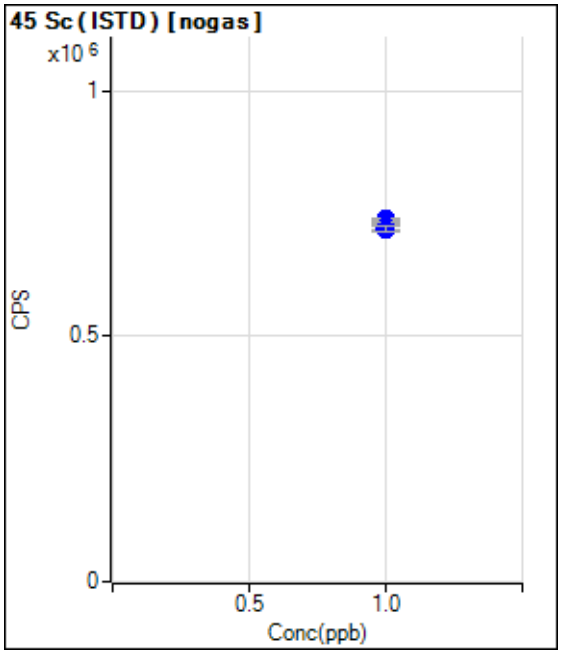
y = 0.0141 * x + 2.2394E-004
R = 1.0000
DL = 0.004754
BEC = 0.0159

Weight: <None>
Min Conc: <None>

Calibration for 011_ICV.d

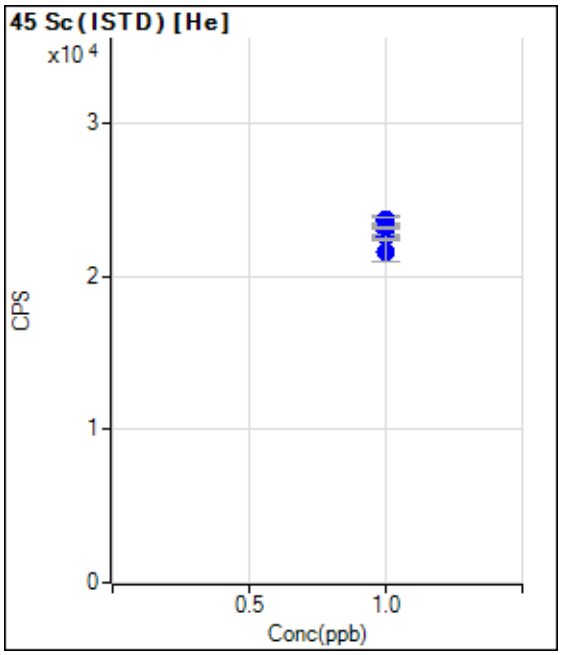


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		249248.85		P	1.6
2	☐	1.000		258478.41		P	3.8
3	☐	1.000		253420.89		P	2.9
4	☐	1.000		254078.76		P	4.0
5	☐	1.000		237795.68		P	3.4
6	☐	1.000		225679.61		P	2.1
7	☐	1.000					

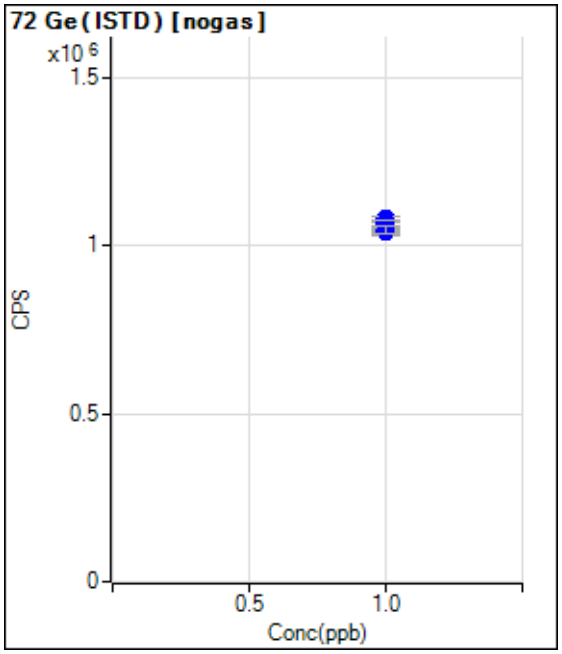


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		717729.10		P	1.7
2	☐	1.000		719742.33		P	2.4
3	☐	1.000		721637.43		P	1.1
4	☐	1.000		738503.95		P	0.7
5	☐	1.000		723495.48		P	2.0
6	☐	1.000		717670.61		P	1.9
7	☐	1.000					

Calibration for 011_ICV.d

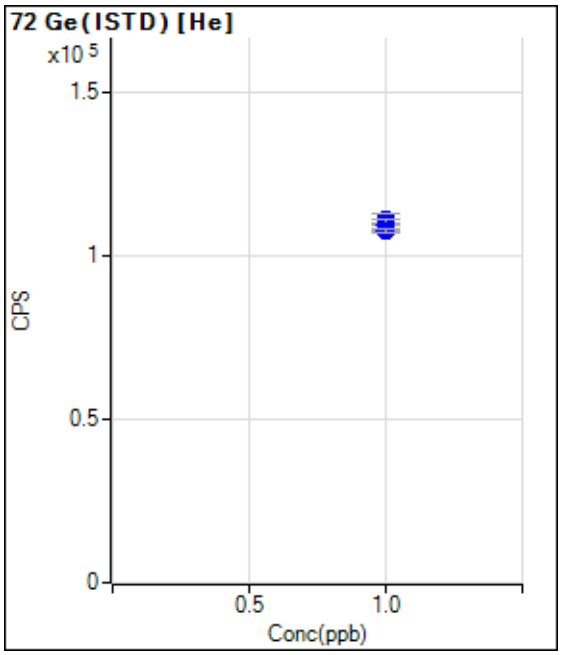


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		23038.01		P	3.6
2	☐	1.000		23695.36		P	2.3
3	☐	1.000		22654.15		P	1.4
4	☐	1.000		23722.22		P	1.8
5	☐	1.000		21686.28		P	6.4
6	☐	1.000		23224.80		P	0.7
7	☐	1.000					

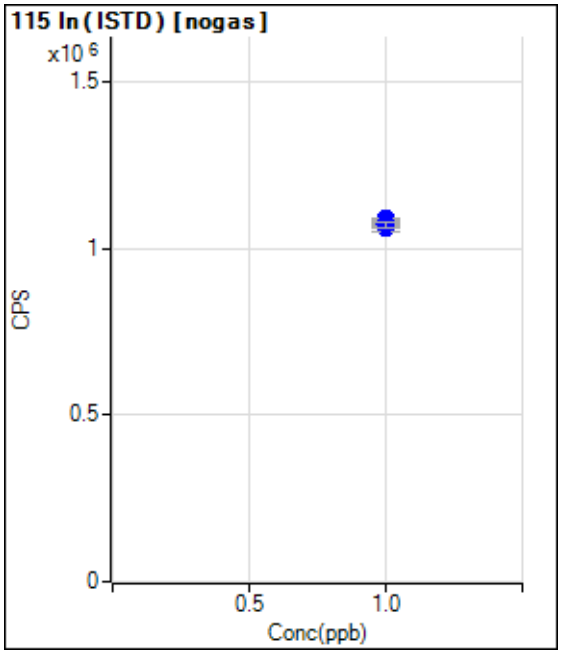


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1043848.19		P	1.0
2	☐	1.000		1062782.67		P	1.5
3	☐	1.000		1038808.55		P	2.1
4	☐	1.000		1078982.80		P	1.4
5	☐	1.000		1066973.14		P	2.0
6	☐	1.000		1045063.84		P	2.0
7	☐	1.000					

Calibration for 011_ICV.d

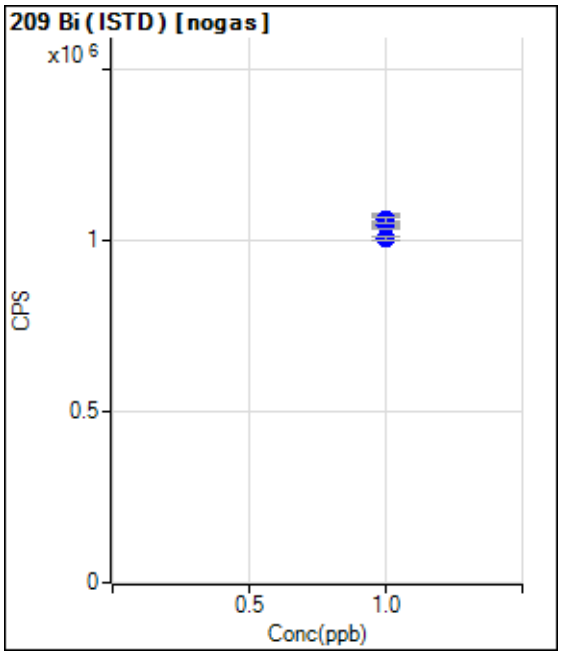


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		111067.84		P	3.1
2	☐	1.000		109923.88		P	0.4
3	☐	1.000		109683.78		P	0.5
4	☐	1.000		109695.95		P	2.3
5	☐	1.000		107933.18		P	0.9
6	☐	1.000		107694.55		P	1.5
7	☐	1.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1062571.90		P	2.0
2	☐	1.000		1086715.00		P	0.9
3	☐	1.000		1088555.14		P	0.5
4	☐	1.000		1088074.33		P	0.3
5	☐	1.000		1072463.16		P	1.1
6	☐	1.000		1070701.76		P	1.7
7	☐	1.000					

Calibration for 011_ICV.d



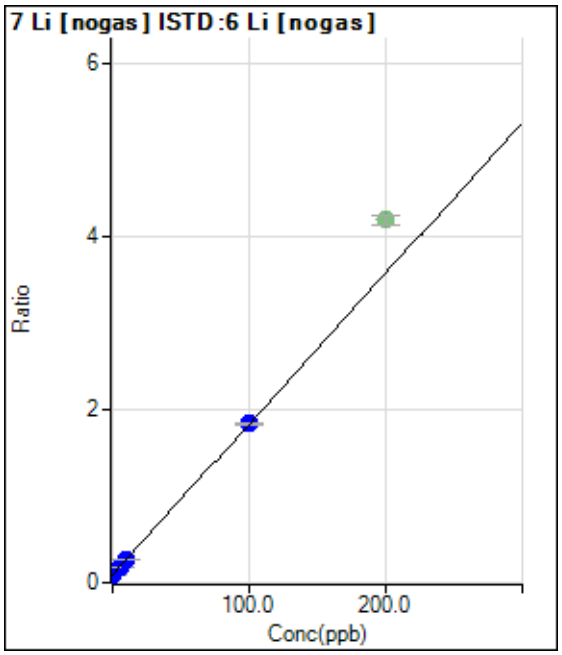
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1042757.59		P	1.1
2	☐	1.000		1059605.74		P	3.2
3	☐	1.000		1044437.15		P	2.1
4	☐	1.000		1052512.95		P	3.6
5	☐	1.000		1058754.02		P	1.8
6	☐	1.000		1007751.86		P	1.2
7	☐	1.000					

Calibration for 119_ICV.d

Batch Folder: C:\Agilent\ICPMH\1\DATA\010318A.b\
Analysis File: 010318A.batch.bin
DA Date-Time: 2018-01-03 21:45:27
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	113CALB.d	CAL BLK	2018-01-03 14:43:08
2	114CALS.d	2/10/200	2018-01-03 14:45:08
3	115CALS.d	5/25/500	2018-01-03 14:47:08
4	116CALS.d	10/50/1000	2018-01-03 14:49:08
5	117CALS.d	100/500/10K	2018-01-03 14:51:05
6	118CALS.d	200/1000/20K	2018-01-03 14:53:04
7			

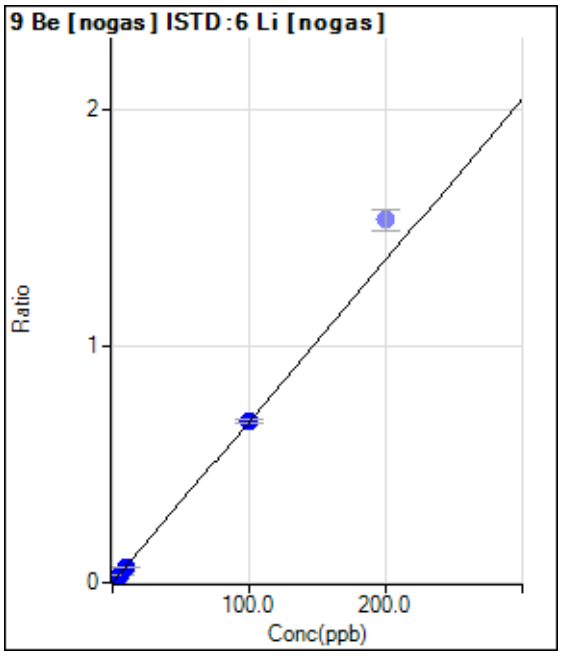
Calibration for 119_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	29984.19	0.0925	P	2.2
2	☐	2.000	1.959	40494.47	0.1267	P	1.3
3	☐	5.000	4.977	58885.71	0.1793	P	3.3
4	☐	10.000	9.868	86756.90	0.2646	P	3.2
5	☐	100.000	100.015	570719.78	1.8371	P	1.3
6	☑	200.000		1182914.67	4.1972	A	2.8
7	☐	1.000					

y = 0.0174 * x + 0.0925
R = 1.0000
DL = 0.3475
BEC = 5.303

Weight: <None>
Min Conc: <None>

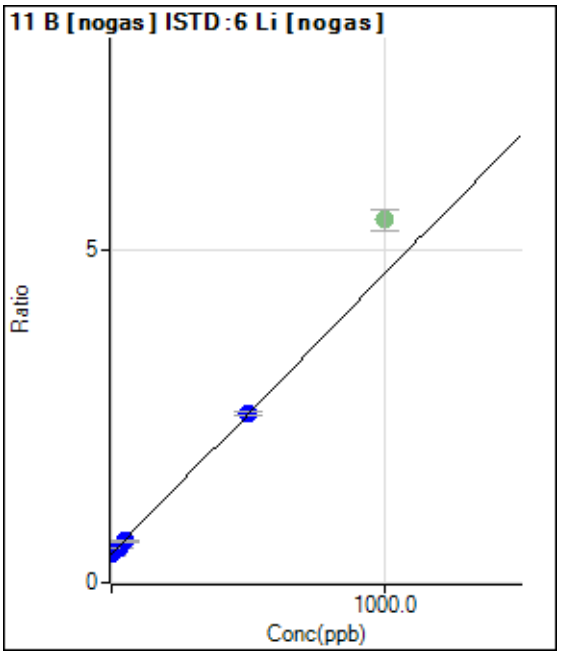


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	30.00	0.0001	P	62.9
2	☐	2.000	1.861	4077.18	0.0128	P	8.8
3	☐	5.000	4.836	10846.64	0.0331	P	4.9
4	☐	10.000	9.691	21685.94	0.0662	P	1.9
5	☐	100.000	100.042	211774.61	0.6821	P	3.3
6	☑	200.000		432070.56	1.5340	P	5.7
7	☐	1.000					

y = 0.0068 * x + 9.0687E-005
R = 1.0000
DL = 0.02509
BEC = 0.0133

Weight: <None>
Min Conc: <None>

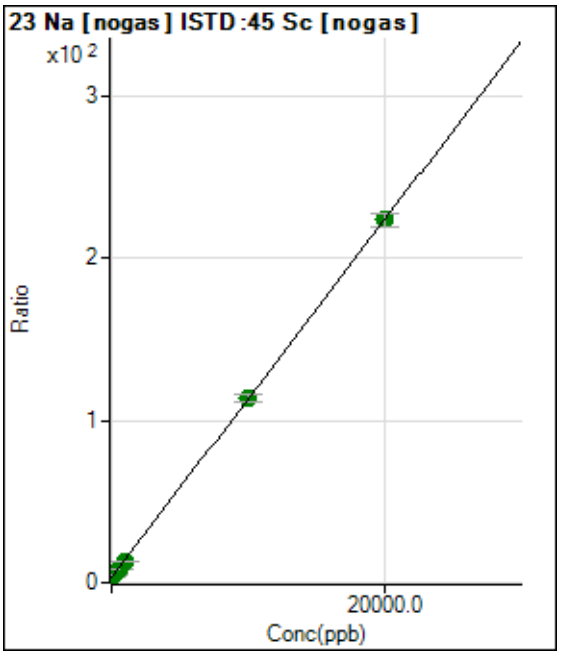
Calibration for 119_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	141360.79	0.4371	P	8.8
2	☐	10.000	8.132	150500.31	0.4712	P	4.8
3	☐	25.000	18.614	169106.97	0.5152	P	1.4
4	☐	50.000	44.809	204907.74	0.6250	P	3.5
5	☐	500.000	500.876	788098.58	2.5382	P	3.4
6	☑	1000.000		1533040.71	5.4422	A	6.0
7	☐	5.000					

y = 0.0042 * x + 0.4371
R = 0.9999
DL = 27.36
BEC = 104.2

Weight: <None>
Min Conc: <None>

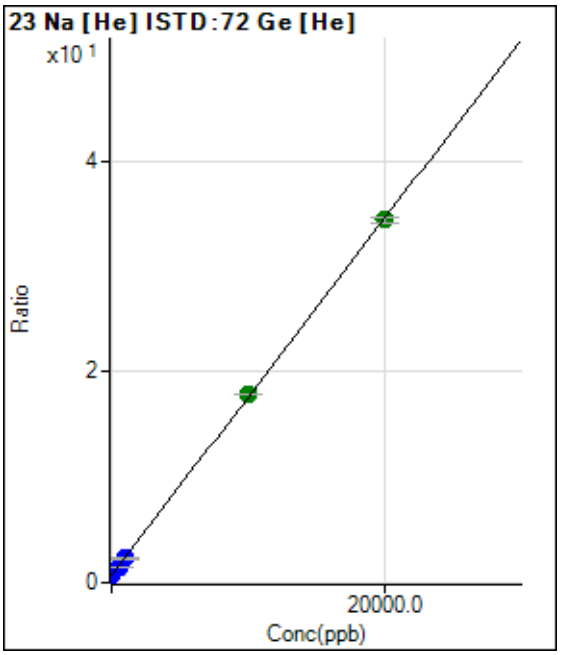


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2522938.66	3.1971	A	5.2
2	☐	200.000	163.944	4178508.82	5.0051	A	3.0
3	☐	500.000	424.189	6615153.40	7.8753	A	2.1
4	☐	1000.000	914.651	11178741.40	13.2844	A	1.4
5	☐	10000.00	10006.429	92489799.98	113.553	A	4.1
6	☐	20000.00	20003.309	182495583.2	223.805	A	3.6
7	☐	100.000					

y = 0.0110 * x + 3.1971
R = 1.0000
DL = 45.3
BEC = 289.9

Weight: <None>
Min Conc: <None>

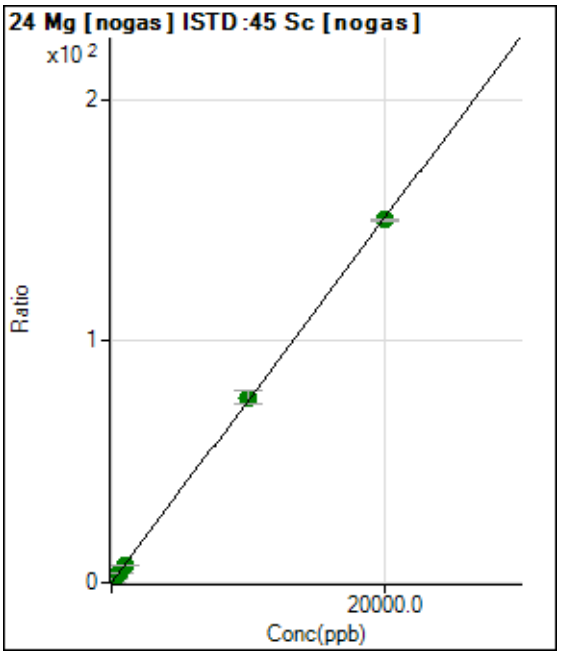
Calibration for 119_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	85156.28	0.6930	P	0.7
2	☐	200.000	196.095	124097.17	1.0253	P	2.1
3	☐	500.000	462.980	182983.26	1.4774	P	2.7
4	☐	1000.000	971.448	285926.58	2.3389	P	6.9
5	☐	10000.00	10153.863	2160334.40	17.8962	A	0.8
6	☐	20000.00	19925.461	4100406.40	34.4516	A	1.3
7	☐	100.000					

y = 0.0017 * x + 0.6930
R = 1.0000
DL = 8.512
BEC = 409

Weight: <None>
Min Conc: <None>

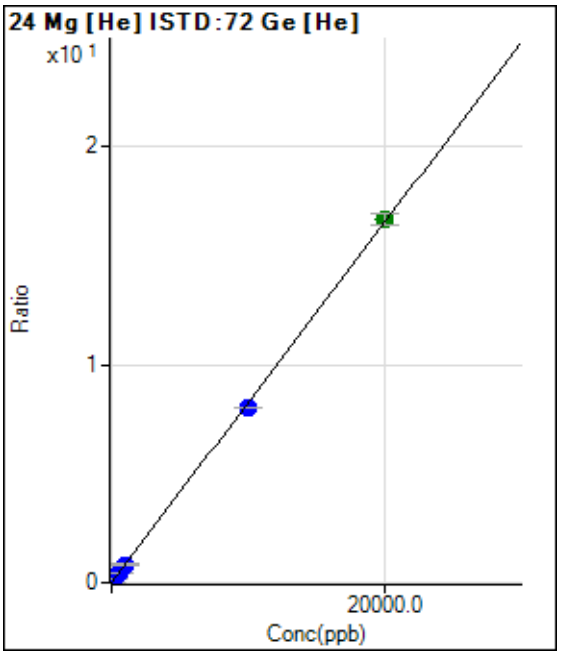


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	10705.12	0.0135	P	11.2
2	☐	200.000	203.912	1295647.75	1.5524	A	4.7
3	☐	500.000	490.004	3117492.84	3.7115	A	2.6
4	☐	1000.000	981.520	6244880.87	7.4209	A	2.1
5	☐	10000.00	10173.673	62479380.57	76.7924	A	7.0
6	☐	20000.00	19914.298	122628719.4	150.303	A	0.5
7	☐	100.000					

y = 0.0075 * x + 0.0135
R = 0.9999
DL = 0.5985
BEC = 1.788

Weight: <None>
Min Conc: <None>

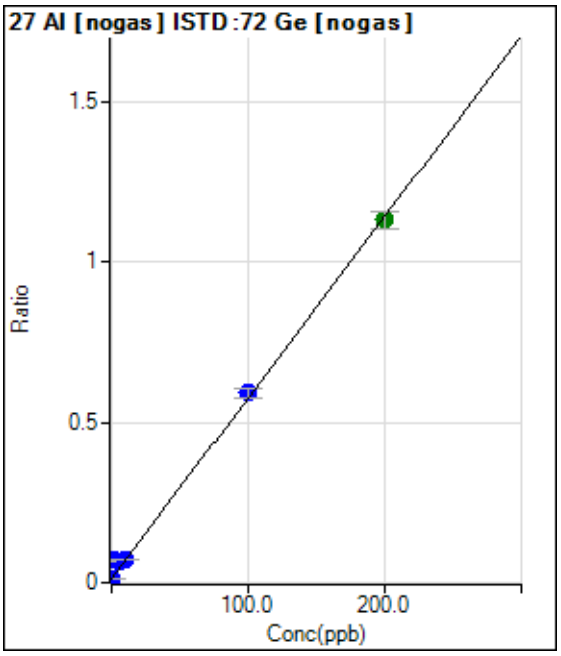
Calibration for 119_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	336.68	0.0027	P	18.9
2	☐	200.000	203.556	20694.99	0.1710	P	4.7
3	☐	500.000	492.032	50704.89	0.4095	P	5.1
4	☐	1000.000	998.261	101197.68	0.8280	P	8.7
5	☐	10000.00	9717.883	970140.79	8.0365	P	0.8
6	☐	20000.00	20141.309	1981921.01	16.6535	A	3.2
7	☐	100.000					

y = 8.2670E-004 * x + 0.0027
R = 0.9999
DL = 1.877
BEC = 3.314

Weight: <None>
Min Conc: <None>

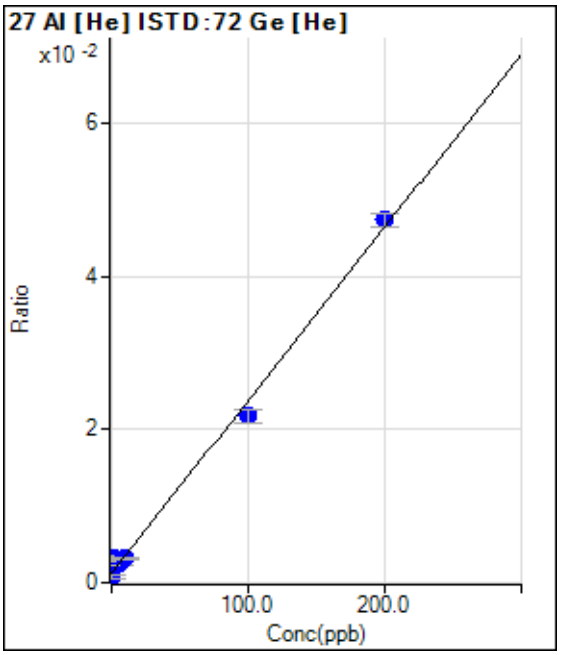


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	15283.18	0.0123	P	2.5
2	☐	2.000	10.095	87306.41	0.0692	P	3.8
3	☐	5.000	9.949	85720.90	0.0684	P	2.5
4	☐	10.000	10.317	90977.37	0.0704	P	4.0
5	☐	100.000	102.846	729781.71	0.5921	P	5.2
6	☐	200.000	198.357	1437428.05	1.1305	A	4.8
7	☐	1.000					

y = 0.0056 * x + 0.0123
R = 0.9993
DL = 0.1655
BEC = 2.176

Weight: <None>
Min Conc: <None>

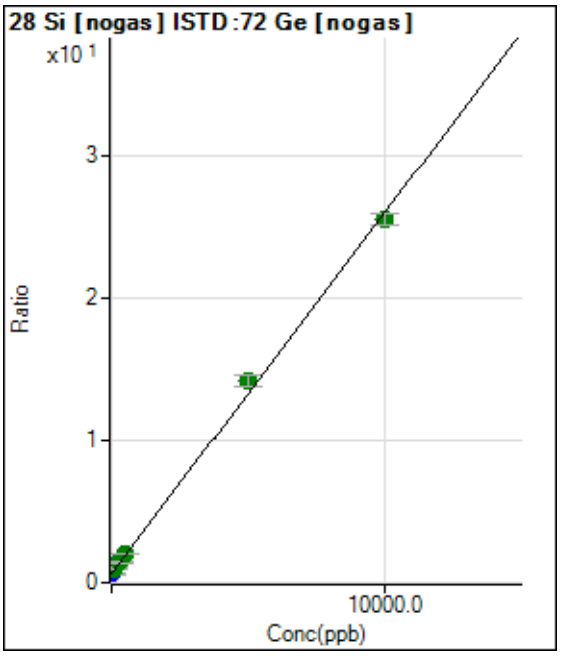
Calibration for 119_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-2.527	80.00	0.0007	P	82.2
2	☐	2.000	9.195	400.01	0.0033	P	9.5
3	☐	5.000	6.089	323.34	0.0026	P	21.2
4	☐	10.000	8.693	390.01	0.0032	P	6.6
5	☐	100.000	91.167	2633.57	0.0218	P	7.7
6	☐	200.000	204.383	5644.29	0.0474	P	3.6
7	☐	1.000					

y = 2.2602E-004 * x + 0.0012
R = 0.9976
DL = 7.11
BEC = 5.41

Weight: <None>
Min Conc: <None>

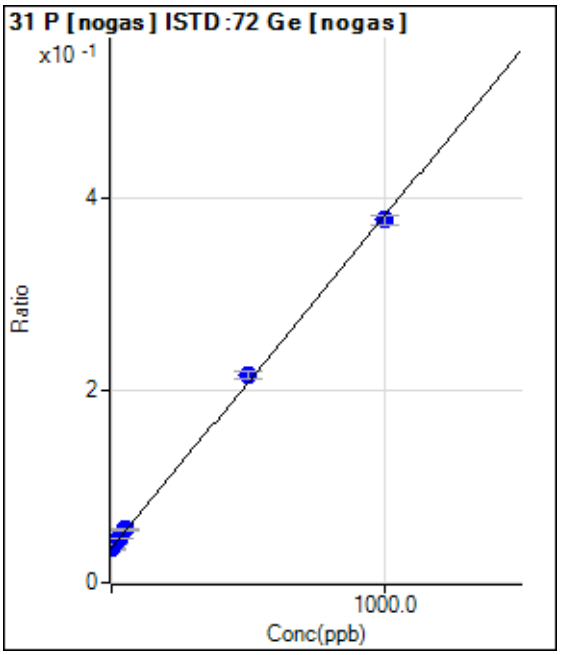


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	766220.35	0.6163	P	6.4
2	☐	100.000	155.134	1273930.87	1.0090	A	2.6
3	☐	250.000	317.752	1781707.21	1.4207	A	2.0
4	☐	500.000	562.101	2634454.75	2.0393	A	2.7
5	☐	5000.000	5365.256	17496710.99	14.1985	A	6.1
6	☐	10000.00	9812.022	32372524.52	25.4555	A	3.3
7	☐	5.000					

y = 0.0025 * x + 0.6163
R = 0.9991
DL = 47.07
BEC = 243.5

Weight: <None>
Min Conc: <None>

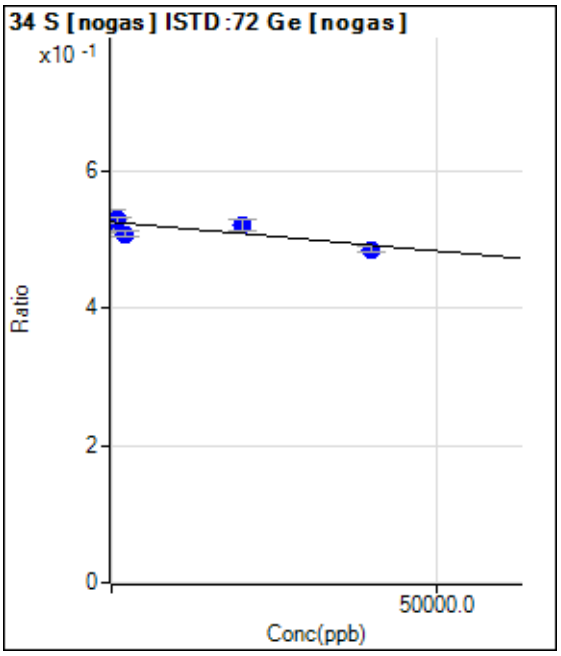
Calibration for 119_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	44626.36	0.0359	P	5.9
2	☐	10.000	14.460	51547.20	0.0409	P	7.1
3	☐	25.000	29.322	57708.41	0.0460	P	2.5
4	☐	50.000	56.282	71485.28	0.0553	P	2.6
5	☐	500.000	522.737	266819.82	0.2164	P	4.1
6	☐	1000.000	988.165	479728.21	0.3772	P	2.3
7	☐	5.000					

y = 3.4539E-004 * x + 0.0359
R = 0.9997
DL = 18.39
BEC = 103.9

Weight: <None>
Min Conc: <None>

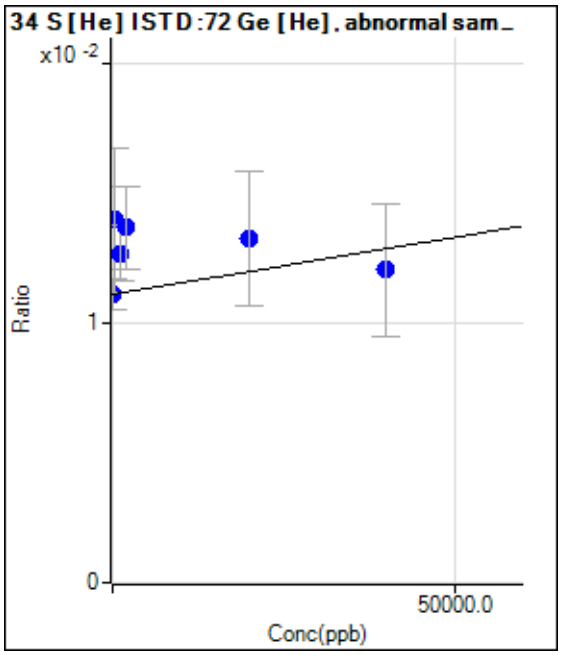


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	654513.77	0.5264	P	6.4
2	☐	400.000	5888.873	658182.26	0.5215	P	3.6
3	☐	1000.000	-3406.740	663994.91	0.5293	P	1.3
4	☐	2000.000	20334.917	657903.12	0.5092	P	2.1
5	☐	20000.00	4128.498	644797.88	0.5229	P	3.1
6	☐	40000.00	47074.285	618811.93	0.4866	P	2.0
7	☐	100.000					

y = -8.4726E-007 * x + 0.5264
R = -0.7934
DL = -1.187E+05
BEC = -6.213E+05

Weight: <None>
Min Conc: <None>

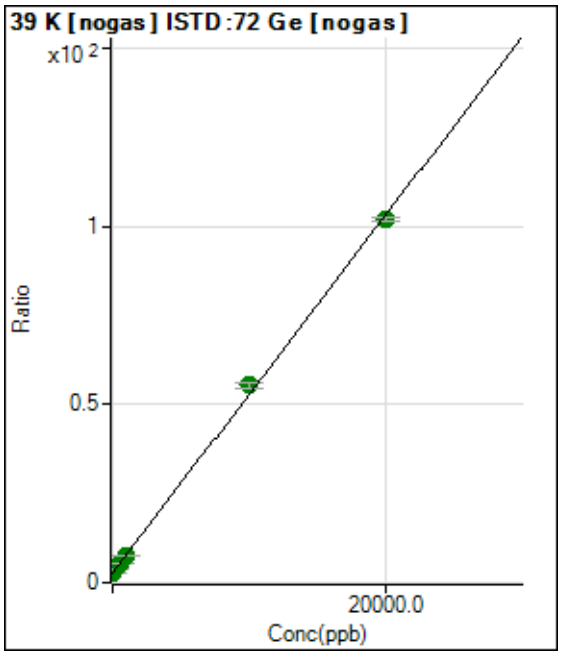
Calibration for 119_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1366.96	0.0111	P	10.9
2	☐	400.000	65282.333	1700.41	0.0140	P	39.7
3	☐	1000.000	35569.844	1567.06	0.0127	P	17.0
4	☐	2000.000	58591.040	1667.07	0.0137	P	23.1
5	☐	20000.00	48971.090	1600.46	0.0133	P	39.5
6	☐	40000.00	21171.833	1433.69	0.0121	P	42.7
7	☐	100.000					

y = 4.3889E-008 * x + 0.0111
R = -0.2095
DL = 8.289E+04
BEC = 2.534E+05

Weight: <None>
Min Conc: <None>

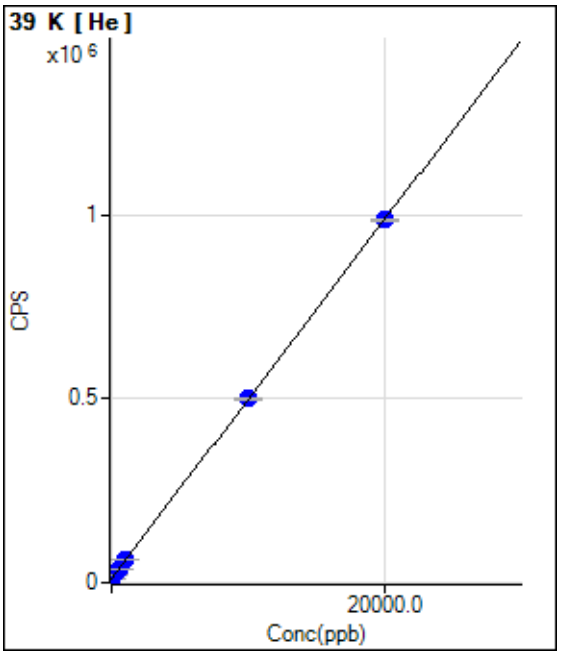


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3367236.93	2.7082	A	6.2
2	☐	200.000	204.761	4711397.50	3.7349	A	5.3
3	☐	500.000	520.303	6668595.98	5.3170	A	1.4
4	☐	1000.000	1002.896	9995717.67	7.7367	A	1.9
5	☐	10000.00	10499.785	68267539.03	55.3536	A	2.8
6	☐	20000.00	19749.407	129402090.3	101.730	A	0.9
7	☐	100.000					

y = 0.0050 * x + 2.7082
R = 0.9996
DL = 100.2
BEC = 540.1

Weight: <None>
Min Conc: <None>

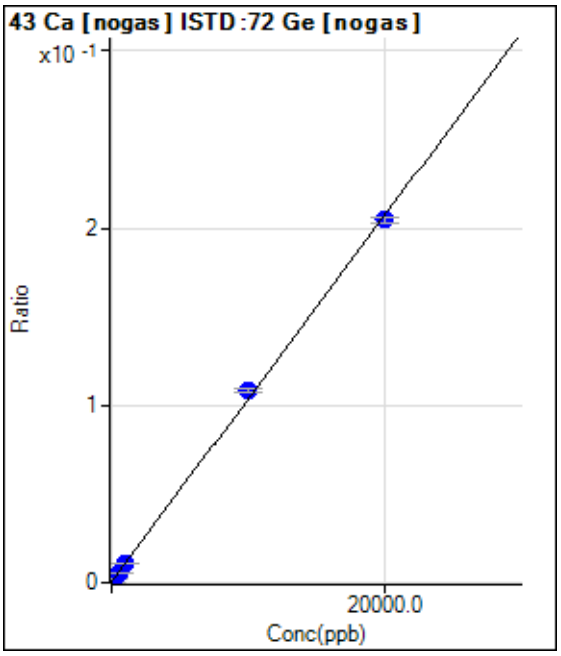
Calibration for 119_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	10823.26		P	3.3
2	☐	200.000	224.189	21762.94		P	2.0
3	☐	500.000	534.399	36900.13		P	1.9
4	☐	1000.000	1045.545	61842.34		P	1.8
5	☐	10000.00	10014.526	499498.38		P	1.6
6	☐	20000.00	19989.358	986236.60		P	0.8
7	☐	100.000					

y = 48.7966 * x + 10823.2600
R = 1.0000
DL = 22.2
BEC = 221.8

Weight: <None>
Min Conc: <None>

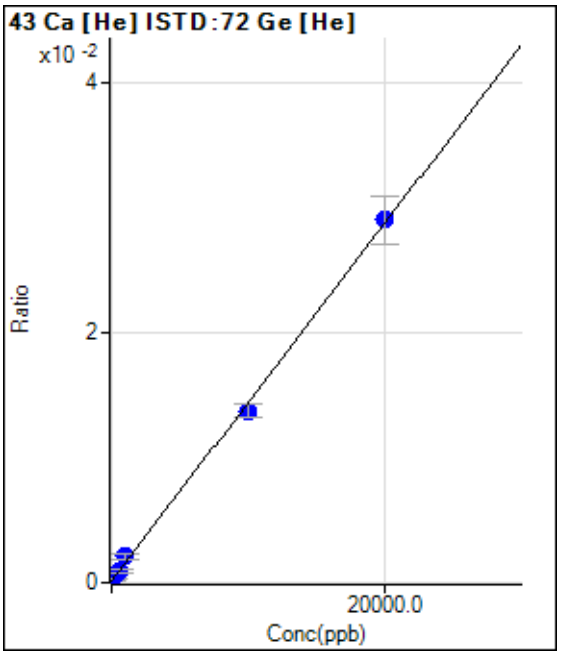


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	553.36	0.0004	P	3.6
2	☐	200.000	214.038	3343.70	0.0027	P	11.8
3	☐	500.000	497.648	7004.77	0.0056	P	2.7
4	☐	1000.000	1009.886	14048.95	0.0109	P	1.8
5	☐	10000.00	10457.133	133791.75	0.1085	P	1.4
6	☐	20000.00	19770.858	260312.43	0.2047	P	1.8
7	☐	100.000					

y = 1.0330E-005 * x + 4.4354E-004
R = 0.9996
DL = 4.7
BEC = 42.94

Weight: <None>
Min Conc: <None>

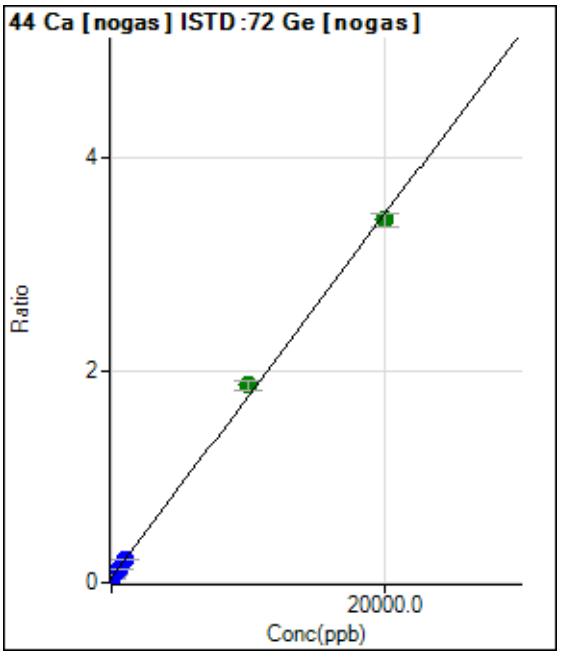
Calibration for 119_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	16.67	0.0001	P	34.5
2	☐	200.000	192.784	50.00	0.0004	P	70.9
3	☐	500.000	549.512	113.33	0.0009	P	38.3
4	☐	1000.000	1411.294	263.34	0.0022	P	21.4
5	☐	10000.00	9532.613	1663.44	0.0138	P	7.7
6	☐	20000.00	20211.963	3457.06	0.0290	P	13.1
7	☐	100.000					

y = 1.4304E-006 * x + 1.3556E-004
R = 0.9994
DL = 97.98
BEC = 94.77

Weight: <None>
Min Conc: <None>

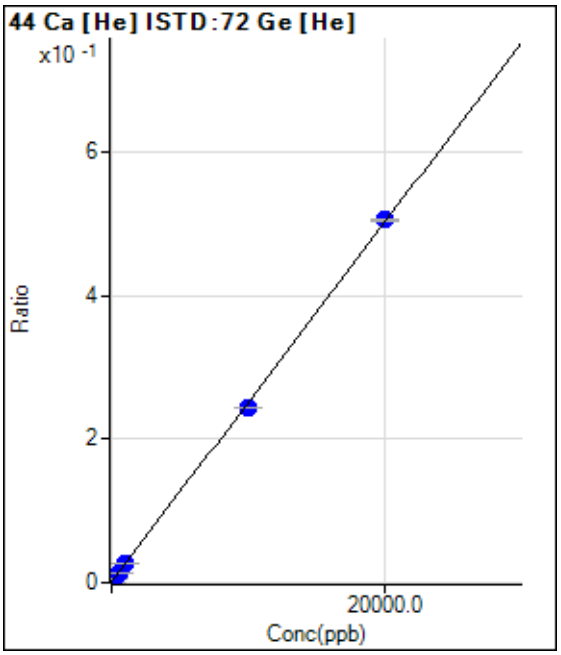


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	55863.60	0.0449	P	7.1
2	☐	200.000	201.230	100150.69	0.0794	P	4.3
3	☐	500.000	518.574	167609.53	0.1336	P	2.8
4	☐	1000.000	1017.208	282822.95	0.2189	P	2.3
5	☐	10000.00	10595.325	2290273.82	1.8573	A	4.3
6	☐	20000.00	19701.000	4342621.29	3.4148	A	3.6
7	☐	100.000					

y = 1.7105E-004 * x + 0.0449
R = 0.9994
DL = 56.15
BEC = 262.8

Weight: <None>
Min Conc: <None>

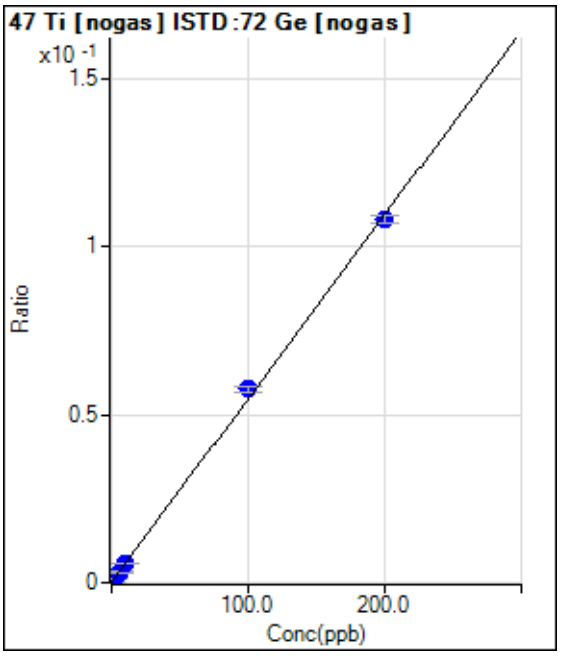
Calibration for 119_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	120.00	0.0010	P	58.4
2	☐	200.000	204.361	736.69	0.0061	P	18.8
3	☐	500.000	500.081	1673.43	0.0135	P	10.0
4	☐	1000.000	1010.197	3217.01	0.0263	P	4.9
5	☐	10000.00	9700.055	29463.67	0.2441	P	0.6
6	☐	20000.00	20149.417	60214.82	0.5059	P	0.8
7	☐	100.000					

y = 2.5060E-005 * x + 9.7672E-004
R = 0.9998
DL = 68.27
BEC = 38.98

Weight: <None>
Min Conc: <None>

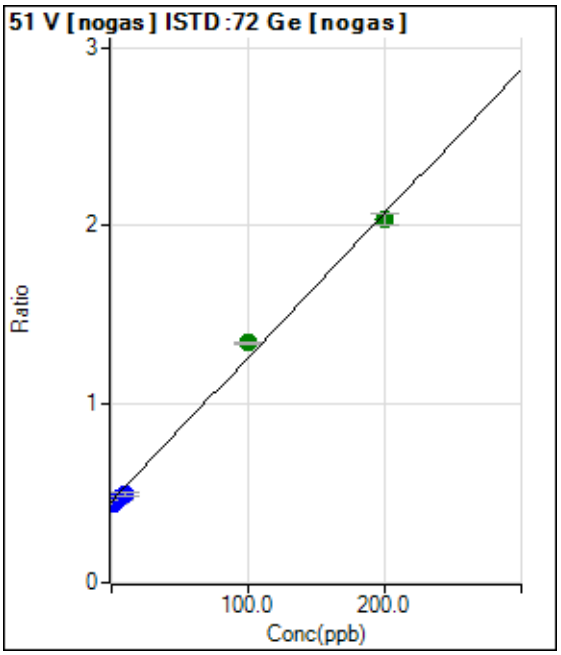


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	180.00	0.0001	P	23.4
2	☐	2.000	1.739	1380.08	0.0011	P	9.3
3	☐	5.000	5.366	3850.48	0.0031	P	7.7
4	☐	10.000	10.080	7291.55	0.0056	P	1.1
5	☐	100.000	105.263	70986.54	0.0576	P	3.2
6	☐	200.000	197.358	137110.36	0.1078	P	2.2
7	☐	1.000					

y = 5.4556E-004 * x + 1.4415E-004
R = 0.9995
DL = 0.1857
BEC = 0.2642

Weight: <None>
Min Conc: <None>

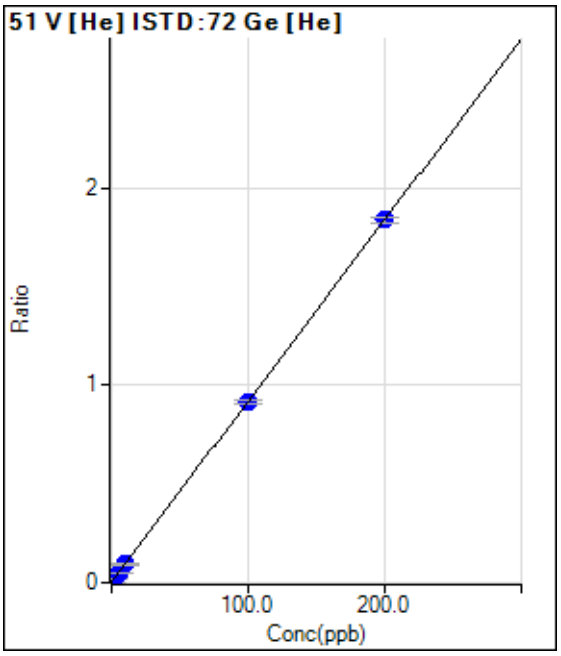
Calibration for 119_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	566883.00	0.4559	P	5.7
2	☐	2.000	-1.875	556747.59	0.4407	P	1.5
3	☐	5.000	1.763	589682.94	0.4701	P	4.3
4	☐	10.000	4.878	639628.55	0.4952	P	4.0
5	☐	100.000	110.032	1657731.29	1.3438	A	0.9
6	☐	200.000	195.360	2584405.33	2.0324	A	3.1
7	☐	1.000					

y = 0.0081 * x + 0.4559
R = 0.9976
DL = 9.702
BEC = 56.49

Weight: <None>
Min Conc: <None>

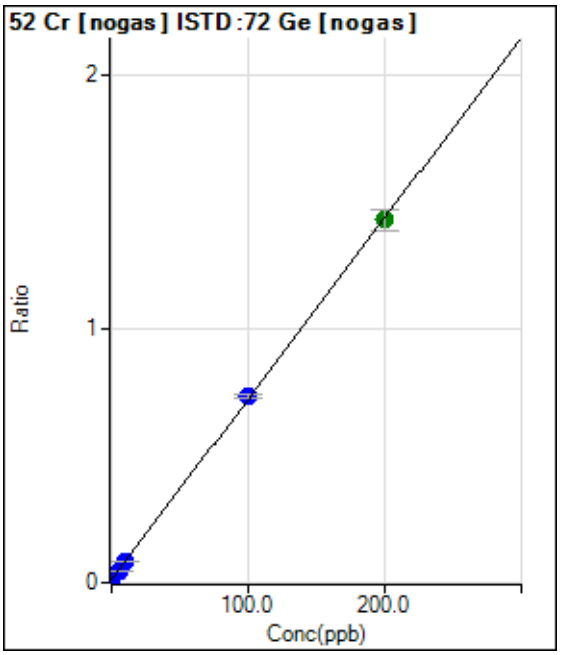


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.062	405.34	0.0033	P	2.8
2	☐	2.000	2.095	2659.53	0.0220	P	5.4
3	☐	5.000	4.932	5945.63	0.0480	P	3.3
4	☐	10.000	10.060	11629.00	0.0951	P	5.7
5	☐	100.000	99.706	110818.81	0.9181	P	1.5
6	☐	200.000	200.145	219027.76	1.8402	P	1.9
7	☐	1.000					

y = 0.0092 * x + 0.0027
R = 1.0000
DL = 0.03041
BEC = 0.2975

Weight: <None>
Min Conc: <None>

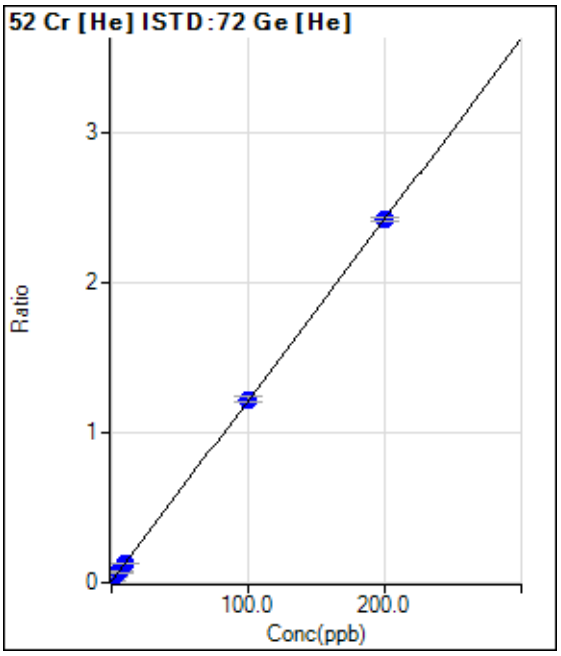
Calibration for 119_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	16073.89	0.0129	P	4.5
2	☐	2.000	2.017	34402.50	0.0273	P	2.9
3	☐	5.000	4.938	60238.57	0.0480	P	3.4
4	☐	10.000	9.758	106299.07	0.0823	P	3.5
5	☐	100.000	101.830	908714.31	0.7368	P	2.2
6	☐	200.000	199.098	1816345.29	1.4282	A	5.5
7	☐	1.000					

y = 0.0071 * x + 0.0129
R = 0.9999
DL = 0.2446
BEC = 1.817

Weight: <None>
Min Conc: <None>

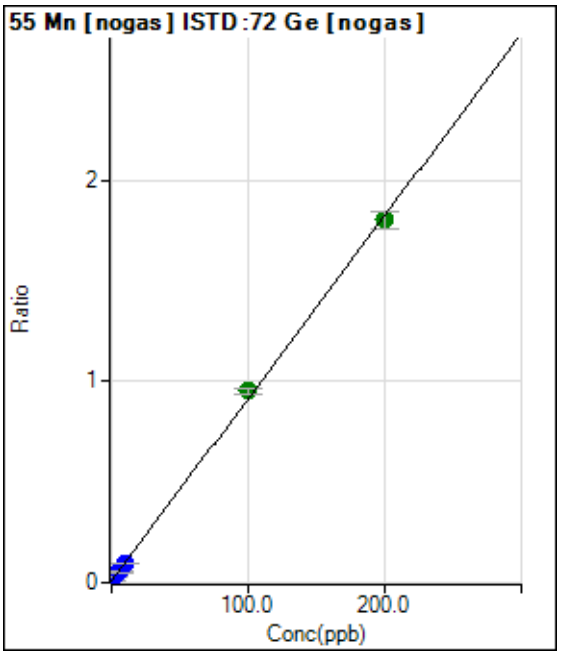


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1003.38	0.0082	P	7.3
2	☐	2.000	2.240	4260.55	0.0352	P	3.5
3	☐	5.000	5.326	8962.31	0.0724	P	8.3
4	☐	10.000	10.043	15840.30	0.1294	P	3.4
5	☐	100.000	100.371	147180.27	1.2195	P	3.1
6	☐	200.000	199.802	287983.76	2.4195	P	1.2
7	☐	1.000					

y = 0.0121 * x + 0.0082
R = 1.0000
DL = 0.1477
BEC = 0.6766

Weight: <None>
Min Conc: <None>

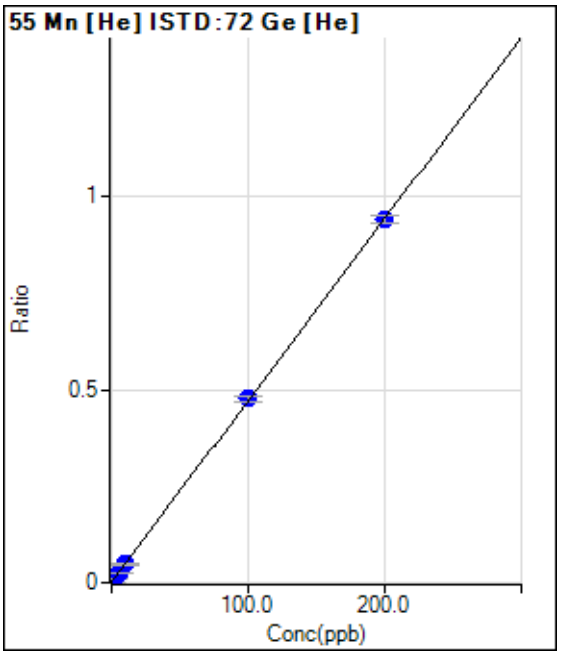
Calibration for 119_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	10129.57	0.0081	P	2.8
2	☐	2.000	1.962	32736.24	0.0259	P	4.1
3	☐	5.000	4.922	66236.51	0.0528	P	2.7
4	☐	10.000	9.855	126051.79	0.0976	P	3.6
5	☐	100.000	104.201	1176382.27	0.9537	A	2.7
6	☐	200.000	197.909	2294674.81	1.8041	A	4.9
7	☐	1.000					

y = 0.0091 * x + 0.0081
R = 0.9997
DL = 0.07461
BEC = 0.8966

Weight: <None>
Min Conc: <None>

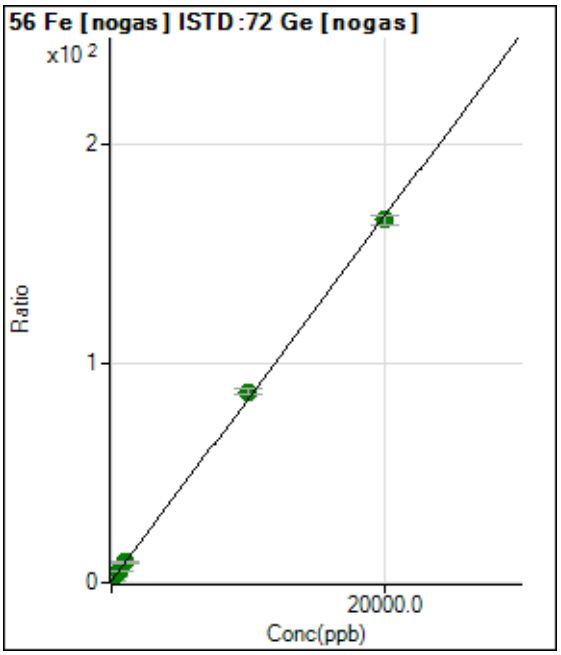


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	143.33	0.0012	P	21.5
2	☐	2.000	2.042	1303.40	0.0108	P	2.9
3	☐	5.000	5.127	3126.99	0.0253	P	7.2
4	☐	10.000	9.998	5904.41	0.0482	P	7.5
5	☐	100.000	100.898	57395.98	0.4755	P	2.6
6	☐	200.000	199.548	111805.31	0.9393	P	2.0
7	☐	1.000					

y = 0.0047 * x + 0.0012
R = 1.0000
DL = 0.1599
BEC = 0.2482

Weight: <None>
Min Conc: <None>

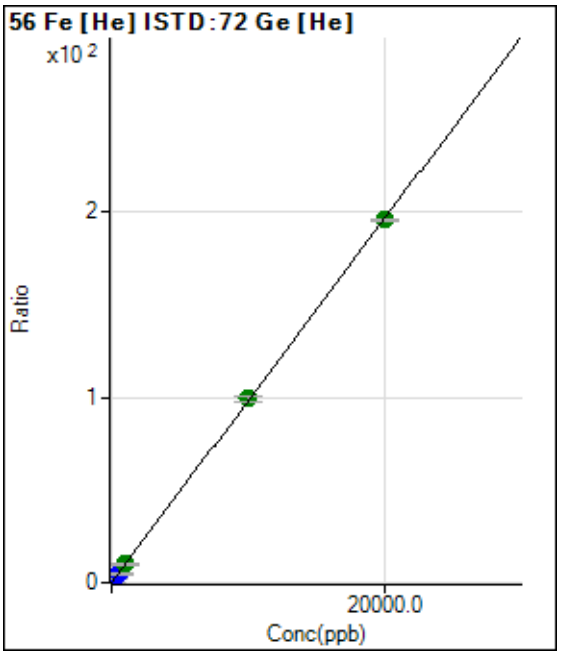
Calibration for 119_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	883802.82	0.7103	P	4.3
2	☐	200.000	219.745	3206196.10	2.5403	A	3.6
3	☐	500.000	525.140	6375435.17	5.0837	A	2.9
4	☐	1000.000	1026.755	11962157.56	9.2611	A	4.6
5	☐	10000.00	10374.960	107408581.5	87.1133	A	3.2
6	☐	20000.00	19810.356	210772433.8	165.691	A	2.7
7	☐	100.000					

y = 0.0083 * x + 0.7103
R = 0.9998
DL = 10.98
BEC = 85.29

Weight: <None>
Min Conc: <None>

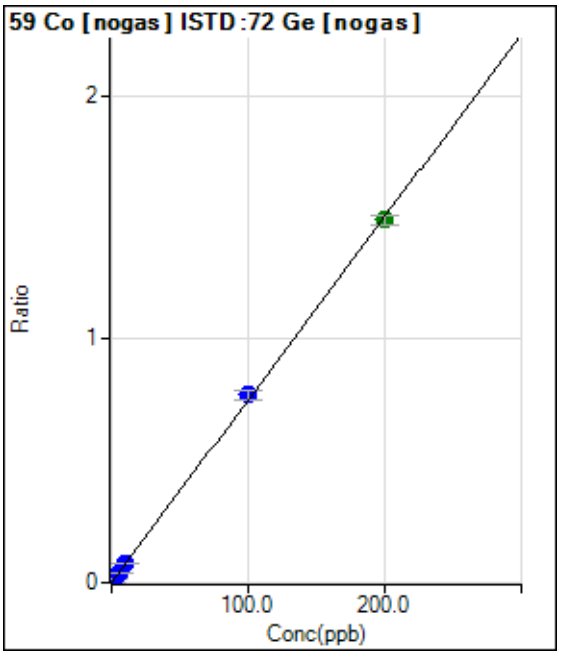


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3317.03	0.0270	P	8.5
2	☐	200.000	192.409	231928.81	1.9162	P	3.3
3	☐	500.000	474.126	579751.01	4.6824	P	4.4
4	☐	1000.000	1007.238	1213756.44	9.9169	A	3.4
5	☐	10000.00	10125.940	12003204.82	99.4523	A	3.0
6	☐	20000.00	19937.391	23304042.15	195.789	A	0.2
7	☐	100.000					

y = 0.0098 * x + 0.0270
R = 1.0000
DL = 0.6978
BEC = 2.749

Weight: <None>
Min Conc: <None>

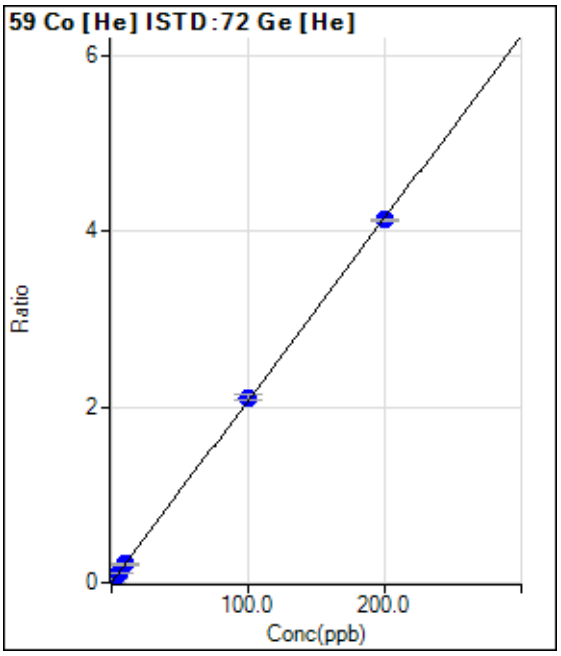
Calibration for 119_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	173.33	0.0001	P	26.0
2	☐	2.000	2.042	19547.40	0.0155	P	2.5
3	☐	5.000	5.106	48277.74	0.0385	P	1.2
4	☐	10.000	10.264	99742.14	0.0772	P	4.1
5	☐	100.000	102.991	953422.70	0.7736	P	5.0
6	☐	200.000	198.488	1895774.82	1.4907	A	2.3
7	☐	1.000					

y = 0.0075 * x + 1.3982E-004
R = 0.9998
DL = 0.01453
BEC = 0.01862

Weight: <None>
Min Conc: <None>

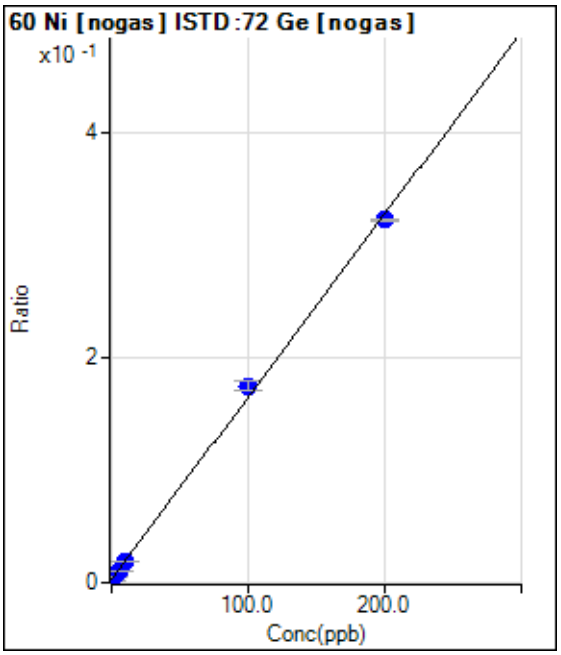


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	20.00	0.0002	P	86.6
2	☐	2.000	2.097	5277.52	0.0436	P	3.9
3	☐	5.000	5.163	13251.72	0.1071	P	9.1
4	☐	10.000	10.110	25624.94	0.2096	P	7.2
5	☐	100.000	101.820	254654.71	2.1098	P	2.1
6	☐	200.000	199.080	490968.70	4.1250	P	0.6
7	☐	1.000					

y = 0.0207 * x + 1.6254E-004
R = 0.9999
DL = 0.02038
BEC = 0.007845

Weight: <None>
Min Conc: <None>

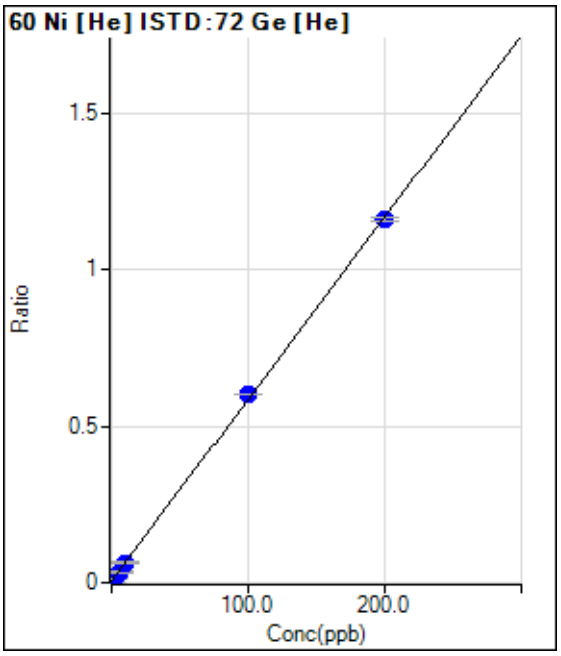
Calibration for 119_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-1.136	1356.74	0.0011	P	6.2
2	☐	2.000	0.968	5680.98	0.0045	P	4.7
3	☐	5.000	4.451	12724.61	0.0101	P	3.3
4	☐	10.000	9.663	24016.08	0.0186	P	5.0
5	☐	100.000	106.028	215443.25	0.1748	P	5.5
6	☐	200.000	197.027	410036.41	0.3223	P	0.5
7	☐	1.000					

y = 0.0016 * x + 0.0029
R = 0.9993
DL = 0.1249
BEC = 1.807

Weight: <None>
Min Conc: <None>

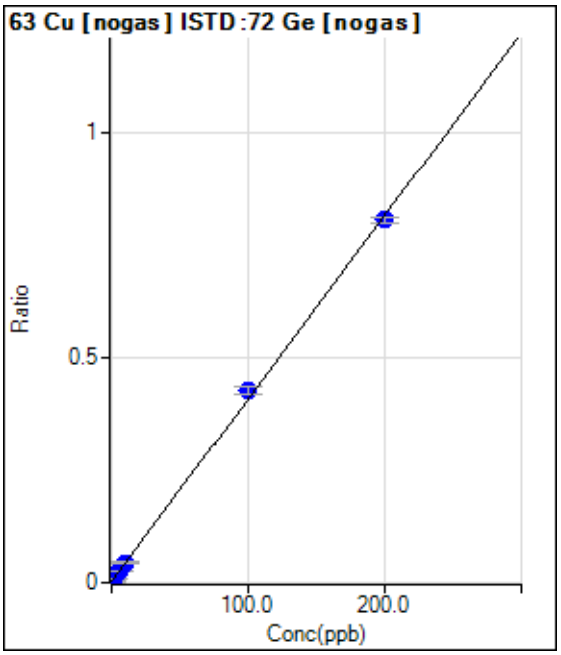


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.528	316.68	0.0026	P	18.4
2	☐	2.000	1.480	1723.44	0.0142	P	1.1
3	☐	5.000	4.663	4047.20	0.0327	P	10.5
4	☐	10.000	10.057	7835.15	0.0640	P	6.0
5	☐	100.000	102.634	72627.67	0.6017	P	0.7
6	☐	200.000	198.694	138002.24	1.1595	P	1.0
7	☐	1.000					

y = 0.0058 * x + 0.0056
R = 0.9999
DL = 0.2454
BEC = 0.9715

Weight: <None>
Min Conc: <None>

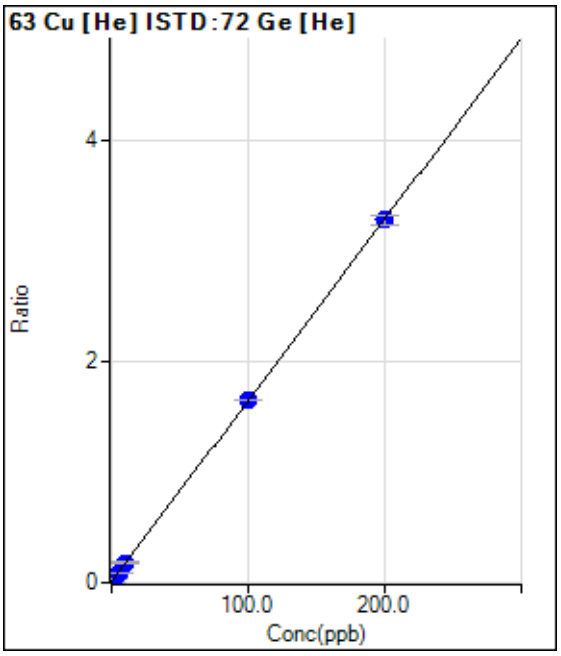
Calibration for 119_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2760.24	0.0022	P	9.1
2	☐	2.000	2.007	13101.55	0.0104	P	4.2
3	☐	5.000	5.452	30586.04	0.0244	P	2.7
4	☐	10.000	10.485	57922.07	0.0449	P	5.2
5	☐	100.000	104.317	525599.21	0.4263	P	3.9
6	☐	200.000	197.806	1025695.77	0.8064	P	1.4
7	☐	1.000					

y = 0.0041 * x + 0.0022
R = 0.9997
DL = 0.1499
BEC = 0.5465

Weight: <None>
Min Conc: <None>

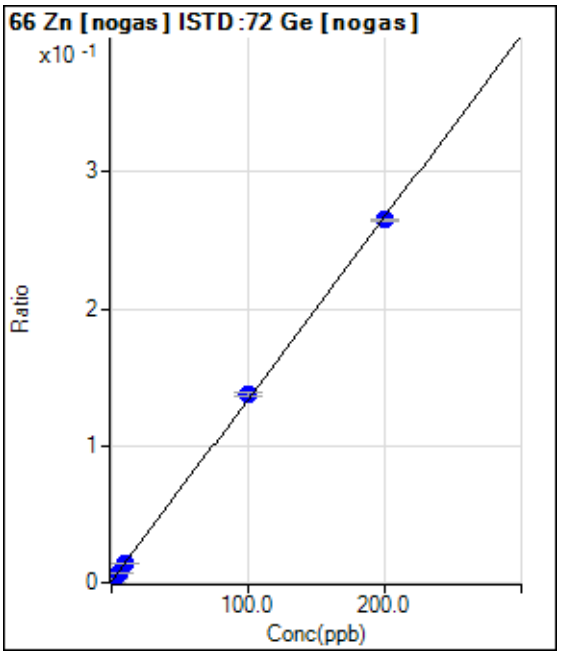


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.231	600.02	0.0049	P	17.7
2	☐	2.000	1.786	4593.99	0.0380	P	5.1
3	☐	5.000	4.893	11003.48	0.0889	P	6.0
4	☐	10.000	10.393	21883.44	0.1791	P	8.4
5	☐	100.000	100.345	199636.69	1.6538	P	0.9
6	☐	200.000	199.812	390906.34	3.2845	P	2.3
7	☐	1.000					

y = 0.0164 * x + 0.0087
R = 1.0000
DL = 0.158
BEC = 0.5291

Weight: <None>
Min Conc: <None>

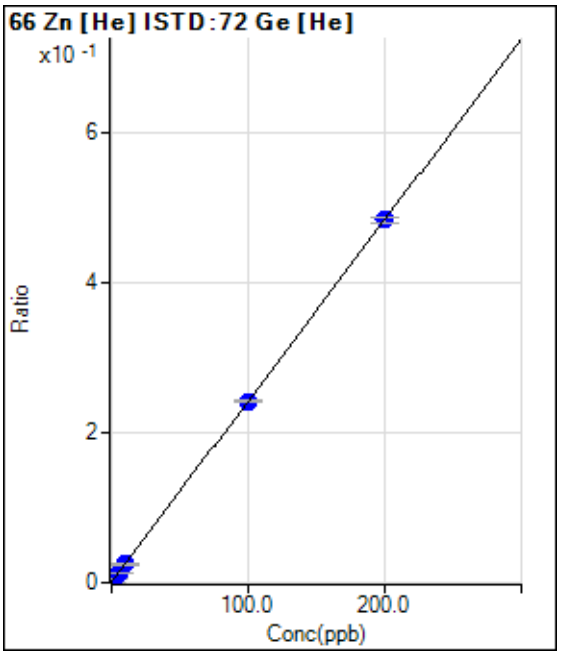
Calibration for 119_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.500	483.35	0.0004	P	18.8
2	☐	2.000	1.667	4123.87	0.0033	P	3.2
3	☐	5.000	4.792	9305.88	0.0074	P	3.6
4	☐	10.000	9.499	17668.87	0.0137	P	3.2
5	☐	100.000	103.018	170198.96	0.1380	P	2.2
6	☐	200.000	198.525	337072.53	0.2650	P	0.2
7	☐	1.000					

y = 0.0013 * x + 0.0011
R = 0.9998
DL = 0.1642
BEC = 0.7905

Weight: <None>
Min Conc: <None>

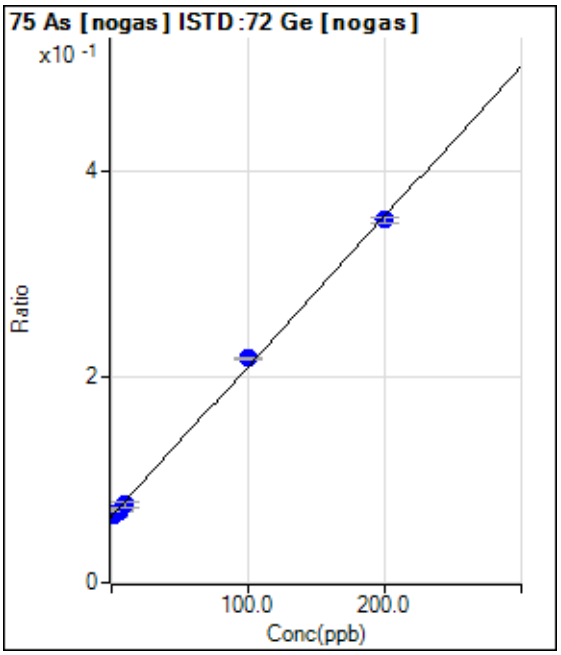


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.045	86.67	0.0007	P	56.8
2	☐	2.000	1.957	670.02	0.0055	P	14.0
3	☐	5.000	5.175	1643.44	0.0133	P	8.2
4	☐	10.000	10.031	3053.64	0.0250	P	10.0
5	☐	100.000	99.774	29126.99	0.2413	P	1.3
6	☐	200.000	200.107	57493.95	0.4831	P	1.7
7	☐	1.000					

y = 0.0024 * x + 8.1250E-004
R = 1.0000
DL = 0.4985
BEC = 0.3371

Weight: <None>
Min Conc: <None>

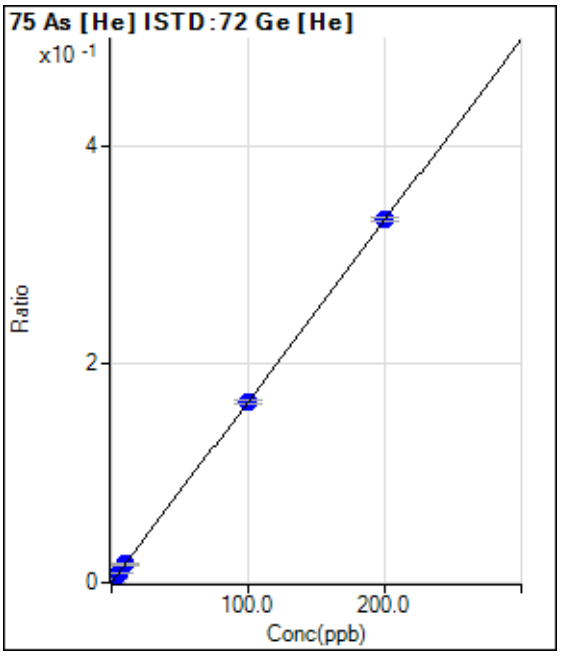
Calibration for 119_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	2.340	84595.67	0.0680	P	4.2
2	☐	2.000	0.188	81906.87	0.0648	P	2.9
3	☐	5.000	3.695	87777.16	0.0700	P	3.6
4	☐	10.000	7.976	98444.83	0.0762	P	6.5
5	☐	100.000	105.298	269644.81	0.2186	P	1.1
6	☐	200.000	197.503	449534.58	0.3534	P	1.4
7	☐	1.000					

y = 0.0015 * x + 0.0646
R = 0.9993
DL = 5.91
BEC = 44.14

Weight: <None>
Min Conc: <None>

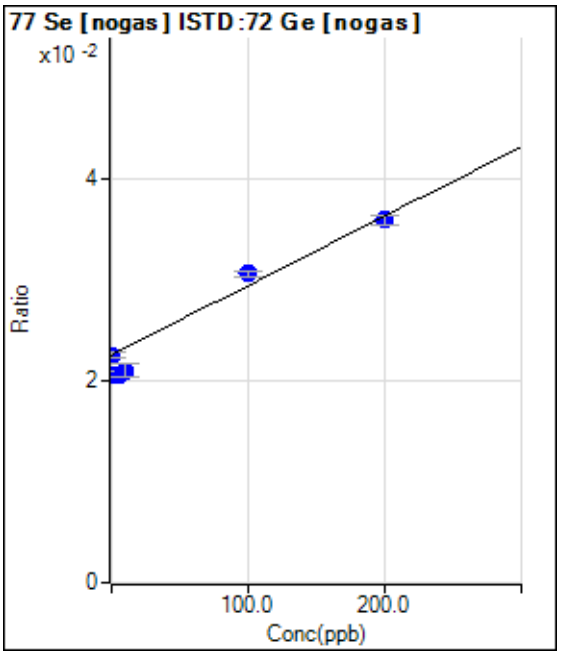


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	14.44	0.0001	P	53.3
2	☐	2.000	1.868	388.89	0.0032	P	5.2
3	☐	5.000	5.063	1053.37	0.0085	P	7.1
4	☐	10.000	10.275	2094.58	0.0171	P	8.8
5	☐	100.000	99.365	19883.10	0.1647	P	2.3
6	☐	200.000	200.304	39510.47	0.3320	P	1.1
7	☐	1.000					

y = 0.0017 * x + 1.1755E-004
R = 1.0000
DL = 0.1135
BEC = 0.07096

Weight: <None>
Min Conc: <None>

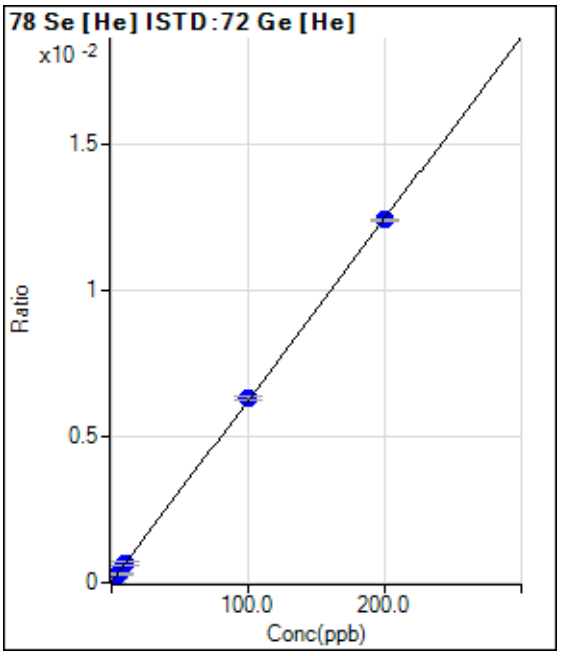
Calibration for 119_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	28132.08	0.0226	P	3.0
2	☐	2.000	-29.765	25965.50	0.0205	P	1.1
3	☐	5.000	-28.214	25912.03	0.0207	P	3.3
4	☐	10.000	-23.097	27134.03	0.0210	P	6.5
5	☐	100.000	117.031	37822.95	0.0307	P	1.7
6	☐	200.000	194.287	45787.89	0.0360	P	2.6
7	☐	1.000					

y = 6.8882E-005 * x + 0.0226
R = 0.9815
DL = 29.78
BEC = 328.1

Weight: <None>
Min Conc: <None>

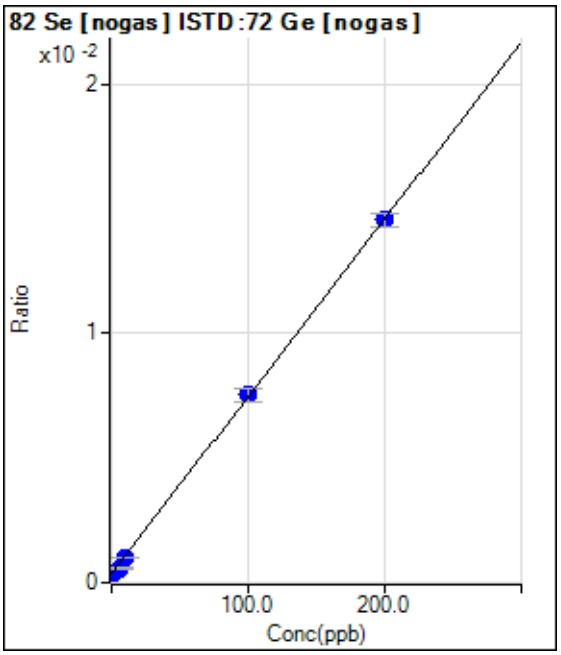


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.193	1.33	0.0000	P	86.6
2	☐	2.000	1.672	15.33	0.0001	P	26.6
3	☐	5.000	4.691	38.67	0.0003	P	26.4
4	☐	10.000	10.223	80.67	0.0007	P	15.6
5	☐	100.000	101.215	760.69	0.0063	P	1.9
6	☐	200.000	199.393	1474.74	0.0124	P	0.5
7	☐	1.000					

y = 6.2024E-005 * x + 2.2805E-005
R = 1.0000
DL = 0.4539
BEC = 0.3677

Weight: <None>
Min Conc: <None>

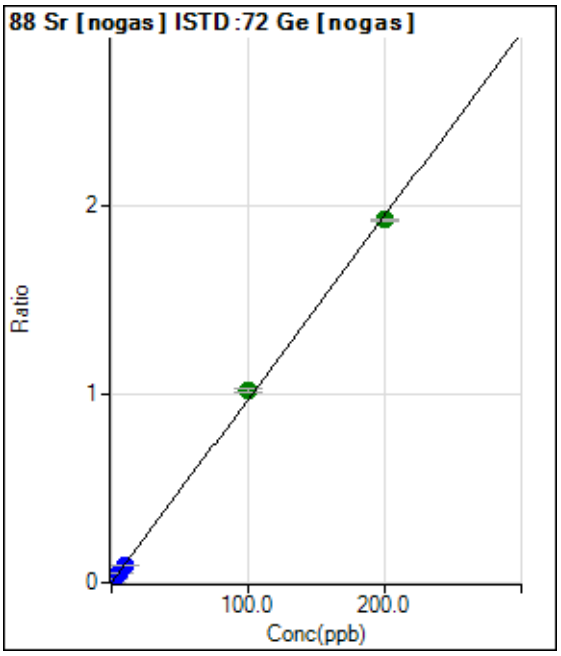
Calibration for 119_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	453.35	0.0004	P	15.3
2	☐	2.000	0.578	510.02	0.0004	P	4.3
3	☐	5.000	2.763	700.02	0.0006	P	13.8
4	☐	10.000	8.880	1283.41	0.0010	P	3.5
5	☐	100.000	100.854	9275.84	0.0075	P	6.7
6	☐	200.000	199.699	18503.13	0.0146	P	3.7
7	☐	1.000					

y = 7.1060E-005 * x + 3.6210E-004
R = 0.9999
DL = 2.333
BEC = 5.096

Weight: <None>
Min Conc: <None>

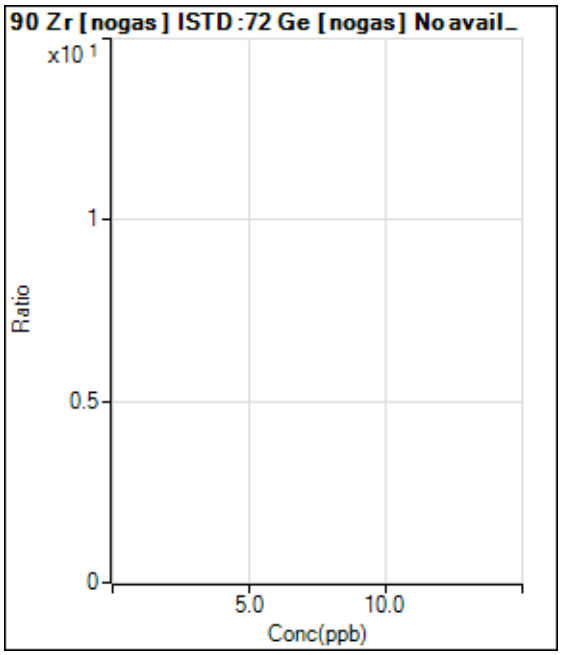


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	663.36	0.0005	P	15.0
2	☐	2.000	2.041	25715.58	0.0204	P	6.3
3	☐	5.000	4.902	60482.64	0.0482	P	0.9
4	☐	10.000	9.704	122626.87	0.0949	P	3.4
5	☐	100.000	104.359	1253161.88	1.0159	A	2.1
6	☐	200.000	197.837	2449074.70	1.9253	A	0.9
7	☐	1.000					

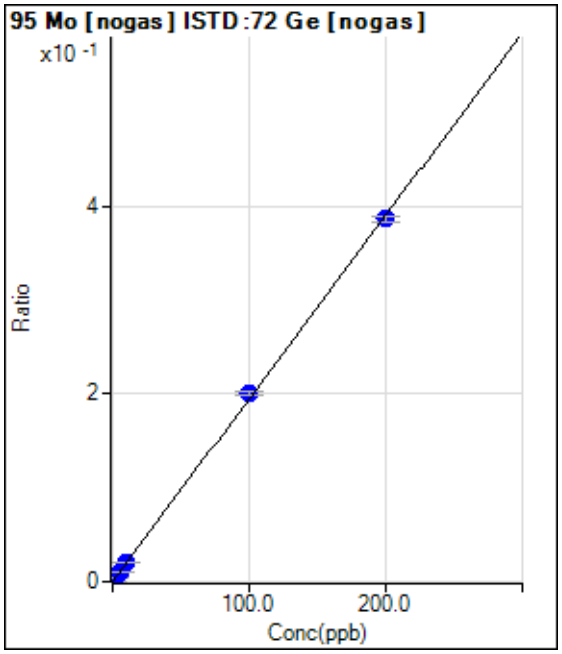
y = 0.0097 * x + 5.3095E-004
R = 0.9997
DL = 0.02452
BEC = 0.05457

Weight: <None>
Min Conc: <None>

Calibration for 119_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

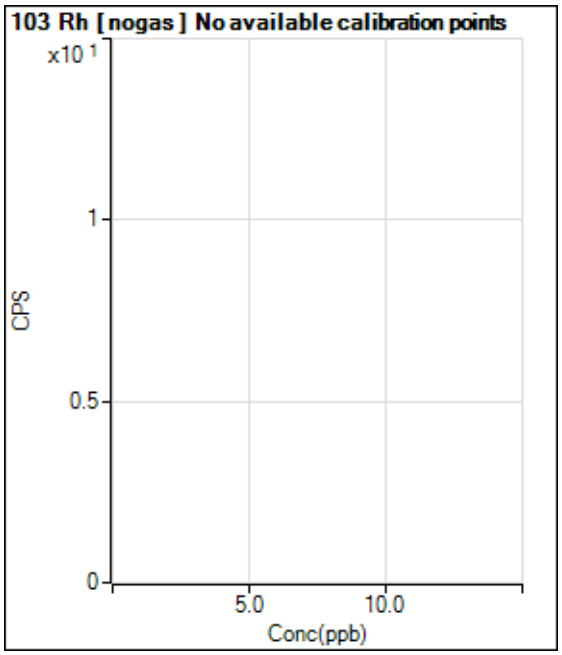


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	70.00	0.0001	P	8.7
2	☐	2.000	2.171	5410.93	0.0043	P	7.8
3	☐	5.000	5.224	12848.23	0.0102	P	4.2
4	☐	10.000	10.360	26182.98	0.0203	P	1.7
5	☐	100.000	103.276	248525.53	0.2015	P	1.8
6	☐	200.000	198.336	492091.74	0.3869	P	1.7
7	☐	1.000					

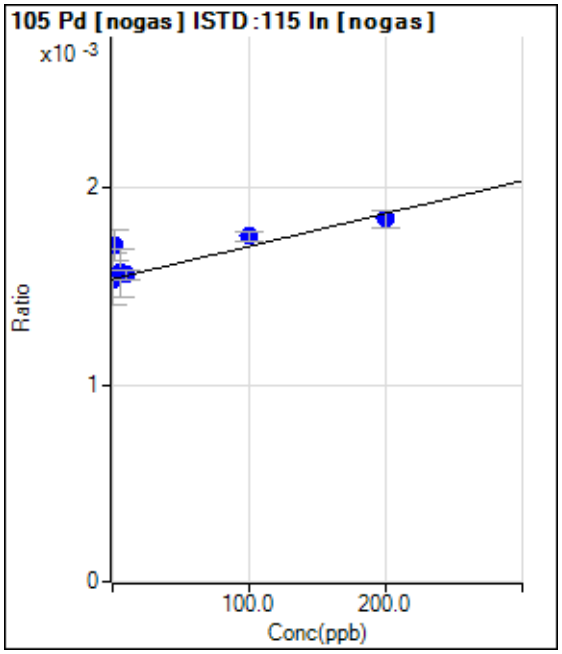
y = 0.0020 * x + 5.5987E-005
R = 0.9998
DL = 0.007499
BEC = 0.02871

Weight: <None>
Min Conc: <None>

Calibration for 119_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			3.33		P	173.
2	☐			13.33		P	114.
3	☐			3.33		P	173.
4	☐			10.00		P	100.
5	☐			73.33		P	51.6
6	☐			103.33		P	36.6
7	☐						

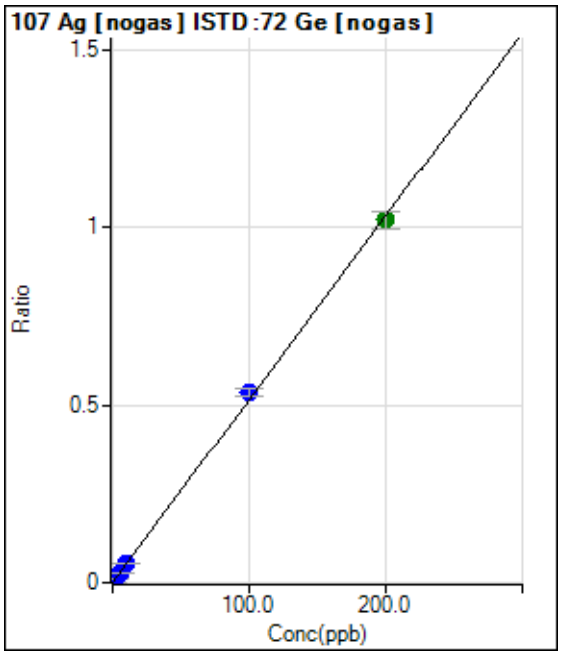


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1943.48	0.0015	P	17.2
2	☐	2.000	101.922	2250.18	0.0017	P	9.3
3	☐	5.000	20.523	2053.49	0.0016	P	15.5
4	☐	10.000	14.452	2110.16	0.0016	P	3.0
5	☐	100.000	130.044	2243.52	0.0018	P	3.2
6	☐	200.000	183.368	2386.87	0.0018	P	5.0
7	☐	1.000					

y = 1.6633E-006 * x + 0.0015
R = 0.8653
DL = 475.7
BEC = 924

Weight: <None>
Min Conc: <None>

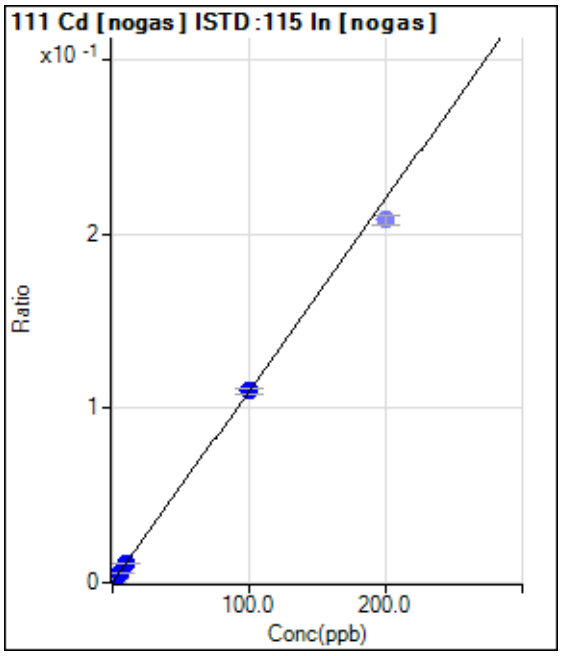
Calibration for 119_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	310.01	0.0002	P	12.1
2	☐	2.000	2.074	13808.91	0.0110	P	7.3
3	☐	5.000	5.370	35058.75	0.0280	P	3.6
4	☐	10.000	10.571	70792.78	0.0548	P	1.6
5	☐	100.000	103.795	660624.14	0.5359	P	3.8
6	☐	200.000	198.064	1299956.83	1.0223	A	4.9
7	☐	1.000					

y = 0.0052 * x + 2.4910E-004
R = 0.9997
DL = 0.01756
BEC = 0.04827

Weight: <None>
Min Conc: <None>

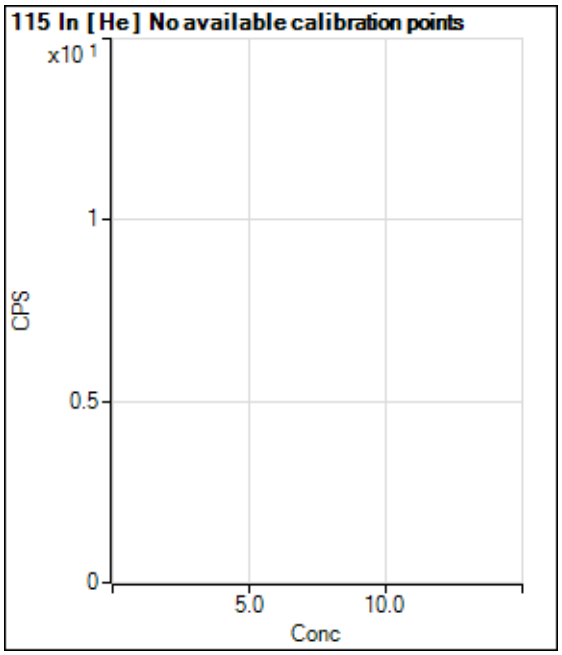


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6.67	0.0000	P	86.7
2	☐	2.000	2.092	3040.31	0.0023	P	6.2
3	☐	5.000	4.699	6758.07	0.0052	P	7.0
4	☐	10.000	9.905	14703.09	0.0109	P	7.3
5	☐	100.000	100.023	140572.99	0.1099	P	2.6
6	☑	200.000		269576.19	0.2080	P	2.9
7	☐	1.000					

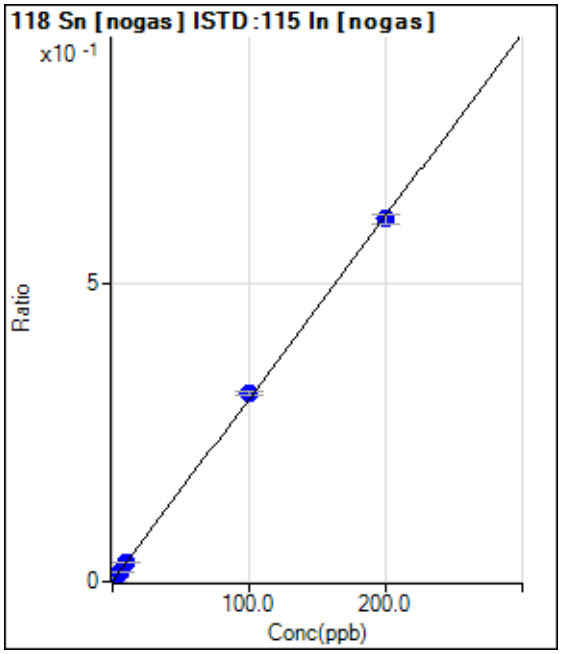
y = 0.0011 * x + 5.4029E-006
R = 1.0000
DL = 0.01279
BEC = 0.004916

Weight: <None>
Min Conc: <None>

Calibration for 119_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			145421.63		P	0.2
2	☐			144367.66		P	1.4
3	☐			143894.83		P	2.9
4	☐			143251.63		P	3.0
5	☐			141965.62		P	1.0
6	☐			139603.73		P	1.8
7	☐						

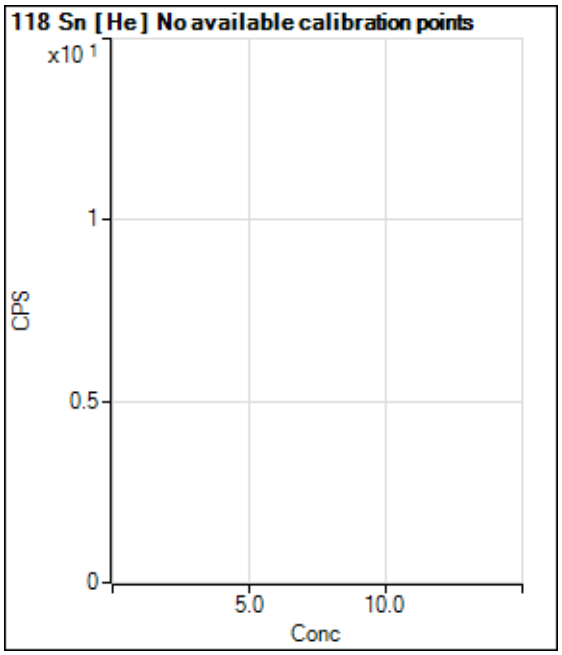


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	590.02	0.0005	P	21.8
2	☐	2.000	2.024	8802.36	0.0067	P	7.2
3	☐	5.000	5.053	20859.55	0.0160	P	1.1
4	☐	10.000	10.033	42205.07	0.0312	P	1.6
5	☐	100.000	103.015	404280.28	0.3161	P	2.6
6	☐	200.000	198.489	788454.99	0.6087	P	3.0
7	☐	1.000					

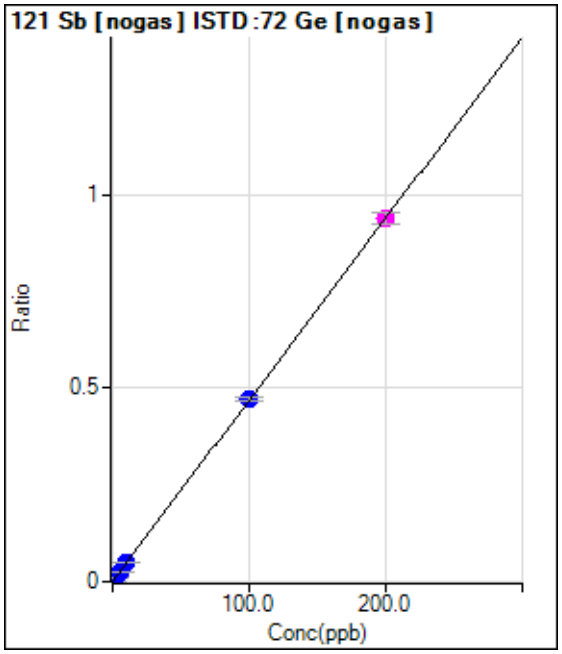
y = 0.0031 * x + 4.6965E-004
R = 0.9998
DL = 0.1004
BEC = 0.1533

Weight: <None>
Min Conc: <None>

Calibration for 119_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			103.33		P	44.7
2	☐			1396.75		P	9.8
3	☐			3337.04		P	3.6
4	☐			6598.02		P	2.9
5	☐			64699.78		P	1.3
6	☐			126381.41		P	1.6
7	☐						

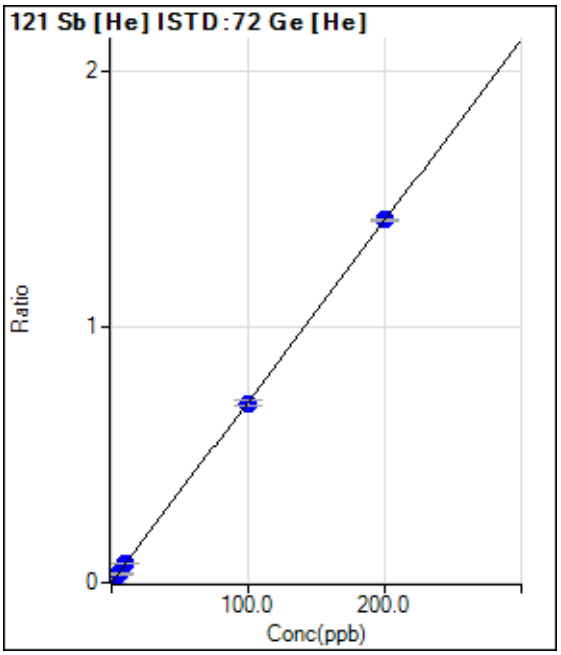


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	580.02	0.0005	P	6.1
2	☐	2.000	2.093	12948.37	0.0103	P	8.1
3	☐	5.000	5.229	31315.15	0.0250	P	1.9
4	☐	10.000	10.044	61411.83	0.0475	P	0.1
5	☐	100.000	100.267	580014.74	0.4703	P	2.2
6	☐	200.000	199.857	1191412.28	0.9370	M	3.2
7	☐	1.000					

y = 0.0047 * x + 4.6447E-004
R = 1.0000
DL = 0.01822
BEC = 0.09912

Weight: <None>
Min Conc: <None>

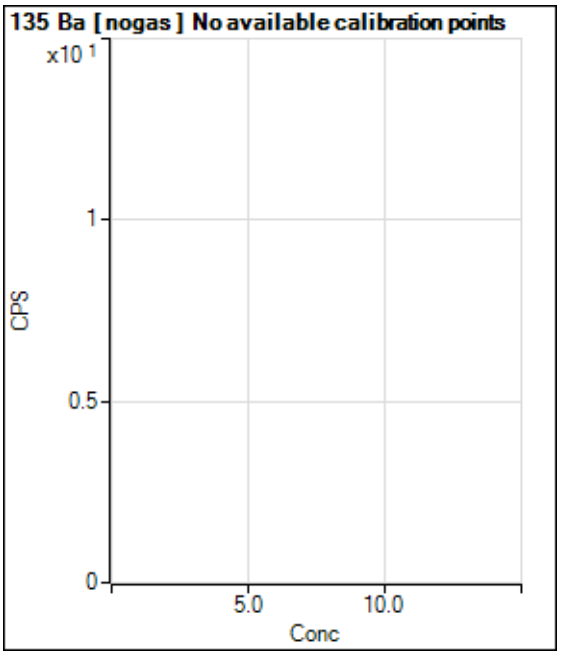
Calibration for 119_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	93.33	0.0008	P	26.7
2	☐	2.000	2.058	1856.80	0.0153	P	8.0
3	☐	5.000	4.806	4307.28	0.0348	P	6.6
4	☐	10.000	10.459	9155.87	0.0749	P	8.3
5	☐	100.000	99.173	84892.40	0.7033	P	2.8
6	☐	200.000	200.395	169067.71	1.4205	P	0.5
7	☐	1.000					

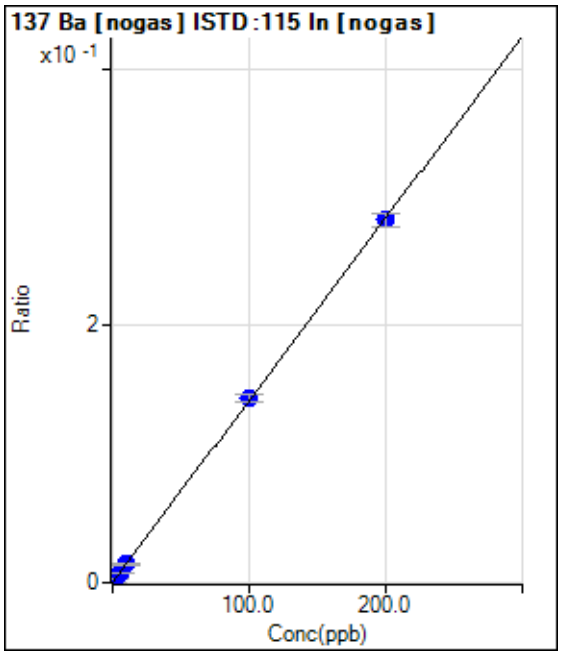
y = 0.0071 * x + 7.5919E-004
R = 1.0000
DL = 0.08574
BEC = 0.1072

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			83.33		P	13.9
2	☐			2103.51		P	1.7
3	☐			5774.41		P	6.2
4	☐			11080.41		P	0.5
5	☐			107028.29		P	0.8
6	☐			210947.23		P	0.9
7	☐						

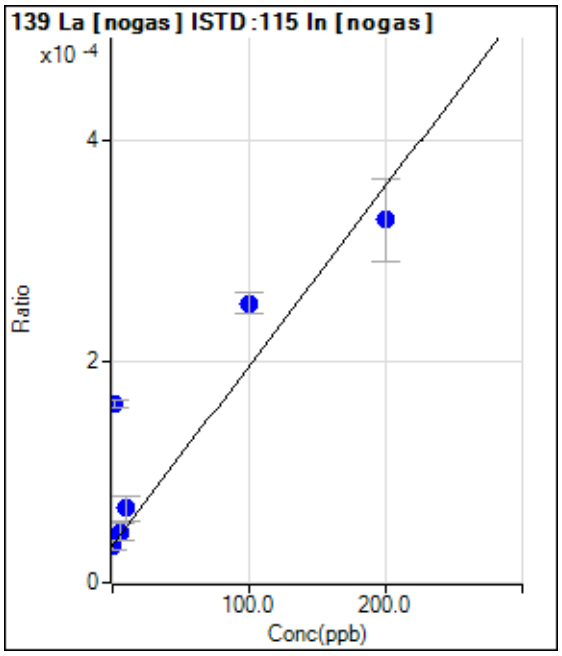
Calibration for 119_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	150.00	0.0001	P	22.6
2	☐	2.000	1.943	3787.15	0.0029	P	10.2
3	☐	5.000	5.149	9699.56	0.0074	P	4.6
4	☐	10.000	10.051	19421.40	0.0144	P	3.1
5	☐	100.000	101.665	184355.62	0.1442	P	4.5
6	☐	200.000	199.162	365756.17	0.2824	P	4.0
7	☐	1.000					

y = 0.0014 * x + 1.1837E-004
R = 1.0000
DL = 0.0565
BEC = 0.08351

Weight: <None>
Min Conc: <None>

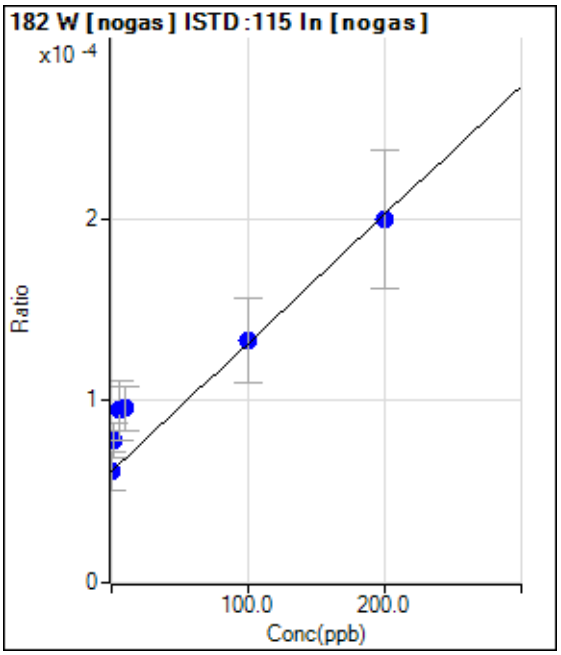


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	43.33	0.0000	P	30.5
2	☐	2.000	78.676	213.34	0.0002	P	5.1
3	☐	5.000	7.311	60.00	0.0000	P	32.7
4	☐	10.000	20.403	90.00	0.0001	P	32.6
5	☐	100.000	134.964	323.34	0.0003	P	8.0
6	☐	200.000	181.173	423.35	0.0003	P	23.2
7	☐	100.000					

y = 1.6244E-006 * x + 3.3922E-005
R = 0.9104
DL = 19.1
BEC = 20.88

Weight: <None>
Min Conc: <None>

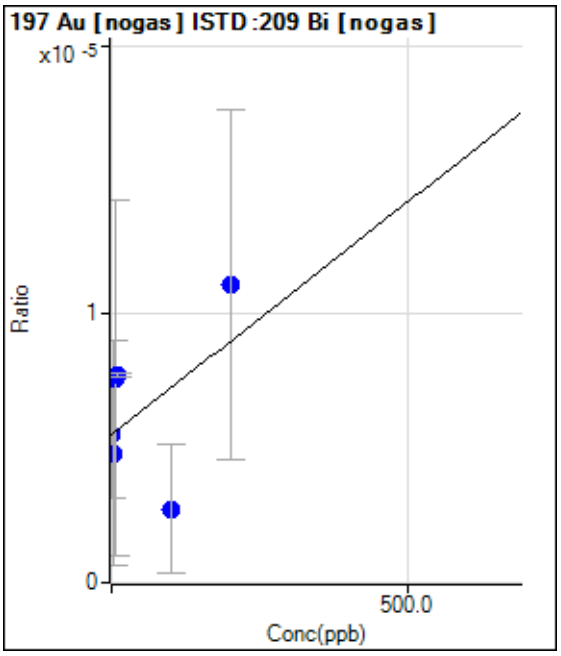
Calibration for 119_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	76.67	0.0001	P	34.4
2	☐	2.000	24.535	103.33	0.0001	P	24.5
3	☐	5.000	47.621	123.33	0.0001	P	34.1
4	☐	10.000	49.158	130.00	0.0001	P	25.4
5	☐	100.000	102.067	170.00	0.0001	P	35.0
6	☐	200.000	195.718	256.67	0.0002	P	38.1
7	☐	1.000					

y = 7.0564E-007 * x + 6.1035E-005
R = 0.9740
DL = 89.17
BEC = 86.5

Weight: <None>
Min Conc: <None>

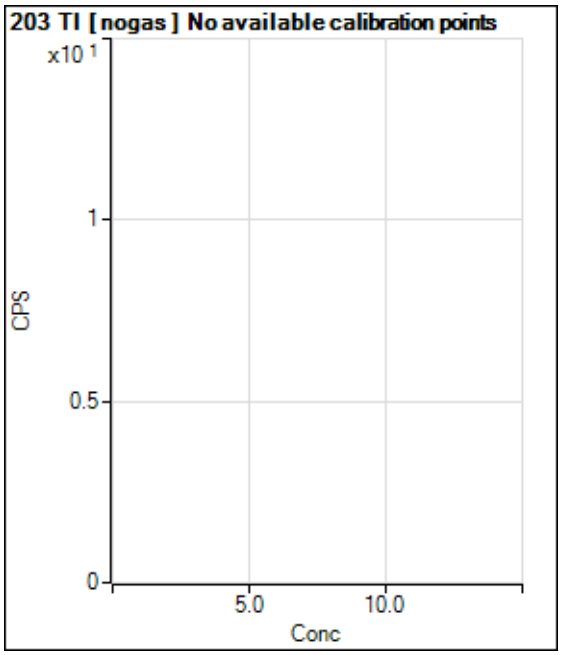


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6.67	0.0000	P	86.7
2	☐	2.000	-39.558	6.67	0.0000	P	173.
3	☐	5.000	121.606	10.00	0.0000	P	173.
4	☐	10.000	129.206	10.00	0.0000	P	1.8
5	☐	100.000	-159.667	3.33	0.0000	P	173.
6	☐	200.000	321.374	13.33	0.0000	P	117.
7	☐	100.000					

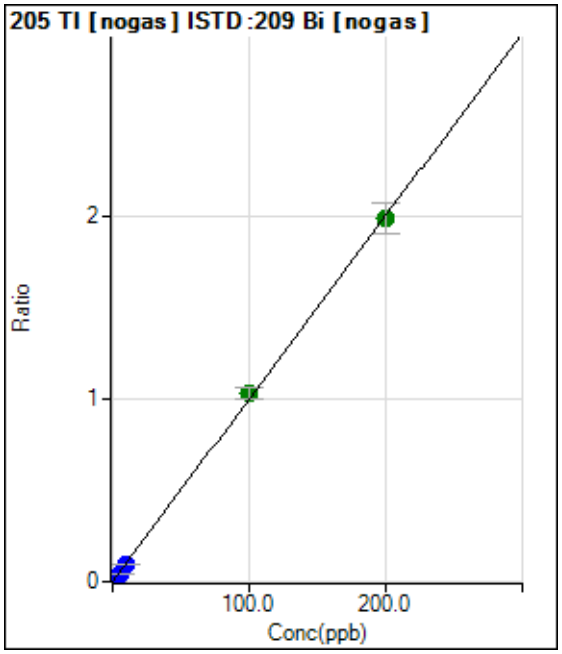
y = 1.7326E-008 * x + 5.5200E-006
R = 0.4472
DL = 829
BEC = 318.6

Weight: <None>
Min Conc: <None>

Calibration for 119_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			76.67		P	58.8
2	☐			10823.77		P	1.0
3	☐			26618.67		P	1.1
4	☐			53448.13		P	2.4
5	☐			509465.38		P	0.3
6	☐			1003269.72		P	3.5
7	☐						

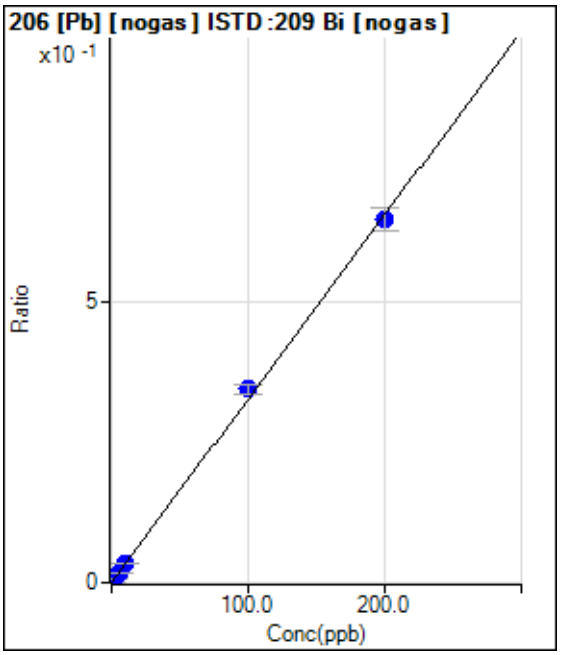


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	143.33	0.0001	P	28.5
2	☐	2.000	1.767	24131.45	0.0178	P	7.2
3	☐	5.000	4.626	60944.12	0.0465	P	1.0
4	☐	10.000	9.805	126869.49	0.0984	P	3.0
5	☐	100.000	103.073	1242946.96	1.0334	A	5.4
6	☐	200.000	198.485	2468560.80	1.9899	A	8.6
7	☐	1.000					

y = 0.0100 * x + 1.1932E-004
R = 0.9998
DL = 0.01016
BEC = 0.0119

Weight: <None>
Min Conc: <None>

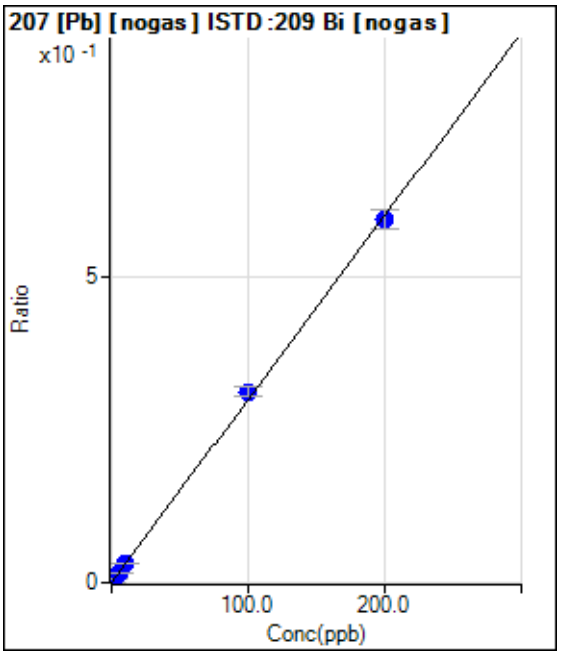
Calibration for 119_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	190.00	0.0002	P	9.1
2	☐	2.000	1.898	8639.12	0.0064	P	4.0
3	☐	5.000	4.902	21287.53	0.0162	P	0.7
4	☐	10.000	10.287	43719.02	0.0339	P	1.6
5	☐	100.000	105.151	415135.26	0.3451	P	5.0
6	☐	200.000	197.413	804235.90	0.6478	P	6.5
7	☐	1.000					

y = 0.0033 * x + 1.5727E-004
R = 0.9995
DL = 0.01309
BEC = 0.04794

Weight: <None>
Min Conc: <None>

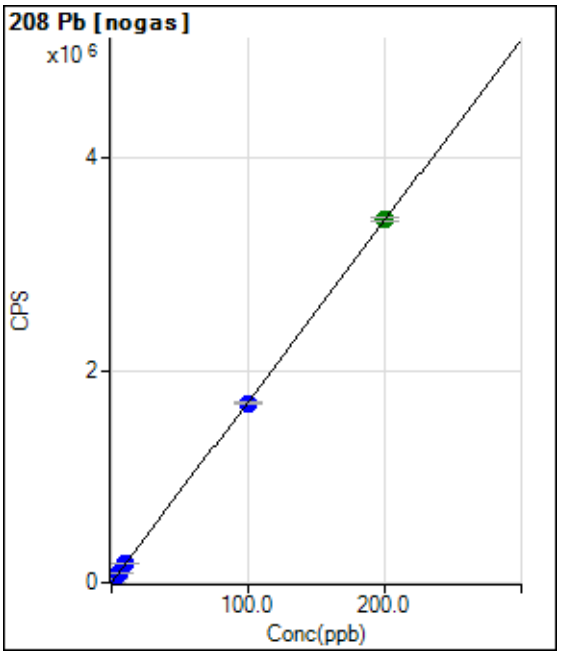


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	123.33	0.0001	P	30.3
2	☐	2.000	1.876	7738.61	0.0057	P	1.3
3	☐	5.000	4.914	19401.90	0.0148	P	2.0
4	☐	10.000	10.064	38926.85	0.0302	P	2.0
5	☐	100.000	104.207	374936.25	0.3118	P	5.7
6	☐	200.000	197.897	735171.03	0.5920	P	5.3
7	☐	1.000					

y = 0.0030 * x + 1.0209E-004
R = 0.9997
DL = 0.03099
BEC = 0.03414

Weight: <None>
Min Conc: <None>

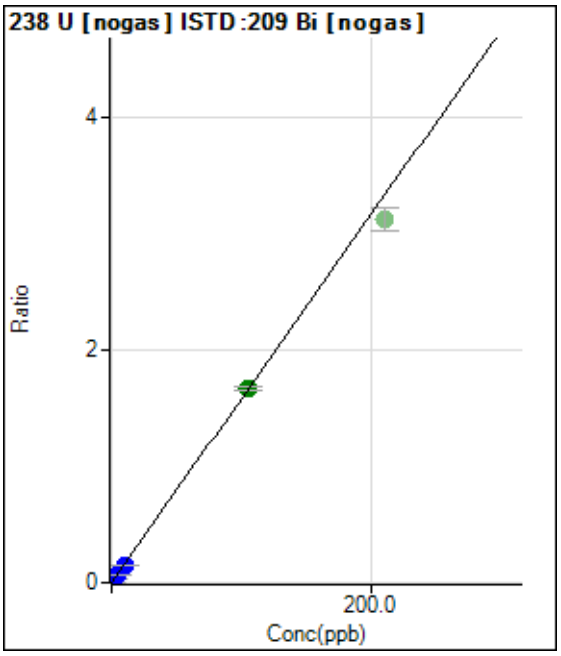
Calibration for 119_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	580.01		P	10.8
2	☐	2.000	2.020	35038.67		P	0.7
3	☐	5.000	5.074	87125.90		P	2.6
4	☐	10.000	10.293	176148.66		P	1.8
5	☐	100.000	99.210	1692769.35		P	1.9
6	☐	200.000	200.378	3418342.79		A	1.2
7	☐	1.000					

y = 17056.5705 * x + 580.0133
R = 1.0000
DL = 0.01098
BEC = 0.03401

Weight: <None>
Min Conc: <None>

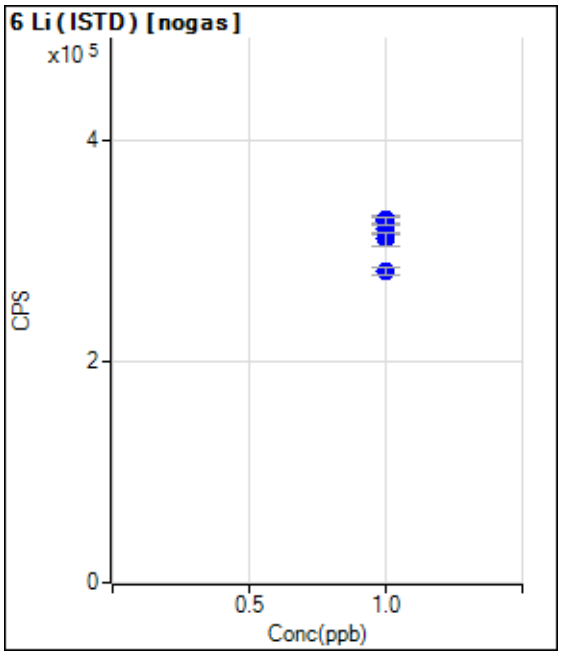


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	36.67	0.0000	P	75.8
2	☐	2.000	1.743	37447.60	0.0277	P	2.9
3	☐	5.000	4.456	92653.03	0.0707	P	1.9
4	☐	10.000	9.014	184272.11	0.1429	P	0.7
5	☐	105.000	105.125	2006136.48	1.6669	A	2.2
6	☑	210.000		3872601.30	3.1193	A	6.3
7	☐	1.000					

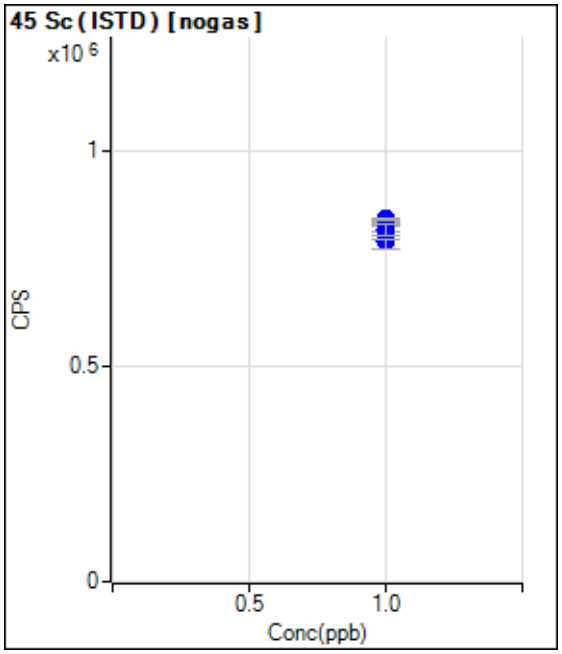
y = 0.0159 * x + 2.9942E-005
R = 1.0000
DL = 0.004294
BEC = 0.001888

Weight: <None>
Min Conc: <None>

Calibration for 119_ICV.d

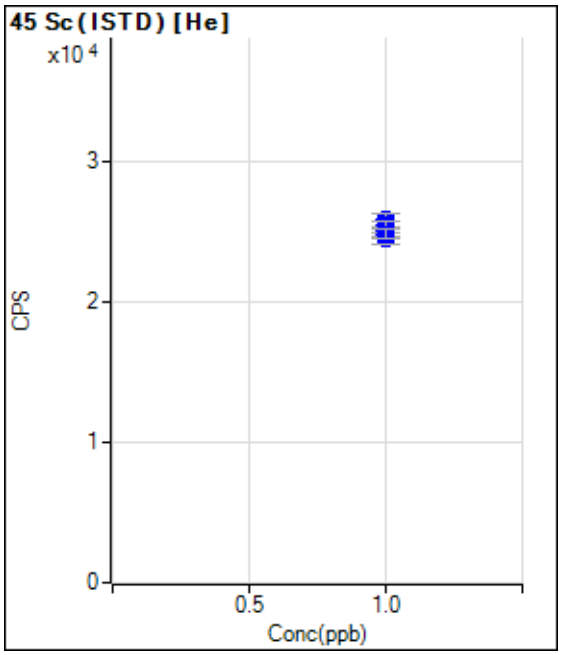


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		324345.37		P	5.0
2	☐	1.000		319649.60		P	2.5
3	☐	1.000		328298.36		P	1.8
4	☐	1.000		327895.24		P	2.2
5	☐	1.000		310750.63		P	3.9
6	☐	1.000		281924.92		P	2.4
7	☐	1.000					

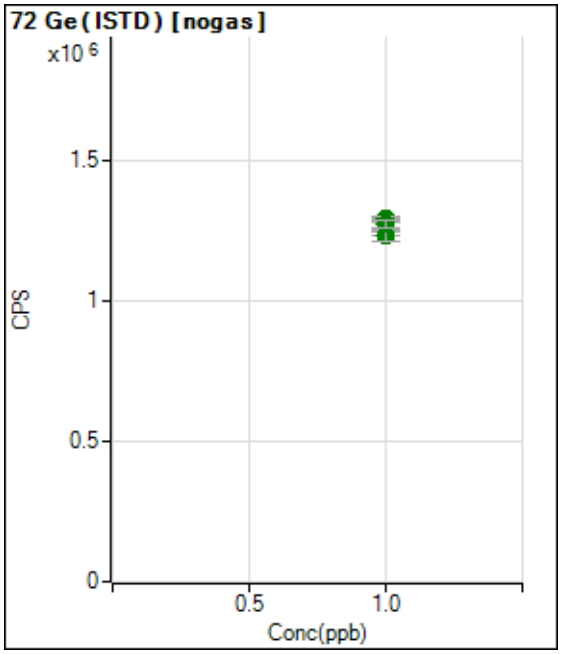


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		790482.12		P	4.9
2	☐	1.000		835120.82		P	2.0
3	☐	1.000		840102.82		P	1.0
4	☐	1.000		841482.02		P	0.9
5	☐	1.000		815619.86		P	5.3
6	☐	1.000		815811.71		P	2.9
7	☐	1.000					

Calibration for 119_ICV.d

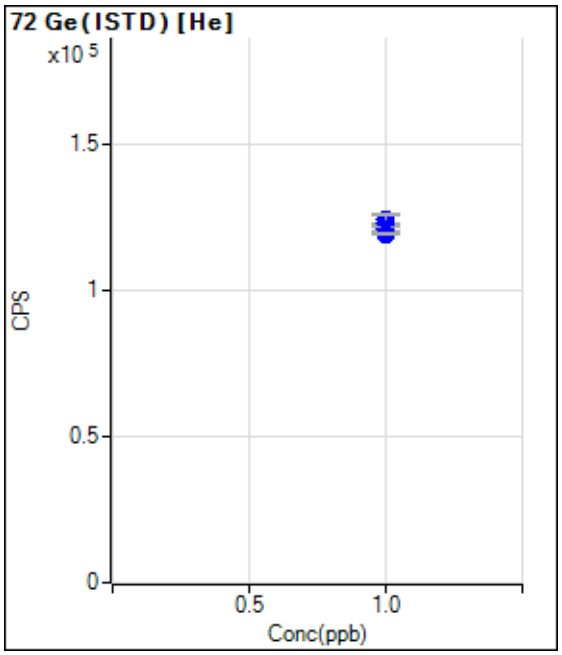


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		25140.62		P	4.6
2	☐	1.000		24533.18		P	3.4
3	☐	1.000		25875.06		P	3.7
4	☐	1.000		25230.96		P	4.1
5	☐	1.000		25481.09		P	2.1
6	☐	1.000		24850.21		P	2.8
7	☐	1.000					

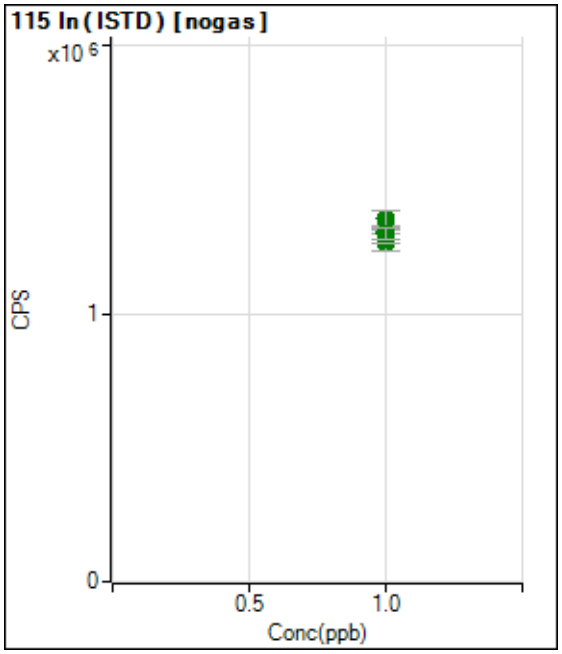


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1246287.22		A	5.7
2	☐	1.000		1263446.44		A	4.4
3	☐	1.000		1254287.59		A	1.2
4	☐	1.000		1292028.42		A	1.4
5	☐	1.000		1233883.99		A	3.4
6	☐	1.000		1272089.04		A	2.0
7	☐	1.000					

Calibration for 119_ICV.d

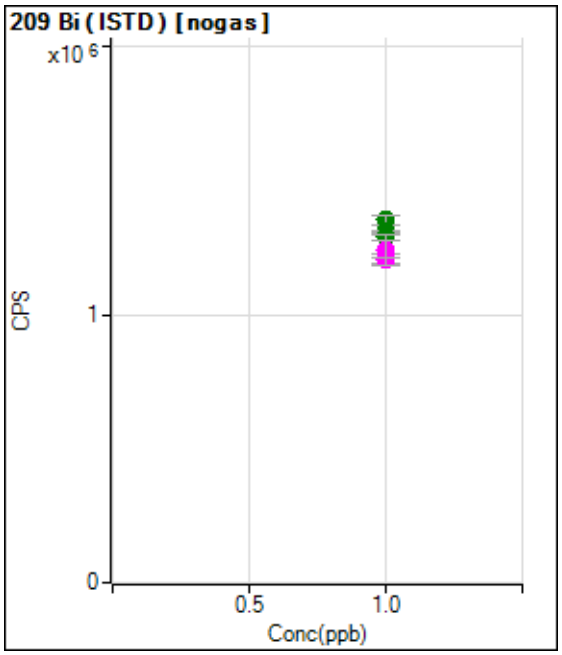


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		122873.92		P	0.3
2	☐	1.000		121061.28		P	1.7
3	☐	1.000		123919.00		P	3.1
4	☐	1.000		122526.18		P	4.9
5	☐	1.000		120718.62		P	1.2
6	☐	1.000		119025.24		P	0.6
7	☐	1.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1264981.31		A	5.1
2	☐	1.000		1319051.90		A	0.7
3	☐	1.000		1307578.36		A	1.5
4	☐	1.000		1352876.54		A	4.5
5	☐	1.000		1279437.53		A	3.2
6	☐	1.000		1296099.01		A	3.1
7	☐	1.000					

Calibration for 119_ICV.d



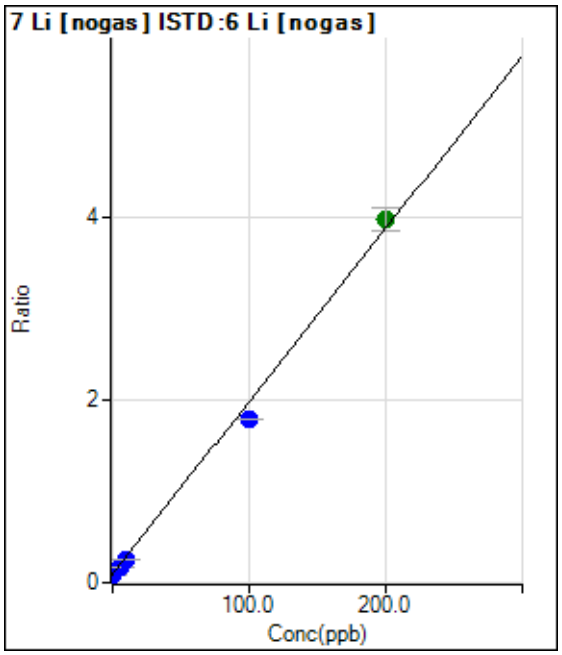
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1207454.62		M	3.1
2	☐	1.000		1354125.14		A	2.6
3	☐	1.000		1310836.02		A	0.7
4	☐	1.000		1289177.53		A	1.8
5	☐	1.000		1204168.44		M	3.6
6	☐	1.000		1243984.28		M	4.8
7	☐	1.000					

Calibration for 240_ICV.d

Batch Folder: C:\Agilent\ICPMH\1\DATA\010318A.b\
Analysis File: 010318A.batch.bin
DA Date-Time: 2018-01-03 21:45:28
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	234CALB.d	CAL BLK	2018-01-03 21:25:09
2	235CALS.d	2/10/200	2018-01-03 21:27:11
3	236CALS.d	5/25/500	2018-01-03 21:29:13
4	237CALS.d	10/50/1000	2018-01-03 21:31:14
5	238CALS.d	100/500/10K	2018-01-03 21:33:15
6	239CALS.d	200/1000/20K	2018-01-03 21:35:16
7			

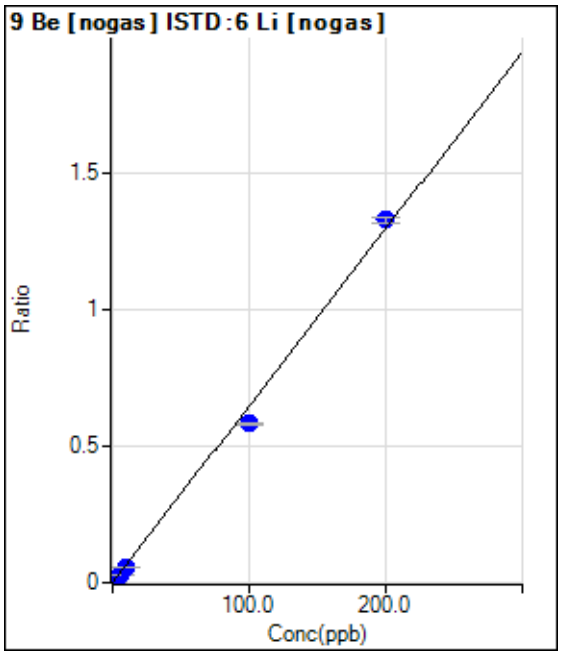
Calibration for 240_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	32538.46	0.0941	P	2.7
2	☐	2.000	1.401	43186.24	0.1207	P	2.3
3	☐	5.000	4.303	60666.77	0.1757	P	3.4
4	☐	10.000	8.555	89742.18	0.2563	P	2.0
5	☐	100.000	90.001	583461.07	1.8002	P	0.2
6	☐	200.000	205.095	1129916.13	3.9821	A	6.2
7	☐	1.000					

y = 0.0190 * x + 0.0941
R = 0.9983
DL = 0.4078
BEC = 4.964

Weight: <None>
Min Conc: <None>

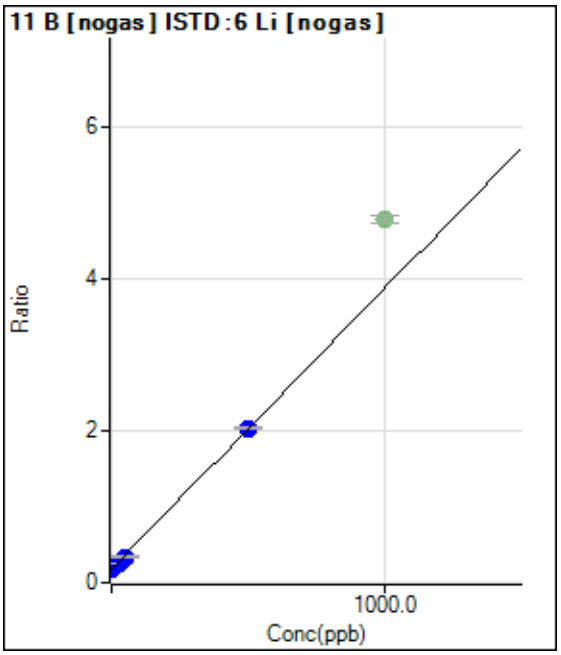


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3.33	0.0000	P	173.
2	☐	2.000	1.795	4170.54	0.0117	P	5.3
3	☐	5.000	4.482	10049.45	0.0291	P	5.3
4	☐	10.000	8.969	20381.17	0.0582	P	2.3
5	☐	100.000	89.930	189177.02	0.5838	P	1.6
6	☐	200.000	205.102	377786.70	1.3314	P	1.9
7	☐	1.000					

y = 0.0065 * x + 9.4764E-006
R = 0.9983
DL = 0.007586
BEC = 0.00146

Weight: <None>
Min Conc: <None>

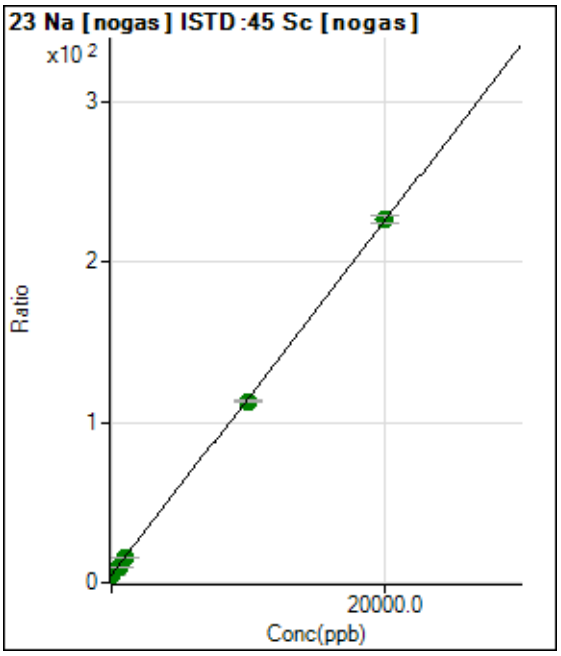
Calibration for 240_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	62696.36	0.1814	P	4.7
2	☐	10.000	4.928	71434.11	0.1997	P	3.1
3	☐	25.000	21.973	90738.21	0.2627	P	2.0
4	☐	50.000	43.153	119331.90	0.3411	P	4.9
5	☐	500.000	500.937	659340.99	2.0346	P	1.6
6	☑	1000.000		1356603.78	4.7808	A	2.0
7	☐	5.000					

y = 0.0037 * x + 0.1814
R = 0.9999
DL = 6.931
BEC = 49.04

Weight: <None>
Min Conc: <None>

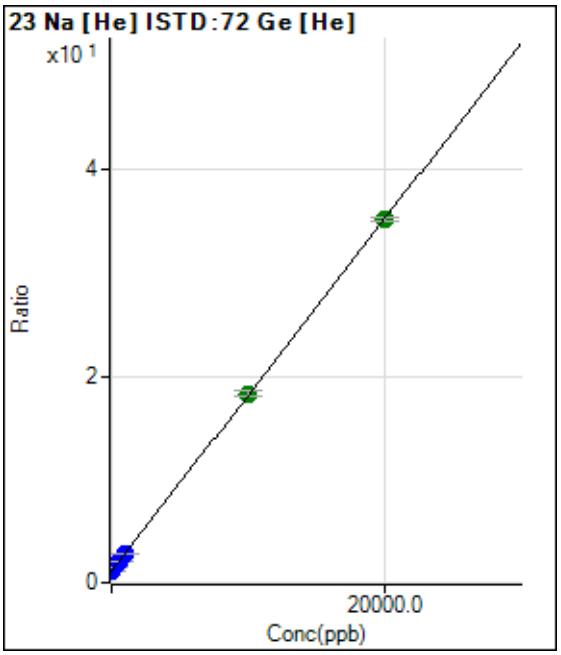


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3896345.66	4.9641	A	2.1
2	☐	200.000	172.938	5419005.07	6.8697	A	2.8
3	☐	500.000	463.663	7910198.61	10.0731	A	1.8
4	☐	1000.000	975.386	12013069.54	15.7117	A	1.8
5	☐	10000.00	9834.704	86128741.51	113.331	A	1.8
6	☐	20000.00	20085.058	169964741.3	226.278	A	2.0
7	☐	100.000					

y = 0.0110 * x + 4.9641
R = 1.0000
DL = 28.48
BEC = 450.5

Weight: <None>
Min Conc: <None>

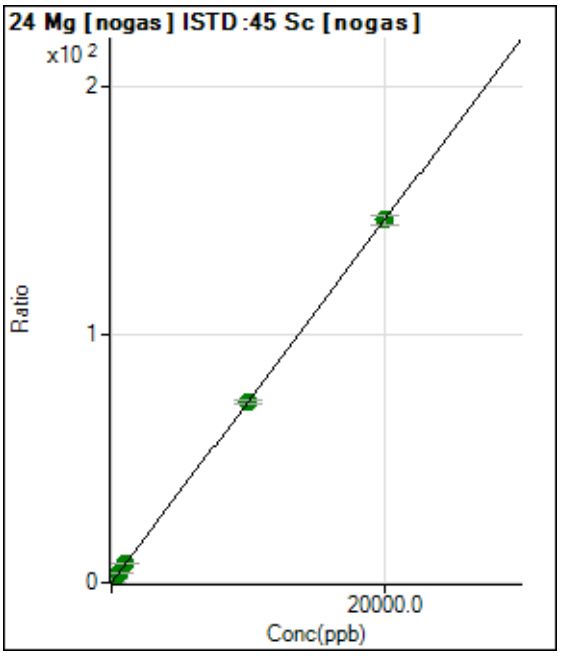
Calibration for 240_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	116164.88	1.1145	P	2.1
2	☐	200.000	210.457	151065.40	1.4735	P	3.7
3	☐	500.000	529.297	203012.14	2.0174	P	2.0
4	☐	1000.000	991.149	289854.78	2.8051	P	2.8
5	☐	10000.00	10088.384	1836186.64	18.3221	A	2.9
6	☐	20000.00	19955.414	3471609.32	35.1521	A	0.9
7	☐	100.000					

y = 0.0017 * x + 1.1145
R = 1.0000
DL = 42.12
BEC = 653.4

Weight: <None>
Min Conc: <None>

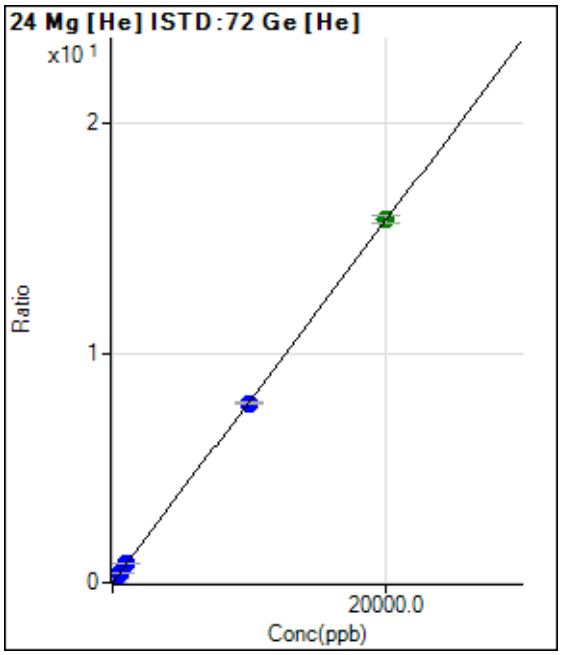


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6402.14	0.0082	P	20.9
2	☐	200.000	202.267	1172176.33	1.4861	A	4.4
3	☐	500.000	511.003	2938727.02	3.7420	A	0.3
4	☐	1000.000	1020.670	5708356.90	7.4660	A	1.9
5	☐	10000.00	9973.108	55381609.57	72.8797	A	2.3
6	☐	20000.00	20012.115	109825998.2	146.232	A	2.7
7	☐	100.000					

y = 0.0073 * x + 0.0082
R = 1.0000
DL = 0.7011
BEC = 1.117

Weight: <None>
Min Conc: <None>

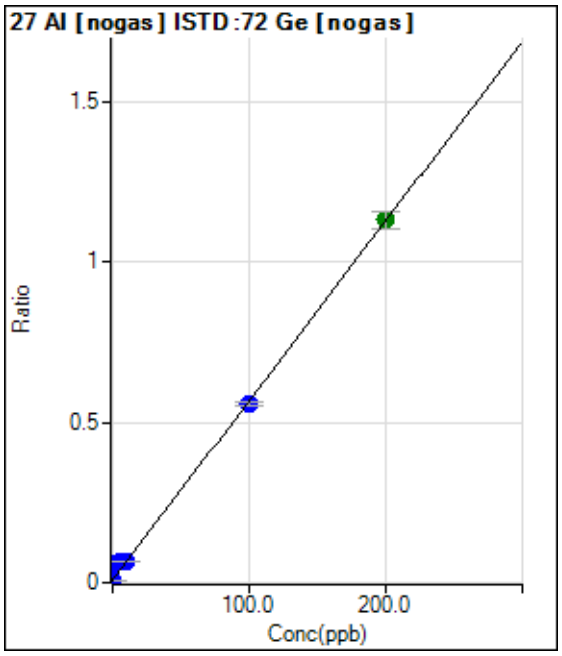
Calibration for 240_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	243.34	0.0023	P	23.7
2	☐	200.000	207.773	17028.01	0.1661	P	3.5
3	☐	500.000	530.313	42297.75	0.4203	P	3.4
4	☐	1000.000	1027.548	83932.06	0.8122	P	2.5
5	☐	10000.00	9901.967	782367.44	7.8065	P	1.5
6	☐	20000.00	20046.803	1560591.28	15.8021	A	2.0
7	☐	100.000					

y = 7.8814E-004 * x + 0.0023
R = 1.0000
DL = 2.103
BEC = 2.962

Weight: <None>
Min Conc: <None>

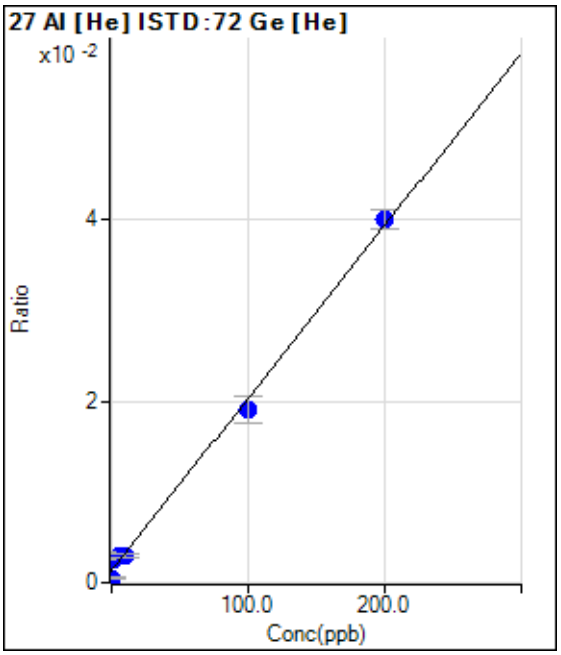


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	9175.71	0.0080	P	1.2
2	☐	2.000	9.404	72355.86	0.0607	P	4.1
3	☐	5.000	10.205	74581.77	0.0652	P	2.3
4	☐	10.000	10.750	77707.79	0.0683	P	2.1
5	☐	100.000	98.099	622304.11	0.5576	P	2.7
6	☐	200.000	200.709	1220892.17	1.1325	A	4.7
7	☐	1.000					

y = 0.0056 * x + 0.0080
R = 0.9992
DL = 0.0528
BEC = 1.433

Weight: <None>
Min Conc: <None>

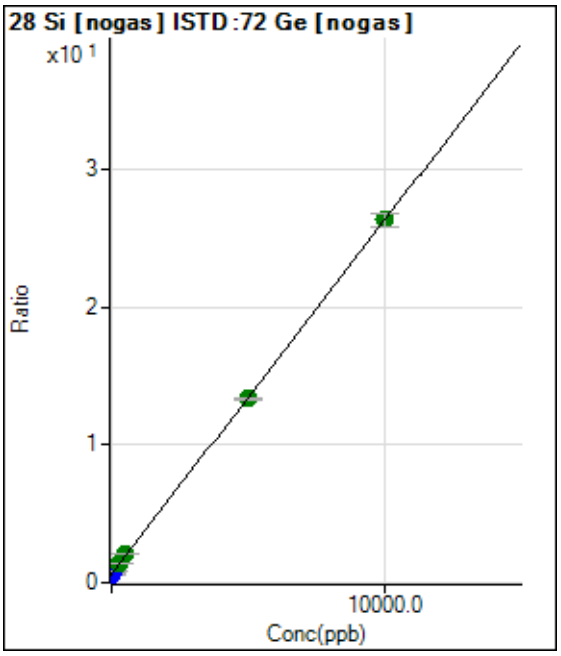
Calibration for 240_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-4.329	53.33	0.0005	P	28.2
2	☐	2.000	6.820	270.01	0.0026	P	11.6
3	☐	5.000	8.994	306.68	0.0030	P	26.0
4	☐	10.000	9.061	316.68	0.0031	P	14.9
5	☐	100.000	93.111	1910.13	0.0190	P	16.0
6	☐	200.000	203.344	3947.15	0.0400	P	5.4
7	☐	1.000					

y = 1.9000E-004 * x + 0.0013
R = 0.9982
DL = 2.277
BEC = 7.018

Weight: <None>
Min Conc: <None>

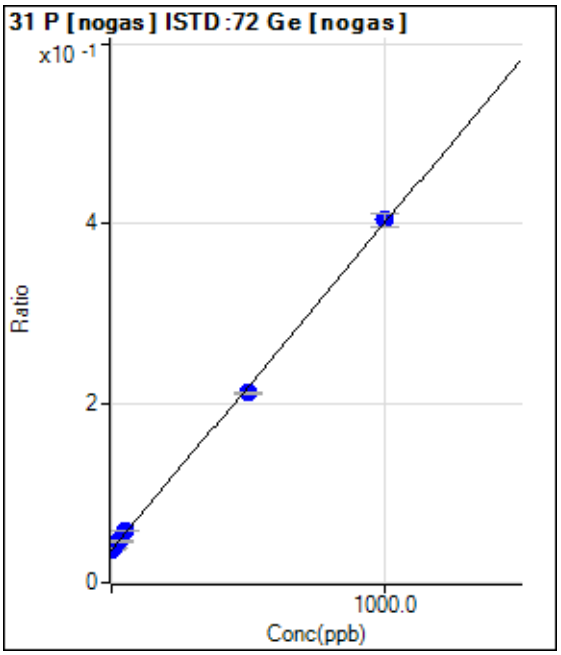


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	716769.99	0.6276	P	3.5
2	☐	100.000	84.426	1006005.27	0.8444	P	4.0
3	☐	250.000	288.009	1564032.01	1.3673	A	1.2
4	☐	500.000	568.464	2376658.40	2.0877	A	0.7
5	☐	5000.000	4967.746	14941670.20	13.3869	A	0.8
6	☐	10000.00	10011.909	28402820.41	26.3425	A	3.6
7	☐	5.000					

y = 0.0026 * x + 0.6276
R = 1.0000
DL = 25.74
BEC = 244.4

Weight: <None>
Min Conc: <None>

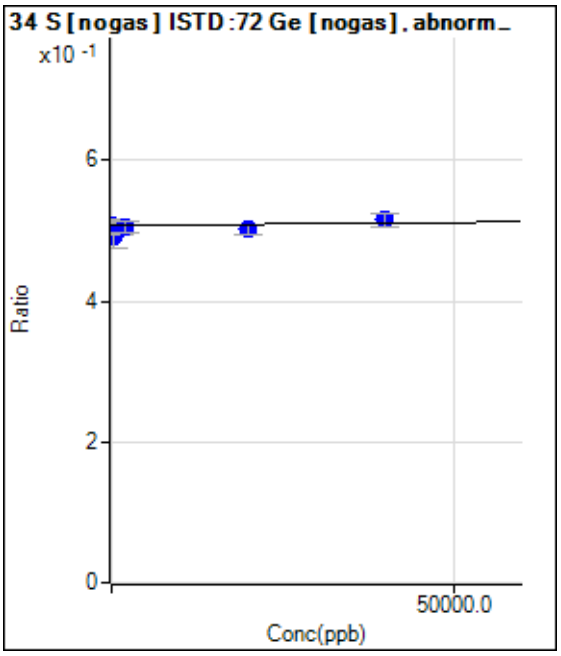
Calibration for 240_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	41739.82	0.0365	P	2.3
2	☐	10.000	4.788	45618.37	0.0383	P	2.8
3	☐	25.000	27.092	53054.77	0.0464	P	5.6
4	☐	50.000	58.469	65817.76	0.0578	P	0.2
5	☐	500.000	479.498	235529.53	0.2110	P	1.7
6	☐	1000.000	1009.827	435628.57	0.4040	P	3.5
7	☐	5.000					

y = 3.6391E-004 * x + 0.0365
R = 0.9996
DL = 6.938
BEC = 100.4

Weight: <None>
Min Conc: <None>

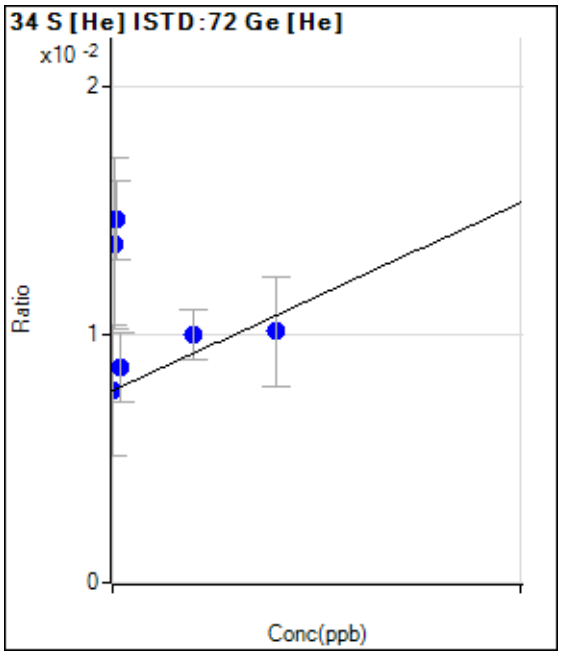


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	579303.64	0.5073	P	3.9
2	☐	400.000	-182347.82	584787.11	0.4913	P	6.7
3	☐	1000.000	-62957.674	573705.81	0.5018	P	3.5
4	☐	2000.000	-34234.701	574008.51	0.5043	P	3.3
5	☐	20000.00	-68849.254	559403.09	0.5012	P	2.5
6	☐	40000.00	89662.782	555461.75	0.5152	P	3.6
7	☐	100.000					

y = 8.7810E-008 * x + 0.5073
R = 0.6484
DL = 6.744E+05
BEC = 5.777E+06

Weight: <None>
Min Conc: <None>

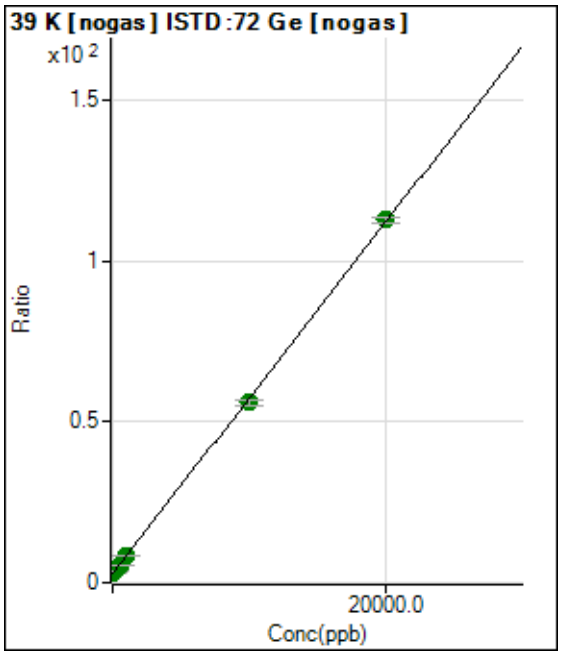
Calibration for 240_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	800.22	0.0077	P	67.8
2	☐	400.000	78413.502	1400.33	0.0137	P	50.4
3	☐	1000.000	90984.559	1467.00	0.0146	P	21.7
4	☐	2000.000	12326.729	900.20	0.0087	P	31.5
5	☐	20000.00	29813.764	1000.21	0.0100	P	20.8
6	☐	40000.00	31547.032	1000.23	0.0101	P	43.3
7	☐	100.000					

y = 7.5599E-008 * x + 0.0077
R = -0.1896
DL = 2.081E+05
BEC = 1.023E+05

Weight: <None>
Min Conc: <None>

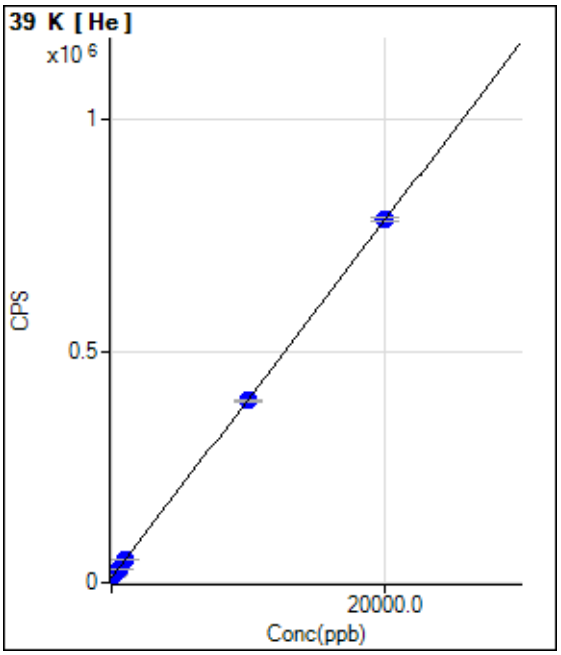


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3163864.07	2.7702	A	3.8
2	☐	200.000	168.003	4395855.57	3.6896	A	3.7
3	☐	500.000	484.063	6198003.39	5.4193	A	2.4
4	☐	1000.000	1016.233	9484190.05	8.3317	A	2.0
5	☐	10000.00	9725.697	62486955.56	55.9952	A	3.6
6	☐	20000.00	20137.058	121856352.7	112.972	A	1.4
7	☐	100.000					

y = 0.0055 * x + 2.7702
R = 0.9999
DL = 58.14
BEC = 506.2

Weight: <None>
Min Conc: <None>

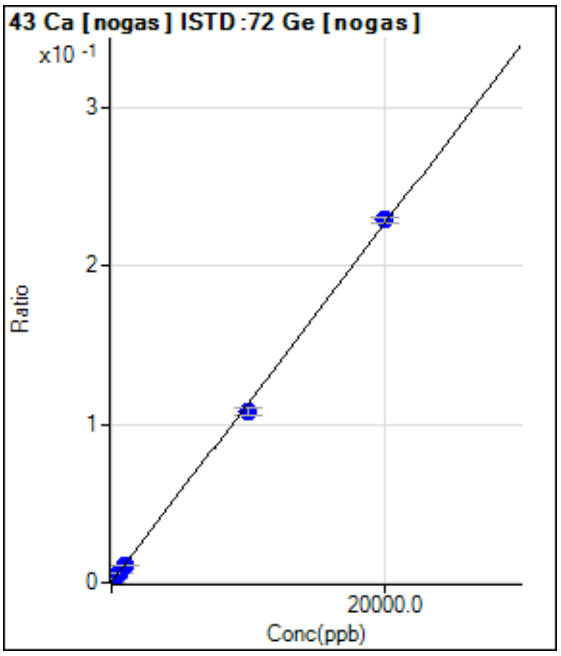
Calibration for 240_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	10549.77		P	2.8
2	☐	200.000	195.087	18072.21		P	2.5
3	☐	500.000	512.583	30314.65		P	2.6
4	☐	1000.000	1023.540	50016.83		P	1.5
5	☐	10000.00	9915.506	392885.61		P	0.4
6	☐	20000.00	20040.805	783310.95		P	1.0
7	☐	100.000					

y = 38.5594 * x + 10549.7667
R = 1.0000
DL = 23.1
BEC = 273.6

Weight: <None>
Min Conc: <None>

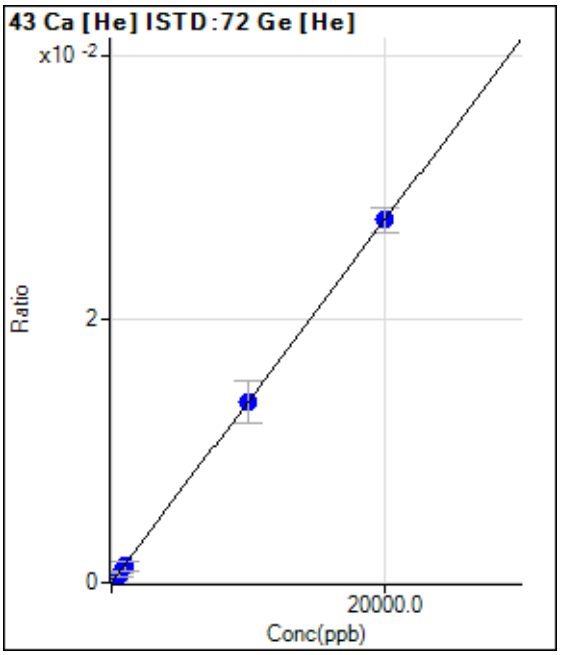


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	286.67	0.0003	P	26.1
2	☐	200.000	194.815	2923.62	0.0025	P	4.7
3	☐	500.000	489.033	6607.97	0.0058	P	3.0
4	☐	1000.000	979.814	12894.69	0.0113	P	2.7
5	☐	10000.00	9540.744	120638.55	0.1081	P	4.4
6	☐	20000.00	20230.963	246951.10	0.2290	P	1.9
7	☐	100.000					

y = 1.1305E-005 * x + 2.5021E-004
R = 0.9996
DL = 17.3
BEC = 22.13

Weight: <None>
Min Conc: <None>

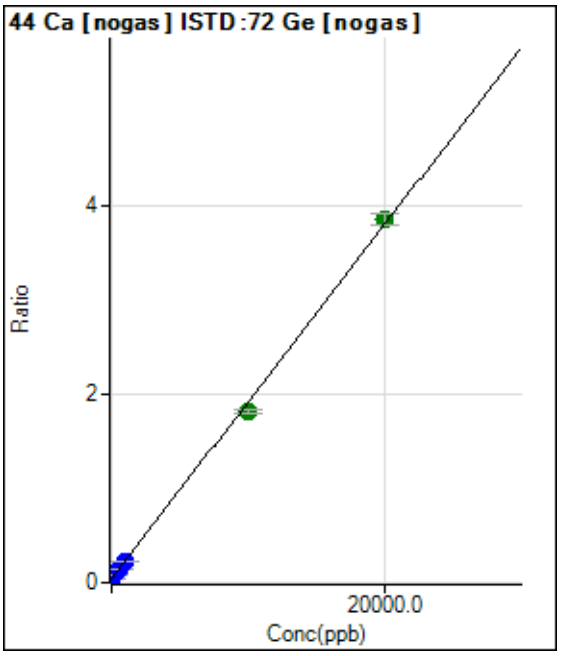
Calibration for 240_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	0.00	0.0000	P	
2	☐	200.000	118.224	16.67	0.0002	P	34.6
3	☐	500.000	459.775	63.33	0.0006	P	46.4
4	☐	1000.000	936.178	133.33	0.0013	P	55.6
5	☐	10000.00	9969.619	1370.08	0.0137	P	22.8
6	☐	20000.00	20020.205	2716.91	0.0275	P	7.1
7	☐	100.000					

y = 1.3743E-006 * x + 0.0000E+000
R = 1.0000
DL = 0
BEC = 0

Weight: <None>
Min Conc: <None>

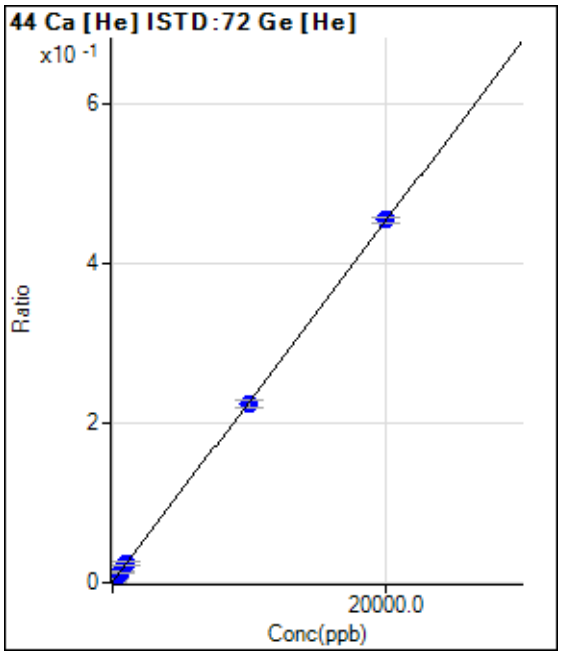


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	48389.40	0.0424	P	2.4
2	☐	200.000	178.205	90378.09	0.0759	P	5.8
3	☐	500.000	491.272	154260.85	0.1348	P	1.5
4	☐	1000.000	989.547	260304.37	0.2286	P	1.3
5	☐	10000.00	9455.882	2033814.76	1.8224	A	2.4
6	☐	20000.00	20273.018	4161015.15	3.8587	A	3.1
7	☐	100.000					

y = 1.8825E-004 * x + 0.0424
R = 0.9995
DL = 16.1
BEC = 225

Weight: <None>
Min Conc: <None>

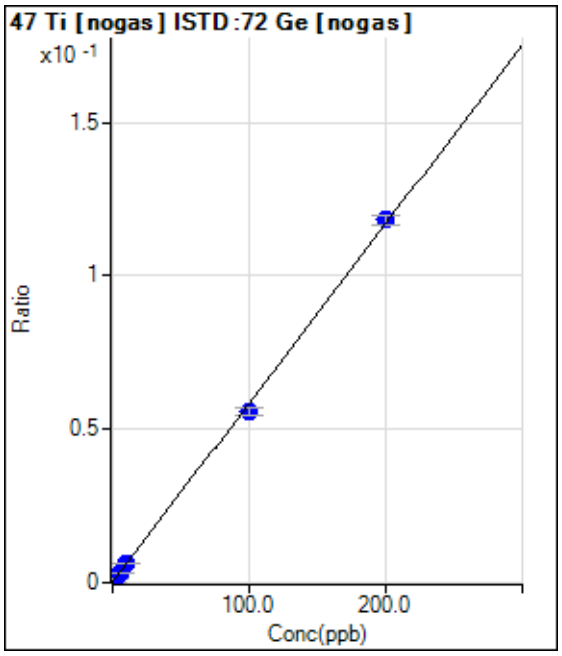
Calibration for 240_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	120.00	0.0012	P	14.6
2	☐	200.000	209.805	603.35	0.0059	P	12.3
3	☐	500.000	529.503	1320.07	0.0131	P	21.2
4	☐	1000.000	1008.397	2470.22	0.0239	P	12.0
5	☐	10000.00	9864.508	22450.52	0.2241	P	3.6
6	☐	20000.00	20066.491	44898.13	0.4546	P	1.3
7	☐	100.000					

y = 2.2599E-005 * x + 0.0012
R = 1.0000
DL = 22.38
BEC = 50.95

Weight: <None>
Min Conc: <None>

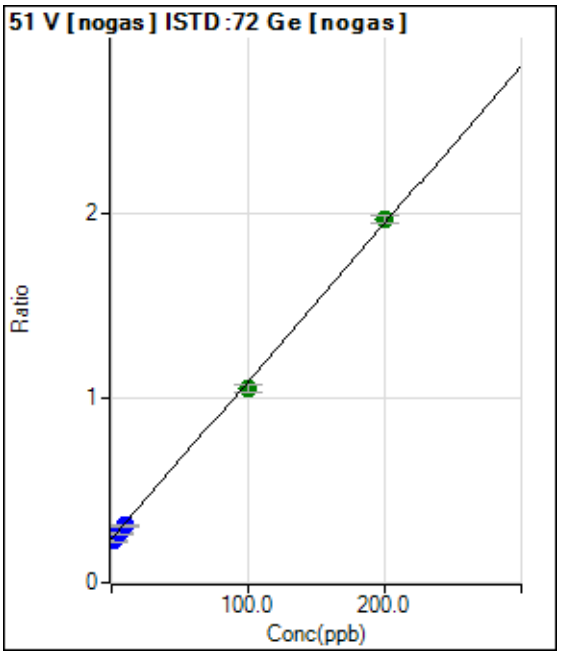


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	190.00	0.0002	P	41.9
2	☐	2.000	1.750	1413.41	0.0012	P	11.7
3	☐	5.000	4.780	3383.70	0.0030	P	1.0
4	☐	10.000	10.339	7061.51	0.0062	P	5.2
5	☐	100.000	95.332	62301.87	0.0558	P	3.6
6	☐	200.000	202.325	127541.14	0.1183	P	2.8
7	☐	1.000					

y = 5.8377E-004 * x + 1.6668E-004
R = 0.9996
DL = 0.3585
BEC = 0.2855

Weight: <None>
Min Conc: <None>

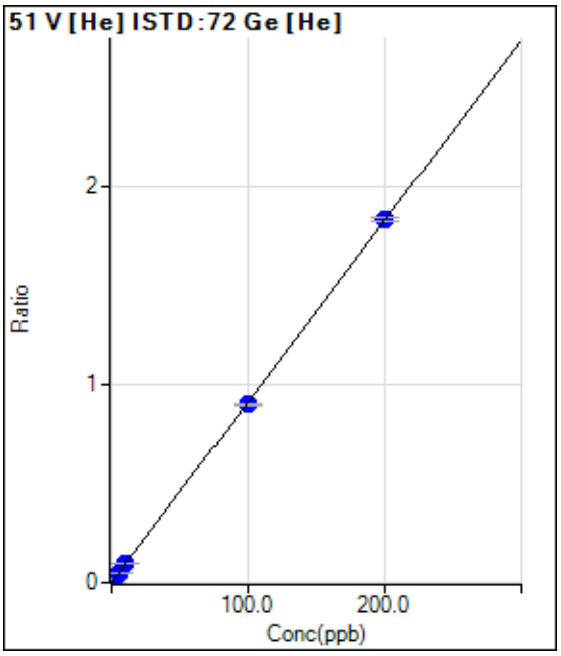
Calibration for 240_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	271156.15	0.2372	P	2.7
2	☐	2.000	-1.094	271466.75	0.2279	P	4.6
3	☐	5.000	3.596	306576.76	0.2680	P	4.8
4	☐	10.000	8.341	351271.71	0.3085	P	3.0
5	☐	100.000	95.725	1177904.00	1.0552	A	4.2
6	☐	200.000	202.287	2120119.58	1.9659	A	2.2
7	☐	1.000					

y = 0.0085 * x + 0.2372
R = 0.9997
DL = 2.269
BEC = 27.76

Weight: <None>
Min Conc: <None>

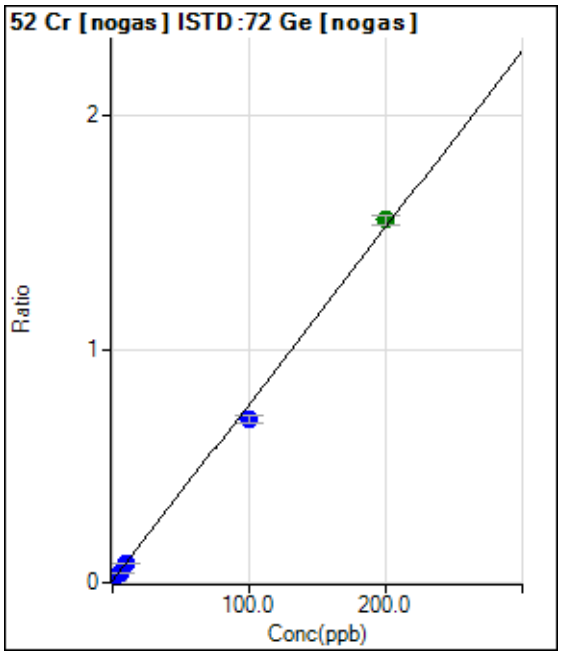


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.115	182.67	0.0018	P	7.0
2	☐	2.000	2.142	2076.79	0.0202	P	0.0
3	☐	5.000	5.072	4727.95	0.0470	P	2.0
4	☐	10.000	10.323	9805.27	0.0949	P	3.2
5	☐	100.000	98.738	90371.55	0.9017	P	1.1
6	☐	200.000	200.612	180867.72	1.8314	P	1.2
7	☐	1.000					

y = 0.0091 * x + 7.0399E-004
R = 1.0000
DL = 0.04053
BEC = 0.07715

Weight: <None>
Min Conc: <None>

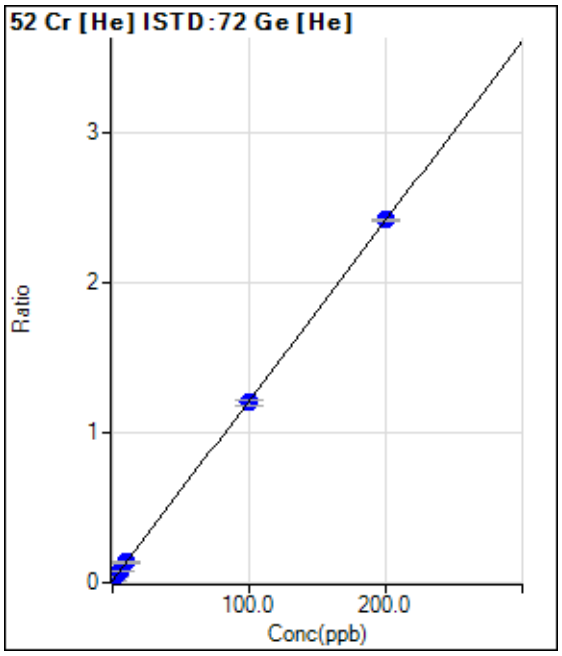
Calibration for 240_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	9339.14	0.0082	P	2.5
2	☐	2.000	1.857	26516.21	0.0222	P	1.1
3	☐	5.000	4.739	50362.52	0.0440	P	3.4
4	☐	10.000	9.715	93014.98	0.0817	P	0.1
5	☐	100.000	91.456	781652.93	0.7004	P	3.8
6	☐	200.000	204.294	1676325.13	1.5544	A	2.7
7	☐	1.000					

y = 0.0076 * x + 0.0082
R = 0.9987
DL = 0.08252
BEC = 1.08

Weight: <None>
Min Conc: <None>

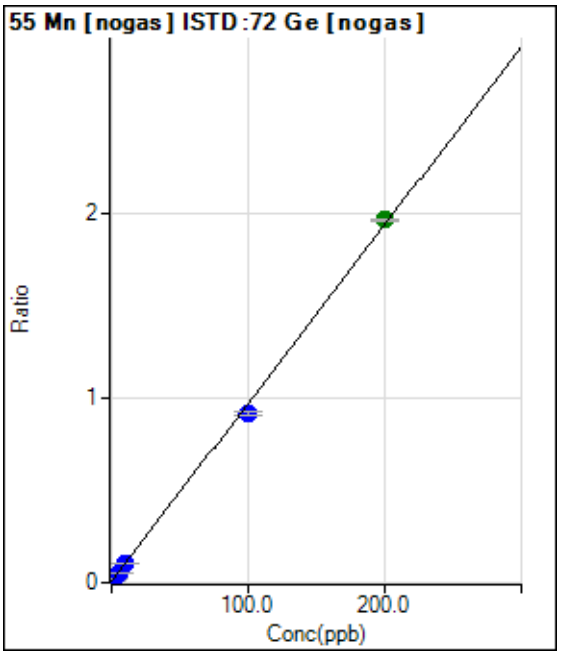


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1530.09	0.0147	P	5.8
2	☐	2.000	2.093	4077.20	0.0398	P	3.3
3	☐	5.000	5.167	7701.75	0.0766	P	10.1
4	☐	10.000	10.217	14159.05	0.1371	P	5.8
5	☐	100.000	98.986	120306.67	1.2007	P	3.6
6	☐	200.000	200.491	238686.89	2.4168	P	0.5
7	☐	1.000					

y = 0.0120 * x + 0.0147
R = 1.0000
DL = 0.2146
BEC = 1.226

Weight: <None>
Min Conc: <None>

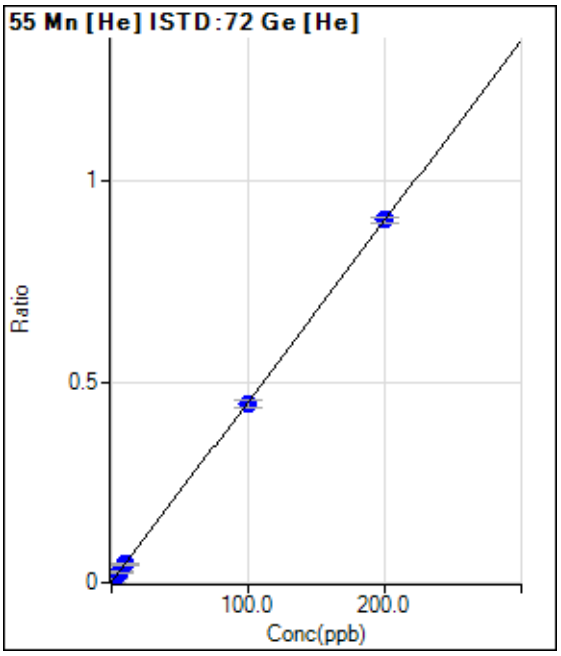
Calibration for 240_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	7988.54	0.0070	P	1.4
2	☐	2.000	1.837	29447.13	0.0247	P	4.9
3	☐	5.000	4.853	61576.95	0.0538	P	1.1
4	☐	10.000	9.727	114837.52	0.1009	P	1.9
5	☐	100.000	94.191	1022410.66	0.9161	P	2.5
6	☐	200.000	202.923	2120071.17	1.9655	A	0.9
7	☐	1.000					

y = 0.0097 * x + 0.0070
R = 0.9994
DL = 0.03033
BEC = 0.7241

Weight: <None>
Min Conc: <None>

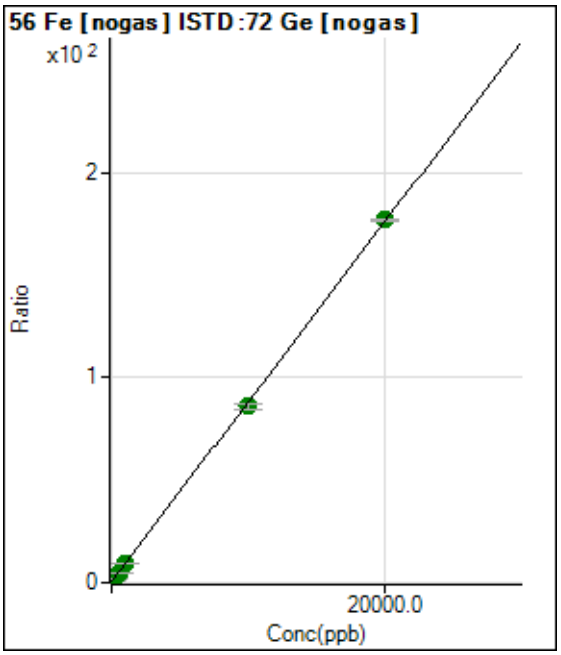


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	146.67	0.0014	P	16.0
2	☐	2.000	1.698	926.71	0.0090	P	11.2
3	☐	5.000	5.384	2573.56	0.0256	P	12.5
4	☐	10.000	10.041	4810.71	0.0465	P	6.6
5	☐	100.000	98.844	44641.47	0.4456	P	4.4
6	☐	200.000	200.569	89155.09	0.9027	P	1.6
7	☐	1.000					

y = 0.0045 * x + 0.0014
R = 1.0000
DL = 0.1503
BEC = 0.3136

Weight: <None>
Min Conc: <None>

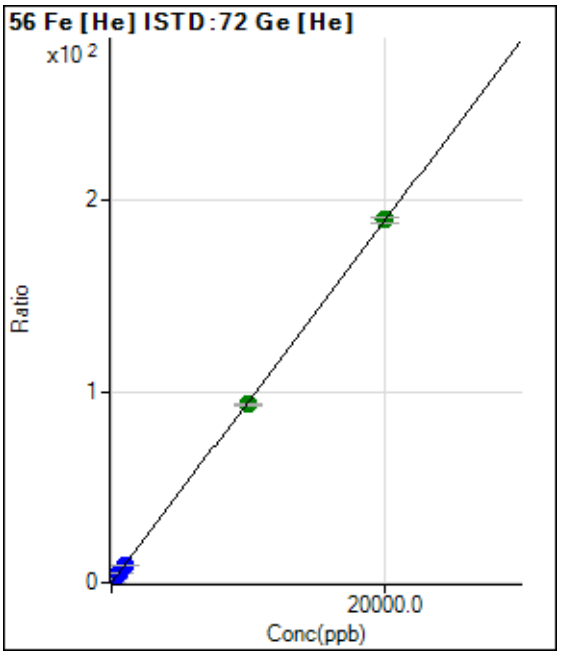
Calibration for 240_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	555563.94	0.4864	P	3.4
2	☐	200.000	195.804	2622317.51	2.2030	A	6.8
3	☐	500.000	497.752	5550000.51	4.8503	A	1.5
4	☐	1000.000	993.939	10475218.20	9.2005	A	2.3
5	☐	10000.00	9738.106	95823016.72	85.8624	A	3.5
6	☐	20000.00	20131.348	190922154.2	176.982	A	0.8
7	☐	100.000					

y = 0.0088 * x + 0.4864
R = 0.9999
DL = 5.601
BEC = 55.48

Weight: <None>
Min Conc: <None>

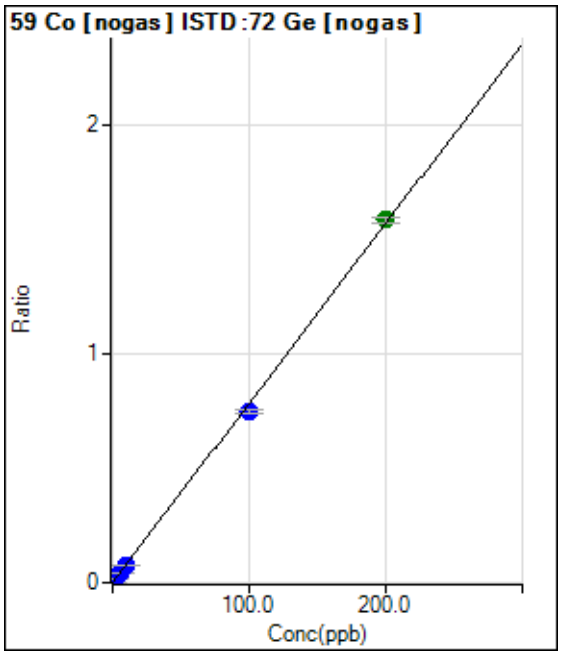


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3143.65	0.0301	P	12.2
2	☐	200.000	194.992	192035.72	1.8734	P	4.9
3	☐	500.000	503.830	482477.43	4.7928	P	1.0
4	☐	1000.000	965.663	946539.15	9.1585	P	2.7
5	☐	10000.00	9865.265	9349062.78	93.2866	A	1.1
6	☐	20000.00	20069.039	18738635.56	189.743	A	1.7
7	☐	100.000					

y = 0.0095 * x + 0.0301
R = 1.0000
DL = 1.164
BEC = 3.186

Weight: <None>
Min Conc: <None>

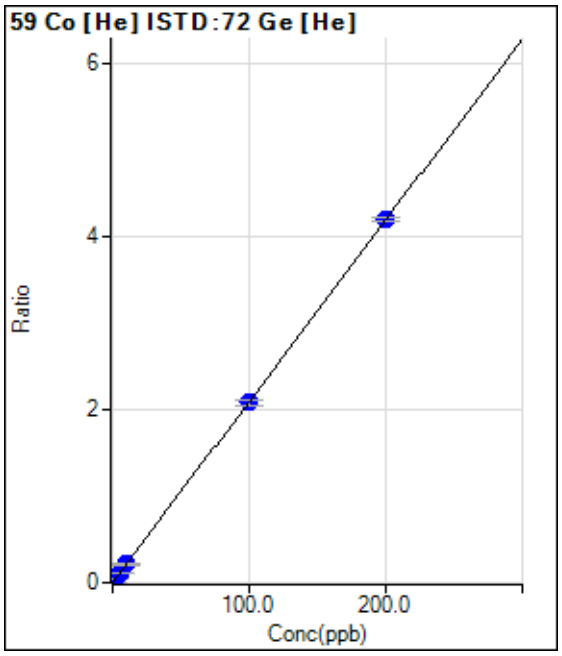
Calibration for 240_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	166.67	0.0001	P	16.5
2	☐	2.000	1.925	18179.34	0.0153	P	7.0
3	☐	5.000	5.000	45115.97	0.0394	P	0.5
4	☐	10.000	9.714	87057.02	0.0765	P	0.7
5	☐	100.000	95.667	839070.46	0.7518	P	2.3
6	☐	200.000	202.182	1713633.88	1.5887	A	1.7
7	☐	1.000					

y = 0.0079 * x + 1.4630E-004
R = 0.9997
DL = 0.009189
BEC = 0.01862

Weight: <None>
Min Conc: <None>

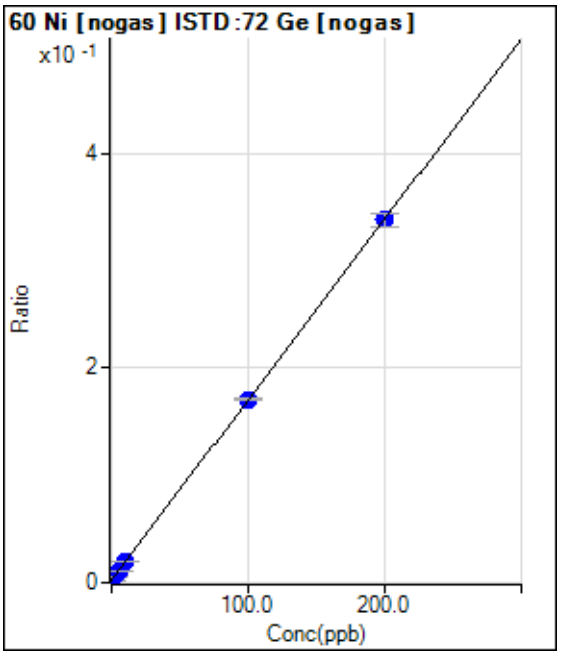


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	16.67	0.0002	P	69.2
2	☐	2.000	2.031	4377.26	0.0427	P	3.0
3	☐	5.000	5.418	11437.11	0.1136	P	2.1
4	☐	10.000	10.138	21953.40	0.2125	P	2.7
5	☐	100.000	99.325	208444.95	2.0800	P	2.4
6	☐	200.000	200.320	414284.98	4.1949	P	1.1
7	☐	1.000					

y = 0.0209 * x + 1.5984E-004
R = 1.0000
DL = 0.01584
BEC = 0.007633

Weight: <None>
Min Conc: <None>

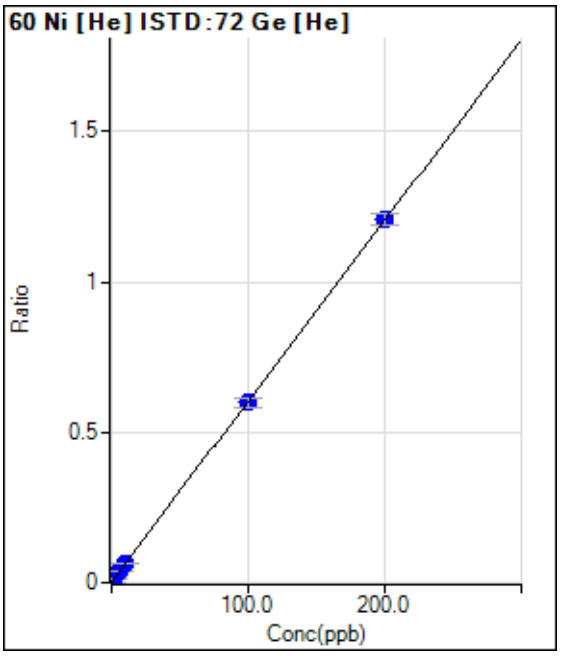
Calibration for 240_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.190	2376.86	0.0021	P	9.7
2	☐	2.000	1.810	6477.93	0.0054	P	6.2
3	☐	5.000	4.939	12237.62	0.0107	P	1.1
4	☐	10.000	10.289	22414.01	0.0197	P	1.9
5	☐	100.000	100.325	190852.22	0.1710	P	1.2
6	☐	200.000	199.826	364733.47	0.3382	P	3.5
7	☐	1.000					

y = 0.0017 * x + 0.0024
R = 1.0000
DL = 0.3616
BEC = 1.427

Weight: <None>
Min Conc: <None>

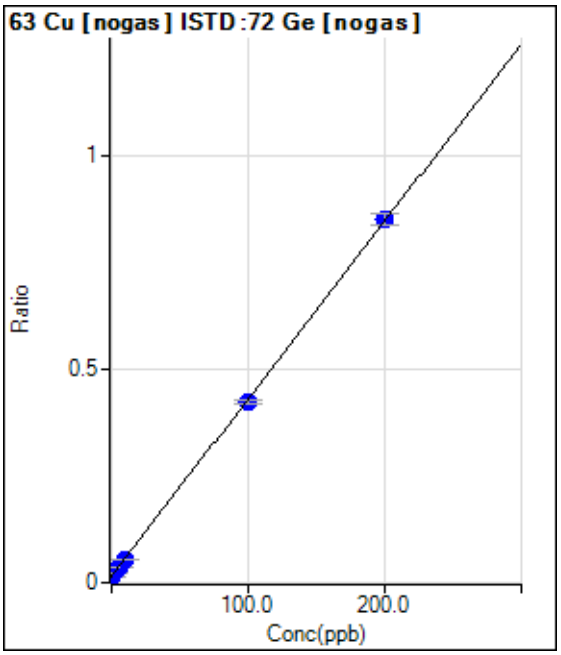


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.217	150.00	0.0014	P	19.3
2	☐	2.000	2.069	1553.42	0.0152	P	9.7
3	☐	5.000	5.622	3673.78	0.0365	P	2.0
4	☐	10.000	9.959	6464.56	0.0625	P	1.6
5	☐	100.000	99.164	59948.51	0.5983	P	5.7
6	☐	200.000	200.404	119125.06	1.2063	P	3.3
7	☐	1.000					

y = 0.0060 * x + 0.0027
R = 1.0000
DL = 0.1384
BEC = 0.4568

Weight: <None>
Min Conc: <None>

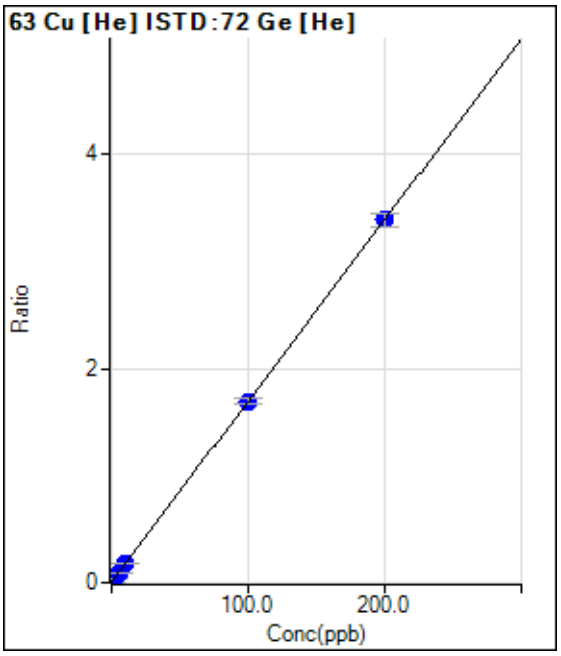
Calibration for 240_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	17715.42	0.0155	P	0.9
2	☐	2.000	1.697	26856.59	0.0225	P	3.4
3	☐	5.000	4.648	39770.08	0.0348	P	2.4
4	☐	10.000	9.744	63637.42	0.0559	P	0.8
5	☐	100.000	98.228	471857.11	0.4228	P	1.6
6	☐	200.000	200.911	914969.75	0.8485	P	3.3
7	☐	1.000					

y = 0.0041 * x + 0.0155
R = 0.9999
DL = 0.1038
BEC = 3.739

Weight: <None>
Min Conc: <None>

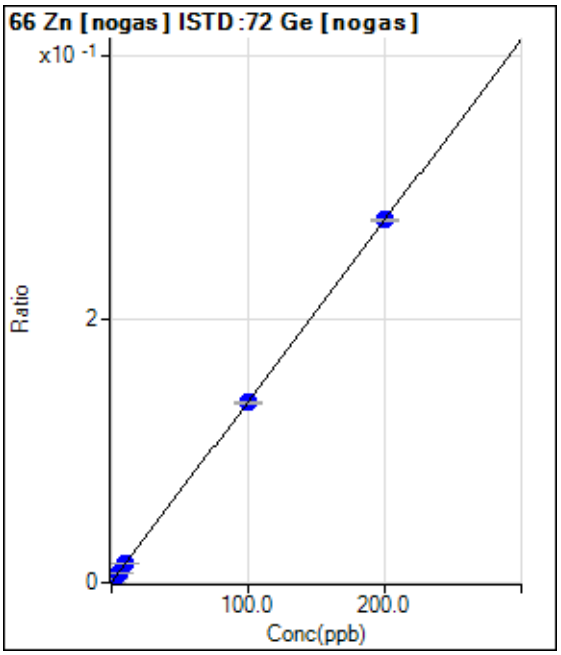


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.093	313.34	0.0030	P	5.0
2	☐	2.000	1.946	3843.80	0.0375	P	3.6
3	☐	5.000	5.118	9165.77	0.0911	P	5.3
4	☐	10.000	10.106	18129.26	0.1755	P	4.2
5	☐	100.000	99.862	169674.80	1.6932	P	2.7
6	☐	200.000	200.061	334540.16	3.3876	P	3.6
7	☐	1.000					

y = 0.0169 * x + 0.0046
R = 1.0000
DL = 0.02658
BEC = 0.2709

Weight: <None>
Min Conc: <None>

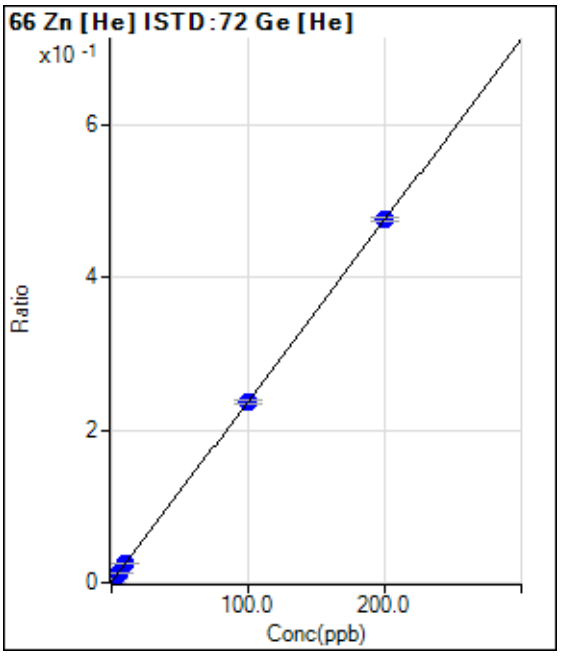
Calibration for 240_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.047	333.34	0.0003	P	2.9
2	☐	2.000	1.992	3533.74	0.0030	P	3.2
3	☐	5.000	4.931	8008.55	0.0070	P	3.1
4	☐	10.000	10.360	16464.38	0.0145	P	1.5
5	☐	100.000	99.374	152653.99	0.1368	P	1.7
6	☐	200.000	200.297	297119.68	0.2754	P	0.3
7	☐	1.000					

y = 0.0014 * x + 2.2722E-004
R = 1.0000
DL = 0.01836
BEC = 0.1654

Weight: <None>
Min Conc: <None>

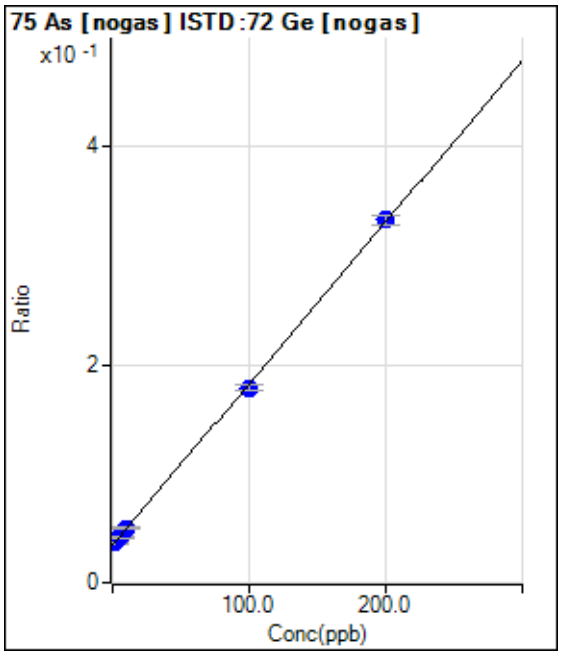


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.098	20.00	0.0002	P	88.2
2	☐	2.000	1.847	493.35	0.0048	P	15.3
3	☐	5.000	4.991	1236.73	0.0123	P	4.0
4	☐	10.000	10.448	2606.91	0.0252	P	6.5
5	☐	100.000	99.666	23775.87	0.2372	P	1.9
6	☐	200.000	200.146	46997.39	0.4759	P	1.2
7	☐	1.000					

y = 0.0024 * x + 4.2719E-004
R = 1.0000
DL = 0.2156
BEC = 0.1798

Weight: <None>
Min Conc: <None>

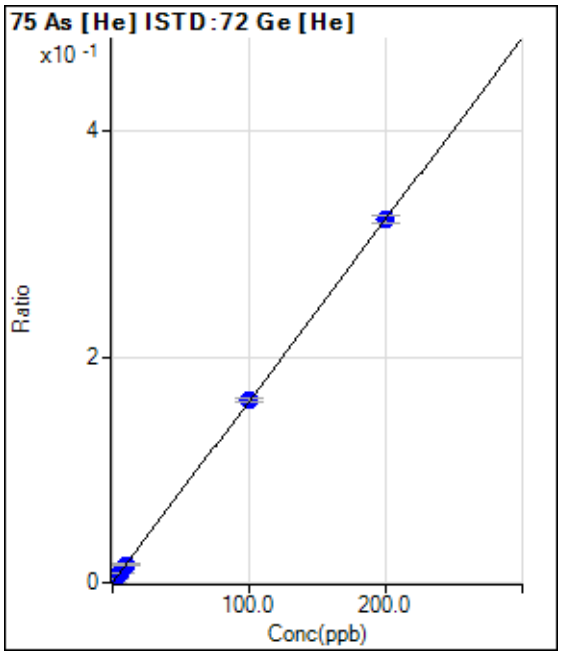
Calibration for 240_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	1.582	42058.82	0.0368	P	1.7
2	☐	2.000	1.172	43151.28	0.0362	P	2.6
3	☐	5.000	5.060	47993.41	0.0420	P	2.9
4	☐	10.000	10.610	57146.09	0.0502	P	3.7
5	☐	100.000	97.199	199263.44	0.1786	P	2.7
6	☐	200.000	201.377	359086.86	0.3330	P	2.5
7	☐	1.000					

y = 0.0015 * x + 0.0345
R = 0.9998
DL = 1.246
BEC = 23.25

Weight: <None>
Min Conc: <None>

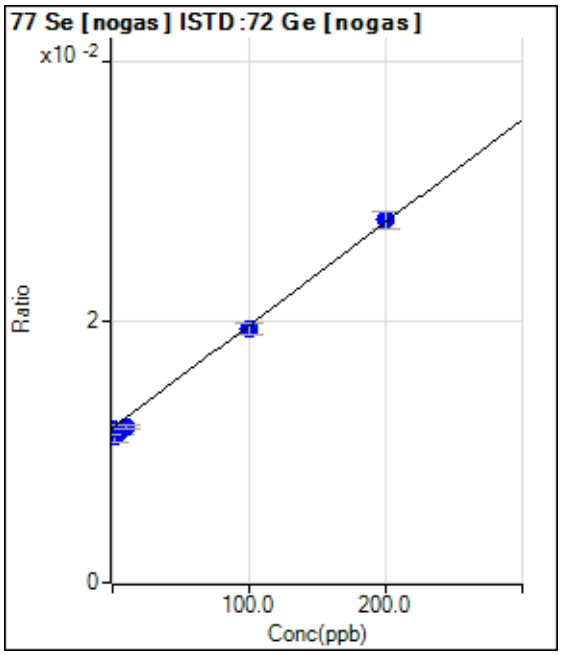


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6.67	0.0001	P	99.3
2	☐	2.000	1.891	318.89	0.0031	P	10.1
3	☐	5.000	5.141	838.91	0.0083	P	6.5
4	☐	10.000	9.710	1618.97	0.0157	P	8.2
5	☐	100.000	100.448	16197.24	0.1616	P	2.1
6	☐	200.000	199.788	31743.12	0.3214	P	2.0
7	☐	1.000					

y = 0.0016 * x + 6.4303E-005
R = 1.0000
DL = 0.1191
BEC = 0.03998

Weight: <None>
Min Conc: <None>

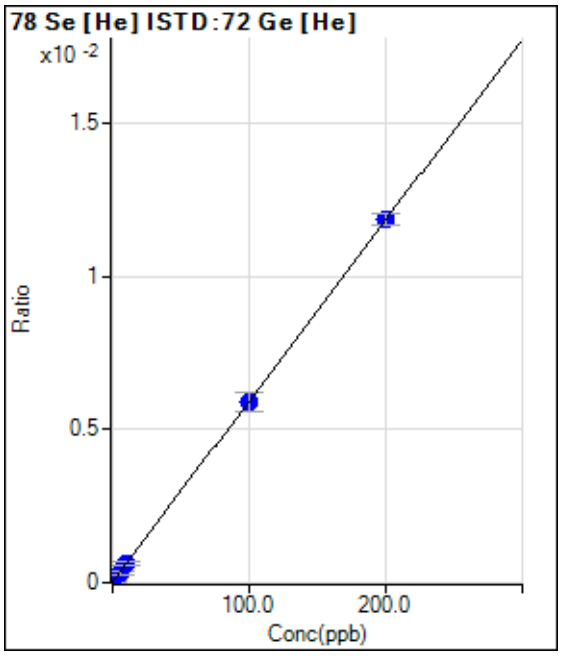
Calibration for 240_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	13555.21	0.0119	P	1.9
2	☐	2.000	-8.601	13328.44	0.0112	P	7.5
3	☐	5.000	-3.231	13288.34	0.0116	P	4.4
4	☐	10.000	0.388	13538.55	0.0119	P	2.7
5	☐	100.000	97.048	21776.57	0.0195	P	4.4
6	☐	200.000	202.268	29995.08	0.0278	P	4.7
7	☐	1.000					

y = 7.8839E-005 * x + 0.0119
R = 0.9990
DL = 8.779
BEC = 150.5

Weight: <None>
Min Conc: <None>

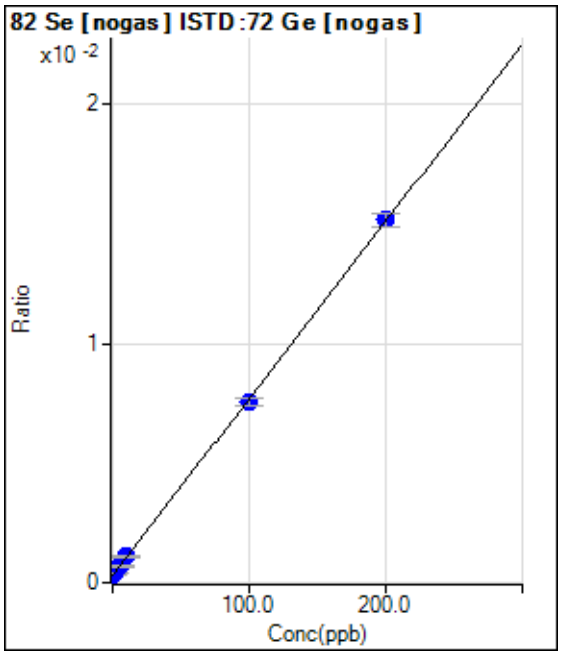


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.120	2.00	0.0000	P	173.
2	☐	2.000	2.740	19.33	0.0002	P	32.2
3	☐	5.000	4.807	31.33	0.0003	P	40.1
4	☐	10.000	9.859	62.67	0.0006	P	24.5
5	☐	100.000	99.420	590.01	0.0059	P	11.0
6	☐	200.000	200.295	1169.37	0.0118	P	3.3
7	☐	1.000					

y = 5.8981E-005 * x + 2.6260E-005
R = 1.0000
DL = 1.689
BEC = 0.4452

Weight: <None>
Min Conc: <None>

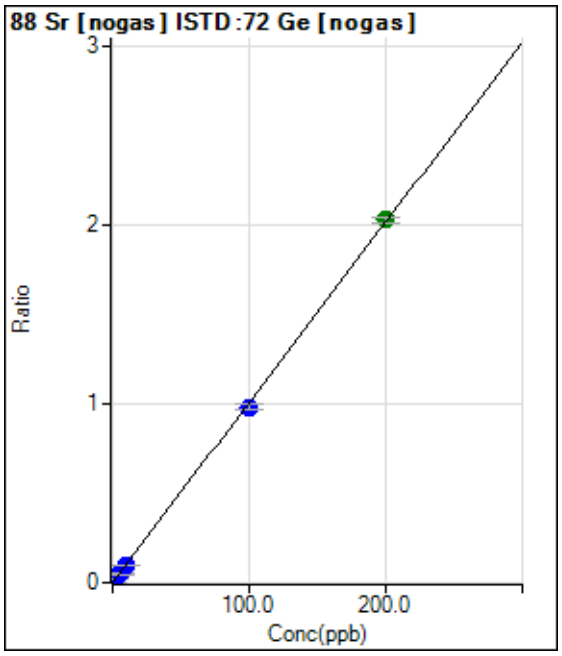
Calibration for 240_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	336.68	0.0003	P	2.0
2	☐	2.000	1.767	506.68	0.0004	P	6.7
3	☐	5.000	5.647	816.69	0.0007	P	11.8
4	☐	10.000	10.894	1253.40	0.0011	P	5.9
5	☐	100.000	97.961	8422.07	0.0075	P	4.4
6	☐	200.000	200.961	16354.37	0.0152	P	3.5
7	☐	1.000					

y = 7.4006E-005 * x + 2.9469E-004
R = 0.9999
DL = 0.2437
BEC = 3.982

Weight: <None>
Min Conc: <None>

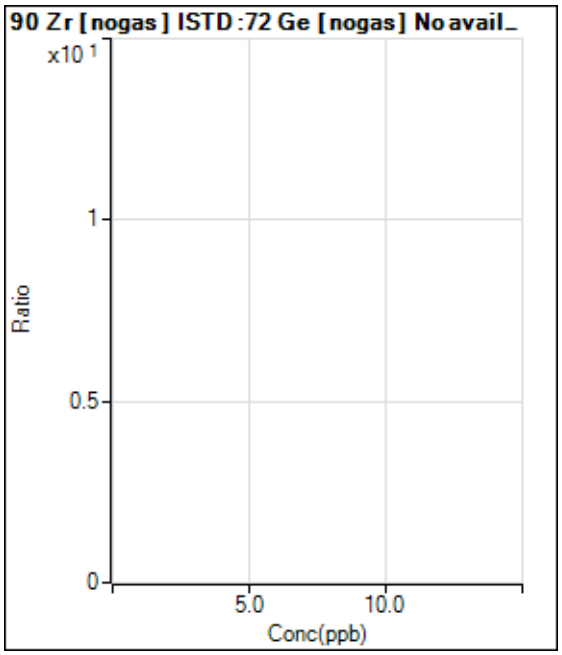


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	513.35	0.0004	P	11.0
2	☐	2.000	1.876	23071.93	0.0194	P	1.7
3	☐	5.000	4.788	55706.81	0.0487	P	2.2
4	☐	10.000	9.881	113881.20	0.1000	P	1.5
5	☐	100.000	97.286	1094650.53	0.9809	P	3.6
6	☐	200.000	201.370	2189334.39	2.0298	A	1.3
7	☐	1.000					

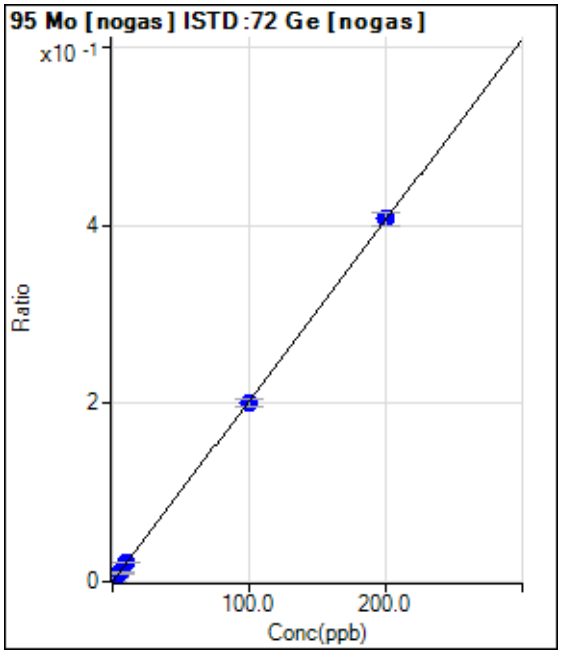
y = 0.0101 * x + 4.4871E-004
R = 0.9999
DL = 0.01475
BEC = 0.04453

Weight: <None>
Min Conc: <None>

Calibration for 240_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

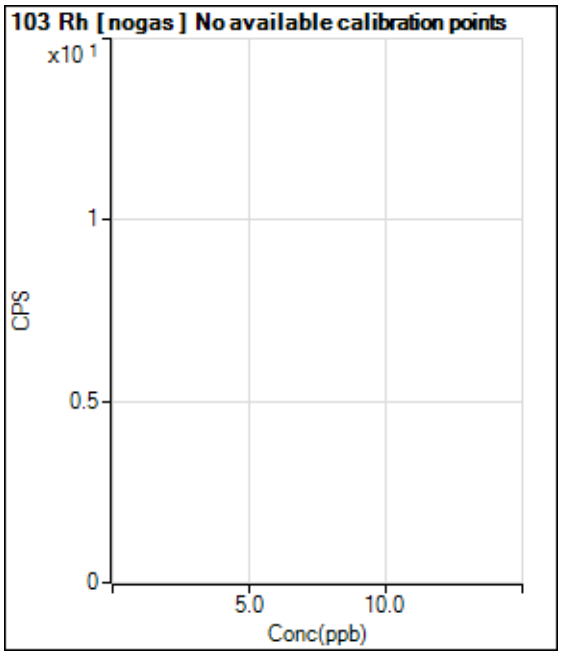


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	36.67	0.0000	P	57.3
2	☐	2.000	1.890	4600.67	0.0039	P	9.7
3	☐	5.000	4.889	11390.50	0.0100	P	7.4
4	☐	10.000	10.112	23409.05	0.0206	P	0.2
5	☐	100.000	98.564	223363.85	0.2001	P	4.3
6	☐	200.000	200.716	439475.63	0.4075	P	3.7
7	☐	1.000					

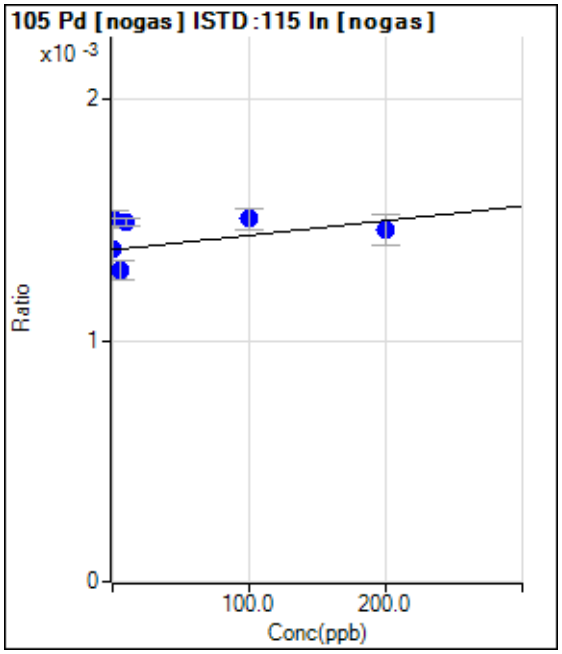
y = 0.0020 * x + 3.2080E-005
R = 1.0000
DL = 0.02715
BEC = 0.0158

Weight: <None>
Min Conc: <None>

Calibration for 240_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			6.67		P	173.
2	☐			16.67		P	91.7
3	☐			16.67		P	124.
4	☐			30.00		P	66.7
5	☐			66.67		P	22.9
6	☐			106.67		P	14.3
7	☐						



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1543.43	0.0014	P	16.3
2	☐	2.000	209.206	1706.79	0.0015	P	4.3
3	☐	5.000	-133.478	1496.76	0.0013	P	6.2
4	☐	10.000	185.037	1680.11	0.0015	P	2.1
5	☐	100.000	211.732	1626.77	0.0015	P	5.8
6	☐	200.000	136.772	1536.76	0.0015	P	8.7
7	☐	1.000					

y = 6.0796E-007 * x + 0.0014

R = 0.3145

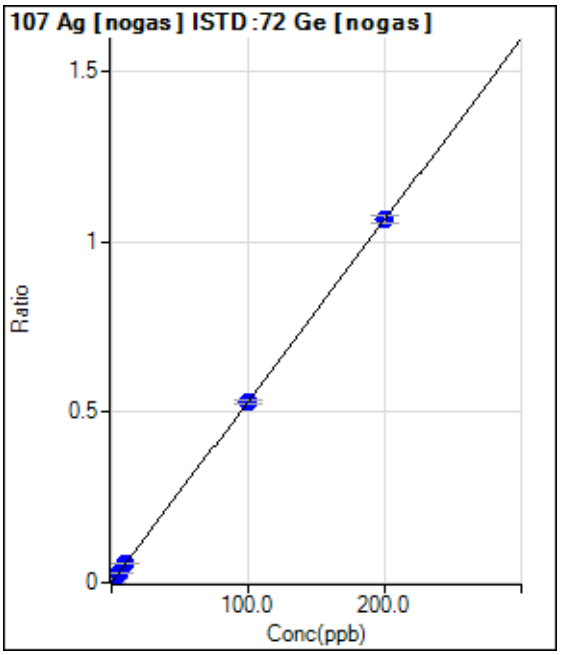
DL = 1110

BEC = 2264

Weight: <None>

Min Conc: <None>

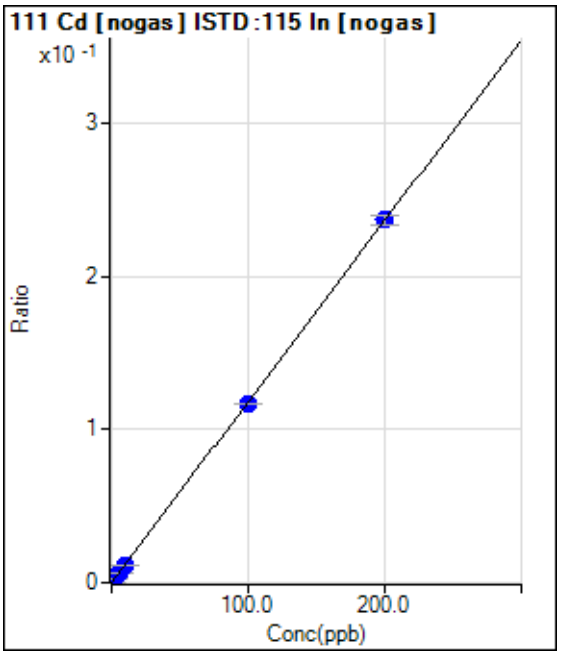
Calibration for 240_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	143.33	0.0001	P	6.6
2	☐	2.000	1.923	12334.57	0.0103	P	3.0
3	☐	5.000	5.144	31421.59	0.0275	P	3.2
4	☐	10.000	10.267	62280.09	0.0547	P	1.9
5	☐	100.000	99.863	592641.97	0.5310	P	1.6
6	☐	200.000	200.052	1147141.55	1.0636	P	2.0
7	☐	1.000					

y = 0.0053 * x + 1.2557E-004
R = 1.0000
DL = 0.004704
BEC = 0.02362

Weight: <None>
Min Conc: <None>

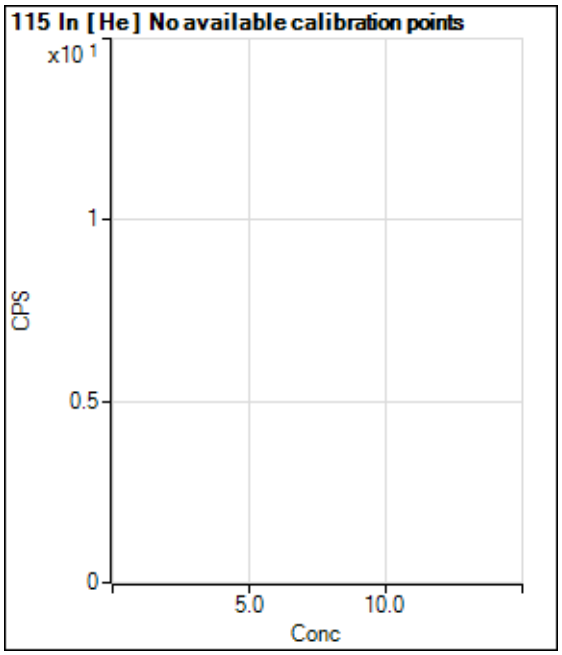


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	13.33	0.0000	P	173.
2	☐	2.000	1.861	2510.24	0.0022	P	8.4
3	☐	5.000	4.885	6678.05	0.0058	P	3.3
4	☐	10.000	9.421	12564.70	0.0111	P	4.8
5	☐	100.000	98.875	126144.38	0.1168	P	0.7
6	☐	200.000	200.596	249556.10	0.2369	P	2.7
7	☐	1.000					

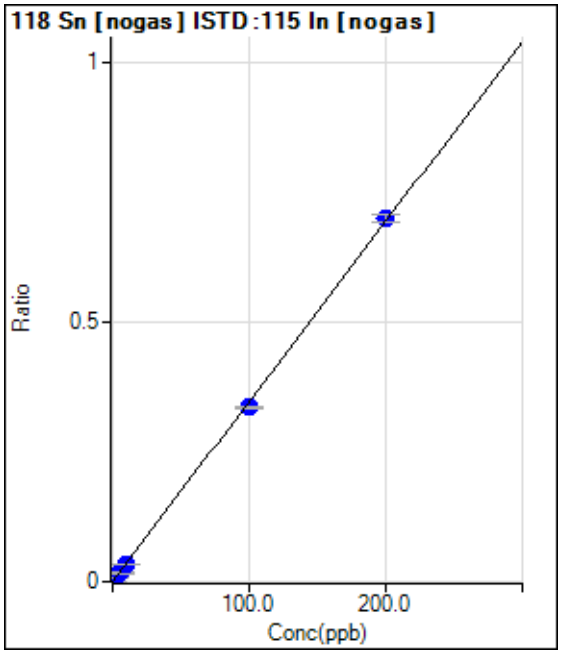
y = 0.0012 * x + 1.2334E-005
R = 1.0000
DL = 0.05426
BEC = 0.01044

Weight: <None>
Min Conc: <None>

Calibration for 240_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			110793.53		P	2.3
2	☐			111074.05		P	1.1
3	☐			110152.68		P	1.1
4	☐			112121.59		P	3.0
5	☐			107003.31		P	1.0
6	☐			106298.32		P	1.1
7	☐						

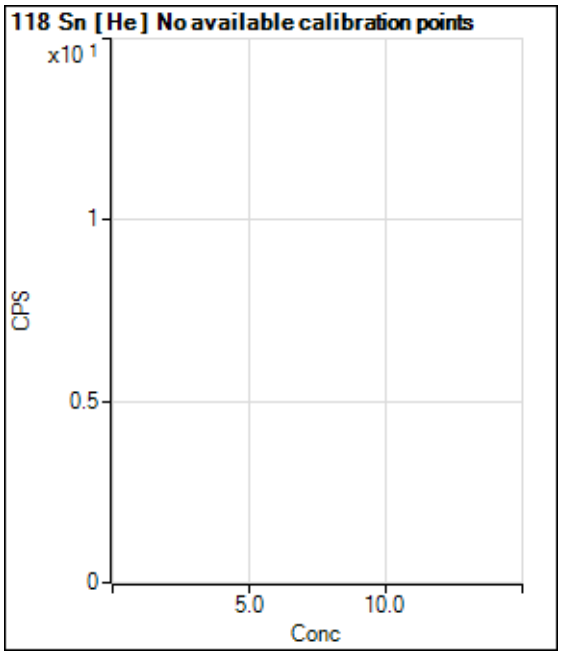


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	606.69	0.0005	P	18.0
2	☐	2.000	1.979	8398.83	0.0074	P	9.8
3	☐	5.000	4.677	19387.79	0.0168	P	3.0
4	☐	10.000	9.866	39224.45	0.0348	P	1.3
5	☐	100.000	96.805	363269.60	0.3363	P	0.4
6	☐	200.000	201.613	737144.47	0.6999	P	2.1
7	☐	1.000					

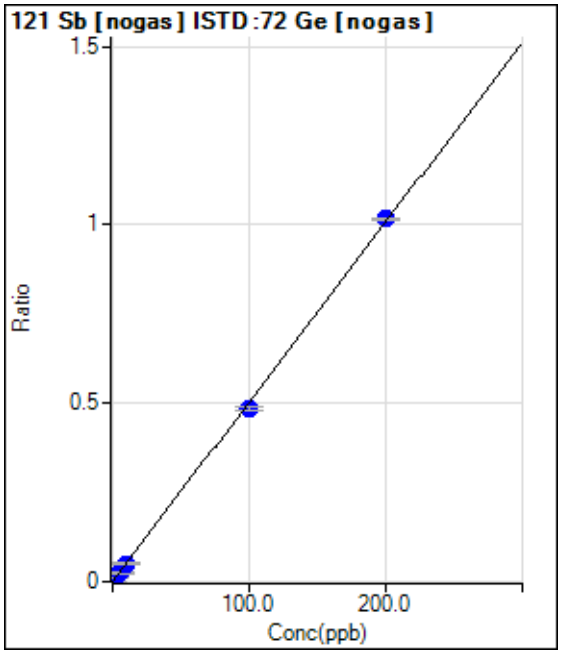
y = 0.0035 * x + 5.4158E-004
R = 0.9998
DL = 0.08417
BEC = 0.1561

Weight: <None>
Min Conc: <None>

Calibration for 240_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			106.67		P	21.7
2	☐			1230.06		P	11.5
3	☐			2830.27		P	8.0
4	☐			5450.93		P	2.4
5	☐			48327.24		P	2.4
6	☐			101503.61		P	1.0
7	☐						

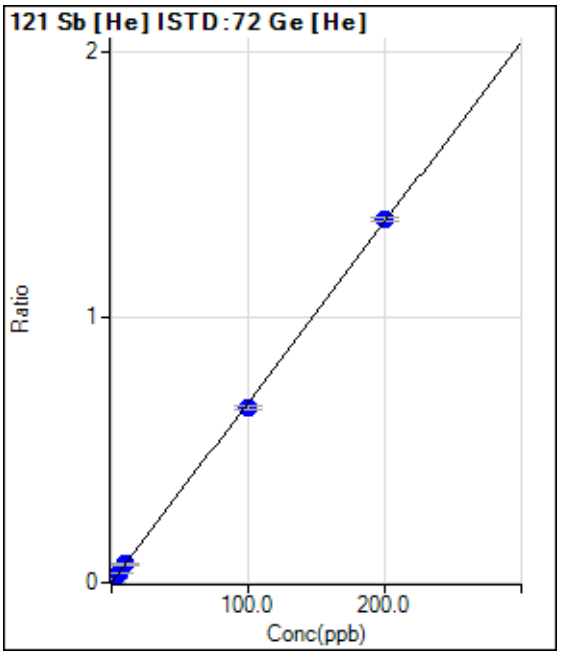


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	756.69	0.0007	P	7.0
2	☐	2.000	1.834	11780.86	0.0099	P	7.5
3	☐	5.000	4.812	28436.93	0.0249	P	5.2
4	☐	10.000	9.988	57970.13	0.0509	P	1.8
5	☐	100.000	96.092	540440.79	0.4842	P	2.2
6	☐	200.000	201.961	1096966.65	1.0170	P	0.8
7	☐	1.000					

y = 0.0050 * x + 6.6122E-004
R = 0.9997
DL = 0.02773
BEC = 0.1314

Weight: <None>
Min Conc: <None>

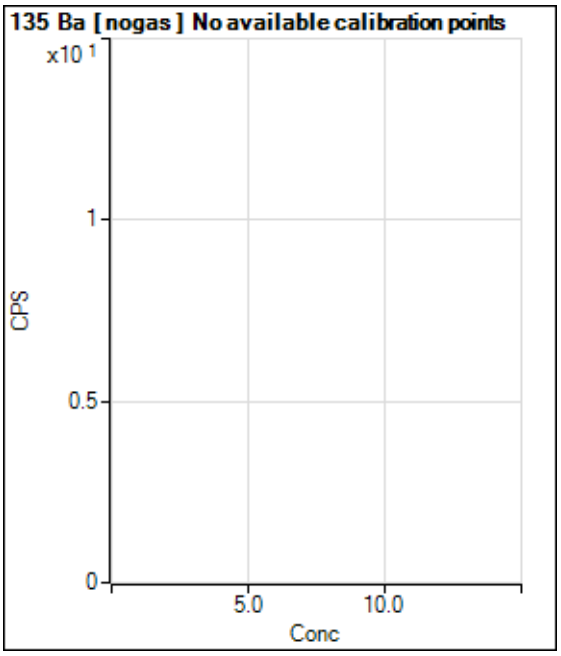
Calibration for 240_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	83.33	0.0008	P	20.1
2	☐	2.000	2.115	1556.77	0.0152	P	7.5
3	☐	5.000	5.357	3740.47	0.0372	P	3.5
4	☐	10.000	10.442	7401.71	0.0717	P	7.9
5	☐	100.000	97.280	66286.07	0.6613	P	1.6
6	☐	200.000	201.328	135082.10	1.3678	P	1.2
7	☐	1.000					

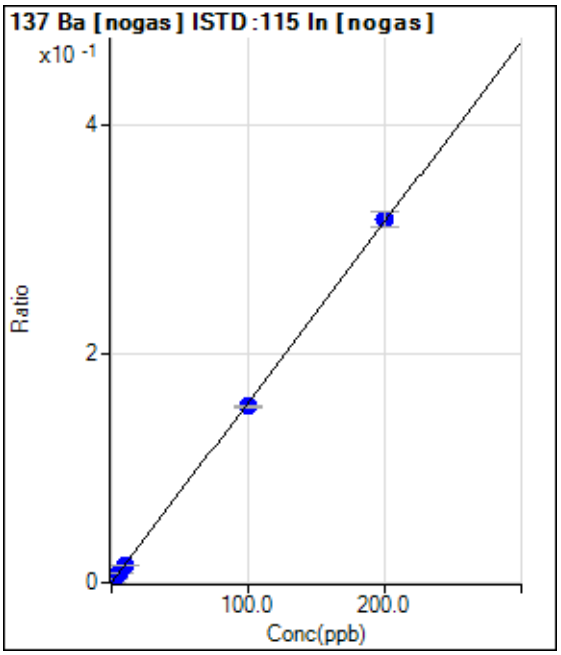
y = 0.0068 * x + 8.0123E-004
R = 0.9999
DL = 0.07121
BEC = 0.118

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			46.67		P	44.6
2	☐			2110.17		P	10.4
3	☐			5157.52		P	3.0
4	☐			9936.35		P	1.4
5	☐			95524.91		P	2.5
6	☐			195739.96		P	1.9
7	☐						

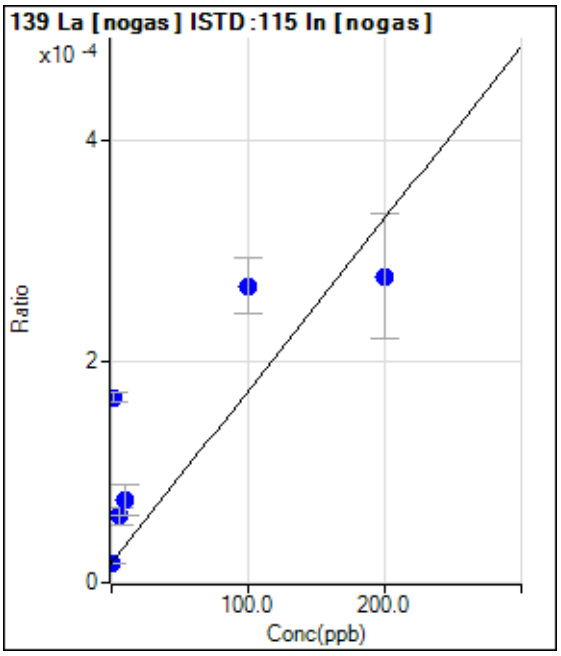
Calibration for 240_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	93.33	0.0001	P	61.6
2	☐	2.000	1.946	3577.11	0.0032	P	10.8
3	☐	5.000	4.966	9159.26	0.0079	P	2.3
4	☐	10.000	9.651	17278.91	0.0153	P	2.5
5	☐	100.000	97.701	166635.70	0.1543	P	0.9
6	☐	200.000	201.168	334318.07	0.3176	P	4.3
7	☐	1.000					

y = 0.0016 * x + 8.4282E-005
R = 0.9999
DL = 0.09874
BEC = 0.05341

Weight: <None>
Min Conc: <None>

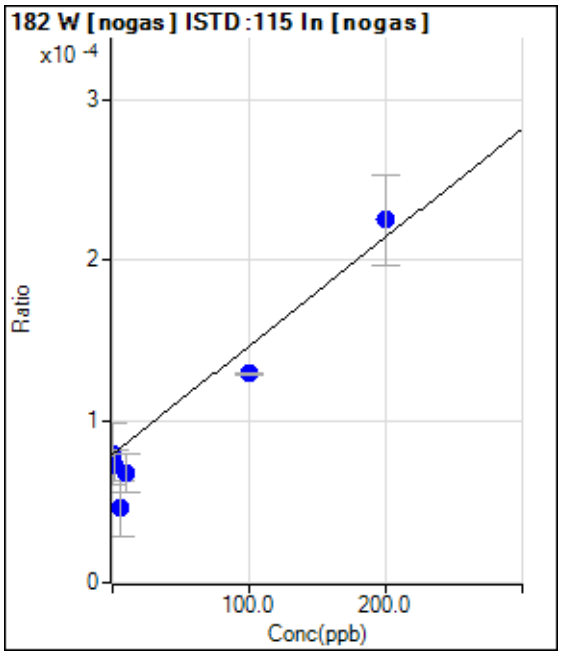


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	20.00	0.0000	P	3.5
2	☐	2.000	95.951	190.01	0.0002	P	4.9
3	☐	5.000	27.273	70.00	0.0001	P	27.1
4	☐	10.000	36.079	83.33	0.0001	P	37.4
5	☐	100.000	161.032	290.01	0.0003	P	19.0
6	☐	200.000	166.684	290.01	0.0003	P	41.1
7	☐	100.000					

y = 1.5579E-006 * x + 1.7876E-005
R = 0.8373
DL = 1.217
BEC = 11.47

Weight: <None>
Min Conc: <None>

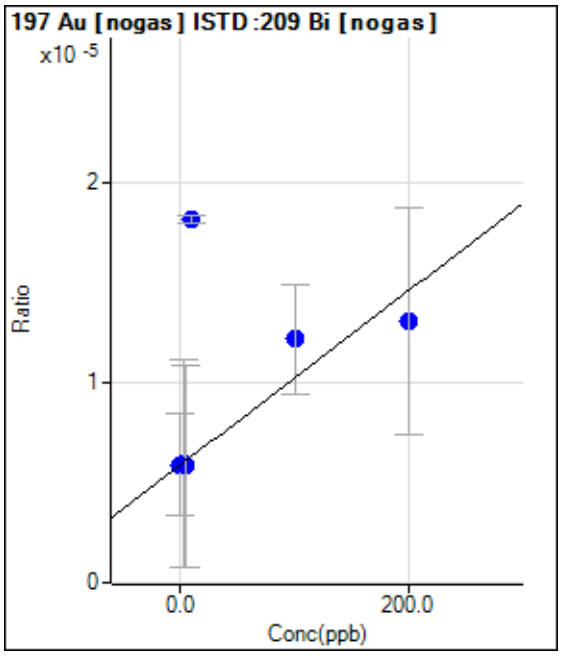
Calibration for 240_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	90.00	0.0001	P	48.0
2	☐	2.000	-9.834	83.33	0.0001	P	25.7
3	☐	5.000	-50.104	53.33	0.0000	P	74.4
4	☐	10.000	-17.457	76.67	0.0001	P	33.7
5	☐	100.000	73.977	140.00	0.0001	P	1.2
6	☐	200.000	215.880	236.68	0.0002	P	24.7
7	☐	1.000					

y = 6.7363E-007 * x + 7.9796E-005
R = 0.9774
DL = 170.6
BEC = 118.5

Weight: <None>
Min Conc: <None>

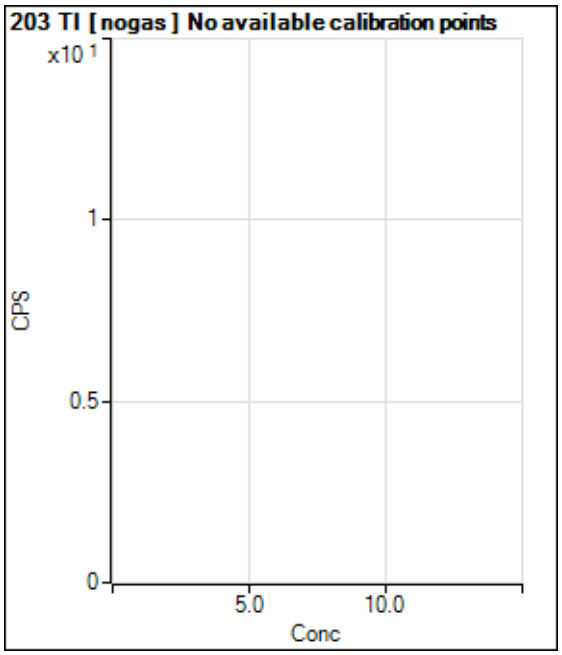


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6.67	0.0000	P	86.6
2	☐	2.000	1.531	6.67	0.0000	P	173.
3	☐	5.000	-1.353	6.67	0.0000	P	173.
4	☐	10.000	281.480	20.00	0.0000	P	2.0
5	☐	100.000	144.105	13.33	0.0000	P	44.5
6	☐	200.000	164.537	13.33	0.0000	P	86.7
7	☐	100.000					

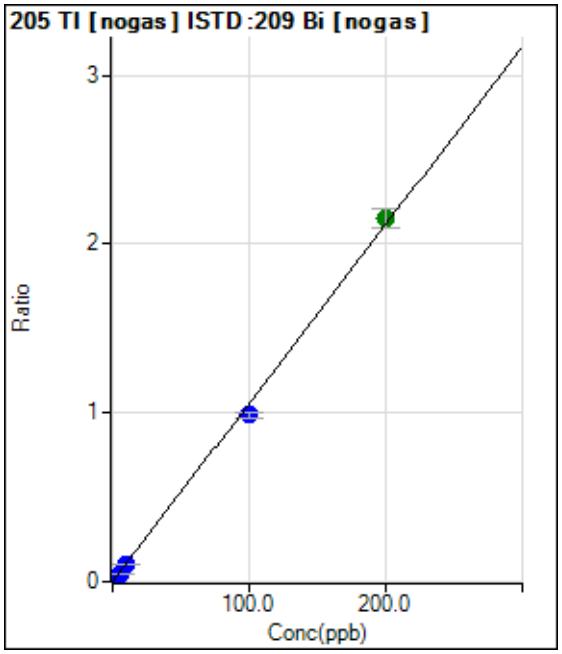
y = 4.3496E-008 * x + 5.8935E-006
R = 0.3947
DL = 352.1
BEC = 135.5

Weight: <None>
Min Conc: <None>

Calibration for 240_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			60.00		P	83.3
2	☐			9166.05		P	1.5
3	☐			23170.15		P	1.7
4	☐			47054.63		P	4.0
5	☐			457202.30		P	4.1
6	☐			890599.86		P	3.4
7	☐						

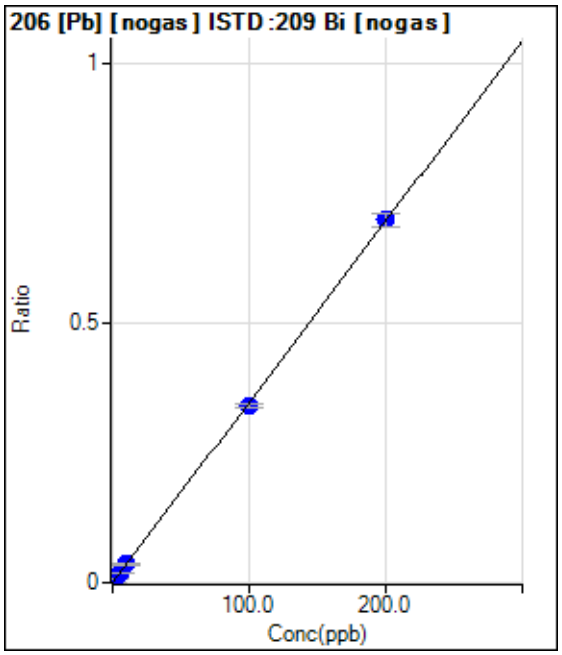


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	93.33	0.0001	P	14.6
2	☐	2.000	1.839	22051.98	0.0195	P	2.5
3	☐	5.000	4.631	55872.85	0.0490	P	2.1
4	☐	10.000	9.549	111374.54	0.1010	P	2.3
5	☐	100.000	93.331	1084494.98	0.9864	P	3.3
6	☐	200.000	203.368	2230852.26	2.1493	A	5.4
7	☐	1.000					

y = 0.0106 * x + 8.3043E-005
R = 0.9992
DL = 0.003447
BEC = 0.007858

Weight: <None>
Min Conc: <None>

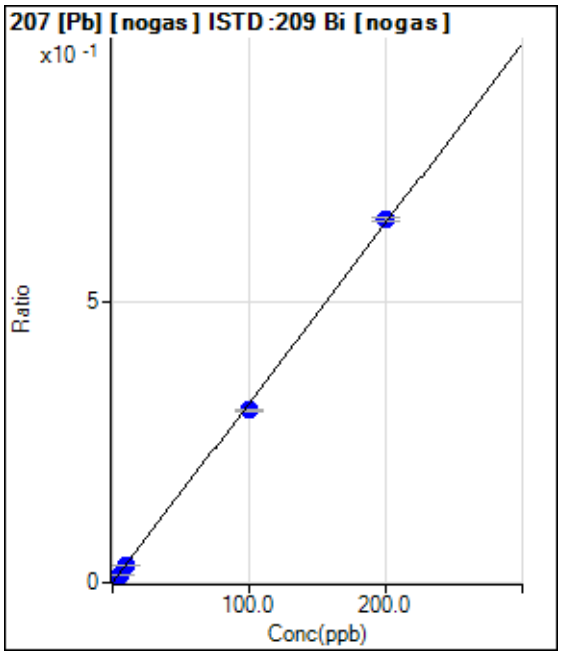
Calibration for 240_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	83.33	0.0001	P	43.3
2	☐	2.000	1.936	7701.90	0.0068	P	2.1
3	☐	5.000	4.926	19625.45	0.0172	P	3.2
4	☐	10.000	10.117	38916.71	0.0353	P	2.0
5	☐	100.000	98.083	375489.67	0.3415	P	1.8
6	☐	200.000	200.955	726259.84	0.6996	P	3.8
7	☐	1.000					

y = 0.0035 * x + 7.4423E-005
R = 0.9999
DL = 0.02776
BEC = 0.02138

Weight: <None>
Min Conc: <None>

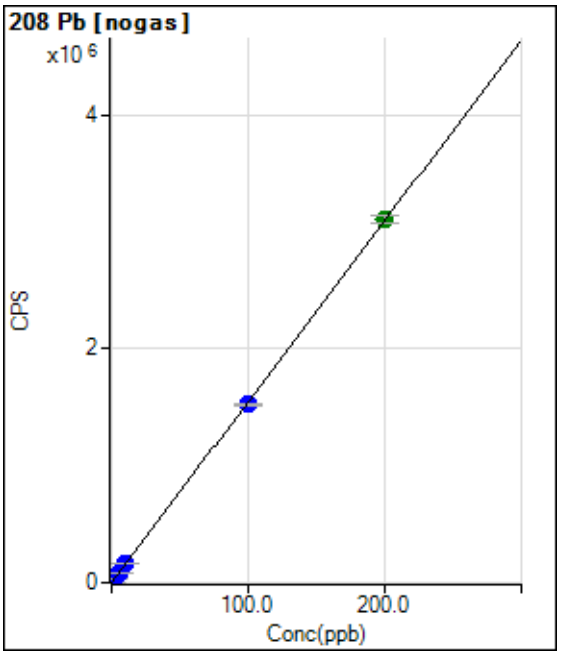


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	80.00	0.0001	P	2.0
2	☐	2.000	1.901	6941.61	0.0061	P	5.2
3	☐	5.000	4.728	17286.07	0.0152	P	2.8
4	☐	10.000	9.907	34961.28	0.0317	P	2.8
5	☐	100.000	96.013	337290.61	0.3067	P	1.7
6	☐	200.000	202.006	670094.45	0.6451	P	1.2
7	☐	1.000					

y = 0.0032 * x + 7.1308E-005
R = 0.9997
DL = 0.00134
BEC = 0.02233

Weight: <None>
Min Conc: <None>

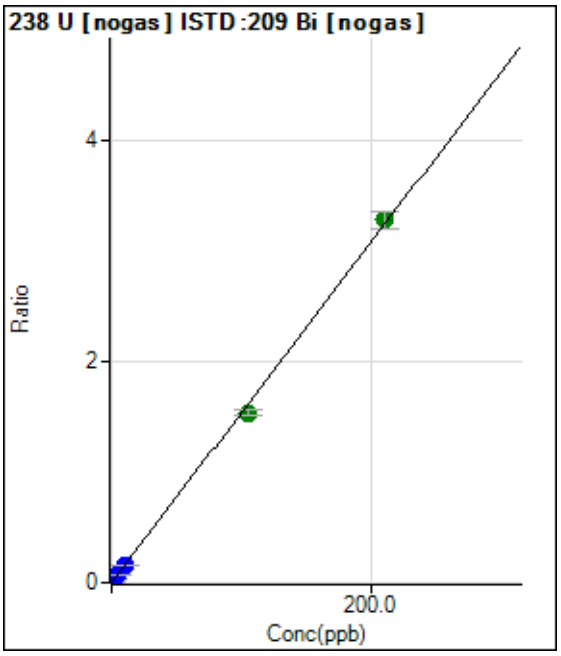
Calibration for 240_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	283.33		P	23.5
2	☐	2.000	2.019	31479.16		P	1.2
3	☐	5.000	5.101	79090.22		P	3.5
4	☐	10.000	10.225	158242.79		P	1.4
5	☐	100.000	98.655	1524355.69		P	1.4
6	☐	200.000	200.659	3100175.31		A	2.1
7	☐	1.000					

y = 15448.5757 * x + 283.3333
R = 1.0000
DL = 0.01293
BEC = 0.01834

Weight: <None>
Min Conc: <None>

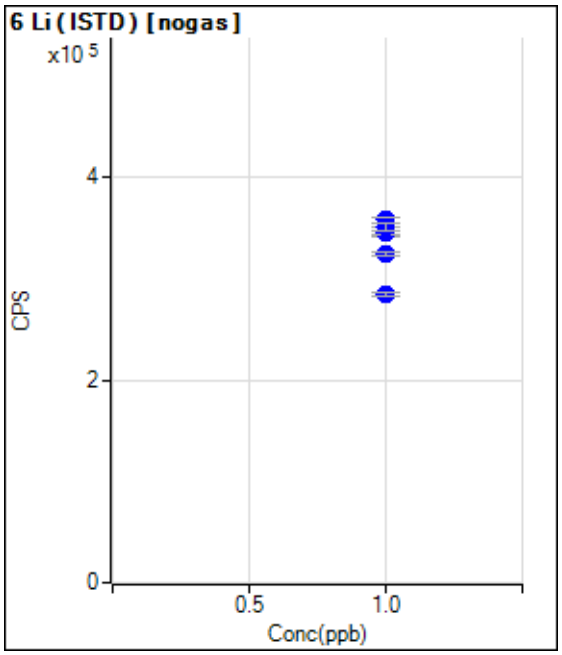


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	50.00	0.0000	P	34.4
2	☐	2.000	1.888	32907.78	0.0291	P	4.3
3	☐	5.000	4.681	82262.03	0.0722	P	2.9
4	☐	10.000	9.742	165628.07	0.1502	P	1.7
5	☐	105.000	99.586	1687324.09	1.5346	A	2.7
6	☐	210.000	212.728	3403786.30	3.2781	A	5.0
7	☐	1.000					

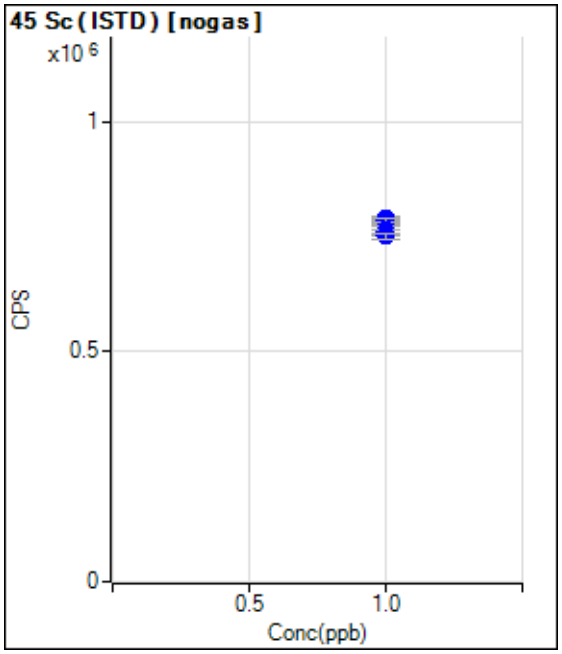
y = 0.0154 * x + 4.4516E-005
R = 0.9995
DL = 0.002977
BEC = 0.002889

Weight: <None>
Min Conc: <None>

Calibration for 240_ICV.d

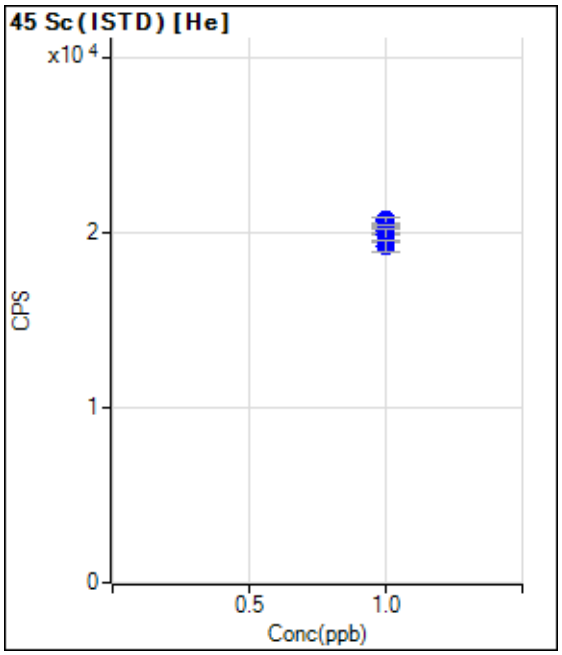


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		345803.12		P	2.8
2	☐	1.000		357853.38		P	1.4
3	☐	1.000		345427.92		P	1.1
4	☐	1.000		350105.67		P	2.1
5	☐	1.000		324100.27		P	1.5
6	☐	1.000		283763.33		P	1.4
7	☐	1.000					

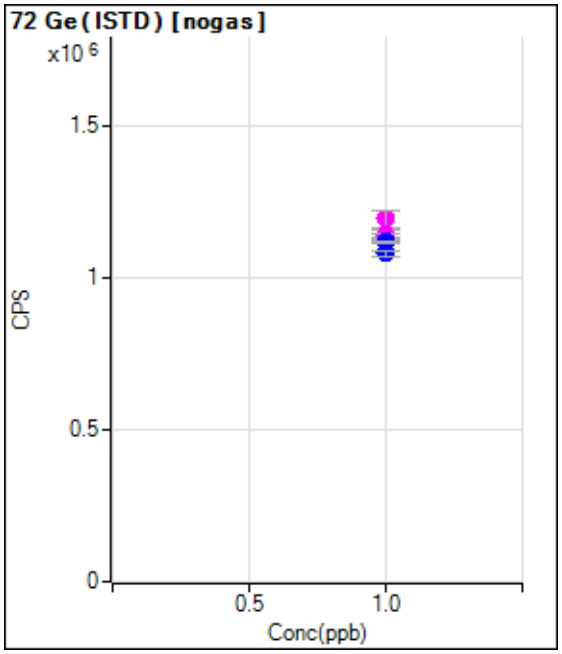


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		785095.09		P	1.9
2	☐	1.000		788969.42		P	1.1
3	☐	1.000		785342.30		P	0.9
4	☐	1.000		764802.67		P	2.5
5	☐	1.000		760034.96		P	1.8
6	☐	1.000		751175.82		P	1.4
7	☐	1.000					

Calibration for 240_ICV.d

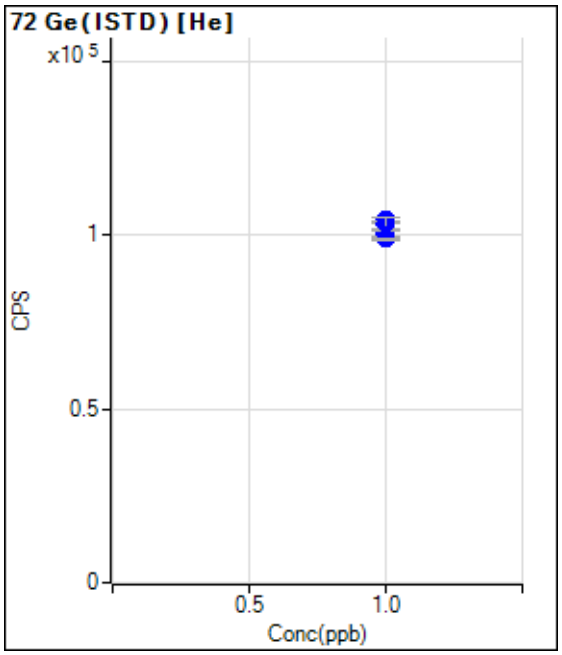


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		20695.10		P	1.5
2	☐	1.000		20161.15		P	1.9
3	☐	1.000		20568.35		P	3.0
4	☐	1.000		20121.24		P	2.4
5	☐	1.000		19810.89		P	4.1
6	☐	1.000		19173.46		P	3.6
7	☐	1.000					

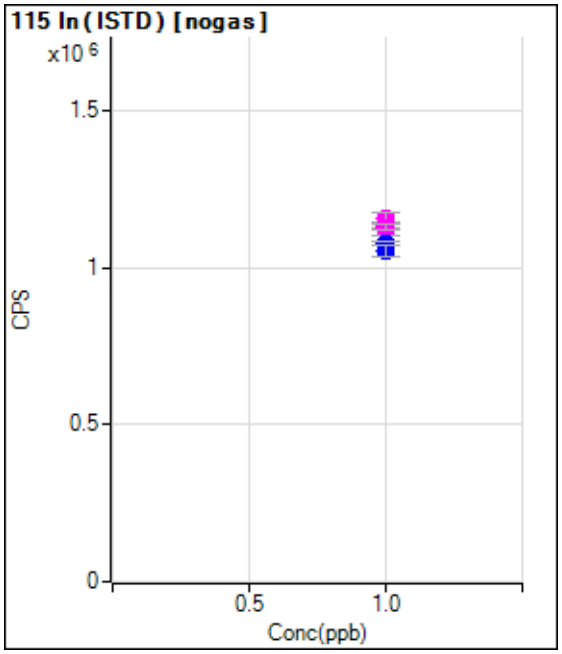


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1142872.66		M	3.0
2	☐	1.000		1192718.50		M	4.5
3	☐	1.000		1144079.18		M	2.6
4	☐	1.000		1138434.67		M	0.7
5	☐	1.000		1116195.92		P	1.0
6	☐	1.000		1078690.46		P	1.9
7	☐	1.000					

Calibration for 240_ICV.d

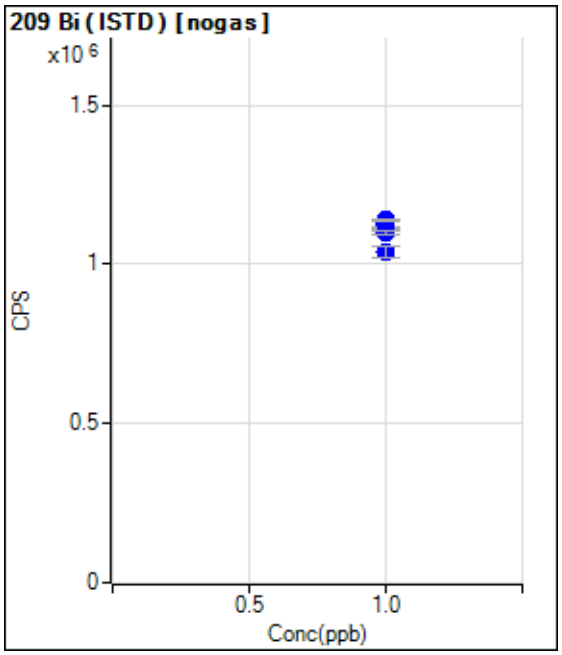


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		104250.41		P	1.8
2	☐	1.000		102574.21		P	2.3
3	☐	1.000		100654.06		P	1.9
4	☐	1.000		103383.55		P	2.9
5	☐	1.000		100229.78		P	1.6
6	☐	1.000		98760.95		P	0.3
7	☐	1.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1119741.18		M	3.5
2	☐	1.000		1135373.75		M	2.0
3	☐	1.000		1155795.04		M	3.1
4	☐	1.000		1128474.90		M	1.7
5	☐	1.000		1080109.86		P	1.2
6	☐	1.000		1053712.57		P	3.4
7	☐	1.000					

Calibration for 240_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1122197.27		P	2.0
2	☐	1.000		1130176.52		P	2.0
3	☐	1.000		1139649.20		P	0.2
4	☐	1.000		1103028.68		P	2.0
5	☐	1.000		1099782.46		P	1.5
6	☐	1.000		1038954.31		P	3.5
7	☐	1.000					

Sub Contract Data

Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
ALS WO# HS17121113

Case Narrative

Method: 6850
Analysis: Perchlorate
Analysis SOP: LC-MS-CLO4
ALS WO ID(s): 1735679; 1735681; 1735685; 1735689

Client: ALS Laboratories (Houston, TX)
Matrix: Water
ELMS Batch (HBN): 2023 (205839)

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

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

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

Holding Times: Holding times were met for all analyses.

Dilutions: Sample 1735679001 was analyzed and reported at a 1:1,000 dilution. Samples 1735685001/02/03/08 were analyzed and reported at the following dilutions: 1:10,000/10,000/1,000/1,000. The reporting limits have been adjusted accordingly.

Method QC data: The method blank (LMB 581172) was less than 1/2 the CRDL. The recovery for the LCS (581173) was within acceptable parameters.

MS/MSD Analysis: The matrix spike and matrix spike duplicate (MS/MSD) was performed on sample 1735681001 (Client ID: LH18/24SP140_122017). The Matrix Spike (MS - 581367) failed QC acceptance criteria for percent recovery. The Relative Percent Difference (RPD) also failed QC criteria. The Matrix Spike and Matrix Spike duplicate is reported for the clients' information only. The sample matrix may be inappropriate for the

method selected.

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

NC/CAR(s): None were required for this set.

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

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

Miscellaneous Comments: These samples were analyzed in accordance with the requirements found in the DOD QSM Version 5.1. Manual Integrations were performed for some of the Initial Calibration analyses (datafiles: 28NOVP01/02) along with datafiles 28DECP03/11/12/17-19.

Thomas Bosch January 9, 2017
Date

ANALYTICAL REPORT

Report Date: January 10, 2018

Sonia West
ALS Environmental
10450 Stancliff Rd.
Suite 210
Houston, TX 77099

Phone: (281) 530-5656

E-mail: Sonia.West@alsglobal.com

Workorder: **34-1735685**
Project ID: HS17121113 121817
Purchase Order: HS17121113
Project Manager Kevin W. Griffiths

Client Sample ID	Lab ID	Collect Date	Receive Date	Sampling Site
MW14_121817	1735685001	12/18/17	12/22/17	
MW14_121817_a	1735685002	12/18/17	12/22/17	
MW21_121817	1735685003	12/18/17	12/22/17	
MW22_121817	1735685004	12/18/17	12/22/17	
18CPTMW06_121817	1735685005	12/18/17	12/22/17	
18CPTMW06_121817_a	1735685006	12/18/17	12/22/17	
18CPTMW16_121817	1735685007	12/18/17	12/22/17	
AWD3_121817	1735685008	12/18/17	12/22/17	

ANALYTICAL REPORT

Workorder: 34-1735685
Client: ALS Environmental (Houston)
Project Manager: Kevin W. Griffiths

Analytical Results

Sample ID: **MW14_121817** | Sampling Site: NA | Collected: 12/18/2017
Lab ID: 1735685001 | Media: 125 mL Nalgene | Received: 12/22/2017
Matrix: Water | Sampling Parameter: NA

Analysis Method - EPA 6850, DoD QSM

Preparation: Not Applicable
Analysis: EPA 6850, DoD QSM Water | **Instrument ID:** LCMS04
Batch: ELMS/2023 (HBN: 205839) | **Percent Solid:** NA
Analyzed: 12/28/2017 13:11 | **Report Basis:** Wet

Analyte	Result (ug/L)	DL (ug/L)	LOD (ug/L)	LOQ (ug/L)	Dilution	Qual
Perchlorate	**150000**	10000	20000	40000	10000	

Sample ID: **MW14_121817_a** | Sampling Site: NA | Collected: 12/18/2017
Lab ID: 1735685002 | Media: 125 mL Nalgene | Received: 12/22/2017
Matrix: Water | Sampling Parameter: NA

Analysis Method - EPA 6850, DoD QSM

Preparation: Not Applicable
Analysis: EPA 6850, DoD QSM Water | **Instrument ID:** LCMS04
Batch: ELMS/2023 (HBN: 205839) | **Percent Solid:** NA
Analyzed: 12/28/2017 13:30 | **Report Basis:** Wet

Analyte	Result (ug/L)	DL (ug/L)	LOD (ug/L)	LOQ (ug/L)	Dilution	Qual
Perchlorate	**150000**	10000	20000	40000	10000	

Sample ID: **MW21_121817** | Sampling Site: NA | Collected: 12/18/2017
Lab ID: 1735685003 | Media: 125 mL Nalgene | Received: 12/22/2017
Matrix: Water | Sampling Parameter: NA

Analysis Method - EPA 6850, DoD QSM

Preparation: Not Applicable
Analysis: EPA 6850, DoD QSM Water | **Instrument ID:** LCMS04
Batch: ELMS/2023 (HBN: 205839) | **Percent Solid:** NA
Analyzed: 12/28/2017 13:49 | **Report Basis:** Wet

Analyte	Result (ug/L)	DL (ug/L)	LOD (ug/L)	LOQ (ug/L)	Dilution	Qual
Perchlorate	**21000**	1000	2000	4000	1000	

Sample ID: **MW22_121817** | Sampling Site: NA | Collected: 12/18/2017
Lab ID: 1735685004 | Media: 125 mL Nalgene | Received: 12/22/2017
Matrix: Water | Sampling Parameter: NA

Analysis Method - EPA 6850, DoD QSM

Preparation: Not Applicable
Analysis: EPA 6850, DoD QSM Water | **Instrument ID:** LCMS04
Batch: ELMS/2023 (HBN: 205839) | **Percent Solid:** NA
Analyzed: 12/28/2017 17:25 | **Report Basis:** Wet

Analyte	Result (ug/L)	DL (ug/L)	LOD (ug/L)	LOQ (ug/L)	Dilution	Qual
Perchlorate	**40**	1.0	2.0	4.0	1	

ANALYTICAL REPORT

Workorder: 34-1735685
Client: ALS Environmental (Houston)
Project Manager: Kevin W. Griffiths

Analytical Results

Sample ID: **18CPTMW06_121817** | Sampling Site: NA | Collected: 12/18/2017
Lab ID: 1735685005 | Media: 125 mL Nalgene | Received: 12/22/2017
Matrix: Water | Sampling Parameter: NA

Analysis Method - EPA 6850, DoD QSM

Preparation: Not Applicable
Analysis: EPA 6850, DoD QSM Water | **Instrument ID:** LCMS04
Batch: ELMS/2023 (HBN: 205839) | **Percent Solid:** NA
Analyzed: 12/28/2017 17:44 | **Report Basis:** Wet

Analyte	Result (ug/L)	DL (ug/L)	LOD (ug/L)	LOQ (ug/L)	Dilution	Qual
Perchlorate	1.8	1.0	2.0	4.0	1	J

Sample ID: **18CPTMW06_121817_a** | Sampling Site: NA | Collected: 12/18/2017
Lab ID: 1735685006 | Media: 125 mL Nalgene | Received: 12/22/2017
Matrix: Water | Sampling Parameter: NA

Analysis Method - EPA 6850, DoD QSM

Preparation: Not Applicable
Analysis: EPA 6850, DoD QSM Water | **Instrument ID:** LCMS04
Batch: ELMS/2023 (HBN: 205839) | **Percent Solid:** NA
Analyzed: 12/28/2017 14:46 | **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: **18CPTMW16_121817** | Sampling Site: NA | Collected: 12/18/2017
Lab ID: 1735685007 | Media: 125 mL Nalgene | Received: 12/22/2017
Matrix: Water | Sampling Parameter: NA

Analysis Method - EPA 6850, DoD QSM

Preparation: Not Applicable
Analysis: EPA 6850, DoD QSM Water | **Instrument ID:** LCMS04
Batch: ELMS/2023 (HBN: 205839) | **Percent Solid:** NA
Analyzed: 12/28/2017 15:05 | **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: **AWD3_121817** | Sampling Site: NA | Collected: 12/18/2017
Lab ID: 1735685008 | Media: 125 mL Nalgene | Received: 12/22/2017
Matrix: Water | Sampling Parameter: NA

Analysis Method - EPA 6850, DoD QSM

Preparation: Not Applicable
Analysis: EPA 6850, DoD QSM Water | **Instrument ID:** LCMS04
Batch: ELMS/2023 (HBN: 205839) | **Percent Solid:** NA
Analyzed: 12/28/2017 15:25 | **Report Basis:** Wet

Analyte	Result (ug/L)	DL (ug/L)	LOD (ug/L)	LOQ (ug/L)	Dilution	Qual
Perchlorate	**8800**	1000	2000	4000	1000	

ANALYTICAL REPORT

Workorder: 34-1735685
Client: ALS Environmental (Houston)
Project Manager: Kevin W. Griffiths

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 01/08/2018 14:25	/S/ Stephen Brose 01/10/2018 12:01

Laboratory Contact Information

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

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

General Lab Comments

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

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

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

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

Testing Sector	Accreditation Body (Standard)	Certificate Number	Website
Environmental	ANAB (DoD ELAP)	ADE-1420	http://www.anab.org/accredited-organizations/
	Utah (NELAC)	DATA1	http://health.utah.gov/lab/labimp/
	Nevada	UT00009	http://ndep.nv.gov/bsdw/labservice.htm
	Oklahoma	UT00009	http://www.deq.state.ok.us/CSDnew/
	Iowa	IA# 376	http://www.iowadnr.gov/InsideDNR/RegulatoryWater.aspx
	Texas (TNI)	T104704456-11-1	http://www.tceq.texas.gov/field/qa/lab_accred_certif.html
	Washington	C596-16	http://www.ecy.wa.gov/programs/eap/labs/index.html
	Kansas	E-10416	http://www.kdheks.gov/lipo/index.html
Industrial Hygiene	AIHA LAP LLC (ISO 17025 & IHLAP/ELLAP)	101574	http://www.aihaaccreditedlabs.org
	Washington	C596-16	http://www.ecy.wa.gov/programs/eap/labs/index.html
Lead Testing:			
CPSC	ANAB (ISO 17025, CPSC)	ADE-1420	http://www.anab.org/accredited-organizations/
Soil, Dust, Paint ,Air	AIHA LAP LLC (ISO 17025 & IHLAP/ELLAP)	101574	http://www.aihaaccreditedlabs.org
Dietary Supplements	ACLASS (ISO 17025)	ADE-1420	http://www.aclasscorp.com

ANALYTICAL REPORT

Workorder: 34-1735685
Client: ALS Environmental (Houston)
Project Manager: Kevin W. Griffiths

Result Symbol Definitions

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

Qualifier Symbol Definitions

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

Quality Control Sample
Batch Report

Analysis Information

Workorder: 1735685

Limits:	Client SOW/Contract Specified	**Preparation:**	NA	**Analysis:**	EPA 6850
Basis:	DoD QSM	**Batch:**	NA	**Batch:**	ELMS/2023 (HBN: 205839)
		Prepared By:	NA	**Analyzed By:**	Thomas Bosch

Blank

LMB: 581172
Analyzed: 12/28/2017 11:50
Units: ug/L

Analyte	Result	MDL	RL
Perchlorate	ND	1	2.00

Laboratory Control Sample

LCS: 581173
Analyzed: 12/28/2017 12:09
Dilution: 1
Units: ug/L

Analyte	Result	Target	% Rec	QC Limits	
Perchlorate	5.27	5.00	105	78.8	123.8

Matrix Spike - Matrix Spike Duplicate

Sample:	1735681001	**MS:**	581367					**MSD:**	581368				
Analyzed:	12/28/2017 12:51	**Analyzed:**	12/28/2017 16:47					**Analyzed:**	12/28/2017 17:06				
Dilution:	1	**Dilution:**	1					**Dilution:**	1				
Units:	ug/L	**Units:**	ug/L					**Units:**	ug/L				

Analyte	Result	Result	Target		% Rec	QC Limits		Result	% Rec		RPD	QC Limits	
Perchlorate	ND	6.42	5	#	128	78.8	123.8	4.97	99.4	#	25.4	0.0	20.0

Surrogate Recoveries

Surrogate	Perchlorate 89		
QC Limits			
Units			
Lab ID	**Result**	**Target**	**% Recovery**
581169-CCV	160000	0.100	* 160000000
581171-ICS	126000	0.100	* 126000000
581172-LMB	142000	0.100	* 142000000
1735679001	173000	0.100	* 173000000
1735681001	170000	0.100	* 170000000
1735685006	177000	0.100	* 177000000
1735685007	180000	0.100	* 180000000
1735685008	176000	0.100	* 176000000
581176-CCV	165000	0.100	* 165000000
1735689001	175000	0.100	* 175000000
1735685004	159000	0.100	* 159000000
1735685005	179000	0.100	* 179000000
581178-CCV	170000	0.100	* 170000000

Quality Control Sample Batch Report

Analysis Information

Workorder: 1735685

Limits:	Client SOW/Contract Specified	**Preparation:**	NA
Basis:	DoD QSM	**Batch:**	NA
		Prepared By:	NA
Analysis:	EPA 6850		
Batch:	ELMS/2023 (HBN: 205839)		
Analyzed By:	Thomas Bosch		

Continuing Calibration Verification

CCV:	581169			**CCV:**	581176			**CCV:**	581178		
Analyzed:	12/28/2017 10:52			**Analyzed:**	12/28/2017 15:44			**Analyzed:**	12/28/2017 18:04		
Units:	ug/L			**Units:**	ug/L			**Units:**	ug/L		
Criteria:	± 15%			**Criteria:**	± 15%			**Criteria:**	± 15%		
Analyte	**Result**	**Target**	**% Rec.**	**Result**	**Target**	**% Rec.**		**Result**	**Target**	**% Rec.**
Perchlorate	26.0	25.0	104	25.6	25.0	102		26.6	25.0	106

Interference Check Sample

ICSA:	581171		
Analyzed:	12/28/2017 11:30		
Units:	ug/L		
Criteria:	± 30%		
Analyte	**Result**	**Target**	**% Rec.**
Perchlorate	0.891	1.00	89.1

Limit of Detection Verification

LODV:	581170			**LODV:**	581177			**LODV:**	581179		
Analyzed:	12/28/2017 11:11			**Analyzed:**	12/28/2017 16:03			**Analyzed:**	12/28/2017 18:23		
Units:	ug/L			**Units:**	ug/L			**Units:**	ug/L		
Criteria:	± 50%			**Criteria:**	± 50%			**Criteria:**	± 50%		
Analyte	**Result**	**Target**	**% Rec.**	**Result**	**Target**	**% Rec.**		**Result**	**Target**	**% Rec.**
Perchlorate	1.16	0.100	*1160	1.14	0.100	* 1140		1.23	1.00	123

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

Analyst	Peer Review
/S/ Thomas Bosch	/S/ Stephen Brose
01/08/2018 14:25	01/10/2018 12:00

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

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00874210

18698/2

Subcontract Chain of Custody

COC ID: 8282

1735685

SUBCONTRACT TO:

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

Phone: +1 801 266 7700

CUSTOMER INFORMATION:

Company:	ALS Houston
Contact:	Sonia West
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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:	HS17121113
TSR:	Houston House Acct

	LAB SAMPLE ID / ANALYSIS REQUESTED	CLIENT SAMPLE ID	MATRIX	COLLECT DATE / DUE DATE
1.	**HS17121113-01**	**MW14_121817**	**Water**	**18 Dec 2017 08:25**
	SUB_Perch-6850			03 Jan 2018
2.	**HS17121113-02**	**MW14_121817_a**	**Water**	**18 Dec 2017 08:25**
	SUB_Perch-6850			03 Jan 2018
3.	**HS17121113-03**	**MW21_121817**	**Water**	**18 Dec 2017 09:35**
	SUB_Perch-6850			03 Jan 2018
4.	**HS17121113-04**	**MW22_121817**	**Water**	**18 Dec 2017 10:40**
	SUB_Perch-6850			03 Jan 2018
5.	**HS17121113-05**	**18CPTMW06_121817**	**Water**	**18 Dec 2017 11:40**
	SUB_Perch-6850			03 Jan 2018
6.	**HS17121113-06**	**18CPTMW06_121817_a**	**Water**	**18 Dec 2017 11:40**
	SUB_Perch-6850			03 Jan 2018
7.	**HS17121113-07**	**18CPTMW16_121817**	**Water**	**18 Dec 2017 13:40**
	SUB_Perch-6850			03 Jan 2018
8.	**HS17121113-08**	**AWD3_121817**	**Water**	**18 Dec 2017 14:50**
	SUB_Perch-6850			03 Jan 2018

Subcontract Chain of Custody

COC ID: 8282

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

QC Level: DOD IV (DoD Data Package)

Relinquished By: _____ Date/Time: Dec 21, 2017 1800

Received By: _____ Date/Time: 12.22.17 11:37

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

ALS - Salt Lake City-Related Information Report (CRIR)

Cooler or Container Information Checklist (Fill In or Circle)

Client Name: ALS Houston

Project/Task/Site: 735685

Date/Time of Receipt: 12-22-17 11:37

Number of Coolers Received: 1

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

Cooler Received	ALS Cooler No.	Temp.	Cooler Received	ALS Cooler No.	Temp.	Cooler Received	ALSL Cooler No.	Temp.
1	C17-8133	5 °C	4	C17-	°C	7	C17-	°C
2	C17-	°C	5	C17-	°C	8	C17-	°C
3	C17-	°C	6	C17-	°C	9	C17-	°C

Taken By: Jessica Davies (Signature) Jessica Davies (Printed Name) 12-22-17 (Date)

Client-Related Information

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

Briefly Describe the Problem and the Action Taken:

E-mailed to Client? Yes ☐ No ☐

Response Required Within 24 Hours

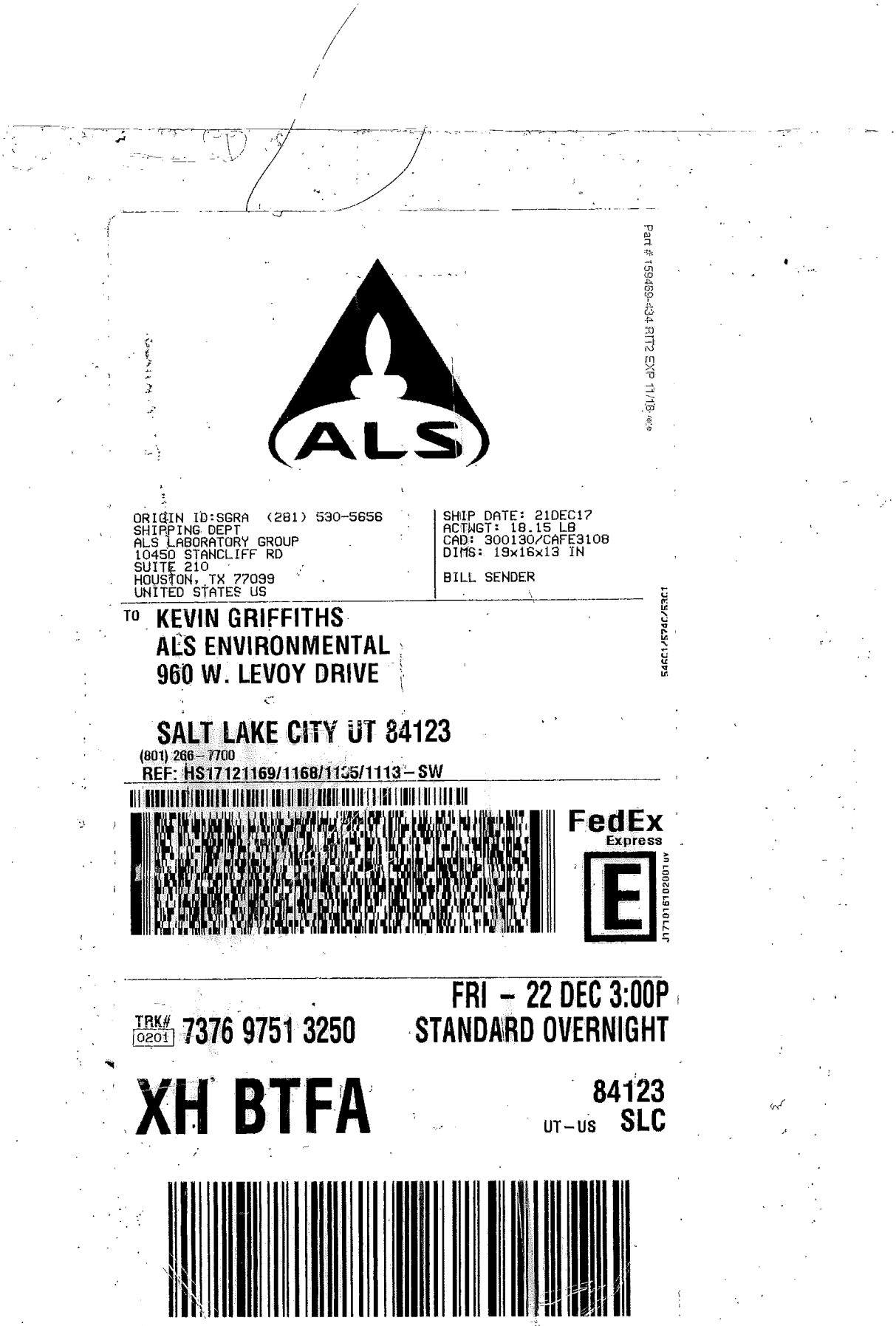
Project Management

Project Manager Comments:

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

CRIR.dot

Revised 1/1/15



Part # 159469-434 RIT2 EXP 11/18

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

SHIP DATE: 21DEC17
ACTWGT: 18.15 LB
CAD: 300130/CAFE3108
DIMS: 19x16x13 IN

BILL SENDER

TO KEVIN GRIFFITHS
ALS ENVIRONMENTAL
960 W. LEVOY DRIVE

SALT LAKE CITY UT 84123
(801) 266-7700
REF: HS17121169/1168/1135/1113-SW

FedEx Express

FRI - 22 DEC 3:00P
STANDARD OVERNIGHT

TRK# 0201 7376 9751 3250

XH BTFA

84123
UT-US SLC

ALS Environmental
CHAIN-OF-CUSTODY

Project / Job / Task: HS17121113	*Split:*	**Workorder ID:** 1735685	Level: ENV_LVL4	Requested Analysis
Client: ALS Environmental (Houston)		**Account:** 8101	Type: 125Poly	
Comments:			Preservatives: COOL	EPA 6850, DoD QSM

Item	Collect Date/Time	Sample ID	Lab ID	QC	Matrix	Containers ID(s)	Count	Requested Analysis
1	12/18/2017 08:25	MW14_121817	1735685001		Water	A	1	A
2	12/18/2017 08:25	MW14_121817_a	1735685002		Water	A	1	A
3	12/18/2017 09:35	MW21_121817	1735685003		Water	A	1	A
4	12/18/2017 10:40	MW22_121817	1735685004		Water	A	1	A
5	12/18/2017 11:40	18CPTMW06_121817	1735685005		Water	A	1	A
6	12/18/2017 11:40	18CPTMW06_121817_a	1735685006		Water	A	1	A
7	12/18/2017 13:40	18CPTMW16_121817	1735685007		Water	A	1	A
8	12/18/2017 14:50	AWD3_121817	1735685008		Water	A	1	A
9								
10								

949 of 1061

ORIGINAL FIELD SAMPLE CHAIN-OF-CUSTODY

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Reason for Transfer / Storage Location
Wajath, Julie	12/22/2017 11:37	ALS Sample Receiving	Sample Login
Kristy Wajath R.33.1	12.22.17 1500 12.27.17 1700	KLC T. Bond	storage 6850

SAMPLE PREPARATION / ANALYSIS CHAIN-OF-CUSTODY

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

Prepared / Analyzed by: _____ Date / Time: _____

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

00874214

Batch Worklist

Batch: ELMS/ 2023 **Created:** 12/27/2017 16:48 **Instrument:** **HBN:** 205839

Rule: EPA 6850, DoD QSM Water **Analyst:** T. Bosch **Status:** WP

Workorder: 1735679 [ENV_LVL4]
Workorder: 1735681 [ENV_LVL4]
Workorder: 1735685 [ENV_LVL4]
Workorder: 1735689 [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	581169	CCV for HBN 205839 [ELMS/2023]				CCV	3		E685041C3Q	5311		1/10/2018	
2	581170	LODV for HBN 205839 [ELMS/2023				LODV	3		E6850..D3Q	5311		1/10/2018	
3	581171	ICS for HBN 205839 [ELMS/2023]				ICS	3		E6850..D3Q	5311		1/10/2018	
4	581172	LMB for HBN 205839 [ELMS/2023]				LMB	3		E6850Q413Q	5311		1/10/2018	
5	581173	LCS for HBN 205839 [ELMS/2023]				LCS	3		E6850Q413Q	5311		1/10/2018	
6	1735679001	LH18/24-SP140_122017				SAMPLE	3	1735679001-A	E6850Q41.3	5480	1/17/2018	1/10/2018	
7	1735681001	LH18/24-SP650_122017				SAMPLE	3	1735681001-A	E6850Q41.3	5480	1/17/2018	1/10/2018	
8	581367	LH18/24-SP650...(1735681001MS)				MS	3		E6850Q413Q	5311		1/10/2018	
9	581368	LH18/24-SP65...(1735681001MSD)				MSD	3		E6850Q413Q	5311		1/10/2018	
10	1735685001	MW14_121817				SAMPLE	3	1735685001-A	E6850Q41.3	5480	1/15/2018	1/10/2018	
11	1735685002	MW14_121817_a				SAMPLE	3	1735685002-A	E6850Q41.3	5480	1/15/2018	1/10/2018	
12	1735685003	MW21_121817				SAMPLE	3	1735685003-A	E6850Q41.3	5480	1/15/2018	1/10/2018	
13	1735685004	MW22_121817				SAMPLE	3	1735685004-A	E6850Q41.3	5480	1/15/2018	1/10/2018	
14	1735685005	18CPTMW06_121817				SAMPLE	3	1735685005-A	E6850Q41.3	5480	1/15/2018	1/10/2018	
15	1735685006	18CPTMW06_121817_a				SAMPLE	3	1735685006-A	E6850Q41.3	5480	1/15/2018	1/10/2018	
16	1735685007	18CPTMW16_121817				SAMPLE	3	1735685007-A	E6850Q41.3	5480	1/15/2018	1/10/2018	
17	1735685008	AWD3_121817				SAMPLE	3	1735685008-A	E6850Q41.3	5480	1/15/2018	1/10/2018	
18	581176	CCV for HBN 205839 [ELMS/2023]				CCV	3		E685041C3Q	5311		1/10/2018	
19	581177	LODV for HBN 205839 [ELMS/2023				LODV	3		E6850..D3Q	5311		1/10/2018	
20	1735689001	LH18/24-SP650_122017				SAMPLE	3	1735689001-A	E6850Q41.3	5480	1/17/2018	1/10/2018	
21	581178	CCV for HBN 205839 [ELMS/2023]				CCV	3		E685041C3Q	5311		1/10/2018	
22	581179	LODV for HBN 205839 [ELMS/2023				LODV	3		E6850..D3Q	5311		1/10/2018	

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

Analytical Documentation

ALS Work Order #'s & Sample #( )'s: 1735679 (001); 1735681 (001); 1735685 (00108); 1735689 (001)
ELMS Batch/HBN ID: 2023 (205839)
Prep Date: 12/28/2017 Analysis Date: 12/28/2017 Analyst: T. Bosch
Analyte: **Perchlorate** Matrix: **Water** Method: **6850**
Sequence:\\HPCHEM\1\SEQUENCE\CLO4\2017\DEC\28DEC17P. 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 DI735)/0.1% glacial acetic acid (JT-Baker Lot 04802).
Eluent B1: 95% ACN (B&J Lot DI735)/ 5% ASTM Type II water (ALS)/0.1% glacial acetic acid (JT-Baker Lot 04802).

STANDARDS: Internal Standard Spiking Solution Horizon# 38780. Dilutions of Working Standard Solution ID 32373 used for CCV's, LODV's, RLVS and IPC.

CALIBRATION CURVE: Used curve from 11/28/2017, sequence 28NOV17P.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: 25µL
Column: KP-RPPX C8 separator, 250mm Mobile Phase: 70% Eluent A1; 30% Eluent B1

FLOW GRADIENT:

Time (min.)	Flow (mL/min)
0	0.65
4.0	0.65
5.0	0.25
14.5	0.25
15.0	0.65
17.5	0.65

QC DATA: 5.0µL of QC Solution Horizon ID 36749 was used for LCS 581173; Target = 5.0µg/L. ASTM type II water was used for LMB 581172.

MS/MSD: MS/MSD was performed on sample 1735681001 (Client ID: LH18/24SP140_122017). 5.0µl of Working Standard Solution Horizon ID 36735 was added to 10.0mL of sample preparation. Spike target = 5.0µg/L.

COMMENTS:

1) Results reported in µg/L. Sample 1735679001 was analyzed and reported at a 1:1,000 dilution. Samples 1735685001/02/03/08 were analyzed and reported at the following dilutions: 1:10,000/10,000/1,000/1,000. The reporting limits have been adjusted accordingly.
2) All QC, Blank, CCV, and MS/MSD results were within method parameters, except for the following. The Matrix Spike (MS - 581367) failed QC acceptance criteria for percent recovery. The Relative Percent Difference (RPD) also failed QC criteria. The Matrix Spike and Matrix Spike duplicate is reported for the clients' information only. The sample matrix may be inappropriate for the method selected.
3) Sample data can be viewed at two directories within the ALS system: \\ALSLTWS013\LCMS\LCMS04\2017\DEC\HBN# or through NuGenesis\Tree\PrintData\LCMS\DefaultView.
4) Due to limitations of the Chemstation Software, many of the chromatographic peaks require manual integration. Manual Integrations were performed for some of the Initial Calibration analyses (datafiles: 28NOVP01,02) along with datafiles 28DECP03/11/12/17/18.
5) Notebook: \\alsltws013\ORGANIC\BOSCH\LCMS\Perchlorates\Waters\2017\CLO4-205839-DOD-ALS-HSTN-LCMS4 or through \\ALSLTWS013\DATAREVIEW\HBN#

STANDARD REPORT

Working Standard - CLO4 WRK

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

Standard: 36735
MFG: ALS/SLC
MFG Lot: TNB: 05/10/17
Part ID:

Created By: T. Bosch
Create Date: 05/10/2017
Lab Lot: CLO4 WRK

Amount: 10 mL
Expires: 05/10/2018
Usable: Yes

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
36734	CLO4 INT	6850 Intermdt AccStd 10.ug/mL	CLO4 INT	0.1 mL	05/10/2018

STANDARD REPORT

Constituent

Stock Standard - CLO4 STOCK

CLO4 STOCK		Description - 6850 Stock AccStd 1,000ug/mL
Standard: 36733	Created By: T. Bosch	Amount: 100 mL
MFG: AccuStandard	Create Date: 5/10/2017	Expires: 10/4/2018
MFG Lot: 216095148	Lab Lot: CLO4 STOCK	Usable: Yes
Part ID: IC-PER-10X-1		

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: 10/6/2005	Expires: 11/7/2025
MFG Lot:	Lab Lot: LAB 109	Usable: Yes
Part ID:		

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: 36734	Created By: T. Bosch	Amount: 10 mL
MFG: ALS/SLC	Create Date: 05/10/2017	Expires: 05/10/2018
MFG Lot: TNB: 05/10/17	Lab Lot: CLO4 INT	Usable: Yes
Part ID:		

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
36733	CLO4 STOCK	6850 Stock AccStd 1,000ug/mL	CLO4 STOCK	0.1 mL	10/04/2018

STANDARD REPORT

Working Standard - CLO4 QC WRK

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

Standard: 36750
MFG: ALS/SLC
MFG Lot: TNB: 05/11/17
Part ID:

Created By: T. Bosch
Create Date: 05/11/2017
Lab Lot: CLO4 QC WRK 100.ug/L

Amount: 10 mL
Expires: 05/11/2018
Usable: Yes

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
36749	CLO4 QC INT	6850 QC Intrmdt Std-QC 10ug/mL	CLO4 QC INT 10.ug/mL	0.1 mL	05/11/2018

STANDARD REPORT

Constituent

Working Standard - CLO4 QC INT

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

Standard: 36749 | Created By: T. Bosch | Amount: 10 mL
MFG: ALS/SLC | Create Date: 05/11/2017 | Expires: 05/11/2018
MFG Lot: TNB: 05/11/2017 | Lab Lot: CLO4 QC INT 10.ug/mL | Usable: Yes
Part ID:

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: 10/6/2005	Expires: 11/7/2025	
MFG Lot:	Lab Lot: LAB 109	Usable: Yes	
Part ID:			

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:	T. Bosch	Amount:	100 mL
MFG:	Ultra Scientific	Create Date:	5/11/2017	Expires:	3/31/2020
MFG Lot:	CP-0860	Lab Lot:	CLO4 QC STOCK	Usable:	Yes
Part ID:	ICC-013				

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: **38780**
MFG: ALS/SLC
MFG Lot: TNB: 10/09/17
Pipette ID: Not Provided

Created By: Thomas Bosch
Create Date: 10/09/2017 01:10PM
Verified By: Thomas Bosch
Verify Date:

Amount: 10 mL
Expires: 10/09/2018
Usable: Yes
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
23118	CLO4ISTDSTK	Perchlorate ISTD Stock	CLO4ISTDSTK	0.1 mL	02/27/2024

STANDARD REPORT

Constituent

Stock Standard - CLO4ISTDSTK

CLO4ISTDSTK		Description - Perchlorate ISTD Stock
Standard: 23118	Created By: Thomas Bosch	Amount: 1 mL
MFG: Cambridge Isotope	Create Date: 04/04/2014 03:04PM	Expires: 02/27/2024
MFG Lot: SDDG-013	Verified By: Thomas Bosch	Usable: Yes
Part ID: OLM-7310-S	Verify Date: 02/05/2009 12:02AM	Lab Lot: CLO4ISTDSTK

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

ULTRA SCIENTIFIC
Analytical Solutions

Certificate of Analysis

TRIPLE ISO CERTIFICATION ULTRA ISO 17025 • ISO GUIDE 34 • ISO 9001

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.

ANAB ACCREDITED ISO 17025 REFERENCE MATERIAL PRODUCER
ANAB ACCREDITED ISO 17025 TESTING LABORATORY

ALS

ULTRA SCIENTIFIC
Analytical Solutions

Certificate of Analysis

TRIPLE ISO CERTIFICATION ULTRA ISO 9001 • ISO GUIDE 34 • ISO 17025

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

ANAB ACCREDITED ISO GUIDE 34 REFERENCE MATERIAL PRODUCER

ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY

ALS

125 Market Street
New Haven, CT 06513
USA

AccuStandard® Inc.

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

CERTIFICATE OF ANALYSIS

AccuTrace™ Reference Standard

Catalog No: IC-PER-10X-1
Description: Perchlorate Standard
Element: Perchlorate (ClO_4)
SRM: Ind. Std.
Lot: 216095148
Matrix: Water
Hazards: *Refer to SDS for complete safety information*

Signal Word: Warning

Date Certified: Oct 4, 2016
Expiration: Oct 4, 2018
Sample Size: 100 mL
Components: 1
Storage Condition: Ambient (>5 °C)

Included on ISO/IEC 17025 Scope of Accreditation: Yes

Included on ISO Guide 34 Scope of Accreditation: Yes

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

The gravimetric uncertainty for this product is ±0.2%. See reverse side for details.

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

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

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

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

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

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

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

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

Certified By: Meigan O'Leary

Meigan O'Leary, Inorganic QC Manager

For use in routine laboratory analysis.

AccuStandard is accredited to ISO Guide 34, ISO/IEC 17025 and certified to ISO 9001

Cambridge Isotope Laboratories, Inc.

Certificate of Analysis

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

23118

Product Name: (Isotopic Label & Enrichment Specification)	PERCHLORIC ACID, SODIUM SALT (18O4, 90%+) 100 UG/ML IN WATER
Lot Number:	SDDG-013
Catalog Number:	OLM-7310-S

Product Information

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

Certification

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

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

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

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

Approved by: T. J. Eckersley

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

Quality Control Tests and Results

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

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

Raw Data

Batch Report: C:\HPCHEM\1\DATA\28DEC17D\28DEC17D.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
*	581169	CCV@25	Vial 71	1	Control	1	1.01859e6	12.182	25.96141
*	581170	LODV@1.	Vial 72	1	Control	2	4.43782e4	12.318	1.16307
*	581171	ICS@1.	Vial 73	1	Control	3	2.36682e4	11.986	8.90663e-1
*	581172	LMB	Vial 74	1	Control	4	0.00000	0.000	0.00000
*	581173	LCS@5.	Vial 75	1	Control	5	1.94810e5	12.377	5.27149
*	1735679001	1K	Vial 76	1	Sample	6	3.15673e5	12.413	8119.23601
*	1735681001		Vial 77	1	Sample	7	0.00000	0.000	0.00000
*	1735685001	10K	Vial 78	1	Sample	8	6.12244e5	12.412	1.52642e5
*	1735685002	10K	Vial 79	1	Sample	9	5.86286e5	12.424	1.45162e5
*	1735685003	1K	Vial 80	1	Sample	10	8.58552e5	12.416	2.14594e4
*	1735685004	100	Vial 81	1	Sample	11	2.15054e4	12.400	58.09091
*	1735685005	100	Vial 82	1	Sample	12	4777.41943	12.440	15.63459
*	1735685006		Vial 83	1	Sample	13	3.50391e4	11.899	9.39453e-1
*	1735685007		Vial 84	1	Sample	14	0.00000	0.000	0.00000
*	1735685008	1K	Vial 85	1	Sample	15	3.50228e5	12.396	8838.83797
*	581176	CCV@25	Vial 71	1	Control	16	1.03216e6	12.243	25.58790
*	581177	LODV@1.	Vial 72	1	Control	17	4.46104e4	12.365	1.14067
*	1735689001		Vial 86	1	Sample	18	2.43839e4	11.970	6.69783e-1
*	581367	356811S	Vial 87	1	Sample	19	1.86974e5	12.011	6.41601
*	581368	356811D	Vial 88	1	Sample	20	1.82162e5	12.009	4.96862
*	1735685004		Vial 89	1	Sample	21	1.65326e6	11.810	39.73792
*	1735685005		Vial 90	1	Sample	22	6.82111e4	12.029	1.77732
*	581178	CCV@25	Vial 71	1	Control	23	1.10850e6	12.340	26.55255
*	581179	LODV@1.	Vial 72	1	Control	24	5.07547e4	12.522	1.22551

#*	Sample	Location	Inj	SampleType	Run	CLO4-85 Area	CLO4-85 RT	CLO4-85 Amount
*	581169	CCV@25	Vial 71	1	Control	1	3.15397e5	12.200	25.52114
*	581170	LODV@1.	Vial 72	1	Control	2	1.58993e4	12.318	1.06485
*	581171	ICS@1.	Vial 73	1	Control	3	7909.42334	11.994	6.95976e-1
*	581172	LMB	Vial 74	1	Control	4	0.00000	0.000	0.00000
*	581173	LCS@5.	Vial 75	1	Control	5	6.43923e4	12.394	5.22105
*	1735679001	1K	Vial 76	1	Sample	6	1.05967e5	12.424	8316.16801
*	1735681001		Vial 77	1	Sample	7	0.00000	0.000	0.00000
*	1735685001	10K	Vial 78	1	Sample	8	2.00772e5	12.423	1.55841e5
*	1735685002	10K	Vial 79	1	Sample	9	1.93899e5	12.438	1.49200e5
*	1735685003	1K	Vial 80	1	Sample	10	2.70354e5	12.429	2.12978e4
*	1735685004	100	Vial 81	1	Sample	11	7779.59229	12.397	42.10595
*	1735685005	100	Vial 82	1	Sample	12	1968.70264	12.453	0.00000
*	1735685006		Vial 83	1	Sample	13	1.48166e4	11.927	9.98323e-1
*	1735685007		Vial 84	1	Sample	14	0.00000	0.000	0.00000
*	1735685008	1K	Vial 85	1	Sample	15	1.15251e5	12.413	8903.21632
*	581176	CCV@25	Vial 71	1	Control	16	3.24643e5	12.259	25.50704
*	581177	LODV@1.	Vial 72	1	Control	17	1.30513e4	12.396	8.12346e-1
*	1735689001		Vial 86	1	Sample	18	8719.61621	12.011	5.12863e-1
*	581367	356811S	Vial 87	1	Sample	19	6.47928e4	12.018	6.72389
*	581368	356811D	Vial 88	1	Sample	20	6.39179e4	12.026	5.21417
*	1735685004		Vial 89	1	Sample	21	5.33653e5	11.825	41.11392
*	1735685005		Vial 90	1	Sample	22	2.47354e4	12.040	1.77469
*	581178	CCV@25	Vial 71	1	Control	23	3.53710e5	12.359	26.85149
*	581179	LODV@1.	Vial 72	1	Control	24	1.76874e4	12.520	1.09818

#*	Sample	Location	Inj	SampleType	Run	CLO4-89-ISTD Area	CLO4-89-ISTD RT	CLO4-89-ISTD Amount
*	581169	CCV@25	Vial 71	1	Control	1	1.60075e5	12.205	5.00000
*	581170	LODV@1.	Vial 72	1	Control	2	1.79761e5	12.329	5.00000
*	581171	ICS@1.	Vial 73	1	Control	3	1.26200e5	12.010	5.00000
*	581172	LMB	Vial 74	1	Control	4	1.41507e5	12.370	5.00000

Batch Report: C:\HPCHEM\1\DATA\28DEC17D\28DEC17D.B

#*	Sample	Location	Inj	SampleType	Run	CLO4-89-ISTD Area	CLO4-89-ISTD RT	CLO4-89-ISTD Amount
*	581173	LCS@5.	Vial 75	1	Control	5	1.67600e5	12.393	5.00000
*	1735679001	1K	Vial 76	1	Sample	6	1.73474e5	12.435	5000.00000
*	1735681001		Vial 77	1	Sample	7	1.69952e5	12.021	5.00000
*	1735685001	10K	Vial 78	1	Sample	8	1.72405e5	12.435	5.00000e4
*	1735685002	10K	Vial 79	1	Sample	9	1.74260e5	12.443	5.00000e4
*	1735685003	1K	Vial 80	1	Sample	10	1.66785e5	12.435	5000.00000
*	1735685004	100	Vial 81	1	Sample	11	1.78776e5	12.412	500.00000
*	1735685005	100	Vial 82	1	Sample	12	1.67796e5	12.419	500.00000
*	1735685006		Vial 83	1	Sample	13	1.76823e5	11.925	5.00000
*	1735685007		Vial 84	1	Sample	14	1.79543e5	12.105	5.00000
*	1735685008	1K	Vial 85	1	Sample	15	1.76102e5	12.410	5000.00000
*	581176	CCV@25	Vial 71	1	Control	16	1.64866e5	12.271	5.00000
*	581177	LODV@1.	Vial 72	1	Control	17	1.84350e5	12.394	5.00000
*	1735689001		Vial 86	1	Sample	18	1.74712e5	12.004	5.00000
*	581367	356811S	Vial 87	1	Sample	19	1.31274e5	12.027	5.00000
*	581368	356811D	Vial 88	1	Sample	20	1.66581e5	12.035	5.00000
*	1735685004		Vial 89	1	Sample	21	1.59385e5	11.831	5.00000
*	1735685005		Vial 90	1	Sample	22	1.78902e5	12.046	5.00000
*	581178	CCV@25	Vial 71	1	Control	23	1.69852e5	12.361	5.00000
*	581179	LODV@1.	Vial 72	1	Control	24	1.94839e5	12.543	5.00000

*** End of Report ***

Sequence: C:\HPCHEM\1\SEQUENCE\CLO4\2017\DEC\28DEC17D.S

Sequence Table:

Method and Injection Info Part:

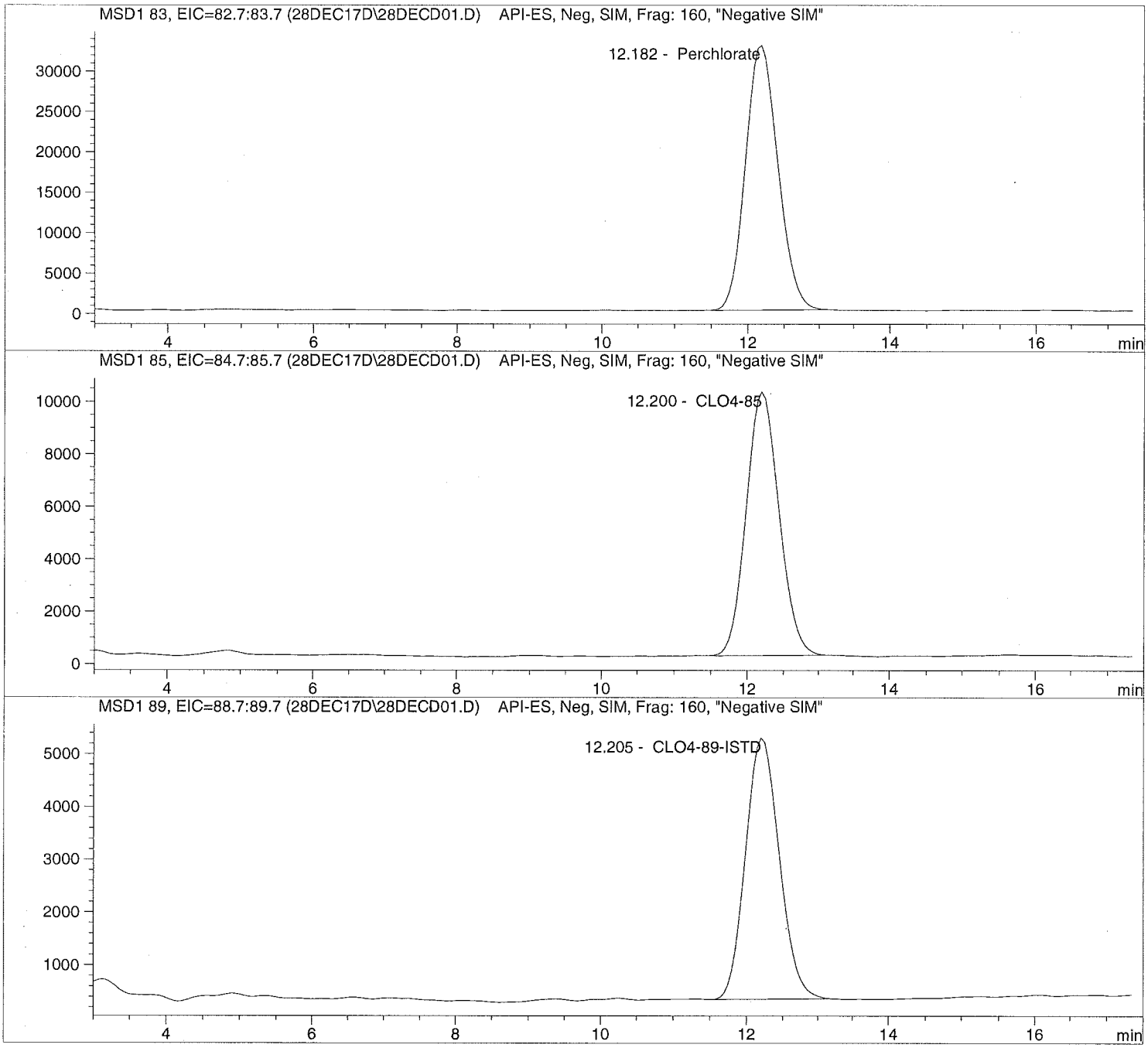
Line	Location	SampleName		Method	Inj	SampleType	InjVolume	DataFile
1	Vial 71	581169	CCV@25	CLO4-DOD	1	Ctrl Samp		
2	Vial 72	581170	LODV@1.	CLO4-DOD	1	Ctrl Samp		
3	Vial 73	581171	ICS@1.	CLO4-DOD	1	Ctrl Samp		
4	Vial 74	581172	LMB	CLO4-DOD	1	Ctrl Samp		
5	Vial 75	581173	LCS@5.	CLO4-DOD	1	Ctrl Samp		
6	Vial 76	1735679001	1K	CLO4-DOD	1	Sample		
7	Vial 77	1735681001		CLO4-DOD	1	Sample		
8	Vial 78	1735685001	10K	CLO4-DOD	1	Sample		
9	Vial 79	1735685002	10K	CLO4-DOD	1	Sample		
10	Vial 80	1735685003	1K	CLO4-DOD	1	Sample		
11	Vial 81	1735685004	100	CLO4-DOD	1	Sample		
12	Vial 82	1735685005	100	CLO4-DOD	1	Sample		
13	Vial 83	1735685006		CLO4-DOD	1	Sample		
14	Vial 84	1735685007		CLO4-DOD	1	Sample		
15	Vial 85	1735685008	1K	CLO4-DOD	1	Sample		
16	Vial 71	581176	CCV@25	CLO4-DOD	1	Ctrl Samp		
17	Vial 72	581177	LODV@1.	CLO4-DOD	1	Ctrl Samp		
18	Vial 86	1735689001		CLO4-DOD	1	Sample		
19	Vial 87	581367	356811S	CLO4-DOD	1	Sample		
20	Vial 88	581368	356811D	CLO4-DOD	1	Sample		
21	Vial 89	1735685004		CLO4-DOD	1	Sample		
22	Vial 90	1735685005		CLO4-DOD	1	Sample		
23	Vial 71	581178	CCV@25	CLO4-DOD	1	Ctrl Samp		
24	Vial 72	581179	LODV@1.	CLO4-DOD	1	Ctrl Samp		

Data file: C:\HPCHEM\1\DATA\28DEC17D\28DECD01.D Sample Name: 581169 CCV@25

Injection Date:	12/28/2017 10:52:30	Seq Line:	1
Sample Name:	581169 CCV@25	Location:	Vial 71
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\28DEC17D\28DECD01.D Sample Name: 581169 CCV@25

Injection Date:	12/28/2017 10:52:30	Seq Line:	1
Sample Name:	581169 CCV@25	Location:	Vial 71
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method:	CLO4-DOD.M
Analysis Method:	C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed:	12/20/2017 08:11:26

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Wed, 20. Dec. 2017,08:01:52 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
12.182	BBA	1018588.3	25.9614	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.200	BBA	315397.3	25.5211	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.205	PBA	160074.8	5.0000	CLO4-89-ISTD

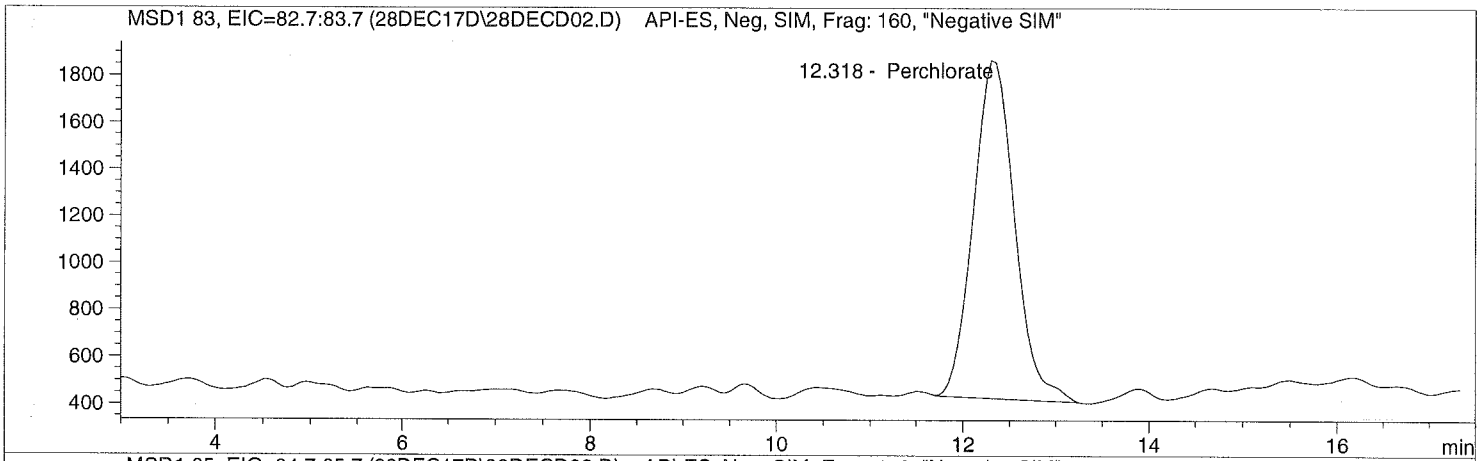
*** End of Report ***

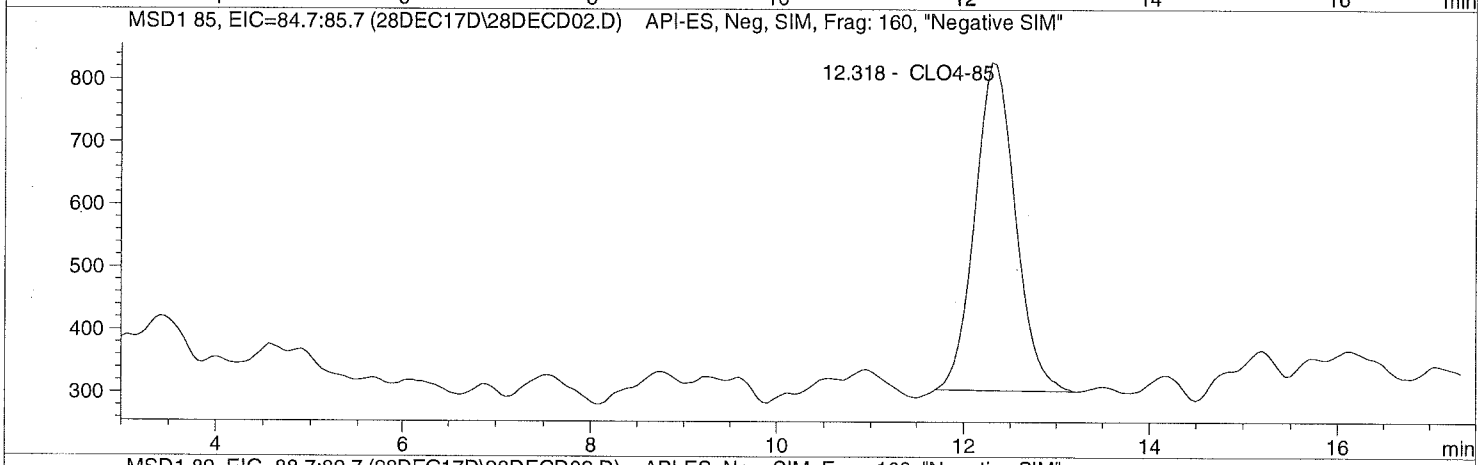
Data file: C:\HPCHEM\1\DATA\28DEC17D\28DECD02.D Sample Name: 581170 LODV@1.

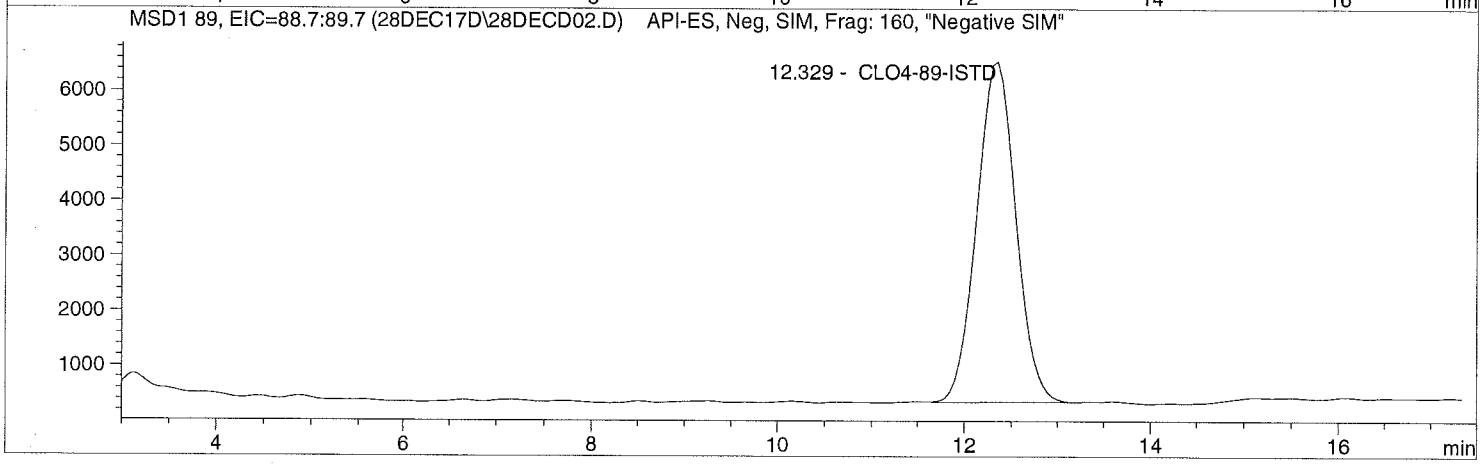
Injection Date:	12/28/2017 11:11:38	Seq Line:	2
Sample Name:	581170 LODV@1.	Location:	Vial 72
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis







Data file: C:\HPCHEM\1\DATA\28DEC17D\28DECD02.D Sample Name: 581170 LODV@1.

Injection Date:	12/28/2017 11:11:38	Seq Line:	2
Sample Name:	581170 LODV@1.	Location:	Vial 72
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Wed, 20. Dec. 2017,08:01:52 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
12.318	BBA	44378.2	1.1631	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.318	PBA	15899.3	1.0648	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.329	BBA	179761.5	5.0000	CLO4-89-ISTD

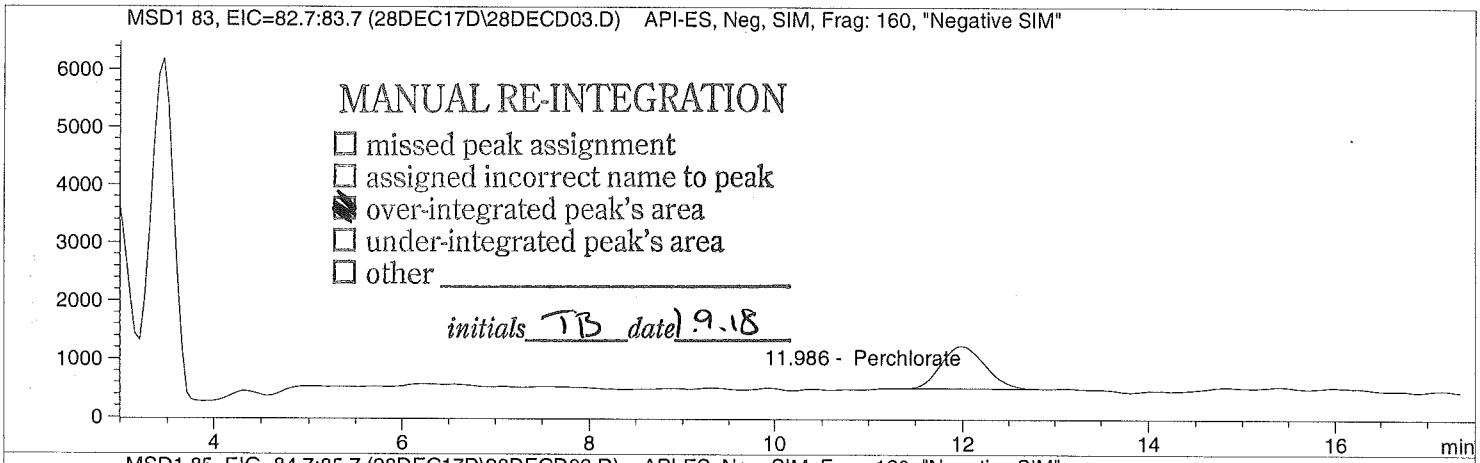
*** End of Report ***

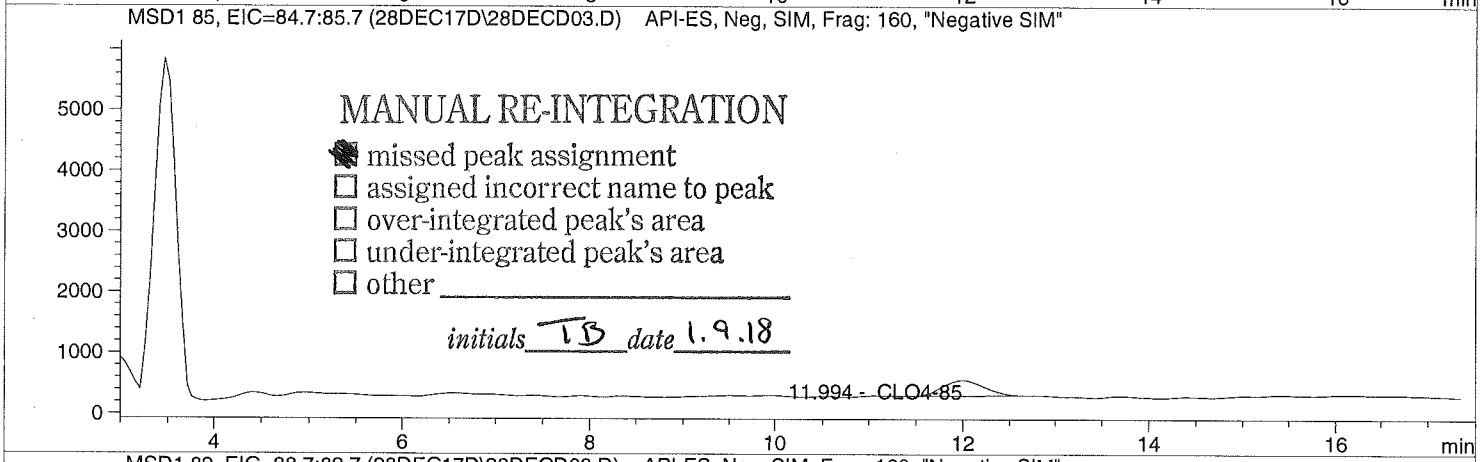
Data file: C:\HPCHEM\1\DATA\28DEC17D\28DECD03.D Sample Name: 581171 ICS@1.

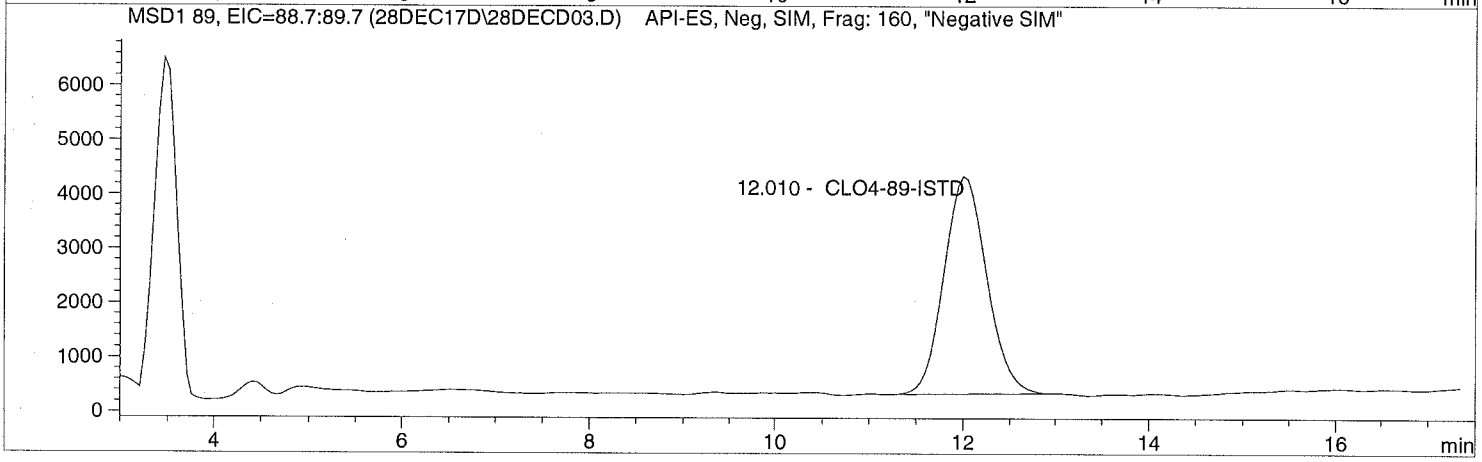
Injection Date:	12/28/2017 11:30:49	Seq Line:	3
Sample Name:	581171 ICS@1.	Location:	Vial 73
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis







Data file: C:\HPCHEM\1\DATA\28DEC17D\28DECD03.D Sample Name: 581171 ICS@1.

Injection Date:	12/28/2017 11:30:49	Seq Line:	3
Sample Name:	581171 ICS@1.	Location:	Vial 73
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Wed, 20. Dec. 2017,08:01:52 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
11.986	MM	23668.2	0.8907	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
11.994	MM	7909.4	0.6960	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.010	PBA	126199.8	5.0000	CLO4-89-ISTD

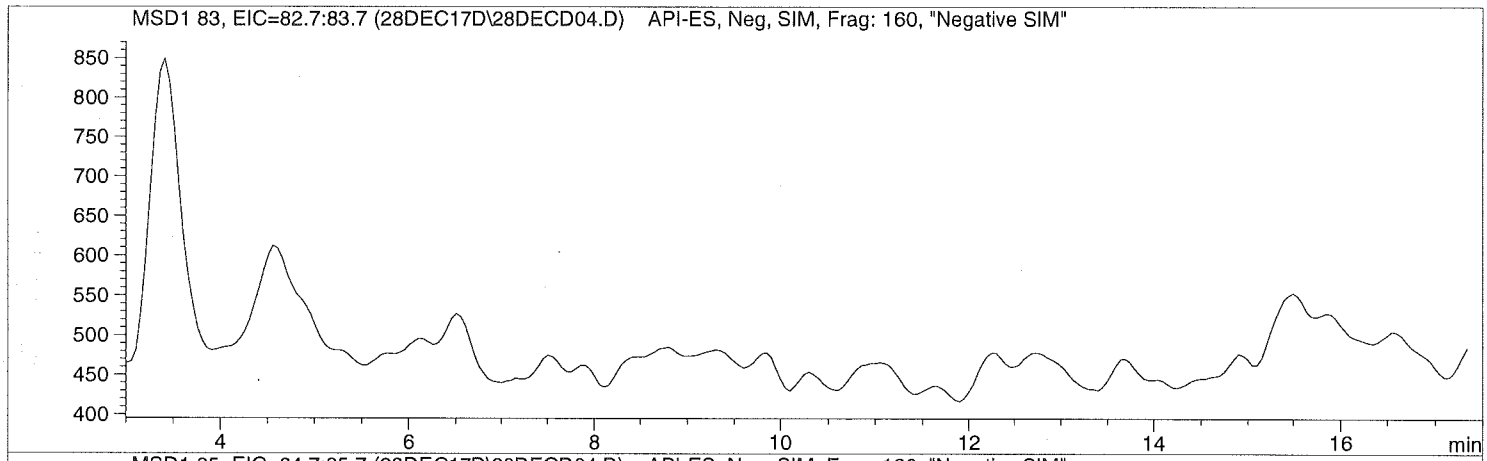
*** End of Report ***

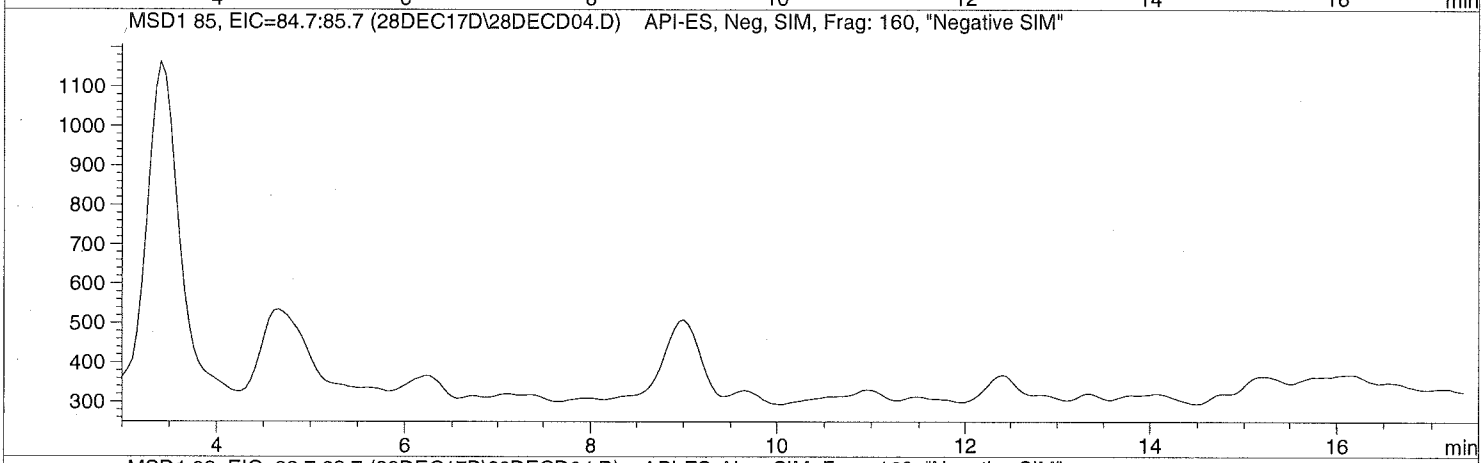
Data file: C:\HPCHEM\1\DATA\28DEC17D\28DECD04.D Sample Name: 581172 LMB

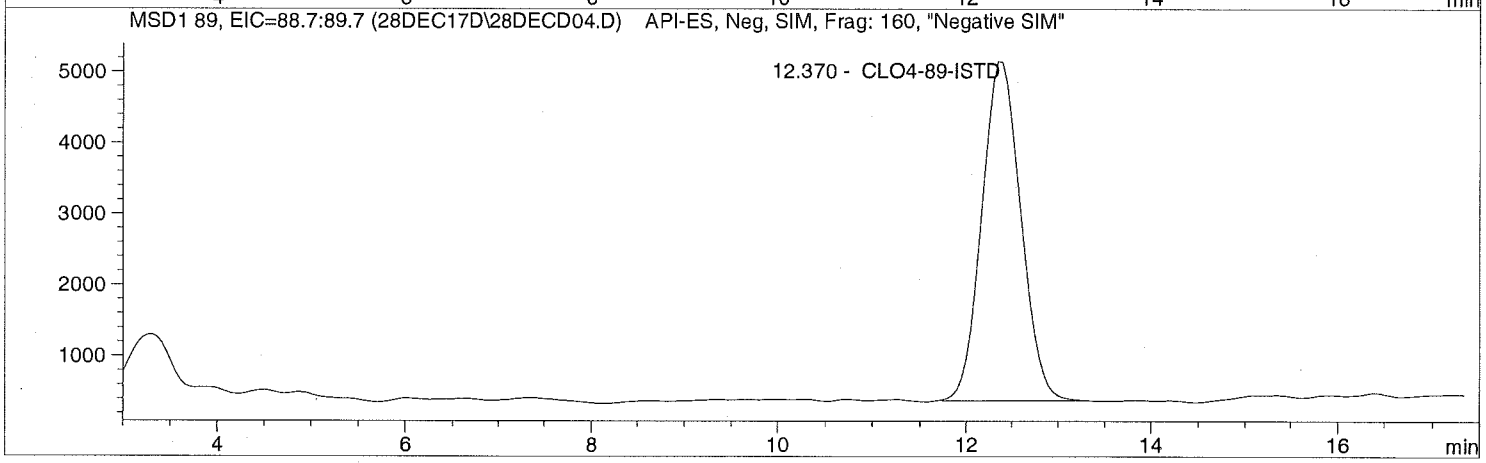
Injection Date:	12/28/2017 11:50:02	Seq Line:	4
Sample Name:	581172 LMB	Location:	Vial 74
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis







Data file: C:\HPCHEM\1\DATA\28DEC17D\28DECD04.D Sample Name: 581172 LMB

Injection Date:	12/28/2017 11:50:02	Seq Line:	4
Sample Name:	581172 LMB	Location:	Vial 74
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method:	CLO4-DOD.M
Analysis Method:	C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed:	12/20/2017 08:11:26

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Wed, 20. Dec. 2017,08:01:52 am
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
12.370	BBA	141506.7	5.0000	CLO4-89-ISTD

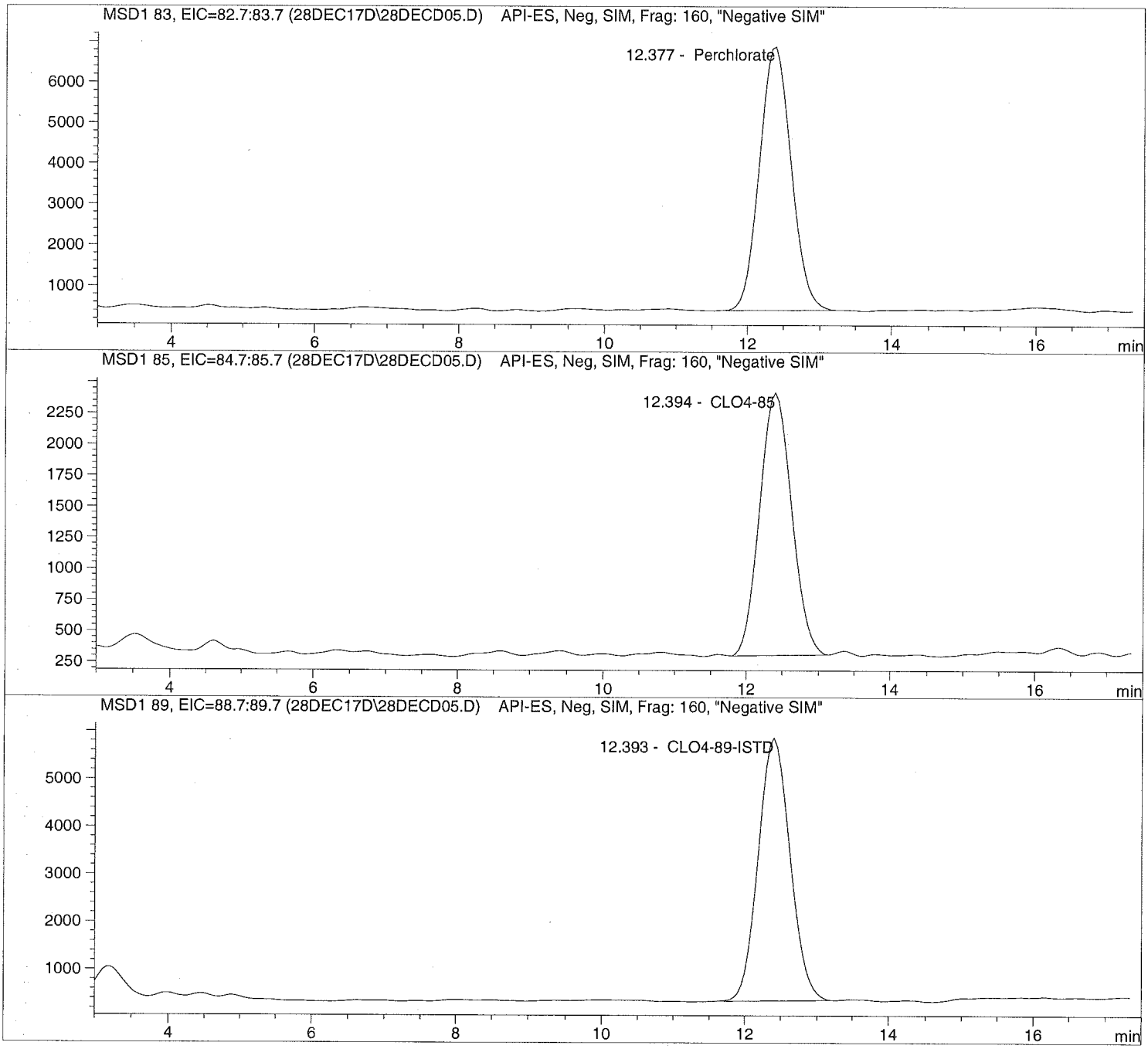
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\28DEC17D\28DECD05.D Sample Name: 581173 LCS@5.

Injection Date:	12/28/2017 12:09:10	Seq Line:	5
Sample Name:	581173 LCS@5.	Location:	Vial 75
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\28DEC17D\28DECD05.D Sample Name: 581173 LCS@5.

Injection Date:	12/28/2017 12:09:10	Seq Line:	5
Sample Name:	581173 LCS@5.	Location:	Vial 75
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Wed, 20. Dec. 2017,08:01:52 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
12.377	PBA	194809.6	5.2715	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.394	PBA	64392.3	5.2210	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.393	BBA	167599.8	5.0000	CLO4-89-ISTD

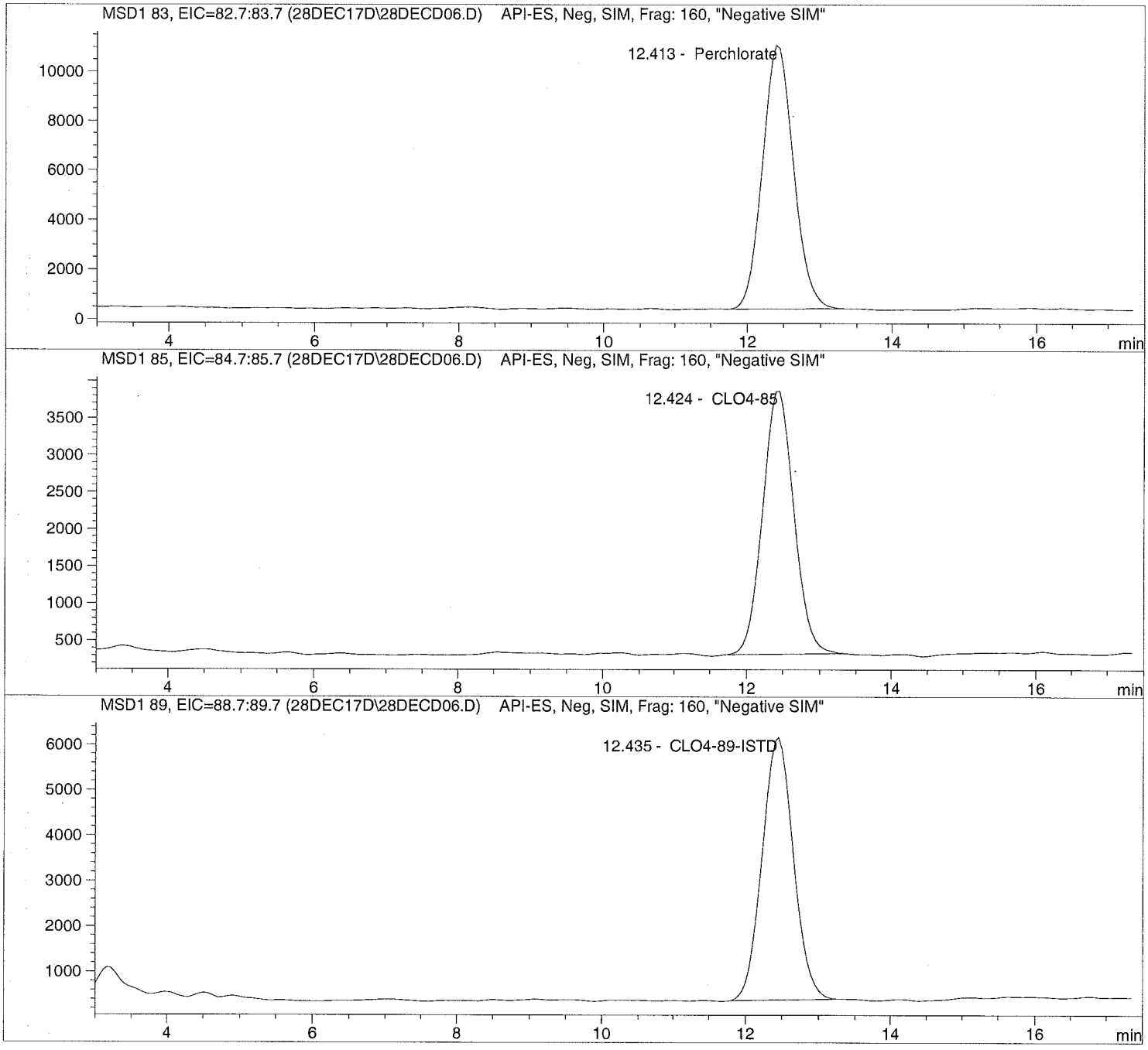
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\28DEC17D\28DECD06.D Sample Name: 1735679001 1K

Injection Date:	12/28/2017 12:32:48	Seq Line:	6
Sample Name:	1735679001 1K	Location:	Vial 76
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\28DEC17D\28DECD06.D Sample Name: 1735679001 1K

Injection Date:	12/28/2017 12:32:48	Seq Line:	6
Sample Name:	1735679001 1K	Location:	Vial 76
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Wed, 20. Dec. 2017,08:01:52 am
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
12.413	PBA	315672.6	8119.2360	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.424	BBA	105966.7	8316.1680	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.435	PBA	173474.0	5000.0000	CLO4-89-ISTD

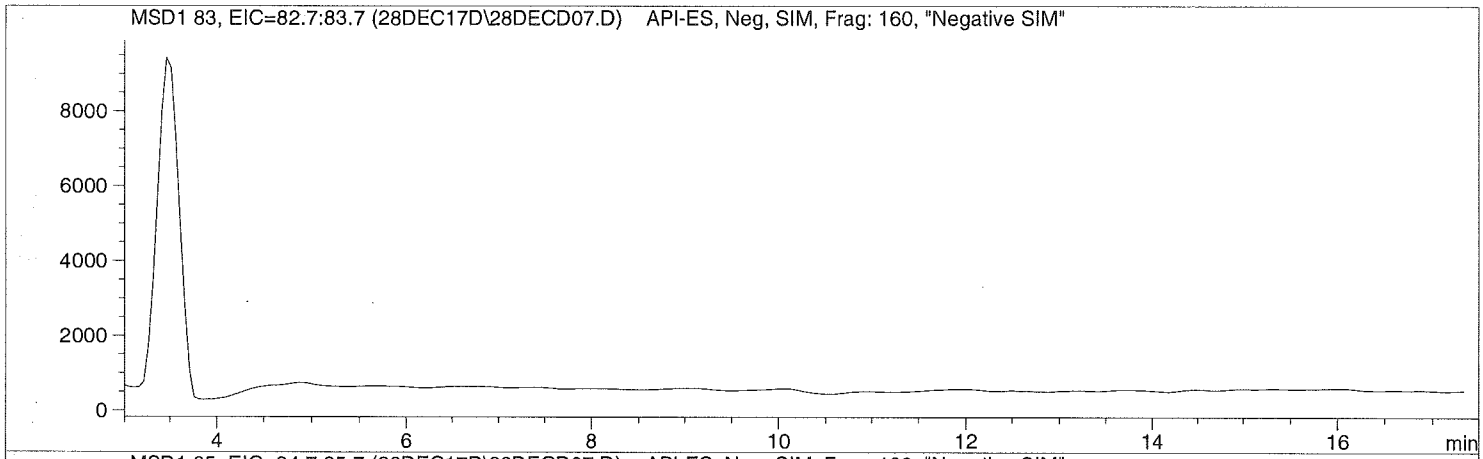
*** End of Report ***

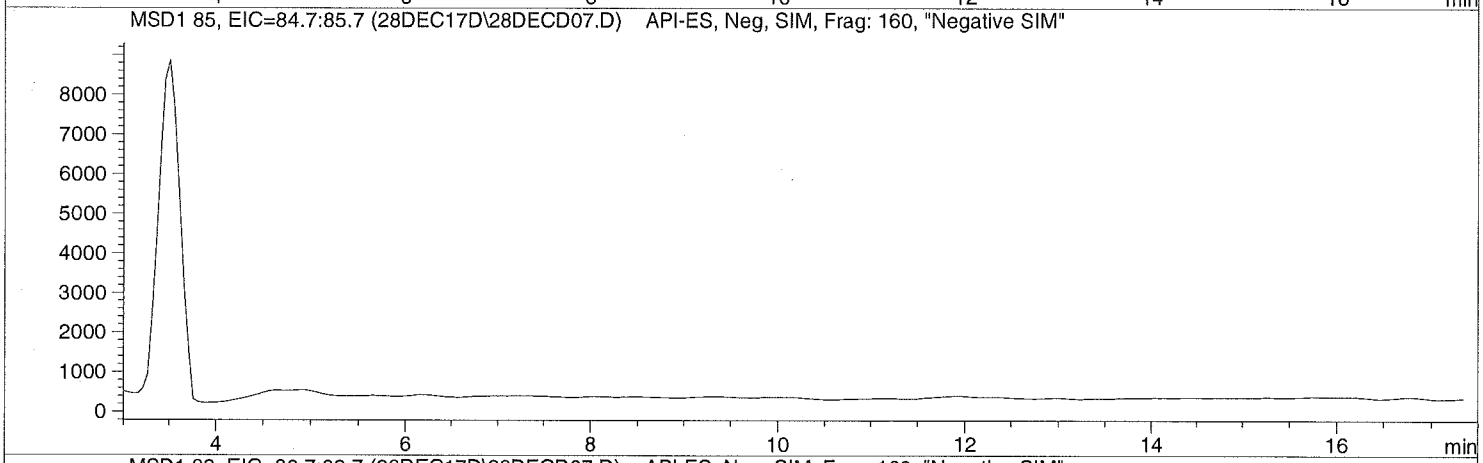
Data file: C:\HPCHEM\1\DATA\28DEC17D\28DECD07.D Sample Name: 1735681001

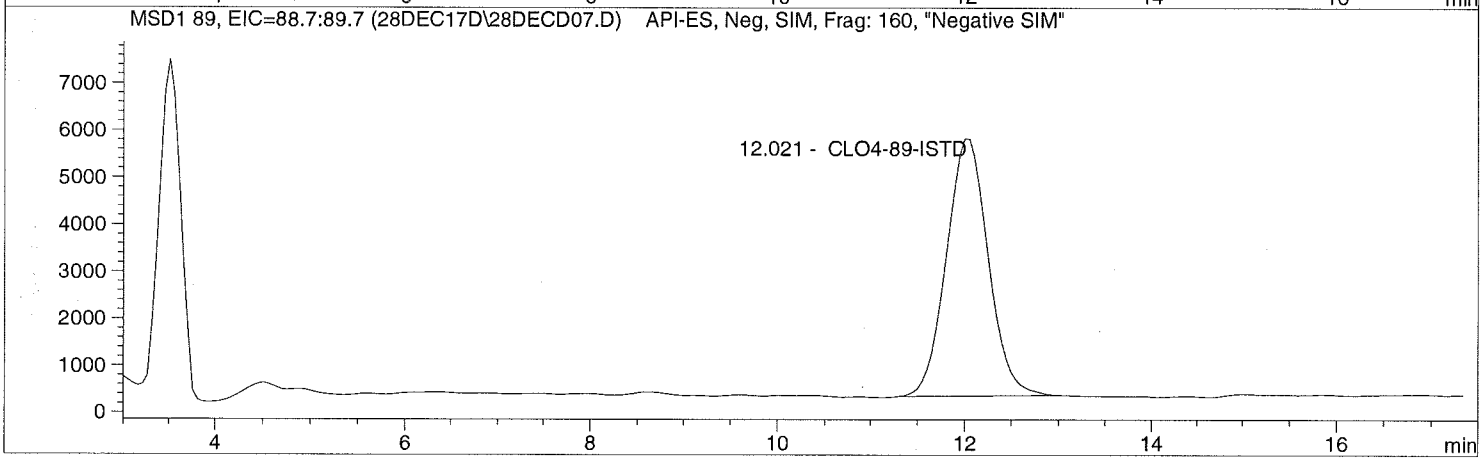
Injection Date:	12/28/2017 12:51:58	Seq Line:	7
Sample Name:	1735681001	Location:	Vial 77
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis







Data file: C:\HPCHEM\1\DATA\28DEC17D\28DECD07.D Sample Name: 1735681001

Injection Date:	12/28/2017 12:51:58	Seq Line:	7
Sample Name:	1735681001	Location:	Vial 77
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Wed, 20. Dec. 2017,08:01:52 am
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
12.021	PBA	169952.1	5.0000	CLO4-89-ISTD

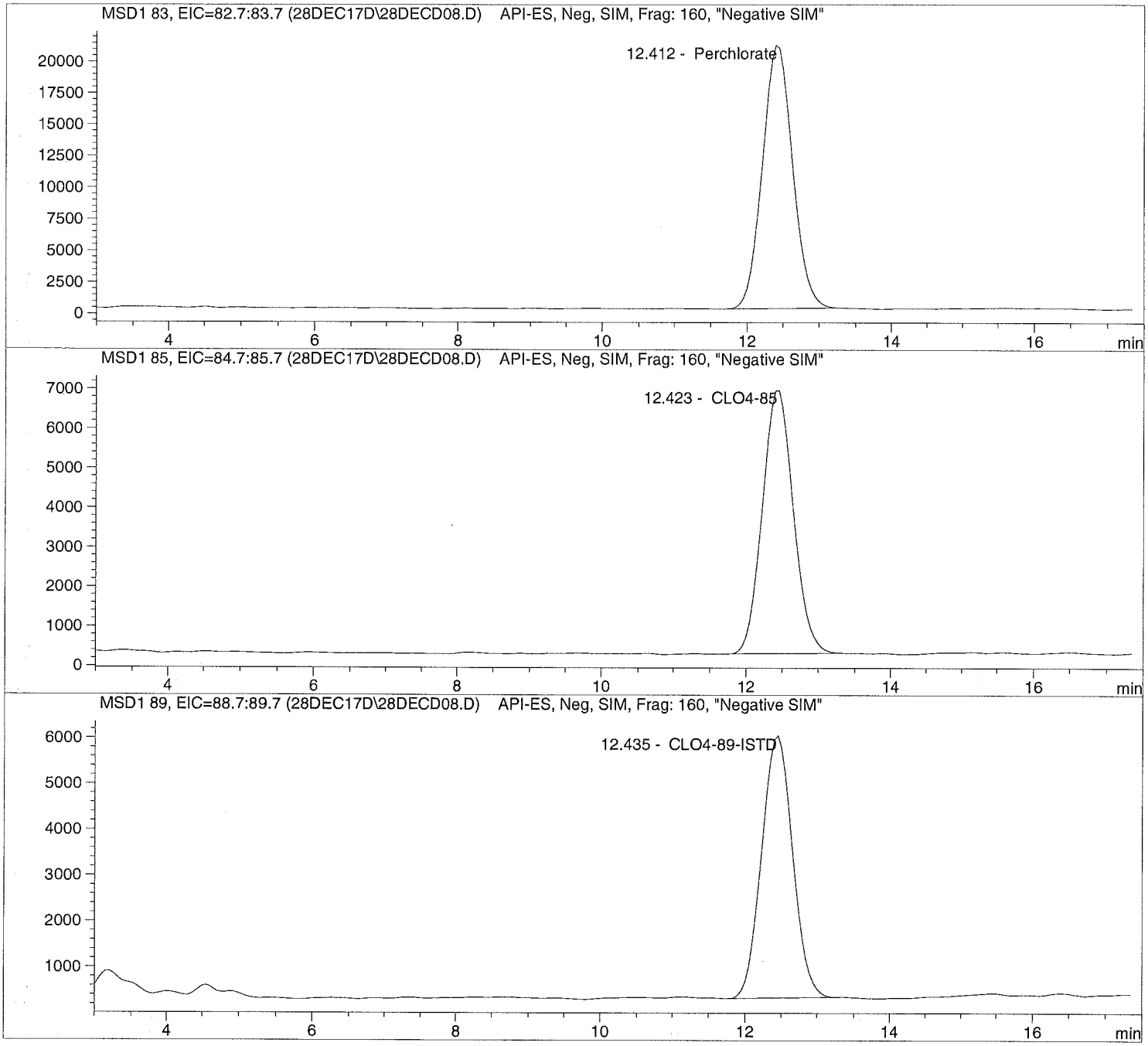
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\28DEC17D\28DECD08.D Sample Name: 1735685001 10K

Injection Date:	12/28/2017 13:11:08	Seq Line:	8
Sample Name:	1735685001 10K	Location:	Vial 78
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\28DEC17D\28DECD08.D Sample Name: 1735685001 10K

Injection Date:	12/28/2017 13:11:08	Seq Line:	8
Sample Name:	1735685001 10K	Location:	Vial 78
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Wed, 20. Dec. 2017,08:01:52 am
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
12.412	PBA	612244.4	152642.1371	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.423	BBA	200772.5	155841.2669	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.435	PBA	172404.8	50000.0000	CLO4-89-ISTD

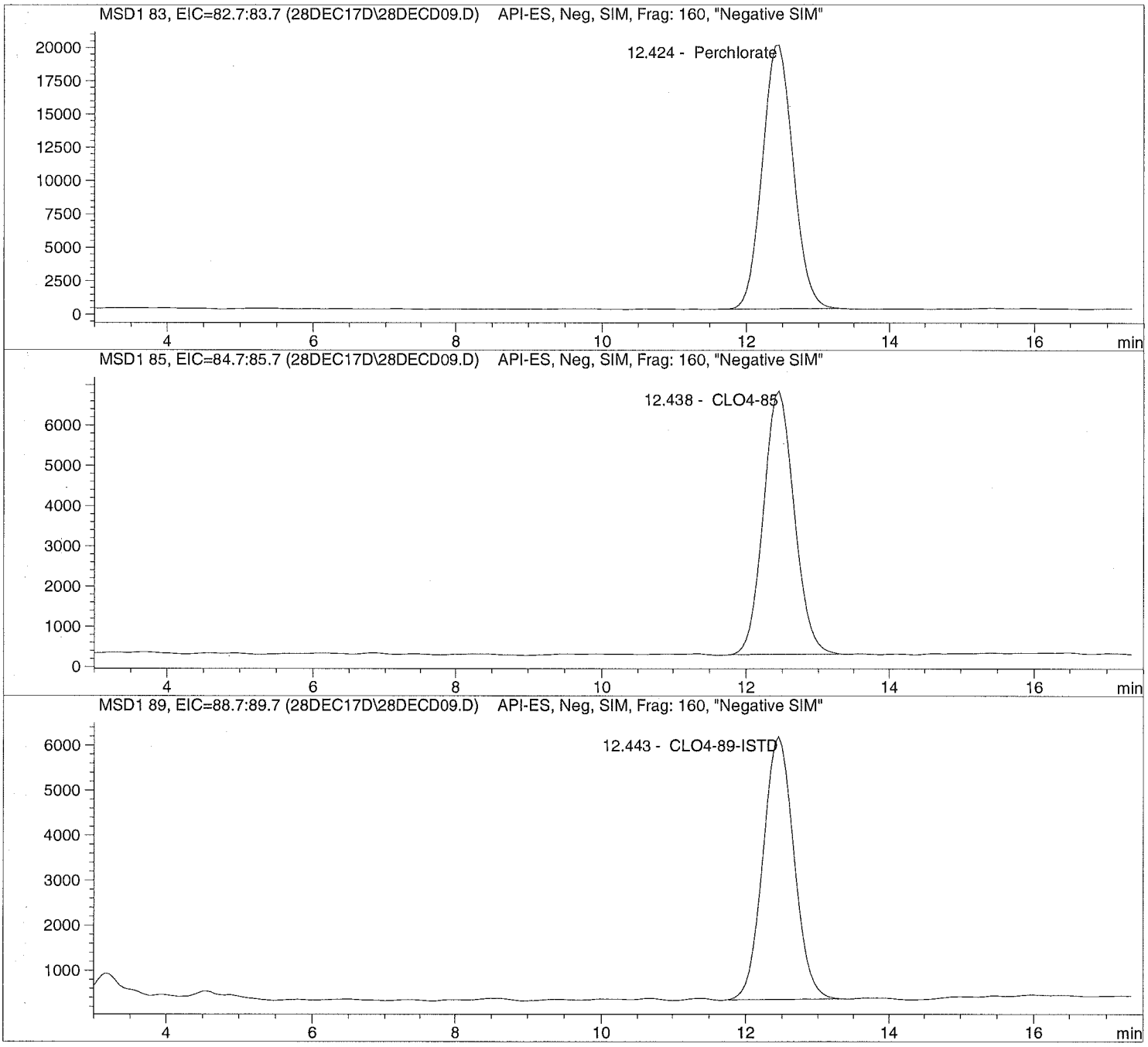
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\28DEC17D\28DECD09.D Sample Name: 1735685002 10K

Injection Date:	12/28/2017 13:30:16	Seq Line:	9
Sample Name:	1735685002 10K	Location:	Vial 79
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\28DEC17D\28DECD09.D Sample Name: 1735685002 10K

Injection Date:	12/28/2017 13:30:16	Seq Line:	9
Sample Name:	1735685002 10K	Location:	Vial 79
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Wed, 20. Dec. 2017,08:01:52 am
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
12.424	BBA	586285.9	145162.1164	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.438	PBA	193898.5	149199.8923	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.443	PBA	174260.2	50000.0000	CLO4-89-ISTD

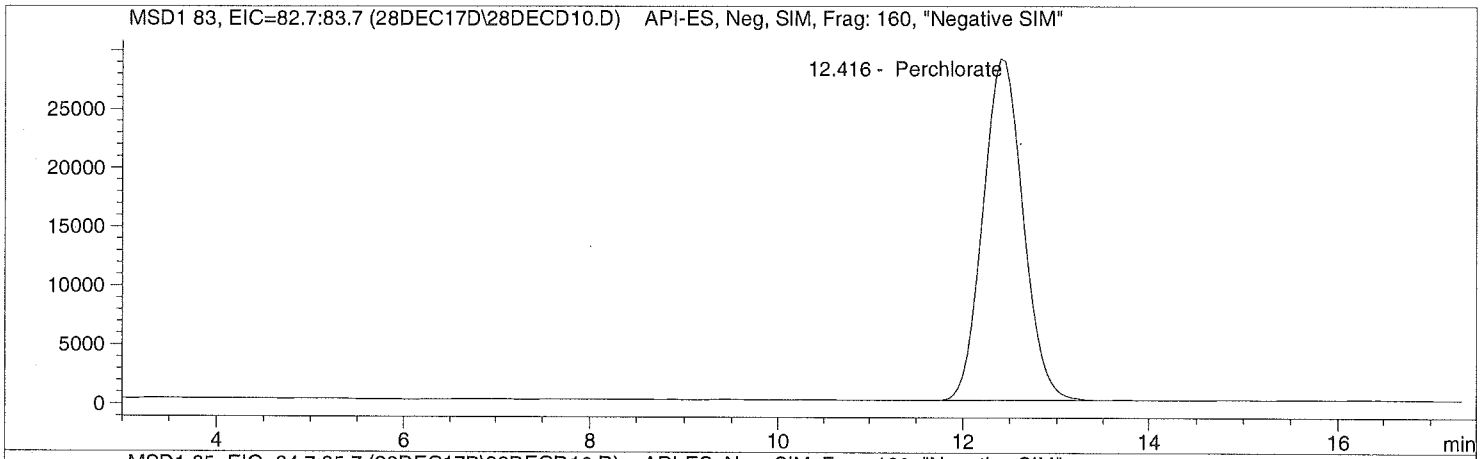
*** End of Report ***

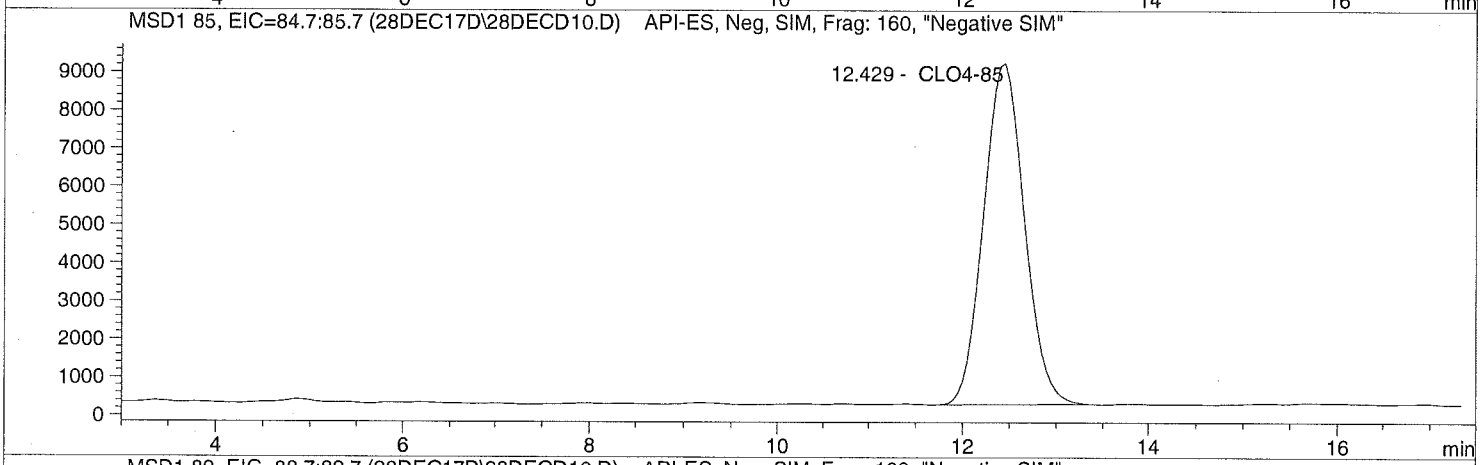
Data file: C:\HPCHEM\1\DATA\28DEC17D\28DECD10.D Sample Name: 1735685003 1K

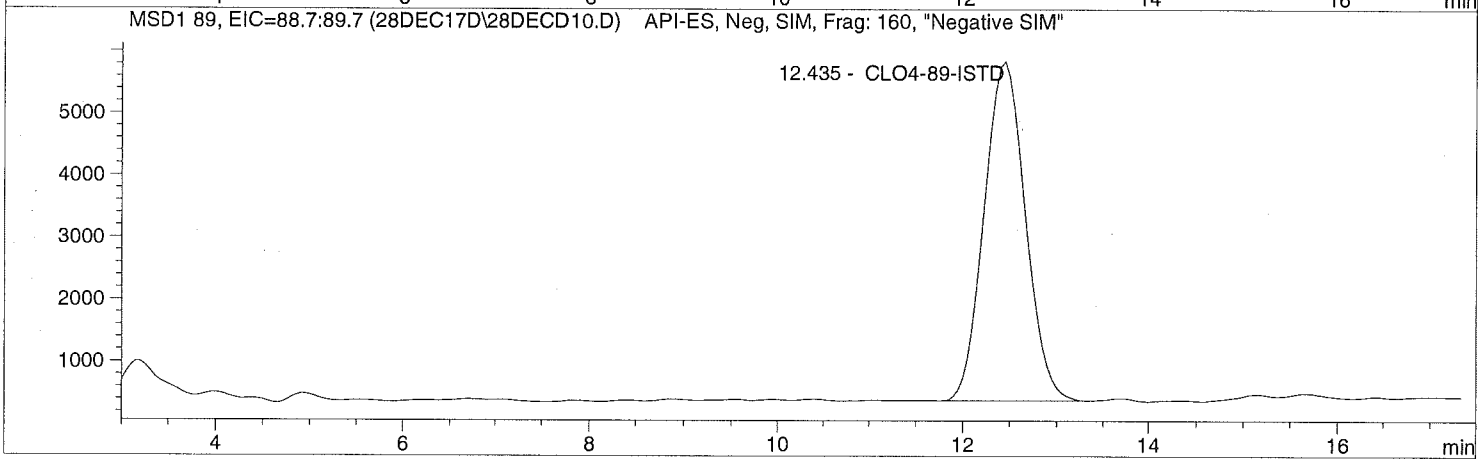
Injection Date:	12/28/2017 13:49:26	Seq Line:	10
Sample Name:	1735685003 1K	Location:	Vial 80
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis







Data file: C:\HPCHEM\1\DATA\28DEC17D\28DECD10.D Sample Name: 1735685003 1K

Injection Date:	12/28/2017 13:49:26	Seq Line:	10
Sample Name:	1735685003 1K	Location:	Vial 80
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Wed, 20. Dec. 2017,08:01:52 am
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
12.416	PBA	858551.9	21459.4019	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.429	PBA	270354.0	21297.7935	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.435	PBA	166785.3	5000.0000	CLO4-89-ISTD

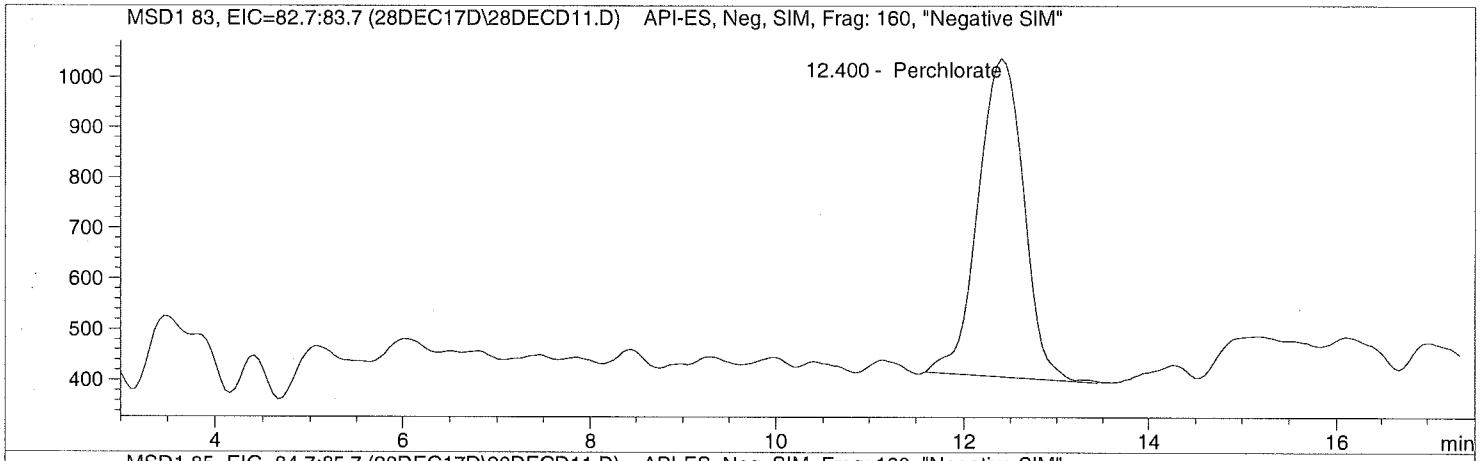
*** End of Report ***

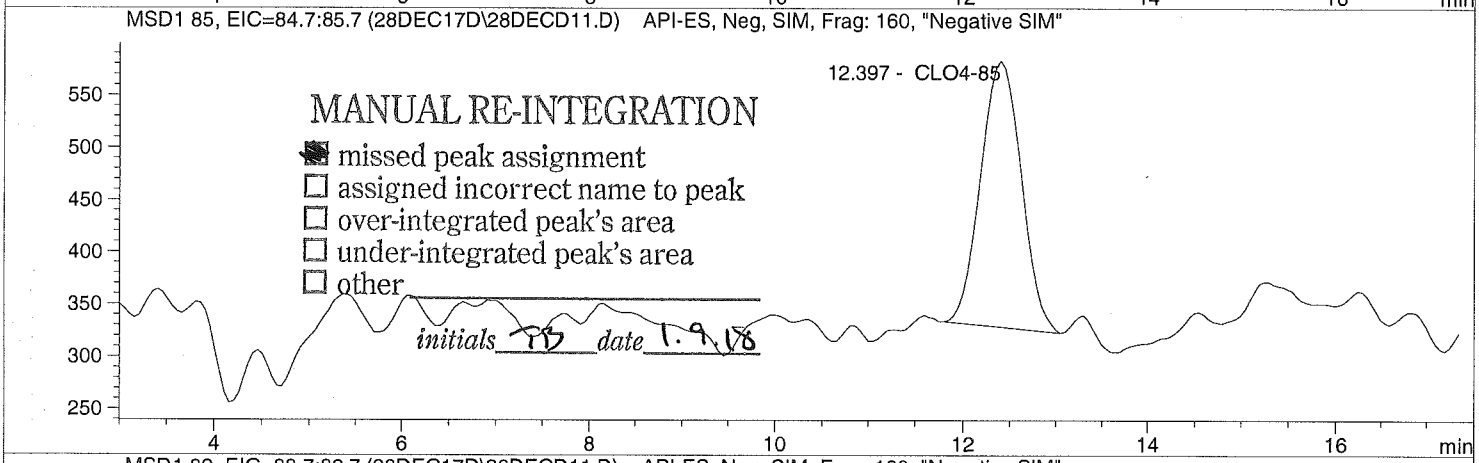
Data file: C:\HPCHEM\1\DATA\28DEC17D\28DECD11.D Sample Name: 1735685004 100

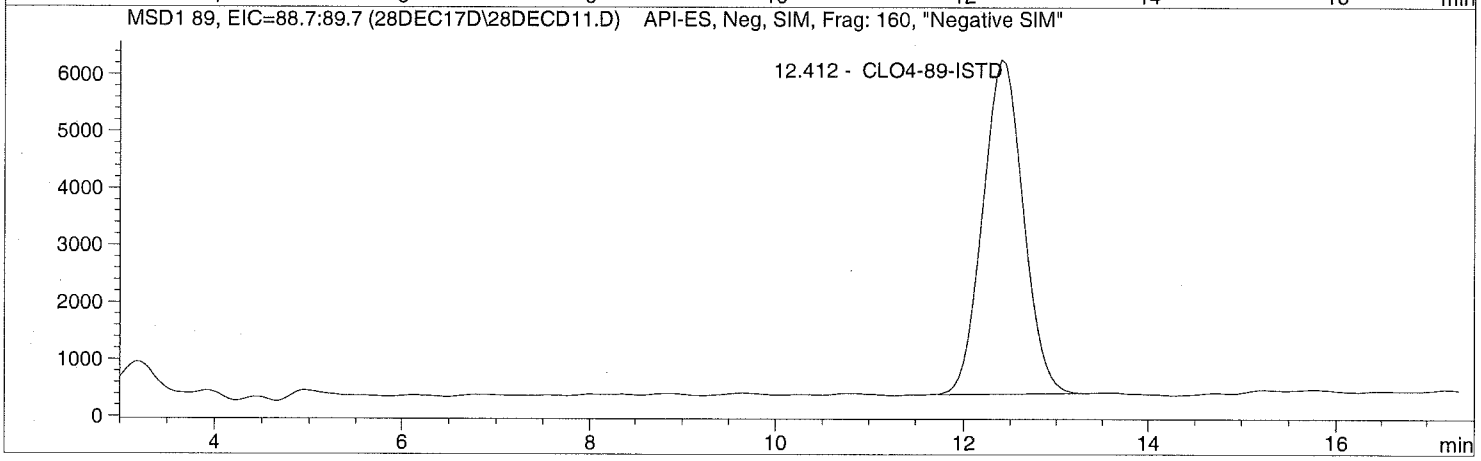
Injection Date:	12/28/2017 14:08:36	Seq Line:	11
Sample Name:	1735685004 100	Location:	Vial 81
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis







Data file: C:\HPCHEM\1\DATA\28DEC17D\28DECD11.D Sample Name: 1735685004 100

Injection Date:	12/28/2017 14:08:36	Seq Line:	11
Sample Name:	1735685004 100	Location:	Vial 81
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method:	CLO4-DOD.M
Analysis Method:	C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed:	12/20/2017 08:11:26

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Wed, 20. Dec. 2017,08:01:52 am
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
12.400	PBA	21505.4	58.0909	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.397	MM	7779.6	42.1059	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.412	BBA	178775.9	500.0000	CLO4-89-ISTD

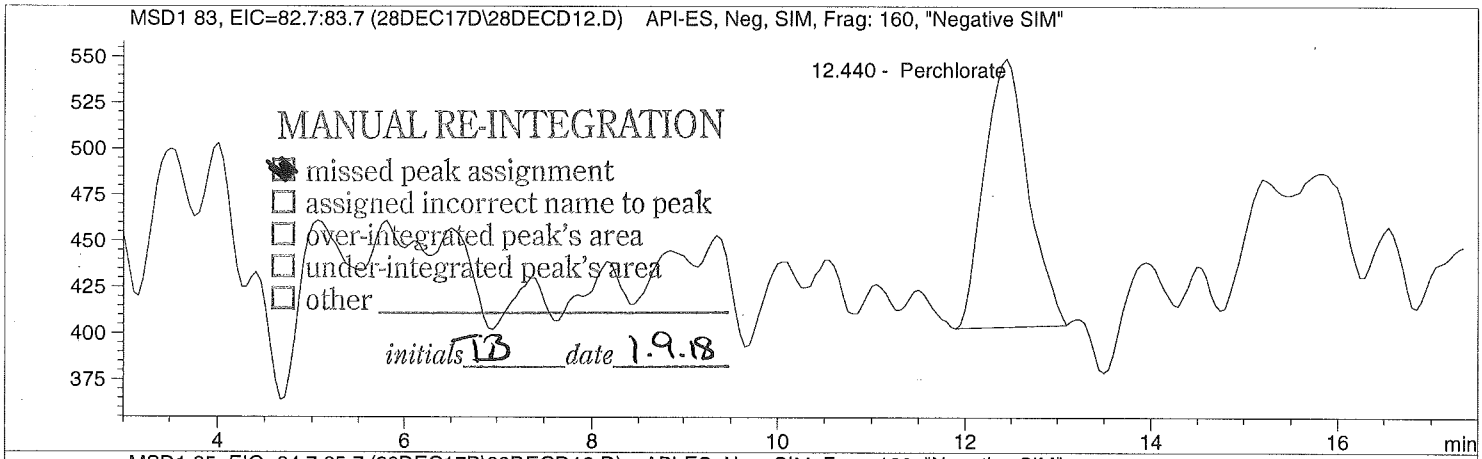
*** End of Report ***

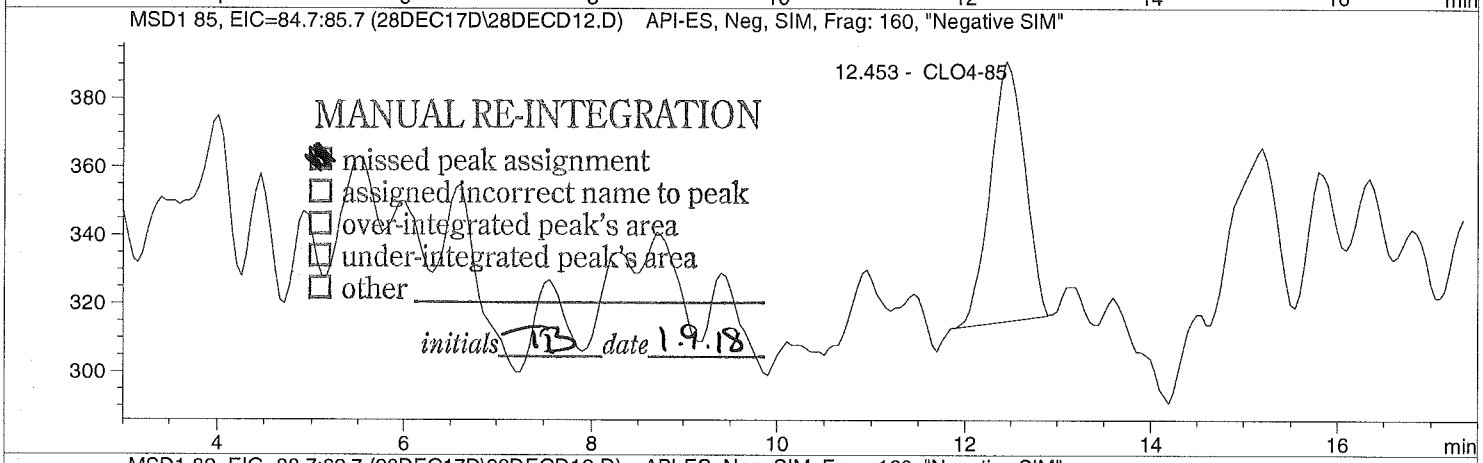
Data file: C:\HPCHEM\1\DATA\28DEC17D\28DECD12.D Sample Name: 1735685005 100

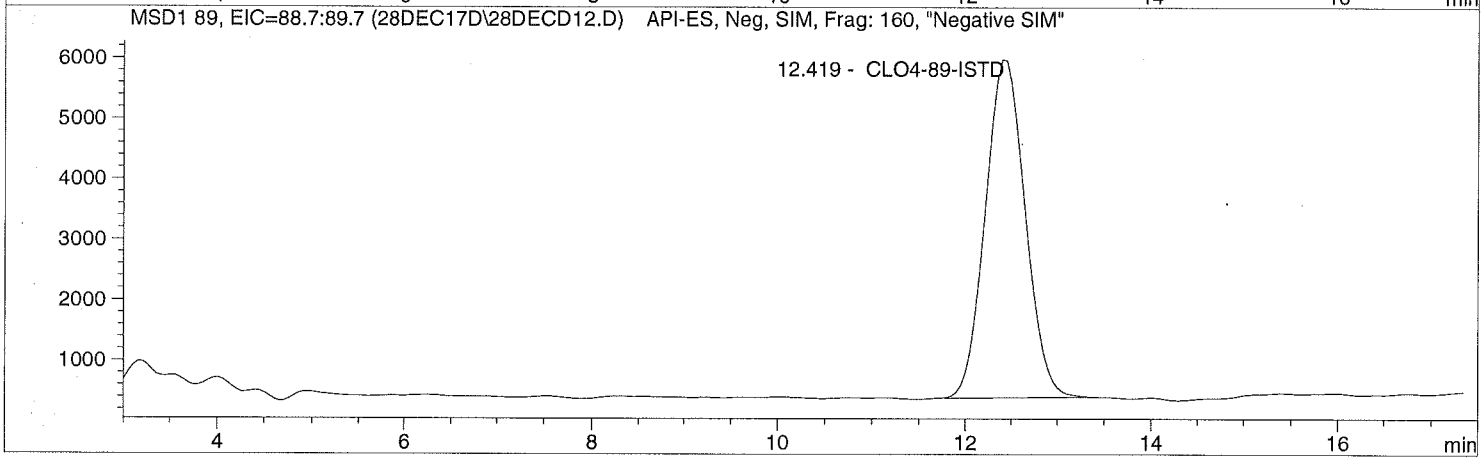
Injection Date:	12/28/2017 14:27:43	Seq Line:	12
Sample Name:	1735685005 100	Location:	Vial 82
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis







Data file: C:\HPCHEM\1\DATA\28DEC17D\28DECD12.D Sample Name: 1735685005 100

Injection Date:	12/28/2017 14:27:43	Seq Line:	12
Sample Name:	1735685005 100	Location:	Vial 82
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Wed, 20. Dec. 2017,08:01:52 am
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
12.440	MM	4777.4	15.6346	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.453	MM	1968.7	0.0000	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.419	BBA	167796.2	500.0000	CLO4-89-ISTD

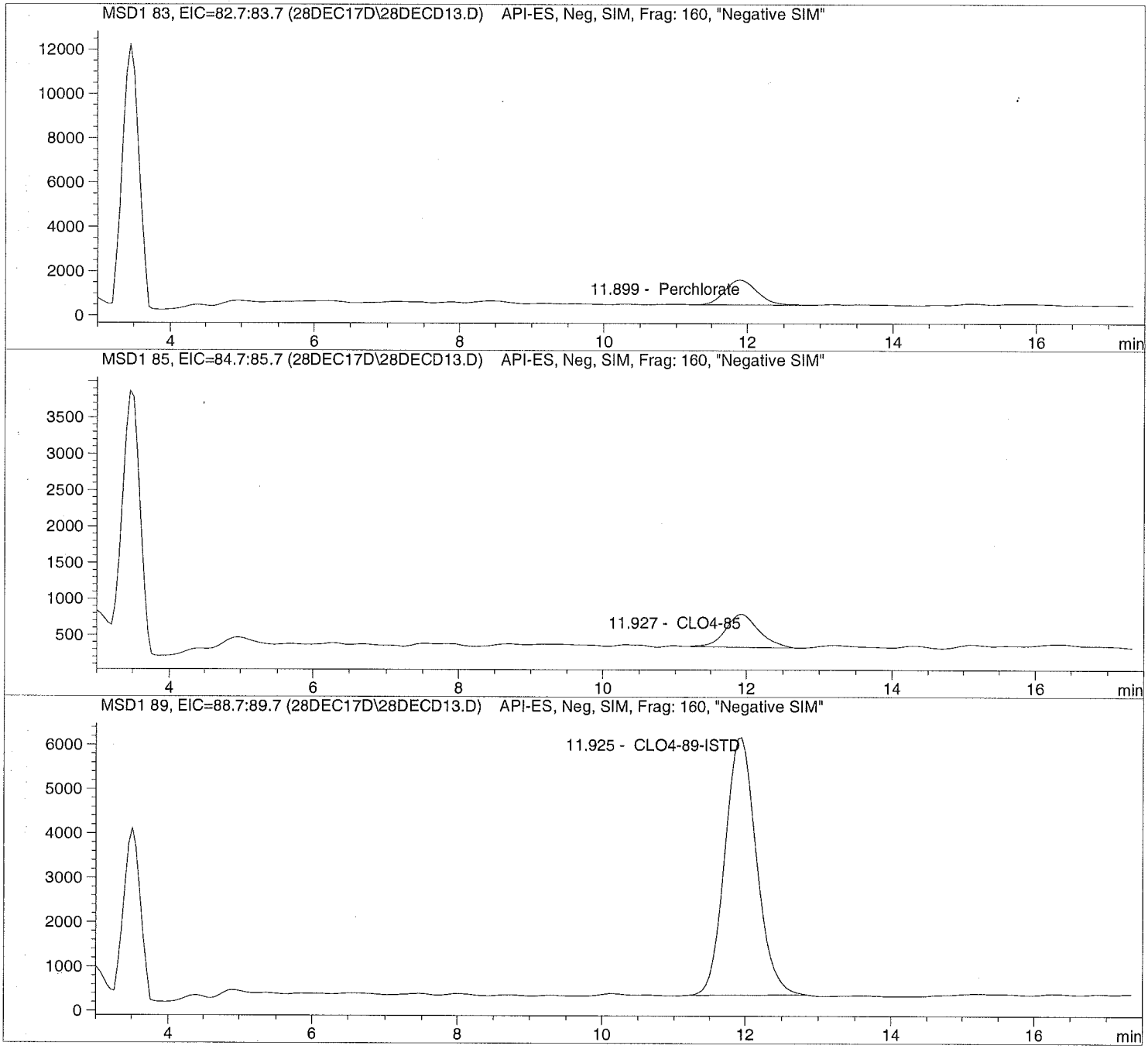
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\28DEC17D\28DECD13.D Sample Name: 1735685006

Injection Date:	12/28/2017 14:46:51	Seq Line:	13
Sample Name:	1735685006	Location:	Vial 83
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\28DEC17D\28DECD13.D Sample Name: 1735685006

Injection Date:	12/28/2017 14:46:51	Seq Line:	13
Sample Name:	1735685006	Location:	Vial 83
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Wed, 20. Dec. 2017,08:01:52 am
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
11.899	PBA	35039.1	0.9395	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
11.927	BBA	14816.6	0.9983	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
11.925	BBA	176823.1	5.0000	CLO4-89-ISTD

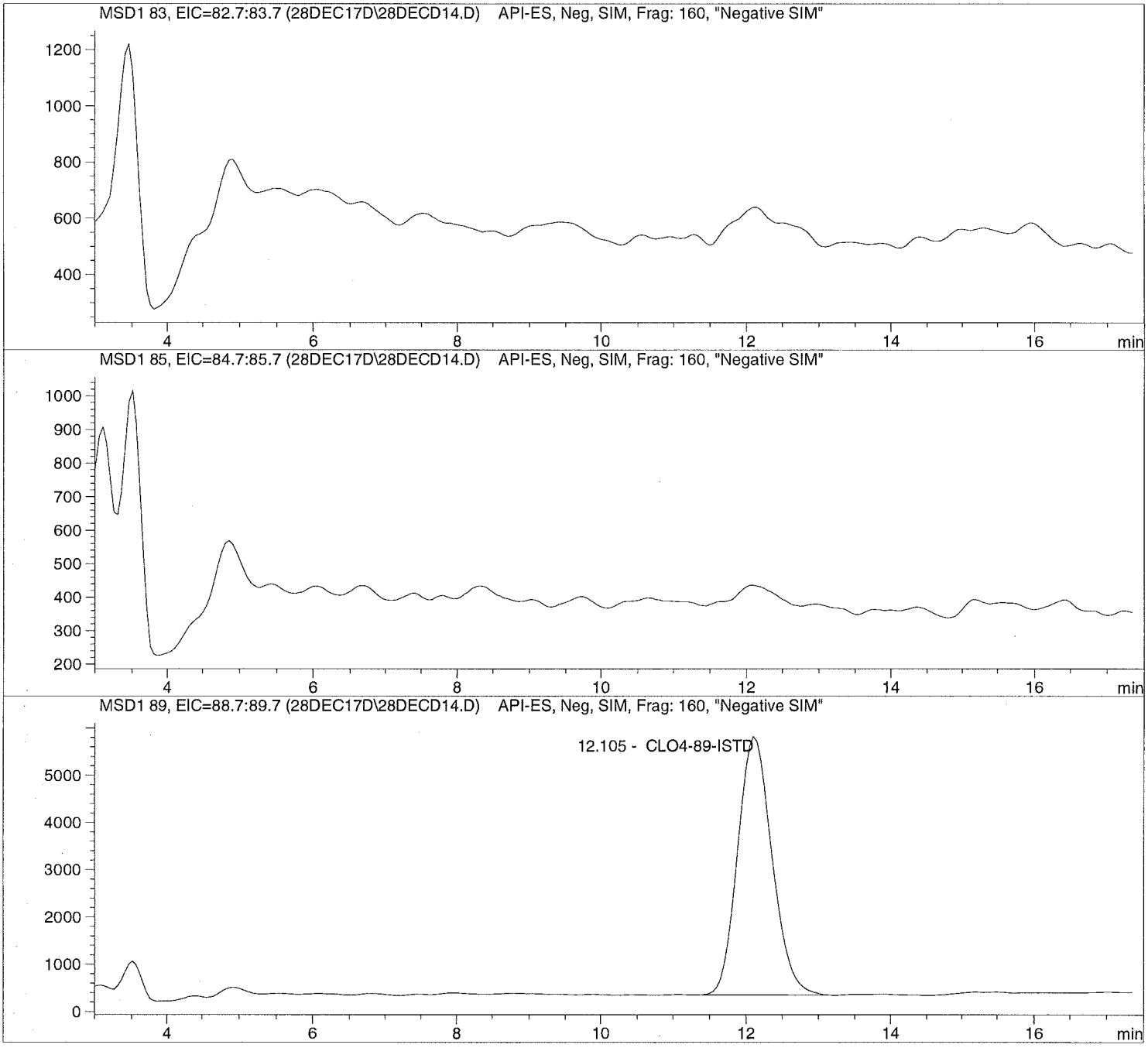
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\28DEC17D\28DECD14.D Sample Name: 1735685007

Injection Date:	12/28/2017 15:05:59	Seq Line:	14
Sample Name:	1735685007	Location:	Vial 84
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\28DEC17D\28DECD14.D Sample Name: 1735685007

Injection Date:	12/28/2017 15:05:59	Seq Line:	14
Sample Name:	1735685007	Location:	Vial 84
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Wed, 20. Dec. 2017,08:01:52 am
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
12.105	BBA	179543.0	5.0000	CLO4-89-ISTD

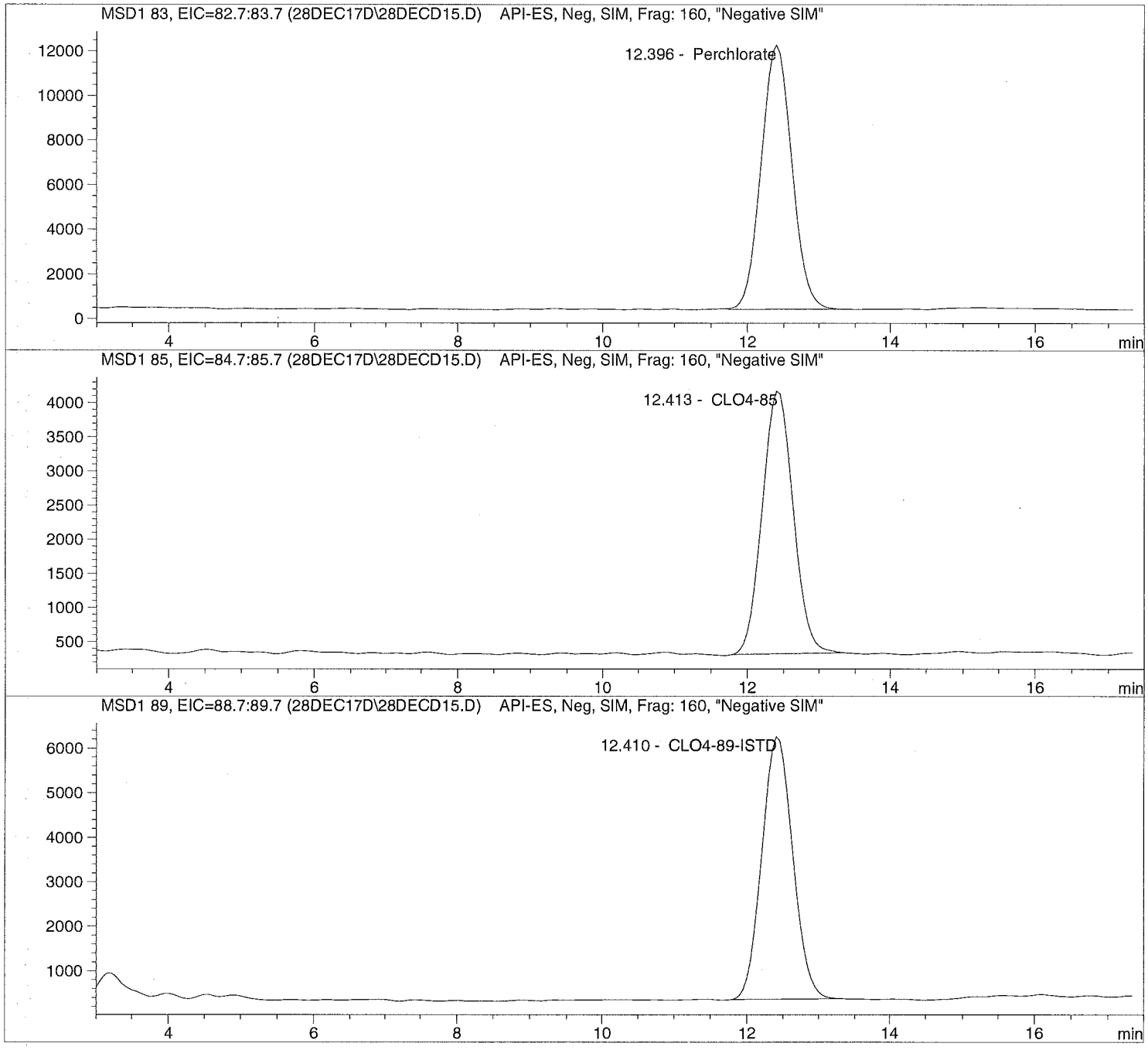
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\28DEC17D\28DECD15.D Sample Name: 1735685008 1K

Injection Date:	12/28/2017 15:25:07	Seq Line:	15
Sample Name:	1735685008 1K	Location:	Vial 85
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\28DEC17D\28DECD15.D Sample Name: 1735685008 1K

Injection Date:	12/28/2017 15:25:07	Seq Line:	15
Sample Name:	1735685008 1K	Location:	Vial 85
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Wed, 20. Dec. 2017,08:01:52 am
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
12.396	BBA	350227.7	8838.8380	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.413	PBA	115251.0	8903.2163	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.410	BBA	176102.2	5000.0000	CLO4-89-ISTD

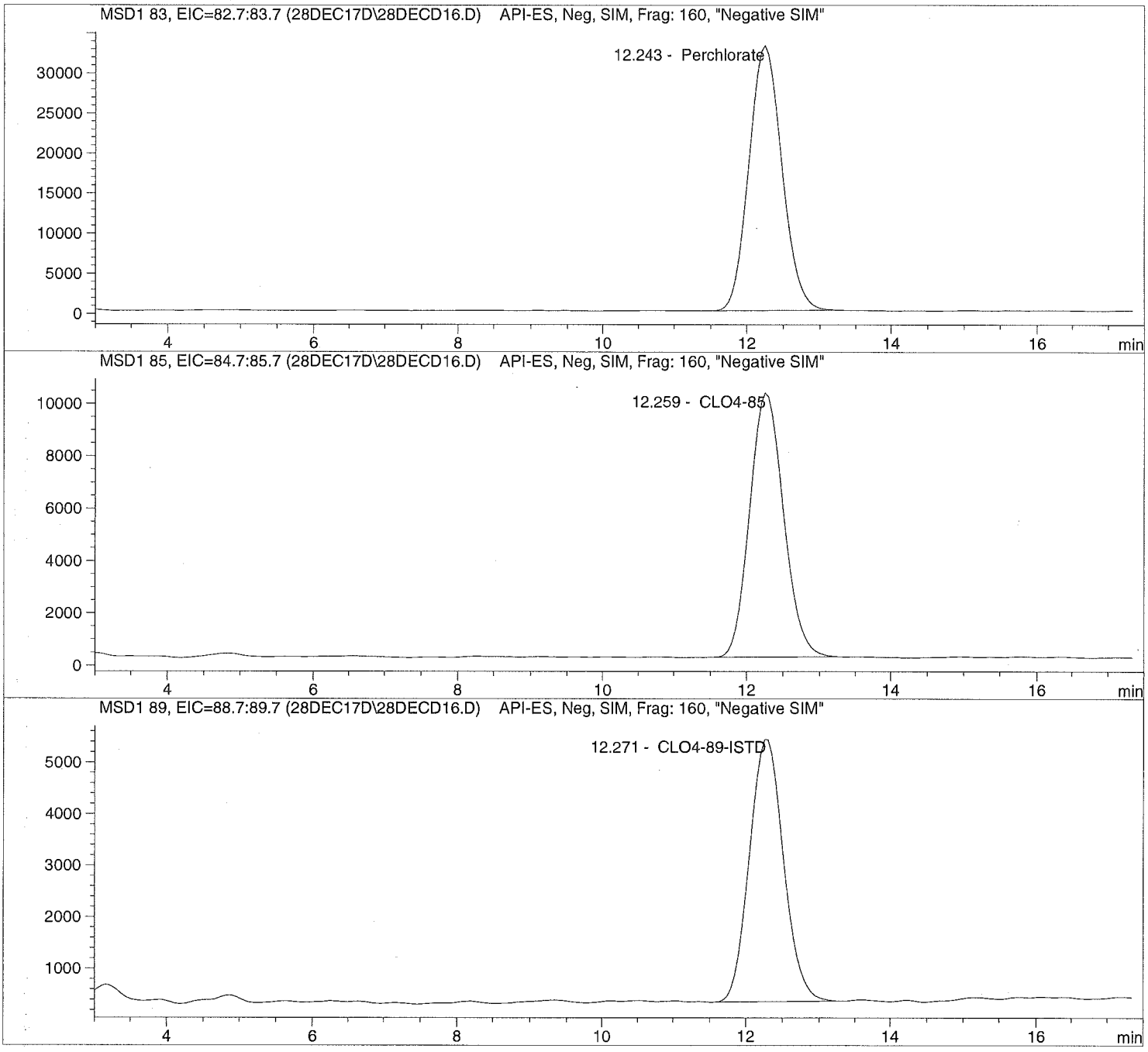
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\28DEC17D\28DECD16.D Sample Name: 581176 CCV@25

Injection Date:	12/28/2017 15:44:20	Seq Line:	16
Sample Name:	581176 CCV@25	Location:	Vial 71
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\28DEC17D\28DECD16.D Sample Name: 581176 CCV@25

Injection Date:	12/28/2017 15:44:20	Seq Line:	16
Sample Name:	581176 CCV@25	Location:	Vial 71
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Wed, 20. Dec. 2017,08:01:52 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
12.243	PBA	1032158.7	25.5879	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.259	PBA	324643.2	25.5070	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.271	PBA	164866.4	5.0000	CLO4-89-ISTD

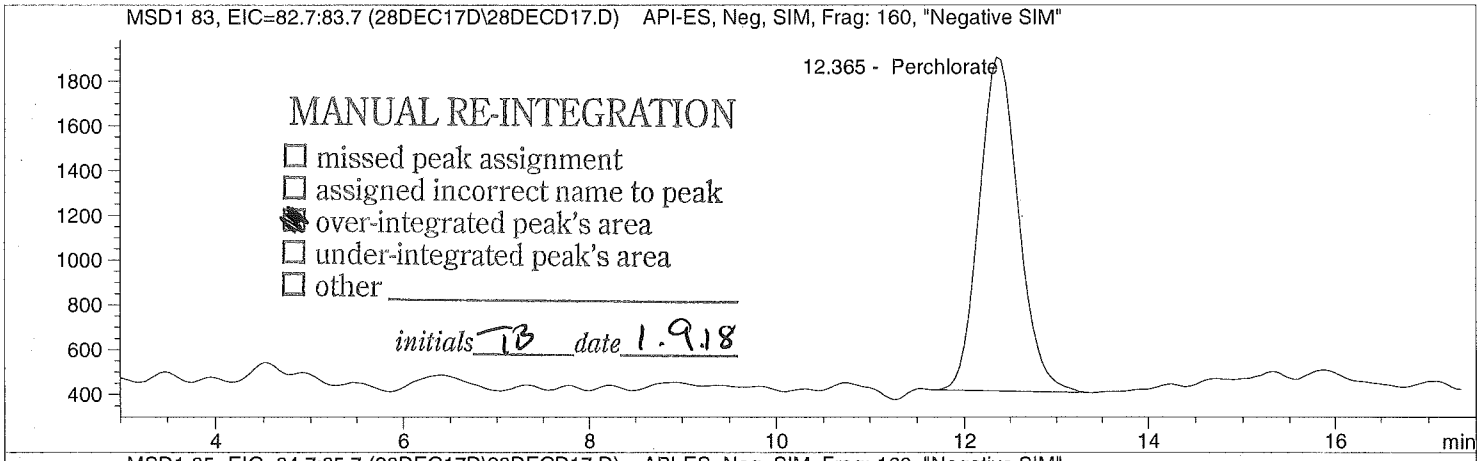
*** End of Report ***

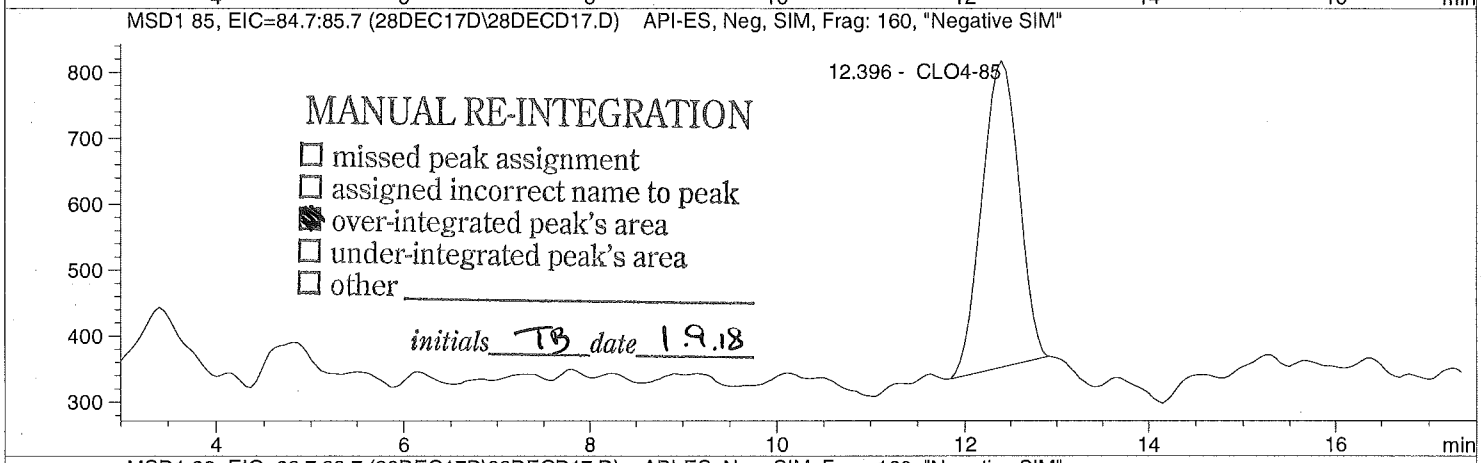
Data file: C:\HPCHEM\1\DATA\28DEC17D\28DECD17.D Sample Name: 581177 LODV@1.

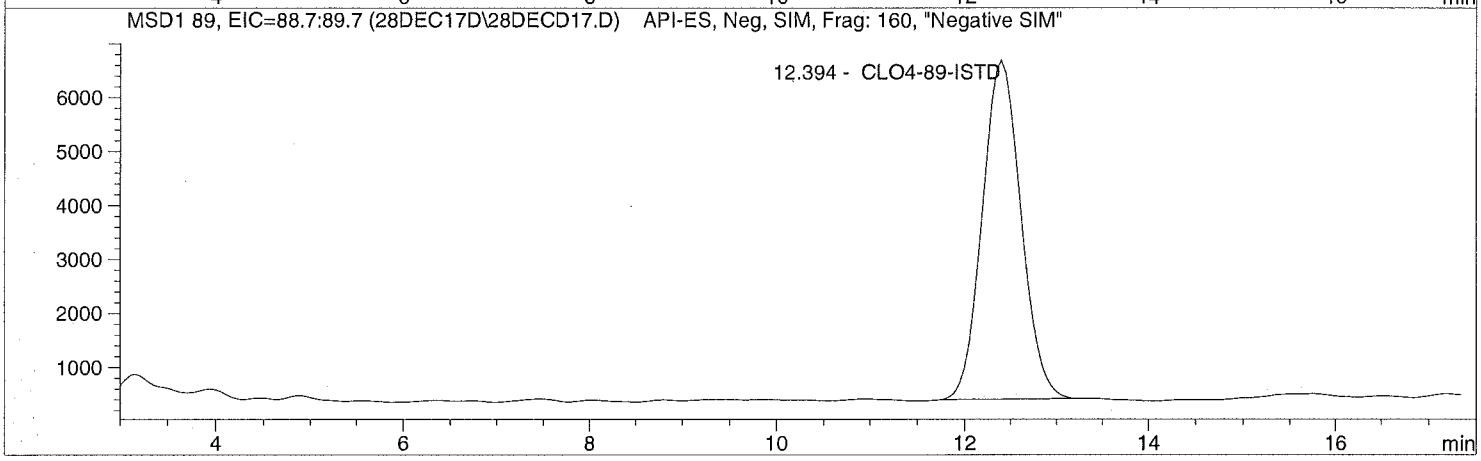
Injection Date:	12/28/2017 16:03:29	Seq Line:	17
Sample Name:	581177 LODV@1.	Location:	Vial 72
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis







Data file: C:\HPCHEM\1\DATA\28DEC17D\28DECD17.D Sample Name: 581177 LODV@1.

Injection Date:	12/28/2017 16:03:29	Seq Line:	17
Sample Name:	581177 LODV@1.	Location:	Vial 72
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Wed, 20. Dec. 2017,08:01:52 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
12.365	MM	44610.4	1.1407	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.396	MM	13051.3	0.8123	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.394	PBA	184350.1	5.0000	CLO4-89-ISTD

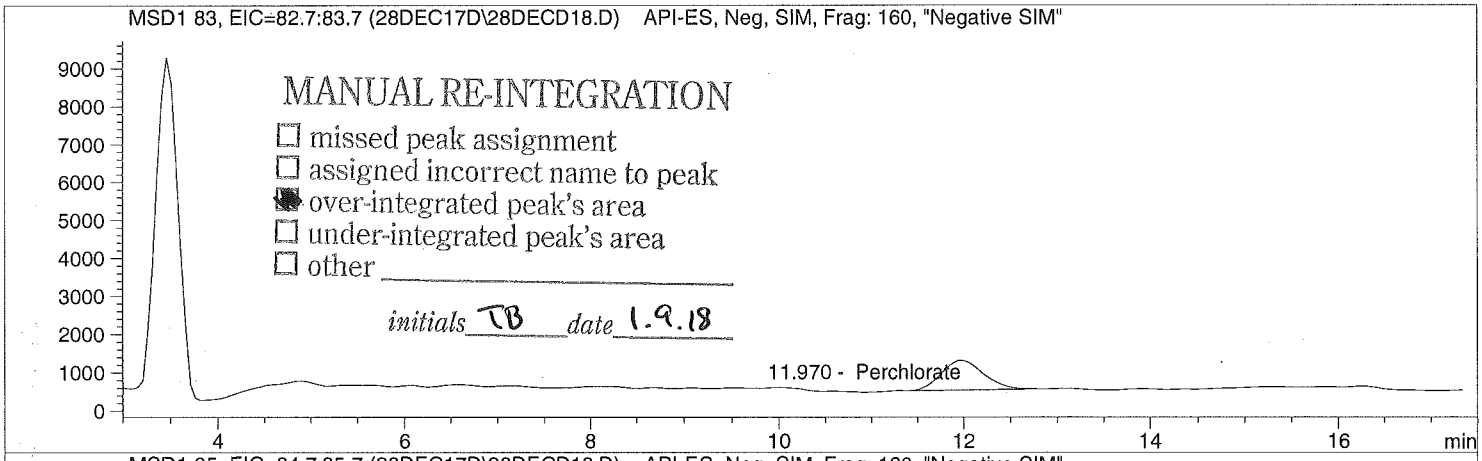
*** End of Report ***

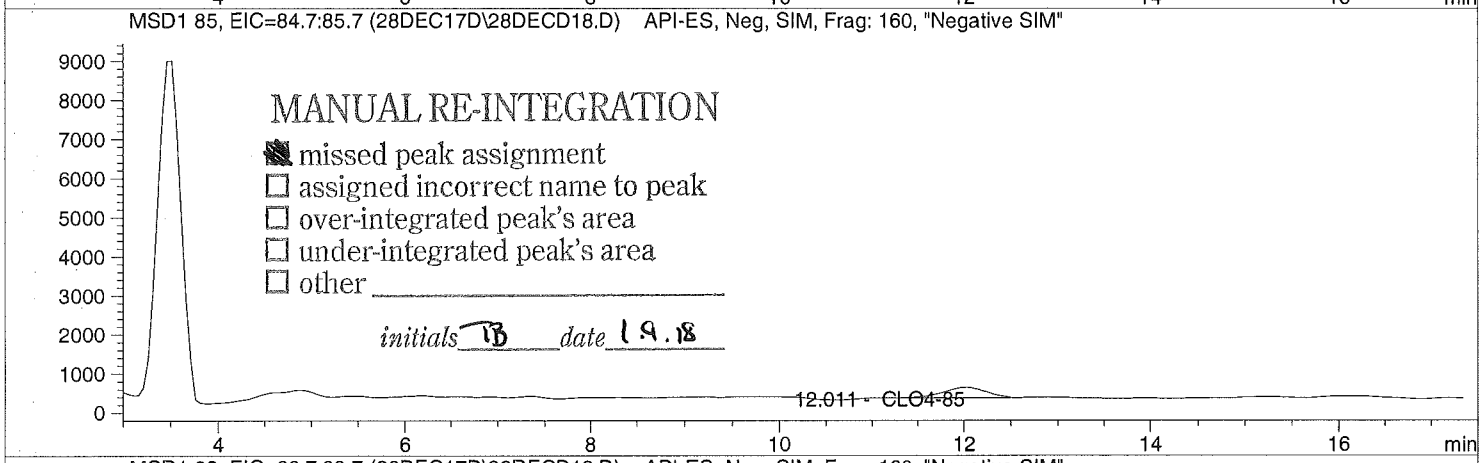
Data file: C:\HPCHEM\1\DATA\28DEC17D\28DECD18.D Sample Name: 1735689001

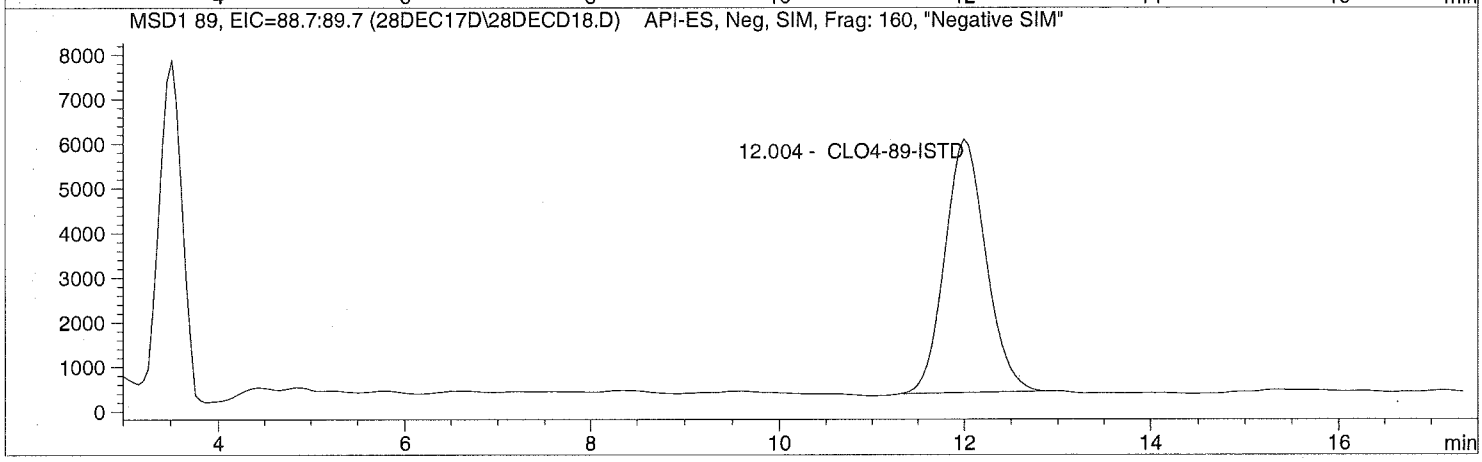
Injection Date:	12/28/2017 16:28:09	Seq Line:	18
Sample Name:	1735689001	Location:	Vial 86
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis







Data file: C:\HPCHEM\1\DATA\28DEC17D\28DECD18.D Sample Name: 1735689001

Injection Date:	12/28/2017 16:28:09	Seq Line:	18
Sample Name:	1735689001	Location:	Vial 86
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Wed, 20. Dec. 2017,08:01:52 am
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
11.970	MM	24383.9	0.6698	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.011	MM	8719.6	0.5129	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.004	BBA	174711.9	5.0000	CLO4-89-ISTD

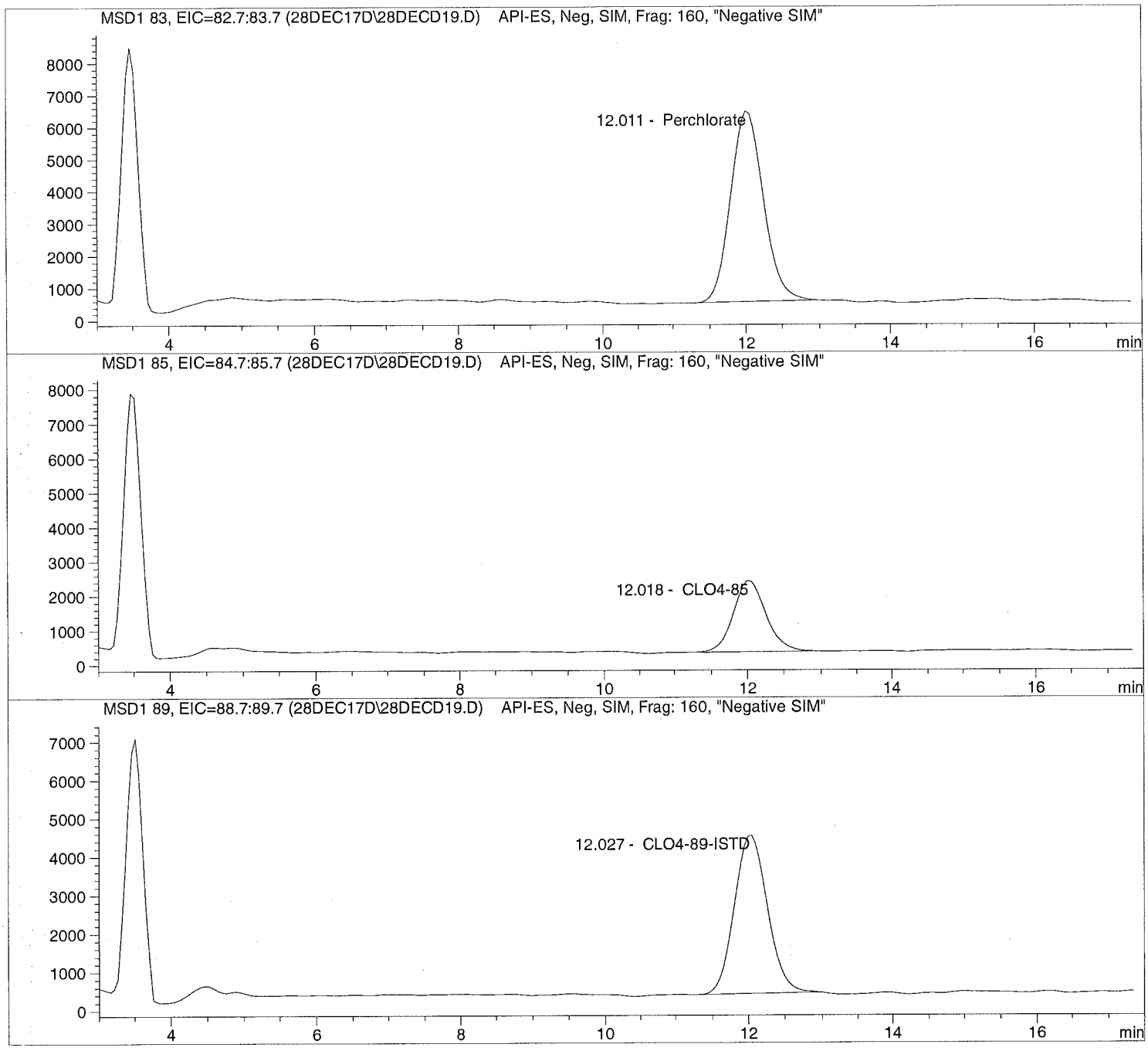
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\28DEC17D\28DECD19.D Sample Name: 581367 356811S

Injection Date:	12/28/2017 16:47:18	Seq Line:	19
Sample Name:	581367 356811S	Location:	Vial 87
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\28DEC17D\28DECD19.D Sample Name: 581367 356811S

Injection Date:	12/28/2017 16:47:18	Seq Line:	19
Sample Name:	581367 356811S	Location:	Vial 87
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Wed, 20. Dec. 2017,08:01:52 am
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
12.011	BBA	186973.8	6.4160	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.018	BBA	64792.8	6.7239	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.027	PBA	131273.9	5.0000	CLO4-89-ISTD

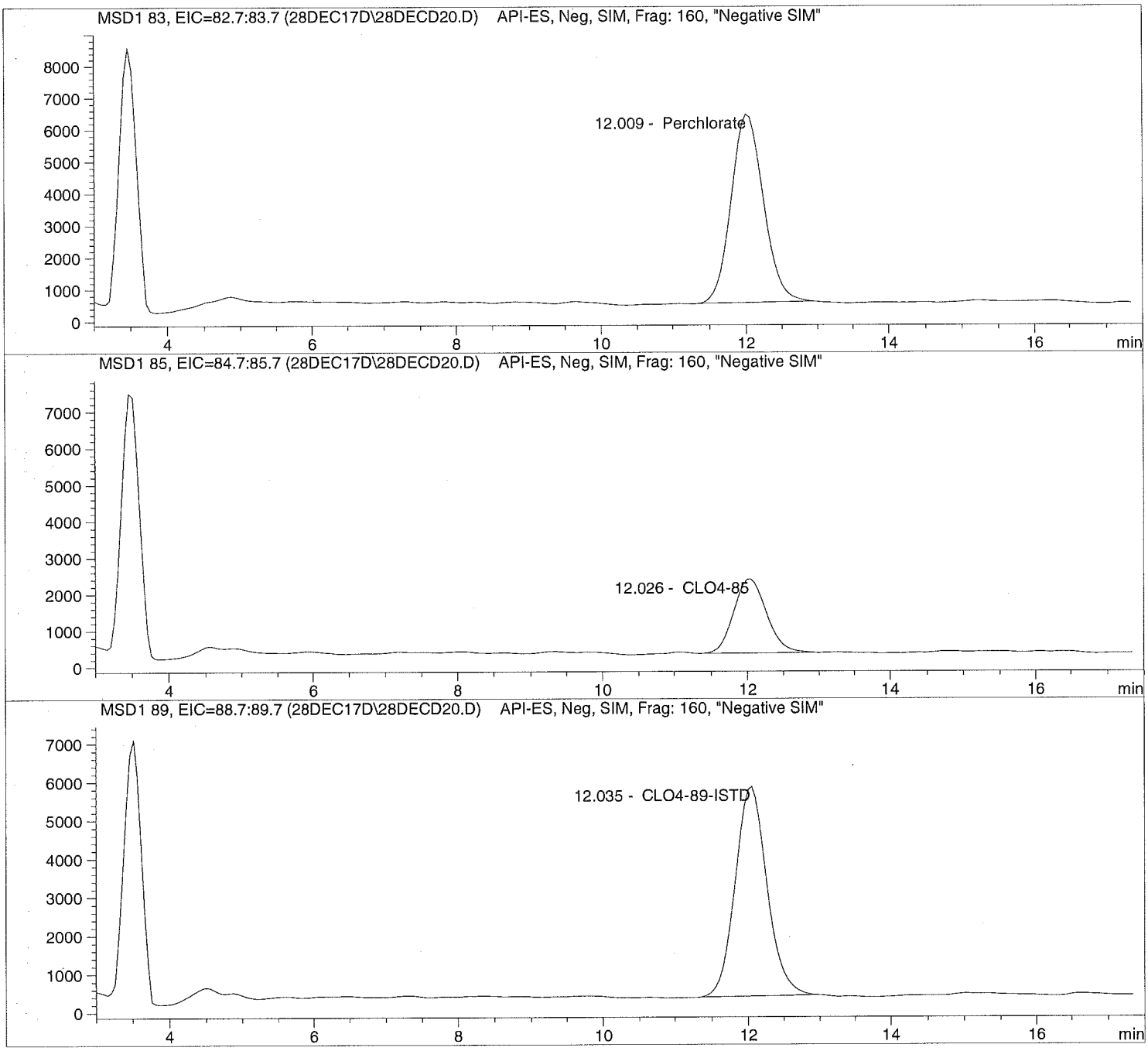
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\28DEC17D\28DECD20.D Sample Name: 581368 356811D

Injection Date:	12/28/2017 17:06:27	Seq Line:	20
Sample Name:	581368 356811D	Location:	Vial 88
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\28DEC17D\28DECD20.D Sample Name: 581368 356811D

Injection Date:	12/28/2017 17:06:27	Seq Line:	20
Sample Name:	581368 356811D	Location:	Vial 88
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Wed, 20. Dec. 2017,08:01:52 am
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
12.009	PBA	182161.7	4.9686	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.026	PBA	63917.9	5.2142	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.035	PBA	166580.6	5.0000	CLO4-89-ISTD

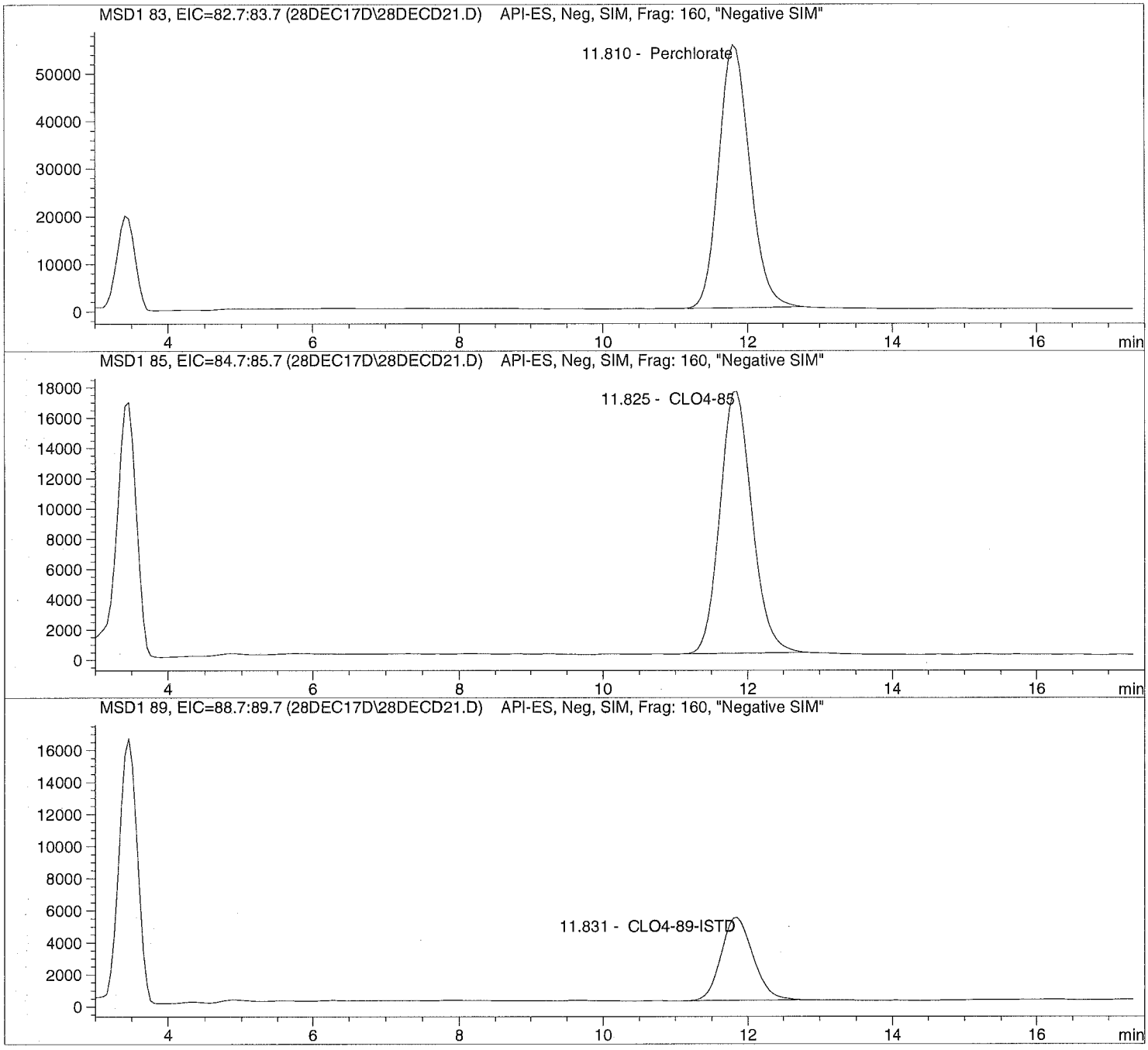
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\28DEC17D\28DECD21.D Sample Name: 1735685004

Injection Date:	12/28/2017 17:25:40	Seq Line:	21
Sample Name:	1735685004	Location:	Vial 89
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\28DEC17D\28DECD21.D Sample Name: 1735685004

Injection Date:	12/28/2017 17:25:40	Seq Line:	21
Sample Name:	1735685004	Location:	Vial 89
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Wed, 20. Dec. 2017,08:01:52 am
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
11.810	PBA	1653258.4	39.7379	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
11.825	PBA	533653.0	41.1139	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
11.831	PBA	159385.2	5.0000	CLO4-89-ISTD

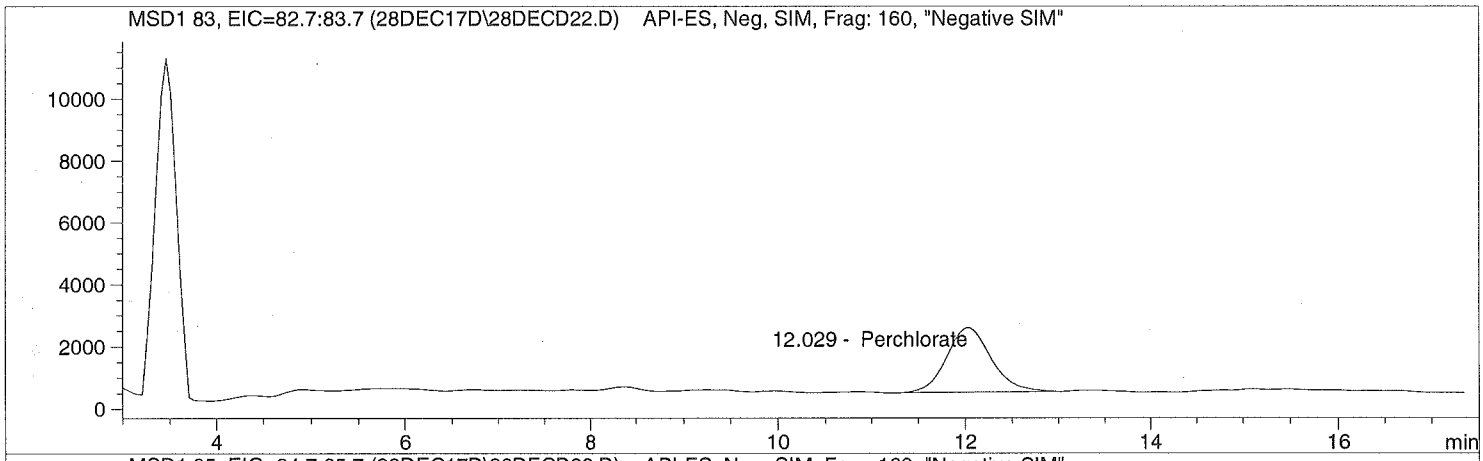
*** End of Report ***

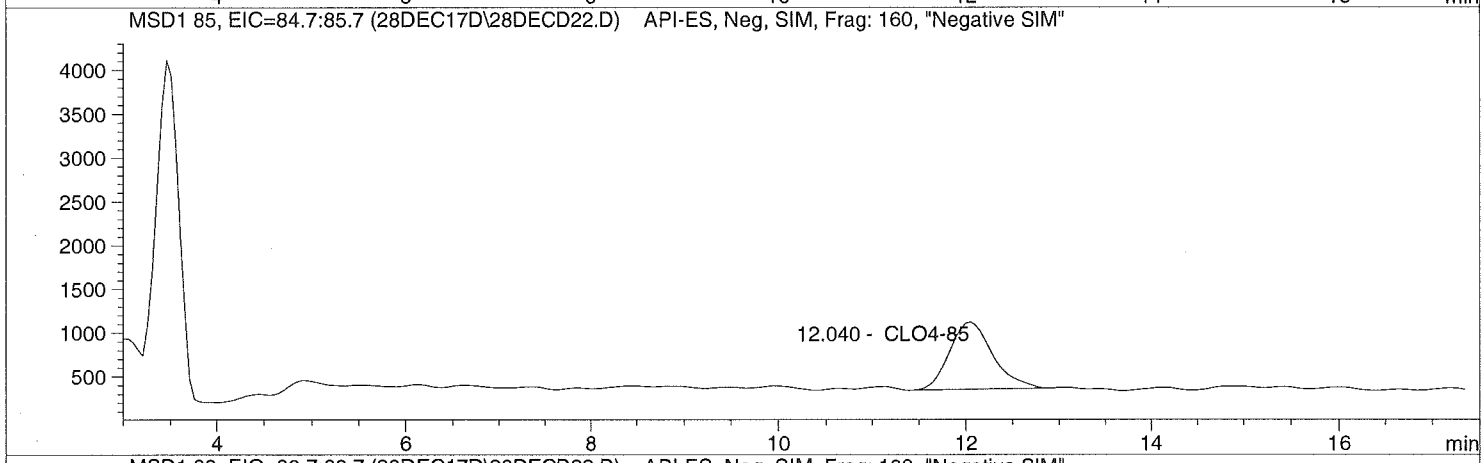
Data file: C:\HPCHEM\1\DATA\28DEC17D\28DECD22.D Sample Name: 1735685005

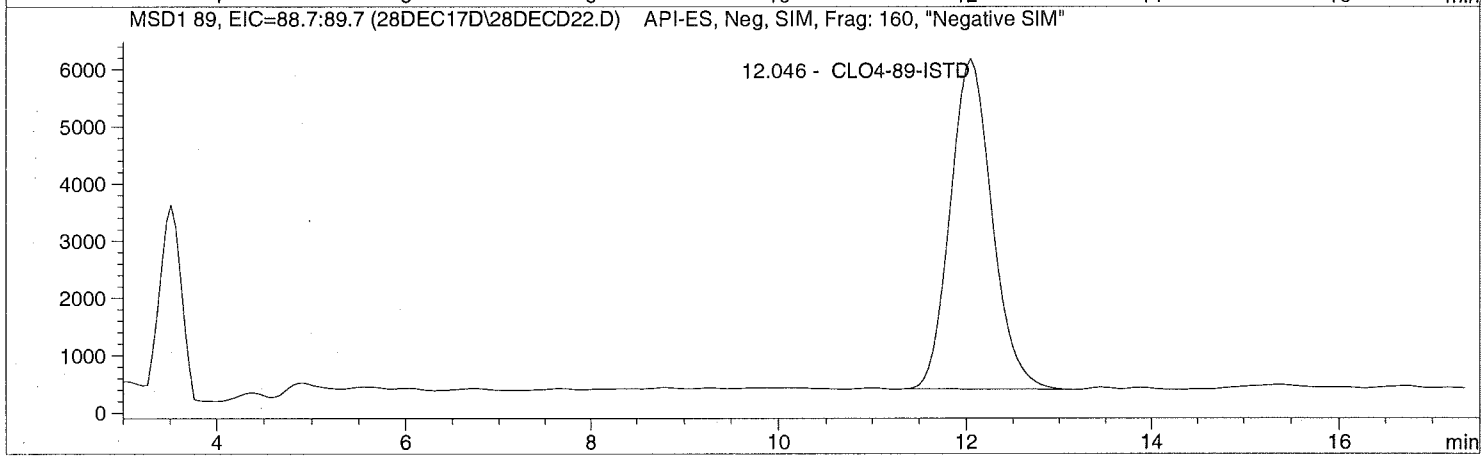
Injection Date:	12/28/2017 17:44:52	Seq Line:	22
Sample Name:	1735685005	Location:	Vial 90
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis







Data file: C:\HPCHEM\1\DATA\28DEC17D\28DECD22.D Sample Name: 1735685005

Injection Date:	12/28/2017 17:44:52	Seq Line:	22
Sample Name:	1735685005	Location:	Vial 90
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis

Sample Information

Sorted By: Signal
Calib. Data Modified: Wed, 20. Dec. 2017,08:01:52 am
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
12.029	PBA	68211.1	1.7773	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.040	PBA	24735.4	1.7747	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.046	PBA	178902.4	5.0000	CLO4-89-ISTD

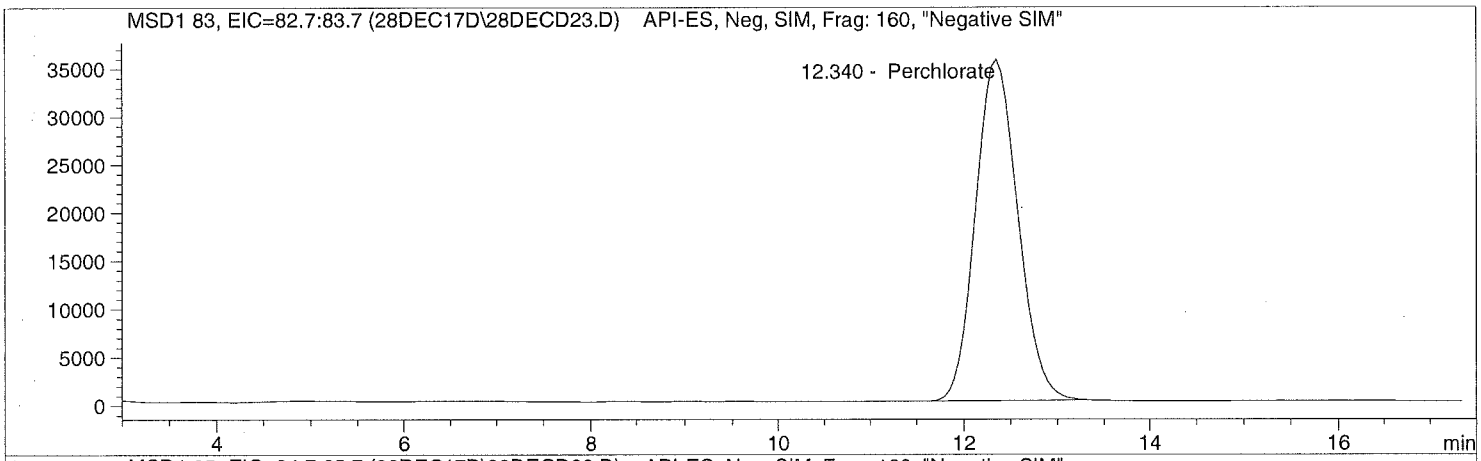
*** End of Report ***

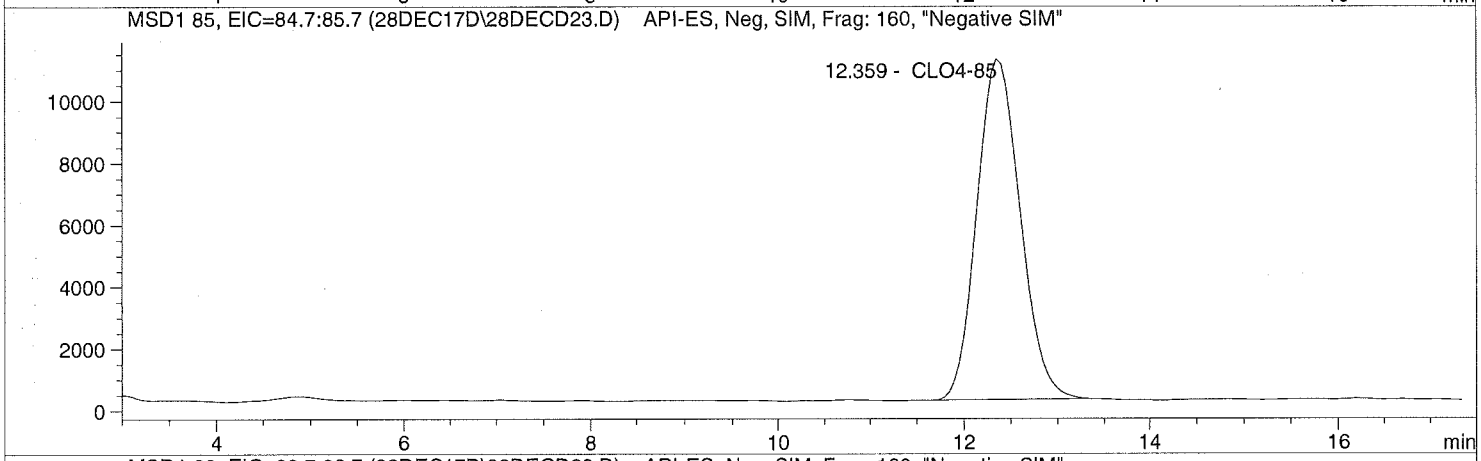
Data file: C:\HPCHEM\1\DATA\28DEC17D\28DECD23.D Sample Name: 581178 CCV@25

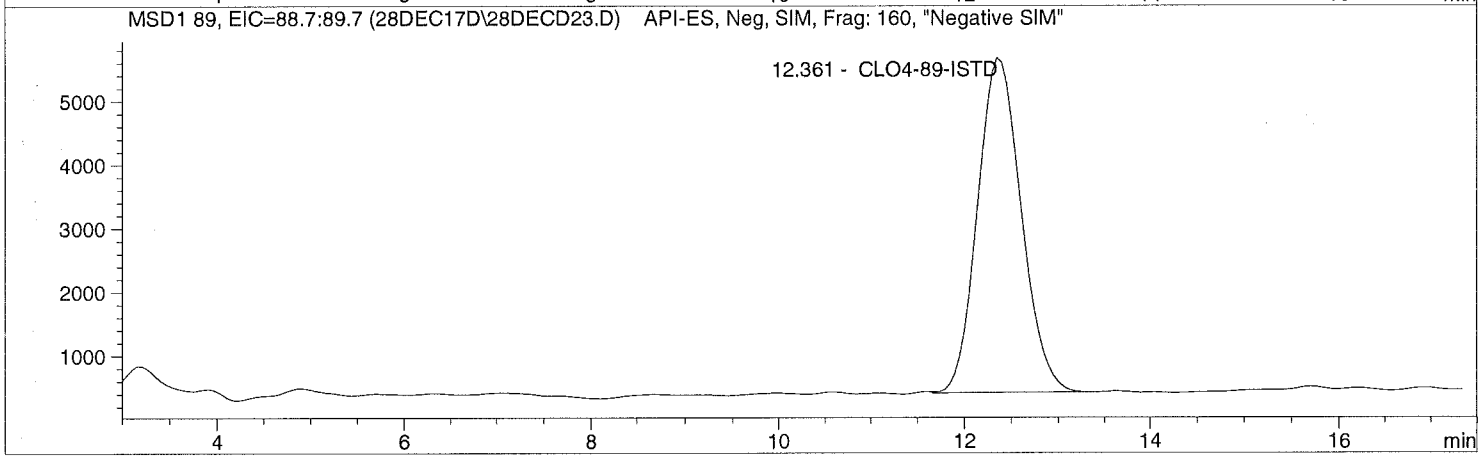
Injection Date:	12/28/2017 18:04:03	Seq Line:	23
Sample Name:	581178 CCV@25	Location:	Vial 71
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis







Data file: C:\HPCHEM\1\DATA\28DEC17D\28DECD23.D Sample Name: 581178 CCV@25

Injection Date:	12/28/2017 18:04:03	Seq Line:	23
Sample Name:	581178 CCV@25	Location:	Vial 71
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Wed, 20. Dec. 2017,08:01:52 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
12.340	PBA	1108499.4	26.5526	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.359	PBA	353709.5	26.8515	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.361	BBA	169851.7	5.0000	CLO4-89-ISTD

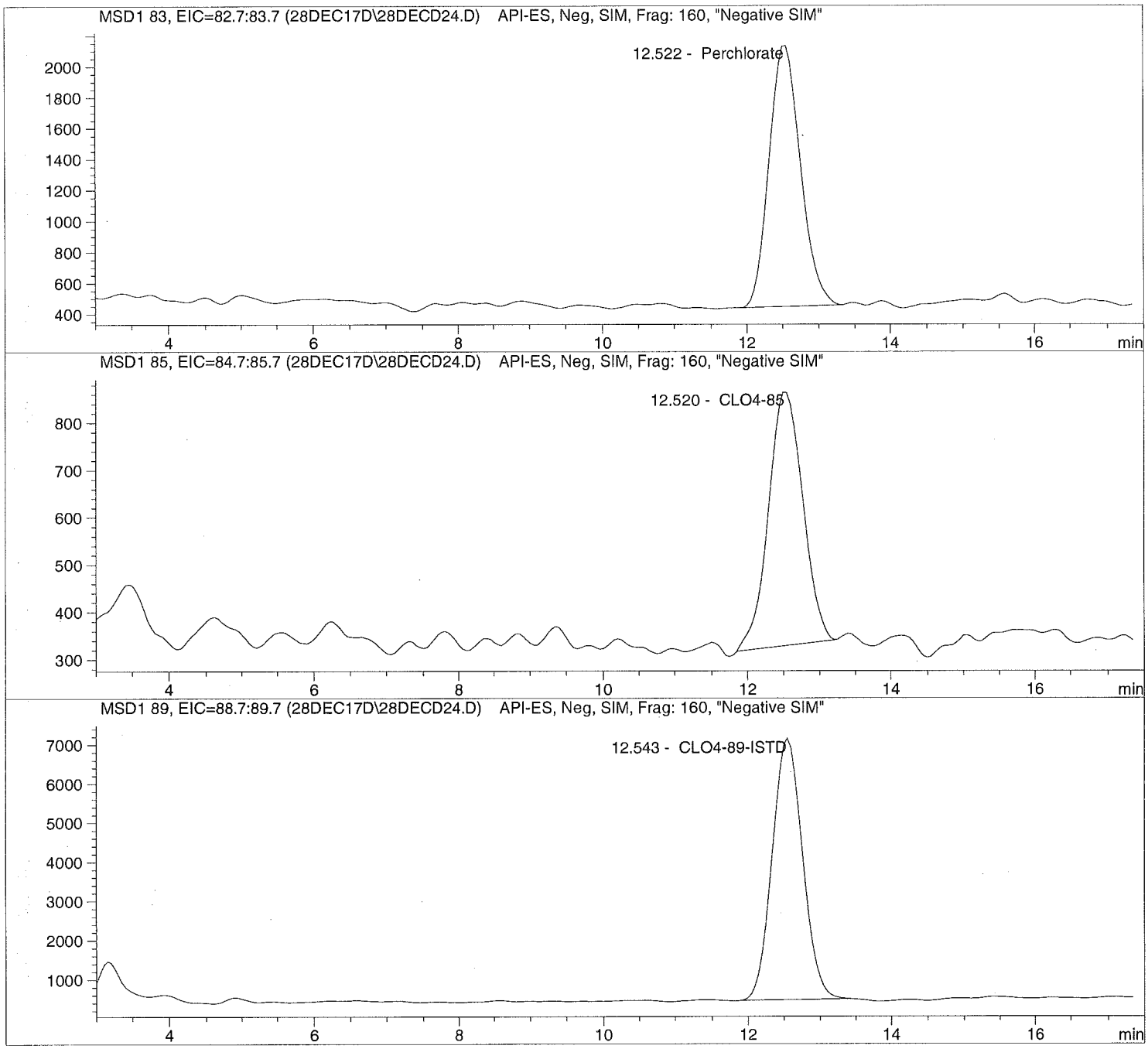
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\28DEC17D\28DECD24.D Sample Name: 581179 LODV@1.

Injection Date:	12/28/2017 18:23:11	Seq Line:	24
Sample Name:	581179 LODV@1.	Location:	Vial 72
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\28DEC17D\28DECD24.D Sample Name: 581179 LODV@1.

Injection Date:	12/28/2017 18:23:11	Seq Line:	24
Sample Name:	581179 LODV@1.	Location:	Vial 72
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Wed, 20. Dec. 2017,08:01:52 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
12.522	PBA	50754.7	1.2255	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.520	PBA	17687.4	1.0982	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.543	PBA	194839.2	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\21AUG17P\21AUG17P.B

Batch Review Method:
C:\HPCHEM\1\METHODS\CLO4-PR3.M

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

#*	Sample	Location	Inj	SampleType	Run	CLO4-85 Area	CLO4-85 RT	CLO4-85 Amount
*	ICAL1@ .05ug/L	Vial 71	1	Control	1	4365.90820	12.226	9.14000e-2
*	ICAL2@ .10ug/L	Vial 72	1	Control	2	9514.03027	12.210	2.01141e-1
*	ICAL3@ .20ug/L	Vial 73	1	Control	3	1.35331e4	12.236	2.88584e-1
*	ICAL4@ 0.5ug/L	Vial 74	1	Control	4	2.76171e4	12.161	5.95393e-1
*	ICAL5@ 1.0ug/L	Vial 75	1	Control	5	4.75097e4	12.226	1.01731
*	ICAL6@ 5.0ug/L	Vial 76	1	Control	6	2.30426e5	12.209	5.01082
*	ICAL7@ 10.ug/L	Vial 77	1	Control	7	4.46570e5	12.212	9.64041
*	ICAL8@ 25.ug/L	Vial 78	1	Control	8	1.19993e6	12.134	25.19412
*	ICAL9@ 50.ug/L	Vial 79	1	Control	9	2.60933e6	12.150	49.96977
*	ICAL Verf@10ug/L	Vial 80	1	Control	10	4.49703e5	12.232	9.41499

#*	Sample	Location	Inj	SampleType	Run	Perchlorate Area	Perchlorate RT	Perchlorate Amount
*	ICAL1@ .05ug/L	Vial 71	1	Control	1	8930.38184	12.237	6.88583e-2
*	ICAL2@ .10ug/L	Vial 72	1	Control	2	1.15052e4	12.248	8.73938e-2
*	ICAL3@ .20ug/L	Vial 73	1	Control	3	2.62111e4	12.238	1.91166e-1
*	ICAL4@ 0.5ug/L	Vial 74	1	Control	4	6.28912e4	12.159	4.52946e-1
*	ICAL5@ 1.0ug/L	Vial 75	1	Control	5	1.30706e5	12.231	9.25591e-1
*	ICAL6@ 5.0ug/L	Vial 76	1	Control	6	6.80205e5	12.200	4.80762
*	ICAL7@ 10.ug/L	Vial 77	1	Control	7	1.41057e6	12.196	9.74126
*	ICAL8@ 25.ug/L	Vial 78	1	Control	8	4.00474e6	12.118	25.78802
*	ICAL9@ 50.ug/L	Vial 79	1	Control	9	8.85683e6	12.137	49.73658
*	ICAL Verf@10ug/L	Vial 80	1	Control	10	1.36065e6	12.218	9.14332

#*	Sample	Location	Inj	SampleType	Run	CLO4-89-ISTD Area	CLO4-89-ISTD RT	CLO4-89-ISTD Amount
*	ICAL1@ .05ug/L	Vial 71	1	Control	1	6.73943e5	12.272	5.00000
*	ICAL2@ .10ug/L	Vial 72	1	Control	2	6.67016e5	12.250	5.00000
*	ICAL3@ .20ug/L	Vial 73	1	Control	3	6.61031e5	12.267	5.00000
*	ICAL4@ 0.5ug/L	Vial 74	1	Control	4	6.52904e5	12.190	5.00000
*	ICAL5@ 1.0ug/L	Vial 75	1	Control	5	6.56071e5	12.242	5.00000
*	ICAL6@ 5.0ug/L	Vial 76	1	Control	6	6.34251e5	12.221	5.00000
*	ICAL7@ 10.ug/L	Vial 77	1	Control	7	6.25689e5	12.216	5.00000
*	ICAL8@ 25.ug/L	Vial 78	1	Control	8	6.01523e5	12.141	5.00000
*	ICAL9@ 50.ug/L	Vial 79	1	Control	9	5.97661e5	12.156	5.00000
*	ICAL Verf@10ug/L	Vial 80	1	Control	10	6.45815e5	12.234	5.00000

*** End of Report ***

Method C:\HPCHEM\1\METHODS\CLO4-PR3.M

Calibration Table

Perchlorate

Calib. Data Modified : 8/21/2017 2:55:52 PM

Calculate : Internal Standard
Based on : Peak Area

Rel. Reference Window : 20.000 %
Abs. Reference Window : 0.000 min
Rel. Non-ref. Window : 20.000 %
Abs. Non-ref. Window : 0.000 min
Use Multiplier & Dilution Factor with ISTDs
Uncalibrated Peaks : not reported
Partial Calibration : No recalibration if peaks missing

Curve Type : Quadratic (some peaks differ, see below)
Origin : Ignored (some peaks differ, see below)
Weight : Linear (Amnt) (some peaks differ, see below)

Recalibration Settings:
Average Response : Average all calibrations
Average Retention Time: Floating Average New 75%

Calibration Report Options :
Printout of recalibrations within a sequence:
Calibration Table after Recalibration
Normal Report after Recalibration
If the sequence is done with bracketing:
Results of first cycle (ending previous bracket)

Default Sample ISTD Information (if not set in sample table):

ISTD #	ISTD Amount	Name
1	5.00000	CLO4-89-ISTD

Signal 1: MSD1 83, EIC=82.7:83.7
Signal 2: MSD1 85, EIC=84.7:85.7
Signal 3: MSD1 89, EIC=88.7:89.7

RetTime [min]	Sig	Lvl	Amount	Area	Amt/Area	Ref	Grp	Name
12.226	2	1	5.00000e-2	4365.90820	1.14524e-5		1	CLO4-85
		2	1.00000e-1	9514.03027	1.05108e-5			
		3	2.00000e-1	1.35331e4	1.47786e-5			
		4	5.00000e-1	2.76171e4	1.81047e-5			
		5	1.00000	4.75097e4	2.10483e-5			
		6	5.00000	2.30426e5	2.16990e-5			
		7	10.00000	4.46570e5	2.23929e-5			
		8	25.00000	1.19993e6	2.08345e-5			
		9	50.00000	2.60933e6	1.91620e-5			
12.237	1	1	5.00000e-2	8930.38184	5.59886e-6		1	Perchlorate
		2	1.00000e-1	1.15052e4	8.69173e-6			
		3	2.00000e-1	2.62111e4	7.63037e-6			
		4	5.00000e-1	6.28912e4	7.95024e-6			
		5	1.00000	1.30706e5	7.65074e-6			
		6	5.00000	6.80205e5	7.35073e-6			
		7	10.00000	1.41057e6	7.08933e-6			
		8	25.00000	4.00474e6	6.24259e-6			
		9	50.00000	8.85683e6	5.64536e-6			
12.272	3	1	5.00000	6.73943e5	7.41903e-6	+I1		CLO4-89-ISTD
		2	5.00000	6.67016e5	7.49607e-6			

Method C:\HPCHEM\1\METHODS\CLO4-PR3.M

RetTime [min]	Sig	Lvl	Amount	Area	Amt/Area	Ref	Grp	Name
		3	5.00000	6.61031e5	7.56394e-6			
		4	5.00000	6.52904e5	7.65809e-6			
		5	5.00000	6.56071e5	7.62113e-6			
		6	5.00000	6.34251e5	7.88331e-6			
		7	5.00000	6.25689e5	7.99119e-6			
		8	5.00000	6.01523e5	8.31223e-6			
		9	5.00000	5.97661e5	8.36594e-6			

More compound-specific settings:

Compound: CLO4-85
- Time Window : From 10.676 min To 13.166 min
- Curve Type : Quadratic
- Origin : Forced
- Calibration Level Weights:/
  - Level 1 : 1
  - Level 2 : 1
  - Level 3 : 1
  - Level 4 : 1
  - Level 5 : 1
  - Level 6 : 1
  - Level 7 : 1
  - Level 8 : 1
  - Level 9 : 1

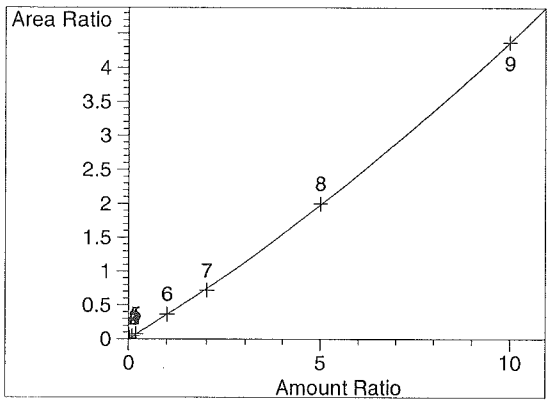
Compound: Perchlorate
- Time Window : From 10.737 min To 13.198 min
- Curve Type : Quadratic
- Origin : Ignored
- Calibration Level Weights:/
  - Level 1 : 1
  - Level 2 : 0.5
  - Level 3 : 0.25
  - Level 4 : 0.1
  - Level 5 : 0.05
  - Level 6 : 0.01
  - Level 7 : 0.005
  - Level 8 : 0.002
  - Level 9 : 0.001

Compound: CLO4-89-ISTD
- Time Window : From 10.704 min To 13.272 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
  - Level 8 : 1
  - Level 9 : 1

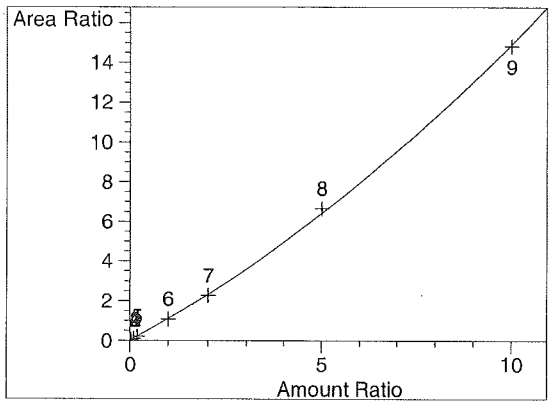
Peak Sum Table

No Entries in table

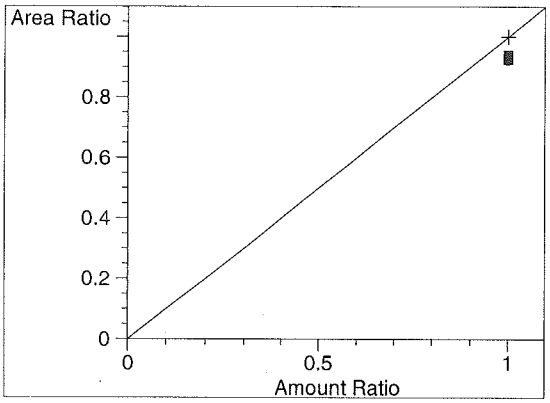
Calibration Curves



CLO4-85 at exp. RT: 12.226
MSD1 85, EIC=84.7:85.7
Correlation: 0.99997
Residual Std. Dev.: 0.01235
Formula: $y = ax^2 + bx$
a: 8.26698e-3
b: 3.54234e-1
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
Level 8 : 1
Level 9 : 1



Perchlorate at exp. RT: 12.237
MSD1 83, EIC=82.7:83.7
Correlation: 0.99970
Residual Std. Dev.: 0.10168
Formula: $y = ax^2 + bx + c$
a: 4.14991e-2
b: 1.07712
c: -1.59065e-3
x: Amount Ratio
y: Area Ratio
Calibration Level Weights:
Level 1 : 1
Level 2 : 0.5
Level 3 : 0.25
Level 4 : 0.1
Level 5 : 0.05
Level 6 : 0.01
Level 7 : 0.005
Level 8 : 0.002
Level 9 : 0.001



CLO4-89-ISTD at exp. RT: 12.272
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
Level 8 : 1
Level 9 : 1

Sequence Table:

Method and Injection Info Part:

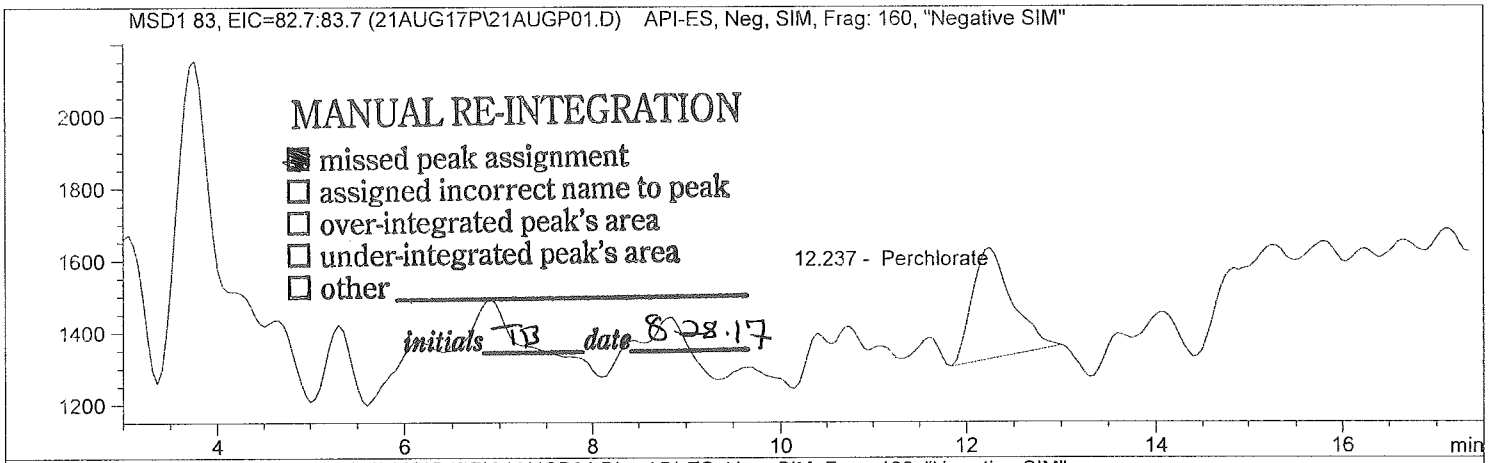
Line	Location	SampleName	Method	Inj	SampleType	InjVolume	DataFile
1	Vial 71	ICAL1@ .05ug/L	CLO4-AQN	1	Ctrl Samp		
2	Vial 72	ICAL2@ .10ug/L	CLO4-AQN	1	Ctrl Samp		
3	Vial 73	ICAL3@ .20ug/L	CLO4-AQN	1	Ctrl Samp		
4	Vial 74	ICAL4@ 0.5ug/L	CLO4-AQN	1	Ctrl Samp		
5	Vial 75	ICAL5@ 1.0ug/L	CLO4-AQN	1	Ctrl Samp		
6	Vial 76	ICAL6@ 5.0ug/L	CLO4-AQN	1	Ctrl Samp		
7	Vial 77	ICAL7@ 10.ug/L	CLO4-AQN	1	Ctrl Samp		
8	Vial 78	ICAL8@ 25.ug/L	CLO4-AQN	1	Ctrl Samp		
9	Vial 79	ICAL9@ 50.ug/L	CLO4-AQN	1	Ctrl Samp		
10	Vial 80	ICAL Verf@10ug/L	CLO4-AQN	1	Ctrl Samp		

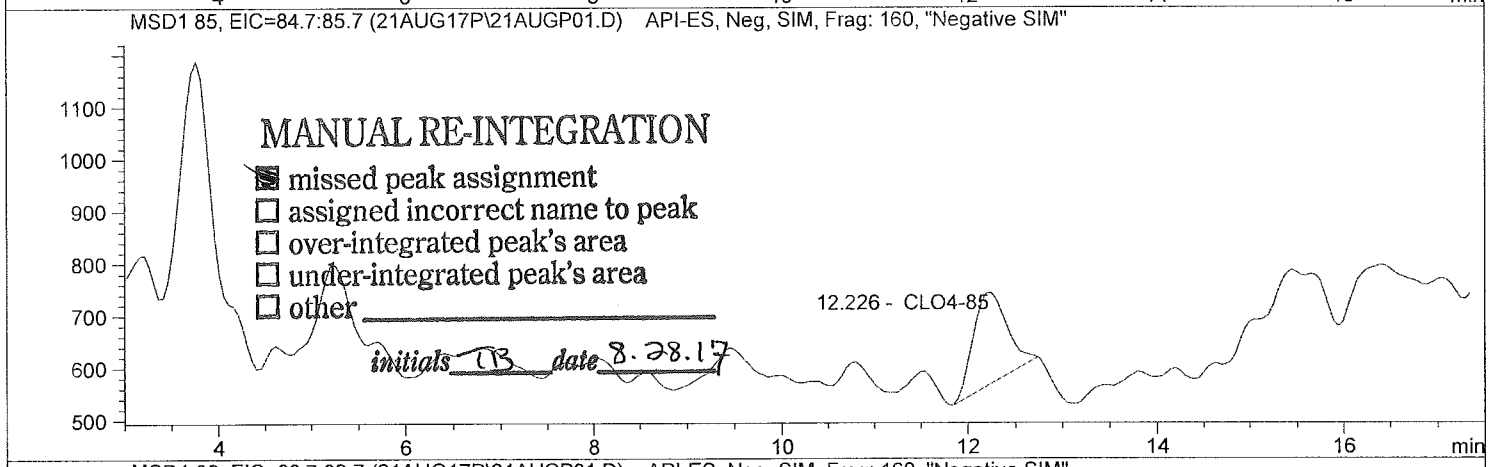
Data file: C:\HPCHEM\1\DATA\21AUG17P\21AUGP01.D Sample Name: ICAL1@ .05ug/L

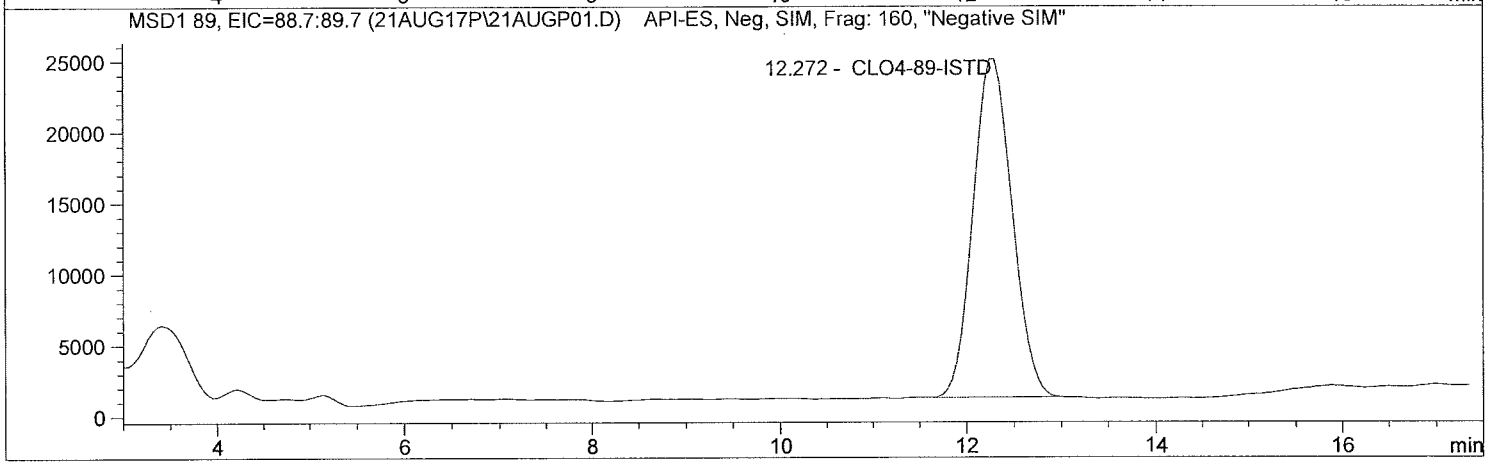
Injection Date:	8/21/2017 09:42:32	Seq Line:	1
Sample Name:	ICAL1@ .05ug/L	Location:	Vial 71
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-PR3.M
Last Changed: 8/21/2017 14:55:53

Perchlorate analysis







Data file: C:\HPCHEM\1\DATA\21AUG17P\21AUGP01.D Sample Name: ICAL1@ .05ug/L

Injection Date:	8/21/2017 09:42:32	Seq Line:	1
Sample Name:	ICAL1@ .05ug/L	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-PR3.M
Last Changed: 8/21/2017 14:55:53

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 21. Aug. 2017,02:55:52 pm
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	0.050

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.237	MM	8930.4	0.0689	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.226	MM	4365.9	0.0914	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.272	BBA	673942.9	5.0000	CLO4-89-ISTD

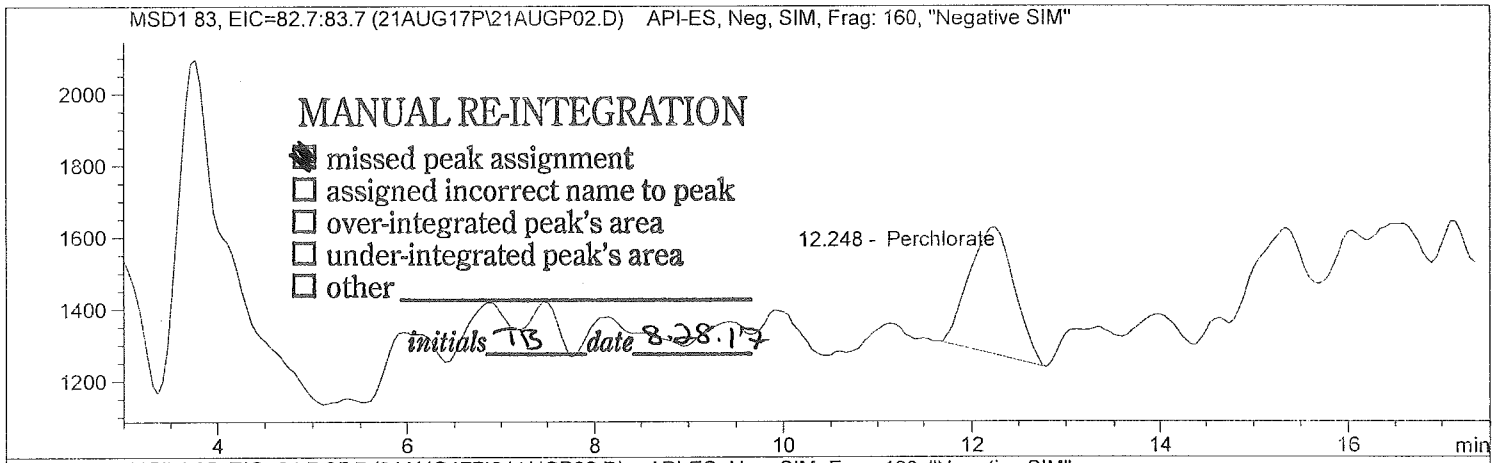
*** End of Report ***

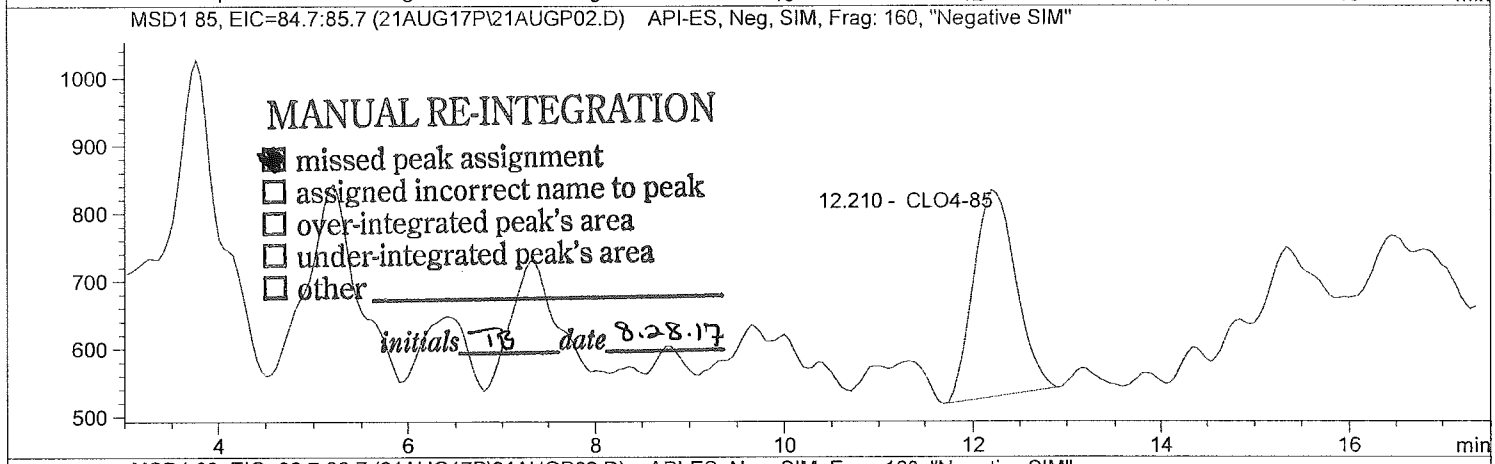
Data File: C:\HPCHEM\1\DATA\21AUG17P\21AUGP02.D Sample Name: ICAL2@ .10ug/L

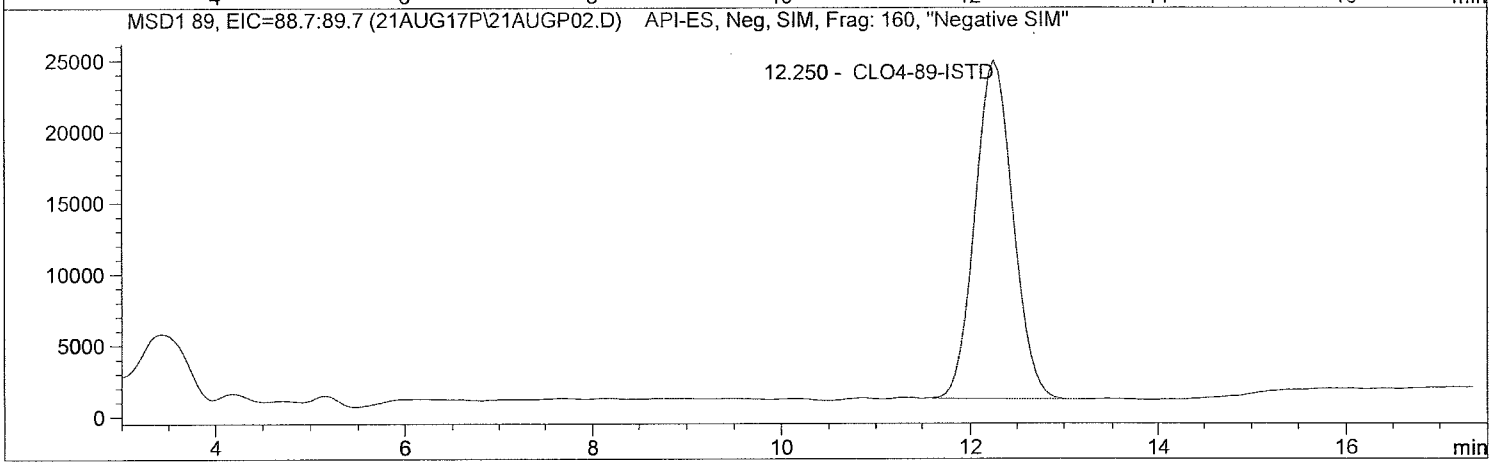
Injection Date:	8/21/2017 10:01:47	Seq Line:	2
Sample Name:	ICAL2@ .10ug/L	Location:	Vial 72
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-PR3.M
Last Changed: 8/21/2017 14:55:53

Perchlorate analysis







Data file: C:\HPCHEM\1\DATA\21AUG17P\21AUGP02.D Sample Name: ICAL2@ .10ug/L

Injection Date:	8/21/2017 10:01:47	Seq Line:	2
Sample Name:	ICAL2@ .10ug/L	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-PR3.M
Last Changed:	8/21/2017 14:55:53

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 21. Aug. 2017,02:55:52 pm
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	0.100

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.248	MM	11505.2	0.0874	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.210	MM	9514.0	0.2011	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.250	BBA	667016.3	5.0000	CLO4-89-ISTD

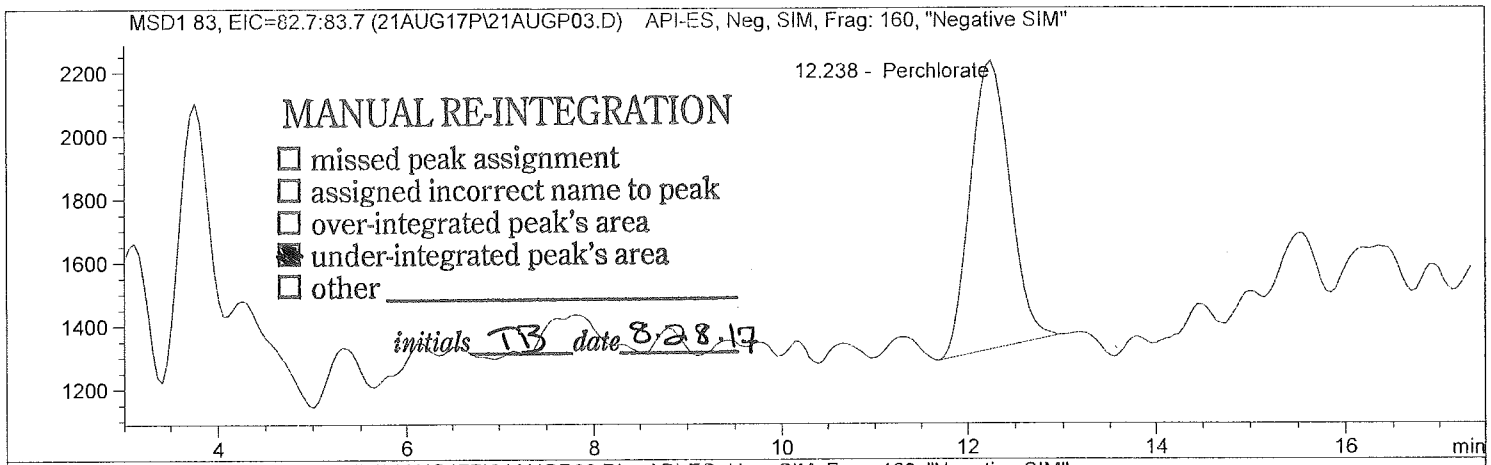
*** End of Report ***

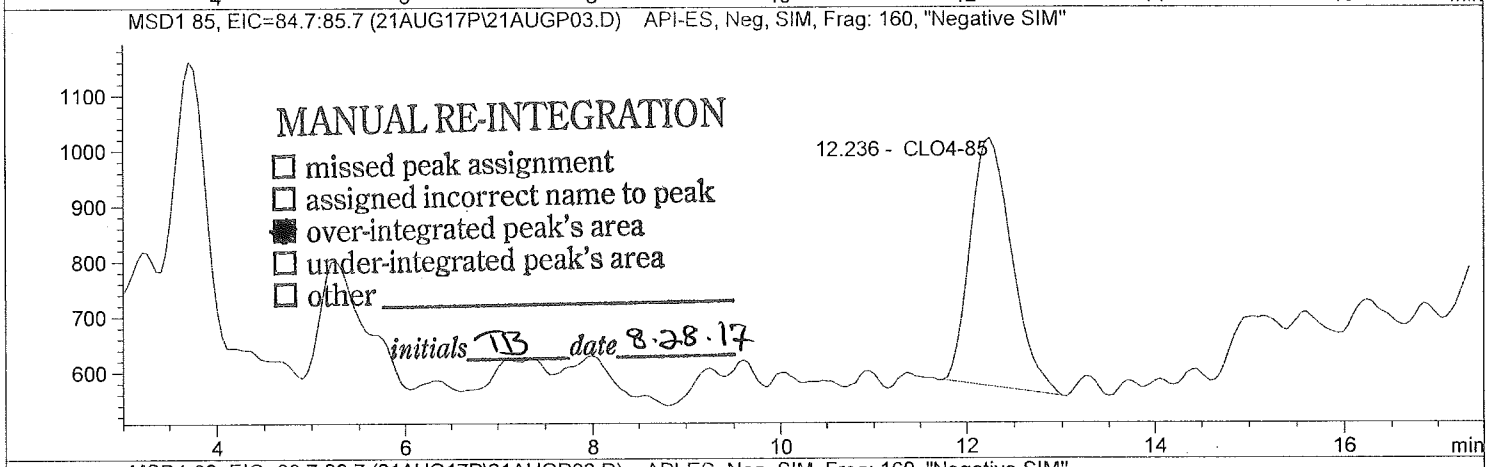
Data file: C:\HPCHEM\1\DATA\21AUG17P\21AUGP03.D Sample Name: ICAL3@ .20ug/L

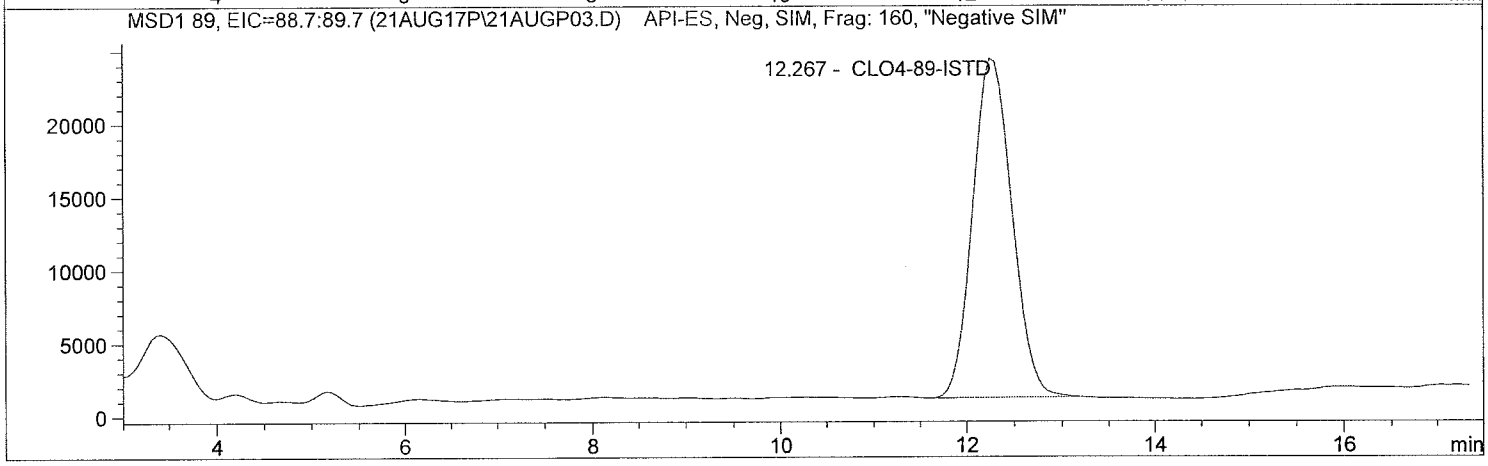
Injection Date:	8/21/2017 10:21:02	Seq Line:	3
Sample Name:	ICAL3@ .20ug/L	Location:	Vial 73
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-PR3.M
Last Changed: 8/21/2017 14:55:53

Perchlorate analysis







Data file: C:\HPCHEM\1\DATA\21AUG17P\21AUGP03.D Sample Name: ICAL3@ .20ug/L

Injection Date:	8/21/2017 10:21:02	Seq Line:	3
Sample Name:	ICAL3@ .20ug/L	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-PR3.M
Last Changed: 8/21/2017 14:55:53

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 21. Aug. 2017,02:55:52 pm
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	0.200

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.238	MM	26211.1	0.1912	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.236	MM	13533.1	0.2886	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.267	PBA	661030.8	5.0000	CLO4-89-ISTD

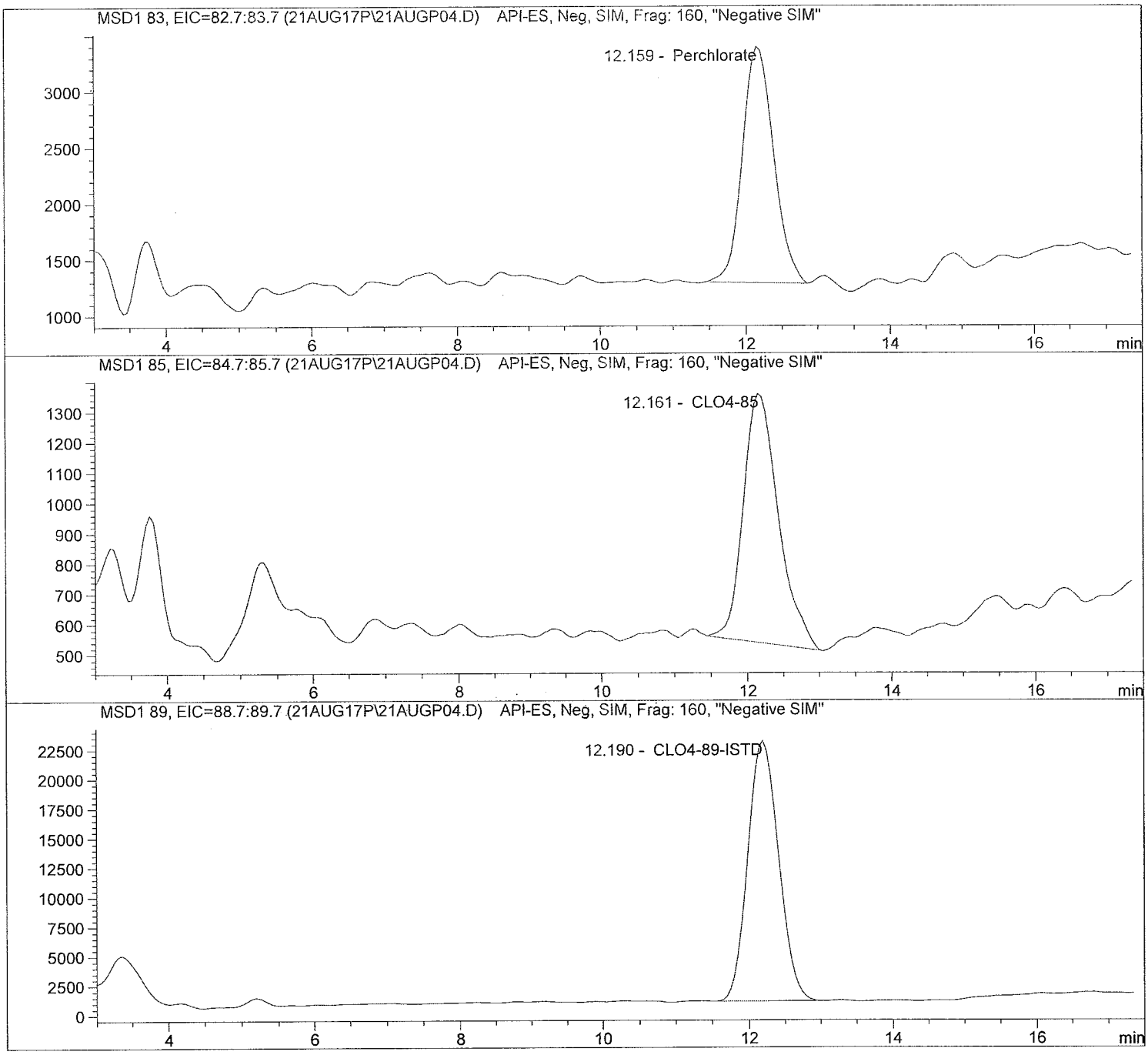
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\21AUG17P\21AUGP04.D Sample Name: ICAL4@ 0.5ug/L

Injection Date:	8/21/2017 10:40:22	Seq Line:	4
Sample Name:	ICAL4@ 0.5ug/L	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-PR3.M
Last Changed: 8/21/2017 14:55:53

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\21AUG17P\21AUGP04.D Sample Name: ICAL4@ 0.5ug/L

Injection Date:	8/21/2017 10:40:22	Seq Line:	4
Sample Name:	ICAL4@ 0.5ug/L	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-PR3.M
Last Changed: 8/21/2017 14:55:53

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 21. Aug. 2017,02:55:52 pm
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	0.500

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.159	BBA	62891.2	0.4529	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.161	PBA	27617.1	0.5954	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.190	PBA	652904.1	5.0000	CLO4-89-ISTD

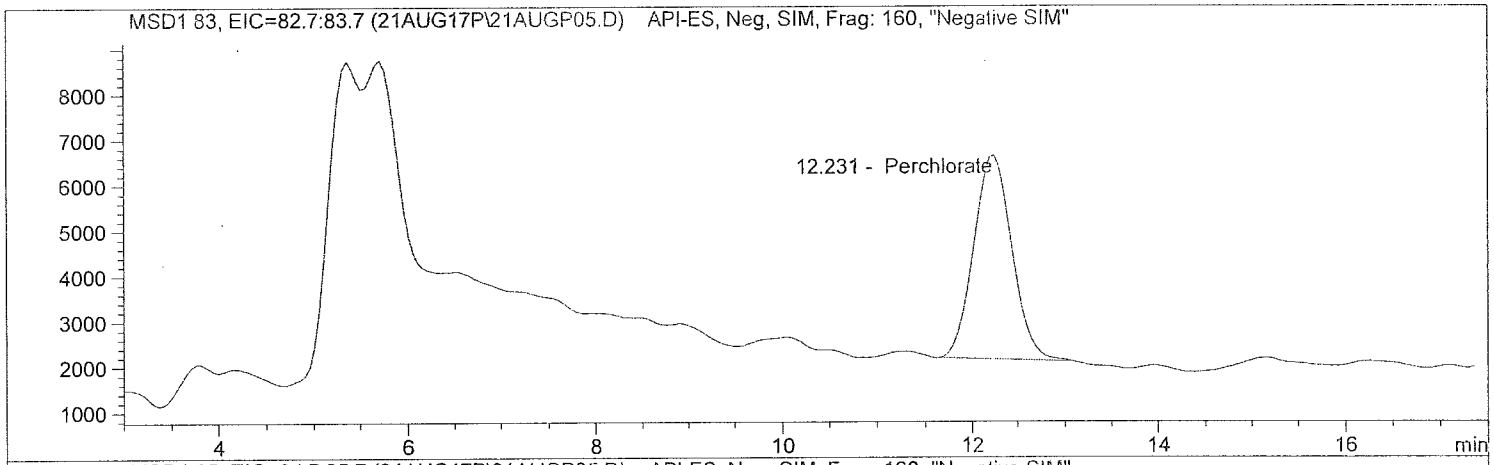
*** End of Report ***

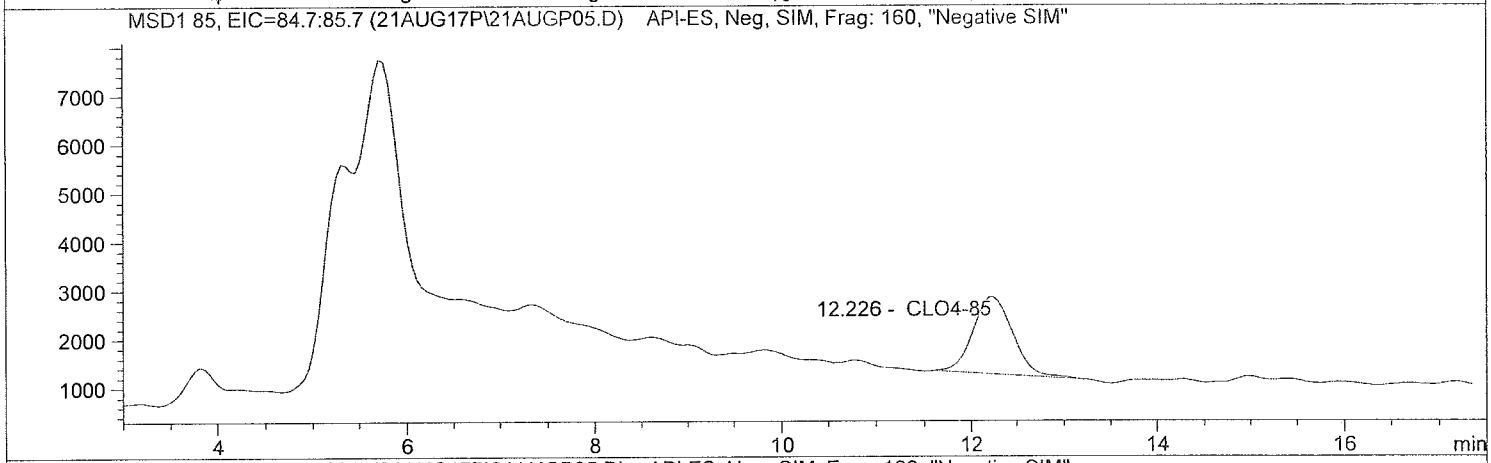
Data file: C:\HPCHEM\1\DATA\21AUG17P\21AUGP05.D Sample Name: ICAL5@ 1.0ug/L

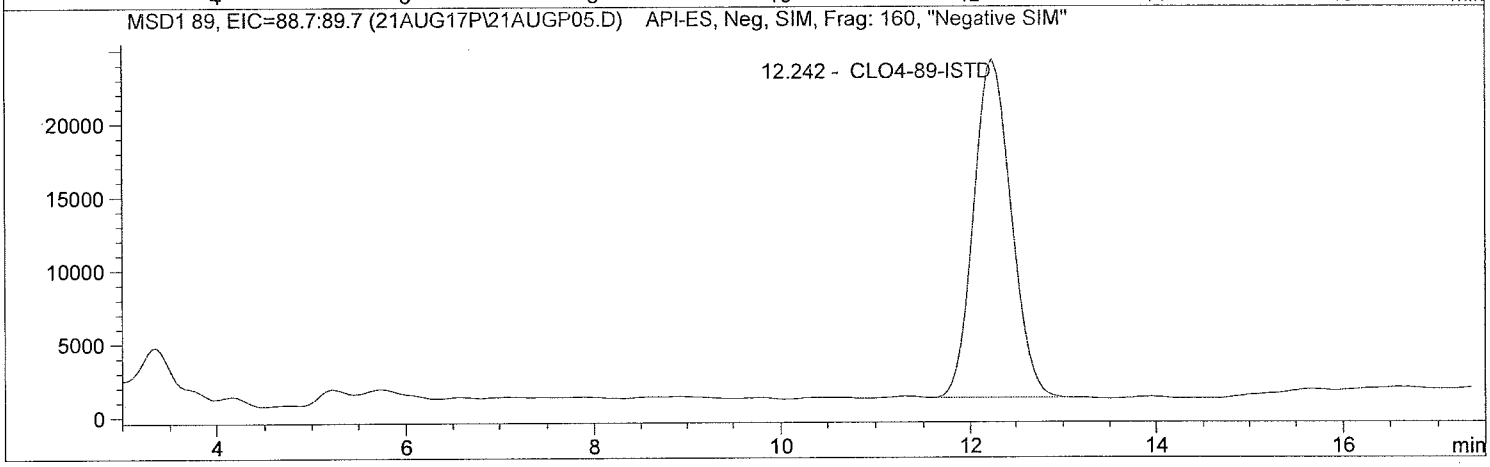
Injection Date:	8/21/2017 10:59:36	Seq Line:	5
Sample Name:	ICAL5@ 1.0ug/L	Location:	Vial 75
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-PR3.M
Last Changed: 8/21/2017 14:55:53

Perchlorate analysis







Data file: C:\HPCHEM\1\DATA\21AUG17P\21AUGP05.D Sample Name: ICAL5@ 1.0ug/L

Injection Date:	8/21/2017 10:59:36	Seq Line:	5
Sample Name:	ICAL5@ 1.0ug/L	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-PR3.M
Last Changed: 8/21/2017 14:55:53

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 21. Aug. 2017,02:55:52 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
12.231	PBA	130706.3	0.9256	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.226	PBA	47509.7	1.0173	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.242	PBA	656070.7	5.0000	CLO4-89-ISTD

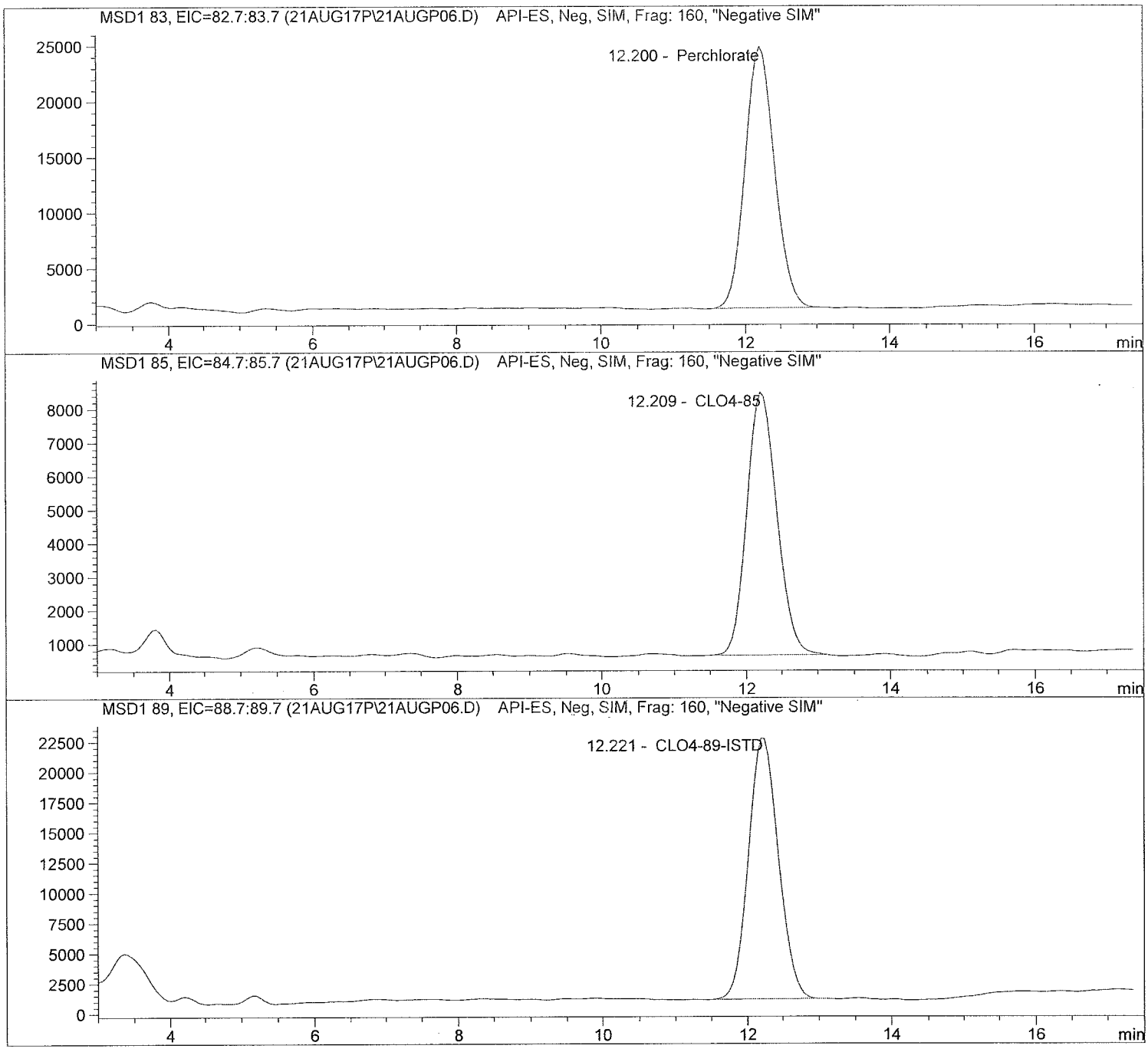
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\21AUG17P\21AUGP06.D Sample Name: ICAL6@ 5.0ug/L

Injection Date:	8/21/2017 11:18:53	Seq Line:	6
Sample Name:	ICAL6@ 5.0ug/L	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-PR3.M
Last Changed: 8/21/2017 14:55:53

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\21AUG17P\21AUGP06.D Sample Name: ICAL6@ 5.0ug/L

Injection Date:	8/21/2017 11:18:53	Seq Line:	6
Sample Name:	ICAL6@ 5.0ug/L	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-PR3.M
Last Changed: 8/21/2017 14:55:53

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 21. Aug. 2017,02:55:52 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
12.200	PBA	680204.6	4.8076	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.209	BBA	230425.8	5.0108	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.221	BBA	634251.4	5.0000	CLO4-89-ISTD

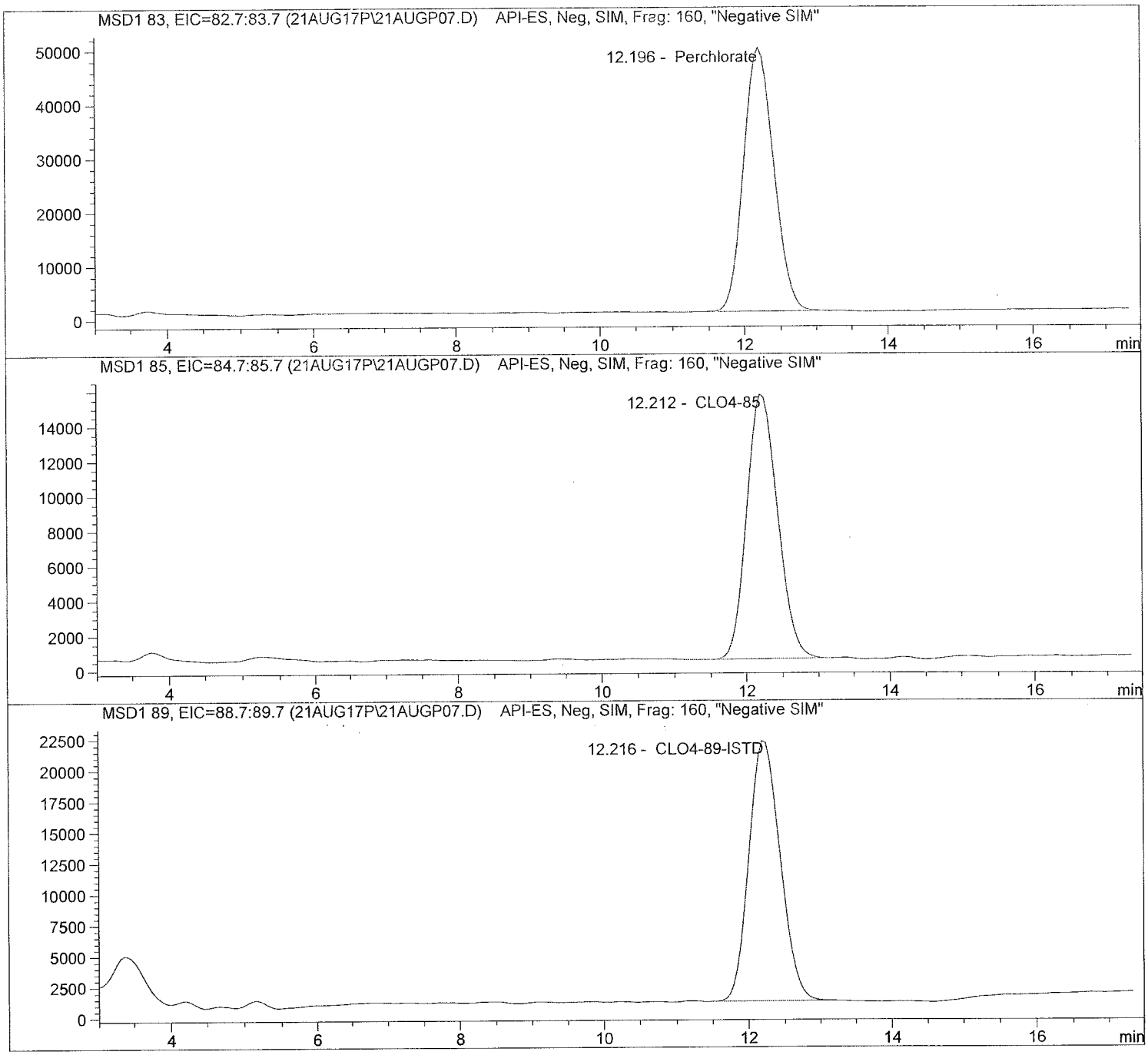
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\21AUG17P\21AUGP07.D Sample Name: ICAL7@ 10.ug/L

Injection Date:	8/21/2017 11:38:12	Seq Line:	7
Sample Name:	ICAL7@ 10.ug/L	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-PR3.M
Last Changed: 8/21/2017 14:55:53

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\21AUG17P\21AUGP07.D Sample Name: ICAL7@ 10.ug/L

Injection Date:	8/21/2017 11:38:12	Seq Line:	7
Sample Name:	ICAL7@ 10.ug/L	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-PR3.M
Last Changed: 8/21/2017 14:55:53

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 21. Aug. 2017,02:55:52 pm
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
12.196	BBA	1410569.9	9.7413	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.212	PBA	446569.7	9.6404	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.216	PBA	625689.1	5.0000	CLO4-89-ISTD

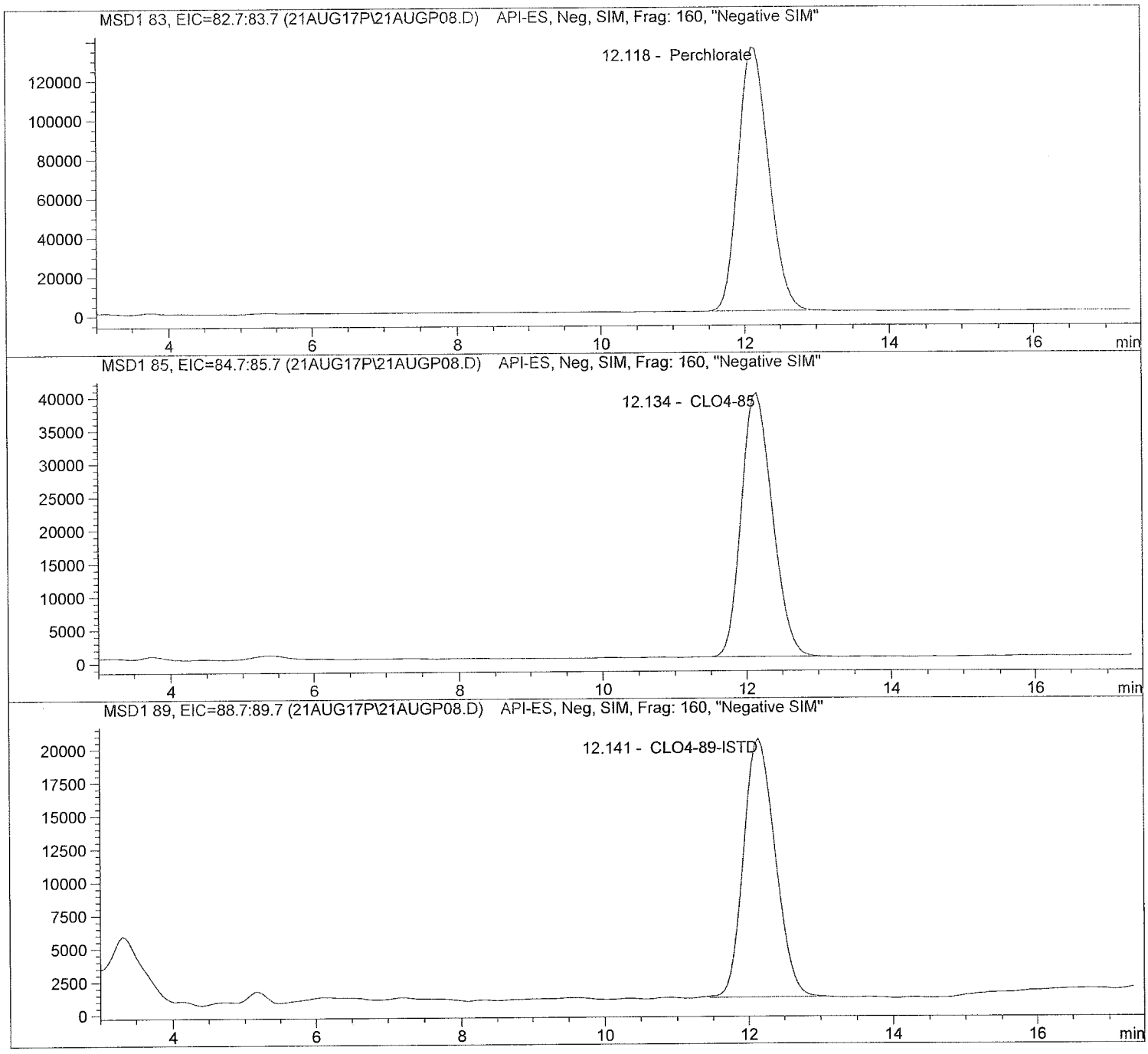
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\21AUG17P\21AUGP08.D Sample Name: ICAL8@ 25.ug/L

Injection Date:	8/21/2017 13:12:50	Seq Line:	8
Sample Name:	ICAL8@ 25.ug/L	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-PR3.M
Last Changed: 8/21/2017 14:55:53

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\21AUG17P\21AUGP08.D Sample Name: ICAL8@ 25.ug/L

Injection Date:	8/21/2017 13:12:50	Seq Line:	8
Sample Name:	ICAL8@ 25.ug/L	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-PR3.M
Last Changed:	8/21/2017 14:55:53

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 21. Aug. 2017,02:55:52 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
12.118	BBA	4004745.0	25.7880	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.134	BBA	1199930.0	25.1941	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.141	BBA	601523.1	5.0000	CLO4-89-ISTD

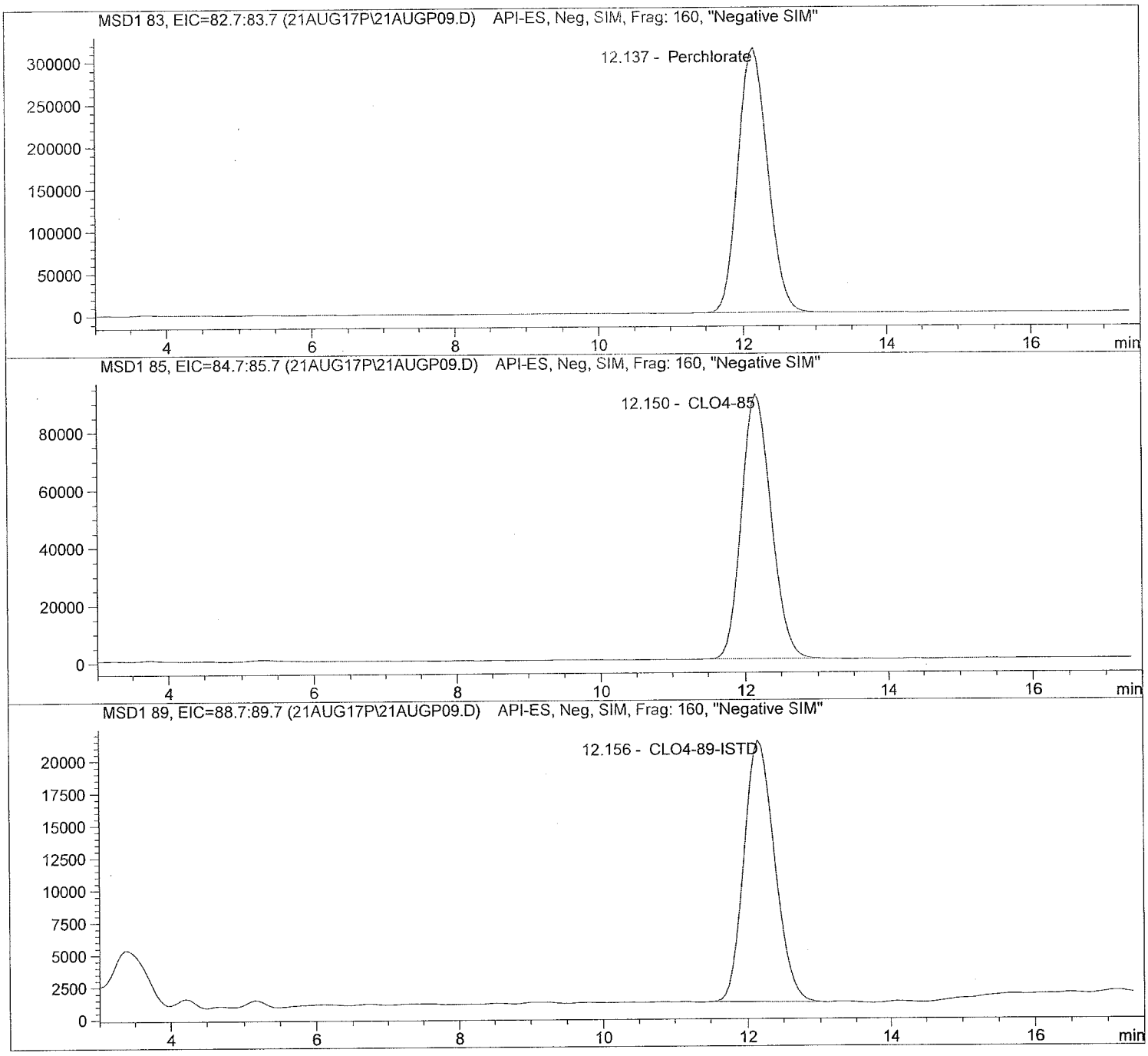
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\21AUG17P\21AUGP09.D Sample Name: ICAL9@ 50.ug/L

Injection Date:	8/21/2017 13:32:10	Seq Line:	9
Sample Name:	ICAL9@ 50.ug/L	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-PR3.M
Last Changed: 8/21/2017 14:55:53

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\21AUG17P\21AUGP09.D Sample Name: ICAL9@ 50.ug/L

Injection Date:	8/21/2017 13:32:10	Seq Line:	9
Sample Name:	ICAL9@ 50.ug/L	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-PR3.M
Last Changed: 8/21/2017 14:55:53

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 21. Aug. 2017,02:55:52 pm
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
12.137	PBA	8856831.0	49.7366	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.150	BBA	2609327.3	49.9698	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.156	BBA	597661.2	5.0000	CLO4-89-ISTD

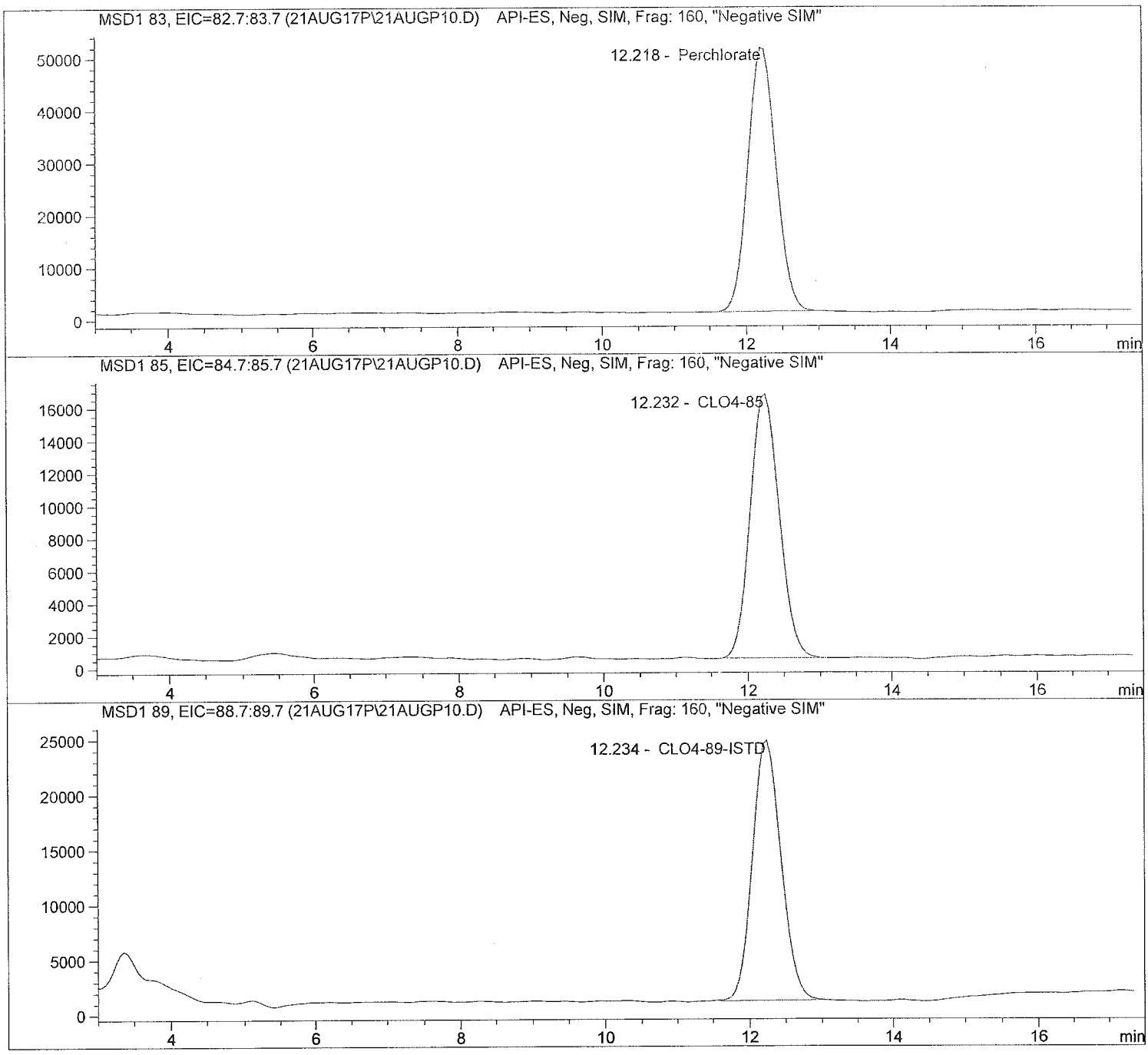
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\21AUG17P\21AUGP10.D Sample Name: ICAL Verf@10ug/L

Injection Date:	8/21/2017 13:51:27	Seq Line:	10
Sample Name:	ICAL Verf@10ug/L	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-PR3.M
Last Changed: 8/21/2017 14:55:53

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\21AUG17P\21AUGP10.D Sample Name: ICAL Verf@10ug/L

Injection Date:	8/21/2017 13:51:27	Seq Line:	10
Sample Name:	ICAL Verf@10ug/L	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-PR3.M
Last Changed: 8/21/2017 14:55:53

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 21. Aug. 2017,02:55:52 pm
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
12.218	BBA	1360649.7	9.1433	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.232	PBA	449703.0	9.4150	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.234	BBA	645815.0	5.0000	CLO4-89-ISTD

*** End of Report ***

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

Raw Data

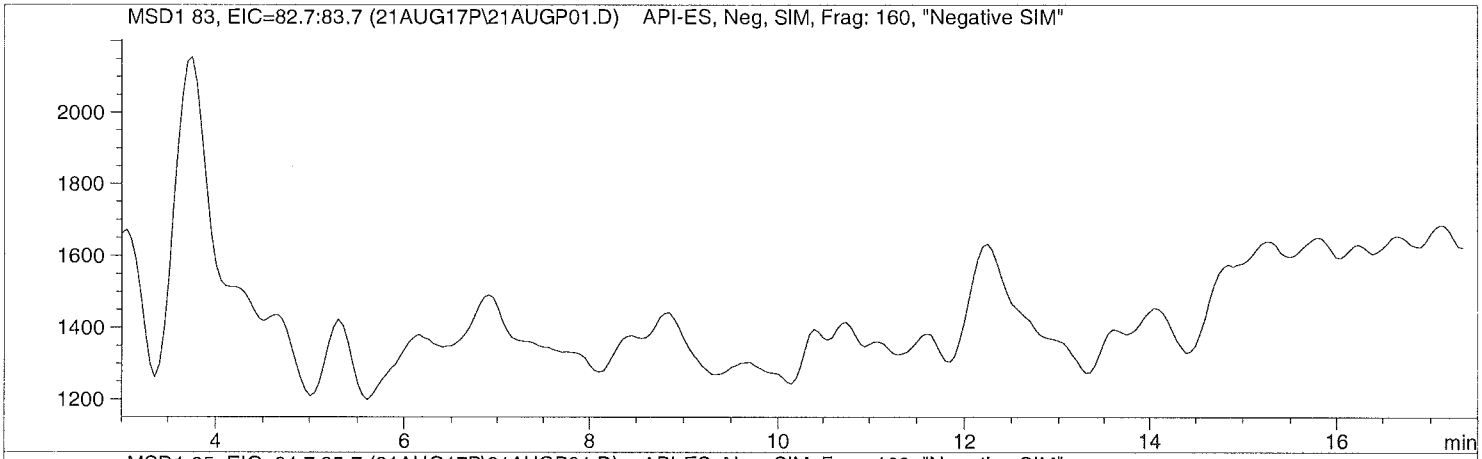
Unmodified

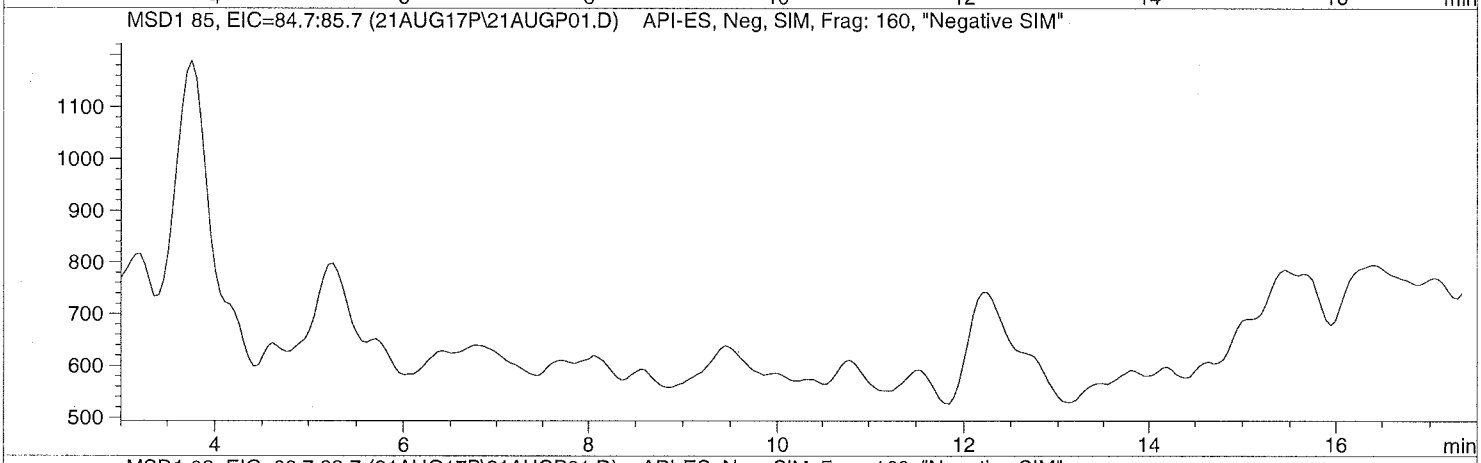
Data file: C:\HPCHEM\1\DATA\21AUG17P\21AUGP01.D Sample Name: ICAL1@ .05ug/L

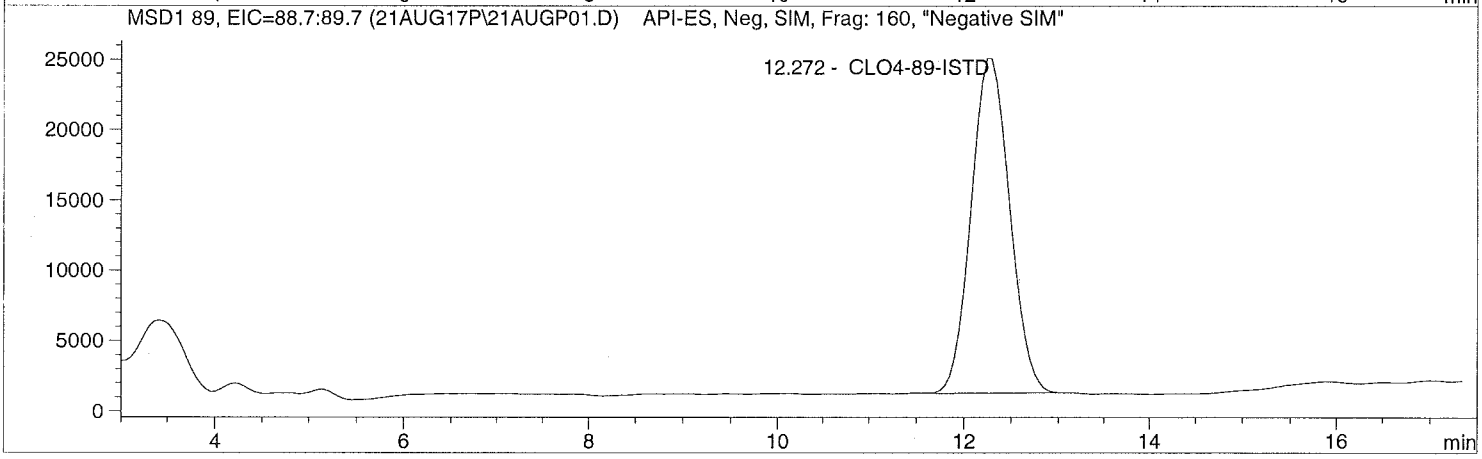
Injection Date:	8/21/2017 09:42:32	Seq Line:	1
Sample Name:	ICAL1@ .05ug/L	Location:	Vial 71
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-PR3.M
Last Changed: 8/21/2017 14:55:53

Perchlorate analysis







Data file: C:\HPCHEM\1\DATA\21AUG17P\21AUGP01.D Sample Name: ICAL1@ .05ug/L

Injection Date:	8/21/2017 09:42:32	Seq Line:	1
Sample Name:	ICAL1@ .05ug/L	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-PR3.M
Last Changed: 8/21/2017 14:55:53

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 21. Aug. 2017,02:55:52 pm
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	0.050

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
12.272	BBA	673942.9	5.0000	CLO4-89-ISTD

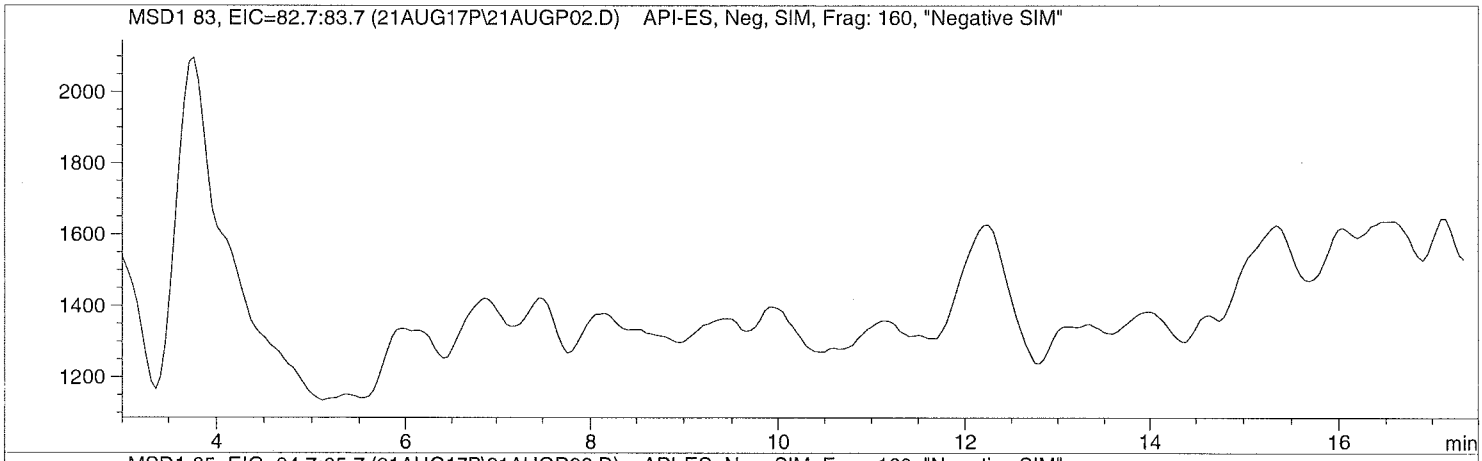
*** End of Report ***

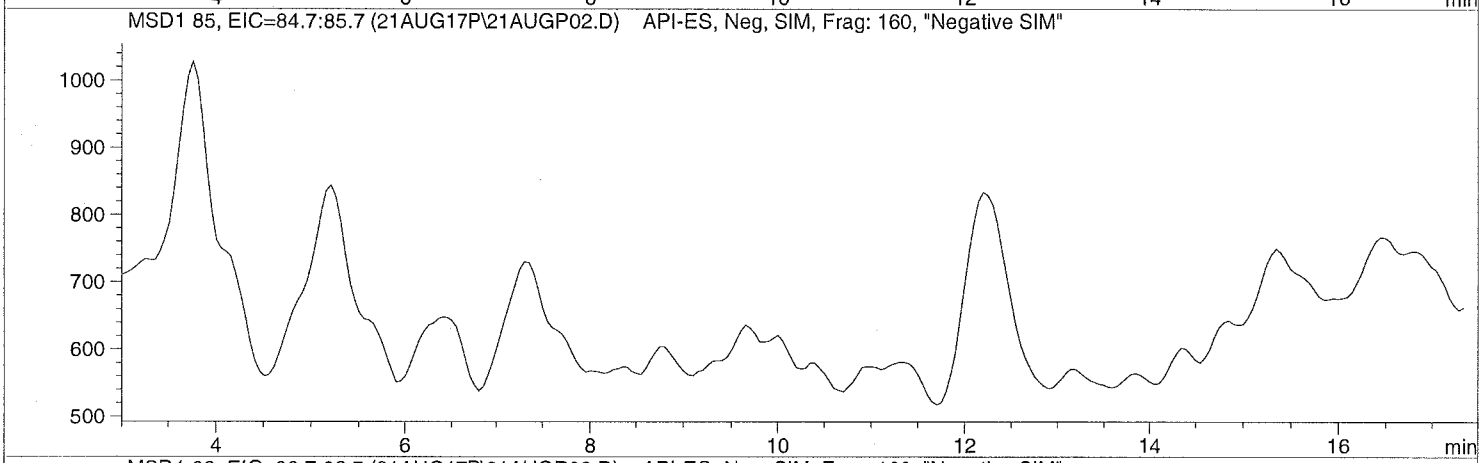
Data file: C:\HPCHEM\1\DATA\21AUG17P\21AUGP02.D Sample Name: ICAL2@ .10ug/L

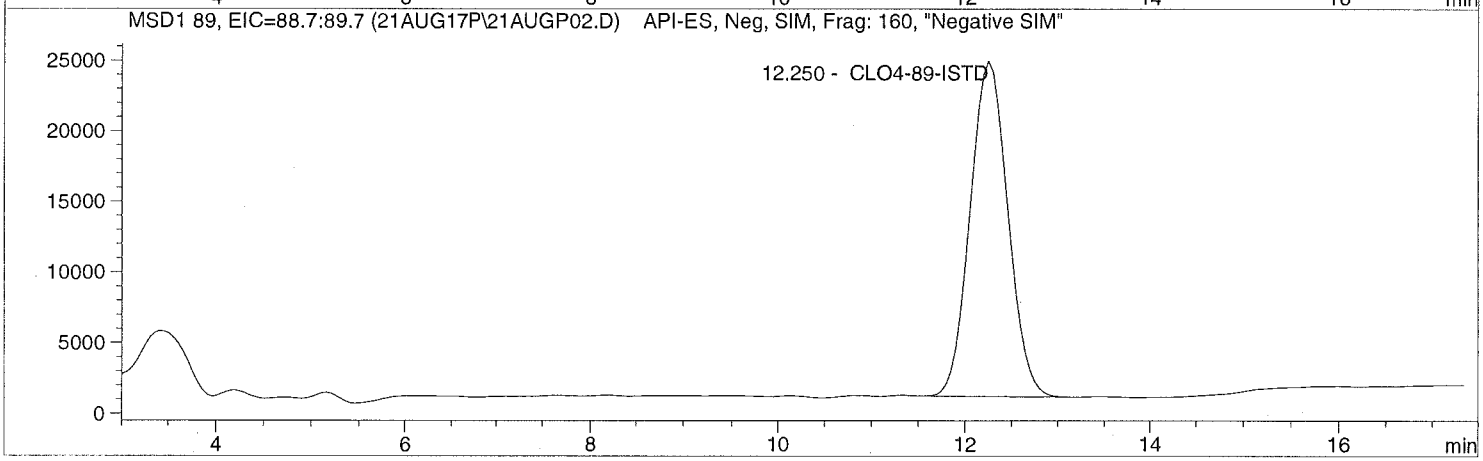
Injection Date:	8/21/2017 10:01:47	Seq Line:	2
Sample Name:	ICAL2@ .10ug/L	Location:	Vial 72
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-PR3.M
Last Changed: 8/21/2017 14:55:53

Perchlorate analysis







Data file: C:\HPCHEM\1\DATA\21AUG17P\21AUGP02.D Sample Name: ICAL2@ .10ug/L

Injection Date:	8/21/2017 10:01:47	Seq Line:	2
Sample Name:	ICAL2@ .10ug/L	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-PR3.M
Last Changed: 8/21/2017 14:55:53

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 21. Aug. 2017,02:55:52 pm
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	0.100

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
12.250	BBA	667016.3	5.0000	CLO4-89-ISTD

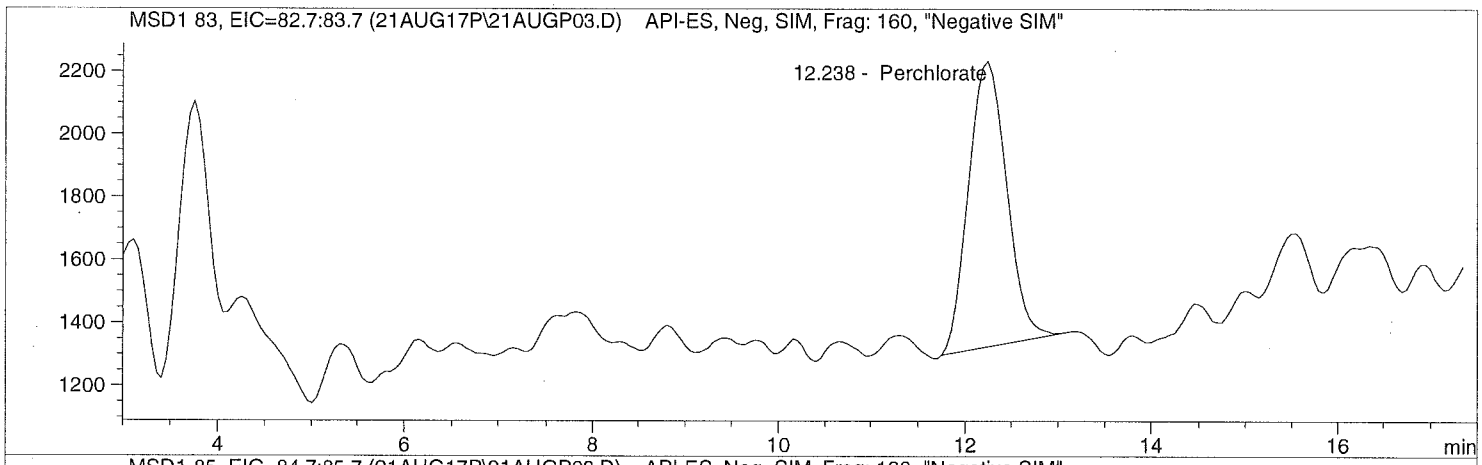
*** End of Report ***

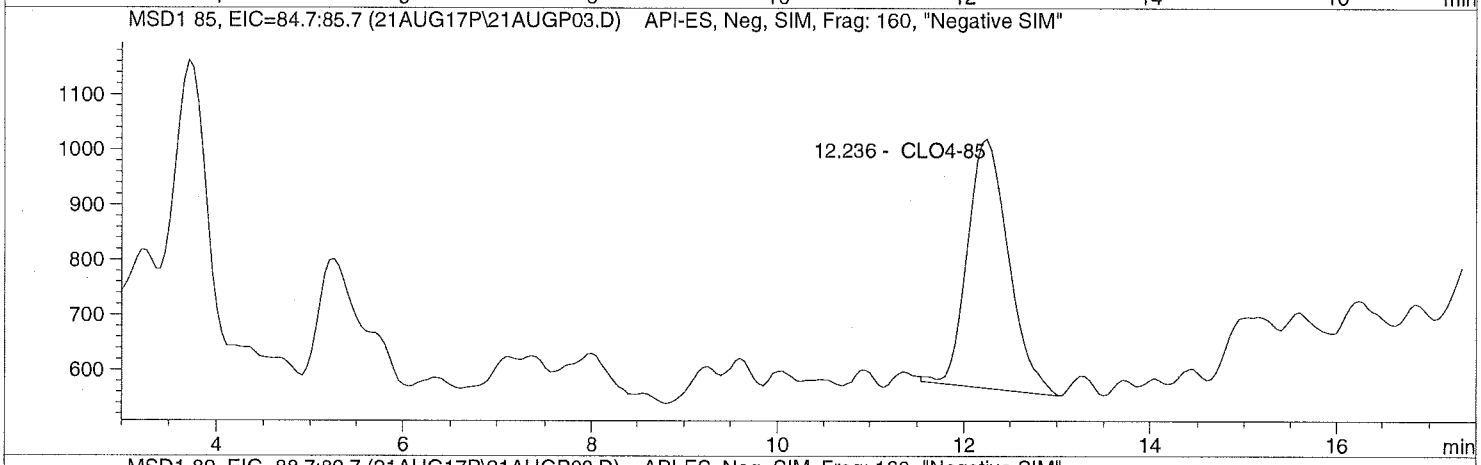
Data file: C:\HPCHEM\1\DATA\21AUG17P\21AUGP03.D Sample Name: ICAL3@ .20ug/L

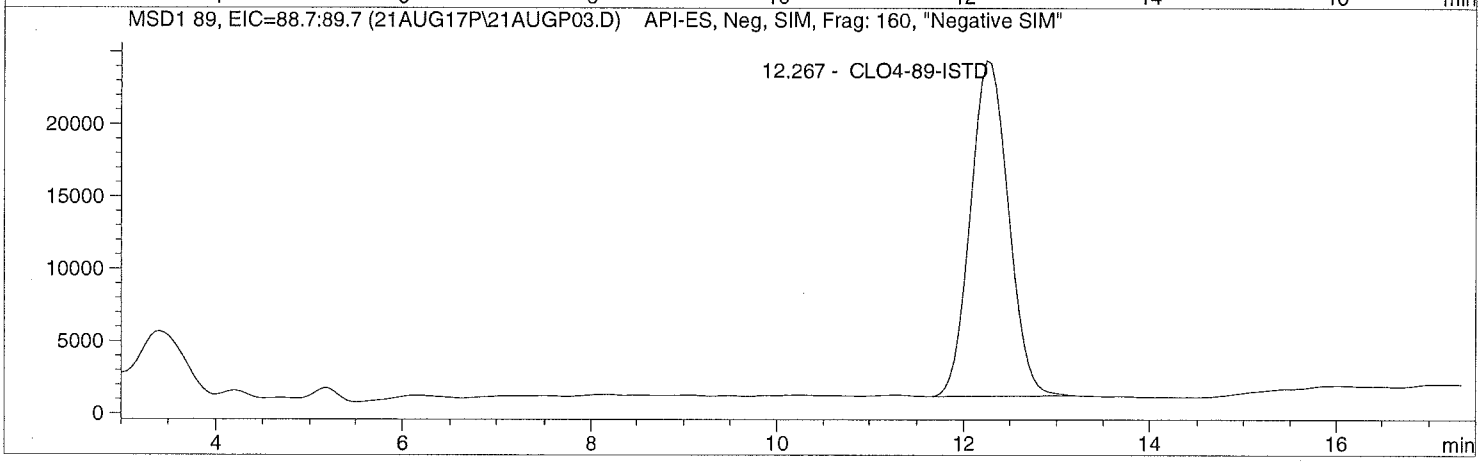
Injection Date:	8/21/2017 10:21:02	Seq Line:	3
Sample Name:	ICAL3@ .20ug/L	Location:	Vial 73
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-PR3.M
Last Changed: 8/21/2017 14:55:53

Perchlorate analysis







Data file: C:\HPCHEM\1\DATA\21AUG17P\21AUGP03.D Sample Name: ICAL3@ .20ug/L

Injection Date:	8/21/2017 10:21:02	Seq Line:	3
Sample Name:	ICAL3@ .20ug/L	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-PR3.M
Last Changed: 8/21/2017 14:55:53

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 21. Aug. 2017,02:55:52 pm
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	0.200

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.238	PBA	26023.7	0.1899	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.236	BBA	13974.8	0.2980	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.267	PBA	661030.8	5.0000	CLO4-89-ISTD

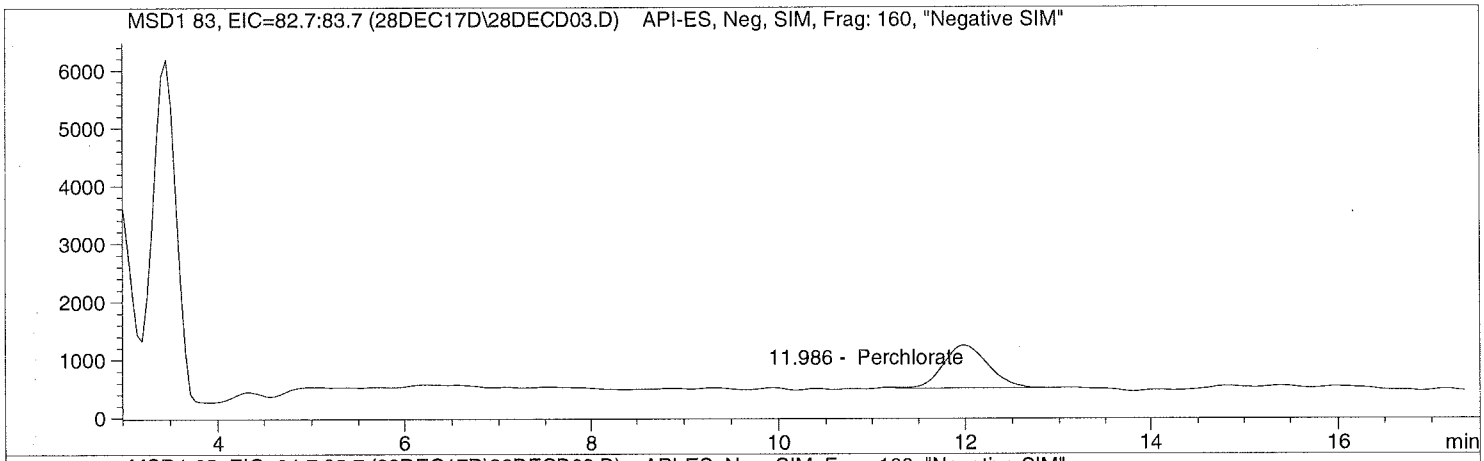
*** End of Report ***

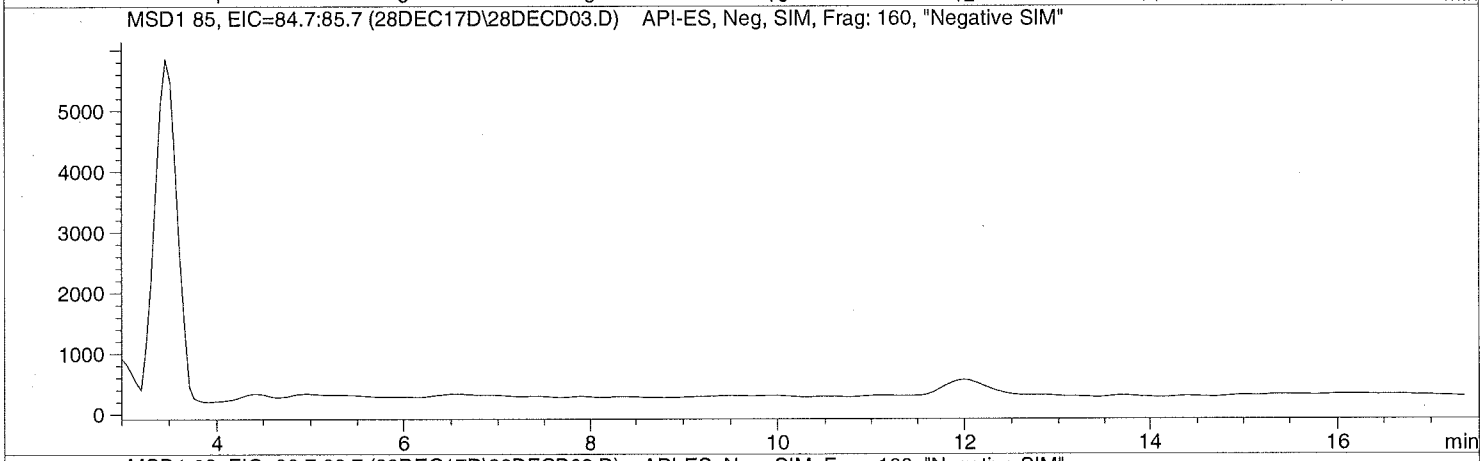
Data file: C:\HPCHEM\1\DATA\28DEC17D\28DECD03.D Sample Name: 581171 ICS@1.

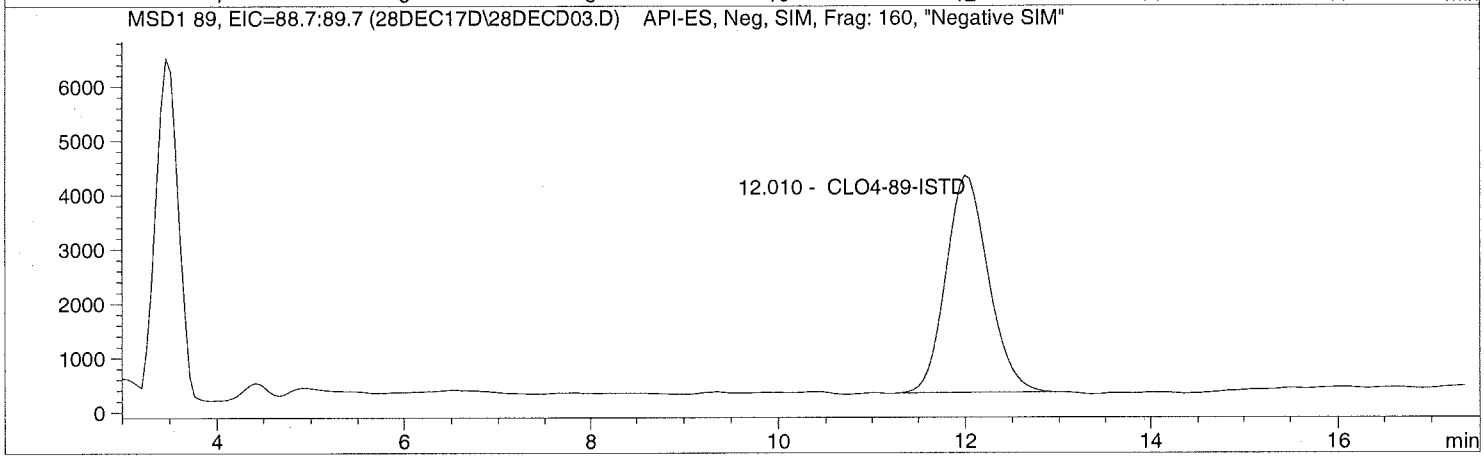
Injection Date:	12/28/2017 11:30:49	Seq Line:	3
Sample Name:	581171 ICS@1.	Location:	Vial 73
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis







Data file: C:\HPCHEM\1\DATA\28DEC17D\28DECD03.D Sample Name: 581171 ICS@1.

Injection Date:	12/28/2017 11:30:49	Seq Line:	3
Sample Name:	581171 ICS@1.	Location:	Vial 73
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Wed, 20. Dec. 2017,08:01:52 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
11.986	BBA	24593.0	0.9244	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
12.010	PBA	126199.8	5.0000	CLO4-89-ISTD

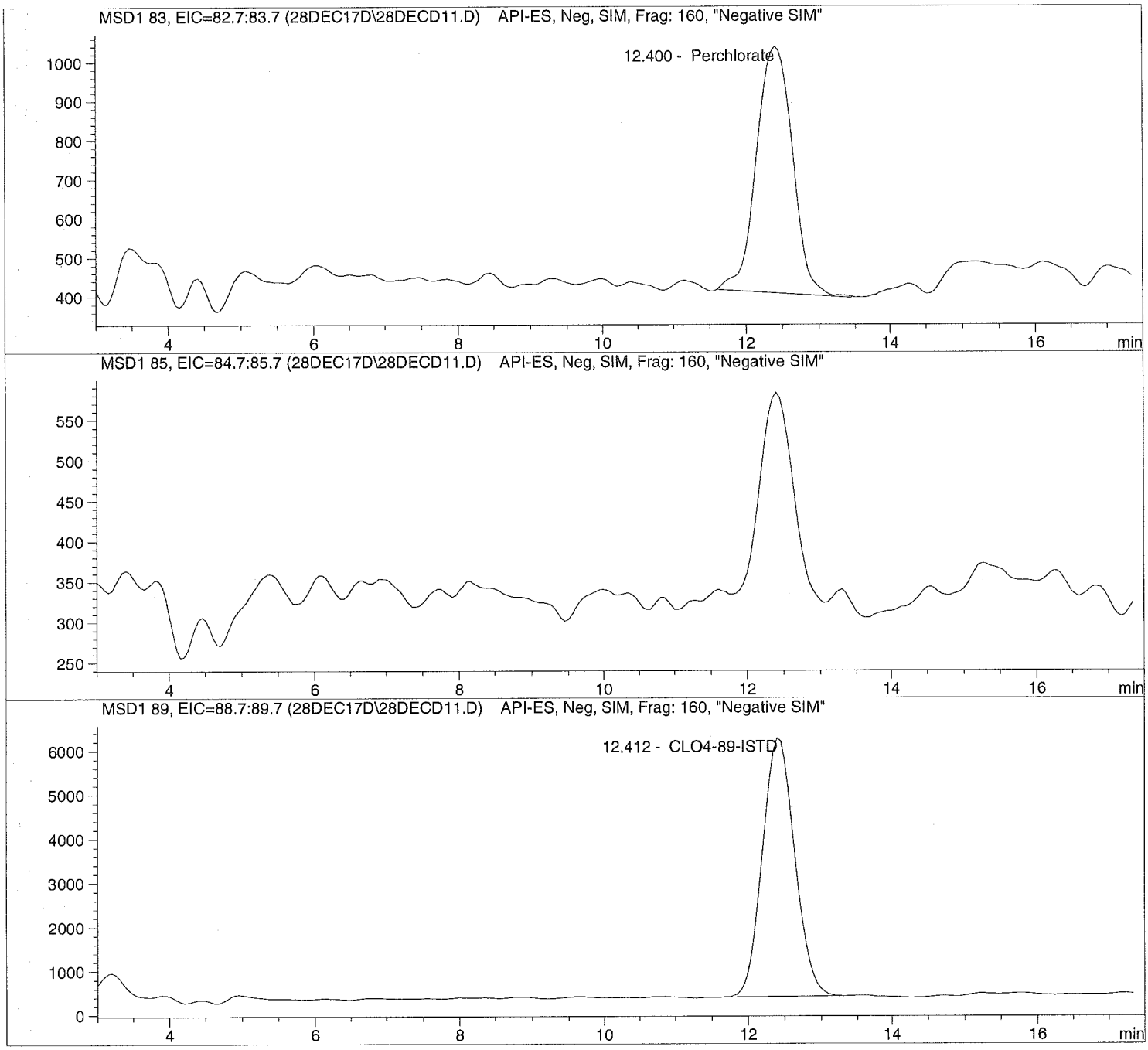
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\28DEC17D\28DECD11.D Sample Name: 1735685004 100

Injection Date:	12/28/2017 14:08:36	Seq Line:	11
Sample Name:	1735685004 100	Location:	Vial 81
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\28DEC17D\28DECD11.D Sample Name: 1735685004 100

Injection Date:	12/28/2017 14:08:36	Seq Line:	11
Sample Name:	1735685004 100	Location:	Vial 81
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Wed, 20. Dec. 2017,08:01:52 am
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
12.400	PBA	21505.4	58.0909	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
12.412	BBA	178775.9	500.0000	CLO4-89-ISTD

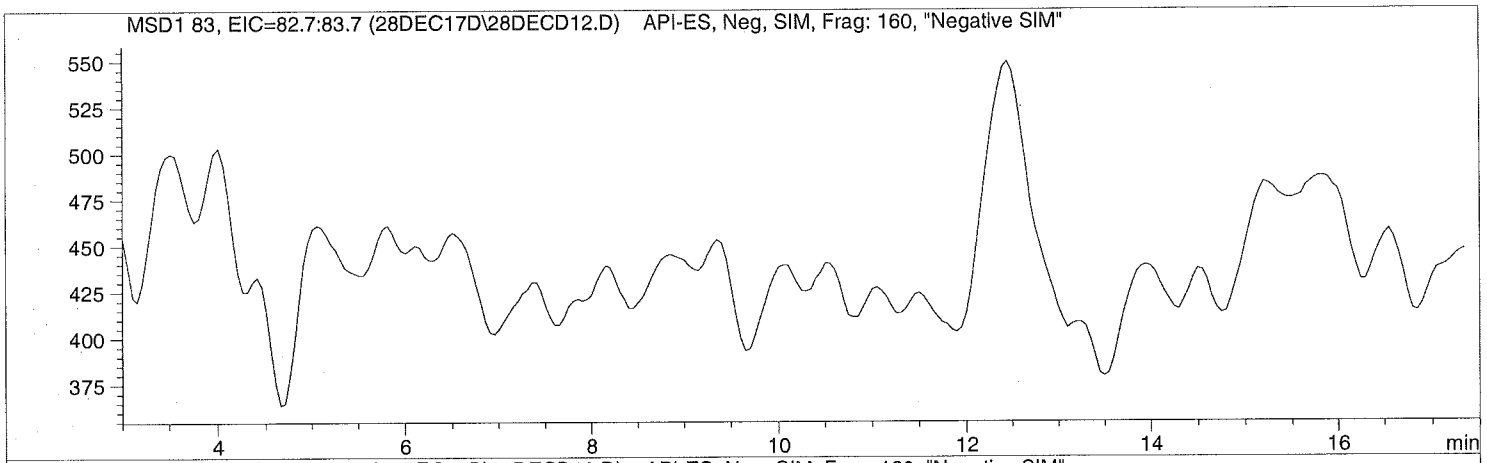
*** End of Report ***

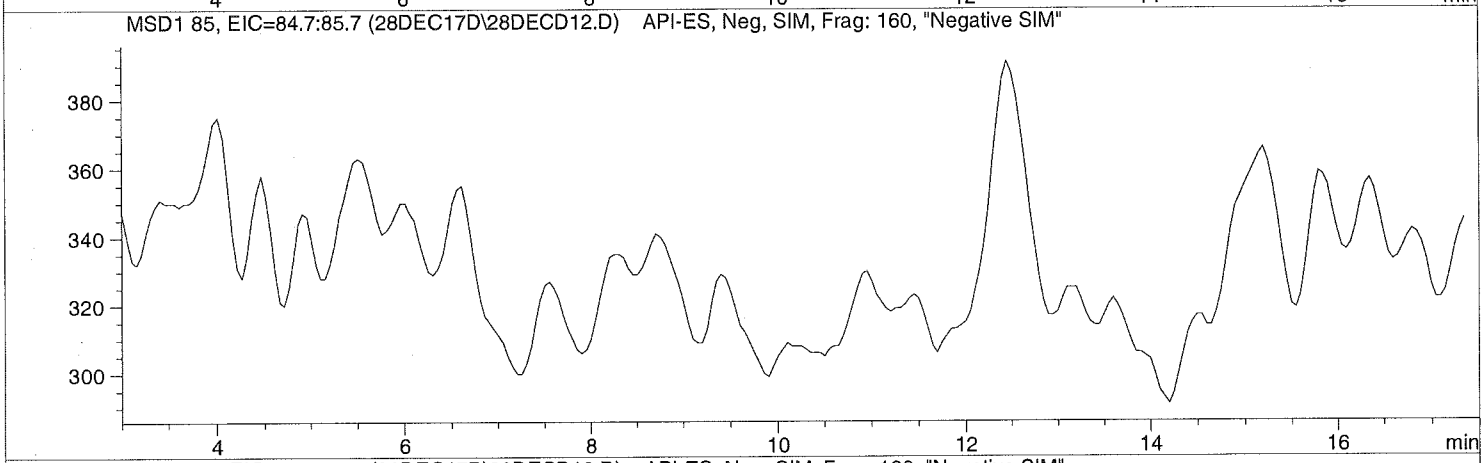
Data file: C:\HPCHEM\1\DATA\28DEC17D\28DECD12.D Sample Name: 1735685005 100

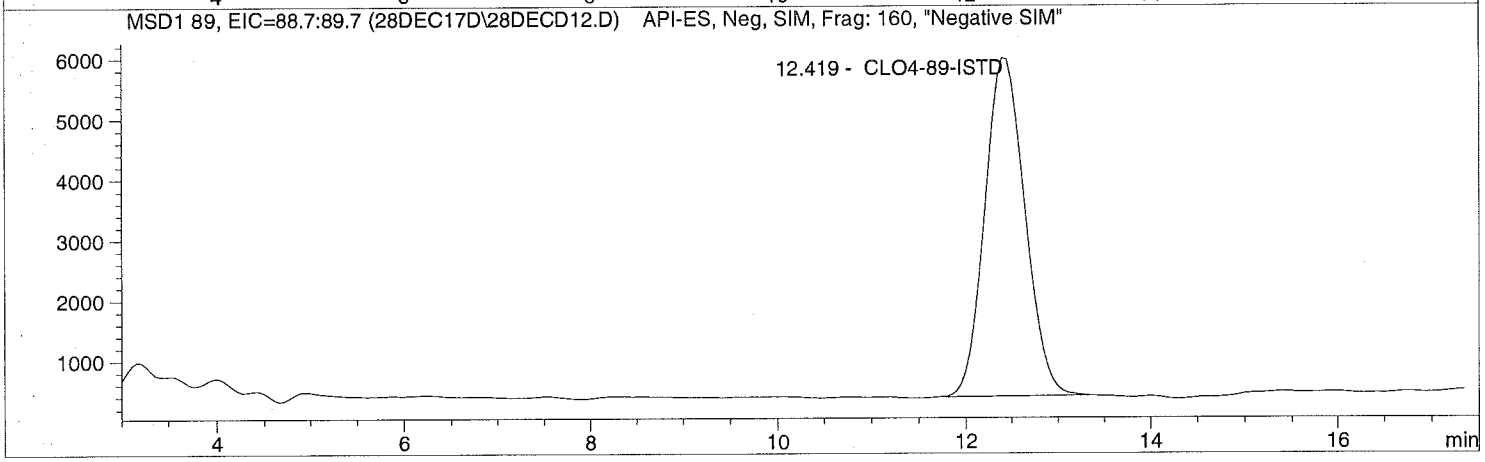
Injection Date:	12/28/2017 14:27:43	Seq Line:	12
Sample Name:	1735685005 100	Location:	Vial 82
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis







Data file: C:\HPCHEM\1\DATA\28DEC17D\28DECD12.D Sample Name: 1735685005 100

Injection Date:	12/28/2017 14:27:43	Seq Line:	12
Sample Name:	1735685005 100	Location:	Vial 82
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Wed, 20. Dec. 2017,08:01:52 am
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
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
12.419	BBA	167796.2	500.0000	CLO4-89-ISTD

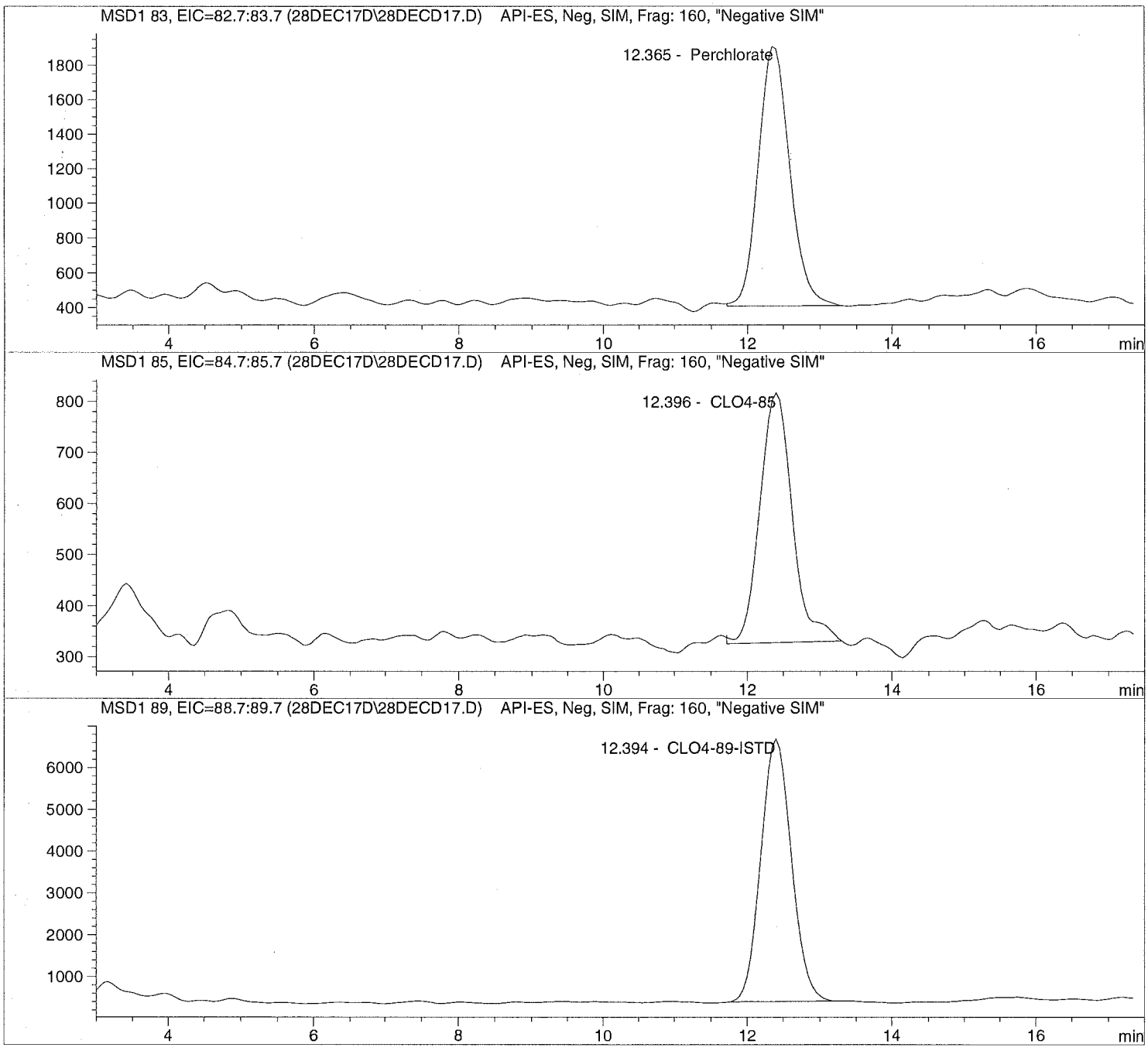
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\28DEC17D\28DECD17.D Sample Name: 581177 LODV@1.

Injection Date:	12/28/2017 16:03:29	Seq Line:	17
Sample Name:	581177 LODV@1.	Location:	Vial 72
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\28DEC17D\28DECD17.D Sample Name: 581177 LODV@1.

Injection Date:	12/28/2017 16:03:29	Seq Line:	17
Sample Name:	581177 LODV@1.	Location:	Vial 72
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Wed, 20. Dec. 2017,08:01:52 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
12.365	BBA	45116.8	1.1533	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.396	BBA	15199.4	0.9791	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.394	PBA	184350.1	5.0000	CLO4-89-ISTD

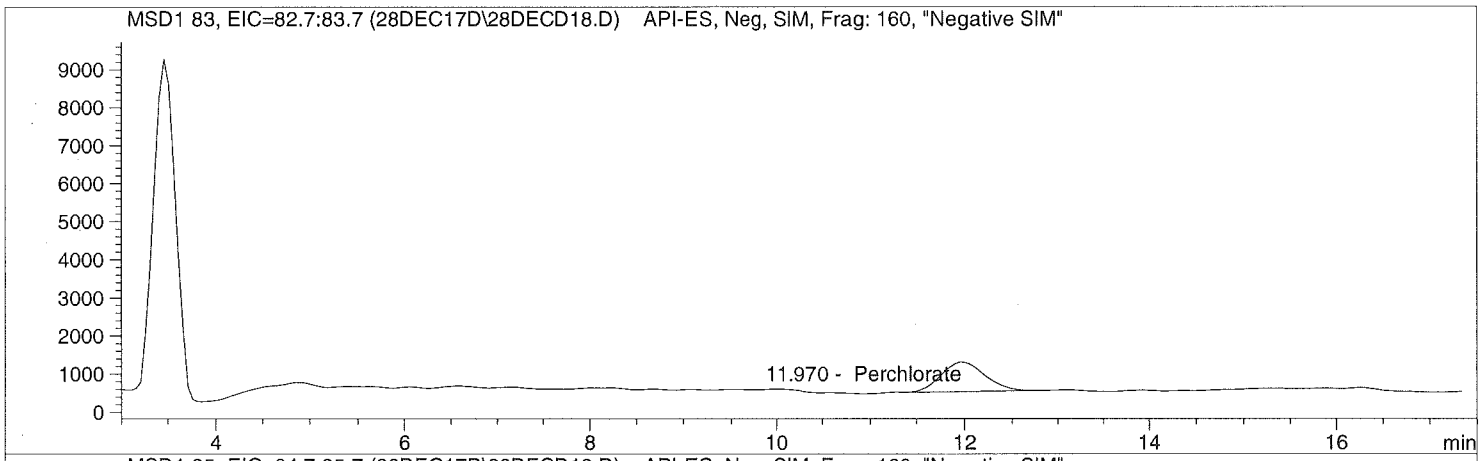
*** End of Report ***

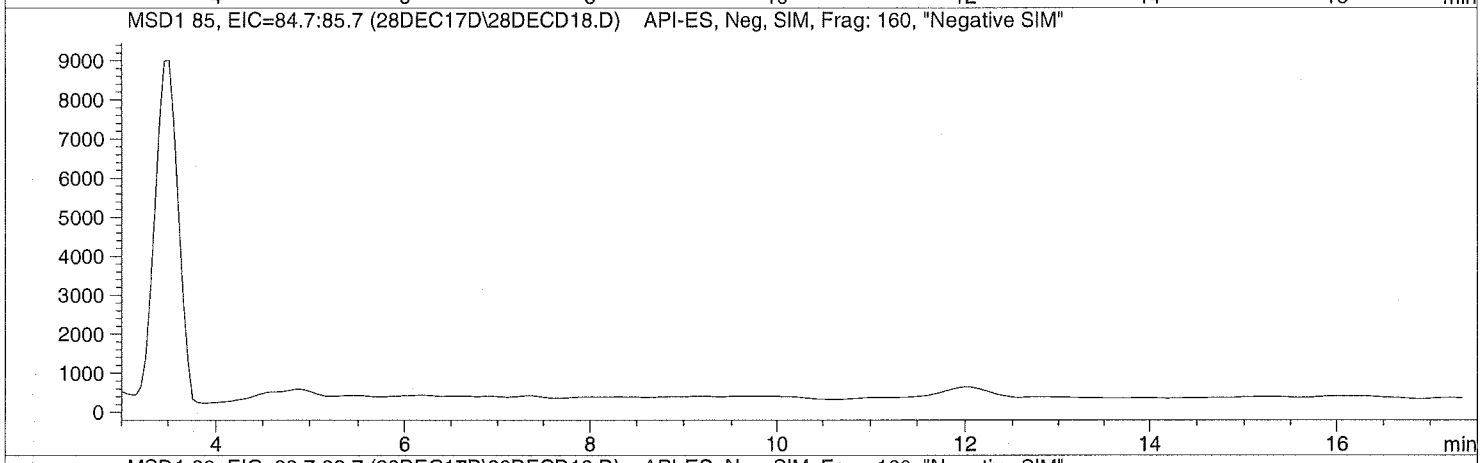
Data file: C:\HPCHEM\1\DATA\28DEC17D\28DECD18.D Sample Name: 1735689001

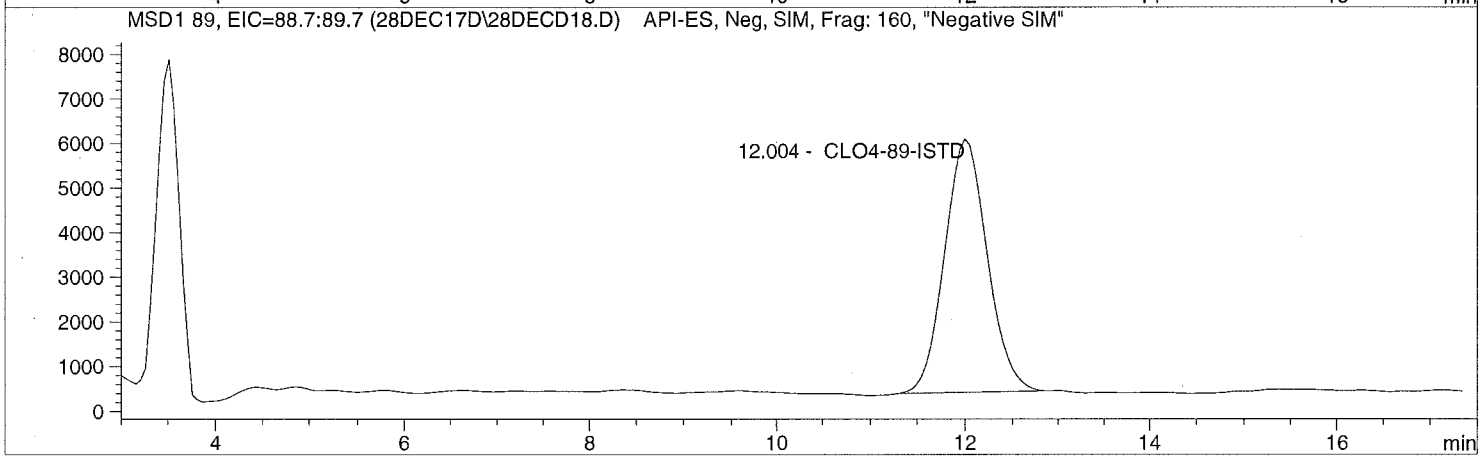
Injection Date:	12/28/2017 16:28:09	Seq Line:	18
Sample Name:	1735689001	Location:	Vial 86
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis







Data file: C:\HPCHEM\1\DATA\28DEC17D\28DECD18.D Sample Name: 1735689001

Injection Date:	12/28/2017 16:28:09	Seq Line:	18
Sample Name:	1735689001	Location:	Vial 86
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Wed, 20. Dec. 2017,08:01:52 am
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
11.970	BBA	24877.5	0.6828	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
12.004	BBA	174711.9	5.0000	CLO4-89-ISTD

*** End of Report ***

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www.alsglobal.com

WorkOrder: HS17121224

LHAAP 18/24

Bhate Environmental Associates, Inc.

Marcia Olive
445 Union Blvd Ste 129
Lakewood CO 80228

14-Feb-2018

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

February 02, 2018

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

Work Order: **HS17121224**

Revision: **1**

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

Dear Marcia,

ALS Environmental received 9 sample(s) on Dec 22, 2017 for the analysis presented in the following report.

This is a REVISED REPORT. Please see the Case Narrative for discussion concerning this revision.

Regards,

Sonia West

Generated By: Jumoke.Lawal

Sonia West
Project Manager

ALS Group USA, Corp Date: 02-Feb-18

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
Work Order: HS17121224

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS17121224-01	18CPTMW04SW_122017	Water		20-Dec-2017 08:55	22-Dec-2017 10:15	☐
HS17121224-02	18CPTMW04_122017	Water		20-Dec-2017 09:55	22-Dec-2017 10:15	☐
HS17121224-03	MW2_122017	Water		20-Dec-2017 10:50	22-Dec-2017 10:15	☐
HS17121224-04	18CPTMW01SW_122017	Water		20-Dec-2017 13:00	22-Dec-2017 10:15	☐
HS17121224-05	MW5_122017	Water		20-Dec-2017 13:55	22-Dec-2017 10:15	☐
HS17121224-06	MW3_122117	Water		21-Dec-2017 08:45	22-Dec-2017 10:15	☐
HS17121224-07	18CPTMW08DW_122117	Water		21-Dec-2017 09:45	22-Dec-2017 10:15	☐
HS17121224-08	18CPTMW08SW_122117	Water		21-Dec-2017 10:45	22-Dec-2017 10:15	☐
HS17121224-09	Trip Blank	Water		21-Dec-2017 00:00	22-Dec-2017 10:15	☐

Revision: 1

ALS Group USA, Corp Date: 02-Feb-18

Client: Bhate Environmental Associates, Inc. **CASE NARRATIVE**
Project: LHAAP 18/24
Work Order: HS17121224

Work Order Comments

- As per the clients request via email on December 27, 2017, sample 18CPTMWISW_122017 was changed to 18CPTMW01SW_122017.
- The analysis for Perchlorate was subcontracted to ALS Environmental in Salt Lake City, UT.

GCMS Volatiles by Method SW8260

Batch ID: R308234

Sample ID: MW3_122117 (HS17121224-06)

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

Batch ID: R308247

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

Metals by Method SW7470

Batch ID: 124068

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

Metals by Method SW6020

Batch ID: 124039

Sample ID: HS17121169-01MS

- MS/MSD and DUPs are for an unrelated sample

Revision:1

ALS Group USA, Corp Date: 02-Feb-18

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
Sample ID: 18CPTMW04SW_122017
Collection Date: 20-Dec-2017 08:55

ANALYTICAL REPORT
WorkOrder:HS17121224
Lab ID:HS17121224-01
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: AKP
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	31-Dec-2017 18:09
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	31-Dec-2017 18:09
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	ug/L	1	31-Dec-2017 18:09
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	31-Dec-2017 18:09
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	31-Dec-2017 18:09
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	31-Dec-2017 18:09
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	ug/L	1	31-Dec-2017 18:09
1,2,3-Trichlorobenzene	0.50	U	0.40	0.50	1.0	ug/L	1	31-Dec-2017 18:09
1,2,3-Trichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	31-Dec-2017 18:09
1,2,4-Trichlorobenzene	0.50	U	0.50	0.50	1.0	ug/L	1	31-Dec-2017 18:09
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	31-Dec-2017 18:09
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	31-Dec-2017 18:09
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	31-Dec-2017 18:09
1,2-Dichlorobenzene	0.50	U	0.50	0.50	1.0	ug/L	1	31-Dec-2017 18:09
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	31-Dec-2017 18:09
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	31-Dec-2017 18:09
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	31-Dec-2017 18:09
1,3-Dichlorobenzene	0.50	U	0.40	0.50	1.0	ug/L	1	31-Dec-2017 18:09
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	ug/L	1	31-Dec-2017 18:09
1,4-Dichlorobenzene	0.50	U	0.40	0.50	1.0	ug/L	1	31-Dec-2017 18:09
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	31-Dec-2017 18:09
2-Butanone	0.50	U	0.50	0.50	2.0	ug/L	1	31-Dec-2017 18:09
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	ug/L	1	31-Dec-2017 18:09
2-Hexanone	1.0	U	1.0	1.0	2.0	ug/L	1	31-Dec-2017 18:09
4-Chlorotoluene	0.50	U	0.40	0.50	1.0	ug/L	1	31-Dec-2017 18:09
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	ug/L	1	31-Dec-2017 18:09
4-Methyl-2-pentanone	1.0	U	0.70	1.0	2.0	ug/L	1	31-Dec-2017 18:09
Acetone	1.0	U	0.40	1.0	2.0	ug/L	1	31-Dec-2017 18:09
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	31-Dec-2017 18:09
Bromobenzene	0.50	U	0.40	0.50	1.0	ug/L	1	31-Dec-2017 18:09
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	31-Dec-2017 18:09
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	31-Dec-2017 18:09
Bromoform	0.50	U	0.40	0.50	1.0	ug/L	1	31-Dec-2017 18:09
Bromomethane	0.50	U	0.40	0.50	1.0	ug/L	1	31-Dec-2017 18:09
Carbon disulfide	1.0	U	0.60	1.0	2.0	ug/L	1	31-Dec-2017 18:09
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	ug/L	1	31-Dec-2017 18:09
Chlorobenzene	0.50	U	0.30	0.50	1.0	ug/L	1	31-Dec-2017 18:09
Chloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	31-Dec-2017 18:09

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

Revision:1

ALS Group USA, Corp Date: 02-Feb-18

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
Sample ID: 18CPTMW04SW_122017
Collection Date: 20-Dec-2017 08:55

ANALYTICAL REPORT
WorkOrder:HS17121224
Lab ID:HS17121224-01
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: AKP
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	31-Dec-2017 18:09
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	31-Dec-2017 18:09
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	31-Dec-2017 18:09
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	31-Dec-2017 18:09
Dibromochloromethane	0.50	U	0.30	0.50	1.0	ug/L	1	31-Dec-2017 18:09
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	31-Dec-2017 18:09
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	31-Dec-2017 18:09
Ethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	31-Dec-2017 18:09
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	31-Dec-2017 18:09
Isopropylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	31-Dec-2017 18:09
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	31-Dec-2017 18:09
Methylene chloride	0.50	U	0.40	0.50	2.0	ug/L	1	31-Dec-2017 18:09
n-Butylbenzene	0.50	U	0.40	0.50	1.0	ug/L	1	31-Dec-2017 18:09
n-Propylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	31-Dec-2017 18:09
Naphthalene	0.50	U	0.30	0.50	1.0	ug/L	1	31-Dec-2017 18:09
o-Xylene	0.50	U	0.30	0.50	1.0	ug/L	1	31-Dec-2017 18:09
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	31-Dec-2017 18:09
Styrene	0.50	U	0.30	0.50	1.0	ug/L	1	31-Dec-2017 18:09
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	31-Dec-2017 18:09
Tetrachloroethene	0.50	U	0.30	0.50	1.0	ug/L	1	31-Dec-2017 18:09
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	31-Dec-2017 18:09
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	31-Dec-2017 18:09
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	31-Dec-2017 18:09
Trichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	31-Dec-2017 18:09
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	31-Dec-2017 18:09
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	31-Dec-2017 18:09
Surr: 1,2-Dichloroethane-d4	*90.6*			**0**	*81-118*	*%REC*	*1*	*31-Dec-2017 18:09*
Surr: 4-Bromofluorobenzene	*98.3*			**0**	*85-114*	*%REC*	*1*	*31-Dec-2017 18:09*
Surr: Dibromofluoromethane	*99.4*			**0**	*80-119*	*%REC*	*1*	*31-Dec-2017 18:09*
Surr: Toluene-d8	*96.3*			**0**	*89-112*	*%REC*	*1*	*31-Dec-2017 18:09*

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

Revision:1

ALS Group USA, Corp Date: 02-Feb-18

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
Sample ID: 18CPTMW04SW_122017
Collection Date: 20-Dec-2017 08:55

ANALYTICAL REPORT
WorkOrder:HS17121224
Lab ID:HS17121224-01
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		**Method:SW6020**				Prep:SW3010A / 04-Jan-2018		Analyst: JDE
Aluminum	**0.0283**		**0.00180**	**0.00500**	**0.0100**	**mg/L**	1	05-Jan-2018 13:09
Antimony	**0.00146**	J	**0.000400**	**0.00100**	**0.00200**	**mg/L**	1	05-Jan-2018 13:09
Arsenic	**0.00216**		**0.000400**	**0.00100**	**0.00200**	**mg/L**	1	05-Jan-2018 13:09
Barium	**0.822**		**0.00190**	**0.00250**	**0.00400**	**mg/L**	1	05-Jan-2018 13:09
Beryllium	0.00100	U	0.000200	0.00100	0.00200	mg/L	1	05-Jan-2018 13:09
Cadmium	0.00100	U	0.000200	0.00100	0.00200	mg/L	1	05-Jan-2018 13:09
Calcium	**30.4**		**0.0340**	**0.100**	**0.500**	**mg/L**	1	05-Jan-2018 13:09
Chromium	**0.00521**		**0.000400**	**0.00100**	**0.00400**	**mg/L**	1	05-Jan-2018 13:09
Cobalt	**0.0148**		**0.000200**	**0.00100**	**0.00500**	**mg/L**	1	05-Jan-2018 13:09
Copper	0.00200	U	0.00100	0.00200	0.00200	mg/L	1	05-Jan-2018 13:09
Iron	**25.6**		**0.0120**	**0.100**	**0.200**	**mg/L**	1	05-Jan-2018 13:09
Lead	0.00100	U	0.000600	0.00100	0.00200	mg/L	1	05-Jan-2018 13:09
Magnesium	**16.2**		**0.0100**	**0.100**	**0.200**	**mg/L**	1	05-Jan-2018 13:09
Manganese	**0.748**		**0.000700**	**0.00100**	**0.00500**	**mg/L**	1	05-Jan-2018 13:09
Nickel	**0.00980**		**0.000600**	**0.00100**	**0.00200**	**mg/L**	1	05-Jan-2018 13:09
Potassium	**23.5**		**0.0180**	**0.100**	**0.200**	**mg/L**	1	05-Jan-2018 13:09
Selenium	0.00200	U	0.00110	0.00200	0.00200	mg/L	1	05-Jan-2018 13:09
Silver	0.00100	U	0.000200	0.00100	0.00200	mg/L	1	05-Jan-2018 13:09
Sodium	**99.3**		**0.0140**	**0.100**	**0.200**	**mg/L**	1	05-Jan-2018 13:09
Thallium	0.00100	U	0.000200	0.00100	0.00200	mg/L	1	05-Jan-2018 13:09
Vanadium	0.00100	U	0.000600	0.00100	0.00500	mg/L	1	05-Jan-2018 13:09
Zinc	**0.0341**		**0.00200**	**0.00250**	**0.00400**	**mg/L**	1	05-Jan-2018 13:09
MERCURY BY SW7470A		**Method:SW7470**				Prep:SW7470 / 05-Jan-2018		Analyst: JCJ
Mercury	0.000100	U	0.0000300	0.000100	0.000200	mg/L	1	05-Jan-2018 14:17
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: SUB
Subcontract Analysis	See Attached		0	0		NA	1	12-Jan-2018 11:16

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

Revision:1

ALS Group USA, Corp Date: 02-Feb-18

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
Sample ID: 18CPTMW04_122017
Collection Date: 20-Dec-2017 09:55

ANALYTICAL REPORT
WorkOrder:HS17121224
Lab ID:HS17121224-02
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: AKP
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	01-Jan-2018 20:17
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	01-Jan-2018 20:17
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	ug/L	1	01-Jan-2018 20:17
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	01-Jan-2018 20:17
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	01-Jan-2018 20:17
1,1-Dichloroethene	**3.6**		**0.20**	**0.50**	**1.0**	**ug/L**	1	01-Jan-2018 20:17
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	ug/L	1	01-Jan-2018 20:17
1,2,3-Trichlorobenzene	0.50	U	0.40	0.50	1.0	ug/L	1	01-Jan-2018 20:17
1,2,3-Trichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	01-Jan-2018 20:17
1,2,4-Trichlorobenzene	0.50	U	0.50	0.50	1.0	ug/L	1	01-Jan-2018 20:17
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	01-Jan-2018 20:17
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	01-Jan-2018 20:17
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	01-Jan-2018 20:17
1,2-Dichlorobenzene	0.50	U	0.50	0.50	1.0	ug/L	1	01-Jan-2018 20:17
1,2-Dichloroethane	**5.4**		**0.20**	**0.50**	**1.0**	**ug/L**	1	01-Jan-2018 20:17
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	01-Jan-2018 20:17
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	01-Jan-2018 20:17
1,3-Dichlorobenzene	0.50	U	0.40	0.50	1.0	ug/L	1	01-Jan-2018 20:17
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	ug/L	1	01-Jan-2018 20:17
1,4-Dichlorobenzene	0.50	U	0.40	0.50	1.0	ug/L	1	01-Jan-2018 20:17
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	01-Jan-2018 20:17
2-Butanone	0.50	U	0.50	0.50	2.0	ug/L	1	01-Jan-2018 20:17
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	ug/L	1	01-Jan-2018 20:17
2-Hexanone	1.0	U	1.0	1.0	2.0	ug/L	1	01-Jan-2018 20:17
4-Chlorotoluene	0.50	U	0.40	0.50	1.0	ug/L	1	01-Jan-2018 20:17
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	ug/L	1	01-Jan-2018 20:17
4-Methyl-2-pentanone	1.0	U	0.70	1.0	2.0	ug/L	1	01-Jan-2018 20:17
Acetone	1.0	U	0.40	1.0	2.0	ug/L	1	01-Jan-2018 20:17
Benzene	**0.44**	J	**0.20**	**0.50**	**1.0**	**ug/L**	1	01-Jan-2018 20:17
Bromobenzene	0.50	U	0.40	0.50	1.0	ug/L	1	01-Jan-2018 20:17
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	01-Jan-2018 20:17
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	01-Jan-2018 20:17
Bromoform	0.50	U	0.40	0.50	1.0	ug/L	1	01-Jan-2018 20:17
Bromomethane	0.50	U	0.40	0.50	1.0	ug/L	1	01-Jan-2018 20:17
Carbon disulfide	1.0	U	0.60	1.0	2.0	ug/L	1	01-Jan-2018 20:17
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	ug/L	1	01-Jan-2018 20:17
Chlorobenzene	0.50	U	0.30	0.50	1.0	ug/L	1	01-Jan-2018 20:17
Chloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	01-Jan-2018 20:17

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

Revision:1

ALS Group USA, Corp Date: 02-Feb-18

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
Sample ID: 18CPTMW04_122017
Collection Date: 20-Dec-2017 09:55

ANALYTICAL REPORT
WorkOrder:HS17121224
Lab ID:HS17121224-02
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: AKP
Chloroform	**2.3**		**0.20**	**0.50**	**1.0**	**ug/L**	1	01-Jan-2018 20:17
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	01-Jan-2018 20:17
cis-1,2-Dichloroethene	**66**		**0.20**	**0.50**	**1.0**	**ug/L**	1	01-Jan-2018 20:17
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	01-Jan-2018 20:17
Dibromochloromethane	0.50	U	0.30	0.50	1.0	ug/L	1	01-Jan-2018 20:17
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	01-Jan-2018 20:17
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	01-Jan-2018 20:17
Ethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	01-Jan-2018 20:17
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	01-Jan-2018 20:17
Isopropylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	01-Jan-2018 20:17
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	01-Jan-2018 20:17
Methylene chloride	0.50	U	0.40	0.50	2.0	ug/L	1	01-Jan-2018 20:17
n-Butylbenzene	0.50	U	0.40	0.50	1.0	ug/L	1	01-Jan-2018 20:17
n-Propylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	01-Jan-2018 20:17
Naphthalene	0.50	U	0.30	0.50	1.0	ug/L	1	01-Jan-2018 20:17
o-Xylene	0.50	U	0.30	0.50	1.0	ug/L	1	01-Jan-2018 20:17
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	01-Jan-2018 20:17
Styrene	0.50	U	0.30	0.50	1.0	ug/L	1	01-Jan-2018 20:17
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	01-Jan-2018 20:17
Tetrachloroethene	0.50	U	0.30	0.50	1.0	ug/L	1	01-Jan-2018 20:17
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	01-Jan-2018 20:17
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	01-Jan-2018 20:17
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	01-Jan-2018 20:17
Trichloroethene	**1,600**		**2.0**	**5.0**	**10**	**ug/L**	10	31-Dec-2017 22:06
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	01-Jan-2018 20:17
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	01-Jan-2018 20:17
Surr: 1,2-Dichloroethane-d4	*93.4*			**0**	*81-118*	*%REC*	*10*	*31-Dec-2017 22:06*
Surr: 1,2-Dichloroethane-d4	*94.1*			**0**	*81-118*	*%REC*	*1*	*01-Jan-2018 20:17*
Surr: 4-Bromofluorobenzene	*97.0*			**0**	*85-114*	*%REC*	*10*	*31-Dec-2017 22:06*
Surr: 4-Bromofluorobenzene	*96.7*			**0**	*85-114*	*%REC*	*1*	*01-Jan-2018 20:17*
Surr: Dibromofluoromethane	*98.3*			**0**	*80-119*	*%REC*	*10*	*31-Dec-2017 22:06*
Surr: Dibromofluoromethane	*96.2*			**0**	*80-119*	*%REC*	*1*	*01-Jan-2018 20:17*
Surr: Toluene-d8	*98.4*			**0**	*89-112*	*%REC*	*10*	*31-Dec-2017 22:06*
Surr: Toluene-d8	*94.7*			**0**	*89-112*	*%REC*	*1*	*01-Jan-2018 20:17*
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: SUB
Subcontract Analysis	See Attached		0	0		NA	1	12-Jan-2018 11:16

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

Revision:1

ALS Group USA, Corp Date: 02-Feb-18

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
Sample ID: MW2_122017
Collection Date: 20-Dec-2017 10:50

ANALYTICAL REPORT
WorkOrder:HS17121224
Lab ID:HS17121224-03
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: AKP
1,1,1,2-Tetrachloroethane	50	U	30	50	100	ug/L	100	31-Dec-2017 23:53
1,1,1-Trichloroethane	50	U	20	50	100	ug/L	100	31-Dec-2017 23:53
1,1,2,2-Tetrachloroethane	50	U	50	50	100	ug/L	100	31-Dec-2017 23:53
1,1,2-Trichloroethane	50	U	30	50	100	ug/L	100	31-Dec-2017 23:53
1,1-Dichloroethane	50	U	20	50	100	ug/L	100	31-Dec-2017 23:53
1,1-Dichloroethene	**270**		**20**	**50**	**100**	**ug/L**	100	31-Dec-2017 23:53
1,1-Dichloropropene	50	U	30	50	100	ug/L	100	31-Dec-2017 23:53
1,2,3-Trichlorobenzene	50	U	40	50	100	ug/L	100	31-Dec-2017 23:53
1,2,3-Trichloropropane	50	U	50	50	100	ug/L	100	31-Dec-2017 23:53
1,2,4-Trichlorobenzene	50	U	50	50	100	ug/L	100	31-Dec-2017 23:53
1,2,4-Trimethylbenzene	50	U	30	50	100	ug/L	100	31-Dec-2017 23:53
1,2-Dibromo-3-chloropropane	50	U	20	50	100	ug/L	100	31-Dec-2017 23:53
1,2-Dibromoethane	50	U	20	50	100	ug/L	100	31-Dec-2017 23:53
1,2-Dichlorobenzene	50	U	50	50	100	ug/L	100	31-Dec-2017 23:53
1,2-Dichloroethane	50	U	20	50	100	ug/L	100	31-Dec-2017 23:53
1,2-Dichloropropane	50	U	50	50	100	ug/L	100	31-Dec-2017 23:53
1,3,5-Trimethylbenzene	50	U	30	50	100	ug/L	100	31-Dec-2017 23:53
1,3-Dichlorobenzene	50	U	40	50	100	ug/L	100	31-Dec-2017 23:53
1,3-Dichloropropane	50	U	30	50	100	ug/L	100	31-Dec-2017 23:53
1,4-Dichlorobenzene	50	U	40	50	100	ug/L	100	31-Dec-2017 23:53
2,2-Dichloropropane	50	U	20	50	100	ug/L	100	31-Dec-2017 23:53
2-Butanone	50	U	50	50	200	ug/L	100	31-Dec-2017 23:53
2-Chlorotoluene	50	U	30	50	100	ug/L	100	31-Dec-2017 23:53
2-Hexanone	100	U	100	100	200	ug/L	100	31-Dec-2017 23:53
4-Chlorotoluene	50	U	40	50	100	ug/L	100	31-Dec-2017 23:53
4-Isopropyltoluene	50	U	30	50	100	ug/L	100	31-Dec-2017 23:53
4-Methyl-2-pentanone	100	U	70	100	200	ug/L	100	31-Dec-2017 23:53
Acetone	100	U	40	100	200	ug/L	100	31-Dec-2017 23:53
Benzene	50	U	20	50	100	ug/L	100	31-Dec-2017 23:53
Bromobenzene	50	U	40	50	100	ug/L	100	31-Dec-2017 23:53
Bromochloromethane	**250**		**20**	**50**	**100**	**ug/L**	100	31-Dec-2017 23:53
Bromodichloromethane	50	U	20	50	100	ug/L	100	31-Dec-2017 23:53
Bromoform	50	U	40	50	100	ug/L	100	31-Dec-2017 23:53
Bromomethane	50	U	40	50	100	ug/L	100	31-Dec-2017 23:53
Carbon disulfide	100	U	60	100	200	ug/L	100	31-Dec-2017 23:53
Carbon tetrachloride	50	U	50	50	100	ug/L	100	31-Dec-2017 23:53
Chlorobenzene	50	U	30	50	100	ug/L	100	31-Dec-2017 23:53
Chloroethane	50	U	30	50	100	ug/L	100	31-Dec-2017 23:53

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

Revision:1

ALS Group USA, Corp Date: 02-Feb-18

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
Sample ID: MW2_122017
Collection Date: 20-Dec-2017 10:50

ANALYTICAL REPORT
WorkOrder:HS17121224
Lab ID:HS17121224-03
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: AKP
Chloroform	50	U	20	50	100	ug/L	100	31-Dec-2017 23:53
Chloromethane	50	U	20	50	100	ug/L	100	31-Dec-2017 23:53
cis-1,2-Dichloroethene	**34,000**		**200**	**500**	**1000**	**ug/L**	1000	01-Jan-2018 00:20
cis-1,3-Dichloropropene	50	U	10	50	100	ug/L	100	31-Dec-2017 23:53
Dibromochloromethane	50	U	30	50	100	ug/L	100	31-Dec-2017 23:53
Dibromomethane	50	U	20	50	100	ug/L	100	31-Dec-2017 23:53
Dichlorodifluoromethane	50	U	30	50	100	ug/L	100	31-Dec-2017 23:53
Ethylbenzene	50	U	30	50	100	ug/L	100	31-Dec-2017 23:53
Hexachlorobutadiene	100	U	100	100	100	ug/L	100	31-Dec-2017 23:53
Isopropylbenzene	50	U	30	50	100	ug/L	100	31-Dec-2017 23:53
m,p-Xylene	100	U	50	100	200	ug/L	100	31-Dec-2017 23:53
Methylene chloride	**140,000**		**400**	**500**	**2000**	**ug/L**	1000	01-Jan-2018 00:20
n-Butylbenzene	50	U	40	50	100	ug/L	100	31-Dec-2017 23:53
n-Propylbenzene	50	U	30	50	100	ug/L	100	31-Dec-2017 23:53
Naphthalene	50	U	30	50	100	ug/L	100	31-Dec-2017 23:53
o-Xylene	50	U	30	50	100	ug/L	100	31-Dec-2017 23:53
sec-Butylbenzene	50	U	30	50	100	ug/L	100	31-Dec-2017 23:53
Styrene	50	U	30	50	100	ug/L	100	31-Dec-2017 23:53
tert-Butylbenzene	50	U	30	50	100	ug/L	100	31-Dec-2017 23:53
Tetrachloroethene	50	U	30	50	100	ug/L	100	31-Dec-2017 23:53
Toluene	50	U	20	50	100	ug/L	100	31-Dec-2017 23:53
trans-1,2-Dichloroethene	50	U	20	50	100	ug/L	100	31-Dec-2017 23:53
trans-1,3-Dichloropropene	50	U	20	50	100	ug/L	100	31-Dec-2017 23:53
Trichloroethene	**2,600**		**20**	**50**	**100**	**ug/L**	100	31-Dec-2017 23:53
Trichlorofluoromethane	50	U	30	50	100	ug/L	100	31-Dec-2017 23:53
Vinyl chloride	50	U	20	50	100	ug/L	100	31-Dec-2017 23:53
Surr: 1,2-Dichloroethane-d4	*95.4*			**0**	*81-118*	*%REC*	*100*	*31-Dec-2017 23:53*
Surr: 1,2-Dichloroethane-d4	*91.4*			**0**	*81-118*	*%REC*	*1000*	*01-Jan-2018 00:20*
Surr: 4-Bromofluorobenzene	*97.3*			**0**	*85-114*	*%REC*	*1000*	*01-Jan-2018 00:20*
Surr: 4-Bromofluorobenzene	*98.9*			**0**	*85-114*	*%REC*	*100*	*31-Dec-2017 23:53*
Surr: Dibromofluoromethane	*97.5*			**0**	*80-119*	*%REC*	*100*	*31-Dec-2017 23:53*
Surr: Dibromofluoromethane	*96.0*			**0**	*80-119*	*%REC*	*1000*	*01-Jan-2018 00:20*
Surr: Toluene-d8	*96.5*			**0**	*89-112*	*%REC*	*1000*	*01-Jan-2018 00:20*
Surr: Toluene-d8	*95.8*			**0**	*89-112*	*%REC*	*100*	*31-Dec-2017 23:53*

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

Revision:1

ALS Group USA, Corp Date: 02-Feb-18

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
Sample ID: MW2_122017
Collection Date: 20-Dec-2017 10:50

ANALYTICAL REPORT
WorkOrder:HS17121224
Lab ID:HS17121224-03
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		**Method:SW6020**				Prep:SW3010A / 04-Jan-2018		Analyst: JDE
Aluminum	**0.0381**		**0.00180**	**0.00500**	**0.0100**	**mg/L**	1	05-Jan-2018 13:11
Antimony	**0.000858**	J	**0.000400**	**0.00100**	**0.00200**	**mg/L**	1	05-Jan-2018 13:11
Arsenic	**0.00986**		**0.000400**	**0.00100**	**0.00200**	**mg/L**	1	05-Jan-2018 13:11
Barium	**2.60**		**0.00950**	**0.0125**	**0.0200**	**mg/L**	5	05-Jan-2018 16:43
Beryllium	**0.000620**	J	**0.000200**	**0.00100**	**0.00200**	**mg/L**	1	05-Jan-2018 13:11
Cadmium	**0.000320**	J	**0.000200**	**0.00100**	**0.00200**	**mg/L**	1	05-Jan-2018 13:11
Calcium	**79.7**		**0.0340**	**0.100**	**0.500**	**mg/L**	1	05-Jan-2018 13:11
Chromium	**0.0158**		**0.000400**	**0.00100**	**0.00400**	**mg/L**	1	05-Jan-2018 13:11
Cobalt	**0.0660**		**0.000200**	**0.00100**	**0.00500**	**mg/L**	1	05-Jan-2018 13:11
Copper	0.00200	U	0.00100	0.00200	0.00200	mg/L	1	05-Jan-2018 13:11
Iron	**16.4**		**0.0120**	**0.100**	**0.200**	**mg/L**	1	05-Jan-2018 13:11
Lead	0.00100	U	0.000600	0.00100	0.00200	mg/L	1	05-Jan-2018 13:11
Magnesium	**54.1**		**0.0100**	**0.100**	**0.200**	**mg/L**	1	05-Jan-2018 13:11
Manganese	**3.47**		**0.00350**	**0.00500**	**0.0250**	**mg/L**	5	05-Jan-2018 16:43
Nickel	**0.0503**		**0.000600**	**0.00100**	**0.00200**	**mg/L**	1	05-Jan-2018 13:11
Potassium	**3.24**		**0.0180**	**0.100**	**0.200**	**mg/L**	1	05-Jan-2018 13:11
Selenium	0.00200	U	0.00110	0.00200	0.00200	mg/L	1	05-Jan-2018 13:11
Silver	0.00100	U	0.000200	0.00100	0.00200	mg/L	1	05-Jan-2018 13:11
Sodium	**226**		**0.0700**	**0.500**	**1.00**	**mg/L**	5	05-Jan-2018 20:21
Thallium	0.00100	U	0.000200	0.00100	0.00200	mg/L	1	05-Jan-2018 13:11
Vanadium	**0.000998**	J	**0.000600**	**0.00100**	**0.00500**	**mg/L**	1	05-Jan-2018 13:11
Zinc	**0.0744**		**0.00200**	**0.00250**	**0.00400**	**mg/L**	1	05-Jan-2018 13:11
MERCURY BY SW7470A		**Method:SW7470**				Prep:SW7470 / 05-Jan-2018		Analyst: JCJ
Mercury	0.000100	U	0.0000300	0.000100	0.000200	mg/L	1	05-Jan-2018 14:18
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: SUB
Subcontract Analysis	See Attached		0	0		NA	1	12-Jan-2018 11:16

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

Revision:1

ALS Group USA, Corp Date: 02-Feb-18

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
Sample ID: 18CPTMW01SW_122017
Collection Date: 20-Dec-2017 13:00

ANALYTICAL REPORT
WorkOrder:HS17121224
Lab ID:HS17121224-04
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: AKP
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	01-Jan-2018 19:25
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	01-Jan-2018 19:25
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	ug/L	1	01-Jan-2018 19:25
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	01-Jan-2018 19:25
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	01-Jan-2018 19:25
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	01-Jan-2018 19:25
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	ug/L	1	01-Jan-2018 19:25
1,2,3-Trichlorobenzene	0.50	U	0.40	0.50	1.0	ug/L	1	01-Jan-2018 19:25
1,2,3-Trichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	01-Jan-2018 19:25
1,2,4-Trichlorobenzene	0.50	U	0.50	0.50	1.0	ug/L	1	01-Jan-2018 19:25
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	01-Jan-2018 19:25
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	01-Jan-2018 19:25
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	01-Jan-2018 19:25
1,2-Dichlorobenzene	0.50	U	0.50	0.50	1.0	ug/L	1	01-Jan-2018 19:25
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	01-Jan-2018 19:25
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	01-Jan-2018 19:25
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	01-Jan-2018 19:25
1,3-Dichlorobenzene	0.50	U	0.40	0.50	1.0	ug/L	1	01-Jan-2018 19:25
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	ug/L	1	01-Jan-2018 19:25
1,4-Dichlorobenzene	0.50	U	0.40	0.50	1.0	ug/L	1	01-Jan-2018 19:25
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	01-Jan-2018 19:25
2-Butanone	0.50	U	0.50	0.50	2.0	ug/L	1	01-Jan-2018 19:25
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	ug/L	1	01-Jan-2018 19:25
2-Hexanone	1.0	U	1.0	1.0	2.0	ug/L	1	01-Jan-2018 19:25
4-Chlorotoluene	0.50	U	0.40	0.50	1.0	ug/L	1	01-Jan-2018 19:25
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	ug/L	1	01-Jan-2018 19:25
4-Methyl-2-pentanone	1.0	U	0.70	1.0	2.0	ug/L	1	01-Jan-2018 19:25
Acetone	1.0	U	0.40	1.0	2.0	ug/L	1	01-Jan-2018 19:25
Benzene	**5.8**		**0.20**	**0.50**	**1.0**	**ug/L**	1	01-Jan-2018 19:25
Bromobenzene	0.50	U	0.40	0.50	1.0	ug/L	1	01-Jan-2018 19:25
Bromochloromethane	**3.7**		**0.20**	**0.50**	**1.0**	**ug/L**	1	01-Jan-2018 19:25
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	01-Jan-2018 19:25
Bromoform	0.50	U	0.40	0.50	1.0	ug/L	1	01-Jan-2018 19:25
Bromomethane	0.50	U	0.40	0.50	1.0	ug/L	1	01-Jan-2018 19:25
Carbon disulfide	1.0	U	0.60	1.0	2.0	ug/L	1	01-Jan-2018 19:25
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	ug/L	1	01-Jan-2018 19:25
Chlorobenzene	0.50	U	0.30	0.50	1.0	ug/L	1	01-Jan-2018 19:25
Chloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	01-Jan-2018 19:25

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

Revision:1

ALS Group USA, Corp Date: 02-Feb-18

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
Sample ID: 18CPTMW01SW_122017
Collection Date: 20-Dec-2017 13:00

ANALYTICAL REPORT
WorkOrder:HS17121224
Lab ID:HS17121224-04
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: AKP
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	01-Jan-2018 19:25
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	01-Jan-2018 19:25
cis-1,2-Dichloroethene	**13**		**0.20**	**0.50**	**1.0**	**ug/L**	1	01-Jan-2018 19:25
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	01-Jan-2018 19:25
Dibromochloromethane	0.50	U	0.30	0.50	1.0	ug/L	1	01-Jan-2018 19:25
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	01-Jan-2018 19:25
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	01-Jan-2018 19:25
Ethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	01-Jan-2018 19:25
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	01-Jan-2018 19:25
Isopropylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	01-Jan-2018 19:25
m,p-Xylene	**1.7**	J	**0.50**	**1.0**	**2.0**	**ug/L**	1	01-Jan-2018 19:25
Methylene chloride	**1,500**		**4.0**	**5.0**	**20**	**ug/L**	10	31-Dec-2017 23:01
n-Butylbenzene	0.50	U	0.40	0.50	1.0	ug/L	1	01-Jan-2018 19:25
n-Propylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	01-Jan-2018 19:25
Naphthalene	0.50	U	0.30	0.50	1.0	ug/L	1	01-Jan-2018 19:25
o-Xylene	**1.1**		**0.30**	**0.50**	**1.0**	**ug/L**	1	01-Jan-2018 19:25
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	01-Jan-2018 19:25
Styrene	0.50	U	0.30	0.50	1.0	ug/L	1	01-Jan-2018 19:25
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	01-Jan-2018 19:25
Tetrachloroethene	0.50	U	0.30	0.50	1.0	ug/L	1	01-Jan-2018 19:25
Toluene	**4.0**		**0.20**	**0.50**	**1.0**	**ug/L**	1	01-Jan-2018 19:25
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	01-Jan-2018 19:25
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	01-Jan-2018 19:25
Trichloroethene	**90**		**0.20**	**0.50**	**1.0**	**ug/L**	1	01-Jan-2018 19:25
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	01-Jan-2018 19:25
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	01-Jan-2018 19:25
Surr: 1,2-Dichloroethane-d4	*92.7*			**0**	*81-118*	*%REC*	*10*	*31-Dec-2017 23:01*
Surr: 1,2-Dichloroethane-d4	*91.6*			**0**	*81-118*	*%REC*	*1*	*01-Jan-2018 19:25*
Surr: 4-Bromofluorobenzene	*98.0*			**0**	*85-114*	*%REC*	*10*	*31-Dec-2017 23:01*
Surr: 4-Bromofluorobenzene	*97.6*			**0**	*85-114*	*%REC*	*1*	*01-Jan-2018 19:25*
Surr: Dibromofluoromethane	*95.4*			**0**	*80-119*	*%REC*	*10*	*31-Dec-2017 23:01*
Surr: Dibromofluoromethane	*99.9*			**0**	*80-119*	*%REC*	*1*	*01-Jan-2018 19:25*
Surr: Toluene-d8	*99.6*			**0**	*89-112*	*%REC*	*10*	*31-Dec-2017 23:01*
Surr: Toluene-d8	*95.9*			**0**	*89-112*	*%REC*	*1*	*01-Jan-2018 19:25*

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

Revision:1

ALS Group USA, Corp Date: 02-Feb-18

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
Sample ID: 18CPTMW01SW_122017
Collection Date: 20-Dec-2017 13:00

ANALYTICAL REPORT
WorkOrder:HS17121224
Lab ID:HS17121224-04
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		**Method:SW6020**				Prep:SW3010A / 04-Jan-2018		Analyst: JDE
Aluminum	**0.00872**	J	**0.00180**	**0.00500**	**0.0100**	**mg/L**	1	05-Jan-2018 13:18
Antimony	**0.000593**	J	**0.000400**	**0.00100**	**0.00200**	**mg/L**	1	05-Jan-2018 13:18
Arsenic	**0.0150**		**0.000400**	**0.00100**	**0.00200**	**mg/L**	1	05-Jan-2018 13:18
Barium	**0.913**		**0.00190**	**0.00250**	**0.00400**	**mg/L**	1	05-Jan-2018 13:18
Beryllium	0.00100	U	0.000200	0.00100	0.00200	mg/L	1	05-Jan-2018 13:18
Cadmium	0.00100	U	0.000200	0.00100	0.00200	mg/L	1	05-Jan-2018 13:18
Calcium	**30.2**		**0.0340**	**0.100**	**0.500**	**mg/L**	1	05-Jan-2018 13:18
Chromium	0.00100	U	0.000400	0.00100	0.00400	mg/L	1	05-Jan-2018 13:18
Cobalt	**0.00101**	J	**0.000200**	**0.00100**	**0.00500**	**mg/L**	1	05-Jan-2018 13:18
Copper	0.00200	U	0.00100	0.00200	0.00200	mg/L	1	05-Jan-2018 13:18
Iron	**55.5**		**0.0120**	**0.100**	**0.200**	**mg/L**	1	05-Jan-2018 13:18
Lead	0.00100	U	0.000600	0.00100	0.00200	mg/L	1	05-Jan-2018 13:18
Magnesium	**19.5**		**0.0100**	**0.100**	**0.200**	**mg/L**	1	05-Jan-2018 13:18
Manganese	**0.602**		**0.000700**	**0.00100**	**0.00500**	**mg/L**	1	05-Jan-2018 13:18
Nickel	**0.00225**		**0.000600**	**0.00100**	**0.00200**	**mg/L**	1	05-Jan-2018 13:18
Potassium	**5.96**		**0.0180**	**0.100**	**0.200**	**mg/L**	1	05-Jan-2018 13:18
Selenium	0.00200	U	0.00110	0.00200	0.00200	mg/L	1	05-Jan-2018 13:18
Silver	0.00100	U	0.000200	0.00100	0.00200	mg/L	1	05-Jan-2018 13:18
Sodium	**101**		**0.0140**	**0.100**	**0.200**	**mg/L**	1	05-Jan-2018 13:18
Thallium	0.00100	U	0.000200	0.00100	0.00200	mg/L	1	05-Jan-2018 13:18
Vanadium	0.00100	U	0.000600	0.00100	0.00500	mg/L	1	05-Jan-2018 13:18
Zinc	**0.00377**	J	**0.00200**	**0.00250**	**0.00400**	**mg/L**	1	05-Jan-2018 13:18
MERCURY BY SW7470A		**Method:SW7470**				Prep:SW7470 / 05-Jan-2018		Analyst: JCJ
Mercury	0.000100	U	0.0000300	0.000100	0.000200	mg/L	1	05-Jan-2018 14:20
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: SUB
Subcontract Analysis	See Attached		0	0		NA	1	12-Jan-2018 11:16

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

Revision:1

ALS Group USA, Corp Date: 02-Feb-18

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
Sample ID: MW5_122017
Collection Date: 20-Dec-2017 13:55

ANALYTICAL REPORT
WorkOrder:HS17121224
Lab ID:HS17121224-05
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: AKP
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	31-Dec-2017 19:23
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	31-Dec-2017 19:23
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	ug/L	1	31-Dec-2017 19:23
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	31-Dec-2017 19:23
1,1-Dichloroethane	**3.3**		**0.20**	**0.50**	**1.0**	**ug/L**	1	31-Dec-2017 19:23
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	31-Dec-2017 19:23
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	ug/L	1	31-Dec-2017 19:23
1,2,3-Trichlorobenzene	0.50	U	0.40	0.50	1.0	ug/L	1	31-Dec-2017 19:23
1,2,3-Trichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	31-Dec-2017 19:23
1,2,4-Trichlorobenzene	0.50	U	0.50	0.50	1.0	ug/L	1	31-Dec-2017 19:23
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	31-Dec-2017 19:23
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	31-Dec-2017 19:23
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	31-Dec-2017 19:23
1,2-Dichlorobenzene	0.50	U	0.50	0.50	1.0	ug/L	1	31-Dec-2017 19:23
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	31-Dec-2017 19:23
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	31-Dec-2017 19:23
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	31-Dec-2017 19:23
1,3-Dichlorobenzene	0.50	U	0.40	0.50	1.0	ug/L	1	31-Dec-2017 19:23
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	ug/L	1	31-Dec-2017 19:23
1,4-Dichlorobenzene	0.50	U	0.40	0.50	1.0	ug/L	1	31-Dec-2017 19:23
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	31-Dec-2017 19:23
2-Butanone	0.50	U	0.50	0.50	2.0	ug/L	1	31-Dec-2017 19:23
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	ug/L	1	31-Dec-2017 19:23
2-Hexanone	1.0	U	1.0	1.0	2.0	ug/L	1	31-Dec-2017 19:23
4-Chlorotoluene	0.50	U	0.40	0.50	1.0	ug/L	1	31-Dec-2017 19:23
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	ug/L	1	31-Dec-2017 19:23
4-Methyl-2-pentanone	1.0	U	0.70	1.0	2.0	ug/L	1	31-Dec-2017 19:23
Acetone	1.0	U	0.40	1.0	2.0	ug/L	1	31-Dec-2017 19:23
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	31-Dec-2017 19:23
Bromobenzene	0.50	U	0.40	0.50	1.0	ug/L	1	31-Dec-2017 19:23
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	31-Dec-2017 19:23
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	31-Dec-2017 19:23
Bromoform	0.50	U	0.40	0.50	1.0	ug/L	1	31-Dec-2017 19:23
Bromomethane	0.50	U	0.40	0.50	1.0	ug/L	1	31-Dec-2017 19:23
Carbon disulfide	1.0	U	0.60	1.0	2.0	ug/L	1	31-Dec-2017 19:23
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	ug/L	1	31-Dec-2017 19:23
Chlorobenzene	0.50	U	0.30	0.50	1.0	ug/L	1	31-Dec-2017 19:23
Chloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	31-Dec-2017 19:23

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

Revision:1

ALS Group USA, Corp Date: 02-Feb-18

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
Sample ID: MW5_122017
Collection Date: 20-Dec-2017 13:55

ANALYTICAL REPORT
WorkOrder:HS17121224
Lab ID:HS17121224-05
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: AKP
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	31-Dec-2017 19:23
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	31-Dec-2017 19:23
cis-1,2-Dichloroethene	**12**		**0.20**	**0.50**	**1.0**	**ug/L**	1	31-Dec-2017 19:23
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	31-Dec-2017 19:23
Dibromochloromethane	0.50	U	0.30	0.50	1.0	ug/L	1	31-Dec-2017 19:23
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	31-Dec-2017 19:23
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	31-Dec-2017 19:23
Ethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	31-Dec-2017 19:23
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	31-Dec-2017 19:23
Isopropylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	31-Dec-2017 19:23
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	31-Dec-2017 19:23
Methylene chloride	0.50	U	0.40	0.50	2.0	ug/L	1	31-Dec-2017 19:23
n-Butylbenzene	0.50	U	0.40	0.50	1.0	ug/L	1	31-Dec-2017 19:23
n-Propylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	31-Dec-2017 19:23
Naphthalene	0.50	U	0.30	0.50	1.0	ug/L	1	31-Dec-2017 19:23
o-Xylene	0.50	U	0.30	0.50	1.0	ug/L	1	31-Dec-2017 19:23
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	31-Dec-2017 19:23
Styrene	0.50	U	0.30	0.50	1.0	ug/L	1	31-Dec-2017 19:23
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	31-Dec-2017 19:23
Tetrachloroethene	0.50	U	0.30	0.50	1.0	ug/L	1	31-Dec-2017 19:23
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	31-Dec-2017 19:23
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	31-Dec-2017 19:23
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	31-Dec-2017 19:23
Trichloroethene	**46**		**0.20**	**0.50**	**1.0**	**ug/L**	1	31-Dec-2017 19:23
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	31-Dec-2017 19:23
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	31-Dec-2017 19:23
Surr: 1,2-Dichloroethane-d4	*93.2*			**0**	*81-118*	*%REC*	*1*	*31-Dec-2017 19:23*
Surr: 4-Bromofluorobenzene	*98.0*			**0**	*85-114*	*%REC*	*1*	*31-Dec-2017 19:23*
Surr: Dibromofluoromethane	*99.3*			**0**	*80-119*	*%REC*	*1*	*31-Dec-2017 19:23*
Surr: Toluene-d8	*95.8*			**0**	*89-112*	*%REC*	*1*	*31-Dec-2017 19:23*

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

Revision:1

ALS Group USA, Corp Date: 02-Feb-18

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
Sample ID: MW5_122017
Collection Date: 20-Dec-2017 13:55

ANALYTICAL REPORT
WorkOrder:HS17121224
Lab ID:HS17121224-05
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		**Method:SW6020**				Prep:SW3010A / 04-Jan-2018		Analyst: JDE
Aluminum	**0.00867**	J	**0.00180**	**0.00500**	**0.0100**	**mg/L**	1	05-Jan-2018 13:20
Antimony	**0.000519**	J	**0.000400**	**0.00100**	**0.00200**	**mg/L**	1	05-Jan-2018 13:20
Arsenic	0.00100	U	0.000400	0.00100	0.00200	mg/L	1	05-Jan-2018 13:20
Barium	**0.872**		**0.00190**	**0.00250**	**0.00400**	**mg/L**	1	05-Jan-2018 13:20
Beryllium	0.00100	U	0.000200	0.00100	0.00200	mg/L	1	05-Jan-2018 13:20
Cadmium	**0.000798**	J	**0.000200**	**0.00100**	**0.00200**	**mg/L**	1	05-Jan-2018 13:20
Calcium	**21.7**		**0.0340**	**0.100**	**0.500**	**mg/L**	1	05-Jan-2018 13:20
Chromium	**0.581**		**0.000400**	**0.00100**	**0.00400**	**mg/L**	1	05-Jan-2018 13:20
Cobalt	**0.00537**		**0.000200**	**0.00100**	**0.00500**	**mg/L**	1	05-Jan-2018 13:20
Copper	**0.00622**		**0.00100**	**0.00200**	**0.00200**	**mg/L**	1	05-Jan-2018 13:20
Iron	**2.37**		**0.0120**	**0.100**	**0.200**	**mg/L**	1	05-Jan-2018 13:20
Lead	0.00100	U	0.000600	0.00100	0.00200	mg/L	1	05-Jan-2018 13:20
Magnesium	**22.0**		**0.0100**	**0.100**	**0.200**	**mg/L**	1	05-Jan-2018 13:20
Manganese	**0.150**		**0.000700**	**0.00100**	**0.00500**	**mg/L**	1	05-Jan-2018 13:20
Nickel	**0.323**		**0.000600**	**0.00100**	**0.00200**	**mg/L**	1	05-Jan-2018 13:20
Potassium	**2.20**		**0.0180**	**0.100**	**0.200**	**mg/L**	1	05-Jan-2018 13:20
Selenium	0.00200	U	0.00110	0.00200	0.00200	mg/L	1	05-Jan-2018 13:20
Silver	0.00100	U	0.000200	0.00100	0.00200	mg/L	1	05-Jan-2018 13:20
Sodium	**117**		**0.0140**	**0.100**	**0.200**	**mg/L**	1	05-Jan-2018 13:20
Thallium	0.00100	U	0.000200	0.00100	0.00200	mg/L	1	05-Jan-2018 13:20
Vanadium	**0.000869**	J	**0.000600**	**0.00100**	**0.00500**	**mg/L**	1	05-Jan-2018 13:20
Zinc	**0.0212**		**0.00200**	**0.00250**	**0.00400**	**mg/L**	1	05-Jan-2018 13:20
MERCURY BY SW7470A		**Method:SW7470**				Prep:SW7470 / 05-Jan-2018		Analyst: JCJ
Mercury	0.000100	U	0.0000300	0.000100	0.000200	mg/L	1	05-Jan-2018 14:22
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: SUB
Subcontract Analysis	See Attached		0	0		NA	1	12-Jan-2018 11:16

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

Revision:1

ALS Group USA, Corp Date: 02-Feb-18

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
Sample ID: MW3_122117
Collection Date: 21-Dec-2017 08:45

ANALYTICAL REPORT
WorkOrder:HS17121224
Lab ID:HS17121224-06
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: AKP
1,1,1,2-Tetrachloroethane	2.5	U	1.5	2.5	5.0	ug/L	5	31-Dec-2017 20:17
1,1,1-Trichloroethane	2.5	U	1.0	2.5	5.0	ug/L	5	31-Dec-2017 20:17
1,1,2,2-Tetrachloroethane	2.5	U	2.5	2.5	5.0	ug/L	5	31-Dec-2017 20:17
1,1,2-Trichloroethane	2.5	U	1.5	2.5	5.0	ug/L	5	31-Dec-2017 20:17
1,1-Dichloroethane	2.5	U	1.0	2.5	5.0	ug/L	5	31-Dec-2017 20:17
1,1-Dichloroethene	**42**		**1.0**	**2.5**	**5.0**	**ug/L**	5	31-Dec-2017 20:17
1,1-Dichloropropene	2.5	U	1.5	2.5	5.0	ug/L	5	31-Dec-2017 20:17
1,2,3-Trichlorobenzene	2.5	U	2.0	2.5	5.0	ug/L	5	31-Dec-2017 20:17
1,2,3-Trichloropropane	2.5	U	2.5	2.5	5.0	ug/L	5	31-Dec-2017 20:17
1,2,4-Trichlorobenzene	2.5	U	2.5	2.5	5.0	ug/L	5	31-Dec-2017 20:17
1,2,4-Trimethylbenzene	2.5	U	1.5	2.5	5.0	ug/L	5	31-Dec-2017 20:17
1,2-Dibromo-3-chloropropane	2.5	U	1.0	2.5	5.0	ug/L	5	31-Dec-2017 20:17
1,2-Dibromoethane	2.5	U	1.0	2.5	5.0	ug/L	5	31-Dec-2017 20:17
1,2-Dichlorobenzene	2.5	U	2.5	2.5	5.0	ug/L	5	31-Dec-2017 20:17
1,2-Dichloroethane	2.5	U	1.0	2.5	5.0	ug/L	5	31-Dec-2017 20:17
1,2-Dichloropropane	2.5	U	2.5	2.5	5.0	ug/L	5	31-Dec-2017 20:17
1,3,5-Trimethylbenzene	2.5	U	1.5	2.5	5.0	ug/L	5	31-Dec-2017 20:17
1,3-Dichlorobenzene	2.5	U	2.0	2.5	5.0	ug/L	5	31-Dec-2017 20:17
1,3-Dichloropropane	2.5	U	1.5	2.5	5.0	ug/L	5	31-Dec-2017 20:17
1,4-Dichlorobenzene	2.5	U	2.0	2.5	5.0	ug/L	5	31-Dec-2017 20:17
2,2-Dichloropropane	2.5	U	1.0	2.5	5.0	ug/L	5	31-Dec-2017 20:17
2-Butanone	2.5	U	2.5	2.5	10	ug/L	5	31-Dec-2017 20:17
2-Chlorotoluene	2.5	U	1.5	2.5	5.0	ug/L	5	31-Dec-2017 20:17
2-Hexanone	5.0	U	5.0	5.0	10	ug/L	5	31-Dec-2017 20:17
4-Chlorotoluene	2.5	U	2.0	2.5	5.0	ug/L	5	31-Dec-2017 20:17
4-Isopropyltoluene	2.5	U	1.5	2.5	5.0	ug/L	5	31-Dec-2017 20:17
4-Methyl-2-pentanone	5.0	U	3.5	5.0	10	ug/L	5	31-Dec-2017 20:17
Acetone	5.0	U	2.0	5.0	10	ug/L	5	31-Dec-2017 20:17
Benzene	2.5	U	1.0	2.5	5.0	ug/L	5	31-Dec-2017 20:17
Bromobenzene	2.5	U	2.0	2.5	5.0	ug/L	5	31-Dec-2017 20:17
Bromochloromethane	2.5	U	1.0	2.5	5.0	ug/L	5	31-Dec-2017 20:17
Bromodichloromethane	2.5	U	1.0	2.5	5.0	ug/L	5	31-Dec-2017 20:17
Bromoform	2.5	U	2.0	2.5	5.0	ug/L	5	31-Dec-2017 20:17
Bromomethane	2.5	U	2.0	2.5	5.0	ug/L	5	31-Dec-2017 20:17
Carbon disulfide	5.0	U	3.0	5.0	10	ug/L	5	31-Dec-2017 20:17
Carbon tetrachloride	2.5	U	2.5	2.5	5.0	ug/L	5	31-Dec-2017 20:17
Chlorobenzene	2.5	U	1.5	2.5	5.0	ug/L	5	31-Dec-2017 20:17
Chloroethane	2.5	U	1.5	2.5	5.0	ug/L	5	31-Dec-2017 20:17

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

Revision:1

ALS Group USA, Corp Date: 02-Feb-18

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
Sample ID: MW3_122117
Collection Date: 21-Dec-2017 08:45

ANALYTICAL REPORT
WorkOrder:HS17121224
Lab ID:HS17121224-06
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: AKP
Chloroform	2.5	U	1.0	2.5	5.0	ug/L	5	31-Dec-2017 20:17
Chloromethane	2.5	U	1.0	2.5	5.0	ug/L	5	31-Dec-2017 20:17
cis-1,2-Dichloroethene	**84**		**1.0**	**2.5**	**5.0**	**ug/L**	5	31-Dec-2017 20:17
cis-1,3-Dichloropropene	2.5	U	0.50	2.5	5.0	ug/L	5	31-Dec-2017 20:17
Dibromochloromethane	2.5	U	1.5	2.5	5.0	ug/L	5	31-Dec-2017 20:17
Dibromomethane	2.5	U	1.0	2.5	5.0	ug/L	5	31-Dec-2017 20:17
Dichlorodifluoromethane	2.5	U	1.5	2.5	5.0	ug/L	5	31-Dec-2017 20:17
Ethylbenzene	2.5	U	1.5	2.5	5.0	ug/L	5	31-Dec-2017 20:17
Hexachlorobutadiene	5.0	U	5.0	5.0	5.0	ug/L	5	31-Dec-2017 20:17
Isopropylbenzene	2.5	U	1.5	2.5	5.0	ug/L	5	31-Dec-2017 20:17
m,p-Xylene	5.0	U	2.5	5.0	10	ug/L	5	31-Dec-2017 20:17
Methylene chloride	2.5	U	2.0	2.5	10	ug/L	5	31-Dec-2017 20:17
n-Butylbenzene	2.5	U	2.0	2.5	5.0	ug/L	5	31-Dec-2017 20:17
n-Propylbenzene	2.5	U	1.5	2.5	5.0	ug/L	5	31-Dec-2017 20:17
Naphthalene	2.5	U	1.5	2.5	5.0	ug/L	5	31-Dec-2017 20:17
o-Xylene	2.5	U	1.5	2.5	5.0	ug/L	5	31-Dec-2017 20:17
sec-Butylbenzene	2.5	U	1.5	2.5	5.0	ug/L	5	31-Dec-2017 20:17
Styrene	2.5	U	1.5	2.5	5.0	ug/L	5	31-Dec-2017 20:17
tert-Butylbenzene	2.5	U	1.5	2.5	5.0	ug/L	5	31-Dec-2017 20:17
Tetrachloroethene	2.5	U	1.5	2.5	5.0	ug/L	5	31-Dec-2017 20:17
Toluene	2.5	U	1.0	2.5	5.0	ug/L	5	31-Dec-2017 20:17
trans-1,2-Dichloroethene	2.5	U	1.0	2.5	5.0	ug/L	5	31-Dec-2017 20:17
trans-1,3-Dichloropropene	2.5	U	1.0	2.5	5.0	ug/L	5	31-Dec-2017 20:17
Trichloroethene	**470**		**1.0**	**2.5**	**5.0**	**ug/L**	5	31-Dec-2017 20:17
Trichlorofluoromethane	2.5	U	1.5	2.5	5.0	ug/L	5	31-Dec-2017 20:17
Vinyl chloride	**29**		**1.0**	**2.5**	**5.0**	**ug/L**	5	31-Dec-2017 20:17
Surr: 1,2-Dichloroethane-d4	*94.1*			**0**	*81-118*	*%REC*	*5*	*31-Dec-2017 20:17*
Surr: 4-Bromofluorobenzene	*98.7*			**0**	*85-114*	*%REC*	*5*	*31-Dec-2017 20:17*
Surr: Dibromofluoromethane	*98.7*			**0**	*80-119*	*%REC*	*5*	*31-Dec-2017 20:17*
Surr: Toluene-d8	*96.3*			**0**	*89-112*	*%REC*	*5*	*31-Dec-2017 20:17*

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

Revision:1

ALS Group USA, Corp Date: 02-Feb-18

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
Sample ID: MW3_122117
Collection Date: 21-Dec-2017 08:45

ANALYTICAL REPORT
WorkOrder:HS17121224
Lab ID:HS17121224-06
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		**Method:SW6020**				Prep:SW3010A / 04-Jan-2018		Analyst: JDE
Aluminum	**0.00504**	J	**0.00180**	**0.00500**	**0.0100**	**mg/L**	1	05-Jan-2018 13:23
Antimony	**0.000414**	J	**0.000400**	**0.00100**	**0.00200**	**mg/L**	1	05-Jan-2018 13:23
Arsenic	0.00100	U	0.000400	0.00100	0.00200	mg/L	1	05-Jan-2018 13:23
Barium	**0.479**		**0.00190**	**0.00250**	**0.00400**	**mg/L**	1	05-Jan-2018 13:23
Beryllium	0.00100	U	0.000200	0.00100	0.00200	mg/L	1	05-Jan-2018 13:23
Cadmium	**0.000290**	J	**0.000200**	**0.00100**	**0.00200**	**mg/L**	1	05-Jan-2018 13:23
Calcium	**28.1**		**0.0340**	**0.100**	**0.500**	**mg/L**	1	05-Jan-2018 13:23
Chromium	**0.000552**	J	**0.000400**	**0.00100**	**0.00400**	**mg/L**	1	05-Jan-2018 13:23
Cobalt	**0.0104**		**0.000200**	**0.00100**	**0.00500**	**mg/L**	1	05-Jan-2018 13:23
Copper	0.00200	U	0.00100	0.00200	0.00200	mg/L	1	05-Jan-2018 13:23
Iron	**0.599**		**0.0120**	**0.100**	**0.200**	**mg/L**	1	05-Jan-2018 13:23
Lead	0.00100	U	0.000600	0.00100	0.00200	mg/L	1	05-Jan-2018 13:23
Magnesium	**15.1**		**0.0100**	**0.100**	**0.200**	**mg/L**	1	05-Jan-2018 13:23
Manganese	**2.20**		**0.00350**	**0.00500**	**0.0250**	**mg/L**	5	05-Jan-2018 16:45
Nickel	**0.00717**		**0.000600**	**0.00100**	**0.00200**	**mg/L**	1	05-Jan-2018 13:23
Potassium	**1.62**		**0.0180**	**0.100**	**0.200**	**mg/L**	1	05-Jan-2018 13:23
Selenium	0.00200	U	0.00110	0.00200	0.00200	mg/L	1	05-Jan-2018 13:23
Silver	0.00100	U	0.000200	0.00100	0.00200	mg/L	1	05-Jan-2018 13:23
Sodium	**217**		**0.0700**	**0.500**	**1.00**	**mg/L**	5	05-Jan-2018 20:24
Thallium	0.00100	U	0.000200	0.00100	0.00200	mg/L	1	05-Jan-2018 13:23
Vanadium	0.00100	U	0.000600	0.00100	0.00500	mg/L	1	05-Jan-2018 13:23
Zinc	**0.00590**		**0.00200**	**0.00250**	**0.00400**	**mg/L**	1	05-Jan-2018 13:23
MERCURY BY SW7470A		**Method:SW7470**				Prep:SW7470 / 05-Jan-2018		Analyst: JCJ
Mercury	0.000100	U	0.0000300	0.000100	0.000200	mg/L	1	05-Jan-2018 14:27
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: SUB
Subcontract Analysis	See Attached		0	0		NA	1	12-Jan-2018 11:16

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

Revision:1

ALS Group USA, Corp Date: 02-Feb-18

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
Sample ID: 18CPTMW08DW_122117
Collection Date: 21-Dec-2017 09:45

ANALYTICAL REPORT
WorkOrder:HS17121224
Lab ID:HS17121224-07
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: SUB
Subcontract Analysis	See Attached		0	0		NA	1	12-Jan-2018 11:16

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

Revision:1

ALS Group USA, Corp Date: 02-Feb-18

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
Sample ID: 18CPTMW08SW_122117
Collection Date: 21-Dec-2017 10:45

ANALYTICAL REPORT
WorkOrder:HS17121224
Lab ID:HS17121224-08
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: AKP
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	31-Dec-2017 18:34
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	31-Dec-2017 18:34
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	ug/L	1	31-Dec-2017 18:34
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	31-Dec-2017 18:34
1,1-Dichloroethane	**3.8**		**0.20**	**0.50**	**1.0**	**ug/L**	1	31-Dec-2017 18:34
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	31-Dec-2017 18:34
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	ug/L	1	31-Dec-2017 18:34
1,2,3-Trichlorobenzene	0.50	U	0.40	0.50	1.0	ug/L	1	31-Dec-2017 18:34
1,2,3-Trichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	31-Dec-2017 18:34
1,2,4-Trichlorobenzene	0.50	U	0.50	0.50	1.0	ug/L	1	31-Dec-2017 18:34
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	31-Dec-2017 18:34
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	31-Dec-2017 18:34
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	31-Dec-2017 18:34
1,2-Dichlorobenzene	0.50	U	0.50	0.50	1.0	ug/L	1	31-Dec-2017 18:34
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	31-Dec-2017 18:34
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	31-Dec-2017 18:34
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	31-Dec-2017 18:34
1,3-Dichlorobenzene	0.50	U	0.40	0.50	1.0	ug/L	1	31-Dec-2017 18:34
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	ug/L	1	31-Dec-2017 18:34
1,4-Dichlorobenzene	0.50	U	0.40	0.50	1.0	ug/L	1	31-Dec-2017 18:34
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	31-Dec-2017 18:34
2-Butanone	0.50	U	0.50	0.50	2.0	ug/L	1	31-Dec-2017 18:34
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	ug/L	1	31-Dec-2017 18:34
2-Hexanone	1.0	U	1.0	1.0	2.0	ug/L	1	31-Dec-2017 18:34
4-Chlorotoluene	0.50	U	0.40	0.50	1.0	ug/L	1	31-Dec-2017 18:34
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	ug/L	1	31-Dec-2017 18:34
4-Methyl-2-pentanone	1.0	U	0.70	1.0	2.0	ug/L	1	31-Dec-2017 18:34
Acetone	1.0	U	0.40	1.0	2.0	ug/L	1	31-Dec-2017 18:34
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	31-Dec-2017 18:34
Bromobenzene	0.50	U	0.40	0.50	1.0	ug/L	1	31-Dec-2017 18:34
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	31-Dec-2017 18:34
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	31-Dec-2017 18:34
Bromoform	0.50	U	0.40	0.50	1.0	ug/L	1	31-Dec-2017 18:34
Bromomethane	0.50	U	0.40	0.50	1.0	ug/L	1	31-Dec-2017 18:34
Carbon disulfide	1.0	U	0.60	1.0	2.0	ug/L	1	31-Dec-2017 18:34
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	ug/L	1	31-Dec-2017 18:34
Chlorobenzene	0.50	U	0.30	0.50	1.0	ug/L	1	31-Dec-2017 18:34
Chloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	31-Dec-2017 18:34

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

Revision:1

ALS Group USA, Corp Date: 02-Feb-18

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
Sample ID: 18CPTMW08SW_122117
Collection Date: 21-Dec-2017 10:45

ANALYTICAL REPORT
WorkOrder:HS17121224
Lab ID:HS17121224-08
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: AKP
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	31-Dec-2017 18:34
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	31-Dec-2017 18:34
cis-1,2-Dichloroethene	**15**		**0.20**	**0.50**	**1.0**	**ug/L**	1	31-Dec-2017 18:34
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	31-Dec-2017 18:34
Dibromochloromethane	0.50	U	0.30	0.50	1.0	ug/L	1	31-Dec-2017 18:34
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	31-Dec-2017 18:34
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	31-Dec-2017 18:34
Ethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	31-Dec-2017 18:34
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	31-Dec-2017 18:34
Isopropylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	31-Dec-2017 18:34
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	31-Dec-2017 18:34
Methylene chloride	0.50	U	0.40	0.50	2.0	ug/L	1	31-Dec-2017 18:34
n-Butylbenzene	0.50	U	0.40	0.50	1.0	ug/L	1	31-Dec-2017 18:34
n-Propylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	31-Dec-2017 18:34
Naphthalene	0.50	U	0.30	0.50	1.0	ug/L	1	31-Dec-2017 18:34
o-Xylene	0.50	U	0.30	0.50	1.0	ug/L	1	31-Dec-2017 18:34
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	31-Dec-2017 18:34
Styrene	0.50	U	0.30	0.50	1.0	ug/L	1	31-Dec-2017 18:34
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	31-Dec-2017 18:34
Tetrachloroethene	0.50	U	0.30	0.50	1.0	ug/L	1	31-Dec-2017 18:34
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	31-Dec-2017 18:34
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	31-Dec-2017 18:34
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	31-Dec-2017 18:34
Trichloroethene	**58**		**0.20**	**0.50**	**1.0**	**ug/L**	1	31-Dec-2017 18:34
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	31-Dec-2017 18:34
Vinyl chloride	**7.9**		**0.20**	**0.50**	**1.0**	**ug/L**	1	31-Dec-2017 18:34
Surr: 1,2-Dichloroethane-d4	*92.1*			**0**	*81-118*	*%REC*	*1*	*31-Dec-2017 18:34*
Surr: 4-Bromofluorobenzene	*98.7*			**0**	*85-114*	*%REC*	*1*	*31-Dec-2017 18:34*
Surr: Dibromofluoromethane	*99.1*			**0**	*80-119*	*%REC*	*1*	*31-Dec-2017 18:34*
Surr: Toluene-d8	*94.9*			**0**	*89-112*	*%REC*	*1*	*31-Dec-2017 18:34*
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: SUB
Subcontract Analysis	See Attached		0	0		NA	1	12-Jan-2018 11:16

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

Revision:1

ALS Group USA, Corp Date: 02-Feb-18

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
Sample ID: Trip Blank
Collection Date: 21-Dec-2017 00:00

ANALYTICAL REPORT
WorkOrder:HS17121224
Lab ID:HS17121224-09
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: AKP
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	31-Dec-2017 16:56
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	31-Dec-2017 16:56
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	ug/L	1	31-Dec-2017 16:56
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	31-Dec-2017 16:56
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	31-Dec-2017 16:56
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	31-Dec-2017 16:56
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	ug/L	1	31-Dec-2017 16:56
1,2,3-Trichlorobenzene	0.50	U	0.40	0.50	1.0	ug/L	1	31-Dec-2017 16:56
1,2,3-Trichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	31-Dec-2017 16:56
1,2,4-Trichlorobenzene	0.50	U	0.50	0.50	1.0	ug/L	1	31-Dec-2017 16:56
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	31-Dec-2017 16:56
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	31-Dec-2017 16:56
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	31-Dec-2017 16:56
1,2-Dichlorobenzene	0.50	U	0.50	0.50	1.0	ug/L	1	31-Dec-2017 16:56
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	31-Dec-2017 16:56
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	31-Dec-2017 16:56
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	31-Dec-2017 16:56
1,3-Dichlorobenzene	0.50	U	0.40	0.50	1.0	ug/L	1	31-Dec-2017 16:56
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	ug/L	1	31-Dec-2017 16:56
1,4-Dichlorobenzene	0.50	U	0.40	0.50	1.0	ug/L	1	31-Dec-2017 16:56
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	31-Dec-2017 16:56
2-Butanone	0.50	U	0.50	0.50	2.0	ug/L	1	31-Dec-2017 16:56
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	ug/L	1	31-Dec-2017 16:56
2-Hexanone	1.0	U	1.0	1.0	2.0	ug/L	1	31-Dec-2017 16:56
4-Chlorotoluene	0.50	U	0.40	0.50	1.0	ug/L	1	31-Dec-2017 16:56
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	ug/L	1	31-Dec-2017 16:56
4-Methyl-2-pentanone	1.0	U	0.70	1.0	2.0	ug/L	1	31-Dec-2017 16:56
Acetone	1.0	U	0.40	1.0	2.0	ug/L	1	31-Dec-2017 16:56
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	31-Dec-2017 16:56
Bromobenzene	0.50	U	0.40	0.50	1.0	ug/L	1	31-Dec-2017 16:56
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	31-Dec-2017 16:56
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	31-Dec-2017 16:56
Bromoform	0.50	U	0.40	0.50	1.0	ug/L	1	31-Dec-2017 16:56
Bromomethane	0.50	U	0.40	0.50	1.0	ug/L	1	31-Dec-2017 16:56
Carbon disulfide	1.0	U	0.60	1.0	2.0	ug/L	1	31-Dec-2017 16:56
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	ug/L	1	31-Dec-2017 16:56
Chlorobenzene	0.50	U	0.30	0.50	1.0	ug/L	1	31-Dec-2017 16:56
Chloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	31-Dec-2017 16:56

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

Revision:1

ALS Group USA, Corp Date: 02-Feb-18

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
Sample ID: Trip Blank
Collection Date: 21-Dec-2017 00:00

ANALYTICAL REPORT
WorkOrder:HS17121224
Lab ID:HS17121224-09
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: AKP
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	31-Dec-2017 16:56
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	31-Dec-2017 16:56
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	31-Dec-2017 16:56
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	31-Dec-2017 16:56
Dibromochloromethane	0.50	U	0.30	0.50	1.0	ug/L	1	31-Dec-2017 16:56
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	31-Dec-2017 16:56
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	31-Dec-2017 16:56
Ethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	31-Dec-2017 16:56
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	31-Dec-2017 16:56
Isopropylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	31-Dec-2017 16:56
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	31-Dec-2017 16:56
Methylene chloride	0.50	U	0.40	0.50	2.0	ug/L	1	31-Dec-2017 16:56
n-Butylbenzene	0.50	U	0.40	0.50	1.0	ug/L	1	31-Dec-2017 16:56
n-Propylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	31-Dec-2017 16:56
Naphthalene	0.50	U	0.30	0.50	1.0	ug/L	1	31-Dec-2017 16:56
o-Xylene	0.50	U	0.30	0.50	1.0	ug/L	1	31-Dec-2017 16:56
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	31-Dec-2017 16:56
Styrene	0.50	U	0.30	0.50	1.0	ug/L	1	31-Dec-2017 16:56
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	31-Dec-2017 16:56
Tetrachloroethene	0.50	U	0.30	0.50	1.0	ug/L	1	31-Dec-2017 16:56
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	31-Dec-2017 16:56
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	31-Dec-2017 16:56
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	31-Dec-2017 16:56
Trichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	31-Dec-2017 16:56
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	31-Dec-2017 16:56
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	31-Dec-2017 16:56
Surr: 1,2-Dichloroethane-d4	*90.6*			**0**	*81-118*	*%REC*	*1*	*31-Dec-2017 16:56*
Surr: 4-Bromofluorobenzene	*95.9*			**0**	*85-114*	*%REC*	*1*	*31-Dec-2017 16:56*
Surr: Dibromofluoromethane	*97.8*			**0**	*80-119*	*%REC*	*1*	*31-Dec-2017 16:56*
Surr: Toluene-d8	*95.9*			**0**	*89-112*	*%REC*	*1*	*31-Dec-2017 16:56*

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

Revision:1

WEIGHT LOG

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS17121224

Batch ID: 124039 **Method:** ICP-MS METALS BY SW6020A **Prep:** 3010A

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS17121224-01	1	10	10 (mL)	1
HS17121224-03	1	10	10 (mL)	1
HS17121224-04	1	10	10 (mL)	1
HS17121224-05	1	10	10 (mL)	1
HS17121224-06	1	10	10 (mL)	1

Batch ID: 124068 **Method:** MERCURY BY SW7470A **Prep:** HG_WPR

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS17121224-01	1	10	10 (mL)	1
HS17121224-03	1	10	10 (mL)	1
HS17121224-04	1	10	10 (mL)	1
HS17121224-05	1	10	10 (mL)	1
HS17121224-06	1	10	10 (mL)	1

ALS Group USA, Corp Date: 02-Feb-18

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS17121224

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID 124039	**Test Name :** ICP-MS METALS BY SW6020A			**Matrix:** Water		
HS17121224-01	18CPTMW04SW_122017	20 Dec 2017 08:55		04 Jan 2018 12:18	05 Jan 2018 13:09	1
HS17121224-03	MW2_122017	20 Dec 2017 10:50		04 Jan 2018 12:18	05 Jan 2018 20:21	5
HS17121224-03	MW2_122017	20 Dec 2017 10:50		04 Jan 2018 12:18	05 Jan 2018 16:43	5
HS17121224-03	MW2_122017	20 Dec 2017 10:50		04 Jan 2018 12:18	05 Jan 2018 13:11	1
HS17121224-04	18CPTMW01SW_122017	20 Dec 2017 13:00		04 Jan 2018 12:18	05 Jan 2018 13:18	1
HS17121224-05	MW5_122017	20 Dec 2017 13:55		04 Jan 2018 12:18	05 Jan 2018 13:20	1
HS17121224-06	MW3_122117	21 Dec 2017 08:45		04 Jan 2018 12:18	05 Jan 2018 20:24	5
HS17121224-06	MW3_122117	21 Dec 2017 08:45		04 Jan 2018 12:18	05 Jan 2018 16:45	5
HS17121224-06	MW3_122117	21 Dec 2017 08:45		04 Jan 2018 12:18	05 Jan 2018 13:23	1
Batch ID 124068	**Test Name :** MERCURY BY SW7470A			**Matrix:** Water		
HS17121224-01	18CPTMW04SW_122017	20 Dec 2017 08:55		05 Jan 2018 11:12	05 Jan 2018 14:17	1
HS17121224-03	MW2_122017	20 Dec 2017 10:50		05 Jan 2018 11:12	05 Jan 2018 14:18	1
HS17121224-04	18CPTMW01SW_122017	20 Dec 2017 13:00		05 Jan 2018 11:12	05 Jan 2018 14:20	1
HS17121224-05	MW5_122017	20 Dec 2017 13:55		05 Jan 2018 11:12	05 Jan 2018 14:22	1
HS17121224-06	MW3_122117	21 Dec 2017 08:45		05 Jan 2018 11:12	05 Jan 2018 14:27	1
Batch ID R308234	**Test Name :** VOLATILES ORGANICS BY METHOD 8260C			**Matrix:** Water		
HS17121224-01	18CPTMW04SW_122017	20 Dec 2017 08:55			31 Dec 2017 18:09	1
HS17121224-02	18CPTMW04_122017	20 Dec 2017 09:55			31 Dec 2017 22:06	10
HS17121224-03	MW2_122017	20 Dec 2017 10:50			31 Dec 2017 23:53	100
HS17121224-03	MW2_122017	20 Dec 2017 10:50			01 Jan 2018 00:20	1000
HS17121224-04	18CPTMW01SW_122017	20 Dec 2017 13:00			31 Dec 2017 23:01	10
HS17121224-05	MW5_122017	20 Dec 2017 13:55			31 Dec 2017 19:23	1
HS17121224-06	MW3_122117	21 Dec 2017 08:45			31 Dec 2017 20:17	5
HS17121224-08	18CPTMW08SW_122117	21 Dec 2017 10:45			31 Dec 2017 18:34	1
HS17121224-09	Trip Blank	21 Dec 2017 00:00			31 Dec 2017 16:56	1
Batch ID R308247	**Test Name :** VOLATILES ORGANICS BY METHOD 8260C			**Matrix:** Water		
HS17121224-02	18CPTMW04_122017	20 Dec 2017 09:55			01 Jan 2018 20:17	1
HS17121224-04	18CPTMW01SW_122017	20 Dec 2017 13:00			01 Jan 2018 19:25	1
Batch ID R308871	**Test Name :** SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)			**Matrix:** Water		
HS17121224-01	18CPTMW04SW_122017	20 Dec 2017 08:55			12 Jan 2018 11:16	1
HS17121224-02	18CPTMW04_122017	20 Dec 2017 09:55			12 Jan 2018 11:16	1
HS17121224-03	MW2_122017	20 Dec 2017 10:50			12 Jan 2018 11:16	1
HS17121224-04	18CPTMW01SW_122017	20 Dec 2017 13:00			12 Jan 2018 11:16	1
HS17121224-05	MW5_122017	20 Dec 2017 13:55			12 Jan 2018 11:16	1
HS17121224-06	MW3_122117	21 Dec 2017 08:45			12 Jan 2018 11:16	1
HS17121224-07	18CPTMW08DW_122117	21 Dec 2017 09:45			12 Jan 2018 11:16	1
HS17121224-08	18CPTMW08SW_122117	21 Dec 2017 10:45			12 Jan 2018 11:16	1

Revision:1

ALS Group USA, Corp Date: 02-Feb-18

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS17121224

QC BATCH REPORT

Batch ID: 124039 **Instrument: ICPMS04** **Method: SW6020**

MBLK Sample ID: **MBLK-124039** Units: **mg/L** Analysis Date: **05-Jan-2018 12:52**
Client ID: Run ID: **ICPMS04_308513** SeqNo: **4382579** PrepDate: **04-Jan-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.003836	0.0100								J
Antimony	0.000414	0.00200								J
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	0.00200	0.00200								U
Iron	0.100	0.200								U
Lead	0.00100	0.00200								U
Magnesium	0.100	0.200								U
Manganese	0.00100	0.00500								U
Nickel	0.00100	0.00200								U
Potassium	0.1187	0.200								J
Selenium	0.00200	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

MBLK Sample ID: **MBLK-124039** Units: **mg/L** Analysis Date: **05-Jan-2018 17:59**
Client ID: Run ID: **ICPMS04_308513** SeqNo: **4383227** PrepDate: **04-Jan-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Zinc	0.002768	0.00400								J

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

Revision: 1

ALS Group USA, Corp Date: 02-Feb-18

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS17121224

QC BATCH REPORT

Batch ID: 124039 **Instrument: ICPMS04** **Method: SW6020**

LCS Sample ID: **LCS-124039** Units: **mg/L** Analysis Date: **05-Jan-2018 12:54**
Client ID: Run ID: **ICPMS04_308513** SeqNo: **4382580** PrepDate: **04-Jan-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.1054	0.0100	0.1	0	105	80 - 120				
Antimony	0.05156	0.00200	0.05	0	103	80 - 120				
Arsenic	0.04974	0.00200	0.05	0	99.5	80 - 120				
Barium	0.04885	0.00400	0.05	0	97.7	80 - 120				
Beryllium	0.05003	0.00200	0.05	0	100	80 - 120				
Cadmium	0.04997	0.00200	0.05	0	99.9	80 - 120				
Calcium	4.952	0.500	5	0	99.0	80 - 120				
Chromium	0.05099	0.00400	0.05	0	102	80 - 120				
Cobalt	0.04969	0.00500	0.05	0	99.4	80 - 120				
Copper	0.04869	0.00200	0.05	0	97.4	80 - 120				
Iron	5.175	0.200	5	0	104	80 - 120				
Lead	0.04874	0.00200	0.05	0	97.5	80 - 120				
Magnesium	5.149	0.200	5	0	103	80 - 120				
Manganese	0.04927	0.00500	0.05	0	98.5	80 - 120				
Nickel	0.05052	0.00200	0.05	0	101	80 - 120				
Potassium	5.156	0.200	5	0	103	80 - 120				
Selenium	0.0508	0.00200	0.05	0	102	80 - 120				
Silver	0.04994	0.00200	0.05	0	99.9	80 - 120				
Sodium	5.11	0.200	5	0	102	80 - 120				
Thallium	0.04789	0.00200	0.05	0	95.8	80 - 120				
Vanadium	0.04828	0.00500	0.05	0	96.6	80 - 120				
Zinc	0.05156	0.00400	0.05	0	103	80 - 120				

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

Revision: 1

ALS Group USA, Corp Date: 02-Feb-18

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS17121224

QC BATCH REPORT

Batch ID: 124039 **Instrument: ICPMS04** **Method: SW6020**

MS Sample ID: **HS17121169-01MS** Units: **mg/L** Analysis Date: **05-Jan-2018 13:03**
Client ID: Run ID: **ICPMS04_308513** SeqNo: **4382584** PrepDate: **04-Jan-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.1477	0.0100	0.1	0.04991	97.8	80 - 120				
Antimony	0.04878	0.00200	0.05	0.000843	95.9	80 - 120				
Arsenic	0.05114	0.00200	0.05	0.001429	99.4	80 - 120				
Barium	0.7045	0.00400	0.05	0.6795	50.0	80 - 120				SO
Beryllium	0.04968	0.00200	0.05	0.000089	99.2	80 - 120				
Cadmium	0.04733	0.00200	0.05	0.000326	94.0	80 - 120				
Calcium	45.13	0.500	5	40.33	96.1	80 - 120				O
Chromium	0.04892	0.00400	0.05	0.0019	94.0	80 - 120				
Cobalt	0.05523	0.00500	0.05	0.008769	92.9	80 - 120				
Copper	0.04857	0.00200	0.05	0.001379	94.4	80 - 120				
Iron	5.774	0.200	5	0.8909	97.7	80 - 120				
Lead	0.04683	0.00200	0.05	0.000257	93.2	80 - 120				
Magnesium	35.5	0.200	5	32.37	62.6	80 - 120				SO
Manganese	0.5631	0.00500	0.05	0.5244	77.4	80 - 120				SO
Nickel	0.05984	0.00200	0.05	0.01395	91.8	80 - 120				
Potassium	6.515	0.200	5	1.644	97.4	80 - 120				
Selenium	0.05077	0.00200	0.05	0.00049	101	80 - 120				
Silver	0.04521	0.00200	0.05	-0.000011	90.4	80 - 120				
Sodium	243.6	0.200	5	240.3	67.7	80 - 120				SEO
Thallium	0.04548	0.00200	0.05	-0.000005	91.0	80 - 120				
Vanadium	0.04768	0.00500	0.05	0.000627	94.1	80 - 120				
Zinc	0.1683	0.00400	0.05	0.1207	95.2	80 - 120				

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

Revision: 1

ALS Group USA, Corp Date: 02-Feb-18

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS17121224

QC BATCH REPORT

Batch ID: 124039 **Instrument: ICPMS04** **Method: SW6020**

MSD Sample ID: **HS17121169-01MSD** Units: **mg/L** Analysis Date: **05-Jan-2018 13:05**
Client ID: Run ID: **ICPMS04_308513** SeqNo: **4382585** PrepDate: **04-Jan-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.1535	0.0100	0.1	0.04991	104	80 - 120	0.1477	3.84	20	
Antimony	0.05006	0.00200	0.05	0.000843	98.4	80 - 120	0.04878	2.6	20	
Arsenic	0.04934	0.00200	0.05	0.001429	95.8	80 - 120	0.05114	3.59	20	
Barium	0.7221	0.00400	0.05	0.6795	85.3	80 - 120	0.7045	2.47	20	O
Beryllium	0.05056	0.00200	0.05	0.000089	101	80 - 120	0.04968	1.74	20	
Cadmium	0.04705	0.00200	0.05	0.000326	93.4	80 - 120	0.04733	0.593	20	
Calcium	45.63	0.500	5	40.33	106	80 - 120	45.13	1.11	20	O
Chromium	0.05302	0.00400	0.05	0.0019	102	80 - 120	0.04892	8.06	20	
Cobalt	0.05764	0.00500	0.05	0.008769	97.8	80 - 120	0.05523	4.28	20	
Copper	0.05054	0.00200	0.05	0.001379	98.3	80 - 120	0.04857	3.97	20	
Iron	5.944	0.200	5	0.8909	101	80 - 120	5.774	2.9	20	
Lead	0.0477	0.00200	0.05	0.000257	94.9	80 - 120	0.04683	1.83	20	
Magnesium	37.09	0.200	5	32.37	94.3	80 - 120	35.5	4.37	20	O
Manganese	0.5828	0.00500	0.05	0.5244	117	80 - 120	0.5631	3.44	20	O
Nickel	0.06242	0.00200	0.05	0.01395	97.0	80 - 120	0.05984	4.22	20	
Potassium	6.661	0.200	5	1.644	100	80 - 120	6.515	2.23	20	
Selenium	0.0422	0.00200	0.05	0.00049	83.4	80 - 120	0.05077	18.4	20	
Silver	0.04737	0.00200	0.05	-0.000011	94.8	80 - 120	0.04521	4.66	20	
Sodium	253.4	0.200	5	240.3	262	80 - 120	243.6	3.91	20	SEO
Thallium	0.0458	0.00200	0.05	-0.000005	91.6	80 - 120	0.04548	0.703	20	
Vanadium	0.04892	0.00500	0.05	0.000627	96.6	80 - 120	0.04768	2.57	20	
Zinc	0.1734	0.00400	0.05	0.1207	106	80 - 120	0.1683	3.02	20	

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

Revision: 1

ALS Group USA, Corp Date: 02-Feb-18

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS17121224

QC BATCH REPORT

Batch ID: 124039 **Instrument: ICPMS04** **Method: SW6020**

PDS Sample ID: **HS17121169-01PDS** Units: **mg/L** Analysis Date: **05-Jan-2018 13:07**
Client ID: Run ID: **ICPMS04_308513** SeqNo: **4382586** PrepDate: **04-Jan-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.1511	0.0100	0.1	0.04991	101	75 - 125				
Antimony	0.09514	0.00200	0.1	0.000843	94.3	75 - 125				
Arsenic	0.1002	0.00200	0.1	0.001429	98.8	75 - 125				
Barium	0.7605	0.00400	0.1	0.6795	81.0	75 - 125				O
Beryllium	0.1132	0.00200	0.1	0.000089	113	75 - 125				
Cadmium	0.09741	0.00200	0.1	0.000326	97.1	75 - 125				
Calcium	51.81	0.500	10	40.33	115	75 - 125				O
Chromium	0.1033	0.00400	0.1	0.0019	101	75 - 125				
Cobalt	0.1075	0.00500	0.1	0.008769	98.8	75 - 125				
Copper	0.0999	0.00200	0.1	0.001379	98.5	75 - 125				
Iron	11.07	0.200	10	0.8909	102	75 - 125				
Lead	0.09863	0.00200	0.1	0.000257	98.4	75 - 125				
Magnesium	41.24	0.200	10	32.37	88.7	75 - 125				
Manganese	0.6169	0.00500	0.1	0.5244	92.5	75 - 125				O
Nickel	0.111	0.00200	0.1	0.01395	97.0	75 - 125				
Potassium	12.1	0.200	10	1.644	105	75 - 125				
Selenium	0.1132	0.00200	0.1	0.00049	113	75 - 125				
Silver	0.09771	0.00200	0.1	-0.000011	97.7	75 - 125				
Thallium	0.09934	0.00200	0.1	-0.000005	99.4	75 - 125				
Vanadium	0.1022	0.00500	0.1	0.000627	102	75 - 125				
Zinc	0.223	0.00400	0.1	0.1207	102	75 - 125				

PDS Sample ID: **HS17121169-01PDS** Units: **mg/L** Analysis Date: **05-Jan-2018 20:19**
Client ID: Run ID: **ICPMS04_308513** SeqNo: **4383320** PrepDate: **04-Jan-2018** DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sodium	270.2	1.00	50	240.3	60.0	75 - 125				SO

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

Revision: 1

ALS Group USA, Corp Date: 02-Feb-18

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS17121224

QC BATCH REPORT

Batch ID: 124039 **Instrument: ICPMS04** **Method: SW6020**

SD Sample ID: **HS17121169-01SD** Units: **mg/L** Analysis Date: **05-Jan-2018 13:00**
Client ID: Run ID: **ICPMS04_308513** SeqNo: **4382583** PrepDate: **04-Jan-2018** DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual
Aluminum	0.05321	0.0500					0.04991	0	10	
Antimony	0.00500	0.0100					0.000843	0	10	U
Arsenic	0.00500	0.0100					0.001429	0	10	U
Barium	0.6468	0.0200					0.6795	4.8	10	
Beryllium	0.00500	0.0100					0.000089	0	10	U
Cadmium	0.00500	0.0100					0.000326	0	10	U
Calcium	38.07	2.50					40.33	5.59	10	
Chromium	0.00500	0.0200					0.0019	0	10	U
Cobalt	0.008292	0.0250					0.008769	0	10	J
Copper	0.0100	0.0100					0.001379	0	10	U
Iron	0.8531	1.00					0.8909	0	10	J
Lead	0.00500	0.0100					0.000257	0	10	U
Magnesium	32.64	1.00					32.37	0.824	10	
Manganese	0.5058	0.0250					0.5244	3.55	10	
Nickel	0.01425	0.0100					0.01395	2.16	10	
Potassium	1.78	1.00					1.644	8.25	10	
Selenium	0.0100	0.0100					0.00049	0	10	U
Silver	0.00500	0.0100					-0.000011	0	10	U
Thallium	0.00500	0.0100					-0.000005	0	10	U
Vanadium	0.00500	0.0250					0.000627	0	10	U
Zinc	0.1103	0.0200					0.1207	8.57	10	

SD Sample ID: **HS17121169-01SD** Units: **mg/L** Analysis Date: **05-Jan-2018 20:17**
Client ID: Run ID: **ICPMS04_308513** SeqNo: **4383319** PrepDate: **04-Jan-2018** DF: **25**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual
Sodium	220.5	5.00					224	1.57	10	

The following samples were analyzed in this batch: HS17121224-01 HS17121224-03 HS17121224-04 HS17121224-05 HS17121224-06

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

Revision: 1

ALS Group USA, Corp Date: 02-Feb-18

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS17121224

QC BATCH REPORT

Batch ID: 124068 **Instrument: HG03** **Method: SW7470**

MBLK Sample ID: **MBLK-124068** Units: **mg/L** Analysis Date: **05-Jan-2018 14:06**
Client ID: Run ID: **HG03_308532** SeqNo: **4382981** PrepDate: **05-Jan-2018** 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-124068** Units: **mg/L** Analysis Date: **05-Jan-2018 14:08**
Client ID: Run ID: **HG03_308532** SeqNo: **4382982** PrepDate: **05-Jan-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00518	0.000200	0.005	0	104	80 - 120				

MS Sample ID: **HS17121224-05MS** Units: **mg/L** Analysis Date: **05-Jan-2018 14:23**
Client ID: **MW5_122017** Run ID: **HG03_308532** SeqNo: **4382991** PrepDate: **05-Jan-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00503	0.000200	0.005	0.000009	100	75 - 125				

MSD Sample ID: **HS17121224-05MSD** Units: **mg/L** Analysis Date: **05-Jan-2018 14:25**
Client ID: **MW5_122017** Run ID: **HG03_308532** SeqNo: **4382992** PrepDate: **05-Jan-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00497	0.000200	0.005	0.000009	99.2	75 - 125	0.00503	1.2	20	

The following samples were analyzed in this batch: HS17121224-01 HS17121224-03 HS17121224-04 HS17121224-05 HS17121224-06

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

Revision: 1

ALS Group USA, Corp Date: 02-Feb-18

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS17121224

QC BATCH REPORT

Batch ID: R308234 **Instrument: VOA2** **Method: SW8260**

MBLK Sample ID: **VBLKW-171231** Units: **ug/L** Analysis Date: **31-Dec-2017 15:17**
Client ID: Run ID: **VOA2_308234** SeqNo: **4375147** 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	0.50	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	1.0	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

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

Revision: 1

ALS Group USA, Corp Date: 02-Feb-18

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS17121224

QC BATCH REPORT

Batch ID: R308234 **Instrument: VOA2** **Method: SW8260**

MBLK Sample ID: **VBLKW-171231** Units: **ug/L** Analysis Date: **31-Dec-2017 15:17**
Client ID: Run ID: **VOA2_308234** SeqNo: **4375147** 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	*45.6*	*1.0*	*50*	*0*	*91.2*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*48.04*	*1.0*	*50*	*0*	*96.1*	*85 - 114*				
Surr: Dibromofluoromethane	*49.22*	*1.0*	*50*	*0*	*98.4*	*80 - 119*				
Surr: Toluene-d8	*48.55*	*1.0*	*50*	*0*	*97.1*	*89 - 112*				

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

Revision: 1

ALS Group USA, Corp Date: 02-Feb-18

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS17121224

QC BATCH REPORT

Batch ID: R308234 **Instrument: VOA2** **Method: SW8260**

LCS Sample ID: **VLCSW-171231** Units: **ug/L** Analysis Date: **31-Dec-2017 14:28**
Client ID: Run ID: **VOA2_308234** SeqNo: **4375145** 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	47.86	1.0	50	0	95.7	78 - 124				
1,1,1-Trichloroethane	47.85	1.0	50	0	95.7	74 - 131				
1,1,2,2-Tetrachloroethane	41.54	1.0	50	0	83.1	71 - 121				
1,1,2-Trichloroethane	46.09	1.0	50	0	92.2	80 - 119				
1,1-Dichloroethane	46.48	1.0	50	0	93.0	77 - 125				
1,1-Dichloroethene	49.4	1.0	50	0	98.8	71 - 131				
1,1-Dichloropropene	51.32	1.0	50	0	103	79 - 125				
1,2,3-Trichlorobenzene	51.87	1.0	50	0	104	69 - 129				
1,2,3-Trichloropropane	44.61	1.0	50	0	89.2	73 - 122				
1,2,4-Trichlorobenzene	52.6	1.0	50	0	105	69 - 130				
1,2,4-Trimethylbenzene	42.39	1.0	50	0	84.8	76 - 124				
1,2-Dibromo-3-chloropropane	43.41	1.0	50	0	86.8	62 - 128				
1,2-Dibromoethane	48.3	1.0	50	0	96.6	77 - 121				
1,2-Dichlorobenzene	43.99	1.0	50	0	88.0	80 - 119				
1,2-Dichloroethane	49.28	1.0	50	0	98.6	73 - 128				
1,2-Dichloropropane	46.94	1.0	50	0	93.9	78 - 122				
1,3,5-Trimethylbenzene	43.25	1.0	50	0	86.5	75 - 124				
1,3-Dichlorobenzene	44.39	1.0	50	0	88.8	80 - 119				
1,3-Dichloropropane	45.35	1.0	50	0	90.7	80 - 119				
1,4-Dichlorobenzene	44.46	1.0	50	0	88.9	79 - 118				
2,2-Dichloropropane	50.02	1.0	50	0	100	60 - 139				
2-Butanone	86.86	2.0	100	0	86.9	56 - 143				
2-Chlorotoluene	42.25	1.0	50	0	84.5	79 - 122				
2-Hexanone	86.53	2.0	100	0	86.5	57 - 139				
4-Chlorotoluene	43.02	1.0	50	0	86.0	78 - 122				
4-Isopropyltoluene	44.78	1.0	50	0	89.6	77 - 127				
4-Methyl-2-pentanone	88.08	2.0	100	0	88.1	67 - 130				
Acetone	89.2	2.0	100	0	89.2	39 - 160				
Benzene	47.24	1.0	50	0	94.5	79 - 120				
Bromobenzene	43.78	1.0	50	0	87.6	80 - 120				
Bromochloromethane	49.33	1.0	50	0	98.7	78 - 123				
Bromodichloromethane	48.13	1.0	50	0	96.3	79 - 125				
Bromoform	50.51	1.0	50	0	101	66 - 130				
Bromomethane	54.19	1.0	50	0	108	53 - 141				

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

Revision: 1

ALS Group USA, Corp Date: 02-Feb-18

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS17121224

QC BATCH REPORT

Batch ID: R308234 **Instrument: VOA2** **Method: SW8260**

LCS Sample ID: **VLCSW-171231** Units: **ug/L** Analysis Date: **31-Dec-2017 14:28**
Client ID: Run ID: **VOA2_308234** SeqNo: **4375145** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	98.72	2.0	100	0	98.7	64 - 133				
Carbon tetrachloride	40.99	1.0	50	0	82.0	72 - 136				
Chlorobenzene	46.43	1.0	50	0	92.9	80 - 120				
Chloroethane	43.11	1.0	50	0	86.2	82 - 118				
Chloroform	46.54	1.0	50	0	93.1	79 - 124				
Chloromethane	49.86	1.0	50	0	99.7	50 - 139				
cis-1,2-Dichloroethene	47.37	1.0	50	0	94.7	78 - 123				
cis-1,3-Dichloropropene	52.05	1.0	50	0	104	75 - 124				
Dibromochloromethane	48.61	1.0	50	0	97.2	74 - 126				
Dibromomethane	49.85	1.0	50	0	99.7	79 - 123				
Dichlorodifluoromethane	46.5	1.0	50	0	93.0	32 - 152				
Ethylbenzene	45.93	1.0	50	0	91.9	79 - 121				
Hexachlorobutadiene	50.83	1.0	50	0	102	66 - 134				
Isopropylbenzene	47.55	1.0	50	0	95.1	72 - 131				
m,p-Xylene	92.23	2.0	100	0	92.2	80 - 121				
Methylene chloride	45.03	2.0	50	0	90.1	74 - 124				
Naphthalene	48.76	1.0	50	0	97.5	61 - 128				
n-Butylbenzene	47.57	1.0	50	0	95.1	75 - 128				
n-Propylbenzene	44.13	1.0	50	0	88.3	76 - 126				
o-Xylene	46.93	1.0	50	0	93.9	78 - 122				
sec-Butylbenzene	45.5	1.0	50	0	91.0	77 - 126				
Styrene	47.93	1.0	50	0	95.9	78 - 128				
tert-Butylbenzene	43.81	1.0	50	0	87.6	78 - 124				
Tetrachloroethene	52.24	1.0	50	0	104	74 - 129				
Toluene	46.23	1.0	50	0	92.5	80 - 121				
trans-1,2-Dichloroethene	51.28	1.0	50	0	103	75 - 124				
trans-1,3-Dichloropropene	51.85	1.0	50	0	104	73 - 127				
Trichloroethene	49	1.0	50	0	98.0	79 - 123				
Trichlorofluoromethane	51.82	1.0	50	0	104	65 - 141				
Vinyl chloride	48.57	1.0	50	0	97.1	58 - 137				
Surr: 1,2-Dichloroethane-d4	*47.17*	*1.0*	*50*	*0*	*94.3*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*49.78*	*1.0*	*50*	*0*	*99.6*	*85 - 114*				
Surr: Dibromofluoromethane	*47.39*	*1.0*	*50*	*0*	*94.8*	*80 - 119*				
Surr: Toluene-d8	*46.57*	*1.0*	*50*	*0*	*93.1*	*89 - 112*				

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

Revision: 1

ALS Group USA, Corp Date: 02-Feb-18

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS17121224

QC BATCH REPORT

Batch ID: R308234 **Instrument: VOA2** **Method: SW8260**

MS Sample ID: **HS17121224-01MS** Units: **ug/L** Analysis Date: **01-Jan-2018 00:44**
Client ID: **18CPTMW04SW_122017** Run ID: **VOA2_308234** SeqNo: **4375169** 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	47.04	1.0	50	0	94.1	78 - 124				
1,1,1-Trichloroethane	48.9	1.0	50	0	97.8	74 - 131				
1,1,2,2-Tetrachloroethane	40.4	1.0	50	0	80.8	71 - 121				
1,1,2-Trichloroethane	44.91	1.0	50	0	89.8	80 - 119				
1,1-Dichloroethane	45.71	1.0	50	0	91.4	77 - 125				
1,1-Dichloroethene	51.49	1.0	50	0	103	71 - 131				
1,1-Dichloropropene	51.53	1.0	50	0	103	79 - 125				
1,2,3-Trichlorobenzene	49.47	1.0	50	0	98.9	69 - 129				
1,2,3-Trichloropropane	41.84	1.0	50	0	83.7	73 - 122				
1,2,4-Trichlorobenzene	48.75	1.0	50	0	97.5	69 - 130				
1,2,4-Trimethylbenzene	40.85	1.0	50	0	81.7	76 - 124				
1,2-Dibromo-3-chloropropane	41.97	1.0	50	0	83.9	62 - 128				
1,2-Dibromoethane	47.88	1.0	50	0	95.8	77 - 121				
1,2-Dichlorobenzene	42.75	1.0	50	0	85.5	80 - 119				
1,2-Dichloroethane	50.56	1.0	50	0	101	73 - 128				
1,2-Dichloropropane	46.39	1.0	50	0	92.8	78 - 122				
1,3,5-Trimethylbenzene	41.56	1.0	50	0	83.1	75 - 124				
1,3-Dichlorobenzene	42.78	1.0	50	0	85.6	80 - 119				
1,3-Dichloropropane	44.3	1.0	50	0	88.6	80 - 119				
1,4-Dichlorobenzene	42.48	1.0	50	0	85.0	79 - 118				
2,2-Dichloropropane	43.91	1.0	50	0	87.8	60 - 139				
2-Butanone	87.07	2.0	100	0	87.1	56 - 143				
2-Chlorotoluene	40.98	1.0	50	0	82.0	79 - 122				
2-Hexanone	86.07	2.0	100	0	86.1	57 - 139				
4-Chlorotoluene	41.09	1.0	50	0	82.2	78 - 122				
4-Isopropyltoluene	42.85	1.0	50	0	85.7	77 - 127				
4-Methyl-2-pentanone	87.52	2.0	100	0	87.5	67 - 130				
Acetone	93.39	2.0	100	0	93.4	39 - 160				
Benzene	47.56	1.0	50	0	95.1	79 - 120				
Bromobenzene	41.47	1.0	50	0	82.9	80 - 120				
Bromochloromethane	48.01	1.0	50	0	96.0	78 - 123				
Bromodichloromethane	47.87	1.0	50	0	95.7	79 - 125				
Bromoform	49.09	1.0	50	0	98.2	66 - 130				
Bromomethane	44.46	1.0	50	0	88.9	53 - 141				

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

Revision: 1

ALS Group USA, Corp Date: 02-Feb-18

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS17121224

QC BATCH REPORT

Batch ID: R308234 **Instrument: VOA2** **Method: SW8260**

MS Sample ID: **HS17121224-01MS** Units: **ug/L** Analysis Date: **01-Jan-2018 00:44**
Client ID: **18CPTMW04SW_122017** Run ID: **VOA2_308234** SeqNo: **4375169** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	99.01	2.0	100	0	99.0	64 - 133				
Carbon tetrachloride	43.9	1.0	50	0	87.8	72 - 136				
Chlorobenzene	45.69	1.0	50	0	91.4	80 - 120				
Chloroethane	44.2	1.0	50	0	88.4	82 - 118				
Chloroform	45.8	1.0	50	0	91.6	79 - 124				
Chloromethane	53.01	1.0	50	0	106	50 - 139				
cis-1,2-Dichloroethene	47.51	1.0	50	0	95.0	78 - 123				
cis-1,3-Dichloropropene	50.46	1.0	50	0	101	75 - 124				
Dibromochloromethane	47.38	1.0	50	0	94.8	74 - 126				
Dibromomethane	49.4	1.0	50	0	98.8	79 - 123				
Dichlorodifluoromethane	55.3	1.0	50	0	111	32 - 152				
Ethylbenzene	45.71	1.0	50	0	91.4	79 - 121				
Hexachlorobutadiene	45.23	1.0	50	0	90.5	66 - 134				
Isopropylbenzene	47.41	1.0	50	0	94.8	72 - 131				
m,p-Xylene	91.1	2.0	100	0	91.1	80 - 121				
Methylene chloride	45.7	2.0	50	0	91.4	74 - 124				
Naphthalene	47.28	1.0	50	0	94.6	61 - 128				
n-Butylbenzene	44.14	1.0	50	0	88.3	75 - 128				
n-Propylbenzene	42.52	1.0	50	0	85.0	76 - 126				
o-Xylene	45.9	1.0	50	0	91.8	78 - 122				
sec-Butylbenzene	43.8	1.0	50	0	87.6	77 - 126				
Styrene	46.71	1.0	50	0	93.4	78 - 128				
tert-Butylbenzene	43.15	1.0	50	0	86.3	78 - 124				
Tetrachloroethene	51.95	1.0	50	0	104	74 - 129				
Toluene	45.86	1.0	50	0	91.7	80 - 121				
trans-1,2-Dichloroethene	51.36	1.0	50	0	103	75 - 124				
trans-1,3-Dichloropropene	50.22	1.0	50	0	100	73 - 127				
Trichloroethene	49.6	1.0	50	0	99.2	79 - 123				
Trichlorofluoromethane	52.84	1.0	50	0	106	65 - 141				
Vinyl chloride	50.95	1.0	50	0	102	58 - 137				
Surr: 1,2-Dichloroethane-d4	*46.83*	*1.0*	*50*	*0*	*93.7*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*49.15*	*1.0*	*50*	*0*	*98.3*	*85 - 114*				
Surr: Dibromofluoromethane	*47.87*	*1.0*	*50*	*0*	*95.7*	*80 - 119*				
Surr: Toluene-d8	*46.64*	*1.0*	*50*	*0*	*93.3*	*89 - 112*				

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

Revision: 1

ALS Group USA, Corp Date: 02-Feb-18

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS17121224

QC BATCH REPORT

Batch ID: R308234 **Instrument: VOA2** **Method: SW8260**

MSD Sample ID: **HS17121224-01MSD** Units: **ug/L** Analysis Date: **01-Jan-2018 01:09**
Client ID: **18CPTMW04SW_122017** Run ID: **VOA2_308234** SeqNo: **4375170** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	46.34	1.0	50	0	92.7	78 - 124	47.04	1.51	20	
1,1,1-Trichloroethane	48.97	1.0	50	0	97.9	74 - 131	48.9	0.149	20	
1,1,2,2-Tetrachloroethane	40.71	1.0	50	0	81.4	71 - 121	40.4	0.767	20	
1,1,2-Trichloroethane	45.32	1.0	50	0	90.6	80 - 119	44.91	0.901	20	
1,1-Dichloroethane	46.42	1.0	50	0	92.8	77 - 125	45.71	1.56	20	
1,1-Dichloroethene	51.21	1.0	50	0	102	71 - 131	51.49	0.547	20	
1,1-Dichloropropene	52.6	1.0	50	0	105	79 - 125	51.53	2.04	20	
1,2,3-Trichlorobenzene	49.28	1.0	50	0	98.6	69 - 129	49.47	0.389	20	
1,2,3-Trichloropropane	41.66	1.0	50	0	83.3	73 - 122	41.84	0.434	20	
1,2,4-Trichlorobenzene	49.76	1.0	50	0	99.5	69 - 130	48.75	2.06	20	
1,2,4-Trimethylbenzene	39.67	1.0	50	0	79.3	76 - 124	40.85	2.93	20	
1,2-Dibromo-3-chloropropane	43.31	1.0	50	0	86.6	62 - 128	41.97	3.13	20	
1,2-Dibromoethane	47.75	1.0	50	0	95.5	77 - 121	47.88	0.282	20	
1,2-Dichlorobenzene	41.6	1.0	50	0	83.2	80 - 119	42.75	2.73	20	
1,2-Dichloroethane	48.63	1.0	50	0	97.3	73 - 128	50.56	3.88	20	
1,2-Dichloropropane	45.87	1.0	50	0	91.7	78 - 122	46.39	1.13	20	
1,3,5-Trimethylbenzene	40.48	1.0	50	0	81.0	75 - 124	41.56	2.65	20	
1,3-Dichlorobenzene	41.64	1.0	50	0	83.3	80 - 119	42.78	2.72	20	
1,3-Dichloropropane	44.75	1.0	50	0	89.5	80 - 119	44.3	1	20	
1,4-Dichlorobenzene	41.85	1.0	50	0	83.7	79 - 118	42.48	1.48	20	
2,2-Dichloropropane	43.76	1.0	50	0	87.5	60 - 139	43.91	0.35	20	
2-Butanone	87.75	2.0	100	0	87.8	56 - 143	87.07	0.785	20	
2-Chlorotoluene	39.92	1.0	50	0	79.8	79 - 122	40.98	2.62	20	
2-Hexanone	87.81	2.0	100	0	87.8	57 - 139	86.07	2	20	
4-Chlorotoluene	40.01	1.0	50	0	80.0	78 - 122	41.09	2.68	20	
4-Isopropyltoluene	42.11	1.0	50	0	84.2	77 - 127	42.85	1.74	20	
4-Methyl-2-pentanone	88.49	2.0	100	0	88.5	67 - 130	87.52	1.09	20	
Acetone	95.78	2.0	100	0	95.8	39 - 160	93.39	2.52	20	
Benzene	47.41	1.0	50	0	94.8	79 - 120	47.56	0.31	20	
Bromobenzene	41.03	1.0	50	0	82.1	80 - 120	41.47	1.07	20	
Bromochloromethane	48.61	1.0	50	0	97.2	78 - 123	48.01	1.26	20	
Bromodichloromethane	47.86	1.0	50	0	95.7	79 - 125	47.87	0.0172	20	
Bromoform	49.89	1.0	50	0	99.8	66 - 130	49.09	1.63	20	
Bromomethane	44.08	1.0	50	0	88.2	53 - 141	44.46	0.858	20	

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

Revision: 1

ALS Group USA, Corp Date: 02-Feb-18

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS17121224

QC BATCH REPORT

Batch ID: R308234 **Instrument: VOA2** **Method: SW8260**

MSD Sample ID: **HS17121224-01MSD** Units: **ug/L** Analysis Date: **01-Jan-2018 01:09**
Client ID: **18CPTMW04SW_122017** Run ID: **VOA2_308234** SeqNo: **4375170** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Carbon disulfide	98.72	2.0	100	0	98.7	64 - 133	99.01	0.294	20	
Carbon tetrachloride	43.69	1.0	50	0	87.4	72 - 136	43.9	0.479	20	
Chlorobenzene	45.36	1.0	50	0	90.7	80 - 120	45.69	0.726	20	
Chloroethane	42.34	1.0	50	0	84.7	82 - 118	44.2	4.31	20	
Chloroform	46.14	1.0	50	0	92.3	79 - 124	45.8	0.75	20	
Chloromethane	50	1.0	50	0	100.0	50 - 139	53.01	5.85	20	
cis-1,2-Dichloroethene	47.11	1.0	50	0	94.2	78 - 123	47.51	0.846	20	
cis-1,3-Dichloropropene	49.73	1.0	50	0	99.5	75 - 124	50.46	1.45	20	
Dibromochloromethane	47.49	1.0	50	0	95.0	74 - 126	47.38	0.242	20	
Dibromomethane	48.72	1.0	50	0	97.4	79 - 123	49.4	1.39	20	
Dichlorodifluoromethane	54.4	1.0	50	0	109	32 - 152	55.3	1.65	20	
Ethylbenzene	45.12	1.0	50	0	90.2	79 - 121	45.71	1.31	20	
Hexachlorobutadiene	46.3	1.0	50	0	92.6	66 - 134	45.23	2.34	20	
Isopropylbenzene	46.69	1.0	50	0	93.4	72 - 131	47.41	1.54	20	
m,p-Xylene	90.36	2.0	100	0	90.4	80 - 121	91.1	0.813	20	
Methylene chloride	44.91	2.0	50	0	89.8	74 - 124	45.7	1.75	20	
Naphthalene	47.07	1.0	50	0	94.1	61 - 128	47.28	0.45	20	
n-Butylbenzene	43.71	1.0	50	0	87.4	75 - 128	44.14	0.973	20	
n-Propylbenzene	41.18	1.0	50	0	82.4	76 - 126	42.52	3.2	20	
o-Xylene	45.96	1.0	50	0	91.9	78 - 122	45.9	0.14	20	
sec-Butylbenzene	42.94	1.0	50	0	85.9	77 - 126	43.8	1.98	20	
Styrene	46.51	1.0	50	0	93.0	78 - 128	46.71	0.428	20	
tert-Butylbenzene	42.01	1.0	50	0	84.0	78 - 124	43.15	2.68	20	
Tetrachloroethene	50.69	1.0	50	0	101	74 - 129	51.95	2.46	20	
Toluene	45.44	1.0	50	0	90.9	80 - 121	45.86	0.932	20	
trans-1,2-Dichloroethene	51.43	1.0	50	0	103	75 - 124	51.36	0.135	20	
trans-1,3-Dichloropropene	50.28	1.0	50	0	101	73 - 127	50.22	0.109	20	
Trichloroethene	49.1	1.0	50	0	98.2	79 - 123	49.6	1.01	20	
Trichlorofluoromethane	52.07	1.0	50	0	104	65 - 141	52.84	1.45	20	
Vinyl chloride	50.1	1.0	50	0	100	58 - 137	50.95	1.7	20	
Surr: 1,2-Dichloroethane-d4	*47.86*	*1.0*	*50*	*0*	*95.7*	*81 - 118*	*46.83*	*2.19*	*20*	
Surr: 4-Bromofluorobenzene	*49.38*	*1.0*	*50*	*0*	*98.8*	*85 - 114*	*49.15*	*0.463*	*20*	
Surr: Dibromofluoromethane	*48.38*	*1.0*	*50*	*0*	*96.8*	*80 - 119*	*47.87*	*1.05*	*20*	
Surr: Toluene-d8	*46.83*	*1.0*	*50*	*0*	*93.7*	*89 - 112*	*46.64*	*0.406*	*20*	

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

Revision: 1

ALS Group USA, Corp Date: 02-Feb-18

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS17121224

QC BATCH REPORT

Batch ID: R308234 **Instrument: VOA2** **Method: SW8260**

The following samples were analyzed in this batch:

HS17121224-01	HS17121224-02	HS17121224-03	HS17121224-04
HS17121224-05	HS17121224-06	HS17121224-08	HS17121224-09

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

Revision: 1

ALS Group USA, Corp Date: 02-Feb-18

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS17121224

QC BATCH REPORT

Batch ID: R308247 **Instrument: VOA2** **Method: SW8260**

MBLK Sample ID: **VBLKW-180101** Units: **ug/L** Analysis Date: **01-Jan-2018 16:08**
Client ID: Run ID: **VOA2_308247** SeqNo: **4375627** 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	0.50	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	1.0	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

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

Revision: 1

ALS Group USA, Corp Date: 02-Feb-18

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS17121224

QC BATCH REPORT

Batch ID: R308247 **Instrument: VOA2** **Method: SW8260**

MBLK Sample ID: **VBLKW-180101** Units: **ug/L** Analysis Date: **01-Jan-2018 16:08**
Client ID: Run ID: **VOA2_308247** SeqNo: **4375627** 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	*45.5*	*1.0*	*50*	*0*	*91.0*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*48.7*	*1.0*	*50*	*0*	*97.4*	*85 - 114*				
Surr: Dibromofluoromethane	*49.53*	*1.0*	*50*	*0*	*99.1*	*80 - 119*				
Surr: Toluene-d8	*47.93*	*1.0*	*50*	*0*	*95.9*	*89 - 112*				

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

Revision: 1

ALS Group USA, Corp Date: 02-Feb-18

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS17121224

QC BATCH REPORT

Batch ID: R308247 **Instrument: VOA2** **Method: SW8260**

LCS Sample ID: **VLCSW-180101** Units: **ug/L** Analysis Date: **01-Jan-2018 15:19**
Client ID: Run ID: **VOA2_308247** SeqNo: **4375625** 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	49.01	1.0	50	0	98.0	78 - 124				
1,1,1-Trichloroethane	47.34	1.0	50	0	94.7	74 - 131				
1,1,2,2-Tetrachloroethane	44	1.0	50	0	88.0	71 - 121				
1,1,2-Trichloroethane	47.74	1.0	50	0	95.5	80 - 119				
1,1-Dichloroethane	45.47	1.0	50	0	90.9	77 - 125				
1,1-Dichloroethene	50.57	1.0	50	0	101	71 - 131				
1,1-Dichloropropene	50.63	1.0	50	0	101	79 - 125				
1,2,3-Trichlorobenzene	53.76	1.0	50	0	108	69 - 129				
1,2,3-Trichloropropane	46.15	1.0	50	0	92.3	73 - 122				
1,2,4-Trichlorobenzene	53.5	1.0	50	0	107	69 - 130				
1,2,4-Trimethylbenzene	42.01	1.0	50	0	84.0	76 - 124				
1,2-Dibromo-3-chloropropane	46.12	1.0	50	0	92.2	62 - 128				
1,2-Dibromoethane	49.51	1.0	50	0	99.0	77 - 121				
1,2-Dichlorobenzene	44.43	1.0	50	0	88.9	80 - 119				
1,2-Dichloroethane	49.73	1.0	50	0	99.5	73 - 128				
1,2-Dichloropropane	45.97	1.0	50	0	91.9	78 - 122				
1,3,5-Trimethylbenzene	42.32	1.0	50	0	84.6	75 - 124				
1,3-Dichlorobenzene	44.05	1.0	50	0	88.1	80 - 119				
1,3-Dichloropropane	47.15	1.0	50	0	94.3	80 - 119				
1,4-Dichlorobenzene	44.05	1.0	50	0	88.1	79 - 118				
2,2-Dichloropropane	48.34	1.0	50	0	96.7	60 - 139				
2-Butanone	94.93	2.0	100	0	94.9	56 - 143				
2-Chlorotoluene	41.43	1.0	50	0	82.9	79 - 122				
2-Hexanone	97.53	2.0	100	0	97.5	57 - 139				
4-Chlorotoluene	42.03	1.0	50	0	84.1	78 - 122				
4-Isopropyltoluene	44.34	1.0	50	0	88.7	77 - 127				
4-Methyl-2-pentanone	94.53	2.0	100	0	94.5	67 - 130				
Acetone	98.88	2.0	100	0	98.9	39 - 160				
Benzene	46.36	1.0	50	0	92.7	79 - 120				
Bromobenzene	43.3	1.0	50	0	86.6	80 - 120				
Bromochloromethane	50.18	1.0	50	0	100	78 - 123				
Bromodichloromethane	47.95	1.0	50	0	95.9	79 - 125				
Bromoform	53.17	1.0	50	0	106	66 - 130				
Bromomethane	49.81	1.0	50	0	99.6	53 - 141				

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

Revision: 1

ALS Group USA, Corp Date: 02-Feb-18

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS17121224

QC BATCH REPORT

Batch ID: R308247 **Instrument: VOA2** **Method: SW8260**

LCS Sample ID: **VLCSW-180101** Units: **ug/L** Analysis Date: **01-Jan-2018 15:19**
Client ID: Run ID: **VOA2_308247** SeqNo: **4375625** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	95.19	2.0	100	0	95.2	64 - 133				
Carbon tetrachloride	41.37	1.0	50	0	82.7	72 - 136				
Chlorobenzene	46.25	1.0	50	0	92.5	80 - 120				
Chloroethane	41.31	1.0	50	0	82.6	82 - 118				
Chloroform	45.42	1.0	50	0	90.8	79 - 124				
Chloromethane	46.17	1.0	50	0	92.3	50 - 139				
cis-1,2-Dichloroethene	47.39	1.0	50	0	94.8	78 - 123				
cis-1,3-Dichloropropene	51.49	1.0	50	0	103	75 - 124				
Dibromochloromethane	49.99	1.0	50	0	100.0	74 - 126				
Dibromomethane	50.44	1.0	50	0	101	79 - 123				
Dichlorodifluoromethane	43.04	1.0	50	0	86.1	32 - 152				
Ethylbenzene	45.58	1.0	50	0	91.2	79 - 121				
Hexachlorobutadiene	48.81	1.0	50	0	97.6	66 - 134				
Isopropylbenzene	47.93	1.0	50	0	95.9	72 - 131				
m,p-Xylene	91.44	2.0	100	0	91.4	80 - 121				
Methylene chloride	44.9	2.0	50	0	89.8	74 - 124				
Naphthalene	51.58	1.0	50	0	103	61 - 128				
n-Butylbenzene	46.59	1.0	50	0	93.2	75 - 128				
n-Propylbenzene	43.18	1.0	50	0	86.4	76 - 126				
o-Xylene	46.64	1.0	50	0	93.3	78 - 122				
sec-Butylbenzene	44.82	1.0	50	0	89.6	77 - 126				
Styrene	48.15	1.0	50	0	96.3	78 - 128				
tert-Butylbenzene	43.31	1.0	50	0	86.6	78 - 124				
Tetrachloroethene	51.48	1.0	50	0	103	74 - 129				
Toluene	45.82	1.0	50	0	91.6	80 - 121				
trans-1,2-Dichloroethene	51.72	1.0	50	0	103	75 - 124				
trans-1,3-Dichloropropene	52.83	1.0	50	0	106	73 - 127				
Trichloroethene	48.09	1.0	50	0	96.2	79 - 123				
Trichlorofluoromethane	49.06	1.0	50	0	98.1	65 - 141				
Vinyl chloride	46.52	1.0	50	0	93.0	58 - 137				
Surr: 1,2-Dichloroethane-d4	*47.69*	*1.0*	*50*	*0*	*95.4*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*49.51*	*1.0*	*50*	*0*	*99.0*	*85 - 114*				
Surr: Dibromofluoromethane	*48.25*	*1.0*	*50*	*0*	*96.5*	*80 - 119*				
Surr: Toluene-d8	*46.7*	*1.0*	*50*	*0*	*93.4*	*89 - 112*				

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

Revision: 1

ALS Group USA, Corp Date: 02-Feb-18

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS17121224

QC BATCH REPORT

Batch ID: R308247 **Instrument: VOA2** **Method: SW8260**

MS Sample ID: **HS17121134-13MS** Units: **ug/L** Analysis Date: **01-Jan-2018 18:11**
Client ID: Run ID: **VOA2_308247** SeqNo: **4375632** 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	47.71	1.0	50	0	95.4	78 - 124				
1,1,1-Trichloroethane	50.44	1.0	50	0	101	74 - 131				
1,1,2,2-Tetrachloroethane	40.93	1.0	50	0	81.9	71 - 121				
1,1,2-Trichloroethane	45.64	1.0	50	0	91.3	80 - 119				
1,1-Dichloroethane	46.7	1.0	50	0	93.4	77 - 125				
1,1-Dichloroethene	51.44	1.0	50	0	103	71 - 131				
1,1-Dichloropropene	54.07	1.0	50	0	108	79 - 125				
1,2,3-Trichlorobenzene	49.67	1.0	50	0	99.3	69 - 129				
1,2,3-Trichloropropane	42.61	1.0	50	0	85.2	73 - 122				
1,2,4-Trichlorobenzene	50.44	1.0	50	0	101	69 - 130				
1,2,4-Trimethylbenzene	41.59	1.0	50	0	83.2	76 - 124				
1,2-Dibromo-3-chloropropane	42.37	1.0	50	0	84.7	62 - 128				
1,2-Dibromoethane	48	1.0	50	0	96.0	77 - 121				
1,2-Dichlorobenzene	42.46	1.0	50	0	84.9	80 - 119				
1,2-Dichloroethane	49.13	1.0	50	0	98.3	73 - 128				
1,2-Dichloropropane	45.34	1.0	50	0	90.7	78 - 122				
1,3,5-Trimethylbenzene	42.26	1.0	50	0	84.5	75 - 124				
1,3-Dichlorobenzene	42.92	1.0	50	0	85.8	80 - 119				
1,3-Dichloropropane	45.09	1.0	50	0	90.2	80 - 119				
1,4-Dichlorobenzene	42.3	1.0	50	0	84.6	79 - 118				
2,2-Dichloropropane	47.88	1.0	50	0	95.8	60 - 139				
2-Butanone	88.13	2.0	100	0	88.1	56 - 143				
2-Chlorotoluene	41.08	1.0	50	0	82.2	79 - 122				
2-Hexanone	88.81	2.0	100	0	88.8	57 - 139				
4-Chlorotoluene	41.03	1.0	50	0	82.1	78 - 122				
4-Isopropyltoluene	44.22	1.0	50	0	88.4	77 - 127				
4-Methyl-2-pentanone	88.83	2.0	100	0	88.8	67 - 130				
Acetone	89.28	2.0	100	0	89.3	39 - 160				
Benzene	47.57	1.0	50	0	95.1	79 - 120				
Bromobenzene	41.51	1.0	50	0	83.0	80 - 120				
Bromochloromethane	48.57	1.0	50	0	97.1	78 - 123				
Bromodichloromethane	47.13	1.0	50	0	94.3	79 - 125				
Bromoform	50.53	1.0	50	0	101	66 - 130				
Bromomethane	53.78	1.0	50	0	108	53 - 141				

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

Revision: 1

ALS Group USA, Corp Date: 02-Feb-18

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS17121224

QC BATCH REPORT

Batch ID: R308247 **Instrument: VOA2** **Method: SW8260**

MS Sample ID: **HS17121134-13MS** Units: **ug/L** Analysis Date: **01-Jan-2018 18:11**
Client ID: Run ID: **VOA2_308247** SeqNo: **4375632** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	99.83	2.0	100	0	99.8	64 - 133				
Carbon tetrachloride	44.88	1.0	50	0	89.8	72 - 136				
Chlorobenzene	45.7	1.0	50	0	91.4	80 - 120				
Chloroethane	45.56	1.0	50	0	91.1	82 - 118				
Chloroform	45.96	1.0	50	0	91.9	79 - 124				
Chloromethane	50.63	1.0	50	0	101	50 - 139				
cis-1,2-Dichloroethene	47.49	1.0	50	0	95.0	78 - 123				
cis-1,3-Dichloropropene	50.56	1.0	50	0	101	75 - 124				
Dibromochloromethane	48.48	1.0	50	0	97.0	74 - 126				
Dibromomethane	48.47	1.0	50	0	96.9	79 - 123				
Dichlorodifluoromethane	60.7	1.0	50	0	121	32 - 152				
Ethylbenzene	46.43	1.0	50	0	92.9	79 - 121				
Hexachlorobutadiene	47	1.0	50	0	94.0	66 - 134				
Isopropylbenzene	48.02	1.0	50	0	96.0	72 - 131				
m,p-Xylene	92.32	2.0	100	0	92.3	80 - 121				
Methylene chloride	44.84	2.0	50	0	89.7	74 - 124				
Naphthalene	47.18	1.0	50	0	94.4	61 - 128				
n-Butylbenzene	46.28	1.0	50	0	92.6	75 - 128				
n-Propylbenzene	43.26	1.0	50	0	86.5	76 - 126				
o-Xylene	45.9	1.0	50	0	91.8	78 - 122				
sec-Butylbenzene	44.75	1.0	50	0	89.5	77 - 126				
Styrene	47.05	1.0	50	0	94.1	78 - 128				
tert-Butylbenzene	43.61	1.0	50	0	87.2	78 - 124				
Tetrachloroethene	52.55	1.0	50	0	105	74 - 129				
Toluene	45.88	1.0	50	0	91.8	80 - 121				
trans-1,2-Dichloroethene	53.63	1.0	50	0	107	75 - 124				
trans-1,3-Dichloropropene	49.92	1.0	50	0	99.8	73 - 127				
Trichloroethene	48.88	1.0	50	0	97.8	79 - 123				
Trichlorofluoromethane	55.1	1.0	50	0	110	65 - 141				
Vinyl chloride	53.31	1.0	50	0	107	58 - 137				
Surr: 1,2-Dichloroethane-d4	*46.93*	*1.0*	*50*	*0*	*93.9*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*49.52*	*1.0*	*50*	*0*	*99.0*	*85 - 114*				
Surr: Dibromofluoromethane	*46.98*	*1.0*	*50*	*0*	*94.0*	*80 - 119*				
Surr: Toluene-d8	*46.93*	*1.0*	*50*	*0*	*93.9*	*89 - 112*				

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

Revision: 1

ALS Group USA, Corp Date: 02-Feb-18

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS17121224

QC BATCH REPORT

Batch ID: R308247 **Instrument: VOA2** **Method: SW8260**

MSD Sample ID: **HS17121134-13MSD** Units: **ug/L** Analysis Date: **01-Jan-2018 18:36**
Client ID: Run ID: **VOA2_308247** SeqNo: **4375633** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	46.78	1.0	50	0	93.6	78 - 124	47.71	1.97	20	
1,1,1-Trichloroethane	49.7	1.0	50	0	99.4	74 - 131	50.44	1.47	20	
1,1,2,2-Tetrachloroethane	42.65	1.0	50	0	85.3	71 - 121	40.93	4.12	20	
1,1,2-Trichloroethane	45.4	1.0	50	0	90.8	80 - 119	45.64	0.513	20	
1,1-Dichloroethane	46.62	1.0	50	0	93.2	77 - 125	46.7	0.171	20	
1,1-Dichloroethene	52.57	1.0	50	0	105	71 - 131	51.44	2.18	20	
1,1-Dichloropropene	51.72	1.0	50	0	103	79 - 125	54.07	4.45	20	
1,2,3-Trichlorobenzene	51.65	1.0	50	0	103	69 - 129	49.67	3.91	20	
1,2,3-Trichloropropane	45.39	1.0	50	0	90.8	73 - 122	42.61	6.32	20	
1,2,4-Trichlorobenzene	51.57	1.0	50	0	103	69 - 130	50.44	2.22	20	
1,2,4-Trimethylbenzene	40.72	1.0	50	0	81.4	76 - 124	41.59	2.1	20	
1,2-Dibromo-3-chloropropane	47.86	1.0	50	0	95.7	62 - 128	42.37	12.2	20	
1,2-Dibromoethane	48.29	1.0	50	0	96.6	77 - 121	48	0.614	20	
1,2-Dichlorobenzene	42.64	1.0	50	0	85.3	80 - 119	42.46	0.428	20	
1,2-Dichloroethane	49.16	1.0	50	0	98.3	73 - 128	49.13	0.078	20	
1,2-Dichloropropane	44.7	1.0	50	0	89.4	78 - 122	45.34	1.43	20	
1,3,5-Trimethylbenzene	41.77	1.0	50	0	83.5	75 - 124	42.26	1.17	20	
1,3-Dichlorobenzene	43.26	1.0	50	0	86.5	80 - 119	42.92	0.788	20	
1,3-Dichloropropane	44.91	1.0	50	0	89.8	80 - 119	45.09	0.393	20	
1,4-Dichlorobenzene	42.36	1.0	50	0	84.7	79 - 118	42.3	0.153	20	
2,2-Dichloropropane	47.55	1.0	50	0	95.1	60 - 139	47.88	0.702	20	
2-Butanone	98.63	2.0	100	0	98.6	56 - 143	88.13	11.2	20	
2-Chlorotoluene	40.89	1.0	50	0	81.8	79 - 122	41.08	0.466	20	
2-Hexanone	97.43	2.0	100	0	97.4	57 - 139	88.81	9.25	20	
4-Chlorotoluene	40.92	1.0	50	0	81.8	78 - 122	41.03	0.276	20	
4-Isopropyltoluene	43.94	1.0	50	0	87.9	77 - 127	44.22	0.628	20	
4-Methyl-2-pentanone	94.83	2.0	100	0	94.8	67 - 130	88.83	6.54	20	
Acetone	100.7	2.0	100	0	101	39 - 160	89.28	12	20	
Benzene	46.45	1.0	50	0	92.9	79 - 120	47.57	2.4	20	
Bromobenzene	42.32	1.0	50	0	84.6	80 - 120	41.51	1.91	20	
Bromochloromethane	49.37	1.0	50	0	98.7	78 - 123	48.57	1.64	20	
Bromodichloromethane	46.56	1.0	50	0	93.1	79 - 125	47.13	1.21	20	
Bromoform	51.21	1.0	50	0	102	66 - 130	50.53	1.35	20	
Bromomethane	52.62	1.0	50	0	105	53 - 141	53.78	2.17	20	

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

Revision: 1

ALS Group USA, Corp Date: 02-Feb-18

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS17121224

QC BATCH REPORT

Batch ID: R308247 **Instrument: VOA2** **Method: SW8260**

MSD Sample ID: **HS17121134-13MSD** Units: **ug/L** Analysis Date: **01-Jan-2018 18:36**
Client ID: Run ID: **VOA2_308247** SeqNo: **4375633** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Carbon disulfide	99.39	2.0	100	0	99.4	64 - 133	99.83	0.439	20	
Carbon tetrachloride	42.69	1.0	50	0	85.4	72 - 136	44.88	4.99	20	
Chlorobenzene	44.78	1.0	50	0	89.6	80 - 120	45.7	2.02	20	
Chloroethane	44.47	1.0	50	0	88.9	82 - 118	45.56	2.42	20	
Chloroform	46.31	1.0	50	0	92.6	79 - 124	45.96	0.751	20	
Chloromethane	49.91	1.0	50	0	99.8	50 - 139	50.63	1.43	20	
cis-1,2-Dichloroethene	47.56	1.0	50	0	95.1	78 - 123	47.49	0.156	20	
cis-1,3-Dichloropropene	50.28	1.0	50	0	101	75 - 124	50.56	0.546	20	
Dibromochloromethane	47.78	1.0	50	0	95.6	74 - 126	48.48	1.44	20	
Dibromomethane	49.13	1.0	50	0	98.3	79 - 123	48.47	1.35	20	
Dichlorodifluoromethane	59.36	1.0	50	0	119	32 - 152	60.7	2.22	20	
Ethylbenzene	45.85	1.0	50	0	91.7	79 - 121	46.43	1.25	20	
Hexachlorobutadiene	48.42	1.0	50	0	96.8	66 - 134	47	2.96	20	
Isopropylbenzene	46.79	1.0	50	0	93.6	72 - 131	48.02	2.58	20	
m,p-Xylene	89.94	2.0	100	0	89.9	80 - 121	92.32	2.62	20	
Methylene chloride	44.92	2.0	50	0	89.8	74 - 124	44.84	0.164	20	
Naphthalene	49.5	1.0	50	0	99.0	61 - 128	47.18	4.79	20	
n-Butylbenzene	46.34	1.0	50	0	92.7	75 - 128	46.28	0.138	20	
n-Propylbenzene	42.93	1.0	50	0	85.9	76 - 126	43.26	0.766	20	
o-Xylene	45.24	1.0	50	0	90.5	78 - 122	45.9	1.44	20	
sec-Butylbenzene	44.71	1.0	50	0	89.4	77 - 126	44.75	0.0908	20	
Styrene	46.38	1.0	50	0	92.8	78 - 128	47.05	1.43	20	
tert-Butylbenzene	43.38	1.0	50	0	86.8	78 - 124	43.61	0.523	20	
Tetrachloroethene	50.6	1.0	50	0	101	74 - 129	52.55	3.79	20	
Toluene	44.92	1.0	50	0	89.8	80 - 121	45.88	2.12	20	
trans-1,2-Dichloroethene	53.11	1.0	50	0	106	75 - 124	53.63	0.968	20	
trans-1,3-Dichloropropene	50.1	1.0	50	0	100	73 - 127	49.92	0.357	20	
Trichloroethene	48.31	1.0	50	0	96.6	79 - 123	48.88	1.17	20	
Trichlorofluoromethane	53.92	1.0	50	0	108	65 - 141	55.1	2.17	20	
Vinyl chloride	51.69	1.0	50	0	103	58 - 137	53.31	3.1	20	
Surr: 1,2-Dichloroethane-d4	*48.43*	*1.0*	*50*	*0*	*96.9*	*81 - 118*	*46.93*	*3.14*	*20*	
Surr: 4-Bromofluorobenzene	*49.35*	*1.0*	*50*	*0*	*98.7*	*85 - 114*	*49.52*	*0.334*	*20*	
Surr: Dibromofluoromethane	*48.58*	*1.0*	*50*	*0*	*97.2*	*80 - 119*	*46.98*	*3.35*	*20*	
Surr: Toluene-d8	*46.62*	*1.0*	*50*	*0*	*93.2*	*89 - 112*	*46.93*	*0.659*	*20*	

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

Revision: 1

ALS Group USA, Corp Date: 02-Feb-18

Client:	Bhate Environmental Associates, Inc.
Project:	LHAAP 18/24
WorkOrder:	HS17121224

QC BATCH REPORT

Batch ID:	**R308247**	**Instrument:**	**VOA2**	**Method:**	**SW8260**

The following samples were analyzed in this batch: HS17121224-02 HS17121224-04

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

Revision: 1

ALS Group USA, Corp Date: 02-Feb-18

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: **HS17121224**

QUALIFIERS, ACRONYMS, UNITS

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

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

Unit Reported	Description
mg/L	Milligrams per Liter

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	17-027-0	27-Mar-2018
California	2919 2016-2018	31-Jul-2018
Illinois	004112	09-May-2018
Kentucky	123043	30-Apr-2018
Louisiana	03087 2017-2017	30-Jun-2018
North Dakota	R193 2017-2017	30-Apr-2018
Oklahoma	2017-088	31-Aug-2018
Texas	T104704231-17-19	30-Apr-2018
North Carolina	624-2018	31-Dec-2018

ALS Group USA, Corp Date: 02-Feb-18

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
Work Order: HS17121224

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS17121224-01	18CPTMW04SW_122017	Login	12/22/2017 3:48:03 PM	SDW	Sub
HS17121224-01	18CPTMW04SW_122017	Login	12/22/2017 3:48:03 PM	SDW	MET033
HS17121224-01	18CPTMW04SW_122017	Login	12/22/2017 3:48:03 PM	SDW	VOA142
HS17121224-02	18CPTMW04_122017	Login	12/22/2017 3:48:03 PM	SDW	Sub
HS17121224-02	18CPTMW04_122017	Login	12/22/2017 3:48:03 PM	SDW	VOA142
HS17121224-03	MW2_122017	Login	12/22/2017 3:48:03 PM	SDW	Sub
HS17121224-03	MW2_122017	Login	12/22/2017 3:48:03 PM	SDW	MET033
HS17121224-03	MW2_122017	Login	12/22/2017 3:48:03 PM	SDW	VOA142
HS17121224-04	18CPTMW01SW_122017	Login	12/22/2017 3:48:03 PM	SDW	Sub
HS17121224-04	18CPTMW01SW_122017	Login	12/22/2017 3:48:03 PM	SDW	MET033
HS17121224-04	18CPTMW01SW_122017	Login	12/22/2017 3:48:03 PM	SDW	VOA142
HS17121224-05	MW5_122017	Login	12/22/2017 3:48:04 PM	SDW	Sub
HS17121224-05	MW5_122017	Login	12/22/2017 3:48:04 PM	SDW	MET033
HS17121224-05	MW5_122017	Login	12/22/2017 3:48:04 PM	SDW	VOA142
HS17121224-06	MW3_122117	Login	12/22/2017 3:48:04 PM	SDW	Sub
HS17121224-06	MW3_122117	Login	12/22/2017 3:48:04 PM	SDW	MET033
HS17121224-06	MW3_122117	Login	12/22/2017 3:48:04 PM	SDW	VOA142
HS17121224-07	18CPTMW08DW_122117	Login	12/22/2017 3:48:04 PM	SDW	Sub
HS17121224-08	18CPTMW08SW_122117	Login	12/22/2017 3:48:04 PM	SDW	Sub
HS17121224-08	18CPTMW08SW_122117	Login	12/22/2017 3:48:04 PM	SDW	VOA142
HS17121224-09	Trip Blank	Login	12/22/2017 3:48:05 PM	SDW	VOA142

Revision: 1

ALS Group USA, Corp Date: 02-Feb-18

Sample Receipt Checklist

Client Name: Bhate Environmental
Work Order: HS17121224
Date/Time Received: **22-Dec-2017 10:15**
Received by: **PJM**

Checklist completed by: *Pablo Marinez* eSignature 22-Dec-2017 Date
Reviewed by: *Sonia West* eSignature 28-Dec-2017 Date

Matrices: **WATER**
Carrier name: **FedEx Priority Overnight**

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
TX1005 solids received in hermetically sealed vials?	Yes ☐	No ☐	N/A ☑
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	1.5C/1.8C UC/C	IR # 25	
Cooler(s)/Kit(s):	25018		
Date/Time sample(s) sent to storage:	12/22/2017 16:00		
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☑	N/A ☐
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

00874384

bhate
ENVIRONMENTAL CONSTRUCTION ENERGY

Page: ___ of ___

Project/Phase No: NWO1312.0150

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

Chain of Custody and Analytical Request

HS17121224

Bhate Environmental Associates, Inc.
LHAAP 18 24

Facility/Base I.D.: LHAAP

Project/Site Name: LHAAP / Site 18/24

Client Name:

Collected by: Scott Beesinger

Field Sample ID (30 Characters Max)	ERPIMS LOCID (15 Characters Max)	Date Collected (dd-mmm-yyyy)	Time Collected (Military) (hhmm)	Sample Depth (beginning - ending)	SA Code (2)	Sample Number (3)	Sample Matrix (4)	Number of containers	Sample Analysis Requested (5): VOC	PERCHLORATE	TOTAL METALS									Ambient Blank Lot Control Number	Equipment Blank Lot Control Number	Trip Blank Lot Control Number	Cooler ID
18CPTMW04SW_122017		20 Dec 2017	0855	-			WG	5	X	X	X												
18CPTMW04_122017		20 Dec 2017	0955	-			WG	4	X	X													
MW2_122017		20 Dec 2017	1050	-			WG	5	X	X	X												
18CPTMW01SW_122017		20 Dec 2017	1300				WG	5	X	X	X												
MW5_122017		20 Dec 2017	1355				WG	5	X	X	X												
MW3_122117		21 Dec 2017	0845	-			WG	5	X	X	X												
18CPTMW08SW_122117		21 Dec 2017	0945	-			WG	4	X	X													
18CPTMW08DW_122117		21 Dec 2017	1045	-			WG	1		X													
Trip Blank		21 Dec 2017		-			W	2	X														
				-																			
				-																			

COMMENTS:

Custody Transfers Prior to Receipt by Laboratory

Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1. Scott Beesinger	12/21/17	1230	1. DM	12-22-17	1015
2.			2.		
3.			3.		

Sample Delivery Details / Laboratory Receipt

Delivered Directly to Lab: ___ Shipped No.:

___ Method of Shipment: ___

___ Fed Ex ___ Airbill Number:

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

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

1.) Chain of Custody Number = date collected + custody number (e.g. 09-02-1999-01)

2.) Sample Type (SA) Codes: N = Normal Sample, TB = Trip Blank (-c) Sample, FD = Field Duplicate (-a) Samples, FR = Field Replicate (-b) Samples, EB = Equipment Blank (-d) Samples, MS = Matrix Spike, SD = Matrix Spike Duplicate, AB = Ambient Blank (-e)

3.) Sample Number: Unique sample number collected from a particular location per day. (e.g. Groundwater sample collected from MW-1 on 10/10/99 = 01, if sampled again on 10/10/99 = 02, etc.)

4.) Matrix Codes: GS = Soil Gas, WG = Groundwater, WS = Surface Water, SO = Soil, SE = Sediment, SL = Sludge, SS = Surface Soil Samples, WQ = Aqueous Blank Samples (trip, equipment, ambient, etc), SQ = Soil Blanks

5.) Sample Analysis Requested: Analytical method requested and number of containers provided for each.

6.) Quality assurance samples are assigned by date (ddmmyy) and the sample number associated with the sample (01, 02, etc) (e.g. Equipment blank collected in association with MW-1 on 10/10/99 will be designated 10109901 in the Equipment Blank Lot Control

Mable 25018
1.5c
1m25
CSC10.3

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

CUSTODY SEAL

Date: 12/21/17 Time: 1230

Name: Scott Beesinger

Company: BHATS

Seal Signature: PM

Date: 12-22-17

25018

FedEx
TRK# 0221 7376 9751 1990

FRI - 22 DEC 10:30A
PRIORITY OVERNIGHT

AB SGRA

77099
TX-US
IAH

FID 5090257 21DEC17 GGGA 546C1/574C/0C8A

Volatile Organics Raw Data

Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
ALS WO# HS17121224

FORM 2
WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS17121224

	CLIENT SAMPLE NO.	SMC1 (DCE)#	SMC2 #	SMC3 (TOL)#	OTHER #	TOT OUT
01	VLCSW-171231	94	95	93	100	0
02	VBLKW-171231	91	98	97	96	0
03	HS17121224-09	90	98	96	96	0
04	HS17121224-01	91	99	96	98	0
05	HS17121224-08	92	99	95	99	0
06	HS17121224-05	93	99	96	98	0
07	HS17121224-05	94	96	98	98	0
08	HS17121224-06	94	99	96	99	0
09	HS17121224-06	91	98	98	95	0
10	HS17121224-02	93	98	98	97	0
11	HS17121224-02	92	99	98	95	0
12	HS17121224-04	93	95	100	98	0
13	HS17121224-04	91	99	98	96	0
14	HS17121224-03	95	97	96	99	0
15	HS17121224-03	91	96	96	97	0
16	HS17121224-01	94	96	93	98	0
17	HS17121224-01	96	97	94	99	0
18						
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28						

		QC LIMITS
SMC1 (DCE)	= 1,2-Dichloroethane-d4	(70-130)
SMC2	= Dibromofluoromethane	(70-130)
SMC3 (TOL)	= Toluene-d8	(70-130)
OTHER	= 4-Bromofluorobenzene	(70-130)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

FORM 2
WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS17121224

	CLIENT SAMPLE NO.	SMC1 (DCE) #	SMC2 #	SMC3 (TOL) #	OTHER #	TOT OUT
01	VLCSW-180101	95	96	93	99	0
02	VBLKW-180101	91	99	96	97	0
03	HS17121134-13	94	94	94	99	0
04	HS17121134-13	97	97	93	99	0
05	HS17121224-04	92	100	96	98	0
06	HS17121224-02	94	96	95	97	0
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		QC LIMITS
SMC1 (DCE)	= 1,2-Dichloroethane-d4	(70-130)
SMC2	= Dibromofluoromethane	(70-130)
SMC3 (TOL)	= Toluene-d8	(70-130)
OTHER	= 4-Bromofluorobenzene	(70-130)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

FORM 3
WATER VOLATILE METHOD SPIKE RECOVERY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS17121224

Matrix Spike - Sample No.: VSTD-ICV

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE AMOUNT ()	% REC #	QC. LIMITS REC.
1,1,1-Trichloroethane	50.00	49.06	98	80-120
1,1,1,2-Tetrachloroetha	50.00	49.68	99	80-120
tert-Butylbenzene	50.00	45.55	91	80-120
Naphthalene	50.00	51.79	104	80-120
sec-Butylbenzene	50.00	46.50	93	80-120
1,1,2,2-Tetrachloroetha	50.00	45.44	91	80-120
1,1,2-Trichloroethane	50.00	48.61	97	80-120
1,1-Dichloropropene	50.00	51.30	103	80-120
1,1-Dichloroethane	50.00	48.08	96	80-120
1,1-Dichloroethene	50.00	50.33	101	80-120
1,2,4-Trichlorobenzene	50.00	55.22	110	80-120
1,2-Dibromo-3-Chloropro	50.00	47.98	96	80-120
1,2-Dibromoethane	50.00	49.92	100	80-120
1,2-Dichlorobenzene	50.00	47.36	95	80-120
1,2-Dichloroethane	50.00	51.46	103	80-120
1,2-Dichloropropane	50.00	47.58	95	80-120
1,3-Dichlorobenzene	50.00	47.02	94	80-120
1,4-Dichlorobenzene	50.00	46.92	94	80-120
2-Butanone	100.00	98.74	99	80-120
2-Hexanone	100.00	94.99	95	80-120
4-Methyl-2-Pentanone	100.00	93.96	94	80-120
Acetone	100.00	101.52	102	80-120
Benzene	50.00	47.98	96	80-120
Bromodichloromethane	50.00	49.79	100	80-120
Bromoform	50.00	53.45	107	80-120
Bromomethane	50.00	54.60	109	80-120
Carbon Disulfide	100.00	101.83	102	80-120
Carbon Tetrachloride	50.00	42.60	85	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: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS17121224

Matrix Spike - Sample No.: VSTD-ICV

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE AMOUNT ()	% REC #	QC. LIMITS REC.
Chlorobenzene	50.00	46.60	93	80-120
Chloroethane	50.00	42.06	84	80-120
Chloroform	50.00	48.98	98	80-120
Chloromethane	50.00	54.85	110	80-120
cis-1,2-Dichloroethene	50.00	49.49	99	80-120
cis-1,3-Dichloropropene	50.00	52.66	105	80-120
Dibromochloromethane	50.00	50.66	101	80-120
Dichlorodifluoromethane	50.00	53.81	108	80-120
Ethylbenzene	50.00	46.15	92	80-120
Isopropylbenzene	50.00	46.76	94	80-120
Methylene Chloride	50.00	48.55	97	80-120
Tetrachloroethene	50.00	50.78	102	80-120
Toluene	50.00	45.96	92	80-120
trans-1,2-Dichloroethen	50.00	52.97	106	80-120
trans-1,3-Dichloroprope	50.00	54.38	109	80-120
Trichloroethene	50.00	48.10	96	80-120
Trichlorofluoromethane	50.00	52.99	106	80-120
Vinyl Chloride	50.00	51.74	103	80-120
m,p-Xylenes	100.00	91.61	92	80-120
o-Xylene	50.00	46.64	93	80-120
Xylenes (total)	150.00	138.25	92	80-120
1,2,3-Trichloropropane	50.00	48.85	98	80-120
1,2,3-Trichlorobenzene	50.00	54.84	110	80-120
1,2,4-Trimethylbenzene	50.00	44.39	89	80-120
1,3,5-Trimethylbenzene	50.00	44.90	90	80-120
2,2-Dichloropropane	50.00	49.36	99	80-120
1,3-Dichloropropane	50.00	47.05	94	80-120
2-Chlorotoluene	50.00	44.48	89	80-120

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

* Values outside of QC limits

COMMENTS: _____

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FORM III VOA

FORM 3
WATER VOLATILE METHOD SPIKE RECOVERY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS17121224

Matrix Spike - Sample No.: VSTD-ICV

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE AMOUNT ()	% REC #	QC. LIMITS REC.
4-Chlorotoluene	50.00	44.61	89	80-120
p-Isopropyltoluene	50.00	46.35	93	80-120
Bromochloromethane	50.00	52.80	106	80-120
Bromobenzene	50.00	46.42	93	80-120
Dibromomethane	50.00	51.22	102	80-120
Hexachlorobutadiene	50.00	49.83	100	80-120
n-Propylbenzene	50.00	45.14	90	80-120
n-Butylbenzene	50.00	48.19	96	80-120
Styrene	50.00	48.08	96	80-120

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

* Values outside of QC limits

COMMENTS: _____

_____

FORM III VOA

FORM 5
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS17121224

Lab File ID: D121901 BFB Injection Date: 12/19/17

Instrument ID: VOA2 BFB Injection Time: 0921

GC Column: DB624 ID: 0.18 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	17.1
75	30.0 - 60.0% of mass 95	43.0
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.7
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	83.4
175	5.0 - 9.0% of mass 174	6.7 (8.0)1
176	95.0 - 101.0% of mass 174	80.0 (95.9)1
177	5.0 - 9.0% of mass 176	5.8 (7.2)2

1-Value is % mass 174 2-Value is % mass 176

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD00.5	VSTD00.5	D121903	12/19/17	1010
02	VSTD001	VSTD001	D121904	12/19/17	1034
03	VSTD002	VSTD002	D121905	12/19/17	1059
04	VSTD005	VSTD005	D121906	12/19/17	1123
05	VSTD010	VSTD010	D121907	12/19/17	1147
06	VSTD020	VSTD020	D121908	12/19/17	1214
07	VSTD050	VSTD050	D121909	12/19/17	1239
08	VSTD100	VSTD100	D121910	12/19/17	1303
09	VSTD200	VSTD200	D121911	12/19/17	1327
10	VSTD-ICV	VSTD-ICV	D121913	12/19/17	1416
11					
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FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS17121224

Instrument ID: VOA2 Calibration Date(s): 12/19/17 12/19/17

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1010 1327

LAB FILE ID: RF0.5: D121903 RF1: D121904 RF2: D121905
RF5: D121906 RF10: D121907 RF20: D121908

COMPOUND	RF0.5	RF1	RF2	RF5	RF10	RF20
1,1,1-Trichloroethane	0.804	0.803	0.745	0.714	0.797	0.794
1,1,1,2-Tetrachloroethane	0.414	0.439	0.395	0.373	0.404	0.406
tert-Butylbenzene	3.220	3.180	2.800	2.512	2.689	2.709
Naphthalene	1123	3453	8523	34239	75559	161007
sec-Butylbenzene	4.297	4.084	3.646	3.220	3.596	3.673
1,1,2,2-Tetrachloroethane	1.431	1.401	1.274	1.150	1.186	1.090
1,1,2-Trichloroethane	0.354	0.348	0.305	0.289	0.300	0.299
1,1-Dichloropropene	2906	4681	7445	15499	28773	61975
1,1-Dichloroethane	1.067	1.147	1.054	0.993	1.054	1.040
1,1-Dichloroethene	0.347	0.438	0.420	0.379	0.435	0.435
1,2,4-Trichlorobenzene	0.741	0.962	0.873	0.877	0.991	1.106
1,2-Dibromo-3-Chloropropane	130	527	1073	2812	5460	11302
1,2-Dibromoethane	0.400	0.401	0.383	0.365	0.383	0.384
1,2-Dichlorobenzene	2.062	2.084	1.842	1.715	1.791	1.780
1,2-Dichloroethane	2076	3910	7652	19328	11455	73153
1,2-Dichloropropane	0.387	0.431	0.432	0.405	0.415	0.380
1,3-Dichlorobenzene	2.189	2.106	1.936	1.751	1.807	1.846
1,4-Dichlorobenzene	2.070	2.116	1.792	1.663	1.737	1.705
2-Butanone	0.276	0.300	0.260	0.271	0.264	0.247
2-Hexanone	0.322	0.328	0.307	0.274	0.293	0.277
4-Methyl-2-Pentanone	0.516	0.532	0.464	0.436	0.460	0.427
Acetone	2564	3611	4810	8024	15119	33367
Benzene	1.437	1.580	1.320	1.264	1.338	1.249
Bromodichloromethane	0.500	0.504	0.449	0.430	0.470	0.468
Bromoform	0.284	0.260	0.286	0.279	0.295	0.305
Bromomethane	1436	2542	4860	11772	19732	37890
Carbon Disulfide	1.039	0.948	0.859	0.833	0.960	0.977
Carbon Tetrachloride	0.626	0.510	0.521	0.436	0.486	0.452
Chlorobenzene	1.171	1.198	1.074	0.999	1.027	1.014
Chloroethane	0.355	0.450	0.438	0.496	0.423	0.409
Chloroform	0.988	0.952	0.930	0.874	0.930	0.895
Chloromethane	3374	5969	10010	22250	43035	90594
cis-1,2-Dichloroethene	0.668	0.561	0.587	0.540	0.564	0.544
cis-1,3-Dichloropropene	0.494	0.537	0.508	0.501	0.555	0.555
Dibromochloromethane	0.437	0.446	0.415	0.403	0.432	0.447
Dichlorodifluoromethane	0.376	0.410	0.356	0.382	0.460	0.479
Ethylbenzene	0.652	0.647	0.572	0.512	0.543	0.558
Isopropylbenzene	1.988	1.980	1.718	1.614	1.751	1.742
Methylene Chloride	0.664	0.606	0.547	0.518	0.532	0.512
Tetrachloroethene	2878	3904	5759	12517	22413	46886
Toluene	1.769	1.891	1.653	1.549	1.594	1.597
trans-1,2-Dichloroethene	0.349	0.427	0.475	0.423	0.462	0.461
trans-1,3-Dichloropropene	0.403	0.453	0.399	0.410	0.474	0.476
Trichloroethene	0.443	0.405	0.340	0.332	0.365	0.377

FORM VI VOA

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS1712122

Instrument ID: VOA2 Calibration Date(s): 12/19/17 12/19/17

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1010 1327

LAB FILE ID: RF0.5: D121903 RF1: D121904 RF2: D121905
RF5: D121906 RF10: D121907 RF20: D121908

COMPOUND	RF0.5	RF1	RF2	RF5	RF10	RF20
Trichlorofluoromethane	0.537	0.608	0.565	0.540	0.679	0.679
Vinyl Chloride	0.611	0.630	0.621	0.558	0.626	0.642
m,p-Xylenes	0.813	0.786	0.693	0.640	0.682	0.677
o-Xylene	0.843	0.831	0.707	0.668	0.679	0.700
Xylenes (total)	0.738	0.726	0.617	0.588	0.634	0.617
1,2,3-Trichloropropane	1.343	1.424	1.273	1.151	1.188	1.148
1,2,3-Trichlorobenzene	0.609	0.748	0.797	0.818	0.896	0.940
1,2,4-Trimethylbenzene	4.242	4.007	3.451	3.125	3.218	3.243
1,3,5-Trimethylbenzene	4.026	3.821	3.404	3.059	3.223	3.167
2,2-Dichloropropane	0.729	0.794	0.715	0.676	0.750	0.734
1,3-Dichloropropane	0.710	0.742	0.619	0.586	0.593	0.601
2-Chlorotoluene	3.397	3.467	3.108	2.685	2.712	2.746
4-Chlorotoluene	3.737	3.682	3.298	2.962	3.019	2.968
p-Isopropyltoluene	3.778	3.456	3.033	2.864	3.057	3.110
Bromochloromethane	0.269	0.253	0.255	0.262	0.283	0.284
Bromobenzene	1.383	1.191	1.158	1.049	1.064	1.061
Dibromomethane	0.196	0.197	0.196	0.197	0.217	0.212
Hexachlorobutadiene	963	1399	2593	6524	13741	30591
n-Propylbenzene	4.960	4.944	4.499	3.983	4.179	4.225
n-Butylbenzene	2.497	2.531	2.124	2.093	2.307	2.450
Styrene	1.220	1.281	1.151	1.057	1.155	1.152
1,2-Dichloroethane-d4	0.632	0.541	0.571	0.505	0.571	0.546
Dibromofluoromethane	0.512	0.501	0.479	0.440	0.446	0.431
Toluene-d8	1.673	1.539	1.340	1.195	1.287	1.242
4-Bromofluorobenzene		0.618	0.516	0.462	0.490	0.466

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS1712122

Instrument ID: VOA2 Calibration Date(s): 12/19/17 12/19/17

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1010 1327

LAB FILE ID: RF50: D121909 RF100: D121910 RF200: D121911

COMPOUND	RF50	RF100	RF200
1,1,1-Trichloroethane	0.792	0.774	0.734
1,1,1,2-Tetrachloroethane	0.397	0.392	0.371
tert-Butylbenzene	2.592	2.464	2.320
Naphthalene	395649	794606	1461418
sec-Butylbenzene	3.438	3.291	3.100
1,1,2,2-Tetrachloroethane	1.084	1.085	1.034
1,1,2-Trichloroethane	0.294	0.288	0.275
1,1-Dichloropropene	151900	286474	583601
1,1-Dichloroethane	1.050	1.026	0.963
1,1-Dichloroethene	0.437	0.431	0.391
1,2,4-Trichlorobenzene	1.106	1.128	1.079
1,2-Dibromo-3-Chloropropane	30643	61519	121157
1,2-Dibromoethane	0.380	0.383	0.368
1,2-Dichlorobenzene	1.732	1.646	1.522
1,2-Dichloroethane	175492	337824	662291
1,2-Dichloropropane	0.375	0.370	0.351
1,3-Dichlorobenzene	1.790	1.745	1.661
1,4-Dichlorobenzene	1.708	1.694	1.614
2-Butanone	0.265	0.280	0.264
2-Hexanone	0.278	0.285	0.272
4-Methyl-2-Pentanone	0.426	0.426	0.395
Acetone	83806	155352	314789
Benzene	1.267	1.235	1.150
Bromodichloromethane	0.463	0.467	0.439
Bromoform	0.317	0.328	0.316
Bromomethane	88179	161998	315966
Carbon Disulfide	0.984	0.960	0.922
Carbon Tetrachloride	0.409	0.428	0.406
Chlorobenzene	0.976	0.938	0.869
Chloroethane	0.368	0.365	0.335
Chloroform	0.914	0.895	0.826
Chloromethane	201934	389398	800291
cis-1,2-Dichloroethene	0.568	0.561	0.526
cis-1,3-Dichloropropene	0.564	0.563	0.535
Dibromochloromethane	0.441	0.440	0.424
Dichlorodifluoromethane	0.470	0.466	0.448
Ethylbenzene	0.520	0.491	0.465
Isopropylbenzene	1.628	1.532	1.391
Methylene Chloride	0.524	0.525	0.496
Tetrachloroethene	108668	206898	413430
Toluene	1.481	1.409	1.316
trans-1,2-Dichloroethene	0.491	0.474	0.453
trans-1,3-Dichloropropene	0.486	0.504	0.488
Trichloroethene	0.364	0.360	0.348

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS1712122

Instrument ID: VOA2 Calibration Date(s): 12/19/17 12/19/17

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1010 1327

LAB FILE ID: RF50: D121909 RF100: D121910 RF200: D121911

COMPOUND	RF50	RF100	RF200
Trichlorofluoromethane	0.669	0.651	0.620
Vinyl Chloride	0.619	0.623	0.585
m,p-Xylenes	0.631	0.594	0.550
o-Xylene	0.678	0.644	0.596
Xylenes (total)	0.583	0.556	0.514
1,2,3-Trichloropropane	1.159	1.174	0.858
1,2,3-Trichlorobenzene	0.914	0.982	0.934
1,2,4-Trimethylbenzene	3.063	2.910	2.715
1,3,5-Trimethylbenzene	3.000	2.851	2.639
2,2-Dichloropropane	0.741	0.730	0.686
1,3-Dichloropropane	0.578	0.577	0.545
2-Chlorotoluene	2.590	2.489	2.369
4-Chlorotoluene	2.875	2.736	2.555
p-Isopropyltoluene	2.916	2.821	2.664
Bromochloromethane	0.279	0.286	0.263
Bromobenzene	1.056	1.030	0.989
Dibromomethane	0.207	0.211	0.202
Hexachlorobutadiene	68105	134255	266365
n-Propylbenzene	3.932	3.780	3.543
n-Butylbenzene	2.286	2.203	2.095
Styrene	1.107	1.044	0.953
1,2-Dichloroethane-d4	0.554	0.564	0.522
Dibromofluoromethane	0.432	0.424	0.390
Toluene-d8	1.163	1.108	
4-Bromofluorobenzene	0.450	0.440	0.409

FORM VI VOA

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS1712122

Instrument ID: VOA2 Calibration Date(s): 12/19/17 12/19/17

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1010 1327

COMPOUND	CURVE	COEFFICENTS A0	COEFFICENTS A1	%RSD OR R^2	MAX %RSD OR R^2
1,1,1-Trichloroethane	AVRG		0.77276924	4.350	15.000
1,1,1,2-Tetrachloroethane	AVRG		0.39899030	5.212	15.000
tert-Butylbenzene	AVRG		2.72069995	11.280	15.000
Naphthalene	LINR	-1.06e-002	0.39396060	0.9979078	0.9900000
sec-Butylbenzene	AVRG		3.59394331	10.964	15.000
1,1,2,2-Tetrachloroethane	AVRG		1.19275495	12.147	15.000
1,1,2-Trichloroethane	AVRG		0.30586501	8.839	15.000
1,1-Dichloropropene	LINR	-1.87e-002	2.61428031	0.9997801	0.9900000
1,1-Dichloroethane	AVRG		1.04387562	4.895	15.000
1,1-Dichloroethene	AVRG		0.41266966	7.912	15.000
1,2,4-Trichlorobenzene	AVRG		0.98501350	13.569	15.000
1,2-Dibromo-3-Chloropropane	LINR	1.077e-002	4.80773795	0.9997728	0.9900000
1,2-Dibromoethane	AVRG		0.38308597	3.220	15.000
1,2-Dichlorobenzene	AVRG		1.79719079	10.110	15.000
1,2-Dichloroethane	LINR	-2.e-003	2.26967717	0.9977457	0.9900000
1,2-Dichloropropane	AVRG		0.39381920	7.224	15.000
1,3-Dichlorobenzene	AVRG		1.87027266	9.388	15.000
1,4-Dichlorobenzene	AVRG		1.78884060	10.034	15.000
2-Butanone	AVRG		0.26980121	5.521	15.000
2-Hexanone	AVRG		0.29295978	7.283	15.000
4-Methyl-2-Pentanone	AVRG		0.45362315	9.861	15.000
Acetone	LINR	-4.69e-002	6.17516382	0.9992633	0.9900000
Benzene	AVRG		1.31556367	9.655	15.000
Bromodichloromethane	AVRG		0.46564182	5.335	15.000
Bromoform	AVRG		0.29659331	7.335	15.000
Bromomethane	LINR	-5.e-002	3.06715228	0.9980188	0.9900000
Carbon Disulfide	AVRG		0.94240963	6.753	15.000
Carbon Tetrachloride	AVRG		0.47493257	14.801	15.000
Chlorobenzene	AVRG		1.02970292	10.206	15.000
Chloroethane	AVRG		0.40453032	13.046	15.000
Chloroform	AVRG		0.91157626	5.113	15.000
Chloromethane	LINR	-1.91e-002	1.21864727	0.9997769	0.9900000
cis-1,2-Dichloroethene	AVRG		0.56884012	7.235	15.000
cis-1,3-Dichloropropene	AVRG		0.53474402	5.103	15.000
Dibromochloromethane	AVRG		0.43168732	3.484	15.000
Dichlorodifluoromethane	AVRG		0.42743627	10.958	15.000
Ethylbenzene	AVRG		0.55113746	11.724	15.000
Isopropylbenzene	AVRG		1.70498371	11.397	15.000
Methylene Chloride	AVRG		0.54727576	9.818	15.000
Tetrachloroethene	LINR	-3.42e-002	3.35406776	0.9995193	0.9900000
Toluene	AVRG		1.58456836	11.098	15.000
trans-1,2-Dichloroethene	AVRG		0.44636929	9.521	15.000
trans-1,3-Dichloropropene	AVRG		0.45502367	8.923	15.000
Trichloroethene	AVRG		0.37033768	9.361	15.000

FORM VI VOA

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS1712122

Instrument ID: VOA2 Calibration Date(s): 12/19/17 12/19/17

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1010 1327

COMPOUND	CURVE	COEFFICENTS A0	COEFFICENTS A1	%RSD OR R^2	MAX %RSD OR R^2
Trichlorofluoromethane	AVRG		0.61649749	9.352	15.000
Vinyl Chloride	AVRG		0.61283948	4.188	15.000
m,p-Xylenes	AVRG		0.67400585	12.531	15.000
o-Xylene	AVRG		0.70513462	11.580	15.000
Xylenes (total)	AVRG		0.61936012	11.870	15.000
1,2,3-Trichloropropane	AVRG		1.19108795	13.263	15.000
1,2,3-Trichlorobenzene	AVRG		0.84874055	13.882	15.000
1,2,4-Trimethylbenzene	AVRG		3.33043722	14.988	15.000
1,3,5-Trimethylbenzene	AVRG		3.24331762	13.740	15.000
2,2-Dichloropropane	AVRG		0.72842815	4.762	15.000
1,3-Dichloropropane	AVRG		0.61691019	10.615	15.000
2-Chlorotoluene	AVRG		2.84031752	13.816	15.000
4-Chlorotoluene	AVRG		3.09264178	13.064	15.000
p-Isopropyltoluene	AVRG		3.07768873	11.169	15.000
Bromochloromethane	AVRG		0.27070416	4.764	15.000
Bromobenzene	AVRG		1.10912501	10.843	15.000
Dibromomethane	AVRG		0.20408606	3.962	15.000
Hexachlorobutadiene	LINR	-8.76e-003	2.20054899	0.9998445	0.9900000
n-Propylbenzene	AVRG		4.22741997	11.650	15.000
n-Butylbenzene	AVRG		2.28734751	7.553	15.000
Styrene	AVRG		1.12463170	8.714	15.000
1,2-Dichloroethane-d4	AVRG		0.55637893	6.497	15.000
Dibromofluoromethane	AVRG		0.45048639	8.752	15.000
Toluene-d8	AVRG		1.31829540	14.782	15.000
4-Bromofluorobenzene	AVRG		0.48140050	13.223	15.000

FORM VI VOA

MSVOA02 -Logbook

Batch: 30538
Date: 01-19-2018
Method: 8260
Comments:

Analyst: Anjana Poluri
Reviewer:
Laboratory: Houston

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
1	BFB	TUNE	01-19-2018 12:03 pm	1.00	50 mL	50 mL	D011901.D	Liquid	Y	NA
2	*Auto find/purged* CCV	CCV	01-19-2018 12:28 pm	1.00	50 mL	50 mL	D011902.D	Liquid	Y	NA
3	*10 uL cal std/50 mL DI* CCB	SAMP	01-19-2018 12:52 pm	1.00	50 mL	50 mL	D011903.D	Liquid	Y	NA
4	*CCB* VLCSW-180119	LCS	01-19-2018 01:17 pm	1.00	50 mL	50 mL	D011904.D	Liquid	Y	NA
5	*10 uL cal std/50 mL DI* VLCSDW-180119	LCSD	01-19-2018 01:42 pm	1.00	50 mL	50 mL	D011905.D	Liquid	Y	NA
6	*10 uL cal std/50 mL DI* BLK	SAMP	01-19-2018 02:06 pm	1.00	50 mL	50 mL	D011906.D	Liquid	Y	NA
7	*Cleanup blk* VBLKW-180119	MBLK	01-19-2018 02:31 pm	1.00	50 mL	50 mL	D011907.D	Liquid	Y	NA
8	HS18010632-25	SAMP	01-19-2018 02:55 pm	1.00	50 mL	50 mL	D011908.D	Liquid	Y	<2
9	HS18010632-28	SAMP	01-19-2018 03:20 pm	1.00	50 mL	50 mL	D011909.D	Liquid	Y	<2
10	HS18010632-29	SAMP	01-19-2018 03:44 pm	1.00	50 mL	50 mL	D011910.D	Liquid	Y	<2
11	HS18010648-01	SAMP	01-19-2018 04:10 pm	1.00	50 mL	50 mL	D011911.D	Liquid	Y	<2
12	HS18010648-02	SAMP	01-19-2018 04:33 pm	1.00	50 mL	50 mL	D011912.D	Liquid	Y	<2
13	HS18010648-03	SAMP	01-19-2018 04:58 pm	1.00	50 mL	50 mL	D011913.D	Liquid	Y	<2
14	HS18010472-02	SAMP	01-19-2018 05:22 pm	1.00	50 mL	50 mL	D011914.D	Liquid	Y	<2
15	HS18010472-03	SAMP	01-19-2018 05:47 pm	1.00	50 mL	50 mL	D011915.D	Liquid	Y	<2
16	HS18010472-04	SAMP	01-19-2018 06:11 pm	1.00	50 mL	50 mL	D011916.D	Liquid	Y	<2
17	HS18010472-02MS	MS	01-19-2018 06:36 pm	1.00	50 mL	50 mL	D011917.D	Liquid	Y	<2
18	*8 uL cal std/40 mL sample* HS18010472-02MSD	MSD	01-19-2018 07:00 pm	1.00	50 mL	50 mL	D011918.D	Liquid	Y	<2
19	*8 uL cal std/40 mL sample* HS18010502-14	SAMP	01-19-2018 07:25 pm	1.00	50 mL	50 mL	D011919.D	Liquid	Y	<2
20	HS18010704-12	SAMP	01-19-2018 07:49 pm	1.00	50 mL	50 mL	D011920.D	Liquid	Y	<2
21	HS18010648-01	SAMP	01-19-2018 08:14 pm	1.00	50 mL	50 mL	D011921.D	Liquid	Y	<2
22	HS18010396-01	SAMP	01-19-2018 08:38 pm	1.00	50 mL	50 mL	D011922.D	Liquid	Y	<2
23	HS18010642-02	SAMP	01-19-2018 09:03 pm	1.00	50 mL	50 mL	D011923.D	Liquid	Y	<2
24	HS18010642-04	SAMP	01-19-2018 09:27 pm	1.00	50 mL	50 mL	D011924.D	Liquid	Y	<2
25	HS18010642-06	SAMP	01-19-2018 09:52 pm	1.00	50 mL	50 mL	D011925.D	Liquid	Y	<2
26	HS18010642-09	SAMP	01-19-2018 10:16 pm	1.00	50 mL	50 mL	D011926.D	Liquid	Y	<2
27	HS18010642-10	SAMP	01-19-2018 10:41 pm	1.00	50 mL	50 mL	D011927.D	Liquid	Y	<2
28	HS18010642-13	SAMP	01-19-2018 11:06 pm	1.00	50 mL	50 mL	D011928.D	Liquid	Y	<2
29	HS18010642-15	SAMP	01-19-2018 11:30 pm	1.00	50 mL	50 mL	D011929.D	Liquid	Y	<2

MSVOA02 -Logbook

Chemical	Value
SURR ID	30603-01-03
IS ID	30603-01-04
LCS/MS ID	30603-02-01
CAL STD ID	30603-02-01
BFB ID	30603-01-03
pH Paper	634-37-03

Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171219.b\D121901.D

Date : 19-DEC-2017 09:21

Client ID: BFB

Instrument: VOA2.i

Sample Info: BFB;BFB;3;;BFB

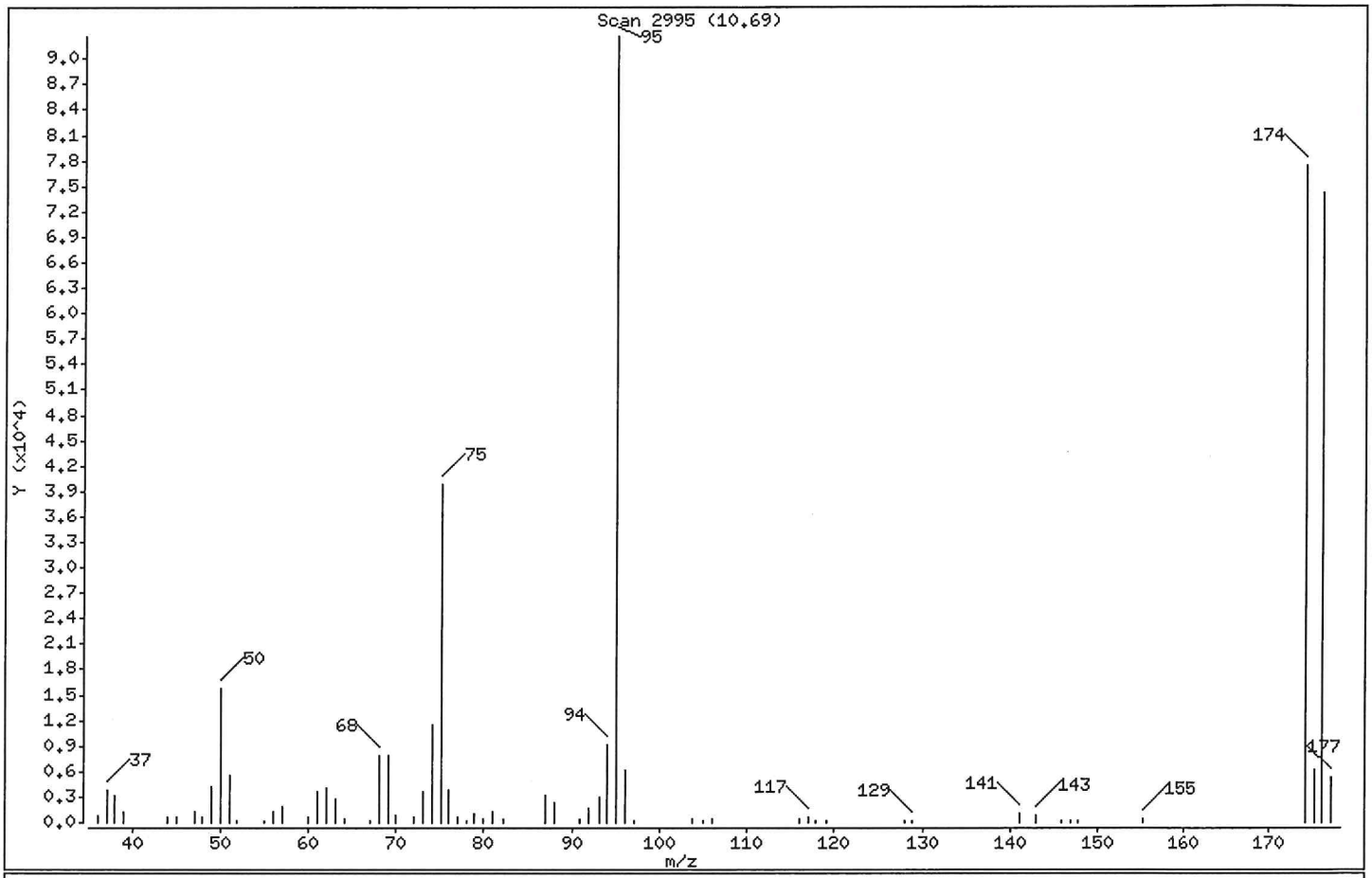
Volume Injected (uL): 2.0

Operator: AP

Column phase: DB624

Column diameter: 0.18

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	17.10
75	30.00 - 60.00% of mass 95	42.98
96	5.00 - 9.00% of mass 95	6.70
173	Less than 2.00% of mass 174	0.00 (0.00)
174	Greater than 50.00% of mass 95	83.41
175	5.00 - 9.00% of mass 174	6.69 (8.02)
176	95.00 - 101.00% of mass 174	80.00 (95.92)
177	5.00 - 9.00% of mass 176	5.80 (7.25)

Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171219.b\D121901.D

Date : 19-DEC-2017 09:21

Client ID: BFB

Instrument: VOA2.i

Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: AP

Column phase: DB624

Column diameter: 0.18

Data File: D121901.D
Spectrum: Scan 2995 (10.69)
Location of Maximum: 95.10
Number of points: 63

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.10	848	61.10	3681	80.00	392	117.00	535
37.10	3899	62.10	4118	81.00	1369	117.90	289
38.10	3186	63.00	2763	82.10	505	119.00	178
39.10	1261	64.10	359	87.00	3297	128.00	213
44.00	703	67.00	160	88.00	2355	128.80	224
45.10	701	68.10	7863	90.80	345	141.00	1018
47.10	1299	69.10	7818	92.00	1652	143.00	802
48.00	615	70.00	864	93.10	3058	145.80	176
49.00	4200	72.00	664	94.10	9230	146.90	167
50.10	15838	73.00	3522	95.10	92608	147.80	292
51.10	5508	74.00	11471	96.00	6202	155.10	321
52.00	204	75.10	39800	97.10	186	174.00	77240
55.10	193	76.00	3881	103.80	420	175.00	6192
56.10	1190	77.00	562	104.90	165	176.00	74088
57.00	1938	78.00	270	106.00	442	177.00	5369
60.00	615	78.90	1147	116.00	390		

Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171219.b\D121901.D

Date : 19-DEC-2017 09:21

Client ID: BFB

Instrument: VOA2.i

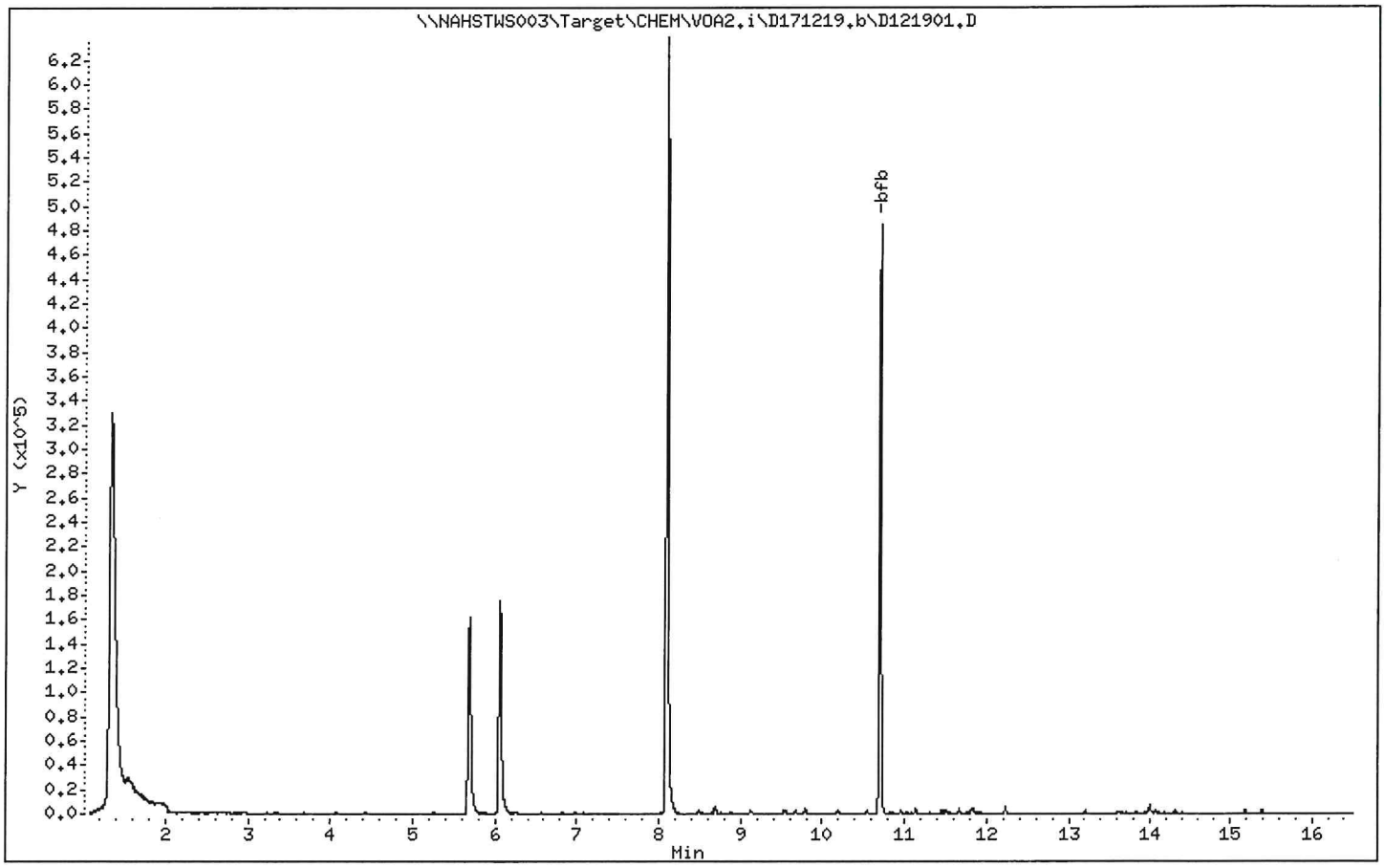
Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: AP

Column phase: DB624

Column diameter: 0.18



Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171219.b\D121903.D
Report Date: 09-Feb-2018 17:33

ALS Laboratory Group

Data file : \\NAHSTWS003\Target\CHEM\VOA2.i\D171219.b\D121903.D
Lab Smp Id: VSTD00.5 Client Smp ID: VSTD00.5
Inj Date : 19-DEC-2017 10:10
Operator : AP Inst ID: VOA2.i
Smp Info : VSTD00.5;VSTD00.5;1;1;
Misc Info : HS15080001;WATER;0;1;
Comment :
Method : \\nahstws003\Target\CHEM\VOA2.i\D171219.b\8260LL.m
Meth Date : 09-Feb-2018 17:33 VOA2.i Quant Type: ISTD
Cal Date : 19-DEC-2017 13:27 Cal File: D121911.D
Als bottle: 3 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: dn_bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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
Va	0.00000	
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
	31 1,1,1-Trichloroethane	97	5.657	5.657	(0.979)	2140	0.50000	0.52(aM)
*	1 Pentafluorobenzene	168	5.779	5.779	(1.000)	266257	50.0000	
$	30 Dibromofluoromethane	113	5.693	5.693	(0.985)	1363	0.50000	0.56(aM)
*	36 1,4-Difluorobenzene	114	6.569	6.569	(1.000)	394668	50.0000	
$	35 1,2-Dichloroethane-d4	65	6.058	6.058	(1.048)	1684	0.50000	0.56(aM)
*	47 Chlorobenzene-d5	117	9.524	9.524	(1.000)	354076	50.0000	
$	48 Toluene-d8	98	8.093	8.093	(0.850)	5924	0.50000	0.63(Ta)
$	69 4-Bromofluorobenzene	95	10.698	10.698	(1.123)	2922	0.50000	0.85(a)
*	70 1,4-Dichlorobenzene-d4	152	11.838	11.838	(1.000)	145249	50.0000	
	68 1,1,2,2-Tetrachloroethane	83	10.878	10.878	(0.919)	2079	0.50000	0.60(aM)
	53 1,1,2-Trichloroethane	83	8.593	8.593	(0.902)	1254	0.50000	0.57(aM)
	32 1,1-Dichloropropene	75	5.850	5.850	(0.891)	2906	0.50000	0.02(aM)
	22 1,1-Dichloroethane	63	4.281	4.281	(0.741)	2841	0.50000	0.51(aM)
	11 1,1-Dichloroethene	96	2.753	2.753	(0.476)	924	0.50000	0.42(aM)
	90 1,2,4-Trichlorobenzene	180	13.821	13.821	(1.168)	1076	0.50000	0.37(aM)
	89 1,2-Dibromo-3-Chloropropane	75	13.015	13.015	(1.099)	130	0.50000	0.75(aM)
	57 1,2-Dibromoethane	107	9.072	9.072	(0.952)	1418	0.50000	0.52(aM)
	88 1,2-Dichlorobenzene	146	12.229	12.229	(1.033)	2995	0.50000	0.57(aM)
	33 1,2-Dichloroethane	62	6.145	6.145	(0.936)	2076	0.50000	0.49(aM)
	42 1,2-Dichloropropane	63	7.066	7.066	(1.076)	1527	0.50000	0.49(aM)
	83 1,3-Dichlorobenzene	146	11.764	11.764	(0.994)	3180	0.50000	0.58(aM)

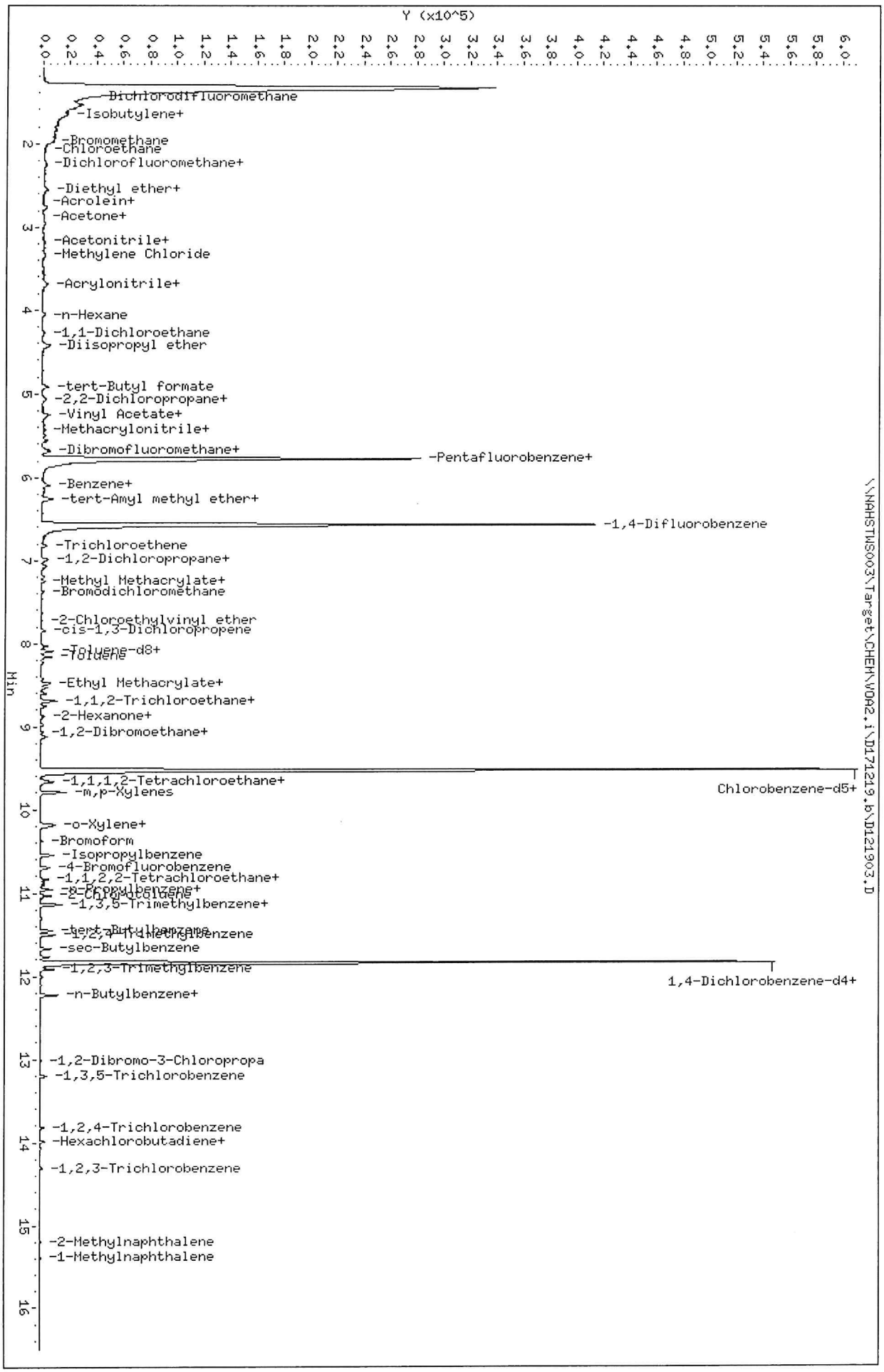
Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171219.b\D121903.D
Report Date: 09-Feb-2018 17:33

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
	84 1,4-Dichlorobenzene	146	11.863	11.863	(1.002)	3007	0.50000	0.57(a)
	24 2-Butanone	43	5.169	5.169	(0.895)	1469	1.00000	1.02(aM)
	52 2-Hexanone	43	8.873	8.873	(0.932)	2281	1.00000	1.09(aM)
	45 4-Methyl-2-Pentanone	43	8.032	8.032	(0.843)	3651	1.00000	1.13(aM)
	10 Acetone	43	2.865	2.865	(0.496)	2564	1.00000	0.62(aM)
	37 Benzene	78	6.087	6.087	(0.927)	5673	0.50000	0.54(aM)
	39 Bromodichloromethane	83	7.377	7.377	(1.123)	1975	0.50000	0.53(aM)
	66 Bromoform	173	10.374	10.374	(1.089)	1005	0.50000	0.47(aM)
	6 Bromomethane	94	1.964	1.964	(0.340)	1436	0.50000	(aM)
	19 Carbon Disulfide	76	2.952	2.952	(0.511)	5535	1.00000	1.10(aM)
	34 Carbon Tetrachloride	117	5.821	5.821	(0.886)	2469	0.50000	0.65(aM)
	59 Chlorobenzene	112	9.556	9.556	(1.003)	4146	0.50000	0.56(Ta)
	7 Chloroethane	64	2.028	2.028	(0.351)	945	0.50000	0.43(aM)
	28 Chloroform	83	5.497	5.497	(0.951)	2630	0.50000	0.54(aM)
	3 Chloromethane	50	1.595	1.595	(0.276)	3374	0.50000	(aM)
	27 cis-1,2-Dichloroethene	96	5.076	5.076	(0.878)	1778	0.50000	0.58(aM)
	46 cis-1,3-Dichloropropene	75	7.846	7.846	(1.194)	1950	0.50000	0.46(aM)
	55 Dibromochloromethane	129	8.972	8.972	(0.942)	1549	0.50000	0.50(aM)
	2 Dichlorodifluoromethane	85	1.450	1.450	(0.251)	1000	0.50000	0.43(aM)
	61 Ethylbenzene	106	9.668	9.668	(1.015)	2309	0.50000	0.59(aM)
	67 Isopropylbenzene	105	10.548	10.548	(1.107)	7040	0.50000	0.58(aM)
	17 Methylene Chloride	84	3.334	3.334	(0.577)	1769	0.50000	0.60(aM)
	56 Tetrachloroethene	164	8.693	8.693	(0.913)	2878	0.50000	(aM)
	50 Toluene	91	8.160	8.160	(0.857)	6264	0.50000	0.55(Ta)
	20 trans-1,2-Dichloroethene	96	3.677	3.677	(0.636)	930	0.50000	0.39(aM)
	51 trans-1,3-Dichloropropene	75	8.420	8.420	(1.282)	1589	0.50000	0.44(aM)
	38 Trichloroethene	130	6.816	6.816	(1.038)	1748	0.50000	0.59(aM)
	8 Trichlorofluoromethane	101	2.237	2.237	(0.387)	1431	0.50000	0.43(aM)
	5 Vinyl Chloride	62	1.681	1.681	(0.291)	1626	0.50000	0.49(aM)
	62 m,p-Xylenes	106	9.790	9.790	(1.028)	5758	1.00000	1.20(aM)
	63 o-Xylene	106	10.185	10.185	(1.069)	2985	0.50000	0.59(aM)
M	95 Xylenes (total)	106				8743	1.50000	(a)
	71 1,2,3-Trichloropropane	75	10.904	10.904	(0.921)	1951	0.50000	0.56(aM)
	93 1,2,3-Trichlorobenzene	182	14.312	14.312	(1.209)	885	0.50000	0.35(aM)
	79 1,2,4-Trimethylbenzene	105	11.504	11.504	(0.972)	6162	0.50000	0.63(a)
	75 1,3,5-Trimethylbenzene	105	11.138	11.138	(0.941)	5847	0.50000	0.62(a)
	26 2,2-Dichloropropane	77	5.048	5.048	(0.873)	1940	0.50000	0.50(aM)
	54 1,3-Dichloropropane	76	8.754	8.754	(0.919)	2515	0.50000	0.57(aM)
	76 2-Chlorotoluene	91	11.026	11.026	(0.931)	4934	0.50000	0.59(aM)
	77 4-Chlorotoluene	91	11.138	11.138	(0.941)	5428	0.50000	0.60(aM)
	82 p-Isopropyltoluene	119	11.822	11.822	(0.999)	5487	0.50000	0.61(aM)
	29 Bromochloromethane	128	5.368	5.368	(0.929)	717	0.50000	0.49(aM)
	74 Bromobenzene	156	10.833	10.833	(0.915)	2009	0.50000	0.62(aM)
	44 Dibromomethane	93	7.191	7.191	(1.095)	773	0.50000	0.47(aM)
	91 Hexachlorobutadiene	225	13.988	13.988	(1.182)	963	0.50000	0.29(aM)
	73 n-Propylbenzene	91	10.958	10.958	(0.926)	7204	0.50000	0.58(Ta)
	87 n-Butylbenzene	91	12.226	12.226	(1.033)	3627	0.50000	0.54(aM)
	81 sec-Butylbenzene	105	11.668	11.668	(0.986)	6241	0.50000	0.59(aM)
	92 Naphthalene	128	14.068	14.068	(1.188)	1123	0.50000	(aM)
	78 tert-Butylbenzene	119	11.453	11.453	(0.967)	4677	0.50000	0.59(Ta)
	60 1,1,1,2-Tetrachloroethane	131	9.646	9.646	(1.013)	1467	0.50000	0.51(aM)
	64 Styrene	104	10.201	10.201	(1.071)	4321	0.50000	0.54(aM)

Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171219.b\D121903.D
Report Date: 09-Feb-2018 17:33

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: \\NAHSTWS003\Target\CHEM\VOA2.i\D171219.b\D121903.D
Date : 19-DEC-2017 10:10
Client ID: VSTD00.5
Sample Info: VSTD00.5;VSTD00.5;1;1;
Purge Volume: 5.0
Column phase: DB624

Instrument: VOA2.i
Operator: AP
Column diameter: 0.18

Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171219.b\D121904.D
Report Date: 09-Feb-2018 17:33

ALS Laboratory Group

Data file : \\NAHSTWS003\Target\CHEM\VOA2.i\D171219.b\D121904.D
Lab Smp Id: VSTD001 Client Smp ID: VSTD001
Inj Date : 19-DEC-2017 10:34
Operator : AP Inst ID: VOA2.i
Smp Info : VSTD001;VSTD001;1;2;
Misc Info : HS15080001;WATER;0;1;
Comment :
Method : \\nahstws003\Target\CHEM\VOA2.i\D171219.b\8260LL.m
Meth Date : 09-Feb-2018 17:33 VOA2.i Quant Type: ISTD
Cal Date : 19-DEC-2017 10:10 Cal File: D121903.D
Als bottle: 4 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: dn_bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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
Va	0.00000	
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
	31 1,1,1-Trichloroethane	97	5.654	5.654	(0.979)	4089	1.00000	1.03(a)
*	1 Pentafluorobenzene	168	5.776	5.776	(1.000)	254673	50.0000	
$	30 Dibromofluoromethane	113	5.689	5.689	(0.985)	2553	1.00000	1.11(aM)
*	36 1,4-Difluorobenzene	114	6.572	6.572	(1.000)	370301	50.0000	
$	35 1,2-Dichloroethane-d4	65	6.062	6.062	(1.049)	2757	1.00000	0.97(Ta)
*	47 Chlorobenzene-d5	117	9.524	9.524	(1.000)	335559	50.0000	
$	48 Toluene-d8	98	8.090	8.090	(0.849)	10331	1.00000	1.16(Ta)
$	69 4-Bromofluorobenzene	95	10.695	10.695	(1.123)	4145	1.00000	1.28(a)
*	70 1,4-Dichlorobenzene-d4	152	11.838	11.838	(1.000)	139780	50.0000	
	68 1,1,2,2-Tetrachloroethane	83	10.875	10.875	(0.919)	3917	1.00000	1.17(aM)
	53 1,1,2-Trichloroethane	83	8.603	8.603	(0.903)	2335	1.00000	1.13(aM)
	32 1,1-Dichloropropene	75	5.856	5.856	(0.891)	4681	1.00000	0.71(aM)
	22 1,1-Dichloroethane	63	4.284	4.284	(0.742)	5842	1.00000	1.09(aM)
	11 1,1-Dichloroethene	96	2.763	2.763	(0.478)	2233	1.00000	1.06(aM)
	90 1,2,4-Trichlorobenzene	180	13.821	13.821	(1.168)	2691	1.00000	0.97(Ta)
	89 1,2-Dibromo-3-Chloropropane	75	13.009	13.009	(1.099)	527	1.00000	1.44(aM)
	57 1,2-Dibromoethane	107	9.068	9.068	(0.952)	2693	1.00000	1.04(Ta)
	88 1,2-Dichlorobenzene	146	12.229	12.229	(1.033)	5826	1.00000	1.15(aM)
	33 1,2-Dichloroethane	62	6.142	6.142	(0.935)	3910	1.00000	1.09(aM)
	42 1,2-Dichloropropane	63	7.073	7.073	(1.076)	3194	1.00000	1.09(aM)
	83 1,3-Dichlorobenzene	146	11.770	11.770	(0.994)	5888	1.00000	1.12(aM)

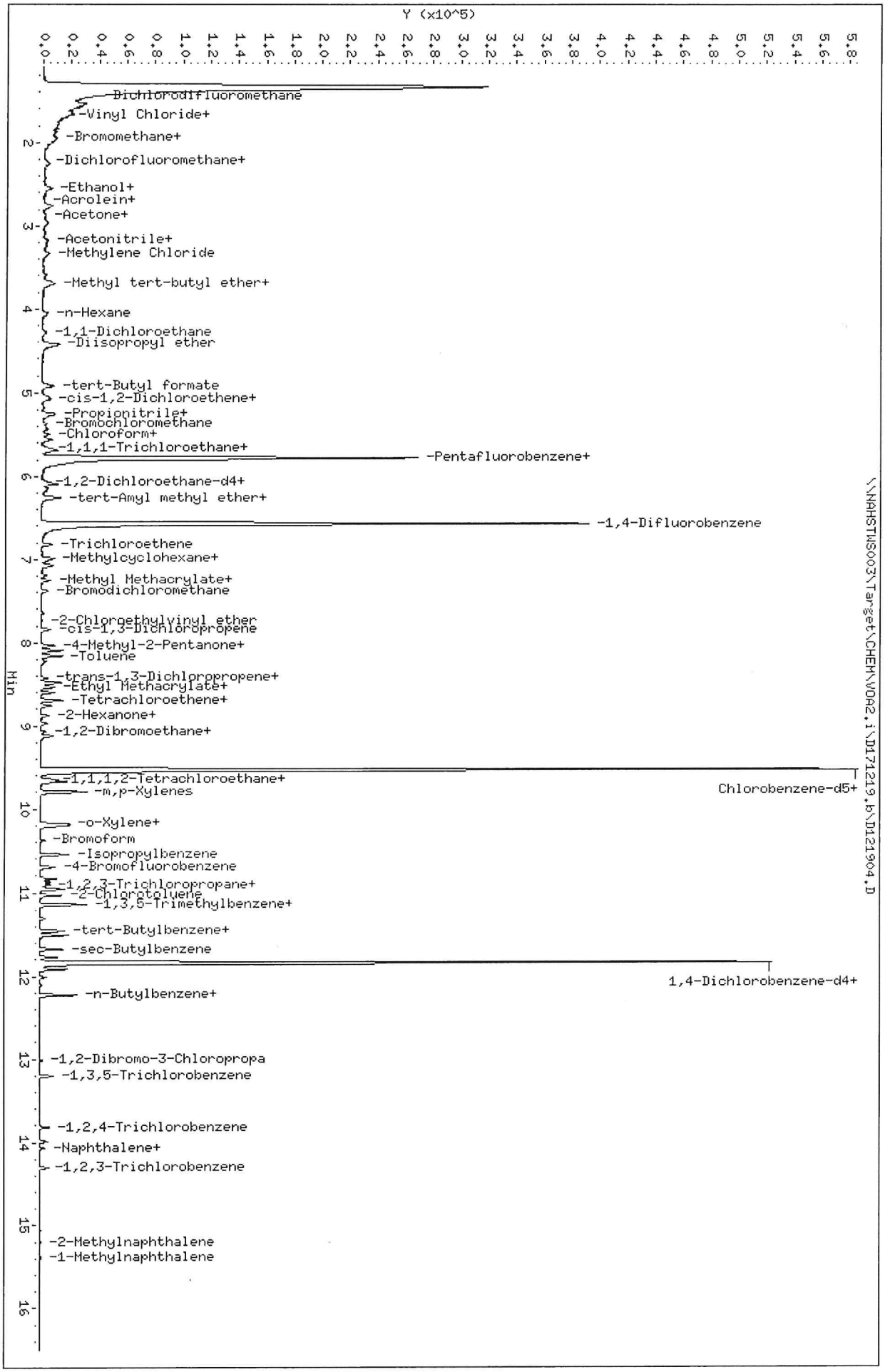
Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171219.b\D121904.D
Report Date: 09-Feb-2018 17:33

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
84	1,4-Dichlorobenzene	146	11.860	11.860	(1.002)	5915	1.00000	1.18(aM)
24	2-Butanone	43	5.166	5.166	(0.894)	3060	2.00000	2.22(aM)
52	2-Hexanone	43	8.873	8.873	(0.932)	4407	2.00000	2.24(Ta)
45	4-Methyl-2-Pentanone	43	8.032	8.032	(0.843)	7137	2.00000	2.34(a)
10	Acetone	43	2.866	2.866	(0.496)	3611	2.00000	2.03(aM)
37	Benzene	78	6.094	6.094	(0.927)	11705	1.00000	1.20(aM)
39	Bromodichloromethane	83	7.377	7.377	(1.123)	3729	1.00000	1.08(aM)
66	Bromoform	173	10.371	10.371	(1.089)	1745	1.00000	0.87(aM)
6	Bromomethane	94	1.938	1.938	(0.336)	2542	1.00000	(aM)
19	Carbon Disulfide	76	2.962	2.962	(0.513)	9653	2.00000	2.01(aM)
34	Carbon Tetrachloride	117	5.824	5.824	(0.886)	3778	1.00000	1.07(TaM)
59	Chlorobenzene	112	9.556	9.556	(1.003)	8040	1.00000	1.16(a)
7	Chloroethane	64	2.031	2.031	(0.352)	2295	1.00000	1.11(aM)
28	Chloroform	83	5.494	5.494	(0.951)	4849	1.00000	1.04(Ta)
3	Chloromethane	50	1.595	1.595	(0.276)	5969	1.00000	0.47(aM)
27	cis-1,2-Dichloroethene	96	5.067	5.067	(0.877)	2859	1.00000	0.98(Ta)
46	cis-1,3-Dichloropropene	75	7.843	7.843	(1.193)	3975	1.00000	1.00(aM)
55	Dibromochloromethane	129	8.969	8.969	(0.942)	2995	1.00000	1.03(aM)
2	Dichlorodifluoromethane	85	1.447	1.447	(0.251)	2091	1.00000	0.96(aM)
61	Ethylbenzene	106	9.675	9.675	(1.016)	4343	1.00000	1.17(aMH)
67	Isopropylbenzene	105	10.548	10.548	(1.107)	13289	1.00000	1.16(a)
17	Methylene Chloride	84	3.328	3.328	(0.576)	3087	1.00000	1.10(aM)
56	Tetrachloroethene	164	8.687	8.687	(0.912)	3904	1.00000	0.24(a)
50	Toluene	91	8.160	8.160	(0.857)	12691	1.00000	1.19(Ta)
20	trans-1,2-Dichloroethene	96	3.665	3.665	(0.634)	2177	1.00000	0.95(aM)
51	trans-1,3-Dichloropropene	75	8.417	8.417	(1.281)	3358	1.00000	0.99(aM)
38	Trichloroethene	130	6.819	6.819	(1.038)	2998	1.00000	1.09(aM)
8	Trichlorofluoromethane	101	2.259	2.259	(0.391)	3095	1.00000	0.98(aM)
5	Vinyl Chloride	62	1.678	1.678	(0.291)	3210	1.00000	1.02(Ta)
62	m,p-Xylenes	106	9.794	9.794	(1.028)	10553	2.00000	2.33(a)
63	o-Xylene	106	10.176	10.176	(1.068)	5578	1.00000	1.17(a)
M 95	Xylenes (total)	106				16131	3.00000	(a)
71	1,2,3-Trichloropropane	75	10.907	10.907	(0.921)	3980	1.00000	1.19(Ta)
93	1,2,3-Trichlorobenzene	182	14.305	14.305	(1.208)	2091	1.00000	0.88(aM)
79	1,2,4-Trimethylbenzene	105	11.501	11.501	(0.972)	11202	1.00000	1.20(a)
75	1,3,5-Trimethylbenzene	105	11.135	11.135	(0.941)	10681	1.00000	1.17(a)
26	2,2-Dichloropropane	77	5.044	5.044	(0.873)	4044	1.00000	1.08(aM)
54	1,3-Dichloropropane	76	8.757	8.757	(0.919)	4979	1.00000	1.20(aM)
76	2-Chlorotoluene	91	11.029	11.029	(0.932)	9692	1.00000	1.22(Ta)
77	4-Chlorotoluene	91	11.141	11.141	(0.941)	10294	1.00000	1.19(a)
82	p-Isopropyltoluene	119	11.819	11.819	(0.998)	9663	1.00000	1.12(a)
29	Bromochloromethane	128	5.372	5.372	(0.930)	1289	1.00000	0.93(aM)
74	Bromobenzene	156	10.837	10.837	(0.915)	3330	1.00000	1.07(a)
44	Dibromomethane	93	7.188	7.188	(1.094)	1461	1.00000	0.96(aM)
91	Hexachlorobutadiene	225	13.985	13.985	(1.181)	1399	1.00000	0.66(aM)
73	n-Propylbenzene	91	10.952	10.952	(0.925)	13821	1.00000	1.16(Ta)
87	n-Butylbenzene	91	12.223	12.223	(1.033)	7076	1.00000	1.10(a)
81	sec-Butylbenzene	105	11.671	11.671	(0.986)	11416	1.00000	1.13(a)
92	Naphthalene	128	14.065	14.065	(1.188)	3453	1.00000	(a)
78	tert-Butylbenzene	119	11.449	11.449	(0.967)	8889	1.00000	1.16(a)
60	1,1,1,2-Tetrachloroethane	131	9.643	9.643	(1.012)	2945	1.00000	1.09(a)
64	Styrene	104	10.198	10.198	(1.071)	8599	1.00000	1.13(a)

Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171219.b\D121904.D
Report Date: 09-Feb-2018 17:33

QC Flag Legend

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



Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171219.b\D121904.D
Date : 19-DEC-2017 10:34
Client ID: VSTD001
Sample Info: VSTD001;VSTD001;1;2;
Purge Volume: 5.0
Column phase: DB624

Instrument: VOA2.i
Operator: AP
Column diameter: 0.18

Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171219.b\D121905.D
Report Date: 09-Feb-2018 17:33

ALS Laboratory Group

Data file : \\NAHSTWS003\Target\CHEM\VOA2.i\D171219.b\D121905.D
Lab Smp Id: VSTD002 Client Smp ID: VSTD002
Inj Date : 19-DEC-2017 10:59
Operator : AP Inst ID: VOA2.i
Smp Info : VSTD002;VSTD002;1;3;
Misc Info : HS15080001;WATER;0;1;
Comment :
Method : \\nahstws003\Target\CHEM\VOA2.i\D171219.b\8260LL.m
Meth Date : 09-Feb-2018 17:33 VOA2.i Quant Type: ISTD
Cal Date : 19-DEC-2017 10:34 Cal File: D121904.D
Als bottle: 5 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: dn_bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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
Va	0.00000	
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
	31 1,1,1-Trichloroethane	97	5.654	5.654	(0.978)	7739	2.00000	1.92(a)
*	1 Pentafluorobenzene	168	5.779	5.779	(1.000)	259826	50.0000	
$	30 Dibromofluoromethane	113	5.683	5.683	(0.983)	4981	2.00000	2.12(a)
*	36 1,4-Difluorobenzene	114	6.572	6.572	(1.000)	391700	50.0000	
$	35 1,2-Dichloroethane-d4	65	6.058	6.058	(1.048)	5934	2.00000	2.05(Ta)
*	47 Chlorobenzene-d5	117	9.524	9.524	(1.000)	346408	50.0000	
$	48 Toluene-d8	98	8.093	8.093	(0.850)	18565	2.00000	2.03(Ta)
$	69 4-Bromofluorobenzene	95	10.695	10.695	(1.123)	7156	2.00000	2.14(a)
*	70 1,4-Dichlorobenzene-d4	152	11.835	11.835	(1.000)	146224	50.0000	
	68 1,1,2,2-Tetrachloroethane	83	10.872	10.872	(0.919)	7449	2.00000	2.13(aM)
	53 1,1,2-Trichloroethane	83	8.603	8.603	(0.903)	4222	2.00000	1.99(a)
	32 1,1-Dichloropropene	75	5.856	5.856	(0.891)	7445	2.00000	1.55(aM)
	22 1,1-Dichloroethane	63	4.274	4.274	(0.740)	10955	2.00000	2.01(aM)
	11 1,1-Dichloroethene	96	2.760	2.760	(0.478)	4364	2.00000	2.03(aM)
	90 1,2,4-Trichlorobenzene	180	13.818	13.818	(1.168)	5108	2.00000	1.77(Ta)
	89 1,2-Dibromo-3-Chloropropane	75	13.012	13.012	(1.100)	1073	2.00000	2.30(aM)
	57 1,2-Dibromoethane	107	9.065	9.065	(0.952)	5304	2.00000	1.99(Ta)
	88 1,2-Dichlorobenzene	146	12.223	12.223	(1.033)	10774	2.00000	2.04(a)
	33 1,2-Dichloroethane	62	6.155	6.155	(0.937)	7652	2.00000	2.11(aM)
	42 1,2-Dichloropropane	63	7.069	7.069	(1.076)	6767	2.00000	2.19(aM)
	83 1,3-Dichlorobenzene	146	11.764	11.764	(0.994)	11327	2.00000	2.07(a)

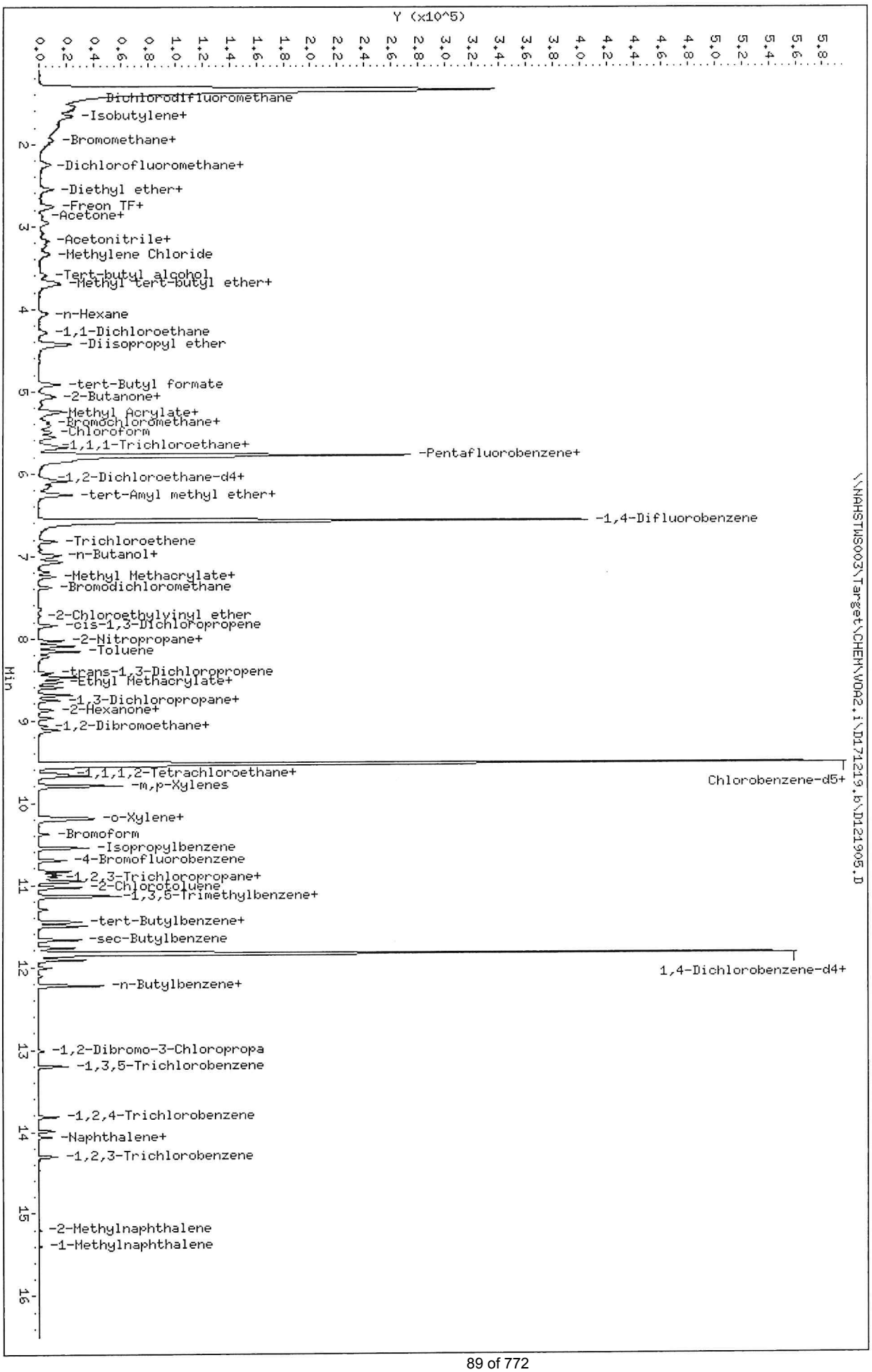
Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171219.b\D121905.D
Report Date: 09-Feb-2018 17:33

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
84	1,4-Dichlorobenzene	146	11.860	11.860	(1.002)	10483	2.00000	2.00(a)
24	2-Butanone	43	5.170	5.170	(0.895)	5411	4.00000	3.85(aM)
52	2-Hexanone	43	8.873	8.873	(0.932)	8511	4.00000	4.19(a)
45	4-Methyl-2-Pentanone	43	8.029	8.029	(0.843)	12860	4.00000	4.09(a)
10	Acetone	43	2.872	2.872	(0.497)	4810	4.00000	3.36(aM)
37	Benzene	78	6.094	6.094	(0.927)	20675	2.00000	2.00(a)
39	Bromodichloromethane	83	7.377	7.377	(1.123)	7033	2.00000	1.92(Ta)
66	Bromoform	173	10.378	10.378	(1.090)	3966	2.00000	1.93(aM)
6	Bromomethane	94	1.951	1.951	(0.338)	4860	2.00000	0.36(aM)
19	Carbon Disulfide	76	2.959	2.959	(0.512)	17850	4.00000	3.64(aM)
34	Carbon Tetrachloride	117	5.837	5.837	(0.888)	8167	2.00000	2.19(TaM)
59	Chlorobenzene	112	9.556	9.556	(1.003)	14887	2.00000	2.08(a)
7	Chloroethane	64	2.038	2.038	(0.353)	4553	2.00000	2.16(aM)
28	Chloroform	83	5.494	5.494	(0.951)	9662	2.00000	2.03(Ta)
3	Chloromethane	50	1.605	1.605	(0.278)	10010	2.00000	1.39(aM)
27	cis-1,2-Dichloroethene	96	5.070	5.070	(0.877)	6103	2.00000	2.06(aM)
46	cis-1,3-Dichloropropene	75	7.839	7.839	(1.193)	7958	2.00000	1.89(aM)
55	Dibromochloromethane	129	8.969	8.969	(0.942)	5749	2.00000	1.92(Ta)
2	Dichlorodifluoromethane	85	1.447	1.447	(0.250)	3705	2.00000	1.66(aM)
61	Ethylbenzene	106	9.672	9.672	(1.015)	7922	2.00000	2.07(aMH)
67	Isopropylbenzene	105	10.545	10.545	(1.107)	23813	2.00000	2.01(a)
17	Methylene Chloride	84	3.341	3.341	(0.578)	5681	2.00000	1.99(aM)
56	Tetrachloroethene	164	8.687	8.687	(0.912)	5759	2.00000	1.07(a)
50	Toluene	91	8.157	8.157	(0.856)	22911	2.00000	2.08(a)
20	trans-1,2-Dichloroethene	96	3.677	3.677	(0.636)	4940	2.00000	2.12(a)
51	trans-1,3-Dichloropropene	75	8.417	8.417	(1.281)	6256	2.00000	1.75(aM)
38	Trichloroethene	130	6.819	6.819	(1.038)	5320	2.00000	1.83(a)
8	Trichlorofluoromethane	101	2.256	2.256	(0.390)	5870	2.00000	1.83(aM)
5	Vinyl Chloride	62	1.682	1.682	(0.291)	6459	2.00000	2.02(aM)
62	m,p-Xylenes	106	9.794	9.794	(1.028)	19203	4.00000	4.11(a)
63	o-Xylene	106	10.176	10.176	(1.068)	9802	2.00000	2.00(a)
M 95	Xylenes (total)	106				29005	6.00000	(a)
71	1,2,3-Trichloropropane	75	10.904	10.904	(0.921)	7447	2.00000	2.13(a)
93	1,2,3-Trichlorobenzene	182	14.302	14.302	(1.209)	4663	2.00000	1.87(Ta)
79	1,2,4-Trimethylbenzene	105	11.498	11.498	(0.972)	20183	2.00000	2.07(a)
75	1,3,5-Trimethylbenzene	105	11.132	11.132	(0.941)	19907	2.00000	2.09(a)
26	2,2-Dichloropropane	77	5.054	5.054	(0.875)	7433	2.00000	1.96(aM)
54	1,3-Dichloropropane	76	8.754	8.754	(0.919)	8573	2.00000	2.00(a)
76	2-Chlorotoluene	91	11.029	11.029	(0.932)	18179	2.00000	2.18(a)
77	4-Chlorotoluene	91	11.138	11.138	(0.941)	19291	2.00000	2.13(a)
82	p-Isopropyltoluene	119	11.818	11.818	(0.999)	17740	2.00000	1.97(a)
29	Bromochloromethane	128	5.375	5.375	(0.930)	2655	2.00000	1.88(a)
74	Bromobenzene	156	10.833	10.833	(0.915)	6776	2.00000	2.08(a)
44	Dibromomethane	93	7.191	7.191	(1.094)	3077	2.00000	1.92(a)
91	Hexachlorobutadiene	225	13.988	13.988	(1.182)	2593	2.00000	1.51(aM)
73	n-Propylbenzene	91	10.955	10.955	(0.926)	26316	2.00000	2.12(a)
87	n-Butylbenzene	91	12.223	12.223	(1.033)	12425	2.00000	1.85(a)
81	sec-Butylbenzene	105	11.664	11.664	(0.986)	21328	2.00000	2.02(a)
92	Naphthalene	128	14.065	14.065	(1.188)	8523	2.00000	0.61(a)
78	tert-Butylbenzene	119	11.449	11.449	(0.967)	16377	2.00000	2.05(a)
60	1,1,1,2-Tetrachloroethane	131	9.646	9.646	(1.013)	5468	2.00000	1.97(a)
64	Styrene	104	10.198	10.198	(1.071)	15951	2.00000	2.04(a)

Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171219.b\D121905.D
Report Date: 09-Feb-2018 17:33

QC Flag Legend

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


Y (x10^5)
Min
Dichlorodifluoromethane
-Isobutylene+
-Bromomethane+
-Dichlorofluoromethane+
-Diethyl ether+
-Freon TF+
-Acetone+
-Acetonitrile+
-Methylene Chloride
-Tert-butyl alcohol
-Methyl tert-butyl ether+
-n-Hexane
-1,1-Dichloroethane
-Diisopropyl ether
-tert-Butyl formate
-2-Butanone+
-Methyl Acrylate+
-Bromochloromethane+
-Chloroform
-1,1,1-Trichloroethane+
-Pentafluorobenzene+
-1,2-Dichloroethane-d4+
-tert-Amyl methyl ether+
-1,4-Difluorobenzene
-Trichloroethene
-n-Butanol+
-Methyl Methacrylate+
-Bromodichloromethane
-2-Chloroethylvinyl ether
-cis-1,3-Dichloropropene
-2-Nitropropane+
-Toluene
-trans-1,3-Dichloropropene
-Ethyl Methacrylate+
-1,3-Dichloropropane+
-2-Hexanone+
-1,2-Dibromoethane+
-1,1,1,2-Tetrachloroethane+
-m,p-Xylenes
Chlorobenzene-d5+
-o-Xylene+
-Bromoform
-Isopropylbenzene
-4-Bromofluorobenzene
-1,2,3-Trichloropropane+
-2-Chlorotoluene
-1,3,5-Trimethylbenzene+
-tert-Butylbenzene+
-sec-Butylbenzene
1,4-Dichlorobenzene-d4+
-n-Butylbenzene+
-1,2-Dibromo-3-Chloropropa
-1,3,5-Trichlorobenzene
-1,2,4-Trichlorobenzene
-Naphthalene+
-1,2,3-Trichlorobenzene
-2-Methylnaphthalene
-1-Methylnaphthalene
\\NAHSTWS003\Target\CHEM\VOA2,i\D171219,b\D121905.D
Data File: \\NAHSTWS003\Target\CHEM\VOA2,i\D171219,b\D121905.D
Date : 19-DEC-2017 10:59
Client ID: VSTD002
Sample Info: VSTD002;VSTD002;1;3;
Purge Volume: 5.0
Column phase: DB624
Instrument: VOA2,i
Operator: AP
Column diameter: 0.18

Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171219.b\D121906.D
Report Date: 09-Feb-2018 17:33

ALS Laboratory Group

Data file : \\NAHSTWS003\Target\CHEM\VOA2.i\D171219.b\D121906.D
Lab Smp Id: VSTD005 Client Smp ID: VSTD005
Inj Date : 19-DEC-2017 11:23
Operator : AP Inst ID: VOA2.i
Smp Info : VSTD005;VSTD005;1;4;
Misc Info : HS15080001;WATER;0;1;
Comment :
Method : \\nahstws003\Target\CHEM\VOA2.i\D171219.b\8260LL.m
Meth Date : 09-Feb-2018 17:33 VOA2.i Quant Type: ISTD
Cal Date : 19-DEC-2017 10:59 Cal File: D121905.D
Als bottle: 6 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: dn_bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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
Va	0.00000	
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
	31 1,1,1-Trichloroethane	97	5.654	5.654	(0.978)	19452	5.00000	4.61(a)
*	1 Pentafluorobenzene	168	5.779	5.779	(1.000)	272617	50.0000	
$	30 Dibromofluoromethane	113	5.689	5.689	(0.984)	11996	5.00000	4.88(a)
*	36 1,4-Difluorobenzene	114	6.569	6.569	(1.000)	412491	50.0000	
$	35 1,2-Dichloroethane-d4	65	6.058	6.058	(1.048)	13758	5.00000	4.53(a)
*	47 Chlorobenzene-d5	117	9.527	9.527	(1.000)	373656	50.0000	
$	48 Toluene-d8	98	8.090	8.090	(0.849)	44645	5.00000	4.53(a)
$	69 4-Bromofluorobenzene	95	10.695	10.695	(1.123)	17276	5.00000	4.80(a)
*	70 1,4-Dichlorobenzene-d4	152	11.838	11.838	(1.000)	161728	50.0000	
	68 1,1,2,2-Tetrachloroethane	83	10.869	10.869	(0.918)	18597	5.00000	4.82(aM)
	53 1,1,2-Trichloroethane	83	8.593	8.593	(0.902)	10807	5.00000	4.72(a)
	32 1,1-Dichloropropene	75	5.853	5.853	(0.891)	15499	5.00000	3.97(a)
	22 1,1-Dichloroethane	63	4.287	4.287	(0.742)	27067	5.00000	4.75(Ta)
	11 1,1-Dichloroethene	96	2.747	2.747	(0.475)	10340	5.00000	4.59(a)
	90 1,2,4-Trichlorobenzene	180	13.818	13.818	(1.167)	14191	5.00000	4.45(a)
	89 1,2-Dibromo-3-Chloropropane	75	13.012	13.012	(1.099)	2812	5.00000	4.71(a)
	57 1,2-Dibromoethane	107	9.065	9.065	(0.952)	13628	5.00000	4.76(Ta)
	88 1,2-Dichlorobenzene	146	12.226	12.226	(1.033)	27735	5.00000	4.77(a)
	33 1,2-Dichloroethane	62	6.145	6.145	(0.936)	19328	5.00000	5.21(M)
	42 1,2-Dichloropropane	63	7.066	7.066	(1.076)	16698	5.00000	5.13(M)
	83 1,3-Dichlorobenzene	146	11.767	11.767	(0.994)	28316	5.00000	4.68(a)

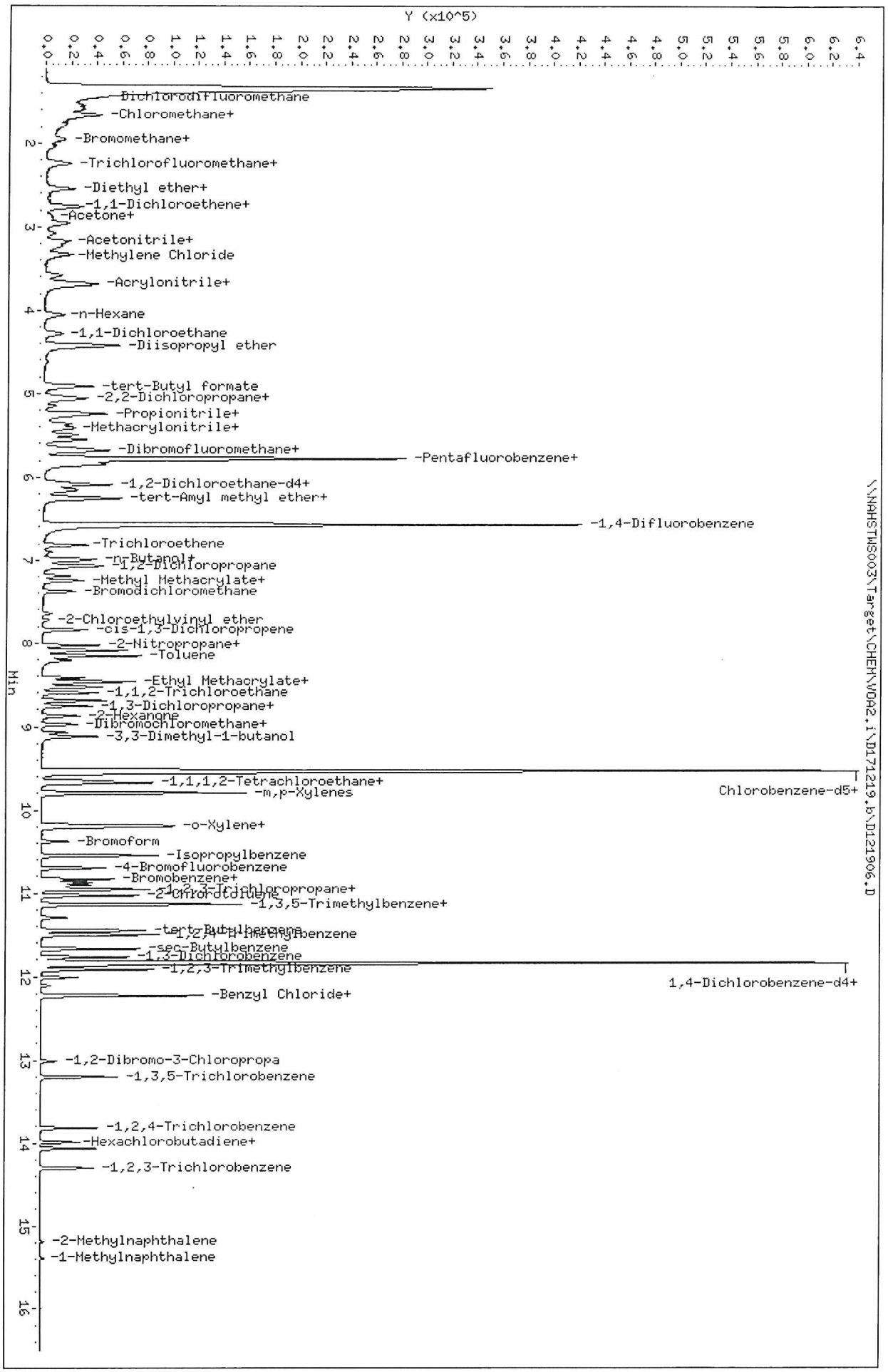
Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171219.b\D121906.D
Report Date: 09-Feb-2018 17:33

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
84	1,4-Dichlorobenzene	146	11.857	11.857	(1.002)	26891	5.00000	4.64(a)
24	2-Butanone	43	5.144	5.144	(0.890)	14793	10.0000	10.05(M)
52	2-Hexanone	43	8.869	8.869	(0.931)	20452	10.0000	9.34
45	4-Methyl-2-Pentanone	43	8.025	8.025	(0.842)	32602	10.0000	9.61
10	Acetone	43	2.866	2.866	(0.496)	8024	10.0000	6.74(T)
37	Benzene	78	6.090	6.090	(0.927)	52138	5.00000	4.80(a)
39	Bromodichloromethane	83	7.380	7.380	(1.124)	17741	5.00000	4.61(Ta)
66	Bromoform	173	10.374	10.374	(1.089)	10411	5.00000	4.69(Ta)
6	Bromomethane	94	1.951	1.951	(0.338)	11772	5.00000	4.12(TaM)
19	Carbon Disulfide	76	2.959	2.959	(0.512)	45421	10.0000	8.83
34	Carbon Tetrachloride	117	5.831	5.831	(0.888)	18004	5.00000	4.59(aM)
59	Chlorobenzene	112	9.553	9.553	(1.003)	37334	5.00000	4.85(a)
7	Chloroethane	64	2.034	2.034	(0.352)	13535	5.00000	6.13(M)
28	Chloroform	83	5.494	5.494	(0.951)	23836	5.00000	4.79(a)
3	Chloromethane	50	1.598	1.598	(0.277)	22250	5.00000	4.01(Ta)
27	cis-1,2-Dichloroethene	96	5.067	5.067	(0.877)	14731	5.00000	4.74(a)
46	cis-1,3-Dichloropropene	75	7.839	7.839	(1.193)	20685	5.00000	4.68(a)
55	Dibromochloromethane	129	8.972	8.972	(0.942)	15049	5.00000	4.66(Ta)
2	Dichlorodifluoromethane	85	1.447	1.447	(0.250)	10402	5.00000	4.46(TaM)
61	Ethylbenzene	106	9.668	9.668	(1.015)	19113	5.00000	4.64(aH)
67	Isopropylbenzene	105	10.551	10.551	(1.107)	60307	5.00000	4.73(a)
17	Methylene Chloride	84	3.340	3.340	(0.578)	14132	5.00000	4.73(a)
56	Tetrachloroethene	164	8.686	8.686	(0.912)	12517	5.00000	3.90(a)
50	Toluene	91	8.157	8.157	(0.856)	57868	5.00000	4.88(a)
20	trans-1,2-Dichloroethene	96	3.668	3.668	(0.635)	11542	5.00000	4.74(a)
51	trans-1,3-Dichloropropene	75	8.420	8.420	(1.282)	16929	5.00000	4.50(a)
38	Trichloroethene	130	6.812	6.812	(1.037)	13693	5.00000	4.48(a)
8	Trichlorofluoromethane	101	2.249	2.249	(0.389)	14728	5.00000	4.38(Ta)
5	Vinyl Chloride	62	1.678	1.678	(0.290)	15224	5.00000	4.55(a)
62	m,p-Xylenes	106	9.790	9.790	(1.028)	47823	10.0000	9.49
63	o-Xylene	106	10.179	10.179	(1.068)	24981	5.00000	4.74(a)
M 95	Xylenes (total)	106				72804	15.0000	(a)
71	1,2,3-Trichloropropane	75	10.901	10.901	(0.921)	18621	5.00000	4.83(a)
93	1,2,3-Trichlorobenzene	182	14.302	14.302	(1.208)	13224	5.00000	4.81(a)
79	1,2,4-Trimethylbenzene	105	11.497	11.497	(0.971)	50539	5.00000	4.69(a)
75	1,3,5-Trimethylbenzene	105	11.132	11.132	(0.940)	49475	5.00000	4.71(a)
26	2,2-Dichloropropane	77	5.048	5.048	(0.873)	18442	5.00000	4.64(a)
54	1,3-Dichloropropane	76	8.754	8.754	(0.919)	21911	5.00000	4.75(a)
76	2-Chlorotoluene	91	11.026	11.026	(0.931)	43425	5.00000	4.72(a)
77	4-Chlorotoluene	91	11.138	11.138	(0.941)	47906	5.00000	4.78(a)
82	p-Isopropyltoluene	119	11.818	11.818	(0.998)	46314	5.00000	4.65(a)
29	Bromochloromethane	128	5.368	5.368	(0.929)	7151	5.00000	4.84(a)
74	Bromobenzene	156	10.833	10.833	(0.915)	16961	5.00000	4.72(a)
44	Dibromomethane	93	7.194	7.194	(1.095)	8132	5.00000	4.82(a)
91	Hexachlorobutadiene	225	13.994	13.994	(1.182)	6524	5.00000	4.00(a)
73	n-Propylbenzene	91	10.955	10.955	(0.925)	64421	5.00000	4.71(a)
87	n-Butylbenzene	91	12.223	12.223	(1.033)	33851	5.00000	4.57(a)
81	sec-Butylbenzene	105	11.668	11.668	(0.986)	52080	5.00000	4.48(a)
92	Naphthalene	128	14.065	14.065	(1.188)	34239	5.00000	3.64(a)
78	tert-Butylbenzene	119	11.453	11.453	(0.967)	40621	5.00000	4.61(a)
60	1,1,1,2-Tetrachloroethane	131	9.646	9.646	(1.012)	13932	5.00000	4.67(a)
64	Styrene	104	10.198	10.198	(1.070)	39508	5.00000	4.70(a)

Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171219.b\D121906.D
Report Date: 09-Feb-2018 17:33

QC Flag Legend

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


Y (x10^5)
Min
Dichlorodifluoromethane
-Chloromethane+
-Bromomethane+
-Trichlorofluoromethane+
-Diethyl ether+
-1,1-Dichloroethene+
-Acetone+
-Acetonitrile+
-Methylene Chloride
-Acrylonitrile+
-n-Hexane
-1,1-Dichloroethane
-Diisopropyl ether
-tert-Butyl formate
-2,2-Dichloropropane+
-Propionitrile+
-Methacrylonitrile+
-Dibromofluoromethane+
-Pentafluorobenzene+
-1,2-Dichloroethane-d4+
-tert-Amyl methyl ether+
-1,4-Difluorobenzene
-Trichloroethene
-n-Butanol+
-1,2-Dichloropropane
-Methyl Methacrylate+
-Bromodichloromethane
-2-Chloroethylvinyl ether
-cis-1,3-Dichloropropene
-2-Nitropropane+
-Toluene
-Ethyl Methacrylate+
-1,1,2-Trichloroethane
-1,3-Dichloropropane+
-2-Hexanone
-Dibromochloromethane+
-3,3-Dimethyl-1-butanol
-1,1,1,2-Tetrachloroethane+
-m,p-Xylenes
Chlorobenzene-d5+
-o-Xylene+
-Bromoform
-Isopropylbenzene
-4-Bromofluorobenzene
-Bromobenzene+
-1,2,3-Trichloropropane+
-2-Chlorotoluene
-1,3,5-Trimethylbenzene+
-tert-Butylbenzene
-1,2,4-Trimethylbenzene
-sec-Butylbenzene
-1,3-Dichlorobenzene
-1,2,3-Trimethylbenzene
1,4-Dichlorobenzene-d4+
-Benzyl Chloride+
-1,2-Dibromo-3-Chloropropa
-1,3,5-Trichlorobenzene
-1,2,4-Trichlorobenzene
-Hexachlorobutadiene+
-1,2,3-Trichlorobenzene
-2-Methylnaphthalene
-1-Methylnaphthalene
\\NAHSTWS003\Target\CHEM\VOA2.i\D171219.b\D121906.D
Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171219.b\D121906.D
Date : 19-DEC-2017 11:23
Client ID: VSTD005
Sample Info: VSTD005;VSTD005;1;4;
Purge Volume: 5.0
Column phase: DB624
Instrument: VOA2.i
Operator: AP
Column diameter: 0.18

Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171219.b\D121907.D
Report Date: 09-Feb-2018 17:33

ALS Laboratory Group

Data file : \\NAHSTWS003\Target\CHEM\VOA2.i\D171219.b\D121907.D
Lab Smp Id: VSTD010 Client Smp ID: VSTD010
Inj Date : 19-DEC-2017 11:47
Operator : AP Inst ID: VOA2.i
Smp Info : VSTD010;VSTD010;1;5;
Misc Info : HS15080001;WATER;0;1;
Comment :
Method : \\nahstws003\Target\CHEM\VOA2.i\D171219.b\8260LL.m
Meth Date : 09-Feb-2018 17:33 VOA2.i Quant Type: ISTD
Cal Date : 19-DEC-2017 11:23 Cal File: D121906.D
Als bottle: 7 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: dn_bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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
Va	0.00000	
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
	31 1,1,1-Trichloroethane	97	5.654	5.654	(0.978)	37895	10.0000	10.30
*	1 Pentafluorobenzene	168	5.779	5.779	(1.000)	237830	50.0000	
$	30 Dibromofluoromethane	113	5.689	5.689	(0.984)	21200	10.0000	9.89
*	36 1,4-Difluorobenzene	114	6.572	6.572	(1.000)	352105	50.0000	
$	35 1,2-Dichloroethane-d4	65	6.062	6.062	(1.049)	27168	10.0000	10.26
*	47 Chlorobenzene-d5	117	9.524	9.524	(1.000)	328049	50.0000	
$	48 Toluene-d8	98	8.090	8.090	(0.849)	84452	10.0000	9.76
$	69 4-Bromofluorobenzene	95	10.695	10.695	(1.123)	32136	10.0000	10.17
*	70 1,4-Dichlorobenzene-d4	152	11.834	11.834	(1.000)	144718	50.0000	
	68 1,1,2,2-Tetrachloroethane	83	10.872	10.872	(0.919)	34314	10.0000	9.93
	53 1,1,2-Trichloroethane	83	8.597	8.597	(0.903)	19720	10.0000	9.82
	32 1,1-Dichloropropene	75	5.853	5.853	(0.891)	28773	10.0000	9.74
	22 1,1-Dichloroethane	63	4.281	4.281	(0.741)	50157	10.0000	10.10
	11 1,1-Dichloroethene	96	2.750	2.750	(0.476)	20686	10.0000	10.53
	90 1,2,4-Trichlorobenzene	180	13.821	13.821	(1.168)	28692	10.0000	10.06
	89 1,2-Dibromo-3-Chloropropane	75	13.012	13.012	(1.100)	5460	10.0000	9.60
	57 1,2-Dibromoethane	107	9.065	9.065	(0.952)	25156	10.0000	10.00
	88 1,2-Dichlorobenzene	146	12.226	12.226	(1.033)	51831	10.0000	9.96
	33 1,2-Dichloroethane	62	6.569	6.569	(1.000)	11455	10.0000	3.59(a)
	42 1,2-Dichloropropane	63	7.066	7.066	(1.075)	29213	10.0000	10.53(M)
	83 1,3-Dichlorobenzene	146	11.767	11.767	(0.994)	52296	10.0000	9.66

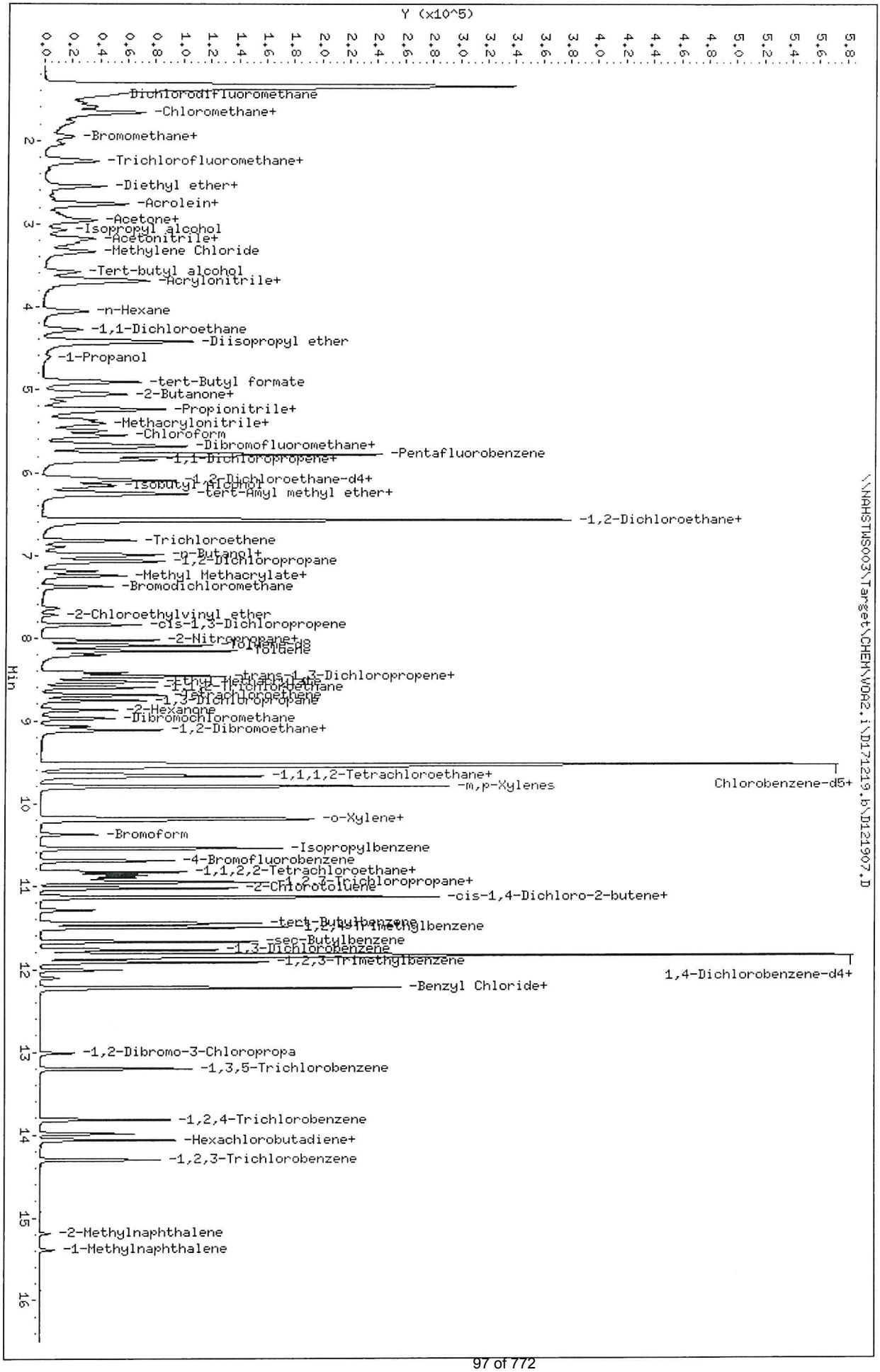
Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171219.b\D121907.D
Report Date: 09-Feb-2018 17:33

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
84	1,4-Dichlorobenzene	146	11.860	11.860	(1.002)	50273	10.0000	9.70
24	2-Butanone	43	5.147	5.147	(0.891)	25131	20.0000	19.58
52	2-Hexanone	43	8.869	8.869	(0.931)	38430	20.0000	19.99
45	4-Methyl-2-Pentanone	43	8.029	8.029	(0.843)	60355	20.0000	20.27
10	Acetone	43	2.862	2.862	(0.495)	15119	20.0000	17.28
37	Benzene	78	6.094	6.094	(0.927)	94240	10.0000	10.17
39	Bromodichloromethane	83	7.377	7.377	(1.123)	33081	10.0000	10.08
66	Bromoform	173	10.374	10.374	(1.089)	19346	10.0000	9.94(T)
6	Bromomethane	94	1.948	1.948	(0.337)	19732	10.0000	10.22(M)
19	Carbon Disulfide	76	2.952	2.952	(0.511)	91292	20.0000	20.36
34	Carbon Tetrachloride	117	5.837	5.837	(0.888)	34246	10.0000	10.23(M)
59	Chlorobenzene	112	9.553	9.553	(1.003)	67378	10.0000	9.97
7	Chloroethane	64	2.034	2.034	(0.352)	20139	10.0000	10.46(M)
28	Chloroform	83	5.494	5.494	(0.951)	44244	10.0000	10.20
3	Chloromethane	50	1.595	1.595	(0.276)	43035	10.0000	10.06(T)
27	cis-1,2-Dichloroethene	96	5.070	5.070	(0.877)	26852	10.0000	9.92
46	cis-1,3-Dichloropropene	75	7.839	7.839	(1.193)	39110	10.0000	10.38
55	Dibromochloromethane	129	8.972	8.972	(0.942)	28378	10.0000	10.01
2	Dichlorodifluoromethane	85	1.447	1.447	(0.250)	21870	10.0000	10.75(T)
61	Ethylbenzene	106	9.668	9.668	(1.015)	35642	10.0000	9.85(H)
67	Isopropylbenzene	105	10.548	10.548	(1.107)	114863	10.0000	10.26
17	Methylene Chloride	84	3.331	3.331	(0.576)	25318	10.0000	9.72
56	Tetrachloroethene	164	8.690	8.690	(0.912)	22413	10.0000	9.74
50	Toluene	91	8.157	8.157	(0.856)	104621	10.0000	10.06
20	trans-1,2-Dichloroethene	96	3.665	3.665	(0.634)	21988	10.0000	10.35
51	trans-1,3-Dichloropropene	75	8.417	8.417	(1.281)	33383	10.0000	10.41
38	Trichloroethene	130	6.816	6.816	(1.037)	25682	10.0000	9.84
8	Trichlorofluoromethane	101	2.249	2.249	(0.389)	32301	10.0000	11.01
5	Vinyl Chloride	62	1.681	1.681	(0.291)	29755	10.0000	10.20
62	m,p-Xylenes	106	9.790	9.790	(1.028)	89427	20.0000	20.22
63	o-Xylene	106	10.182	10.182	(1.069)	44528	10.0000	9.62
M 95	Xylenes (total)	106				133955	30.0000	(a)
71	1,2,3-Trichloropropane	75	10.904	10.904	(0.921)	34398	10.0000	9.97
93	1,2,3-Trichlorobenzene	182	14.299	14.299	(1.208)	25930	10.0000	10.55
79	1,2,4-Trimethylbenzene	105	11.501	11.501	(0.972)	93133	10.0000	9.66
75	1,3,5-Trimethylbenzene	105	11.135	11.135	(0.941)	93296	10.0000	9.93
26	2,2-Dichloropropane	77	5.044	5.044	(0.873)	35680	10.0000	10.29
54	1,3-Dichloropropane	76	8.754	8.754	(0.919)	38920	10.0000	9.61
76	2-Chlorotoluene	91	11.029	11.029	(0.932)	78484	10.0000	9.54
77	4-Chlorotoluene	91	11.138	11.138	(0.941)	87380	10.0000	9.76
82	p-Isopropyltoluene	119	11.818	11.818	(0.999)	88488	10.0000	9.93
29	Bromochloromethane	128	5.362	5.362	(0.928)	13447	10.0000	10.44
74	Bromobenzene	156	10.833	10.833	(0.915)	30785	10.0000	9.58
44	Dibromomethane	93	7.191	7.191	(1.094)	15302	10.0000	10.64
91	Hexachlorobutadiene	225	13.988	13.988	(1.182)	13741	10.0000	10.00
73	n-Propylbenzene	91	10.952	10.952	(0.925)	120968	10.0000	9.88
87	n-Butylbenzene	91	12.223	12.223	(1.033)	66777	10.0000	10.08
81	sec-Butylbenzene	105	11.668	11.668	(0.986)	104072	10.0000	10.00
92	Naphthalene	128	14.065	14.065	(1.188)	75559	10.0000	9.75
78	tert-Butylbenzene	119	11.449	11.449	(0.967)	77835	10.0000	9.88
60	1,1,1,2-Tetrachloroethane	131	9.643	9.643	(1.012)	26535	10.0000	10.13
64	Styrene	104	10.198	10.198	(1.071)	75784	10.0000	10.27

Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171219.b\D121907.D
Report Date: 09-Feb-2018 17:33

QC Flag Legend

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



Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171219.b\D121907.D
Date : 19-DEC-2017 11:47
Client ID: WSTD010
Sample Info: WSTD010;WSTD010;1;5;
Purge Volume: 5.0
Column phase: DB624

Instrument: VOA2.i
Operator: AP
Column diameter: 0.18

Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171219.b\D121908.D
Report Date: 09-Feb-2018 17:33

ALS Laboratory Group

Data file : \\NAHSTWS003\Target\CHEM\VOA2.i\D171219.b\D121908.D
Lab Smp Id: VSTD020 Client Smp ID: VSTD020
Inj Date : 19-DEC-2017 12:14
Operator : AP Inst ID: VOA2.i
Smp Info : VSTD020;VSTD020;1;6;
Misc Info : HS15080001;WATER;0;1;
Comment :
Method : \\nahstws003\Target\CHEM\VOA2.i\D171219.b\8260LL.m
Meth Date : 09-Feb-2018 17:33 VOA2.i Quant Type: ISTD
Cal Date : 19-DEC-2017 11:47 Cal File: D121907.D
Als bottle: 8 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: dn_bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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
Va	0.00000	
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
	31 1,1,1-Trichloroethane	97	5.654	5.654	(0.978)	78591	20.0000	20.54
*	1 Pentafluorobenzene	168	5.782	5.782	(1.000)	247505	50.0000	
$	30 Dibromofluoromethane	113	5.686	5.686	(0.983)	42633	20.0000	19.11
*	36 1,4-Difluorobenzene	114	6.572	6.572	(1.000)	377533	50.0000	
$	35 1,2-Dichloroethane-d4	65	6.055	6.055	(1.047)	54044	20.0000	19.62
*	47 Chlorobenzene-d5	117	9.527	9.527	(1.000)	340657	50.0000	
$	48 Toluene-d8	98	8.093	8.093	(0.849)	169178	20.0000	18.83
$	69 4-Bromofluorobenzene	95	10.695	10.695	(1.123)	63474	20.0000	19.35
*	70 1,4-Dichlorobenzene-d4	152	11.834	11.834	(1.000)	152059	50.0000	
	68 1,1,2,2-Tetrachloroethane	83	10.872	10.872	(0.919)	66290	20.0000	18.27
	53 1,1,2-Trichloroethane	83	8.593	8.593	(0.902)	40699	20.0000	19.53
	32 1,1-Dichloropropene	75	5.850	5.850	(0.890)	61975	20.0000	20.52
	22 1,1-Dichloroethane	63	4.274	4.274	(0.739)	102995	20.0000	19.93
	11 1,1-Dichloroethene	96	2.750	2.750	(0.476)	43049	20.0000	21.07
	90 1,2,4-Trichlorobenzene	180	13.818	13.818	(1.168)	67305	20.0000	22.46
	89 1,2-Dibromo-3-Chloropropane	75	13.012	13.012	(1.100)	11302	20.0000	18.40
	57 1,2-Dibromoethane	107	9.068	9.068	(0.952)	52264	20.0000	20.02
	88 1,2-Dichlorobenzene	146	12.223	12.223	(1.033)	108285	20.0000	19.81
	33 1,2-Dichloroethane	62	6.142	6.142	(0.935)	73153	20.0000	21.88
	42 1,2-Dichloropropane	63	7.069	7.069	(1.076)	57317	20.0000	19.27(M)
	83 1,3-Dichlorobenzene	146	11.770	11.770	(0.995)	112309	20.0000	19.74

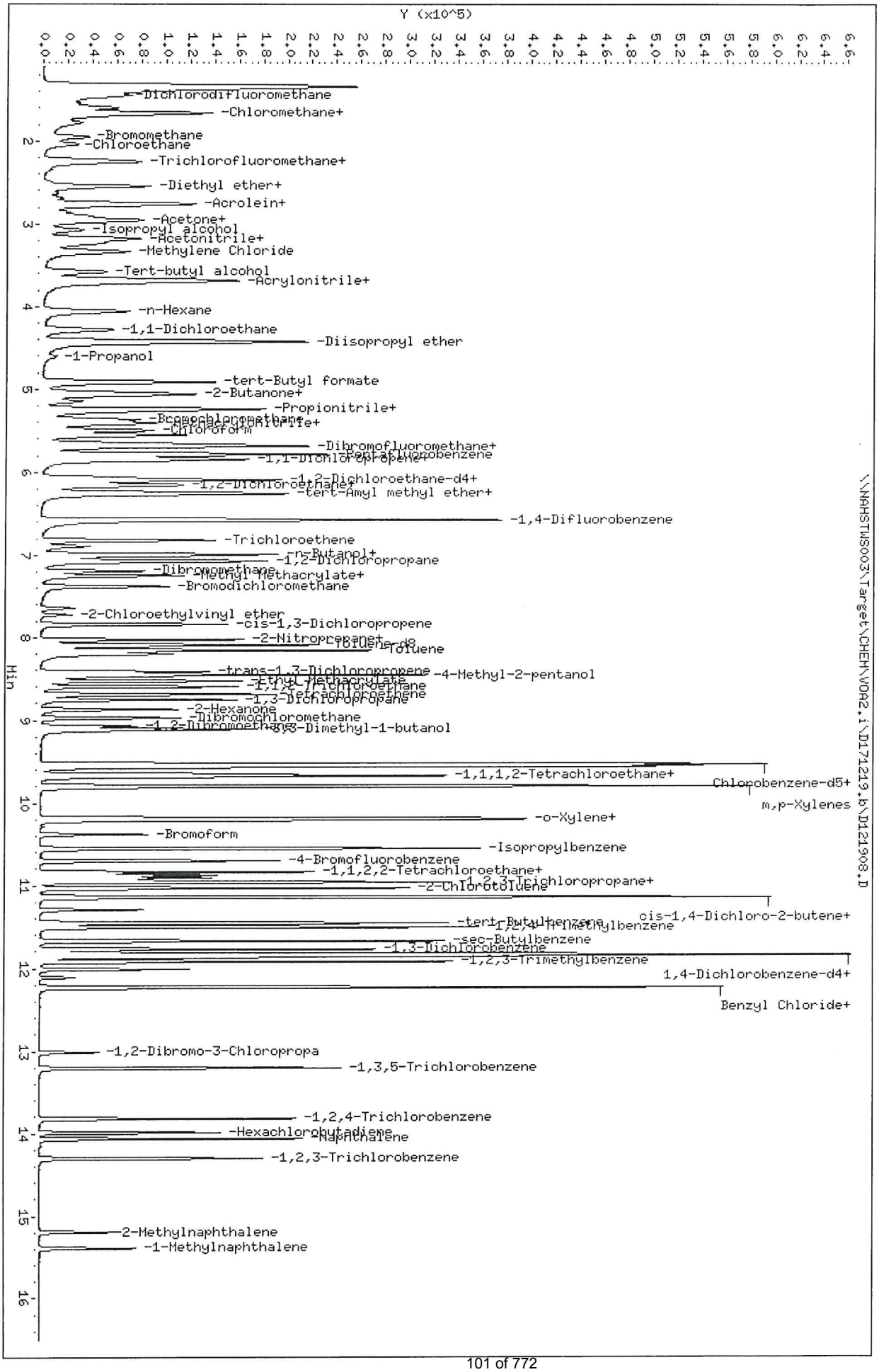
Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171219.b\D121908.D
Report Date: 09-Feb-2018 17:33

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
84	1,4-Dichlorobenzene	146	11.860	11.860	(1.002)	103710	20.0000	19.06
24	2-Butanone	43	5.141	5.141	(0.889)	48984	40.0000	36.67
52	2-Hexanone	43	8.866	8.866	(0.931)	75537	40.0000	37.84
45	4-Methyl-2-Pentanone	43	8.029	8.029	(0.843)	116500	40.0000	37.69
10	Acetone	43	2.856	2.856	(0.494)	33367	40.0000	39.27
37	Benzene	78	6.087	6.087	(0.926)	188661	20.0000	18.99
39	Bromodichloromethane	83	7.377	7.377	(1.123)	70757	20.0000	20.12
66	Bromoform	173	10.374	10.374	(1.089)	41520	20.0000	20.54
6	Bromomethane	94	1.941	1.941	(0.336)	37890	20.0000	20.97(M)
19	Carbon Disulfide	76	2.952	2.952	(0.511)	193500	40.0000	41.47
34	Carbon Tetrachloride	117	5.837	5.837	(0.888)	68216	20.0000	19.02(MH)
59	Chlorobenzene	112	9.553	9.553	(1.003)	138156	20.0000	19.69
7	Chloroethane	64	2.047	2.047	(0.354)	40521	20.0000	20.23(M)
28	Chloroform	83	5.494	5.494	(0.950)	88595	20.0000	19.63
3	Chloromethane	50	1.595	1.595	(0.276)	90594	20.0000	21.34
27	cis-1,2-Dichloroethene	96	5.067	5.067	(0.876)	53810	20.0000	19.10
46	cis-1,3-Dichloropropene	75	7.839	7.839	(1.193)	83791	20.0000	20.75
55	Dibromochloromethane	129	8.969	8.969	(0.941)	60863	20.0000	20.69
2	Dichlorodifluoromethane	85	1.447	1.447	(0.250)	47446	20.0000	22.42
61	Ethylbenzene	106	9.675	9.675	(1.015)	75990	20.0000	20.23(H)
67	Isopropylbenzene	105	10.548	10.548	(1.107)	237346	20.0000	20.43
17	Methylene Chloride	84	3.331	3.331	(0.576)	50656	20.0000	18.69
56	Tetrachloroethene	164	8.686	8.686	(0.912)	46886	20.0000	21.37
50	Toluene	91	8.157	8.157	(0.856)	217602	20.0000	20.15
20	trans-1,2-Dichloroethene	96	3.671	3.671	(0.635)	45649	20.0000	20.65
51	trans-1,3-Dichloropropene	75	8.417	8.417	(1.281)	71936	20.0000	20.93
38	Trichloroethene	130	6.822	6.822	(1.038)	56994	20.0000	20.38
8	Trichlorofluoromethane	101	2.256	2.256	(0.390)	67183	20.0000	22.01
5	Vinyl Chloride	62	1.681	1.681	(0.291)	63525	20.0000	20.94
62	m,p-Xylenes	106	9.790	9.790	(1.028)	184416	40.0000	40.15
63	o-Xylene	106	10.175	10.175	(1.068)	95335	20.0000	19.84
M 95	Xylenes (total)	106				279751	60.0000	(a)
71	1,2,3-Trichloropropane	75	10.901	10.901	(0.921)	69837	20.0000	19.27
93	1,2,3-Trichlorobenzene	182	14.302	14.302	(1.209)	57198	20.0000	22.15
79	1,2,4-Trimethylbenzene	105	11.501	11.501	(0.972)	197269	20.0000	19.47
75	1,3,5-Trimethylbenzene	105	11.132	11.132	(0.941)	192655	20.0000	19.53
26	2,2-Dichloropropane	77	5.048	5.048	(0.873)	72639	20.0000	20.14
54	1,3-Dichloropropane	76	8.751	8.751	(0.918)	81872	20.0000	19.47
76	2-Chlorotoluene	91	11.029	11.029	(0.932)	167050	20.0000	19.33
77	4-Chlorotoluene	91	11.138	11.138	(0.941)	180539	20.0000	19.19
82	p-Isopropyltoluene	119	11.818	11.818	(0.999)	189137	20.0000	20.20
29	Bromochloromethane	128	5.365	5.365	(0.928)	28167	20.0000	21.01
74	Bromobenzene	156	10.833	10.833	(0.915)	64552	20.0000	19.13
44	Dibromomethane	93	7.191	7.191	(1.094)	32043	20.0000	20.79
91	Hexachlorobutadiene	225	13.991	13.991	(1.182)	30591	20.0000	21.69
73	n-Propylbenzene	91	10.955	10.955	(0.926)	257005	20.0000	19.99
87	n-Butylbenzene	91	12.223	12.223	(1.033)	149001	20.0000	21.41
81	sec-Butylbenzene	105	11.668	11.668	(0.986)	223410	20.0000	20.44
92	Naphthalene	128	14.061	14.061	(1.188)	161007	20.0000	20.32
78	tert-Butylbenzene	119	11.453	11.453	(0.968)	164758	20.0000	19.91
60	1,1,1,2-Tetrachloroethane	131	9.646	9.646	(1.012)	55350	20.0000	20.36
64	Styrene	104	10.198	10.198	(1.070)	156998	20.0000	20.48

Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171219.b\D121908.D
Report Date: 09-Feb-2018 17:33

QC Flag Legend

a - Target compound detected but, quantitated amount
    Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.


Y (x10^5)
Min
-Dichlorodifluoromethane
-Chloromethane+
-Bromomethane
-Chloroethane
-Trichlorofluoromethane+
-Diethyl ether+
-Acrolein+
-Acetone+
-Isopropyl alcohol
-Acetonitrile+
-Methylene Chloride
-Tert-butyl alcohol
-Acrylonitrile+
-n-Hexane
-1,1-Dichloroethane
-Diisopropyl ether
-1-Propanol
-tert-Butyl formate
-2-Butanone+
-Propionitrile+
-Bromochloromethane
-Chloroform
-Dibromofluoromethane+
-1,1-Dichloropropene
-1,2-Dichloroethane-d4+
-1,2-Dichloroethane
-tert-Amyl methyl ether+
-1,4-Difluorobenzene
-Trichloroethene
-n-Butanol+
-1,2-Dichloropropane
-Dibromomethane
-Methyl Methacrylate+
-Bromodichloromethane
-2-Chloroethylvinyl ether
-cis-1,3-Dichloropropene
-2-Nitropropane+
-Toluene-d8
-Toluene
-trans-1,3-Dichloropropene
-4-Methyl-2-pentanol
-Ethyl Methacrylate
-1,1,2-Trichloroethane
-Tetrachloroethene
-1,3-Dichloropropane
-2-Hexanone
-Dibromochloromethane
-1,2-Dibromoethane
-3,3-Dimethyl-1-butanol
-1,1,1,2-Tetrachloroethane+
Chlorobenzene-d5+
m,p-Xylenes
-o-Xylene+
-Bromoform
-Isopropylbenzene
-4-Bromofluorobenzene
-1,1,2,2-Tetrachloroethane+
-1,2,3-Trichloropropane+
-2-Chlorotoluene
cis-1,4-Dichloro-2-butene+
-tert-Butylbenzene
-1,2,4-Trimethylbenzene
-sec-Butylbenzene
-1,3-Dichlorobenzene
-1,2,3-Trimethylbenzene
1,4-Dichlorobenzene-d4+
Benzyl Chloride+
-1,2-Dibromo-3-Chloropropa
-1,3,5-Trichlorobenzene
-1,2,4-Trichlorobenzene
-Hexachlorobutadiene
-Naphthalene
-1,2,3-Trichlorobenzene
2-Methylnaphthalene
-1-Methylnaphthalene
\\NAHSTWS003\Target\CHEM\VOA2.i\D171219.b\D121908.D
Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171219.b\D121908.D
Date : 19-DEC-2017 12:14
Client ID: WSTD020
Sample Info: WSTD020;WSTD020;1;6;
Purge Volume: 5.0
Column phase: DB624
Instrument: VOA2.i
Operator: AP
Column diameter: 0.18

Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171219.b\D121909.D
Report Date: 09-Feb-2018 17:33

ALS Laboratory Group

Data file : \\NAHSTWS003\Target\CHEM\VOA2.i\D171219.b\D121909.D
Lab Smp Id: VSTD050 Client Smp ID: VSTD050
Inj Date : 19-DEC-2017 12:39
Operator : AP Inst ID: VOA2.i
Smp Info : VSTD050;VSTD050;1;7;
Misc Info : HS15080001;WATER;0;1;
Comment :
Method : \\nahstws003\Target\CHEM\VOA2.i\D171219.b\8260LL.m
Meth Date : 09-Feb-2018 17:33 VOA2.i Quant Type: ISTD
Cal Date : 19-DEC-2017 12:14 Cal File: D121908.D
Als bottle: 9 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: dn_bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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
Va	0.00000	
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
	31 1,1,1-Trichloroethane	97	5.654	5.654	(0.978)	186795	50.0000	51.22
*	1 Pentafluorobenzene	168	5.782	5.782	(1.000)	235952	50.0000	
$	30 Dibromofluoromethane	113	5.686	5.686	(0.983)	101827	50.0000	47.89
*	36 1,4-Difluorobenzene	114	6.572	6.572	(1.000)	375071	50.0000	
$	35 1,2-Dichloroethane-d4	65	6.058	6.058	(1.048)	130826	50.0000	49.82
*	47 Chlorobenzene-d5	117	9.527	9.527	(1.000)	338284	50.0000	
$	48 Toluene-d8	98	8.093	8.093	(0.849)	393321	50.0000	44.09
$	69 4-Bromofluorobenzene	95	10.695	10.695	(1.123)	152091	50.0000	46.69
*	70 1,4-Dichlorobenzene-d4	152	11.838	11.838	(1.000)	148533	50.0000	
	68 1,1,2,2-Tetrachloroethane	83	10.872	10.872	(0.918)	161093	50.0000	45.46
	53 1,1,2-Trichloroethane	83	8.593	8.593	(0.902)	99527	50.0000	48.09
	32 1,1-Dichloropropene	75	5.856	5.856	(0.891)	151900	50.0000	52.00
	22 1,1-Dichloroethane	63	4.281	4.281	(0.740)	247818	50.0000	50.30
	11 1,1-Dichloroethene	96	2.750	2.750	(0.476)	103192	50.0000	52.98
	90 1,2,4-Trichlorobenzene	180	13.817	13.817	(1.167)	164262	50.0000	56.13
	89 1,2-Dibromo-3-Chloropropane	75	13.009	13.009	(1.099)	30643	50.0000	50.13
	57 1,2-Dibromoethane	107	9.065	9.065	(0.952)	128740	50.0000	49.67
	88 1,2-Dichlorobenzene	146	12.226	12.226	(1.033)	257317	50.0000	48.19
	33 1,2-Dichloroethane	62	6.142	6.142	(0.935)	175492	50.0000	52.99
	42 1,2-Dichloropropane	63	7.069	7.069	(1.076)	140543	50.0000	47.57
	83 1,3-Dichlorobenzene	146	11.767	11.767	(0.994)	265949	50.0000	47.86

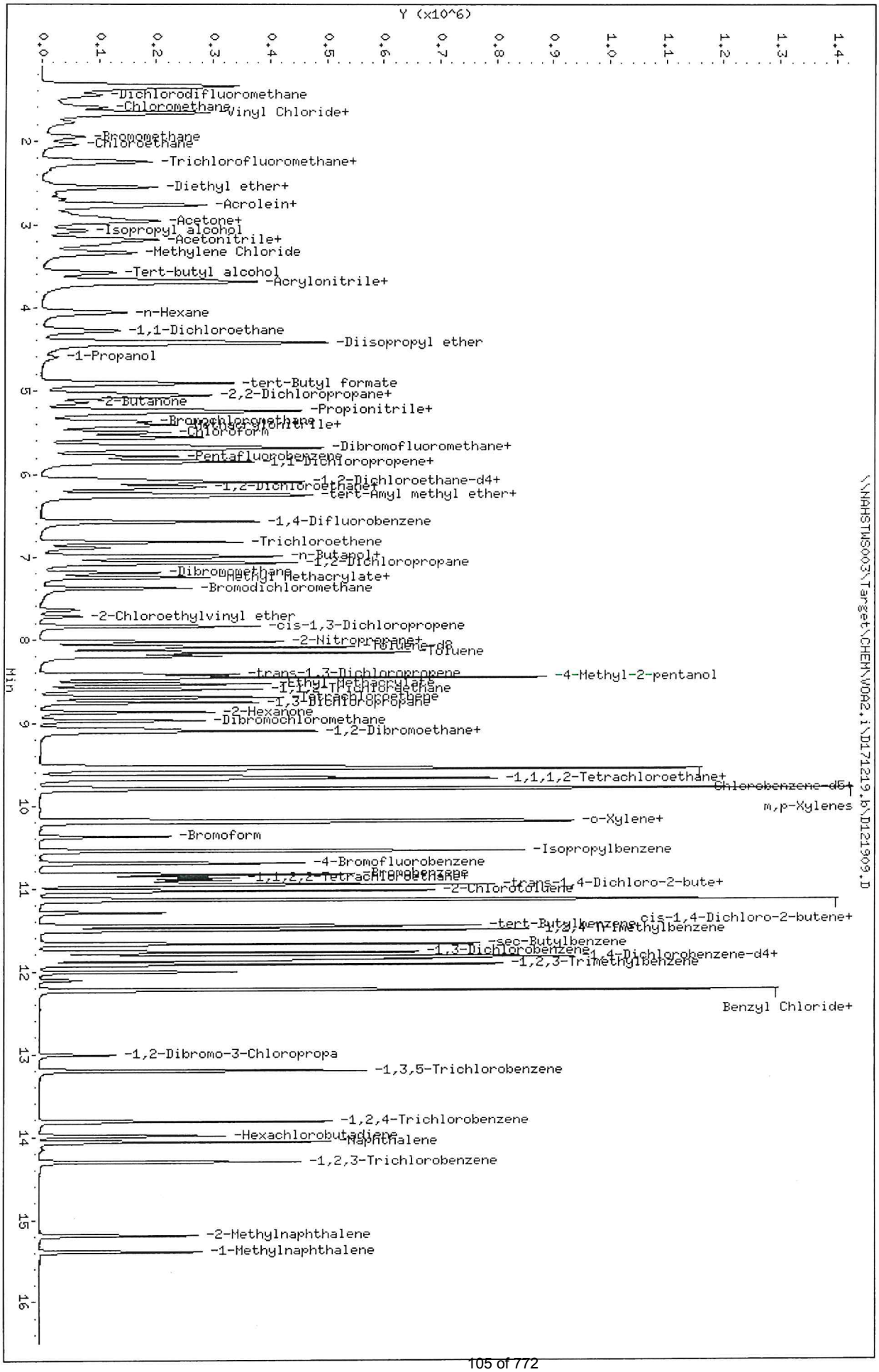
Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171219.b\D121909.D
Report Date: 09-Feb-2018 17:33

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
84	1,4-Dichlorobenzene	146	11.860	11.860	(1.002)	253757	50.0000	47.75
24	2-Butanone	43	5.147	5.147	(0.890)	124936	100.000	98.12
52	2-Hexanone	43	8.866	8.866	(0.931)	187852	100.000	94.77
45	4-Methyl-2-Pentanone	43	8.029	8.029	(0.843)	288559	100.000	94.02
10	Acetone	43	2.862	2.862	(0.495)	83806	100.000	107.31
37	Benzene	78	6.097	6.097	(0.928)	475144	50.0000	48.14
39	Bromodichloromethane	83	7.377	7.377	(1.123)	173751	50.0000	49.74
66	Bromoform	173	10.374	10.374	(1.089)	107385	50.0000	53.51
6	Bromomethane	94	1.944	1.944	(0.336)	88179	50.0000	54.81
19	Carbon Disulfide	76	2.952	2.952	(0.511)	464487	100.000	104.44
34	Carbon Tetrachloride	117	5.830	5.830	(0.887)	153362	50.0000	43.04(H)
59	Chlorobenzene	112	9.556	9.556	(1.003)	330208	50.0000	47.39
7	Chloroethane	64	2.041	2.041	(0.353)	86782	50.0000	45.45(M)
28	Chloroform	83	5.494	5.494	(0.950)	215735	50.0000	50.15
3	Chloromethane	50	1.595	1.595	(0.276)	201934	50.0000	51.19
27	cis-1,2-Dichloroethene	96	5.067	5.067	(0.876)	133957	50.0000	49.90
46	cis-1,3-Dichloropropene	75	7.839	7.839	(1.193)	211359	50.0000	52.69
55	Dibromochloromethane	129	8.969	8.969	(0.941)	149132	50.0000	51.06
2	Dichlorodifluoromethane	85	1.447	1.447	(0.250)	110936	50.0000	54.99
61	Ethylbenzene	106	9.672	9.672	(1.015)	175926	50.0000	47.18(H)
67	Isopropylbenzene	105	10.548	10.548	(1.107)	550664	50.0000	47.73
17	Methylene Chloride	84	3.334	3.334	(0.577)	123761	50.0000	47.92
56	Tetrachloroethene	164	8.690	8.690	(0.912)	108668	50.0000	52.16
50	Toluene	91	8.160	8.160	(0.857)	501085	50.0000	46.74
20	trans-1,2-Dichloroethene	96	3.668	3.668	(0.634)	115924	50.0000	55.03
51	trans-1,3-Dichloropropene	75	8.420	8.420	(1.281)	182394	50.0000	53.43
38	Trichloroethene	130	6.819	6.819	(1.038)	136623	50.0000	49.17
8	Trichlorofluoromethane	101	2.256	2.256	(0.390)	157909	50.0000	54.27
5	Vinyl Chloride	62	1.681	1.681	(0.291)	146127	50.0000	50.52
62	m,p-Xylenes	106	9.790	9.790	(1.028)	427108	100.000	93.66
63	o-Xylene	106	10.179	10.179	(1.068)	229237	50.0000	48.05
M 95	Xylenes (total)	106				656345	150.000	(a)
71	1,2,3-Trichloropropane	75	10.904	10.904	(0.921)	172192	50.0000	48.66
93	1,2,3-Trichlorobenzene	182	14.302	14.302	(1.208)	135765	50.0000	53.84
79	1,2,4-Trimethylbenzene	105	11.501	11.501	(0.972)	454906	50.0000	45.97
75	1,3,5-Trimethylbenzene	105	11.135	11.135	(0.941)	445617	50.0000	46.25
26	2,2-Dichloropropane	77	5.041	5.041	(0.872)	174913	50.0000	50.88
54	1,3-Dichloropropane	76	8.754	8.754	(0.919)	195730	50.0000	46.89
76	2-Chlorotoluene	91	11.029	11.029	(0.932)	384723	50.0000	45.59
77	4-Chlorotoluene	91	11.141	11.141	(0.941)	427083	50.0000	46.48
82	p-Isopropyltoluene	119	11.818	11.818	(0.998)	433050	50.0000	47.36
29	Bromochloromethane	128	5.365	5.365	(0.928)	65939	50.0000	51.61
74	Bromobenzene	156	10.833	10.833	(0.915)	156920	50.0000	47.62
44	Dibromomethane	93	7.191	7.191	(1.094)	77818	50.0000	50.83
91	Hexachlorobutadiene	225	13.991	13.991	(1.182)	68105	50.0000	50.01
73	n-Propylbenzene	91	10.955	10.955	(0.925)	584086	50.0000	46.51
87	n-Butylbenzene	91	12.223	12.223	(1.033)	339560	50.0000	49.97
81	sec-Butylbenzene	105	11.667	11.667	(0.986)	510740	50.0000	47.83
92	Naphthalene	128	14.061	14.061	(1.188)	395649	50.0000	51.94
78	tert-Butylbenzene	119	11.452	11.452	(0.967)	385055	50.0000	47.64
60	1,1,1,2-Tetrachloroethane	131	9.646	9.646	(1.012)	134297	50.0000	49.74
64	Styrene	104	10.201	10.201	(1.071)	374411	50.0000	49.20

Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171219.b\D121909.D
Report Date: 09-Feb-2018 17:33

QC Flag Legend

a - Target compound detected but, quantitated amount
    Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.



Data File: \\NAHSTWS003\Target\CHEM\VOA2,i\D171219,b\D121909.D
Date : 19-DEC-2017 12:39
Client ID: VSTD050
Sample Info: VSTD050;VSTD050;1;7;
Purge Volume: 5.0
Column phase: DB624

Instrument: VOA2,i
Operator: AP
Column diameter: 0.18

\\NAHSTWS003\Target\CHEM\VOA2,i\D171219,b\D121909.D

Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171219.b\D121910.D
Report Date: 09-Feb-2018 17:33

ALS Laboratory Group

Data file : \\NAHSTWS003\Target\CHEM\VOA2.i\D171219.b\D121910.D
Lab Smp Id: VSTD100 Client Smp ID: VSTD100
Inj Date : 19-DEC-2017 13:03
Operator : AP Inst ID: VOA2.i
Smp Info : VSTD100;VSTD100;1;8;
Misc Info : HS15080001;WATER;0;1;
Comment :
Method : \\nahstws003\Target\CHEM\VOA2.i\D171219.b\8260LL.m
Meth Date : 09-Feb-2018 17:33 VOA2.i Quant Type: ISTD
Cal Date : 19-DEC-2017 12:39 Cal File: D121909.D
Als bottle: 10 Calibration Sample, Level: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: dn_bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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
Va	0.00000	
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
	31 1,1,1-Trichloroethane	97	5.657	5.657	(0.978)	359337	100.000	100.16
*	1 Pentafluorobenzene	168	5.786	5.786	(1.000)	232106	50.0000	
$	30 Dibromofluoromethane	113	5.686	5.686	(0.983)	196966	100.000	94.18
*	36 1,4-Difluorobenzene	114	6.575	6.575	(1.000)	367391	50.0000	
$	35 1,2-Dichloroethane-d4	65	6.062	6.062	(1.048)	261877	100.000	101.39
*	47 Chlorobenzene-d5	117	9.527	9.527	(1.000)	334258	50.0000	
$	48 Toluene-d8	98	8.096	8.096	(0.850)	740602	100.000	84.03
$	69 4-Bromofluorobenzene	95	10.695	10.695	(1.123)	294343	100.000	91.46
*	70 1,4-Dichlorobenzene-d4	152	11.838	11.838	(1.000)	145669	50.0000	
	68 1,1,2,2-Tetrachloroethane	83	10.875	10.875	(0.919)	316208	100.000	90.99
	53 1,1,2-Trichloroethane	83	8.597	8.597	(0.902)	192511	100.000	94.14
	32 1,1-Dichloropropene	75	5.856	5.856	(0.891)	286474	100.000	100.99
	22 1,1-Dichloroethane	63	4.281	4.281	(0.740)	476188	100.000	98.26
	11 1,1-Dichloroethene	96	2.750	2.750	(0.475)	200113	100.000	104.46
	90 1,2,4-Trichlorobenzene	180	13.821	13.821	(1.168)	328605	100.000	114.50
	89 1,2-Dibromo-3-Chloropropane	75	13.009	13.009	(1.099)	61519	100.000	102.05
	57 1,2-Dibromoethane	107	9.068	9.068	(0.952)	256307	100.000	100.08
	88 1,2-Dichlorobenzene	146	12.226	12.226	(1.033)	479561	100.000	91.59
	33 1,2-Dichloroethane	62	6.148	6.148	(0.935)	337824	100.000	104.25
	42 1,2-Dichloropropane	63	7.069	7.069	(1.075)	271672	100.000	93.88
	83 1,3-Dichlorobenzene	146	11.770	11.770	(0.994)	508346	100.000	93.29

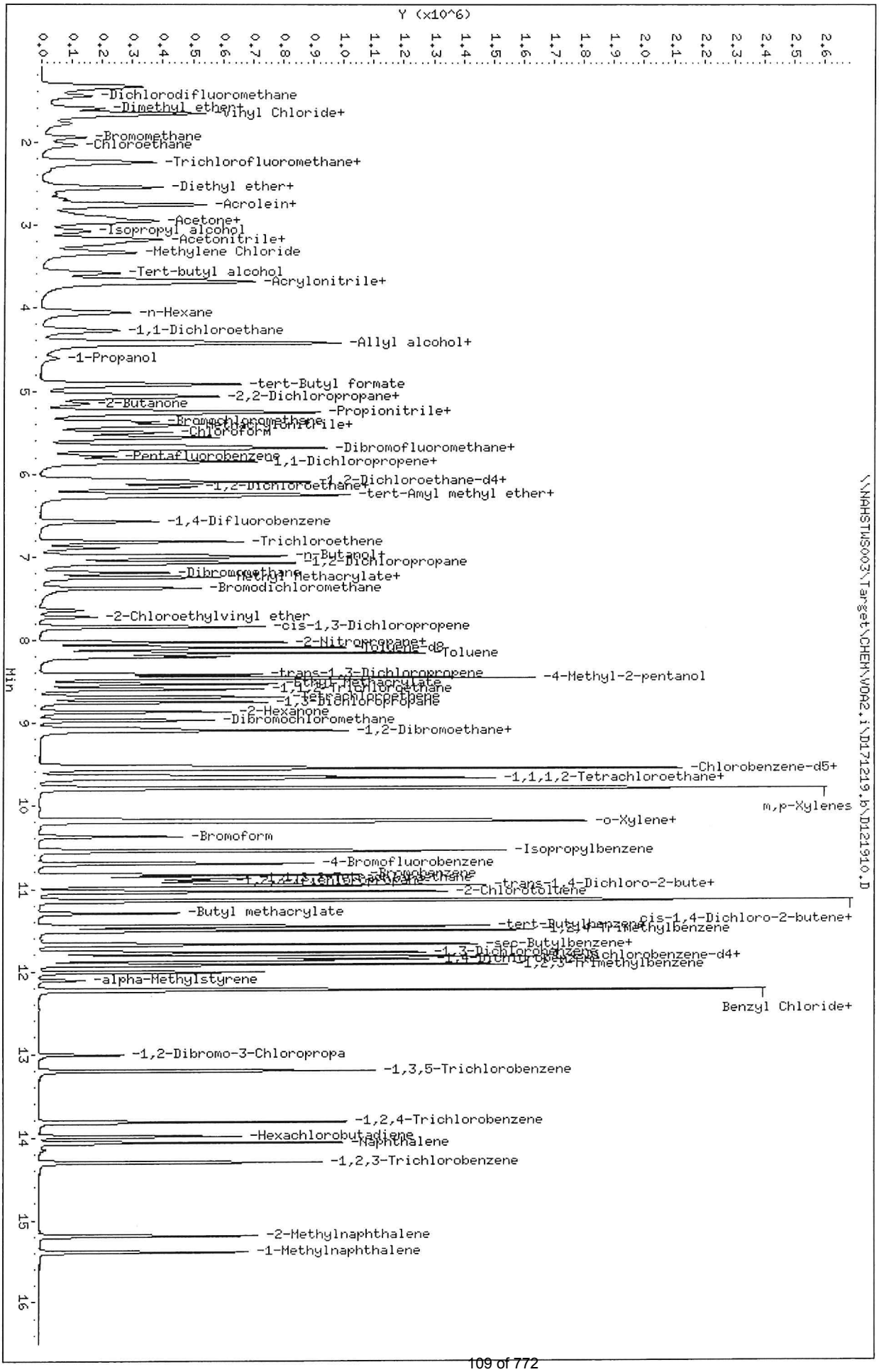
Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171219.b\D121910.D
Report Date: 09-Feb-2018 17:33

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
84	1,4-Dichlorobenzene	146	11.863	11.863	(1.002)	493502	100.000	94.69
24	2-Butanone	43	5.150	5.150	(0.890)	260350	200.000	207.87(A)
52	2-Hexanone	43	8.869	8.869	(0.931)	381694	200.000	194.89
45	4-Methyl-2-Pentanone	43	8.032	8.032	(0.843)	569796	200.000	187.89
10	Acetone	43	2.862	2.862	(0.495)	155352	200.000	204.30(A)
37	Benzene	78	6.094	6.094	(0.927)	907206	100.000	93.85
39	Bromodichloromethane	83	7.377	7.377	(1.122)	343436	100.000	100.37
66	Bromoform	173	10.378	10.378	(1.089)	219356	100.000	110.63
6	Bromomethane	94	1.938	1.938	(0.335)	161998	100.000	104.53
19	Carbon Disulfide	76	2.955	2.955	(0.511)	891341	200.000	203.74(A)
34	Carbon Tetrachloride	117	5.837	5.837	(0.888)	314365	100.000	90.08(MH)
59	Chlorobenzene	112	9.556	9.556	(1.003)	627395	100.000	91.14
7	Chloroethane	64	2.038	2.038	(0.352)	169642	100.000	90.33
28	Chloroform	83	5.497	5.497	(0.950)	415480	100.000	98.18
3	Chloromethane	50	1.595	1.595	(0.276)	389398	100.000	101.26
27	cis-1,2-Dichloroethene	96	5.067	5.067	(0.876)	260493	100.000	98.64
46	cis-1,3-Dichloropropene	75	7.842	7.842	(1.193)	413879	100.000	105.33
55	Dibromochloromethane	129	8.972	8.972	(0.942)	294218	100.000	101.95
2	Dichlorodifluoromethane	85	1.450	1.450	(0.251)	216165	100.000	108.94
61	Ethylbenzene	106	9.675	9.675	(1.015)	328547	100.000	89.17(H)
67	Isopropylbenzene	105	10.548	10.548	(1.107)	1024383	100.000	89.87
17	Methylene Chloride	84	3.334	3.334	(0.576)	243786	100.000	95.95
56	Tetrachloroethene	164	8.693	8.693	(0.912)	206898	100.000	102.09
50	Toluene	91	8.160	8.160	(0.857)	942268	100.000	88.95
20	trans-1,2-Dichloroethene	96	3.668	3.668	(0.634)	220029	100.000	106.18
51	trans-1,3-Dichloropropene	75	8.420	8.420	(1.281)	370545	100.000	110.82
38	Trichloroethene	130	6.822	6.822	(1.038)	264221	100.000	97.09
8	Trichlorofluoromethane	101	2.249	2.249	(0.389)	302337	100.000	105.64
5	Vinyl Chloride	62	1.681	1.681	(0.291)	289377	100.000	101.71
62	m,p-Xylenes	106	9.794	9.794	(1.028)	794645	200.000	176.35
63	o-Xylene	106	10.182	10.182	(1.069)	430424	100.000	91.30
M 95	Xylenes (total)	106				1225069	300.000	(a)
71	1,2,3-Trichloropropane	75	10.904	10.904	(0.921)	342153	100.000	98.60
93	1,2,3-Trichlorobenzene	182	14.302	14.302	(1.208)	286124	100.000	115.71
79	1,2,4-Trimethylbenzene	105	11.504	11.504	(0.972)	847846	100.000	87.38
75	1,3,5-Trimethylbenzene	105	11.135	11.135	(0.941)	830511	100.000	87.89
26	2,2-Dichloropropane	77	5.044	5.044	(0.872)	339030	100.000	100.26
54	1,3-Dichloropropane	76	8.757	8.757	(0.919)	385871	100.000	93.56
76	2-Chlorotoluene	91	11.032	11.032	(0.932)	725093	100.000	87.62
77	4-Chlorotoluene	91	11.141	11.141	(0.941)	797152	100.000	88.47
82	p-Isopropyltoluene	119	11.822	11.822	(0.999)	821994	100.000	91.67
29	Bromochloromethane	128	5.368	5.368	(0.928)	132951	100.000	105.79
74	Bromobenzene	156	10.833	10.833	(0.915)	300219	100.000	92.90
44	Dibromomethane	93	7.194	7.194	(1.094)	154979	100.000	103.34
91	Hexachlorobutadiene	225	13.988	13.988	(1.182)	134255	100.000	100.96
73	n-Propylbenzene	91	10.958	10.958	(0.926)	1101290	100.000	89.41
87	n-Butylbenzene	91	12.223	12.223	(1.033)	641790	100.000	96.30
81	sec-Butylbenzene	105	11.671	11.671	(0.986)	958811	100.000	91.57
92	Naphthalene	128	14.065	14.065	(1.188)	794606	100.000	106.92
78	tert-Butylbenzene	119	11.453	11.453	(0.967)	717972	100.000	90.57
60	1,1,1,2-Tetrachloroethane	131	9.649	9.649	(1.013)	262051	100.000	98.24
64	Styrene	104	10.201	10.201	(1.071)	698309	100.000	92.88

Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171219.b\D121910.D
Report Date: 09-Feb-2018 17:33

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.
H - Operator selected an alternate compound hit.


Y (x10^6)
Min
-Dichlorodifluoromethane
-Dimethyl ether
-Vinyl Chloride+
-Bromomethane
-Chloroethane
-Trichlorofluoromethane+
-Diethyl ether+
-Acrolein+
-Acetone+
-Isopropyl alcohol
-Acetonitrile+
-Methylene Chloride
-Tert-butyl alcohol
-Acrylonitrile+
-n-Hexane
-1,1-Dichloroethane
-Allyl alcohol+
-1-Propanol
-tert-Butyl formate
-2,2-Dichloropropane+
-2-Butanone
-Propionitrile+
-Bromochloromethane
-Methacrylonitrile+
-Chloroform
-Dibromofluoromethane+
-Pentafluorobenzene
-1,1-Dichloropropene+
-1,2-Dichloroethane-d4+
-1,2-Dichloroethane+
-tert-Amyl methyl ether+
-1,4-Difluorobenzene
-Trichloroethene
-n-Butanol
-1,2-Dichloropropane
-Dibromomethane
-Methyl Methacrylate+
-Bromodichloromethane
-2-Chloroethylvinyl ether
-cis-1,3-Dichloropropene
-2-Nitropropane+
-Toluene-d8
-Toluene
-trans-1,3-Dichloropropene
-4-Methyl-2-pentanol
-Ethyl Methacrylate
-1,1,2-Trichloroethane
-Tetrachloroethene
-1,3-Dichloropropane
-2-Hexanone
-Dibromochloromethane
-1,2-Dibromoethane+
-Chlorobenzene-d5+
-1,1,1,2-Tetrachloroethane+
m,p-Xylenes
-o-Xylene+
-Bromoform
-Isopropylbenzene
-4-Bromofluorobenzene
-Bromobenzene
-1,2,3-Trichloropropane
-trans-1,4-Dichloro-2-bute+
-2-Chlorotoluene
-Butyl methacrylate
-tert-Butylbenzene+
cis-1,4-Dichloro-2-butene+
1,2,4-Trimethylbenzene
-sec-Butylbenzene+
-1,3-Dichlorobenzene
-Chlorobenzene-d4+
-1,4-Dichlorobenzene
1,2,3-Trimethylbenzene
-alpha-Methylstyrene
Benzyl Chloride+
-1,2-Dibromo-3-Chloropropa
-1,3,5-Trichlorobenzene
-1,2,4-Trichlorobenzene
-Hexachlorobutadiene
-Naphthalene
-1,2,3-Trichlorobenzene
-2-Methylnaphthalene
-1-Methylnaphthalene
\\NAHSTWS003\Target\CHEM\VOA2,i\D171219,b\D121910.D
Data File: \\NAHSTWS003\Target\CHEM\VOA2,i\D171219,b\D121910.D
Date : 19-DEC-2017 13:03
Client ID: VSTD100
Sample Info: VSTD100;VSTD100;1;8;
Purge Volume: 5.0
Column phase: DB624
Instrument: VOA2,i
Operator: AP
Column diameter: 0.18

Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171219.b\D121911.D
Report Date: 09-Feb-2018 17:33

ALS Laboratory Group

Data file : \\NAHSTWS003\Target\CHEM\VOA2.i\D171219.b\D121911.D
Lab Smp Id: VSTD200 Client Smp ID: VSTD200
Inj Date : 19-DEC-2017 13:27
Operator : AP Inst ID: VOA2.i
Smp Info : VSTD200;VSTD200;1;9;
Misc Info : HS15080001;WATER;0;1;
Comment :
Method : \\nahstws003\Target\CHEM\VOA2.i\D171219.b\8260LL.m
Meth Date : 09-Feb-2018 17:33 VOA2.i Quant Type: ISTD
Cal Date : 19-DEC-2017 13:03 Cal File: D121910.D
Als bottle: 11 Calibration Sample, Level: 9
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: dn_bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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
Va	0.00000	
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
	31 1,1,1-Trichloroethane	97	5.661	5.661	(0.978)	716255	200.000	189.95
*	1 Pentafluorobenzene	168	5.786	5.786	(1.000)	243965	50.0000	
$	30 Dibromofluoromethane	113	5.686	5.686	(0.983)	380348	200.000	173.03
*	36 1,4-Difluorobenzene	114	6.575	6.575	(1.000)	381634	50.0000	
$	35 1,2-Dichloroethane-d4	65	6.062	6.062	(1.048)	509778	200.000	187.78
*	47 Chlorobenzene-d5	117	9.531	9.531	(1.000)	346750	50.0000	
$	48 Toluene-d8	98	8.096	8.096	(0.850)	1426526	200.000	156.03
$	69 4-Bromofluorobenzene	95	10.702	10.702	(1.123)	567658	200.000	170.03
*	70 1,4-Dichlorobenzene-d4	152	11.841	11.841	(1.000)	146695	50.0000	
	68 1,1,2,2-Tetrachloroethane	83	10.878	10.878	(0.919)	606455	200.000	173.30
	53 1,1,2-Trichloroethane	83	8.603	8.603	(0.903)	381912	200.000	180.04
	32 1,1-Dichloropropene	75	5.856	5.856	(0.891)	583601	200.000	198.95
	22 1,1-Dichloroethane	63	4.281	4.281	(0.740)	939835	200.000	184.52
	11 1,1-Dichloroethene	96	2.741	2.741	(0.474)	381816	200.000	189.62
	90 1,2,4-Trichlorobenzene	180	13.821	13.821	(1.167)	633301	200.000	219.14(A)
	89 1,2-Dibromo-3-Chloropropane	75	13.012	13.012	(1.099)	121157	200.000	199.07
	57 1,2-Dibromoethane	107	9.075	9.075	(0.952)	509836	200.000	191.90
	88 1,2-Dichlorobenzene	146	12.229	12.229	(1.033)	893240	200.000	169.40
	33 1,2-Dichloroethane	62	6.148	6.148	(0.935)	662291	200.000	196.84
	42 1,2-Dichloropropane	63	7.073	7.073	(1.076)	535297	200.000	178.08
	83 1,3-Dichlorobenzene	146	11.774	11.774	(0.994)	974555	200.000	177.60

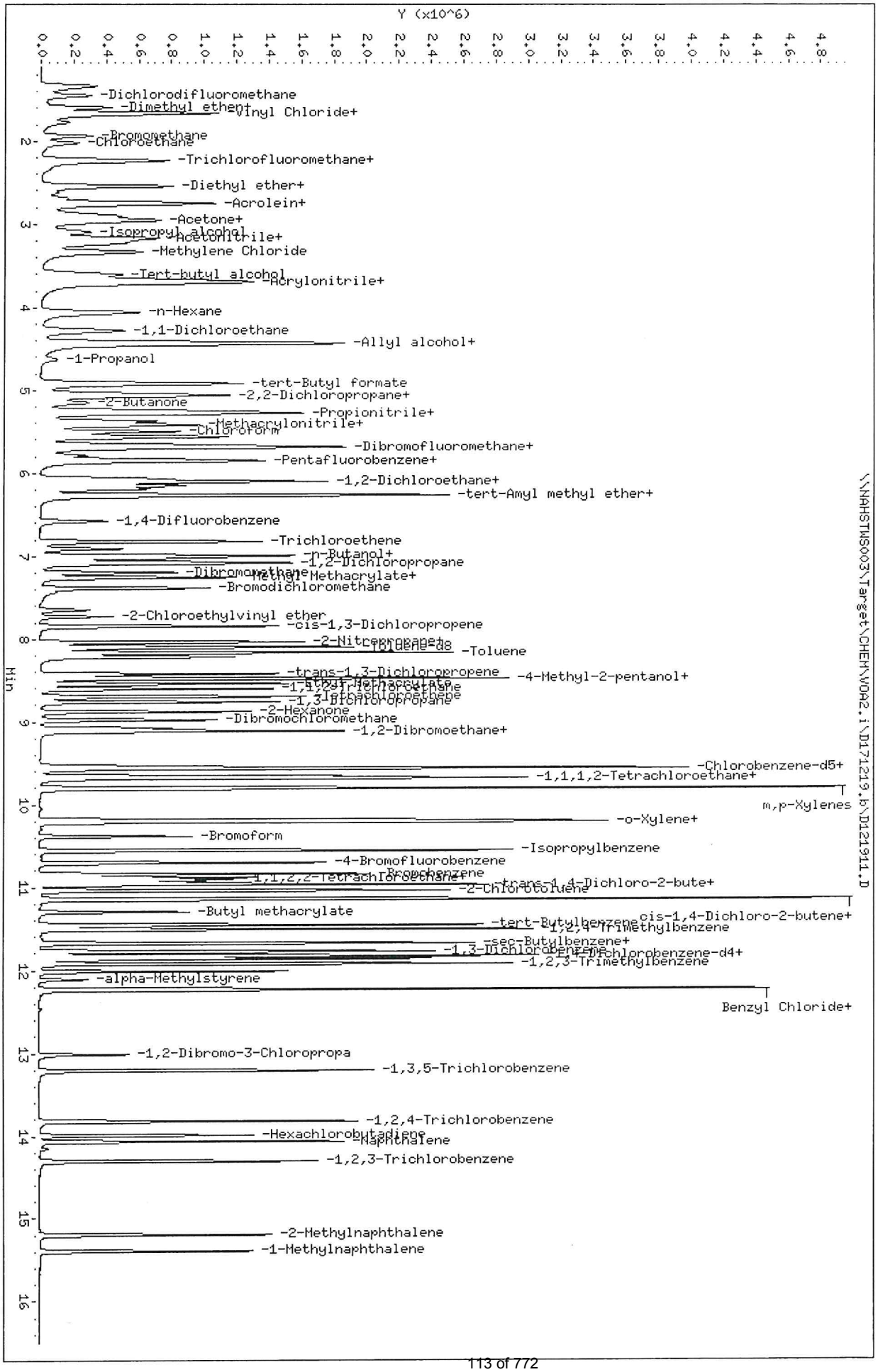
Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171219.b\D121911.D
Report Date: 09-Feb-2018 17:33

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
84	1,4-Dichlorobenzene	146	11.867	11.867	(1.002)	947137	200.000	180.46
24	2-Butanone	43	5.150	5.150	(0.890)	514478	400.000	390.80(A)
52	2-Hexanone	43	8.876	8.876	(0.931)	755178	400.000	371.70(A)
45	4-Methyl-2-Pentanone	43	8.038	8.038	(0.843)	1095468	400.000	348.22(A)
10	Acetone	43	2.866	2.866	(0.495)	314789	400.000	396.04(A)
37	Benzene	78	6.100	6.100	(0.928)	1754958	200.000	174.77
39	Bromodichloromethane	83	7.381	7.381	(1.122)	670027	200.000	188.52
66	Bromoform	173	10.378	10.378	(1.089)	437607	200.000	212.75(A)
6	Bromomethane	94	1.935	1.935	(0.335)	315966	200.000	196.11(M)
19	Carbon Disulfide	76	2.956	2.956	(0.511)	1798818	400.000	391.19(A)
34	Carbon Tetrachloride	117	5.837	5.837	(0.888)	620089	200.000	171.05(M)
59	Chlorobenzene	112	9.559	9.559	(1.003)	1205848	200.000	168.86
7	Chloroethane	64	2.015	2.015	(0.348)	326706	200.000	165.51(M)
28	Chloroform	83	5.497	5.497	(0.950)	806092	200.000	181.23
3	Chloromethane	50	1.592	1.592	(0.275)	800291	200.000	198.92
27	cis-1,2-Dichloroethene	96	5.070	5.070	(0.876)	513279	200.000	184.92
46	cis-1,3-Dichloropropene	75	7.846	7.846	(1.193)	817440	200.000	200.27(A)
55	Dibromochloromethane	129	8.975	8.975	(0.942)	587599	200.000	196.27
2	Dichlorodifluoromethane	85	1.444	1.444	(0.250)	437112	200.000	209.58(A)
61	Ethylbenzene	106	9.678	9.678	(1.015)	645405	200.000	168.85(H)
67	Isopropylbenzene	105	10.551	10.551	(1.107)	1929664	200.000	163.19
17	Methylene Chloride	84	3.331	3.331	(0.576)	484417	200.000	181.40
56	Tetrachloroethene	164	8.693	8.693	(0.912)	413430	200.000	198.24
50	Toluene	91	8.167	8.167	(0.857)	1826045	200.000	166.17
20	trans-1,2-Dichloroethene	96	3.661	3.661	(0.633)	442346	200.000	203.10(A)
51	trans-1,3-Dichloropropene	75	8.420	8.420	(1.281)	745710	200.000	214.71(A)
38	Trichloroethene	130	6.822	6.822	(1.038)	531039	200.000	187.86
8	Trichlorofluoromethane	101	2.240	2.240	(0.387)	605156	200.000	201.17(A)
5	Vinyl Chloride	62	1.678	1.678	(0.290)	570730	200.000	190.86
62	m,p-Xylenes	106	9.800	9.800	(1.028)	1525807	400.000	326.42(A)
63	o-Xylene	106	10.185	10.185	(1.069)	826994	200.000	169.11
M 95	Xylenes (total)	106				2352801	600.000	(a)
71	1,2,3-Trichloropropane	75	10.907	10.907	(0.921)	503444	200.000	144.06
93	1,2,3-Trichlorobenzene	182	14.305	14.305	(1.208)	548103	200.000	220.11(A)
79	1,2,4-Trimethylbenzene	105	11.507	11.507	(0.972)	1593131	200.000	163.04
75	1,3,5-Trimethylbenzene	105	11.141	11.141	(0.941)	1548771	200.000	162.76
26	2,2-Dichloropropane	77	5.045	5.045	(0.872)	669571	200.000	188.38
54	1,3-Dichloropropane	76	8.760	8.760	(0.919)	755983	200.000	176.70
76	2-Chlorotoluene	91	11.039	11.039	(0.932)	1389990	200.000	166.80
77	4-Chlorotoluene	91	11.148	11.148	(0.941)	1499500	200.000	165.26
82	p-Isopropyltoluene	119	11.828	11.828	(0.999)	1563485	200.000	173.15
29	Bromochloromethane	128	5.375	5.375	(0.929)	256786	200.000	194.41
74	Bromobenzene	156	10.840	10.840	(0.915)	580164	200.000	178.28
44	Dibromomethane	93	7.195	7.195	(1.094)	308722	200.000	198.18
91	Hexachlorobutadiene	225	13.991	13.991	(1.182)	266365	200.000	199.34
73	n-Propylbenzene	91	10.965	10.965	(0.926)	2079135	200.000	167.63
87	n-Butylbenzene	91	12.226	12.226	(1.033)	1229106	200.000	183.15
81	sec-Butylbenzene	105	11.674	11.674	(0.986)	1819078	200.000	172.51
92	Naphthalene	128	14.065	14.065	(1.188)	1461418	200.000	195.70
78	tert-Butylbenzene	119	11.459	11.459	(0.968)	1361470	200.000	170.56
60	1,1,1,2-Tetrachloroethane	131	9.653	9.653	(1.013)	514128	200.000	185.80
64	Styrene	104	10.208	10.208	(1.071)	1321701	200.000	169.46

Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171219.b\D121911.D
Report Date: 09-Feb-2018 17:33

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.
H - Operator selected an alternate compound hit.



Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171219.b\D121911.D
Date : 19-DEC-2017 13:27
Client ID: VSTD200
Sample Info: VSTD200;VSTD200;1;9;
Purge Volume: 5.0
Column phase: DB624

Instrument: VOA2.i
Operator: AP
Column diameter: 0.18

\\NAHSTWS003\Target\CHEM\VOA2.i\D171219.b\D121911.D

Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171219.b\D121913.D
Report Date: 09-Feb-2018 17:33

ALS Laboratory Group

Data file : \\NAHSTWS003\Target\CHEM\VOA2.i\D171219.b\D121913.D
Lab Smp Id: VSTD-ICV Client Smp ID: VSTD-ICV
Inj Date : 19-DEC-2017 14:16
Operator : AP Inst ID: VOA2.i
Smp Info : VSTD-ICV;VSTD-ICV;2;;
Misc Info : HS15080001;WATER;0;1;
Comment :
Method : \\nahstws003\Target\CHEM\VOA2.i\D171219.b\8260LL.m
Meth Date : 09-Feb-2018 17:33 VOA2.i Quant Type: ISTD
Cal Date : 19-DEC-2017 13:27 Cal File: D121911.D
Als bottle: 13 QC Sample: METHSPIKE
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: dn_bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

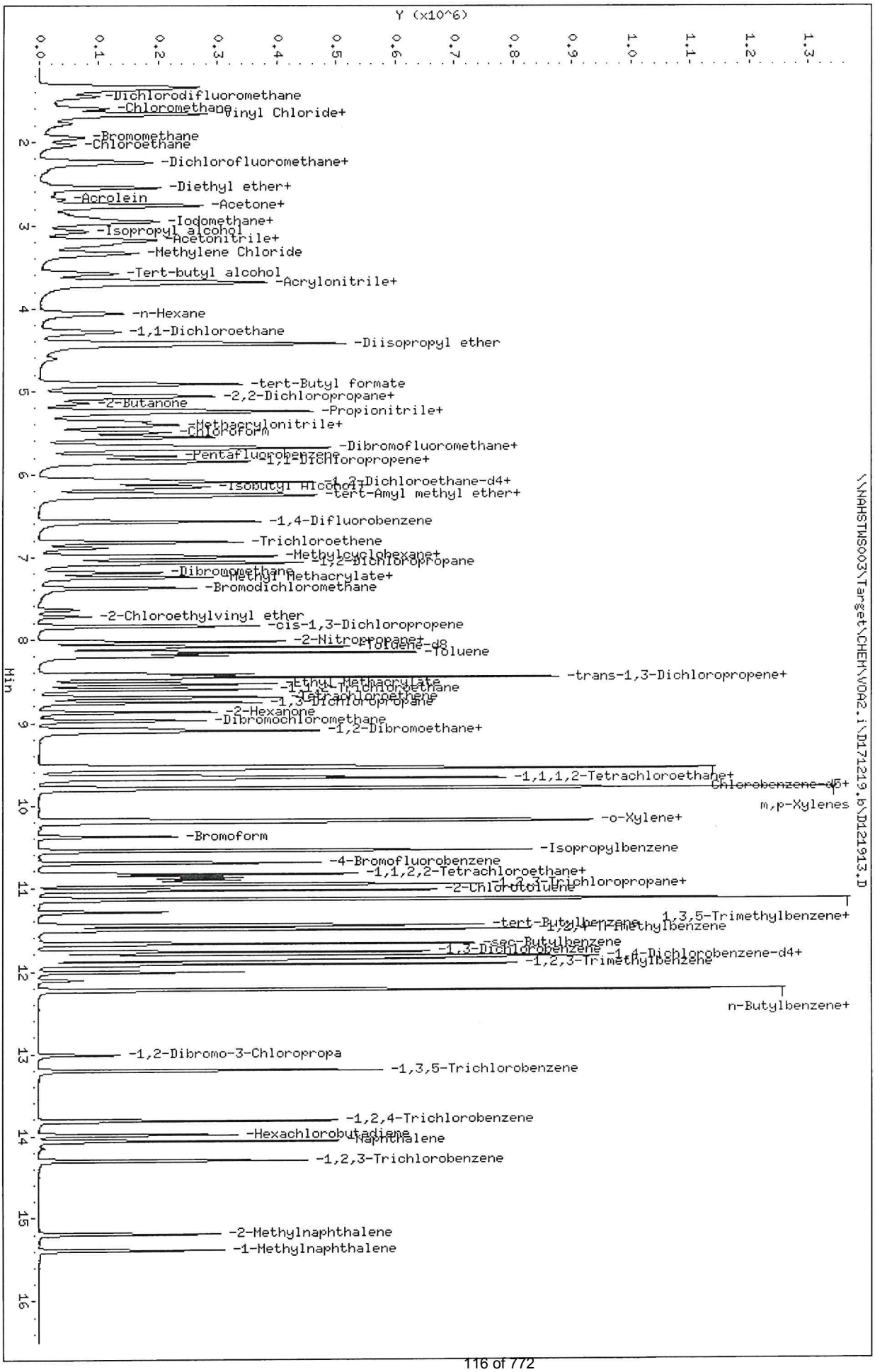
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Va	0.00000	
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
	31 1,1,1-Trichloroethane	97	5.651	5.661	(0.978)	179115	49.0617	49.06
*	1 Pentafluorobenzene	168	5.779	5.786	(1.000)	236216	50.0000	
$	30 Dibromofluoromethane	113	5.686	5.686	(0.984)	101991	47.9227	47.92
*	36 1,4-Difluorobenzene	114	6.575	6.575	(1.000)	371286	50.0000	
$	35 1,2-Dichloroethane-d4	65	6.062	6.062	(1.049)	130923	49.8088	49.80
*	47 Chlorobenzene-d5	117	9.527	9.531	(1.000)	338097	50.0000	
$	48 Toluene-d8	98	8.093	8.096	(0.849)	388288	43.5582	43.55
$	69 4-Bromofluorobenzene	95	10.695	10.702	(1.123)	150830	46.3351	46.33
*	70 1,4-Dichlorobenzene-d4	152	11.834	11.841	(1.000)	149771	50.0000	
	68 1,1,2,2-Tetrachloroethane	83	10.869	10.878	(0.918)	162360	45.4433	45.44
	53 1,1,2-Trichloroethane	83	8.597	8.603	(0.902)	100546	48.6143	48.61
	32 1,1-Dichloropropene	75	5.853	5.856	(0.890)	148378	51.3040	51.30
	22 1,1-Dichloroethane	63	4.281	4.281	(0.741)	237141	48.0860	48.08
	11 1,1-Dichloroethene	96	2.753	2.741	(0.476)	98125	50.3313	50.33
	90 1,2,4-Trichlorobenzene	180	13.818	13.821	(1.168)	162937	55.2230	55.22
	89 1,2-Dibromo-3-Chloropropane	75	13.009	13.012	(1.099)	29561	47.9848	47.98
	57 1,2-Dibromoethane	107	9.065	9.075	(0.952)	129329	49.9262	49.92
	88 1,2-Dichlorobenzene	146	12.223	12.229	(1.033)	254978	47.3643	47.36
	33 1,2-Dichloroethane	62	6.145	6.148	(0.935)	168706	51.4651	51.46
	42 1,2-Dichloropropane	63	7.066	7.073	(1.075)	139163	47.5870	47.58
	83 1,3-Dichlorobenzene	146	11.767	11.774	(0.994)	263425	47.0213	47.02

Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171219.b\D121913.D
Report Date: 09-Feb-2018 17:33

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
84	1,4-Dichlorobenzene	146	11.860	11.867	(1.002)	251434	46.9240	46.92
24	2-Butanone	43	5.144	5.150	(0.890)	125859	98.7418	98.74
52	2-Hexanone	43	8.866	8.876	(0.931)	188174	94.9905	94.99
45	4-Methyl-2-Pentanone	43	8.029	8.038	(0.843)	288228	93.9658	93.96
10	Acetone	43	2.856	2.866	(0.494)	79464	101.521	101.52
37	Benzene	78	6.094	6.100	(0.927)	468722	47.9805	47.98
39	Bromodichloromethane	83	7.377	7.381	(1.122)	172162	49.7905	49.79
66	Bromoform	173	10.374	10.378	(1.089)	107206	53.4548	53.45
6	Bromomethane	94	1.945	1.935	(0.337)	87966	54.6082	54.60
19	Carbon Disulfide	76	2.955	2.956	(0.511)	453389	101.834	101.83
34	Carbon Tetrachloride	117	5.834	5.837	(0.887)	150248	42.6028	42.60
59	Chlorobenzene	112	9.556	9.559	(1.003)	324514	46.6069	46.60
7	Chloroethane	64	2.038	2.015	(0.353)	80390	42.0641	42.06
28	Chloroform	83	5.494	5.497	(0.951)	210974	48.9888	48.98
3	Chloromethane	50	1.598	1.592	(0.277)	216344	54.8507	54.85
27	cis-1,2-Dichloroethene	96	5.070	5.070	(0.877)	133003	49.4916	49.49
46	cis-1,3-Dichloropropene	75	7.839	7.846	(1.192)	209138	52.6682	52.66
55	Dibromochloromethane	129	8.972	8.975	(0.942)	147898	50.6666	50.66
2	Dichlorodifluoromethane	85	1.450	1.444	(0.251)	108668	53.8135	53.81
61	Ethylbenzene	106	9.672	9.678	(1.015)	172020	46.1581	46.15
67	Isopropylbenzene	105	10.548	10.551	(1.107)	539189	46.7681	46.76
17	Methylene Chloride	84	3.331	3.331	(0.576)	125545	48.5572	48.55
56	Tetrachloroethene	164	8.690	8.693	(0.912)	105833	50.7856	50.78
50	Toluene	91	8.160	8.167	(0.857)	492502	45.9648	45.96
20	trans-1,2-Dichloroethene	96	3.668	3.661	(0.635)	111703	52.9702	52.97
51	trans-1,3-Dichloropropene	75	8.417	8.420	(1.280)	183760	54.3849	54.38
38	Trichloroethene	130	6.816	6.822	(1.037)	132301	48.1090	48.10
8	Trichlorofluoromethane	101	2.253	2.240	(0.390)	154364	52.9999	52.99
5	Vinyl Chloride	62	1.681	1.678	(0.291)	149803	51.7410	51.74
62	m,p-Xylenes	106	9.794	9.800	(1.028)	417543	91.6149	91.61
63	o-Xylene	106	10.179	10.185	(1.068)	222400	46.6435	46.64
M 95	Xylenes (total)	106				639943	138.258	138.25
71	1,2,3-Trichloropropane	75	10.904	10.907	(0.921)	174309	48.8560	48.85
93	1,2,3-Trichlorobenzene	182	14.302	14.305	(1.209)	139440	54.8472	54.84
79	1,2,4-Trimethylbenzene	105	11.501	11.507	(0.972)	442889	44.3952	44.39
75	1,3,5-Trimethylbenzene	105	11.132	11.141	(0.941)	436227	44.9020	44.90
26	2,2-Dichloropropane	77	5.044	5.045	(0.873)	169895	49.3690	49.36
54	1,3-Dichloropropane	76	8.754	8.760	(0.919)	196311	47.0599	47.05
76	2-Chlorotoluene	91	11.029	11.039	(0.932)	378502	44.4881	44.48
77	4-Chlorotoluene	91	11.138	11.148	(0.941)	413336	44.6186	44.61
82	p-Isopropyltoluene	119	11.818	11.828	(0.999)	427373	46.3580	46.35
29	Bromochloromethane	128	5.365	5.375	(0.928)	67528	52.8019	52.80
74	Bromobenzene	156	10.833	10.840	(0.915)	154221	46.4200	46.42
44	Dibromomethane	93	7.191	7.195	(1.094)	77635	51.2278	51.22
91	Hexachlorobutadiene	225	13.988	13.991	(1.182)	68432	49.8346	49.83
73	n-Propylbenzene	91	10.955	10.965	(0.926)	571686	45.1465	45.14
87	n-Butylbenzene	91	12.223	12.226	(1.033)	330221	48.1964	48.19
81	sec-Butylbenzene	105	11.671	11.674	(0.986)	500608	46.5017	46.50
92	Naphthalene	128	14.061	14.065	(1.188)	397816	51.7926	51.79
78	tert-Butylbenzene	119	11.453	11.459	(0.968)	371229	45.5516	45.55
60	1,1,1,2-Tetrachloroethane	131	9.649	9.653	(1.013)	134061	49.6900	49.68
64	Styrene	104	10.201	10.208	(1.071)	365703	48.0891	48.08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16
-Dichlorodifluoromethane
-Chloromethane
-Vinyl Chloride+
-Bromomethane
-Chloroethane
-Dichlorofluoromethane+
-Diethyl ether+
-Acrolein
-Acetone+
-Iodomethane+
-Isopropyl alcohol
-Acetonitrile+
-Methylene Chloride
-Tert-butyl alcohol
-Acrylonitrile+
-n-Hexane
-1,1-Dichloroethane
-Diisopropyl ether
-tert-Butyl formate
-2,2-Dichloropropane+
-2-Butanone
-Propionitrile+
-Methacrylonitrile+
-Chloroform
-Dibromofluoromethane+
-Pentafluorobenzene
-1,1-Dichloropropene+
-1,2-Dichloroethane-d4+
-Isobutyl Alcohol
-tert-Amyl methyl ether+
-1,4-Difluorobenzene
-Trichloroethene
-Methylcyclohexane+
-1,2-Dichloropropane
-Dibromomethane
-Methyl Methacrylate+
-Bromodichloromethane
-2-Chloroethylvinyl ether
-cis-1,3-Dichloropropene
-2-Nitropropane+
-Toluene-d8
-Toluene
-trans-1,3-Dichloropropene+
-Ethyl Methacrylate
-1,1,2-Trichloroethane
-Tetrachloroethene
-1,3-Dichloropropane
-2-Hexanone
-Dibromochloromethane
-1,2-Dibromoethane+
-1,1,1,2-Tetrachloroethane+
Chlorobenzene-d5+
m,p-Xylenes
-o-Xylene+
-Bromoform
-Isopropylbenzene
-4-Bromofluorobenzene
-1,1,2,2-Tetrachloroethane+
-1,2,3-Trichloropropane+
-2-Chlorotoluene
-tert-Butylbenzene
1,3,5-Trimethylbenzene+
1,2,4-Trimethylbenzene
-sec-Butylbenzene
-1,3-Dichlorobenzene
-1,4-Dichlorobenzene-d4+
-1,2,3-Trimethylbenzene
n-Butylbenzene+
-1,2-Dibromo-3-Chloropropa
-1,3,5-Trichlorobenzene
-1,2,4-Trichlorobenzene
-Hexachlorobutadiene
-Naphthalene
-1,2,3-Trichlorobenzene
-2-Methylnaphthalene
-1-Methylnaphthalene
\\NAHSTWS003\Target\CHEM\VOA2.i\D171219.b\D121913.D
Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171219.b\D121913.D
Date : 19-DEC-2017 14:16
Client ID: VSTD-ICV
Sample Info: VSTD-ICV;VSTD-ICV;2;;
Purge Volume: 5.0
Column phase: DB624
Instrument: VOA2.i
Operator: AP
Column diameter: 0.18

FORM 5
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS17121224

Lab File ID: D123101 BFB Injection Date: 12/31/17

Instrument ID: VOA2 BFB Injection Time: 1339

GC Column: DB624 ID: 0.18 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	18.9
75	30.0 - 60.0% of mass 95	46.4
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.7
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	86.7
175	5.0 - 9.0% of mass 174	6.1 (7.0)1
176	95.0 - 101.0% of mass 174	87.4 (100.8)1
177	5.0 - 9.0% of mass 176	6.0 (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	CCV	CCV	D123102	12/31/17	1404
02	VLCSW-171231	VLCSW-171231	D123103	12/31/17	1428
03	VBLKW-171231	VBLKW-171231	D123105	12/31/17	1517
04	HS17121224-0	HS17121224-09	D123109	12/31/17	1656
05	HS17121224-0	HS17121224-01	D123112	12/31/17	1809
06	HS17121224-0	HS17121224-08	D123113	12/31/17	1834
07	HS17121224-0	HS17121224-05	D123115	12/31/17	1923
08	HS17121224-0	HS17121224-05	D123116	12/31/17	1950
09	HS17121224-0	HS17121224-06	D123117	12/31/17	2017
10	HS17121224-0	HS17121224-06	D123118	12/31/17	2045
11	HS17121224-0	HS17121224-02	D123121	12/31/17	2206
12	HS17121224-0	HS17121224-02	D123122	12/31/17	2233
13	HS17121224-0	HS17121224-04	D123123	12/31/17	2301
14	HS17121224-0	HS17121224-04	D123124	12/31/17	2328
15	HS17121224-0	HS17121224-03	D123125	12/31/17	2353
16	HS17121224-0	HS17121224-03	D123126	01/01/18	0020
17	HS17121224-0	HS17121224-01M	D123127	01/01/18	0044
18	HS17121224-0	HS17121224-01M	D123128	01/01/18	0109
19	CCV_END	CCV_END	D123129	01/01/18	0133
20					
21					
22					

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS17121224

Instrument ID: VOA2 Calibration Date: 12/31/17 Time: 1404

Lab File ID: D123102 Init. Calib. Date(s): 12/19/17 12/19/17

Init. Calib. Times: 1010 1327

GC Column: DB624 ID: 0.18 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
1,1,1-Trichloroethane	0.7730000	0.7834339	0.7834339	0.1	1.35	20.00	AVRG
1,1,1,2-Tetrachloroethane	0.3990000	0.4087837	0.4087837	0.1	2.45	20.00	AVRG
tert-Butylbenzene	2.7210000	2.5109828	2.5109828	0.1	-7.72	20.00	AVRG
Naphthalene	50.534291	50.000000	2.5922796	0.2	1.07	20.00	LINR
sec-Butylbenzene	3.5940000	3.4383425	3.4383425	0.1	-4.33	20.00	AVRG
1,1,2,2-Tetrachloroethane	1.1930000	1.0296246	1.0296246	0.3	-13.69	20.00	AVRG
1,1,2-Trichloroethane	0.3060000	0.2967527	0.2967527	0.1	-3.02	20.00	AVRG
1,1-Dichloropropene	55.339572	50.000000	0.4305061	0.1	10.68	20.00	LINR
1,1-Dichloroethane	1.0440000	1.0211278	1.0211278	0.2	-2.19	20.00	AVRG
1,1-Dichloroethene	0.4120000	0.4477394	0.4477394	0.1	8.67	20.00	AVRG
1,2,4-Trichlorobenzene	0.9850000	1.0807638	1.0807638	0.2	9.72	20.00	AVRG
1,2-Dibromo-3-Chloropropane	45.120955	50.000000	0.1854610	0.05	-9.76	20.00	LINR
1,2-Dibromoethane	0.3830000	0.3898563	0.3898563	0.1	1.79	20.00	AVRG
1,2-Dichlorobenzene	1.7970000	1.6511734	1.6511734	0.4	-8.12	20.00	AVRG
1,2-Dichloroethane	55.344501	50.000000	0.4885679	0.1	10.69	20.00	LINR
1,2-Dichloropropane	0.3940000	0.3959015	0.3959015	0.1	0.48	20.00	AVRG
1,3-Dichlorobenzene	1.8700000	1.7376490	1.7376490	0.6	-7.08	20.00	AVRG
1,4-Dichlorobenzene	1.7890000	1.6616677	1.6616677	0.4	-7.12	20.00	AVRG
2-Butanone	0.2700000	0.2468740	0.2468740	0.1	-8.56	20.00	AVRG
2-Hexanone	0.2930000	0.2651312	0.2651312	0.1	-9.51	20.00	AVRG
4-Methyl-2-Pentanone	0.4540000	0.4144808	0.4144808	0.1	-8.70	20.00	AVRG
Acetone	94.842113	100.00000	0.1573868	0.1	-5.16	20.00	LINR
Benzene	1.3160000	1.3372083	1.3372083	0.5	1.61	20.00	AVRG
Bromodichloromethane	0.4660000	0.4795462	0.4795462	0.2	2.91	20.00	AVRG
Bromoform	0.2970000	0.3131957	0.3131957	0.1	5.45	20.00	AVRG
Bromomethane	55.990199	50.000000	0.3814083	0.1	11.98	20.00	LINR
Carbon Disulfide	0.9420000	0.9802868	0.9802868	0.1	4.06	20.00	AVRG
Carbon Tetrachloride	0.4750000	0.4294329	0.4294329	0.1	-9.59	20.00	AVRG
Chlorobenzene	1.0300000	1.0009252	1.0009252	0.5	-2.82	20.00	AVRG
Chloroethane	0.4040000	0.3716144	0.3716144	0.1	-8.02	20.00	AVRG
Chloroform	0.9120000	0.8900055	0.8900055	0.2	-2.41	20.00	AVRG
Chloromethane	53.642269	50.000000	0.8960420	0.1	7.28	20.00	LINR
cis-1,2-Dichloroethene	0.5690000	0.5747831	0.5747831	0.1	1.02	20.00	AVRG
cis-1,3-Dichloropropene	0.5350000	0.5950174	0.5950174	0.2	11.22	20.00	AVRG
Dibromochloromethane	0.4320000	0.4420124	0.4420124	0.1	2.32	20.00	AVRG
Dichlorodifluoromethane	0.4270000	0.4274784	0.4274784	0.1	0.11	20.00	AVRG
Ethylbenzene	0.5510000	0.5387145	0.5387145	0.1	-2.23	20.00	AVRG
Isopropylbenzene	1.7050000	1.7094839	1.7094839	0.1	0.26	20.00	AVRG
Methylene Chloride	0.5470000	0.5129354	0.5129354	0.1	-6.23	20.00	AVRG
Tetrachloroethene	55.199033	50.000000	0.3393426	0.2	10.40	20.00	LINR
Toluene	1.5840000	1.5305698	1.5305698	0.4	-3.37	20.00	AVRG
trans-1,2-Dichloroethene	0.4460000	0.4940603	0.4940603	0.1	10.78	20.00	AVRG

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS1712122

Instrument ID: VOA2 Calibration Date: 12/31/17 Time: 1404

Lab File ID: D123102 Init. Calib. Date(s): 12/19/17 12/19/17

Init. Calib. Times: 1010 1327

GC Column: DB624 ID: 0.18 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
trans-1,3-Dichloropropene	0.4550000	0.5111178	0.5111178	0.1	12.33	20.00	AVRG
Trichloroethene	0.3700000	0.3886201	0.3886201	0.2	5.03	20.00	AVRG
Trichlorofluoromethane	0.6160000	0.6655858	0.6655858	0.1	8.05	20.00	AVRG
Vinyl Chloride	0.6130000	0.6361688	0.6361688	0.1	3.78	20.00	AVRG
m,p-Xylenes	0.6740000	0.6544416	0.6544416	0.1	-2.90	20.00	AVRG
o-Xylene	0.7050000	0.6927751	0.6927751	0.3	-1.73	20.00	AVRG
Xylenes (total)	0.6190000	0.6178747	0.6178747	0.1	-0.18	20.00	AVRG
1,2,3-Trichloropropane	1.1910000	1.0950432	1.0950432	0.1	-8.06	20.00	AVRG
1,2,3-Trichlorobenzene	0.8490000	0.9206641	0.9206641	0.1	8.44	20.00	AVRG
1,2,4-Trimethylbenzene	3.3300000	2.9414887	2.9414887	0.1	-11.67	20.00	AVRG
1,3,5-Trimethylbenzene	3.2430000	2.9257814	2.9257814	0.1	-9.78	20.00	AVRG
2,2-Dichloropropane	0.7280000	0.7708198	0.7708198	0.1	5.88	20.00	AVRG
1,3-Dichloropropane	0.6170000	0.5926122	0.5926122	0.1	-3.95	20.00	AVRG
2-Chlorotoluene	2.8400000	2.4939296	2.4939296	0.1	-12.18	20.00	AVRG
4-Chlorotoluene	3.0920000	2.7441465	2.7441465	0.1	-11.25	20.00	AVRG
p-Isopropyltoluene	3.0780000	2.9208622	2.9208622	0.1	-5.10	20.00	AVRG
Bromochloromethane	0.2700000	0.2818500	0.2818500	0.1	4.39	20.00	AVRG
Bromobenzene	1.1090000	1.0003348	1.0003348	0.1	-9.80	20.00	AVRG
Dibromomethane	0.2040000	0.2202961	0.2202961	0.1	7.99	20.00	AVRG
Hexachlorobutadiene	52.873285	50.000000	0.4845284	0.1	5.75	20.00	LINR
n-Propylbenzene	4.2270000	3.8888054	3.8888054	0.1	-8.00	20.00	AVRG
n-Butylbenzene	2.2870000	2.2817135	2.2817135	0.05	-0.23	20.00	AVRG
Styrene	1.1240000	1.1369645	1.1369645	0.3	1.15	20.00	AVRG
1,2-Dichloroethane-d4	0.5560000	0.5226369	0.5226369	0.1	-6.00	20.00	AVRG
Dibromofluoromethane	0.4500000	0.4232590	0.4232590	0.1	-5.94	20.00	AVRG
Toluene-d8	1.3180000	1.2274044	1.2274044	0.1	-6.87	20.00	AVRG
4-Bromofluorobenzene	0.4810000	0.4741749	0.4741749	0.1	-1.42	20.00	AVRG

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS17121224

Instrument ID: VOA2 Calibration Date: 01/01/18 Time: 0133

Lab File ID: D123129 Init. Calib. Date(s): 12/19/17 12/19/17

Init. Calib. Times: 1010 1327

GC Column: DB624 ID: 0.18 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
1,1,1-Trichloroethane	0.7730000	0.7345603	0.7345603	0.1	-4.97	50.00	AVRG
1,1,1,2-Tetrachloroethane	0.3990000	0.3878466	0.3878466	0.1	-2.80	50.00	AVRG
tert-Butylbenzene	2.7210000	2.3251743	2.3251743	0.1	-14.55	50.00	AVRG
Naphthalene	50.422099	50.000000	2.5865840	0.2	0.84	50.00	LINR
sec-Butylbenzene	3.5940000	3.0788206	3.0788206	0.1	-14.33	50.00	AVRG
1,1,2,2-Tetrachloroethane	1.1930000	1.0194698	1.0194698	0.3	-14.54	50.00	AVRG
1,1,2-Trichloroethane	0.3060000	0.2880370	0.2880370	0.1	-5.87	50.00	AVRG
1,1-Dichloropropene	49.603025	50.000000	0.3866199	0.1	-0.79	50.00	LINR
1,1-Dichloroethane	1.0440000	0.9682337	0.9682337	0.2	-7.26	50.00	AVRG
1,1-Dichloroethene	0.4120000	0.4082224	0.4082224	0.1	-0.92	50.00	AVRG
1,2,4-Trichlorobenzene	0.9850000	1.0040318	1.0040318	0.2	1.93	50.00	AVRG
1,2-Dibromo-3-Chloropropane	46.711683	50.000000	0.1920784	0.05	-6.58	50.00	LINR
1,2-Dibromoethane	0.3830000	0.3839427	0.3839427	0.1	0.25	50.00	AVRG
1,2-Dichlorobenzene	1.7970000	1.5599921	1.5599921	0.4	-13.19	50.00	AVRG
1,2-Dichloroethane	51.377117	50.000000	0.4536080	0.1	2.75	50.00	LINR
1,2-Dichloropropane	0.3940000	0.3679965	0.3679965	0.1	-6.60	50.00	AVRG
1,3-Dichlorobenzene	1.8700000	1.6138171	1.6138171	0.6	-13.70	50.00	AVRG
1,4-Dichlorobenzene	1.7890000	1.5160043	1.5160043	0.4	-15.26	50.00	AVRG
2-Butanone	0.2700000	0.2661324	0.2661324	0.1	-1.43	50.00	AVRG
2-Hexanone	0.2930000	0.2817528	0.2817528	0.1	-3.84	50.00	AVRG
4-Methyl-2-Pentanone	0.4540000	0.4348170	0.4348170	0.1	-4.22	50.00	AVRG
Acetone	104.38284	100.00000	0.1728369	0.1	4.38	50.00	LINR
Benzene	1.3160000	1.2313394	1.2313394	0.5	-6.43	50.00	AVRG
Bromodichloromethane	0.4660000	0.4511987	0.4511987	0.2	-3.18	50.00	AVRG
Bromoform	0.2970000	0.3120199	0.3120199	0.1	5.06	50.00	AVRG
Bromomethane	46.945176	50.000000	0.3224283	0.1	-6.11	50.00	LINR
Carbon Disulfide	0.9420000	0.9064839	0.9064839	0.1	-3.77	50.00	AVRG
Carbon Tetrachloride	0.4750000	0.3949022	0.3949022	0.1	-16.86	50.00	AVRG
Chlorobenzene	1.0300000	0.9482240	0.9482240	0.5	-7.94	50.00	AVRG
Chloroethane	0.4040000	0.3471433	0.3471433	0.1	-14.07	50.00	AVRG
Chloroform	0.9120000	0.8427925	0.8427925	0.2	-7.59	50.00	AVRG
Chloromethane	50.641248	50.000000	0.8467903	0.1	1.28	50.00	LINR
cis-1,2-Dichloroethene	0.5690000	0.5404282	0.5404282	0.1	-5.02	50.00	AVRG
cis-1,3-Dichloropropene	0.5350000	0.5365532	0.5365532	0.2	0.29	50.00	AVRG
Dibromochloromethane	0.4320000	0.4270479	0.4270479	0.1	-1.15	50.00	AVRG
Dichlorodifluoromethane	0.4270000	0.3741881	0.3741881	0.1	-12.37	50.00	AVRG
Ethylbenzene	0.5510000	0.4989157	0.4989157	0.1	-9.45	50.00	AVRG
Isopropylbenzene	1.7050000	1.5850098	1.5850098	0.1	-7.04	50.00	AVRG
Methylene Chloride	0.5470000	0.4938533	0.4938533	0.1	-9.72	50.00	AVRG
Tetrachloroethene	49.359535	50.000000	0.3045222	0.2	-1.28	50.00	LINR
Toluene	1.5840000	1.4357542	1.4357542	0.4	-9.36	50.00	AVRG
trans-1,2-Dichloroethene	0.4460000	0.4518983	0.4518983	0.1	1.32	50.00	AVRG

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS1712122

Instrument ID: VOA2 Calibration Date: 01/01/18 Time: 0133

Lab File ID: D123129 Init. Calib. Date(s): 12/19/17 12/19/17

Init. Calib. Times: 1010 1327

GC Column: DB624 ID: 0.18 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
trans-1,3-Dichloropropene	0.4550000	0.4724271	0.4724271	0.1	3.83	50.00	AVRG
Trichloroethene	0.3700000	0.3600414	0.3600414	0.2	-2.69	50.00	AVRG
Trichlorofluoromethane	0.6160000	0.6129933	0.6129933	0.1	-0.49	50.00	AVRG
Vinyl Chloride	0.6130000	0.5874974	0.5874974	0.1	-4.16	50.00	AVRG
m,p-Xylenes	0.6740000	0.6064089	0.6064089	0.1	-10.03	50.00	AVRG
o-Xylene	0.7050000	0.6473246	0.6473246	0.3	-8.18	50.00	AVRG
Xylenes (total)	0.6190000	0.5603096	0.5603096	0.1	-9.48	50.00	AVRG
1,2,3-Trichloropropane	1.1910000	1.0839644	1.0839644	0.1	-8.99	50.00	AVRG
1,2,3-Trichlorobenzene	0.8490000	0.8878406	0.8878406	0.1	4.57	50.00	AVRG
1,2,4-Trimethylbenzene	3.3300000	2.7044192	2.7044192	0.1	-18.79	50.00	AVRG
1,3,5-Trimethylbenzene	3.2430000	2.6552399	2.6552399	0.1	-18.12	50.00	AVRG
2,2-Dichloropropane	0.7280000	0.5966358	0.5966358	0.1	-18.04	50.00	AVRG
1,3-Dichloropropane	0.6170000	0.5806728	0.5806728	0.1	-5.89	50.00	AVRG
2-Chlorotoluene	2.8400000	2.3147231	2.3147231	0.1	-18.50	50.00	AVRG
4-Chlorotoluene	3.0920000	2.5268170	2.5268170	0.1	-18.28	50.00	AVRG
p-Isopropyltoluene	3.0780000	2.6035774	2.6035774	0.1	-15.41	50.00	AVRG
Bromochloromethane	0.2700000	0.2739339	0.2739339	0.1	1.46	50.00	AVRG
Bromobenzene	1.1090000	0.9413587	0.9413587	0.1	-15.12	50.00	AVRG
Dibromomethane	0.2040000	0.2077250	0.2077250	0.1	1.82	50.00	AVRG
Hexachlorobutadiene	46.391042	50.000000	0.4256136	0.1	-7.22	50.00	LINR
n-Propylbenzene	4.2270000	3.5433670	3.5433670	0.1	-16.17	50.00	AVRG
n-Butylbenzene	2.2870000	2.0465665	2.0465665	0.05	-10.51	50.00	AVRG
Styrene	1.1240000	1.0647645	1.0647645	0.3	-5.27	50.00	AVRG
1,2-Dichloroethane-d4	0.5560000	0.5281435	0.5281435	0.1	-5.01	50.00	AVRG
Dibromofluoromethane	0.4500000	0.4281762	0.4281762	0.1	-4.85	50.00	AVRG
Toluene-d8	1.3180000	1.2418907	1.2418907	0.1	-5.77	50.00	AVRG
4-Bromofluorobenzene	0.4810000	0.4801812	0.4801812	0.1	-0.17	50.00	AVRG

FORM 8
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS17121224

Lab File ID (Standard): D123102 Date Analyzed: 12/31/17

Instrument ID: VOA2 Time Analyzed: 1404

GC Column: DB624 ID: 0.18 (mm) Heated Purge: (Y/N) N

		IS1 AREA #	IS1 RT #	IS2(DFB) AREA #	IS2(DFB) RT #	IS3(CBZ) AREA #	IS3(CBZ) RT #
	12 HOUR STD	227284	5.78	337296	6.57	312351	9.53
	UPPER LIMIT	454568	6.28	674592	7.07	624702	10.03
	LOWER LIMIT	113642	5.28	168648	6.07	156176	9.03
	CLIENT SAMPLE NO.						
01	VLCSW-171231	232173	5.78	350112	6.57	319446	9.53
02	VBLKW-171231	248348	5.78	350622	6.57	318957	9.52
03	HS17121224-09	246571	5.78	348775	6.57	317913	9.52
04	HS17121224-01	246571	5.78	350672	6.57	320974	9.52
05	HS17121224-08	245397	5.78	351994	6.57	321918	9.52
06	HS17121224-05	242171	5.78	344572	6.57	316192	9.52
07	HS17121224-05	249304	5.78	344800	6.57	298658	9.52
08	HS17121224-06	247119	5.78	352155	6.57	312641	9.52
09	HS17121224-06	250347	5.77	352693	6.57	318002	9.52
10	HS17121224-02	240916	5.77	337926	6.57	288658	9.52
11	HS17121224-02	253601	5.77	363665	6.57	319578	9.52
12	HS17121224-04	243802	5.77	341216	6.57	296222	9.52
13	HS17121224-04	246964	5.78	353199	6.57	316503	9.52
14	HS17121224-03	235171	5.78	339399	6.57	317029	9.52
15	HS17121224-03	237508	5.77	327154	6.57	284872	9.52
16	HS17121224-01	230121	5.78	338952	6.57	312265	9.52
17	HS17121224-01	227155	5.78	338925	6.57	312827	9.53
18							
19							
20							

IS1 = Pentafluorobenzene
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

FORM VIII VOA

FORM 8
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS17121224

Lab File ID (Standard): D123102 Date Analyzed: 12/31/17

Instrument ID: VOA2 Time Analyzed: 1404

GC Column: DB624 ID: 0.18 (mm) Heated Purge: (Y/N) N

		IS4 (DCB) AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	146365	11.84				
	UPPER LIMIT	292730	12.34				
	LOWER LIMIT	73183	11.34				
	CLIENT SAMPLE NO.						
01	VLCSW-171231	147881	11.83				
02	VBLKW-171231	141116	11.83				
03	HS17121224-09	139505	11.83				
04	HS17121224-01	149172	11.83				
05	HS17121224-08	148097	11.84				
06	HS17121224-05	141693	11.83				
07	HS17121224-05	136263	11.84				
08	HS17121224-06	141305	11.84				
09	HS17121224-06	140020	11.83				
10	HS17121224-02	129570	11.84				
11	HS17121224-02	137757	11.84				
12	HS17121224-04	134393	11.83				
13	HS17121224-04	138914	11.83				
14	HS17121224-03	144101	11.83				
15	HS17121224-03	127918	11.83				
16	HS17121224-01	147666	11.83				
17	HS17121224-01	149308	11.84				
18							
19							
20							

IS4 (DCB) = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123101.D

Date : 31-DEC-2017 13:39

Client ID: BFB

Instrument: VOA2.i

Sample Info: BFB;BFB;3;;BFB

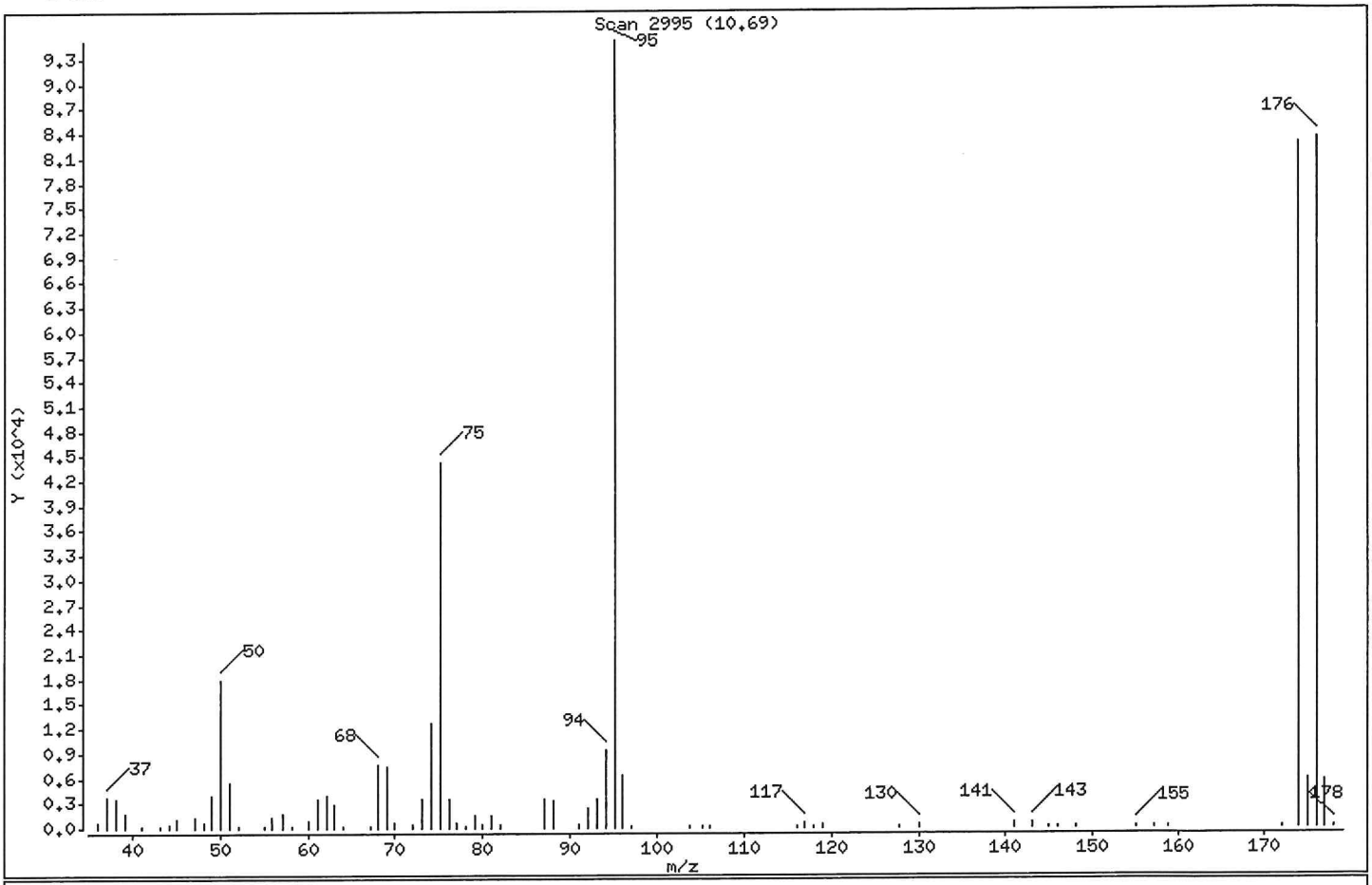
Volume Injected (uL): 2.0

Operator: AP

Column phase: DB624

Column diameter: 0.18

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	18.94
75	30.00 - 60.00% of mass 95	46.44
96	5.00 - 9.00% of mass 95	6.67
173	Less than 2.00% of mass 174	0.00 (0.00)
174	Greater than 50.00% of mass 95	86.67
175	5.00 - 9.00% of mass 174	6.10 (7.04)
176	95.00 - 101.00% of mass 174	87.40 (100.84)
177	5.00 - 9.00% of mass 176	5.99 (6.85)

Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123101.D

Date : 31-DEC-2017 13:39

Client ID: BFB

Instrument: VOA2.i

Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: AP

Column phase: DB624

Column diameter: 0.18

Data File: D123101.D
Spectrum: Scan 2995 (10.69)
Location of Maximum: 95.10
Number of points: 70

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	619	60.10	853	80.90	1581	127.80	228
37.10	3633	61.10	3473	82.00	478	130.00	458
38.10	3566	62.10	3859	87.00	3554	141.00	737
39.10	1752	63.10	2859	88.00	3308	143.00	732
41.10	303	64.00	216	91.00	350	145.00	192
43.10	249	67.10	153	92.10	2431	145.90	281
44.10	460	68.10	7760	93.00	3459	148.00	192
45.00	1004	69.10	7520	94.10	9447	155.00	321
47.10	1343	70.00	712	95.10	95192	157.00	151
48.10	607	72.00	411	96.10	6349	158.80	158
49.10	3926	73.10	3507	97.10	157	172.20	189
50.10	18032	74.10	12652	103.80	248	174.00	82504
51.10	5374	75.10	44208	105.20	171	175.10	5807
52.20	260	76.10	3572	106.00	233	176.00	83200
55.10	232	77.10	760	116.00	157	177.00	5699
56.00	1334	78.00	264	117.00	551	178.00	220
57.10	1833	79.00	1485	117.90	245		
58.10	151	80.00	514	119.00	427		

Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123101.D

Date : 31-DEC-2017 13:39

Client ID: BFB

Instrument: VOA2.i

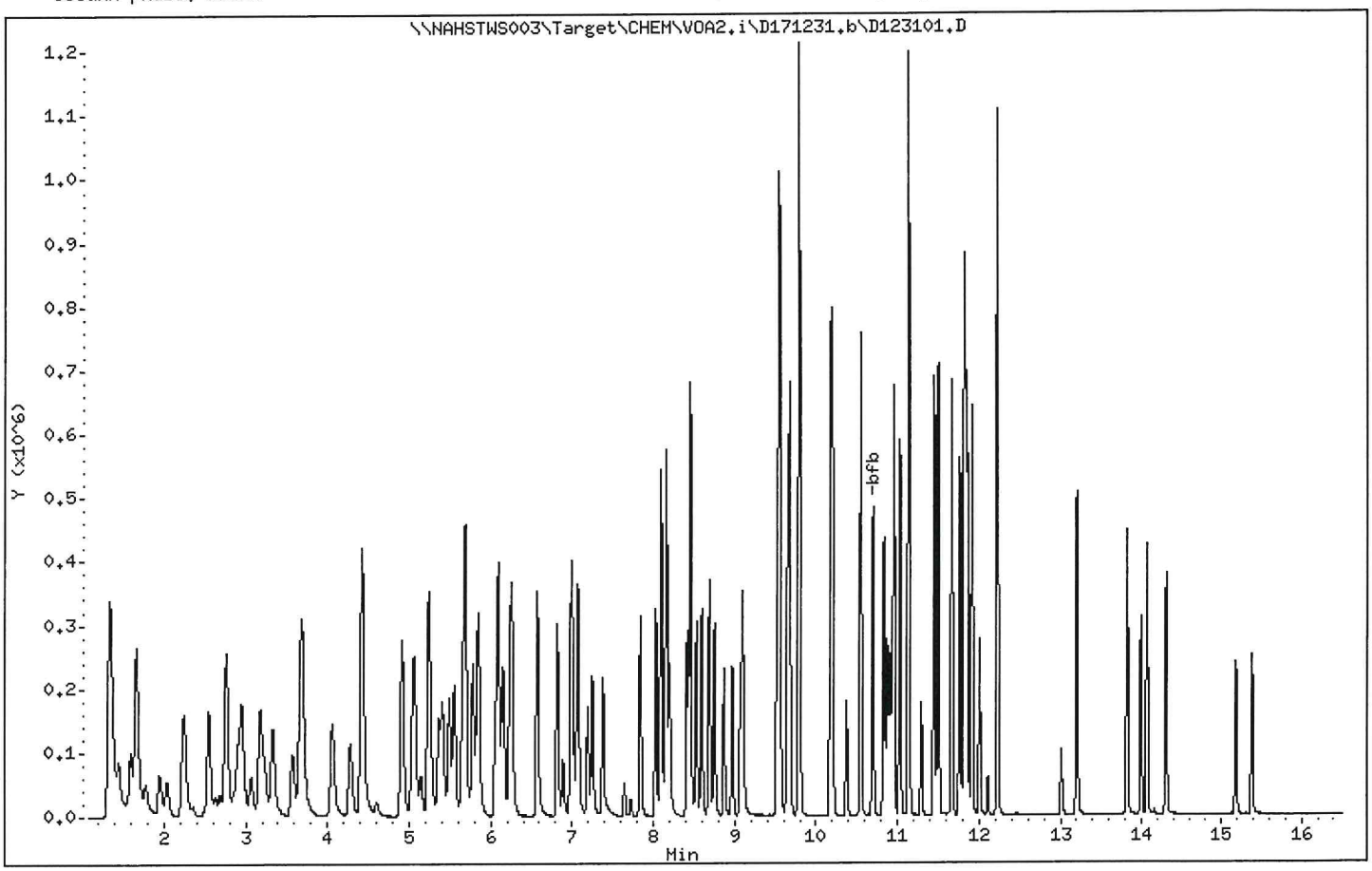
Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: AP

Column phase: DB624

Column diameter: 0.18



Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123102.D
Report Date: 09-Feb-2018 19:43

ALS Laboratory Group

Data file : \\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123102.D
Lab Smp Id: CCV Client Smp ID: CCV
Inj Date : 31-DEC-2017 14:04
Operator : AP Inst ID: VOA2.i
Smp Info : CCV;CCV;2;;
Misc Info : HS15080001;WATER;0;1;
Comment :
Method : \\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\8260LL.m
Meth Date : 09-Feb-2018 19:43 VOA2.i Quant Type: ISTD
Cal Date : 19-DEC-2017 12:14 Cal File: D121908.D
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: dn_bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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
Va	0.00000	
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
	31 1,1,1-Trichloroethane	97	5.654	5.654	(0.978)	178062	50.0000	50.69
*	1 Pentafluorobenzene	168	5.782	5.782	(1.000)	227284	50.0000	
$	30 Dibromofluoromethane	113	5.689	5.689	(0.984)	96200	50.0000	46.97
*	36 1,4-Difluorobenzene	114	6.572	6.572	(1.000)	337296	50.0000	
$	35 1,2-Dichloroethane-d4	65	6.055	6.055	(1.047)	118787	50.0000	46.96
*	47 Chlorobenzene-d5	117	9.527	9.527	(1.000)	312351	50.0000	
$	48 Toluene-d8	98	8.093	8.093	(0.849)	383381	50.0000	46.55
$	69 4-Bromofluorobenzene	95	10.695	10.695	(1.123)	148109	50.0000	49.24
*	70 1,4-Dichlorobenzene-d4	152	11.838	11.838	(1.000)	146365	50.0000	
	68 1,1,2,2-Tetrachloroethane	83	10.872	10.872	(0.918)	150701	50.0000	43.16
	53 1,1,2-Trichloroethane	83	8.593	8.593	(0.902)	92691	50.0000	48.51
	32 1,1-Dichloropropene	75	5.856	5.856	(0.891)	145208	50.0000	55.33
	22 1,1-Dichloroethane	63	4.277	4.277	(0.740)	232086	50.0000	48.91
	11 1,1-Dichloroethene	96	2.750	2.750	(0.476)	101764	50.0000	54.24
	90 1,2,4-Trichlorobenzene	180	13.818	13.818	(1.167)	158186	50.0000	54.86
	89 1,2-Dibromo-3-Chloropropane	75	13.009	13.009	(1.099)	27145	50.0000	45.12
	57 1,2-Dibromoethane	107	9.065	9.065	(0.952)	121772	50.0000	50.88
	88 1,2-Dichlorobenzene	146	12.223	12.223	(1.033)	241674	50.0000	45.93
	33 1,2-Dichloroethane	62	6.145	6.145	(0.935)	164792	50.0000	55.34
	42 1,2-Dichloropropane	63	7.066	7.066	(1.075)	133536	50.0000	50.26
	83 1,3-Dichlorobenzene	146	11.767	11.767	(0.994)	254331	50.0000	46.45

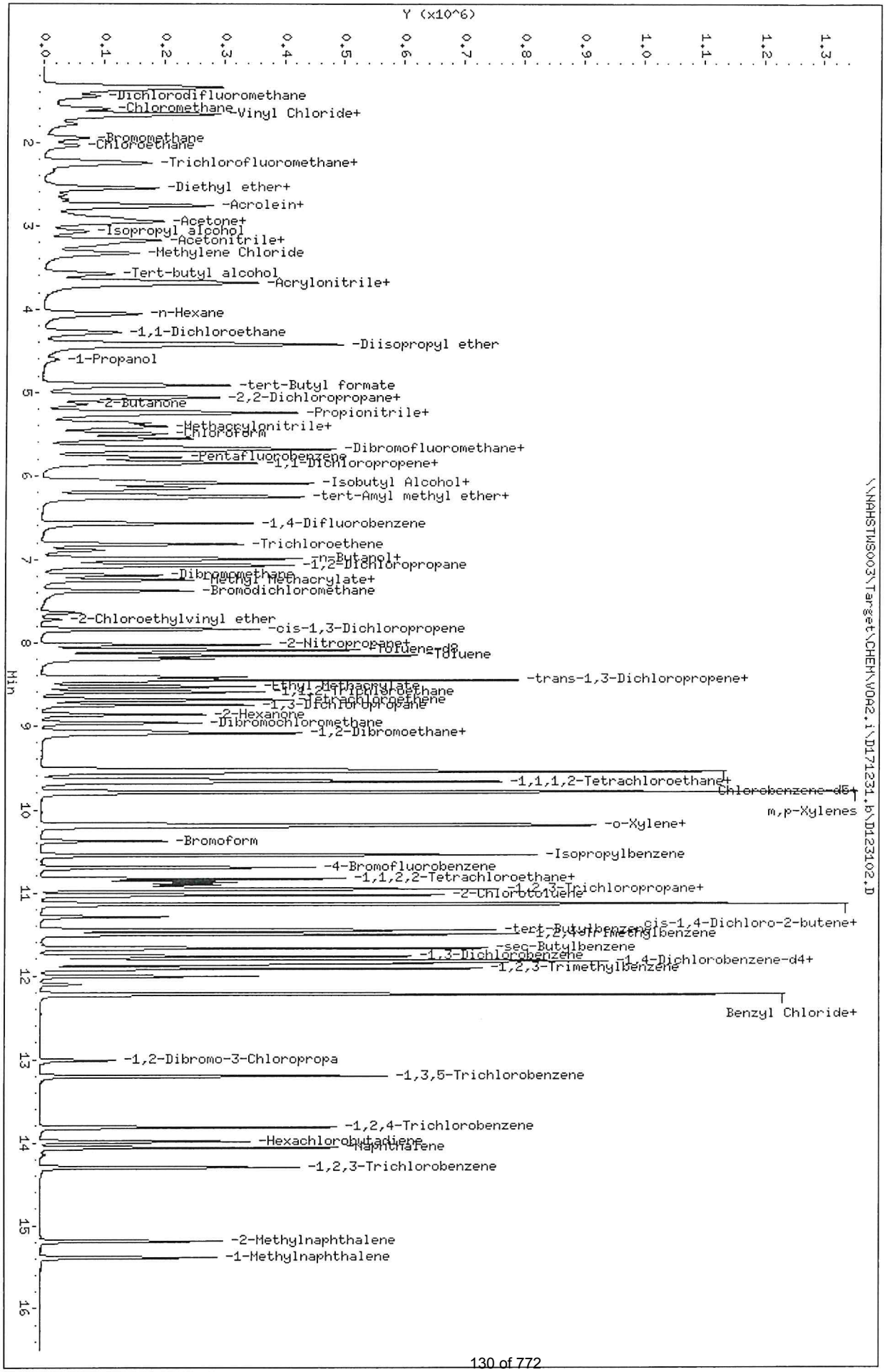
Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123102.D
Report Date: 09-Feb-2018 19:43

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)	
84	1,4-Dichlorobenzene	146	11.860	11.860	(1.002)	243210	50.0000	46.44	
24	2-Butanone	43	5.144	5.144	(0.890)	112221	100.000	91.50	
52	2-Hexanone	43	8.866	8.866	(0.931)	165628	100.000	90.50	
45	4-Methyl-2-Pentanone	43	8.025	8.025	(0.842)	258927	100.000	91.37	
10	Acetone	43	2.862	2.862	(0.495)	71543	100.000	94.84	
37	Benzene	78	6.090	6.090	(0.927)	451035	50.0000	50.82	
39	Bromodichloromethane	83	7.377	7.377	(1.123)	161749	50.0000	51.49	
66	Bromoform	173	10.378	10.378	(1.089)	97827	50.0000	52.79	
6	Bromomethane	94	1.941	1.941	(0.336)	86688	50.0000	55.99	
19	Carbon Disulfide	76	2.952	2.952	(0.511)	445607	100.000	104.01	
34	Carbon Tetrachloride	117	5.834	5.834	(0.888)	144846	50.0000	45.20	
59	Chlorobenzene	112	9.553	9.553	(1.003)	312640	50.0000	48.60	
7	Chloroethane	64	2.041	2.041	(0.353)	84462	50.0000	45.93	
28	Chloroform	83	5.494	5.494	(0.950)	202284	50.0000	48.81	
3	Chloromethane	50	1.588	1.588	(0.275)	203656	50.0000	53.64	
27	cis-1,2-Dichloroethene	96	5.067	5.067	(0.876)	130639	50.0000	50.52	
46	cis-1,3-Dichloropropene	75	7.839	7.839	(1.193)	200697	50.0000	55.63	
55	Dibromochloromethane	129	8.972	8.972	(0.942)	138063	50.0000	51.19	
2	Dichlorodifluoromethane	85	1.447	1.447	(0.250)	97159	50.0000	50.00	
61	Ethylbenzene	106	9.672	9.672	(1.015)	168268	50.0000	48.87	
67	Isopropylbenzene	105	10.548	10.548	(1.107)	533959	50.0000	50.13	
17	Methylene Chloride	84	3.334	3.334	(0.577)	116582	50.0000	46.86	
56	Tetrachloroethene	164	8.690	8.690	(0.912)	105994	50.0000	55.19	
50	Toluene	91	8.157	8.157	(0.856)	478075	50.0000	48.29	
20	trans-1,2-Dichloroethene	96	3.671	3.671	(0.635)	112292	50.0000	55.34	
51	trans-1,3-Dichloropropene	75	8.417	8.417	(1.281)	172398	50.0000	56.16	
38	Trichloroethene	130	6.819	6.819	(1.038)	131080	50.0000	52.46	
8	Trichlorofluoromethane	101	2.256	2.256	(0.390)	151277	50.0000	53.98	
5	Vinyl Chloride	62	1.685	1.685	(0.291)	144591	50.0000	51.90	
62	m,p-Xylenes	106	9.790	9.790	(1.028)	408831	100.000	97.09	
63	o-Xylene	106	10.179	10.179	(1.068)	216389	50.0000	49.12	
M 95	Xylenes (total)	106				625220	150.000		(a)
71	1,2,3-Trichloropropane	75	10.904	10.904	(0.921)	160276	50.0000	45.96	
93	1,2,3-Trichlorobenzene	182	14.302	14.302	(1.208)	134753	50.0000	54.23	
79	1,2,4-Trimethylbenzene	105	11.501	11.501	(0.972)	430531	50.0000	44.16	
75	1,3,5-Trimethylbenzene	105	11.132	11.132	(0.940)	428232	50.0000	45.10	
26	2,2-Dichloropropane	77	5.041	5.041	(0.872)	175195	50.0000	52.90	
54	1,3-Dichloropropane	76	8.754	8.754	(0.919)	185103	50.0000	48.03	
76	2-Chlorotoluene	91	11.029	11.029	(0.932)	365024	50.0000	43.90	
77	4-Chlorotoluene	91	11.138	11.138	(0.941)	401647	50.0000	44.36	
82	p-Isopropyltoluene	119	11.818	11.818	(0.998)	427512	50.0000	47.45	
29	Bromochloromethane	128	5.365	5.365	(0.928)	64060	50.0000	52.05	
74	Bromobenzene	156	10.833	10.833	(0.915)	146414	50.0000	45.09	
44	Dibromomethane	93	7.188	7.188	(1.094)	74305	50.0000	53.97	
91	Hexachlorobutadiene	225	13.991	13.991	(1.182)	70918	50.0000	52.87	
73	n-Propylbenzene	91	10.955	10.955	(0.925)	569185	50.0000	45.99	
87	n-Butylbenzene	91	12.223	12.223	(1.033)	333963	50.0000	49.87	
81	sec-Butylbenzene	105	11.668	11.668	(0.986)	503253	50.0000	47.83	
92	Naphthalene	128	14.061	14.061	(1.188)	379419	50.0000	50.53	
78	tert-Butylbenzene	119	11.453	11.453	(0.967)	367520	50.0000	46.14	
60	1,1,1,2-Tetrachloroethane	131	9.646	9.646	(1.012)	127684	50.0000	51.22	
64	Styrene	104	10.198	10.198	(1.070)	355132	50.0000	50.54	

Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123102.D
Report Date: 09-Feb-2018 19:43

QC Flag Legend

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



Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123102.D
Date : 31-DEC-2017 14:04
Client ID: CCV
Sample Info: CCV;CCV;2;;
Purge Volume: 5.0
Column phase: DB624

Instrument: VOA2.i
Operator: AP
Column diameter: 0.18

\\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123102.D

Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123103.D
Report Date: 09-Feb-2018 19:43

ALS Laboratory Group

Data file : \\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123103.D
Lab Smp Id: VLCSW-171231 Client Smp ID: VLCSW-171231
Inj Date : 31-DEC-2017 14:28
Operator : AP Inst ID: VOA2.i
Smp Info : VLCSW-171231;VLCSW-171231;3;;LCS
Misc Info : HS15080001;WATER;0;1;
Comment :
Method : \\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\8260LL.m
Meth Date : 09-Feb-2018 19:43 VOA2.i Quant Type: ISTD
Cal Date : 19-DEC-2017 12:14 Cal File: D121908.D
Als bottle: 3 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: dn_bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

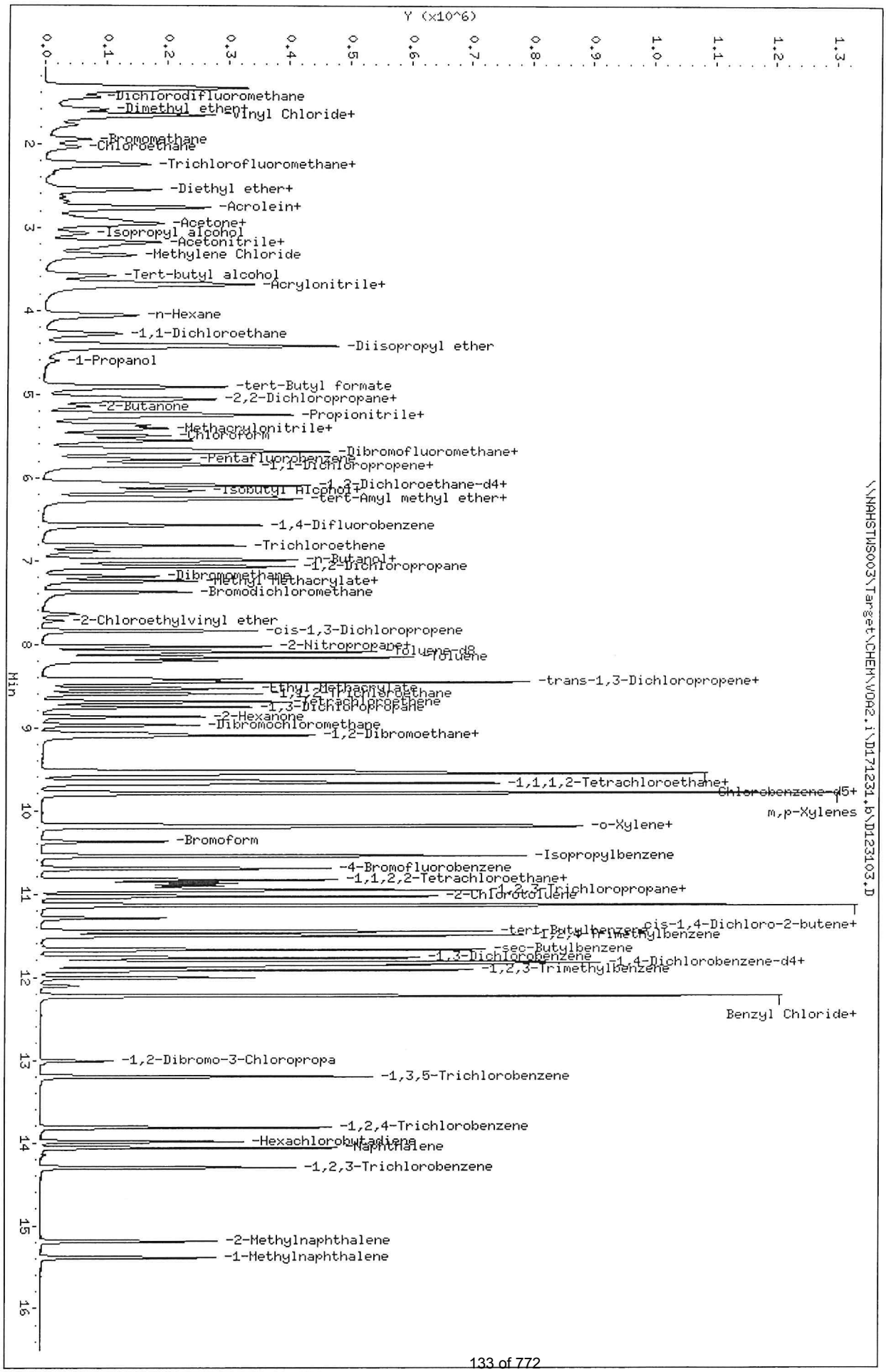
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Va	0.00000	
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
31	1,1,1-Trichloroethane	97	5.654	5.654	(0.978)	171718	47.8547	47.85
* 1	Pentafluorobenzene	168	5.779	5.782	(1.000)	232173	50.0000	
$ 30	Dibromofluoromethane	113	5.686	5.689	(0.984)	99128	47.3885	47.38
* 36	1,4-Difluorobenzene	114	6.572	6.572	(1.000)	350112	50.0000	
$ 35	1,2-Dichloroethane-d4	65	6.058	6.055	(1.048)	121862	47.1689	47.16
* 47	Chlorobenzene-d5	117	9.527	9.527	(1.000)	319446	50.0000	
$ 48	Toluene-d8	98	8.093	8.093	(0.849)	392219	46.5681	46.56
$ 69	4-Bromofluorobenzene	95	10.695	10.695	(1.123)	153094	49.7765	49.77
* 70	1,4-Dichlorobenzene-d4	152	11.834	11.838	(1.000)	147881	50.0000	
68	1,1,2,2-Tetrachloroethane	83	10.872	10.872	(0.919)	146527	41.5359	41.53
53	1,1,2-Trichloroethane	83	8.593	8.593	(0.902)	90075	46.0943	46.09
32	1,1-Dichloropropene	75	5.856	5.856	(0.891)	139971	51.3244	51.32
22	1,1-Dichloroethane	63	4.284	4.277	(0.741)	225301	46.4807	46.48
11	1,1-Dichloroethene	96	2.753	2.750	(0.476)	94660	49.3995	49.39
90	1,2,4-Trichlorobenzene	180	13.817	13.818	(1.168)	153234	52.5982	52.59
89	1,2-Dibromo-3-Chloropropane	75	13.009	13.009	(1.099)	26376	43.4139	43.41
57	1,2-Dibromoethane	107	9.065	9.065	(0.952)	118224	48.3039	48.30
88	1,2-Dichlorobenzene	146	12.223	12.223	(1.033)	233845	43.9938	43.99
33	1,2-Dichloroethane	62	6.145	6.145	(0.935)	152345	49.2804	49.28
42	1,2-Dichloropropane	63	7.069	7.066	(1.076)	129453	46.9438	46.94
83	1,3-Dichlorobenzene	146	11.767	11.767	(0.994)	245556	44.3919	44.39

Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123103.D
Report Date: 09-Feb-2018 19:43

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
	84 1,4-Dichlorobenzene	146	11.857	11.860	(1.002)	235222	44.4594	44.45
	24 2-Butanone	43	5.144	5.144	(0.890)	108816	86.8575	86.85
	52 2-Hexanone	43	8.866	8.866	(0.931)	161951	86.5263	86.52
	45 4-Methyl-2-Pentanone	43	8.029	8.025	(0.843)	255275	88.0817	88.08
	10 Acetone	43	2.856	2.862	(0.494)	68837	89.1969	89.19
	37 Benzene	78	6.094	6.090	(0.927)	435166	47.2396	47.23
	39 Bromodichloromethane	83	7.377	7.377	(1.123)	156945	48.1347	48.13
	66 Bromoform	173	10.374	10.378	(1.089)	95718	50.5132	50.51
	6 Bromomethane	94	1.941	1.941	(0.336)	85834	54.1944	54.19
	19 Carbon Disulfide	76	2.955	2.952	(0.511)	431981	98.7150	98.71
	34 Carbon Tetrachloride	117	5.834	5.834	(0.888)	136308	40.9876	40.98
	59 Chlorobenzene	112	9.553	9.553	(1.003)	305466	46.4327	46.43
	7 Chloroethane	64	2.038	2.041	(0.353)	80986	43.1139	43.11
	28 Chloroform	83	5.493	5.494	(0.951)	196984	46.5368	46.53
	3 Chloromethane	50	1.591	1.588	(0.275)	193609	49.8558	49.85
	27 cis-1,2-Dichloroethene	96	5.067	5.067	(0.877)	125121	47.3694	47.36
	46 cis-1,3-Dichloropropene	75	7.839	7.839	(1.193)	194892	52.0488	52.04
	55 Dibromochloromethane	129	8.969	8.972	(0.941)	134079	48.6143	48.61
	2 Dichlorodifluoromethane	85	1.447	1.447	(0.250)	92301	46.5043	46.50
	61 Ethylbenzene	106	9.672	9.672	(1.015)	161739	45.9333	45.93
	67 Isopropylbenzene	105	10.548	10.548	(1.107)	517914	47.5456	47.54
	17 Methylene Chloride	84	3.334	3.334	(0.577)	114439	45.0325	45.03
	56 Tetrachloroethene	164	8.690	8.690	(0.912)	102757	52.2357	52.23
	50 Toluene	91	8.160	8.157	(0.857)	468018	46.2300	46.23
	20 trans-1,2-Dichloroethene	96	3.671	3.671	(0.635)	106296	51.2839	51.28
	51 trans-1,3-Dichloropropene	75	8.417	8.417	(1.281)	165207	51.8510	51.85
	38 Trichloroethene	130	6.819	6.819	(1.038)	127063	48.9987	48.99
	8 Trichlorofluoromethane	101	2.256	2.256	(0.390)	148345	51.8203	51.82
	5 Vinyl Chloride	62	1.678	1.685	(0.290)	138226	48.5737	48.57
	62 m,p-Xylenes	106	9.790	9.790	(1.028)	397178	92.2346	92.23
	63 o-Xylene	106	10.179	10.179	(1.068)	211437	46.9333	46.93
M	95 Xylenes (total)	106				608615	139.168	139.16
	71 1,2,3-Trichloropropane	75	10.904	10.904	(0.921)	157169	44.6150	44.61
	93 1,2,3-Trichlorobenzene	182	14.302	14.302	(1.209)	130196	51.8657	51.86
	79 1,2,4-Trimethylbenzene	105	11.501	11.501	(0.972)	417571	42.3923	42.39
	75 1,3,5-Trimethylbenzene	105	11.135	11.132	(0.941)	414908	43.2534	43.25
	26 2,2-Dichloropropane	77	5.044	5.041	(0.873)	169202	50.0238	50.02
	54 1,3-Dichloropropane	76	8.754	8.754	(0.919)	178741	45.3497	45.34
	76 2-Chlorotoluene	91	11.029	11.029	(0.932)	354956	42.2537	42.25
	77 4-Chlorotoluene	91	11.138	11.138	(0.941)	393530	43.0235	43.02
	82 p-Isopropyltoluene	119	11.818	11.818	(0.999)	407643	44.7830	44.78
	29 Bromochloromethane	128	5.368	5.365	(0.929)	62014	49.3348	49.33
	74 Bromobenzene	156	10.833	10.833	(0.915)	143613	43.7795	43.77
	44 Dibromomethane	93	7.188	7.188	(1.094)	71234	49.8468	49.84
	91 Hexachlorobutadiene	225	13.987	13.991	(1.182)	68912	50.8342	50.83
	73 n-Propylbenzene	91	10.955	10.955	(0.926)	551824	44.1350	44.13
	87 n-Butylbenzene	91	12.223	12.223	(1.033)	321788	47.5659	47.56
	81 sec-Butylbenzene	105	11.667	11.668	(0.986)	483657	45.5013	45.50
	92 Naphthalene	128	14.061	14.061	(1.188)	370060	48.7642	48.76
	78 tert-Butylbenzene	119	11.449	11.453	(0.967)	352496	43.8058	43.80
	60 1,1,1,2-Tetrachloroethane	131	9.646	9.646	(1.012)	121998	47.8589	47.85
	64 Styrene	104	10.198	10.198	(1.070)	344378	47.9289	47.92



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Date : 31-DEC-2017 14:28
Client ID: VLCSW-171231
Sample Info: VLCSW-171231;VLCSW-171231;3;;LCS
Purge Volume: 5.0
Column phase: DB624

Instrument: VOA2.i
Operator: AP
Column diameter: 0.18

Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123105.D
Report Date: 09-Feb-2018 19:43

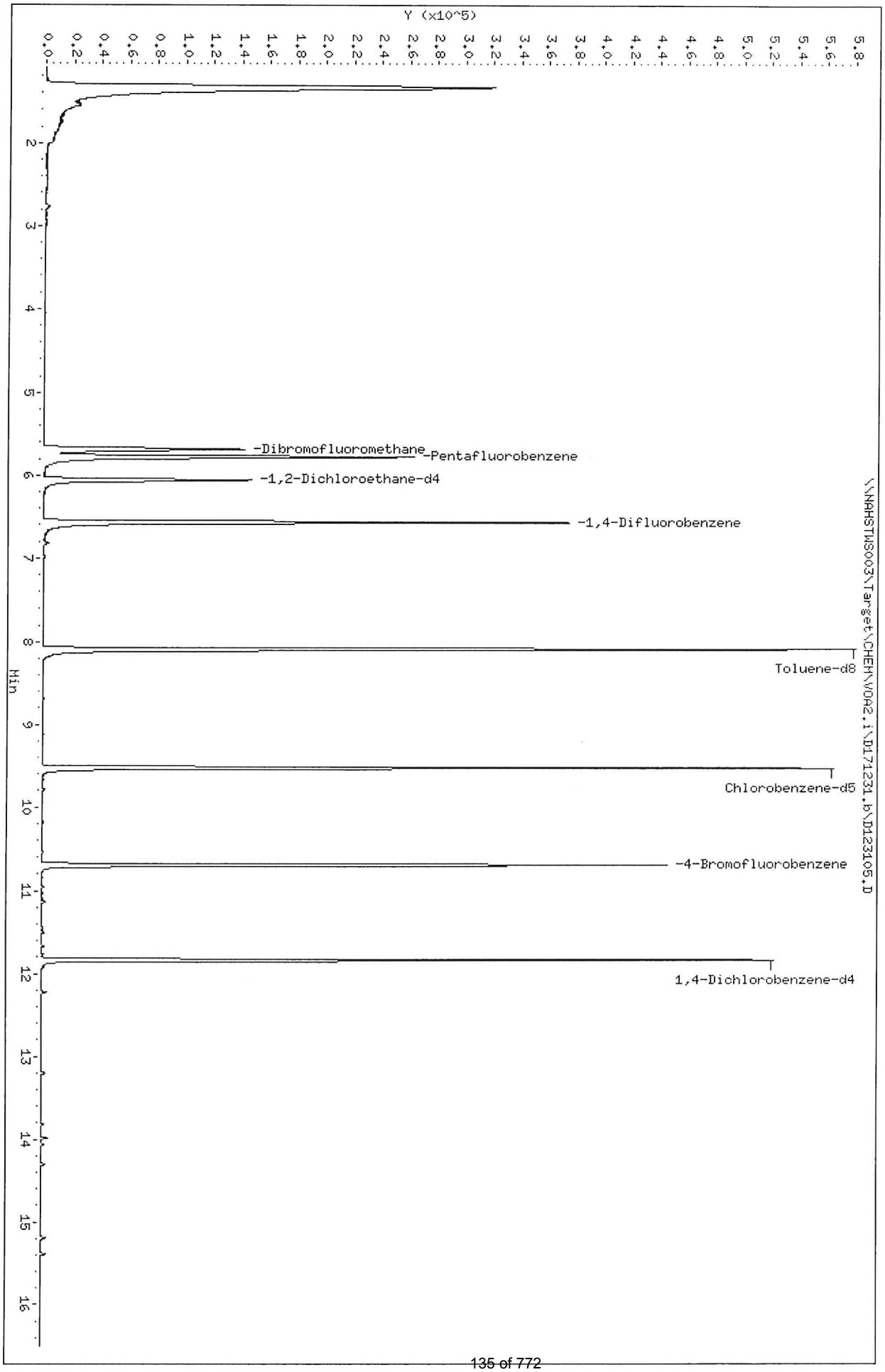
ALS Laboratory Group

Data file : \\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123105.D
Lab Smp Id: VBLKW-171231 Client Smp ID: VBLKW-171231
Inj Date : 31-DEC-2017 15:17
Operator : AP Inst ID: VOA2.i
Smp Info : VBLKW-171231;VBLKW-171231;3;;BLANK
Misc Info : HS15080001;WATER;0;1;
Comment :
Method : \\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\8260LL.m
Meth Date : 09-Feb-2018 19:43 VOA2.i Quant Type: ISTD
Cal Date : 19-DEC-2017 12:14 Cal File: D121908.D
Als bottle: 5 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: dn_bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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
Va	0.00000	
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	5.779	5.782	(1.000)	248348	50.0000	
$ 30 Dibromofluoromethane	113	5.686	5.689	(0.984)	110129	49.2186	49.21
* 36 1,4-Difluorobenzene	114	6.569	6.572	(1.000)	350622	50.0000	
$ 35 1,2-Dichloroethane-d4	65	6.052	6.055	(1.047)	126009	45.5974	45.59
* 47 Chlorobenzene-d5	117	9.524	9.527	(1.000)	318957	50.0000	
$ 48 Toluene-d8	98	8.090	8.093	(0.849)	408314	48.5534	48.55
$ 69 4-Bromofluorobenzene	95	10.695	10.695	(1.123)	147537	48.0432	48.04
* 70 1,4-Dichlorobenzene-d4	152	11.834	11.838	(1.000)	141116	50.0000	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Date : 31-DEC-2017 15:17
Client ID: VBLKW-171231
Sample Info: VBLKW-171231;VBLKW-171231;3;;BLANK
Purge Volume: 5.0
Column phase: DB624
Instrument: VOA2.i
Operator: AP
Column diameter: 0.18
Y (x10^5)
Min
-Dibromofluoromethane
-Pentafluorobenzene
-1,2-Dichloroethane-d4
-1,4-Difluorobenzene
Toluene-d8
Chlorobenzene-d5
-4-Bromofluorobenzene
1,4-Dichlorobenzene-d4
\\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123105.D

Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123109.D
Report Date: 09-Feb-2018 19:43

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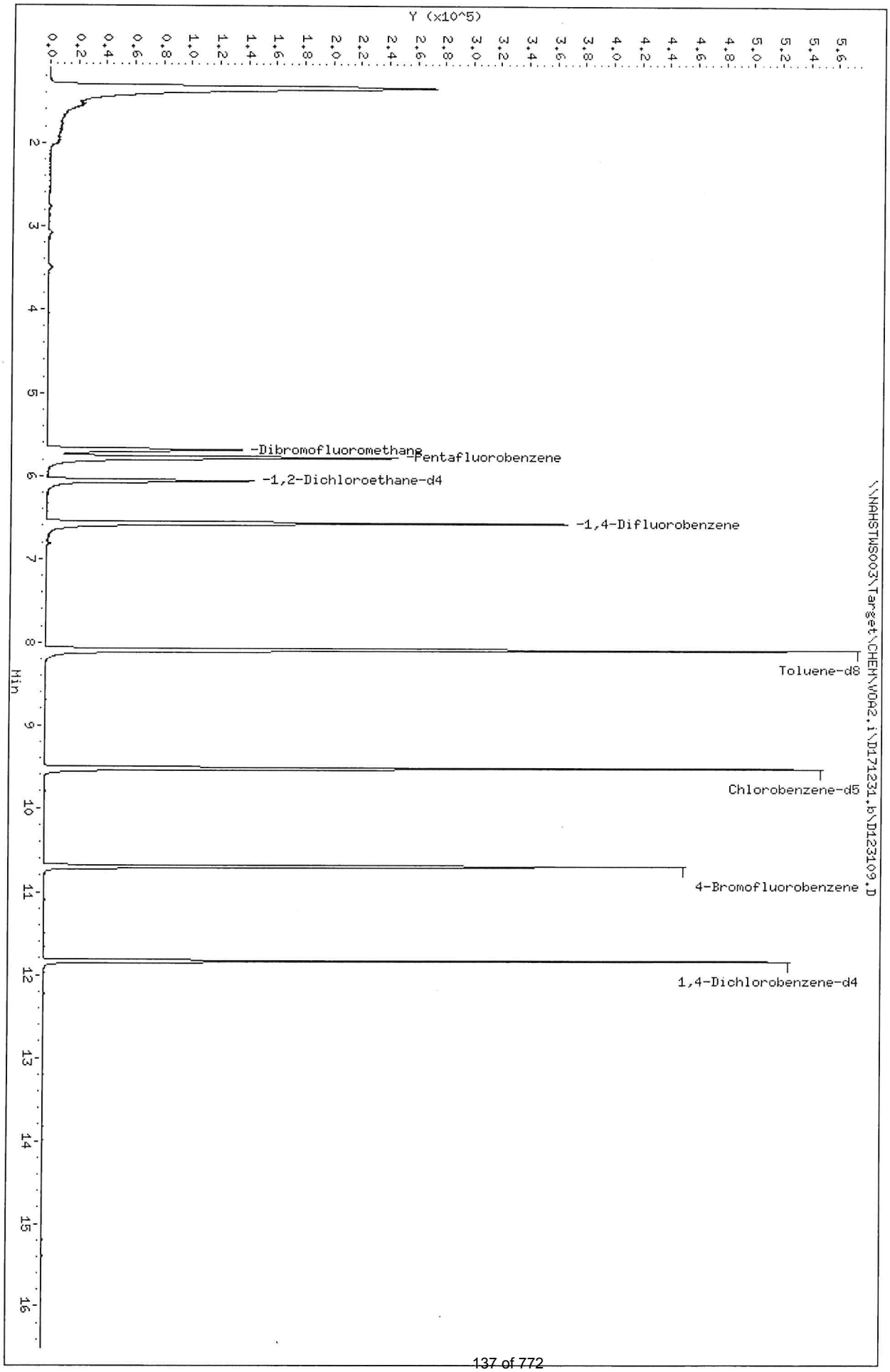
Data file : \\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123109.D
Lab Smp Id: HS17121224-09 Client Smp ID: HS17121224-09
Inj Date : 31-DEC-2017 16:56
Operator : AP Inst ID: VOA2.i
Smp Info : HS17121224-09;HS17121224-09;;;
Misc Info : HS15080001;WATER;0;1;
Comment :
Method : \\nahstws003\Target\chem\voa2.i\D171231.b\8260LL.m
Meth Date : 09-Feb-2018 19:43 VOA2.i Quant Type: ISTD
Cal Date : 19-DEC-2017 12:14 Cal File: D121908.D
Als bottle: 9
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: dn_bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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
Va	0.00000	
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	5.776	5.782	(1.000)	246571	50.0000	
$ 30 Dibromofluoromethane	113	5.686	5.689	(0.984)	108629	48.8981	48.89
* 36 1,4-Difluorobenzene	114	6.569	6.572	(1.000)	348775	50.0000	
$ 35 1,2-Dichloroethane-d4	65	6.058	6.055	(1.049)	124285	45.2977	45.29
* 47 Chlorobenzene-d5	117	9.524	9.527	(1.000)	317913	50.0000	
$ 48 Toluene-d8	98	8.090	8.093	(0.849)	402019	47.9618	47.96
$ 69 4-Bromofluorobenzene	95	10.695	10.695	(1.123)	146773	47.9514	47.95
* 70 1,4-Dichlorobenzene-d4	152	11.834	11.838	(1.000)	139505	50.0000	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Date : 31-DEC-2017 16:56
Client ID: HS171214224-09
Sample Info: HS171214224-09;HS171214224-09;;;
Purge Volume: 5.0
Column phase: DB624
Instrument: VOA2.i
Operator: AP
Column diameter: 0.18
Y (x10^5)
Min
-Dibromofluoromethane
-Pentafluorobenzene
-1,2-Dichloroethane-d4
-1,4-Difluorobenzene
Toluene-d8
Chlorobenzene-d5
4-Bromofluorobenzene
1,4-Dichlorobenzene-d4
\\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123109.D

Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123112.D
Report Date: 09-Feb-2018 19:43

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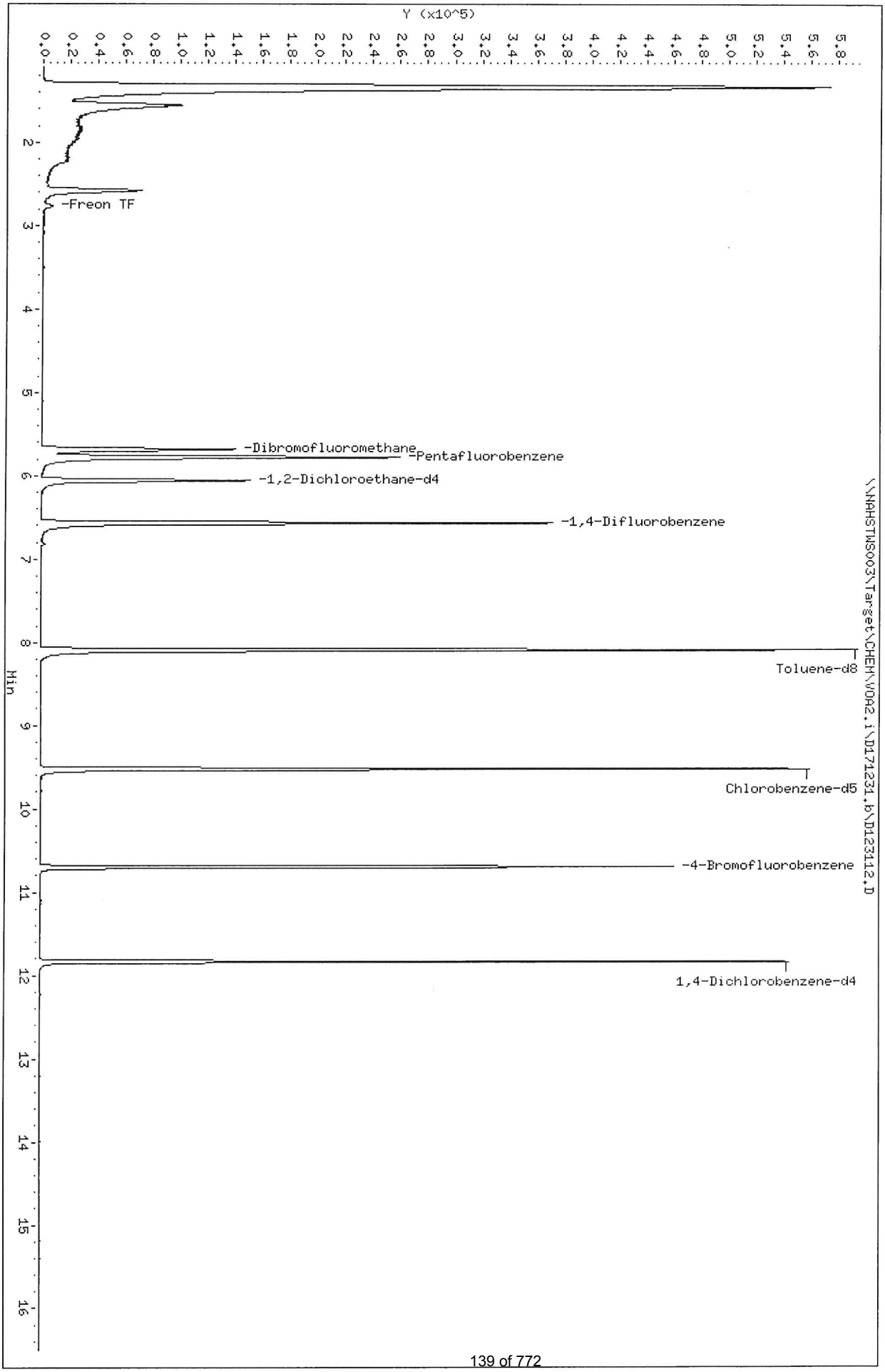
Data file : \\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123112.D
Lab Smp Id: HS17121224-01 Client Smp ID: HS17121224-01
Inj Date : 31-DEC-2017 18:09
Operator : AP Inst ID: VOA2.i
Smp Info : HS17121224-01;HS17121224-01;;;
Misc Info : HS15080001;WATER;0;1;
Comment :
Method : \\nahstws003\Target\chem\voa2.i\D171231.b\8260LL.m
Meth Date : 09-Feb-2018 19:43 VOA2.i Quant Type: ISTD
Cal Date : 19-DEC-2017 12:14 Cal File: D121908.D
Als bottle: 12
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: dn_bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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
Va	0.00000	
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	5.779	5.782	(1.000)	246571	50.0000	
$	30 Dibromofluoromethane	113	5.686	5.689	(0.984)	110414	49.7016	49.70
*	36 1,4-Difluorobenzene	114	6.569	6.572	(1.000)	350672	50.0000	
$	35 1,2-Dichloroethane-d4	65	6.058	6.055	(1.048)	124349	45.3210	45.32
*	47 Chlorobenzene-d5	117	9.524	9.527	(1.000)	320974	50.0000	
$	48 Toluene-d8	98	8.090	8.093	(0.849)	407288	48.1270	48.12
$	69 4-Bromofluorobenzene	95	10.695	10.695	(1.123)	151923	49.1606	49.16
*	70 1,4-Dichlorobenzene-d4	152	11.834	11.838	(1.000)	149172	50.0000	


Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123112.D
Date : 31-DEC-2017 18:09
Client ID: HS17121224-01
Sample Info: HS17121224-01;HS17121224-01;;;
Purge Volume: 5.0
Column phase: DB624
Instrument: VOA2.i
Operator: AP
Column diameter: 0.18
Y (x10^5)
Min
-Freon TF
-Dibromofluoromethane
-Pentafluorobenzene
-1,2-Dichloroethane-d4
-1,4-Difluorobenzene
Toluene-d8
Chlorobenzene-d5
-4-Bromofluorobenzene
1,4-Dichlorobenzene-d4
\\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123112.D

Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123113.D
Report Date: 09-Feb-2018 19:43

ALS Laboratory Group

Data file : \\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123113.D
Lab Smp Id: HS17121224-08 Client Smp ID: HS17121224-08
Inj Date : 31-DEC-2017 18:34
Operator : AP Inst ID: VOA2.i
Smp Info : HS17121224-08;HS17121224-08;;;
Misc Info : HS15080001;WATER;0;1;
Comment :
Method : \\nahstws003\Target\chem\voa2.i\D171231.b\8260LL.m
Meth Date : 09-Feb-2018 19:43 VOA2.i Quant Type: ISTD
Cal Date : 19-DEC-2017 12:14 Cal File: D121908.D
Als bottle: 13
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: dn_bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

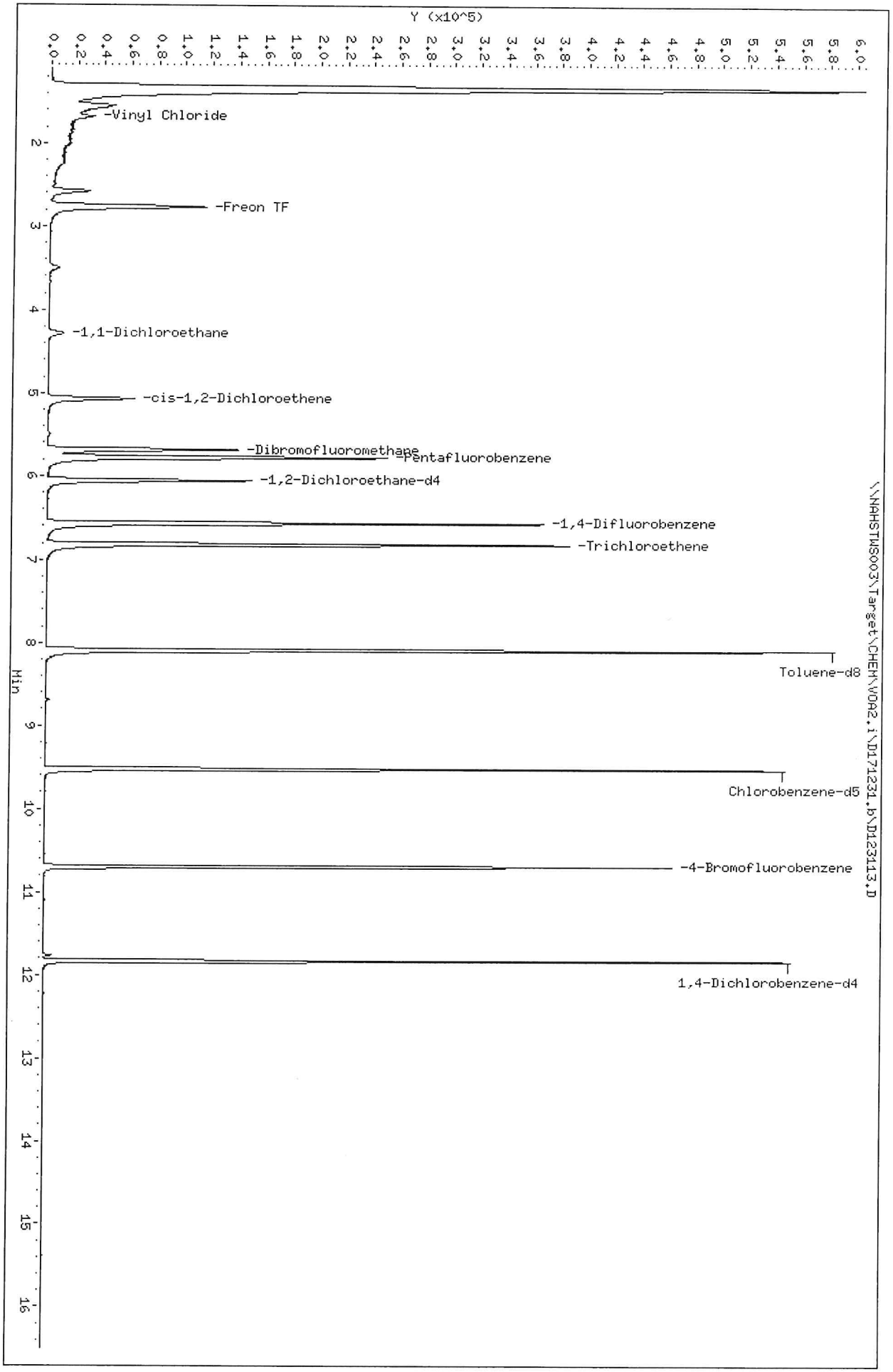
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Va	0.00000	
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	5.779	5.782	(1.000)	245397	50.0000	
$ 30 Dibromofluoromethane	113	5.686	5.689	(0.984)	109599	49.5708	49.57
* 36 1,4-Difluorobenzene	114	6.569	6.572	(1.000)	351994	50.0000	
$ 35 1,2-Dichloroethane-d4	65	6.055	6.055	(1.048)	125791	46.0659	46.06
* 47 Chlorobenzene-d5	117	9.524	9.527	(1.000)	321918	50.0000	
$ 48 Toluene-d8	98	8.090	8.093	(0.849)	402644	47.4388	47.43
$ 69 4-Bromofluorobenzene	95	10.695	10.695	(1.123)	152936	49.3433	49.34
* 70 1,4-Dichlorobenzene-d4	152	11.835	11.838	(1.000)	148097	50.0000	
22 1,1-Dichloroethane	63	4.284	4.277	(0.741)	19357	3.77824	3.77(a)
27 cis-1,2-Dichloroethene	96	5.067	5.067	(0.877)	41349	14.8107	14.81
38 Trichloroethene	130	6.816	6.819	(1.038)	152497	58.4922	58.49
5 Vinyl Chloride	62	1.682	1.685	(0.291)	23818	7.91880	7.91

QC Flag Legend

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



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Date : 31-DEC-2017 18:34
Client ID: HS17121224-08
Sample Info: HS17121224-08;HS17121224-08;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: VOA2.i
Operator: AP
Column diameter: 0.18

Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123113.D

Date : 31-DEC-2017 18:34

Client ID: HS17121224-08

Instrument: VOA2.i

Sample Info: HS17121224-08;HS17121224-08;;;

Purge Volume: 5.0

Operator: AP

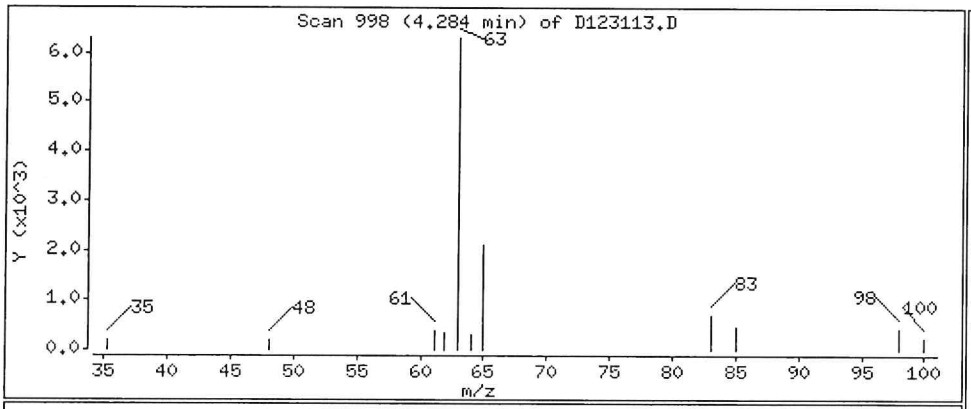
Column phase: DB624

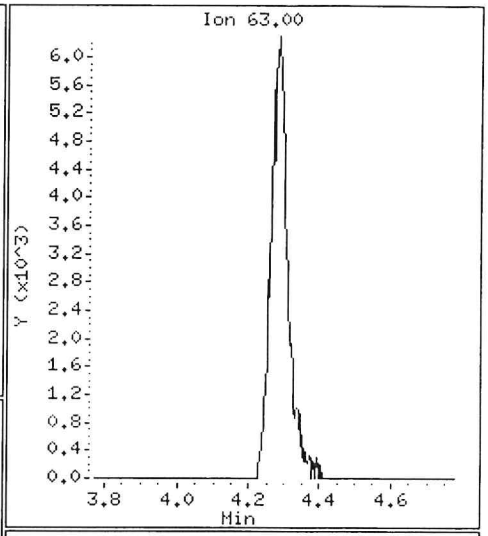
Column diameter: 0.18

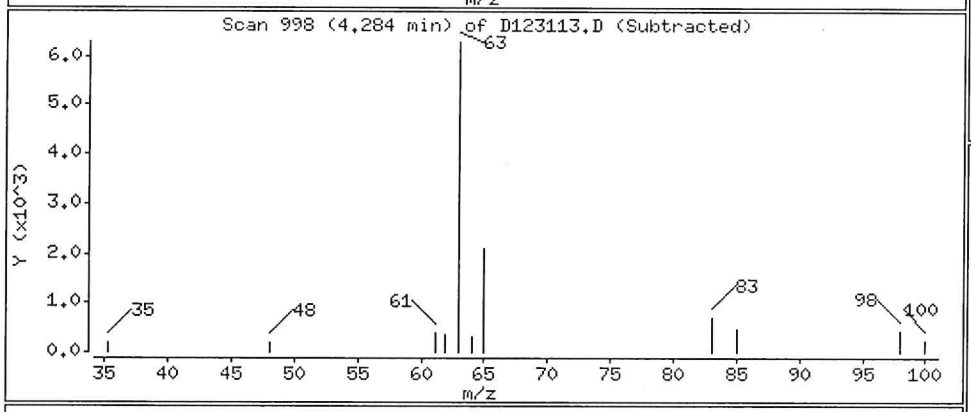
22 1,1-Dichloroethane

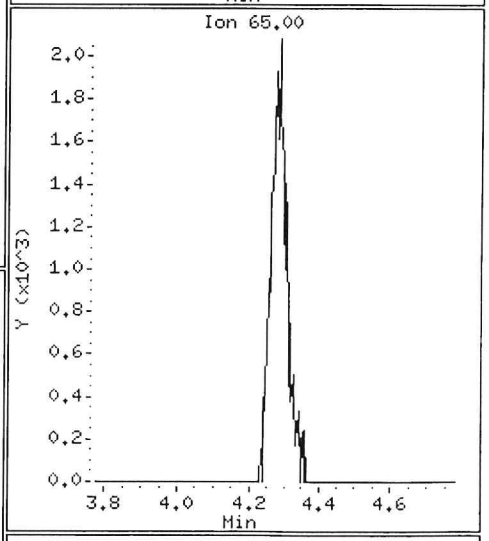
Concentration: 3.77 ug/l

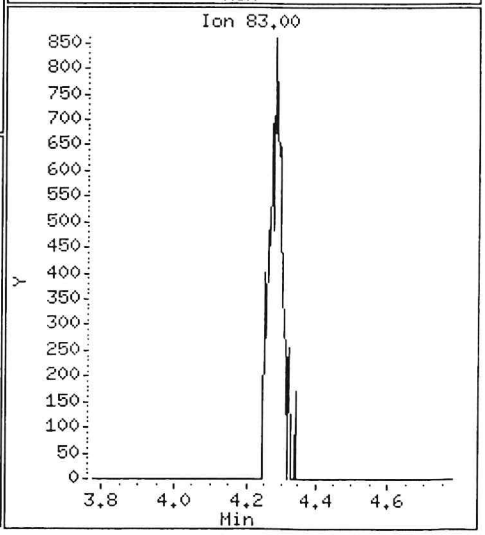
Review Code:











Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123113.D

Date : 31-DEC-2017 18:34

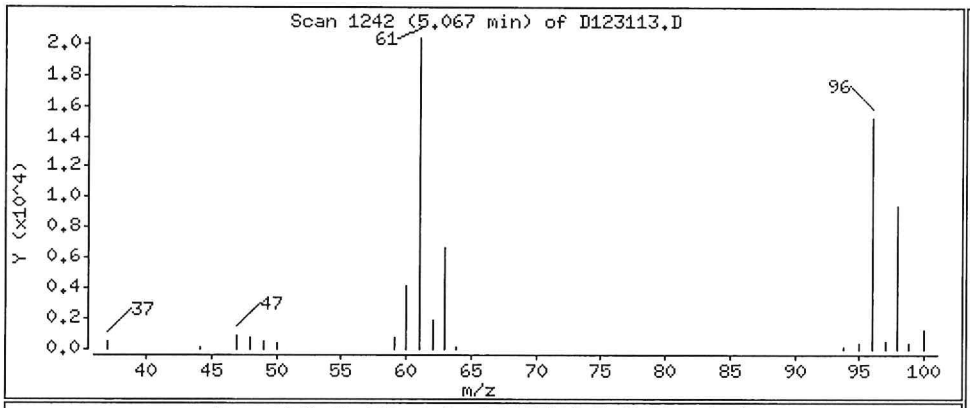
Client ID: HS17121224-08 Instrument: VOA2.i

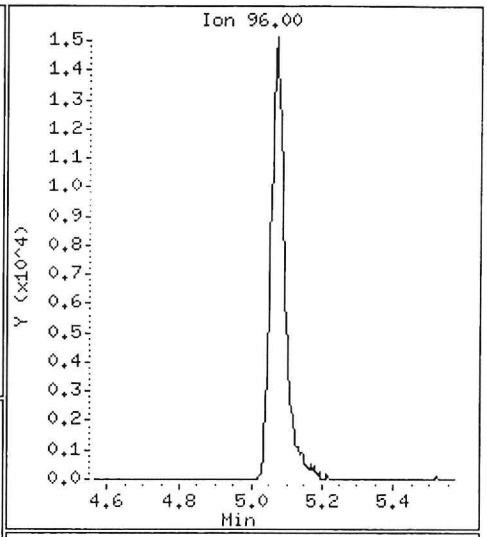
Sample Info: HS17121224-08;HS17121224-08;;;

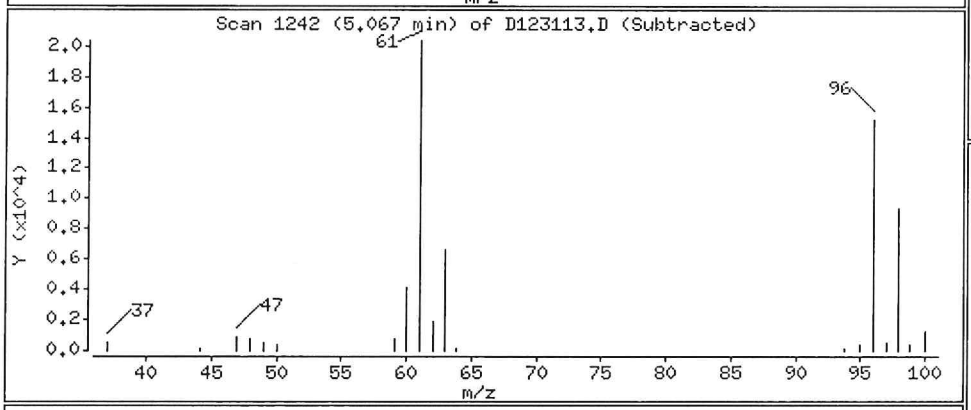
Purge Volume: 5.0 Operator: AP

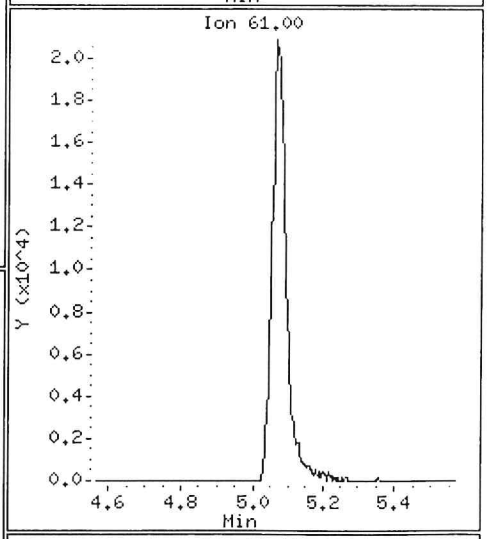
Column phase: DB624 Column diameter: 0.18

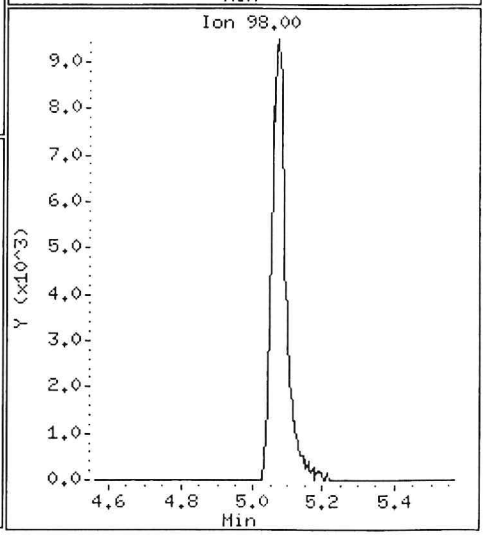
27 cis-1,2-Dichloroethene Concentration: 14.81 ug/l Review Code:











Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123113.D

Date : 31-DEC-2017 18:34

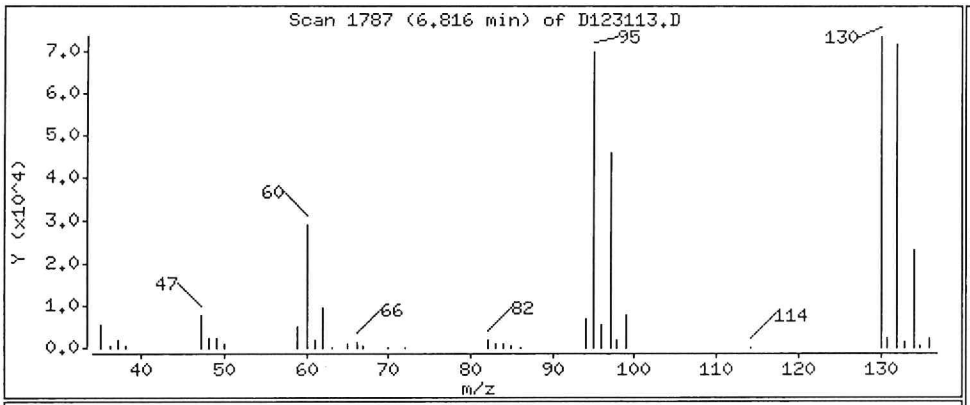
Client ID: HS17121224-08 Instrument: VOA2.i

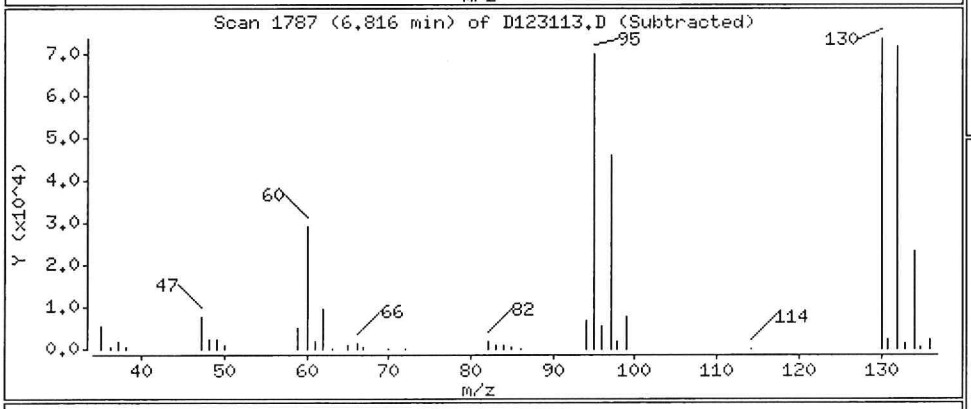
Sample Info: HS17121224-08;HS17121224-08;;;

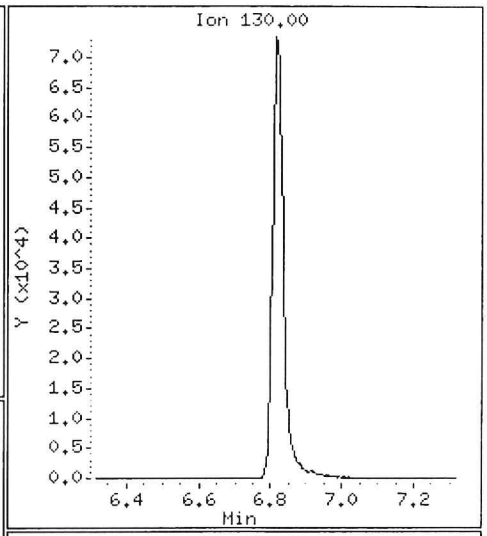
Purge Volume: 5.0 Operator: AP

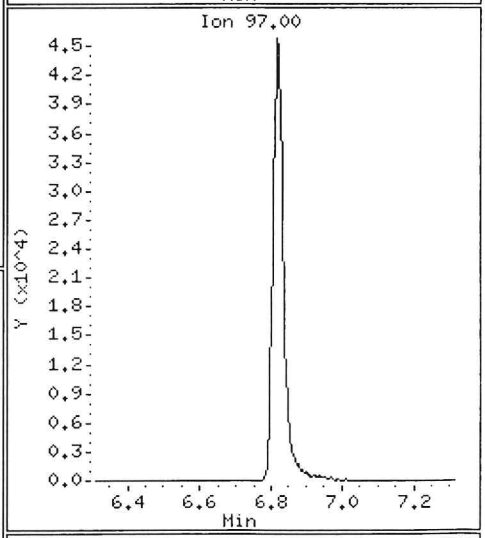
Column phase: DB624 Column diameter: 0.18

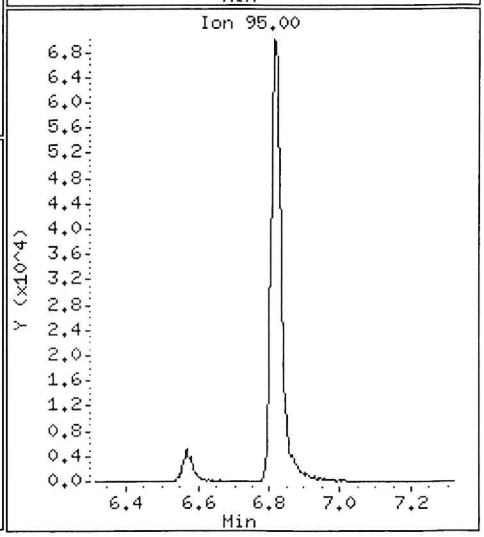
38 Trichloroethene Concentration: 58.49 ug/l Review Code:











Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123113.D

Date : 31-DEC-2017 18:34

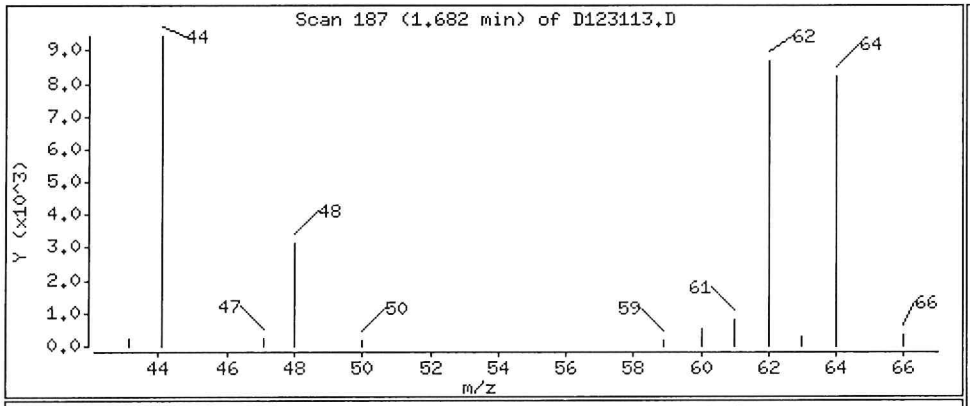
Client ID: HS17121224-08 Instrument: VOA2.i

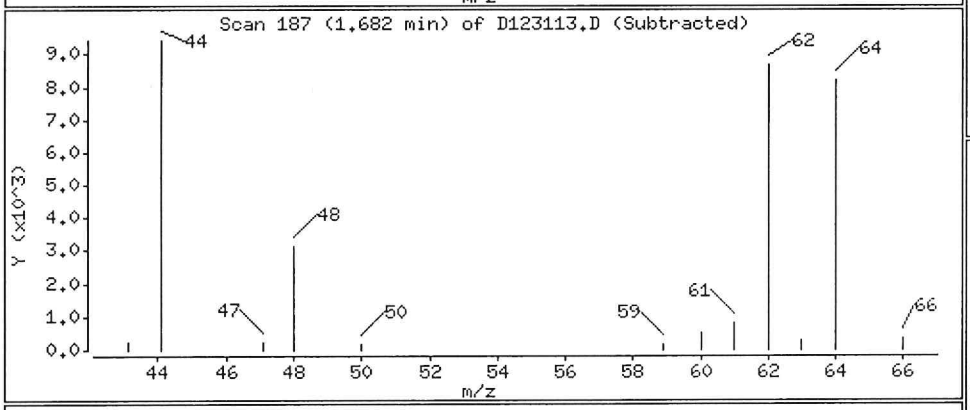
Sample Info: HS17121224-08;HS17121224-08;;;

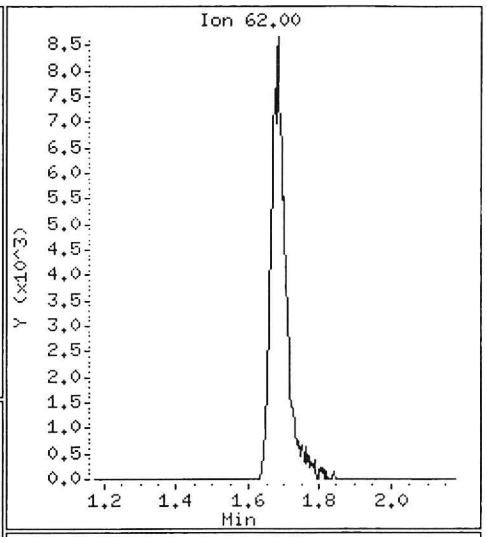
Purge Volume: 5.0 Operator: AP

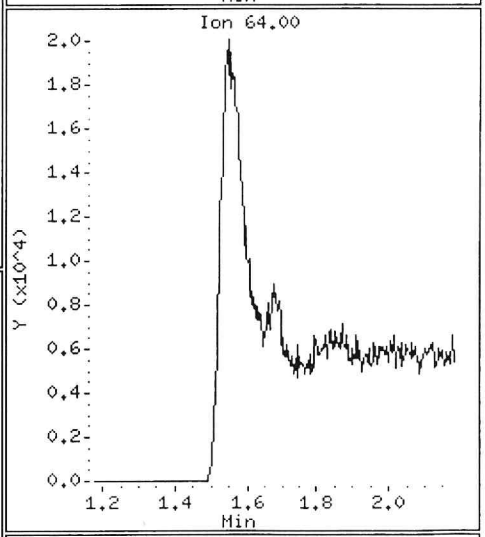
Column phase: DB624 Column diameter: 0.18

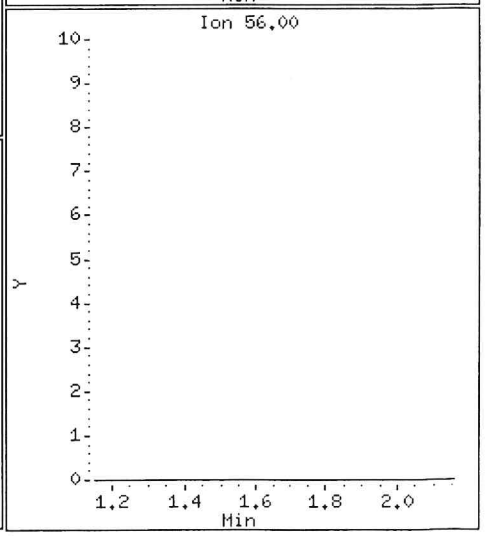
5 Vinyl Chloride Concentration: 7.91 ug/l Review Code:











Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123115.D
Report Date: 09-Feb-2018 19:43

ALS Laboratory Group

Data file : \\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123115.D
Lab Smp Id: HS17121224-05 Client Smp ID: HS17121224-05
Inj Date : 31-DEC-2017 19:23
Operator : AP Inst ID: VOA2.i
Smp Info : HS17121224-05;HS17121224-05;;;
Misc Info : HS15080001;WATER;0;1;
Comment :
Method : \\nahstws003\Target\chem\voa2.i\D171231.b\8260LL.m
Meth Date : 09-Feb-2018 19:43 VOA2.i Quant Type: ISTD
Cal Date : 19-DEC-2017 12:14 Cal File: D121908.D
Als bottle: 15
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: dn_bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

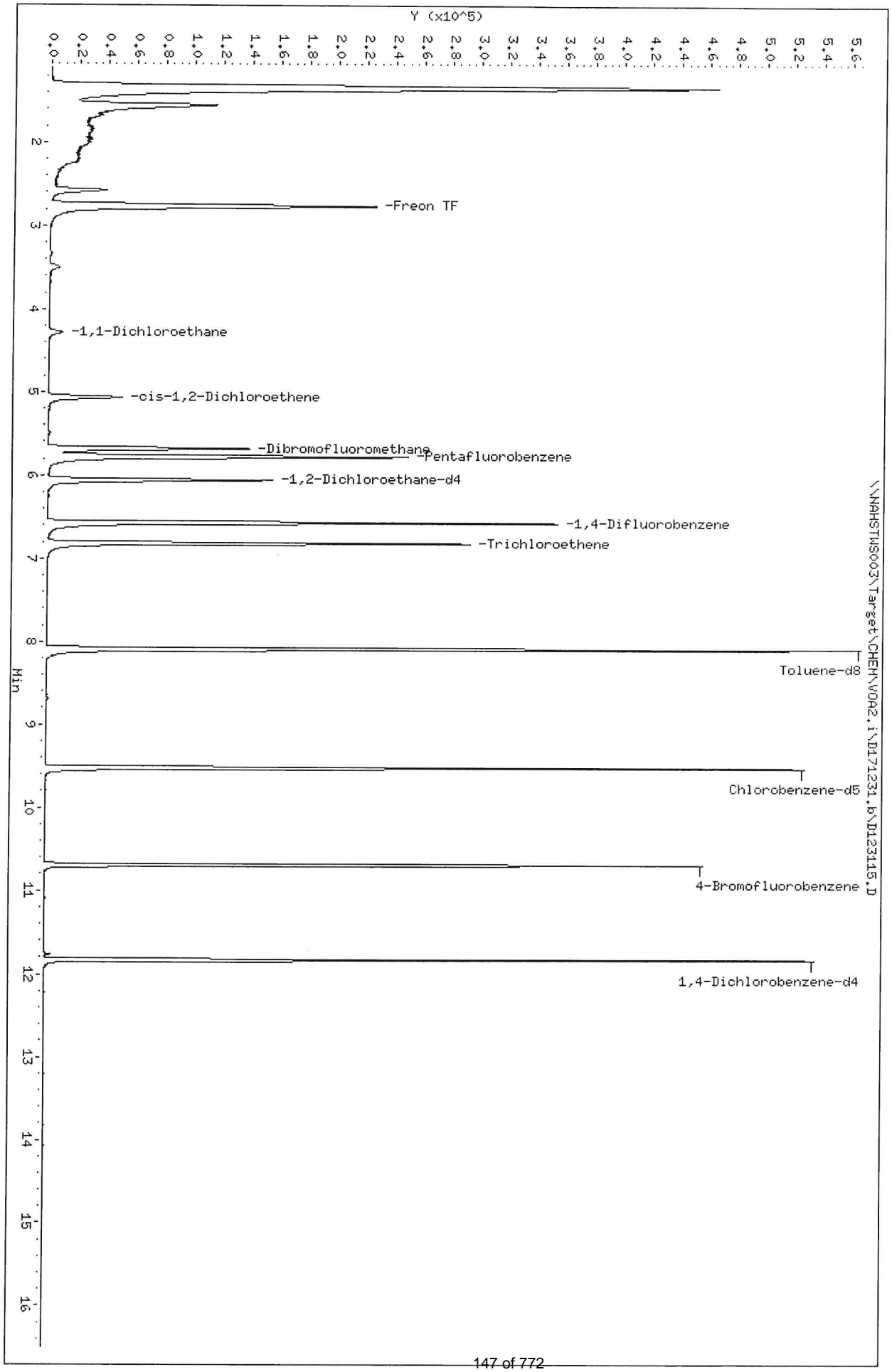
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Va	0.00000	
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	5.776	5.782	(1.000)	242171	50.0000	
$ 30 Dibromofluoromethane	113	5.683	5.689	(0.984)	108336	49.6523	49.65
* 36 1,4-Difluorobenzene	114	6.569	6.572	(1.000)	344572	50.0000	
$ 35 1,2-Dichloroethane-d4	65	6.055	6.055	(1.048)	125522	46.5797	46.57
* 47 Chlorobenzene-d5	117	9.524	9.527	(1.000)	316192	50.0000	
$ 48 Toluene-d8	98	8.090	8.093	(0.849)	399450	47.9147	47.91
$ 69 4-Bromofluorobenzene	95	10.695	10.695	(1.123)	149191	49.0067	49.00
* 70 1,4-Dichlorobenzene-d4	152	11.834	11.838	(1.000)	141693	50.0000	
22 1,1-Dichloroethane	63	4.278	4.277	(0.741)	16502	3.26389	3.26(aM)
27 cis-1,2-Dichloroethene	96	5.070	5.067	(0.878)	33586	12.1903	12.19
38 Trichloroethene	130	6.816	6.819	(1.038)	117855	46.1785	46.17

QC Flag Legend

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


Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123115.D
Date : 31-DEC-2017 19:23
Client ID: HS17121224-05
Sample Info: HS17121224-05;HS17121224-05;;;
Purge Volume: 5.0
Column phase: DB624
Instrument: VOA2.i
Operator: AP
Column diameter: 0.18
Y (x10^5)
-Freon TF
-1,1-Dichloroethane
-cis-1,2-Dichloroethene
-Dibromofluoromethane
-Pentafluorobenzene
-1,2-Dichloroethane-d4
-1,4-Difluorobenzene
-Trichloroethene
Toluene-d8
Chlorobenzene-d5
4-Bromofluorobenzene
1,4-Dichlorobenzene-d4
\\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123115.D
Min

Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123115.D

Date : 31-DEC-2017 19:23

Client ID: HS17121224-05

Instrument: VOA2.i

Sample Info: HS17121224-05;HS17121224-05;;;

Purge Volume: 5.0

Operator: AP

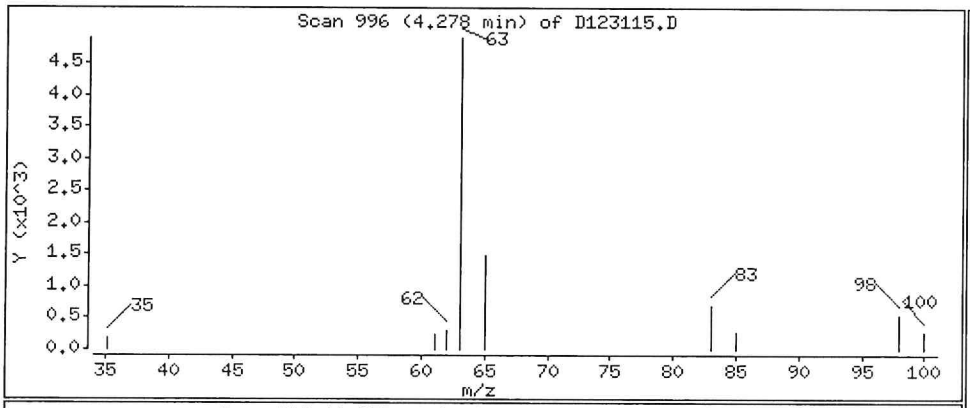
Column phase: DB624

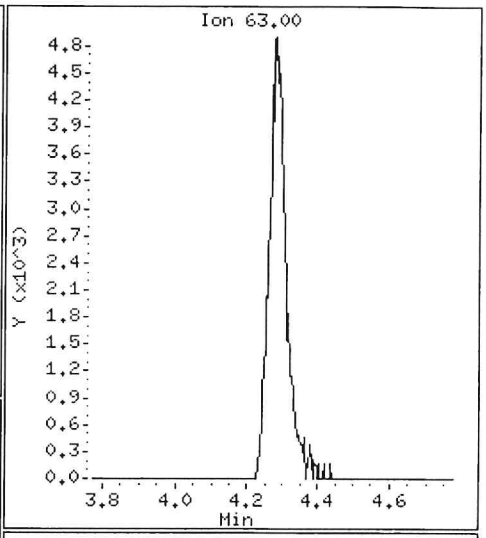
Column diameter: 0.18

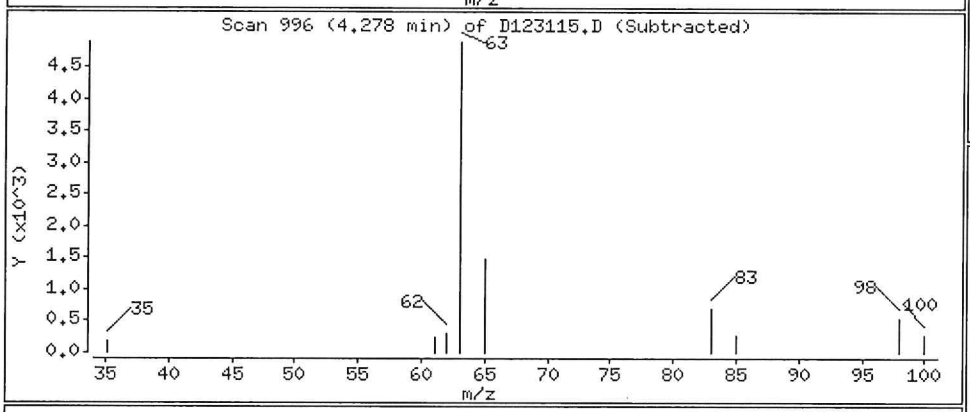
22 1,1-Dichloroethane

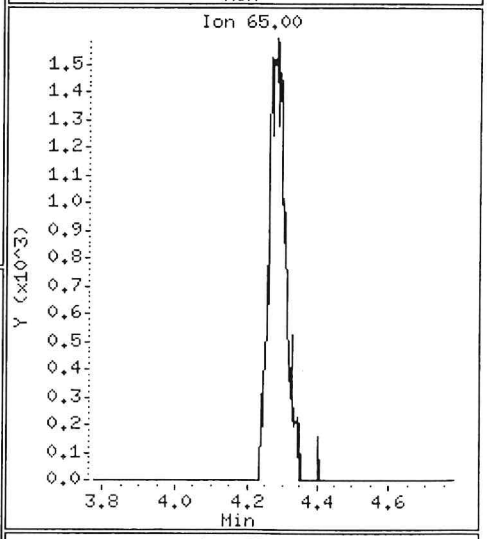
Concentration: 3.26 ug/l

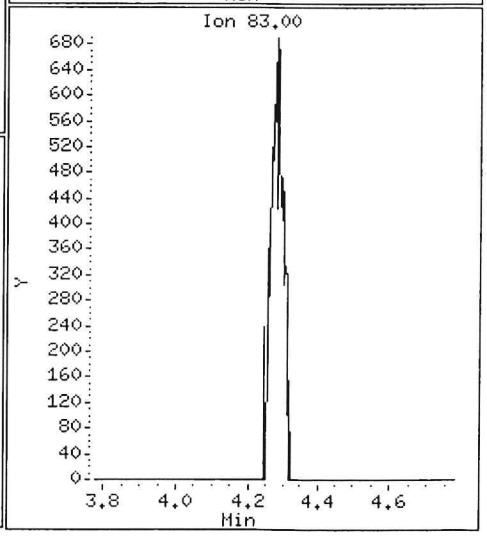
Review Code:











Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123115.D

Date : 31-DEC-2017 19:23

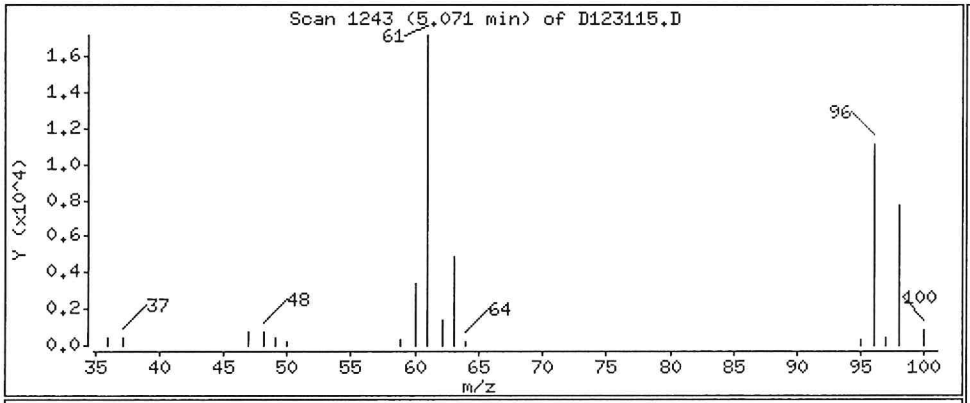
Client ID: HS17121224-05 Instrument: VOA2.i

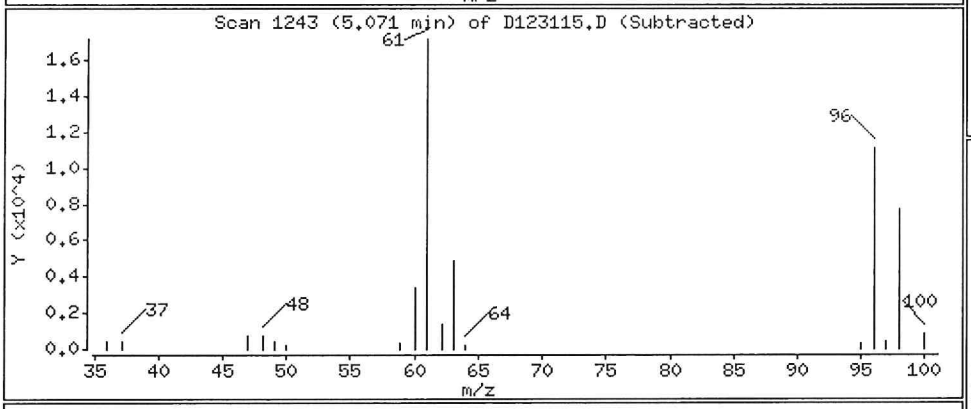
Sample Info: HS17121224-05;HS17121224-05;;;

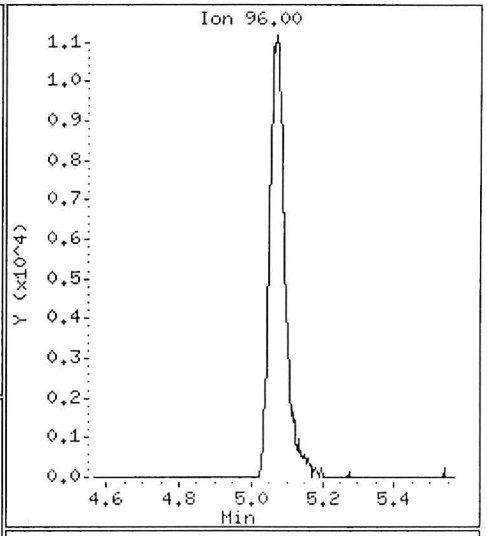
Purge Volume: 5.0 Operator: AP

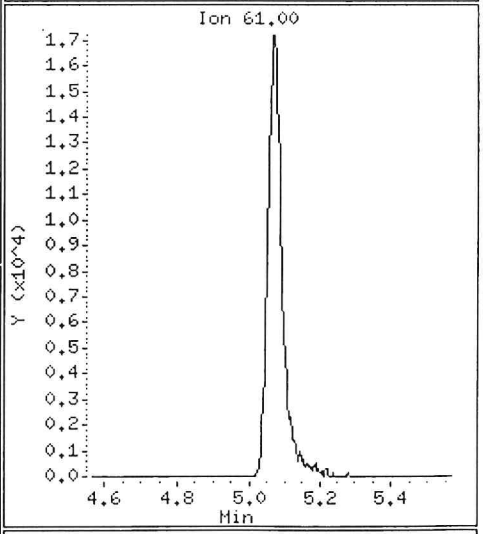
Column phase: DB624 Column diameter: 0.18

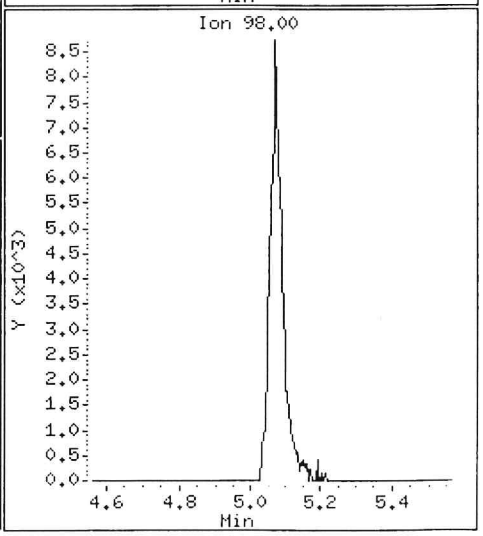
27 cis-1,2-Dichloroethene Concentration: 12.19 ug/l Review Code:











Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123115.D

Date : 31-DEC-2017 19:23

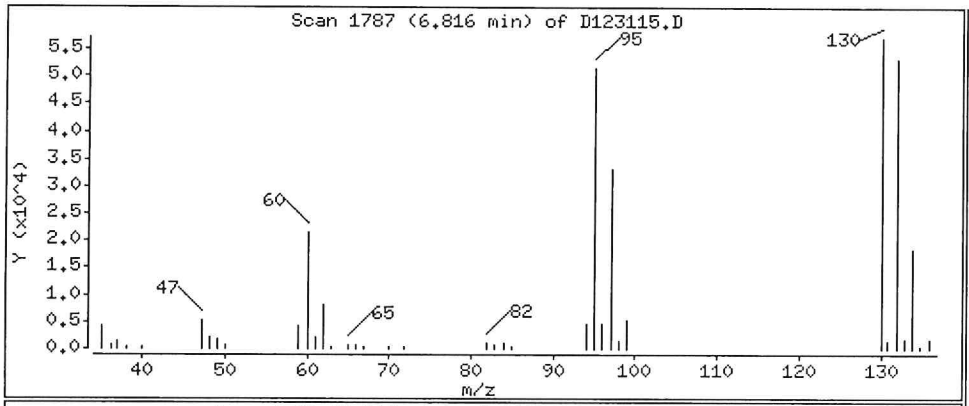
Client ID: HS17121224-05 Instrument: VOA2.i

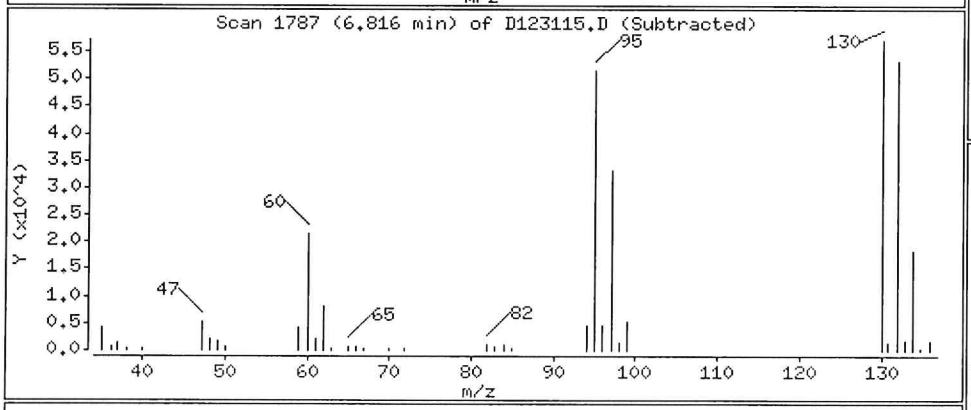
Sample Info: HS17121224-05;HS17121224-05;;;

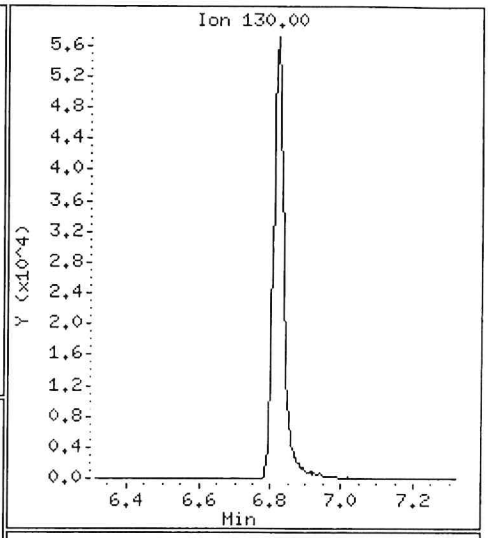
Purge Volume: 5.0 Operator: AP

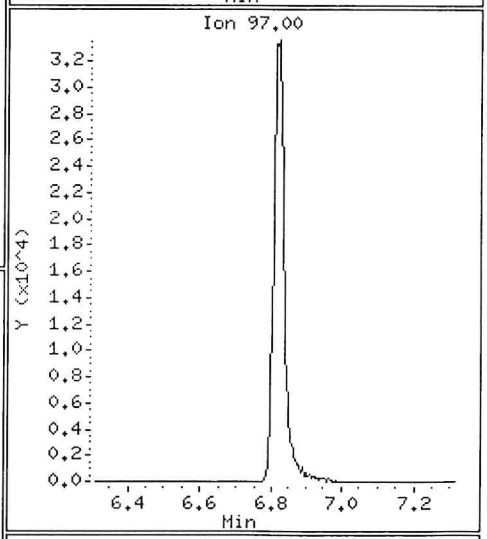
Column phase: DB624 Column diameter: 0.18

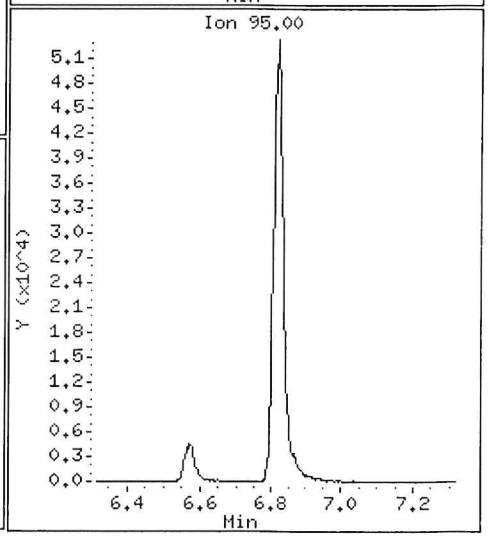
38 Trichloroethene Concentration: 46.17 ug/l Review Code:











Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123116.D
Report Date: 09-Feb-2018 19:43

ALS Laboratory Group

Data file : \\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123116.D
Lab Smp Id: HS17121224-05 Client Smp ID: HS17121224-05
Inj Date : 31-DEC-2017 19:50
Operator : AP Inst ID: VOA2.i
Smp Info : HS17121224-05;HS17121224-05;;;
Misc Info : HS15080001;WATER;0;10;
Comment :
Method : \\nahstws003\Target\chem\voa2.i\D171231.b\8260LL.m
Meth Date : 09-Feb-2018 19:43 VOA2.i Quant Type: ISTD
Cal Date : 19-DEC-2017 12:14 Cal File: D121908.D
Als bottle: 15
Dil Factor: 10.00000
Integrator: HP RTE Compound Sublist: dn_bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

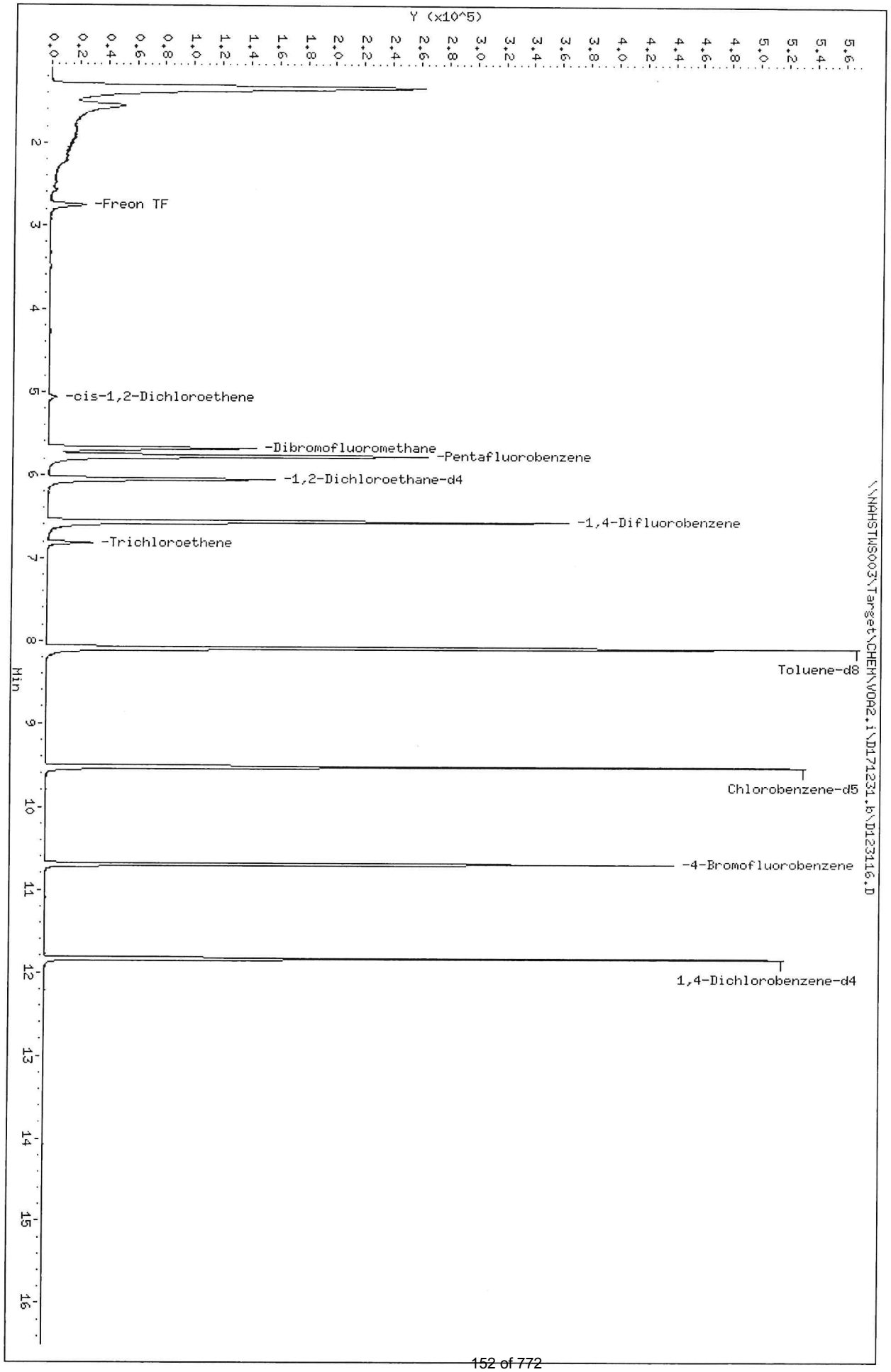
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	10.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Va	0.00000	
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	5.776	5.782	(1.000)	249304	50.0000	
$ 30 Dibromofluoromethane	113	5.680	5.689	(0.983)	108107	48.1297	48.12
* 36 1,4-Difluorobenzene	114	6.566	6.572	(1.000)	344800	50.0000	
$ 35 1,2-Dichloroethane-d4	65	6.055	6.055	(1.048)	130443	47.0209	47.02
* 47 Chlorobenzene-d5	117	9.524	9.527	(1.000)	298658	50.0000	
$ 48 Toluene-d8	98	8.090	8.093	(0.849)	384263	48.7991	48.79
$ 69 4-Bromofluorobenzene	95	10.695	10.695	(1.123)	140315	48.7970	48.79
* 70 1,4-Dichlorobenzene-d4	152	11.835	11.838	(1.000)	136263	50.0000	
27 cis-1,2-Dichloroethene	96	5.057	5.067	(0.876)	3168	1.11696	11.16(aM)
38 Trichloroethene	130	6.813	6.819	(1.038)	12346	4.83427	48.34(a)

QC Flag Legend

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


Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123116.D
Date : 31-DEC-2017 19:50
Client ID: HS171231224-05
Sample Info: HS171231224-05;HS171231224-05;;;
Purge Volume: 5.0
Column phase: DB624
Instrument: VOA2.i
Operator: AP
Column diameter: 0.18
Y (x10^5)
Min
-Freon TF
-cis-1,2-Dichloroethene
-Dibromofluoromethane
-Pentafluorobenzene
-1,2-Dichloroethane-d4
-1,4-Difluorobenzene
-Trichloroethene
Toluene-d8
Chlorobenzene-d5
-4-Bromofluorobenzene
1,4-Dichlorobenzene-d4
\\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123116.D

Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123116.D

Date : 31-DEC-2017 19:50

Client ID: HS17121224-05

Instrument: VOA2.i

Sample Info: HS17121224-05;HS17121224-05;;;

Purge Volume: 5.0

Operator: AP

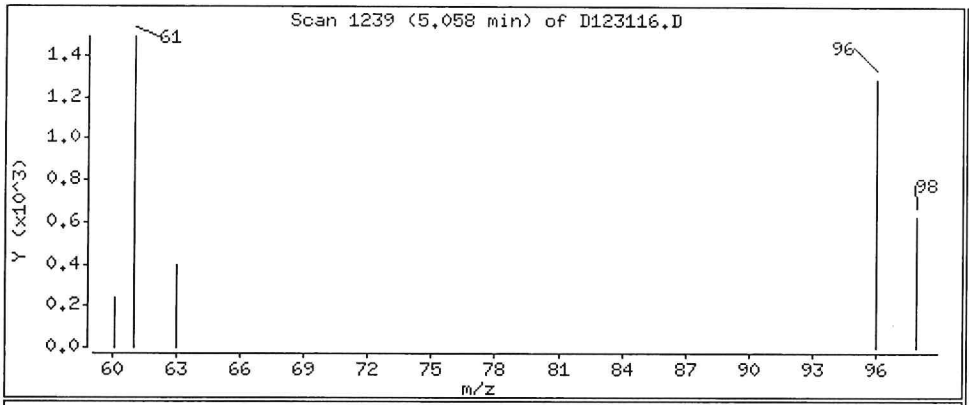
Column phase: DB624

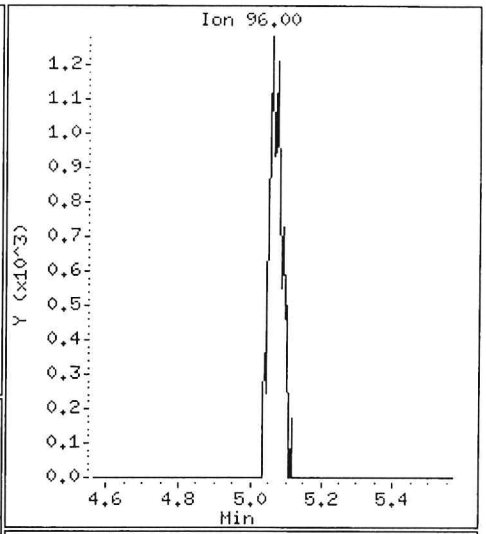
Column diameter: 0.18

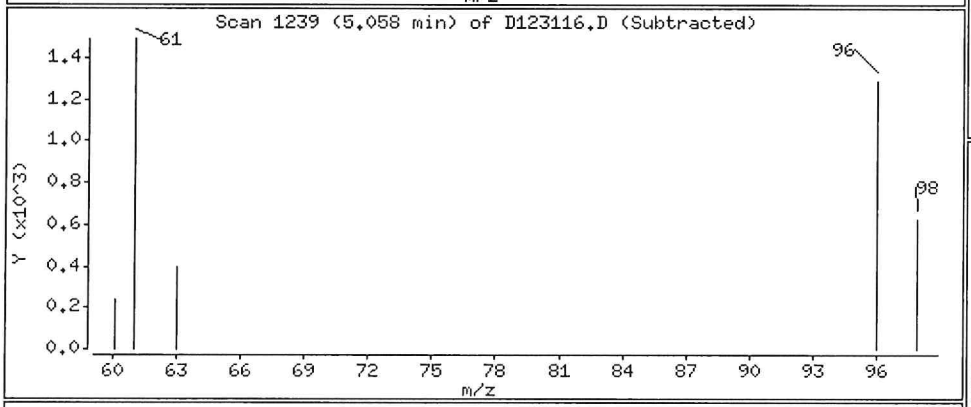
27 cis-1,2-Dichloroethene

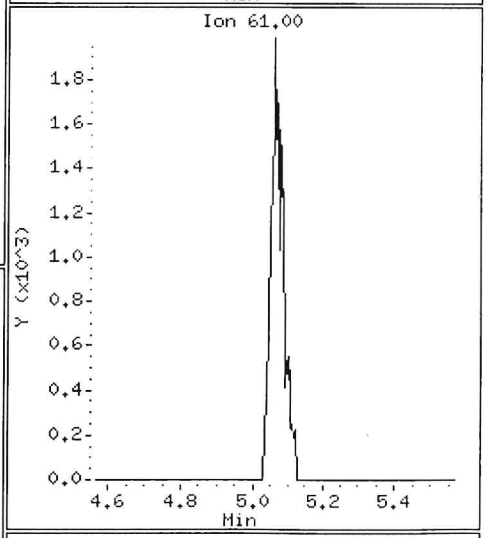
Concentration: 11.16 ug/l

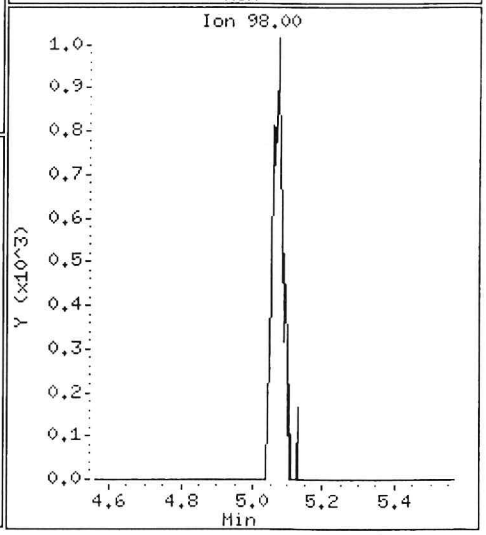
Review Code:











Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123116.D

Date : 31-DEC-2017 19:50

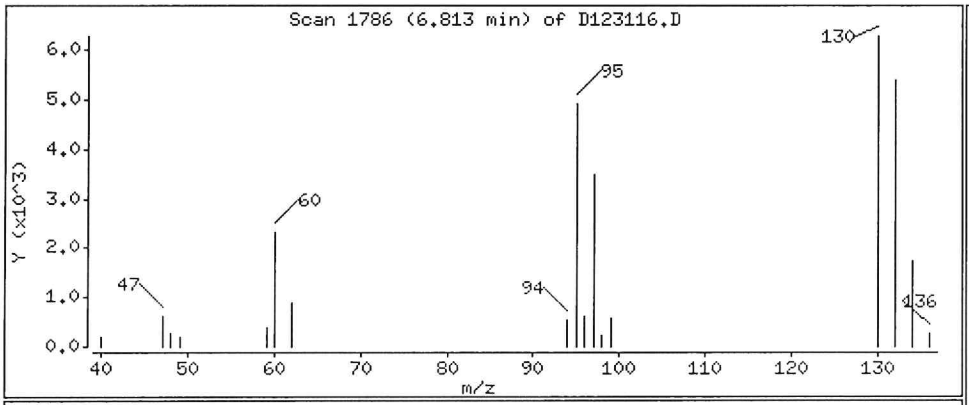
Client ID: HS17121224-05 Instrument: VOA2.i

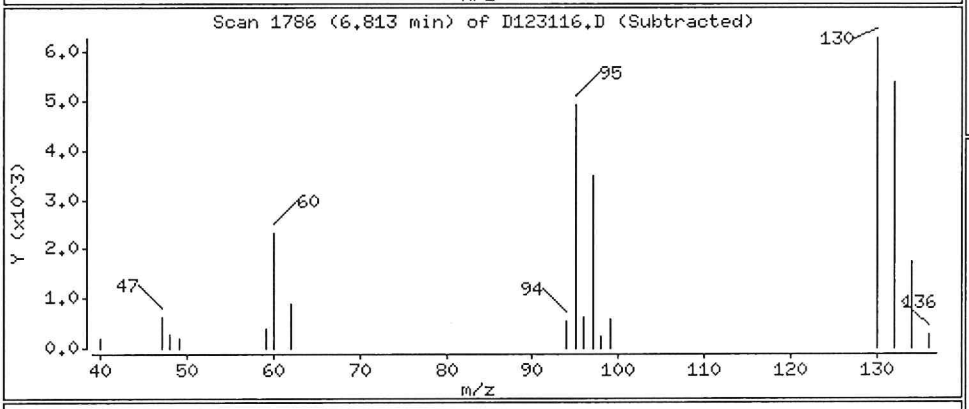
Sample Info: HS17121224-05;HS17121224-05;;;

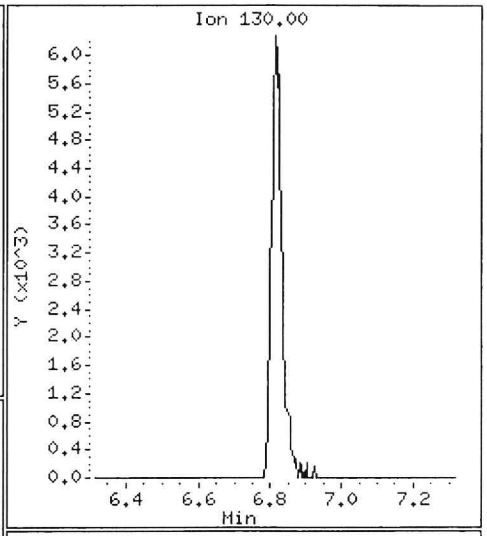
Purge Volume: 5.0 Operator: AP

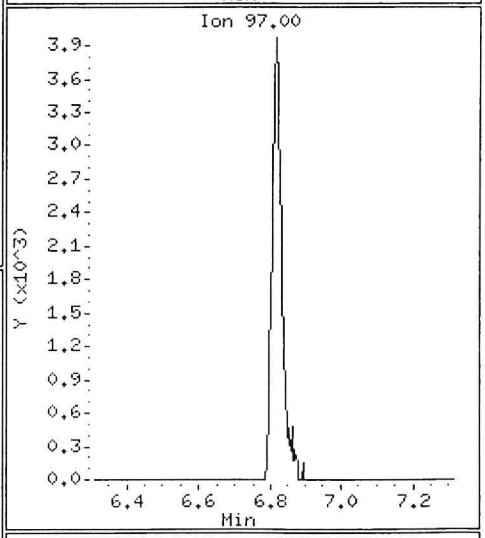
Column phase: DB624 Column diameter: 0.18

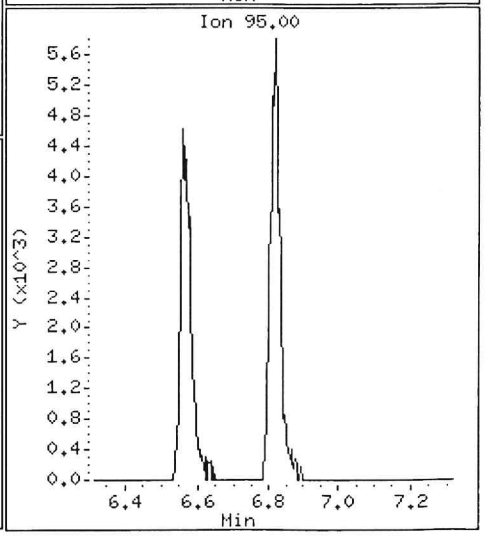
38 Trichloroethene Concentration: 48.34 ug/l Review Code:











Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123117.D
Report Date: 09-Feb-2018 19:43

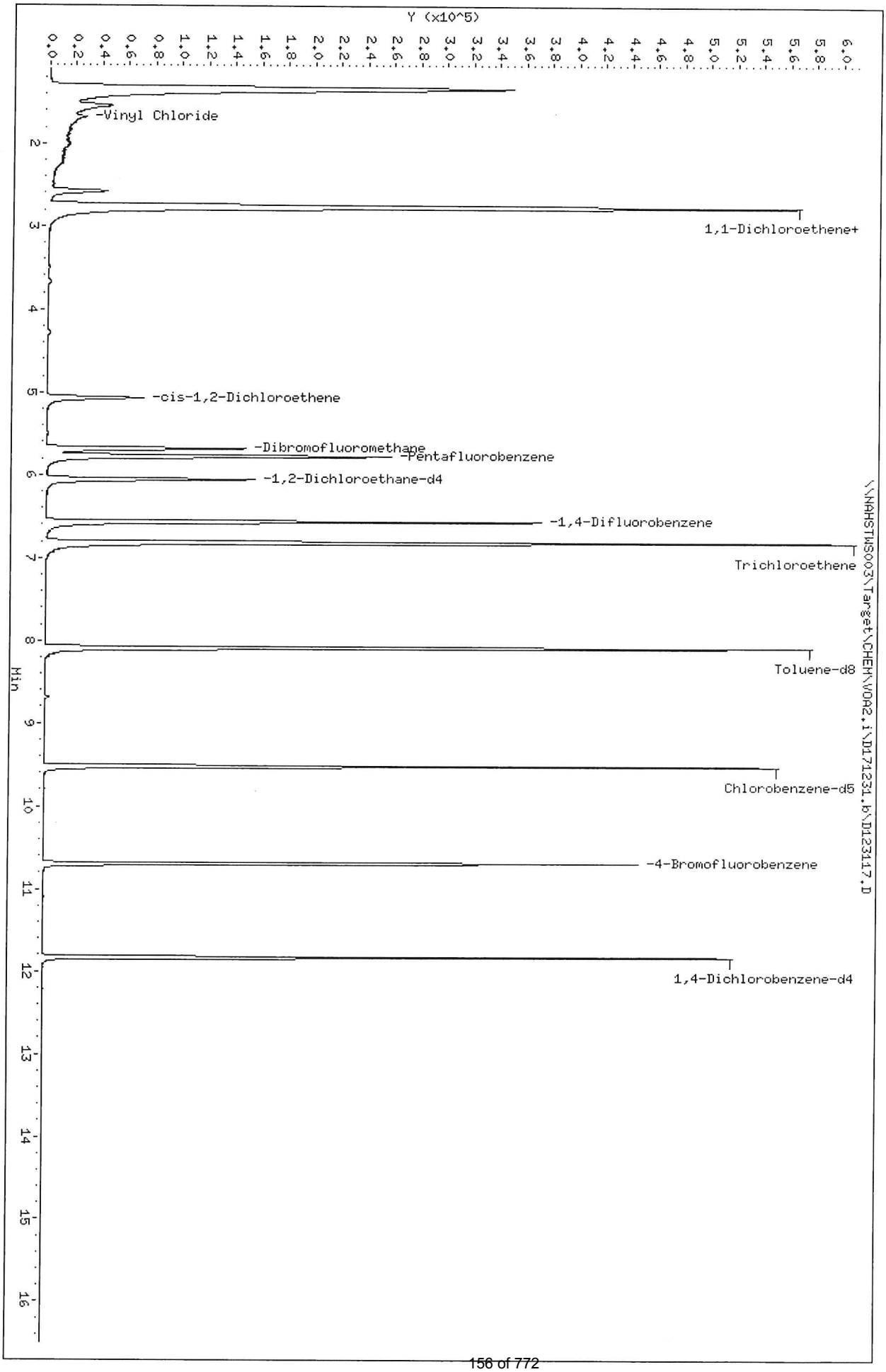
ALS Laboratory Group

Data file : \\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123117.D
Lab Smp Id: HS17121224-06 Client Smp ID: HS17121224-06
Inj Date : 31-DEC-2017 20:17
Operator : AP Inst ID: VOA2.i
Smp Info : HS17121224-06;HS17121224-06;;;
Misc Info : HS15080001;WATER;0;5;
Comment :
Method : \\nahstws003\Target\chem\voa2.i\D171231.b\8260LL.m
Meth Date : 09-Feb-2018 19:43 VOA2.i Quant Type: ISTD
Cal Date : 19-DEC-2017 12:14 Cal File: D121908.D
Als bottle: 16
Dil Factor: 5.00000
Integrator: HP RTE Compound Sublist: dn_bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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
Va	0.00000	
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	5.776	5.782	(1.000)	247119	50.0000	
$ 30 Dibromofluoromethane	113	5.686	5.689	(0.984)	109829	49.3286	49.32
* 36 1,4-Difluorobenzene	114	6.569	6.572	(1.000)	352155	50.0000	
$ 35 1,2-Dichloroethane-d4	65	6.055	6.055	(1.048)	129374	47.0479	47.04
* 47 Chlorobenzene-d5	117	9.524	9.527	(1.000)	312641	50.0000	
$ 48 Toluene-d8	98	8.087	8.093	(0.849)	397078	48.1712	48.17
$ 69 4-Bromofluorobenzene	95	10.695	10.695	(1.123)	148577	49.3593	49.35
* 70 1,4-Dichlorobenzene-d4	152	11.835	11.838	(1.000)	141305	50.0000	
11 1,1-Dichloroethene	96	2.744	2.750	(0.475)	17326	8.49493	42.47
27 cis-1,2-Dichloroethene	96	5.067	5.067	(0.877)	47463	16.8822	84.41
38 Trichloroethene	130	6.816	6.819	(1.038)	245987	94.3084	471.54
5 Vinyl Chloride	62	1.682	1.685	(0.291)	17806	5.87873	29.39



Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123117.D
Date : 31-DEC-2017 20:17
Client ID: HS171211224-06
Sample Info: HS171211224-06;HS171211224-06;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: VOA2.i
Operator: AP
Column diameter: 0.18

Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123117.D

Date : 31-DEC-2017 20:17

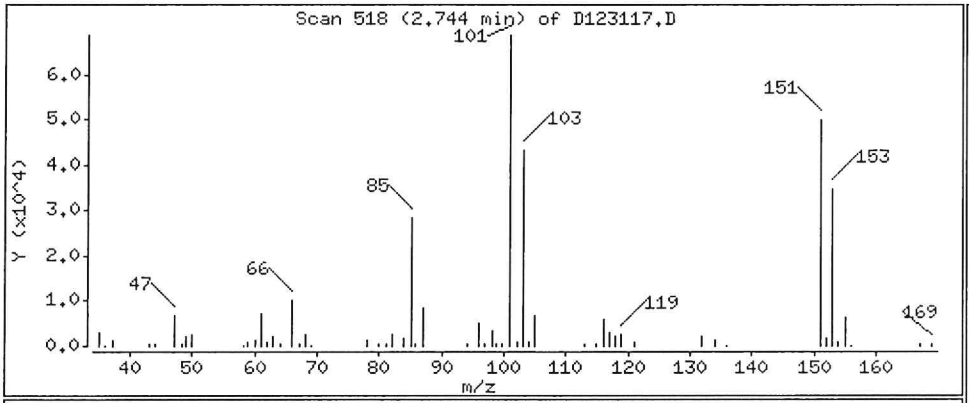
Client ID: HS17121224-06 Instrument: VOA2.i

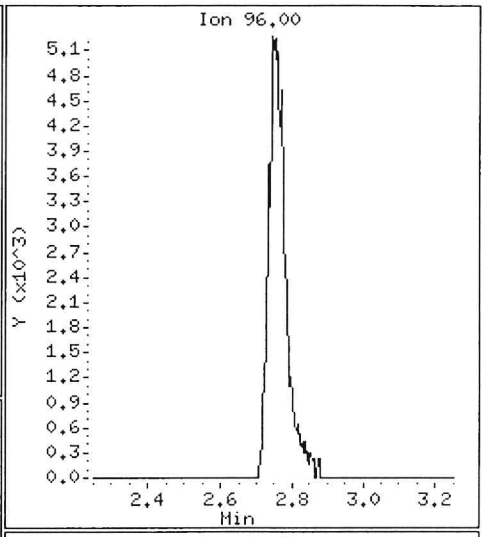
Sample Info: HS17121224-06;HS17121224-06;;;

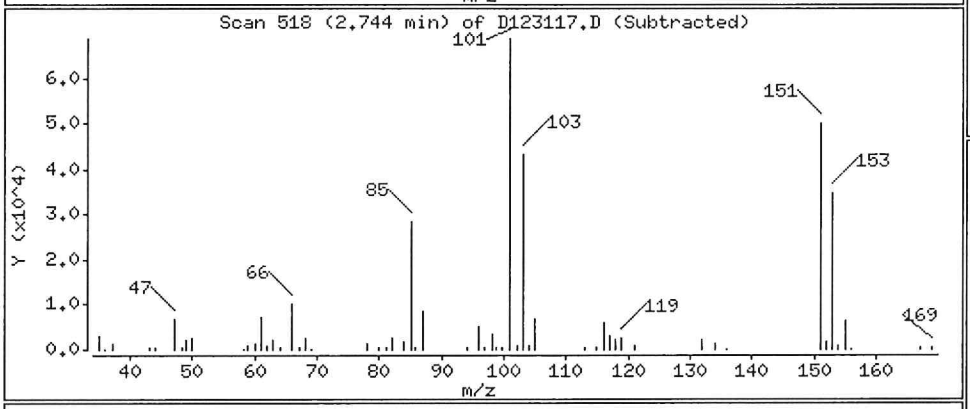
Purge Volume: 5.0 Operator: AP

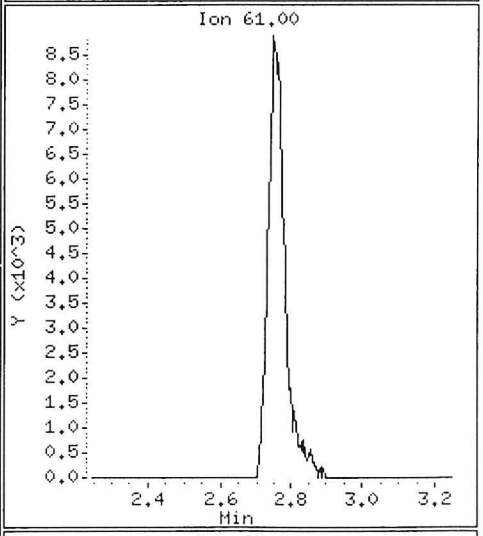
Column phase: DB624 Column diameter: 0.18

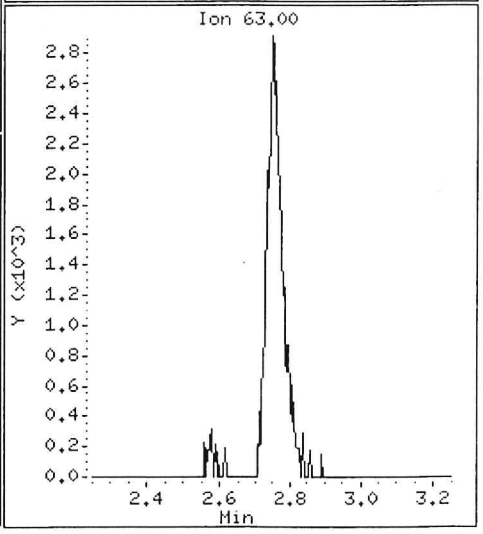
11 1,1-Dichloroethene Concentration: 42.47 ug/l Review Code:











Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123117.D

Date : 31-DEC-2017 20:17

Client ID: HS17121224-06

Instrument: VOA2.i

Sample Info: HS17121224-06;HS17121224-06;;;

Purge Volume: 5.0

Operator: AP

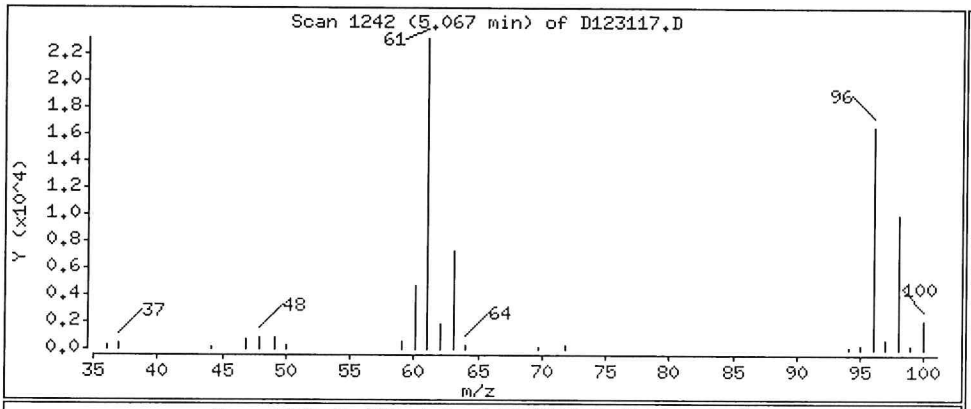
Column phase: DB624

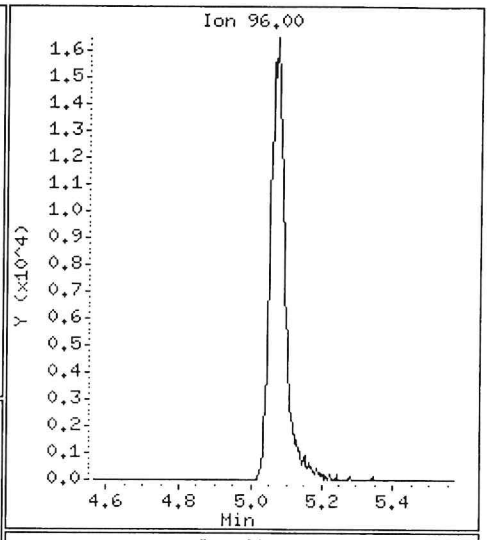
Column diameter: 0.18

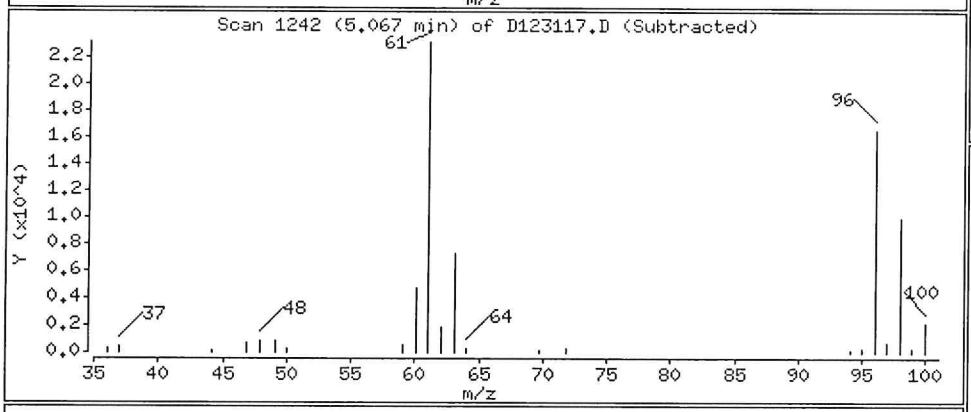
27 cis-1,2-Dichloroethene

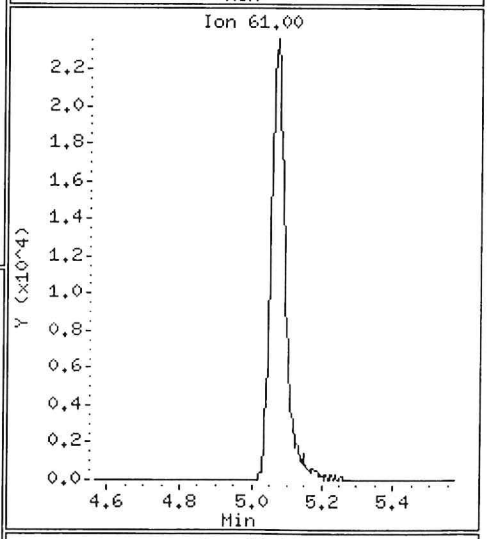
Concentration: 84.41 ug/l

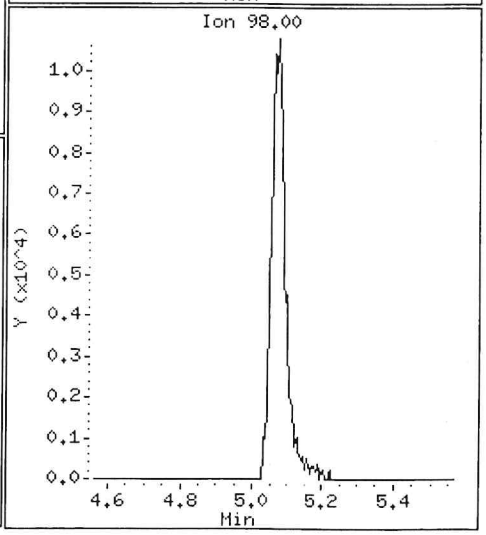
Review Code:











Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123117.D

Date : 31-DEC-2017 20:17

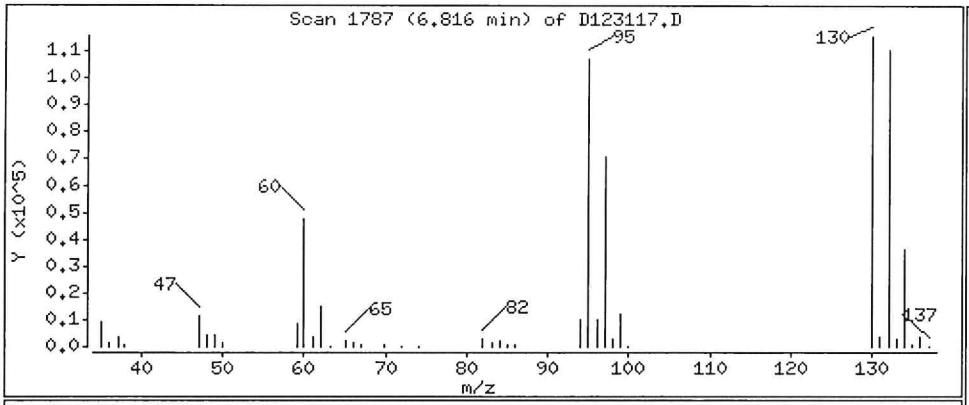
Client ID: HS17121224-06 Instrument: VOA2.i

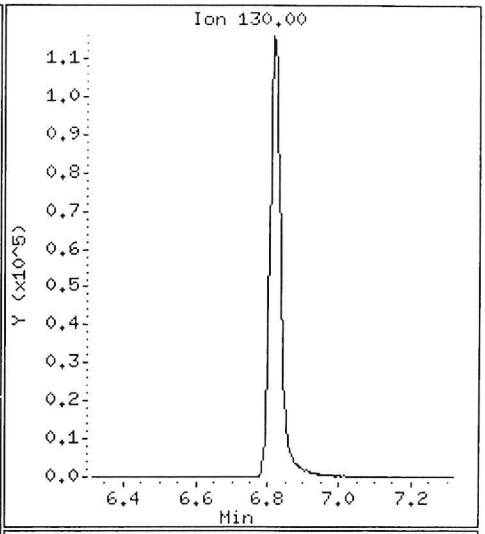
Sample Info: HS17121224-06;HS17121224-06;;;

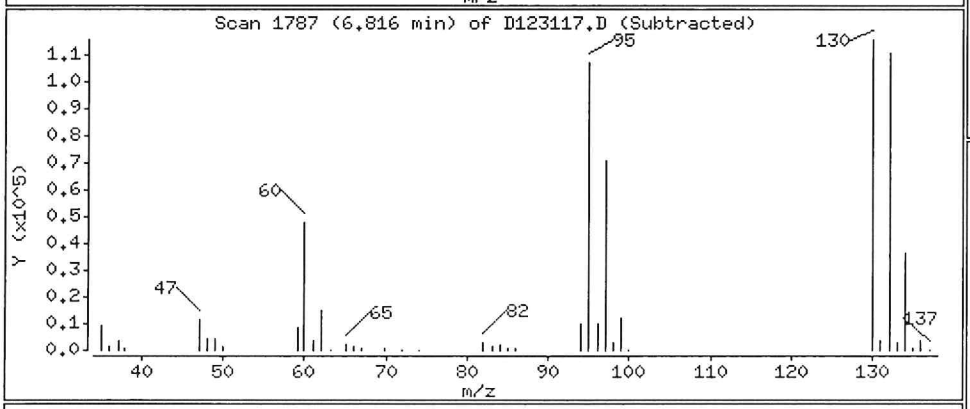
Purge Volume: 5.0 Operator: AP

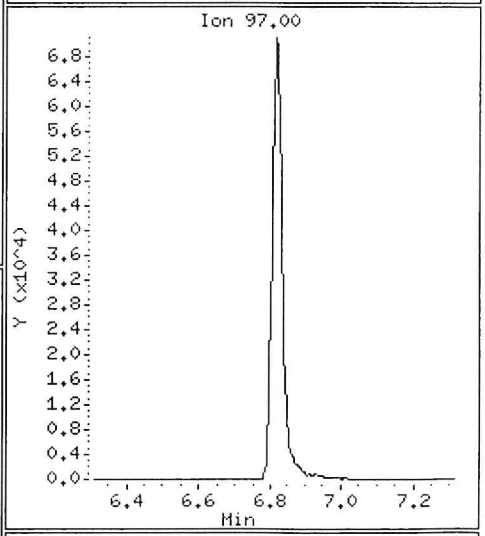
Column phase: DB624 Column diameter: 0.18

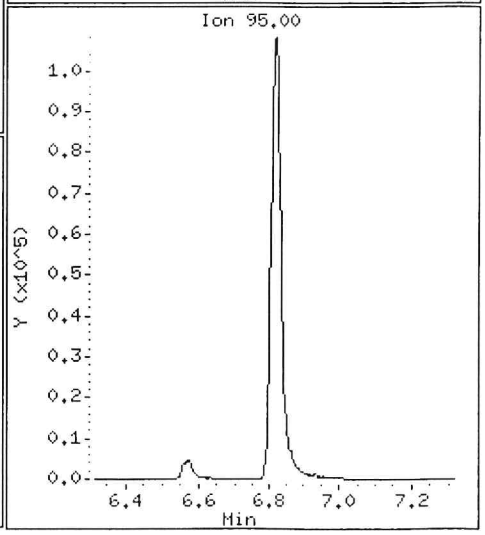
38 Trichloroethene Concentration: 471.54 ug/l Review Code:











Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123117.D

Date : 31-DEC-2017 20:17

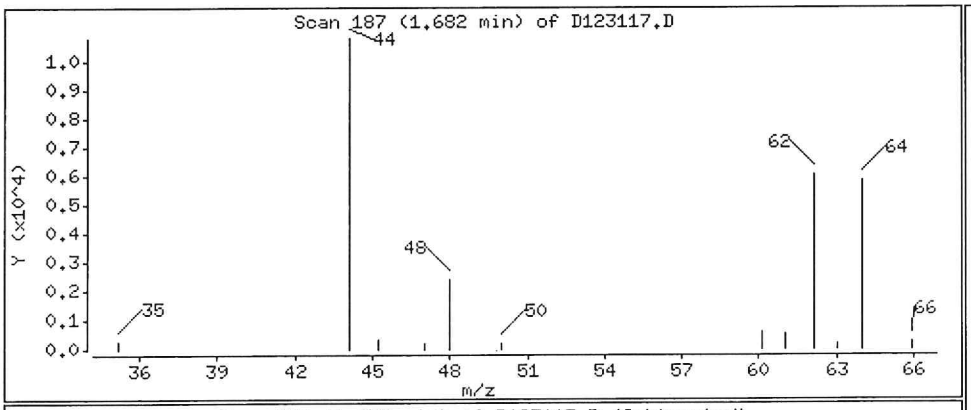
Client ID: HS17121224-06 Instrument: VOA2.i

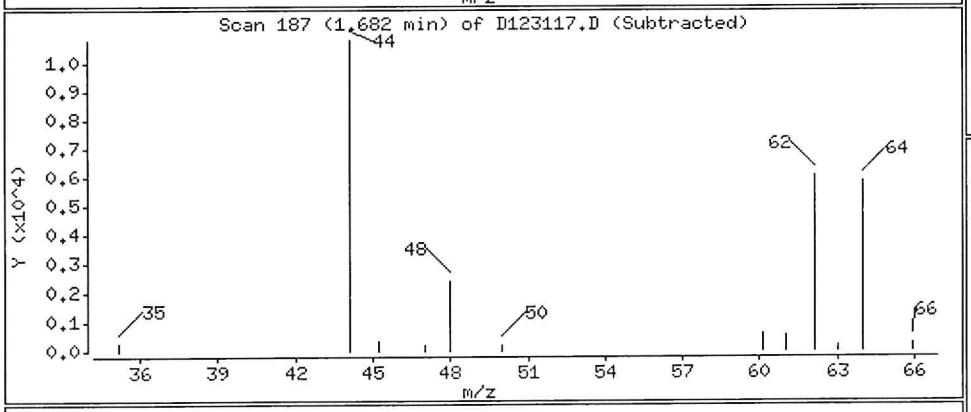
Sample Info: HS17121224-06;HS17121224-06;;;

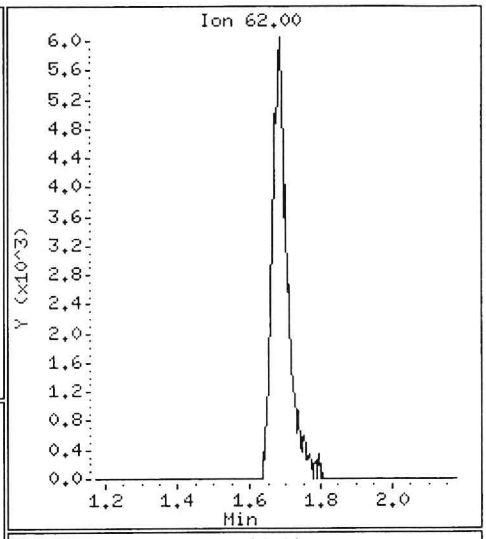
Purge Volume: 5.0 Operator: AP

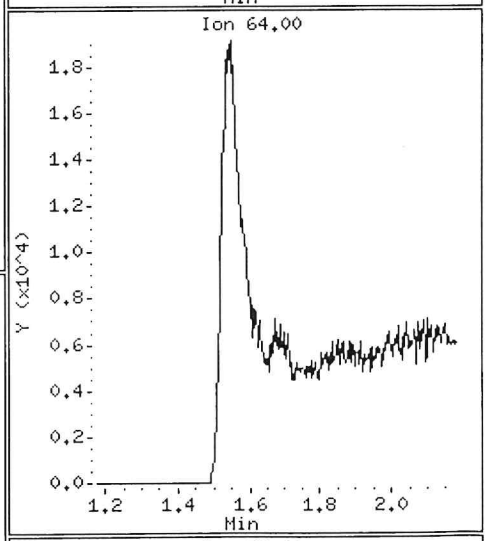
Column phase: DB624 Column diameter: 0.18

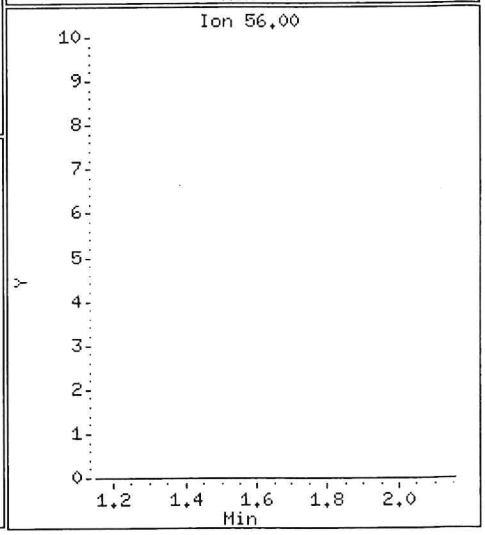
5 Vinyl Chloride Concentration: 29.39 ug/l Review Code:











Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123118.D
Report Date: 09-Feb-2018 19:43

ALS Laboratory Group

Data file : \\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123118.D
Lab Smp Id: HS17121224-06 Client Smp ID: HS17121224-06
Inj Date : 31-DEC-2017 20:45
Operator : AP Inst ID: VOA2.i
Smp Info : HS17121224-06;HS17121224-06;;;
Misc Info : HS15080001;WATER;0;50;
Comment :
Method : \\nahstws003\Target\chem\voa2.i\D171231.b\8260LL.m
Meth Date : 09-Feb-2018 19:43 VOA2.i Quant Type: ISTD
Cal Date : 19-DEC-2017 12:14 Cal File: D121908.D
Als bottle: 16
Dil Factor: 50.00000
Integrator: HP RTE Compound Sublist: dn_bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

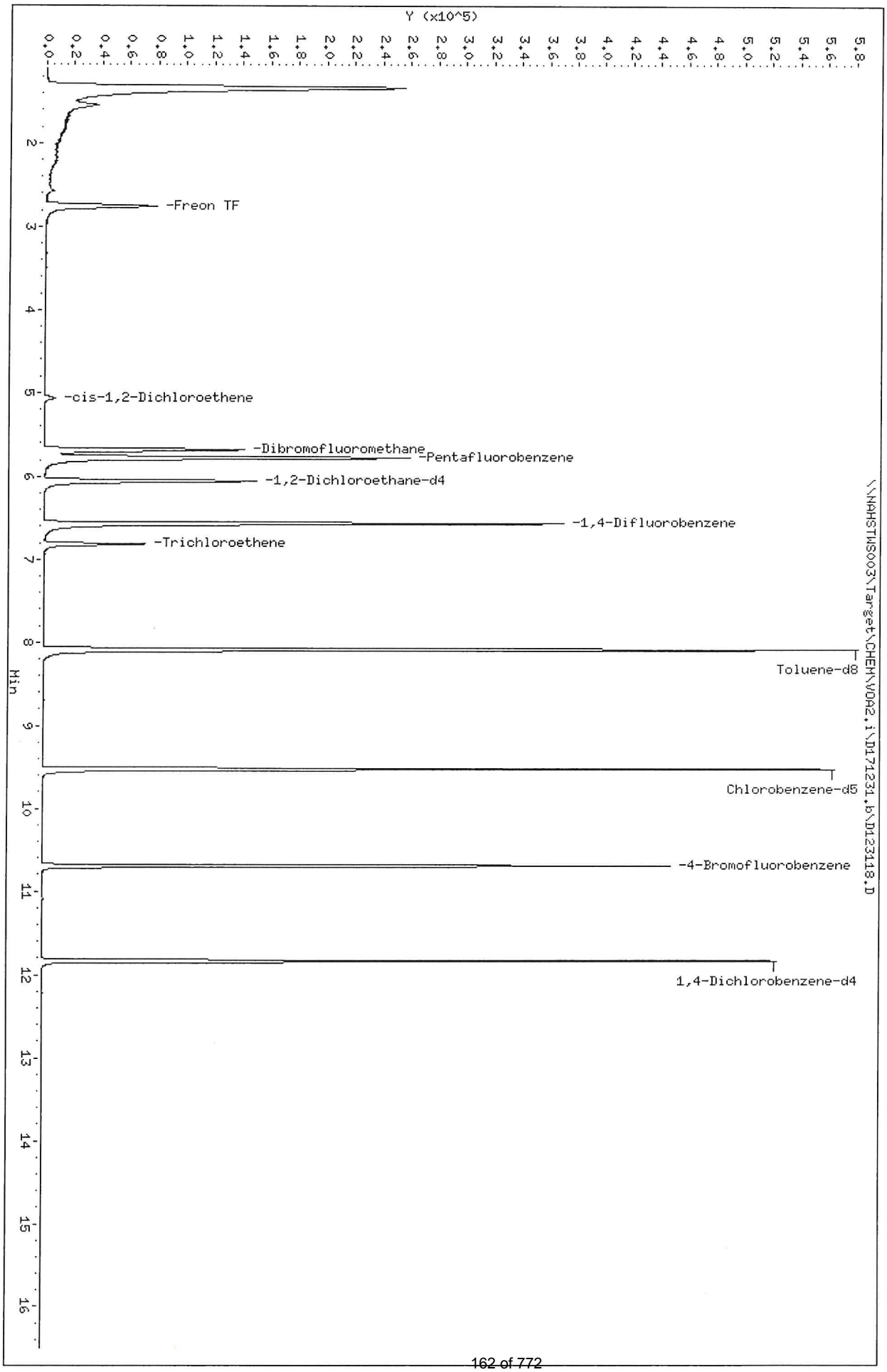
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	50.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Va	0.00000	
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	5.773	5.782	(1.000)	250347	50.0000	
$ 30 Dibromofluoromethane	113	5.680	5.689	(0.984)	111116	49.2632	49.26
* 36 1,4-Difluorobenzene	114	6.569	6.572	(1.000)	352693	50.0000	
$ 35 1,2-Dichloroethane-d4	65	6.055	6.055	(1.049)	126941	45.5679	45.56
* 47 Chlorobenzene-d5	117	9.524	9.527	(1.000)	318002	50.0000	
$ 48 Toluene-d8	98	8.090	8.093	(0.849)	409229	48.8083	48.80
$ 69 4-Bromofluorobenzene	95	10.695	10.695	(1.123)	145479	47.5153	47.51
* 70 1,4-Dichlorobenzene-d4	152	11.834	11.838	(1.000)	140020	50.0000	
27 cis-1,2-Dichloroethene	96	5.067	5.067	(0.878)	4857	1.70532	85.26(a)
38 Trichloroethene	130	6.812	6.819	(1.037)	29797	11.4064	570.31

QC Flag Legend

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


Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123118.D
Date : 31-DEC-2017 20:45
Client ID: HS17121224-06
Sample Info: HS17121224-06;HS17121224-06;;;
Purge Volume: 5.0
Column phase: DB624
Instrument: VOA2.i
Operator: AP
Column diameter: 0.18
Y (x10^5)
-Freon TF
-cis-1,2-Dichloroethene
-Dibromofluoromethane
-Pentafluorobenzene
-1,2-Dichloroethane-d4
-1,4-Difluorobenzene
-Trichloroethene
Toluene-d8
Chlorobenzene-d5
-4-Bromofluorobenzene
1,4-Dichlorobenzene-d4
\\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123118.D
Min

Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123118.D

Date : 31-DEC-2017 20:45

Client ID: HS17121224-06

Instrument: VOA2.i

Sample Info: HS17121224-06;HS17121224-06;;;

Purge Volume: 5.0

Operator: AP

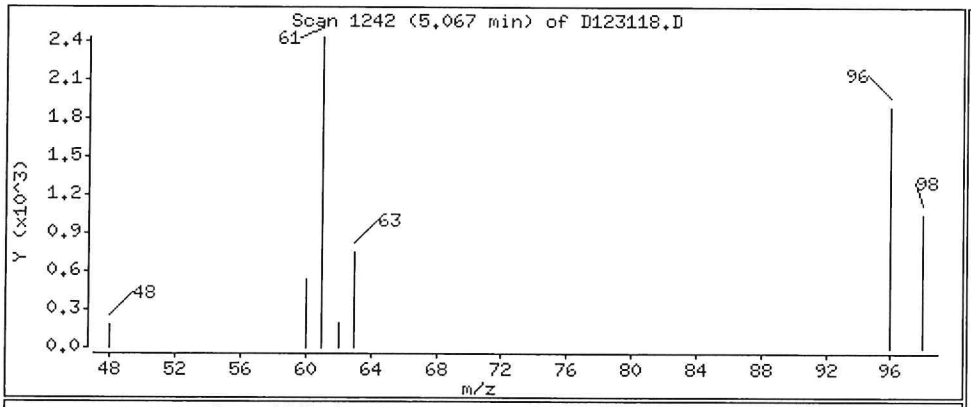
Column phase: DB624

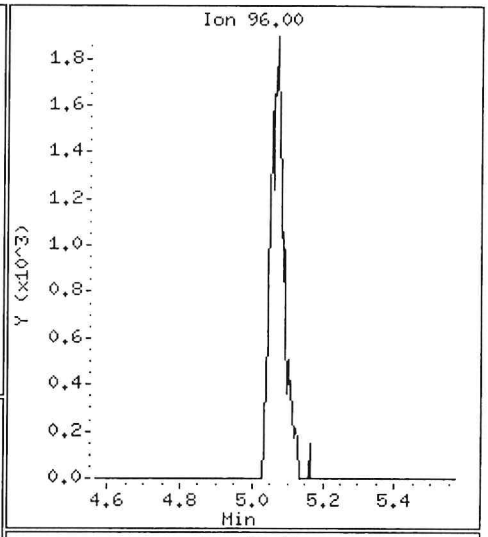
Column diameter: 0.18

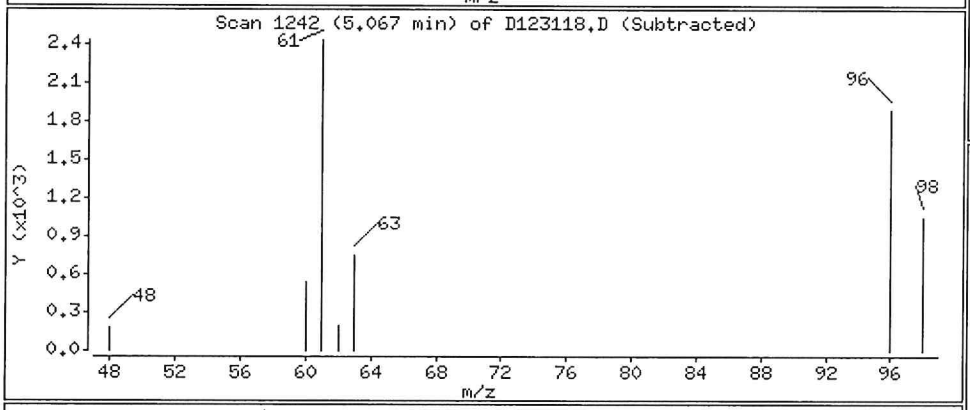
27 cis-1,2-Dichloroethene

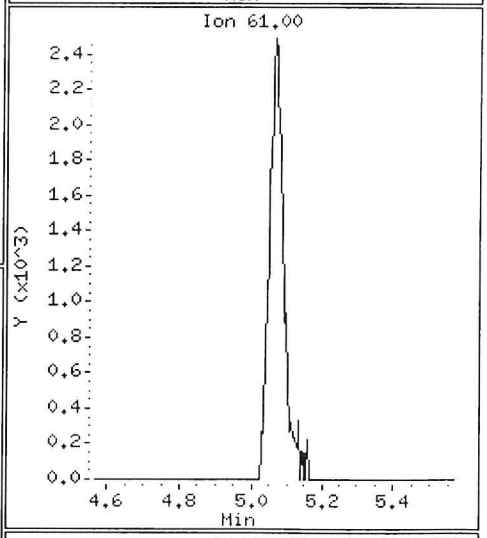
Concentration: 85.26 ug/l

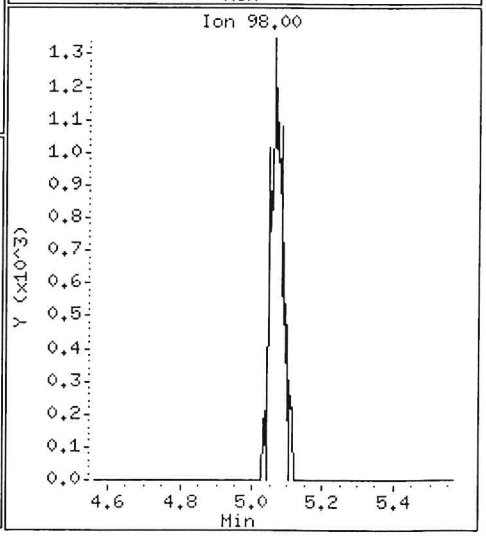
Review Code:











Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123118.D

Date : 31-DEC-2017 20:45

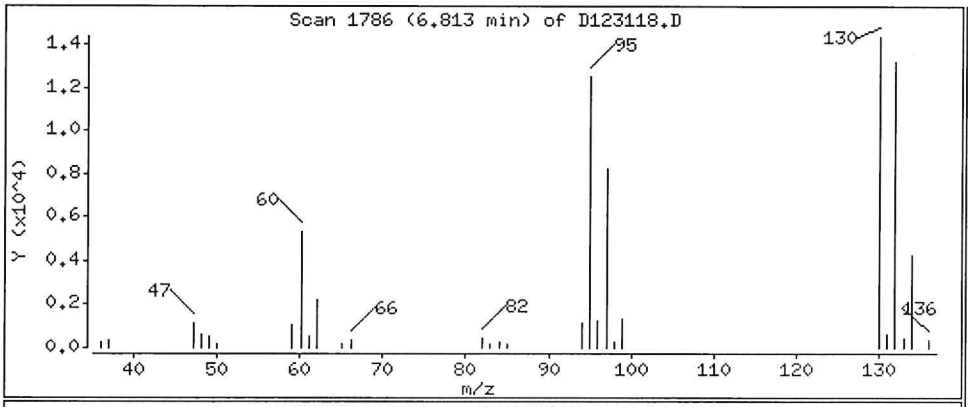
Client ID: HS17121224-06 Instrument: VOA2.i

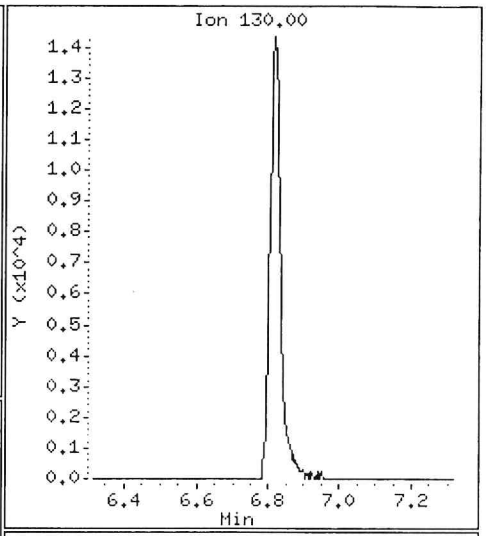
Sample Info: HS17121224-06;HS17121224-06;;;

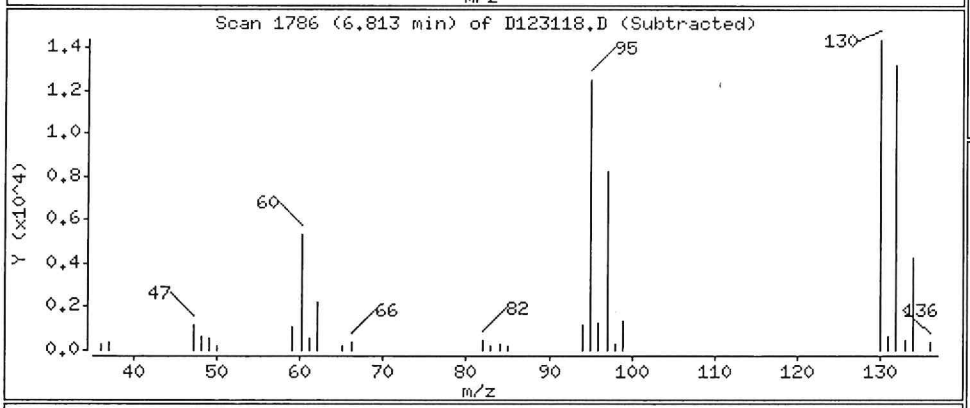
Purge Volume: 5.0 Operator: AP

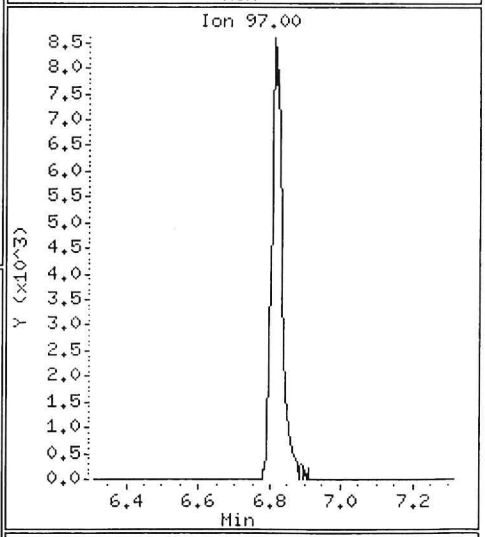
Column phase: DB624 Column diameter: 0.18

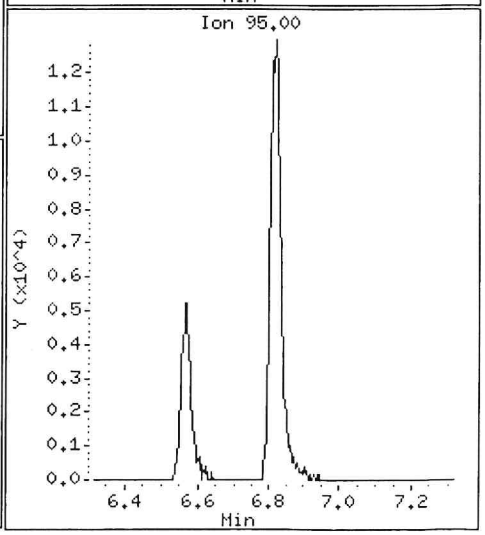
38 Trichloroethene Concentration: 570.31 ug/l Review Code:











Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123121.D
Report Date: 09-Feb-2018 19:43

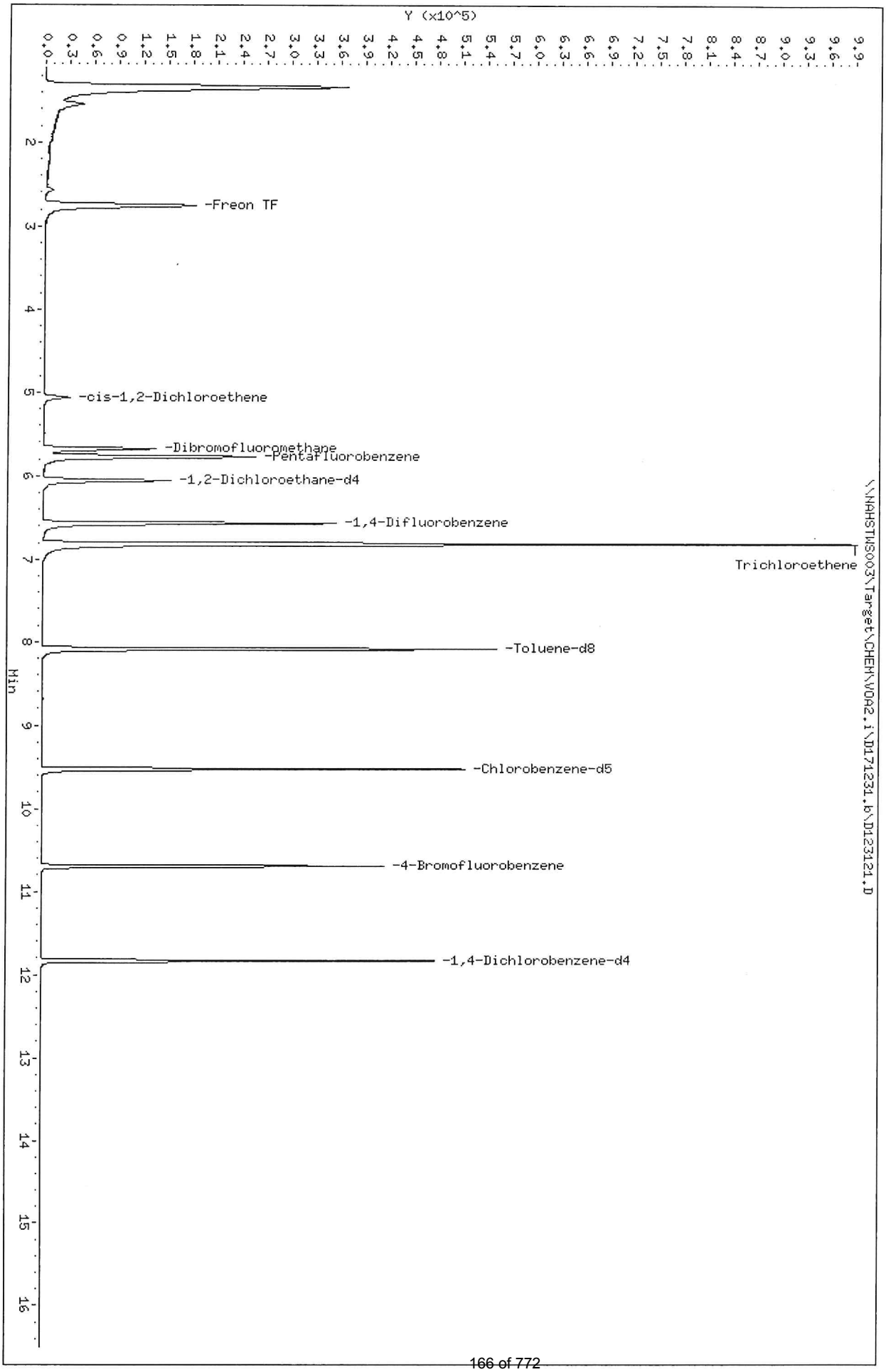
ALS Laboratory Group

Data file : \\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123121.D
Lab Smp Id: HS17121224-02 Client Smp ID: HS17121224-02
Inj Date : 31-DEC-2017 22:06
Operator : AP Inst ID: VOA2.i
Smp Info : HS17121224-02;HS17121224-02;;;
Misc Info : HS15080001;WATER;0;10;
Comment :
Method : \\nahstws003\Target\chem\voa2.i\D171231.b\8260LL.m
Meth Date : 09-Feb-2018 19:43 VOA2.i Quant Type: ISTD
Cal Date : 19-DEC-2017 12:14 Cal File: D121908.D
Als bottle: 18
Dil Factor: 10.00000
Integrator: HP RTE Compound Sublist: dn_bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

Name	Value	Description
DF	10.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Va	0.00000	
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	5.773	5.782	(1.000)	240916	50.0000	
$ 30 Dibromofluoromethane	113	5.680	5.689	(0.984)	106715	49.1641	49.16
* 36 1,4-Difluorobenzene	114	6.569	6.572	(1.000)	337926	50.0000	
$ 35 1,2-Dichloroethane-d4	65	6.055	6.055	(1.049)	125255	46.7228	46.72
* 47 Chlorobenzene-d5	117	9.524	9.527	(1.000)	288658	50.0000	
$ 48 Toluene-d8	98	8.087	8.093	(0.849)	374431	49.1978	49.19
$ 69 4-Bromofluorobenzene	95	10.692	10.695	(1.123)	134745	48.4833	48.48
* 70 1,4-Dichlorobenzene-d4	152	11.835	11.838	(1.000)	129570	50.0000	
27 cis-1,2-Dichloroethene	96	5.064	5.067	(0.877)	19847	7.24117	72.41
38 Trichloroethene	130	6.813	6.819	(1.037)	390776	156.127	1561.27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Date : 31-DEC-2017 22:06
Client ID: HS171214224-02
Sample Info: HS171214224-02;HS171214224-02;;;
Purge Volume: 5.0
Column phase: DB624
Instrument: VOA2.i
Operator: AP
Column diameter: 0.18
Y (x10^5)
Min
-Freon TF
-cis-1,2-Dichloroethene
-Dibromofluoromethane
-Pentafluorobenzene
-1,2-Dichloroethane-d4
-1,4-Difluorobenzene
Trichloroethene
-Toluene-d8
-Chlorobenzene-d5
-4-Bromofluorobenzene
-1,4-Dichlorobenzene-d4
\\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123121.D

Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123121.D

Date : 31-DEC-2017 22:06

Client ID: HS17121224-02

Instrument: VOA2.i

Sample Info: HS17121224-02;HS17121224-02;;;

Purge Volume: 5.0

Operator: AP

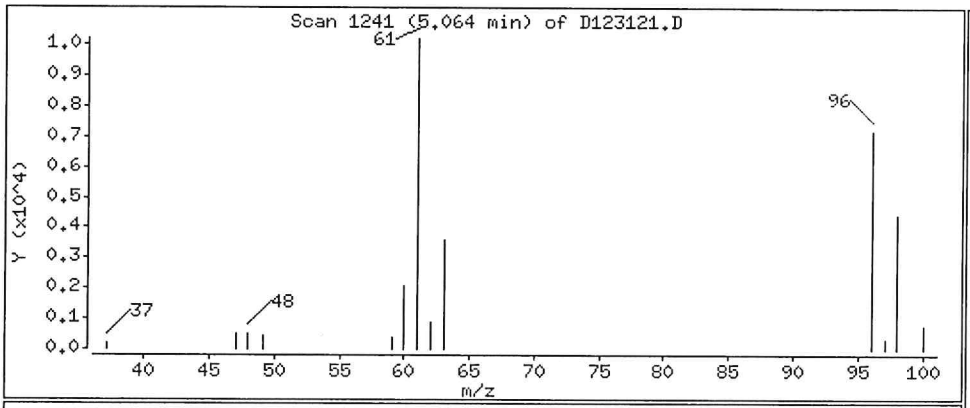
Column phase: DB624

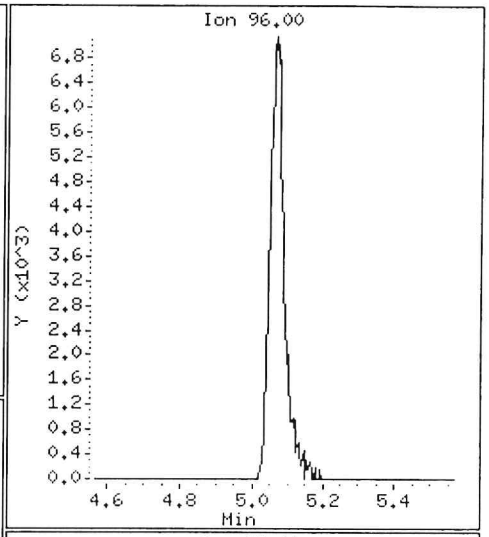
Column diameter: 0.18

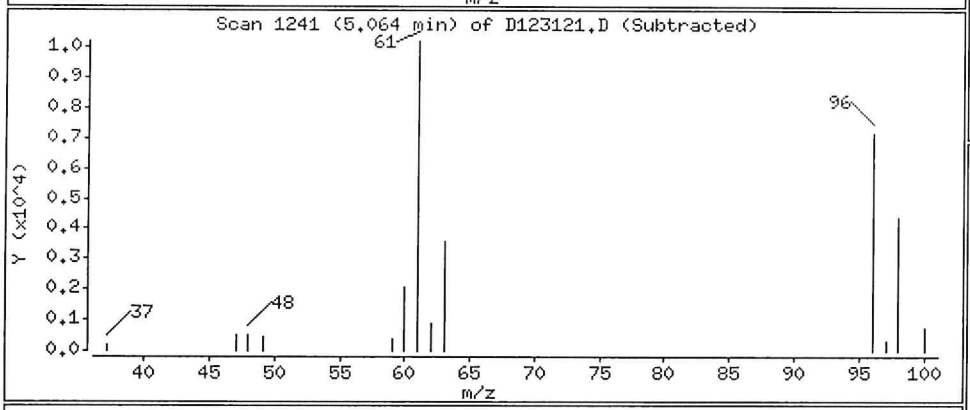
27 cis-1,2-Dichloroethene

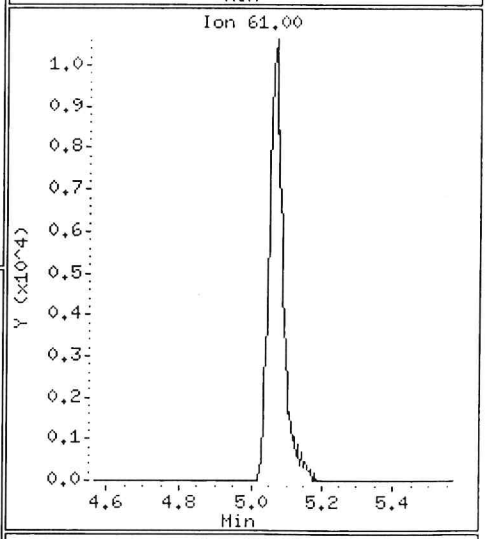
Concentration: 72.41 ug/l

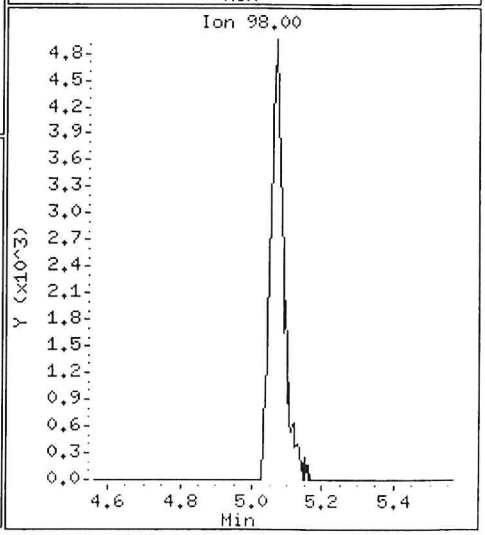
Review Code:











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Date : 31-DEC-2017 22:06

Client ID: HS17121224-02

Instrument: VOA2.i

Sample Info: HS17121224-02;HS17121224-02;;;

Purge Volume: 5.0

Operator: AP

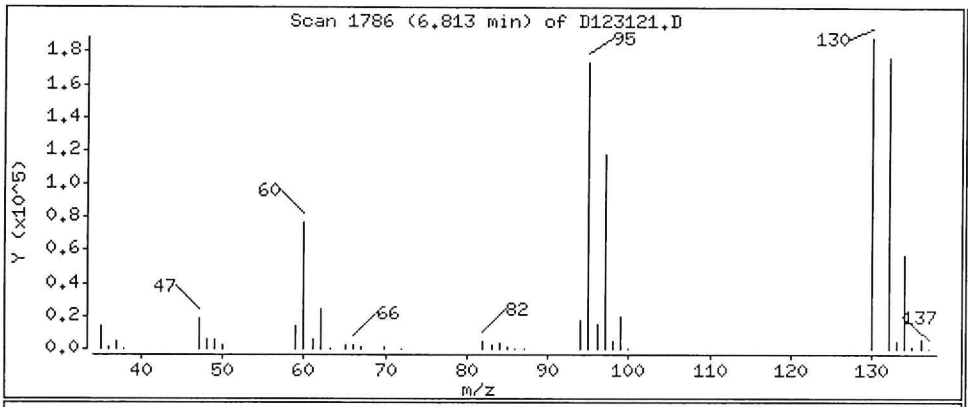
Column phase: DB624

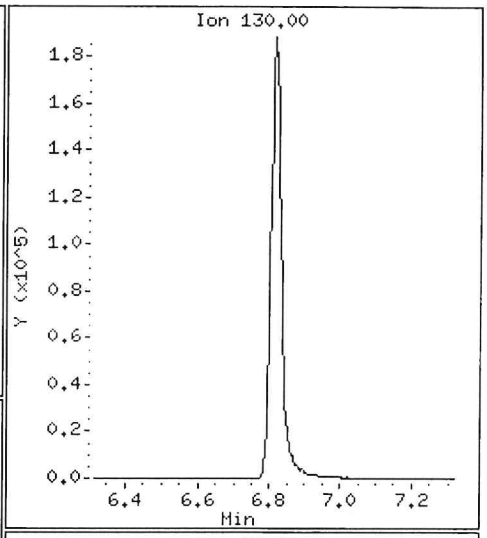
Column diameter: 0.18

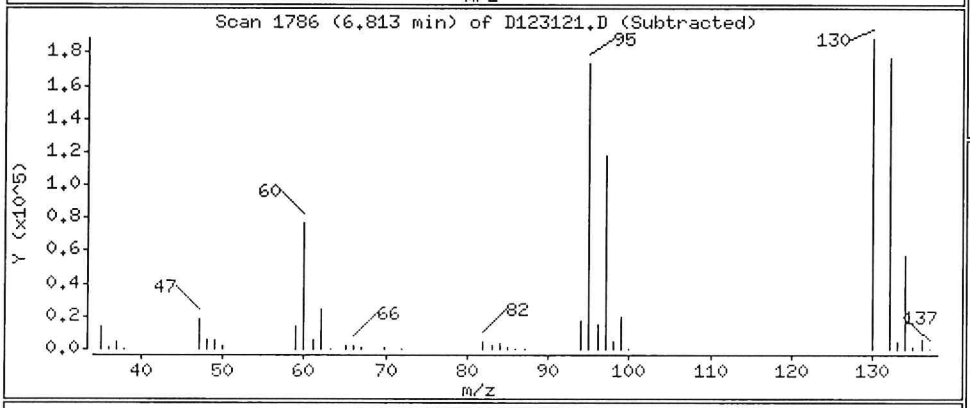
38 Trichloroethene

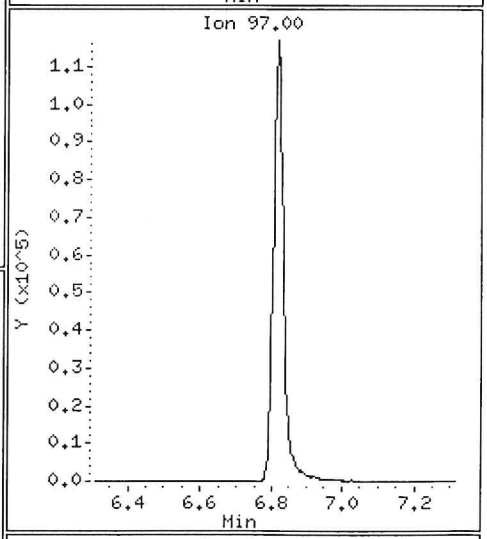
Concentration: 1561.27 ug/l

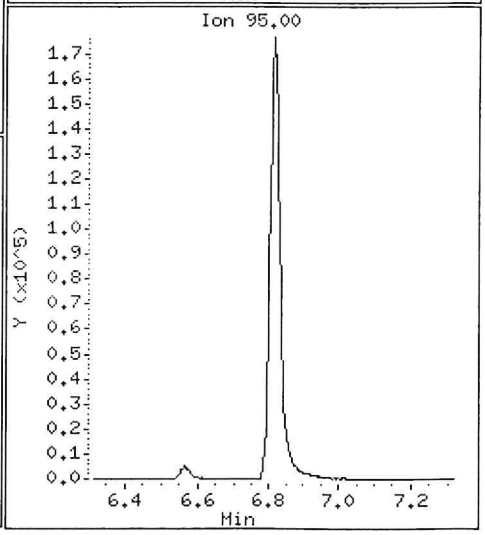
Review Code:











Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123122.D
Report Date: 09-Feb-2018 19:43

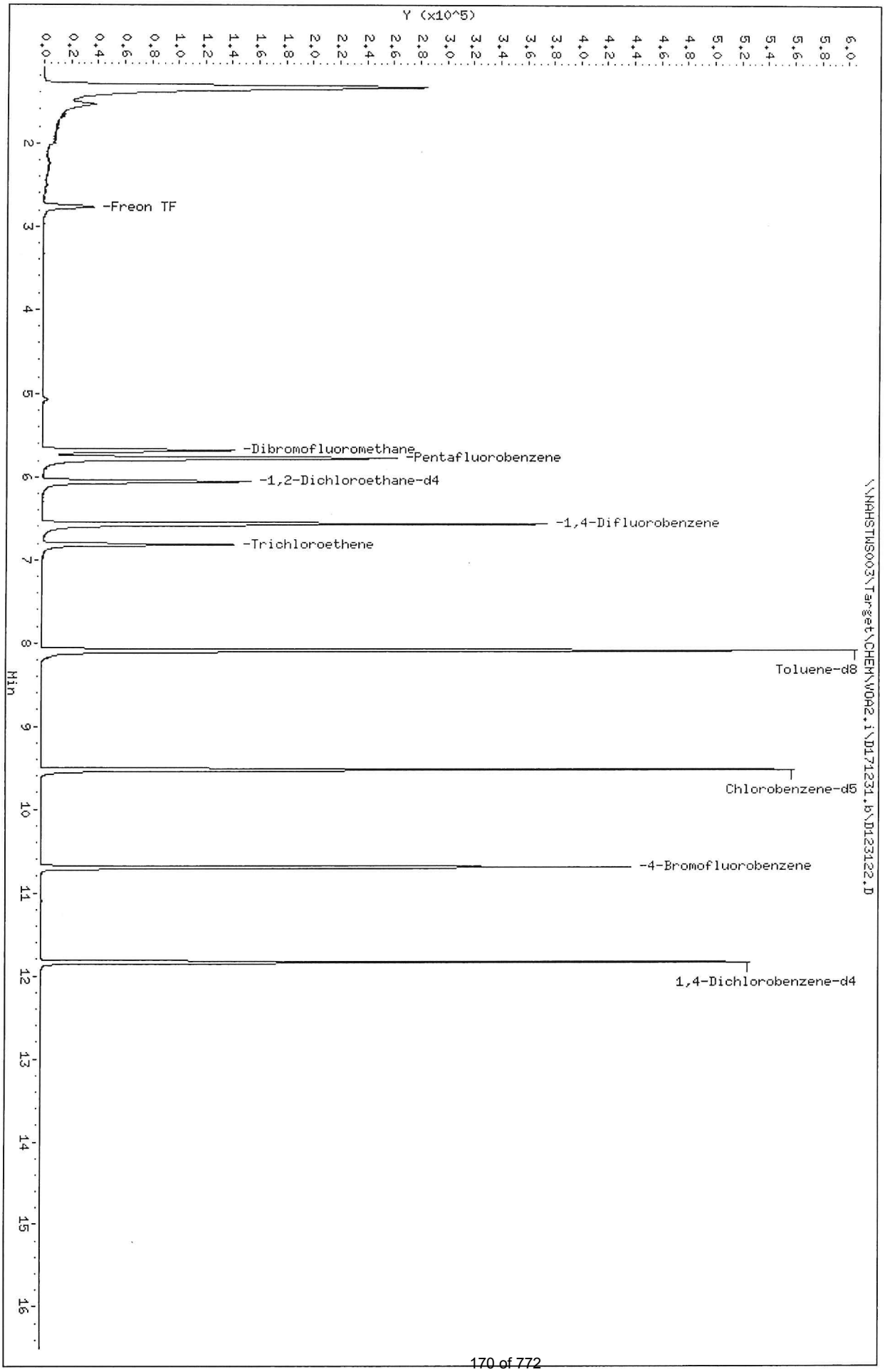
ALS Laboratory Group

Data file : \\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123122.D
Lab Smp Id: HS17121224-02 Client Smp ID: HS17121224-02
Inj Date : 31-DEC-2017 22:33
Operator : AP Inst ID: VOA2.i
Smp Info : HS17121224-02;HS17121224-02;;;
Misc Info : HS15080001;WATER;0;100;
Comment :
Method : \\nahstws003\Target\chem\voa2.i\D171231.b\8260LL.m
Meth Date : 09-Feb-2018 19:43 VOA2.i Quant Type: ISTD
Cal Date : 19-DEC-2017 12:14 Cal File: D121908.D
Als bottle: 18
Dil Factor: 100.00000
Integrator: HP RTE Compound Sublist: dn_bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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
Va	0.00000	
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	5.773	5.782	(1.000)	253601	50.0000	
$ 30 Dibromofluoromethane	113	5.686	5.689	(0.985)	113295	49.5847	49.58
* 36 1,4-Difluorobenzene	114	6.565	6.572	(1.000)	363665	50.0000	
$ 35 1,2-Dichloroethane-d4	65	6.058	6.055	(1.049)	130411	46.2128	46.21
* 47 Chlorobenzene-d5	117	9.524	9.527	(1.000)	319578	50.0000	
$ 48 Toluene-d8	98	8.086	8.093	(0.849)	412378	48.9413	48.94
$ 69 4-Bromofluorobenzene	95	10.695	10.695	(1.123)	146162	47.5030	47.50
* 70 1,4-Dichlorobenzene-d4	152	11.835	11.838	(1.000)	137757	50.0000	
38 Trichloroethene	130	6.819	6.819	(1.039)	56987	21.1566	2115.66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Client ID: HS17121224-02
Sample Info: HS17121224-02;HS17121224-02;;;
Purge Volume: 5.0
Column phase: DB624
Instrument: VOA2.i
Operator: AP
Column diameter: 0.18
Y (x10^5)
-Freon TF
-Dibromofluoromethane
-Pentafluorobenzene
-1,2-Dichloroethane-d4
-1,4-Difluorobenzene
-Trichloroethene
Toluene-d8
Chlorobenzene-d5
-4-Bromofluorobenzene
1,4-Dichlorobenzene-d4
\\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123122.D
Min

Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123122.D

Date : 31-DEC-2017 22:33

Client ID: HS17121224-02

Instrument: VOA2.i

Sample Info: HS17121224-02;HS17121224-02;;;

Purge Volume: 5.0

Operator: AP

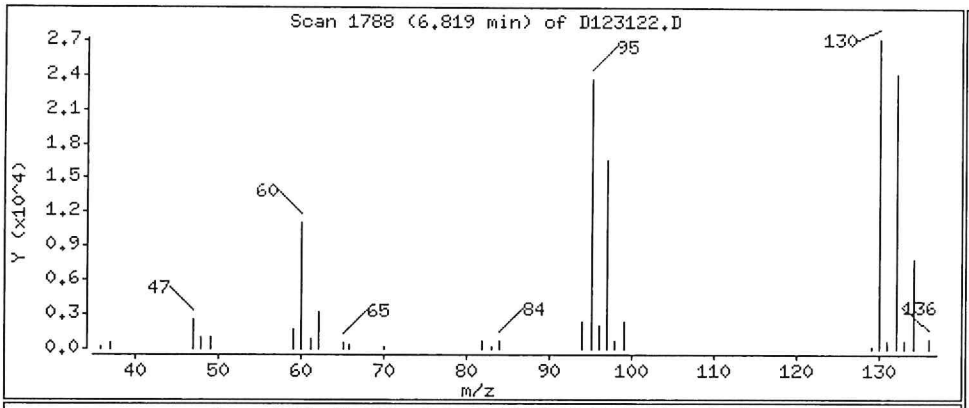
Column phase: DB624

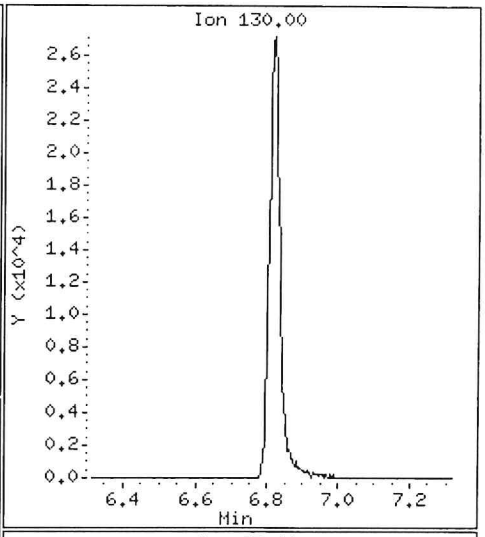
Column diameter: 0.18

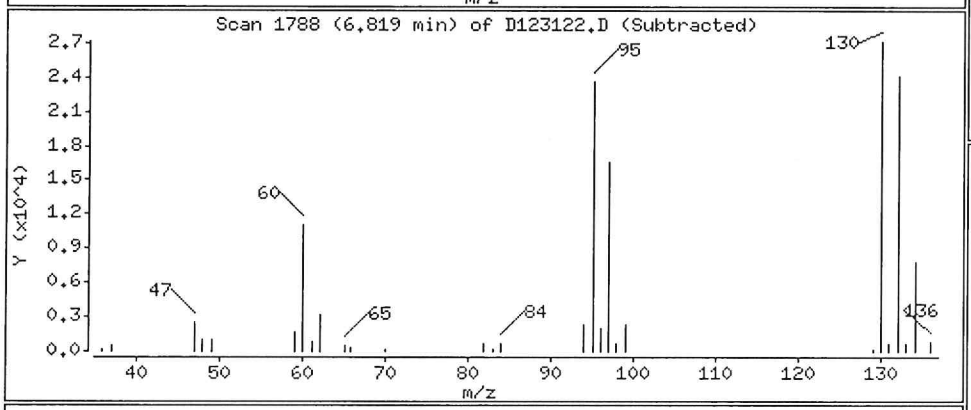
38 Trichloroethene

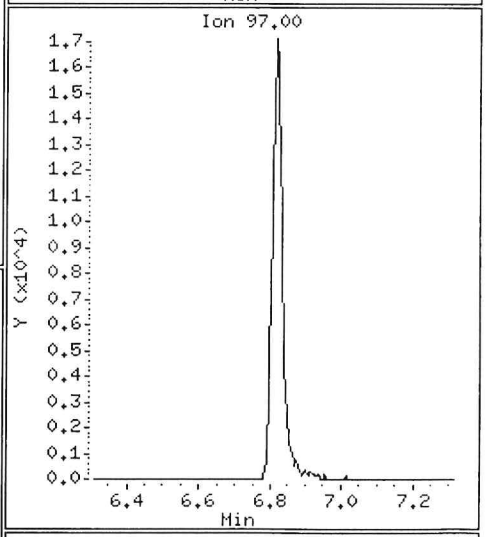
Concentration: 2115.66 ug/l

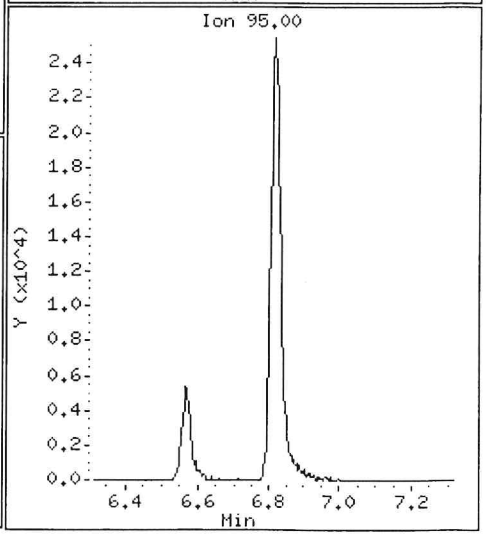
Review Code:











Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123123.D
Report Date: 09-Feb-2018 19:43

ALS Laboratory Group

Data file : \\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123123.D
Lab Smp Id: HS17121224-04 Client Smp ID: HS17121224-04
Inj Date : 31-DEC-2017 23:01
Operator : AP Inst ID: VOA2.i
Smp Info : HS17121224-04;HS17121224-04;;;
Misc Info : HS15080001;WATER;0;10;
Comment :
Method : \\nahstws003\Target\chem\voa2.i\D171231.b\8260LL.m
Meth Date : 09-Feb-2018 19:43 VOA2.i Quant Type: ISTD
Cal Date : 19-DEC-2017 12:14 Cal File: D121908.D
Als bottle: 19
Dil Factor: 10.00000
Integrator: HP RTE Compound Sublist: dn_bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

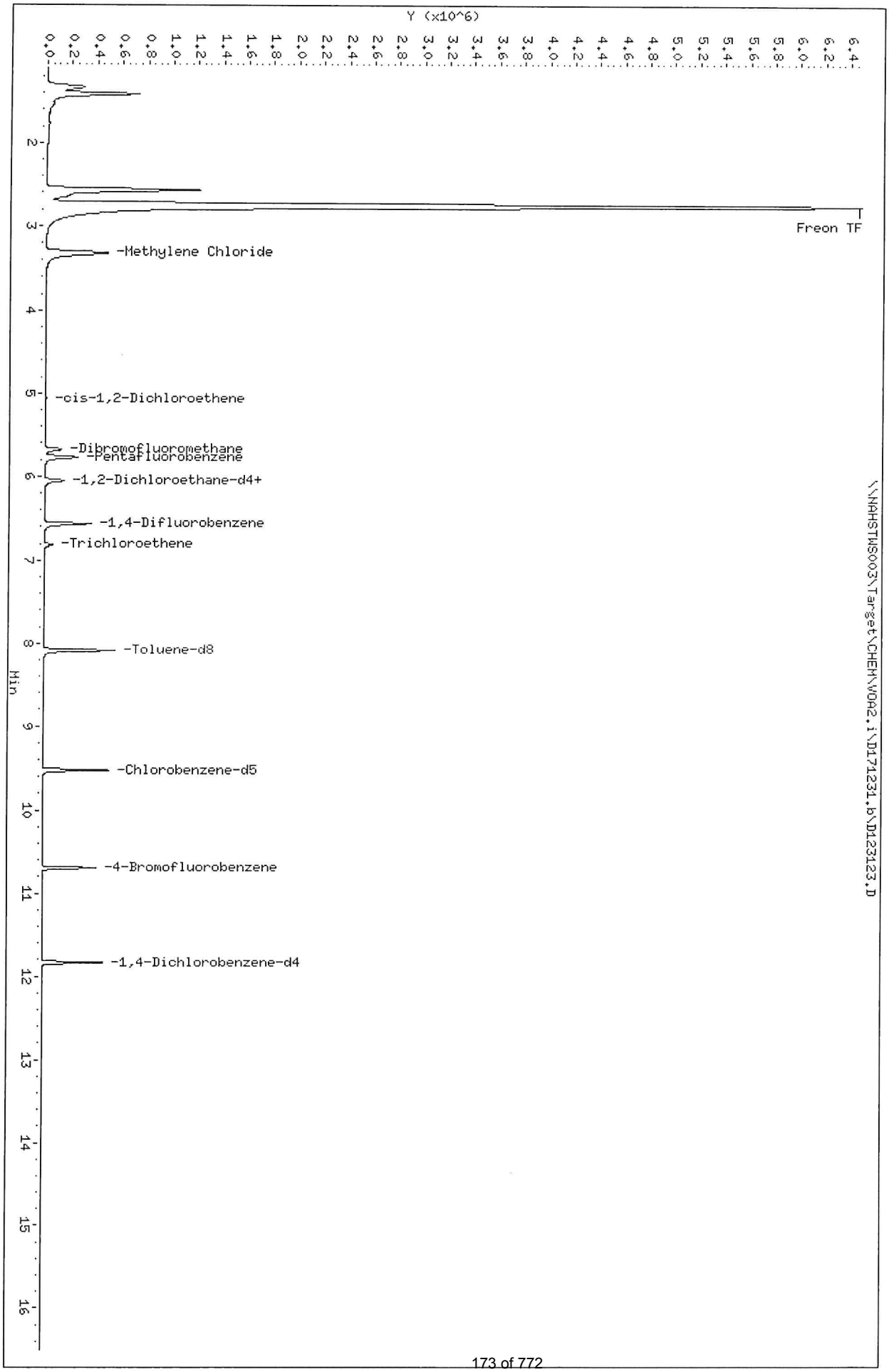
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	10.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Va	0.00000	
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	5.770	5.782	(1.000)	243802	50.0000	
$ 30 Dibromofluoromethane	113	5.680	5.689	(0.984)	104749	47.6871	47.68
* 36 1,4-Difluorobenzene	114	6.565	6.572	(1.000)	341216	50.0000	
$ 35 1,2-Dichloroethane-d4	65	6.049	6.055	(1.048)	125766	46.3581	46.35
* 47 Chlorobenzene-d5	117	9.524	9.527	(1.000)	296222	50.0000	
$ 48 Toluene-d8	98	8.086	8.093	(0.849)	388812	49.7828	49.78
$ 69 4-Bromofluorobenzene	95	10.695	10.695	(1.123)	139812	49.0220	49.02
* 70 1,4-Dichlorobenzene-d4	152	11.831	11.838	(1.000)	134393	50.0000	
37 Benzene	78	6.084	6.090	(0.927)	4591	0.51137	5.11(a)
27 cis-1,2-Dichloroethene	96	5.060	5.067	(0.877)	3924	1.41472	14.14(a)
17 Methylene Chloride	84	3.321	3.334	(0.576)	399894	149.855	1498.55
38 Trichloroethene	130	6.816	6.819	(1.038)	28353	11.2187	112.18

QC Flag Legend

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


Y (x10^6)
Freon TF
-Methylene Chloride
-cis-1,2-Dichloroethene
-Dibromofluoromethane
-Pentafluorobenzene
-1,2-Dichloroethane-d4+
-1,4-Difluorobenzene
-Trichloroethene
-Toluene-d8
-Chlorobenzene-d5
-4-Bromofluorobenzene
-1,4-Dichlorobenzene-d4
Min
\\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123123.D
Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123123.D
Date : 31-DEC-2017 23:01
Client ID: HS17121224-04
Sample Info: HS17121224-04;HS17121224-04;;;
Purge Volume: 5.0
Column phase: DB624
Instrument: VOA2.i
Operator: AP
Column diameter: 0.18

Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123123.D

Date : 31-DEC-2017 23:01

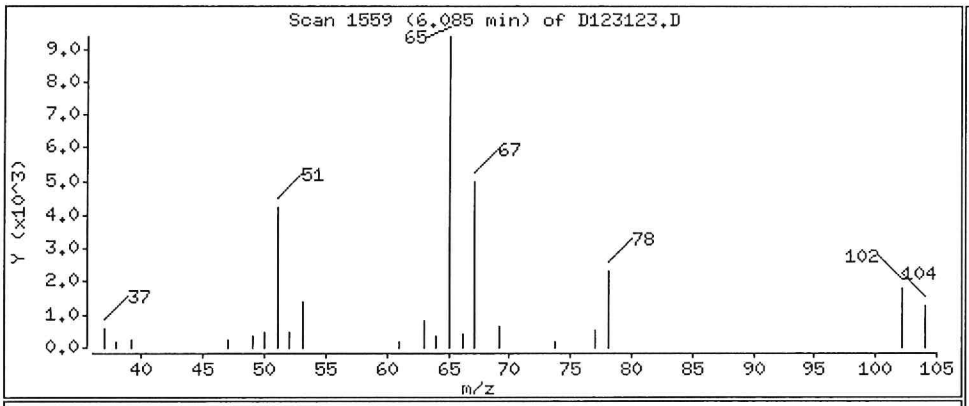
Client ID: HS17121224-04 Instrument: VOA2.i

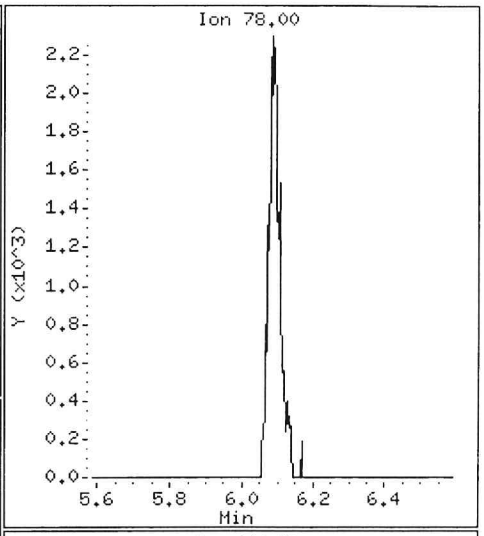
Sample Info: HS17121224-04;HS17121224-04;;;

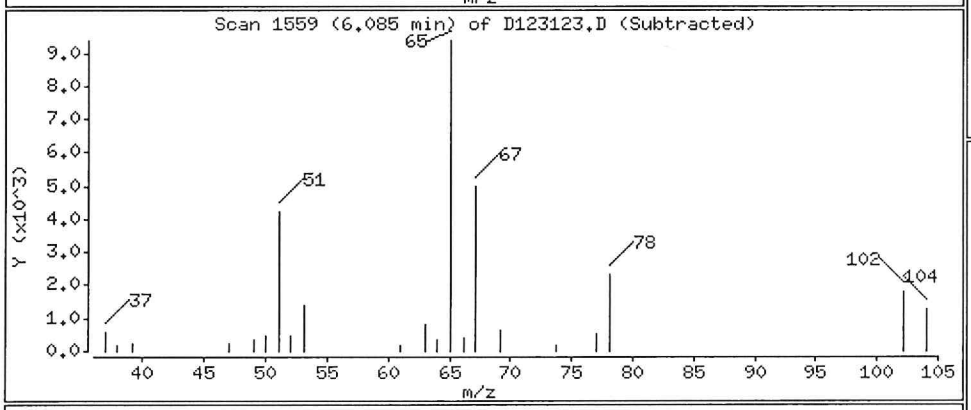
Purge Volume: 5.0 Operator: AP

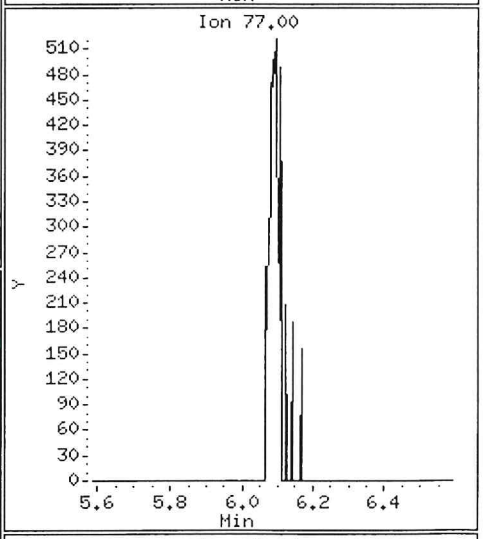
Column phase: DB624 Column diameter: 0.18

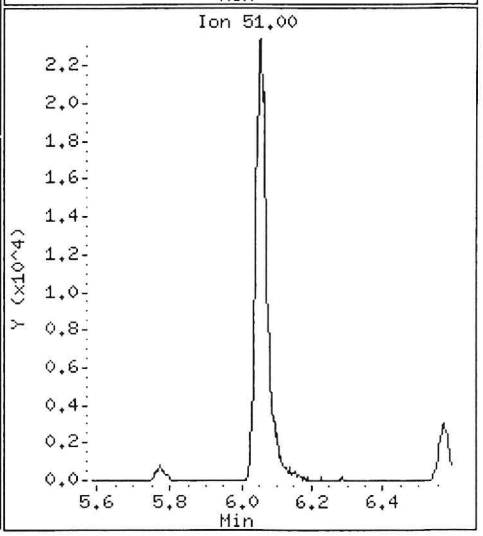
37 Benzene Concentration: 5.11 ug/l Review Code:











Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123123.D

Date : 31-DEC-2017 23:01

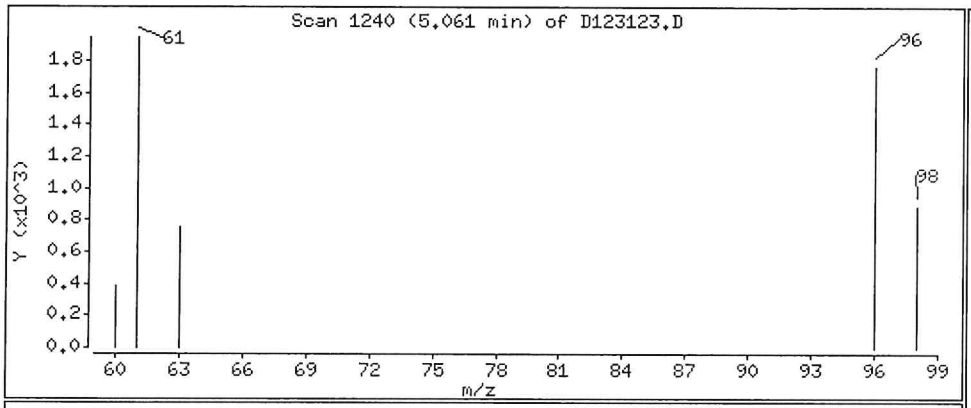
Client ID: HS17121224-04 Instrument: VOA2.i

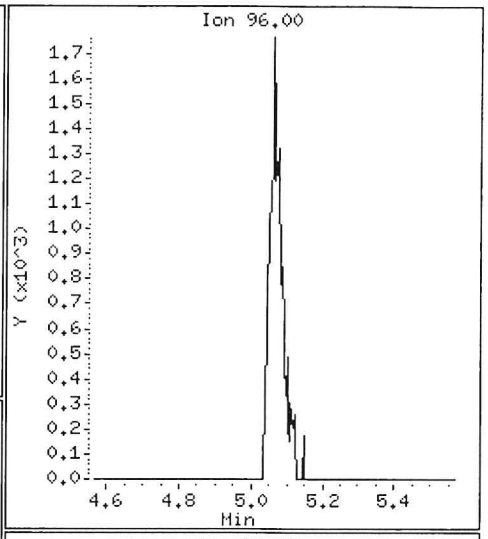
Sample Info: HS17121224-04;HS17121224-04;;;

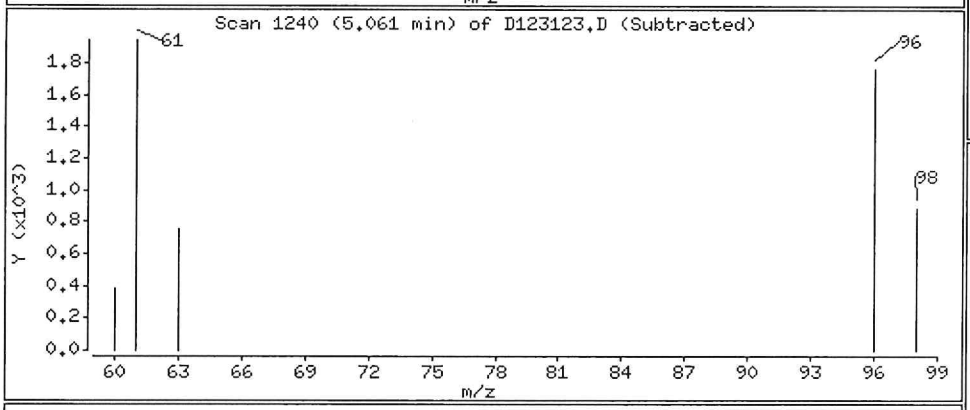
Purge Volume: 5.0 Operator: AP

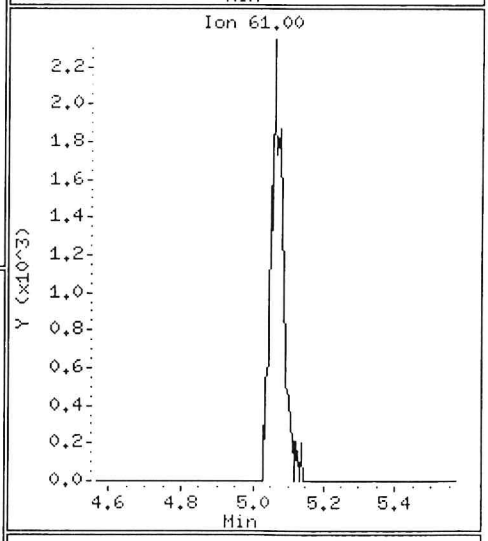
Column phase: DB624 Column diameter: 0.18

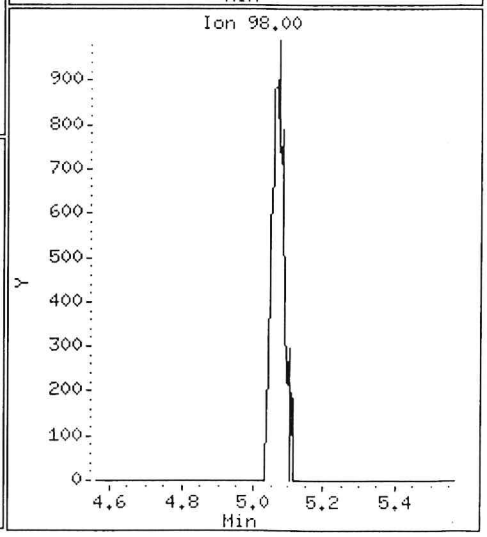
27 cis-1,2-Dichloroethene Concentration: 14.14 ug/l Review Code:











Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123123.D

Date : 31-DEC-2017 23:01

Client ID: HS17121224-04

Instrument: VOA2.i

Sample Info: HS17121224-04;HS17121224-04;;;

Purge Volume: 5.0

Operator: AP

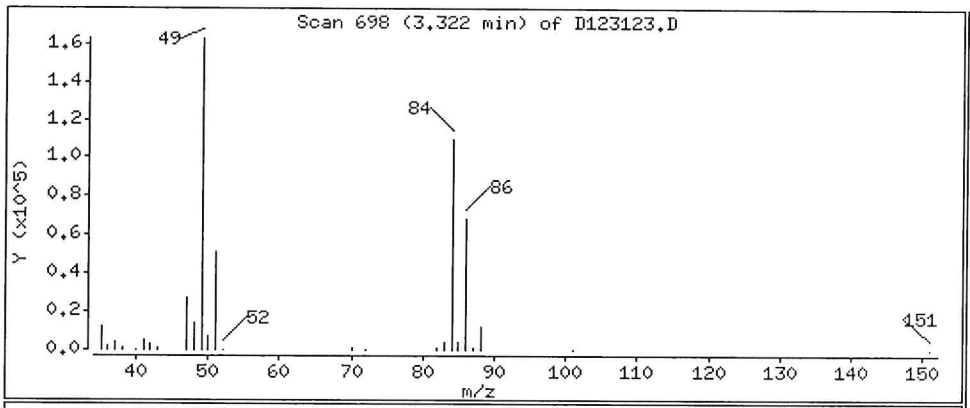
Column phase: DB624

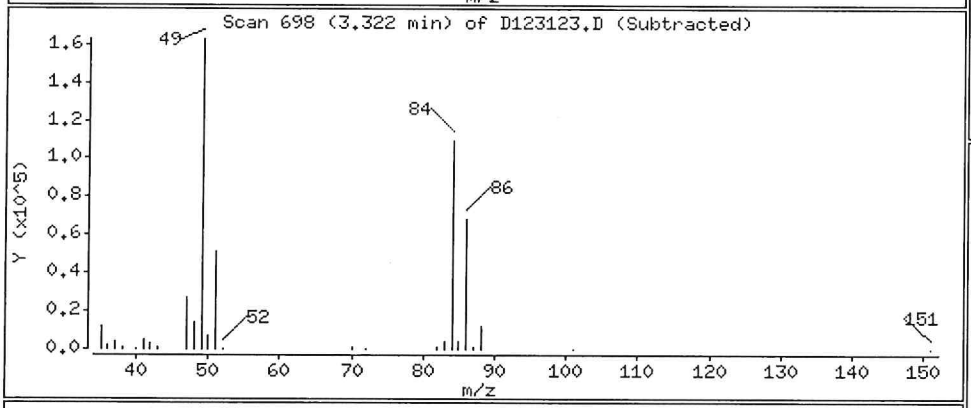
Column diameter: 0.18

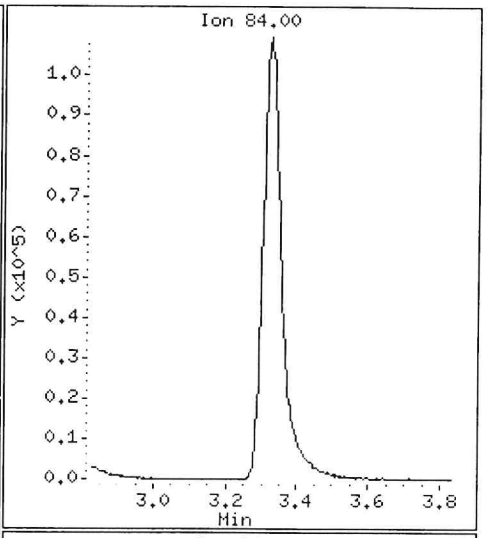
17 Methylene Chloride

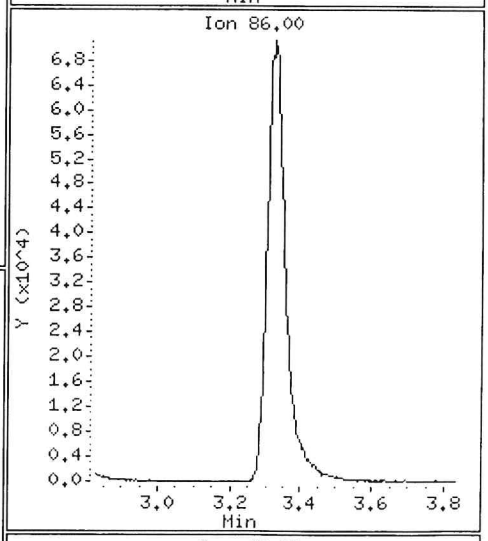
Concentration: 1498.55 ug/l

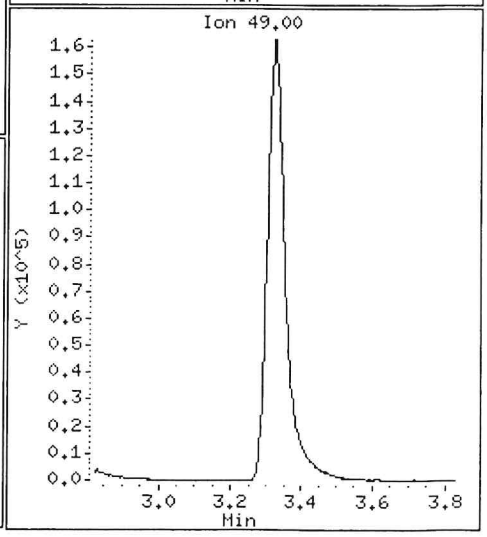
Review Code:











Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123123.D

Date : 31-DEC-2017 23:01

Client ID: HS17121224-04

Instrument: VOA2.i

Sample Info: HS17121224-04;HS17121224-04;;;

Purge Volume: 5.0

Operator: AP

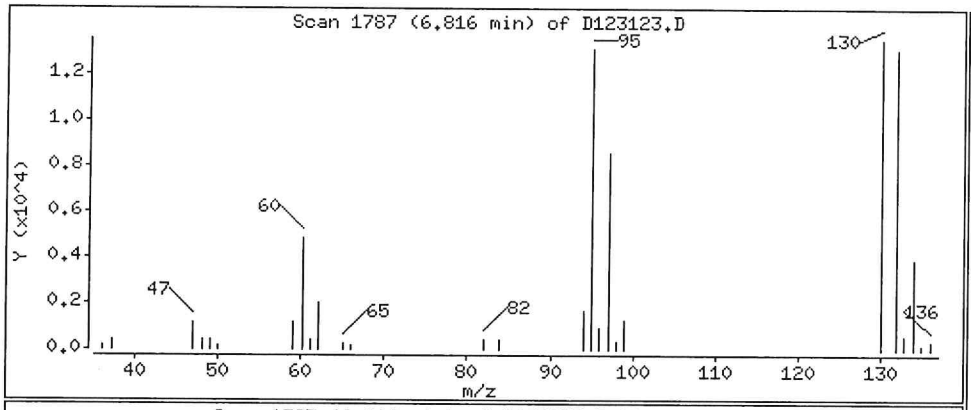
Column phase: DB624

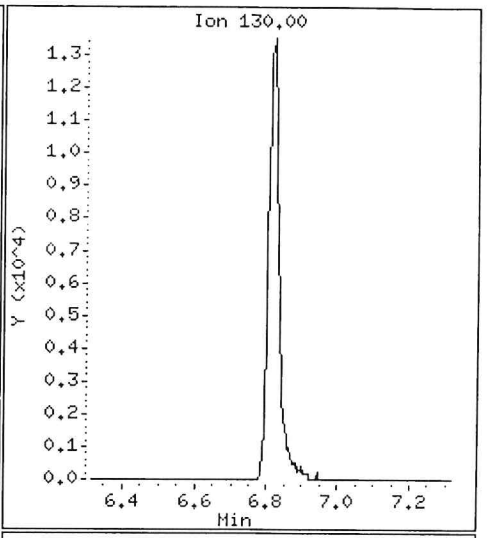
Column diameter: 0.18

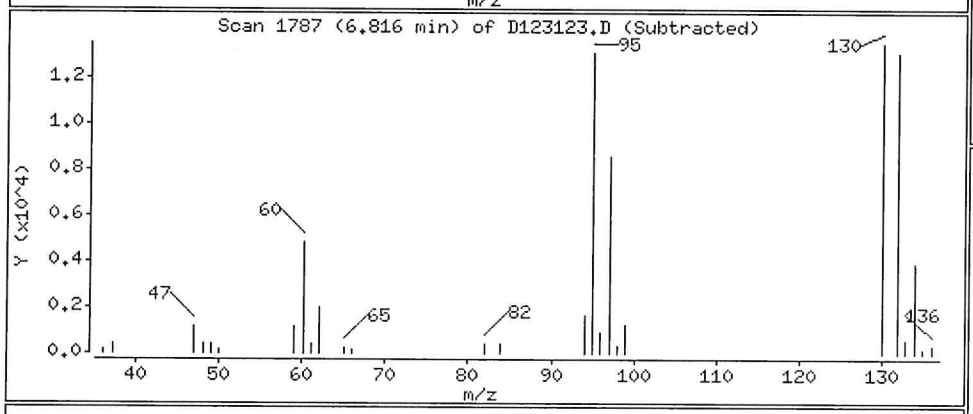
38 Trichloroethene

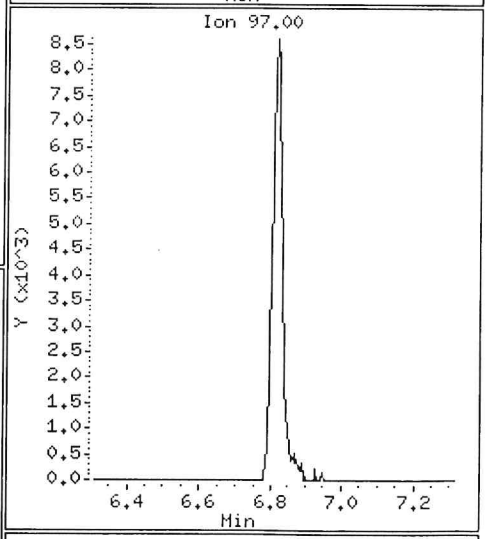
Concentration: 112.18 ug/l

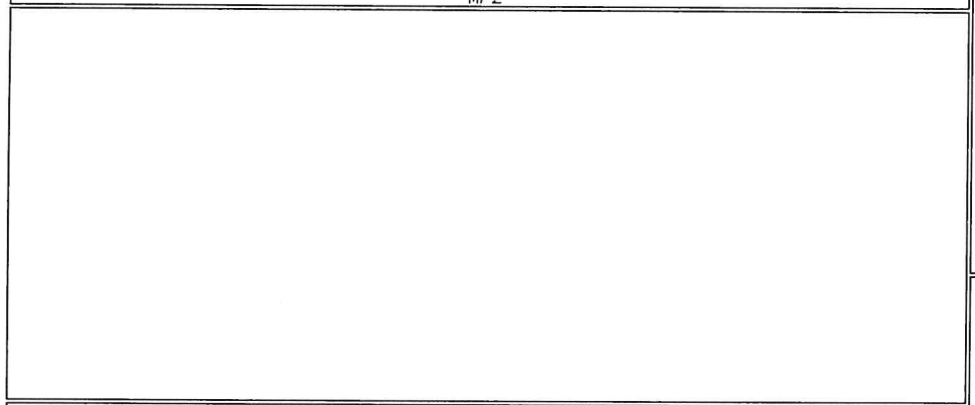
Review Code:

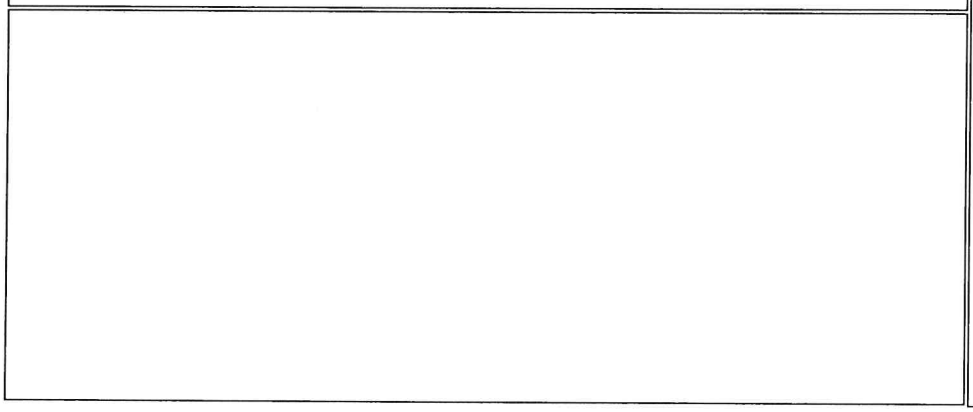


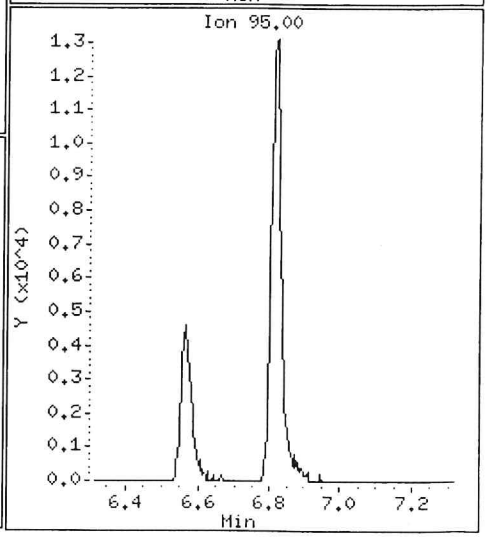












Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123124.D
Report Date: 09-Feb-2018 19:43

ALS Laboratory Group

Data file : \\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123124.D
Lab Smp Id: HS17121224-04 Client Smp ID: HS17121224-04
Inj Date : 31-DEC-2017 23:28
Operator : AP Inst ID: VOA2.i
Smp Info : HS17121224-04;HS17121224-04;;;
Misc Info : HS15080001;WATER;0;100;
Comment :
Method : \\nahstws003\Target\chem\voa2.i\D171231.b\8260LL.m
Meth Date : 09-Feb-2018 19:43 VOA2.i Quant Type: ISTD
Cal Date : 19-DEC-2017 12:14 Cal File: D121908.D
Als bottle: 19
Dil Factor: 100.00000
Integrator: HP RTE Compound Sublist: dn_bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

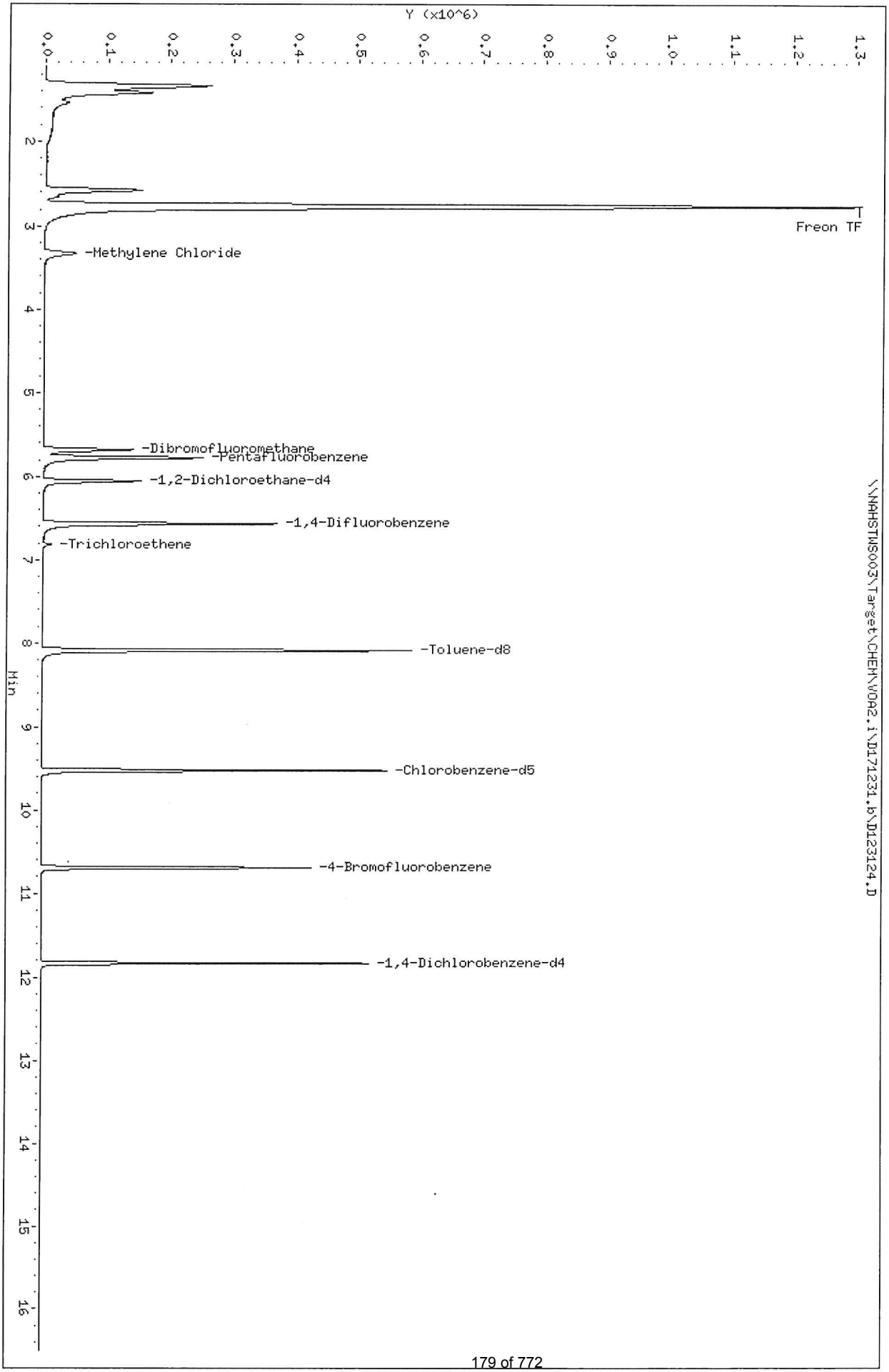
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	100.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Va	0.00000	
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	5.776	5.782	(1.000)	246964	50.0000	
$ 30 Dibromofluoromethane	113	5.683	5.689	(0.984)	110195	49.5241	49.52
* 36 1,4-Difluorobenzene	114	6.568	6.572	(1.000)	353199	50.0000	
$ 35 1,2-Dichloroethane-d4	65	6.052	6.055	(1.048)	125355	45.6150	45.61
* 47 Chlorobenzene-d5	117	9.524	9.527	(1.000)	316503	50.0000	
$ 48 Toluene-d8	98	8.089	8.093	(0.849)	410441	49.1847	49.18
$ 69 4-Bromofluorobenzene	95	10.695	10.695	(1.123)	146113	47.9484	47.94
* 70 1,4-Dichlorobenzene-d4	152	11.834	11.838	(1.000)	138914	50.0000	
17 Methylene Chloride	84	3.334	3.334	(0.577)	42257	15.6325	1563.25
38 Trichloroethene	130	6.819	6.819	(1.038)	5302	2.02671	202.67(a)

QC Flag Legend

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


Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123124.D
Date : 31-DEC-2017 23:28
Client ID: HS17121224-04
Sample Info: HS17121224-04;HS17121224-04;;;
Purge Volume: 5.0
Column phase: DB624
Instrument: VOA2.i
Operator: AP
Column diameter: 0.18
\\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123124.D
Y (x10^6)
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
1.1
1.2
1.3
Min
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
Freon TF
-Methylene Chloride
-Dibromofluoromethane
-Pentafluorobenzene
-1,2-Dichloroethane-d4
-1,4-Difluorobenzene
-Trichloroethene
-Toluene-d8
-Chlorobenzene-d5
-4-Bromofluorobenzene
-1,4-Dichlorobenzene-d4

Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123124.D

Date : 31-DEC-2017 23:28

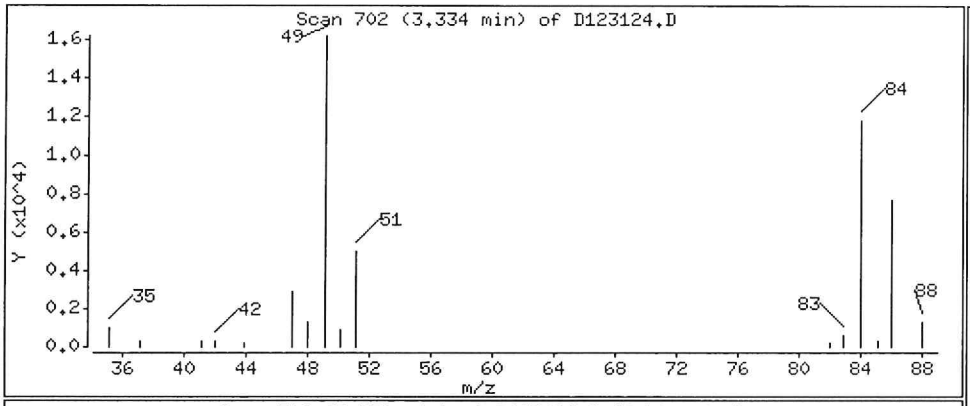
Client ID: HS17121224-04 Instrument: VOA2.i

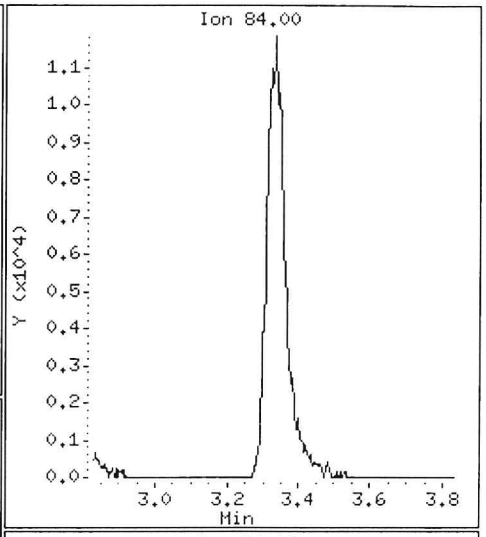
Sample Info: HS17121224-04;HS17121224-04;;;

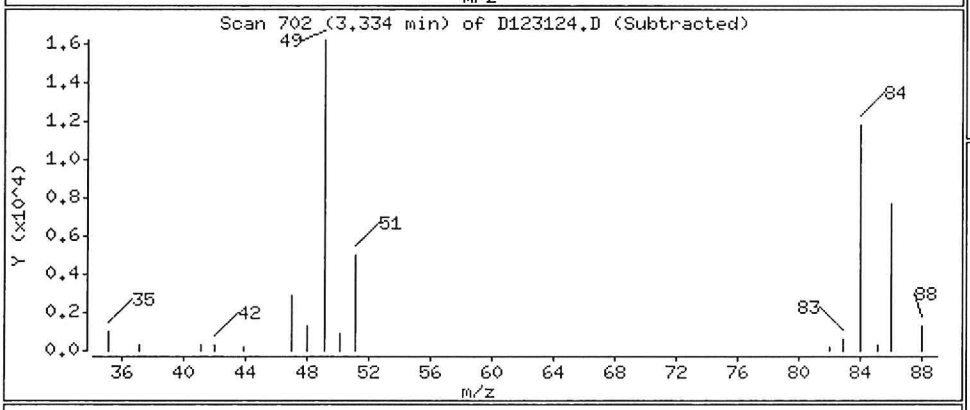
Purge Volume: 5.0 Operator: AP

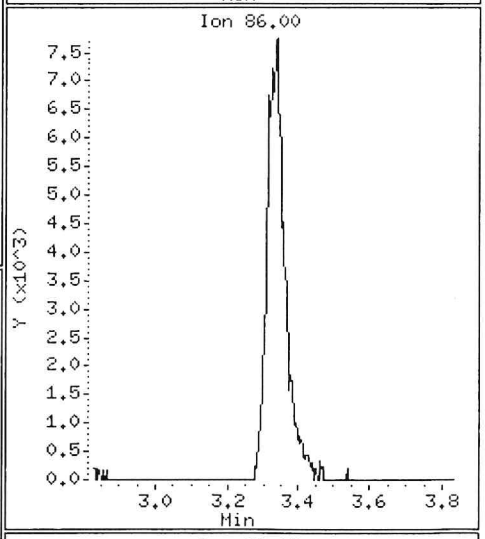
Column phase: DB624 Column diameter: 0.18

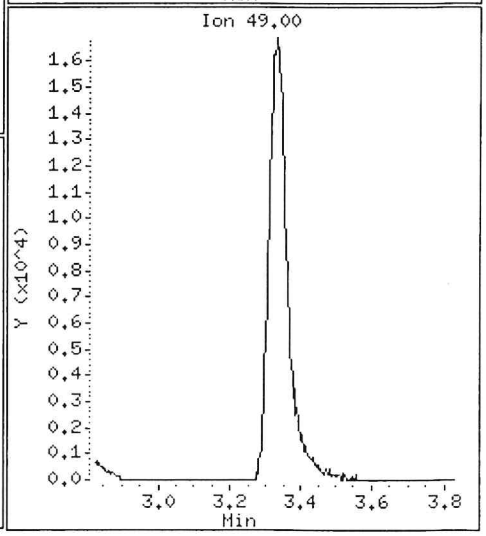
17 Methylene Chloride Concentration: 1563.25 ug/l Review Code:











Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123124.D

Date : 31-DEC-2017 23:28

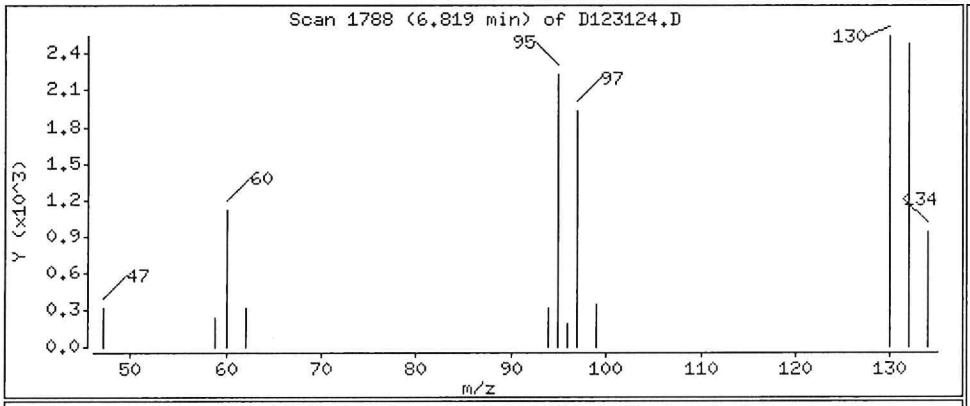
Client ID: HS17121224-04 Instrument: VOA2.i

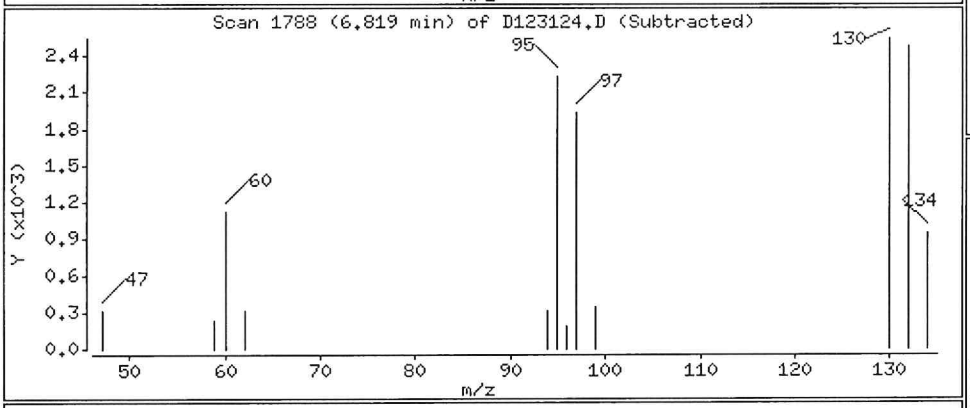
Sample Info: HS17121224-04;HS17121224-04;;;

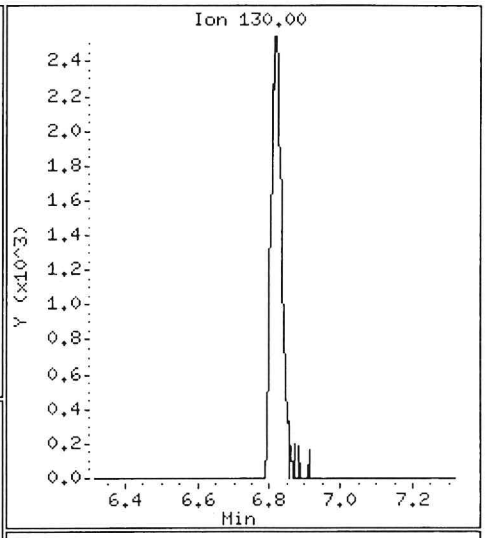
Purge Volume: 5.0 Operator: AP

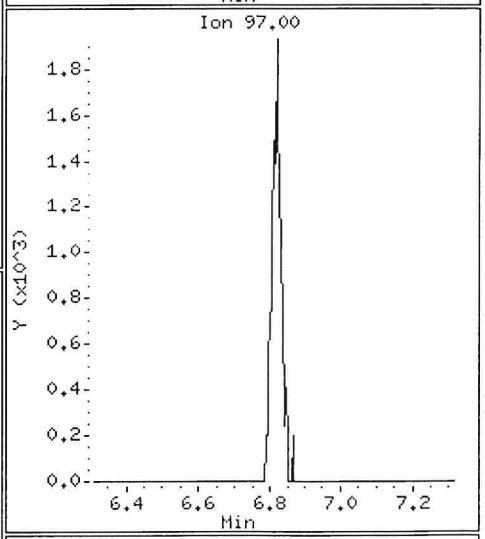
Column phase: DB624 Column diameter: 0.18

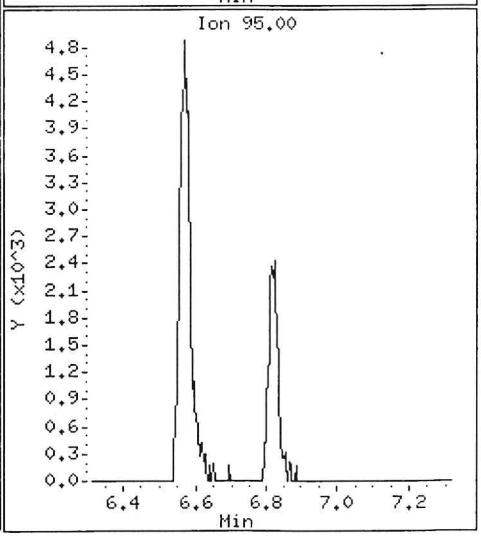
38 Trichloroethene Concentration: 202.67 ug/l Review Code:











Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123125.D
Report Date: 09-Feb-2018 19:43

ALS Laboratory Group

Data file : \\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123125.D
Lab Smp Id: HS17121224-03 Client Smp ID: HS17121224-03
Inj Date : 31-DEC-2017 23:53
Operator : AP Inst ID: VOA2.i
Smp Info : HS17121224-03;HS17121224-03;;;
Misc Info : HS15080001;WATER;0;100;
Comment :
Method : \\nahstws003\Target\chem\voa2.i\D171231.b\8260LL.m
Meth Date : 09-Feb-2018 19:43 VOA2.i Quant Type: ISTD
Cal Date : 19-DEC-2017 12:14 Cal File: D121908.D
Als bottle: 20
Dil Factor: 100.00000
Integrator: HP RTE Compound Sublist: dn_bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

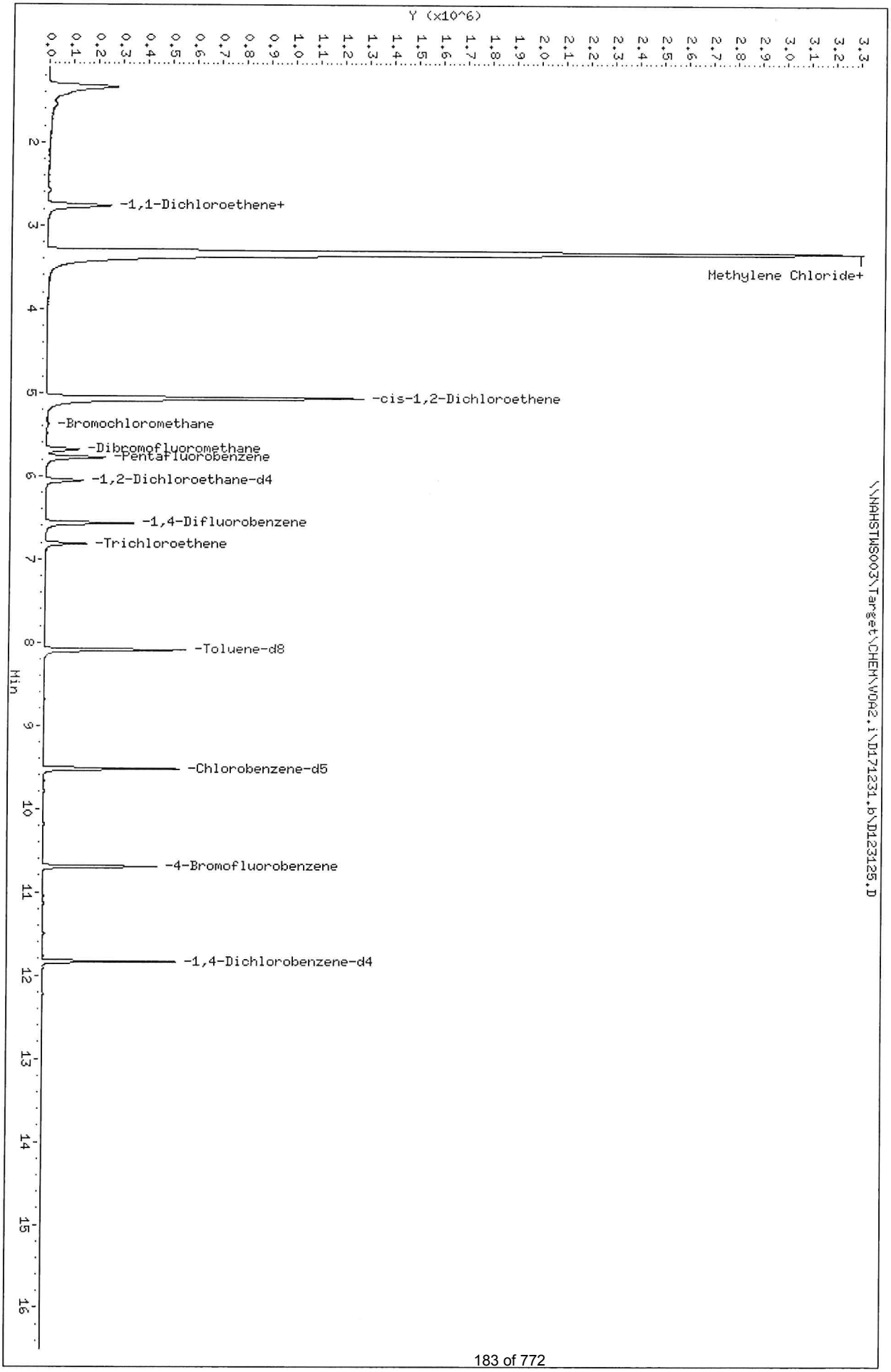
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	100.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Va	0.00000	
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	5.776	5.782	(1.000)	235171	50.0000	
$ 30 Dibromofluoromethane	113	5.683	5.689	(0.984)	103276	48.7421	48.74
* 36 1,4-Difluorobenzene	114	6.568	6.572	(1.000)	339399	50.0000	
$ 35 1,2-Dichloroethane-d4	65	6.052	6.055	(1.048)	124797	47.6892	47.68
* 47 Chlorobenzene-d5	117	9.524	9.527	(1.000)	317029	50.0000	
$ 48 Toluene-d8	98	8.090	8.093	(0.849)	400328	47.8932	47.89
$ 69 4-Bromofluorobenzene	95	10.695	10.695	(1.123)	150953	49.4545	49.45
* 70 1,4-Dichlorobenzene-d4	152	11.834	11.838	(1.000)	144101	50.0000	
11 1,1-Dichloroethene	96	2.756	2.750	(0.477)	5244	2.70176	270.17(a)
27 cis-1,2-Dichloroethene	96	5.067	5.067	(0.877)	851332	318.196	31819.61(A)
17 Methylene Chloride	84	3.327	3.334	(0.576)	3019757	1173.15	117314.58(A)
38 Trichloroethene	130	6.816	6.819	(1.038)	66496	26.4519	2645.19
29 Bromochloromethane	128	5.372	5.365	(0.930)	3192	2.50700	250.69(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: \\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123125.D
Date : 31-DEC-2017 23:53
Client ID: HS17121224-03
Sample Info: HS17121224-03;HS17121224-03;;;
Purge Volume: 5.0
Column phase: DB624
Instrument: VOA2.i
Operator: AP
Column diameter: 0.18
\\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123125.D
Y (x10^6)
Min
-1,1-Dichloroethene+
Methylene Chloride+
-cis-1,2-Dichloroethene
-Bromochloromethane
-Dibromofluoromethane
-Pentafluorobenzene
-1,2-Dichloroethane-d4
-1,4-Difluorobenzene
-Trichloroethene
-Toluene-d8
-Chlorobenzene-d5
-4-Bromofluorobenzene
-1,4-Dichlorobenzene-d4

Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123125.D

Date : 31-DEC-2017 23:53

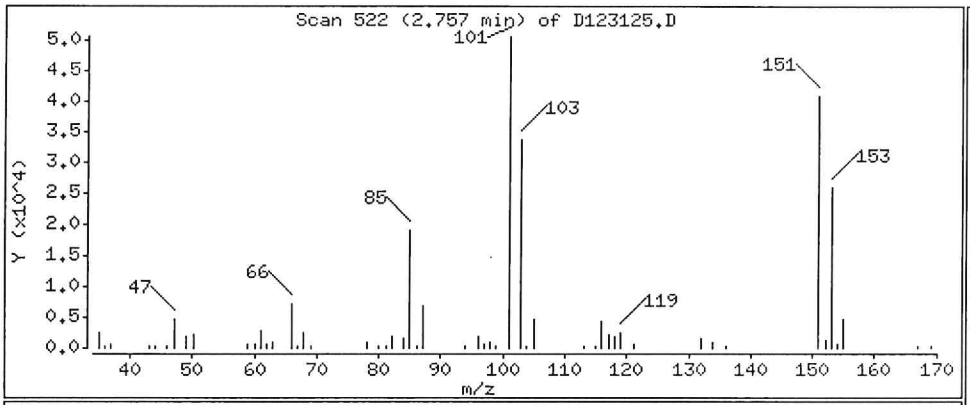
Client ID: HS17121224-03 Instrument: VOA2.i

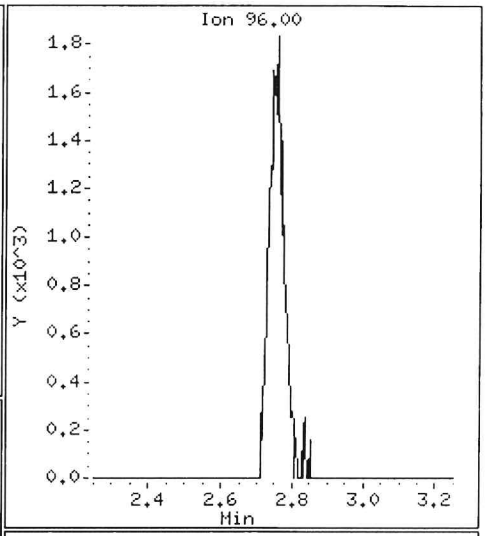
Sample Info: HS17121224-03;HS17121224-03;;;

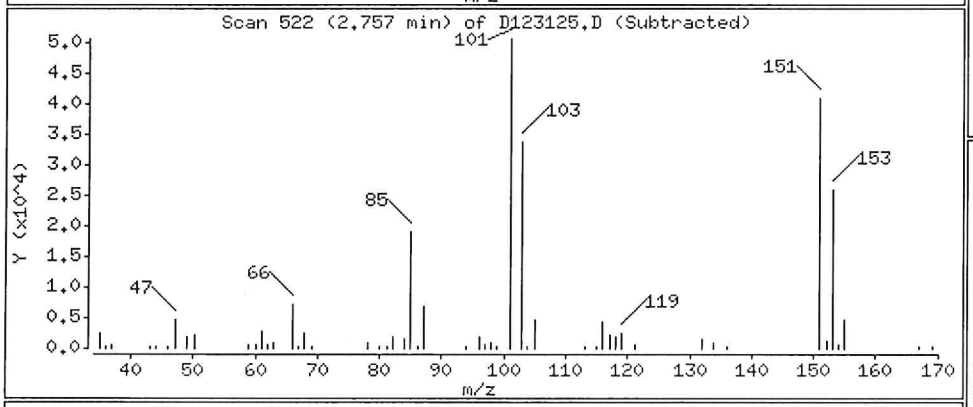
Purge Volume: 5.0 Operator: AP

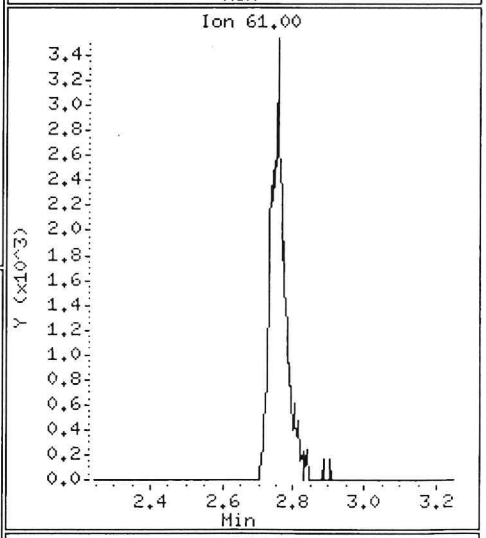
Column phase: DB624 Column diameter: 0.18

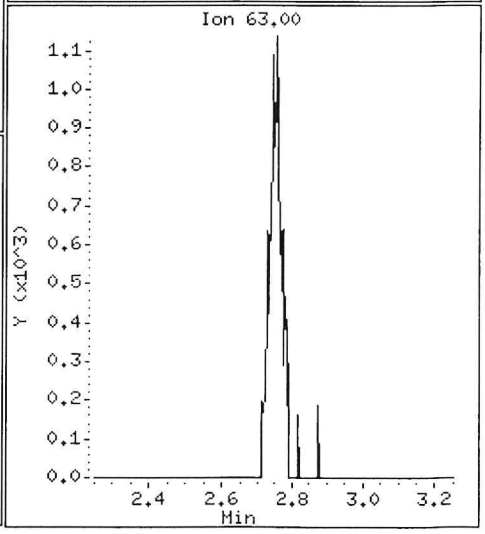
11 1,1-Dichloroethene Concentration: 270.17 ug/l Review Code:











Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123125.D

Date : 31-DEC-2017 23:53

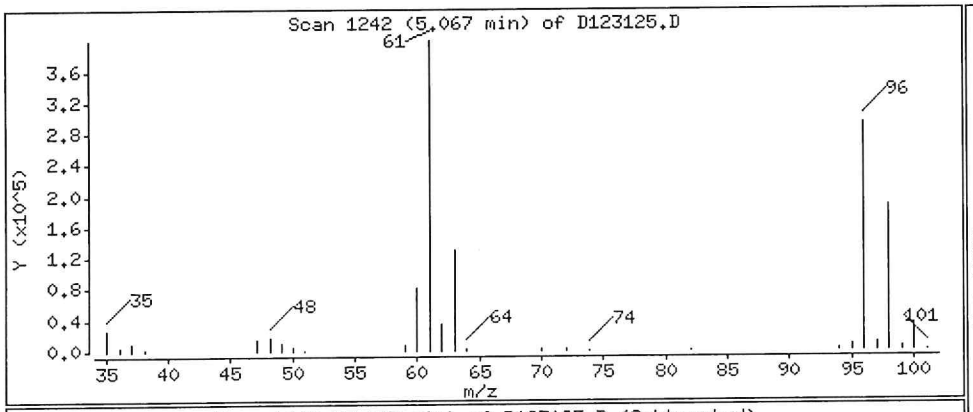
Client ID: HS17121224-03 Instrument: VOA2.i

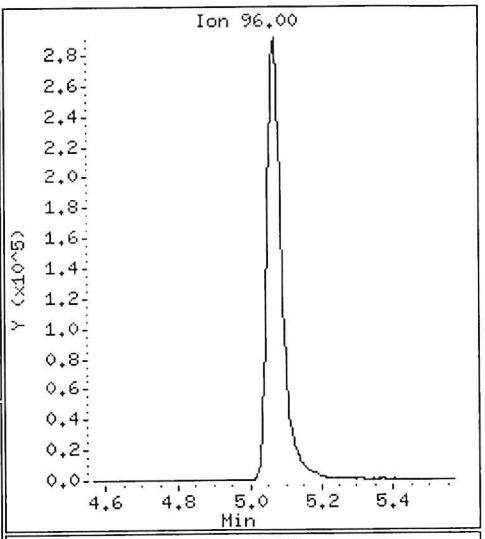
Sample Info: HS17121224-03;HS17121224-03;;;

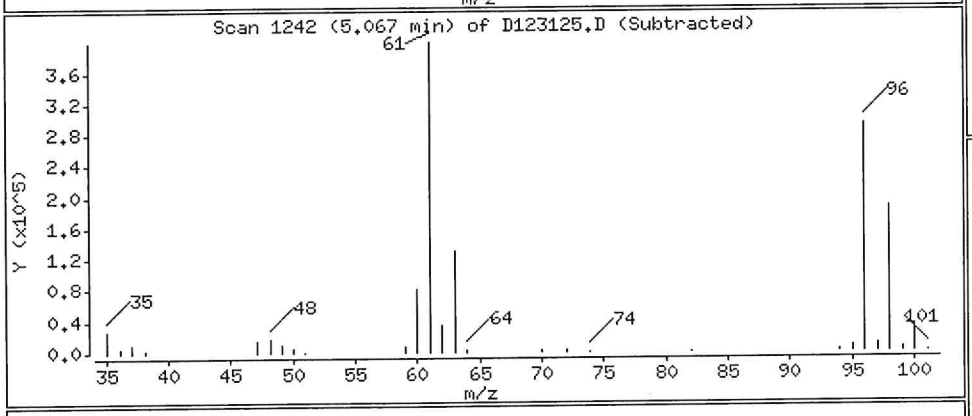
Purge Volume: 5.0 Operator: AP

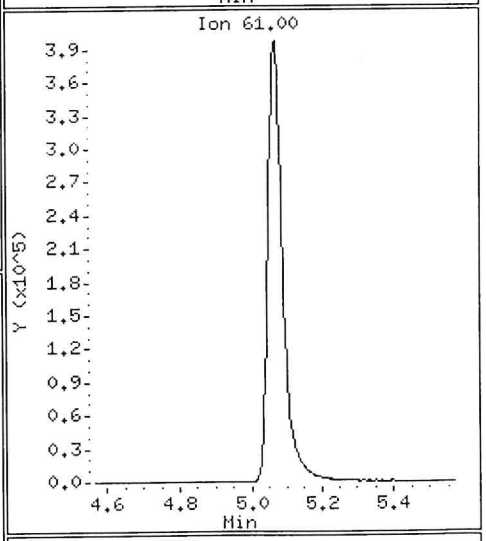
Column phase: DB624 Column diameter: 0.18

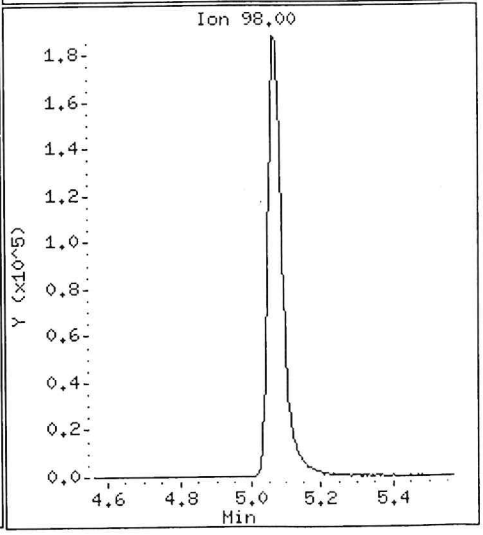
27 cis-1,2-Dichloroethene Concentration: 31819.61 ug/l Review Code:











Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123125.D

Date : 31-DEC-2017 23:53

Client ID: HS17121224-03

Instrument: VOA2.i

Sample Info: HS17121224-03;HS17121224-03;;;

Purge Volume: 5.0

Operator: AP

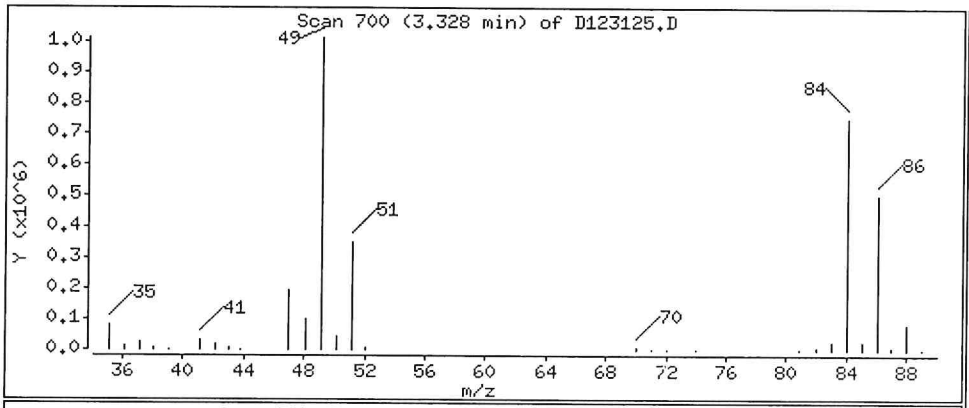
Column phase: DB624

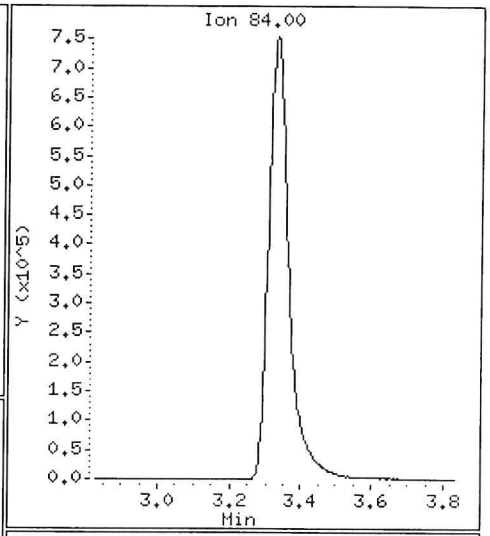
Column diameter: 0.18

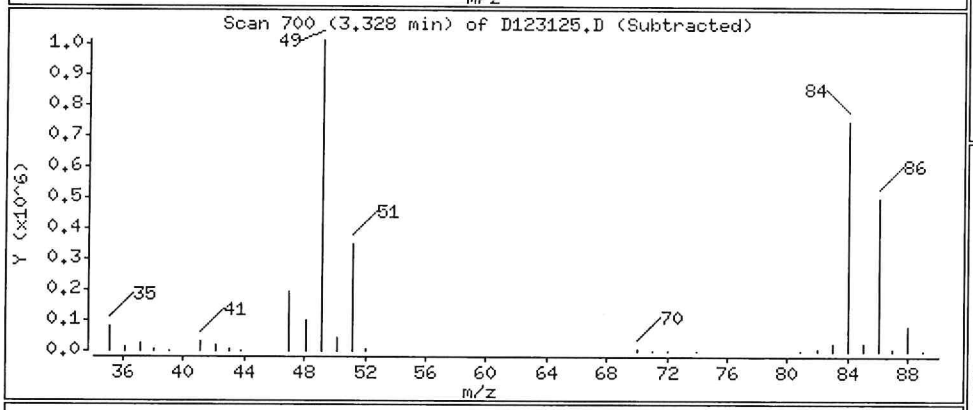
17 Methylene Chloride

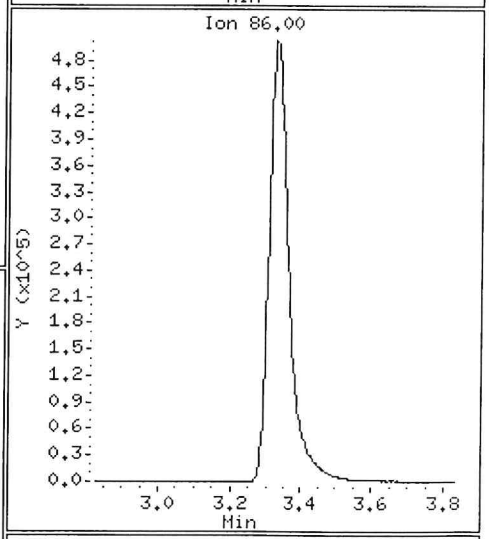
Concentration: 117314.58 ug/l

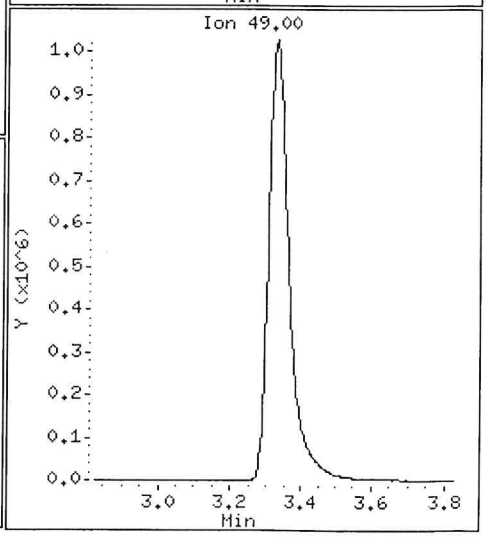
Review Code:











Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123125.D

Date : 31-DEC-2017 23:53

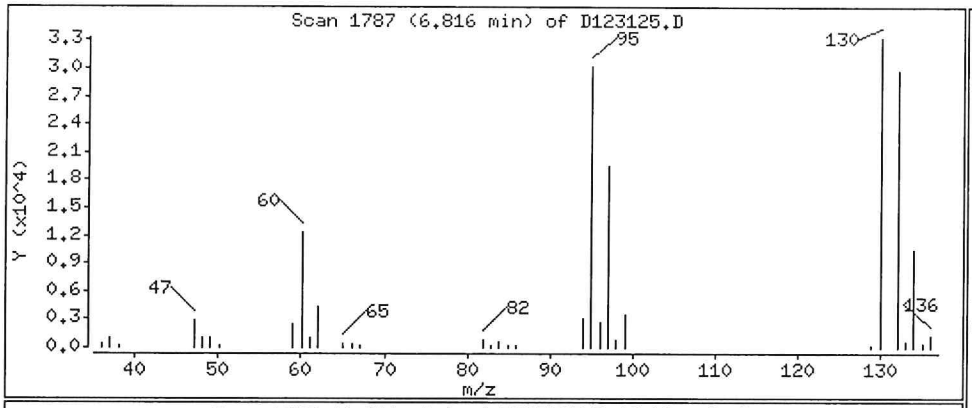
Client ID: HS17121224-03 Instrument: VOA2.i

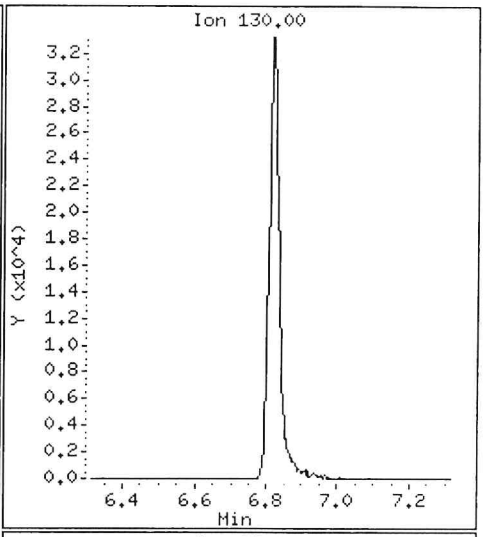
Sample Info: HS17121224-03;HS17121224-03;;;

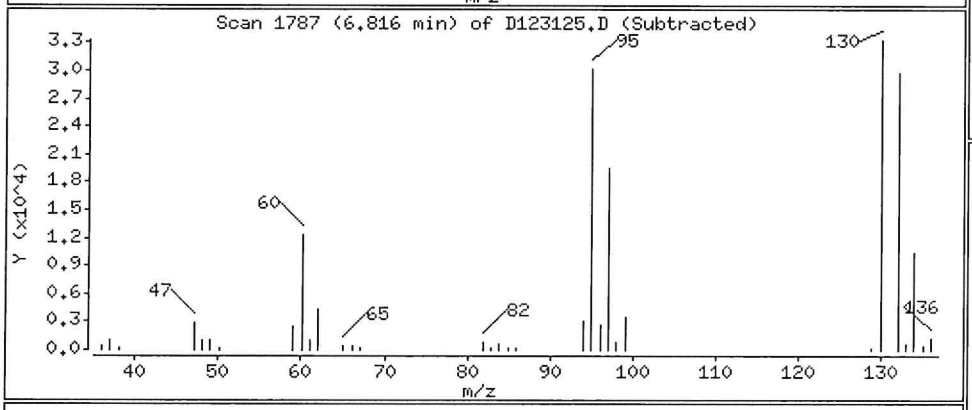
Purge Volume: 5.0 Operator: AP

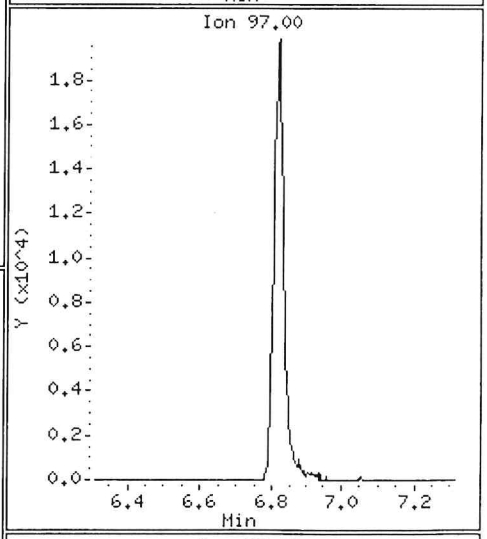
Column phase: DB624 Column diameter: 0.18

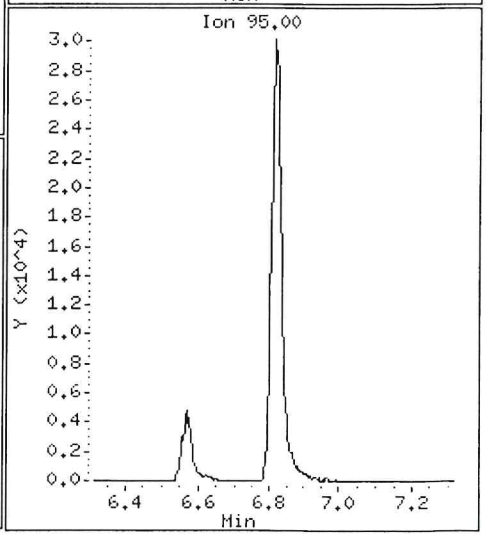
38 Trichloroethene Concentration: 2645.19 ug/l Review Code:











Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123125.D

Date : 31-DEC-2017 23:53

Client ID: HS17121224-03

Instrument: VOA2.i

Sample Info: HS17121224-03;HS17121224-03;;;

Purge Volume: 5.0

Operator: AP

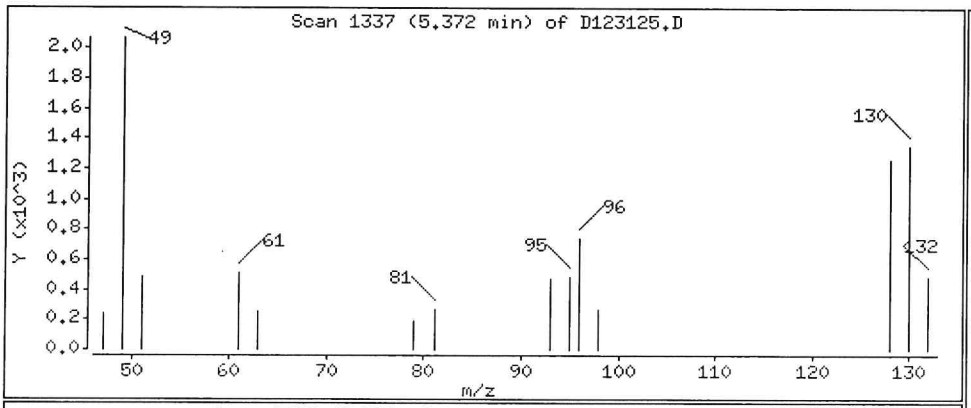
Column phase: DB624

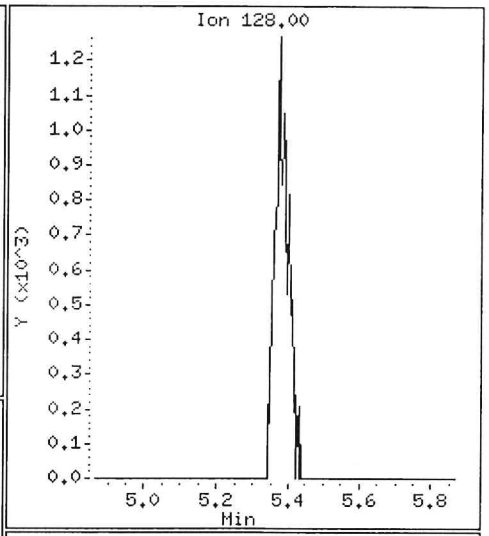
Column diameter: 0.18

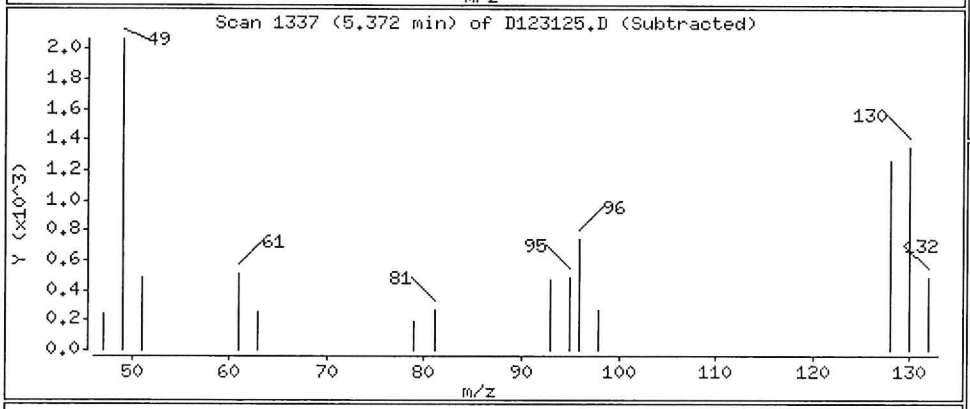
29 Bromochloromethane

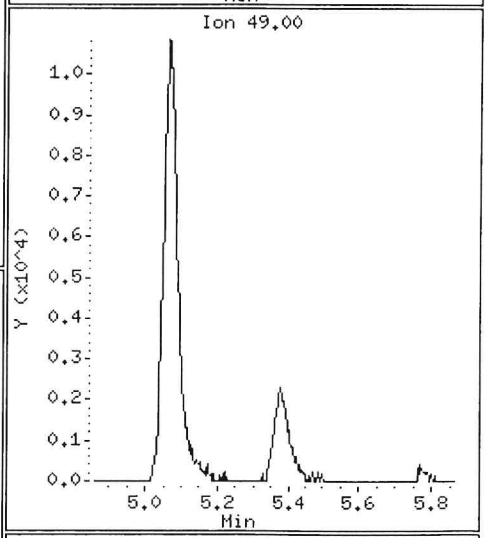
Concentration: 250.69 ug/l

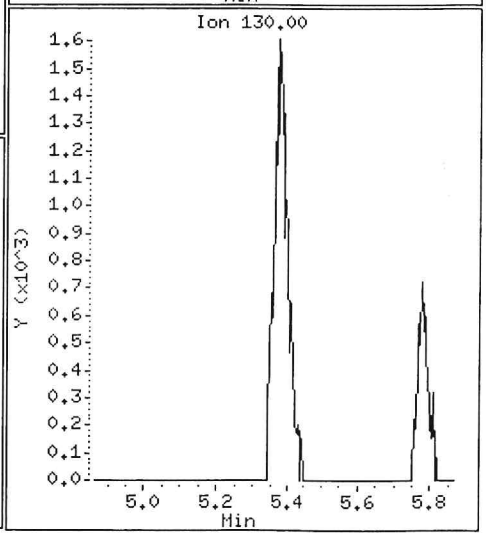
Review Code:











Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123126.D
Report Date: 09-Feb-2018 19:43

ALS Laboratory Group

Data file : \\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123126.D
Lab Smp Id: HS17121224-03 Client Smp ID: HS17121224-03
Inj Date : 01-JAN-2018 00:20
Operator : AP Inst ID: VOA2.i
Smp Info : HS17121224-03;HS17121224-03;;;
Misc Info : HS15080001;WATER;0;1000;
Comment :
Method : \\nahstws003\Target\chem\voa2.i\D171231.b\8260LL.m
Meth Date : 09-Feb-2018 19:43 VOA2.i Quant Type: ISTD
Cal Date : 19-DEC-2017 12:14 Cal File: D121908.D
Als bottle: 20
Dil Factor: 1000.00000
Integrator: HP RTE Compound Sublist: dn_bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

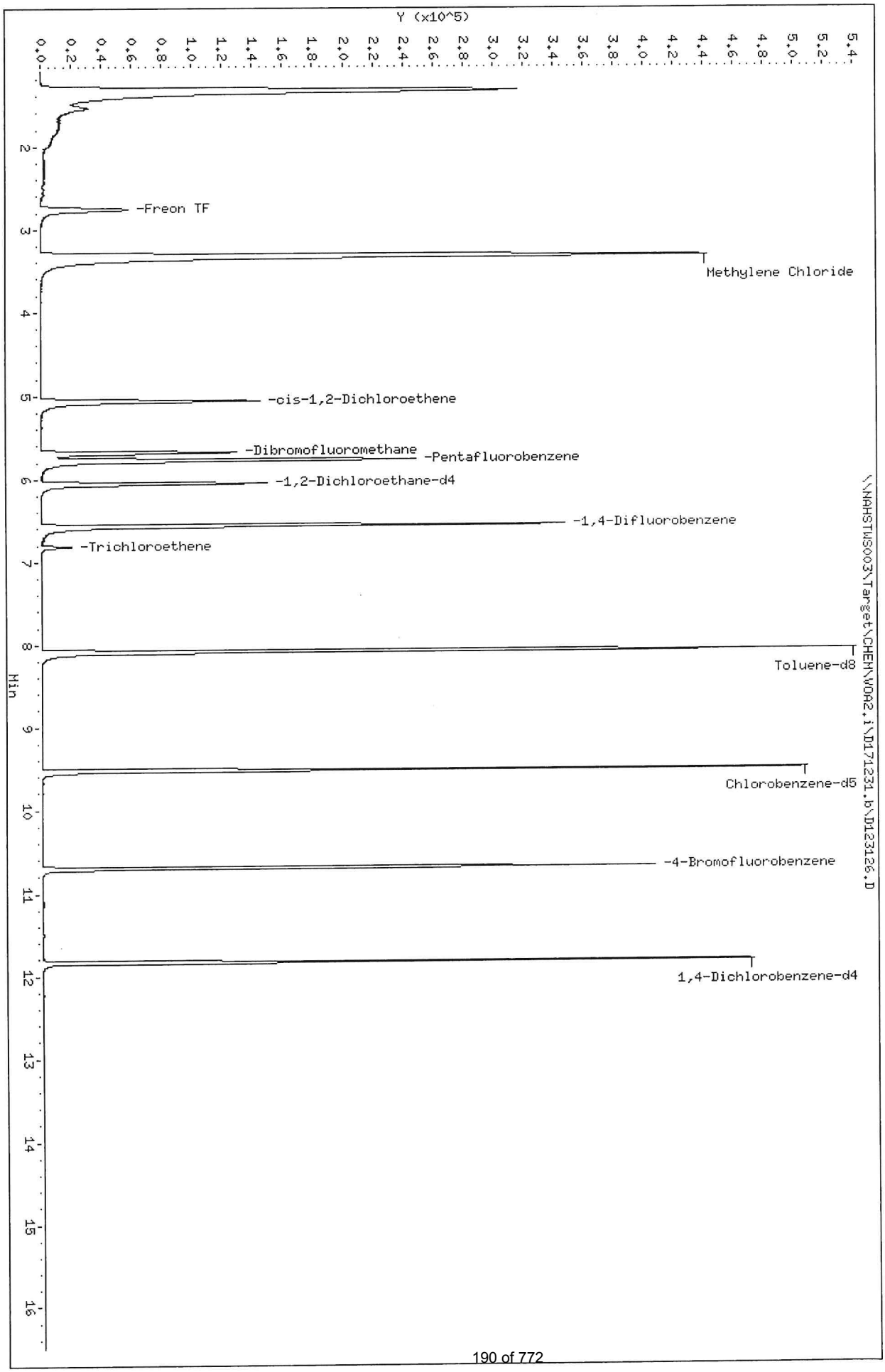
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1000.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Va	0.00000	
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	5.773	5.782	(1.000)	237508	50.0000	
$ 30 Dibromofluoromethane	113	5.680	5.689	(0.984)	102705	47.9956	47.99
* 36 1,4-Difluorobenzene	114	6.569	6.572	(1.000)	327154	50.0000	
$ 35 1,2-Dichloroethane-d4	65	6.052	6.055	(1.048)	120759	45.6920	45.69
* 47 Chlorobenzene-d5	117	9.521	9.527	(1.000)	284872	50.0000	
$ 48 Toluene-d8	98	8.086	8.093	(0.849)	362518	48.2655	48.26
$ 69 4-Bromofluorobenzene	95	10.695	10.695	(1.123)	133373	48.6275	48.62
* 70 1,4-Dichlorobenzene-d4	152	11.834	11.838	(1.000)	127918	50.0000	
27 cis-1,2-Dichloroethene	96	5.064	5.067	(0.877)	92404	34.1973	34197.33
17 Methylene Chloride	84	3.324	3.334	(0.576)	365364	140.544	140543.67
38 Trichloroethene	130	6.819	6.819	(1.038)	7679	3.16902	3169.01(a)

QC Flag Legend

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



Data File: \\NAHSTWS003\Target\CHEM\WOA2.i\D171231.b\D123126.D
Date : 01-JAN-2018 00:20
Client ID: HS171211224-03
Sample Info: HS171211224-03;HS171211224-03;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: WOA2.i
Operator: AP
Column diameter: 0.18

Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123126.D

Date : 01-JAN-2018 00:20

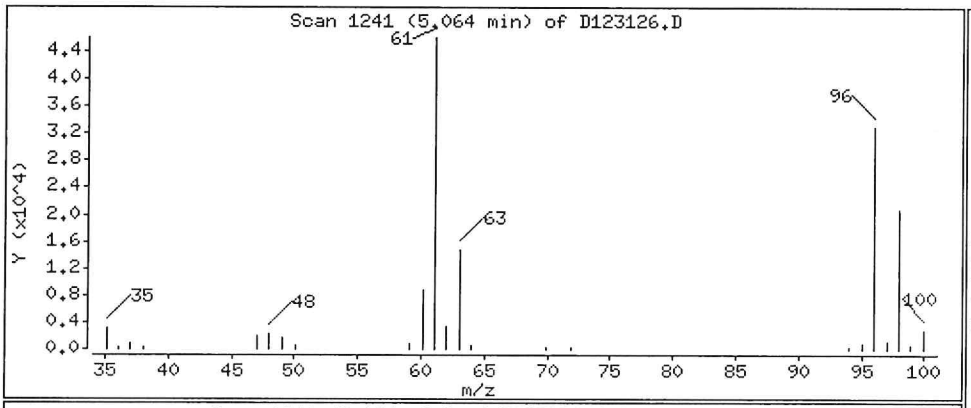
Client ID: HS17121224-03 Instrument: VOA2.i

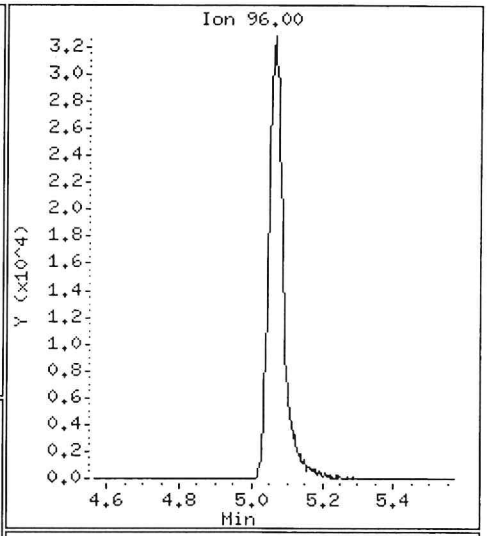
Sample Info: HS17121224-03;HS17121224-03;;;

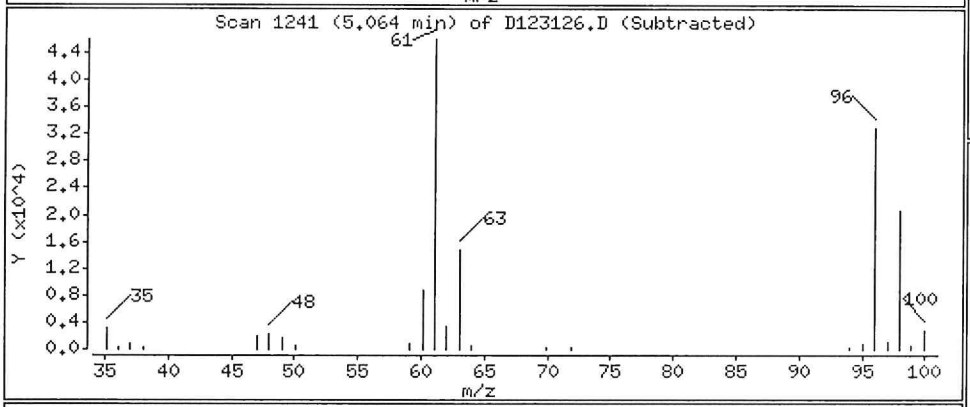
Purge Volume: 5.0 Operator: AP

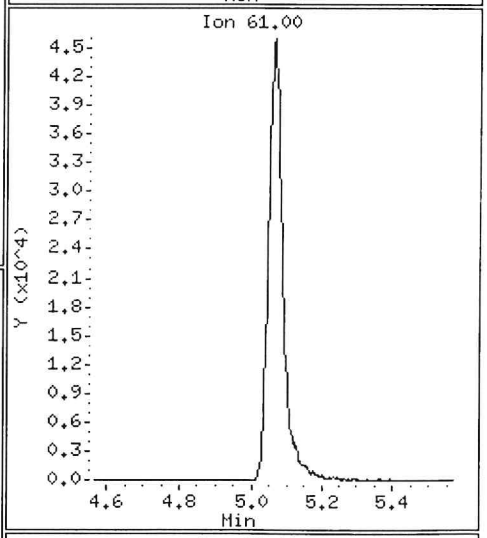
Column phase: DB624 Column diameter: 0.18

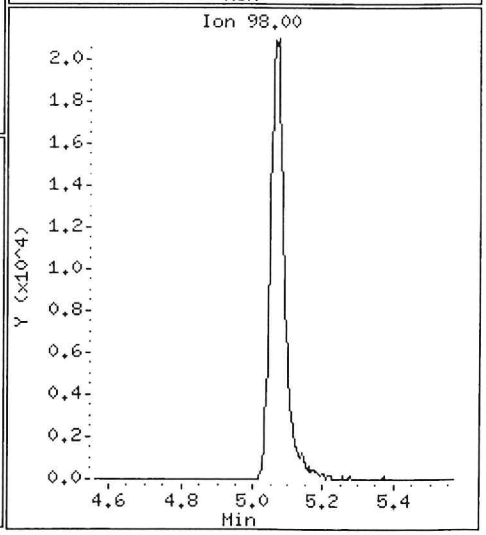
27 cis-1,2-Dichloroethene Concentration: 34197.33 ug/l Review Code:











Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123126.D

Date : 01-JAN-2018 00:20

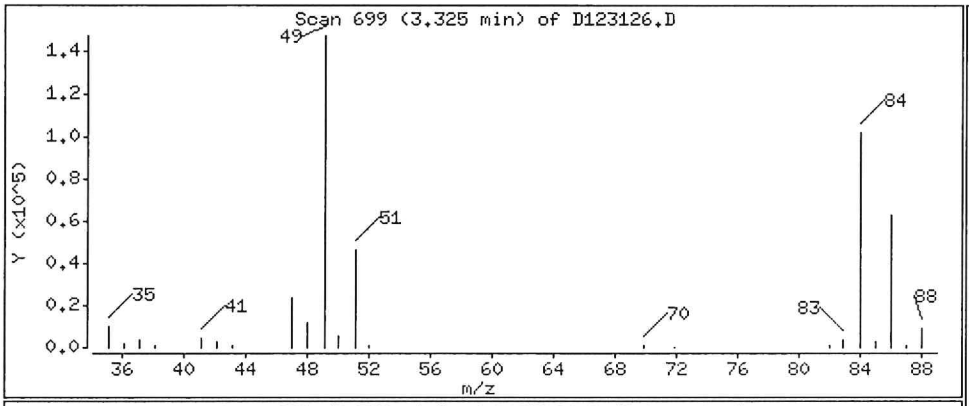
Client ID: HS17121224-03 Instrument: VOA2.i

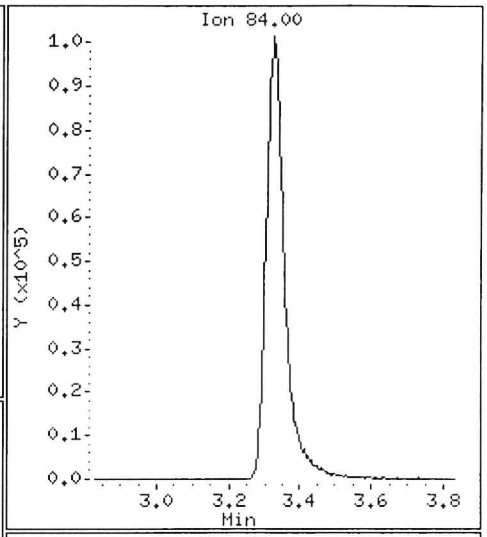
Sample Info: HS17121224-03;HS17121224-03;;;

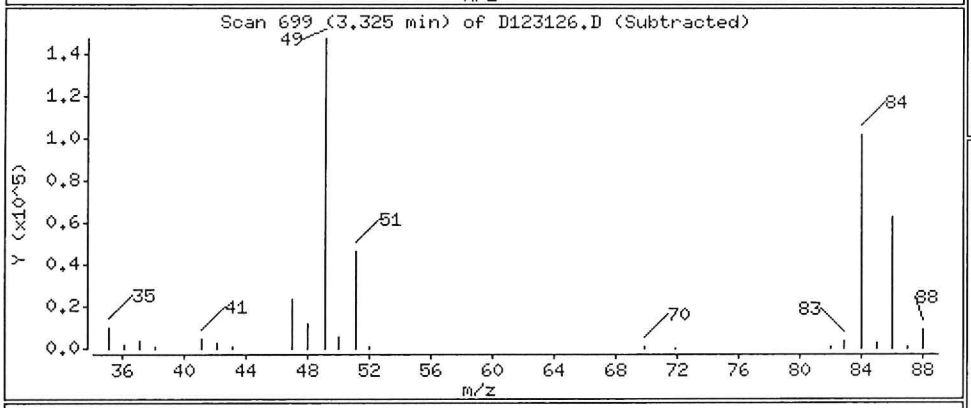
Purge Volume: 5.0 Operator: AP

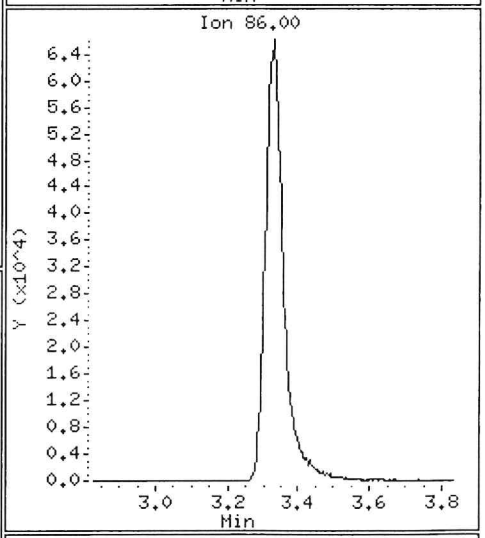
Column phase: DB624 Column diameter: 0.18

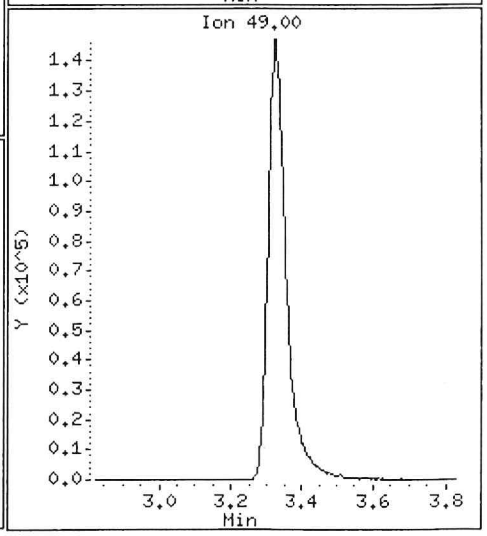
17 Methylene Chloride Concentration: 140543.67 ug/l Review Code:











Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123126.D

Date : 01-JAN-2018 00:20

Client ID: HS17121224-03

Instrument: VOA2.i

Sample Info: HS17121224-03;HS17121224-03;;;

Purge Volume: 5.0

Operator: AP

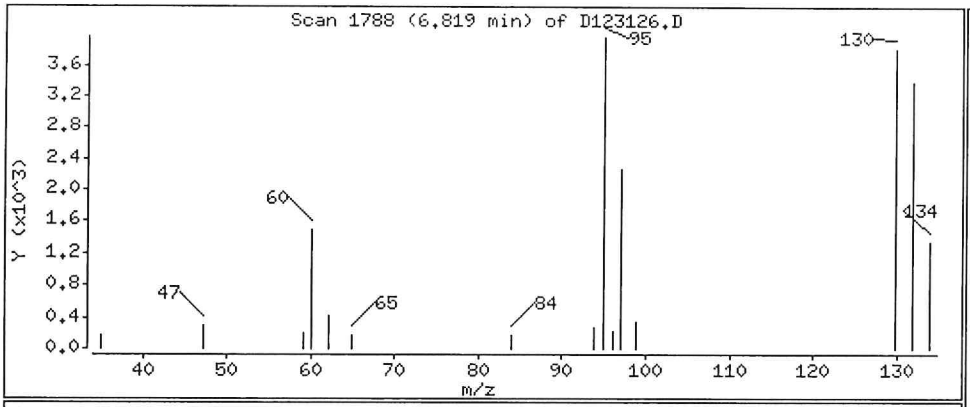
Column phase: DB624

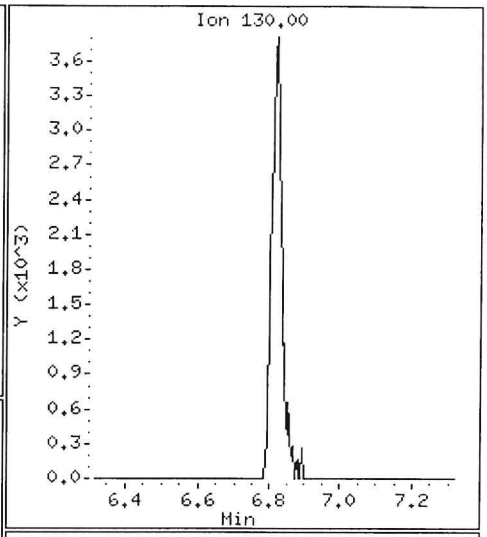
Column diameter: 0.18

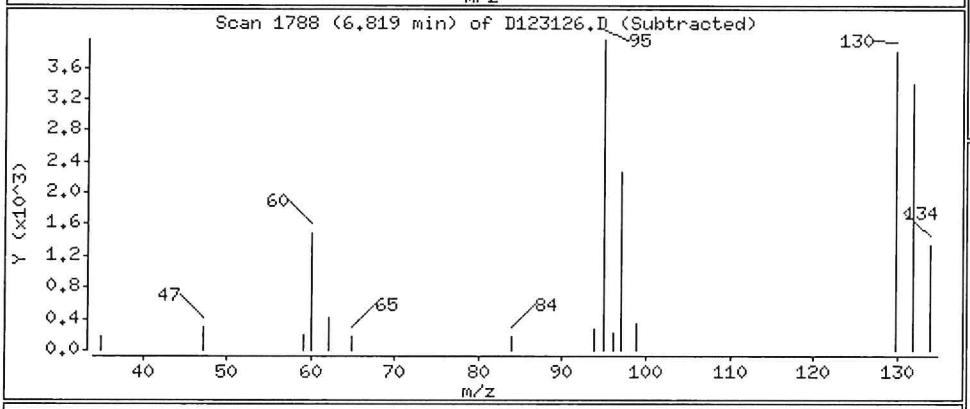
38 Trichloroethene

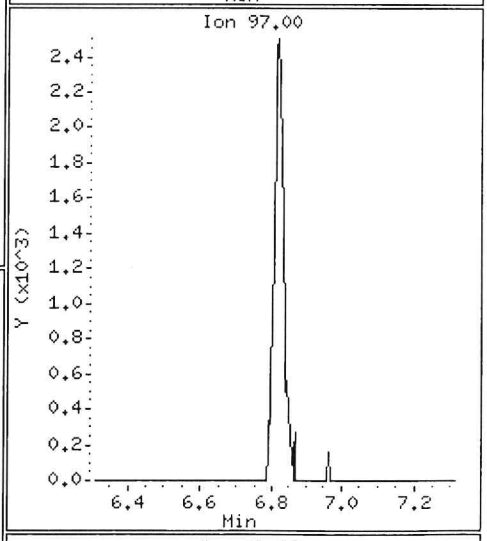
Concentration: 3169.01 ug/l

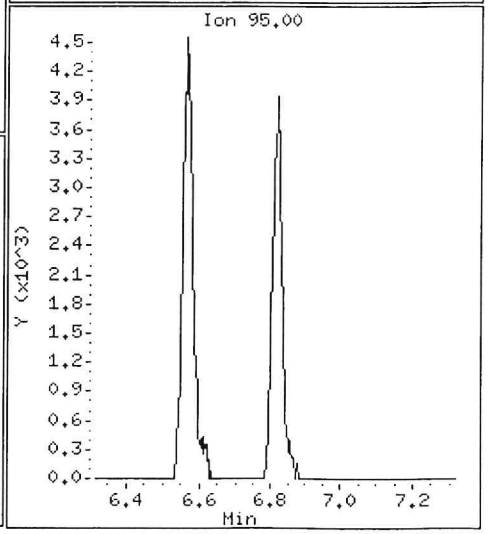
Review Code:











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Report Date: 09-Feb-2018 19:43

ALS Laboratory Group

Data file : \\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123127.D
Lab Smp Id: HS17121224-01MS Client Smp ID: HS17121224-01MS
Inj Date : 01-JAN-2018 00:44
Operator : AP Inst ID: VOA2.i
Smp Info : HS17121224-01MS;HS17121224-01MS;3;;MS
Misc Info : HS15080001;WATER;0;1;
Comment :
Method : \\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\8260LL.m
Meth Date : 09-Feb-2018 19:43 VOA2.i Quant Type: ISTD
Cal Date : 19-DEC-2017 12:14 Cal File: D121908.D
Als bottle: 21 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: dn_bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

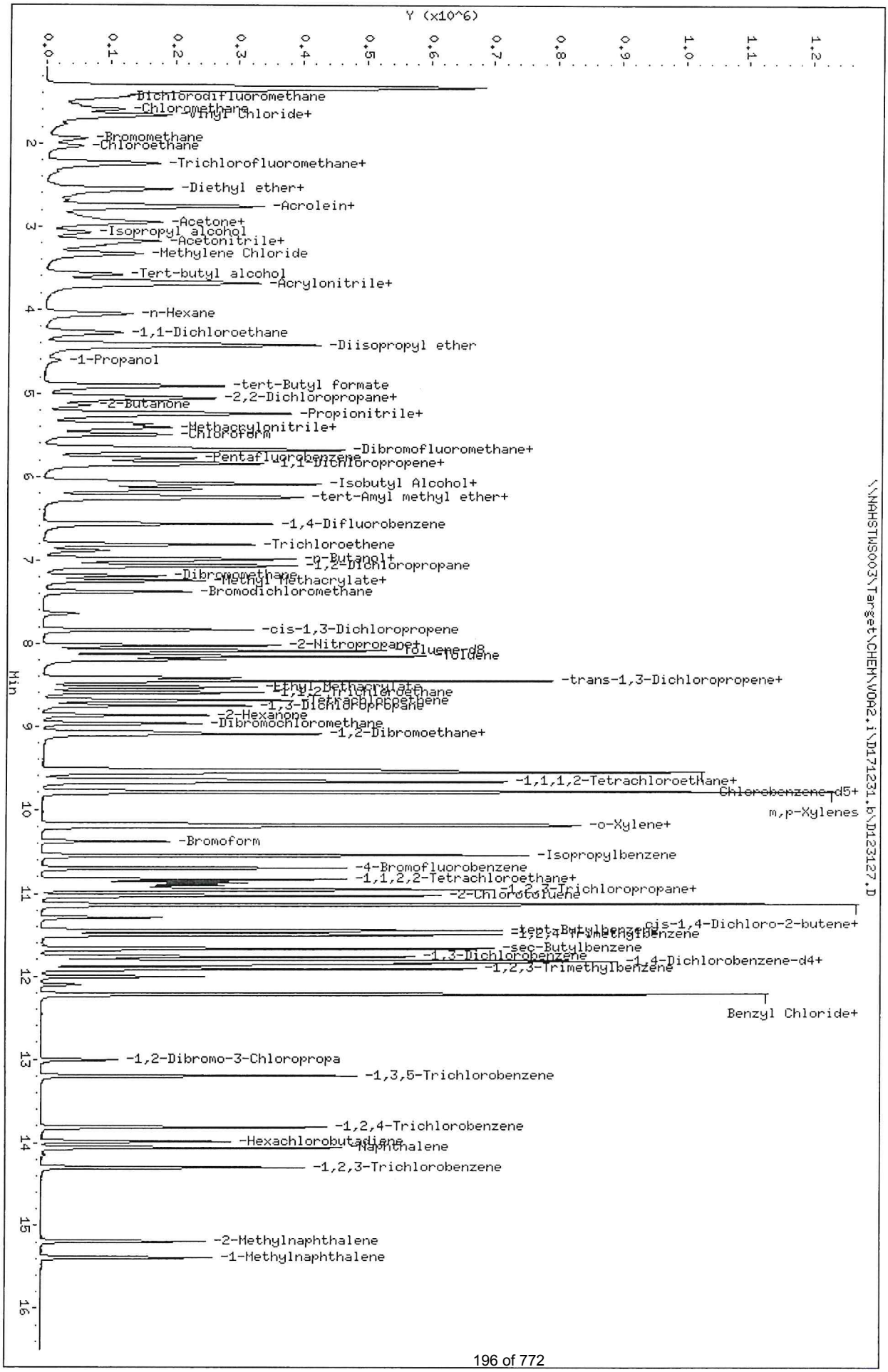
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Va	0.00000	
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
31 1,1,1-Trichloroethane	97	5.651	5.654	(0.978)	173916	48.8994	48.89
* 1 Pentafluorobenzene	168	5.779	5.782	(1.000)	230121	50.0000	
$ 30 Dibromofluoromethane	113	5.683	5.689	(0.983)	99252	47.8709	47.87
* 36 1,4-Difluorobenzene	114	6.572	6.572	(1.000)	338952	50.0000	
$ 35 1,2-Dichloroethane-d4	65	6.058	6.055	(1.048)	119908	46.8265	46.82
* 47 Chlorobenzene-d5	117	9.524	9.527	(1.000)	312265	50.0000	
$ 48 Toluene-d8	98	8.093	8.093	(0.850)	383964	46.6363	46.63
$ 69 4-Bromofluorobenzene	95	10.695	10.695	(1.123)	147778	49.1530	49.15
* 70 1,4-Dichlorobenzene-d4	152	11.834	11.838	(1.000)	147666	50.0000	
68 1,1,2,2-Tetrachloroethane	83	10.872	10.872	(0.919)	142303	40.3973	40.39
53 1,1,2-Trichloroethane	83	8.597	8.593	(0.903)	85797	44.9148	44.91
32 1,1-Dichloropropene	75	5.853	5.856	(0.891)	136052	51.5337	51.53
22 1,1-Dichloroethane	63	4.281	4.277	(0.741)	219590	45.7065	45.70
11 1,1-Dichloroethene	96	2.747	2.750	(0.475)	97799	51.4927	51.49
90 1,2,4-Trichlorobenzene	180	13.814	13.818	(1.167)	141805	48.7460	48.74
89 1,2-Dibromo-3-Chloropropane	75	13.009	13.009	(1.099)	25453	41.9737	41.97
57 1,2-Dibromoethane	107	9.065	9.065	(0.952)	114562	47.8841	47.88
88 1,2-Dichlorobenzene	146	12.223	12.223	(1.033)	226910	42.7513	42.75
33 1,2-Dichloroethane	62	6.145	6.145	(0.935)	151297	50.5554	50.55
42 1,2-Dichloropropane	63	7.066	7.066	(1.075)	123842	46.3877	46.38
83 1,3-Dichlorobenzene	146	11.767	11.767	(0.994)	236316	42.7836	42.78

Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123127.D
Report Date: 09-Feb-2018 19:43

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
	84 1,4-Dichlorobenzene	146	11.857	11.860	(1.002)	224403	42.4763	42.47
	24 2-Butanone	43	5.147	5.144	(0.891)	108113	87.0658	87.06
	52 2-Hexanone	43	8.866	8.866	(0.931)	157478	86.0713	86.07
	45 4-Methyl-2-Pentanone	43	8.026	8.025	(0.843)	247953	87.5227	87.52
	10 Acetone	43	2.859	2.862	(0.495)	71357	93.3944	93.39
	37 Benzene	78	6.091	6.090	(0.927)	424120	47.5564	47.55
	39 Bromodichloromethane	83	7.377	7.377	(1.123)	151097	47.8669	47.86
	66 Bromoform	173	10.374	10.378	(1.089)	90923	49.0862	49.08
	6 Bromomethane	94	1.935	1.941	(0.335)	70466	44.4584	44.45
	19 Carbon Disulfide	76	2.952	2.952	(0.511)	429426	99.0062	99.00
	34 Carbon Tetrachloride	117	5.831	5.834	(0.887)	141334	43.8982	43.89
	59 Chlorobenzene	112	9.553	9.553	(1.003)	293796	45.6857	45.68
	7 Chloroethane	64	2.034	2.041	(0.352)	82297	44.2025	44.20
	28 Chloroform	83	5.494	5.494	(0.951)	192140	45.7972	45.79
	3 Chloromethane	50	1.592	1.588	(0.275)	203798	53.0068	53.00
	27 cis-1,2-Dichloroethene	96	5.067	5.067	(0.877)	124396	47.5149	47.51
	46 cis-1,3-Dichloropropene	75	7.839	7.839	(1.193)	182912	50.4578	50.45
	55 Dibromochloromethane	129	8.969	8.972	(0.942)	127728	47.3766	47.37
	2 Dichlorodifluoromethane	85	1.450	1.447	(0.251)	108794	55.3028	55.30
	61 Ethylbenzene	106	9.668	9.672	(1.015)	157350	45.7145	45.71
	67 Isopropylbenzene	105	10.545	10.548	(1.107)	504851	47.4122	47.41
	17 Methylene Chloride	84	3.334	3.334	(0.577)	115107	45.6993	45.69
	56 Tetrachloroethene	164	8.690	8.690	(0.912)	99913	51.9489	51.94
	50 Toluene	91	8.157	8.157	(0.856)	453870	45.8635	45.86
	20 trans-1,2-Dichloroethene	96	3.671	3.671	(0.635)	105515	51.3610	51.36
	51 trans-1,3-Dichloropropene	75	8.417	8.417	(1.281)	154912	50.2207	50.22
	38 Trichloroethene	130	6.816	6.819	(1.037)	124529	49.6026	49.60
	8 Trichlorofluoromethane	101	2.253	2.256	(0.390)	149913	52.8350	52.83
	5 Vinyl Chloride	62	1.678	1.685	(0.290)	143715	50.9529	50.95
	62 m,p-Xylenes	106	9.790	9.790	(1.028)	383483	91.1023	91.10
	63 o-Xylene	106	10.175	10.179	(1.068)	202134	45.9001	45.90
M	95 Xylenes (total)	106				585617	137.002	137.00
	71 1,2,3-Trichloropropane	75	10.904	10.904	(0.921)	147179	41.8400	41.83
	93 1,2,3-Trichlorobenzene	182	14.299	14.302	(1.208)	123997	49.4682	49.46
	79 1,2,4-Trimethylbenzene	105	11.501	11.501	(0.972)	401757	40.8462	40.84
	75 1,3,5-Trimethylbenzene	105	11.132	11.132	(0.941)	398100	41.5616	41.56
	26 2,2-Dichloropropane	77	5.041	5.041	(0.872)	147221	43.9134	43.91
	54 1,3-Dichloropropane	76	8.751	8.754	(0.919)	170685	44.3017	44.30
	76 2-Chlorotoluene	91	11.029	11.029	(0.932)	343788	40.9839	40.98
	77 4-Chlorotoluene	91	11.138	11.138	(0.941)	375304	41.0907	41.09
	82 p-Isopropyltoluene	119	11.818	11.818	(0.999)	389481	42.8500	42.85
	29 Bromochloromethane	128	5.365	5.365	(0.928)	59812	48.0073	48.00
	74 Bromobenzene	156	10.833	10.833	(0.915)	135830	41.4672	41.46
	44 Dibromomethane	93	7.188	7.188	(1.094)	68345	49.3998	49.39
	91 Hexachlorobutadiene	225	13.988	13.991	(1.182)	61289	45.2289	45.22
	73 n-Propylbenzene	91	10.955	10.955	(0.926)	530888	42.5223	42.52
	87 n-Butylbenzene	91	12.220	12.223	(1.033)	298175	44.1396	44.13
	81 sec-Butylbenzene	105	11.668	11.668	(0.986)	464879	43.7984	43.79
	92 Naphthalene	128	14.061	14.061	(1.188)	358413	47.2823	47.28
	78 tert-Butylbenzene	119	11.449	11.453	(0.967)	346706	43.1489	43.14
	60 1,1,1,2-Tetrachloroethane	131	9.643	9.646	(1.012)	117226	47.0444	47.04
	64 Styrene	104	10.198	10.198	(1.071)	328096	46.7130	46.71



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Purge Volume: 5.0
Column phase: DB624

Instrument: VOA2.i
Operator: AP
Column diameter: 0.18

Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123128.D
Report Date: 09-Feb-2018 19:43

ALS Laboratory Group

Data file : \\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123128.D
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Inj Date : 01-JAN-2018 01:09
Operator : AP Inst ID: VOA2.i
Smp Info : HS17121224-01MSD;HS17121224-01MSD;3;;MSD
Misc Info : HS15080001;WATER;0;1;
Comment :
Method : \\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\8260LL.m
Meth Date : 09-Feb-2018 19:43 VOA2.i Quant Type: ISTD
Cal Date : 19-DEC-2017 12:14 Cal File: D121908.D
Als bottle: 21 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: dn_bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

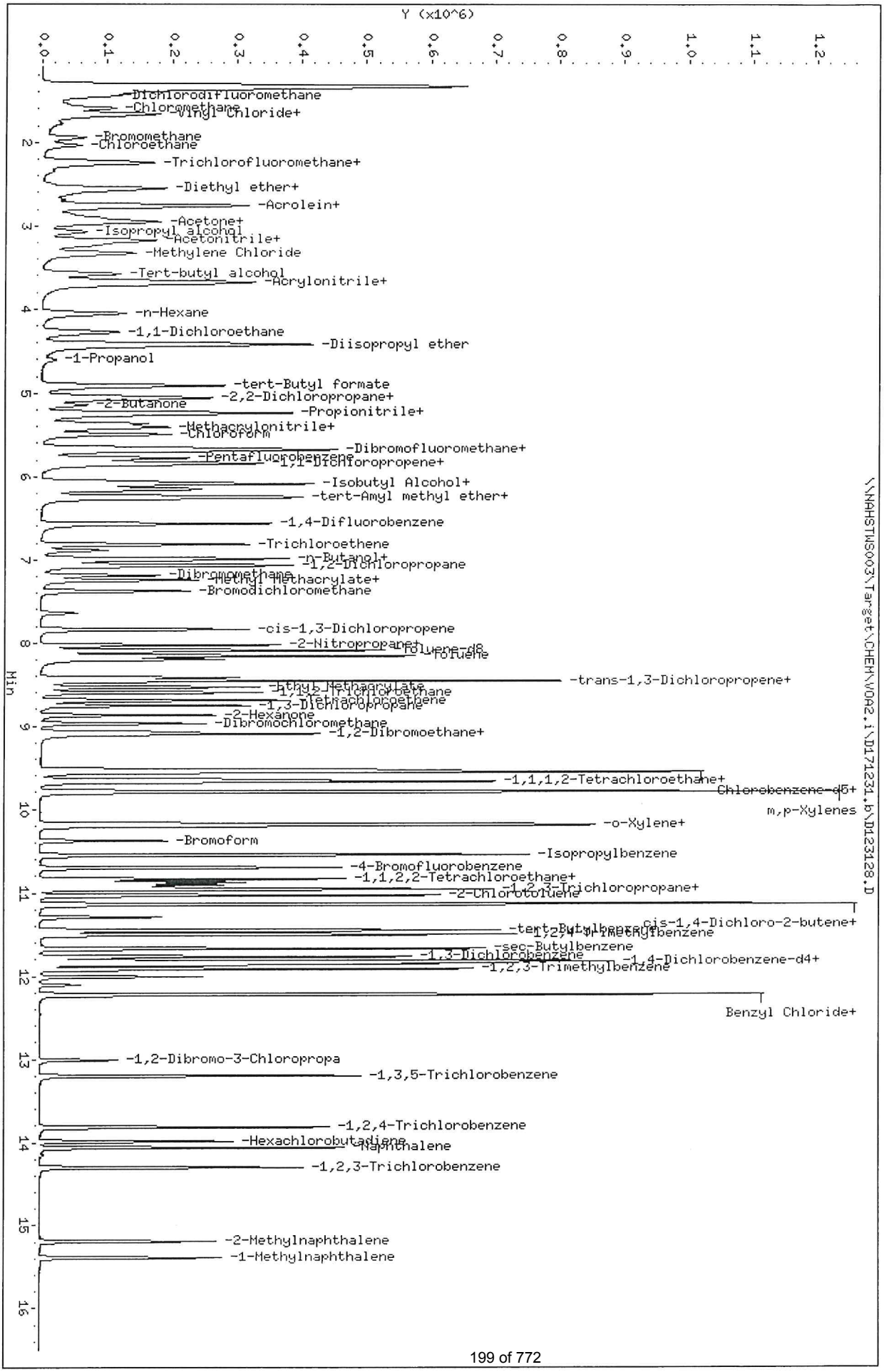
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Va	0.00000	
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
	31 1,1,1-Trichloroethane	97	5.648	5.654	(0.977)	171931	48.9725	48.97
*	1 Pentafluorobenzene	168	5.783	5.782	(1.000)	227155	50.0000	
$	30 Dibromofluoromethane	113	5.683	5.689	(0.983)	99011	48.3782	48.37
*	36 1,4-Difluorobenzene	114	6.572	6.572	(1.000)	338925	50.0000	
$	35 1,2-Dichloroethane-d4	65	6.055	6.055	(1.047)	120984	47.8636	47.86
*	47 Chlorobenzene-d5	117	9.527	9.527	(1.000)	312827	50.0000	
$	48 Toluene-d8	98	8.090	8.093	(0.849)	386220	46.8261	46.82
$	69 4-Bromofluorobenzene	95	10.695	10.695	(1.123)	148731	49.3811	49.38
*	70 1,4-Dichlorobenzene-d4	152	11.835	11.838	(1.000)	149308	50.0000	
	68 1,1,2,2-Tetrachloroethane	83	10.872	10.872	(0.919)	144993	40.7083	40.70
	53 1,1,2-Trichloroethane	83	8.590	8.593	(0.902)	86729	45.3211	45.32
	32 1,1-Dichloropropene	75	5.850	5.856	(0.890)	138798	52.5969	52.59
	22 1,1-Dichloroethane	63	4.278	4.277	(0.740)	220157	46.4228	46.42
	11 1,1-Dichloroethene	96	2.750	2.750	(0.476)	96012	51.2119	51.21
	90 1,2,4-Trichlorobenzene	180	13.818	13.818	(1.168)	146361	49.7588	49.75
	89 1,2-Dibromo-3-Chloropropane	75	13.009	13.009	(1.099)	26564	43.3068	43.30
	57 1,2-Dibromoethane	107	9.065	9.065	(0.952)	114445	47.7492	47.74
	88 1,2-Dichlorobenzene	146	12.223	12.223	(1.033)	223255	41.6001	41.60
	33 1,2-Dichloroethane	62	6.142	6.145	(0.935)	145541	48.6321	48.63
	42 1,2-Dichloropropane	63	7.066	7.066	(1.075)	122438	45.8655	45.86
	83 1,3-Dichlorobenzene	146	11.767	11.767	(0.994)	232534	41.6359	41.63

Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123128.D
Report Date: 09-Feb-2018 19:43

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
84	1,4-Dichlorobenzene	146	11.860	11.860	(1.002)	223574	41.8540	41.85
24	2-Butanone	43	5.141	5.144	(0.889)	107561	87.7523	87.75
52	2-Hexanone	43	8.866	8.866	(0.931)	160945	87.8082	87.80
45	4-Methyl-2-Pentanone	43	8.029	8.025	(0.843)	251132	88.4856	88.48
10	Acetone	43	2.859	2.862	(0.495)	72194	95.7822	95.78
37	Benzene	78	6.087	6.090	(0.926)	422773	47.4091	47.40
39	Bromodichloromethane	83	7.377	7.377	(1.123)	151059	47.8587	47.85
66	Bromoform	173	10.378	10.378	(1.089)	92582	49.8920	49.89
6	Bromomethane	94	1.935	1.941	(0.335)	68995	44.0785	44.07
19	Carbon Disulfide	76	2.949	2.952	(0.510)	422646	98.7154	98.71
34	Carbon Tetrachloride	117	5.831	5.834	(0.887)	140648	43.6886	43.68
59	Chlorobenzene	112	9.550	9.553	(1.002)	292197	45.3555	45.35
7	Chloroethane	64	2.035	2.041	(0.352)	77805	42.3354	42.33
28	Chloroform	83	5.494	5.494	(0.950)	191091	46.1418	46.14
3	Chloromethane	50	1.595	1.588	(0.276)	189945	49.9954	49.99
27	cis-1,2-Dichloroethene	96	5.067	5.067	(0.876)	121758	47.1145	47.11
46	cis-1,3-Dichloropropene	75	7.836	7.839	(1.192)	180267	49.7321	49.73
55	Dibromochloromethane	129	8.969	8.972	(0.941)	128268	47.4914	47.49
2	Dichlorodifluoromethane	85	1.447	1.447	(0.250)	105630	54.3956	54.39
61	Ethylbenzene	106	9.672	9.672	(1.015)	155586	45.1208	45.12
67	Isopropylbenzene	105	10.545	10.548	(1.107)	498027	46.6873	46.68
17	Methylene Chloride	84	3.328	3.334	(0.576)	111651	44.9060	44.90
56	Tetrachloroethene	164	8.690	8.690	(0.912)	97741	50.6881	50.68
50	Toluene	91	8.157	8.157	(0.856)	450471	45.4383	45.43
20	trans-1,2-Dichloroethene	96	3.661	3.671	(0.633)	104296	51.4305	51.43
51	trans-1,3-Dichloropropene	75	8.417	8.417	(1.281)	155068	50.2753	50.27
38	Trichloroethene	130	6.816	6.819	(1.037)	123267	49.1038	49.10
8	Trichlorofluoromethane	101	2.250	2.256	(0.389)	145852	52.0749	52.07
5	Vinyl Chloride	62	1.678	1.685	(0.290)	139478	50.0964	50.09
62	m,p-Xylenes	106	9.790	9.790	(1.028)	381064	90.3650	90.36
63	o-Xylene	106	10.176	10.179	(1.068)	202782	45.9646	45.96
M 95	Xylenes (total)	106				583846	136.330	136.32
71	1,2,3-Trichloropropane	75	10.904	10.904	(0.921)	148171	41.6588	41.65
93	1,2,3-Trichlorobenzene	182	14.302	14.302	(1.209)	124889	49.2761	49.27
79	1,2,4-Trimethylbenzene	105	11.501	11.501	(0.972)	394486	39.6659	39.66
75	1,3,5-Trimethylbenzene	105	11.132	11.132	(0.941)	392018	40.4765	40.47
26	2,2-Dichloropropane	77	5.041	5.041	(0.872)	144816	43.7600	43.76
54	1,3-Dichloropropane	76	8.751	8.754	(0.918)	172718	44.7488	44.74
76	2-Chlorotoluene	91	11.029	11.029	(0.932)	338614	39.9232	39.92
77	4-Chlorotoluene	91	11.138	11.138	(0.941)	369459	40.0059	40.00
82	p-Isopropyltoluene	119	11.819	11.818	(0.999)	387038	42.1130	42.11
29	Bromochloromethane	128	5.359	5.365	(0.927)	59788	48.6146	48.61
74	Bromobenzene	156	10.830	10.833	(0.915)	135883	41.0272	41.02
44	Dibromomethane	93	7.191	7.188	(1.094)	67393	48.7156	48.71
91	Hexachlorobutadiene	225	13.988	13.991	(1.182)	63426	46.3015	46.30
73	n-Propylbenzene	91	10.955	10.955	(0.926)	519861	41.1812	41.18
87	n-Butylbenzene	91	12.220	12.223	(1.033)	298570	43.7120	43.71
81	sec-Butylbenzene	105	11.668	11.668	(0.986)	460849	42.9412	42.94
92	Naphthalene	128	14.062	14.061	(1.188)	360790	47.0701	47.07
78	tert-Butylbenzene	119	11.449	11.453	(0.967)	341296	42.0085	42.00
60	1,1,1,2-Tetrachloroethane	131	9.643	9.646	(1.012)	115679	46.3402	46.34
64	Styrene	104	10.198	10.198	(1.070)	327282	46.5133	46.51



Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123128.D
Date : 01-JAN-2018 01:09
Client ID: HS17121224-01HSD
Sample Info: HS17121224-01HSD;HS17121224-01HSD;3;;HSD
Purge Volume: 5.0
Column phase: DB624

Instrument: VOA2.i
Operator: AP
Column diameter: 0.18

\\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123128.D

Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123129.D
Report Date: 09-Feb-2018 19:43

ALS Laboratory Group

Data file : \\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123129.D
Lab Smp Id: CCV_END Client Smp ID: CCV_END
Inj Date : 01-JAN-2018 01:33
Operator : AP Inst ID: VOA2.i
Smp Info : CCV_END;CCV_END;2;;
Misc Info : HS15080001;WATER;0;1;
Comment :
Method : \\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\8260LL.m
Meth Date : 09-Feb-2018 19:43 VOA2.i Quant Type: ISTD
Cal Date : 19-DEC-2017 12:14 Cal File: D121908.D
Als bottle: 22 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: dn_bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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
Va	0.00000	
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
	31 1,1,1-Trichloroethane	97	5.651	5.651	(0.978)	166469	50.0000	47.52
*	1 Pentafluorobenzene	168	5.779	5.779	(1.000)	226624	50.0000	
$	30 Dibromofluoromethane	113	5.686	5.686	(0.984)	97035	50.0000	47.52
*	36 1,4-Difluorobenzene	114	6.569	6.569	(1.000)	342419	50.0000	
$	35 1,2-Dichloroethane-d4	65	6.058	6.058	(1.048)	119690	50.0000	47.46
*	47 Chlorobenzene-d5	117	9.524	9.524	(1.000)	309429	50.0000	
$	48 Toluene-d8	98	8.090	8.090	(0.849)	384277	50.0000	47.10
$	69 4-Bromofluorobenzene	95	10.695	10.695	(1.123)	148582	50.0000	49.87
*	70 1,4-Dichlorobenzene-d4	152	11.835	11.835	(1.000)	146586	50.0000	
	68 1,1,2,2-Tetrachloroethane	83	10.872	10.872	(0.919)	149440	50.0000	42.73
	53 1,1,2-Trichloroethane	83	8.594	8.594	(0.902)	89127	50.0000	47.08
	32 1,1-Dichloropropene	75	5.850	5.850	(0.891)	132386	50.0000	49.60
	22 1,1-Dichloroethane	63	4.274	4.274	(0.740)	219425	50.0000	46.37
	11 1,1-Dichloroethene	96	2.750	2.750	(0.476)	92513	50.0000	49.46
	90 1,2,4-Trichlorobenzene	180	13.814	13.814	(1.167)	147177	50.0000	50.96
	89 1,2-Dibromo-3-Chloropropane	75	13.009	13.009	(1.099)	28156	50.0000	46.71
	57 1,2-Dibromoethane	107	9.068	9.068	(0.952)	118803	50.0000	50.11
	88 1,2-Dichlorobenzene	146	12.223	12.223	(1.033)	228673	50.0000	43.40
	33 1,2-Dichloroethane	62	6.145	6.145	(0.936)	155324	50.0000	51.37
	42 1,2-Dichloropropane	63	7.066	7.066	(1.076)	126009	50.0000	46.72
	83 1,3-Dichlorobenzene	146	11.767	11.767	(0.994)	236563	50.0000	43.14

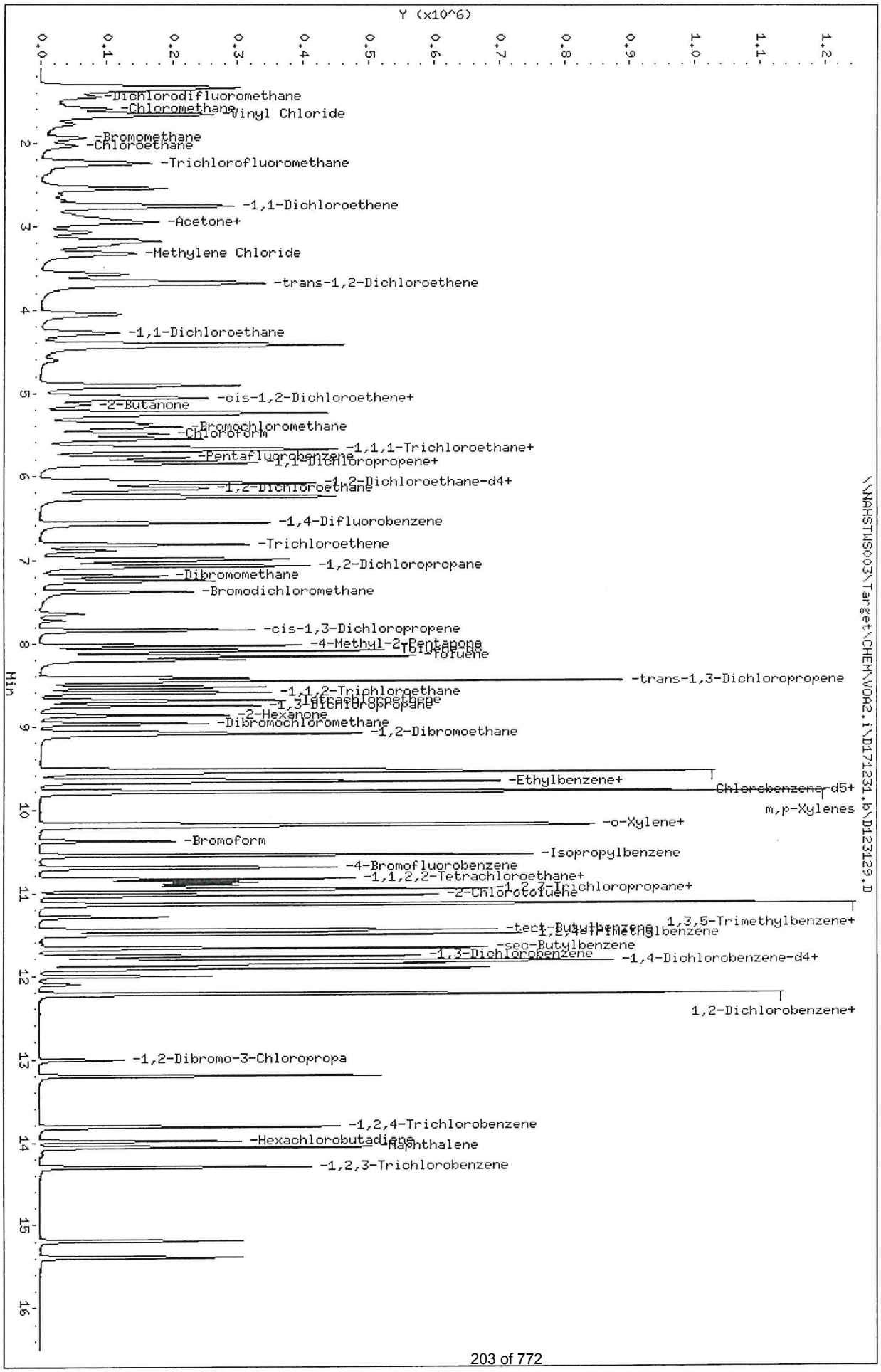
Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123129.D
Report Date: 09-Feb-2018 19:43

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)	
84	1,4-Dichlorobenzene	146	11.857	11.857	(1.002)	222225	50.0000	42.37	
24	2-Butanone	43	5.147	5.147	(0.891)	120624	100.000	98.64	
52	2-Hexanone	43	8.866	8.866	(0.931)	174365	100.000	96.17	
45	4-Methyl-2-Pentanone	43	8.026	8.026	(0.843)	269090	100.000	95.85	
10	Acetone	43	2.859	2.859	(0.495)	78338	100.000	104.38	
37	Benzene	78	6.087	6.087	(0.927)	421634	50.0000	46.79	
39	Bromodichloromethane	83	7.377	7.377	(1.123)	154499	50.0000	48.44	
66	Bromoform	173	10.378	10.378	(1.090)	96548	50.0000	52.60	
6	Bromomethane	94	1.932	1.932	(0.334)	73070	50.0000	46.94	
19	Carbon Disulfide	76	2.949	2.949	(0.510)	410862	100.000	96.18	
34	Carbon Tetrachloride	117	5.834	5.834	(0.888)	135222	50.0000	41.57	
59	Chlorobenzene	112	9.553	9.553	(1.003)	293408	50.0000	46.04	
7	Chloroethane	64	2.031	2.031	(0.352)	78671	50.0000	42.90	
28	Chloroform	83	5.491	5.491	(0.950)	190997	50.0000	46.22	
3	Chloromethane	50	1.592	1.592	(0.275)	191903	50.0000	50.64	
27	cis-1,2-Dichloroethene	96	5.067	5.067	(0.877)	122474	50.0000	47.50	
46	cis-1,3-Dichloropropene	75	7.839	7.839	(1.193)	183726	50.0000	50.16	
55	Dibromochloromethane	129	8.969	8.969	(0.942)	132141	50.0000	49.46	
2	Dichlorodifluoromethane	85	1.447	1.447	(0.250)	84800	50.0000	43.77	
61	Ethylbenzene	106	9.672	9.672	(1.015)	154379	50.0000	45.26	
67	Isopropylbenzene	105	10.545	10.545	(1.107)	490448	50.0000	46.48	
17	Methylene Chloride	84	3.331	3.331	(0.576)	111919	50.0000	45.11	
56	Tetrachloroethene	164	8.690	8.690	(0.912)	94228	50.0000	49.35	
50	Toluene	91	8.157	8.157	(0.856)	444264	50.0000	45.30	
20	trans-1,2-Dichloroethene	96	3.665	3.665	(0.634)	102411	50.0000	50.61	
51	trans-1,3-Dichloropropene	75	8.414	8.414	(1.281)	161768	50.0000	51.91	
38	Trichloroethene	130	6.816	6.816	(1.038)	123285	50.0000	48.60	
8	Trichlorofluoromethane	101	2.250	2.250	(0.389)	138919	50.0000	49.71	
5	Vinyl Chloride	62	1.675	1.675	(0.290)	133141	50.0000	47.93	
62	m,p-Xylenes	106	9.790	9.790	(1.028)	375281	100.000	89.97	
63	o-Xylene	106	10.176	10.176	(1.068)	200301	50.0000	45.90	
M 95	Xylenes (total)	106				575582	150.000		(a)
71	1,2,3-Trichloropropane	75	10.901	10.901	(0.921)	158894	50.0000	45.50	
93	1,2,3-Trichlorobenzene	182	14.299	14.299	(1.208)	130145	50.0000	52.30	
79	1,2,4-Trimethylbenzene	105	11.498	11.498	(0.972)	396430	50.0000	40.60	
75	1,3,5-Trimethylbenzene	105	11.132	11.132	(0.941)	389221	50.0000	40.93	
26	2,2-Dichloropropane	77	5.038	5.038	(0.872)	135212	50.0000	40.95	
54	1,3-Dichloropropane	76	8.754	8.754	(0.919)	179677	50.0000	47.06	
76	2-Chlorotoluene	91	11.029	11.029	(0.932)	339306	50.0000	40.74	
77	4-Chlorotoluene	91	11.138	11.138	(0.941)	370396	50.0000	40.85	
82	p-Isopropyltoluene	119	11.818	11.818	(0.999)	381648	50.0000	42.29	
29	Bromochloromethane	128	5.365	5.365	(0.928)	62080	50.0000	50.59	
74	Bromobenzene	156	10.830	10.830	(0.915)	137990	50.0000	42.43	
44	Dibromomethane	93	7.191	7.191	(1.095)	71129	50.0000	50.89	
91	Hexachlorobutadiene	225	13.988	13.988	(1.182)	62389	50.0000	46.39	
73	n-Propylbenzene	91	10.955	10.955	(0.926)	519408	50.0000	41.90	
87	n-Butylbenzene	91	12.220	12.220	(1.033)	299998	50.0000	44.73	
81	sec-Butylbenzene	105	11.668	11.668	(0.986)	451312	50.0000	42.83	
92	Naphthalene	128	14.062	14.062	(1.188)	379157	50.0000	50.42	
78	tert-Butylbenzene	119	11.449	11.449	(0.967)	340838	50.0000	42.73	
60	1,1,1,2-Tetrachloroethane	131	9.646	9.646	(1.013)	120011	50.0000	48.60	
64	Styrene	104	10.198	10.198	(1.071)	329469	50.0000	47.33	

Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123129.D
Report Date: 09-Feb-2018 19:43

QC Flag Legend

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



Data File: \\NAHSTWS003\Target\CHEM\VOA2,i\D171231,b\D123129,D
Date : 01-JAN-2018 01:33
Client ID: CCV_END
Sample Info: CCV_END;CCV_END;2;;
Purge Volume: 5.0
Column phase: DB624

Instrument: VOA2,i
Operator: AP
Column diameter: 0.18

FORM 5
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS17121224

Lab File ID: D010101 BFB Injection Date: 01/01/18

Instrument ID: VOA2 BFB Injection Time: 1405

GC Column: DB624 ID: 0.18 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	18.5
75	30.0 - 60.0% of mass 95	42.4
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.2
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	86.0
175	5.0 - 9.0% of mass 174	6.9 (8.0)1
176	95.0 - 101.0% of mass 174	85.3 (99.2)1
177	5.0 - 9.0% of mass 176	6.4 (7.5)2

1-Value is % mass 174 2-Value is % mass 176

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	CCV	CCV	D010102	01/01/18	1430
02	VLCSW-180101	VLCSW-180101	D010104	01/01/18	1519
03	VBLKW-180101	VBLKW-180101	D010106	01/01/18	1608
04	HS17121134-1	HS17121134-13M	D010111	01/01/18	1811
05	HS17121134-1	HS17121134-13M	D010112	01/01/18	1836
06	HS17121224-0	HS17121224-04	D010114	01/01/18	1925
07	HS17121224-0	HS17121224-02	D010116	01/01/18	2017
08	CCV_END	CCV_END	D010129	01/02/18	0148
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS17121224

Instrument ID: VOA2 Calibration Date: 01/01/18 Time: 1430

Lab File ID: D010102 Init. Calib. Date(s): 12/19/17 12/19/17

Init. Calib. Times: 1010 1327

GC Column: DB624 ID: 0.18 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
1,1,1-Trichloroethane	0.7730000	0.7768648	0.7768648	0.1	0.50	20.00	AVRG
1,1,1,2-Tetrachloroethane	0.3990000	0.4025232	0.4025232	0.1	0.88	20.00	AVRG
tert-Butylbenzene	2.7210000	2.4411517	2.4411517	0.1	-10.28	20.00	AVRG
Naphthalene	52.174389	50.000000	2.6755416	0.2	4.35	20.00	LINR
sec-Butylbenzene	3.5940000	3.3550271	3.3550271	0.1	-6.65	20.00	AVRG
1,1,2,2-Tetrachloroethane	1.1930000	1.0504763	1.0504763	0.3	-11.95	20.00	AVRG
1,1,2-Trichloroethane	0.3060000	0.2966830	0.2966830	0.1	-3.04	20.00	AVRG
1,1-Dichloropropene	52.218875	50.000000	0.4066319	0.1	4.44	20.00	LINR
1,1-Dichloroethane	1.0440000	0.9902086	0.9902086	0.2	-5.15	20.00	AVRG
1,1-Dichloroethene	0.4120000	0.4379625	0.4379625	0.1	6.30	20.00	AVRG
1,2,4-Trichlorobenzene	0.9850000	1.0679729	1.0679729	0.2	8.42	20.00	AVRG
1,2-Dibromo-3-Chloropropane	47.068892	50.000000	0.1935643	0.05	-5.86	20.00	LINR
1,2-Dibromoethane	0.3830000	0.3889200	0.3889200	0.1	1.54	20.00	AVRG
1,2-Dichlorobenzene	1.7970000	1.6264798	1.6264798	0.4	-9.49	20.00	AVRG
1,2-Dichloroethane	52.680656	50.000000	0.4650946	0.1	5.36	20.00	LINR
1,2-Dichloropropane	0.3940000	0.3784515	0.3784515	0.1	-3.95	20.00	AVRG
1,3-Dichlorobenzene	1.8700000	1.6953725	1.6953725	0.6	-9.34	20.00	AVRG
1,4-Dichlorobenzene	1.7890000	1.5935630	1.5935630	0.4	-10.92	20.00	AVRG
2-Butanone	0.2700000	0.2671989	0.2671989	0.1	-1.04	20.00	AVRG
2-Hexanone	0.2930000	0.2814539	0.2814539	0.1	-3.94	20.00	AVRG
4-Methyl-2-Pentanone	0.4540000	0.4315003	0.4315003	0.1	-4.96	20.00	AVRG
Acetone	101.85092	100.00000	0.1687368	0.1	1.85	20.00	LINR
Benzene	1.3160000	1.3064750	1.3064750	0.5	-0.72	20.00	AVRG
Bromodichloromethane	0.4660000	0.4653653	0.4653653	0.2	-0.14	20.00	AVRG
Bromoform	0.2970000	0.3179484	0.3179484	0.1	7.05	20.00	AVRG
Bromomethane	53.256021	50.000000	0.3635795	0.1	6.51	20.00	LINR
Carbon Disulfide	0.9420000	0.9533846	0.9533846	0.1	1.21	20.00	AVRG
Carbon Tetrachloride	0.4750000	0.4230900	0.4230900	0.1	-10.93	20.00	AVRG
Chlorobenzene	1.0300000	0.9814993	0.9814993	0.5	-4.71	20.00	AVRG
Chloroethane	0.4040000	0.3545321	0.3545321	0.1	-12.24	20.00	AVRG
Chloroform	0.9120000	0.8804897	0.8804897	0.2	-3.46	20.00	AVRG
Chloromethane	49.337178	50.000000	0.8253883	0.1	-1.32	20.00	LINR
cis-1,2-Dichloroethene	0.5690000	0.5469829	0.5469829	0.1	-3.87	20.00	AVRG
cis-1,3-Dichloropropene	0.5350000	0.5802862	0.5802862	0.2	8.46	20.00	AVRG
Dibromochloromethane	0.4320000	0.4403935	0.4403935	0.1	1.94	20.00	AVRG
Dichlorodifluoromethane	0.4270000	0.3922737	0.3922737	0.1	-8.13	20.00	AVRG
Ethylbenzene	0.5510000	0.5231777	0.5231777	0.1	-5.05	20.00	AVRG
Isopropylbenzene	1.7050000	1.6889766	1.6889766	0.1	-0.94	20.00	AVRG
Methylene Chloride	0.5470000	0.5126513	0.5126513	0.1	-6.28	20.00	AVRG
Tetrachloroethene	54.302574	50.000000	0.3339971	0.2	8.60	20.00	LINR
Toluene	1.5840000	1.5010368	1.5010368	0.4	-5.24	20.00	AVRG
trans-1,2-Dichloroethene	0.4460000	0.4814465	0.4814465	0.1	7.95	20.00	AVRG

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS1712122

Instrument ID: VOA2 Calibration Date: 01/01/18 Time: 1430

Lab File ID: D010102 Init. Calib. Date(s): 12/19/17 12/19/17

Init. Calib. Times: 1010 1327

GC Column: DB624 ID: 0.18 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
trans-1,3-Dichloropropene	0.4550000	0.5039936	0.5039936	0.1	10.77	20.00	AVRG
Trichloroethene	0.3700000	0.3756897	0.3756897	0.2	1.54	20.00	AVRG
Trichlorofluoromethane	0.6160000	0.6587650	0.6587650	0.1	6.94	20.00	AVRG
Vinyl Chloride	0.6130000	0.5967709	0.5967709	0.1	-2.65	20.00	AVRG
m,p-Xylenes	0.6740000	0.6478363	0.6478363	0.1	-3.88	20.00	AVRG
o-Xylene	0.7050000	0.6772890	0.6772890	0.3	-3.93	20.00	AVRG
Xylenes (total)	0.6190000	0.6077498	0.6077498	0.1	-1.82	20.00	AVRG
1,2,3-Trichloropropane	1.1910000	1.1182750	1.1182750	0.1	-6.11	20.00	AVRG
1,2,3-Trichlorobenzene	0.8490000	0.9194846	0.9194846	0.1	8.30	20.00	AVRG
1,2,4-Trimethylbenzene	3.3300000	2.8792862	2.8792862	0.1	-13.53	20.00	AVRG
1,3,5-Trimethylbenzene	3.2430000	2.8260645	2.8260645	0.1	-12.86	20.00	AVRG
2,2-Dichloropropane	0.7280000	0.7537397	0.7537397	0.1	3.54	20.00	AVRG
1,3-Dichloropropane	0.6170000	0.5916479	0.5916479	0.1	-4.11	20.00	AVRG
2-Chlorotoluene	2.8400000	2.4367688	2.4367688	0.1	-14.20	20.00	AVRG
4-Chlorotoluene	3.0920000	2.6912823	2.6912823	0.1	-12.96	20.00	AVRG
p-Isopropyltoluene	3.0780000	2.8260576	2.8260576	0.1	-8.18	20.00	AVRG
Bromochloromethane	0.2700000	0.2790308	0.2790308	0.1	3.34	20.00	AVRG
Bromobenzene	1.1090000	0.9837227	0.9837227	0.1	-11.30	20.00	AVRG
Dibromomethane	0.2040000	0.2150322	0.2150322	0.1	5.41	20.00	AVRG
Hexachlorobutadiene	50.122368	50.000000	0.4595263	0.1	0.24	20.00	LINR
n-Propylbenzene	4.2270000	3.7922279	3.7922279	0.1	-10.28	20.00	AVRG
n-Butylbenzene	2.2870000	2.2062252	2.2062252	0.05	-3.53	20.00	AVRG
Styrene	1.1240000	1.1147663	1.1147663	0.3	-0.82	20.00	AVRG
1,2-Dichloroethane-d4	0.5560000	0.5291849	0.5291849	0.1	-4.82	20.00	AVRG
Dibromofluoromethane	0.4500000	0.4360361	0.4360361	0.1	-3.10	20.00	AVRG
Toluene-d8	1.3180000	1.2313100	1.2313100	0.1	-6.58	20.00	AVRG
4-Bromofluorobenzene	0.4810000	0.4870979	0.4870979	0.1	1.27	20.00	AVRG

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS17121224

Instrument ID: VOA2 Calibration Date: 01/02/18 Time: 0148

Lab File ID: D010129 Init. Calib. Date(s): 12/19/17 12/19/17

Init. Calib. Times: 1010 1327

GC Column: DB624 ID: 0.18 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
1,1,1-Trichloroethane	0.7730000	0.7636101	0.7636101	0.1	-1.21	50.00	AVRG
1,1,1,2-Tetrachloroethane	0.3990000	0.3820172	0.3820172	0.1	-4.26	50.00	AVRG
tert-Butylbenzene	2.7210000	2.3825625	2.3825625	0.1	-12.44	50.00	AVRG
Naphthalene	47.359048	50.000000	2.4310836	0.2	-5.28	50.00	LINR
sec-Butylbenzene	3.5940000	3.2050631	3.2050631	0.1	-10.82	50.00	AVRG
1,1,2,2-Tetrachloroethane	1.1930000	0.9034750	0.9034750	0.3	-24.27	50.00	AVRG
1,1,2-Trichloroethane	0.3060000	0.2769318	0.2769318	0.1	-9.50	50.00	AVRG
1,1-Dichloropropene	53.393897	50.000000	0.4156212	0.1	6.79	50.00	LINR
1,1-Dichloroethane	1.0440000	0.9790123	0.9790123	0.2	-6.22	50.00	AVRG
1,1-Dichloroethene	0.4120000	0.4502953	0.4502953	0.1	9.29	50.00	AVRG
1,2,4-Trichlorobenzene	0.9850000	0.9587819	0.9587819	0.2	-2.66	50.00	AVRG
1,2-Dibromo-3-Chloropropane	43.180549	50.000000	0.1773890	0.05	-13.64	50.00	LINR
1,2-Dibromoethane	0.3830000	0.3704947	0.3704947	0.1	-3.26	50.00	AVRG
1,2-Dichlorobenzene	1.7970000	1.5359323	1.5359323	0.4	-14.53	50.00	AVRG
1,2-Dichloroethane	49.174845	50.000000	0.4342020	0.1	-1.65	50.00	LINR
1,2-Dichloropropane	0.3940000	0.3628917	0.3628917	0.1	-7.90	50.00	AVRG
1,3-Dichlorobenzene	1.8700000	1.5831638	1.5831638	0.6	-15.34	50.00	AVRG
1,4-Dichlorobenzene	1.7890000	1.4990242	1.4990242	0.4	-16.21	50.00	AVRG
2-Butanone	0.2700000	0.2463871	0.2463871	0.1	-8.74	50.00	AVRG
2-Hexanone	0.2930000	0.2621805	0.2621805	0.1	-10.52	50.00	AVRG
4-Methyl-2-Pentanone	0.4540000	0.4035973	0.4035973	0.1	-11.10	50.00	AVRG
Acetone	97.670273	100.00000	0.1619667	0.1	-2.33	50.00	LINR
Benzene	1.3160000	1.2602870	1.2602870	0.5	-4.23	50.00	AVRG
Bromodichloromethane	0.4660000	0.4404615	0.4404615	0.2	-5.48	50.00	AVRG
Bromoform	0.2970000	0.2940357	0.2940357	0.1	-1.00	50.00	AVRG
Bromomethane	51.818548	50.000000	0.3542062	0.1	3.64	50.00	LINR
Carbon Disulfide	0.9420000	0.9438203	0.9438203	0.1	0.19	50.00	AVRG
Carbon Tetrachloride	0.4750000	0.4168551	0.4168551	0.1	-12.24	50.00	AVRG
Chlorobenzene	1.0300000	0.9373784	0.9373784	0.5	-8.99	50.00	AVRG
Chloroethane	0.4040000	0.3616224	0.3616224	0.1	-10.49	50.00	AVRG
Chloroform	0.9120000	0.8464633	0.8464633	0.2	-7.19	50.00	AVRG
Chloromethane	56.425409	50.000000	0.9417178	0.1	12.85	50.00	LINR
cis-1,2-Dichloroethene	0.5690000	0.5410683	0.5410683	0.1	-4.91	50.00	AVRG
cis-1,3-Dichloropropene	0.5350000	0.5172346	0.5172346	0.2	-3.32	50.00	AVRG
Dibromochloromethane	0.4320000	0.4050949	0.4050949	0.1	-6.23	50.00	AVRG
Dichlorodifluoromethane	0.4270000	0.5206702	0.5206702	0.1	21.94	50.00	AVRG
Ethylbenzene	0.5510000	0.5034708	0.5034708	0.1	-8.62	50.00	AVRG
Isopropylbenzene	1.7050000	1.6251140	1.6251140	0.1	-4.68	50.00	AVRG
Methylene Chloride	0.5470000	0.4927561	0.4927561	0.1	-9.92	50.00	AVRG
Tetrachloroethene	52.687339	50.000000	0.3243656	0.2	5.37	50.00	LINR
Toluene	1.5840000	1.4461527	1.4461527	0.4	-8.70	50.00	AVRG
trans-1,2-Dichloroethene	0.4460000	0.4642932	0.4642932	0.1	4.10	50.00	AVRG

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS1712122

Instrument ID: VOA2 Calibration Date: 01/02/18 Time: 0148

Lab File ID: D010129 Init. Calib. Date(s): 12/19/17 12/19/17

Init. Calib. Times: 1010 1327

GC Column: DB624 ID: 0.18 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
trans-1,3-Dichloropropene	0.4550000	0.4483802	0.4483802	0.1	-1.45	50.00	AVRG
Trichloroethene	0.3700000	0.3797863	0.3797863	0.2	2.64	50.00	AVRG
Trichlorofluoromethane	0.6160000	0.6798042	0.6798042	0.1	10.36	50.00	AVRG
Vinyl Chloride	0.6130000	0.6650443	0.6650443	0.1	8.49	50.00	AVRG
m,p-Xylenes	0.6740000	0.6169397	0.6169397	0.1	-8.46	50.00	AVRG
o-Xylene	0.7050000	0.6476260	0.6476260	0.3	-8.14	50.00	AVRG
Xylenes (total)	0.6190000	0.5744695	0.5744695	0.1	-7.19	50.00	AVRG
1,2,3-Trichloropropane	1.1910000	0.9818839	0.9818839	0.1	-17.56	50.00	AVRG
1,2,3-Trichlorobenzene	0.8490000	0.8343344	0.8343344	0.1	-1.73	50.00	AVRG
1,2,4-Trimethylbenzene	3.3300000	2.6991911	2.6991911	0.1	-18.94	50.00	AVRG
1,3,5-Trimethylbenzene	3.2430000	2.7014047	2.7014047	0.1	-16.70	50.00	AVRG
2,2-Dichloropropane	0.7280000	0.5731101	0.5731101	0.1	-21.28	50.00	AVRG
1,3-Dichloropropane	0.6170000	0.5535301	0.5535301	0.1	-10.29	50.00	AVRG
2-Chlorotoluene	2.8400000	2.3391376	2.3391376	0.1	-17.64	50.00	AVRG
4-Chlorotoluene	3.0920000	2.5330704	2.5330704	0.1	-18.08	50.00	AVRG
p-Isopropyltoluene	3.0780000	2.6674896	2.6674896	0.1	-13.34	50.00	AVRG
Bromochloromethane	0.2700000	0.2634241	0.2634241	0.1	-2.44	50.00	AVRG
Bromobenzene	1.1090000	0.9178810	0.9178810	0.1	-17.23	50.00	AVRG
Dibromomethane	0.2040000	0.1985277	0.1985277	0.1	-2.68	50.00	AVRG
Hexachlorobutadiene	45.061077	50.000000	0.4135261	0.1	-9.88	50.00	LINR
n-Propylbenzene	4.2270000	3.5914805	3.5914805	0.1	-15.03	50.00	AVRG
n-Butylbenzene	2.2870000	2.0193229	2.0193229	0.05	-11.70	50.00	AVRG
Styrene	1.1240000	1.0504909	1.0504909	0.3	-6.54	50.00	AVRG
1,2-Dichloroethane-d4	0.5560000	0.5287306	0.5287306	0.1	-4.90	50.00	AVRG
Dibromofluoromethane	0.4500000	0.4325235	0.4325235	0.1	-3.88	50.00	AVRG
Toluene-d8	1.3180000	1.2334871	1.2334871	0.1	-6.41	50.00	AVRG
4-Bromofluorobenzene	0.4810000	0.4770809	0.4770809	0.1	-0.81	50.00	AVRG

FORM 8
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS17121224

Lab File ID (Standard): D010102 Date Analyzed: 01/01/18

Instrument ID: VOA2 Time Analyzed: 1430

GC Column: DB624 ID: 0.18 (mm) Heated Purge: (Y/N) N

		IS1 AREA #	IS1 RT #	IS2 (DFB) AREA #	IS2 (DFB) RT #	IS3 (CBZ) AREA #	IS3 (CBZ) RT #
	12 HOUR STD	219069	5.78	328774	6.57	303826	9.53
	UPPER LIMIT	438138	6.28	657548	7.07	607652	10.03
	LOWER LIMIT	109535	5.28	164387	6.07	151913	9.03
	CLIENT SAMPLE NO.						
01	VLCSW-180101	223161	5.78	335829	6.57	303431	9.52
02	VBLKW-180101	241794	5.78	344252	6.57	311537	9.52
03	HS17121134-13	224671	5.78	336672	6.57	305703	9.52
04	HS17121134-13	219670	5.78	335537	6.57	308167	9.52
05	HS17121224-04	237826	5.78	335987	6.57	309168	9.52
06	HS17121224-02	237883	5.78	347929	6.57	315144	9.52
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

IS1 = Pentafluorobenzene
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

FORM 8
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS17121224

Lab File ID (Standard): D010102 Date Analyzed: 01/01/18

Instrument ID: VOA2 Time Analyzed: 1430

GC Column: DB624 ID: 0.18 (mm) Heated Purge: (Y/N) N

		IS4(DCB) AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	143513	11.84				
	UPPER LIMIT	287026	12.34				
	LOWER LIMIT	71757	11.34				
	CLIENT SAMPLE NO.						
01	VLCSW-180101	142805	11.83				
02	VBLKW-180101	138157	11.84				
03	HS17121134-13	144784	11.83				
04	HS17121134-13	143728	11.83				
05	HS17121224-04	140615	11.83				
06	HS17121224-02	141044	11.83				
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

IS4 (DCB) = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

FORM VIII VOA

MSVOA02 -Logbook

Batch: 30338
Date: 12-31-2017
Method: 8260
Comments:

Analyst: Anjana Poluri
Reviewer:
Laboratory: Houston

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
1	BFB	TUNE	12-31-2017 01:39 pm	1.00	50 mL	50 mL	D123101.D	Liquid	Y	NA
2	*Auto find/purged* CCV	CCV	12-31-2017 02:04 pm	1.00	50 mL	50 mL	D123102.D	Liquid	Y	NA
3	*10 uL cal std/50 mL DI* VLCSW-171231	LCS	12-31-2017 02:28 pm	1.00	50 mL	50 mL	D123103.D	Liquid	Y	NA
4	*10 uL cal std/50 mL DI* BLK	SAMP	12-31-2017 02:53 pm	1.00	50 mL	50 mL	D123104.D	Liquid	Y	NA
5	*CLeanup Blk* VBLKW-171231	MBLK	12-31-2017 03:17 pm	1.00	50 mL	50 mL	D123105.D	Liquid	Y	NA
6	HS17121158-03	SAMP	12-31-2017 03:42 pm	1.00	50 mL	50 mL	D123106.D	Liquid	Y	<2
7	HS17121168-02	SAMP	12-31-2017 04:06 pm	1.00	50 mL	50 mL	D123107.D	Liquid	Y	<2
8	HS17121169-02	SAMP	12-31-2017 04:31 pm	1.00	50 mL	50 mL	D123108.D	Liquid	Y	<2
9	HS17121224-09	SAMP	12-31-2017 04:56 pm	1.00	50 mL	50 mL	D123109.D	Liquid	Y	<2
10	HS17121400-02	SAMP	12-31-2017 05:20 pm	1.00	50 mL	50 mL	D123110.D	Liquid	Y	<2
11	HS17121168-01	SAMP	12-31-2017 05:45 pm	1.00	50 mL	50 mL	D123111.D	Liquid	Y	<2
12	HS17121224-01	SAMP	12-31-2017 06:09 pm	1.00	50 mL	50 mL	D123112.D	Liquid	Y	<2
13	HS17121224-08	SAMP	12-31-2017 06:34 pm	1.00	50 mL	50 mL	D123113.D	Liquid	Y	<2
14	HS17121400-01	SAMP	12-31-2017 06:58 pm	1.00	50 mL	50 mL	D123114.D	Liquid	Y	<2
15	HS17121224-05	SAMP	12-31-2017 07:23 pm	1.00	50 mL	50 mL	D123115.D	Liquid	Y	<2
16	HS17121224-05	SAMP	12-31-2017 07:50 pm	10.00	5 mL	50 mL	D123116.D	Liquid	Y	<2
17	HS17121224-06	SAMP	12-31-2017 08:17 pm	5.00	10 mL	50 mL	D123117.D	Liquid	Y	<2
18	HS17121224-06	SAMP	12-31-2017 08:45 pm	50.00	1 mL	50 mL	D123118.D	Liquid	Y	<2
19	HS17121169-01	SAMP	12-31-2017 09:12 pm	10.00	5 mL	50 mL	D123119.D	Liquid	Y	<2
20	HS17121169-01	SAMP	12-31-2017 09:39 pm	100.0(	500 µL	50 mL	D123120.D	Liquid	Y	<2
21	HS17121224-02	SAMP	12-31-2017 10:06 pm	10.00	5 mL	50 mL	D123121.D	Liquid	Y	<2
22	HS17121224-02	SAMP	12-31-2017 10:33 pm	100.0(	500 µL	50 mL	D123122.D	Liquid	Y	<2
23	HS17121224-04	SAMP	12-31-2017 11:01 pm	10.00	5 mL	50 mL	D123123.D	Liquid	Y	<2
24	HS17121224-04	SAMP	12-31-2017 11:28 pm	100.0(	500 µL	50 mL	D123124.D	Liquid	Y	<2
25	HS17121224-03	SAMP	12-31-2017 11:53 pm	100.0(	500 µL	50 mL	D123125.D	Liquid	Y	<2
26	HS17121224-03	SAMP	01-01-2018 12:20 am	1000.0	50 µL	50 mL	D123126.D	Liquid	Y	<2
27	HS17121224-01MS	MS	01-01-2018 12:44 am	1.00	50 mL	50 mL	D123127.D	Liquid	Y	<2
28	*8 uL cal std/40 mL sample* HS17121224-01MSD	MSD	01-01-2018 01:09 am	1.00	50 mL	50 mL	D123128.D	Liquid	Y	<2
29	*8 uL cal std/40 mL sample* CCV_END	CCV	01-01-2018 01:33 am	1.00	50 mL	50 mL	D123129.D	Liquid	Y	NA
30	*10 uL cal std/50 mL DI* BFB	TUNE	01-01-2018 01:58 am	1.00	50 mL	50 mL	E123101.D	Liquid	Y	NA
31	CCV	CCV	01-01-2018 02:23 am	1.00	50 mL	50 mL	E123102.D	Liquid	Y	NA
32	*10 uL cal std/50 mL DI* CCV	CCV	01-01-2018 02:47 am	1.00	50 mL	50 mL	E123103.D	Liquid	Y	NA
33	*10 uL cal std/50 mL DI* VLCSW-171231	LCS	01-01-2018 03:12 am	1.00	50 mL	50 mL	E123104.D	Liquid	Y	NA
34	*10 uL cal std/50 mL DI* BLK	SAMP	01-01-2018 03:37 am	1.00	50 mL	50 mL	E123105.D	Liquid	Y	NA
35	*Cleanup blk* VBLKW-171231	MBLK	01-01-2018 04:01 am	1.00	50 mL	50 mL	E123106.D	Liquid	Y	NA

MSVOA02 -Logbook

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
36	HS17121073-10	SAMP	01-01-2018 04:26 am	1.00	50 mL	50 mL	E123107.D	Liquid	Y	<2
37	HS17121073-08	SAMP	01-01-2018 04:50 am	1.00	50 mL	50 mL	E123108.D	Liquid	Y	<2
38	HS17121073-09	SAMP	01-01-2018 05:15 am	1.00	50 mL	50 mL	E123109.D	Liquid	Y	<2
39	HS17121073-08MS	MS	01-01-2018 05:40 am	1.00	50 mL	50 mL	E123110.D	Liquid	Y	<2
	8 uL cal std/40 mL sample									
40	HS17121073-08MSD	MSD	01-01-2018 06:04 am	1.00	50 mL	50 mL	E123111.D	Liquid	Y	<2
	8 uL cal std/40 mL sample									
41	HS17121037-03	SAMP	01-01-2018 06:29 am	1.00	50 mL	50 mL	E123112.D	Liquid	Y	<2
42	HS17121006-03	SAMP	01-01-2018 06:54 am	1.00	50 mL	50 mL	E123113.D	Liquid	Y	<2
43	HS17121219-05	SAMP	01-01-2018 07:18 am	1.00	50 mL	50 mL	E123114.D	Liquid	Y	<2
44	HS17121219-06	SAMP	01-01-2018 07:43 am	1.00	50 mL	50 mL	E123115.D	Liquid	Y	<2
45	HS17121006-01	SAMP	01-01-2018 08:08 am	1.00	50 mL	50 mL	E123116.D	Liquid	Y	<2
46	HS17121006-02	SAMP	01-01-2018 08:32 am	1.00	50 mL	50 mL	E123117.D	Liquid	Y	<2
47	HS17121171-15	SAMP	01-01-2018 08:57 am	1.00	50 mL	50 mL	E123118.D	Liquid	Y	<2
48	HS17121171-16	SAMP	01-01-2018 09:21 am	1.00	50 mL	50 mL	E123119.D	Liquid	Y	<2
49	HS17121171-17	SAMP	01-01-2018 09:46 am	1.00	50 mL	50 mL	E123120.D	Liquid	Y	<2
50	HS17121171-18	SAMP	01-01-2018 10:11 am	1.00	50 mL	50 mL	E123121.D	Liquid	Y	<2
51	HS17121171-19	SAMP	01-01-2018 10:35 am	1.00	50 mL	50 mL	E123122.D	Liquid	Y	<2
52	HS17121171-20	SAMP	01-01-2018 11:00 am	1.00	50 mL	50 mL	E123123.D	Liquid	Y	<2
53	HS17121171-21	SAMP	01-01-2018 11:24 am	1.00	50 mL	50 mL	E123124.D	Liquid	Y	<2
54	HS17121171-21	SAMP	01-01-2018 11:52 am	10.00	5 mL	50 mL	E123125.D	Liquid	Y	<2
55	HS17121073-03	SAMP	01-01-2018 12:16 pm	100.0(	500 µL	50 mL	E123126.D	Liquid	Y	<2
56	HS17121073-03	SAMP	01-01-2018 12:44 pm	1000.0	50 µL	50 mL	E123127.D	Liquid	Y	<2
57	HS17121073-06	SAMP	01-01-2018 01:08 pm	100.0(	500 µL	50 mL	E123128.D	Liquid	Y	<2
58	HS17121073-06	SAMP	01-01-2018 01:36 pm	1000.0	50 µL	50 mL	E123129.D	Liquid	Y	<2

Chemical	Value
SURR ID	29814-99-03
IS ID	29814-99-04
LCS/MS ID	29814-99-01
CAL STD ID	29814-99-01
BFB ID	29814-99-03
pH Paper	634-37-03

Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123101.D

Date : 31-DEC-2017 13:39

Client ID: BFB

Instrument: VOA2.i

Sample Info: BFB;BFB;3;;BFB

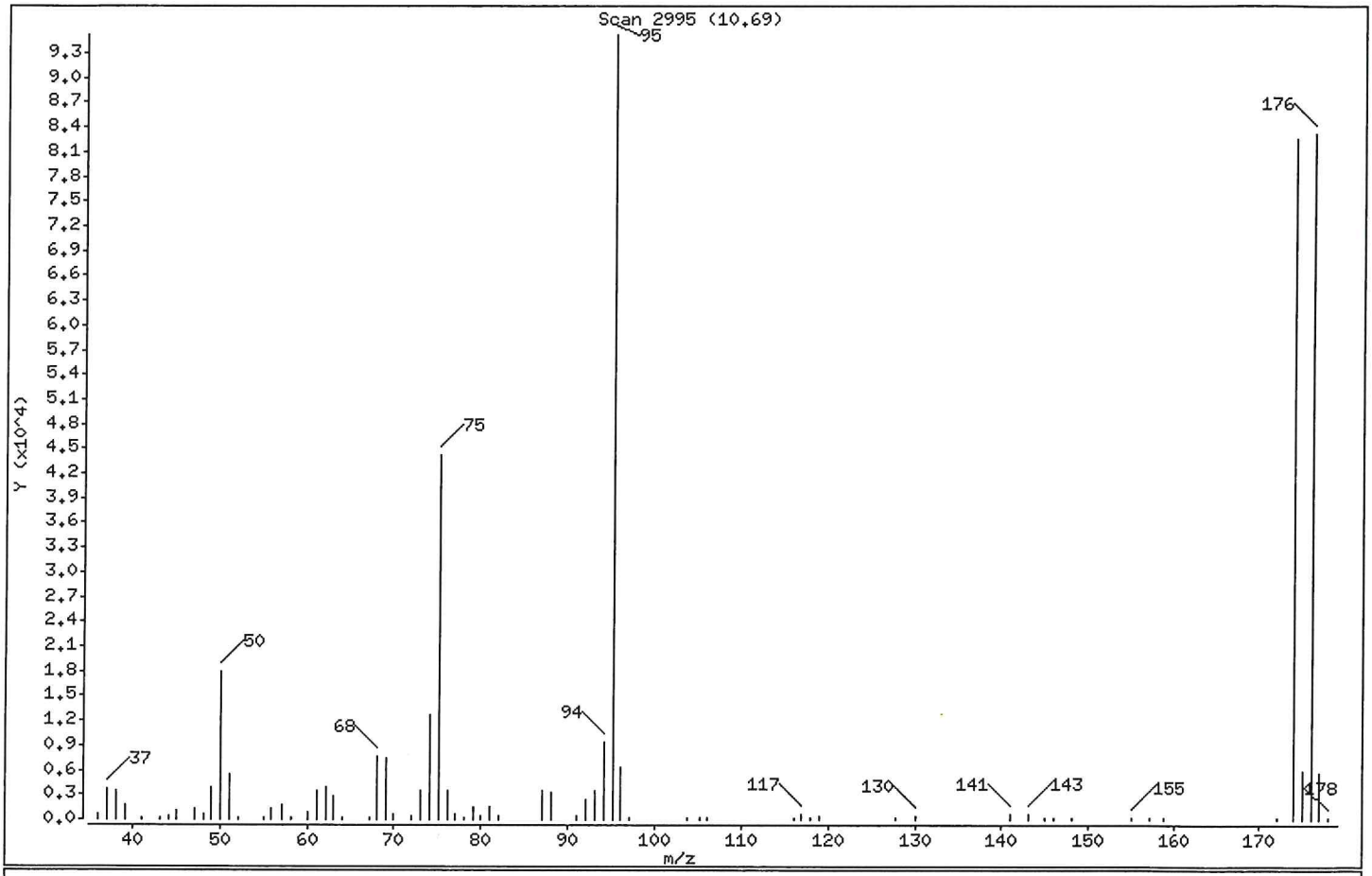
Volume Injected (uL): 2.0

Operator: AP

Column phase: DB624

Column diameter: 0.18

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	18.94
75	30.00 - 60.00% of mass 95	46.44
96	5.00 - 9.00% of mass 95	6.67
173	Less than 2.00% of mass 174	0.00 (0.00)
174	Greater than 50.00% of mass 95	86.67
175	5.00 - 9.00% of mass 174	6.10 (7.04)
176	95.00 - 101.00% of mass 174	87.40 (100.84)
177	5.00 - 9.00% of mass 176	5.99 (6.85)

Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123101.D

Date : 31-DEC-2017 13:39

Client ID: BFB

Instrument: VOA2.i

Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: AP

Column phase: DB624

Column diameter: 0.18

Data File: D123101.D
Spectrum: Scan 2995 (10.69)
Location of Maximum: 95.10
Number of points: 70

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	619	60.10	853	80.90	1581	127.80	228
37.10	3633	61.10	3473	82.00	478	130.00	458
38.10	3566	62.10	3859	87.00	3554	141.00	737
39.10	1752	63.10	2859	88.00	3308	143.00	732
41.10	303	64.00	216	91.00	350	145.00	192
43.10	249	67.10	153	92.10	2431	145.90	281
44.10	460	68.10	7760	93.00	3459	148.00	192
45.00	1004	69.10	7520	94.10	9447	155.00	321
47.10	1343	70.00	712	95.10	95192	157.00	151
48.10	607	72.00	411	96.10	6349	158.80	158
49.10	3926	73.10	3507	97.10	157	172.20	189
50.10	18032	74.10	12652	103.80	248	174.00	82504
51.10	5374	75.10	44208	105.20	171	175.10	5807
52.20	260	76.10	3572	106.00	233	176.00	83200
55.10	232	77.10	760	116.00	157	177.00	5699
56.00	1334	78.00	264	117.00	551	178.00	220
57.10	1833	79.00	1485	117.90	245		
58.10	151	80.00	514	119.00	427		

Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D171231.b\D123101.D

Date : 31-DEC-2017 13:39

Client ID: BFB

Instrument: VOA2.i

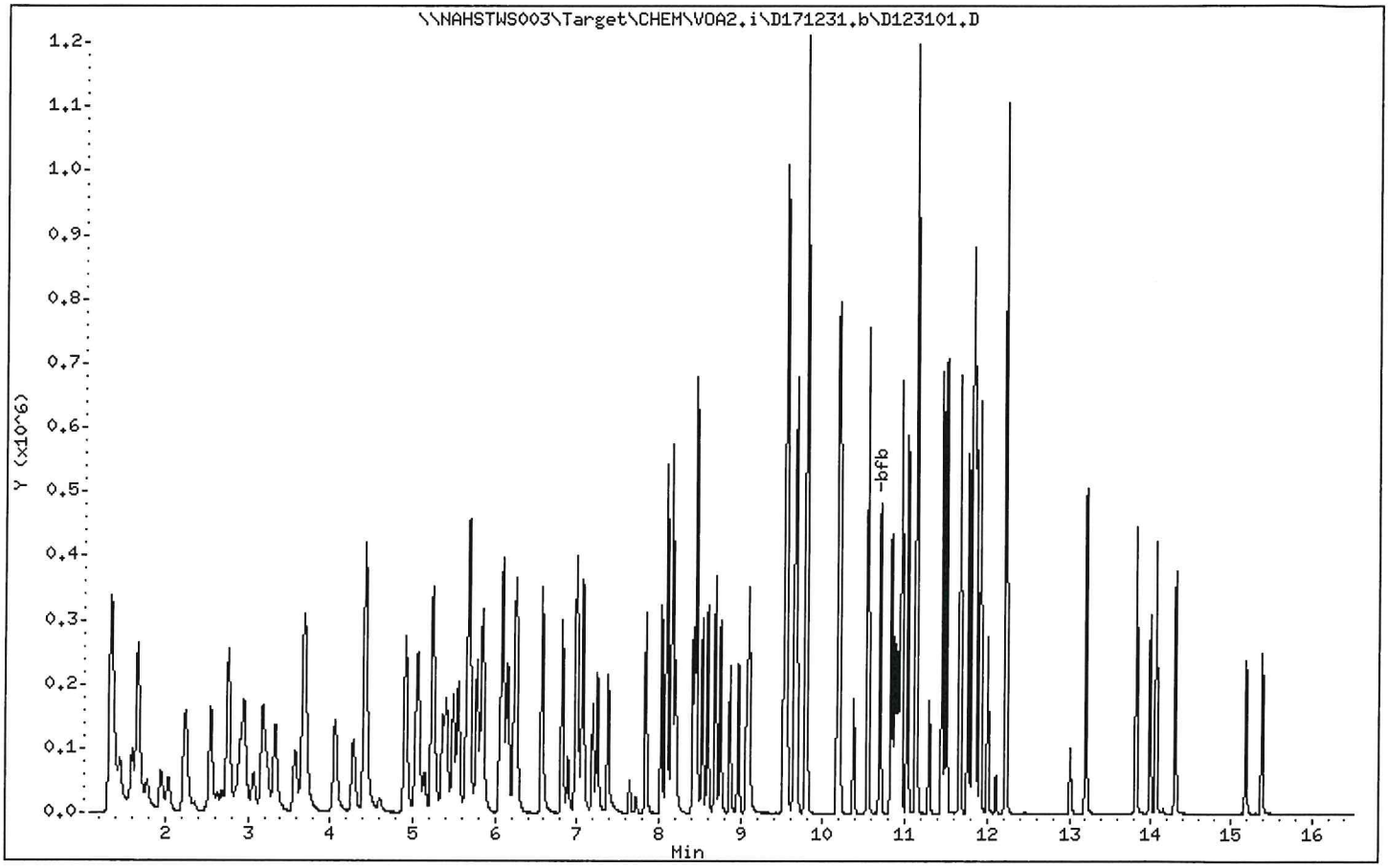
Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: AP

Column phase: DB624

Column diameter: 0.18



Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D180101.b\D010102.D
Report Date: 09-Feb-2018 20:27

ALS Laboratory Group

Data file : \\NAHSTWS003\Target\CHEM\VOA2.i\D180101.b\D010102.D
Lab Smp Id: CCV Client Smp ID: CCV
Inj Date : 01-JAN-2018 14:30
Operator : AP Inst ID: VOA2.i
Smp Info : CCV;CCV;2;;
Misc Info : HS15080001;WATER;0;1;
Comment :
Method : \\nahstws003\Target\CHEM\VOA2.i\D180101.b\8260LL.m
Meth Date : 09-Feb-2018 20:27 VOA2.i Quant Type: ISTD
Cal Date : 19-DEC-2017 12:14 Cal File: D121908.D
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: dn_bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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
Va	0.00000	
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
31 1,1,1-Trichloroethane	97	5.651	5.651	(0.978)	170187	50.0000	50.26
* 1 Pentafluorobenzene	168	5.779	5.779	(1.000)	219069	50.0000	
$ 30 Dibromofluoromethane	113	5.680	5.680	(0.983)	95522	50.0000	48.39
* 36 1,4-Difluorobenzene	114	6.569	6.569	(1.000)	328774	50.0000	
$ 35 1,2-Dichloroethane-d4	65	6.055	6.055	(1.048)	115928	50.0000	47.55
* 47 Chlorobenzene-d5	117	9.527	9.527	(1.000)	303826	50.0000	
$ 48 Toluene-d8	98	8.090	8.090	(0.849)	374104	50.0000	46.70
$ 69 4-Bromofluorobenzene	95	10.695	10.695	(1.123)	147993	50.0000	50.59
* 70 1,4-Dichlorobenzene-d4	152	11.835	11.835	(1.000)	143513	50.0000	
68 1,1,2,2-Tetrachloroethane	83	10.872	10.872	(0.919)	150757	50.0000	44.03
53 1,1,2-Trichloroethane	83	8.594	8.594	(0.902)	90140	50.0000	48.49
32 1,1-Dichloropropene	75	5.850	5.850	(0.891)	133690	50.0000	52.21
22 1,1-Dichloroethane	63	4.278	4.278	(0.740)	216924	50.0000	47.42
11 1,1-Dichloroethene	96	2.750	2.750	(0.476)	95944	50.0000	53.06
90 1,2,4-Trichlorobenzene	180	13.818	13.818	(1.168)	153268	50.0000	54.21
89 1,2-Dibromo-3-Chloropropane	75	13.006	13.006	(1.099)	27779	50.0000	47.06
57 1,2-Dibromoethane	107	9.068	9.068	(0.952)	118164	50.0000	50.76
88 1,2-Dichlorobenzene	146	12.223	12.223	(1.033)	233421	50.0000	45.25
33 1,2-Dichloroethane	62	6.145	6.145	(0.936)	152911	50.0000	52.68
42 1,2-Dichloropropane	63	7.066	7.066	(1.076)	124425	50.0000	48.04
83 1,3-Dichlorobenzene	146	11.767	11.767	(0.994)	243308	50.0000	45.32

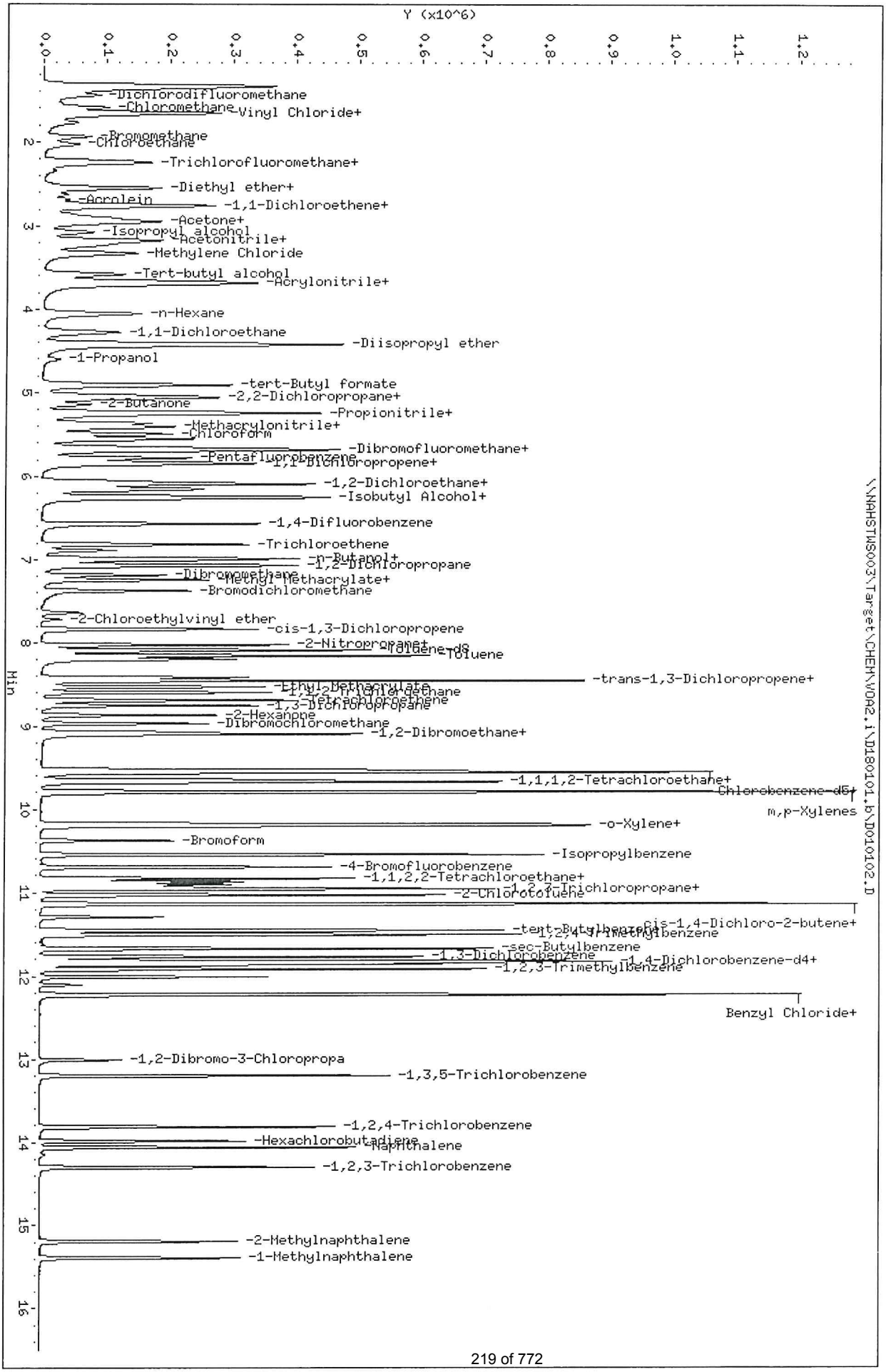
Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D180101.b\D010102.D
Report Date: 09-Feb-2018 20:27

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
84	1,4-Dichlorobenzene	146	11.857	11.857	(1.002)	228697	50.0000	44.54
24	2-Butanone	43	5.141	5.141	(0.890)	117070	100.000	99.03
52	2-Hexanone	43	8.866	8.866	(0.931)	171026	100.000	96.07
45	4-Methyl-2-Pentanone	43	8.026	8.026	(0.842)	262202	100.000	95.12
10	Acetone	43	2.859	2.859	(0.495)	73930	100.000	101.85
37	Benzene	78	6.091	6.091	(0.927)	429535	50.0000	49.65
39	Bromodichloromethane	83	7.377	7.377	(1.123)	153000	50.0000	49.97
66	Bromoform	173	10.374	10.374	(1.089)	96601	50.0000	53.60
6	Bromomethane	94	1.938	1.938	(0.335)	79649	50.0000	53.25
19	Carbon Disulfide	76	2.949	2.949	(0.510)	417714	100.000	101.16
34	Carbon Tetrachloride	117	5.831	5.831	(0.888)	139101	50.0000	44.54
59	Chlorobenzene	112	9.553	9.553	(1.003)	298205	50.0000	47.65
7	Chloroethane	64	2.031	2.031	(0.352)	77667	50.0000	43.82
28	Chloroform	83	5.490	5.490	(0.950)	192888	50.0000	48.29
3	Chloromethane	50	1.592	1.592	(0.275)	180817	50.0000	49.33
27	cis-1,2-Dichloroethene	96	5.067	5.067	(0.877)	119827	50.0000	48.07
46	cis-1,3-Dichloropropene	75	7.836	7.836	(1.193)	190783	50.0000	54.25
55	Dibromochloromethane	129	8.969	8.969	(0.941)	133803	50.0000	51.00
2	Dichlorodifluoromethane	85	1.447	1.447	(0.250)	85935	50.0000	45.88
61	Ethylbenzene	106	9.672	9.672	(1.015)	158955	50.0000	47.46
67	Isopropylbenzene	105	10.545	10.545	(1.107)	513155	50.0000	49.53
17	Methylene Chloride	84	3.328	3.328	(0.576)	112306	50.0000	46.83
56	Tetrachloroethene	164	8.687	8.687	(0.912)	101477	50.0000	54.30
50	Toluene	91	8.157	8.157	(0.856)	456054	50.0000	47.36
20	trans-1,2-Dichloroethene	96	3.661	3.661	(0.634)	105470	50.0000	53.92
51	trans-1,3-Dichloropropene	75	8.414	8.414	(1.281)	165700	50.0000	55.38
38	Trichloroethene	130	6.816	6.816	(1.038)	123517	50.0000	50.72
8	Trichlorofluoromethane	101	2.249	2.249	(0.389)	144315	50.0000	53.42
5	Vinyl Chloride	62	1.678	1.678	(0.290)	130734	50.0000	48.68
62	m,p-Xylenes	106	9.790	9.790	(1.028)	393659	100.000	96.11
63	o-Xylene	106	10.179	10.179	(1.068)	205778	50.0000	48.02
M 95	Xylenes (total)	106				599437	150.000	(a)
71	1,2,3-Trichloropropane	75	10.904	10.904	(0.921)	160487	50.0000	46.94
93	1,2,3-Trichlorobenzene	182	14.302	14.302	(1.209)	131958	50.0000	54.16
79	1,2,4-Trimethylbenzene	105	11.498	11.498	(0.972)	413215	50.0000	43.22
75	1,3,5-Trimethylbenzene	105	11.132	11.132	(0.941)	405577	50.0000	43.56
26	2,2-Dichloropropane	77	5.041	5.041	(0.872)	165121	50.0000	51.73
54	1,3-Dichloropropane	76	8.751	8.751	(0.918)	179758	50.0000	47.95
76	2-Chlorotoluene	91	11.029	11.029	(0.932)	349708	50.0000	42.89
77	4-Chlorotoluene	91	11.138	11.138	(0.941)	386234	50.0000	43.51
82	p-Isopropyltoluene	119	11.818	11.818	(0.999)	405576	50.0000	45.91
29	Bromochloromethane	128	5.362	5.362	(0.928)	61127	50.0000	51.53
74	Bromobenzene	156	10.830	10.830	(0.915)	141177	50.0000	44.34
44	Dibromomethane	93	7.191	7.191	(1.095)	70697	50.0000	52.68
91	Hexachlorobutadiene	225	13.988	13.988	(1.182)	65948	50.0000	50.12
73	n-Propylbenzene	91	10.952	10.952	(0.925)	544234	50.0000	44.85
87	n-Butylbenzene	91	12.223	12.223	(1.033)	316622	50.0000	48.22
81	sec-Butylbenzene	105	11.668	11.668	(0.986)	481490	50.0000	46.67
92	Naphthalene	128	14.061	14.061	(1.188)	383975	50.0000	52.17
78	tert-Butylbenzene	119	11.449	11.449	(0.967)	350337	50.0000	44.86
60	1,1,1,2-Tetrachloroethane	131	9.643	9.643	(1.012)	122297	50.0000	50.44
64	Styrene	104	10.198	10.198	(1.070)	338695	50.0000	49.56

Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D180101.b\D010102.D
Report Date: 09-Feb-2018 20:27

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).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Date : 01-JAN-2018 14:30
Client ID: CCV
Sample Info: CCV;CCV;2;;
Purge Volume: 5.0
Column phase: DB624
Instrument: VOA2.i
Operator: AP
Column diameter: 0.18
\\NAHSTWS003\Target\CHEM\VOA2.i\D180101.b\D010102.D
Y (x10^6)
Min
-Dichlorodifluoromethane
-Chloromethane
-Vinyl Chloride+
-Bromomethane
-Chloroethane
-Trichlorofluoromethane+
-Diethyl ether+
-Acrolein
-1,1-Dichloroethene+
-Acetone+
-Isopropyl alcohol
-Acetonitrile+
-Methylene Chloride
-Tert-butyl alcohol
-Acrylonitrile+
-n-Hexane
-1,1-Dichloroethane
-Diisopropyl ether
-1-Propanol
-tert-Butyl formate
-2,2-Dichloropropane+
-2-Butanone
-Propionitrile+
-Methacrylonitrile+
-Chloroform
-Dibromofluoromethane+
-Pentafluorobenzene
-1,1-Dichloropropene+
-1,2-Dichloroethane+
-Isobutyl Alcohol+
-1,4-Difluorobenzene
-Trichloroethene
-n-Butanol+
-1,2-Dichloropropane
-Dibromomethane
-Methyl Methacrylate+
-Bromodichloromethane
-2-Chloroethylvinyl ether
-cis-1,3-Dichloropropene
-2-Nitropropane+
-Toluene-d8
-Toluene
-trans-1,3-Dichloropropene+
-Ethyl Methacrylate
-1,1,2-Trichloroethane
-Tetrachloroethene
-1,3-Dichloropropane
-2-Hexanone
-Dibromochloromethane
-1,2-Dibromoethane+
-1,1,1,2-Tetrachloroethane+
-Chlorobenzene-d5+
m,p-Xylenes
-o-Xylene+
-Bromoform
-Isopropylbenzene
-4-Bromofluorobenzene
-1,1,2,2-Tetrachloroethane+
-1,2,3-Trichloropropane+
-2-Chlorotoluene
-tert-Butylbenzene
cis-1,4-Dichloro-2-butene+
1,2,4-Trimethylbenzene
-sec-Butylbenzene
-1,3-Dichlorobenzene
-1,4-Dichlorobenzene-d4+
-1,2,3-Trimethylbenzene
Benzyl Chloride+
-1,2-Dibromo-3-Chloropropa
-1,3,5-Trichlorobenzene
-1,2,4-Trichlorobenzene
-Hexachlorobutadiene
-Naphthalene
-1,2,3-Trichlorobenzene
-2-Methylnaphthalene
-1-Methylnaphthalene

Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D180101.b\D010104.D
Report Date: 09-Feb-2018 20:27

ALS Laboratory Group

Data file : \\NAHSTWS003\Target\CHEM\VOA2.i\D180101.b\D010104.D
Lab Smp Id: VLCSW-180101 Client Smp ID: VLCSW-180101
Inj Date : 01-JAN-2018 15:19
Operator : AP Inst ID: VOA2.i
Smp Info : VLCSW-180101;VLCSW-180101;3;;LCS
Misc Info : HS15080001;WATER;0;1;
Comment :
Method : \\nahstws003\Target\CHEM\VOA2.i\D180101.b\8260LL.m
Meth Date : 09-Feb-2018 20:27 VOA2.i Quant Type: ISTD
Cal Date : 19-DEC-2017 12:14 Cal File: D121908.D
Als bottle: 4 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: dn_bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

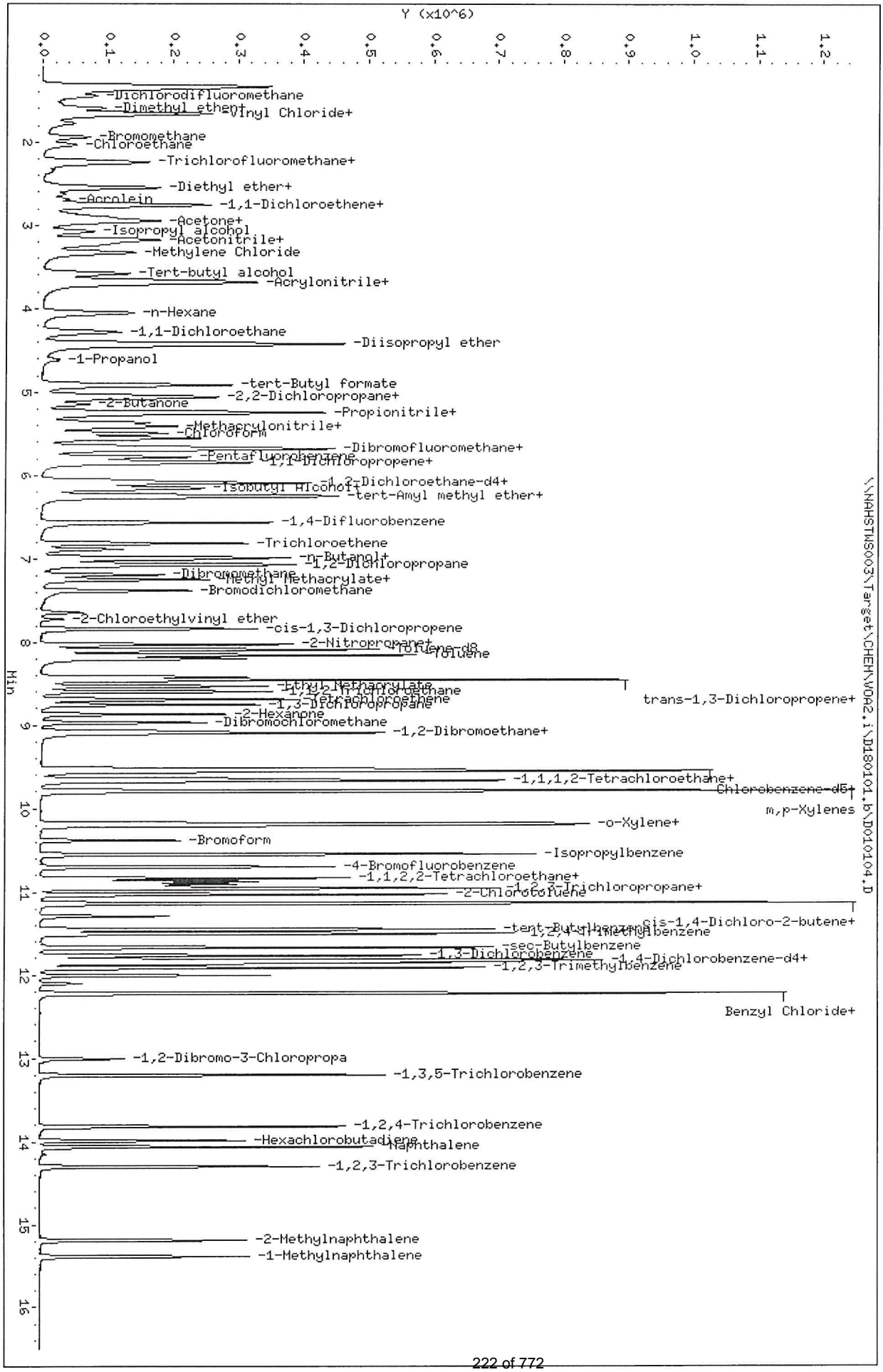
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Va	0.00000	
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
	31 1,1,1-Trichloroethane	97	5.651	5.651	(0.978)	163280	47.3407	47.34
*	1 Pentafluorobenzene	168	5.779	5.779	(1.000)	223161	50.0000	
$	30 Dibromofluoromethane	113	5.686	5.680	(0.984)	97021	48.2543	48.25
*	36 1,4-Difluorobenzene	114	6.569	6.569	(1.000)	335829	50.0000	
$	35 1,2-Dichloroethane-d4	65	6.055	6.055	(1.048)	118437	47.6945	47.69
*	47 Chlorobenzene-d5	117	9.524	9.527	(1.000)	303431	50.0000	
$	48 Toluene-d8	98	8.090	8.090	(0.849)	373646	46.7044	46.70
$	69 4-Bromofluorobenzene	95	10.695	10.695	(1.123)	144636	49.5085	49.50
*	70 1,4-Dichlorobenzene-d4	152	11.834	11.835	(1.000)	142805	50.0000	
	68 1,1,2,2-Tetrachloroethane	83	10.872	10.872	(0.919)	149900	44.0025	44.00
	53 1,1,2-Trichloroethane	83	8.593	8.594	(0.902)	88613	47.7395	47.73
	32 1,1-Dichloropropene	75	5.850	5.850	(0.891)	132471	50.6278	50.62
	22 1,1-Dichloroethane	63	4.281	4.278	(0.741)	211863	45.4735	45.47
	11 1,1-Dichloroethene	96	2.750	2.750	(0.476)	93133	50.5653	50.56
	90 1,2,4-Trichlorobenzene	180	13.818	13.818	(1.168)	150503	53.4970	53.49
	89 1,2-Dibromo-3-Chloropropane	75	13.009	13.006	(1.099)	27079	46.1213	46.12
	57 1,2-Dibromoethane	107	9.065	9.068	(0.952)	115097	49.5083	49.50
	88 1,2-Dichlorobenzene	146	12.223	12.223	(1.033)	228061	44.4307	44.43
	33 1,2-Dichloroethane	62	6.142	6.145	(0.935)	147467	49.7322	49.73
	42 1,2-Dichloropropane	63	7.063	7.066	(1.075)	121589	45.9673	45.96
	83 1,3-Dichlorobenzene	146	11.767	11.767	(0.994)	235320	44.0535	44.05

Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D180101.b\D010104.D
Report Date: 09-Feb-2018 20:27

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
84	1,4-Dichlorobenzene	146	11.857	11.857	(1.002)	225035	44.0459	44.04
24	2-Butanone	43	5.141	5.141	(0.890)	114318	94.9341	94.93
52	2-Hexanone	43	8.866	8.866	(0.931)	173390	97.5273	97.52
45	4-Methyl-2-Pentanone	43	8.025	8.026	(0.843)	260227	94.5295	94.52
10	Acetone	43	2.856	2.859	(0.494)	73166	98.8833	98.88
37	Benzene	78	6.090	6.091	(0.927)	409649	46.3609	46.36
39	Bromodichloromethane	83	7.374	7.377	(1.123)	149967	47.9508	47.95
66	Bromoform	173	10.374	10.374	(1.089)	95709	53.1743	53.17
6	Bromomethane	94	1.935	1.938	(0.335)	76126	49.8126	49.81
19	Carbon Disulfide	76	2.949	2.949	(0.510)	400402	95.1937	95.19
34	Carbon Tetrachloride	117	5.834	5.831	(0.888)	131967	41.3700	41.36
59	Chlorobenzene	112	9.553	9.553	(1.003)	289023	46.2520	46.25
7	Chloroethane	64	2.028	2.031	(0.351)	74578	41.3058	41.30
28	Chloroform	83	5.494	5.490	(0.951)	184801	45.4217	45.42
3	Chloromethane	50	1.592	1.592	(0.275)	172579	46.1657	46.16
27	cis-1,2-Dichloroethene	96	5.067	5.067	(0.877)	120311	47.3878	47.38
46	cis-1,3-Dichloropropene	75	7.839	7.836	(1.193)	184933	51.4897	51.48
55	Dibromochloromethane	129	8.969	8.969	(0.942)	130968	49.9926	49.99
2	Dichlorodifluoromethane	85	1.447	1.447	(0.250)	82100	43.0352	43.03
61	Ethylbenzene	106	9.668	9.672	(1.015)	152450	45.5803	45.58
67	Isopropylbenzene	105	10.544	10.545	(1.107)	495943	47.9316	47.93
17	Methylene Chloride	84	3.328	3.328	(0.576)	109662	44.8954	44.89
56	Tetrachloroethene	164	8.687	8.687	(0.912)	96239	51.4805	51.48
50	Toluene	91	8.157	8.157	(0.856)	440646	45.8236	45.82
20	trans-1,2-Dichloroethene	96	3.661	3.661	(0.634)	103036	51.7186	51.71
51	trans-1,3-Dichloropropene	75	8.414	8.414	(1.281)	161468	52.8329	52.83
38	Trichloroethene	130	6.816	6.816	(1.038)	119607	48.0851	48.08
8	Trichlorofluoromethane	101	2.249	2.249	(0.389)	134999	49.0626	49.06
5	Vinyl Chloride	62	1.672	1.678	(0.289)	127232	46.5159	46.51
62	m,p-Xylenes	106	9.790	9.790	(1.028)	374004	91.4371	91.43
63	o-Xylene	106	10.175	10.179	(1.068)	199562	46.6354	46.63
M 95	Xylenes (total)	106				573566	138.073	138.07
71	1,2,3-Trichloropropane	75	10.901	10.904	(0.921)	156994	46.1494	46.14
93	1,2,3-Trichlorobenzene	182	14.299	14.302	(1.208)	130317	53.7592	53.75
79	1,2,4-Trimethylbenzene	105	11.501	11.498	(0.972)	399584	42.0081	42.00
75	1,3,5-Trimethylbenzene	105	11.132	11.132	(0.941)	392055	42.3237	42.32
26	2,2-Dichloropropane	77	5.044	5.041	(0.873)	157168	48.3425	48.34
54	1,3-Dichloropropane	76	8.754	8.751	(0.919)	176531	47.1530	47.15
76	2-Chlorotoluene	91	11.029	11.029	(0.932)	336105	41.4319	41.43
77	4-Chlorotoluene	91	11.138	11.138	(0.941)	371258	42.0313	42.03
82	p-Isopropyltoluene	119	11.818	11.818	(0.999)	389785	44.3432	44.34
29	Bromochloromethane	128	5.365	5.362	(0.928)	60633	50.1841	50.18
74	Bromobenzene	156	10.830	10.830	(0.915)	137174	43.3030	43.30
44	Dibromomethane	93	7.191	7.191	(1.095)	69136	50.4362	50.43
91	Hexachlorobutadiene	225	13.988	13.988	(1.182)	63925	48.8144	48.81
73	n-Propylbenzene	91	10.955	10.952	(0.926)	521410	43.1848	43.18
87	n-Butylbenzene	91	12.223	12.223	(1.033)	304335	46.5850	46.58
81	sec-Butylbenzene	105	11.668	11.668	(0.986)	460066	44.8204	44.82
92	Naphthalene	128	14.061	14.061	(1.188)	377773	51.5802	51.58
78	tert-Butylbenzene	119	11.449	11.449	(0.967)	336528	43.3079	43.30
60	1,1,1,2-Tetrachloroethane	131	9.646	9.643	(1.013)	118670	49.0104	49.01
64	Styrene	104	10.198	10.198	(1.071)	328608	48.1480	48.14



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Sample Info: VLCSW-180101;VLCSW-180101;3;;LCS
Purge Volume: 5.0
Column phase: DB624

Instrument: VOA2.i
Operator: AP
Column diameter: 0.18

Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D180101.b\D010106.D
Report Date: 09-Feb-2018 20:27

ALS Laboratory Group

Data file : \\NAHSTWS003\Target\CHEM\VOA2.i\D180101.b\D010106.D
Lab Smp Id: VBLKW-180101 Client Smp ID: VBLKW-180101
Inj Date : 01-JAN-2018 16:08
Operator : AP Inst ID: VOA2.i
Smp Info : VBLKW-180101;VBLKW-180101;3;;BLANK
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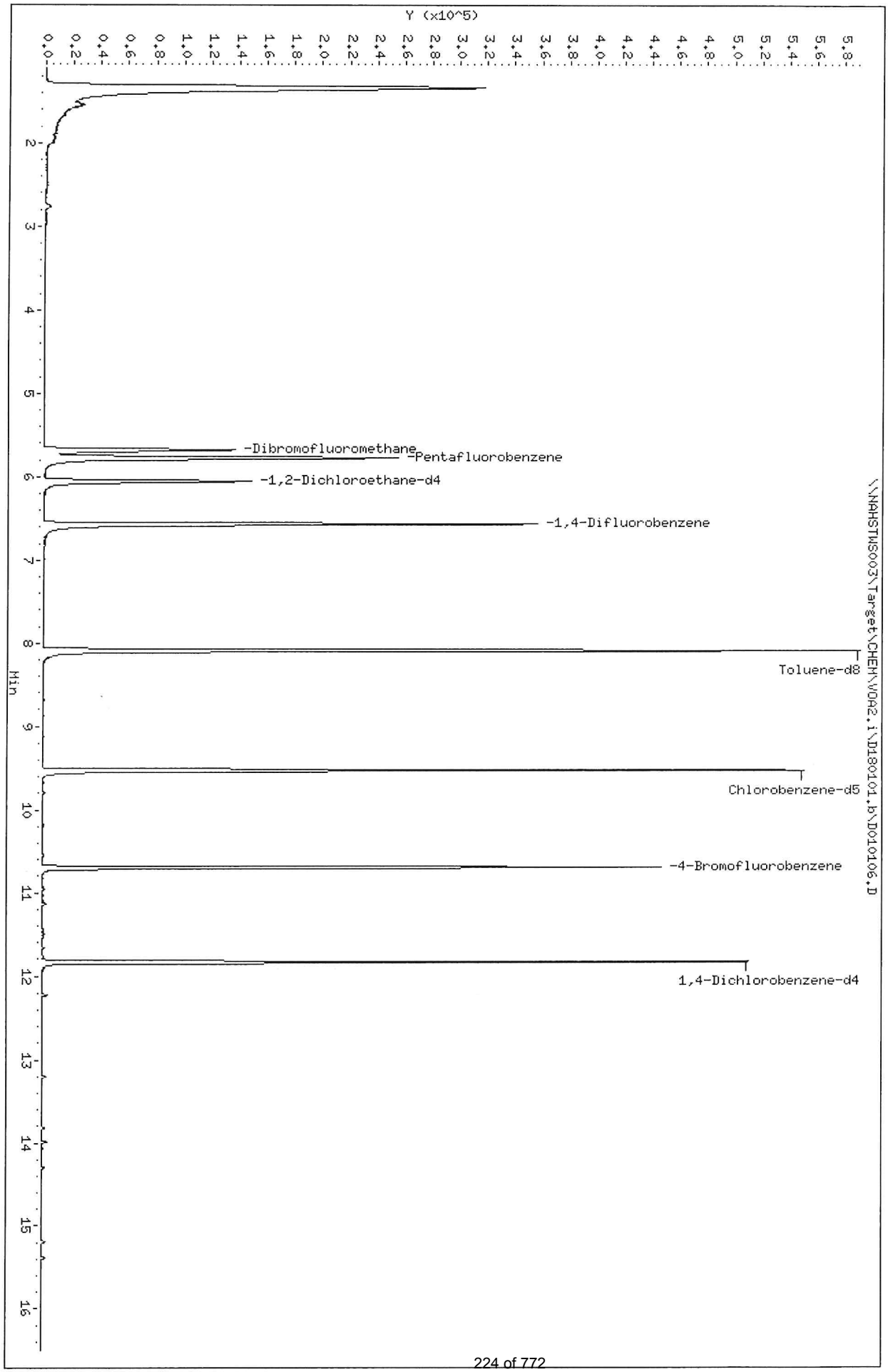
Comment :
Method : \\nahstws003\Target\CHEM\VOA2.i\D180101.b\8260LL.m
Meth Date : 09-Feb-2018 20:27 VOA2.i Quant Type: ISTD
Cal Date : 19-DEC-2017 12:14 Cal File: D121908.D
Als bottle: 6 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: dn_bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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
Va	0.00000	
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	5.776	5.779	(1.000)	241794	50.0000	
$ 30 Dibromofluoromethane	113	5.683	5.680	(0.984)	107894	49.5268	49.52
* 36 1,4-Difluorobenzene	114	6.569	6.569	(1.000)	344252	50.0000	
$ 35 1,2-Dichloroethane-d4	65	6.055	6.055	(1.048)	122414	45.4972	45.49
* 47 Chlorobenzene-d5	117	9.524	9.527	(1.000)	311537	50.0000	
$ 48 Toluene-d8	98	8.087	8.090	(0.849)	393689	47.9293	47.92
$ 69 4-Bromofluorobenzene	95	10.695	10.695	(1.123)	146063	48.6961	48.69
* 70 1,4-Dichlorobenzene-d4	152	11.835	11.835	(1.000)	138157	50.0000	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Date : 01-JAN-2018 16:08
Client ID: VBLKW-180101
Sample Info: VBLKW-180101;VBLKW-180101;3;;BLANK
Purge Volume: 5.0
Column phase: DB624
Instrument: VOA2.i
Operator: AP
Column diameter: 0.18
Y (x10^5)
Min
-Dibromofluoromethane
-Pentafluorobenzene
-1,2-Dichloroethane-d4
-1,4-Difluorobenzene
Toluene-d8
Chlorobenzene-d5
-4-Bromofluorobenzene
1,4-Dichlorobenzene-d4
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Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D180101.b\D010111.D
Report Date: 09-Feb-2018 20:27

ALS Laboratory Group

Data file : \\NAHSTWS003\Target\CHEM\VOA2.i\D180101.b\D010111.D
Lab Smp Id: HS17121134-13MS Client Smp ID: HS17121134-13MS
Inj Date : 01-JAN-2018 18:11
Operator : AP Inst ID: VOA2.i
Smp Info : HS17121134-13MS;HS17121134-13MS;3;;MS
Misc Info : HS15080001;WATER;0;1;
Comment :
Method : \\nahstws003\Target\CHEM\VOA2.i\D180101.b\8260LL.m
Meth Date : 09-Feb-2018 20:27 VOA2.i Quant Type: ISTD
Cal Date : 19-DEC-2017 12:14 Cal File: D121908.D
Als bottle: 11 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: dn_bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

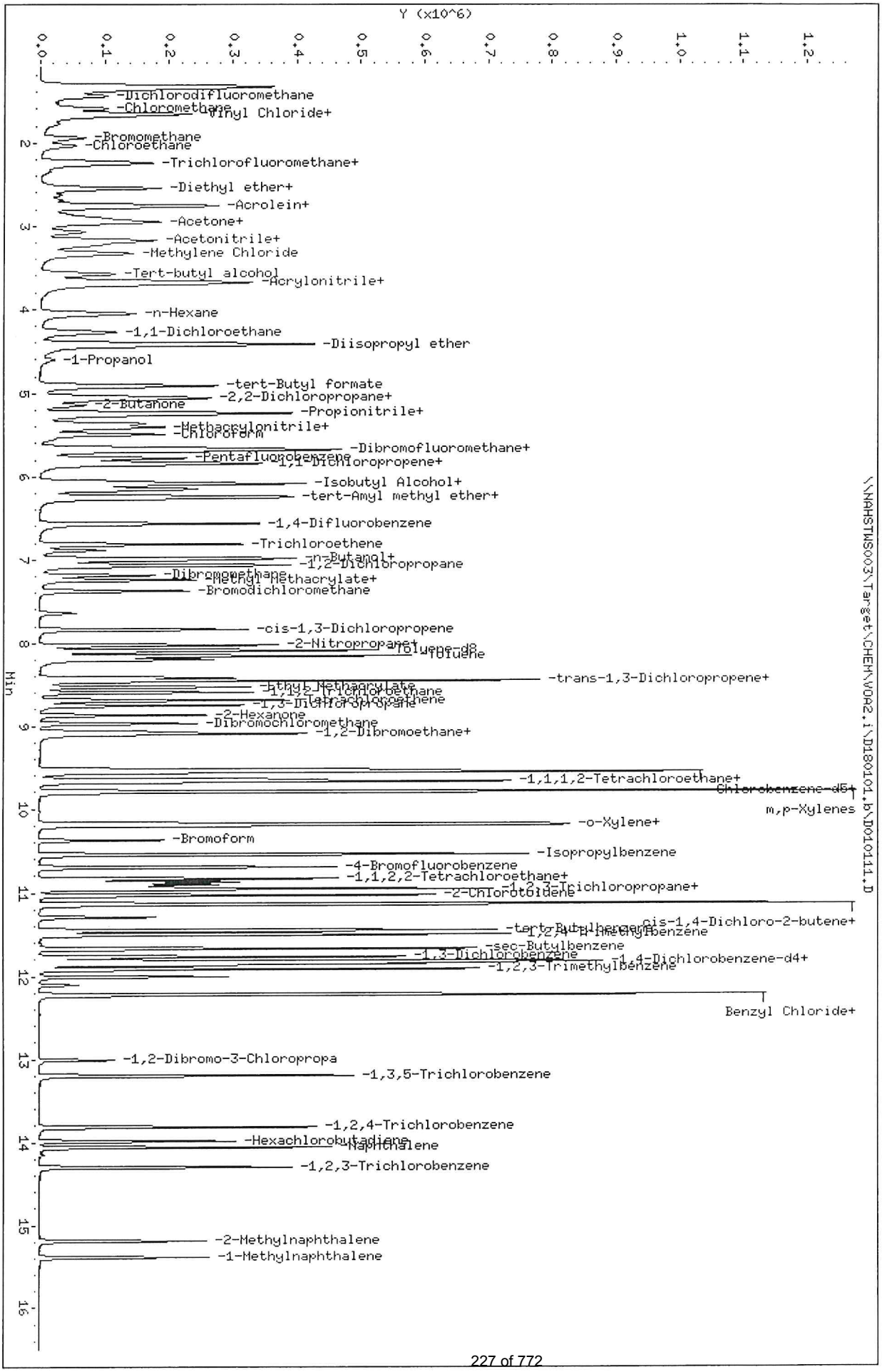
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Va	0.00000	
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
	31 1,1,1-Trichloroethane	97	5.651	5.651	(0.978)	175144	50.4392	50.43
*	1 Pentafluorobenzene	168	5.779	5.779	(1.000)	224671	50.0000	
$	30 Dibromofluoromethane	113	5.680	5.680	(0.983)	95102	46.9819	46.98
*	36 1,4-Difluorobenzene	114	6.572	6.569	(1.000)	336672	50.0000	
$	35 1,2-Dichloroethane-d4	65	6.055	6.055	(1.048)	117320	46.9272	46.92
*	47 Chlorobenzene-d5	117	9.524	9.527	(1.000)	305703	50.0000	
$	48 Toluene-d8	98	8.090	8.090	(0.849)	378229	46.9259	46.92
$	69 4-Bromofluorobenzene	95	10.695	10.695	(1.123)	145741	49.5160	49.51
*	70 1,4-Dichlorobenzene-d4	152	11.834	11.835	(1.000)	144784	50.0000	
	68 1,1,2,2-Tetrachloroethane	83	10.868	10.872	(0.918)	141350	40.9255	40.92
	53 1,1,2-Trichloroethane	83	8.593	8.594	(0.902)	85341	45.6350	45.63
	32 1,1-Dichloropropene	75	5.850	5.850	(0.890)	141666	54.0687	54.06
	22 1,1-Dichloroethane	63	4.281	4.278	(0.741)	219028	46.6954	46.69
	11 1,1-Dichloroethene	96	2.750	2.750	(0.476)	95381	51.4378	51.43
	90 1,2,4-Trichlorobenzene	180	13.817	13.818	(1.168)	143861	50.4371	50.43
	89 1,2-Dibromo-3-Chloropropane	75	13.006	13.006	(1.099)	25197	42.3735	42.37
	57 1,2-Dibromoethane	107	9.065	9.068	(0.952)	112419	47.9970	47.99
	88 1,2-Dichlorobenzene	146	12.223	12.223	(1.033)	220943	42.4557	42.45
	33 1,2-Dichloroethane	62	6.142	6.145	(0.935)	146037	49.1254	49.12
	42 1,2-Dichloropropane	63	7.066	7.066	(1.075)	120237	45.3424	45.34
	83 1,3-Dichlorobenzene	146	11.767	11.767	(0.994)	232463	42.9238	42.92

Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D180101.b\D010111.D
Report Date: 09-Feb-2018 20:27

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
	84 1,4-Dichlorobenzene	146	11.857	11.857	(1.002)	219095	42.2971	42.29
	24 2-Butanone	43	5.141	5.141	(0.890)	106839	88.1270	88.12
	52 2-Hexanone	43	8.863	8.866	(0.931)	159082	88.8144	88.81
	45 4-Methyl-2-Pentanone	43	8.025	8.026	(0.843)	246356	88.8256	88.82
	10 Acetone	43	2.862	2.859	(0.495)	66672	89.2784	89.27
	37 Benzene	78	6.087	6.091	(0.926)	421425	47.5742	47.57
	39 Bromodichloromethane	83	7.374	7.377	(1.122)	147769	47.1297	47.12
	66 Bromoform	173	10.374	10.374	(1.089)	91624	50.5264	50.52
	6 Bromomethane	94	1.938	1.938	(0.335)	82453	53.7797	53.77
	19 Carbon Disulfide	76	2.949	2.949	(0.510)	422745	99.8302	99.83
	34 Carbon Tetrachloride	117	5.834	5.831	(0.888)	143514	44.8772	44.87
	59 Chlorobenzene	112	9.553	9.553	(1.003)	287685	45.6957	45.69
	7 Chloroethane	64	2.034	2.031	(0.352)	82810	45.5570	45.55
	28 Chloroform	83	5.490	5.490	(0.950)	188270	45.9633	45.96
	3 Chloromethane	50	1.595	1.592	(0.276)	190225	50.6347	50.63
	27 cis-1,2-Dichloroethene	96	5.064	5.067	(0.876)	121378	47.4868	47.48
	46 cis-1,3-Dichloropropene	75	7.836	7.836	(1.192)	182033	50.5554	50.55
	55 Dibromochloromethane	129	8.969	8.969	(0.942)	127947	48.4765	48.47
	2 Dichlorodifluoromethane	85	1.447	1.447	(0.250)	116576	60.6961	60.69
	61 Ethylbenzene	106	9.668	9.672	(1.015)	156442	46.4263	46.42
	67 Isopropylbenzene	105	10.544	10.545	(1.107)	500545	48.0168	48.01
	17 Methylene Chloride	84	3.331	3.328	(0.576)	110272	44.8417	44.84
	56 Tetrachloroethene	164	8.690	8.687	(0.912)	98907	52.5488	52.54
	50 Toluene	91	8.157	8.157	(0.856)	444515	45.8824	45.88
	20 trans-1,2-Dichloroethene	96	3.661	3.661	(0.634)	107563	53.6280	53.62
	51 trans-1,3-Dichloropropene	75	8.417	8.414	(1.281)	152961	49.9240	49.92
	38 Trichloroethene	130	6.816	6.816	(1.037)	121883	48.8774	48.87
	8 Trichlorofluoromethane	101	2.249	2.249	(0.389)	152631	55.0978	55.09
	5 Vinyl Chloride	62	1.678	1.678	(0.290)	146806	53.3114	53.31
	62 m,p-Xylenes	106	9.790	9.790	(1.028)	380450	92.3218	92.32
	63 o-Xylene	106	10.179	10.179	(1.069)	197866	45.8954	45.89
M	95 Xylenes (total)	106				578316	138.217	138.21
	71 1,2,3-Trichloropropane	75	10.901	10.904	(0.921)	146957	42.6085	42.60
	93 1,2,3-Trichlorobenzene	182	14.299	14.302	(1.208)	122067	49.6676	49.66
	79 1,2,4-Trimethylbenzene	105	11.497	11.498	(0.972)	401053	41.5863	41.58
	75 1,3,5-Trimethylbenzene	105	11.132	11.132	(0.941)	396877	42.2587	42.25
	26 2,2-Dichloropropane	77	5.038	5.041	(0.872)	156719	47.8804	47.88
	54 1,3-Dichloropropane	76	8.751	8.751	(0.919)	170056	45.0859	45.08
	76 2-Chlorotoluene	91	11.029	11.029	(0.932)	337846	41.0772	41.07
	77 4-Chlorotoluene	91	11.138	11.138	(0.941)	367474	41.0342	41.03
	82 p-Isopropyltoluene	119	11.818	11.818	(0.999)	394059	44.2167	44.21
	29 Bromochloromethane	128	5.362	5.362	(0.928)	59075	48.5659	48.56
	74 Bromobenzene	156	10.830	10.830	(0.915)	133331	41.5145	41.51
	44 Dibromomethane	93	7.191	7.191	(1.094)	66602	48.4660	48.46
	91 Hexachlorobutadiene	225	13.988	13.988	(1.182)	62427	47.0028	47.00
	73 n-Propylbenzene	91	10.952	10.952	(0.925)	529596	43.2632	43.26
	87 n-Butylbenzene	91	12.219	12.223	(1.033)	306508	46.2763	46.27
	81 sec-Butylbenzene	105	11.667	11.668	(0.986)	465701	44.7492	44.74
	92 Naphthalene	128	14.061	14.061	(1.188)	350658	47.1789	47.17
	78 tert-Butylbenzene	119	11.449	11.449	(0.967)	343552	43.6075	43.60
	60 1,1,1,2-Tetrachloroethane	131	9.643	9.643	(1.012)	116388	47.7107	47.71
	64 Styrene	104	10.195	10.198	(1.070)	323527	47.0512	47.05



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Sample Info: HS171211134-13MS;HS171211134-13MS;3;;MS
Purge Volume: 5.0
Column phase: DB624

Instrument: VOA2.i
Operator: AP
Column diameter: 0.18

Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D180101.b\D010112.D
Report Date: 09-Feb-2018 20:27

ALS Laboratory Group

Data file : \\NAHSTWS003\Target\CHEM\VOA2.i\D180101.b\D010112.D
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Operator : AP Inst ID: VOA2.i
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Misc Info : HS15080001;WATER;0;1;
Comment :
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Meth Date : 09-Feb-2018 20:27 VOA2.i Quant Type: ISTD
Cal Date : 19-DEC-2017 12:14 Cal File: D121908.D
Als bottle: 11 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: dn_bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

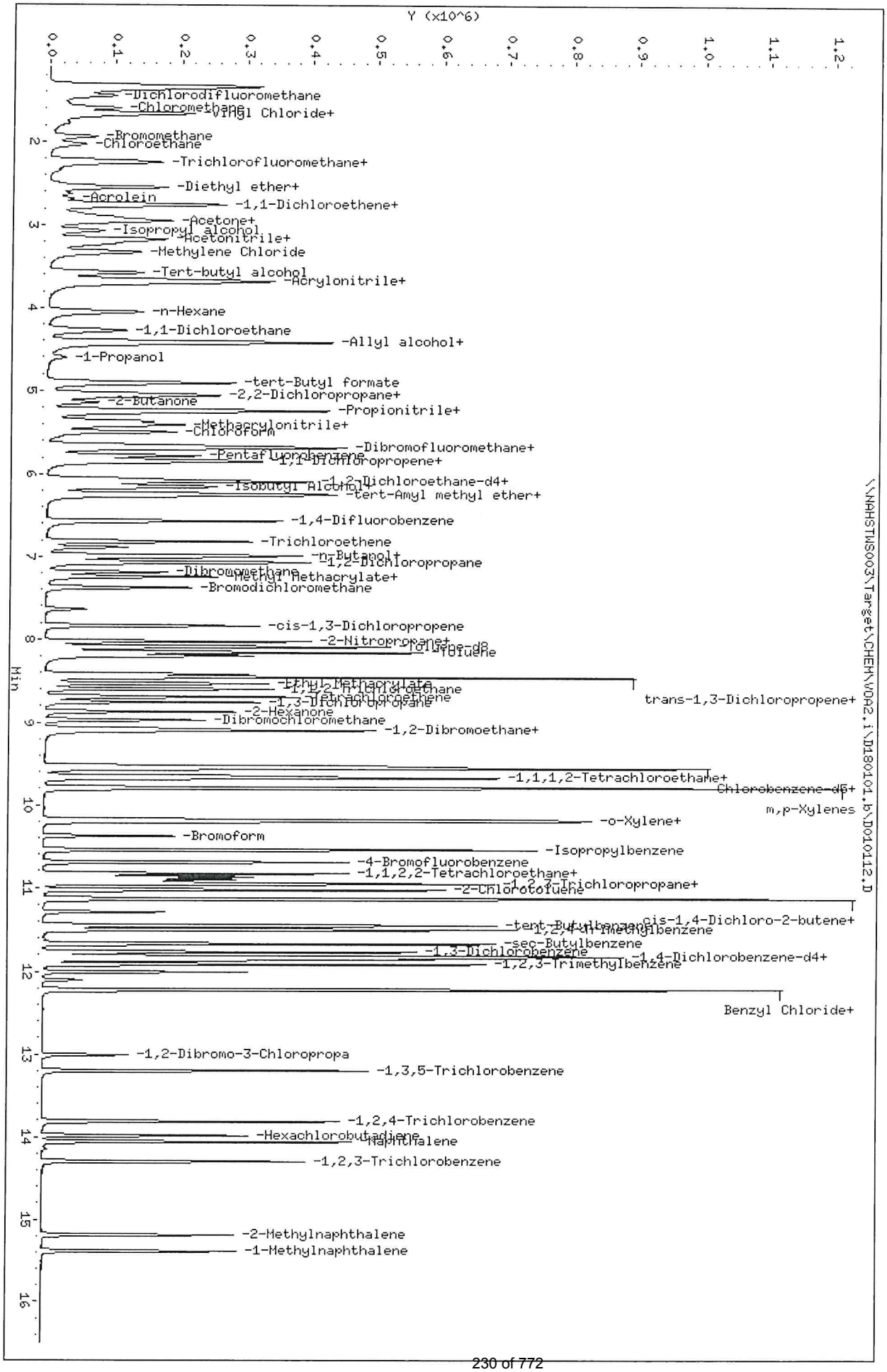
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Va	0.00000	
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
	31 1,1,1-Trichloroethane	97	5.648	5.651	(0.977)	168751	49.7045	49.70
*	1 Pentafluorobenzene	168	5.779	5.779	(1.000)	219670	50.0000	
$	30 Dibromofluoromethane	113	5.680	5.680	(0.983)	96155	48.5836	48.58
*	36 1,4-Difluorobenzene	114	6.569	6.569	(1.000)	335537	50.0000	
$	35 1,2-Dichloroethane-d4	65	6.055	6.055	(1.048)	118371	48.4255	48.42
*	47 Chlorobenzene-d5	117	9.524	9.527	(1.000)	308167	50.0000	
$	48 Toluene-d8	98	8.090	8.090	(0.849)	378772	46.6175	46.61
$	69 4-Bromofluorobenzene	95	10.695	10.695	(1.123)	146426	49.3510	49.35
*	70 1,4-Dichlorobenzene-d4	152	11.834	11.835	(1.000)	143728	50.0000	
	68 1,1,2,2-Tetrachloroethane	83	10.872	10.872	(0.919)	146221	42.6469	42.64
	53 1,1,2-Trichloroethane	83	8.593	8.594	(0.902)	85589	45.4017	45.40
	32 1,1-Dichloropropene	75	5.853	5.850	(0.891)	135152	51.7171	51.71
	22 1,1-Dichloroethane	63	4.271	4.278	(0.739)	213787	46.6157	46.61
	11 1,1-Dichloroethene	96	2.747	2.750	(0.475)	95312	52.5708	52.57
	90 1,2,4-Trichlorobenzene	180	13.818	13.818	(1.168)	146022	51.5709	51.57
	89 1,2-Dibromo-3-Chloropropane	75	13.009	13.006	(1.099)	28295	47.8623	47.86
	57 1,2-Dibromoethane	107	9.065	9.068	(0.952)	114023	48.2925	48.29
	88 1,2-Dichlorobenzene	146	12.223	12.223	(1.033)	220273	42.6379	42.63
	33 1,2-Dichloroethane	62	6.142	6.145	(0.935)	145658	49.1637	49.16
	42 1,2-Dichloropropane	63	7.063	7.066	(1.075)	118126	44.6970	44.69
	83 1,3-Dichlorobenzene	146	11.767	11.767	(0.994)	232593	43.2634	43.26

Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D180101.b\D010112.D
Report Date: 09-Feb-2018 20:27

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
84	1,4-Dichlorobenzene	146	11.857	11.857	(1.002)	217829	42.3616	42.36
24	2-Butanone	43	5.141	5.141	(0.890)	116910	98.6295	98.62
52	2-Hexanone	43	8.866	8.866	(0.931)	175925	97.4324	97.43
45	4-Methyl-2-Pentanone	43	8.025	8.026	(0.843)	265122	94.8275	94.82
10	Acetone	43	2.856	2.859	(0.494)	73319	100.707	100.70
37	Benzene	78	6.090	6.091	(0.927)	410052	46.4469	46.44
39	Bromodichloromethane	83	7.377	7.377	(1.123)	145497	46.5620	46.56
66	Bromoform	173	10.378	10.374	(1.090)	93616	51.2121	51.21
6	Bromomethane	94	1.941	1.938	(0.336)	78961	52.6232	52.62
19	Carbon Disulfide	76	2.946	2.949	(0.510)	411526	99.3932	99.39
34	Carbon Tetrachloride	117	5.834	5.831	(0.888)	136067	42.6924	42.69
59	Chlorobenzene	112	9.553	9.553	(1.003)	284214	44.7834	44.78
7	Chloroethane	64	2.034	2.031	(0.352)	79031	44.4678	44.46
28	Chloroform	83	5.490	5.490	(0.950)	185467	46.3098	46.30
3	Chloromethane	50	1.595	1.592	(0.276)	183390	49.9133	49.91
27	cis-1,2-Dichloroethene	96	5.064	5.067	(0.876)	118862	47.5611	47.56
46	cis-1,3-Dichloropropene	75	7.836	7.836	(1.193)	180432	50.2802	50.28
55	Dibromochloromethane	129	8.969	8.969	(0.942)	127137	47.7844	47.78
2	Dichlorodifluoromethane	85	1.444	1.447	(0.250)	111475	59.3616	59.36
61	Ethylbenzene	106	9.672	9.672	(1.015)	155737	45.8475	45.84
67	Isopropylbenzene	105	10.544	10.545	(1.107)	491727	46.7937	46.79
17	Methylene Chloride	84	3.334	3.328	(0.577)	107994	44.9151	44.91
56	Tetrachloroethene	164	8.686	8.687	(0.912)	96115	50.5956	50.59
50	Toluene	91	8.157	8.157	(0.856)	438686	44.9186	44.91
20	trans-1,2-Dichloroethene	96	3.661	3.661	(0.634)	104156	53.1116	53.11
51	trans-1,3-Dichloropropene	75	8.417	8.414	(1.281)	152991	50.1027	50.10
38	Trichloroethene	130	6.816	6.816	(1.038)	120056	48.3076	48.30
8	Trichlorofluoromethane	101	2.249	2.249	(0.389)	146032	53.9158	53.91
5	Vinyl Chloride	62	1.675	1.678	(0.290)	139163	51.6864	51.68
62	m,p-Xylenes	106	9.790	9.790	(1.028)	373607	89.9363	89.93
63	o-Xylene	106	10.179	10.179	(1.069)	196614	45.2404	45.24
M 95	Xylenes (total)	106				570221	135.177	135.17
71	1,2,3-Trichloropropane	75	10.904	10.904	(0.921)	155410	45.3904	45.39
93	1,2,3-Trichlorobenzene	182	14.302	14.302	(1.209)	126006	51.6470	51.64
79	1,2,4-Trimethylbenzene	105	11.501	11.498	(0.972)	389843	40.7209	40.72
75	1,3,5-Trimethylbenzene	105	11.132	11.132	(0.941)	389393	41.7664	41.76
26	2,2-Dichloropropane	77	5.041	5.041	(0.872)	152158	47.5453	47.54
54	1,3-Dichloropropane	76	8.751	8.751	(0.919)	170755	44.9092	44.90
76	2-Chlorotoluene	91	11.029	11.029	(0.932)	333822	40.8862	40.88
77	4-Chlorotoluene	91	11.138	11.138	(0.941)	363788	40.9211	40.92
82	p-Isopropyltoluene	119	11.818	11.818	(0.999)	388736	43.9399	43.93
29	Bromochloromethane	128	5.362	5.362	(0.928)	58714	49.3681	49.36
74	Bromobenzene	156	10.830	10.830	(0.915)	134912	42.3154	42.31
44	Dibromomethane	93	7.188	7.191	(1.094)	67282	49.1264	49.12
91	Hexachlorobutadiene	225	13.988	13.988	(1.182)	63817	48.4154	48.41
73	n-Propylbenzene	91	10.955	10.952	(0.926)	521724	42.9333	42.93
87	n-Butylbenzene	91	12.223	12.223	(1.033)	304694	46.3405	46.34
81	sec-Butylbenzene	105	11.668	11.668	(0.986)	461885	44.7086	44.70
92	Naphthalene	128	14.061	14.061	(1.188)	365011	49.4965	49.49
78	tert-Butylbenzene	119	11.449	11.449	(0.967)	339267	43.3800	43.38
60	1,1,1,2-Tetrachloroethane	131	9.646	9.643	(1.013)	115035	46.7791	46.77
64	Styrene	104	10.195	10.198	(1.070)	321498	46.3823	46.38



Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D180101.b\D010112.D
Date : 01-JAN-2018 18:36
Client ID: HS171211134-13HSD
Sample Info: HS171211134-13HSD;HS171211134-13HSD;3;;HSD
Purge Volume: 5.0
Column phase: DB624

Instrument: VOA2.i
Operator: AP
Column diameter: 0.18

\\NAHSTWS003\Target\CHEM\VOA2.i\D180101.b\D010112.D

Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D180101.b\D010114.D
Report Date: 09-Feb-2018 20:27

ALS Laboratory Group

Data file : \\NAHSTWS003\Target\CHEM\VOA2.i\D180101.b\D010114.D
Lab Smp Id: HS17121224-04 Client Smp ID: HS17121224-04
Inj Date : 01-JAN-2018 19:25
Operator : AP Inst ID: VOA2.i
Smp Info : HS17121224-04;HS17121224-04;;;
Misc Info : HS15080001;WATER;0;1;
Comment :
Method : \\nahstws003\Target\CHEM\VOA2.i\D180101.b\8260LL.m
Meth Date : 09-Feb-2018 20:27 VOA2.i Quant Type: ISTD
Cal Date : 19-DEC-2017 12:14 Cal File: D121908.D
Als bottle: 13
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: dn_bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

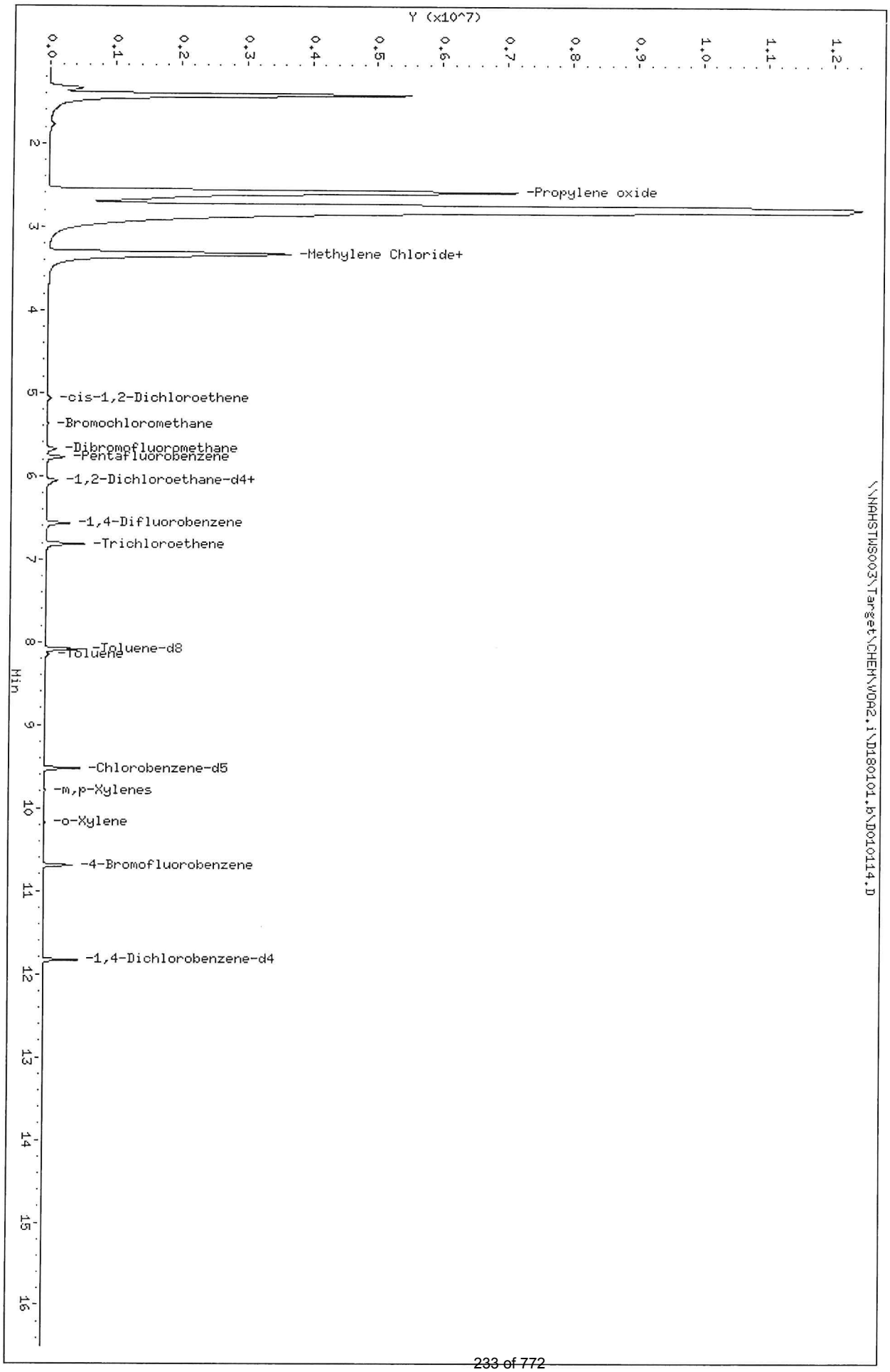
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Va	0.00000	
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
*	1 Pentafluorobenzene	168	5.776	5.779	(1.000)	237826	50.0000	
$	30 Dibromofluoromethane	113	5.680	5.680	(0.983)	107051	49.9597	49.95
*	36 1,4-Difluorobenzene	114	6.572	6.569	(1.000)	335987	50.0000	
$	35 1,2-Dichloroethane-d4	65	6.055	6.055	(1.048)	121251	45.8169	45.81
*	47 Chlorobenzene-d5	117	9.524	9.527	(1.000)	309168	50.0000	
$	48 Toluene-d8	98	8.090	8.090	(0.849)	391064	47.9745	47.97
$	69 4-Bromofluorobenzene	95	10.692	10.695	(1.123)	145226	48.7880	48.78
*	70 1,4-Dichlorobenzene-d4	152	11.831	11.835	(1.000)	140615	50.0000	
	37 Benzene	78	6.090	6.091	(0.927)	51321	5.80538	5.80
	27 cis-1,2-Dichloroethene	96	5.067	5.067	(0.877)	33834	12.5047	12.50
	17 Methylene Chloride	84	3.328	3.328	(0.576)	3341525	1283.66	1283.65(A)
	50 Toluene	91	8.154	8.157	(0.856)	38721	3.95195	3.95(a)
	38 Trichloroethene	130	6.816	6.816	(1.037)	225020	90.4213	90.42
	62 m,p-Xylenes	106	9.787	9.790	(1.028)	7117	1.70769	1.70(a)
	63 o-Xylene	106	10.169	10.179	(1.068)	4927	1.13002	1.13(a)
M	95 Xylenes (total)	106				12044	2.83771	2.83(a)
	29 Bromochloromethane	128	5.384	5.362	(0.932)	4787	3.71774	3.71(a)

Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D180101.b\D010114.D
Report Date: 09-Feb-2018 20:27

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: \\NAHSTWS003\Target\CHEM\VOA2.i\D180101.b\D010114.D
Date : 01-JAN-2018 19:25
Client ID: HS171214224-04
Sample Info: HS171214224-04;HS171214224-04;;;
Purge Volume: 5.0
Column phase: DB624
Instrument: VOA2.i
Operator: AP
Column diameter: 0.18
\\NAHSTWS003\Target\CHEM\VOA2.i\D180101.b\D010114.D
Y (x10^7)
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
1.1
1.2
Min
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
-Propylene oxide
-Methylene Chloride+
-cis-1,2-Dichloroethene
-Bromochloromethane
-Dibromofluoromethane
-Pentafluorobenzene
-1,2-Dichloroethane-d4+
-1,4-Difluorobenzene
-Trichloroethene
-Toluene-d8
-Toluene
-Chlorobenzene-d5
-m,p-Xylenes
-o-Xylene
-4-Bromofluorobenzene
-1,4-Dichlorobenzene-d4

Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D180101.b\D010114.D

Date : 01-JAN-2018 19:25

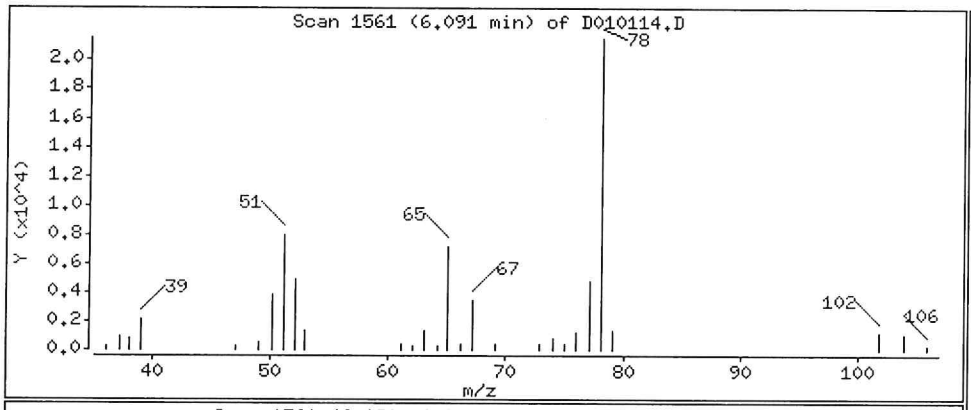
Client ID: HS17121224-04 Instrument: VOA2.i

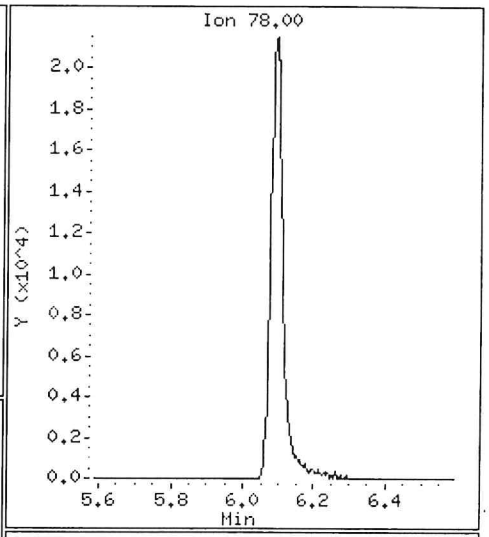
Sample Info: HS17121224-04;HS17121224-04;;;

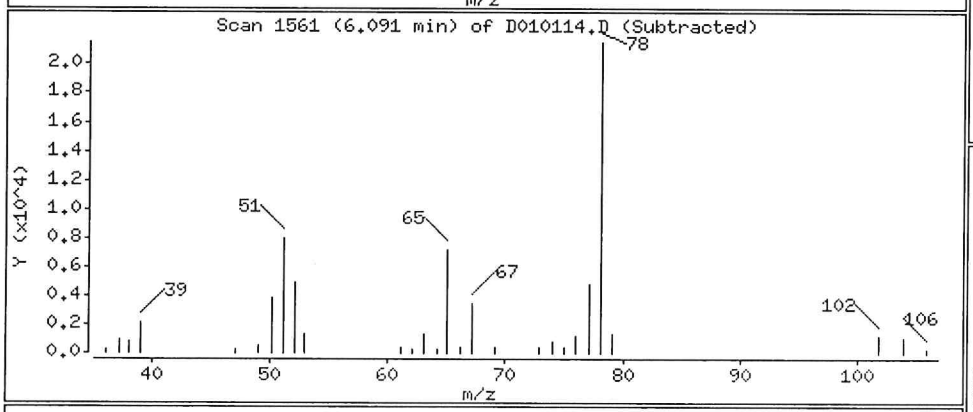
Purge Volume: 5.0 Operator: AP

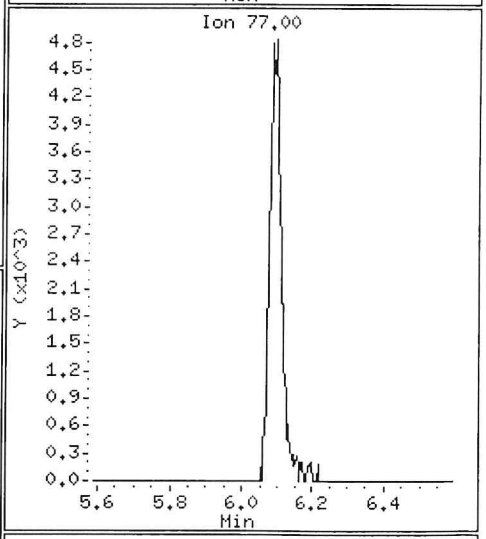
Column phase: DB624 Column diameter: 0.18

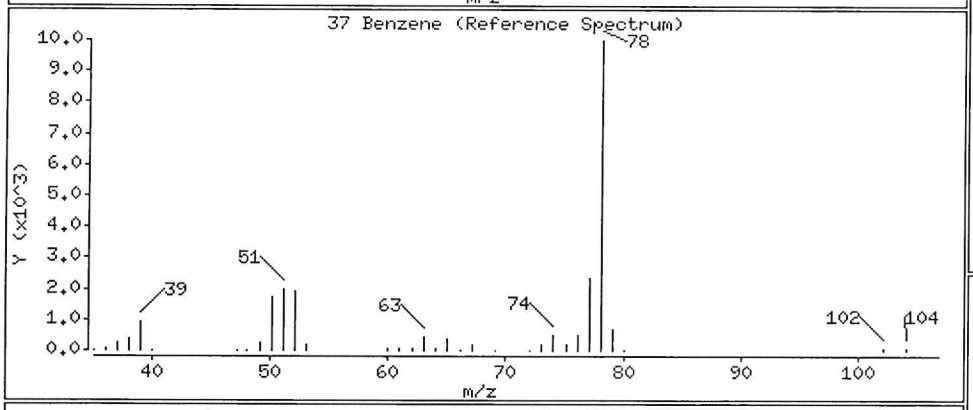
37 Benzene Concentration: 5.80 ug/l Review Code:

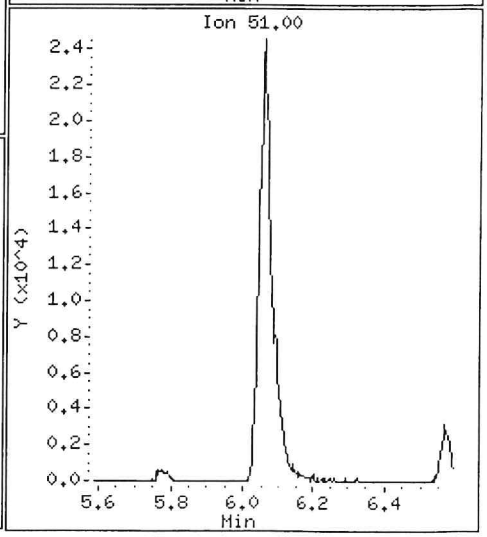


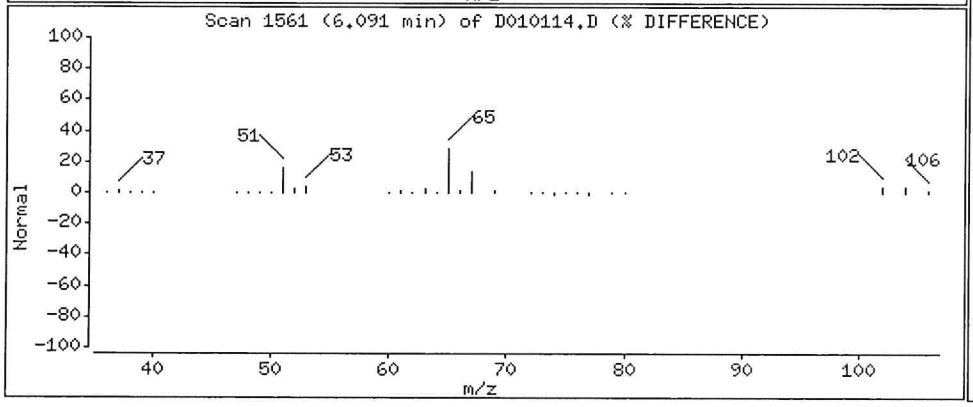












Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D180101.b\D010114.D

Date : 01-JAN-2018 19:25

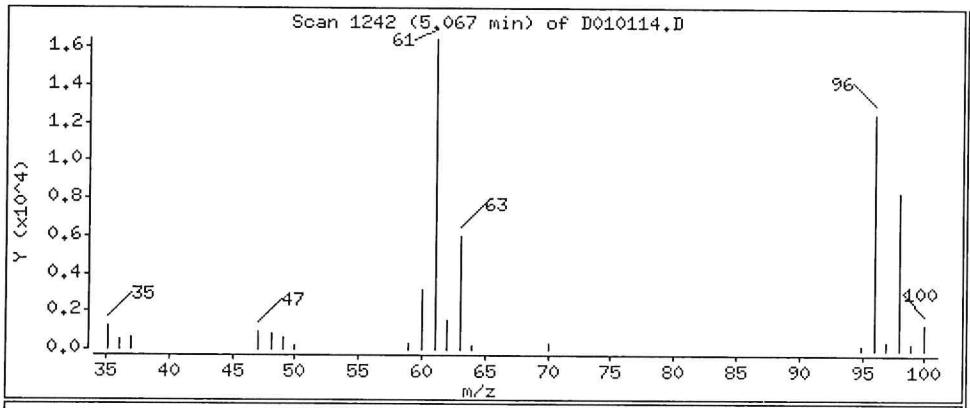
Client ID: HS17121224-04 Instrument: VOA2.i

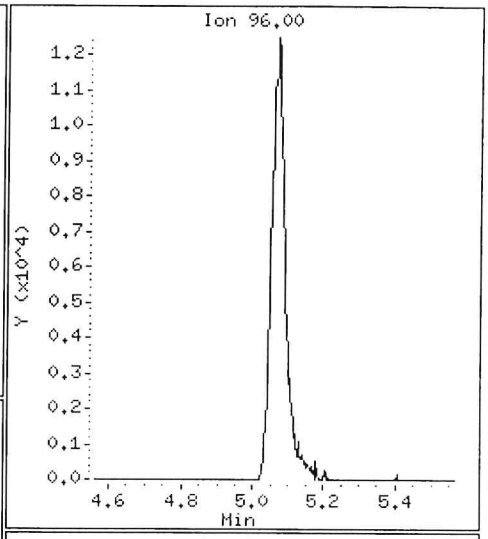
Sample Info: HS17121224-04;HS17121224-04;;;

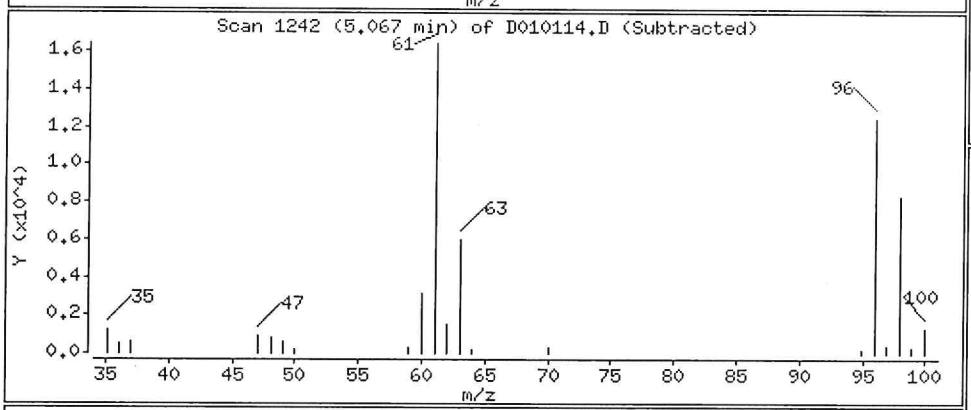
Purge Volume: 5.0 Operator: AP

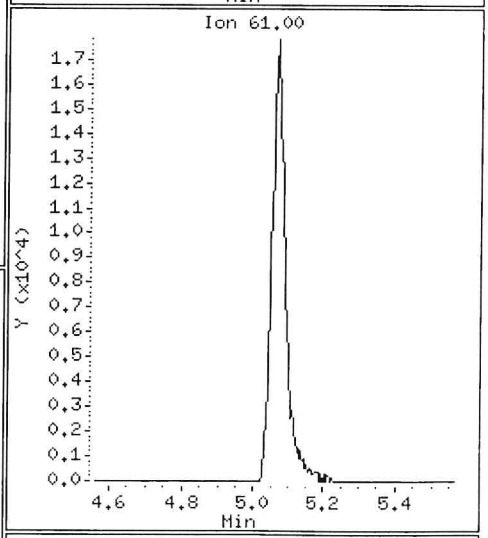
Column phase: DB624 Column diameter: 0.18

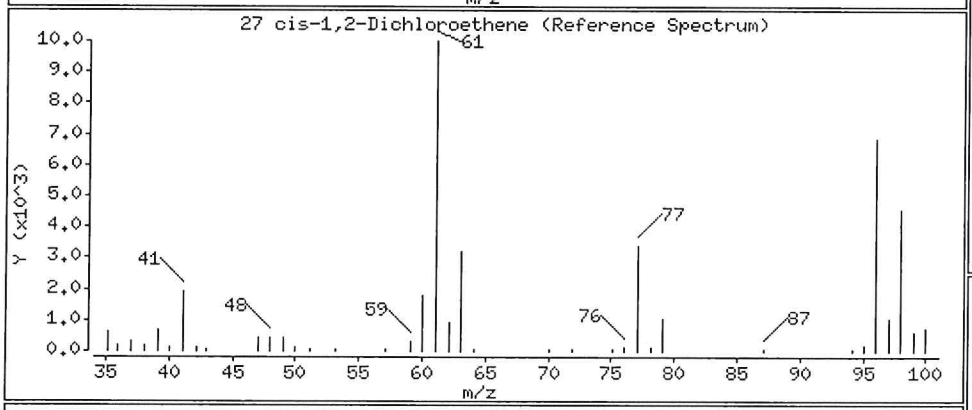
27 cis-1,2-Dichloroethene Concentration: 12.50 ug/l Review Code:

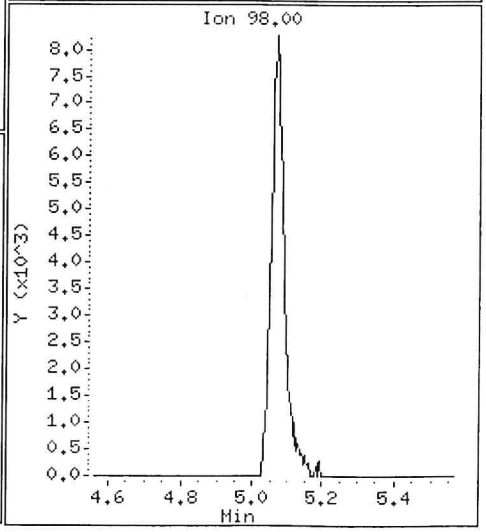


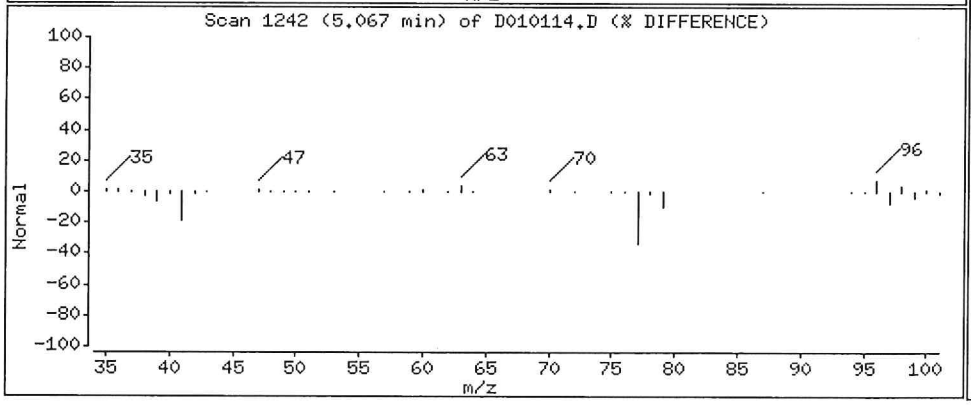












Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D180101.b\D010114.D

Date : 01-JAN-2018 19:25

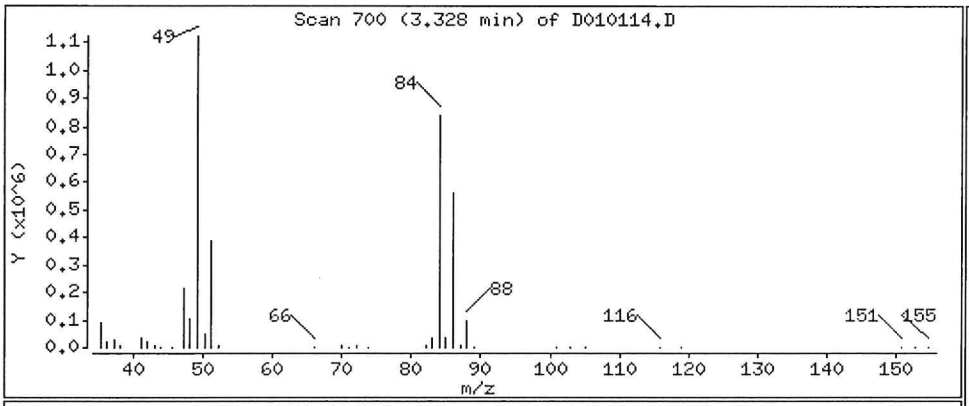
Client ID: HS17121224-04 Instrument: VOA2.i

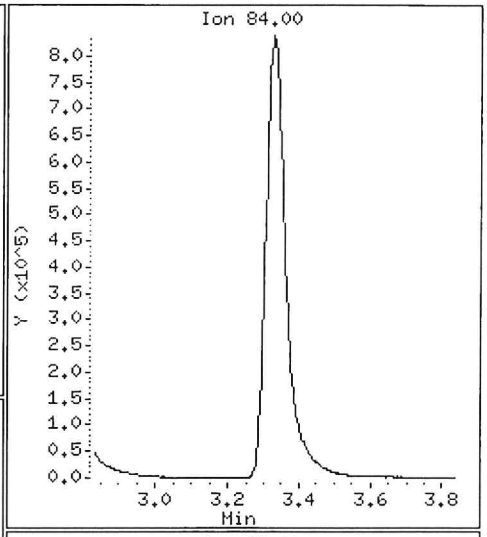
Sample Info: HS17121224-04;HS17121224-04;;;

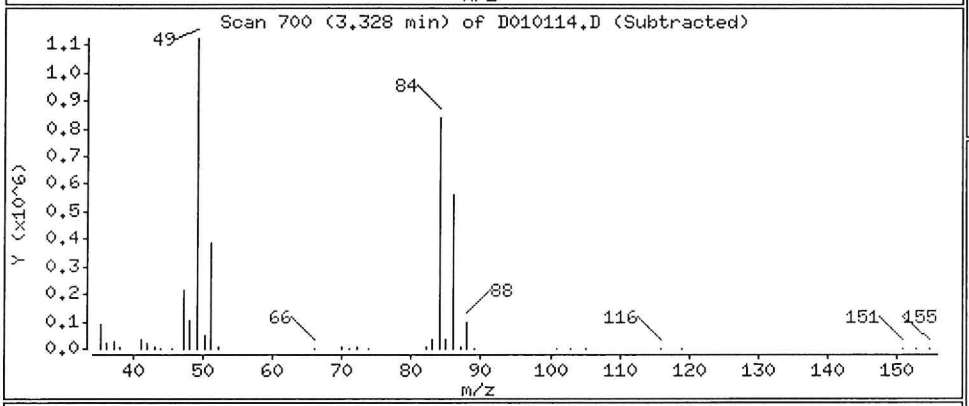
Purge Volume: 5.0 Operator: AP

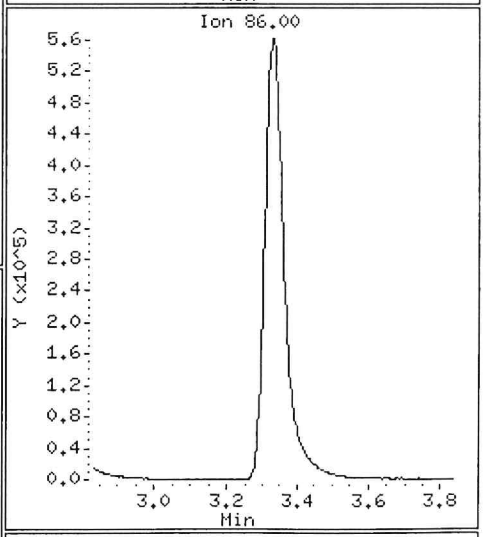
Column phase: DB624 Column diameter: 0.18

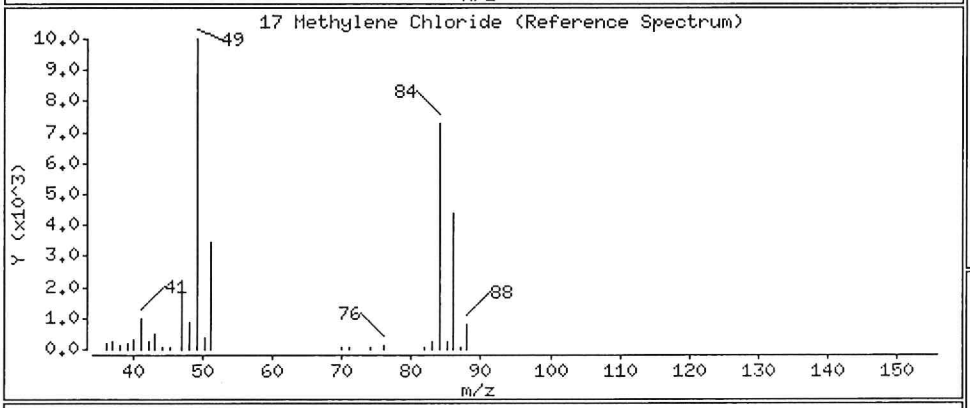
17 Methylene Chloride Concentration: 1283.65 ug/l Review Code:

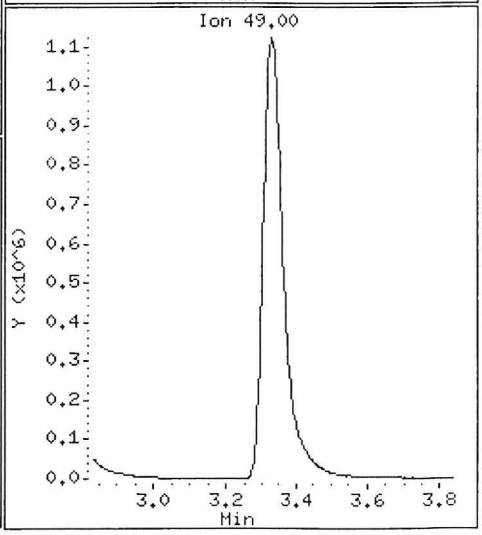


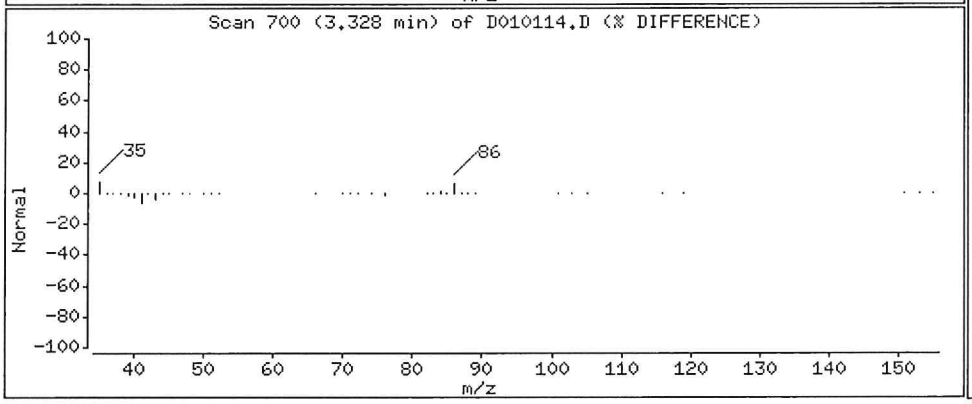












Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D180101.b\D010114.D

Date : 01-JAN-2018 19:25

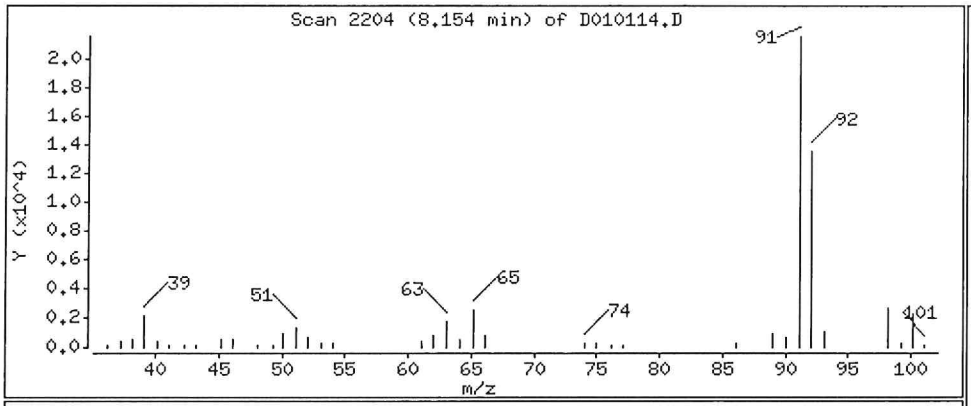
Client ID: HS17121224-04 Instrument: VOA2.i

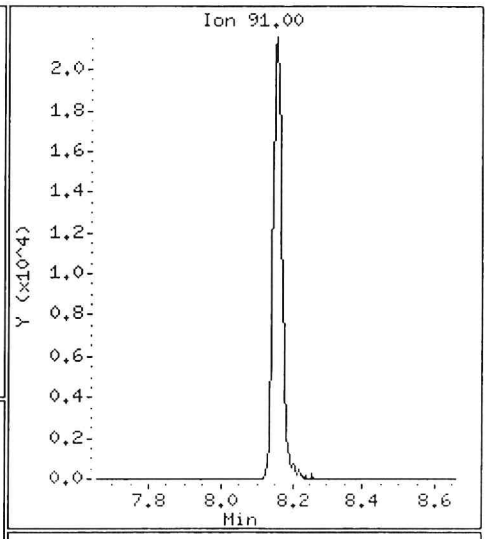
Sample Info: HS17121224-04;HS17121224-04;;;

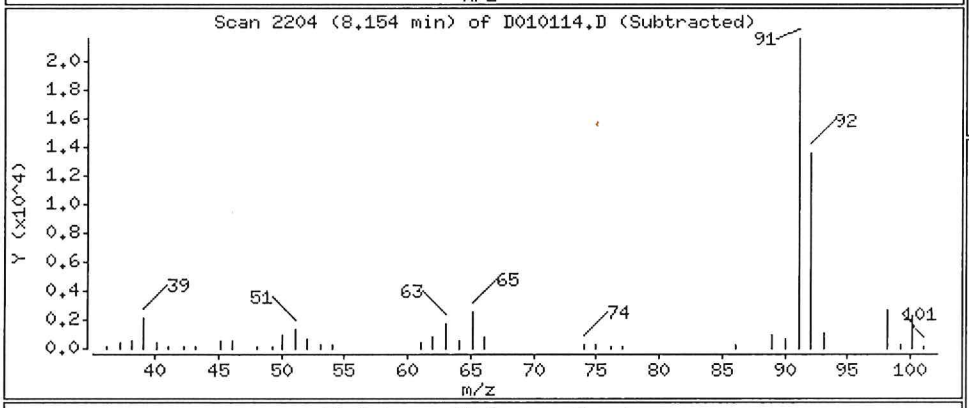
Purge Volume: 5.0 Operator: AP

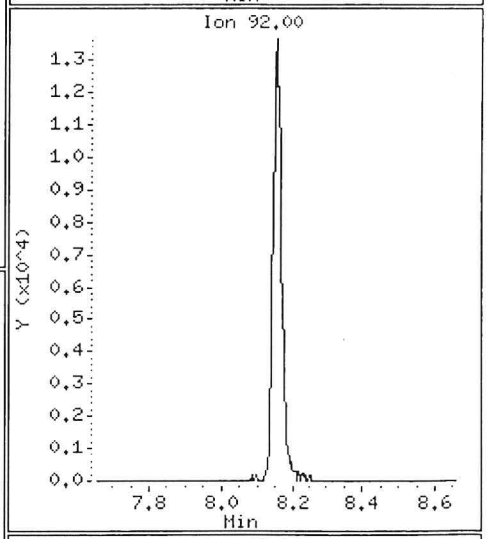
Column phase: DB624 Column diameter: 0.18

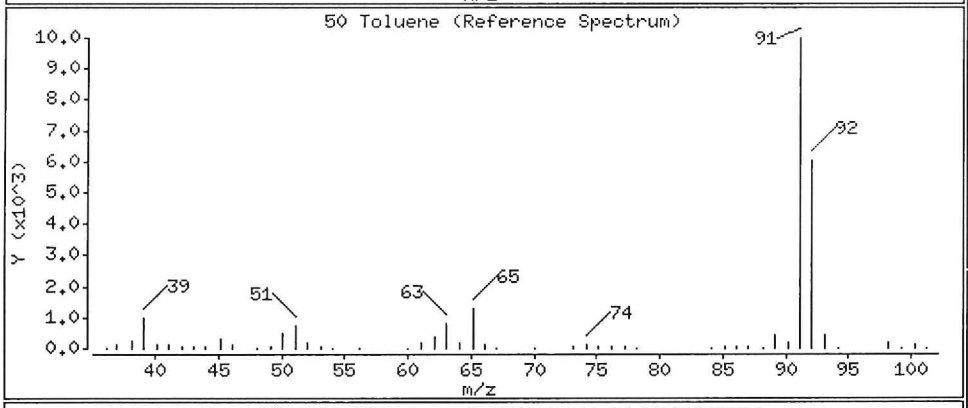
50 Toluene Concentration: 3.95 ug/l Review Code:

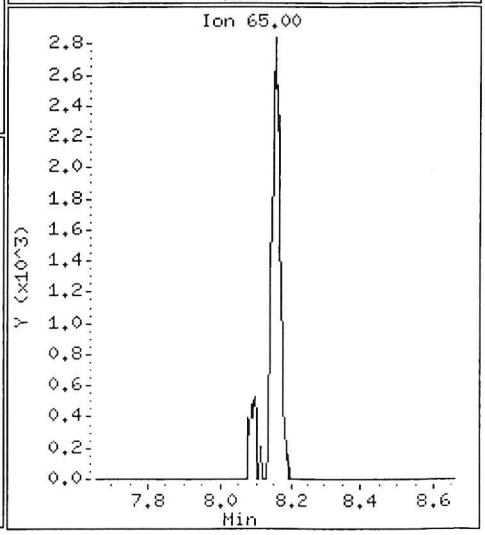


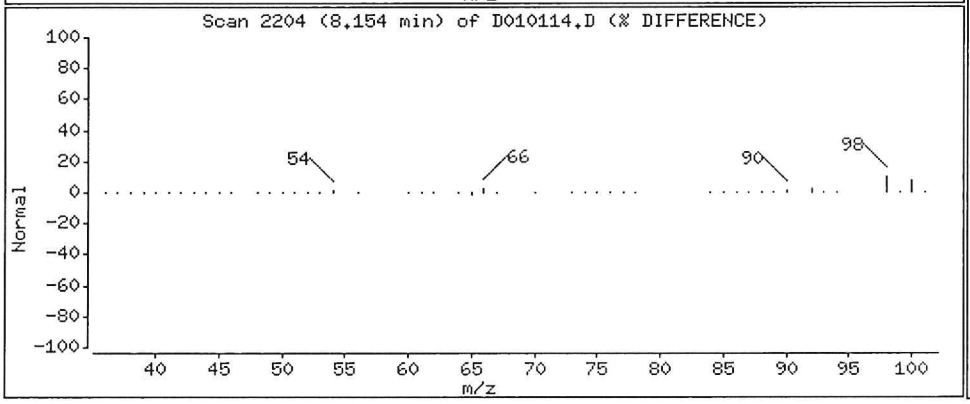












Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D180101.b\D010114.D

Date : 01-JAN-2018 19:25

Client ID: HS17121224-04

Instrument: VOA2.i

Sample Info: HS17121224-04;HS17121224-04;;;

Purge Volume: 5.0

Operator: AP

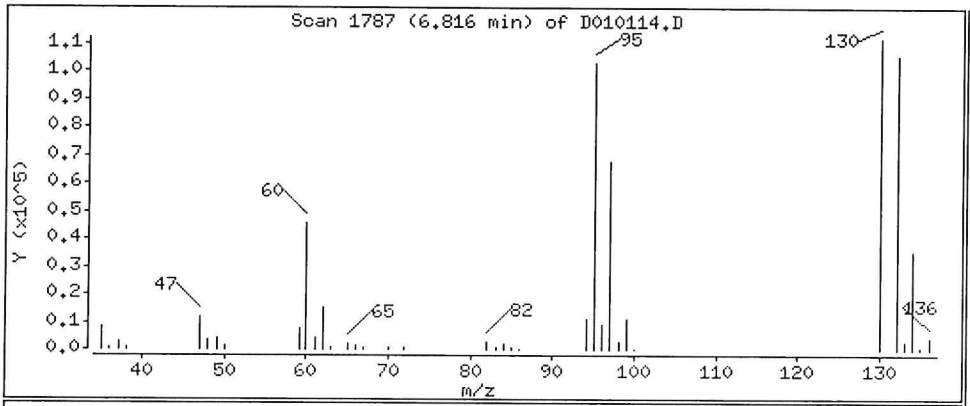
Column phase: DB624

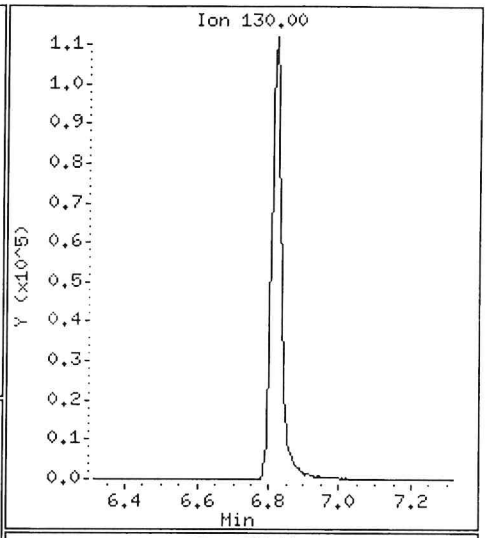
Column diameter: 0.18

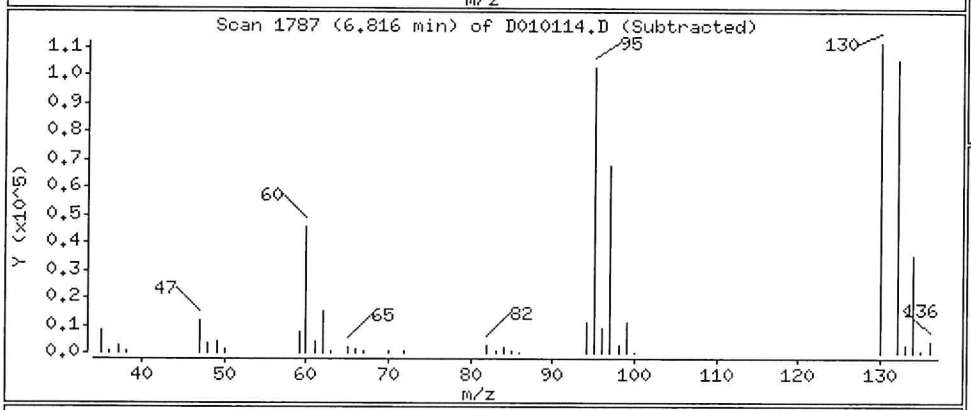
38 Trichloroethene

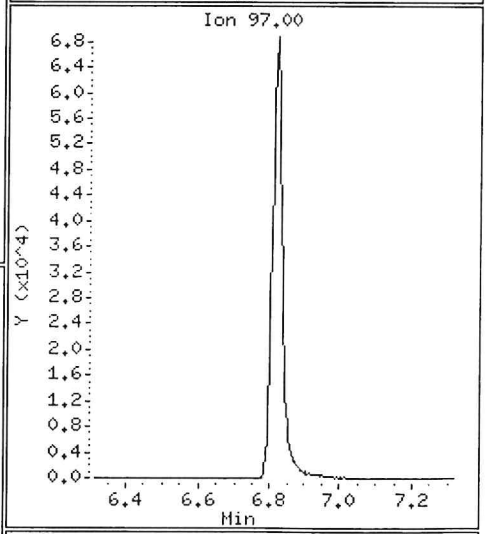
Concentration: 90.42 ug/l

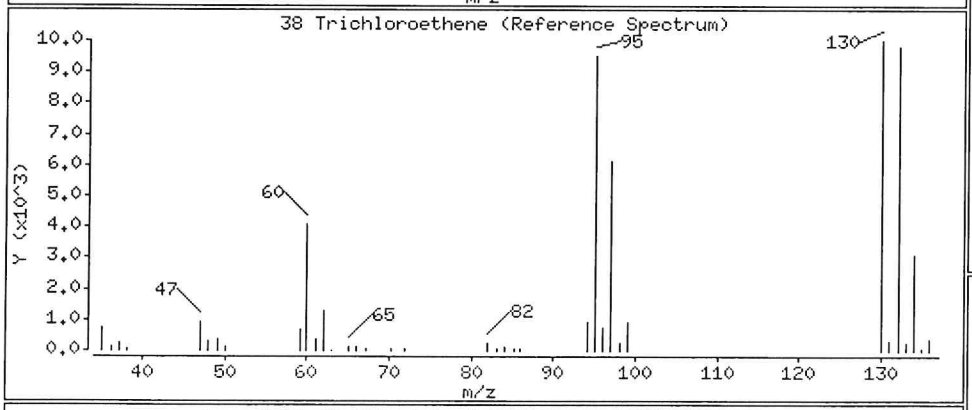
Review Code:

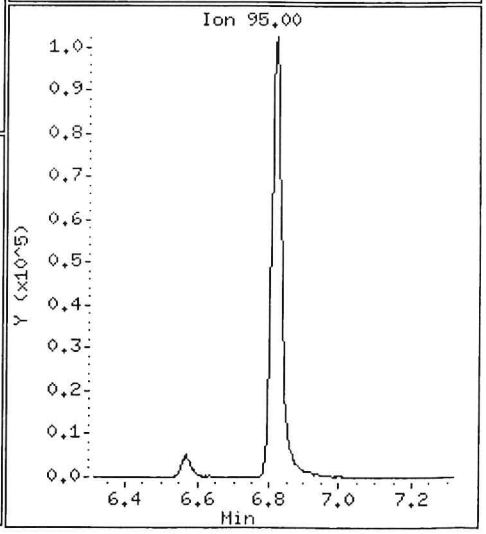


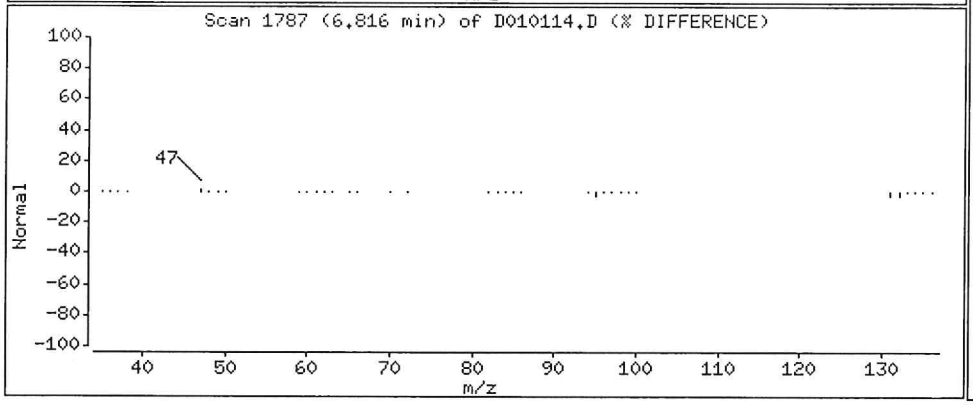












Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D180101.b\D010114.D

Date : 01-JAN-2018 19:25

Client ID: HS17121224-04

Instrument: VOA2.i

Sample Info: HS17121224-04;HS17121224-04;;;

Purge Volume: 5.0

Operator: AP

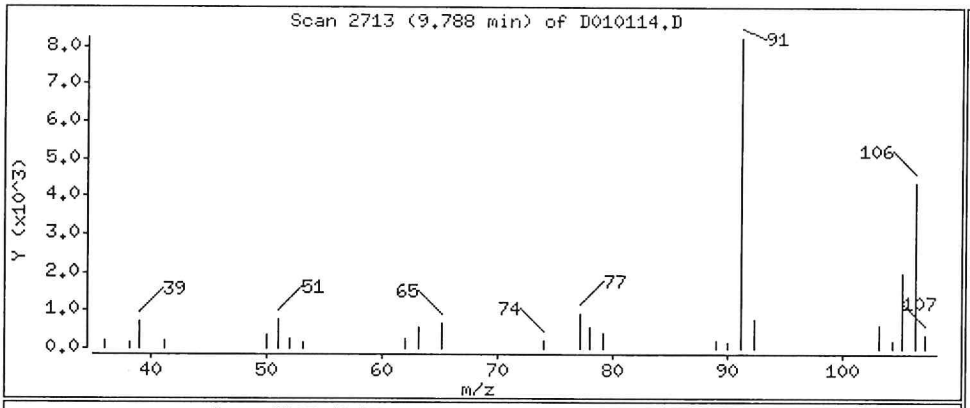
Column phase: DB624

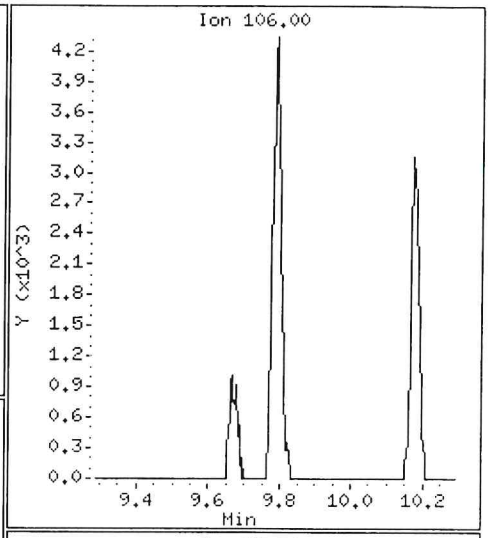
Column diameter: 0.18

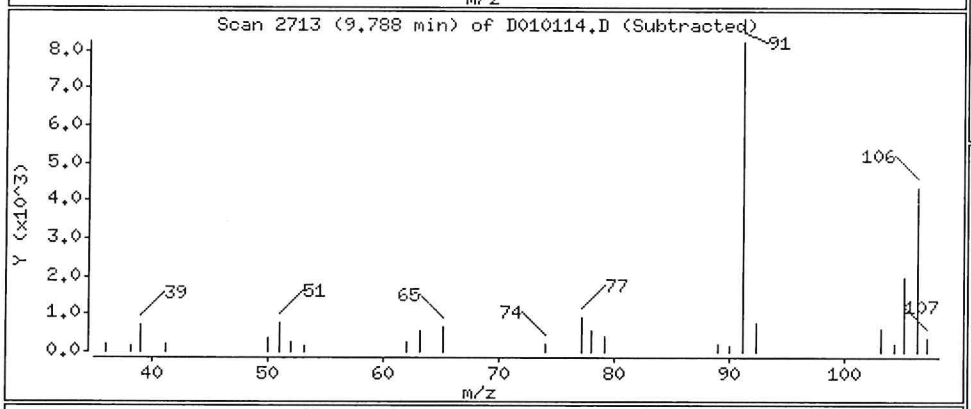
62 m,p-Xylenes

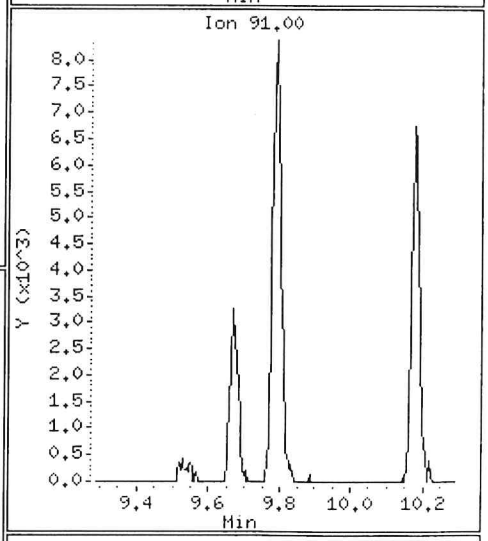
Concentration: 1.70 ug/l

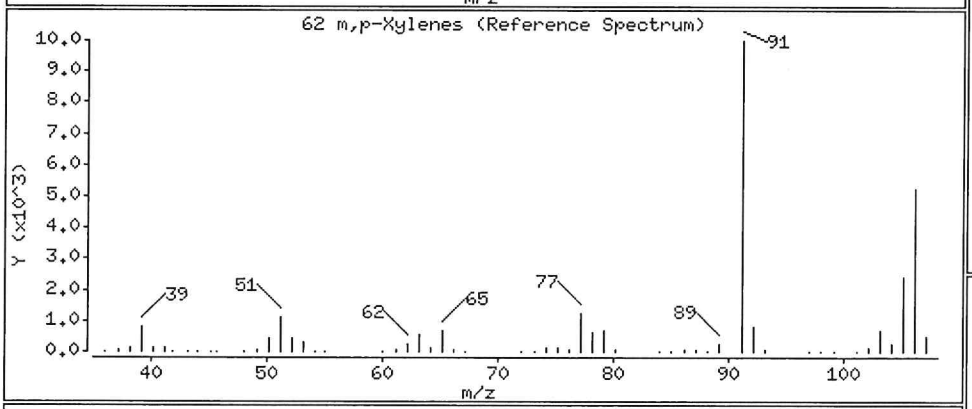
Review Code:

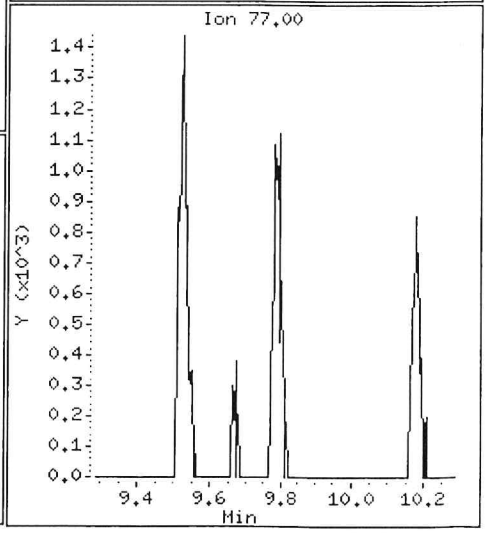


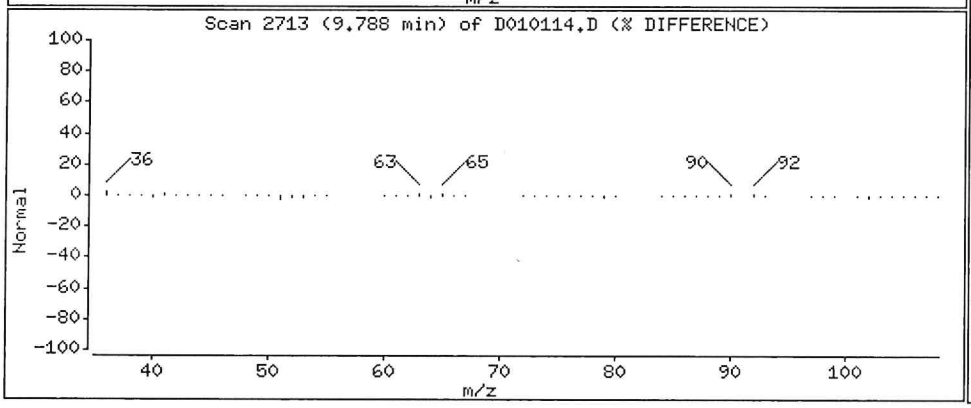












Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D180101.b\D010114.D

Date : 01-JAN-2018 19:25

Client ID: HS17121224-04

Instrument: VOA2.i

Sample Info: HS17121224-04;HS17121224-04;;;

Purge Volume: 5.0

Operator: AP

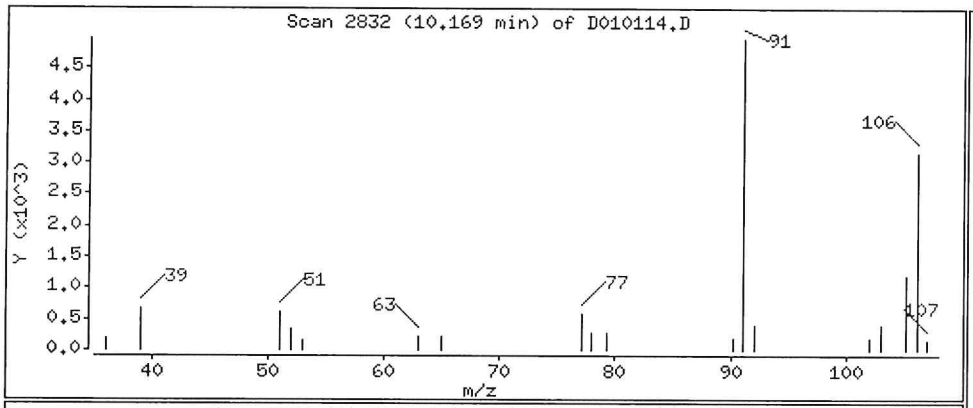
Column phase: DB624

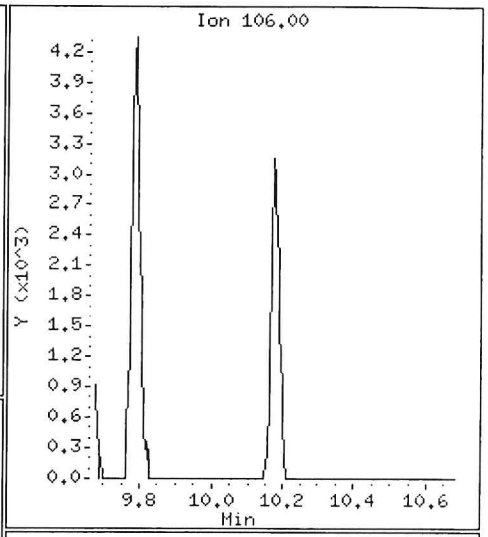
Column diameter: 0.18

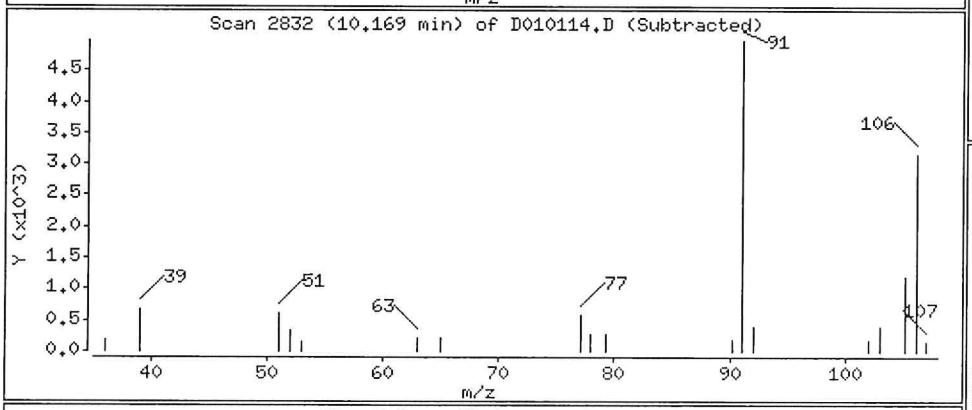
63 o-Xylene

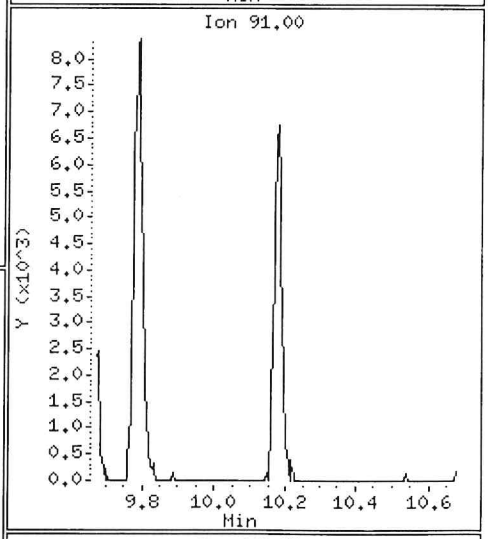
Concentration: 1.13 ug/l

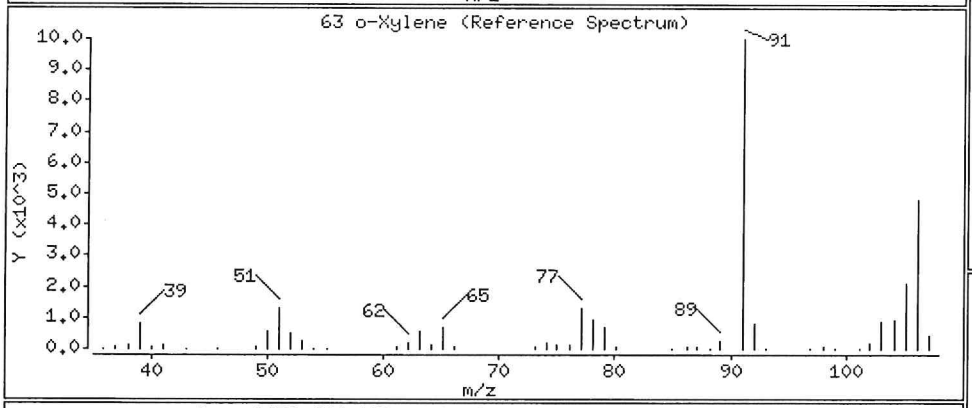
Review Code:

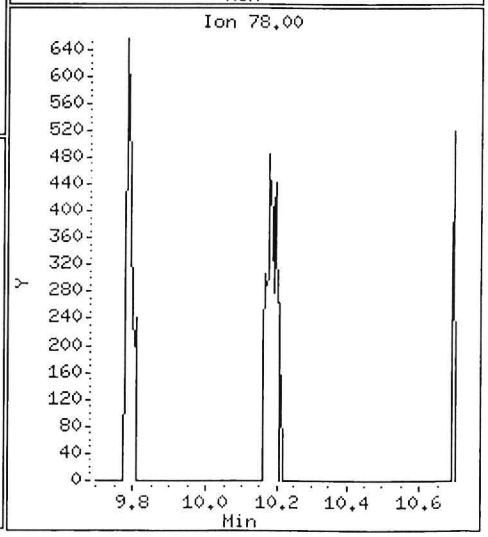


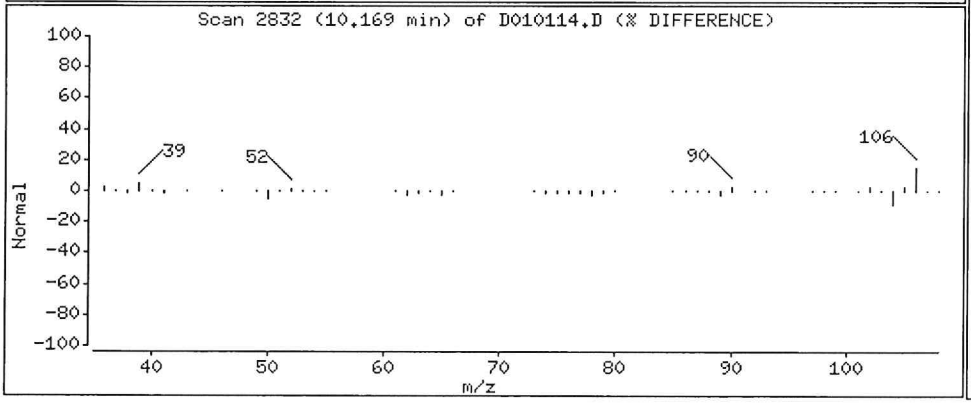












Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D180101.b\D010114.D

Date : 01-JAN-2018 19:25

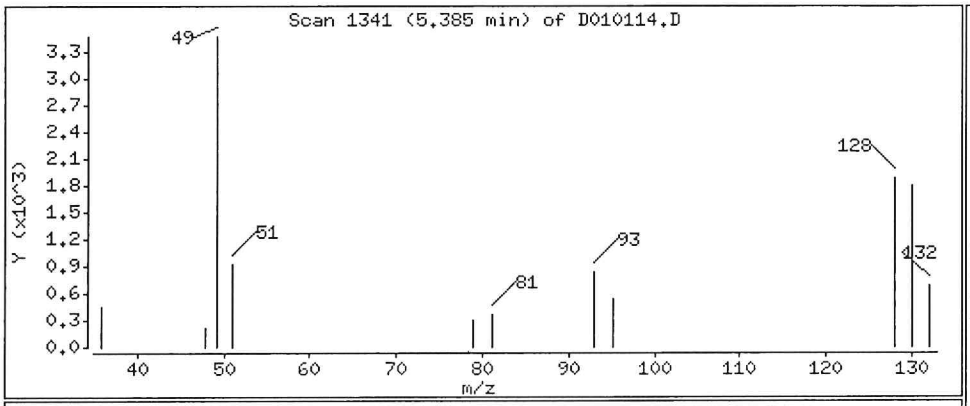
Client ID: HS17121224-04 Instrument: VOA2.i

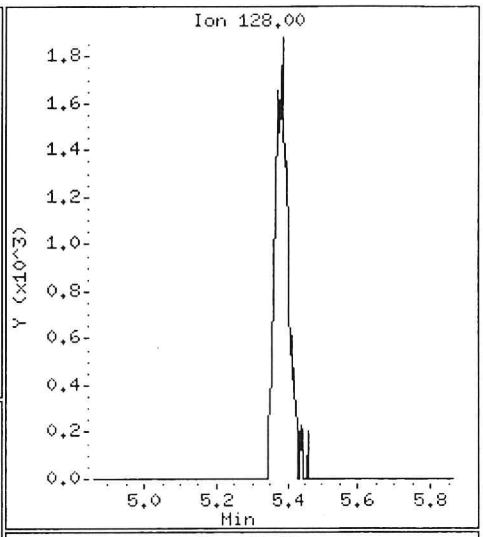
Sample Info: HS17121224-04;HS17121224-04;;;

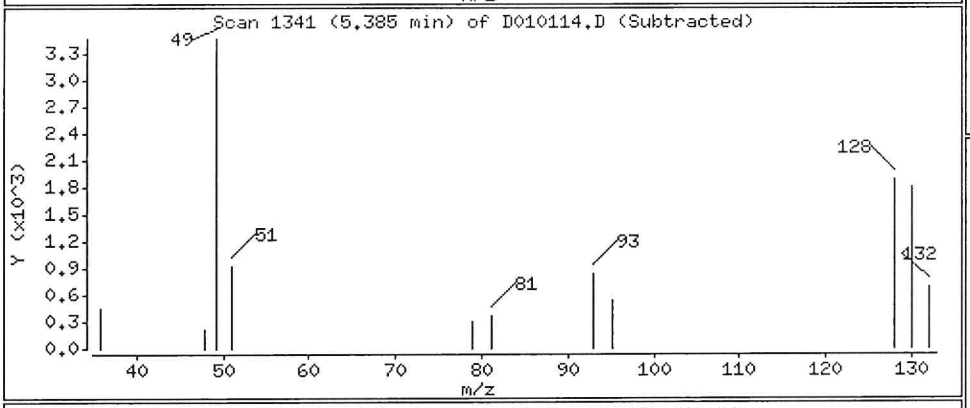
Purge Volume: 5.0 Operator: AP

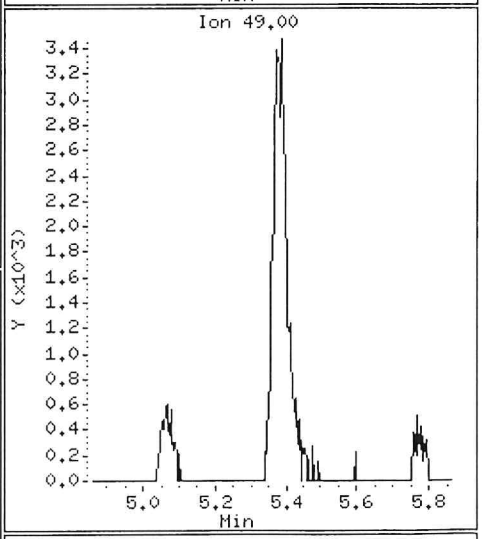
Column phase: DB624 Column diameter: 0.18

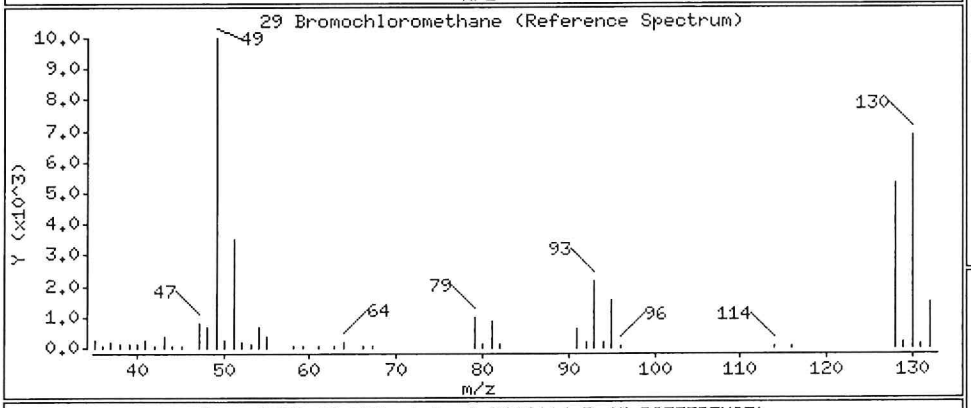
29 Bromochloromethane Concentration: 3.71 ug/l Review Code:

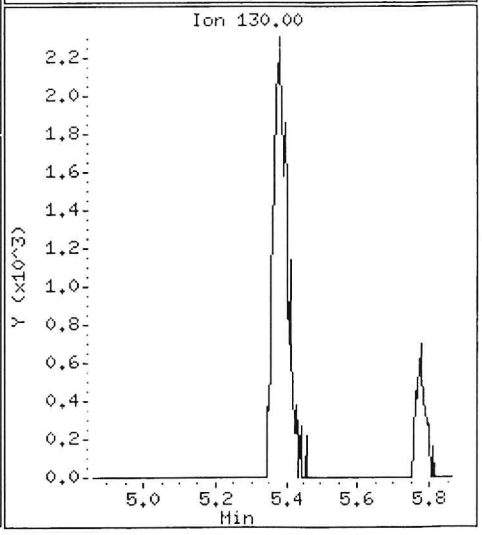


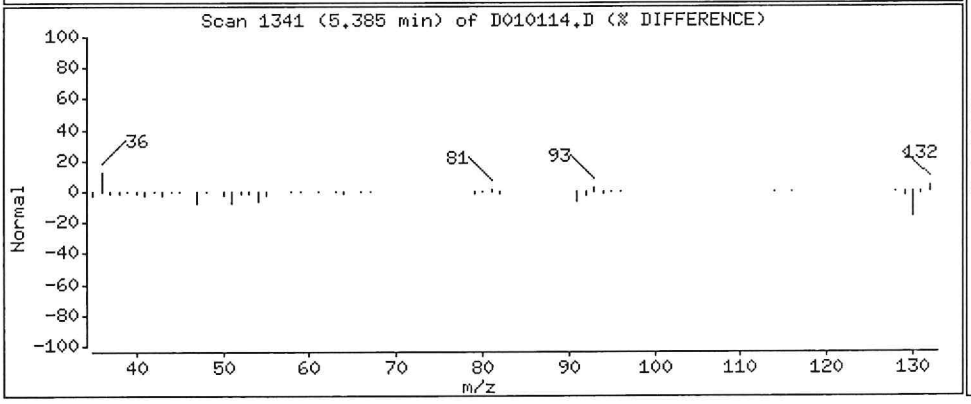












Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D180101.b\D010116.D
Report Date: 09-Feb-2018 20:27

ALS Laboratory Group

Data file : \\NAHSTWS003\Target\CHEM\VOA2.i\D180101.b\D010116.D
Lab Smp Id: HS17121224-02 Client Smp ID: HS17121224-02
Inj Date : 01-JAN-2018 20:17
Operator : AP Inst ID: VOA2.i
Smp Info : HS17121224-02;HS17121224-02;;;
Misc Info : HS15080001;WATER;0;1;
Comment :
Method : \\nahstws003\Target\CHEM\VOA2.i\D180101.b\8260LL.m
Meth Date : 09-Feb-2018 20:27 VOA2.i Quant Type: ISTD
Cal Date : 19-DEC-2017 12:14 Cal File: D121908.D
Als bottle: 15
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: dn_bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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
Va	0.00000	
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	5.779	5.779	(1.000)	237883	50.0000	
$ 30 Dibromofluoromethane	113	5.683	5.680	(0.983)	103118	48.1127	48.11
* 36 1,4-Difluorobenzene	114	6.568	6.569	(1.000)	347929	50.0000	
$ 35 1,2-Dichloroethane-d4	65	6.052	6.055	(1.047)	124561	47.0563	47.05
* 47 Chlorobenzene-d5	117	9.524	9.527	(1.000)	315144	50.0000	
$ 48 Toluene-d8	98	8.090	8.090	(0.849)	393359	47.3410	47.34
$ 69 4-Bromofluorobenzene	95	10.695	10.695	(1.123)	146752	48.3658	48.36
* 70 1,4-Dichlorobenzene-d4	152	11.831	11.835	(1.000)	141044	50.0000	
11 1,1-Dichloroethene	96	2.750	2.750	(0.476)	7154	3.64379	3.64(a)
33 1,2-Dichloroethane	62	6.142	6.145	(0.935)	17008	5.44742	5.44(M)
37 Benzene	78	6.090	6.091	(0.927)	3989	0.43574	0.43(a)
28 Chloroform	83	5.487	5.490	(0.949)	10173	2.34565	2.34(a)
27 cis-1,2-Dichloroethene	96	5.060	5.067	(0.876)	178739	66.0444	66.04
38 Trichloroethene	130	6.832	6.816	(1.040)	2854410	1107.64	1107.63(A)

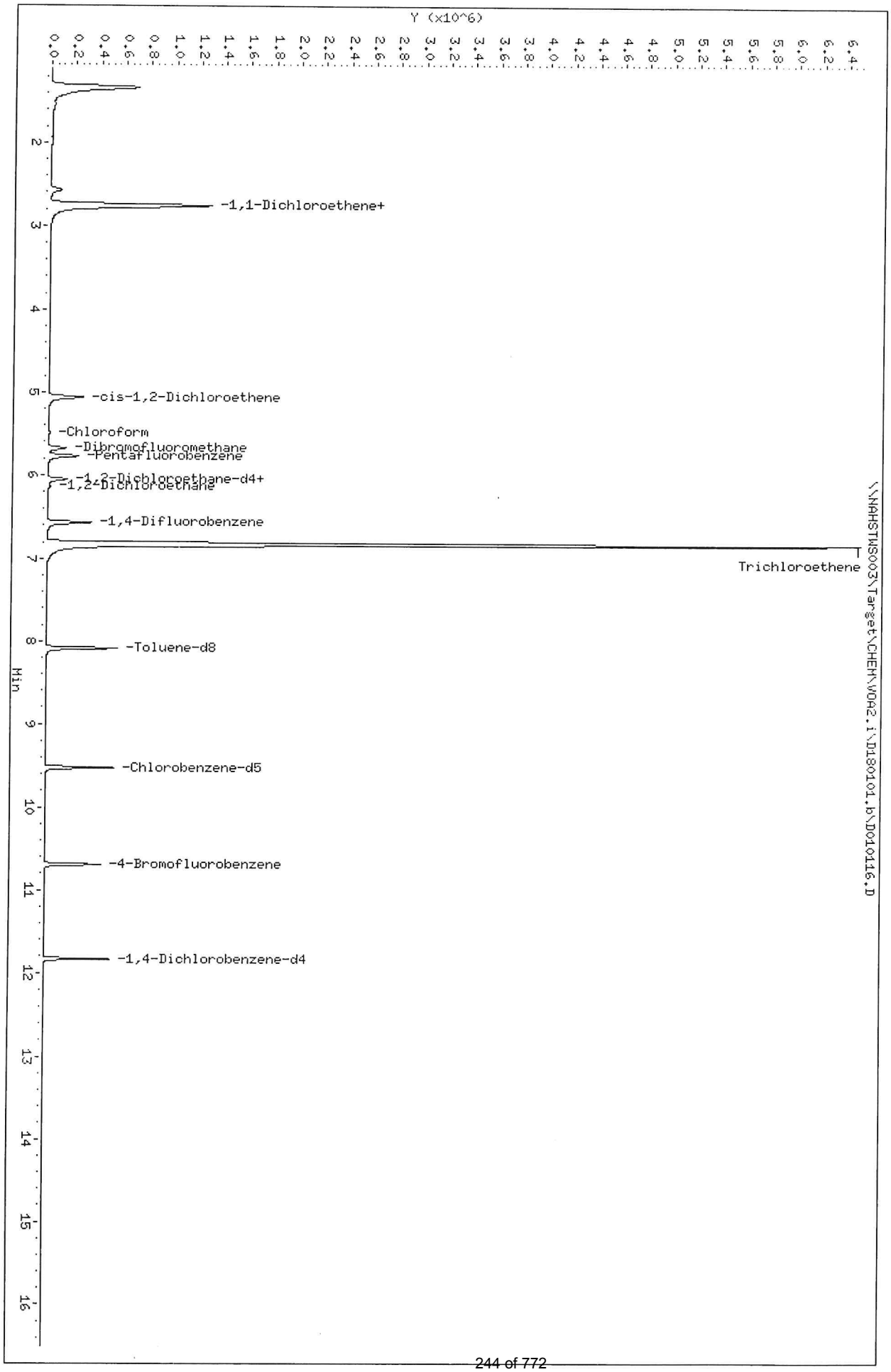
QC Flag Legend

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

Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D180101.b\D010116.D
Report Date: 09-Feb-2018 20:27

QC Flag Legend

M - Compound response manually integrated.


Data File: \\NAHSTWS003\Target\CHEM\WOA2.i\D180101.b\D010116.D
Date : 01-JAN-2018 20:17
Client ID: HS17121224-02
Sample Info: HS17121224-02;HS17121224-02;;;
Purge Volume: 5.0
Column phase: DB624
Instrument: WOA2.i
Operator: AP
Column diameter: 0.18
Y (x10^6)
-1,1-Dichloroethene+
-cis-1,2-Dichloroethene
-Chloroform
-Dibromofluoromethane
-Pentafluorobenzene
-1,2-Dichloroethane-d4+
-1,2-Dichloroethane
-1,4-Difluorobenzene
Trichloroethene
-Toluene-d8
-Chlorobenzene-d5
-4-Bromofluorobenzene
-1,4-Dichlorobenzene-d4
Min
\\NAHSTWS003\Target\CHEM\WOA2.i\D180101.b\D010116.D

Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D180101.b\D010116.D

Date : 01-JAN-2018 20:17

Client ID: HS17121224-02

Instrument: VOA2.i

Sample Info: HS17121224-02;HS17121224-02;;;

Purge Volume: 5.0

Operator: AP

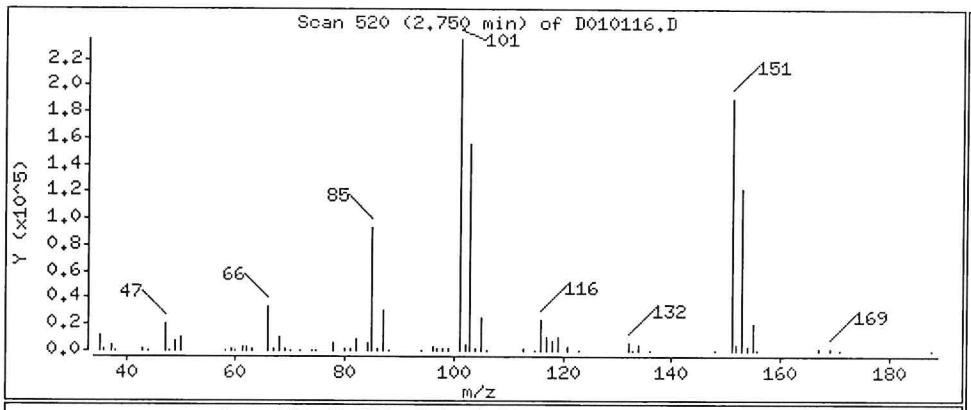
Column phase: DB624

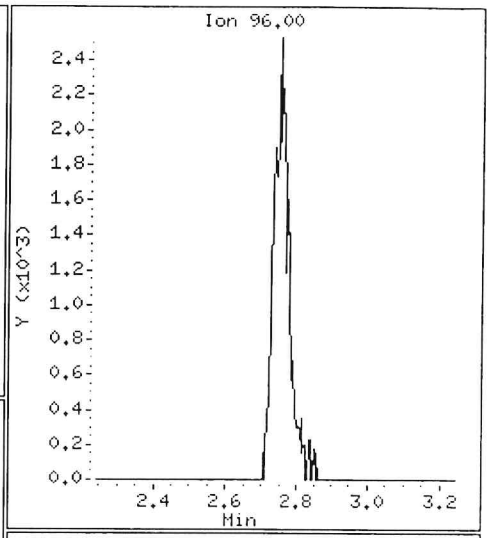
Column diameter: 0.18

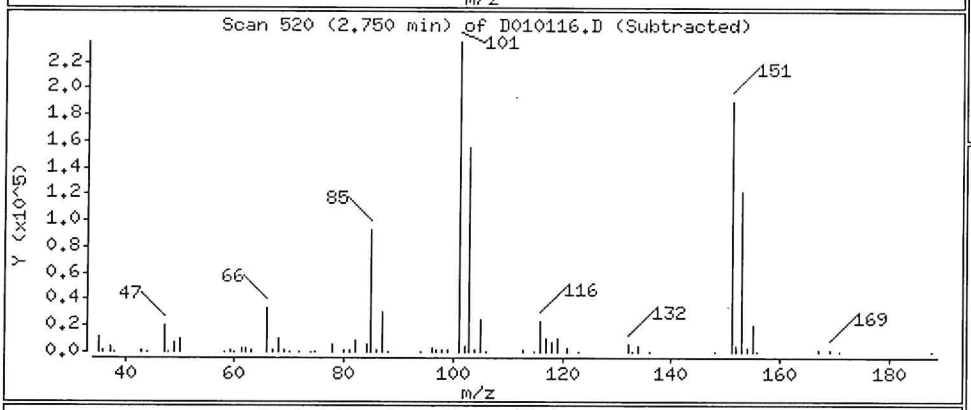
11 1,1-Dichloroethene

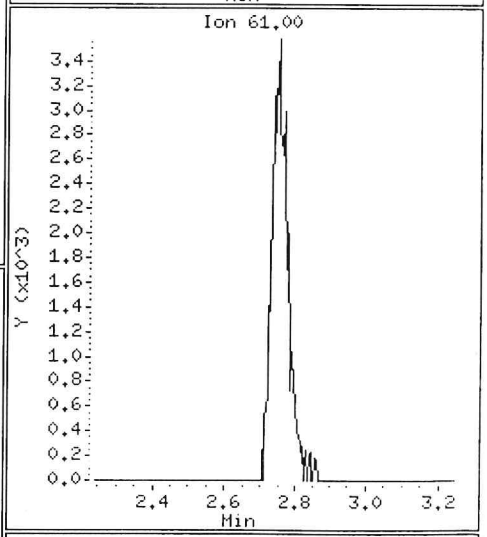
Concentration: 3.64 ug/l

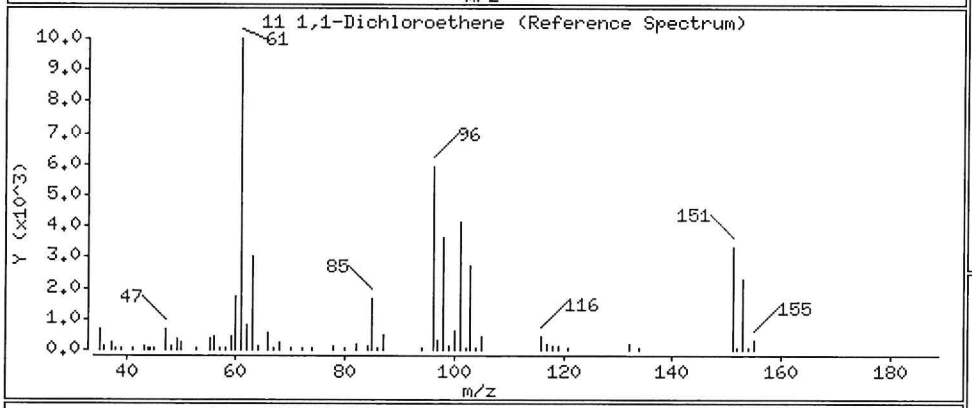
Review Code:

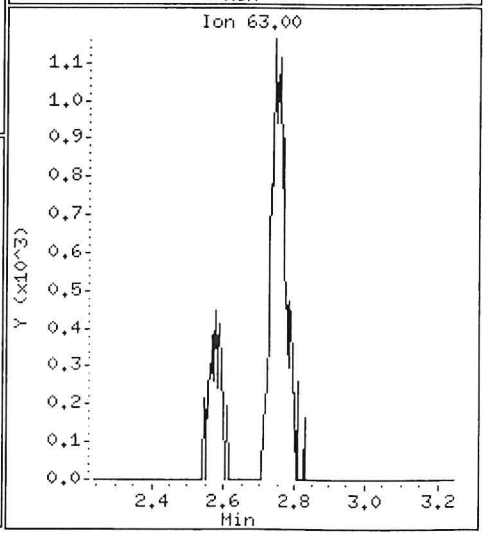


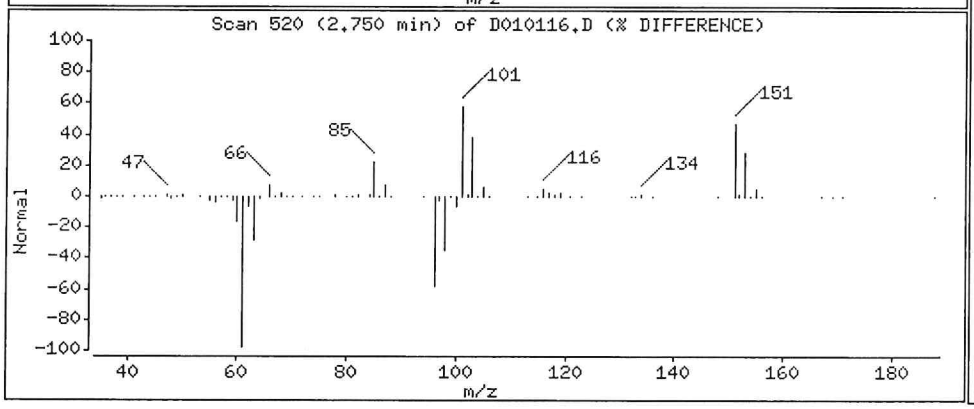












Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D180101.b\D010116.D

Date : 01-JAN-2018 20:17

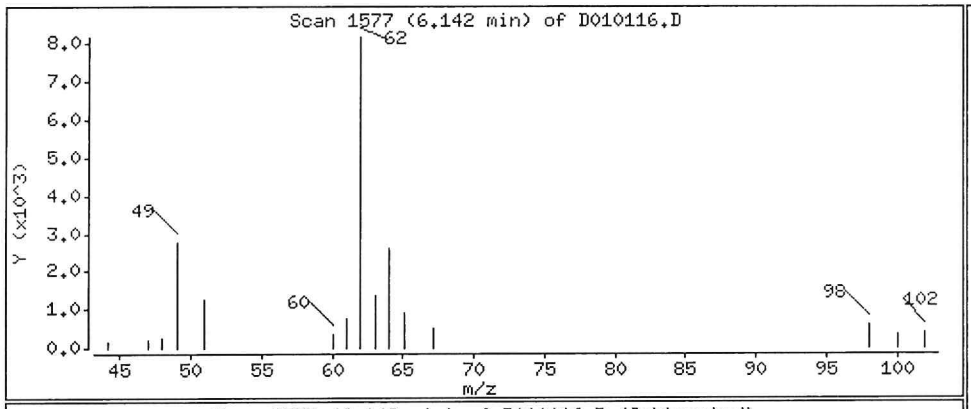
Client ID: HS17121224-02 Instrument: VOA2.i

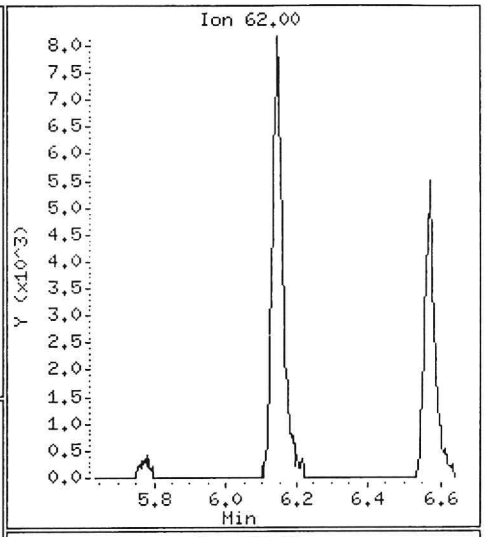
Sample Info: HS17121224-02;HS17121224-02;;;

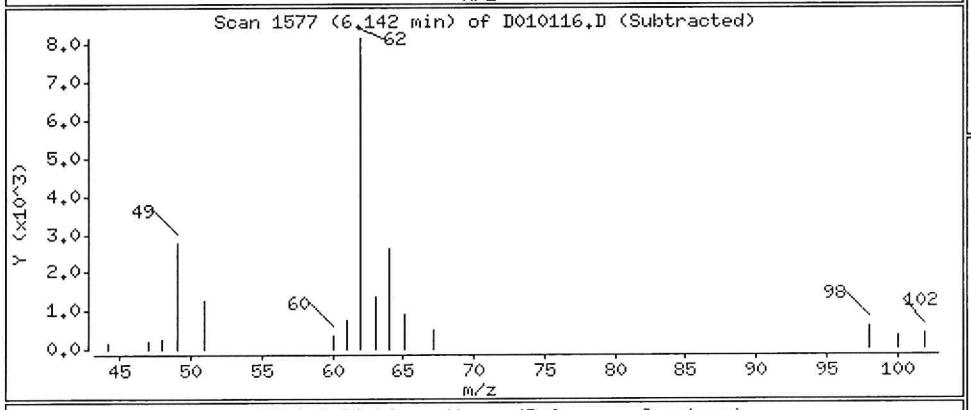
Purge Volume: 5.0 Operator: AP

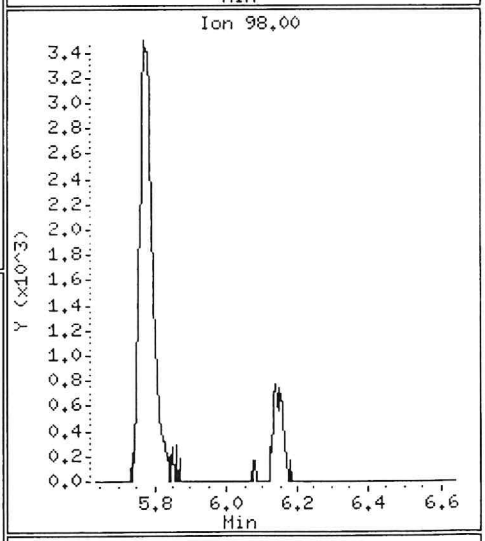
Column phase: DB624 Column diameter: 0.18

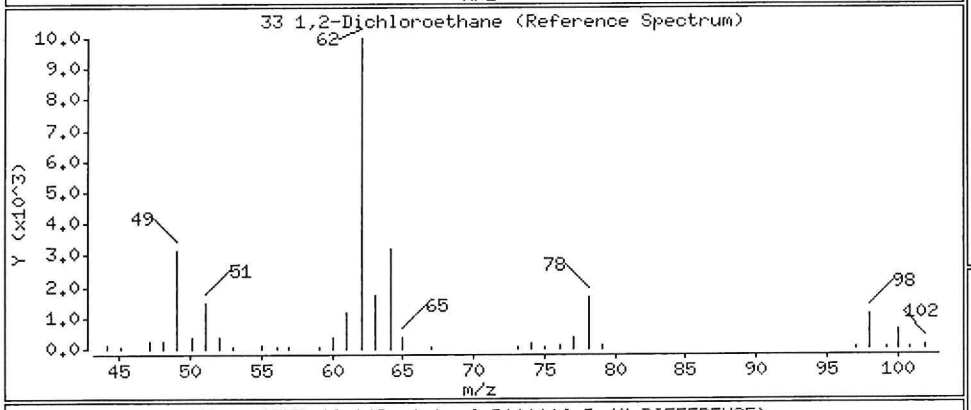
33 1,2-Dichloroethane Concentration: 5.44 ug/l Review Code:

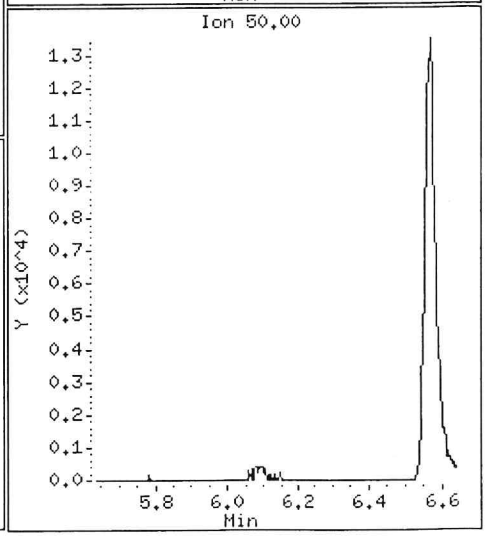


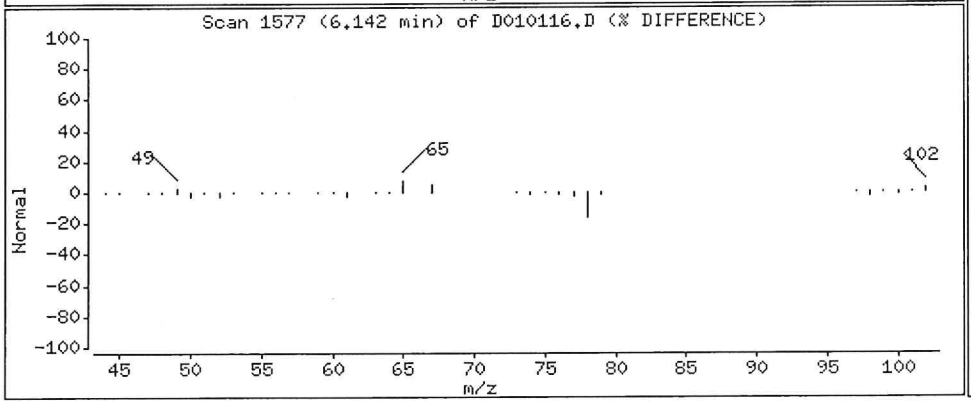












Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D180101.b\D010116.D

Date : 01-JAN-2018 20:17

Client ID: HS17121224-02

Instrument: VOA2.i

Sample Info: HS17121224-02;HS17121224-02;;;

Purge Volume: 5.0

Operator: AP

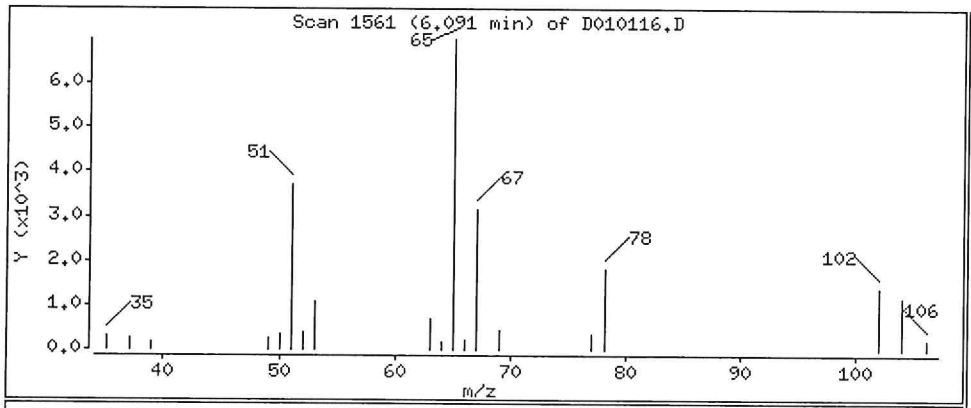
Column phase: DB624

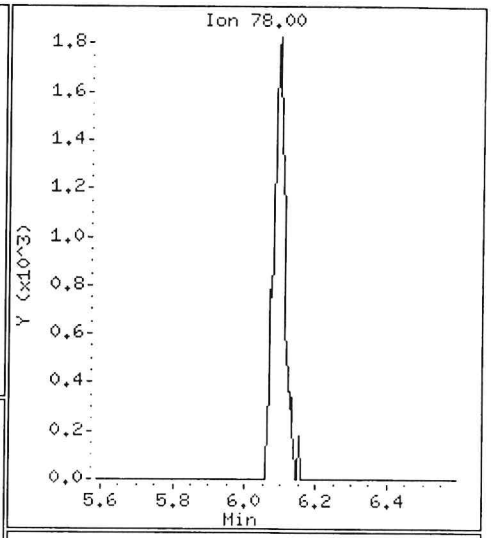
Column diameter: 0.18

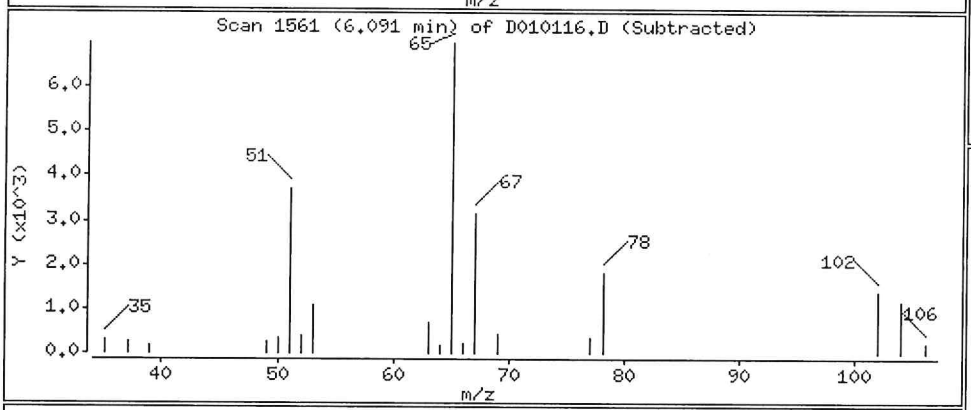
37 Benzene

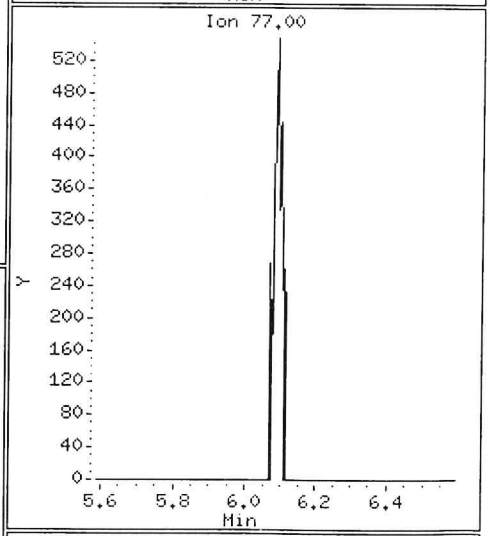
Concentration: 0.43 ug/l

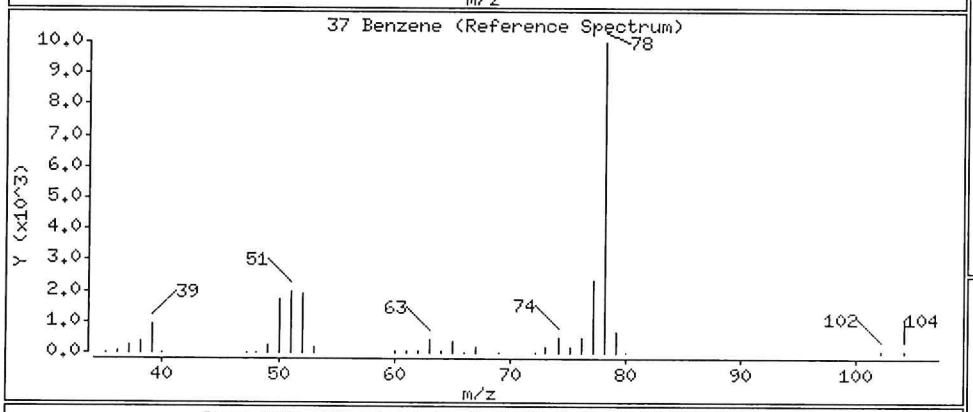
Review Code:

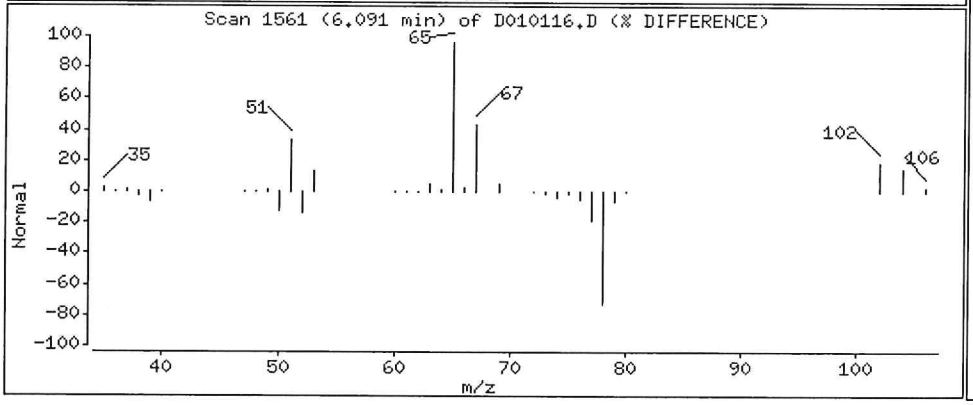


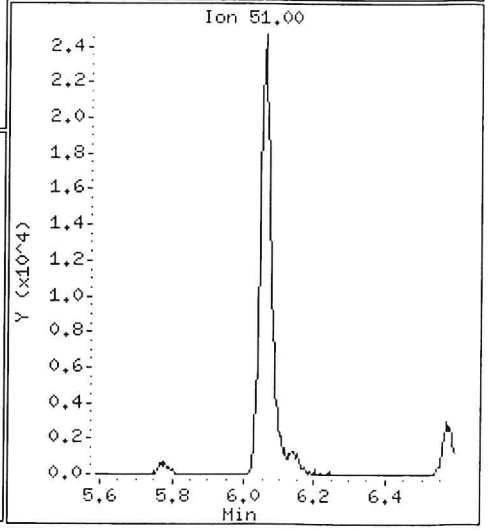












Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D180101.b\D010116.D

Date : 01-JAN-2018 20:17

Client ID: HS17121224-02

Instrument: VOA2.i

Sample Info: HS17121224-02;HS17121224-02;;;

Purge Volume: 5.0

Operator: AP

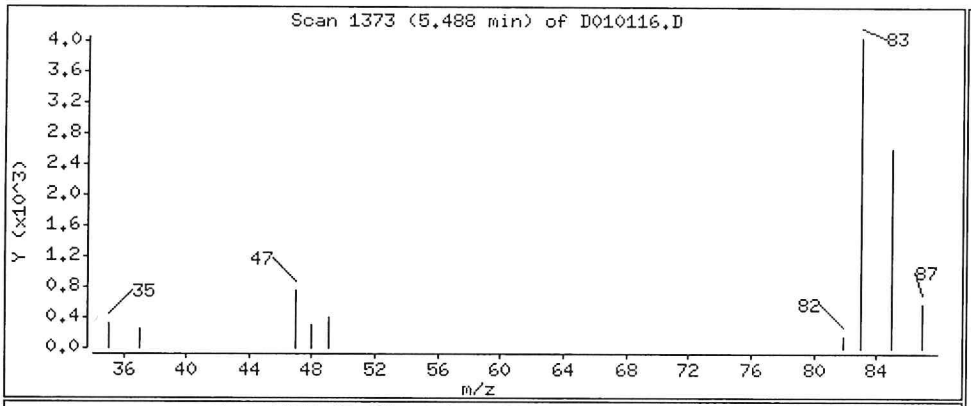
Column phase: DB624

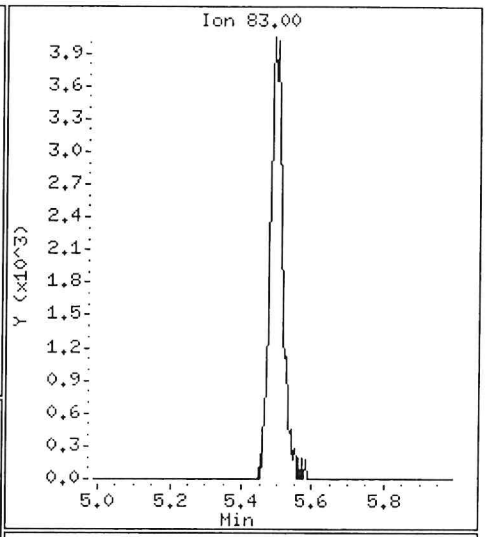
Column diameter: 0.18

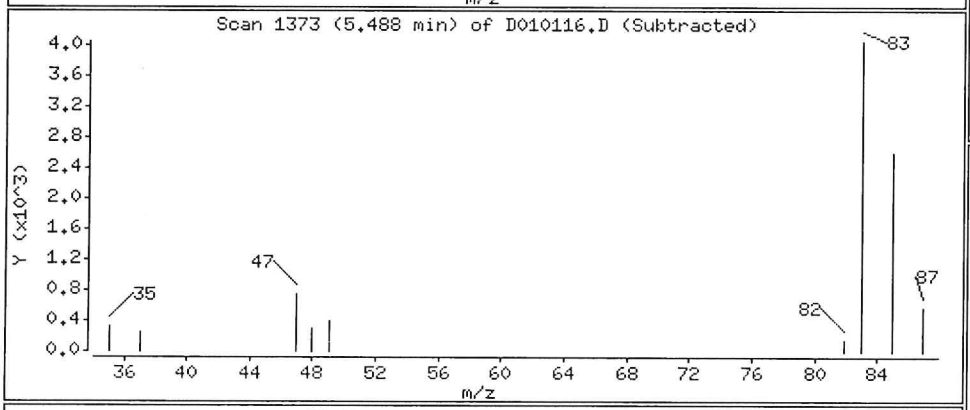
28 Chloroform

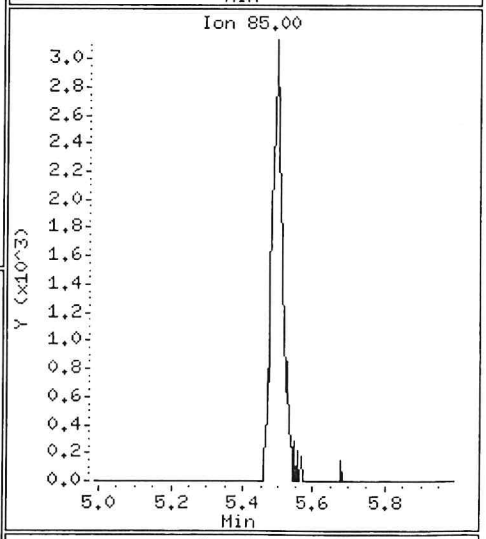
Concentration: 2.34 ug/l

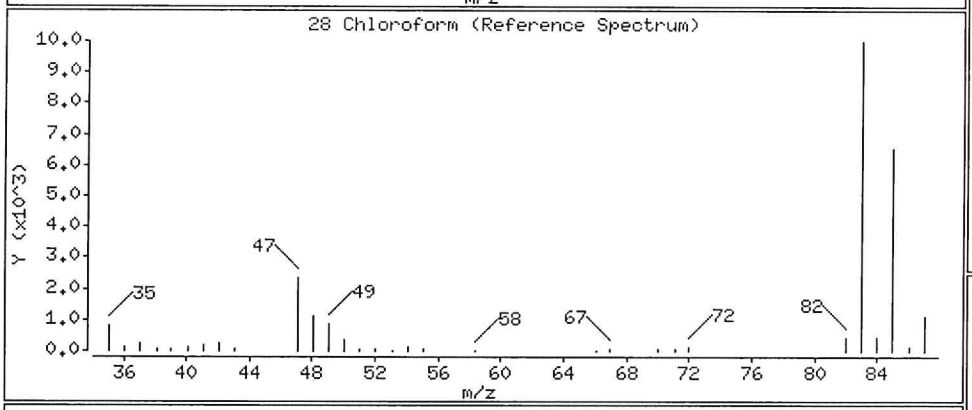
Review Code:

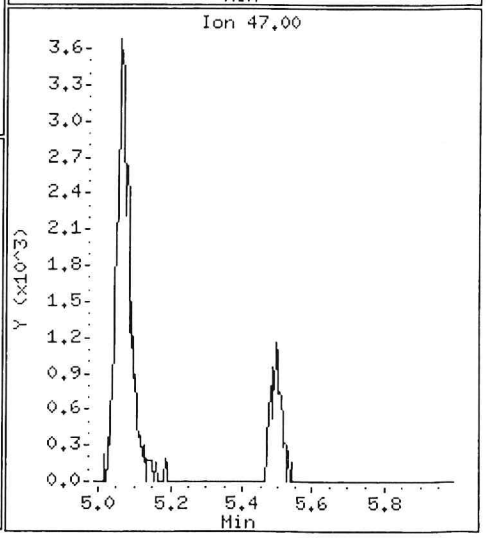


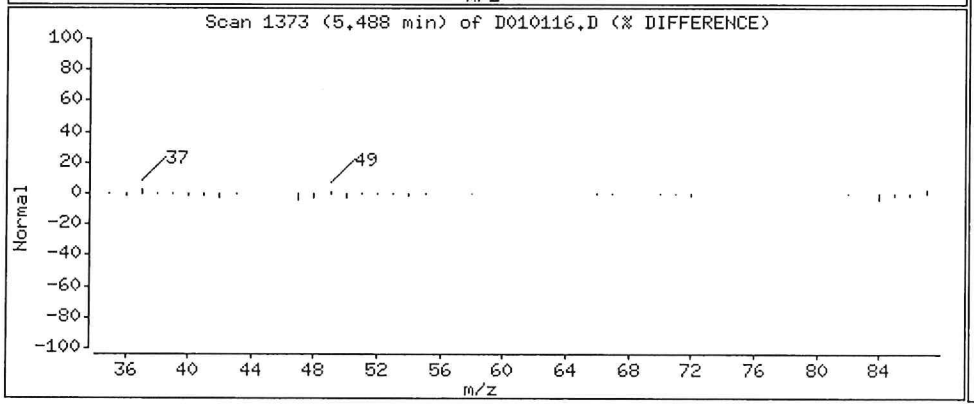












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Date : 01-JAN-2018 20:17

Client ID: HS17121224-02

Instrument: VOA2.i

Sample Info: HS17121224-02;HS17121224-02;;;

Purge Volume: 5.0

Operator: AP

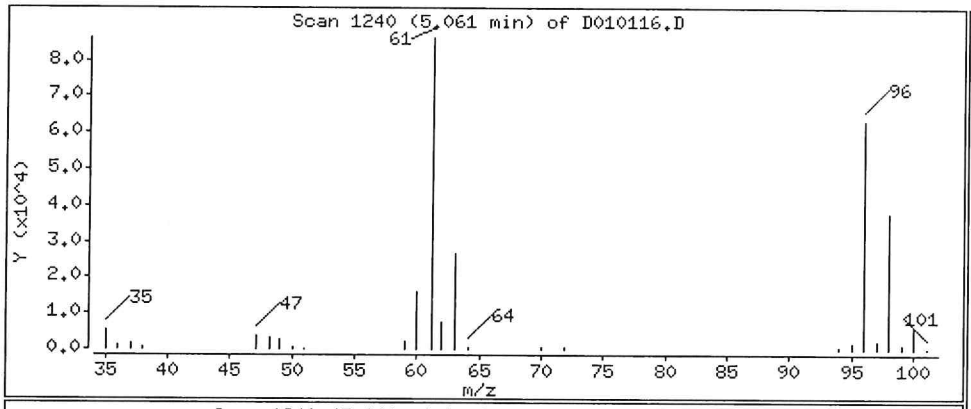
Column phase: DB624

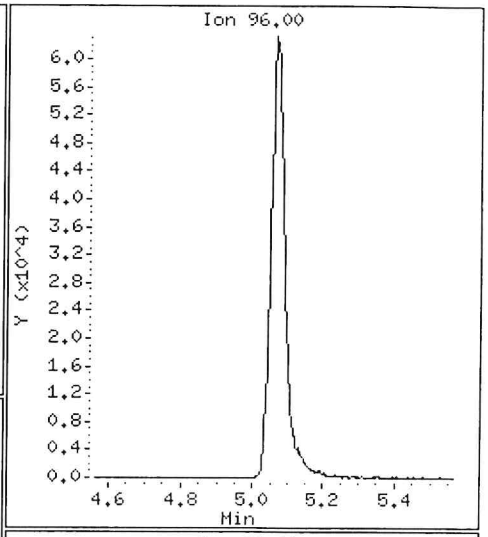
Column diameter: 0.18

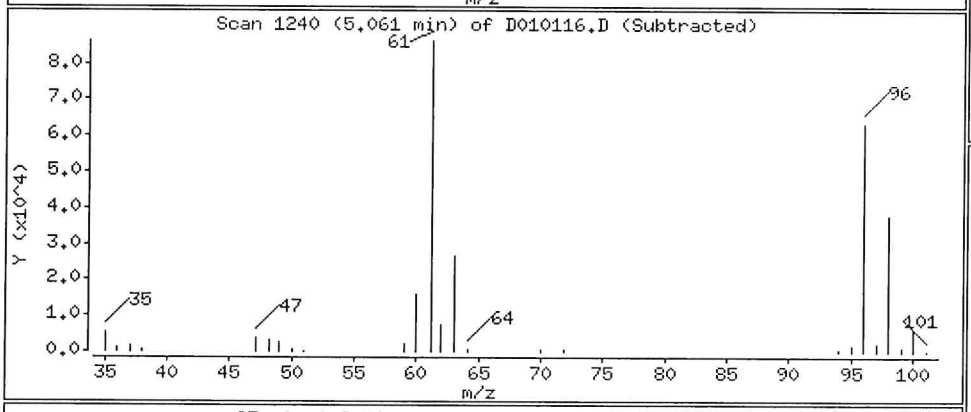
27 cis-1,2-Dichloroethene

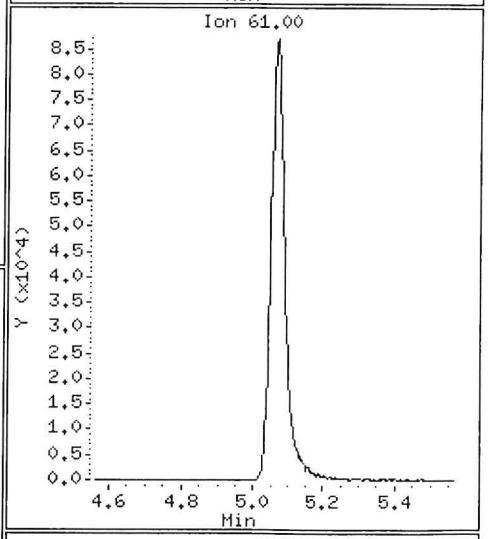
Concentration: 66.04 ug/l

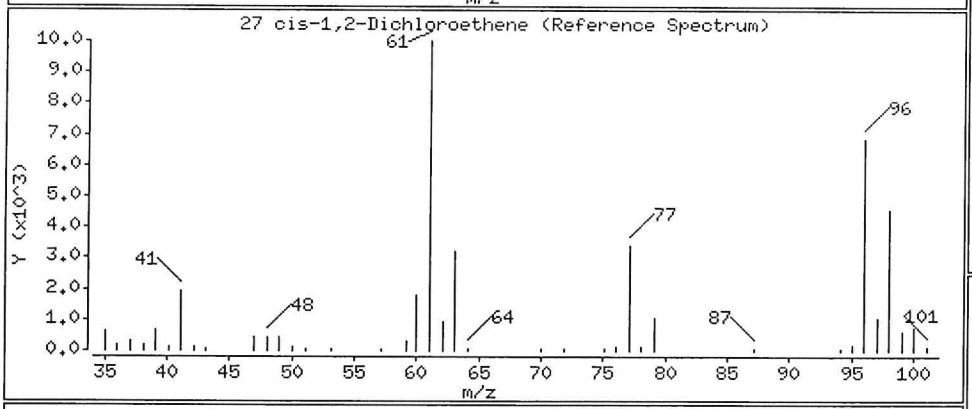
Review Code:

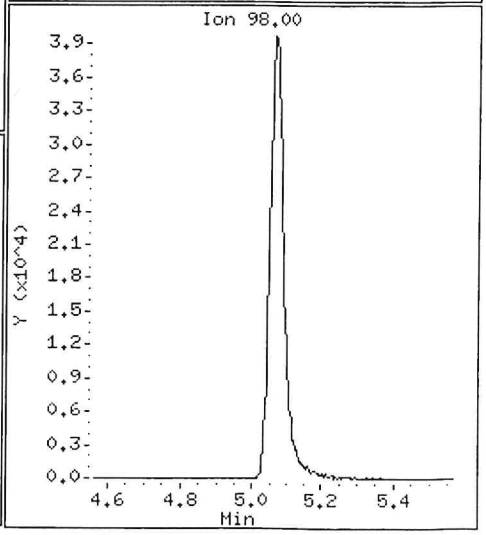


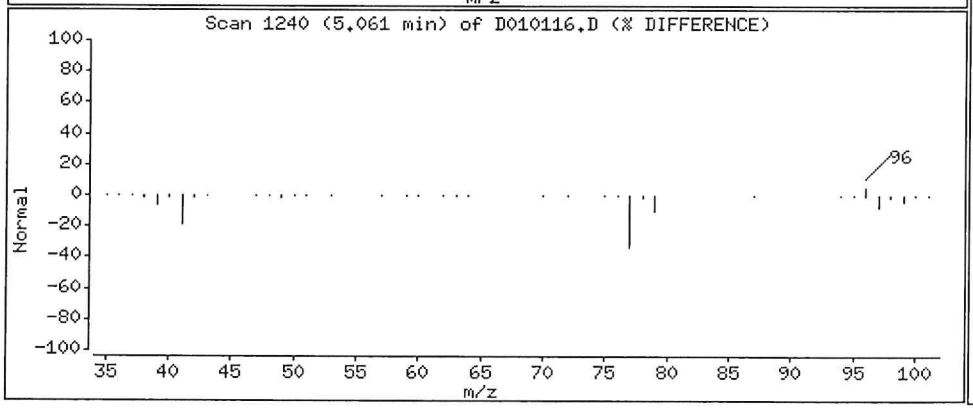












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Date : 01-JAN-2018 20:17

Client ID: HS17121224-02

Instrument: VOA2.i

Sample Info: HS17121224-02;HS17121224-02;;;

Purge Volume: 5.0

Operator: AP

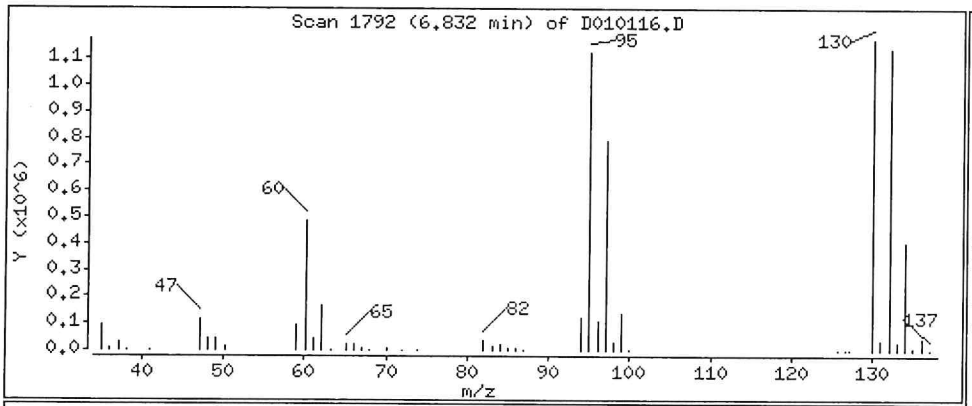
Column phase: DB624

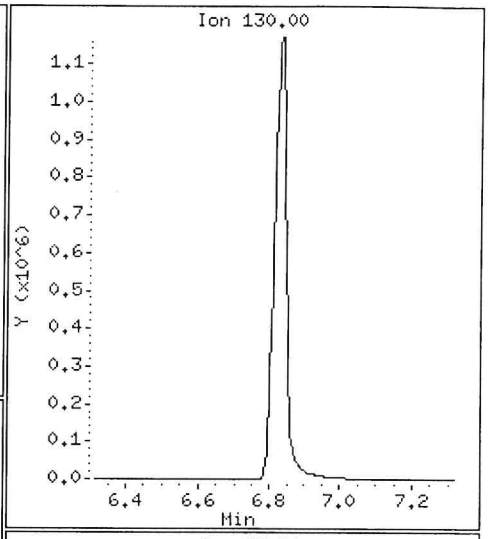
Column diameter: 0.18

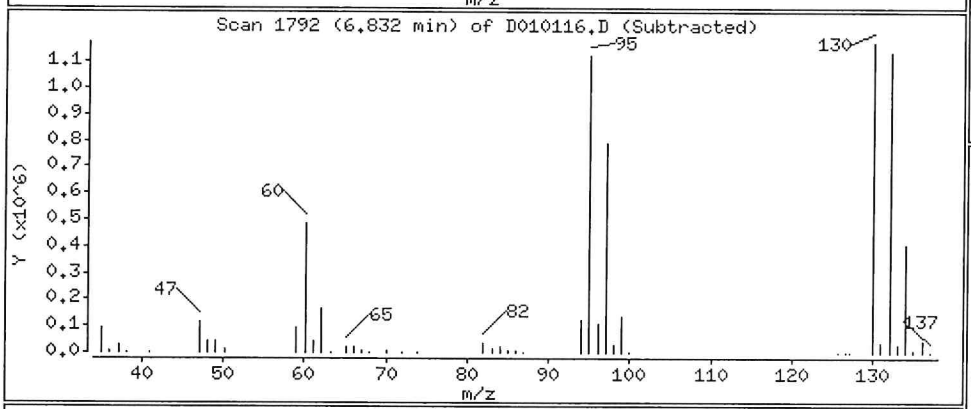
38 Trichloroethene

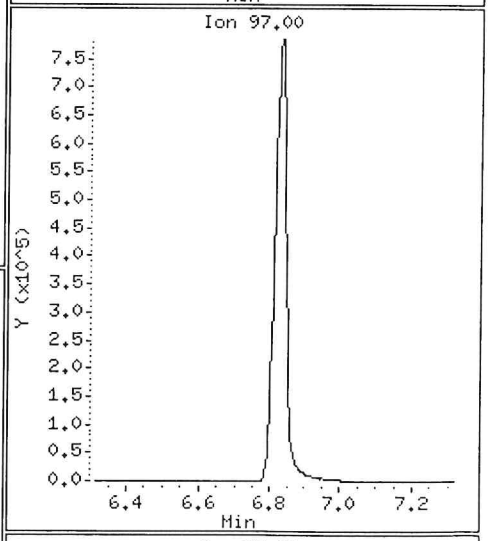
Concentration: 1107.63 ug/l

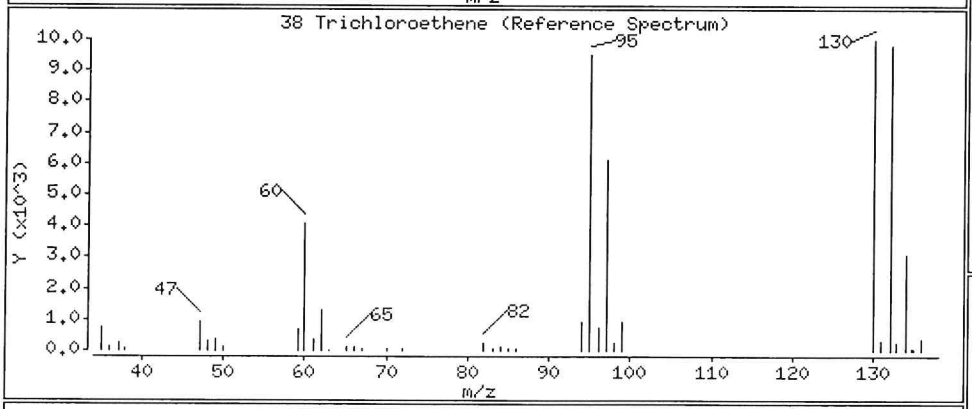
Review Code:

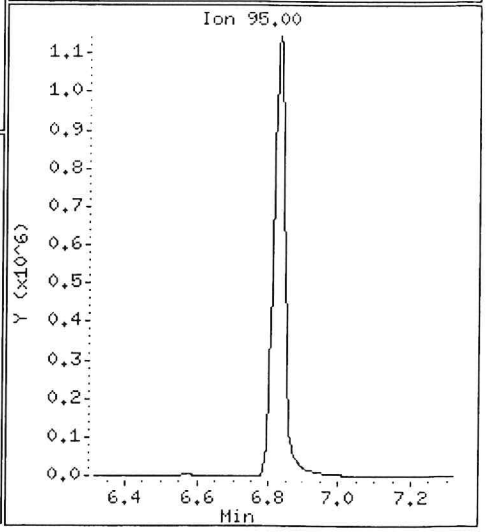


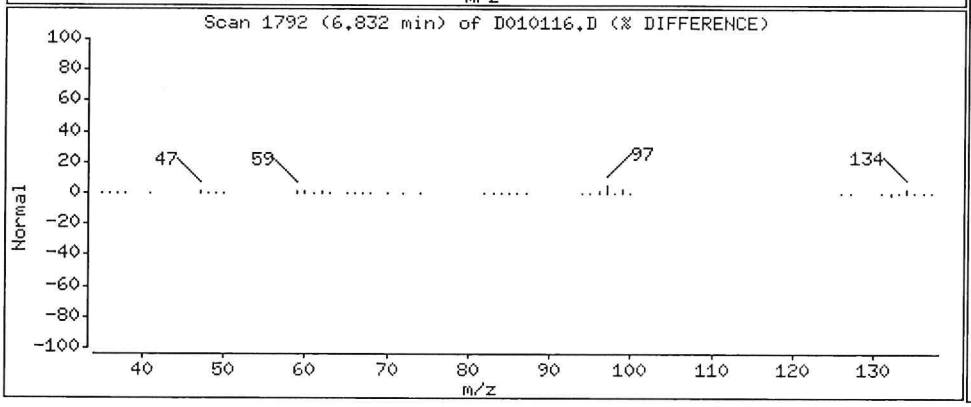












Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D180101.b\D010129.D
Report Date: 09-Feb-2018 20:27

ALS Laboratory Group

Data file : \\NAHSTWS003\Target\CHEM\VOA2.i\D180101.b\D010129.D
Lab Smp Id: CCV_END Client Smp ID: CCV_END
Inj Date : 02-JAN-2018 01:48
Operator : AP Inst ID: VOA2.i
Smp Info : CCV_END;CCV_END;2;;
Misc Info : HS15080001;WATER;0;1;
Comment :
Method : \\nahstws003\Target\CHEM\VOA2.i\D180101.b\8260LL.m
Meth Date : 09-Feb-2018 20:27 VOA2.i Quant Type: ISTD
Cal Date : 19-DEC-2017 12:14 Cal File: D121908.D
Als bottle: 23 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: dn_bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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
Va	0.00000	
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
	31 1,1,1-Trichloroethane	97	5.651	5.651	(0.978)	168347	50.0000	49.40
*	1 Pentafluorobenzene	168	5.776	5.776	(1.000)	220462	50.0000	
$	30 Dibromofluoromethane	113	5.683	5.683	(0.984)	95355	50.0000	48.00
*	36 1,4-Difluorobenzene	114	6.568	6.568	(1.000)	333893	50.0000	
$	35 1,2-Dichloroethane-d4	65	6.055	6.055	(1.048)	116565	50.0000	47.51
*	47 Chlorobenzene-d5	117	9.524	9.524	(1.000)	305837	50.0000	
$	48 Toluene-d8	98	8.089	8.089	(0.849)	377246	50.0000	46.78
$	69 4-Bromofluorobenzene	95	10.695	10.695	(1.123)	145909	50.0000	49.55
*	70 1,4-Dichlorobenzene-d4	152	11.834	11.834	(1.000)	145009	50.0000	
	68 1,1,2,2-Tetrachloroethane	83	10.868	10.868	(0.918)	131012	50.0000	37.87
	53 1,1,2-Trichloroethane	83	8.593	8.593	(0.902)	84696	50.0000	45.27
	32 1,1-Dichloropropene	75	5.853	5.853	(0.891)	138773	50.0000	53.39
	22 1,1-Dichloroethane	63	4.277	4.277	(0.741)	215835	50.0000	46.89
	11 1,1-Dichloroethene	96	2.743	2.743	(0.475)	99273	50.0000	54.55
	90 1,2,4-Trichlorobenzene	180	13.817	13.817	(1.168)	139032	50.0000	48.66
	89 1,2-Dibromo-3-Chloropropane	75	13.012	13.012	(1.100)	25723	50.0000	43.18
	57 1,2-Dibromoethane	107	9.065	9.065	(0.952)	113311	50.0000	48.35
	88 1,2-Dichlorobenzene	146	12.226	12.226	(1.033)	222724	50.0000	42.73
	33 1,2-Dichloroethane	62	6.142	6.142	(0.935)	144977	50.0000	49.17
	42 1,2-Dichloropropane	63	7.063	7.063	(1.075)	121167	50.0000	46.07
	83 1,3-Dichlorobenzene	146	11.767	11.767	(0.994)	229573	50.0000	42.32

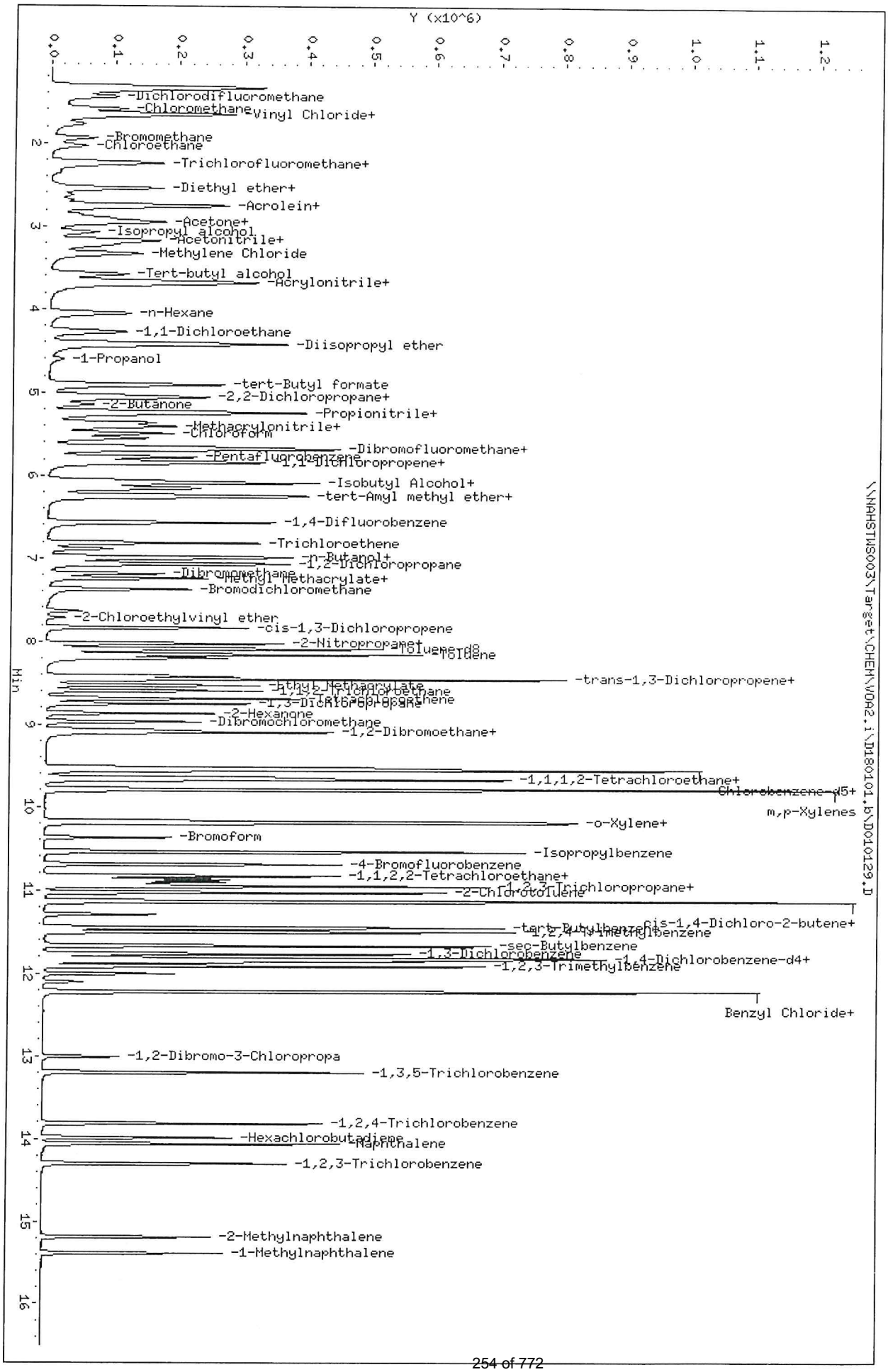
Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D180101.b\D010129.D
Report Date: 09-Feb-2018 20:27

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
	84 1,4-Dichlorobenzene	146	11.857	11.857	(1.002)	217372	50.0000	41.89
	24 2-Butanone	43	5.144	5.144	(0.891)	108638	100.000	91.32
	52 2-Hexanone	43	8.866	8.866	(0.931)	160369	100.000	89.49
	45 4-Methyl-2-Pentanone	43	8.025	8.025	(0.843)	246870	100.000	88.97
	10 Acetone	43	2.859	2.859	(0.495)	71415	100.000	97.67
	37 Benzene	78	6.087	6.087	(0.927)	420801	50.0000	47.89
	39 Bromodichloromethane	83	7.374	7.374	(1.123)	147067	50.0000	47.29
	66 Bromoform	173	10.374	10.374	(1.089)	89927	50.0000	49.56
	6 Bromomethane	94	1.935	1.935	(0.335)	78089	50.0000	51.81
	19 Carbon Disulfide	76	2.949	2.949	(0.511)	416153	100.000	100.14
	34 Carbon Tetrachloride	117	5.830	5.830	(0.888)	139185	50.0000	43.88
	59 Chlorobenzene	112	9.553	9.553	(1.003)	286685	50.0000	45.51
	7 Chloroethane	64	2.031	2.031	(0.352)	79724	50.0000	44.69
	28 Chloroform	83	5.493	5.493	(0.951)	186613	50.0000	46.42
	3 Chloromethane	50	1.595	1.595	(0.276)	207613	50.0000	56.42
	27 cis-1,2-Dichloroethene	96	5.070	5.070	(0.878)	119285	50.0000	47.55
	46 cis-1,3-Dichloropropene	75	7.839	7.839	(1.193)	172701	50.0000	48.36
	55 Dibromochloromethane	129	8.972	8.972	(0.942)	123893	50.0000	46.91
	2 Dichlorodifluoromethane	85	1.444	1.444	(0.250)	114788	50.0000	60.90
	61 Ethylbenzene	106	9.668	9.668	(1.015)	153980	50.0000	45.67
	67 Isopropylbenzene	105	10.544	10.544	(1.107)	497020	50.0000	47.65
	17 Methylene Chloride	84	3.331	3.331	(0.577)	108634	50.0000	45.01
	56 Tetrachloroethene	164	8.686	8.686	(0.912)	99203	50.0000	52.68
	50 Toluene	91	8.157	8.157	(0.856)	442287	50.0000	45.63
	20 trans-1,2-Dichloroethene	96	3.664	3.664	(0.634)	102359	50.0000	52.00
	51 trans-1,3-Dichloropropene	75	8.414	8.414	(1.281)	149711	50.0000	49.26
	38 Trichloroethene	130	6.816	6.816	(1.038)	126808	50.0000	51.27
	8 Trichlorofluoromethane	101	2.246	2.246	(0.389)	149871	50.0000	55.13
	5 Vinyl Chloride	62	1.672	1.672	(0.289)	146617	50.0000	54.25
	62 m,p-Xylenes	106	9.787	9.787	(1.028)	377366	100.000	91.53
	63 o-Xylene	106	10.175	10.175	(1.068)	198068	50.0000	45.92
M	95 Xylenes (total)	106				575434	150.000	(a)
	71 1,2,3-Trichloropropane	75	10.900	10.900	(0.921)	142382	50.0000	41.21
	93 1,2,3-Trichlorobenzene	182	14.302	14.302	(1.209)	120986	50.0000	49.15
	79 1,2,4-Trimethylbenzene	105	11.497	11.497	(0.972)	391407	50.0000	40.52
	75 1,3,5-Trimethylbenzene	105	11.132	11.132	(0.941)	391728	50.0000	41.64
	26 2,2-Dichloropropane	77	5.041	5.041	(0.873)	126349	50.0000	39.33
	54 1,3-Dichloropropane	76	8.751	8.751	(0.919)	169290	50.0000	44.86
	76 2-Chlorotoluene	91	11.029	11.029	(0.932)	339196	50.0000	41.17
	77 4-Chlorotoluene	91	11.138	11.138	(0.941)	367318	50.0000	40.95
	82 p-Isopropyltoluene	119	11.818	11.818	(0.999)	386810	50.0000	43.33
	29 Bromochloromethane	128	5.362	5.362	(0.928)	58075	50.0000	48.65
	74 Bromobenzene	156	10.830	10.830	(0.915)	133101	50.0000	41.37
	44 Dibromomethane	93	7.191	7.191	(1.095)	66287	50.0000	48.63
	91 Hexachlorobutadiene	225	13.987	13.987	(1.182)	59965	50.0000	45.06
	73 n-Propylbenzene	91	10.955	10.955	(0.926)	520797	50.0000	42.47
	87 n-Butylbenzene	91	12.223	12.223	(1.033)	292820	50.0000	44.14
	81 sec-Butylbenzene	105	11.667	11.667	(0.986)	464763	50.0000	44.58
	92 Naphthalene	128	14.061	14.061	(1.188)	352529	50.0000	47.35
	78 tert-Butylbenzene	119	11.449	11.449	(0.967)	345493	50.0000	43.78
	60 1,1,1,2-Tetrachloroethane	131	9.643	9.643	(1.012)	116835	50.0000	47.87
	64 Styrene	104	10.198	10.198	(1.071)	321279	50.0000	46.70

Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D180101.b\D010129.D
Report Date: 09-Feb-2018 20:27

QC Flag Legend

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



Data File: \\NAHSTWS003\Target\CHEM\VOA2.i\D180101.b\D0101129.D
Date : 02-JAN-2018 01:48
Client ID: CCV_END
Sample Info: CCV_END;CCV_END;2;;
Purge Volume: 5.0
Column phase: DB624

Instrument: VOA2.i
Operator: AP
Column diameter: 0.18

Mercury Raw Data

Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
ALS WO# HS17121224

ALS Group USA, Corp Date: 18-Jan-18

Form 2 - Initial and Continuing Calibration Verification

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS17121224

Run ID: HG03_308532
Instrument: HG03
Method: SW7470

ICV Date: 05-Jan-2018 11:38 Seq: 4382786 ICV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Mercury	5	4.84	97	90-110	

CCV1 Date: 05-Jan-2018 12:07 Seq: 4382799 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Mercury	5	4.99	100	90-110	

CCV2 Date: 05-Jan-2018 12:53 Seq: 4382811 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Mercury	5	4.98	100	90-110	

CCV3 Date: 05-Jan-2018 14:10 Seq: 4382983 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Mercury	5	5.14	103	90-110	

CCV4 Date: 05-Jan-2018 14:34 Seq: 4382994 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Mercury	5	5.08	102	90-110	

CCV5 Date: 05-Jan-2018 15:02 Seq: 4383031 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Mercury	5	5.25	105	90-110	

CCV6 Date: 05-Jan-2018 15:23 Seq: 4383043 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Mercury	5	5.22	104	90-110	

CCV7 Date: 05-Jan-2018 16:12 Seq: 4383107 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Mercury	5	5.23	105	90-110	

CCV8 Date: 05-Jan-2018 16:33 Seq: 4383119 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Mercury	5	5.24	105	90-110	

CCV9 Date: 05-Jan-2018 16:56 Seq: 4383128 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Mercury	5	5.23	105	90-110	

Form 3 - BLANKS

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS17121224

Run ID: HG03_308532
Instrument: HG03
Method: SW7470

ICB	Date: 05-Jan-2018 11:40		Seq: 4382787	ICB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Mercury	0.2	0.03	0.2	U	

CCB1	Date: 05-Jan-2018 12:09		Seq: 4382800	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Mercury	0.2	0.03	0.2	U	

CCB2	Date: 05-Jan-2018 12:55		Seq: 4382812	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Mercury	0.2	0.03	0.2	U	

MBLK-124068	Date: 05-Jan-2018 14:06		Seq: 4382981	MBLK	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Mercury	0.2	0.03	0.2	U	

CCB3	Date: 05-Jan-2018 14:11		Seq: 4382984	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Mercury	0.2	0.03	0.2	U	

CCB4	Date: 05-Jan-2018 14:35		Seq: 4382995	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Mercury	0.2	0.03	0.2	U	

CCB5	Date: 05-Jan-2018 15:04		Seq: 4383032	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Mercury	0.2	0.03	0.2	U	

CCB6	Date: 05-Jan-2018 15:24		Seq: 4383044	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Mercury	0.2	0.03	0.2	U	

CCB7	Date: 05-Jan-2018 16:14		Seq: 4383108	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Mercury	0.2	0.03	0.2	U	

CCB8	Date: 05-Jan-2018 16:35		Seq: 4383120	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Mercury	0.2	0.03	0.2	U	

CCB9	Date: 05-Jan-2018 16:58		Seq: 4383129	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Mercury	0.2	0.03	0.2	U	

ALS Group USA, Corp Date: 18-Jan-18

Form 5A - Matrix Spike/Matrix Spike Duplicate Recovery

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS17121224

Date Analyzed: 05-Jan-2018 14:25
Date Extracted: 05-Jan-2018 11:12
Units: ug/L

Matrix Spike: HS17121224-05MS
Client Sample ID: MW5_122017

Analysis Method: SW7470

Analyte	Sample Result	MS Result	Spike Amount	% Rec	MSD Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
Mercury	0.2000	5.030	5.000	100	4.970	5.000	99.2	75-125	1.20	20

ALS Group USA, Corp

Date: 18-Jan-18

Form 7 - Laboratory Control Sample

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS17121224

Date Analyzed: 05-Jan-2018 14:08
Date Extracted: 05-Jan-2018 11:12
Units: ug/L

Lab Sample ID: LCS-124068

Analysis Method: SW7470

Analyte	Spike Amount	LCS Result	% Rec	% Rec Limits
Mercury	5	5.18	104	80-120

ALS Group USA, Corp Date: 18-Jan-18

Form 11 - INTERNAL STANDARD ASSOCIATION

Client: Bhate Environmental Associates, Inc. Instrument:ICPMS04
Project: LHAAP 18/24
WorkOrder: HS17121224

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		ArHe
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
111	Cadmium	Indium		Ar
118	Tin	Germanium		Ar
121	Antimony	Germanium		ArHe
135	Barium	Indium		Ar
203	Thallium	Bismuth		Ar
208	Lead	Bismuth		Ar

ALS Group USA, Corp Date: 18-Jan-18

FORM 12 - PREPARATION LOG

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS17121224
Start Date: 05-Jan-2018 11:12 End Date: 05-Jan-2018 13:30

Batch ID: 124068
Prep Code: Hg_WPr
Method: SW7470
Technician:

SampID	ClientID	Matrix	Init Wt	Init Vol	FinalVol (mL)	PrepFac
HS17121224-01	18CPTMW04SW_122017	Water		10	10	1
HS17121224-03	MW2_122017	Water		10	10	1
HS17121224-04	18CPTMW01SW_122017	Water		10	10	1
HS17121224-05	MW5_122017	Water		10	10	1
HS17121224-05MS				10	10	1
HS17121224-05MSD				10	10	1
HS17121224-06	MW3_122117	Water		10	10	1
LCS-124068				10	10	1
MBLK-124068				10	10	1

ALS Group USA, Corp Date: 18-Jan-18

FORM 13 - ANALYSIS RUN LOG

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS17121224
Start Date: 05-Jan-2018 End Date: 05-Jan-2018

Run ID:HG03_308532
Instrument:HG03
Method:SW7470

Sample No.	D/F	Time	FileID	Analytes
ICV	1	05-Jan-2018 11:38	HG03_308532 Raw Data_4382786	HG
ICB	1	05-Jan-2018 11:40		HG
CRA	1	05-Jan-2018 11:41		HG
CCV 1	1	05-Jan-2018 12:07		HG
CCB 1	1	05-Jan-2018 12:09		HG
CCV 2	1	05-Jan-2018 12:53		HG
CCB 2	1	05-Jan-2018 12:55		HG
MBLK-124068	1	05-Jan-2018 14:06		HG
LCS-124068	1	05-Jan-2018 14:08		HG
CCV 3	1	05-Jan-2018 14:10		HG
CCB 3	1	05-Jan-2018 14:11		HG
18CPTMW04SW_122017	1	05-Jan-2018 14:17		HG
MW2_122017	1	05-Jan-2018 14:18		HG
18CPTMW01SW_122017	1	05-Jan-2018 14:20		HG
MW5_122017	1	05-Jan-2018 14:22		HG
MW5_122017MS	1	05-Jan-2018 14:23		HG
MW5_122017MSD	1	05-Jan-2018 14:25		HG
MW3_122117	1	05-Jan-2018 14:27		HG
CCV 4	1	05-Jan-2018 14:34		HG
CCB 4	1	05-Jan-2018 14:35		HG
CCV 5	1	05-Jan-2018 15:02		HG
CCB 5	1	05-Jan-2018 15:04		HG
CCV 6	1	05-Jan-2018 15:23		HG
CCB 6	1	05-Jan-2018 15:24		HG
CCV 7	1	05-Jan-2018 16:12		HG
CCB 7	1	05-Jan-2018 16:14		HG
CCV 8	1	05-Jan-2018 16:33		HG
CCB 8	1	05-Jan-2018 16:35		HG
CCV 9	1	05-Jan-2018 16:56		HG
CCB 9	1	05-Jan-2018 16:58		HG

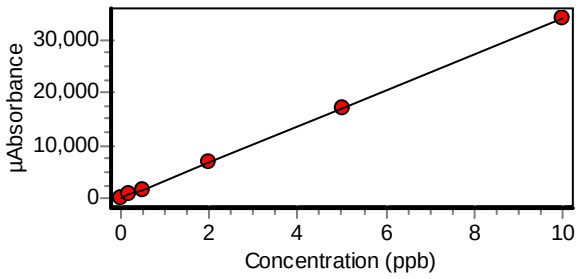
Report Generated By CETAC QuickTrace
Analyst: ALSHS.NoUser
Worksheet file: C:\Program Files (x86)\QuickTrace\Worksheets\010518AW.wsz
Date Started: 1/5/2018 11:05:47 AM
Comment:

Results

Sample Name					Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
Calibration Blank					STD	01/05/18 11:24:52 am	0.000	90	2.88	
Replicates	92.7	90.5	89.2	86.5						
Standard #1 (0.2 ppb)					STD	01/05/18 11:26:34 am	0.200	688	1.76	
Replicates	696.5	696.7	670.9	688.2						
Standard #2 (0.5 ppb)					STD	01/05/18 11:28:16 am	0.500	1705	1.15	
Replicates	1701.7	1715.8	1678.3	1722.8						
Standard #3 (2.0 ppb)					STD	01/05/18 11:29:59 am	2.000	6904	0.60	
Replicates	6853.9	6896.8	6910.3	6954.1						
Standard #4 (5.0 ppb)					STD	01/05/18 11:31:42 am	5.000	17104	0.50	
Replicates	17003.5	17070.2	17144.5	17199.2						
Standard #5 (10.0 ppb)					STD	01/05/18 11:33:26 am	10.000	34066	0.42	
Replicates	33936.1	33993.9	34066.7	34266.9						

Calibration

Equation: A = 70.440 + 3400.529C
R2: 0.99999
SEE: 51.8469
Flags:



ICCV					UNK	01/05/18 11:36:45 am	5.070	17296	0.26	
Replicates	17246.0	17272.2	17326.2	17340.7						
ICV					UNK	01/05/18 11:38:26 am	4.840	16543	0.22	
Replicates	16512.5	16509.4	16581.4	16566.9						

Sample Name					Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
ICB					UNK	01/05/18 11:40:08 am	-0.013	27	76.43	
Replicates	2.6	50.0	36.2	19.0						
CRA					UNK	01/05/18 11:41:49 am	0.180	682	3.71	
Replicates	703.3	696.6	646.6	681.4						
GBLKF-124054					UNK	01/05/18 11:45:39 am	0.037	197	9.83	s
Replicates	224.3	186.0	198.8	180.8						
MBLK-124054					UNK	01/05/18 11:47:22 am	0.039	203	14.76	s
Replicates	168.9	194.7	205.7	241.0						
LCS-124054					UNK	01/05/18 11:49:04 am	4.770	16292	0.94	
Replicates	16107.1	16245.9	16345.9	16470.2						
HS17121188-01					UNK	01/05/18 11:50:47 am	0.019	136	12.95	s
Replicates	161.4	123.4	125.1	133.4						
HS17121188-02					UNK	01/05/18 11:52:30 am	-0.016	15	67.93	
Replicates	13.4	30.3	6.3	11.3						
HS17121188-03					UNK	01/05/18 11:54:14 am	-0.016	16	47.67	
Replicates	20.6	9.5	24.3	9.5						
HS17121188-04					UNK	01/05/18 11:55:58 am	0.001	73	16.30	s
Replicates	56.4	79.0	71.5	83.3						
HS17121188-04MS					UNK	01/05/18 12:02:25 pm	2.570	8795	0.41	
Replicates	8741.7	8814.6	8803.6	8820.3						
HS17121188-04MSD					UNK	01/05/18 12:04:06 pm	2.740	9380	0.61	
Replicates	9314.2	9379.9	9372.2	9452.9						
HS17121188-05					UNK	01/05/18 12:05:47 pm	-0.043	-74	15.33	
Replicates	-65.5	-81.4	-86.1	-63.4						

Sample Name					Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
CCV					UNK	01/05/18 12:07:31 pm	4.990	17026	0.65	
	Replicates	16884.9	17003.8	17069.5	17144.0					
CCB					UNK	01/05/18 12:09:17 pm	-0.009	40	32.84	
	Replicates	24.3	55.1	43.3	35.3					
HS17121188-06					UNK	01/05/18 12:10:58 pm	0.023	150	15.52	s
	Replicates	157.0	156.4	170.6	116.6					
HS17121188-07					UNK	01/05/18 12:12:39 pm	0.055	259	1.16	
	Replicates	255.6	261.9	261.1	257.4					
HS17121188-08					UNK	01/05/18 12:14:21 pm	0.030	174	5.41	s
	Replicates	179.1	184.4	163.4	169.6					
HS17121188-09					UNK	01/05/18 12:16:03 pm	0.032	180	8.33	s
	Replicates	166.1	201.5	179.0	175.2					
HS17121188-10					UNK	01/05/18 12:17:45 pm	0.043	216	7.70	s
	Replicates	191.0	226.1	221.1	224.6					
HS17121188-11					UNK	01/05/18 12:19:28 pm	0.032	180	11.26	s
	Replicates	190.3	195.4	150.4	182.9					
HS17121188-12					UNK	01/05/18 12:21:11 pm	0.029	171	5.46	s
	Replicates	162.5	179.5	178.0	162.7					
HS17121188-13					UNK	01/05/18 12:22:54 pm	0.026	160	11.95	s
	Replicates	166.6	182.4	137.6	152.9					
HS17121188-14					UNK	01/05/18 12:24:38 pm	0.037	195	6.46	s
	Replicates	195.7	213.0	186.7	185.7					
HS17121188-15					UNK	01/05/18 12:26:21 pm	0.040	205	8.68	s
	Replicates	212.1	226.3	185.1	197.8					

Sample Name					Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
CCV					UNK	01/05/18 12:53:16 pm	4.980	16989	0.70	
	Replicates	16844.4	16943.7	17060.7	17108.2					
CCB					UNK	01/05/18 12:55:01 pm	-0.006	52	45.46	s
	Replicates	72.1	69.8	23.3	41.5					
GBLKT1-124067					UNK	01/05/18 01:49:48 pm	0.015	121	9.27	s
	Replicates	120.2	129.0	129.0	105.3					
MBLK-124067					UNK	01/05/18 01:51:29 pm	0.003	82	37.30	s
	Replicates	104.7	39.1	81.3	103.3					
LCS-124067					UNK	01/05/18 01:53:11 pm	4.990	17052	0.97	
	Replicates	16820.9	17049.1	17137.9	17199.9					
HS18010058-01					UNK	01/05/18 01:54:52 pm	0.003	81	20.14	s
	Replicates	64.5	69.7	97.9	91.4					
HS18010058-01MS					UNK	01/05/18 01:56:34 pm	5.130	17516	0.65	
	Replicates	17354.3	17537.2	17623.2	17550.4					
HS18010058-01MSD					UNK	01/05/18 01:58:16 pm	5.070	17308	0.39	
	Replicates	17305.0	17236.5	17291.5	17399.8					
HS18010101-01					UNK	01/05/18 01:59:58 pm	0.003	82	23.34	s
	Replicates	57.3	82.3	85.0	104.0					
HS18010103-01					UNK	01/05/18 02:01:41 pm	0.007	93	26.66	s
	Replicates	106.6	59.6	115.9	89.1					
MBLK-124068					UNK	01/05/18 02:06:44 pm	0.006	91	15.21	s
	Replicates	86.3	92.9	108.6	75.6					
LCS-124068					UNK	01/05/18 02:08:28 pm	5.180	17684	1.33	
	Replicates	17398.4	17606.8	17790.5	17940.8					

Sample Name					Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
CCV					UNK	01/05/18 02:10:12 pm	5.140	17548	0.83	
	Replicates	17371.2	17498.9	17614.2	17705.9					
CCB					UNK	01/05/18 02:11:57 pm	0.000	71	42.45	s
	Replicates	91.1	63.0	99.0	32.3					
HS17121168-01					UNK	01/05/18 02:13:41 pm	0.014	118	8.02	s
	Replicates	124.2	128.1	107.8	112.8					
HS17121169-01					UNK	01/05/18 02:15:24 pm	0.012	111	22.47	s
	Replicates	135.7	94.1	128.1	85.1					
HS17121224-01					UNK	01/05/18 02:17:06 pm	0.003	82	29.54	s
	Replicates	68.7	109.5	56.0	94.7					
HS17121224-03					UNK	01/05/18 02:18:48 pm	0.028	167	10.32	s
	Replicates	160.3	171.8	187.6	147.1					
HS17121224-04					UNK	01/05/18 02:20:29 pm	0.003	81	9.40	s
	Replicates	83.8	81.9	87.9	70.2					
HS17121224-05					UNK	01/05/18 02:22:10 pm	0.009	101	8.88	s
	Replicates	105.2	110.9	90.4	97.4					
HS17121224-05MS					UNK	01/05/18 02:23:52 pm	5.030	17165	0.81	
	Replicates	16980.5	17135.7	17270.2	17274.7					
HS17121224-05MSD					UNK	01/05/18 02:25:34 pm	4.970	16978	0.78	
	Replicates	16836.7	16912.3	17025.3	17137.6					
HS17121224-06					UNK	01/05/18 02:27:17 pm	-0.007	47	61.41	
	Replicates	23.3	39.7	88.7	35.7					
CCV					UNK	01/05/18 02:34:06 pm	5.080	17336	0.67	
	Replicates	17205.0	17286.3	17381.1	17472.6					

Sample Name				Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
CCB				UNK	01/05/18 02:35:51 pm	0.009	100	20.77	s
Replicates	104.8	123.2	101.4	72.7					
GBLKF1-124071				UNK	01/05/18 02:37:34 pm	0.012	111	21.10	s
Replicates	114.6	134.4	78.6	118.1					
GBLKF2-124071				UNK	01/05/18 02:39:17 pm	0.007	96	24.46	s
Replicates	79.9	119.8	72.0	111.8					
MBLK-124071				UNK	01/05/18 02:41:00 pm	0.009	100	19.01	s
Replicates	74.3	119.2	98.0	106.5					
LCS-124071				UNK	01/05/18 02:42:44 pm	4.950	16917	4.17	
Replicates	16142.1	16585.5	17178.0	17764.0					
HS17120668-01				UNK	01/05/18 02:44:27 pm	0.003	81	25.56	s
Replicates	80.6	95.9	94.1	51.4					
HS17121060-01				UNK	01/05/18 02:46:09 pm	0.006	93	21.41	s
Replicates	65.5	112.0	92.0	100.7					
HS17121060-01MS				UNK	01/05/18 02:47:50 pm	4.250	14536	0.66	
Replicates	14409.7	14526.5	14568.5	14638.0					
HS17121060-01MSD				UNK	01/05/18 02:49:32 pm	4.180	14299	0.72	
Replicates	14186.8	14255.8	14321.1	14430.3					
MBLK-124069				UNK	01/05/18 02:58:58 pm	0.003	79	17.71	s
Replicates	77.7	72.2	99.2	67.4					
LCS-124069				UNK	01/05/18 03:00:40 pm	5.150	17598	0.47	
Replicates	17529.4	17543.7	17607.9	17710.4					
CCV				UNK	01/05/18 03:02:25 pm	5.250	17911	0.43	
Replicates	17805.2	17904.3	17951.3	17983.3					

Sample Name					Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
CCB					UNK	01/05/18 03:04:10 pm	0.006	91	20.84	s
Replicates	83.6	81.7	80.4	119.9						
HS17121060-01					UNK	01/05/18 03:05:53 pm	0.009	101	14.36	s
Replicates	82.1	114.6	98.6	110.4						
HS17121172-01					UNK	01/05/18 03:07:35 pm	0.019	136	7.84	s
Replicates	149.4	129.2	139.0	125.7						
HS17121226-01					UNK	01/05/18 03:09:18 pm	0.011	107	8.47	s
Replicates	104.7	96.0	112.7	116.5						
HS17121286-01					UNK	01/05/18 03:11:02 pm	0.045	225	8.56	s
Replicates	204.4	245.0	212.5	236.3						
HS17121287-01					UNK	01/05/18 03:12:45 pm	0.110	443	3.28	
Replicates	455.0	443.6	422.8	452.1						
HS17121326-01					UNK	01/05/18 03:14:29 pm	0.014	117	15.48	s
Replicates	95.3	120.6	138.8	112.3						
HS17121326-01MS					UNK	01/05/18 03:16:13 pm	4.840	16538	0.82	
Replicates	16378.1	16491.1	16586.8	16697.6						
HS17121326-01MSD					UNK	01/05/18 03:17:56 pm	4.940	16871	0.53	
Replicates	16756.6	16893.3	16858.3	16974.3						
HS17121339-01					UNK	01/05/18 03:19:38 pm	0.009	101	14.16	s
Replicates	79.7	106.7	109.7	108.4						
HS18010135-01					UNK	01/05/18 03:21:21 pm	0.010	103	19.67	s
Replicates	111.7	74.9	103.2	122.2						
CCV					UNK	01/05/18 03:23:05 pm	5.220	17811	1.03	
Replicates	17588.6	17764.9	17863.9	18024.9						

Sample Name				Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
CCB				UNK	01/05/18 03:24:51 pm	0.009	101	11.83	s
Replicates	115.0	106.1	97.6	86.9					
HS18010135-02				UNK	01/05/18 03:26:33 pm	0.006	91	12.14	s
Replicates	96.0	99.9	74.9	91.9					
HS18010135-03				UNK	01/05/18 03:28:16 pm	0.001	75	26.75	s
Replicates	72.1	66.2	103.2	57.2					
MBLK-124089				UNK	01/05/18 03:55:42 pm	-0.004	57	25.50	s
Replicates	40.0	49.9	72.4	63.9					
LCS-124089				UNK	01/05/18 03:57:25 pm	5.410	18453	1.12	
Replicates	18194.9	18406.3	18527.8	18683.1					
LCSD-124089				UNK	01/05/18 04:02:27 pm	5.180	17698	1.16	
Replicates	17438.8	17653.5	17780.3	17920.5					
HS17121188-01				UNK	01/05/18 04:04:10 pm	-0.008	43	43.27	
Replicates	20.9	41.8	66.1	42.1					
HS17121188-02				UNK	01/05/18 04:05:53 pm	-0.028	-24	59.83	
Replicates	-7.6	-34.3	-38.3	-16.8					
HS17121188-02MS				UNK	01/05/18 04:07:36 pm	1.610	5551	0.49	
Replicates	5576.3	5563.6	5513.6	5551.1					
HS17121188-02MSD				UNK	01/05/18 04:09:20 pm	1.560	5378	0.54	
Replicates	5350.1	5364.4	5381.1	5417.9					
HS17121188-03				UNK	01/05/18 04:11:02 pm	-0.126	-357	6.97	
Replicates	-364.0	-320.4	-368.2	-375.7					
CCV				UNK	01/05/18 04:12:47 pm	5.230	17861	0.90	
Replicates	17659.3	17827.5	17912.5	18044.7					

Sample Name					Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
CCB					UNK	01/05/18 04:14:32 pm	0.008	97	18.07	s
Replicates	103.6	96.6	73.6	115.4						
HS17121188-04					UNK	01/05/18 04:16:14 pm	-0.018	9	209.11	
Replicates	-16.6	26.1	19.4	7.1						
HS17121188-05					UNK	01/05/18 04:17:56 pm	-0.001	67	41.46	s
Replicates	55.1	41.3	67.0	106.3						
HS17121188-06					UNK	01/05/18 04:19:38 pm	-0.010	37	32.64	
Replicates	53.9	27.9	39.6	28.4						
HS17121188-07					UNK	01/05/18 04:21:20 pm	0.975	3385	1.01	
Replicates	3371.5	3343.7	3404.4	3420.7						
HS17121188-08					UNK	01/05/18 04:23:03 pm	-0.010	36	60.49	
Replicates	35.6	12.1	30.9	64.4						
HS17121188-09					UNK	01/05/18 04:24:45 pm	0.009	102	17.83	s
Replicates	98.5	128.7	91.2	89.7						
HS17121188-10					UNK	01/05/18 04:26:28 pm	0.054	253	5.50	s
Replicates	238.4	259.3	245.5	269.5						
HS17121188-11					UNK	01/05/18 04:28:11 pm	-0.010	37	36.93	
Replicates	22.3	37.0	32.3	54.5						
HS17121188-12					UNK	01/05/18 04:29:54 pm	-0.014	22	120.77	
Replicates	61.9	10.7	4.4	11.4						
HS17121188-13					UNK	01/05/18 04:31:38 pm	-0.009	39	65.42	
Replicates	75.3	17.5	34.5	27.7						
CCV					UNK	01/05/18 04:33:22 pm	5.240	17896	0.77	
Replicates	17721.6	17865.3	17950.8	18044.8						

Sample Name					Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
CCB					UNK	01/05/18 04:35:07 pm	0.001	74	25.26	s
Replicates	90.8	82.7	75.7	47.7						
HS17121188-14					UNK	01/05/18 04:36:51 pm	-0.005	54	29.59	s
Replicates	60.5	30.3	63.6	63.1						
HS17121188-15					UNK	01/05/18 04:38:34 pm	-0.007	45	46.52	
Replicates	28.0	31.4	46.6	73.9						
HS18010067-01					UNK	01/05/18 04:40:17 pm	0.221	822	3.45	
Replicates	806.0	816.1	801.8	863.3						
HS18010085-01					UNK	01/05/18 04:41:59 pm	-0.004	56	25.94	s
Replicates	49.3	55.5	76.7	43.2						
HS18010085-02					UNK	01/05/18 04:43:42 pm	-0.012	30	81.44	
Replicates	-0.3	58.9	28.6	31.6						
HS18010095-01					UNK	01/05/18 04:45:25 pm	0.003	79	29.28	s
Replicates	52.5	94.4	67.4	102.1						
HS17121188-03 RR					UNK	01/05/18 04:53:42 pm	-0.022	-5	256.50	
Replicates	13.3	-5.3	-11.0	-18.0						
CCV					UNK	01/05/18 04:56:34 pm	5.230	17863	0.79	
Replicates	17687.8	17818.2	17928.2	18016.0						
CCB					UNK	01/05/18 04:58:19 pm	0.009	102	8.29	s
Replicates	113.4	94.9	96.2	102.4						

Metals Raw Data

Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
ALS WO# HS17121224

ALS Group USA, Corp Date: 18-Jan-18

Form 2 - Initial and Continuing Calibration Verification

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS17121224

Run ID: ICPMS04_308513
Instrument: ICPMS04
Method: SW6020

ICV Date: 05-Jan-2018 11:35 Seq: 4382238 ICV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	100	100	90-110	
Antimony	100	96.88	97	90-110	
Arsenic	100	102.393	102	90-110	
Barium	100	99.986	100	90-110	
Beryllium	100	101.418	101	90-110	
Cadmium	100	101.077	101	90-110	
Calcium	10000	10260.289	103	90-110	
Chromium	100	103.616	104	90-110	
Cobalt	100	101.899	102	90-110	
Copper	100	103.76	104	90-110	
Iron	10000	10372.519	104	90-110	
Lead	100	101.149	101	90-110	
Magnesium	10000	9959.045	100	90-110	
Manganese	100	102.439	102	90-110	
Nickel	100	99.904	100	90-110	
Potassium	10000	9929.376	99	90-110	
Selenium	100	97.226	97	90-110	
Silver	100	99.71	100	90-110	
Sodium	10000	10506.407	105	90-110	
Thallium	100	100.5	100	90-110	
Vanadium	100	100.987	101	90-110	
Zinc	100	100.09	100	90-110	

CCV1 Date: 05-Jan-2018 12:19 Seq: 4382295 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	101.165	101	90-110	
Antimony	100	97.814	98	90-110	
Arsenic	100	101.973	102	90-110	
Barium	100	97.308	97	90-110	
Beryllium	100	99.326	99	90-110	
Cadmium	100	100.064	100	90-110	
Calcium	10000	10057.882	101	90-110	
Chromium	100	100.918	101	90-110	
Cobalt	100	100.483	100	90-110	
Copper	100	102.111	102	90-110	
Iron	10000	9971.057	100	90-110	
Lead	100	98.993	99	90-110	
Magnesium	10000	9934.165	99	90-110	
Manganese	100	99.935	100	90-110	
Nickel	100	101.652	102	90-110	
Potassium	10000	10033.483	100	90-110	
Selenium	100	103.313	103	90-110	
Silver	100	100.385	100	90-110	
Sodium	10000	10220.969	102	90-110	
Thallium	100	98.034	98	90-110	
Vanadium	100	97.774	98	90-110	
Zinc	100	101.429	101	90-110	

CCV2 Date: 05-Jan-2018 12:47 Seq: 4382329 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	101.441	101	90-110	
Antimony	100	97.038	97	90-110	
Arsenic	100	98.666	99	90-110	
Barium	100	98.266	98	90-110	
Beryllium	100	99.193	99	90-110	
Cadmium	100	101.395	101	90-110	
Calcium	10000	9904.028	99	90-110	

ALS Group USA, Corp Date: 18-Jan-18

Form 2 - Initial and Continuing Calibration Verification

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS17121224

Run ID: ICPMS04_308513
Instrument: ICPMS04
Method: SW6020

CCV2 Date: 05-Jan-2018 12:47 Seq: 4382329 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Chromium	100	102.103	102	90-110	
Cobalt	100	99.73	100	90-110	
Copper	100	99.814	100	90-110	
Iron	10000	10059.279	101	90-110	
Lead	100	99.4	99	90-110	
Magnesium	10000	10076.912	101	90-110	
Manganese	100	103.137	103	90-110	
Nickel	100	101.986	102	90-110	
Potassium	10000	10099.724	101	90-110	
Selenium	100	101.469	101	90-110	
Silver	100	100.417	100	90-110	
Sodium	10000	10182.492	102	90-110	
Thallium	100	99.412	99	90-110	
Vanadium	100	99.795	100	90-110	
Zinc	100	102.174	102	90-110	

CCV3 Date: 05-Jan-2018 13:14 Seq: 4382589 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	101.2	101	90-110	
Antimony	100	96.873	97	90-110	
Arsenic	100	96.019	96	90-110	
Barium	100	97.718	98	90-110	
Beryllium	100	98.723	99	90-110	
Cadmium	100	98.287	98	90-110	
Calcium	10000	9974.591	100	90-110	
Chromium	100	98.395	98	90-110	
Cobalt	100	97.612	98	90-110	
Copper	100	100.519	101	90-110	
Iron	10000	10095.91	101	90-110	
Lead	100	97.293	97	90-110	
Magnesium	10000	10130.007	101	90-110	
Manganese	100	103.432	103	90-110	
Nickel	100	99.71	100	90-110	
Potassium	10000	10170.413	102	90-110	
Selenium	100	93.04	93	90-110	
Silver	100	99.485	100	90-110	
Sodium	10000	10516.626	105	90-110	
Thallium	100	99.112	99	90-110	
Vanadium	100	97.126	97	90-110	
Zinc	100	101.146	101	90-110	

CCV4 Date: 05-Jan-2018 13:40 Seq: 4382601 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	100.199	100	90-110	
Antimony	100	95.132	95	90-110	
Arsenic	100	101.375	101	90-110	
Barium	100	98.651	99	90-110	
Beryllium	100	97.745	98	90-110	
Cadmium	100	96.961	97	90-110	
Calcium	10000	10204.423	102	90-110	
Chromium	100	103.889	104	90-110	
Cobalt	100	101.799	102	90-110	
Copper	100	101.95	102	90-110	
Iron	10000	10301.194	103	90-110	
Lead	100	97.204	97	90-110	
Magnesium	10000	9989.957	100	90-110	
Manganese	100	102.772	102	90-110	

ALS Group USA, Corp Date: 18-Jan-18

Form 2 - Initial and Continuing Calibration Verification

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS17121224

Run ID: ICPMS04_308513
Instrument: ICPMS04
Method: SW6020

CCV4	Date: 05-Jan-2018 13:40		Seq: 4382601	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Nickel	100	99.058	99	90-110	
Potassium	10000	9968.579	100	90-110	
Selenium	100	100.432	100	90-110	
Silver	100	97.717	98	90-110	
Sodium	10000	10992.079	110	90-110	
Thallium	100	98.048	98	90-110	
Vanadium	100	101.357	101	90-110	
Zinc	100	98.907	99	90-110	

CCV5	Date: 05-Jan-2018 14:07		Seq: 4382613	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Aluminum	100	99.916	100	90-110	
Antimony	100	97.339	97	90-110	
Arsenic	100	95.003	95	90-110	
Barium	100	96.665	97	90-110	
Beryllium	100	97.364	97	90-110	
Cadmium	100	99.745	100	90-110	
Calcium	10000	10172.57	102	90-110	
Chromium	100	100.847	101	90-110	
Cobalt	100	100.6	101	90-110	
Copper	100	98.086	98	90-110	
Iron	10000	10167.037	102	90-110	
Lead	100	95.906	96	90-110	
Magnesium	10000	9993.583	100	90-110	
Manganese	100	101.3	101	90-110	
Nickel	100	97.906	98	90-110	
Potassium	10000	10242.865	102	90-110	
Selenium	100	96.679	97	90-110	
Silver	100	97.656	98	90-110	
Sodium	10000	10671.126	107	90-110	
Thallium	100	96.982	97	90-110	
Vanadium	100	98.685	99	90-110	
Zinc	100	98.78	99	90-110	

CCV6	Date: 05-Jan-2018 14:34		Seq: 4382625	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Aluminum	100	104.129	104	90-110	
Antimony	100	98.49	99	90-110	
Arsenic	100	97.758	98	90-110	
Barium	100	97.887	98	90-110	
Beryllium	100	97.404	97	90-110	
Cadmium	100	98.244	98	90-110	
Calcium	10000	10382.911	104	90-110	
Chromium	100	102.669	103	90-110	
Cobalt	100	101.218	101	90-110	
Copper	100	101.402	101	90-110	
Iron	10000	10549.114	105	90-110	
Lead	100	97.466	98	90-110	
Magnesium	10000	10391.503	104	90-110	
Manganese	100	99.164	99	90-110	
Nickel	100	103.099	103	90-110	
Potassium	10000	10576.736	106	90-110	
Selenium	100	108.246	108	90-110	
Silver	100	99.123	99	90-110	
Sodium	10000	11022.002	110	90-110	
Thallium	100	99.462	100	90-110	
Vanadium	100	102.634	102	90-110	

ALS Group USA, Corp Date: 18-Jan-18

Form 2 - Initial and Continuing Calibration Verification

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS17121224

Run ID: ICPMS04_308513
Instrument: ICPMS04
Method: SW6020

CCV6 Date: 05-Jan-2018 14:34 Seq: 4382625 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Zinc	100	100.529	101	90-110	

CCV7 Date: 05-Jan-2018 15:01 Seq: 4382937 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	102.862	103	90-110	
Antimony	100	97.421	97	90-110	
Arsenic	100	99.347	99	90-110	
Barium	100	97.949	98	90-110	
Beryllium	100	96.789	97	90-110	
Cadmium	100	99.646	100	90-110	
Calcium	10000	10347.384	103	90-110	
Chromium	100	101.457	101	90-110	
Cobalt	100	101.713	102	90-110	
Copper	100	100.801	101	90-110	
Iron	10000	10502.339	105	90-110	
Lead	100	96.952	97	90-110	
Magnesium	10000	10232.973	102	90-110	
Manganese	100	106.824	107	90-110	
Nickel	100	100.094	100	90-110	
Potassium	10000	10399.486	104	90-110	
Selenium	100	96.842	97	90-110	
Silver	100	98.215	98	90-110	
Sodium	10000	11244.913	112	90-110	S
Thallium	100	98.353	98	90-110	
Vanadium	100	99.812	100	90-110	
Zinc	100	100.209	100	90-110	

CCV8 Date: 05-Jan-2018 15:27 Seq: 4382949 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	105.869	106	90-110	
Antimony	100	100.008	100	90-110	
Arsenic	100	103.047	103	90-110	
Barium	100	101.009	101	90-110	
Beryllium	100	99.153	99	90-110	
Cadmium	100	102.631	103	90-110	
Calcium	10000	10597.284	106	90-110	
Chromium	100	103.266	103	90-110	
Cobalt	100	103.105	103	90-110	
Copper	100	105.406	105	90-110	
Iron	10000	10624.484	106	90-110	
Lead	100	98.602	99	90-110	
Magnesium	10000	10945.497	109	90-110	
Manganese	100	104.244	104	90-110	
Nickel	100	101.198	101	90-110	
Potassium	10000	10441.341	104	90-110	
Selenium	100	91.464	92	90-110	
Silver	100	99.72	100	90-110	
Sodium	10000	11231.524	112	90-110	S
Thallium	100	100.309	100	90-110	
Vanadium	100	101.839	102	90-110	
Zinc	100	102.614	103	90-110	

CCV9 Date: 05-Jan-2018 15:54 Seq: 4382961 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	102.806	103	90-110	
Antimony	100	100.346	100	90-110	
Arsenic	100	98.772	99	90-110	

ALS Group USA, Corp Date: 18-Jan-18

Form 2 - Initial and Continuing Calibration Verification

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS17121224

Run ID: ICPMS04_308513
Instrument: ICPMS04
Method: SW6020

CCV9	Date: 05-Jan-2018 15:54	Seq: 4382961	CCV	Units: ug/L	
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Barium	100	98.744	99	90-110	
Beryllium	100	97.979	98	90-110	
Cadmium	100	100.507	101	90-110	
Calcium	10000	10463.494	105	90-110	
Chromium	100	105.404	105	90-110	
Cobalt	100	101.533	102	90-110	
Copper	100	102.317	102	90-110	
Iron	10000	10409.532	104	90-110	
Lead	100	97.664	98	90-110	
Magnesium	10000	10335.317	103	90-110	
Manganese	100	104.52	105	90-110	
Nickel	100	100.557	101	90-110	
Potassium	10000	10369.879	104	90-110	
Selenium	100	97.089	97	90-110	
Silver	100	98.718	99	90-110	
Sodium	10000	11014.829	110	90-110	
Thallium	100	98.776	99	90-110	
Vanadium	100	100.845	101	90-110	
Zinc	100	101.855	102	90-110	

CCV10	Date: 05-Jan-2018 16:21	Seq: 4383069	CCV	Units: ug/L	
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Aluminum	100	103.768	104	90-110	
Antimony	100	93.947	94	90-110	
Arsenic	100	93.986	94	90-110	
Barium	100	98.685	99	90-110	
Beryllium	100	93.945	94	90-110	
Cadmium	100	98.734	99	90-110	
Calcium	10000	9996.897	100	90-110	
Chromium	100	100.173	100	90-110	
Cobalt	100	98.572	99	90-110	
Copper	100	98.037	98	90-110	
Iron	10000	10125.595	101	90-110	
Lead	100	96.185	96	90-110	
Magnesium	10000	10616.553	106	90-110	
Manganese	100	98.883	99	90-110	
Nickel	100	100.639	101	90-110	
Potassium	10000	10357.985	104	90-110	
Selenium	100	87.124	87	90-110	S
Silver	100	95.755	96	90-110	
Sodium	10000	11199.181	112	90-110	S
Thallium	100	98.649	99	90-110	
Vanadium	100	99.08	99	90-110	
Zinc	100	99.812	100	90-110	

CCV11	Date: 05-Jan-2018 16:49	Seq: 4383097	CCV	Units: ug/L	
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Aluminum	100	101.651	102	90-110	
Antimony	100	95.66	96	90-110	
Arsenic	100	97.996	98	90-110	
Barium	100	93.347	93	90-110	
Beryllium	100	92.338	92	90-110	
Cadmium	100	97.374	97	90-110	
Calcium	10000	10182.366	102	90-110	
Chromium	100	101.058	101	90-110	
Cobalt	100	97.54	98	90-110	
Copper	100	97.834	98	90-110	

ALS Group USA, Corp Date: 18-Jan-18

Form 2 - Initial and Continuing Calibration Verification

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS17121224

Run ID: ICPMS04_308513
Instrument: ICPMS04
Method: SW6020

CCV11 Date: 05-Jan-2018 16:49 Seq: 4383097 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Iron	10000	10069.125	101	90-110	
Lead	100	95.004	95	90-110	
Magnesium	10000	10245.713	102	90-110	
Manganese	100	98.735	99	90-110	
Nickel	100	98.866	99	90-110	
Potassium	10000	10144.948	101	90-110	
Selenium	100	97.144	97	90-110	
Silver	100	96.837	97	90-110	
Sodium	10000	10797.402	108	90-110	
Thallium	100	95.808	96	90-110	
Vanadium	100	98.66	99	90-110	
Zinc	100	98.617	99	90-110	

CCV12 Date: 05-Jan-2018 17:16 Seq: 4383201 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	100.996	101	90-110	
Antimony	100	96.223	96	90-110	
Arsenic	100	92.128	92	90-110	
Barium	100	96.951	97	90-110	
Beryllium	100	95.411	95	90-110	
Cadmium	100	98.395	98	90-110	
Calcium	10000	9773.033	98	90-110	
Chromium	100	100.418	100	90-110	
Cobalt	100	99.165	99	90-110	
Copper	100	99.95	100	90-110	
Iron	10000	10238.878	102	90-110	
Lead	100	95.332	95	90-110	
Magnesium	10000	10358.101	104	90-110	
Manganese	100	98.745	99	90-110	
Nickel	100	99.438	99	90-110	
Potassium	10000	10196.575	102	90-110	
Selenium	100	98.398	98	90-110	
Silver	100	96.067	96	90-110	
Sodium	10000	10548.989	105	90-110	
Thallium	100	96.49	97	90-110	
Vanadium	100	97.871	98	90-110	
Zinc	100	99.646	100	90-110	

CCV13 Date: 05-Jan-2018 17:47 Seq: 4383215 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	103.148	103	90-110	
Antimony	100	100.807	101	90-110	
Arsenic	100	100.715	101	90-110	
Barium	100	100.711	101	90-110	
Beryllium	100	99.303	99	90-110	
Cadmium	100	101.506	102	90-110	
Calcium	10000	10435.548	104	90-110	
Chromium	100	104.066	104	90-110	
Cobalt	100	103.239	103	90-110	
Copper	100	102.911	103	90-110	
Iron	10000	10669.926	107	90-110	
Lead	100	99.012	99	90-110	
Magnesium	10000	10731.846	107	90-110	
Manganese	100	103.527	104	90-110	
Nickel	100	102.224	102	90-110	
Potassium	10000	10681.35	107	90-110	
Selenium	100	101.265	101	90-110	

ALS Group USA, Corp Date: 18-Jan-18

Form 2 - Initial and Continuing Calibration Verification

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS17121224

Run ID: ICPMS04_308513
Instrument: ICPMS04
Method: SW6020

CCV13	Date: 05-Jan-2018 17:47		Seq: 4383215	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Silver	100	100.598	101	90-110	
Sodium	10000	11762.624	118	90-110	S
Thallium	100	101.517	102	90-110	
Vanadium	100	101.077	101	90-110	
Zinc	100	102.726	103	90-110	

CCV14	Date: 05-Jan-2018 18:12		Seq: 4383253	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Aluminum	100	104.34	104	90-110	
Antimony	100	100.927	101	90-110	
Arsenic	100	106.895	107	90-110	
Barium	100	103.99	104	90-110	
Beryllium	100	99.072	99	90-110	
Cadmium	100	101.334	101	90-110	
Calcium	10000	10811.421	108	90-110	
Chromium	100	103.095	103	90-110	
Cobalt	100	101.239	101	90-110	
Copper	100	102.149	102	90-110	
Iron	10000	10397.072	104	90-110	
Lead	100	97.972	98	90-110	
Magnesium	10000	10841.3	108	90-110	
Manganese	100	102.563	103	90-110	
Nickel	100	102.589	103	90-110	
Potassium	10000	10558.851	106	90-110	
Selenium	100	98.123	98	90-110	
Silver	100	99.337	99	90-110	
Sodium	10000	11643.42	116	90-110	S
Thallium	100	101.082	101	90-110	
Vanadium	100	102.199	102	90-110	
Zinc	100	104.748	105	90-110	

CCV15	Date: 05-Jan-2018 18:39		Seq: 4383265	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Aluminum	100	103.583	104	90-110	
Antimony	100	99.665	100	90-110	
Arsenic	100	104.531	105	90-110	
Barium	100	101.488	101	90-110	
Beryllium	100	97.749	98	90-110	
Cadmium	100	102.943	103	90-110	
Calcium	10000	10598.491	106	90-110	
Chromium	100	103.156	103	90-110	
Cobalt	100	101.957	102	90-110	
Copper	100	101.666	102	90-110	
Iron	10000	10471.991	105	90-110	
Lead	100	98.74	99	90-110	
Magnesium	10000	10593.9	106	90-110	
Manganese	100	104.176	104	90-110	
Nickel	100	99.475	100	90-110	
Potassium	10000	10480.893	105	90-110	
Selenium	100	99.727	100	90-110	
Silver	100	97.791	98	90-110	
Sodium	10000	11733.432	117	90-110	S
Thallium	100	99.684	100	90-110	
Vanadium	100	101.833	102	90-110	
Zinc	100	103.217	103	90-110	

ALS Group USA, Corp Date: 18-Jan-18

Form 2 - Initial and Continuing Calibration Verification

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS17121224

Run ID: ICPMS04_308513
Instrument: ICPMS04
Method: SW6020

CCV16 Date: 05-Jan-2018 19:05 Seq: 4383297 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	104.025	104	90-110	
Antimony	100	101.598	102	90-110	
Arsenic	100	104.62	105	90-110	
Barium	100	105.068	105	90-110	
Beryllium	100	100.64	101	90-110	
Cadmium	100	102.666	103	90-110	
Calcium	10000	10877.775	109	90-110	
Chromium	100	102.814	103	90-110	
Cobalt	100	101.905	102	90-110	
Copper	100	102.381	102	90-110	
Iron	10000	10237.277	102	90-110	
Lead	100	99.819	100	90-110	
Magnesium	10000	10653.01	107	90-110	
Manganese	100	102.73	103	90-110	
Nickel	100	101.806	102	90-110	
Potassium	10000	10558.573	106	90-110	
Selenium	100	107.812	108	90-110	
Silver	100	99.345	99	90-110	
Sodium	10000	11783.821	118	90-110	S
Thallium	100	100.806	101	90-110	
Vanadium	100	101.44	101	90-110	
Zinc	100	103.934	104	90-110	

CCV17 Date: 05-Jan-2018 19:27 Seq: 4383304 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	109.481	109	90-110	
Antimony	100	96.502	97	90-110	
Arsenic	100	99.622	100	90-110	
Barium	100	103.651	104	90-110	
Beryllium	100	99.616	100	90-110	
Cadmium	100	102.598	103	90-110	
Calcium	10000	10670.851	107	90-110	
Chromium	100	104.07	104	90-110	
Cobalt	100	100.647	101	90-110	
Copper	100	97.003	97	90-110	
Iron	10000	10271.54	103	90-110	
Lead	100	98.175	98	90-110	
Magnesium	10000	11125.407	111	90-110	S
Manganese	100	101.24	101	90-110	
Nickel	100	104.44	104	90-110	
Potassium	10000	11341.263	113	90-110	S
Selenium	100	105.514	106	90-110	
Silver	100	95.902	96	90-110	
Sodium	10000	12378.465	124	90-110	S
Thallium	100	100.848	101	90-110	
Vanadium	100	100.592	101	90-110	
Zinc	100	102.288	102	90-110	

ICCV18 Date: 05-Jan-2018 20:06 Seq: 4383314 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	76.834	77	90-110	S
Antimony	100	99.504	100	90-110	
Arsenic	100	93.176	93	90-110	
Barium	100	97.249	97	90-110	
Beryllium	100	104.798	105	90-110	
Cadmium	100	97.912	98	90-110	
Calcium	10000	9428.97772	94	90-110	

ALS Group USA, Corp Date: 18-Jan-18

Form 2 - Initial and Continuing Calibration Verification

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS17121224

Run ID: ICPMS04_308513
Instrument: ICPMS04
Method: SW6020

ICCV18	Date: 05-Jan-2018 20:06		Seq: 4383314	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Chromium	100	97.807	98	90-110	
Cobalt	100	97.501	98	90-110	
Copper	100	99.197	99	90-110	
Iron	10000	9839.987	98	90-110	
Lead	100	95.195	95	90-110	
Magnesium	10000	9629.71	96	90-110	
Manganese	100	96.782	97	90-110	
Nickel	100	99.49	100	90-110	
Potassium	10000	9673.785	97	90-110	
Selenium	100	100.631	101	90-110	
Silver	100	96.057	96	90-110	
Sodium	10000	9613.333	96	90-110	
Thallium	100	99.226	99	90-110	
Vanadium	100	96.174	96	90-110	
Zinc	100	97.727	98	90-110	

CCV19	Date: 05-Jan-2018 20:26		Seq: 4383323	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Aluminum	100	67.161	67	90-110	S
Antimony	100	95.733	96	90-110	
Arsenic	100	98.192	98	90-110	
Barium	100	99.517	100	90-110	
Beryllium	100	102.883	103	90-110	
Cadmium	100	98.44	98	90-110	
Calcium	10000	10142.291	101	90-110	
Chromium	100	96.405	96	90-110	
Cobalt	100	96.611	97	90-110	
Copper	100	95.013	95	90-110	
Iron	10000	9782.249	98	90-110	
Lead	100	93.677	94	90-110	
Magnesium	10000	9670.954	97	90-110	
Manganese	100	98.224	98	90-110	
Nickel	100	97.096	97	90-110	
Potassium	10000	9682.437	97	90-110	
Selenium	100	97.109	97	90-110	
Silver	100	96.689	97	90-110	
Sodium	10000	10404.366	104	90-110	
Thallium	100	95.182	95	90-110	
Vanadium	100	97.295	97	90-110	
Zinc	100	96.327	96	90-110	

CCV20	Date: 05-Jan-2018 20:30		Seq: 4383325	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Aluminum	100	66.919	67	90-110	S
Antimony	100	96.105	96	90-110	
Arsenic	100	100.307	100	90-110	
Barium	100	102.37	102	90-110	
Beryllium	100	103.682	104	90-110	
Cadmium	100	96.552	97	90-110	
Calcium	10000	10151.506	102	90-110	
Chromium	100	100.881	101	90-110	
Cobalt	100	100.261	100	90-110	
Copper	100	96.384	96	90-110	
Iron	10000	9906.62	99	90-110	
Lead	100	94.76	95	90-110	
Magnesium	10000	9846.158	99	90-110	
Manganese	100	99.53	100	90-110	

ALS Group USA, Corp Date: 18-Jan-18

Form 2 - Initial and Continuing Calibration Verification

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS17121224

Run ID: ICPMS04_308513
Instrument: ICPMS04
Method: SW6020

CCV20 Date: 05-Jan-2018 20:30 Seq: 4383325 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Nickel	100	97.895	98	90-110	
Potassium	10000	9624.877	96	90-110	
Selenium	100	93.047	93	90-110	
Silver	100	96.35	96	90-110	
Sodium	10000	10812.339	108	90-110	
Thallium	100	94.616	95	90-110	
Vanadium	100	98.11	98	90-110	
Zinc	100	98.723	99	90-110	

CCV21 Date: 05-Jan-2018 20:57 Seq: 4383337 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	66.646	67	90-110	S
Antimony	100	98.133	98	90-110	
Arsenic	100	95.702	96	90-110	
Barium	100	102.358	102	90-110	
Beryllium	100	104.683	105	90-110	
Cadmium	100	98.064	98	90-110	
Calcium	10000	9831.269	98	90-110	
Chromium	100	95.404	95	90-110	
Cobalt	100	96.214	96	90-110	
Copper	100	95.626	96	90-110	
Iron	10000	9642.43	96	90-110	
Lead	100	95.421	95	90-110	
Magnesium	10000	9818.385	98	90-110	
Manganese	100	99.011	99	90-110	
Nickel	100	98.682	99	90-110	
Potassium	10000	9763.3	98	90-110	
Selenium	100	96.965	97	90-110	
Silver	100	96.257	96	90-110	
Sodium	10000	10284.97	103	90-110	
Thallium	100	95.667	96	90-110	
Vanadium	100	95.696	96	90-110	
Zinc	100	99.659	100	90-110	

CCV22 Date: 05-Jan-2018 21:30 Seq: 4383353 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	65.984	66	90-110	S
Antimony	100	97.955	98	90-110	
Arsenic	100	91.093	91	90-110	
Barium	100	101.095	101	90-110	
Beryllium	100	104.433	104	90-110	
Cadmium	100	97.823	98	90-110	
Calcium	10000	9716.871	97	90-110	
Chromium	100	94.845	95	90-110	
Cobalt	100	95.485	96	90-110	
Copper	100	95.565	96	90-110	
Iron	10000	9410.771	94	90-110	
Lead	100	94.756	95	90-110	
Magnesium	10000	9631.992	96	90-110	
Manganese	100	93.884	94	90-110	
Nickel	100	98.457	99	90-110	
Potassium	10000	9772.772	98	90-110	
Selenium	100	96.093	96	90-110	
Silver	100	98.145	98	90-110	
Sodium	10000	10052.056	101	90-110	
Thallium	100	95.111	95	90-110	
Vanadium	100	9407.772	94	90-110	

ALS Group USA, Corp Date: 18-Jan-18

Form 2 - Initial and Continuing Calibration Verification

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS17121224

Run ID: ICPMS04_308513
Instrument: ICPMS04
Method: SW6020

CCV22	Date: 05-Jan-2018 21:30		Seq: 4383353	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Zinc	100	100.777	101	90-110	

CCV23	Date: 05-Jan-2018 21:49		Seq: 4383362	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Aluminum	100	65.751	66	90-110	S
Antimony	100	98.238	98	90-110	
Arsenic	100	96.078	96	90-110	
Barium	100	99.781	100	90-110	
Beryllium	100	104.438	104	90-110	
Cadmium	100	97.975	98	90-110	
Calcium	10000	9735.11	97	90-110	
Chromium	100	96.432	96	90-110	
Cobalt	100	95.035	95	90-110	
Copper	100	95.365	95	90-110	
Iron	10000	9607.232	96	90-110	
Lead	100	95.523	96	90-110	
Magnesium	10000	9761.01	98	90-110	
Manganese	100	95.418	95	90-110	
Nickel	100	95.98	96	90-110	
Potassium	10000	9605.685	96	90-110	
Selenium	100	96.525	97	90-110	
Silver	100	97.473	98	90-110	
Sodium	10000	10223.357	102	90-110	
Thallium	100	96.124	96	90-110	
Vanadium	100	93.987	94	90-110	
Zinc	100	98.154	98	90-110	

ICCV24	Date: 05-Jan-2018 22:10		Seq: 4383371	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Aluminum	100	75.427	75	90-110	S
Antimony	100	98.582	99	90-110	
Arsenic	100	98.592	99	90-110	
Barium	100	97.484	98	90-110	
Beryllium	100	106.675	107	90-110	
Cadmium	100	97.771	98	90-110	
Calcium	10000	9966.506	100	90-110	
Chromium	100	101.317	101	90-110	
Cobalt	100	101.13	101	90-110	
Copper	100	99.351	99	90-110	
Iron	10000	9732.221	97	90-110	
Lead	100	98.283	98	90-110	
Magnesium	10000	9741.36	97	90-110	
Manganese	100	97.915	98	90-110	
Nickel	100	97.596	98	90-110	
Potassium	10000	9729.336	97	90-110	
Selenium	100	98.749	99	90-110	
Silver	100	96.829	97	90-110	
Sodium	10000	10416.544	104	90-110	
Thallium	100	100.779	101	90-110	
Vanadium	100	98.346	98	90-110	
Zinc	100	98.841	99	90-110	

CCV25	Date: 05-Jan-2018 22:33		Seq: 4383380	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Aluminum	100	66.316	66	90-110	S
Antimony	100	97.095	97	90-110	
Arsenic	100	92.772	93	90-110	

ALS Group USA, Corp Date: 18-Jan-18

Form 2 - Initial and Continuing Calibration Verification

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS17121224

Run ID: ICPMS04_308513
Instrument: ICPMS04
Method: SW6020

CCV25 Date: 05-Jan-2018 22:33 Seq: 4383380 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Barium	100	99.986	100	90-110	
Beryllium	100	101.349	101	90-110	
Cadmium	100	96.877	97	90-110	
Calcium	10000	9971.09	100	90-110	
Chromium	100	95.085	95	90-110	
Cobalt	100	93.398	93	90-110	
Copper	100	93.427	93	90-110	
Iron	10000	9470.205	95	90-110	
Lead	100	96.556	97	90-110	
Magnesium	10000	9544.164	95	90-110	
Manganese	100	93.44	93	90-110	
Nickel	100	95.258	95	90-110	
Potassium	10000	9831.398	98	90-110	
Selenium	100	95.196	95	90-110	
Silver	100	96.992	97	90-110	
Sodium	10000	10362.351	104	90-110	
Thallium	100	95.563	96	90-110	
Vanadium	100	93.3	93	90-110	
Zinc	100	98.034	98	90-110	

CCV26 Date: 05-Jan-2018 23:00 Seq: 4383757 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	70.001	70	90-110	S
Antimony	100	94.898	95	90-110	
Arsenic	100	91.448	91	90-110	
Barium	100	95.963	96	90-110	
Beryllium	100	101.761	102	90-110	
Cadmium	100	96.386	96	90-110	
Calcium	10000	9551.442	96	90-110	
Chromium	100	95.254	95	90-110	
Cobalt	100	95.509	96	90-110	
Copper	100	92.184	92	90-110	
Iron	10000	9349.784	94	90-110	
Lead	100	96.685	97	90-110	
Magnesium	10000	9530.01	95	90-110	
Manganese	100	95.106	95	90-110	
Nickel	100	95.79	96	90-110	
Potassium	10000	9658.007	97	90-110	
Selenium	100	92.271	92	90-110	
Silver	100	95.101	95	90-110	
Sodium	10000	10025.318	100	90-110	
Thallium	100	96.233	96	90-110	
Vanadium	100	94.589	95	90-110	
Zinc	100	96.742	97	90-110	

CCV27 Date: 05-Jan-2018 23:27 Seq: 4383769 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	68.243	68	90-110	S
Antimony	100	95.913	96	90-110	
Arsenic	100	90.467	91	90-110	
Barium	100	93.125	93	90-110	
Beryllium	100	102.105	102	90-110	
Cadmium	100	93.67	94	90-110	
Calcium	10000	10090.798	101	90-110	
Chromium	100	96.281	96	90-110	
Cobalt	100	97.81	98	90-110	
Copper	100	96.363	96	90-110	

ALS Group USA, Corp Date: 18-Jan-18

Form 2 - Initial and Continuing Calibration Verification

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS17121224

Run ID: ICPMS04_308513
Instrument: ICPMS04
Method: SW6020

CCV27 Date: 05-Jan-2018 23:27 Seq: 4383769 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Iron	10000	9557.749	96	90-110	
Lead	100	93.39	93	90-110	
Magnesium	10000	9287.741	93	90-110	
Manganese	100	94.206	94	90-110	
Nickel	100	93.005	93	90-110	
Potassium	10000	9324.111	93	90-110	
Selenium	100	93.875	94	90-110	
Silver	100	93.751	94	90-110	
Sodium	10000	10396.867	104	90-110	
Thallium	100	94.134	94	90-110	
Vanadium	100	95.376	95	90-110	
Zinc	100	94.411	94	90-110	

CCV28 Date: 05-Jan-2018 23:53 Seq: 4383781 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	69.433	69	90-110	S
Antimony	100	99.352	99	90-110	
Arsenic	100	97.303	97	90-110	
Barium	100	97.917	98	90-110	
Beryllium	100	102.603	103	90-110	
Cadmium	100	97.87	98	90-110	
Calcium	10000	9723.124	97	90-110	
Chromium	100	97.315	97	90-110	
Cobalt	100	96.769	97	90-110	
Copper	100	97.351	97	90-110	
Iron	10000	9485.782	95	90-110	
Lead	100	96.849	97	90-110	
Magnesium	10000	9508.277	95	90-110	
Manganese	100	94.489	95	90-110	
Nickel	100	95.872	96	90-110	
Potassium	10000	9672.822	97	90-110	
Selenium	100	92.054	92	90-110	
Silver	100	96.935	97	90-110	
Sodium	10000	10018.706	100	90-110	
Thallium	100	96.951	97	90-110	
Vanadium	100	95.498	96	90-110	
Zinc	100	97.681	98	90-110	

CCV29 Date: 06-Jan-2018 00:20 Seq: 4383793 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Aluminum	100	70.112	70	90-110	S
Antimony	100	98.821	99	90-110	
Arsenic	100	95.78	96	90-110	
Barium	100	100.039	100	90-110	
Beryllium	100	105.267	105	90-110	
Cadmium	100	98.622	99	90-110	
Calcium	10000	9667.76	97	90-110	
Chromium	100	95.949	96	90-110	
Cobalt	100	96.035	96	90-110	
Copper	100	94.994	95	90-110	
Iron	10000	9341.565	93	90-110	
Lead	100	97.953	98	90-110	
Magnesium	10000	9581.005	96	90-110	
Manganese	100	95.83	96	90-110	
Nickel	100	97.087	97	90-110	
Potassium	10000	9765.855	98	90-110	
Selenium	100	10267.772	102	90-110	

Form 2 - Initial and Continuing Calibration Verification

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS17121224

Run ID: ICPMS04_308513
Instrument: ICPMS04
Method: SW6020

CCV29	Date: 06-Jan-2018 00:20		Seq: 4383793	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Silver	100	96.521	97	90-110	
Sodium	10000	9860.699	99	90-110	
Thallium	100	98.208	98	90-110	
Vanadium	100	95.295	95	90-110	
Zinc	100	96.583	97	90-110	

CCV30	Date: 06-Jan-2018 00:46		Seq: 4383805	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Aluminum	100	69.524	70	90-110	S
Antimony	100	102.188	102	90-110	
Arsenic	100	97.876	98	90-110	
Barium	100	101.118	101	90-110	
Beryllium	100	105.865	106	90-110	
Cadmium	100	97.531	98	90-110	
Calcium	10000	9926.974	99	90-110	
Chromium	100	94.45	94	90-110	
Cobalt	100	94.808	95	90-110	
Copper	100	93.072	93	90-110	
Iron	10000	9425.29	94	90-110	
Lead	100	97.945	98	90-110	
Magnesium	10000	9626.961	96	90-110	
Manganese	100	96.214	96	90-110	
Nickel	100	96.965	97	90-110	
Potassium	10000	9692.843	97	90-110	
Selenium	100	94.651	95	90-110	
Silver	100	96.693	97	90-110	
Sodium	10000	9851.638	99	90-110	
Thallium	100	98.229	98	90-110	
Vanadium	100	93.85	94	90-110	
Zinc	100	98.324	98	90-110	

CCV31	Date: 06-Jan-2018 00:57		Seq: 4383810	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Aluminum	100	69.107	69	90-110	S
Antimony	100	101.38	101	90-110	
Arsenic	100	97.673	98	90-110	
Barium	100	97.843	98	90-110	
Beryllium	100	105.593	106	90-110	
Cadmium	100	97.692	98	90-110	
Calcium	10000	9624.379	96	90-110	
Chromium	100	96.469	97	90-110	
Cobalt	100	98.169	98	90-110	
Copper	100	93.359	93	90-110	
Iron	10000	9331.481	93	90-110	
Lead	100	98.373	98	90-110	
Magnesium	10000	9626.915	96	90-110	
Manganese	100	95.427	95	90-110	
Nickel	100	99.063	99	90-110	
Potassium	10000	9631.696	96	90-110	
Selenium	100	86.527	87	90-110	S
Silver	100	97.572	98	90-110	
Sodium	10000	9712.977	97	90-110	
Thallium	100	98.18	98	90-110	
Vanadium	100	94.01	94	90-110	
Zinc	100	97.757	98	90-110	

Form 3 - BLANKS

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS17121224

Run ID: ICPMS04_308513
Instrument: ICPMS04
Method: SW6020

ICB | Date: 05-Jan-2018 11:33 | Seq: 4382237 | ICB | Units: ug/L

Analyte	Result	MDL	Report Limit	Qual
Aluminum	10	1.8	10	U
Antimony	5	0.4	5	U
Arsenic	5	0.4	5	U
Barium	5	1.9	5	U
Beryllium	2	0.2	2	U
Cadmium	2	0.2	2	U
Calcium	500	34	500	U
Chromium	5	0.4	5	U
Cobalt	5	0.1	5	U
Copper	5	1	5	U
Iron	200	12	200	U
Lead	5	0.6	5	U
Magnesium	200	10	200	U
Manganese	5	0.7	5	U
Nickel	5	0.6	5	U
Potassium	200	18	200	U
Selenium	-1.196	1.1	5	J
Silver	5	0.2	5	U
Sodium	200	14	200	U
Thallium	2	0.2	2	U
Vanadium	5	0.6	5	U
Zinc	5	2	5	U

CCB1 | Date: 05-Jan-2018 12:15 | Seq: 4382293 | CCB | Units: ug/L

Analyte	Result	MDL	Report Limit	Qual
Aluminum	10	1.8	10	U
Antimony	0.903	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	26.13	18	200	J
Selenium	-2.504	1.1	2	
Silver	2	0.2	2	U
Sodium	35.57	14	200	J
Thallium	2	0.2	2	U
Vanadium	5	0.6	5	U
Zinc	4	2	4	U

CCB2 | Date: 05-Jan-2018 12:50 | Seq: 4382330 | CCB | Units: ug/L

Analyte	Result	MDL	Report Limit	Qual
Aluminum	10	1.8	10	U
Antimony	0.7	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

Form 3 - BLANKS

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS17121224

Run ID: ICPMS04_308513
Instrument: ICPMS04
Method: SW6020

CCB2 Date: 05-Jan-2018 12:50 Seq: 4382330 CCB Units: ug/L

Analyte	Result	MDL	Report Limit	Qual
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	2	0.2	2	U
Vanadium	5	0.6	5	U
Zinc	4	2	4	U

MBLK-124039 Date: 05-Jan-2018 12:52 Seq: 4382579 MBLK Units: ug/L

Analyte	Result	MDL	Report Limit	Qual
Aluminum	3.836	1.8	10	J
Antimony	0.414	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	118.7	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

CCB3 Date: 05-Jan-2018 13:16 Seq: 4382590 CCB Units: ug/L

Analyte	Result	MDL	Report Limit	Qual
Aluminum	10	1.8	10	U
Antimony	0.879	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

Form 3 - BLANKS

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS17121224

Run ID: ICPMS04_308513
Instrument: ICPMS04
Method: SW6020

CCB3	Date: 05-Jan-2018 13:16		Seq: 4382590	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Manganese	5	0.7	5	U	
Nickel	2	0.6	2	U	
Potassium	39.35	18	200	J	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	
Sodium	46.49	14	200	J	
Thallium	2	0.2	2	U	
Vanadium	5	0.6	5	U	
Zinc	4	2	4	U	

CCB4	Date: 05-Jan-2018 13:42		Seq: 4382602	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Aluminum	10	1.8	10	U	
Antimony	0.746	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	29.96	18	200	J	
Selenium	-1.361	1.1	2	J	
Silver	2	0.2	2	U	
Sodium	59.68	14	200	J	
Thallium	2	0.2	2	U	
Vanadium	5	0.6	5	U	
Zinc	4	2	4	U	

CCB5	Date: 05-Jan-2018 14:09		Seq: 4382614	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Aluminum	10	1.8	10	U	
Antimony	0.429	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	28.43	18	200	J	
Selenium	-1.527	1.1	2	J	
Silver	2	0.2	2	U	
Sodium	31.03	14	200	J	

Form 3 - BLANKS

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS17121224

Run ID: ICPMS04_308513
Instrument: ICPMS04
Method: SW6020

CCB5	Date: 05-Jan-2018 14:09		Seq: 4382614	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Thallium	2	0.2	2	U	
Vanadium	5	0.6	5	U	
Zinc	4	2	4	U	

CCB6	Date: 05-Jan-2018 14:36		Seq: 4382626	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Aluminum	10	1.8	10	U	
Antimony	0.404	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	40.33	18	200	J	
Selenium	1.255	1.1	2	J	
Silver	2	0.2	2	U	
Sodium	81.78	14	200	J	
Thallium	2	0.2	2	U	
Vanadium	5	0.6	5	U	
Zinc	4	2	4	U	

CCB7	Date: 05-Jan-2018 15:03		Seq: 4382938	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Aluminum	10	1.8	10	U	
Antimony	0.413	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	34.7	18	200	J	
Selenium	2.288	1.1	2		
Silver	2	0.2	2	U	
Sodium	98.89	14	200	J	
Thallium	2	0.2	2	U	
Vanadium	5	0.6	5	U	
Zinc	4	2	4	U	

Form 3 - BLANKS

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS17121224

Run ID: ICPMS04_308513
Instrument: ICPMS04
Method: SW6020

CCB8	Date: 05-Jan-2018 15:29		Seq: 4382950	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	200	18	200	U	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	
Sodium	40.16	14	200	J	
Thallium	2	0.2	2	U	
Vanadium	5	0.6	5	U	
Zinc	4	2	4	U	

CCB9	Date: 05-Jan-2018 15:56		Seq: 4382962	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	19.98	18	200	J	
Selenium	-2.172	1.1	2		
Silver	2	0.2	2	U	
Sodium	43.55	14	200	J	
Thallium	2	0.2	2	U	
Vanadium	5	0.6	5	U	
Zinc	4	2	4	U	

CCB10	Date: 05-Jan-2018 16:23		Seq: 4383070	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	

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Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS17121224

Run ID: ICPMS04_308513
Instrument: ICPMS04
Method: SW6020

CCB10	Date: 05-Jan-2018 16:23		Seq: 4383070	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
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	41.44	18	200	J	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	
Sodium	163.3	14	200	J	
Thallium	2	0.2	2	U	
Vanadium	5	0.6	5	U	
Zinc	4	2	4	U	

CCB11	Date: 05-Jan-2018 16:51		Seq: 4383098	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	200	18	200	U	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	
Sodium	56.41	14	200	J	
Thallium	2	0.2	2	U	
Vanadium	5	0.6	5	U	
Zinc	4	2	4	U	

CCB12	Date: 05-Jan-2018 17:18		Seq: 4383202	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	

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Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS17121224

Run ID: ICPMS04_308513
Instrument: ICPMS04
Method: SW6020

CCB12	Date: 05-Jan-2018 17:18		Seq: 4383202	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Magnesium	200	10	200	U	
Manganese	5	0.7	5	U	
Nickel	2	0.6	2	U	
Potassium	200	18	200	U	
Selenium	-1.991	1.1	2	J	
Silver	2	0.2	2	U	
Sodium	51.99	14	200	J	
Thallium	2	0.2	2	U	
Vanadium	5	0.6	5	U	
Zinc	4	2	4	U	

CCB13	Date: 05-Jan-2018 17:45		Seq: 4383214	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	53.33	18	200	J	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	
Sodium	106	14	200	J	
Thallium	2	0.2	2	U	
Vanadium	5	0.6	5	U	
Zinc	4	2	4	U	

MBLK-124039	Date: 05-Jan-2018 17:59		Seq: 4383227	MBLK	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Zinc	2.768	2	4	J	

CCB14	Date: 05-Jan-2018 18:14		Seq: 4383254	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	

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Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS17121224

Run ID: ICPMS04_308513
Instrument: ICPMS04
Method: SW6020

CCB14	Date: 05-Jan-2018 18:14		Seq: 4383254	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Nickel	2	0.6	2	U	
Potassium	52.6	18	200	J	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	
Sodium	67.35	14	200	J	
Thallium	2	0.2	2	U	
Vanadium	5	0.6	5	U	
Zinc	4	2	4	U	

CCB15	Date: 05-Jan-2018 18:41		Seq: 4383266	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	58.09	18	200	J	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	
Sodium	52.89	14	200	J	
Thallium	2	0.2	2	U	
Vanadium	5	0.6	5	U	
Zinc	4	2	4	U	

CCB16	Date: 05-Jan-2018 19:07		Seq: 4383298	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	-1.076	1	2	J	
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	46.68	18	200	J	
Selenium	-1.404	1.1	2	J	
Silver	2	0.2	2	U	
Sodium	64.16	14	200	J	
Thallium	2	0.2	2	U	

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Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS17121224

Run ID: ICPMS04_308513
Instrument: ICPMS04
Method: SW6020

CCB16	Date: 05-Jan-2018 19:07		Seq: 4383298	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Vanadium	5	0.6	5	U	
Zinc	4	2	4	U	

CCB17	Date: 05-Jan-2018 19:29		Seq: 4383305	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	0.986	0.6	2	J	
Potassium	122.7	18	200	J	
Selenium	1.129	1.1	2	J	
Silver	2	0.2	2	U	
Sodium	402.4	14	200		
Thallium	2	0.2	2	U	
Vanadium	5	0.6	5	U	
Zinc	4	2	4	U	

ICCB18	Date: 05-Jan-2018 20:12		Seq: 4383317	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	-0.697	0.6	2	J	
Potassium	-33.04	18	200	J	
Selenium	1.308	1.1	2	J	
Silver	2	0.2	2	U	
Sodium	-82.04	14	200	J	
Thallium	2	0.2	2	U	
Vanadium	5	0.6	5	U	
Zinc	4	2	4	U	

CCB19	Date: 05-Jan-2018 20:28		Seq: 4383324	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Aluminum	10	1.8	10	U	

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Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS17121224

Run ID: ICPMS04_308513
Instrument: ICPMS04
Method: SW6020

CCB19	Date: 05-Jan-2018 20:28		Seq: 4383324	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
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	-0.643	0.6	2	J	
Potassium	-21.45	18	200	J	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	
Sodium	-81.59	14	200	J	
Thallium	2	0.2	2	U	
Vanadium	5	0.6	5	U	
Zinc	4	2	4	U	

CCB20	Date: 05-Jan-2018 20:32		Seq: 4383326	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	-25.31	18	200	J	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	
Sodium	-88.93	14	200	J	
Thallium	2	0.2	2	U	
Vanadium	5	0.6	5	U	
Zinc	4	2	4	U	

CCB21	Date: 05-Jan-2018 20:59		Seq: 4383338	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	

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Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS17121224

Run ID: ICPMS04_308513
Instrument: ICPMS04
Method: SW6020

CCB21	Date: 05-Jan-2018 20:59		Seq: 4383338	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
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	-23.24	18	200	J	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	
Sodium	-61.76	14	200	J	
Thallium	2	0.2	2	U	
Vanadium	5	0.6	5	U	
Zinc	4	2	4	U	

CCB22	Date: 05-Jan-2018 21:32		Seq: 4383354	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	-0.652	0.6	2	J	
Potassium	-26.22	18	200	J	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	
Sodium	-99.99	14	200	J	
Thallium	2	0.2	2	U	
Vanadium	5	0.6	5	U	
Zinc	4	2	4	U	

CCB23	Date: 05-Jan-2018 21:52		Seq: 4383363	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	

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Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS17121224

Run ID: ICPMS04_308513
Instrument: ICPMS04
Method: SW6020

CCB23	Date: 05-Jan-2018 21:52		Seq: 4383363	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Manganese	5	0.7	5	U	
Nickel	-0.643	0.6	2	J	
Potassium	200	18	200	U	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	
Sodium	-94.35	14	200	J	
Thallium	2	0.2	2	U	
Vanadium	5	0.6	5	U	
Zinc	4	2	4	U	

ICCB24	Date: 05-Jan-2018 22:17		Seq: 4383374	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	200	18	200	U	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	
Sodium	-21.87	14	200	J	
Thallium	2	0.2	2	U	
Vanadium	5	0.6	5	U	
Zinc	4	2	4	U	

CCB25	Date: 05-Jan-2018 22:36		Seq: 4383381	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	200	18	200	U	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	
Sodium	-18.49	14	200	J	

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Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS17121224

Run ID: ICPMS04_308513
Instrument: ICPMS04
Method: SW6020

CCB25	Date: 05-Jan-2018 22:36		Seq: 4383381	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Thallium	2	0.2	2	U	
Vanadium	5	0.6	5	U	
Zinc	4	2	4	U	

CCB26	Date: 05-Jan-2018 23:02		Seq: 4383758	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	22.75	18	200	J	
Selenium	-1.658	1.1	2	J	
Silver	2	0.2	2	U	
Sodium	56.29	14	200	J	
Thallium	2	0.2	2	U	
Vanadium	5	0.6	5	U	
Zinc	4	2	4	U	

CCB27	Date: 05-Jan-2018 23:29		Seq: 4383770	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	200	18	200	U	
Selenium	-1.374	1.1	2	J	
Silver	2	0.2	2	U	
Sodium	42.36	14	200	J	
Thallium	2	0.2	2	U	
Vanadium	5	0.6	5	U	
Zinc	4	2	4	U	

Form 3 - BLANKS

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS17121224

Run ID: ICPMS04_308513
Instrument: ICPMS04
Method: SW6020

CCB28 Date: 05-Jan-2018 23:55 Seq: 4383782 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	200	18	200	U
Selenium	-1.999	1.1	2	J
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

CCB29 Date: 06-Jan-2018 00:22 Seq: 4383794 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	200	18	200	U
Selenium	-1.652	1.1	2	J
Silver	2	0.2	2	U
Sodium	32.82	14	200	J
Thallium	2	0.2	2	U
Vanadium	5	0.6	5	U
Zinc	4	2	4	U

CCB30 Date: 06-Jan-2018 00:48 Seq: 4383806 CCB Units: ug/L

Analyte	Result	MDL	Report Limit	Qual
Aluminum	10	1.8	10	U
Antimony	0.745	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

Form 3 - BLANKS

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS17121224

Run ID: ICPMS04_308513
Instrument: ICPMS04
Method: SW6020

CCB30	Date: 06-Jan-2018 00:48		Seq: 4383806	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
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	20.49	18	200	J	
Selenium	-1.74	1.1	2	J	
Silver	2	0.2	2	U	
Sodium	21.9	14	200	J	
Thallium	2	0.2	2	U	
Vanadium	5	0.6	5	U	
Zinc	4	2	4	U	

CCB31	Date: 06-Jan-2018 00:59		Seq: 4383811	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Aluminum	10	1.8	10	U	
Antimony	1.227	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	20.93	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	

ALS Group USA, Corp Date: 18-Jan-18

Form 4 - ICP Interference Check Sample

Client: Bhate Environmental Associates, Inc. Run ID:ICPMS04_308513
Project: LHAAP 18/24 Instrument:ICPMS04
WorkOrder: HS17121224 Method:SW6020

ICSA	Date: 05-Jan-2018 11:39	Seq: 4382240	ICSA	Units: ug/L
Analyte	**True**	**Found**	**%R**	
Aluminum	100000	96260	96.3	
Antimony		0.29	0	
Arsenic		-0.024	0	
Barium		-0.097	0	
Beryllium		0.01	0	
Cadmium		0.612	0	
Calcium	100000	97460	97.5	
Chromium		0.006	0	
Cobalt		0.013	0	
Copper		0.141	0	
Iron	100000	98740	98.7	
Lead		0.104	0	
Magnesium	100000	99630	99.6	
Manganese		0.315	0	
Nickel		0.69	0	
Potassium	100000	103400	103	
Selenium		-0.306	0	
Silver		0.012	0	
Sodium	100000	98830	98.8	
Thallium		0.062	0	
Vanadium		-0.191	0	
Zinc		0.28	0	

ICSAB	Date: 05-Jan-2018 11:41	Seq: 4382241	ICSAB	Units: ug/L
Analyte	**True**	**Found**	**%R**	
Aluminum	100500	97120	96.6	
Antimony	100	103.3	103	
Arsenic	100	93.73	93.7	
Barium	100	102.7	103	
Beryllium	100	100.9	101	
Cadmium	100	100.7	101	
Calcium	110000	105500	95.9	
Chromium	100	95.82	95.8	
Cobalt	100	96.91	96.9	
Copper	100	95.58	95.6	
Iron	110000	104500	95.0	
Lead	100	101.6	102	
Magnesium	110000	108100	98.3	
Manganese	100	97.48	97.5	
Nickel	100	101.9	102	
Potassium	110000	113500	103	
Selenium	100	108.4	108	
Silver	100	98.65	98.7	
Sodium	110000	107600	97.9	
Thallium	100	98.86	98.9	
Vanadium	100	96.92	96.9	
Zinc	100	101.9	102	

ICSA	Date: 05-Jan-2018 22:19	Seq: 4383375	ICSA	Units: ug/L
Analyte	**True**	**Found**	**%R**	
Aluminum	100000	62610	62.6	
Antimony		0.012	0	
Arsenic		-0.048	0	
Barium		0.044	0	
Beryllium		0.002	0	
Cadmium		0.688	0	
cium	100000	96520	96.5	

ALS Group USA, Corp Date: 18-Jan-18

Form 4 - ICP Interference Check Sample

Client: Bhate Environmental Associates, Inc. Run ID:ICPMS04_308513
Project: LHAAP 18/24 Instrument:ICPMS04
WorkOrder: HS17121224 Method:SW6020

ICSA	Date: 05-Jan-2018 22:19	Seq: 4383375	ICSA	Units: ug/L
Analyte	**True**	**Found**	**%R**	
Chromium		0.122	0	
Cobalt		0.028	0	
Copper		-0.044	0	
Iron	100000	93010	93.0	
Lead		0.08	0	
Magnesium	100000	95380	95.4	
Manganese		0.078	0	
Nickel		0.125	0	
Potassium	100000	97530	97.5	
Selenium		-2.298	0	
Silver		0.04	0	
Sodium	100000	96000	96.0	
Thallium		0.009	0	
Vanadium		-0.227	0	
Zinc		0.882	0	

ICSAB	Date: 05-Jan-2018 22:22	Seq: 4383376	ICSAB	Units: ug/L
Analyte	**True**	**Found**	**%R**	
Aluminum	100500	61790	61.5	
Antimony	100	97.07	97.1	
Arsenic	100	97.22	97.2	
Barium	100	99.66	99.7	
Beryllium	100	104.9	105	
Cadmium	100	98.64	98.6	
Calcium	110000	104700	95.2	
Chromium	100	94.52	94.5	
Cobalt	100	94.81	94.8	
Copper	100	95.39	95.4	
Iron	110000	101200	92.0	
Lead	100	98.32	98.3	
Magnesium	110000	102500	93.2	
Manganese	100	96.05	96.0	
Nickel	100	95.69	95.7	
Potassium	110000	106000	96.4	
Selenium	100	95.08	95.1	
Silver	100	92.8	92.8	
Sodium	110000	103800	94.4	
Thallium	100	96.48	96.5	
Vanadium	100	96.08	96.1	
Zinc	100	98.36	98.4	

ICSA	Date: 06-Jan-2018 01:06	Seq: 4383814	ICSA	Units: ug/L
Analyte	**True**	**Found**	**%R**	
Aluminum	100000	60960	61.0	
Antimony		0.582	0	
Arsenic		-0.205	0	
Barium		-0.004	0	
Beryllium		0.014	0	
Cadmium		0.716	0	
Calcium	100000	96530	96.5	
Chromium		0.239	0	
Cobalt		0.031	0	
Copper		-0.083	0	
Iron	100000	92210	92.2	
Lead		0.092	0	
Magnesium	100000	93080	93.1	
nganese		0.234	0	

ALS Group USA, Corp Date: 18-Jan-18

Form 4 - ICP Interference Check Sample

Client: Bhate Environmental Associates, Inc. Run ID:ICPMS04_308513
Project: LHAAP 18/24 Instrument:ICPMS04
WorkOrder: HS17121224 Method:SW6020

ICSA	Date: 06-Jan-2018 01:06	Seq: 4383814	ICSA	Units: ug/L
Analyte	**True**	**Found**	**%R**	
Nickel		0.506	0	
Potassium	100000	96310	96.3	
Selenium		-0.132	0	
Silver		0.035	0	
Sodium	100000	94160	94.2	
Thallium		0.021	0	
Vanadium		-0.277	0	
Zinc		1.023	0	

ICSAB	Date: 06-Jan-2018 01:08	Seq: 4383815	ICSAB	Units: ug/L
Analyte	**True**	**Found**	**%R**	
Aluminum	100500	61490	61.2	
Antimony	100	101.9	102	
Arsenic	100	101.9	102	
Barium	100	102.4	102	
Beryllium	100	108.1	108	
Cadmium	100	100.6	101	
Calcium	110000	109500	99.6	
Chromium	100	100.6	101	
Cobalt	100	100.7	101	
Copper	100	99.13	99.1	
Iron	110000	104800	95.3	
Lead	100	99.98	100.0	
Magnesium	110000	102400	93.1	
Manganese	100	97.96	98.0	
Nickel	100	96.59	96.6	
Potassium	110000	106400	96.7	
Selenium	100	99.62	99.6	
Silver	100	96.37	96.4	
Sodium	110000	104900	95.4	
Thallium	100	98.17	98.2	
Vanadium	100	100.2	100	
Zinc	100	99.07	99.1	

ALS Group USA, Corp Date: 18-Jan-18

Form 5A - Matrix Spike/Matrix Spike Duplicate Recovery

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS17121224

Date Analyzed: 05-Jan-2018 13:05
Date Extracted: 04-Jan-2018 12:18
Units: ug/L

Matrix Spike: HS17121169-01MS
Client Sample ID:

Analysis Method: SW6020

Analyte	Sample Result	MS Result	Spike Amount	% Rec	MSD Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
Aluminum	49.91	147.7	100.0	97.8	153.5	100.0	104	80-120	3.84	20
Antimony	0.8430	48.78	50.00	95.9	50.06	50.00	98.4	80-120	2.60	20
Arsenic	1.429	51.14	50.00	99.4	49.34	50.00	95.8	80-120	3.59	20
Barium	679.5	704.5	50.00	50.0	722.1	50.00	85.3	80-120	2.47	20
Beryllium	2.000	49.68	50.00	99.2	50.56	50.00	101	80-120	1.74	20
Cadmium	0.3260	47.33	50.00	94.0	47.05	50.00	93.4	80-120	0.593	20
Calcium	40330	45130	5000	96.1	45630	5000	106	80-120	1.11	20
Chromium	1.900	48.92	50.00	94.0	53.02	50.00	102	80-120	8.06	20
Cobalt	8.769	55.23	50.00	92.9	57.64	50.00	97.8	80-120	4.28	20
Copper	1.379	48.57	50.00	94.4	50.54	50.00	98.3	80-120	3.97	20
Iron	890.9	5774	5000	97.7	5944	5000	101	80-120	2.90	20
Lead	2.000	46.83	50.00	93.2	47.70	50.00	94.9	80-120	1.83	20
Magnesium	32370	35500	5000	62.6	37090	5000	94.3	80-120	4.37	20
Manganese	524.4	563.1	50.00	77.4	582.8	50.00	117	80-120	3.44	20
Nickel	13.95	59.84	50.00	91.8	62.42	50.00	97.0	80-120	4.22	20
Potassium	1644	6515	5000	97.4	6661	5000	100	80-120	2.23	20
Selenium	2.000	50.77	50.00	101	42.20	50.00	83.4	80-120	18.4	20
Silver	2.000	45.21	50.00	90.4	47.37	50.00	94.8	80-120	4.66	20
Sodium	240300	243600	5000	67.7	253400	5000	262	80-120	3.91	20
Thallium	2.000	45.48	50.00	91.0	45.80	50.00	91.6	80-120	0.703	20
Vanadium	0.6270	47.68	50.00	94.1	48.92	50.00	96.6	80-120	2.57	20
Zinc	120.7	168.3	50.00	95.2	173.4	50.00	106	80-120	3.02	20

ALS Group USA, Corp Date: 18-Jan-18

Form 5B - Post Digest Sample Recovery

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS17121224

Date Analyzed: 05-Jan-2018 13:07
Date Extracted: 04-Jan-2018 12:18
Units: ug/L

Lab Sample ID: HS17121169-01PDS
Client Sample ID:

Analysis Method: SW6020

Analyte	Sample Result	PDS Result	Spike Amount	% Rec	% Rec Limits
Aluminum	49.91	151.1	100	101	75-125
Antimony	0.843	95.14	100	94	75-125
Arsenic	1.429	100.2	100	99	75-125
Barium	679.5	760.5	100	81	75-125
Beryllium	0	113.2	100	113	75-125
Cadmium	0.326	97.41	100	97	75-125
Calcium	40330	51810	10000	115	75-125
Chromium	1.9	103.3	100	101	75-125
Cobalt	8.769	107.5	100	99	75-125
Copper	1.379	99.9	100	99	75-125
Iron	890.9	11070	10000	102	75-125
Lead	0	98.63	100	98	75-125
Magnesium	32370	41240	10000	89	75-125
Manganese	524.4	616.9	100	93	75-125
Nickel	13.95	111	100	97	75-125
Potassium	1644	12100	10000	105	75-125
Selenium	0	113.2	100	113	75-125
Silver	0	97.71	100	98	75-125
Thallium	0	99.34	100	99	75-125
Vanadium	0.627	102.2	100	102	75-125
Zinc	120.7	223	100	102	75-125
Sodium	240300	270200	50000	60	75-125

ALS Group USA, Corp Date: 18-Jan-18

Form 7 - Laboratory Control Sample

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS17121224

Date Analyzed: 05-Jan-2018 12:54
Date Extracted: 04-Jan-2018 12:18
Units: ug/L

Lab Sample ID: LCS-124039 Analysis Method: SW6020

Analyte	Spike Amount	LCS Result	% Rec	% Rec Limits
Aluminum	100	105.4	105	80-120
Antimony	50	51.56	103	80-120
Arsenic	50	49.74	100	80-120
Barium	50	48.85	98	80-120
Beryllium	50	50.03	100	80-120
Cadmium	50	49.97	100	80-120
Calcium	5000	4952	99	80-120
Chromium	50	50.99	102	80-120
Cobalt	50	49.69	99	80-120
Copper	50	48.69	97	80-120
Iron	5000	5175	104	80-120
Lead	50	48.74	98	80-120
Magnesium	5000	5149	103	80-120
Manganese	50	49.27	99	80-120
Nickel	50	50.52	101	80-120
Potassium	5000	5156	103	80-120
Selenium	50	50.8	102	80-120
Silver	50	49.94	100	80-120
Sodium	5000	5110	102	80-120
Thallium	50	47.89	96	80-120
Vanadium	50	48.28	97	80-120
Zinc	50	51.56	103	80-120

ALS Group USA, Corp

Date: 18-Jan-18

Form 8 - ICP Serial Dilutions

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS17121224

Date Analyzed: 05-Jan-2018 13:00
Date Extracted: 04-Jan-2018 12:18
Units: ug/L

Lab Sample ID: HS17121169-01SD
Client Sample ID:

Analysis Method: SW6020

Analyte	Sample Result	C	SD Result	C	RPD	Q
Aluminum	49.91		53.21		7	
Antimony	0.843	J	0	U	0	
Arsenic	1.429	J	0	U	0	
Barium	679.5		646.8		5	
Beryllium	0	U	0	U	0	
Cadmium	0.326	J	0	U	0	
Calcium	40330		38070		6	
Chromium	1.9	J	0	U	0	
Cobalt	8.769		8.292	J	5	
Copper	1.379	J	0	U	0	
Iron	890.9		853.1	J	4	
Lead	0	U	0	U	0	
Magnesium	32370		32640		1	
Manganese	524.4		505.8		4	
Nickel	13.95		14.25		2	
Potassium	1644		1780		8	
Selenium	0	U	0	U	0	
Silver	0	U	0	U	0	
Thallium	0	U	0	U	0	
Vanadium	0.627	J	0	U	0	
Zinc	120.7		110.3		9	
Sodium	224000		220500		2	

ALS Group USA, Corp Date: 18-Jan-18

Form 11 - INTERNAL STANDARD ASSOCIATION

Client: Bhate Environmental Associates, Inc. Instrument:ICPMS04
Project: LHAAP 18/24
WorkOrder: HS17121224

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		ArHe
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
111	Cadmium	Indium		Ar
118	Tin	Germanium		Ar
121	Antimony	Germanium		ArHe
135	Barium	Indium		Ar
203	Thallium	Bismuth		Ar
208	Lead	Bismuth		Ar

ALS Group USA, Corp Date: 18-Jan-18

FORM 12 - PREPARATION LOG

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS17121224
Start Date: 04-Jan-2018 09:00 End Date: 04-Jan-2018 13:00

Batch ID: 124039
Prep Code: 3010A
Method: SW3010A
Technician:

SampID	ClientID	Matrix	Init Wt	Init Vol	FinalVol (mL)	PrepFac
HS17121169-01MS				10	10	1
HS17121169-01MSD				10	10	1
HS17121169-01PDS				10	10	1
HS17121169-01SD				10	10	1
HS17121224-01	18CPTMW04SW_122017	Water		10	10	1
HS17121224-03	MW2_122017	Water		10	10	1
HS17121224-04	18CPTMW01SW_122017	Water		10	10	1
HS17121224-05	MW5_122017	Water		10	10	1
HS17121224-06	MW3_122117	Water		10	10	1
LCS-124039				10	10	1
MBLK-124039				10	10	1

ALS Group USA, Corp Date: 18-Jan-18

FORM 13 - ANALYSIS RUN LOG

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS17121224
Start Date: 05-Jan-2018 End Date: 06-Jan-2018

Run ID:ICPMS04_308513
Instrument:ICPMS04
Method:

Sample No.	D/F	Time	FileID	Analytes
ICPMS04_308513_Tune	1	05-Jan-2018 00:00	ICPMS04_308513_Tune_1	
CAL BLK	1	05-Jan-2018 11:13	020CALB.d_4382228	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	05-Jan-2018 11:15	021CALS.d_4382229	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	05-Jan-2018 11:17	022CALS.d_4382230	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	05-Jan-2018 11:19	023CALS.d_4382231	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	05-Jan-2018 11:22	024CALS.d_4382232	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	05-Jan-2018 11:24	025CALS.d_4382233	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
LLICV2	1	05-Jan-2018 11:28	027SMPL.d_4382235	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
LLICV5	1	05-Jan-2018 11:30	028LICV.d_4382236	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
ICB	1	05-Jan-2018 11:33	029_ICB.d_4382237	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
ICV	1	05-Jan-2018 11:35	030_ICV.d_4382238	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
ICSA	1	05-Jan-2018 11:39	032ICSA.d_4382240	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
ICSAB	1	05-Jan-2018 11:41	033ICSB.d_4382241	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	05-Jan-2018 12:15	042_CCB.d_4382293	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	05-Jan-2018 12:19	044_CCV.d_4382295	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	05-Jan-2018 12:47	054_CCV.d_4382329	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	05-Jan-2018 12:50	055_CCB.d_4382330	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
MBLK-124039	1	05-Jan-2018 12:52	056SMPL.d_4382579	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V
LCS-124039	1	05-Jan-2018 12:54	057SMPL.d_4382580	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
ZZZZZZSD	5	05-Jan-2018 13:00	060SMPL.d_4382583	AG AL AS BA BE CA CD CO CR CU FE K MG MN NI PB SB SE TL V ZN
ZZZZZZMS	1	05-Jan-2018 13:03	061SMPL.d_4382584	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
ZZZZZZMSD	1	05-Jan-2018 13:05	062SMPL.d_4382585	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
ZZZZZZPDS	1	05-Jan-2018 13:07	063SMPL.d_4382586	AG AL AS BA BE CA CD CO CR CU FE K MG MN NI PB SB SE TL V ZN
18CPTMW04SW_122017	1	05-Jan-2018 13:09	064SMPL.d_4382587	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
MW2_122017	1	05-Jan-2018 13:11	065SMPL.d_4382588	AG AL AS BE CA CD CO CR CU FE K MG NI PB SB SE TL V ZN
CCV 3	1	05-Jan-2018 13:14	066_CCV.d_4382589	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	05-Jan-2018 13:16	067_CCB.d_4382590	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
18CPTMW01SW_122017	1	05-Jan-2018 13:18	068SMPL.d_4382591	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
MW5_122017	1	05-Jan-2018 13:20	069SMPL.d_4382592	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
MW3_122117	1	05-Jan-2018 13:23	070SMPL.d_4382593	AG AL AS BA BE CA CD CO CR CU FE K MG NI PB SB SE TL V ZN
CCV 4	1	05-Jan-2018 13:40	078_CCV.d_4382601	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	05-Jan-2018 13:42	079_CCB.d_4382602	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	05-Jan-2018 14:07	090_CCV.d_4382613	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	05-Jan-2018 14:09	091_CCB.d_4382614	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN

ALS Group USA, Corp Date: 18-Jan-18

FORM 13 - ANALYSIS RUN LOG

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS17121224
Start Date: 05-Jan-2018 End Date: 06-Jan-2018

Run ID:ICPMS04_308513
Instrument:ICPMS04
Method:

Sample No.	D/F	Time	FileID	Analytes
CCV 6	1	05-Jan-2018 14:34	102_CCV.d_4382625	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	05-Jan-2018 14:36	103_CCB.d_4382626	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	05-Jan-2018 15:01	114_CCV.d_4382937	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	05-Jan-2018 15:03	115_CCB.d_4382938	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCV 8	1	05-Jan-2018 15:27	126_CCV.d_4382949	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 8	1	05-Jan-2018 15:29	127_CCB.d_4382950	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	05-Jan-2018 15:54	138_CCV.d_4382961	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	05-Jan-2018 15:56	139_CCB.d_4382962	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	05-Jan-2018 16:21	150_CCV.d_4383069	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	05-Jan-2018 16:23	151_CCB.d_4383070	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
MW2_122017	5	05-Jan-2018 16:43	159SMPL.d_4383094	BA MN
MW3_122117	5	05-Jan-2018 16:45	160SMPL.d_4383095	MN
CCV 11	1	05-Jan-2018 16:49	162_CCV.d_4383097	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	05-Jan-2018 16:51	163_CCB.d_4383098	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	05-Jan-2018 17:16	174_CCV.d_4383201	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	05-Jan-2018 17:18	175_CCB.d_4383202	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	05-Jan-2018 17:45	187_CCB.d_4383214	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	05-Jan-2018 17:47	188_CCV.d_4383215	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
MBLK-124039	1	05-Jan-2018 17:59	193SMPL.d_4383227	ZN
CCV 14	1	05-Jan-2018 18:12	199_CCV.d_4383253	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	05-Jan-2018 18:14	200_CCB.d_4383254	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	05-Jan-2018 18:39	211_CCV.d_4383265	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	05-Jan-2018 18:41	212_CCB.d_4383266	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	05-Jan-2018 19:05	223_CCV.d_4383297	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	05-Jan-2018 19:07	224_CCB.d_4383298	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	05-Jan-2018 19:27	230_CCV.d_4383304	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
CCB 17	1	05-Jan-2018 19:29	231_CCB.d_4383305	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	05-Jan-2018 19:52	236CALB.d_4383308	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	05-Jan-2018 19:55	237CALS.d_4383309	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	05-Jan-2018 19:57	238CALS.d_4383310	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	05-Jan-2018 19:59	239CALS.d_4383311	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	05-Jan-2018 20:01	240CALS.d_4383312	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	05-Jan-2018 20:03	241CALS.d_4383313	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
ICCV 18	1	05-Jan-2018 20:06	242_ICV.d_4383314	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
[illegible]CV2	1	05-Jan-2018 20:08	243SMPL.d_4383315	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN

ALS Group USA, Corp Date: 18-Jan-18

FORM 13 - ANALYSIS RUN LOG

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS17121224
Start Date: 05-Jan-2018 End Date: 06-Jan-2018

Run ID:ICPMS04_308513
Instrument:ICPMS04
Method:

Sample No.	D/F	Time	FileID	Analytes
LLCCV5	1	05-Jan-2018 20:10	244LICV.d_4383316	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
ICCB 18	1	05-Jan-2018 20:12	245_ICB.d_4383317	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
ZZZZZZSD	25	05-Jan-2018 20:17	247SMPL.d_4383319	NA
ZZZZZZPDS	5	05-Jan-2018 20:19	248SMPL.d_4383320	NA
MW2_122017	5	05-Jan-2018 20:21	249SMPL.d_4383321	NA
MW3_122117	5	05-Jan-2018 20:24	250SMPL.d_4383322	NA
CCV 19	1	05-Jan-2018 20:26	251_CCV.d_4383323	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	05-Jan-2018 20:28	252_CCB.d_4383324	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	05-Jan-2018 20:30	253_CCV.d_4383325	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	05-Jan-2018 20:32	254_CCB.d_4383326	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	05-Jan-2018 20:57	265_CCV.d_4383337	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	05-Jan-2018 20:59	266_CCB.d_4383338	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	05-Jan-2018 21:30	277_CCV.d_4383353	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	05-Jan-2018 21:32	278_CCB.d_4383354	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	05-Jan-2018 21:49	286_CCV.d_4383362	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	05-Jan-2018 21:52	287_CCB.d_4383363	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	05-Jan-2018 21:57	289CALB.d_4383365	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	05-Jan-2018 21:59	290CALS.d_4383366	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	05-Jan-2018 22:02	291CALS.d_4383367	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	05-Jan-2018 22:04	292CALS.d_4383368	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	05-Jan-2018 22:06	293CALS.d_4383369	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	05-Jan-2018 22:08	294CALS.d_4383370	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
ICCV 24	1	05-Jan-2018 22:10	295_ICV.d_4383371	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
LLCCV2	1	05-Jan-2018 22:13	296SMPL.d_4383372	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
LLCCV5	1	05-Jan-2018 22:15	297LICV.d_4383373	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
ICCB 24	1	05-Jan-2018 22:17	298_ICB.d_4383374	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
ICSA	1	05-Jan-2018 22:19	299ICSA.d_4383375	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
ICSAB	1	05-Jan-2018 22:22	300ICSB.d_4383376	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	05-Jan-2018 22:33	304_CCV.d_4383380	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	05-Jan-2018 22:36	305_CCB.d_4383381	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	05-Jan-2018 23:00	316_CCV.d_4383757	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	05-Jan-2018 23:02	317_CCB.d_4383758	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	05-Jan-2018 23:27	328_CCV.d_4383769	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	05-Jan-2018 23:29	329_CCB.d_4383770	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	05-Jan-2018 23:53	340_CCV.d_4383781	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN

ALS Group USA, Corp Date: 18-Jan-18

FORM 13 - ANALYSIS RUN LOG

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
WorkOrder: HS17121224
Start Date: 05-Jan-2018 End Date: 06-Jan-2018

Run ID:ICPMS04_308513
Instrument:ICPMS04
Method:

Sample No.	D/F	Time	FileID	Analytes
CCB 28	1	05-Jan-2018 23:55	341_CCB.d_4383782	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	06-Jan-2018 00:20	352_CCV.d_4383793	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	06-Jan-2018 00:22	353_CCB.d_4383794	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	06-Jan-2018 00:46	364_CCV.d_4383805	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	06-Jan-2018 00:48	365_CCB.d_4383806	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	06-Jan-2018 00:57	369_CCV.d_4383810	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	06-Jan-2018 00:59	370_CCB.d_4383811	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
LLICV2	1	06-Jan-2018 01:02	371SMPL.d_4383812	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
LLICV5	1	06-Jan-2018 01:04	372LICV.d_4383813	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
ICSA	1	06-Jan-2018 01:06	373ICSA.d_4383814	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN
ICSAB	1	06-Jan-2018 01:08	374ICSB.d_4383815	AG AL AS BA BE CA CD CO CR CU FE K MG MN NA NI PB SB SE TL V ZN

Calibration Blank Report

Sample Table

Sample Name	CAL BLK
Data File Name	020CALB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-05T11:13:19-06:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	10	1000.00
B	11	1	nogas	10213	0.06
Na	23	1	nogas	64799	0.00
Mg	24	1	nogas	2101	3.34
Al	27	1	nogas	8436	0.04
P	31	1	nogas	6968	0.09
K	39	1	nogas	867943	0.00
Ca	43	1	nogas	93	65.28
Ca	44	1	nogas	11938	0.01
Ti	47	1	nogas	27	324.76
V	51	1	nogas	57975	0.01
Cr	52	1	nogas	3594	0.13
Mn	55	1	nogas	3847	0.03
Fe	56	1	nogas	198495	0.00
Co	59	1	nogas	83	22.00
Ni	60	1	nogas	117	18.49
Cu	63	1	nogas	3234	0.24
Zn	66	1	nogas	347	14.08
As	75	1	nogas	9506	0.04
Se	77	1	nogas	3174	0.10
Se	82	1	nogas	203	22.47
Sr	88	1	nogas	227	5.95
Ag	107	1	nogas	83	92.58
Sn	118	1	nogas	497	2.04
Sb	121	1	nogas	173	6.93
Ba	137	1	nogas	183	11.26
Tl	205	1	nogas	97	32.69
Pb	208	1	nogas	137	30.45
Li	7	1	nogas	17395	0.02
Si	28	1	nogas	566648	0.00
La	139	1	nogas	67	149.81
Na	23	2	He	3467	0.20
Mg	24	2	He	37	227.24
Al	27	2	He	90	42.77
K	39	2	He	5361	0.10
Ca	44	2	He	43	110.86
V	51	2	He	108	13.39
Cr	52	2	He	173	22.66
Mn	55	2	He	17	749.40
Fe	56	2	He	690	2.13
Co	59	2	He	13	649.52
Ni	60	2	He	17	749.40

Calibration Blank Report

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Cu	63	2	He	483	3.86
Zn	66	2	He	3	5196.15
As	75	2	He	4	3898.09
Sb	121	2	He	17	207.85
Se	78	2	He	3	3747.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Ge	72	1	nogas	522917	0.49
In	115	1	nogas	627838	0.42
Li	6	1	nogas	211473	1.24
Bi	209	1	nogas	915562	0.63
Ge	72	2	He	29526	0.50

Calibration Standard Report

Sample Table

Sample Name	2/10/200
Data File Name	021CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-05T11:15:31-06:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	020CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	2967	0.27
B	11	1	nogas	15320	0.01
Na	23	1	nogas	985288	0.00
Mg	24	1	nogas	645769	0.00
Al	27	1	nogas	15070	0.03
P	31	1	nogas	8576	0.08
K	39	1	nogas	1569294	0.00
Ca	43	1	nogas	1520	0.55
Ca	44	1	nogas	33262	0.00
Ti	47	1	nogas	657	2.71
V	51	1	nogas	92866	0.00
Cr	52	1	nogas	13465	0.04
Mn	55	1	nogas	15227	0.02
Fe	56	1	nogas	1135214	0.00
Co	59	1	nogas	9176	0.06
Ni	60	1	nogas	2037	0.22
Cu	63	1	nogas	7905	0.04
Zn	66	1	nogas	2224	0.13
As	75	1	nogas	14520	0.01
Se	77	1	nogas	4254	0.15
Se	82	1	nogas	203	6.09
Sr	88	1	nogas	13235	0.03
Mo	95	1	nogas	2757	0.29
Ag	107	1	nogas	7532	0.02
Cd	111	1	nogas	1703	0.68
Sn	118	1	nogas	5124	0.17
Sb	121	1	nogas	7115	0.07
Ba	137	1	nogas	2334	0.43
Tl	205	1	nogas	19606	0.02
Pb	208	1	nogas	15645	0.02
Si	28	1	nogas	742259	0.00
La	139	1	nogas	60	55.56
Na	23	2	He	36885	0.00
Mg	24	2	He	15067	0.02
Al	27	2	He	153	31.35
K	39	2	He	12788	0.02
Ca	43	2	He	23	106.04
Ca	44	2	He	400	1.65
V	51	2	He	727	1.06
Cr	52	2	He	833	1.96

Calibration Standard Report

Mn	55	2	He	463	6.20
Fe	56	2	He	61887	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Co	59	2	He	1297	0.80
Ni	60	2	He	320	3.52
Cu	63	2	He	1417	0.22
Zn	66	2	He	183	19.81
As	75	2	He	97	14.27
Sb	121	2	He	923	0.41
Se	78	2	He	13	190.41

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	526041	0.75	522917	100.60	70	125	
In	115	1	nogas	633423	1.11	627838	100.89	70	125	
Li	6	1	nogas	213697	1.27	211473	101.05	70	125	
Bi	209	1	nogas	923824	1.44	915562	100.90	70	125	
Ge	72	2	He	28845	3.02	29526	97.69	70	125	

Calibration Standard Report

Sample Table

Sample Name	5/25/500
Data File Name	022CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-05T11:17:43-06:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	
ISTD Ref File Name	020CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	7952	0.06
B	11	1	nogas	26550	0.01
Na	23	1	nogas	2361000	0.00
Mg	24	1	nogas	1636029	0.00
Al	27	1	nogas	28216	0.00
P	31	1	nogas	12198	0.03
K	39	1	nogas	2610671	0.00
Ca	43	1	nogas	3517	0.06
Ca	44	1	nogas	65907	0.00
Ti	47	1	nogas	1697	0.41
V	51	1	nogas	100143	0.00
Cr	52	1	nogas	26090	0.01
Mn	55	1	nogas	31890	0.01
Fe	56	1	nogas	2584526	0.00
Co	59	1	nogas	22769	0.01
Ni	60	1	nogas	4984	0.05
Cu	63	1	nogas	15497	0.04
Zn	66	1	nogas	4741	0.06
As	75	1	nogas	16638	0.00
Se	77	1	nogas	4167	0.09
Se	82	1	nogas	387	3.43
Sr	88	1	nogas	31099	0.01
Mo	95	1	nogas	6735	0.05
Ag	107	1	nogas	19268	0.02
Cd	111	1	nogas	3707	0.16
Sn	118	1	nogas	12352	0.04
Sb	121	1	nogas	17510	0.02
Ba	137	1	nogas	5728	0.01
Tl	205	1	nogas	49062	0.00
Pb	208	1	nogas	38756	0.00
Si	28	1	nogas	1022196	0.00
La	139	1	nogas	50	40.00
Na	23	2	He	87424	0.00
Mg	24	2	He	38743	0.01
Al	27	2	He	263	9.82
K	39	2	He	24878	0.01
Ca	43	2	He	70	81.63
Ca	44	2	He	903	1.58
V	51	2	He	1667	0.12
Cr	52	2	He	2074	0.27

Calibration Standard Report

Mn	55	2	He	1170	0.13
Fe	56	2	He	156205	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Co	59	2	He	2944	0.19
Ni	60	2	He	820	0.54
Cu	63	2	He	2587	0.19
Zn	66	2	He	450	3.08
As	75	2	He	242	3.42
Sb	121	2	He	1913	0.72
Se	78	2	He	32	58.59

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	533572	0.70	522917	102.04	70	125	
In	115	1	nogas	633287	1.62	627838	100.87	70	125	
Li	6	1	nogas	206728	1.20	211473	97.76	70	125	
Bi	209	1	nogas	919580	0.98	915562	100.44	70	125	
Ge	72	2	He	29753	0.69	29526	100.77	70	125	

Calibration Standard Report

Sample Table

Sample Name	10/50/1000
Data File Name	023CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-05T11:19:54-06:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	
ISTD Ref File Name	020CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	15550	0.03
B	11	1	nogas	44201	0.01
Na	23	1	nogas	4522233	0.00
Mg	24	1	nogas	3179377	0.00
Al	27	1	nogas	51041	0.00
P	31	1	nogas	17519	0.02
K	39	1	nogas	4246746	0.00
Ca	43	1	nogas	6571	0.08
Ca	44	1	nogas	121231	0.00
Ti	47	1	nogas	3417	0.26
V	51	1	nogas	118725	0.00
Cr	52	1	nogas	45667	0.01
Mn	55	1	nogas	59108	0.00
Fe	56	1	nogas	4900069	0.00
Co	59	1	nogas	45701	0.01
Ni	60	1	nogas	9940	0.04
Cu	63	1	nogas	27653	0.01
Zn	66	1	nogas	8806	0.01
As	75	1	nogas	18894	0.03
Se	77	1	nogas	3821	0.17
Se	82	1	nogas	543	8.13
Sr	88	1	nogas	63597	0.00
Mo	95	1	nogas	13569	0.03
Ag	107	1	nogas	37533	0.00
Cd	111	1	nogas	8279	0.01
Sn	118	1	nogas	23958	0.02
Sb	121	1	nogas	34256	0.01
Ba	137	1	nogas	11471	0.04
Tl	205	1	nogas	97345	0.00
Pb	208	1	nogas	77116	0.00
Si	28	1	nogas	1596541	0.00
La	139	1	nogas	103	23.57
Na	23	2	He	174307	0.00
Mg	24	2	He	77941	0.00
Al	27	2	He	420	7.88
K	39	2	He	45887	0.00
Ca	43	2	He	157	32.93
Ca	44	2	He	1890	0.85
V	51	2	He	3266	0.06
Cr	52	2	He	4141	0.17

Calibration Standard Report

Mn	55	2	He	2003	0.43
Fe	56	2	He	314350	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Co	59	2	He	5698	0.08
Ni	60	2	He	1653	0.40
Cu	63	2	He	5011	0.12
Zn	66	2	He	843	1.00
As	75	2	He	446	0.95
Sb	121	2	He	3764	0.03
Se	78	2	He	25	230.88

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	532193	0.63	522917	101.77	70	125	
In	115	1	nogas	647527	1.19	627838	103.14	70	125	
Li	6	1	nogas	208601	1.24	211473	98.64	70	125	
Bi	209	1	nogas	922495	0.97	915562	100.76	70	125	
Ge	72	2	He	30013	2.19	29526	101.65	70	125	

Calibration Standard Report

Sample Table

Sample Name	100/500/10K
Data File Name	024CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-05T11:22:05-06:00
Sample Type	CalStd
Level	5
Dilution	1
Comment	
ISTD Ref File Name	020CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	154115	0.00
B	11	1	nogas	360267	0.00
Na	23	1	nogas	42045199	0.00
Mg	24	1	nogas	29561656	0.00
Al	27	1	nogas	397459	0.00
P	31	1	nogas	110879	0.00
K	39	1	nogas	32361532	0.00
Ca	43	1	nogas	61612	0.00
Ca	44	1	nogas	1023330	0.00
Ti	47	1	nogas	31576	0.01
V	51	1	nogas	539563	0.00
Cr	52	1	nogas	412275	0.00
Mn	55	1	nogas	528318	0.00
Fe	56	1	nogas	43965426	0.00
Co	59	1	nogas	431318	0.00
Ni	60	1	nogas	95017	0.00
Cu	63	1	nogas	236590	0.00
Zn	66	1	nogas	80224	0.00
As	75	1	nogas	89035	0.00
Se	77	1	nogas	7392	0.14
Se	82	1	nogas	4294	0.18
Sr	88	1	nogas	598274	0.00
Mo	95	1	nogas	126094	0.00
Ag	107	1	nogas	351284	0.00
Cd	111	1	nogas	76865	0.00
Sn	118	1	nogas	221915	0.00
Sb	121	1	nogas	318275	0.00
Ba	137	1	nogas	110483	0.00
Tl	205	1	nogas	953657	0.00
Pb	208	1	nogas	740906	0.00
Si	28	1	nogas	8746590	0.00
La	139	1	nogas	240	7.57
Na	23	2	He	1610580	0.00
Mg	24	2	He	733773	0.00
Al	27	2	He	2867	0.38
K	39	2	He	379359	0.00
Ca	43	2	He	833	1.08
Ca	44	2	He	16154	0.01
V	51	2	He	29558	0.00
Cr	52	2	He	37498	0.01

Calibration Standard Report

Mn	55	2	He	19438	0.01
Fe	56	2	He	2926201	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Co	59	2	He	54603	0.01
Ni	60	2	He	15114	0.02
Cu	63	2	He	42446	0.00
Zn	66	2	He	7418	0.07
As	75	2	He	4289	0.05
Sb	121	2	He	34416	0.00
Se	78	2	He	290	2.18

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	527535	0.74	522917	100.88	70	125	
In	115	1	nogas	635889	1.67	627838	101.28	70	125	
Li	6	1	nogas	224973	0.66	211473	106.38	70	125	
Bi	209	1	nogas	905005	0.79	915562	98.85	70	125	
Ge	72	2	He	29476	1.70	29526	99.83	70	125	

Calibration Standard Report

Sample Table

Sample Name	200/1000/20K
Data File Name	025CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-05T11:24:17-06:00
Sample Type	CalStd
Level	6
Dilution	1
Comment	
ISTD Ref File Name	020CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	302652	0.00
B	11	1	nogas	738369	0.00
Na	23	1	nogas	85407744	0.00
Mg	24	1	nogas	59159562	0.00
Al	27	1	nogas	758099	0.00
P	31	1	nogas	215034	0.00
K	39	1	nogas	63469379	0.00
Ca	43	1	nogas	125990	0.00
Ca	44	1	nogas	2092637	0.00
Ti	47	1	nogas	63044	0.00
V	51	1	nogas	987042	0.00
Cr	52	1	nogas	807025	0.00
Mn	55	1	nogas	1059870	0.00
Fe	56	1	nogas	90013012	0.00
Co	59	1	nogas	867238	0.00
Ni	60	1	nogas	190102	0.00
Cu	63	1	nogas	472440	0.00
Zn	66	1	nogas	155592	0.00
As	75	1	nogas	161437	0.00
Se	77	1	nogas	9456	0.01
Se	82	1	nogas	8519	0.03
Sr	88	1	nogas	1212949	0.00
Mo	95	1	nogas	257786	0.00
Ag	107	1	nogas	697919	0.00
Cd	111	1	nogas	153471	0.00
Sn	118	1	nogas	451638	0.00
Sb	121	1	nogas	654400	0.00
Ba	137	1	nogas	220817	0.00
Tl	205	1	nogas	1940365	0.00
Pb	208	1	nogas	1486562	0.00
Si	28	1	nogas	16246759	0.00
La	139	1	nogas	237	13.16
Na	23	2	He	3148099	0.00
Mg	24	2	He	1508187	0.00
Al	27	2	He	5344	0.10
K	39	2	He	767878	0.00
Ca	43	2	He	1833	0.41
Ca	44	2	He	32010	0.01
V	51	2	He	59178	0.00
Cr	52	2	He	74272	0.00

Calibration Standard Report

Mn	55	2	He	38283	0.01
Fe	56	2	He	5662791	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Co	59	2	He	106969	0.00
Ni	60	2	He	29516	0.01
Cu	63	2	He	83117	0.00
Zn	66	2	He	14049	0.04
As	75	2	He	8933	0.04
Sb	121	2	He	70264	0.00
Se	78	2	He	607	0.59

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	524852	1.19	522917	100.37	70	125	
In	115	1	nogas	629999	1.27	627838	100.34	70	125	
Li	6	1	nogas	237496	1.77	211473	112.31	70	125	
Bi	209	1	nogas	902243	0.57	915562	98.55	70	125	
Ge	72	2	He	29132	1.46	29526	98.67	70	125	

Sample Report

Sample Table

Sample Name	LLICV2
Data File Name	027SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-05T11:28:41-06:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	020CALB.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	2.162	2.162	4.57	3177	0.07	2000	
B	11	1	nogas	76.262	76.262	7.40	60961	0.13	2000	
Na	23	1	nogas	221.226	221.226	2.49	1000927	0.02	200000	
Mg	24	1	nogas	220.383	220.383	4.18	650406	0.03	200000	
Al	27	1	nogas	1.837	1.837	6.21	15527	0.01	2000	
K	39	1	nogas	239.686	239.686	6.86	1635308	0.01	200000	
Ca	43	1	nogas	224.777	224.777	6.69	1513	14.85	200000	
Ca	44	1	nogas	195.777	195.777	4.17	32484	0.60	200000	
Ti	47	1	nogas	1.801	1.801	26.43	600	0.30	2000	
V	51	1	nogas	3.453	3.453	22.88	74942	0.00	2000	
Cr	52	1	nogas	2.174	2.174	2.52	12468	0.02	2000	
Mn	55	1	nogas	2.038	2.038	7.13	14720	0.01	2000	
Fe	56	1	nogas	203.307	203.307	4.21	1115757	0.02	200000	
Co	59	1	nogas	2.038	2.038	2.79	8976	0.02	2000	
Ni	60	1	nogas	2.035	2.035	10.60	2070	0.10	2000	
Cu	63	1	nogas	1.943	1.943	4.79	7859	0.02	2000	
Zn	66	1	nogas	1.597	1.597	3.56	2094	0.08	2000	
As	75	1	nogas	0.477	0.477	121.40	12215	0.00	2000	
Se	77	1	nogas	14.324	14.324	28.34	3697	0.39	2000	
Se	82	1	nogas	2.414	2.414	32.27	307	0.79	2000	
Sr	88	1	nogas	2.140	2.140	3.98	13266	0.02	2000	
Mo	95	1	nogas	2.088	2.088	0.76	2700	0.08	2000	
Ag	107	1	nogas	2.177	2.177	5.29	7749	0.03	2000	
Cd	111	1	nogas	2.168	2.168	5.05	1677	0.13	2000	
Sn	118	1	nogas	2.038	2.038	3.55	5118	0.04	2000	
Sb	121	1	nogas	2.829	2.829	2.58	9450	0.03	2000	
Ba	137	1	nogas	1.807	1.807	3.12	2194	0.08	2000	
Tl	205	1	nogas	2.152	2.152	2.02	21462	0.01	2000	
Pb	208	1	nogas	2.100	2.100	5.10	16155	0.01	2000	
U	238	1	nogas	2.033	2.033	1.28	38797	0.01	2000	
Si	28	1	nogas	151.035	151.035	7.31	814161	0.02	2000	
La	139	1	nogas	28.103	28.103	226.36	97	29.07	2000	
Au	197	1	nogas	-522.367	-522.367	-87.52	13	-3917.75	2000	
Na	23	2	He	216.490	216.490	5.91	37467	0.58	200000	
Mg	24	2	He	205.593	205.593	0.95	15397	1.34	200000	
Al	27	2	He	1.207	1.207	148.00	157	0.77	2000	
K	39	2	He	208.144	208.144	5.85	13155	1.58	200000	
Ca	43	2	He	186.257	186.257	125.07	17	1117.54	200000	
Ca	44	2	He	226.126	226.126	3.28	403	56.06	200000	
V	51	2	He	2.362	2.362	7.84	809	0.29	2000	
Cr	52	2	He	1.648	1.648	2.00	780	0.21	2000	
Mn	55	2	He	2.444	2.444	37.29	483	0.51	2000	
Fe	56	2	He	214.826	214.826	0.97	61673	0.35	200000	
Co	59	2	He	2.102	2.102	25.50	1137	0.18	2000	

Sample Report

Ni	60	2	He	2.156	2.156	27.79	390	0.55	2000	
Cu	63	2	He	1.829	1.829	31.13	1333	0.14	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Zn	66	2	He	1.943	1.943	44.16	227	0.86	2000	
As	75	2	He	2.420	2.420	7.99	111	2.18	2000	
Sb	121	2	He	2.498	2.498	11.85	887	0.28	2000	
Se	78	2	He	2.488	2.488	159.19	11	23.32	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	529246	1.06	522917	101.21	70	125	
In	115	1	nogas	635852	0.79	627838	101.28	70	125	
Li	6	1	nogas	213529	1.69	211473	100.97	70	125	
Bi	209	1	nogas	926905	0.28	915562	101.24	70	125	
Ge	72	2	He	29082	0.41	29526	98.50	70	125	

Low Level Initial Calibration Verification (LLICV) Report

Sample Table

Sample Name	LLICV5
Data File Name	028LICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-05T11:30:52-06:00
Sample Type	LLICV
Dilution	1
Comment	
ISTD Ref File Name	020CALB.d
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	5.486	1.600	8025	1.35	5	109.7	70	130	
B	11	1	nogas	53.421	4.087	45655	2.80	25	213.7	70	130	LLICV Main CR1 Failed
Na	23	1	nogas	535.304	2.963	2376224	1.86	500	107.1	70	130	
Mg	24	1	nogas	544.963	2.369	1637600	1.33	500	109.0	70	130	
Al	27	1	nogas	5.243	4.132	29054	3.10	5	104.9	70	130	
P	31	1	nogas	22.877	11.536	12078	4.35	25	91.5	70	130	
K	39	1	nogas	533.017	0.978	2612215	0.85	500	106.6	70	130	
Ca	43	1	nogas	528.194	9.805	3497	9.64	500	105.6	70	130	
Ca	44	1	nogas	498.674	3.504	65319	2.83	500	99.7	70	130	
Ti	47	1	nogas	4.393	1.204	1450	1.38	5	87.9	70	130	
V	51	1	nogas	5.826	5.405	87871	1.95	5	116.5	70	130	
Cr	52	1	nogas	5.094	3.305	24808	3.10	5	101.9	70	130	
Mn	55	1	nogas	5.050	1.392	31329	1.54	5	101.0	70	130	
Fe	56	1	nogas	530.134	1.840	2638193	1.51	500	106.0	70	130	
Co	59	1	nogas	5.148	1.508	22992	1.26	5	103.0	70	130	
Ni	60	1	nogas	4.957	6.069	4961	5.74	5	99.1	70	130	
Cu	63	1	nogas	4.997	4.248	15367	3.01	5	99.9	70	130	
Zn	66	1	nogas	5.105	2.849	4937	2.05	5	102.1	70	130	
As	75	1	nogas	3.507	8.822	14803	1.94	5	70.1	70	130	
Se	77	1	nogas	9.671	165.207	3610	15.54	5	193.4	70	130	LLICV Main CR1 Failed
Se	82	1	nogas	4.695	44.393	410	21.95	5	93.9	70	130	
Sr	88	1	nogas	5.070	3.819	31734	4.12	5	101.4	70	130	
Mo	95	1	nogas	5.100	2.639	6725	2.53	5	102.0	70	130	
Ag	107	1	nogas	5.260	1.585	18968	1.27	5	105.2	70	130	
Cd	111	1	nogas	5.450	7.622	4331	7.60	5	109.0	70	130	
Sn	118	1	nogas	5.094	5.125	12368	4.89	5	101.9	70	130	
Sb	121	1	nogas	5.557	2.185	18751	2.19	5	111.1	70	130	
Ba	137	1	nogas	4.799	5.808	5671	5.69	5	96.0	70	130	
Tl	205	1	nogas	4.932	0.758	50242	0.65	5	98.6	70	130	
Pb	208	1	nogas	5.112	3.521	40072	3.62	5	102.2	70	130	
U	238	1	nogas	4.904	0.422	95601	0.26	5	98.1	70	130	
Li	7	1	nogas	5.962	2.927	37686	1.82	5	119.2	70	130	
Si	28	1	nogas	284.944	1.269	1047995	0.70	25	1139.8	70	130	LLICV Main CR1 Failed
La	139	1	nogas	-21.258	-51.209	47	24.74	5	-425.2	70	130	LLICV Main CR1 Failed
Au	197	1	nogas	-238.416	-560.177	10	173.21	5	-4768.3	70	130	LLICV Main CR1 Failed
Na	23	2	He	504.080	2.945	86580	0.86	500	100.8	70	130	
Mg	24	2	He	498.913	0.245	39073	2.20	500	99.8	70	130	
Al	27	2	He	5.186	29.504	273	14.79	5	103.7	70	130	
K	39	2	He	497.005	5.357	25208	2.19	500	99.4	70	130	
Ca	43	2	He	463.775	49.040	43	48.04	500	92.8	70	130	
Ca	44	2	He	459.552	20.304	810	17.29	500	91.9	70	130	
V	51	2	He	4.804	3.195	1598	1.87	5	96.1	70	130	
Cr	52	2	He	5.352	12.134	2247	9.15	5	107.0	70	130	
Mn	55	2	He	4.878	20.353	993	19.56	5	97.6	70	130	
Fe	56	2	He	521.986	2.875	155842	0.83	500	104.4	70	130	
Co	59	2	He	5.306	5.473	2987	6.58	5	106.1	70	130	
Ni	60	2	He	5.012	12.446	850	13.10	5	100.2	70	130	
Cu	63	2	He	4.624	12.346	2600	8.44	5	92.5	70	130	
Zn	66	2	He	3.901	27.099	380	18.42	5	78.0	70	130	
As	75	2	He	5.297	12.958	249	10.91	5	105.9	70	130	
Sb	121	2	He	5.193	10.709	1913	11.69	5	103.9	70	130	
Se	78	2	He	6.793	25.824	25	23.41	5	135.9	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
Ge	72	1	nogas	539708	0.33	522917	103.21	70	125	
In	115	1	nogas	653310	0.08	627838	104.06	70	125	
Li	6	1	nogas	213042	0.41	211473	100.74	70	125	
Bi	209	1	nogas	949450	0.16	915562	103.70	70	125	
Ge	72	2	He	30454	2.16	29526	103.14	70	125	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	ICB
Data File Name	029_ICB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-05T11:33:05-06:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	020CALB.d
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	0.006	210.9	20	100.0	1	
B	11	1	nogas	15.765	3.2	21276	1.9	10	ICB Main CR1 Failed
Na	23	1	nogas	1.555	46.0	72798	3.9	100	
Mg	24	1	nogas	-0.256	-14.9	1367	8.4	100	
Al	27	1	nogas	-1.150	-7.1	4174	6.9	5	
P	31	1	nogas	-3.492	-19.3	6341	2.1	10	
K	39	1	nogas	6.379	67.7	901605	1.7	100	
Ca	43	1	nogas	12.954	57.9	177	26.8	100	
Ca	44	1	nogas	-11.499	-26.8	10920	3.1	100	
Ti	47	1	nogas	0.009	589.9	30	57.7	2.5	
V	51	1	nogas	3.290	16.0	74448	3.4	2.5	ICB Main CR1 Failed
Cr	52	1	nogas	0.253	24.6	4681	5.3	2.5	
Mn	55	1	nogas	-0.024	-70.0	3780	2.4	2.5	
Fe	56	1	nogas	-1.315	-124.8	195627	3.6	100	
Co	59	1	nogas	0.019	56.0	167	27.1	2.5	
Ni	60	1	nogas	-0.083	-26.4	43	48.0	2.5	
Cu	63	1	nogas	-0.196	-60.6	2820	10.5	2.5	
Zn	66	1	nogas	-0.977	-8.3	77	82.8	2.5	
As	75	1	nogas	0.780	61.7	12488	2.8	2.5	
Se	77	1	nogas	25.732	28.3	4097	6.1	2.5	ICB Main CR1 Failed
Se	82	1	nogas	-1.196	-80.4	157	25.8	2.5	
Sr	88	1	nogas	-0.013	-34.1	150	17.6	2.5	
Mo	95	1	nogas	0.021	57.0	27	57.3	2.5	
Ag	107	1	nogas	0.002	9.6	90	0.0	2.5	
Cd	111	1	nogas	0.008	173.2	7	173.2	1	
Sn	118	1	nogas	0.017	206.3	553	16.4	5	
Sb	121	1	nogas	0.202	9.0	840	7.4	2.5	
Ba	137	1	nogas	-0.155	-12.9	13	173.2	2.5	
Tl	205	1	nogas	0.048	3.6	597	2.6	1	
Pb	208	1	nogas	0.010	51.1	227	18.4	2.5	
U	238	1	nogas	0.005	98.3	297	34.6	2.5	
Si	28	1	nogas	4.003	129.3	581782	0.9	5	
La	139	1	nogas	-55.869	-29.1	10	173.2	2.5	
Au	197	1	nogas	277.401	159.4	3	173.2	2.5	ICB Main CR1 Failed
Na	23	2	He	-0.865	-261.1	3340	11.1	100	
Mg	24	2	He	0.436	78.7	70	37.8	100	
Al	27	2	He	-2.642	-36.4	57	44.4	5	
K	39	2	He	-6.551	-40.4	5128	2.4	100	
Ca	43	2	He	0.000	#DIV/0!	0	#DIV/0!	100	
Ca	44	2	He	-22.613	-31.7	7	173.2	100	
V	51	2	He	0.086	64.0	142	12.0	2.5	
Cr	52	2	He	-0.188	-83.0	103	56.7	2.5	
Mn	55	2	He	0.137	79.1	43	48.0	2.5	
Fe	56	2	He	-0.080	-248.6	670	9.3	100	

Initial Calibration Blank (ICB) Report

Co	59	2	He	-0.012	-85.6	7	86.6	2.5	
Ni	60	2	He	-0.404	-9.5	13	43.3	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Cu	63	2	He	-0.158	-90.1	523	11.7	2.5	
Zn	66	2	He	-1.189	-13.7	7	173.2	2.5	
As	75	2	He	0.050	396.1	7	132.3	2.5	
Sb	121	2	He	0.169	20.4	77	15.1	2.5	
Se	78	2	He	0.214	814.8	4	132.3	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	531007	0.57	522917	101.55	70	125	
In	115	1	nogas	647797	1.38	627838	103.18	70	125	
Li	6	1	nogas	218673	1.78	211473	103.40	70	125	
Bi	209	1	nogas	963875	0.56	915562	105.28	70	125	
Ge	72	2	He	29629	1.02	29526	100.35	70	125	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	ICV
Data File Name	030_ICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-05T11:35:20-06:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	020CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	1	nogas	101.418	1.798	156810	0.37	100	101.4	90	110	
B	11	1	nogas	532.281	3.827	383696	2.24	500	106.5	90	110	
Na	23	1	nogas	9893.712	0.801	43254474	0.36	10000	98.9	90	110	
Mg	24	1	nogas	9959.045	1.409	30233806	1.87	10000	99.6	90	110	
Al	27	1	nogas	100.000	1.105	399697	1.46	100	100.0	90	110	
P	31	1	nogas	502.413	1.324	115368	1.35	500	100.5	90	110	
K	39	1	nogas	9929.376	1.273	33109339	0.30	10000	99.3	90	110	
Ca	43	1	nogas	9877.731	1.639	64158	1.50	10000	98.8	90	110	
Ca	44	1	nogas	9747.552	1.625	1055897	0.71	10000	97.5	90	110	
Ti	47	1	nogas	96.605	1.602	31539	0.49	100	96.6	90	110	
V	51	1	nogas	97.540	0.962	532976	0.65	100	97.5	90	110	
Cr	52	1	nogas	99.138	1.278	417294	0.31	100	99.1	90	110	
Mn	55	1	nogas	98.211	1.451	539943	1.02	100	98.2	90	110	
Fe	56	1	nogas	9763.376	0.830	45351599	1.14	10000	97.6	90	110	
Co	59	1	nogas	98.453	0.507	441422	1.36	100	98.5	90	110	
Ni	60	1	nogas	99.904	1.608	98302	1.27	100	99.9	90	110	
Cu	63	1	nogas	100.128	1.333	246189	0.87	100	100.1	90	110	
Zn	66	1	nogas	100.090	0.930	81429	0.88	100	100.1	90	110	
As	75	1	nogas	100.104	2.092	90194	0.71	100	100.1	90	110	
Se	77	1	nogas	100.058	5.952	6781	3.14	100	100.1	90	110	
Se	82	1	nogas	97.226	5.803	4377	4.64	100	97.2	90	110	
Sr	88	1	nogas	98.255	1.288	615140	0.66	100	98.3	90	110	
Mo	95	1	nogas	99.069	2.773	131569	1.67	100	99.1	90	110	
Ag	107	1	nogas	99.710	1.025	360628	0.24	100	99.7	90	110	
Cd	111	1	nogas	101.077	1.942	79453	1.51	100	101.1	90	110	
Sn	118	1	nogas	98.444	0.047	227078	0.39	100	98.4	90	110	
Sb	121	1	nogas	96.880	1.883	326356	1.69	100	96.9	90	110	
Ba	137	1	nogas	101.769	0.952	115149	1.29	100	101.8	90	110	
Tl	205	1	nogas	100.698	1.581	1001844	0.32	100	100.7	90	110	
Pb	208	1	nogas	101.149	2.051	773232	0.97	100	101.1	90	110	
U	238	1	nogas	100.153	2.765	1907008	2.68	100	100.2	90	110	
Li	7	1	nogas	102.201	1.613	384242	0.27	100	102.2	90	110	
Si	28	1	nogas	5224.128	1.126	9142606	0.45	5000	104.5	90	110	
Ba	135	1	nogas	99.986	1.579	67540	1.21	100	100.0	90	110	
La	139	1	nogas	74.616	58.351	147	30.75	100	74.6	90	110	ICV Main CR1 Failed
Au	197	1	nogas	-260.030	-303.541	10	100.00	100	-260.0	90	110	ICV Main CR1 Failed
Tl	203	1	nogas	100.500	0.354	412814	1.62	100	100.5	90	110	
Na	23	2	He	10506.407	1.694	1648640	1.20	10000	105.1	90	110	
Mg	24	2	He	9943.286	1.435	739601	1.44	10000	99.4	90	110	
Al	27	2	He	103.439	2.853	2827	3.61	100	103.4	90	110	
K	39	2	He	10132.716	2.571	386859	0.85	10000	101.3	90	110	
Ca	43	2	He	11399.898	15.562	1020	16.32	10000	114.0	90	110	ICV Main CR1 Failed
Ca	44	2	He	10260.289	3.309	16345	5.51	10000	102.6	90	110	
V	51	2	He	100.987	0.426	29679	3.02	100	101.0	90	110	
Cr	52	2	He	103.616	2.101	38296	2.28	100	103.6	90	110	
Mn	55	2	He	102.439	2.764	19521	4.02	100	102.4	90	110	
Fe	56	2	He	10372.519	3.634	2931236	1.48	10000	103.7	90	110	
Co	59	2	He	101.899	4.773	54239	2.08	100	101.9	90	110	
Ni	60	2	He	99.005	4.336	14583	2.88	100	99.0	90	110	
Cu	63	2	He	103.760	1.260	43161	1.82	100	103.8	90	110	
Zn	66	2	He	105.200	2.157	7445	4.80	100	105.2	90	110	
As	75	2	He	102.393	4.014	4498	1.26	100	102.4	90	110	
Sn	118	2	He	98.480	4.106	24455	2.07	100	98.5	90	110	
Sb	121	2	He	97.921	1.484	33985	1.75	100	97.9	90	110	
Se	78	2	He	101.667	4.062	305	6.83	100	101.7	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	543699	1.20	522917	103.97	70	125	
In	115	1	nogas	646270	0.43	627838	102.94	70	125	
Li	6	1	nogas	225478	1.54	211473	106.62	70	125	

Initial Calibration Verification (ICV) Report

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Bi	209	1	nogas	929117	1.27	915562	101.48	70	125	
Ge	72	2	He	28958	2.84	29526	98.08	70	125	

Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	ICSA
Data File Name	032ICSA.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-05T11:39:42-06:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	020CALB.d
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	0.010	85.9	23	49.5	0	ICSA Main CR1 Failed
B	11	1	nogas	20.844	18.7	23262	10.4	0	
Na	23	1	nogas	100266.206	0.7	428473693	0.9	0	
Mg	24	1	nogas	99629.762	0.6	296013015	0.9	0	
Al	27	1	nogas	96258.681	3.5	354283195	1.8	0	
P	31	1	nogas	99461.566	1.4	20164979	1.2	0	
K	39	1	nogas	103422.090	1.5	316770357	0.3	0	
Ca	43	1	nogas	101631.562	0.7	620855	1.0	0	
Ca	44	1	nogas	100118.333	1.1	10105891	0.7	0	
Ti	47	1	nogas	2088.512	1.3	641646	1.1	0	
V	51	1	nogas	-7.528	-2.8	22420	5.4	0	ICSA Main CR1 Failed
Cr	52	1	nogas	0.249	8.1	4497	3.4	0	ICSA Main CR1 Failed
Mn	55	1	nogas	0.245	27.3	5024	5.1	0	ICSA Main CR1 Failed
Fe	56	1	nogas	99067.467	1.3	431582160	0.9	0	
Co	59	1	nogas	0.091	9.3	467	8.1	0	ICSA Main CR1 Failed
Ni	60	1	nogas	0.690	38.8	760	34.3	0	ICSA Main CR1 Failed
Cu	63	1	nogas	0.567	14.4	4461	3.2	0	ICSA Main CR1 Failed
Zn	66	1	nogas	0.280	33.0	1027	6.9	0	ICSA Main CR1 Failed
As	75	1	nogas	-6.019	-5.7	7052	3.9	0	ICSA Main CR1 Failed
Se	77	1	nogas	-20.775	-44.4	2427	12.6	0	ICSA Main CR1 Failed
Se	82	1	nogas	-0.306	-531.9	187	34.9	0	ICSA Main CR1 Failed
Sr	88	1	nogas	0.940	3.8	5764	2.9	0	ICSA Main CR1 Failed
Mo	95	1	nogas	2041.641	3.3	2553235	1.6	0	
Ag	107	1	nogas	0.012	116.0	123	38.3	0	ICSA Main CR1 Failed
Cd	111	1	nogas	0.612	22.9	450	21.9	0	ICSA Main CR1 Failed
Sn	118	1	nogas	0.104	8.9	703	3.3	0	ICSA Main CR1 Failed
Sb	121	1	nogas	0.290	7.2	1090	5.6	0	ICSA Main CR1 Failed
Ba	137	1	nogas	-0.013	-95.6	163	7.1	0	ICSA Main CR1 Failed
Tl	205	1	nogas	0.065	26.5	707	22.9	0	ICSA Main CR1 Failed
Pb	208	1	nogas	0.104	18.5	883	16.1	0	ICSA Main CR1 Failed
Si	28	1	nogas	64.573	11.9	654337	0.1	0	
La	139	1	nogas	120.860	23.8	183	16.7	0	
Na	23	2	He	98832.006	2.7	15560294	0.9	0	
Mg	24	2	He	98124.309	3.9	7334140	0.9	0	
Al	27	2	He	99611.142	2.9	2615299	1.1	0	
K	39	2	He	100526.284	2.7	3811905	2.2	0	
Ca	43	2	He	101302.229	4.2	9103	3.9	0	
Ca	44	2	He	97462.378	4.7	155521	1.0	0	
V	51	2	He	-0.191	-26.4	58	26.9	0	ICSA Main CR1 Failed
Cr	52	2	He	0.006	1101.8	173	14.5	0	ICSA Main CR1 Failed
Mn	55	2	He	0.315	73.3	77	58.8	0	ICSA Main CR1 Failed
Fe	56	2	He	98739.621	4.5	28040173	1.2	0	
Co	59	2	He	0.013	144.3	20	50.0	0	ICSA Main CR1 Failed
Ni	60	2	He	-0.244	-43.0	37	41.7	0	ICSA Main CR1 Failed
Cu	63	2	He	0.141	76.1	637	3.3	0	ICSA Main CR1 Failed
Zn	66	2	He	-0.269	-299.2	70	75.6	0	ICSA Main CR1 Failed
As	75	2	He	-0.024	-309.6	3	100.1	0	ICSA Main CR1 Failed
Sb	121	2	He	0.437	33.2	170	32.8	0	ICSA Main CR1 Failed
Se	78	2	He	1.145	122.9	7	62.4	0	ICSA Main CR1 Failed

Interference Check Solution A (ICS-A) Report

Interference Check Solution A (ICS-A) Report

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	512070	1.74	522917	97.93	70	125	
In	115	1	nogas	605770	1.43	627838	96.49	70	125	
Li	6	1	nogas	205765	1.07	211473	97.30	70	125	
Bi	209	1	nogas	880987	0.92	915562	96.22	70	125	
Ge	72	2	He	29118	3.56	29526	98.62	70	125	

Interference Check Solution AB (ICS-AB) Report

Sample Table

Sample Name	ICSAB
Data File Name	033ICSB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-05T11:41:59-06:00
Sample Type	ICSB
Dilution	1
Comment	
ISTD Ref File Name	020CALB.d
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	100.941	1.937	154802	0.78	100	100.9	80	120	
B	11	1	nogas	574.526	1.769	410038	1.62	100	574.5	80	120	
Na	23	1	nogas	109405.247	0.680	459968894	0.46	100	109405.2	80	120	
Mg	24	1	nogas	108092.567	1.391	315961824	1.07	100	108092.6	80	120	
Al	27	1	nogas	97117.298	1.380	350407795	1.21	100	97117.3	80	120	ICSB Main CR1 Failed
K	39	1	nogas	113548.150	1.635	340762524	0.72	100	113548.1	80	120	
Ca	43	1	nogas	111999.458	1.190	670490	0.67	100	111999.5	80	120	
Ca	44	1	nogas	110021.176	1.337	10882334	0.36	100	110021.2	80	120	
Ti	47	1	nogas	2215.556	1.291	667063	0.28	100	2215.6	80	120	ICSB Main CR1 Failed
V	51	1	nogas	96.393	6.007	486680	4.60	100	96.4	80	120	
Cr	52	1	nogas	103.044	1.421	400194	0.77	100	103.0	80	120	
Mn	55	1	nogas	102.510	1.423	520008	0.97	100	102.5	80	120	
Fe	56	1	nogas	108953.468	0.938	465161327	0.49	100	108953.5	80	120	
Co	59	1	nogas	102.235	1.154	423029	0.23	100	102.2	80	120	
Ni	60	1	nogas	101.944	1.285	92587	1.73	100	101.9	80	120	
Cu	63	1	nogas	101.161	1.147	229545	1.08	100	101.2	80	120	
Zn	66	1	nogas	101.902	1.482	76500	0.95	100	101.9	80	120	
As	75	1	nogas	98.608	2.254	82174	1.45	100	98.6	80	120	
Se	77	1	nogas	84.390	9.296	5754	3.48	100	84.4	80	120	
Se	82	1	nogas	108.398	1.891	4484	2.84	100	108.4	80	120	
Sr	88	1	nogas	105.193	1.471	607816	0.48	100	105.2	80	120	
Mo	95	1	nogas	2200.564	0.832	2697801	0.70	100	2200.6	80	120	ICSB Main CR1 Failed
Ag	107	1	nogas	98.654	0.569	329352	1.31	100	98.7	80	120	
Cd	111	1	nogas	100.689	1.193	74537	1.44	100	100.7	80	120	
Sn	118	1	nogas	101.397	0.576	220230	0.39	100	101.4	80	120	
Sb	121	1	nogas	103.264	0.339	321069	0.74	100	103.3	80	120	
Ba	137	1	nogas	103.904	2.106	110699	2.03	100	103.9	80	120	
Tl	205	1	nogas	98.358	1.252	913518	1.02	100	98.4	80	120	
Pb	208	1	nogas	101.593	0.480	725064	1.11	100	101.6	80	120	
U	238	1	nogas	104.361	1.574	1855057	2.01	100	104.4	80	120	
Si	28	1	nogas	5820.351	0.552	9339943	1.00	100	5820.4	80	120	ICSB Main CR1 Failed
La	139	1	nogas	211.297	11.845	273	9.21	100	211.3	80	120	
Na	23	2	He	107642.494	1.368	16983331	1.32	100	107642.5	80	120	
Mg	24	2	He	105186.269	0.685	7880791	0.91	100	105186.3	80	120	ICSB Main CR1 Failed
Al	27	2	He	96961.551	2.290	2551395	2.62	100	96961.6	80	120	ICSB Main CR1 Failed
K	39	2	He	106674.295	2.246	4052749	2.17	100	106674.3	80	120	ICSB Main CR1 Failed
Ca	43	2	He	109945.977	2.031	9900	2.41	100	109946.0	80	120	
Ca	44	2	He	105538.168	1.631	168846	1.86	100	105538.2	80	120	
V	51	2	He	96.916	2.215	28688	2.37	100	96.9	80	120	
Cr	52	2	He	95.824	2.572	35684	2.16	100	95.8	80	120	
Mn	55	2	He	97.479	2.704	18707	2.77	100	97.5	80	120	
Fe	56	2	He	104479.171	0.642	29746374	1.05	100	104479.2	80	120	ICSB Main CR1 Failed
Co	59	2	He	96.906	1.679	51989	1.41	100	96.9	80	120	
Ni	60	2	He	92.467	1.623	13729	1.61	100	92.5	80	120	
Cu	63	2	He	95.578	2.754	40090	2.61	100	95.6	80	120	
Zn	66	2	He	97.035	7.506	6922	7.81	100	97.0	80	120	
As	75	2	He	93.729	3.886	4151	4.18	100	93.7	80	120	
Sb	121	2	He	96.636	1.705	33782	1.39	100	96.6	80	120	
Se	78	2	He	101.723	14.780	307	14.37	100	101.7	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	501816	1.03	522917	95.96	70	125	
In	115	1	nogas	608574	0.25	627838	96.93	70	125	
Li	6	1	nogas	223639	1.37	211473	105.75	70	125	
Bi	209	1	nogas	867281	0.86	915562	94.73	70	125	
Ge	72	2	He	29162	0.41	29526	98.77	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	042_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-05T12:15:10-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	020CALB.d
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	0.000	20736.3	10	100.0	1	
B	11	1	nogas	47.600	11.9	41305	9.9	10	CCB Main CR1 Failed
Na	23	1	nogas	38.573	4.6	227855	1.3	100	
Mg	24	1	nogas	2.350	2.8	9005	2.2	100	
Al	27	1	nogas	-1.047	-13.4	4481	11.2	5	
P	31	1	nogas	-4.529	-21.3	6008	2.8	10	
K	39	1	nogas	26.128	9.6	946016	0.2	100	
Ca	43	1	nogas	6.531	146.2	133	43.9	100	
Ca	44	1	nogas	-8.406	-22.1	11034	2.7	100	
Ti	47	1	nogas	0.011	286.8	30	33.3	2.5	
V	51	1	nogas	-4.329	-12.8	37648	6.0	2.5	
Cr	52	1	nogas	-0.170	-52.9	2900	12.1	2.5	
Mn	55	1	nogas	-0.006	-484.0	3804	4.6	2.5	
Fe	56	1	nogas	7.734	12.1	232044	1.3	100	
Co	59	1	nogas	0.020	37.9	167	18.3	2.5	
Ni	60	1	nogas	0.010	597.3	130	42.8	2.5	
Cu	63	1	nogas	-0.288	-17.8	2554	4.0	2.5	
Zn	66	1	nogas	-0.897	-4.6	137	22.4	2.5	
As	75	1	nogas	-5.629	-8.5	7465	4.4	2.5	
Se	77	1	nogas	-18.636	-15.7	2540	3.1	2.5	
Se	82	1	nogas	-2.504	-35.0	100	36.1	2.5	
Sr	88	1	nogas	0.044	24.7	490	12.4	2.5	
Mo	95	1	nogas	0.087	24.9	110	24.1	2.5	
Ag	107	1	nogas	0.020	55.2	153	26.4	2.5	
Cd	111	1	nogas	0.022	124.9	17	124.9	1	
Sn	118	1	nogas	0.047	85.8	603	14.9	5	
Sb	121	1	nogas	0.903	5.9	3087	6.3	2.5	
Ba	137	1	nogas	-0.070	-53.8	107	39.0	2.5	
Tl	205	1	nogas	0.082	23.5	910	21.2	1	
Pb	208	1	nogas	0.034	7.7	393	3.9	2.5	
U	238	1	nogas	0.022	23.7	590	15.1	2.5	
Si	28	1	nogas	30.946	1.4	613168	0.9	5	CCB Main CR1 Failed
La	139	1	nogas	-45.715	-21.3	20	50.0	2.5	
Au	197	1	nogas	532.665	0.0	0	#DIV/0!	2.5	CCB Main CR1 Failed
Na	23	2	He	35.569	14.2	9219	8.6	100	
Mg	24	2	He	2.050	33.1	193	26.0	100	
Al	27	2	He	-2.166	-44.6	70	37.8	5	
K	39	2	He	5.074	271.1	5601	9.7	100	
Ca	43	2	He	0.000	#DIV/0!	0	#DIV/0!	100	
Ca	44	2	He	-2.227	-727.7	40	66.1	100	
V	51	2	He	-0.155	-11.7	70	7.6	2.5	
Cr	52	2	He	-0.180	-99.7	107	63.8	2.5	
Mn	55	2	He	0.152	83.5	47	53.9	2.5	
Fe	56	2	He	2.039	43.8	1287	19.2	100	
Co	59	2	He	-0.006	-287.4	10	100.0	2.5	
Ni	60	2	He	-0.360	-18.8	20	50.0	2.5	

Continuing Calibration Blank (CCB) Report

Cu	63	2	He	-0.448	-32.0	403	15.1	2.5	
Zn	66	2	He	-1.099	-19.3	13	114.6	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
As	75	2	He	-0.001	-15415.0	4	114.6	2.5	
Sb	121	2	He	0.812	22.1	307	21.7	2.5	
Se	78	2	He	0.427	178.9	5	49.5	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	521040	1.00	522917	99.64	70	125	
In	115	1	nogas	630624	0.08	627838	100.44	70	125	
Li	6	1	nogas	210374	1.26	211473	99.48	70	125	
Bi	209	1	nogas	920905	1.17	915562	100.58	70	125	
Ge	72	2	He	29763	0.93	29526	100.80	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	044_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-05T12:19:43-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	020CALB.d
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	99.326	1.730	155593	0.68	100	99.3	90	110	
B	11	1	nogas	508.997	3.489	372323	3.45	500	101.8	90	110	
Na	23	1	nogas	10039.257	1.807	43454802	0.37	10000	100.4	90	110	
Mg	24	1	nogas	9934.165	1.765	29857356	0.13	10000	99.3	90	110	
Al	27	1	nogas	101.165	1.144	392879	0.26	100	101.2	90	110	
P	31	1	nogas	518.414	1.320	115472	0.78	500	103.7	90	110	
K	39	1	nogas	10033.483	1.820	32506513	0.42	10000	100.3	90	110	
Ca	43	1	nogas	9958.949	0.602	62873	1.47	10000	99.6	90	110	
Ca	44	1	nogas	9886.898	0.231	1040903	1.48	10000	98.9	90	110	
Ti	47	1	nogas	99.716	3.148	31642	3.12	100	99.7	90	110	
V	51	1	nogas	91.071	2.856	487535	2.34	100	91.1	90	110	
Cr	52	1	nogas	100.811	0.619	412396	1.14	100	100.8	90	110	
Mn	55	1	nogas	100.818	0.591	538644	0.99	100	100.8	90	110	
Fe	56	1	nogas	9785.521	1.787	44173623	0.85	10000	97.9	90	110	
Co	59	1	nogas	100.398	0.358	437495	1.05	100	100.4	90	110	
Ni	60	1	nogas	101.652	1.373	97208	0.27	100	101.7	90	110	
Cu	63	1	nogas	100.191	1.085	239443	1.42	100	100.2	90	110	
Zn	66	1	nogas	101.429	0.418	80193	0.98	100	101.4	90	110	
As	75	1	nogas	96.311	1.877	84810	2.67	100	96.3	90	110	
Se	77	1	nogas	76.776	9.442	5804	4.73	100	76.8	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	103.313	5.565	4507	3.97	100	103.3	90	110	
Sr	88	1	nogas	99.281	1.404	604106	0.74	100	99.3	90	110	
Mo	95	1	nogas	99.325	1.394	128219	0.25	100	99.3	90	110	
Ag	107	1	nogas	100.385	0.781	352889	0.77	100	100.4	90	110	
Cd	111	1	nogas	100.064	1.737	78776	1.21	100	100.1	90	110	
Sn	118	1	nogas	96.448	0.086	222823	0.52	100	96.4	90	110	
Sb	121	1	nogas	97.814	0.594	320261	0.80	100	97.8	90	110	
Ba	137	1	nogas	97.959	0.866	111007	0.31	100	98.0	90	110	
Tl	205	1	nogas	98.432	1.795	969177	1.55	100	98.4	90	110	
Pb	208	1	nogas	98.993	0.527	748986	0.77	100	99.0	90	110	
U	238	1	nogas	100.084	3.686	1885899	3.63	100	100.1	90	110	
Li	7	1	nogas	100.627	1.811	383570	0.62	100	100.6	90	110	
Si	28	1	nogas	5373.457	2.464	9122523	0.94	5000	107.5	90	110	
Ba	135	1	nogas	97.308	2.755	65833	2.49	100	97.3	90	110	
La	139	1	nogas	213.847	16.931	293	12.91	100	213.8	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	532.665	0.000	0	#DIV/0!	100	532.7	90	110	CCV Main CR1-2 Failed
Tl	203	1	nogas	98.034	1.037	398474	1.13	100	98.0	90	110	
Na	23	2	He	10220.969	2.096	1655011	1.77	10000	102.2	90	110	
Mg	24	2	He	9783.109	2.414	750781	1.73	10000	97.8	90	110	
Al	27	2	He	100.008	4.790	2824	4.27	100	100.0	90	110	
K	39	2	He	9917.944	1.571	390890	1.17	10000	99.2	90	110	
Ca	43	2	He	10768.423	4.419	993	5.07	10000	107.7	90	110	
Ca	44	2	He	10057.882	4.722	16518	3.82	10000	100.6	90	110	
V	51	2	He	97.774	0.409	29645	0.83	100	97.8	90	110	
Cr	52	2	He	100.918	1.726	38486	0.74	100	100.9	90	110	
Mn	55	2	He	99.935	4.340	19641	3.69	100	99.9	90	110	
Fe	56	2	He	9971.057	1.469	2908446	0.80	10000	99.7	90	110	
Co	59	2	He	100.483	3.163	55229	3.66	100	100.5	90	110	
Ni	60	2	He	98.731	2.193	15013	3.04	100	98.7	90	110	
Cu	63	2	He	102.111	1.089	43833	0.27	100	102.1	90	110	
Zn	66	2	He	104.673	5.590	7639	5.19	100	104.7	90	110	
As	75	2	He	101.973	2.046	4625	2.38	100	102.0	90	110	
Sb	121	2	He	94.862	1.451	33975	2.41	100	94.9	90	110	
Se	78	2	He	97.056	3.972	300	4.37	100	97.1	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	528446	1.39	522917	101.06	70	125	
In	115	1	nogas	647255	0.60	627838	103.09	70	125	
Li	6	1	nogas	228427	1.11	211473	108.02	70	125	
Bi	209	1	nogas	919420	0.30	915562	100.42	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	29873	0.97	29526	101.18	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	2018-01-05T12:47:48-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	020CALB.d
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	99.193	2.008	155490	2.14	100	99.2	90	110	
B	11	1	nogas	536.333	3.006	391931	2.73	500	107.3	90	110	
Na	23	1	nogas	10254.638	1.301	44237549	1.60	10000	102.5	90	110	
Mg	24	1	nogas	10076.912	1.098	30184735	1.24	10000	100.8	90	110	
Al	27	1	nogas	101.441	2.244	395420	1.06	100	101.4	90	110	
P	31	1	nogas	519.765	2.599	116197	1.84	500	104.0	90	110	
K	39	1	nogas	10099.724	2.185	32843019	1.55	10000	101.0	90	110	
Ca	43	1	nogas	9919.416	1.471	62873	2.63	10000	99.2	90	110	
Ca	44	1	nogas	9880.955	0.564	1044303	1.47	10000	98.8	90	110	
Ti	47	1	nogas	100.159	0.962	31910	2.11	100	100.2	90	110	
V	51	1	nogas	95.130	3.354	508556	2.18	100	95.1	90	110	
Cr	52	1	nogas	101.408	0.751	416407	0.49	100	101.4	90	110	
Mn	55	1	nogas	100.756	1.486	540406	1.84	100	100.8	90	110	
Fe	56	1	nogas	9838.917	1.115	44588420	0.84	10000	98.4	90	110	
Co	59	1	nogas	101.660	1.337	444671	0.47	100	101.7	90	110	
Ni	60	1	nogas	101.986	2.210	97903	1.58	100	102.0	90	110	
Cu	63	1	nogas	101.444	1.655	243308	0.44	100	101.4	90	110	
Zn	66	1	nogas	102.174	3.582	81068	2.36	100	102.2	90	110	
As	75	1	nogas	98.067	0.619	86462	0.87	100	98.1	90	110	
Se	77	1	nogas	92.816	12.176	6371	6.27	100	92.8	90	110	
Se	82	1	nogas	101.469	2.552	4451	3.62	100	101.5	90	110	
Sr	88	1	nogas	99.126	1.029	605507	0.23	100	99.1	90	110	
Mo	95	1	nogas	99.627	1.442	129119	1.68	100	99.6	90	110	
Ag	107	1	nogas	100.417	0.817	354368	0.81	100	100.4	90	110	
Cd	111	1	nogas	101.395	2.161	79014	1.39	100	101.4	90	110	
Sn	118	1	nogas	98.360	0.875	224928	0.41	100	98.4	90	110	
Sb	121	1	nogas	97.038	1.144	318935	0.05	100	97.0	90	110	
Ba	137	1	nogas	100.395	1.808	112608	1.02	100	100.4	90	110	
Tl	205	1	nogas	98.982	1.347	967981	0.72	100	99.0	90	110	
Pb	208	1	nogas	99.400	2.182	746910	1.65	100	99.4	90	110	
U	238	1	nogas	100.958	2.387	1889829	3.27	100	101.0	90	110	
Li	7	1	nogas	99.818	0.753	380892	0.88	100	99.8	90	110	
Si	28	1	nogas	5400.485	2.511	9201179	1.23	5000	108.0	90	110	
Ba	135	1	nogas	98.266	2.309	65806	1.67	100	98.3	90	110	
La	139	1	nogas	251.586	33.769	330	27.27	100	251.6	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	-1073.757	-3.103	20	0.00	100	-1073.8	90	110	CCV Main CR1-2 Failed
Tl	203	1	nogas	99.412	1.123	401392	2.38	100	99.4	90	110	
Na	23	2	He	10182.492	2.223	1656673	3.14	10000	101.8	90	110	
Mg	24	2	He	9900.128	1.191	763292	0.98	10000	99.0	90	110	
Al	27	2	He	102.636	5.903	2907	4.70	100	102.6	90	110	
K	39	2	He	10072.972	1.461	398733	1.20	10000	100.7	90	110	
Ca	43	2	He	10430.596	5.545	967	6.32	10000	104.3	90	110	
Ca	44	2	He	9930.428	5.968	16381	4.83	10000	99.3	90	110	
V	51	2	He	99.795	1.279	30392	0.60	100	99.8	90	110	
Cr	52	2	He	102.103	2.679	39114	2.14	100	102.1	90	110	
Mn	55	2	He	103.137	4.065	20369	4.45	100	103.1	90	110	
Fe	56	2	He	10059.279	1.133	2948132	2.33	10000	100.6	90	110	
Co	59	2	He	99.730	1.354	55061	1.76	100	99.7	90	110	
Ni	60	2	He	101.570	6.565	15504	5.36	100	101.6	90	110	
Cu	63	2	He	99.814	1.452	43058	1.54	100	99.8	90	110	
Zn	66	2	He	100.010	3.423	7335	2.29	100	100.0	90	110	
As	75	2	He	98.666	2.136	4496	3.03	100	98.7	90	110	
Sb	121	2	He	96.714	2.904	34794	3.15	100	96.7	90	110	
Se	78	2	He	102.206	13.092	317	13.55	100	102.2	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	530484	1.19	522917	101.45	70	125	
In	115	1	nogas	640720	0.81	627838	102.05	70	125	
Li	6	1	nogas	228549	0.21	211473	108.07	70	125	
Bi	209	1	nogas	913324	2.05	915562	99.76	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	30010	1.22	29526	101.64	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	055_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-05T12:50:00-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	020CALB.d
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	0.024	40.1	47	32.7	1	
B	11	1	nogas	59.111	10.6	50649	10.0	10	CCB Main CR1 Failed
Na	23	1	nogas	7.550	9.4	98588	2.7	100	
Mg	24	1	nogas	1.186	37.3	5702	24.6	100	
Al	27	1	nogas	-1.252	-5.6	3790	7.6	5	
P	31	1	nogas	-3.422	-71.9	6361	8.3	10	
K	39	1	nogas	16.732	24.0	935044	0.9	100	
Ca	43	1	nogas	-0.745	-560.7	90	29.4	100	
Ca	44	1	nogas	-18.779	-3.3	10166	1.1	100	
Ti	47	1	nogas	0.124	95.1	67	56.8	2.5	
V	51	1	nogas	-4.871	-10.3	35847	6.6	2.5	
Cr	52	1	nogas	-0.207	-24.2	2810	7.5	2.5	
Mn	55	1	nogas	-0.035	-163.5	3721	8.0	2.5	
Fe	56	1	nogas	4.387	26.0	221543	2.2	100	
Co	59	1	nogas	0.011	30.5	133	11.5	2.5	
Ni	60	1	nogas	0.060	145.0	180	45.5	2.5	
Cu	63	1	nogas	-0.586	-3.2	1897	2.1	2.5	
Zn	66	1	nogas	-0.926	-4.9	117	30.1	2.5	
As	75	1	nogas	-4.561	-2.2	8429	1.3	2.5	
Se	77	1	nogas	-12.991	-61.3	2784	10.0	2.5	
Se	82	1	nogas	-0.243	-461.2	197	24.0	2.5	
Sr	88	1	nogas	-0.003	-319.3	213	25.8	2.5	
Mo	95	1	nogas	0.067	28.9	87	29.0	2.5	
Ag	107	1	nogas	0.021	36.0	160	16.5	2.5	
Cd	111	1	nogas	0.017	173.2	13	173.2	1	
Sn	118	1	nogas	0.055	10.3	637	1.8	5	
Sb	121	1	nogas	0.700	6.9	2480	5.9	2.5	
Ba	137	1	nogas	-0.111	-62.1	63	122.6	2.5	
Tl	205	1	nogas	0.063	23.4	743	21.5	1	
Pb	208	1	nogas	0.024	34.6	330	21.0	2.5	
U	238	1	nogas	0.022	14.9	617	10.3	2.5	
Si	28	1	nogas	21.093	6.2	609587	0.2	5	CCB Main CR1 Failed
La	139	1	nogas	-49.273	-29.8	17	91.7	2.5	
Au	197	1	nogas	-250.491	-541.5	10	173.2	2.5	
Na	23	2	He	4.820	30.4	4367	3.6	100	
Mg	24	2	He	1.528	55.5	157	40.5	100	
Al	27	2	He	-2.951	-37.3	50	60.0	5	
K	39	2	He	3.479	246.9	5664	3.9	100	
Ca	43	2	He	0.000	#DIV/0!	0	#DIV/0!	100	
Ca	44	2	He	-14.854	-38.6	20	50.0	100	
V	51	2	He	-0.184	-12.9	63	9.8	2.5	
Cr	52	2	He	-0.205	-9.9	100	10.0	2.5	
Mn	55	2	He	0.083	186.5	33	91.7	2.5	
Fe	56	2	He	1.426	63.9	1133	22.4	100	
Co	59	2	He	-0.019	-56.5	3	173.2	2.5	
Ni	60	2	He	-0.406	-24.9	13	114.6	2.5	
Cu	63	2	He	-0.817	-8.6	253	9.9	2.5	
Zn	66	2	He	-1.151	-19.9	10	173.2	2.5	

Continuing Calibration Blank (CCB) Report

As	75	2	He	0.089	297.9	9	142.0	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.758	13.4	293	10.4	2.5	
Se	78	2	He	0.157	795.1	4	100.0	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	531399	0.55	522917	101.62	70	125	
In	115	1	nogas	645885	0.82	627838	102.87	70	125	
Li	6	1	nogas	218124	2.07	211473	103.15	70	125	
Bi	209	1	nogas	949288	1.34	915562	103.68	70	125	
Ge	72	2	He	30464	2.34	29526	103.18	70	125	

Sample Report

Sample Table

Sample Name	MBLK-124039
Data File Name	056SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-05T12:52:12-06:00
Sample Type	Sample
Dilution	1
Comment	TW B124039
ISTD Ref FileName	020CALB.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	-0.001	-0.001	-1107.57	10	-0.01	2000	
B	11	1	nogas	28.789	28.789	6.72	31428	0.09	2000	
Na	23	1	nogas	8.756	8.756	23.35	110092	0.01	200000	
Mg	24	1	nogas	9.852	9.852	7.87	33607	0.03	200000	
Al	27	1	nogas	3.836	3.836	7.83	23900	0.02	2000	
K	39	1	nogas	118.678	118.678	4.52	1294546	0.01	200000	
Ca	43	1	nogas	8.546	8.546	126.02	153	5.57	200000	
Ca	44	1	nogas	-23.178	-23.178	-20.23	9983	-0.23	200000	
Ti	47	1	nogas	0.037	0.037	82.76	40	0.09	2000	
V	51	1	nogas	-4.384	-4.384	-14.71	39254	-0.01	2000	
Cr	52	1	nogas	-0.248	-0.248	-18.29	2717	-0.01	2000	
Mn	55	1	nogas	-0.113	-0.113	-19.67	3400	0.00	2000	
Fe	56	1	nogas	3.551	3.551	15.83	224040	0.00	200000	
Co	59	1	nogas	0.004	0.004	195.95	103	0.00	2000	
Ni	60	1	nogas	-0.078	-0.078	-0.40	50	-0.16	2000	
Cu	63	1	nogas	-0.613	-0.613	-3.98	1887	-0.03	2000	
Zn	66	1	nogas	5.572	5.572	9.95	5378	0.10	2000	
As	75	1	nogas	-4.466	-4.466	-9.57	8746	-0.05	2000	
Se	77	1	nogas	-7.651	-7.651	-24.07	3050	-0.25	2000	
Se	82	1	nogas	-0.521	-0.521	-359.30	190	-0.27	2000	
Sr	88	1	nogas	-0.004	-0.004	-195.39	210	0.00	2000	
Mo	95	1	nogas	0.055	0.055	31.38	73	0.07	2000	
Ag	107	1	nogas	0.000	0.000	-5846.89	87	0.00	2000	
Cd	111	1	nogas	0.020	0.020	91.69	17	0.12	2000	
Sn	118	1	nogas	-0.010	-0.010	-456.65	520	0.00	2000	
Sb	121	1	nogas	0.414	0.414	10.30	1583	0.03	2000	
Ba	137	1	nogas	-0.112	-0.112	-11.33	67	-0.17	2000	
Tl	205	1	nogas	0.009	0.009	78.84	203	0.00	2000	
Pb	208	1	nogas	0.006	0.006	49.58	203	0.00	2000	
U	238	1	nogas	0.001	0.001	174.47	223	0.00	2000	
Si	28	1	nogas	64.283	64.283	6.73	698210	0.01	2000	
La	139	1	nogas	-50.302	-50.302	-27.21	17	-301.81	2000	
Au	197	1	nogas	52.286	52.286	795.97	7	784.28	2000	
Na	23	2	He	7.575	7.575	40.95	4834	0.16	200000	
Mg	24	2	He	10.234	10.234	20.11	840	1.22	200000	
Al	27	2	He	1.804	1.804	171.82	180	1.00	2000	
K	39	2	He	87.162	87.162	25.44	9006	0.97	200000	
Ca	43	2	He	0.000	0.000	#DIV/0!	0	#DIV/0!	200000	
Ca	44	2	He	-10.865	-10.865	-31.66	27	-40.74	200000	
V	51	2	He	-0.110	-0.110	-13.94	86	-0.13	2000	

Sample Report

Cr	52	2	He	-0.273	-0.273	-21.32	73	-0.37	2000	
Mn	55	2	He	0.208	0.208	90.24	60	0.35	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Fe	56	2	He	1.193	1.193	34.48	1070	0.11	200000	
Co	59	2	He	-0.025	-0.025	0.00	0	#DIV/0!	2000	
Ni	60	2	He	-0.383	-0.383	-26.52	17	-2.30	2000	
Cu	63	2	He	-0.874	-0.874	-9.53	230	-0.38	2000	
Zn	66	2	He	4.612	4.612	14.65	437	1.06	2000	
As	75	2	He	0.143	0.143	83.01	11	1.29	2000	
Sb	121	2	He	0.363	0.363	52.87	150	0.24	2000	
Se	78	2	He	1.897	1.897	104.48	9	20.33	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	546680	0.61	522917	104.54	70	125	
In	115	1	nogas	688158	0.36	627838	109.61	70	125	
Li	6	1	nogas	228139	0.42	211473	107.88	70	125	
Bi	209	1	nogas	1012889	1.82	915562	110.63	70	125	
Ge	72	2	He	30601	3.71	29526	103.64	70	125	

Sample Report

Sample Table

Sample Name	LCS-124039
Data File Name	057SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-05T12:54:24-06:00
Sample Type	Sample
Dilution	1
Comment	TW B124039
ISTD Ref FileName	020CALB.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	50.032	50.032	0.82	79087	0.06	2000	
B	11	1	nogas	549.121	549.121	2.52	404262	0.14	2000	
Na	23	1	nogas	5025.394	5025.394	1.08	22497365	0.02	200000	
Mg	24	1	nogas	5149.120	5149.120	1.00	15982032	0.03	200000	
Al	27	1	nogas	105.446	105.446	0.76	421682	0.03	2000	
K	39	1	nogas	5156.212	5156.212	1.20	17657821	0.03	200000	
Ca	43	1	nogas	4965.071	4965.071	2.17	32354	15.35	200000	
Ca	44	1	nogas	4999.709	4999.709	0.18	548599	0.91	200000	
Ti	47	1	nogas	149.490	149.490	2.02	48875	0.31	2000	
V	51	1	nogas	45.415	45.415	2.90	280855	0.02	2000	
Cr	52	1	nogas	50.563	50.563	1.32	215043	0.02	2000	
Mn	55	1	nogas	50.011	50.011	0.91	277394	0.02	2000	
Fe	56	1	nogas	5048.985	5048.985	1.25	23591946	0.02	200000	
Co	59	1	nogas	50.770	50.770	0.98	228051	0.02	2000	
Ni	60	1	nogas	50.517	50.517	2.07	49856	0.10	2000	
Cu	63	1	nogas	50.712	50.712	0.98	126564	0.04	2000	
Zn	66	1	nogas	51.557	51.557	0.71	42436	0.12	2000	
As	75	1	nogas	45.157	45.157	1.06	47456	0.10	2000	
Se	77	1	nogas	40.993	40.993	8.85	4734	0.87	2000	
Se	82	1	nogas	50.797	50.797	16.25	2394	2.12	2000	
Sr	88	1	nogas	99.118	99.118	0.67	621607	0.02	2000	
Mo	95	1	nogas	50.217	50.217	1.70	66816	0.08	2000	
Ag	107	1	nogas	49.937	49.937	1.91	180974	0.03	2000	
Cd	111	1	nogas	49.969	49.969	1.45	40386	0.12	2000	
Sn	118	1	nogas	97.846	97.846	0.43	232040	0.04	2000	
Sb	121	1	nogas	51.564	51.564	0.21	174084	0.03	2000	
Ba	137	1	nogas	48.774	48.774	1.67	56826	0.09	2000	
Tl	205	1	nogas	48.029	48.029	2.00	491255	0.01	2000	
Pb	208	1	nogas	48.735	48.735	1.12	383038	0.01	2000	
U	238	1	nogas	95.355	95.355	0.48	1866421	0.01	2000	
Si	28	1	nogas	5458.889	5458.889	1.82	9543687	0.06	2000	>LDR
La	139	1	nogas	-9.730	-9.730	-338.15	60	-16.22	2000	
Au	197	1	nogas	278.056	278.056	158.60	3	8341.69	2000	
Na	23	2	He	5109.535	5109.535	6.82	834569	0.61	200000	
Mg	24	2	He	5034.698	5034.698	7.36	388874	1.29	200000	
Al	27	2	He	107.538	107.538	18.61	3034	3.54	2000	
K	39	2	He	5071.247	5071.247	7.27	203842	2.49	200000	
Ca	43	2	He	5082.428	5082.428	19.80	477	1066.21	200000	
Ca	44	2	He	4951.904	4951.904	7.70	8209	60.32	200000	
V	51	2	He	48.279	48.279	6.95	14794	0.33	2000	
Cr	52	2	He	50.987	50.987	7.67	19655	0.26	2000	
Mn	55	2	He	49.273	49.273	4.88	9776	0.50	2000	
Fe	56	2	He	5175.027	5175.027	5.21	1521303	0.34	200000	
Co	59	2	He	49.686	49.686	3.59	27526	0.18	2000	

Sample Report

Ni	60	2	He	49.011	49.011	4.74	7552	0.65	2000	
Cu	63	2	He	48.692	48.692	3.94	21380	0.23	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Zn	66	2	He	48.305	48.305	3.26	3604	1.34	2000	
As	75	2	He	49.736	49.736	8.75	2271	2.19	2000	
Sb	121	2	He	50.081	50.081	7.07	18064	0.28	2000	
Se	78	2	He	52.063	52.063	2.73	164	31.75	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	544593	0.35	522917	104.15	70	125	
In	115	1	nogas	664415	1.52	627838	105.83	70	125	
Li	6	1	nogas	230459	2.07	211473	108.98	70	125	
Bi	209	1	nogas	955016	1.34	915562	104.31	70	125	
Ge	72	2	He	30147	5.81	29526	102.10	70	125	

Sample Report

Sample Table

Sample Name	HS17121169-01SD
Data File Name	060SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-05T13:00:59-06:00
Sample Type	Sample
Dilution	5
Comment	TW B124039
ISTD Ref FileName	020CALB.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	0.022	0.108	87.82	40	0.05	2000	
B	11	1	nogas	28.975	144.877	0.77	28343	0.10	2000	
Na	23	1	nogas	47004.324	235021.619	0.75	197535538	0.02	200000	
Mg	24	1	nogas	6527.989	32639.946	2.74	19073615	0.03	200000	
Al	27	1	nogas	10.641	53.207	2.62	47650	0.02	2000	
K	39	1	nogas	355.998	1779.991	4.11	1946105	0.02	200000	
Ca	43	1	nogas	7678.784	38393.921	1.53	47201	16.27	200000	
Ca	44	1	nogas	7680.971	38404.857	0.89	789565	0.97	200000	
Ti	47	1	nogas	0.358	1.790	13.77	137	0.26	2000	
V	51	1	nogas	16.269	81.344	6.90	131596	0.01	2000	
Cr	52	1	nogas	0.482	2.411	10.95	5438	0.01	2000	
Mn	55	1	nogas	101.891	509.454	0.75	529725	0.02	2000	
Fe	56	1	nogas	188.953	944.764	2.39	1021697	0.02	200000	
Co	59	1	nogas	1.734	8.671	3.35	7435	0.02	2000	
Ni	60	1	nogas	2.849	14.247	6.04	2767	0.10	2000	
Cu	63	1	nogas	-0.064	-0.322	-97.64	3034	0.00	2000	
Zn	66	1	nogas	22.063	110.317	1.53	17616	0.13	2000	
As	75	1	nogas	6.642	33.209	6.93	16415	0.04	2000	
Se	77	1	nogas	57.459	287.293	22.12	5014	1.15	2000	
Se	82	1	nogas	-0.818	-4.091	-215.82	167	-0.49	2000	
Sr	88	1	nogas	145.382	726.912	0.78	860844	0.02	2000	
Mo	95	1	nogas	0.175	0.875	13.16	220	0.08	2000	
Ag	107	1	nogas	0.000	0.002	453.12	83	0.00	2000	
Cd	111	1	nogas	0.040	0.198	0.40	30	0.13	2000	
Sn	118	1	nogas	0.043	0.215	34.56	587	0.01	2000	
Sb	121	1	nogas	0.308	1.539	11.55	1150	0.03	2000	
Ba	137	1	nogas	130.937	654.686	0.94	142384	0.09	2000	
Tl	205	1	nogas	0.007	0.037	57.43	163	0.00	2000	
Pb	208	1	nogas	0.058	0.289	9.48	550	0.01	2000	
U	238	1	nogas	0.106	0.531	8.04	2090	0.01	2000	
Si	28	1	nogas	4117.978	20589.890	0.49	6934932	0.06	2000	>LDR
La	139	1	nogas	264.863	1324.315	47.65	333	79.46	2000	
Au	197	1	nogas	-22.270	-111.349	-2158.19	7	-334.05	2000	
Na	23	2	He	45521.026	227605.131	1.38	7218407	0.63	200000	
Mg	24	2	He	6276.450	31382.252	0.85	472507	1.33	200000	
Al	27	2	He	8.607	43.034	23.13	353	2.44	2000	
K	39	2	He	290.257	1451.286	1.73	16385	1.77	200000	
Ca	43	2	He	7519.829	37599.146	9.64	680	1105.81	200000	
Ca	44	2	He	7614.256	38071.279	2.54	12278	62.02	200000	
V	51	2	He	0.400	2.001	26.75	233	0.17	2000	
Cr	52	2	He	0.256	1.278	116.84	267	0.10	2000	
Mn	55	2	He	101.161	505.806	0.64	19505	0.52	2000	
Fe	56	2	He	170.620	853.101	2.97	49478	0.34	200000	
Co	59	2	He	1.658	8.292	16.48	907	0.18	2000	

Sample Report

Ni	60	2	He	2.499	12.493	27.83	443	0.56	2000	
Cu	63	2	He	-0.538	-2.690	-23.83	360	-0.15	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Zn	66	2	He	22.187	110.936	2.96	1660	1.34	2000	
As	75	2	He	0.175	0.876	148.90	12	1.43	2000	
Sb	121	2	He	0.276	1.378	10.80	113	0.24	2000	
Se	78	2	He	-0.439	-2.193	-152.01	2	-21.93	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	514261	0.74	522917	98.34	70	125	
In	115	1	nogas	621341	0.40	627838	98.97	70	125	
Li	6	1	nogas	204864	1.16	211473	96.87	70	125	
Bi	209	1	nogas	879787	0.78	915562	96.09	70	125	
Ge	72	2	He	29299	1.17	29526	99.23	70	125	

Sample Report

Sample Table

Sample Name	HS17121169-01MS
Data File Name	061SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-05T13:03:11-06:00
Sample Type	Sample
Dilution	1
Comment	TW B124039
ISTD Ref FileName	020CALB.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	49.685	49.685	2.90	72402	0.07	2000	
B	11	1	nogas	585.699	585.699	3.13	396934	0.15	2000	
Na	23	1	nogas	230233.547	230233.547	0.50	1026614856	0.02	200000	>LDR
Mg	24	1	nogas	35501.166	35501.166	1.46	110057290	0.03	200000	
Al	27	1	nogas	147.725	147.725	1.31	563332	0.03	2000	
K	39	1	nogas	6514.675	6514.675	1.06	21174781	0.03	200000	
Ca	43	1	nogas	44783.849	44783.849	0.78	279201	16.04	200000	
Ca	44	1	nogas	43490.181	43490.181	0.66	4486223	0.97	200000	
Ti	47	1	nogas	150.657	150.657	0.61	47254	0.32	2000	
V	51	1	nogas	53.838	53.838	4.84	308639	0.02	2000	
Cr	52	1	nogas	50.983	50.983	0.44	207977	0.02	2000	
Mn	55	1	nogas	555.722	555.722	0.83	2918036	0.02	2000	
Fe	56	1	nogas	5530.777	5530.777	1.39	24772326	0.02	200000	
Co	59	1	nogas	55.204	55.204	1.24	237873	0.02	2000	
Ni	60	1	nogas	59.843	59.843	1.81	56637	0.11	2000	
Cu	63	1	nogas	49.322	49.322	2.11	118170	0.04	2000	
Zn	66	1	nogas	168.256	168.256	1.12	130979	0.13	2000	
As	75	1	nogas	54.560	54.560	1.71	52568	0.10	2000	
Se	77	1	nogas	88.443	88.443	7.05	6128	1.44	2000	
Se	82	1	nogas	50.766	50.766	8.49	2294	2.21	2000	
Sr	88	1	nogas	820.229	820.229	0.59	4933182	0.02	2000	
Mo	95	1	nogas	49.145	49.145	2.13	62724	0.08	2000	
Ag	107	1	nogas	45.213	45.213	0.50	157189	0.03	2000	
Cd	111	1	nogas	47.330	47.330	2.71	35839	0.13	2000	
Sn	118	1	nogas	93.721	93.721	1.53	208290	0.04	2000	
Sb	121	1	nogas	48.776	48.776	0.27	157984	0.03	2000	
Ba	137	1	nogas	711.457	711.457	0.39	774359	0.09	2000	
Tl	205	1	nogas	45.136	45.136	1.25	414540	0.01	2000	
Pb	208	1	nogas	46.833	46.833	1.36	330531	0.01	2000	
U	238	1	nogas	96.955	96.955	1.65	1703894	0.01	2000	
Si	28	1	nogas	25144.081	25144.081	0.90	40129549	0.06	2000	>LDR
La	139	1	nogas	1201.103	1201.103	5.09	1280	93.83	2000	
Au	197	1	nogas	532.665	532.665	0.00	0	#DIV/0!	2000	
Na	23	2	He	243644.666	243644.666	4.01	38137865	0.64	200000	>LDR
Mg	24	2	He	37028.099	37028.099	3.32	2752807	1.35	200000	
Al	27	2	He	161.195	161.195	6.48	4337	3.72	2000	
K	39	2	He	6474.330	6474.330	3.88	249006	2.60	200000	
Ca	43	2	He	47258.892	47258.892	5.34	4224	1118.84	200000	
Ca	44	2	He	45130.360	45130.360	3.92	71673	62.97	200000	
V	51	2	He	47.679	47.679	3.20	14065	0.34	2000	
Cr	52	2	He	48.917	48.917	4.98	18153	0.27	2000	
Mn	55	2	He	563.113	563.113	4.11	107169	0.53	2000	
Fe	56	2	He	5774.374	5774.374	3.79	1632052	0.35	200000	
Co	59	2	He	55.228	55.228	7.20	29395	0.19	2000	

Sample Report

Ni	60	2	He	56.896	56.896	6.27	8406	0.68	2000	
Cu	63	2	He	48.567	48.567	5.34	20489	0.24	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Zn	66	2	He	164.456	164.456	5.49	11571	1.42	2000	
As	75	2	He	51.145	51.145	7.56	2248	2.28	2000	
Sb	121	2	He	48.564	48.564	5.12	16849	0.29	2000	
Se	78	2	He	52.779	52.779	15.87	160	32.99	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	522444	0.56	522917	99.91	70	125	
In	115	1	nogas	622575	0.83	627838	99.16	70	125	
Li	6	1	nogas	212533	1.97	211473	100.50	70	125	
Bi	209	1	nogas	857482	0.07	915562	93.66	70	125	
Ge	72	2	He	28955	3.12	29526	98.07	70	125	

Sample Report

Sample Table

Sample Name	HS17121169-01MSD
Data File Name	062SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-05T13:05:23-06:00
Sample Type	Sample
Dilution	1
Comment	TW B124039
ISTD Ref FileName	020CALB.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	50.555	50.555	1.52	73212	0.07	2000	
B	11	1	nogas	602.543	602.543	1.22	405465	0.15	2000	
Na	23	1	nogas	240379.037	240379.037	1.38	1020064989	0.02	200000	>LDR
Mg	24	1	nogas	37087.192	37087.192	1.54	109429523	0.03	200000	
Al	27	1	nogas	153.504	153.504	3.85	553193	0.03	2000	
K	39	1	nogas	6661.492	6661.492	1.20	20462879	0.03	200000	
Ca	43	1	nogas	46034.009	46034.009	0.92	271533	16.95	200000	
Ca	44	1	nogas	45224.472	45224.472	0.99	4412819	1.02	200000	
Ti	47	1	nogas	154.119	154.119	0.70	45734	0.34	2000	
V	51	1	nogas	52.431	52.431	0.96	285825	0.02	2000	
Cr	52	1	nogas	52.028	52.028	1.48	200679	0.03	2000	
Mn	55	1	nogas	581.645	581.645	0.24	2889232	0.02	2000	
Fe	56	1	nogas	5699.825	5699.825	1.07	24150299	0.02	200000	
Co	59	1	nogas	56.797	56.797	0.47	231539	0.02	2000	
Ni	60	1	nogas	62.422	62.422	2.30	55877	0.11	2000	
Cu	63	1	nogas	49.777	49.777	2.28	112835	0.04	2000	
Zn	66	1	nogas	173.414	173.414	2.12	127644	0.14	2000	
As	75	1	nogas	55.237	55.237	3.44	50191	0.11	2000	
Se	77	1	nogas	86.859	86.859	1.09	5748	1.51	2000	
Se	82	1	nogas	42.205	42.205	1.80	1837	2.30	2000	
Sr	88	1	nogas	853.650	853.650	0.68	4857046	0.02	2000	
Mo	95	1	nogas	50.526	50.526	0.85	61014	0.08	2000	
Ag	107	1	nogas	47.369	47.369	0.38	155796	0.03	2000	
Cd	111	1	nogas	47.050	47.050	4.23	34172	0.14	2000	
Sn	118	1	nogas	94.705	94.705	1.12	201912	0.05	2000	
Sb	121	1	nogas	50.060	50.060	0.92	153372	0.03	2000	
Ba	137	1	nogas	734.140	734.140	2.25	766500	0.10	2000	
Tl	205	1	nogas	45.665	45.665	1.01	400387	0.01	2000	
Pb	208	1	nogas	47.698	47.698	0.73	321311	0.01	2000	
U	238	1	nogas	98.777	98.777	1.75	1657387	0.01	2000	
Si	28	1	nogas	26646.068	26646.068	1.05	40204758	0.07	2000	>LDR
La	139	1	nogas	1287.397	1287.397	18.24	1310	98.27	2000	
Au	197	1	nogas	532.665	532.665	0.00	0	#DIV/0!	2000	
Na	23	2	He	253365.285	253365.285	2.57	39018270	0.65	200000	>LDR
Mg	24	2	He	38711.212	38711.212	1.68	2831327	1.37	200000	
Al	27	2	He	161.239	161.239	7.09	4264	3.78	2000	
K	39	2	He	6510.033	6510.033	2.14	246305	2.64	200000	
Ca	43	2	He	46128.606	46128.606	8.51	4054	1137.89	200000	
Ca	44	2	He	45633.183	45633.183	3.71	71292	64.01	200000	
V	51	2	He	48.919	48.919	2.74	14190	0.34	2000	
Cr	52	2	He	53.024	53.024	6.18	19348	0.27	2000	
Mn	55	2	He	582.802	582.802	1.14	109112	0.53	2000	
Fe	56	2	He	5944.260	5944.260	2.12	1652821	0.36	200000	
Co	59	2	He	57.645	57.645	1.63	30200	0.19	2000	

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Ni	60	2	He	61.810	61.810	13.26	8979	0.69	2000	
Cu	63	2	He	50.536	50.536	5.52	20957	0.24	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Zn	66	2	He	172.051	172.051	1.10	11911	1.44	2000	
As	75	2	He	49.340	49.340	3.31	2135	2.31	2000	
Sb	121	2	He	48.528	48.528	2.46	16569	0.29	2000	
Se	78	2	He	47.175	47.175	7.30	141	33.54	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	494250	2.27	522917	94.52	70	125	
In	115	1	nogas	597340	1.75	627838	95.14	70	125	
Li	6	1	nogas	211122	1.75	211473	99.83	70	125	
Bi	209	1	nogas	818498	2.04	915562	89.40	70	125	
Ge	72	2	He	28471	0.85	29526	96.43	70	125	

Sample Report

Sample Table

Sample Name	HS17121169-01PDS
Data File Name	063SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-05T13:07:34-06:00
Sample Type	Sample
Dilution	1
Comment	TW B124039
ISTD Ref FileName	020CALB.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	113.153	113.153	1.02	154305	0.07	2000	
B	11	1	nogas	93.292	93.292	4.09	67233	0.14	2000	
Na	23	1	nogas	239408.723	239408.723	0.87	1040296690	0.02	200000	>LDR
Mg	24	1	nogas	41239.015	41239.015	1.70	124586686	0.03	200000	
Al	27	1	nogas	151.079	151.079	5.05	556574	0.03	2000	
K	39	1	nogas	12096.637	12096.637	1.32	37294782	0.03	200000	
Ca	43	1	nogas	50713.797	50713.797	1.01	305672	16.59	200000	
Ca	44	1	nogas	50060.766	50060.766	1.17	4991409	1.00	200000	
Ti	47	1	nogas	216.876	216.876	1.30	65761	0.33	2000	
V	51	1	nogas	100.165	100.165	2.16	507139	0.02	2000	
Cr	52	1	nogas	105.531	105.531	1.18	412523	0.03	2000	
Mn	55	1	nogas	622.020	622.020	2.63	3157385	0.02	2000	
Fe	56	1	nogas	10840.306	10840.306	1.35	46763158	0.02	200000	
Co	59	1	nogas	108.331	108.331	1.18	451298	0.02	2000	
Ni	60	1	nogas	110.996	110.996	2.40	101497	0.11	2000	
Cu	63	1	nogas	101.890	101.890	0.79	232749	0.04	2000	
Zn	66	1	nogas	223.000	223.000	1.02	167616	0.13	2000	
As	75	1	nogas	104.772	104.772	3.65	87175	0.12	2000	
Se	77	1	nogas	110.738	110.738	3.70	6648	1.67	2000	
Se	82	1	nogas	113.187	113.187	8.14	4704	2.41	2000	
Sr	88	1	nogas	853.496	853.496	0.56	4963437	0.02	2000	
Mo	95	1	nogas	103.923	103.923	3.24	128270	0.08	2000	
Ag	107	1	nogas	97.714	97.714	0.53	328398	0.03	2000	
Cd	111	1	nogas	97.406	97.406	0.26	72600	0.13	2000	
Sn	118	1	nogas	97.483	97.483	2.50	213201	0.05	2000	
Sb	121	1	nogas	95.143	95.143	2.49	297742	0.03	2000	
Ba	137	1	nogas	768.639	768.639	1.07	823403	0.09	2000	
Tl	205	1	nogas	98.817	98.817	1.22	884000	0.01	2000	
Pb	208	1	nogas	98.631	98.631	0.69	677969	0.01	2000	
U	238	1	nogas	0.544	0.544	4.81	9483	0.01	2000	
Si	28	1	nogas	21163.783	21163.783	0.82	32744036	0.06	2000	>LDR
La	139	1	nogas	1385.283	1385.283	3.70	1443	95.97	2000	
Au	197	1	nogas	-637.951	-637.951	-317.82	13	-4784.63	2000	
Na	23	2	He	254721.190	254721.190	3.13	41617349	0.61	200000	>LDR
Mg	24	2	He	43072.057	43072.057	3.98	3341032	1.29	200000	
Al	27	2	He	160.638	160.638	5.89	4504	3.57	2000	
K	39	2	He	11998.097	11998.097	2.23	476988	2.52	200000	
Ca	43	2	He	52500.632	52500.632	3.23	4897	1072.00	200000	
Ca	44	2	He	51812.248	51812.248	3.13	85850	60.35	200000	
V	51	2	He	102.213	102.213	2.31	31327	0.33	2000	
Cr	52	2	He	103.293	103.293	3.41	39816	0.26	2000	
Mn	55	2	He	616.892	616.892	3.13	122490	0.50	2000	
Fe	56	2	He	11074.751	11074.751	1.53	3266469	0.34	200000	
Co	59	2	He	107.542	107.542	2.06	59754	0.18	2000	
Ni	60	2	He	110.081	110.081	5.52	16909	0.65	2000	
Cu	63	2	He	99.900	99.900	0.98	43382	0.23	2000	

Sample Report

Zn	66	2	He	223.630	223.630	2.12	16395	1.36	2000	
As	75	2	He	100.212	100.212	2.45	4598	2.18	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Sb	121	2	He	92.868	92.868	5.94	33625	0.28	2000	
Se	78	2	He	98.718	98.718	6.87	309	31.98	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	505191	1.97	522917	96.61	70	125	
In	115	1	nogas	612746	0.28	627838	97.60	70	125	
Li	6	1	nogas	198844	1.25	211473	94.03	70	125	
Bi	209	1	nogas	835289	1.09	915562	91.23	70	125	
Ge	72	2	He	30214	2.98	29526	102.33	70	125	

Sample Report

Sample Table

Sample Name	HS17121224-01
Data File Name	064SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-05T13:09:46-06:00
Sample Type	Sample
Dilution	1
Comment	TW B124039
ISTD Ref FileName	020CALB.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	0.059	0.059	62.28	97	0.06	2000	
B	11	1	nogas	65.519	65.519	1.11	53774	0.12	2000	
Na	23	1	nogas	93628.099	93628.099	0.52	413815659	0.02	200000	
Mg	24	1	nogas	16163.893	16163.893	1.49	49660340	0.03	200000	
Al	27	1	nogas	28.335	28.335	2.16	116259	0.02	2000	
K	39	1	nogas	23474.555	23474.555	0.81	74942820	0.03	200000	
Ca	43	1	nogas	28316.477	28316.477	2.24	178679	15.85	200000	
Ca	44	1	nogas	28258.542	28258.542	1.02	2954497	0.96	200000	
Ti	47	1	nogas	1.001	1.001	31.05	343	0.29	2000	
V	51	1	nogas	-3.838	-3.838	-18.60	40557	-0.01	2000	
Cr	52	1	nogas	5.023	5.023	2.38	24020	0.02	2000	
Mn	55	1	nogas	727.378	727.378	3.23	3863482	0.02	2000	
Fe	56	1	nogas	24384.690	24384.690	1.66	109852961	0.02	200000	
Co	59	1	nogas	14.461	14.461	1.32	63136	0.02	2000	
Ni	60	1	nogas	9.797	9.797	7.05	9479	0.10	2000	
Cu	63	1	nogas	0.166	0.166	50.74	3660	0.00	2000	
Zn	66	1	nogas	34.088	34.088	1.53	27532	0.12	2000	
As	75	1	nogas	-0.747	-0.747	-125.03	11284	-0.01	2000	
Se	77	1	nogas	0.674	0.674	560.92	3234	0.02	2000	
Se	82	1	nogas	0.036	0.036	3542.52	207	0.02	2000	
Sr	88	1	nogas	660.639	660.639	2.98	4021138	0.02	2000	
Mo	95	1	nogas	0.159	0.159	25.46	207	0.08	2000	
Ag	107	1	nogas	0.015	0.015	41.24	137	0.01	2000	
Cd	111	1	nogas	0.072	0.072	83.33	57	0.13	2000	
Sn	118	1	nogas	0.164	0.164	23.74	887	0.02	2000	
Sb	121	1	nogas	1.462	1.462	5.55	4968	0.03	2000	
Ba	137	1	nogas	839.948	839.948	0.60	948043	0.09	2000	
Tl	205	1	nogas	0.063	0.063	15.52	700	0.01	2000	
Pb	208	1	nogas	0.131	0.131	15.58	1097	0.01	2000	
U	238	1	nogas	0.032	0.032	12.95	770	0.00	2000	
Si	28	1	nogas	19911.597	19911.597	0.84	32285950	0.06	2000	>LDR
La	139	1	nogas	2812.334	2812.334	8.51	3017	93.22	2000	>LDR
Au	197	1	nogas	532.665	532.665	0.00	0	#DIV/0!	2000	
Na	23	2	He	99307.024	99307.024	3.60	15441769	0.64	200000	
Mg	24	2	He	17709.158	17709.158	5.80	1306992	1.35	200000	
Al	27	2	He	26.497	26.497	19.99	813	3.26	2000	
K	39	2	He	23706.728	23706.728	3.86	891644	2.66	200000	
Ca	43	2	He	30510.227	30510.227	5.66	2710	1125.73	200000	
Ca	44	2	He	30373.878	30373.878	5.33	47906	63.40	200000	
V	51	2	He	0.145	0.145	29.31	155	0.09	2000	
Cr	52	2	He	5.206	5.206	13.99	2067	0.25	2000	
Mn	55	2	He	748.120	748.120	4.57	141352	0.53	2000	
Fe	56	2	He	25550.709	25550.709	3.26	7170434	0.36	200000	
Co	59	2	He	14.783	14.783	9.54	7819	0.19	2000	

Sample Report

Ni	60	2	He	10.317	10.317	9.22	1573	0.66	2000	
Cu	63	2	He	-0.263	-0.263	-85.38	467	-0.06	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Zn	66	2	He	34.861	34.861	9.96	2504	1.39	2000	
As	75	2	He	2.164	2.164	27.02	99	2.19	2000	
Sb	121	2	He	1.298	1.298	11.28	463	0.28	2000	
Se	78	2	He	0.908	0.908	120.36	6	15.13	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	528845	1.95	522917	101.13	70	125	
In	115	1	nogas	645619	0.32	627838	102.83	70	125	
Li	6	1	nogas	213480	1.41	211473	100.95	70	125	
Bi	209	1	nogas	896066	0.52	915562	97.87	70	125	
Ge	72	2	He	28765	3.64	29526	97.42	70	125	

Sample Report

Sample Table

Sample Name	HS17121224-03
Data File Name	065SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-05T13:11:58-06:00
Sample Type	Sample
Dilution	1
Comment	TW B124039
ISTD Ref FileName	020CALB.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	0.620	0.620	10.81	880	0.07	2000	
B	11	1	nogas	38.093	38.093	4.73	34079	0.11	2000	
Na	23	1	nogas	221511.251	221511.251	1.41	951188955	0.02	200000	>LDR
Mg	24	1	nogas	54061.780	54061.780	2.01	161415137	0.03	200000	
Al	27	1	nogas	38.113	38.113	0.41	143694	0.03	2000	
K	39	1	nogas	3238.391	3238.391	3.35	10388565	0.03	200000	
Ca	43	1	nogas	78597.792	78597.792	2.73	464328	16.93	200000	
Ca	44	1	nogas	77653.511	77653.511	2.67	7582498	1.02	200000	
Ti	47	1	nogas	1.518	1.518	25.35	477	0.32	2000	
V	51	1	nogas	-5.911	-5.911	-6.76	28830	-0.02	2000	
Cr	52	1	nogas	15.111	15.111	1.30	60823	0.02	2000	
Mn	55	1	nogas	3711.587	3711.587	2.20	18451033	0.02	2000	>LDR
Fe	56	1	nogas	15819.642	15819.642	1.14	66817595	0.02	200000	
Co	59	1	nogas	65.585	65.585	1.70	267867	0.02	2000	
Ni	60	1	nogas	50.283	50.283	2.77	45119	0.11	2000	
Cu	63	1	nogas	0.270	0.270	28.04	3660	0.01	2000	
Zn	66	1	nogas	74.382	74.382	0.64	55320	0.13	2000	
As	75	1	nogas	5.211	5.211	5.26	14793	0.04	2000	
Se	77	1	nogas	-5.440	-5.440	-90.73	2834	-0.19	2000	
Se	82	1	nogas	0.427	0.427	404.03	210	0.20	2000	
Sr	88	1	nogas	1853.943	1853.943	0.29	10568808	0.02	2000	>LDR
Mo	95	1	nogas	0.300	0.300	17.70	363	0.08	2000	
Ag	107	1	nogas	0.009	0.009	84.31	110	0.01	2000	
Cd	111	1	nogas	0.320	0.320	8.46	233	0.14	2000	
Sn	118	1	nogas	0.289	0.289	28.56	1090	0.03	2000	
Sb	121	1	nogas	0.858	0.858	4.74	2797	0.03	2000	
Ba	137	1	nogas	2867.585	2867.585	0.49	3003257	0.10	2000	>LDR
Tl	205	1	nogas	0.019	0.019	13.92	257	0.01	2000	
Pb	208	1	nogas	0.084	0.084	12.96	690	0.01	2000	
U	238	1	nogas	0.041	0.041	21.56	850	0.00	2000	
Si	28	1	nogas	38042.936	38042.936	4.13	57263777	0.07	2000	>LDR
La	139	1	nogas	4927.064	4927.064	2.52	4857	101.43	2000	>LDR
Au	197	1	nogas	-335.924	-335.924	-447.85	10	-3359.24	2000	
Na	23	2	He	236239.699	236239.699	1.91	34865024	0.68	200000	>LDR
Mg	24	2	He	55953.708	55953.708	1.81	3921769	1.43	200000	
Al	27	2	He	32.316	32.316	7.39	913	3.54	2000	
K	39	2	He	3172.877	3172.877	4.75	117511	2.70	200000	
Ca	43	2	He	82662.927	82662.927	6.36	6958	1187.99	200000	
Ca	44	2	He	79701.617	79701.617	1.50	119301	66.81	200000	
V	51	2	He	0.998	0.998	18.84	383	0.26	2000	
Cr	52	2	He	15.756	15.756	9.87	5614	0.28	2000	
Mn	55	2	He	3752.762	3752.762	1.68	673172	0.56	2000	>LDR
Fe	56	2	He	16410.364	16410.364	2.02	4371707	0.38	200000	
Co	59	2	He	65.991	65.991	2.33	33126	0.20	2000	
Ni	60	2	He	52.153	52.153	5.66	7272	0.72	2000	
Cu	63	2	He	-0.282	-0.282	-49.82	433	-0.07	2000	

Sample Report

Zn	66	2	He	74.259	74.259	8.65	4967	1.49	2000	
As	75	2	He	9.859	9.859	20.16	411	2.40	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Sb	121	2	He	0.739	0.739	7.73	257	0.29	2000	
Se	78	2	He	2.742	2.742	57.84	11	25.71	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	495215	1.28	522917	94.70	70	125	
In	115	1	nogas	599163	0.51	627838	95.43	70	125	
Li	6	1	nogas	204396	1.47	211473	96.65	70	125	
Bi	209	1	nogas	822146	2.34	915562	89.80	70	125	
Ge	72	2	He	27289	2.90	29526	92.42	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	066_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-05T13:14:09-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	020CALB.d
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	98.723	3.221	136502	3.17	100	98.7	90	110	
B	11	1	nogas	496.813	3.009	320959	2.68	500	99.4	90	110	
Na	23	1	nogas	10155.228	1.039	38634700	1.41	10000	101.6	90	110	
Mg	24	1	nogas	10130.007	1.788	26757735	1.19	10000	101.3	90	110	
Al	27	1	nogas	101.200	2.423	346877	1.35	100	101.2	90	110	
P	31	1	nogas	519.816	2.432	102181	1.71	500	104.0	90	110	
K	39	1	nogas	10170.413	0.683	29077927	1.03	10000	101.7	90	110	
Ca	43	1	nogas	9954.159	2.186	55475	2.92	10000	99.5	90	110	
Ca	44	1	nogas	9778.319	2.093	908658	0.86	10000	97.8	90	110	
Ti	47	1	nogas	97.363	4.639	27262	3.15	100	97.4	90	110	
V	51	1	nogas	93.471	0.648	440375	1.73	100	93.5	90	110	
Cr	52	1	nogas	100.505	0.994	362906	0.53	100	100.5	90	110	
Mn	55	1	nogas	100.583	2.351	474278	0.98	100	100.6	90	110	
Fe	56	1	nogas	9691.919	0.440	38625459	1.22	10000	96.9	90	110	
Co	59	1	nogas	99.082	0.725	381125	1.48	100	99.1	90	110	
Ni	60	1	nogas	99.710	1.997	84165	0.85	100	99.7	90	110	
Cu	63	1	nogas	99.314	1.608	209514	1.08	100	99.3	90	110	
Zn	66	1	nogas	101.146	1.844	70582	0.38	100	101.1	90	110	
As	75	1	nogas	96.113	1.097	74727	2.08	100	96.1	90	110	
Se	77	1	nogas	80.702	28.781	5234	12.02	100	80.7	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	93.040	2.811	3604	4.12	100	93.0	90	110	
Sr	88	1	nogas	98.107	2.065	526906	1.01	100	98.1	90	110	
Mo	95	1	nogas	99.534	1.067	113428	1.46	100	99.5	90	110	
Ag	107	1	nogas	99.485	1.338	308685	0.38	100	99.5	90	110	
Cd	111	1	nogas	98.287	3.354	67611	2.41	100	98.3	90	110	
Sn	118	1	nogas	96.429	0.693	194685	0.88	100	96.4	90	110	
Sb	121	1	nogas	96.873	2.611	279923	1.13	100	96.9	90	110	
Ba	137	1	nogas	98.518	0.927	97565	1.17	100	98.5	90	110	
Tl	205	1	nogas	98.743	1.279	851427	1.03	100	98.7	90	110	
Pb	208	1	nogas	97.293	0.277	644655	0.89	100	97.3	90	110	
U	238	1	nogas	98.863	0.493	1631463	1.05	100	98.9	90	110	
Li	7	1	nogas	99.835	1.636	336009	0.44	100	99.8	90	110	
Si	28	1	nogas	5526.916	0.865	8269351	1.10	5000	110.5	90	110	CCV Main CR1-2 Failed
Ba	135	1	nogas	97.718	0.686	57776	0.79	100	97.7	90	110	
La	139	1	nogas	199.393	26.368	243	20.68	100	199.4	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	-1593.902	-144.422	23	107.85	100	-1593.9	90	110	CCV Main CR1-2 Failed
Tl	203	1	nogas	99.112	1.196	352788	1.17	100	99.1	90	110	
Na	23	2	He	10516.626	0.695	1538428	1.82	10000	105.2	90	110	
Mg	24	2	He	9889.463	0.400	685725	1.72	10000	98.9	90	110	
Al	27	2	He	95.745	4.997	2447	4.33	100	95.7	90	110	
K	39	2	He	9870.440	0.371	351513	2.23	10000	98.7	90	110	
Ca	43	2	He	9548.254	17.100	797	18.38	10000	95.5	90	110	
Ca	44	2	He	9974.591	1.786	14807	3.46	10000	99.7	90	110	
V	51	2	He	97.126	1.846	26602	1.59	100	97.1	90	110	
Cr	52	2	He	98.395	2.117	33900	0.77	100	98.4	90	110	
Mn	55	2	He	103.432	3.826	18370	4.41	100	103.4	90	110	
Fe	56	2	He	10095.910	1.943	2660252	1.49	10000	101.0	90	110	
Co	59	2	He	97.612	2.705	48468	3.48	100	97.6	90	110	
Ni	60	2	He	100.017	3.091	13736	2.90	100	100.0	90	110	
Cu	63	2	He	100.519	1.953	38991	2.34	100	100.5	90	110	
Zn	66	2	He	98.996	3.614	6535	5.31	100	99.0	90	110	
As	75	2	He	96.019	2.687	3934	2.04	100	96.0	90	110	
Sb	121	2	He	92.358	2.759	29891	4.54	100	92.4	90	110	
Se	78	2	He	106.097	17.718	295	15.89	100	106.1	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	466462	1.48	522917	89.20	70	125	
In	115	1	nogas	565663	1.41	627838	90.10	70	125	
Li	6	1	nogas	201610	1.13	211473	95.34	70	125	
Bi	209	1	nogas	805173	0.62	915562	87.94	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	26988	1.86	29526	91.41	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	067_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-05T13:16:21-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	020CALB.d
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	0.018	98.0	33	69.3	1	
B	11	1	nogas	51.648	14.3	40804	12.2	10	CCB Main CR1 Failed
Na	23	1	nogas	48.786	2.6	248620	1.7	100	
Mg	24	1	nogas	2.849	12.9	9605	10.6	100	
Al	27	1	nogas	-1.280	-1.0	3264	2.6	5	
P	31	1	nogas	-0.389	-268.3	6205	3.8	10	
K	39	1	nogas	39.353	13.9	892391	1.7	100	
Ca	43	1	nogas	-1.306	-313.2	77	30.1	100	
Ca	44	1	nogas	-17.898	-10.1	9093	1.7	100	
Ti	47	1	nogas	-0.026	-206.2	17	91.7	2.5	
V	51	1	nogas	-3.341	-21.9	38183	7.3	2.5	
Cr	52	1	nogas	-0.093	-78.4	2900	8.5	2.5	
Mn	55	1	nogas	0.204	31.4	4434	8.2	2.5	
Fe	56	1	nogas	6.224	9.8	203760	2.4	100	
Co	59	1	nogas	0.018	104.5	147	52.1	2.5	
Ni	60	1	nogas	0.076	61.4	173	21.8	2.5	
Cu	63	1	nogas	-0.646	-5.3	1557	5.2	2.5	
Zn	66	1	nogas	-0.879	-8.3	137	37.6	2.5	
As	75	1	nogas	-4.183	-5.3	7725	0.8	2.5	
Se	77	1	nogas	-10.105	-137.9	2554	16.3	2.5	
Se	82	1	nogas	0.808	22.8	213	2.7	2.5	
Sr	88	1	nogas	0.051	26.5	483	15.8	2.5	
Mo	95	1	nogas	0.044	60.8	50	60.0	2.5	
Ag	107	1	nogas	0.002	706.0	80	43.3	2.5	
Cd	111	1	nogas	0.014	100.4	10	100.0	1	
Sn	118	1	nogas	0.114	10.0	693	4.2	5	
Sb	121	1	nogas	0.879	4.6	2720	5.0	2.5	
Ba	137	1	nogas	-0.016	-241.7	153	26.4	2.5	
Tl	205	1	nogas	0.072	9.6	750	9.3	1	
Pb	208	1	nogas	0.032	37.0	353	24.4	2.5	
U	238	1	nogas	0.027	50.6	647	38.2	2.5	
Si	28	1	nogas	83.921	4.2	629486	1.7	5	CCB Main CR1 Failed
La	139	1	nogas	-47.612	-46.0	17	124.9	2.5	
Au	197	1	nogas	-45.557	-2198.4	7	173.2	2.5	
Na	23	2	He	46.491	3.1	9883	0.8	100	
Mg	24	2	He	3.295	16.1	260	13.9	100	
Al	27	2	He	-3.386	-19.3	33	45.8	5	
K	39	2	He	13.894	2.9	5351	2.7	100	
Ca	43	2	He	0.000	#DIV/0!	0	#DIV/0!	100	
Ca	44	2	He	-20.062	-32.9	10	100.0	100	
V	51	2	He	-0.102	-49.1	77	15.6	2.5	
Cr	52	2	He	-0.265	-53.4	67	70.9	2.5	
Mn	55	2	He	0.085	70.1	30	33.3	2.5	
Fe	56	2	He	2.426	18.5	1263	12.1	100	
Co	59	2	He	0.023	45.6	23	24.7	2.5	
Ni	60	2	He	-0.321	-13.9	23	24.7	2.5	

Continuing Calibration Blank (CCB) Report

Cu	63	2	He	-0.887	-16.4	197	28.0	2.5	
Zn	66	2	He	-1.234	-7.0	3	173.2	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
As	75	2	He	0.092	227.0	8	107.8	2.5	
Sb	121	2	He	0.770	28.6	263	29.0	2.5	
Se	78	2	He	0.128	889.3	3	91.7	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	471037	1.33	522917	90.08	70	125	
In	115	1	nogas	580024	0.84	627838	92.38	70	125	
Li	6	1	nogas	195238	1.46	211473	92.32	70	125	
Bi	209	1	nogas	850702	0.88	915562	92.92	70	125	
Ge	72	2	He	26801	2.71	29526	90.77	70	125	

Sample Report

Sample Table

Sample Name	HS17121224-04
Data File Name	068SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-05T13:18:34-06:00
Sample Type	Sample
Dilution	1
Comment	TW B124039
ISTD Ref FileName	020CALB.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	0.081	0.081	67.61	117	0.07	2000	
B	11	1	nogas	58.756	58.756	0.81	44810	0.13	2000	
Na	23	1	nogas	94968.917	94968.917	0.73	384753684	0.02	200000	
Mg	24	1	nogas	19525.758	19525.758	0.34	55002289	0.04	200000	
Al	27	1	nogas	8.715	8.715	18.34	37636	0.02	2000	
K	39	1	nogas	5963.359	5963.359	2.63	17778646	0.03	200000	
Ca	43	1	nogas	29589.790	29589.790	3.31	168598	17.55	200000	
Ca	44	1	nogas	29109.432	29109.432	2.92	2747737	1.06	200000	
Ti	47	1	nogas	1.021	1.021	8.15	317	0.32	2000	
V	51	1	nogas	-7.975	-7.975	-7.10	18981	-0.04	2000	
Cr	52	1	nogas	0.561	0.561	15.05	5341	0.01	2000	
Mn	55	1	nogas	590.629	590.629	2.07	2834089	0.02	2000	
Fe	56	1	nogas	53777.544	53777.544	2.58	218524680	0.02	200000	
Co	59	1	nogas	1.008	1.008	3.61	4044	0.02	2000	
Ni	60	1	nogas	2.254	2.254	20.70	2057	0.11	2000	
Cu	63	1	nogas	-0.311	-0.311	-20.68	2290	-0.01	2000	
Zn	66	1	nogas	3.771	3.771	11.47	3424	0.11	2000	
As	75	1	nogas	9.953	9.953	9.55	17506	0.06	2000	
Se	77	1	nogas	-10.845	-10.845	-61.83	2567	-0.42	2000	
Se	82	1	nogas	-0.242	-0.242	-498.34	177	-0.14	2000	
Sr	88	1	nogas	670.968	670.968	1.21	3687684	0.02	2000	
Mo	95	1	nogas	0.380	0.380	10.74	443	0.09	2000	
Ag	107	1	nogas	0.003	0.003	143.85	87	0.00	2000	
Cd	111	1	nogas	0.062	0.062	35.57	43	0.14	2000	
Sn	118	1	nogas	0.071	0.071	95.23	603	0.01	2000	
Sb	121	1	nogas	0.593	0.593	7.60	1910	0.03	2000	
Ba	137	1	nogas	933.338	933.338	0.26	941858	0.10	2000	
Tl	205	1	nogas	0.011	0.011	53.16	180	0.01	2000	
Pb	208	1	nogas	0.057	0.057	28.11	510	0.01	2000	
U	238	1	nogas	0.036	0.036	17.98	767	0.00	2000	
Si	28	1	nogas	20877.908	20877.908	2.31	30536396	0.07	2000	>LDR
La	139	1	nogas	404.552	404.552	17.12	440	91.94	2000	
Au	197	1	nogas	236.005	236.005	217.72	3	7080.15	2000	
Na	23	2	He	101262.124	101262.124	3.54	14308693	0.71	200000	
Mg	24	2	He	20845.626	20845.626	2.84	1399096	1.49	200000	
Al	27	2	He	7.102	7.102	29.50	280	2.54	2000	
K	39	2	He	6014.590	6014.590	3.76	209126	2.88	200000	
Ca	43	2	He	30787.938	30787.938	3.45	2484	1239.66	200000	
Ca	44	2	He	30171.098	30171.098	5.42	43234	69.79	200000	
V	51	2	He	-0.134	-0.134	-24.19	67	-0.20	2000	
Cr	52	2	He	0.297	0.297	78.61	253	0.12	2000	
Mn	55	2	He	602.118	602.118	4.36	103383	0.58	2000	
Fe	56	2	He	55517.530	55517.530	3.44	14156026	0.39	200000	
Co	59	2	He	1.013	1.013	9.25	500	0.20	2000	

Sample Report

Ni	60	2	He	1.830	1.830	15.96	307	0.60	2000	
Cu	63	2	He	-0.541	-0.541	-11.32	320	-0.17	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Zn	66	2	He	3.831	3.831	35.78	323	1.18	2000	
As	75	2	He	15.030	15.030	3.59	600	2.51	2000	
Sb	121	2	He	0.613	0.613	20.62	207	0.30	2000	
Se	78	2	He	1.691	1.691	141.35	7	23.05	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	477452	0.99	522917	91.31	70	125	
In	115	1	nogas	577239	1.29	627838	91.94	70	125	
Li	6	1	nogas	194079	1.36	211473	91.77	70	125	
Bi	209	1	nogas	820820	0.88	915562	89.65	70	125	
Ge	72	2	He	26140	3.97	29526	88.53	70	125	

Sample Report

Sample Table

Sample Name	HS17121224-05
Data File Name	069SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-05T13:20:48-06:00
Sample Type	Sample
Dilution	1
Comment	TW B124039
ISTD Ref FileName	020CALB.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	0.155	0.155	29.72	213	0.07	2000	
B	11	1	nogas	24.511	24.511	3.67	23926	0.10	2000	
Na	23	1	nogas	110933.024	110933.024	2.49	435566443	0.03	200000	
Mg	24	1	nogas	21974.707	21974.707	1.65	59993724	0.04	200000	
Al	27	1	nogas	8.666	8.666	8.98	36439	0.02	2000	
K	39	1	nogas	2197.684	2197.684	1.14	6863482	0.03	200000	
Ca	43	1	nogas	21305.610	21305.610	2.35	118163	18.03	200000	
Ca	44	1	nogas	21593.931	21593.931	3.13	1986076	1.09	200000	
Ti	47	1	nogas	0.895	0.895	33.74	273	0.33	2000	
V	51	1	nogas	-3.512	-3.512	-8.84	36980	-0.01	2000	
Cr	52	1	nogas	573.276	573.276	2.33	2047176	0.03	2000	
Mn	55	1	nogas	149.057	149.057	1.22	698568	0.02	2000	
Fe	56	1	nogas	2311.342	2311.342	1.12	9309570	0.02	200000	
Co	59	1	nogas	5.783	5.783	2.05	22225	0.03	2000	
Ni	60	1	nogas	322.977	322.977	1.05	271356	0.12	2000	
Cu	63	1	nogas	6.706	6.706	3.86	16775	0.04	2000	
Zn	66	1	nogas	21.167	21.167	4.08	15297	0.14	2000	
As	75	1	nogas	-3.704	-3.704	-13.95	7942	-0.05	2000	
Se	77	1	nogas	-11.638	-11.638	-39.87	2474	-0.47	2000	
Se	82	1	nogas	-1.385	-1.385	-72.54	130	-1.07	2000	
Sr	88	1	nogas	538.134	538.134	2.14	2878200	0.02	2000	
Mo	95	1	nogas	2.934	2.934	4.84	3330	0.09	2000	
Ag	107	1	nogas	0.005	0.005	128.98	90	0.01	2000	
Cd	111	1	nogas	0.798	0.798	18.37	550	0.15	2000	
Sn	118	1	nogas	0.082	0.082	67.92	613	0.01	2000	
Sb	121	1	nogas	0.519	0.519	6.21	1647	0.03	2000	
Ba	137	1	nogas	882.365	882.365	0.59	873701	0.10	2000	
Tl	205	1	nogas	0.030	0.030	13.93	340	0.01	2000	
Pb	208	1	nogas	0.169	0.169	0.86	1240	0.01	2000	
U	238	1	nogas	0.047	0.047	17.64	940	0.01	2000	
Si	28	1	nogas	34591.371	34591.371	2.54	48902336	0.07	2000	>LDR
La	139	1	nogas	2513.568	2513.568	13.24	2374	105.90	2000	>LDR
Au	197	1	nogas	-984.398	-984.398	-141.47	17	-5906.39	2000	
Na	23	2	He	116769.065	116769.065	1.58	16564042	0.70	200000	
Mg	24	2	He	23574.204	23574.204	2.01	1588240	1.48	200000	
Al	27	2	He	8.368	8.368	54.64	310	2.70	2000	
K	39	2	He	2130.852	2130.852	0.72	77464	2.75	200000	
Ca	43	2	He	22368.823	22368.823	6.49	1810	1235.76	200000	
Ca	44	2	He	21656.453	21656.453	1.44	31182	69.45	200000	
V	51	2	He	0.869	0.869	5.14	333	0.26	2000	
Cr	52	2	He	581.426	581.426	1.19	193910	0.30	2000	
Mn	55	2	He	149.763	149.763	2.09	25836	0.58	2000	
Fe	56	2	He	2372.529	2372.529	1.46	608084	0.39	200000	
Co	59	2	He	5.369	5.369	4.28	2600	0.21	2000	
Ni	60	2	He	323.099	323.099	1.01	42981	0.75	2000	
Cu	63	2	He	6.222	6.222	5.93	2834	0.22	2000	

Sample Report

Zn	66	2	He	19.742	19.742	9.21	1330	1.48	2000	
As	75	2	He	0.211	0.211	124.46	12	1.73	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Sb	121	2	He	0.518	0.518	57.34	177	0.29	2000	
Se	78	2	He	-0.348	-0.348	-377.82	2	-17.42	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	464643	0.81	522917	88.86	70	125	
In	115	1	nogas	566420	0.96	627838	90.22	70	125	
Li	6	1	nogas	192249	1.42	211473	90.91	70	125	
Bi	209	1	nogas	805882	0.32	915562	88.02	70	125	
Ge	72	2	He	26224	1.72	29526	88.82	70	125	

Sample Report

Sample Table

Sample Name	HS17121224-06
Data File Name	070SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-05T13:23:00-06:00
Sample Type	Sample
Dilution	1
Comment	TW B124039
ISTD Ref FileName	020CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	1	nogas	0.012	0.012	36.05	27	0.05	2000	
B	11	1	nogas	25.252	25.252	4.94	25869	0.10	2000	
Na	23	1	nogas	215295.491	215295.491	0.94	945603054	0.02	200000	>LDR
Mg	24	1	nogas	15137.545	15137.545	1.28	46250724	0.03	200000	
Al	27	1	nogas	5.045	5.045	13.32	27044	0.02	2000	
K	39	1	nogas	1621.178	1621.178	0.49	5837859	0.03	200000	
Ca	43	1	nogas	27223.515	27223.515	2.00	167320	16.27	200000	
Ca	44	1	nogas	27293.383	27293.383	1.96	2781746	0.98	200000	
Ti	47	1	nogas	0.943	0.943	42.24	320	0.29	2000	
V	51	1	nogas	-0.457	-0.457	-128.50	55000	0.00	2000	
Cr	52	1	nogas	0.824	0.824	8.43	6795	0.01	2000	
Mn	55	1	nogas	2160.242	2160.242	1.43	11171713	0.02	2000	>LDR
Fe	56	1	nogas	593.672	593.672	1.69	2795977	0.02	200000	
Co	59	1	nogas	9.575	9.575	0.11	40752	0.02	2000	
Ni	60	1	nogas	7.174	7.174	1.64	6798	0.11	2000	
Cu	63	1	nogas	0.658	0.658	1.71	4697	0.01	2000	
Zn	66	1	nogas	5.895	5.895	4.71	5311	0.11	2000	
As	75	1	nogas	-0.452	-0.452	-87.85	11211	0.00	2000	
Se	77	1	nogas	18.060	18.060	19.59	3724	0.48	2000	
Se	82	1	nogas	-0.417	-0.417	-243.03	183	-0.23	2000	
Sr	88	1	nogas	455.767	455.767	2.08	2704361	0.02	2000	
Mo	95	1	nogas	0.209	0.209	26.09	263	0.08	2000	
Ag	107	1	nogas	0.001	0.001	472.95	87	0.00	2000	
Cd	111	1	nogas	0.290	0.290	24.88	220	0.13	2000	
Sn	118	1	nogas	-0.033	-0.033	-186.59	417	-0.01	2000	
Sb	121	1	nogas	0.414	0.414	17.14	1487	0.03	2000	
Ba	137	1	nogas	482.978	482.978	0.74	525346	0.09	2000	
Tl	205	1	nogas	0.036	0.036	11.77	420	0.01	2000	
Pb	208	1	nogas	0.041	0.041	27.28	420	0.01	2000	
U	238	1	nogas	0.621	0.621	5.50	11164	0.01	2000	
Si	28	1	nogas	24728.708	24728.708	0.38	38926649	0.06	2000	>LDR
La	139	1	nogas	826.030	826.030	19.33	903	91.44	2000	
Au	197	1	nogas	532.665	532.665	0.00	0	#DIV/0!	2000	
Na	23	2	He	230121.960	230121.960	0.99	37023850	0.62	200000	>LDR
Mg	24	2	He	16593.631	16593.631	2.56	1267895	1.31	200000	
Al	27	2	He	6.907	6.907	53.72	313	2.20	2000	
K	39	2	He	1622.430	1622.430	1.96	68176	2.38	200000	
Ca	43	2	He	27925.637	27925.637	5.30	2564	1089.32	200000	
Ca	44	2	He	28113.082	28113.082	2.01	45897	61.25	200000	
V	51	2	He	0.118	0.118	68.00	152	0.08	2000	
Cr	52	2	He	0.552	0.552	54.77	383	0.14	2000	
Mn	55	2	He	2222.946	2222.946	2.12	434647	0.51	2000	>LDR
Fe	56	2	He	599.017	599.017	0.94	174617	0.34	200000	
Co	59	2	He	10.385	10.385	7.02	5694	0.18	2000	

Sample Report

Ni	60	2	He	6.016	6.016	16.45	980	0.61	2000	
Cu	63	2	He	0.146	0.146	218.78	653	0.02	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Zn	66	2	He	5.131	5.131	41.33	460	1.12	2000	
As	75	2	He	0.273	0.273	125.78	17	1.64	2000	
Sb	121	2	He	0.400	0.400	59.95	160	0.25	2000	
Se	78	2	He	1.304	1.304	30.45	7	17.79	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	515171	3.42	522917	98.52	70	125	
In	115	1	nogas	622154	2.68	627838	99.09	70	125	
Li	6	1	nogas	203986	2.75	211473	96.46	70	125	
Bi	209	1	nogas	863213	3.24	915562	94.28	70	125	
Ge	72	2	He	29743	1.42	29526	100.73	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	078_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-05T13:40:41-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	020CALB.d
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	97.745	1.199	145178	1.62	100	97.7	90	110	
B	11	1	nogas	506.861	3.437	351413	1.11	500	101.4	90	110	
Na	23	1	nogas	10195.627	0.458	41764936	1.45	10000	102.0	90	110	
Mg	24	1	nogas	9989.957	0.225	28414762	1.08	10000	99.9	90	110	
Al	27	1	nogas	100.199	0.839	369032	0.73	100	100.2	90	110	
P	31	1	nogas	502.739	1.464	106373	0.79	500	100.5	90	110	
K	39	1	nogas	9968.579	0.639	30631737	1.63	10000	99.7	90	110	
Ca	43	1	nogas	9672.872	2.226	57896	1.87	10000	96.7	90	110	
Ca	44	1	nogas	9727.953	0.790	971152	0.62	10000	97.3	90	110	
Ti	47	1	nogas	97.478	0.787	29332	2.03	100	97.5	90	110	
V	51	1	nogas	93.431	1.961	472840	2.41	100	93.4	90	110	
Cr	52	1	nogas	98.651	1.140	382748	2.41	100	98.7	90	110	
Mn	55	1	nogas	98.199	0.948	497551	1.65	100	98.2	90	110	
Fe	56	1	nogas	9582.090	1.619	41021800	2.16	10000	95.8	90	110	
Co	59	1	nogas	97.605	1.546	403235	1.09	100	97.6	90	110	
Ni	60	1	nogas	99.058	0.714	89823	0.68	100	99.1	90	110	
Cu	63	1	nogas	98.228	1.121	222625	0.79	100	98.2	90	110	
Zn	66	1	nogas	98.907	1.983	74157	1.44	100	98.9	90	110	
As	75	1	nogas	92.504	1.557	77660	0.23	100	92.5	90	110	
Se	77	1	nogas	76.301	16.271	5488	7.41	100	76.3	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	100.432	3.698	4161	2.32	100	100.4	90	110	
Sr	88	1	nogas	96.754	0.864	558294	2.12	100	96.8	90	110	
Mo	95	1	nogas	97.918	0.794	119869	2.04	100	97.9	90	110	
Ag	107	1	nogas	97.717	1.583	325668	0.37	100	97.7	90	110	
Cd	111	1	nogas	96.961	2.532	71457	1.94	100	97.0	90	110	
Sn	118	1	nogas	94.914	1.457	205279	1.07	100	94.9	90	110	
Sb	121	1	nogas	95.132	1.636	295300	0.40	100	95.1	90	110	
Ba	137	1	nogas	99.070	2.702	105095	2.42	100	99.1	90	110	
Tl	205	1	nogas	98.214	1.102	909207	0.43	100	98.2	90	110	
Pb	208	1	nogas	97.204	2.316	691404	1.59	100	97.2	90	110	
U	238	1	nogas	96.266	2.121	1705484	1.87	100	96.3	90	110	
Li	7	1	nogas	99.857	1.832	361015	1.59	100	99.9	90	110	
Si	28	1	nogas	5495.342	0.617	8835041	1.44	5000	109.9	90	110	
Ba	135	1	nogas	98.651	1.361	62487	2.01	100	98.7	90	110	
La	139	1	nogas	185.545	57.955	247	42.58	100	185.5	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	251.921	193.021	3	173.21	100	251.9	90	110	CCV Main CR1-2 Failed
Tl	203	1	nogas	98.048	1.677	374681	1.13	100	98.0	90	110	
Na	23	2	He	10992.079	2.069	1575086	1.21	10000	109.9	90	110	
Mg	24	2	He	10208.736	2.577	693360	0.46	10000	102.1	90	110	
Al	27	2	He	99.416	13.547	2487	13.71	100	99.4	90	110	
K	39	2	He	10321.900	1.328	359880	0.79	10000	103.2	90	110	
Ca	43	2	He	11460.736	18.247	933	16.05	10000	114.6	90	110	CCV Main CR1-2 Failed
Ca	44	2	He	10204.423	3.199	14833	1.74	10000	102.0	90	110	
V	51	2	He	101.357	1.777	27194	0.84	100	101.4	90	110	
Cr	52	2	He	103.889	3.855	35059	2.94	100	103.9	90	110	
Mn	55	2	He	101.567	2.228	17669	0.77	100	101.6	90	110	
Fe	56	2	He	10301.194	1.037	2659676	1.06	10000	103.0	90	110	
Co	59	2	He	101.799	3.149	49504	1.16	100	101.8	90	110	
Ni	60	2	He	100.638	1.503	13542	1.65	100	100.6	90	110	
Cu	63	2	He	101.950	2.052	38734	0.98	100	101.9	90	110	
Zn	66	2	He	104.706	4.353	6765	4.78	100	104.7	90	110	
As	75	2	He	101.375	3.110	4069	2.91	100	101.4	90	110	
Sb	121	2	He	95.337	3.462	30211	2.12	100	95.3	90	110	
Se	78	2	He	109.382	5.891	299	4.04	100	109.4	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	501031	1.28	522917	95.81	70	125	
In	115	1	nogas	605934	0.66	627838	96.51	70	125	
Li	6	1	nogas	216583	2.26	211473	102.42	70	125	
Bi	209	1	nogas	864465	0.75	915562	94.42	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	26444	2.09	29526	89.56	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	079_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-05T13:42:52-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	020CALB.d
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	0.030	44.1	50	34.6	1	
B	11	1	nogas	54.593	10.8	42752	10.1	10	CCB Main CR1 Failed
Na	23	1	nogas	59.507	3.9	289574	3.8	100	
Mg	24	1	nogas	3.653	10.9	11740	8.6	100	
Al	27	1	nogas	-1.331	-5.1	3100	7.1	5	
P	31	1	nogas	-3.497	-63.1	5641	6.6	10	
K	39	1	nogas	29.963	11.4	868861	0.8	100	
Ca	43	1	nogas	-1.953	-374.6	73	56.8	100	
Ca	44	1	nogas	-19.233	-6.7	8999	1.8	100	
Ti	47	1	nogas	0.033	328.1	33	91.7	2.5	
V	51	1	nogas	-5.680	-5.9	28464	4.3	2.5	
Cr	52	1	nogas	-0.219	-10.8	2454	4.2	2.5	
Mn	55	1	nogas	0.083	63.8	3874	7.0	2.5	
Fe	56	1	nogas	14.011	12.2	235727	3.3	100	
Co	59	1	nogas	0.013	91.7	127	37.3	2.5	
Ni	60	1	nogas	0.168	40.0	253	23.1	2.5	
Cu	63	1	nogas	-0.840	-7.8	1153	12.6	2.5	
Zn	66	1	nogas	-0.913	-4.9	113	28.4	2.5	
As	75	1	nogas	-5.937	-7.6	6565	5.4	2.5	
Se	77	1	nogas	-20.139	-44.6	2260	12.7	2.5	
Se	82	1	nogas	-1.361	-62.2	133	24.1	2.5	
Sr	88	1	nogas	0.051	13.1	480	7.5	2.5	
Mo	95	1	nogas	0.055	56.1	63	55.5	2.5	
Ag	107	1	nogas	0.027	11.5	160	6.3	2.5	
Cd	111	1	nogas	0.005	173.2	3	173.2	1	
Sn	118	1	nogas	0.108	52.0	683	17.1	5	
Sb	121	1	nogas	0.746	6.3	2340	5.9	2.5	
Ba	137	1	nogas	-0.114	-30.3	53	65.8	2.5	
Tl	205	1	nogas	0.075	12.2	773	12.0	1	
Pb	208	1	nogas	0.029	30.3	333	20.0	2.5	
U	238	1	nogas	0.024	25.5	593	17.2	2.5	
Si	28	1	nogas	73.470	9.2	616677	1.8	5	CCB Main CR1 Failed
La	139	1	nogas	-51.091	-24.0	13	86.6	2.5	
Au	197	1	nogas	243.981	204.9	3	173.2	2.5	CCB Main CR1 Failed
Na	23	2	He	59.679	1.3	11367	4.2	100	
Mg	24	2	He	2.175	19.7	177	18.2	100	
Al	27	2	He	-1.751	-91.2	70	51.5	5	
K	39	2	He	10.191	45.7	5031	5.0	100	
Ca	43	2	He	0.000	#DIV/0!	0	#DIV/0!	100	
Ca	44	2	He	-3.354	-227.6	33	34.6	100	
V	51	2	He	-0.124	-57.6	69	24.8	2.5	
Cr	52	2	He	-0.210	-62.2	83	54.1	2.5	
Mn	55	2	He	0.133	105.3	37	63.0	2.5	
Fe	56	2	He	1.586	37.4	1000	11.8	100	
Co	59	2	He	-0.025	0.0	0	#DIV/0!	2.5	
Ni	60	2	He	-0.416	-19.0	10	100.0	2.5	

Continuing Calibration Blank (CCB) Report

Cu	63	2	He	-0.976	-34.8	157	79.3	2.5	
Zn	66	2	He	-1.232	-7.3	3	173.2	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
As	75	2	He	0.127	99.5	9	57.3	2.5	
Sb	121	2	He	0.575	34.1	193	33.3	2.5	
Se	78	2	He	0.710	355.0	5	137.8	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	472582	0.68	522917	90.37	70	125	
In	115	1	nogas	580820	0.20	627838	92.51	70	125	
Li	6	1	nogas	195971	1.77	211473	92.67	70	125	
Bi	209	1	nogas	854683	1.21	915562	93.35	70	125	
Ge	72	2	He	25817	3.32	29526	87.44	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	2018-01-05T14:07:05-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	020CALB.d
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	97.364	1.800	135383	1.58	100	97.4	90	110	
B	11	1	nogas	483.502	3.862	314360	3.19	500	96.7	90	110	
Na	23	1	nogas	10189.506	1.343	38854657	0.65	10000	101.9	90	110	
Mg	24	1	nogas	9993.583	1.616	26459992	0.48	10000	99.9	90	110	
Al	27	1	nogas	99.916	0.809	337450	0.68	100	99.9	90	110	
P	31	1	nogas	505.348	1.500	98018	1.47	500	101.1	90	110	
K	39	1	nogas	10242.865	1.000	28837178	0.79	10000	102.4	90	110	
Ca	43	1	nogas	9702.580	2.082	53252	1.86	10000	97.0	90	110	
Ca	44	1	nogas	9947.944	1.316	910401	1.23	10000	99.5	90	110	
Ti	47	1	nogas	99.010	0.294	27315	0.66	100	99.0	90	110	
V	51	1	nogas	100.878	3.672	464065	3.61	100	100.9	90	110	
Cr	52	1	nogas	99.883	0.847	355245	0.63	100	99.9	90	110	
Mn	55	1	nogas	98.917	0.905	459512	0.87	100	98.9	90	110	
Fe	56	1	nogas	9749.813	0.770	38267062	0.40	10000	97.5	90	110	
Co	59	1	nogas	98.355	0.797	372597	0.47	100	98.4	90	110	
Ni	60	1	nogas	97.906	1.101	81404	0.76	100	97.9	90	110	
Cu	63	1	nogas	98.729	1.079	205170	1.30	100	98.7	90	110	
Zn	66	1	nogas	98.780	1.709	67918	1.95	100	98.8	90	110	
As	75	1	nogas	98.365	0.486	75075	0.57	100	98.4	90	110	
Se	77	1	nogas	120.135	9.961	6321	5.94	100	120.1	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	96.679	5.249	3681	5.35	100	96.7	90	110	
Sr	88	1	nogas	99.329	1.766	525494	1.95	100	99.3	90	110	
Mo	95	1	nogas	96.662	0.522	108492	0.86	100	96.7	90	110	
Ag	107	1	nogas	97.656	0.544	298459	0.50	100	97.7	90	110	
Cd	111	1	nogas	99.745	1.459	68110	1.78	100	99.7	90	110	
Sn	118	1	nogas	97.530	0.149	195415	0.46	100	97.5	90	110	
Sb	121	1	nogas	97.339	1.107	277071	0.74	100	97.3	90	110	
Ba	137	1	nogas	97.612	2.795	95932	2.52	100	97.6	90	110	
Tl	205	1	nogas	96.743	0.345	849202	1.12	100	96.7	90	110	
Pb	208	1	nogas	95.906	1.112	646825	0.41	100	95.9	90	110	
U	238	1	nogas	95.647	0.508	1606839	1.85	100	95.6	90	110	
Li	7	1	nogas	100.652	0.207	340567	0.76	100	100.7	90	110	
Si	28	1	nogas	5605.436	1.686	8252873	1.23	5000	112.1	90	110	CCV Main CR1-2 Failed
Ba	135	1	nogas	96.665	0.812	56722	0.49	100	96.7	90	110	
La	139	1	nogas	135.809	24.312	183	16.67	100	135.8	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	532.665	0.000	0	#DIV/0!	100	532.7	90	110	CCV Main CR1-2 Failed
Tl	203	1	nogas	96.982	2.623	351345	1.43	100	97.0	90	110	
Na	23	2	He	10671.126	6.849	1476208	2.16	10000	106.7	90	110	
Mg	24	2	He	10121.038	6.097	663827	1.51	10000	101.2	90	110	
Al	27	2	He	105.506	19.050	2530	13.51	100	105.5	90	110	
K	39	2	He	9991.415	6.009	336514	1.29	10000	99.9	90	110	
Ca	43	2	He	10039.690	16.521	797	21.09	10000	100.4	90	110	
Ca	44	2	He	10172.570	3.284	14293	1.56	10000	101.7	90	110	
V	51	2	He	98.685	6.516	25565	1.82	100	98.7	90	110	
Cr	52	2	He	100.847	8.562	32845	3.85	100	100.8	90	110	
Mn	55	2	He	101.300	3.445	17032	1.76	100	101.3	90	110	
Fe	56	2	He	10167.037	4.241	2536095	1.59	10000	101.7	90	110	
Co	59	2	He	100.600	5.393	47265	2.39	100	100.6	90	110	
Ni	60	2	He	98.724	4.784	12835	2.42	100	98.7	90	110	
Cu	63	2	He	98.086	4.771	36018	0.20	100	98.1	90	110	
Zn	66	2	He	100.905	8.860	6291	4.33	100	100.9	90	110	
As	75	2	He	95.003	5.741	3686	5.29	100	95.0	90	110	
Sb	121	2	He	94.777	8.950	28979	4.47	100	94.8	90	110	
Se	78	2	He	97.421	5.209	258	8.74	100	97.4	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	459397	0.37	522917	87.85	70	125	
In	115	1	nogas	561354	0.33	627838	89.41	70	125	
Li	6	1	nogas	202741	0.57	211473	95.87	70	125	
Bi	209	1	nogas	819667	1.46	915562	89.53	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	25576	4.67	29526	86.62	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	091_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-05T14:09:16-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	020CALB.d
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	0.006	207.2	17	91.7	1	
B	11	1	nogas	43.717	16.9	35736	12.1	10	CCB Main CR1 Failed
Na	23	1	nogas	29.858	6.5	170066	3.5	100	
Mg	24	1	nogas	1.807	22.7	6603	17.2	100	
Al	27	1	nogas	-1.256	-8.8	3240	9.5	5	
P	31	1	nogas	-2.765	-45.2	5584	2.8	10	
K	39	1	nogas	28.433	16.1	835588	1.4	100	
Ca	43	1	nogas	7.806	134.6	123	44.7	100	
Ca	44	1	nogas	-23.332	-16.4	8325	2.5	100	
Ti	47	1	nogas	0.085	177.1	47	89.2	2.5	
V	51	1	nogas	1.752	45.7	57742	4.0	2.5	
Cr	52	1	nogas	-0.102	-51.6	2784	7.7	2.5	
Mn	55	1	nogas	0.003	1335.3	3374	5.9	2.5	
Fe	56	1	nogas	11.229	9.1	217049	3.2	100	
Co	59	1	nogas	0.027	70.1	177	42.5	2.5	
Ni	60	1	nogas	0.045	118.3	143	31.5	2.5	
Cu	63	1	nogas	-0.788	-3.0	1220	3.6	2.5	
Zn	66	1	nogas	-0.888	-10.0	127	48.2	2.5	
As	75	1	nogas	-1.262	-35.7	9403	1.6	2.5	
Se	77	1	nogas	10.608	74.3	3080	6.3	2.5	CCB Main CR1 Failed
Se	82	1	nogas	-1.527	-89.5	123	41.6	2.5	
Sr	88	1	nogas	0.014	31.5	273	7.6	2.5	
Mo	95	1	nogas	0.090	29.2	100	30.0	2.5	
Ag	107	1	nogas	0.005	305.9	90	57.7	2.5	
Cd	111	1	nogas	0.049	125.4	33	124.9	1	
Sn	118	1	nogas	0.079	92.5	607	23.3	5	
Sb	121	1	nogas	0.429	18.4	1367	17.5	2.5	
Ba	137	1	nogas	-0.117	-8.4	50	20.0	2.5	
Tl	205	1	nogas	0.097	31.5	967	29.7	1	
Pb	208	1	nogas	0.036	11.3	373	8.6	2.5	
U	238	1	nogas	0.023	36.8	570	26.0	2.5	
Si	28	1	nogas	88.157	12.2	616143	1.8	5	CCB Main CR1 Failed
La	139	1	nogas	-43.577	-24.6	20	50.0	2.5	
Au	197	1	nogas	-1505.659	-145.4	23	107.9	2.5	
Na	23	2	He	31.033	4.4	7155	2.4	100	
Mg	24	2	He	2.621	29.5	200	25.0	100	
Al	27	2	He	-2.411	-64.4	53	65.8	5	
K	39	2	He	15.408	45.9	5057	4.8	100	
Ca	43	2	He	86.308	173.2	7	173.2	100	
Ca	44	2	He	-19.469	-64.8	10	173.2	100	
V	51	2	He	0.122	15.6	129	3.9	2.5	
Cr	52	2	He	-0.264	-13.9	63	18.2	2.5	
Mn	55	2	He	0.197	46.8	47	32.7	2.5	
Fe	56	2	He	2.002	40.2	1077	18.3	100	
Co	59	2	He	-0.003	-734.7	10	100.0	2.5	
Ni	60	2	He	-0.441	-10.3	7	86.6	2.5	
Cu	63	2	He	-0.851	-7.0	197	10.6	2.5	
Zn	66	2	He	-0.953	-17.4	20	50.0	2.5	

Continuing Calibration Blank (CCB) Report

As	75	2	He	0.222	113.8	12	78.7	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.396	19.1	133	17.3	2.5	
Se	78	2	He	2.009	102.5	8	66.1	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	456782	1.67	522917	87.35	70	125	
In	115	1	nogas	567205	0.78	627838	90.34	70	125	
Li	6	1	nogas	194110	0.70	211473	91.79	70	125	
Bi	209	1	nogas	842015	1.20	915562	91.97	70	125	
Ge	72	2	He	25082	0.24	29526	84.95	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	2018-01-05T14:34:35-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	020CALB.d
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	97.404	0.632	135526	1.97	100	97.4	90	110	
B	11	1	nogas	494.040	2.078	321246	2.79	500	98.8	90	110	
Na	23	1	nogas	10462.560	0.763	39398060	0.67	10000	104.6	90	110	
Mg	24	1	nogas	10391.503	1.526	27172351	1.55	10000	103.9	90	110	
Al	27	1	nogas	104.129	1.350	345562	0.14	100	104.1	90	110	
P	31	1	nogas	513.760	1.948	97907	1.71	500	102.8	90	110	
K	39	1	nogas	10576.736	1.689	29263725	1.89	10000	105.8	90	110	
Ca	43	1	nogas	10098.895	2.272	54505	1.02	10000	101.0	90	110	
Ca	44	1	nogas	10189.631	1.128	916937	1.28	10000	101.9	90	110	
Ti	47	1	nogas	102.644	0.775	27853	1.72	100	102.6	90	110	
V	51	1	nogas	104.707	2.289	471764	1.09	100	104.7	90	110	
Cr	52	1	nogas	102.356	2.064	357938	0.95	100	102.4	90	110	
Mn	55	1	nogas	101.293	1.629	462692	0.62	100	101.3	90	110	
Fe	56	1	nogas	9990.803	1.792	38560908	0.96	10000	99.9	90	110	
Co	59	1	nogas	101.640	1.241	378706	1.19	100	101.6	90	110	
Ni	60	1	nogas	103.099	0.173	84312	1.23	100	103.1	90	110	
Cu	63	1	nogas	101.531	0.836	207435	0.73	100	101.5	90	110	
Zn	66	1	nogas	100.529	1.860	67961	0.72	100	100.5	90	110	
As	75	1	nogas	101.367	1.194	75781	0.57	100	101.4	90	110	
Se	77	1	nogas	104.239	14.814	5754	6.92	100	104.2	90	110	
Se	82	1	nogas	108.246	7.293	4031	6.45	100	108.2	90	110	
Sr	88	1	nogas	100.440	1.229	522589	0.43	100	100.4	90	110	
Mo	95	1	nogas	98.286	2.381	108485	1.48	100	98.3	90	110	
Ag	107	1	nogas	99.123	1.582	297935	0.63	100	99.1	90	110	
Cd	111	1	nogas	98.244	0.913	66296	1.38	100	98.2	90	110	
Sn	118	1	nogas	96.327	0.820	190738	0.69	100	96.3	90	110	
Sb	121	1	nogas	98.490	0.728	275744	1.05	100	98.5	90	110	
Ba	137	1	nogas	97.250	0.615	94460	1.06	100	97.2	90	110	
Tl	205	1	nogas	99.168	1.602	833380	0.55	100	99.2	90	110	
Pb	208	1	nogas	97.466	1.163	629390	0.29	100	97.5	90	110	
U	238	1	nogas	98.234	2.036	1579926	1.90	100	98.2	90	110	
Li	7	1	nogas	100.829	0.179	341338	1.72	100	100.8	90	110	
Si	28	1	nogas	5670.019	2.208	8204506	1.34	5000	113.4	90	110	CCV Main CR1-2 Failed
Ba	135	1	nogas	97.887	1.680	56766	2.10	100	97.9	90	110	
La	139	1	nogas	79.136	134.036	130	73.38	100	79.1	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	216.937	252.081	3	173.21	100	216.9	90	110	CCV Main CR1-2 Failed
Tl	203	1	nogas	99.462	1.761	345033	0.63	100	99.5	90	110	
Na	23	2	He	11022.002	3.854	1475131	2.11	10000	110.2	90	110	CCV Main CR1-2 Failed
Mg	24	2	He	10300.885	3.529	653543	1.68	10000	103.0	90	110	
Al	27	2	He	104.358	7.789	2430	5.76	100	104.4	90	110	
K	39	2	He	10332.395	2.355	336506	0.44	10000	103.3	90	110	
Ca	43	2	He	10746.074	6.063	820	7.42	10000	107.5	90	110	
Ca	44	2	He	10382.911	3.034	14099	1.15	10000	103.8	90	110	
V	51	2	He	102.347	3.792	25647	1.96	100	102.3	90	110	
Cr	52	2	He	102.669	3.645	32367	1.87	100	102.7	90	110	
Mn	55	2	He	99.164	1.622	16121	2.36	100	99.2	90	110	
Fe	56	2	He	10549.114	1.768	2544301	0.29	10000	105.5	90	110	
Co	59	2	He	101.218	1.114	45998	1.22	100	101.2	90	110	
Ni	60	2	He	99.702	3.796	12532	2.72	100	99.7	90	110	
Cu	63	2	He	101.402	0.455	36001	1.56	100	101.4	90	110	
Zn	66	2	He	107.687	3.946	6495	2.33	100	107.7	90	110	
As	75	2	He	97.758	2.385	3667	3.31	100	97.8	90	110	
Sb	121	2	He	95.921	3.776	28395	1.96	100	95.9	90	110	
Se	78	2	He	98.380	9.883	251	9.43	100	98.4	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	451860	1.32	522917	86.41	70	125	
In	115	1	nogas	554753	0.46	627838	88.36	70	125	
Li	6	1	nogas	202866	1.82	211473	95.93	70	125	
Bi	209	1	nogas	784793	1.16	915562	85.72	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	24705	1.90	29526	83.67	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	103_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-05T14:36:46-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	020CALB.d
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	0.023	116.5	40	90.1	1	
B	11	1	nogas	58.985	12.0	44496	9.8	10	CCB Main CR1 Failed
Na	23	1	nogas	83.026	2.3	361345	2.6	100	
Mg	24	1	nogas	1.989	16.7	6903	12.9	100	
Al	27	1	nogas	-1.242	-9.8	3240	12.0	5	
P	31	1	nogas	-0.708	-293.8	5864	5.0	10	
K	39	1	nogas	40.331	24.1	854653	1.9	100	
Ca	43	1	nogas	3.691	87.4	100	17.3	100	
Ca	44	1	nogas	-7.555	-60.9	9596	2.9	100	
Ti	47	1	nogas	-0.023	-239.6	17	91.7	2.5	
V	51	1	nogas	0.994	87.0	53828	5.1	2.5	
Cr	52	1	nogas	-0.058	-145.4	2894	11.4	2.5	
Mn	55	1	nogas	0.049	67.1	3530	5.5	2.5	
Fe	56	1	nogas	7.511	18.7	199465	2.3	100	
Co	59	1	nogas	0.023	47.5	157	25.8	2.5	
Ni	60	1	nogas	0.245	12.2	303	8.3	2.5	
Cu	63	1	nogas	-0.526	-7.1	1727	4.4	2.5	
Zn	66	1	nogas	-0.944	-4.2	87	29.0	2.5	
As	75	1	nogas	-1.246	-51.1	9276	5.7	2.5	
Se	77	1	nogas	17.146	33.3	3224	5.3	2.5	CCB Main CR1 Failed
Se	82	1	nogas	1.255	113.3	220	24.1	2.5	
Sr	88	1	nogas	0.006	150.0	227	19.9	2.5	
Mo	95	1	nogas	0.061	35.5	67	34.6	2.5	
Ag	107	1	nogas	0.012	56.1	107	19.5	2.5	
Cd	111	1	nogas	0.020	86.6	13	86.6	1	
Sn	118	1	nogas	0.071	50.9	570	12.3	5	
Sb	121	1	nogas	0.404	10.7	1273	8.7	2.5	
Ba	137	1	nogas	-0.122	-18.0	43	48.0	2.5	
Tl	205	1	nogas	0.091	23.2	863	20.9	1	
Pb	208	1	nogas	0.043	24.8	403	17.4	2.5	
U	238	1	nogas	0.029	12.7	633	9.0	2.5	
Si	28	1	nogas	97.266	11.6	619072	1.3	5	CCB Main CR1 Failed
La	139	1	nogas	-35.068	-49.7	27	57.3	2.5	
Au	197	1	nogas	532.665	0.0	0	#DIV/0!	2.5	CCB Main CR1 Failed
Na	23	2	He	81.780	7.6	13392	7.6	100	
Mg	24	2	He	1.253	26.5	107	19.5	100	
Al	27	2	He	-3.067	-43.7	37	78.7	5	
K	39	2	He	19.715	9.9	4957	4.5	100	
Ca	43	2	He	0.000	#DIV/0!	0	#DIV/0!	100	
Ca	44	2	He	-16.581	-26.7	13	43.3	100	
V	51	2	He	0.007	847.0	95	12.8	2.5	
Cr	52	2	He	-0.207	-55.4	77	41.9	2.5	
Mn	55	2	He	0.045	390.1	20	132.3	2.5	
Fe	56	2	He	1.929	25.7	1013	15.8	100	
Co	59	2	He	-0.002	-2137.0	10	173.2	2.5	
Ni	60	2	He	-0.154	-247.3	40	109.0	2.5	

Continuing Calibration Blank (CCB) Report

Cu	63	2	He	-0.943	-1.9	157	7.4	2.5	
Zn	66	2	He	-1.113	-14.9	10	100.0	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
As	75	2	He	0.079	291.0	7	132.3	2.5	
Sb	121	2	He	0.498	12.6	157	14.7	2.5	
Se	78	2	He	1.099	226.9	5	114.6	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	449822	1.37	522917	86.02	70	125	
In	115	1	nogas	545567	0.67	627838	86.90	70	125	
Li	6	1	nogas	192087	0.58	211473	90.83	70	125	
Bi	209	1	nogas	802543	0.55	915562	87.66	70	125	
Ge	72	2	He	23924	4.46	29526	81.03	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	114_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-05T15:01:05-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	020CALB.d
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	96.789	2.674	131766	3.03	100	96.8	90	110	
B	11	1	nogas	477.603	2.656	304096	0.69	500	95.5	90	110	
Na	23	1	nogas	10624.456	2.156	38812697	0.44	10000	106.2	90	110	
Mg	24	1	nogas	10232.973	1.684	25965013	2.33	10000	102.3	90	110	
Al	27	1	nogas	102.862	0.692	333441	0.55	100	102.9	90	110	
P	31	1	nogas	510.514	4.606	95038	4.21	500	102.1	90	110	
K	39	1	nogas	10399.486	2.059	28106794	1.46	10000	104.0	90	110	
Ca	43	1	nogas	10274.462	2.778	54147	1.78	10000	102.7	90	110	
Ca	44	1	nogas	10142.912	0.839	891309	0.63	10000	101.4	90	110	
Ti	47	1	nogas	103.530	0.659	27432	1.39	100	103.5	90	110	
V	51	1	nogas	97.204	5.536	431066	3.73	100	97.2	90	110	
Cr	52	1	nogas	101.818	2.789	347740	2.69	100	101.8	90	110	
Mn	55	1	nogas	100.376	2.382	447807	2.58	100	100.4	90	110	
Fe	56	1	nogas	9929.010	2.008	37422948	1.36	10000	99.3	90	110	
Co	59	1	nogas	99.698	0.974	362741	0.88	100	99.7	90	110	
Ni	60	1	nogas	100.094	1.156	79931	1.39	100	100.1	90	110	
Cu	63	1	nogas	99.624	0.740	198808	0.80	100	99.6	90	110	
Zn	66	1	nogas	100.209	2.580	66164	2.77	100	100.2	90	110	
As	75	1	nogas	93.120	1.618	68796	2.52	100	93.1	90	110	
Se	77	1	nogas	71.667	11.621	4701	4.43	100	71.7	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	96.842	1.498	3540	2.31	100	96.8	90	110	
Sr	88	1	nogas	100.429	2.693	510209	1.83	100	100.4	90	110	
Mo	95	1	nogas	95.174	2.965	102575	1.84	100	95.2	90	110	
Ag	107	1	nogas	98.215	1.763	288271	1.19	100	98.2	90	110	
Cd	111	1	nogas	99.646	1.223	64690	1.01	100	99.6	90	110	
Sn	118	1	nogas	97.639	2.525	185994	2.26	100	97.6	90	110	
Sb	121	1	nogas	97.421	1.736	266326	1.33	100	97.4	90	110	
Ba	137	1	nogas	99.357	1.310	92841	1.18	100	99.4	90	110	
Tl	205	1	nogas	99.155	1.763	807391	0.23	100	99.2	90	110	
Pb	208	1	nogas	96.952	0.921	606688	1.21	100	97.0	90	110	
U	238	1	nogas	97.527	1.077	1520033	1.88	100	97.5	90	110	
Li	7	1	nogas	101.063	1.817	334683	1.17	100	101.1	90	110	
Si	28	1	nogas	5651.092	1.695	7987546	1.94	5000	113.0	90	110	CCV Main CR1-2 Failed
Ba	135	1	nogas	97.949	1.669	54645	1.66	100	97.9	90	110	
La	139	1	nogas	134.688	12.408	173	8.81	100	134.7	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	-124.810	-912.411	7	173.21	100	-124.8	90	110	CCV Main CR1-2 Failed
Tl	203	1	nogas	98.353	1.144	330632	1.31	100	98.4	90	110	
Na	23	2	He	11244.913	3.730	1463717	1.56	10000	112.4	90	110	CCV Main CR1-2 Failed
Mg	24	2	He	10309.240	2.149	636419	2.40	10000	103.1	90	110	
Al	27	2	He	101.292	7.608	2297	4.85	100	101.3	90	110	
K	39	2	He	10427.140	2.953	330282	2.14	10000	104.3	90	110	
Ca	43	2	He	10051.101	16.232	743	13.27	10000	100.5	90	110	
Ca	44	2	He	10347.384	5.754	13659	2.64	10000	103.5	90	110	
V	51	2	He	99.812	2.555	24338	2.35	100	99.8	90	110	
Cr	52	2	He	101.457	5.849	31102	3.81	100	101.5	90	110	
Mn	55	2	He	106.824	6.476	16869	2.17	100	106.8	90	110	
Fe	56	2	He	10502.339	2.518	2464171	2.86	10000	105.0	90	110	
Co	59	2	He	101.713	3.934	44942	2.00	100	101.7	90	110	
Ni	60	2	He	97.807	1.154	11964	3.06	100	97.8	90	110	
Cu	63	2	He	100.801	3.198	34806	2.47	100	100.8	90	110	
Zn	66	2	He	104.414	8.203	6131	8.80	100	104.4	90	110	
As	75	2	He	99.347	2.456	3626	4.63	100	99.3	90	110	
Sb	121	2	He	95.478	2.638	27497	1.61	100	95.5	90	110	
Se	78	2	He	101.621	5.831	253	7.48	100	101.6	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	441237	1.22	522917	84.38	70	125	
In	115	1	nogas	533720	0.45	627838	85.01	70	125	
Li	6	1	nogas	198504	1.87	211473	93.87	70	125	
Bi	209	1	nogas	760504	1.95	915562	83.06	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	24041	4.17	29526	81.42	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	126_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-05T15:27:34-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	020CALB.d
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	99.153	2.086	153902	1.53	100	99.2	90	110	
B	11	1	nogas	480.622	2.351	349037	3.54	500	96.1	90	110	
Na	23	1	nogas	11068.340	1.174	44059451	0.97	10000	110.7	90	110	CCV Main CR1-2 Failed
Mg	24	1	nogas	10945.497	1.062	30257206	0.57	10000	109.5	90	110	
Al	27	1	nogas	105.869	0.579	384198	0.67	100	105.9	90	110	
P	31	1	nogas	541.207	1.467	112467	1.49	500	108.2	90	110	
K	39	1	nogas	10441.341	0.334	31609733	0.36	10000	104.4	90	110	
Ca	43	1	nogas	10343.386	3.254	61070	3.29	10000	103.4	90	110	
Ca	44	1	nogas	10239.992	0.502	1007865	0.15	10000	102.4	90	110	
Ti	47	1	nogas	103.868	0.444	30828	0.93	100	103.9	90	110	
V	51	1	nogas	111.425	3.475	545635	2.66	100	111.4	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	103.291	1.684	395105	1.43	100	103.3	90	110	
Mn	55	1	nogas	101.588	2.541	507594	2.30	100	101.6	90	110	
Fe	56	1	nogas	9987.088	1.657	42165507	1.27	10000	99.9	90	110	
Co	59	1	nogas	101.808	0.840	414932	0.80	100	101.8	90	110	
Ni	60	1	nogas	101.198	1.659	90517	1.20	100	101.2	90	110	
Cu	63	1	nogas	101.255	2.383	226276	1.79	100	101.3	90	110	
Zn	66	1	nogas	102.614	2.650	75864	2.01	100	102.6	90	110	
As	75	1	nogas	102.709	1.935	83845	1.66	100	102.7	90	110	
Se	77	1	nogas	150.704	9.068	7765	5.01	100	150.7	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	91.464	8.386	3757	8.52	100	91.5	90	110	
Sr	88	1	nogas	101.094	0.996	575363	0.70	100	101.1	90	110	
Mo	95	1	nogas	99.424	1.378	120049	0.96	100	99.4	90	110	
Ag	107	1	nogas	99.720	1.739	327868	1.42	100	99.7	90	110	
Cd	111	1	nogas	102.631	2.514	73569	2.02	100	102.6	90	110	
Sn	118	1	nogas	100.950	0.484	212348	0.97	100	101.0	90	110	
Sb	121	1	nogas	100.008	1.238	306248	0.62	100	100.0	90	110	
Ba	137	1	nogas	103.326	1.010	106608	0.69	100	103.3	90	110	
Tl	205	1	nogas	99.899	0.320	929757	1.04	100	99.9	90	110	
Pb	208	1	nogas	98.602	0.814	705173	1.70	100	98.6	90	110	
U	238	1	nogas	100.899	2.302	1796918	1.77	100	100.9	90	110	
Li	7	1	nogas	104.175	0.616	392864	1.56	100	104.2	90	110	
Si	28	1	nogas	5774.229	1.153	9130171	0.89	5000	115.5	90	110	CCV Main CR1-2 Failed
Ba	135	1	nogas	101.009	1.330	62222	1.09	100	101.0	90	110	
La	139	1	nogas	206.473	39.683	260	30.04	100	206.5	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	532.665	0.000	0	#DIV/0!	100	532.7	90	110	CCV Main CR1-2 Failed
Tl	203	1	nogas	100.309	1.850	385333	1.00	100	100.3	90	110	
Na	23	2	He	11231.524	0.844	1663315	1.53	10000	112.3	90	110	CCV Main CR1-2 Failed
Mg	24	2	He	10555.196	1.550	740935	0.57	10000	105.6	90	110	
Al	27	2	He	109.410	8.391	2817	9.33	100	109.4	90	110	
K	39	2	He	10593.048	0.947	381544	0.58	10000	105.9	90	110	
Ca	43	2	He	10992.063	7.571	927	6.14	10000	109.9	90	110	
Ca	44	2	He	10597.284	2.050	15924	3.20	10000	106.0	90	110	
V	51	2	He	101.839	1.021	28237	0.53	100	101.8	90	110	
Cr	52	2	He	103.266	2.940	36014	1.73	100	103.3	90	110	
Mn	55	2	He	104.244	4.389	18744	4.58	100	104.2	90	110	
Fe	56	2	He	10624.484	1.491	2834667	1.28	10000	106.2	90	110	
Co	59	2	He	103.105	2.718	51818	1.25	100	103.1	90	110	
Ni	60	2	He	98.913	1.763	13756	1.98	100	98.9	90	110	
Cu	63	2	He	105.406	0.917	41370	0.80	100	105.4	90	110	
Zn	66	2	He	104.532	3.238	6978	3.18	100	104.5	90	110	
As	75	2	He	103.047	2.733	4274	1.23	100	103.0	90	110	
Sb	121	2	He	98.729	0.664	32339	0.84	100	98.7	90	110	
Se	78	2	He	96.192	4.677	272	5.15	100	96.2	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	494241	0.63	522917	94.52	70	125	
In	115	1	nogas	589369	0.54	627838	93.87	70	125	
Li	6	1	nogas	226338	1.27	211473	107.03	70	125	
Bi	209	1	nogas	869041	0.91	915562	94.92	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	27325	1.50	29526	92.55	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	127_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-05T15:29:45-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	020CALB.d
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	0.014	49.6	30	33.3	1	
B	11	1	nogas	39.255	15.9	35486	11.4	10	CCB Main CR1 Failed
Na	23	1	nogas	39.714	3.9	217084	3.5	100	
Mg	24	1	nogas	3.555	7.5	11707	6.8	100	
Al	27	1	nogas	-1.217	-1.6	3580	1.6	5	
P	31	1	nogas	-0.685	-220.7	6328	4.1	10	
K	39	1	nogas	16.920	13.4	853702	0.2	100	
Ca	43	1	nogas	9.805	88.9	143	35.8	100	
Ca	44	1	nogas	-19.585	-26.1	9199	5.4	100	
Ti	47	1	nogas	-0.051	-67.4	10	100.0	2.5	
V	51	1	nogas	10.614	12.8	99641	6.1	2.5	CCB Main CR1 Failed
Cr	52	1	nogas	0.089	110.0	3664	10.3	2.5	
Mn	55	1	nogas	0.083	82.9	3971	8.9	2.5	
Fe	56	1	nogas	14.448	6.7	243642	2.0	100	
Co	59	1	nogas	0.021	13.1	160	6.3	2.5	
Ni	60	1	nogas	0.100	63.2	200	27.8	2.5	
Cu	63	1	nogas	-0.701	-8.8	1483	9.1	2.5	
Zn	66	1	nogas	-0.838	-7.4	170	25.6	2.5	
As	75	1	nogas	4.009	15.7	13649	3.7	2.5	CCB Main CR1 Failed
Se	77	1	nogas	50.955	7.5	4524	2.9	2.5	CCB Main CR1 Failed
Se	82	1	nogas	0.123	1311.7	193	31.6	2.5	
Sr	88	1	nogas	0.027	65.4	360	26.8	2.5	
Mo	95	1	nogas	0.090	42.5	107	42.3	2.5	
Ag	107	1	nogas	0.011	116.5	113	36.7	2.5	
Cd	111	1	nogas	0.032	108.5	23	107.9	1	
Sn	118	1	nogas	0.086	71.0	643	18.7	5	
Sb	121	1	nogas	0.392	20.5	1337	17.6	2.5	
Ba	137	1	nogas	-0.079	-34.5	90	29.4	2.5	
Tl	205	1	nogas	0.081	22.8	843	21.4	1	
Pb	208	1	nogas	0.035	29.4	377	18.1	2.5	
U	238	1	nogas	0.029	23.2	687	17.6	2.5	
Si	28	1	nogas	47.547	12.7	594805	1.1	5	CCB Main CR1 Failed
La	139	1	nogas	-44.215	-23.9	20	50.0	2.5	
Au	197	1	nogas	532.665	0.0	0	#DIV/0!	2.5	CCB Main CR1 Failed
Na	23	2	He	40.157	2.2	8836	1.4	100	
Mg	24	2	He	4.248	42.5	320	36.8	100	
Al	27	2	He	-2.109	-11.7	63	9.1	5	
K	39	2	He	6.576	81.8	5021	3.9	100	
Ca	43	2	He	0.000	#DIV/0!	0	#DIV/0!	100	
Ca	44	2	He	10.297	209.8	53	57.3	100	
V	51	2	He	0.371	15.8	203	8.5	2.5	
Cr	52	2	He	-0.223	-49.7	80	45.1	2.5	
Mn	55	2	He	0.088	176.5	30	88.2	2.5	
Fe	56	2	He	2.421	23.3	1240	10.1	100	
Co	59	2	He	0.003	896.3	13	86.6	2.5	
Ni	60	2	He	-0.143	-133.0	47	53.9	2.5	

Continuing Calibration Blank (CCB) Report

Cu	63	2	He	-0.952	-26.7	170	56.7	2.5	
Zn	66	2	He	-1.284	0.0	0	#DIV/0!	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
As	75	2	He	0.067	121.4	7	50.0	2.5	
Sb	121	2	He	0.468	19.9	163	19.7	2.5	
Se	78	2	He	0.870	132.0	5	57.3	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	484855	0.56	522917	92.72	70	125	
In	115	1	nogas	587416	1.80	627838	93.56	70	125	
Li	6	1	nogas	208358	0.23	211473	98.53	70	125	
Bi	209	1	nogas	867390	1.65	915562	94.74	70	125	
Ge	72	2	He	26408	1.61	29526	89.44	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	138_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-05T15:54:09-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	020CALB.d
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	97.979	2.465	169459	2.35	100	98.0	90	110	
B	11	1	nogas	579.304	1.367	466139	1.35	500	115.9	90	110	CCV Main CR1-2 Failed
Na	23	1	nogas	10487.841	1.326	48558700	0.52	10000	104.9	90	110	
Mg	24	1	nogas	10335.317	2.084	33228653	1.65	10000	103.4	90	110	
Al	27	1	nogas	102.806	1.312	422649	1.62	100	102.8	90	110	
P	31	1	nogas	520.875	2.809	122811	2.11	500	104.2	90	110	
K	39	1	nogas	10369.879	0.758	35546845	0.35	10000	103.7	90	110	
Ca	43	1	nogas	10220.228	3.492	68307	2.81	10000	102.2	90	110	
Ca	44	1	nogas	10114.979	1.063	1127235	0.74	10000	101.1	90	110	
Ti	47	1	nogas	102.909	0.414	34578	0.55	100	102.9	90	110	
V	51	1	nogas	94.595	1.277	533869	1.78	100	94.6	90	110	
Cr	52	1	nogas	101.759	1.577	440726	1.19	100	101.8	90	110	
Mn	55	1	nogas	100.073	0.749	566160	0.15	100	100.1	90	110	
Fe	56	1	nogas	9889.306	2.034	47268857	1.26	10000	98.9	90	110	
Co	59	1	nogas	99.938	0.545	461123	0.44	100	99.9	90	110	
Ni	60	1	nogas	100.557	0.976	101829	0.35	100	100.6	90	110	
Cu	63	1	nogas	99.588	0.939	252025	0.41	100	99.6	90	110	
Zn	66	1	nogas	101.855	1.156	85265	0.80	100	101.9	90	110	
As	75	1	nogas	95.479	0.858	89122	0.05	100	95.5	90	110	
Se	77	1	nogas	77.038	6.358	6155	2.73	100	77.0	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	97.089	7.266	4501	7.13	100	97.1	90	110	
Sr	88	1	nogas	100.172	2.160	645401	1.43	100	100.2	90	110	
Mo	95	1	nogas	98.052	2.514	134027	1.90	100	98.1	90	110	
Ag	107	1	nogas	98.718	1.295	367462	1.03	100	98.7	90	110	
Cd	111	1	nogas	100.507	0.648	83651	0.39	100	100.5	90	110	
Sn	118	1	nogas	97.952	0.456	239219	0.13	100	98.0	90	110	
Sb	121	1	nogas	100.346	0.806	347890	0.58	100	100.3	90	110	
Ba	137	1	nogas	100.456	2.912	120343	2.97	100	100.5	90	110	
Tl	205	1	nogas	98.899	0.860	1052987	0.89	100	98.9	90	110	
Pb	208	1	nogas	97.664	1.191	799007	1.23	100	97.7	90	110	
U	238	1	nogas	98.692	0.875	2010938	0.99	100	98.7	90	110	
Li	7	1	nogas	101.878	1.815	428509	1.63	100	101.9	90	110	
Si	28	1	nogas	5543.941	0.859	9948735	1.16	5000	110.9	90	110	CCV Main CR1-2 Failed
Ba	135	1	nogas	98.744	1.192	70623	0.94	100	98.7	90	110	
La	139	1	nogas	186.801	21.286	280	15.57	100	186.8	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	40.073	2129.084	7	173.21	100	40.1	90	110	CCV Main CR1-2 Failed
Tl	203	1	nogas	98.776	0.498	434153	1.25	100	98.8	90	110	
Na	23	2	He	11014.829	4.916	1828255	1.55	10000	110.1	90	110	CCV Main CR1-2 Failed
Mg	24	2	He	10422.356	5.458	819937	2.04	10000	104.2	90	110	
Al	27	2	He	108.197	2.060	3124	2.40	100	108.2	90	110	
K	39	2	He	10301.704	3.426	416178	0.39	10000	103.0	90	110	
Ca	43	2	He	10248.954	30.559	963	27.16	10000	102.5	90	110	
Ca	44	2	He	10463.494	3.919	17636	4.63	10000	104.6	90	110	
V	51	2	He	100.845	3.617	31351	0.28	100	100.8	90	110	
Cr	52	2	He	105.404	3.350	41219	0.52	100	105.4	90	110	
Mn	55	2	He	104.520	4.777	21063	1.38	100	104.5	90	110	
Fe	56	2	He	10409.532	4.120	3113473	0.89	10000	104.1	90	110	
Co	59	2	He	101.533	4.498	57209	1.14	100	101.5	90	110	
Ni	60	2	He	101.309	3.381	15794	0.10	100	101.3	90	110	
Cu	63	2	He	102.317	5.090	45026	1.66	100	102.3	90	110	
Zn	66	2	He	101.105	6.570	7565	3.05	100	101.1	90	110	
As	75	2	He	98.732	6.327	4590	3.16	100	98.7	90	110	
Sb	121	2	He	98.175	2.294	36063	1.16	100	98.2	90	110	
Se	78	2	He	94.214	12.628	299	11.80	100	94.2	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	559543	0.76	522917	107.00	70	125	
In	115	1	nogas	684244	0.35	627838	108.98	70	125	
Li	6	1	nogas	252177	0.13	211473	119.25	70	125	
Bi	209	1	nogas	994200	0.76	915562	108.59	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	30658	3.42	29526	103.83	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	139_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-05T15:56:20-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	020CALB.d
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	0.025	13.4	53	10.8	1	
B	11	1	nogas	97.987	10.0	85644	8.4	10	CCB Main CR1 Failed
Na	23	1	nogas	46.179	2.1	287789	3.5	100	
Mg	24	1	nogas	2.454	29.5	10306	23.1	100	
Al	27	1	nogas	-1.114	-6.8	4591	7.0	5	
P	31	1	nogas	-0.290	-875.5	7462	6.9	10	
K	39	1	nogas	19.975	27.6	1005169	1.1	100	
Ca	43	1	nogas	5.310	87.6	137	23.5	100	
Ca	44	1	nogas	-23.590	-11.0	10277	3.6	100	
Ti	47	1	nogas	0.004	831.6	30	33.3	2.5	
V	51	1	nogas	-3.619	-9.8	44432	4.7	2.5	
Cr	52	1	nogas	-0.178	-12.8	3110	3.1	2.5	
Mn	55	1	nogas	0.043	82.0	4401	3.8	2.5	
Fe	56	1	nogas	7.019	21.6	248206	2.4	100	
Co	59	1	nogas	0.023	45.3	197	24.0	2.5	
Ni	60	1	nogas	0.130	56.9	263	28.5	2.5	
Cu	63	1	nogas	-0.662	-18.1	1823	15.9	2.5	
Zn	66	1	nogas	-0.904	-13.2	143	70.2	2.5	
As	75	1	nogas	-4.376	-3.0	9113	1.0	2.5	
Se	77	1	nogas	-11.702	-60.2	3007	8.9	2.5	
Se	82	1	nogas	-2.172	-32.2	123	26.1	2.5	
Sr	88	1	nogas	0.032	48.1	453	22.2	2.5	
Mo	95	1	nogas	0.068	33.4	93	32.7	2.5	
Ag	107	1	nogas	0.007	105.5	117	24.7	2.5	
Cd	111	1	nogas	0.008	86.6	7	86.6	1	
Sn	118	1	nogas	0.053	132.2	670	24.9	5	
Sb	121	1	nogas	0.301	3.7	1240	2.9	2.5	
Ba	137	1	nogas	-0.058	-87.2	130	46.8	2.5	
Tl	205	1	nogas	0.095	33.4	1150	30.2	1	
Pb	208	1	nogas	0.025	28.4	360	16.7	2.5	
U	238	1	nogas	0.030	19.8	830	14.8	2.5	
Si	28	1	nogas	-5.674	-118.6	602633	1.6	5	
La	139	1	nogas	-44.233	-31.3	23	65.5	2.5	
Au	197	1	nogas	-187.309	-384.1	10	100.0	2.5	
Na	23	2	He	43.551	7.0	11184	1.7	100	
Mg	24	2	He	2.024	26.2	203	18.6	100	
Al	27	2	He	-2.671	-22.7	60	28.9	5	
K	39	2	He	-3.376	-209.1	5621	6.9	100	
Ca	43	2	He	68.269	173.2	7	173.2	100	
Ca	44	2	He	-15.240	-65.6	20	86.6	100	
V	51	2	He	-0.097	-77.1	93	27.1	2.5	
Cr	52	2	He	-0.140	-31.9	130	13.3	2.5	
Mn	55	2	He	0.205	65.4	60	44.1	2.5	
Fe	56	2	He	2.008	15.3	1363	7.8	100	
Co	59	2	He	0.026	125.1	30	66.7	2.5	
Ni	60	2	He	-0.179	-98.0	50	52.9	2.5	
Cu	63	2	He	-0.885	-19.1	233	32.5	2.5	
Zn	66	2	He	-0.854	-36.8	33	75.5	2.5	

Continuing Calibration Blank (CCB) Report

As	75	2	He	0.226	39.6	16	24.8	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.516	42.9	213	37.6	2.5	
Se	78	2	He	0.131	491.5	4	50.0	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	565066	0.75	522917	108.06	70	125	
In	115	1	nogas	684843	0.55	627838	109.08	70	125	
Li	6	1	nogas	242778	0.41	211473	114.80	70	125	
Bi	209	1	nogas	1020484	0.41	915562	111.46	70	125	
Ge	72	2	He	31713	2.99	29526	107.41	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	150_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-05T16:21:36-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	020CALB.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	93.945	1.551	172475	1.87	100	93.9	90	110	
B	11	1	nogas	2061.296	1.450	1727330	0.20	500	412.3	90	110	CCV Main CR1-2 Failed
Na	23	1	nogas	10941.970	0.931	52259595	0.06	10000	109.4	90	110	
Mg	24	1	nogas	10616.553	1.033	35211758	0.19	10000	106.2	90	110	
Al	27	1	nogas	103.768	1.764	443731	1.00	100	103.8	90	110	
P	31	1	nogas	514.528	0.909	126328	0.79	500	102.9	90	110	
K	39	1	nogas	10357.985	2.500	36939926	1.54	10000	103.6	90	110	
Ca	43	1	nogas	10225.043	1.137	71111	0.28	10000	102.3	90	110	
Ca	44	1	nogas	10133.061	1.952	1174828	0.92	10000	101.3	90	110	
Ti	47	1	nogas	100.672	1.835	35193	0.98	100	100.7	90	110	
V	51	1	nogas	102.840	0.717	598286	1.90	100	102.8	90	110	
Cr	52	1	nogas	101.091	1.404	455562	0.22	100	101.1	90	110	
Mn	55	1	nogas	99.139	0.809	583618	0.78	100	99.1	90	110	
Fe	56	1	nogas	9895.416	0.759	49215688	0.71	10000	99.0	90	110	
Co	59	1	nogas	99.111	1.145	475794	0.31	100	99.1	90	110	
Ni	60	1	nogas	100.639	0.604	106051	1.94	100	100.6	90	110	
Cu	63	1	nogas	100.186	0.995	263775	0.43	100	100.2	90	110	
Zn	66	1	nogas	99.812	1.155	86952	0.45	100	99.8	90	110	
As	75	1	nogas	98.532	3.445	95261	1.86	100	98.5	90	110	
Se	77	1	nogas	115.626	5.069	7842	3.05	100	115.6	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	87.124	4.189	4224	2.77	100	87.1	90	110	CCV Main CR1-2 Failed
Sr	88	1	nogas	98.142	1.316	657930	0.10	100	98.1	90	110	
Mo	95	1	nogas	94.472	1.271	134363	0.39	100	94.5	90	110	
Ag	107	1	nogas	95.755	3.291	370777	1.96	100	95.8	90	110	
Cd	111	1	nogas	98.734	2.708	81171	1.81	100	98.7	90	110	
Sn	118	1	nogas	97.424	1.444	235056	1.40	100	97.4	90	110	
Sb	121	1	nogas	93.947	1.265	338882	0.17	100	93.9	90	110	
Ba	137	1	nogas	98.894	1.982	117032	1.44	100	98.9	90	110	
Tl	205	1	nogas	98.662	1.112	1006723	0.82	100	98.7	90	110	
Pb	208	1	nogas	96.185	1.094	754166	1.28	100	96.2	90	110	
U	238	1	nogas	97.496	1.085	1903930	1.56	100	97.5	90	110	
Li	7	1	nogas	101.658	0.730	453901	0.58	100	101.7	90	110	
Si	28	1	nogas	5639.651	1.342	10518299	0.13	5000	112.8	90	110	CCV Main CR1-2 Failed
Ba	135	1	nogas	98.685	1.999	69722	1.21	100	98.7	90	110	
La	139	1	nogas	135.108	30.403	220	20.83	100	135.1	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	532.665	0.000	0	#DIV/0!	100	532.7	90	110	CCV Main CR1-2 Failed
Tl	203	1	nogas	98.649	1.028	415527	1.15	100	98.6	90	110	
Na	23	2	He	11199.181	4.728	1933133	2.07	10000	112.0	90	110	CCV Main CR1-2 Failed
Mg	24	2	He	10153.350	3.505	831037	1.22	10000	101.5	90	110	
Al	27	2	He	107.243	6.499	3220	5.95	100	107.2	90	110	
K	39	2	He	10113.720	3.046	425028	1.04	10000	101.1	90	110	
Ca	43	2	He	11036.745	13.992	1083	11.47	10000	110.4	90	110	CCV Main CR1-2 Failed
Ca	44	2	He	9996.897	3.419	17526	4.69	10000	100.0	90	110	
V	51	2	He	99.080	3.510	32036	1.59	100	99.1	90	110	
Cr	52	2	He	100.173	2.637	40752	0.97	100	100.2	90	110	
Mn	55	2	He	98.883	1.558	20746	3.91	100	98.9	90	110	
Fe	56	2	He	10125.595	3.438	3149879	0.99	10000	101.3	90	110	
Co	59	2	He	98.572	3.967	57764	1.15	100	98.6	90	110	
Ni	60	2	He	98.918	3.962	16041	3.08	100	98.9	90	110	
Cu	63	2	He	98.037	3.976	44909	2.43	100	98.0	90	110	
Zn	66	2	He	98.869	4.824	7699	1.99	100	98.9	90	110	
As	75	2	He	93.986	6.378	4547	6.02	100	94.0	90	110	
Sb	121	2	He	92.425	2.867	35302	0.81	100	92.4	90	110	
Se	78	2	He	94.598	6.495	312	6.41	100	94.6	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	582209	1.38	522917	111.34	70	125	
In	115	1	nogas	675992	1.10	627838	107.67	70	125	
Li	6	1	nogas	267684	1.24	211473	126.58	70	125	ISTD Failed
Bi	209	1	nogas	952802	0.48	915562	104.07	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	31877	2.87	29526	107.96	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	151_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-05T16:23:47-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	020CALB.d
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	0.027	46.5	57	36.7	1	
B	11	1	nogas	1449.427	5.8	1094056	5.5	10	CCB Main CR1 Failed
Na	23	1	nogas	182.826	1.7	903898	2.0	100	CCB Main CR1 Failed
Mg	24	1	nogas	2.483	23.9	10139	19.0	100	
Al	27	1	nogas	-1.127	-4.6	4441	3.9	5	
P	31	1	nogas	1.155	94.4	7625	2.4	10	
K	39	1	nogas	41.441	11.9	1055363	2.0	100	
Ca	43	1	nogas	81.487	4.4	637	4.5	100	
Ca	44	1	nogas	6.136	3.5	13302	1.2	100	
Ti	47	1	nogas	0.025	299.7	37	68.6	2.5	
V	51	1	nogas	6.146	21.8	91628	6.2	2.5	CCB Main CR1 Failed
Cr	52	1	nogas	0.024	18.7	3904	1.3	2.5	
Mn	55	1	nogas	0.090	3.9	4574	1.4	2.5	
Fe	56	1	nogas	4.705	55.8	232152	4.7	100	
Co	59	1	nogas	0.019	46.4	173	23.3	2.5	
Ni	60	1	nogas	0.434	23.6	563	19.1	2.5	
Cu	63	1	nogas	-0.464	-13.7	2277	5.8	2.5	
Zn	66	1	nogas	-0.794	-7.7	230	22.6	2.5	
As	75	1	nogas	0.964	40.8	13159	1.4	2.5	
Se	77	1	nogas	30.565	42.1	4444	11.2	2.5	CCB Main CR1 Failed
Se	82	1	nogas	-0.649	-222.0	187	32.7	2.5	
Sr	88	1	nogas	0.117	2.9	987	1.5	2.5	
Mo	95	1	nogas	0.049	57.8	67	56.8	2.5	
Ag	107	1	nogas	0.018	48.8	153	21.0	2.5	
Cd	111	1	nogas	0.037	87.5	30	88.2	1	
Sn	118	1	nogas	0.088	113.4	727	31.9	5	
Sb	121	1	nogas	0.275	10.8	1127	9.1	2.5	
Ba	137	1	nogas	-0.106	-28.0	70	49.5	2.5	
Tl	205	1	nogas	0.090	6.9	1020	7.8	1	
Pb	208	1	nogas	0.021	23.1	310	14.1	2.5	
U	238	1	nogas	0.028	13.6	750	10.6	2.5	
Si	28	1	nogas	48.453	4.4	680433	1.5	5	CCB Main CR1 Failed
La	139	1	nogas	-55.928	-16.7	10	100.0	2.5	
Au	197	1	nogas	532.665	0.0	0	#DIV/0!	2.5	CCB Main CR1 Failed
Na	23	2	He	163.337	4.9	30223	4.3	100	CCB Main CR1 Failed
Mg	24	2	He	2.349	40.8	220	34.3	100	
Al	27	2	He	-2.701	-46.7	57	62.0	5	
K	39	2	He	19.612	16.5	6255	3.4	100	
Ca	43	2	He	35.682	173.2	3	173.2	100	
Ca	44	2	He	-20.780	-28.7	10	100.0	100	
V	51	2	He	0.124	90.6	156	20.4	2.5	
Cr	52	2	He	-0.098	-64.7	140	18.9	2.5	
Mn	55	2	He	0.114	156.2	40	90.1	2.5	
Fe	56	2	He	1.839	25.5	1247	9.7	100	
Co	59	2	He	0.030	219.1	30	120.2	2.5	
Ni	60	2	He	-0.275	-27.6	33	34.6	2.5	
Cu	63	2	He	-0.609	-23.3	340	16.4	2.5	
Zn	66	2	He	-1.147	-20.7	10	173.2	2.5	

Continuing Calibration Blank (CCB) Report

As	75	2	He	-0.074	-57.4	1	173.2	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.230	33.8	100	26.5	2.5	
Se	78	2	He	0.179	722.3	4	100.0	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	553380	1.04	522917	105.83	70	125	
In	115	1	nogas	658811	0.81	627838	104.93	70	125	
Li	6	1	nogas	240350	0.35	211473	113.66	70	125	
Bi	209	1	nogas	956608	1.58	915562	104.48	70	125	
Ge	72	2	He	30197	1.54	29526	102.27	70	125	

Sample Report

Sample Table

Sample Name	HS17121224-03
Data File Name	159SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-05T16:43:01-06:00
Sample Type	Sample
Dilution	5
Comment	TW B124039
ISTD Ref FileName	020CALB.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	0.132	0.658	18.18	227	0.06	2000	
B	11	1	nogas	461.714	2308.570	2.79	353011	0.13	2000	
Na	23	1	nogas	45267.417	226337.083	2.19	209877596	0.02	200000	
Mg	24	1	nogas	11028.703	55143.516	0.77	35548129	0.03	200000	
Al	27	1	nogas	7.262	36.311	0.16	38212	0.02	2000	
K	39	1	nogas	641.277	3206.384	0.36	3066952	0.02	200000	
Ca	43	1	nogas	14721.423	73607.113	2.45	98265	14.98	200000	
Ca	44	1	nogas	14969.356	74846.778	0.73	1660725	0.90	200000	
Ti	47	1	nogas	0.173	0.867	80.84	87	0.20	2000	
V	51	1	nogas	3.323	16.615	25.35	78527	0.00	2000	
Cr	52	1	nogas	2.754	13.768	5.50	15654	0.02	2000	
Mn	55	1	nogas	707.889	3539.447	1.01	3976504	0.02	2000	
Fe	56	1	nogas	3033.267	15166.334	1.19	14633702	0.02	200000	
Co	59	1	nogas	12.345	61.724	2.01	56994	0.02	2000	
Ni	60	1	nogas	9.629	48.145	1.03	9860	0.10	2000	
Cu	63	1	nogas	-0.436	-2.181	-13.17	2370	-0.02	2000	
Zn	66	1	nogas	13.371	66.854	3.88	11958	0.11	2000	
As	75	1	nogas	2.034	10.168	14.26	14153	0.01	2000	
Se	77	1	nogas	14.369	71.845	18.44	3907	0.37	2000	
Se	82	1	nogas	-0.472	-2.362	-127.90	197	-0.24	2000	
Sr	88	1	nogas	360.418	1802.091	1.41	2319585	0.02	2000	
Mo	95	1	nogas	0.088	0.440	39.04	120	0.07	2000	
Ag	107	1	nogas	0.016	0.082	88.82	150	0.01	2000	
Cd	111	1	nogas	0.020	0.100	92.16	17	0.12	2000	
Sn	118	1	nogas	0.045	0.224	68.49	650	0.01	2000	
Sb	121	1	nogas	1.303	6.516	14.49	4701	0.03	2000	
Ba	137	1	nogas	534.106	2670.530	1.15	637993	0.08	2000	
Tl	205	1	nogas	0.029	0.145	41.14	400	0.01	2000	
Pb	208	1	nogas	0.045	0.227	33.33	503	0.01	2000	
U	238	1	nogas	0.006	0.031	32.10	313	0.00	2000	
Si	28	1	nogas	7216.415	36082.075	0.70	12756429	0.06	2000	>LDR
La	139	1	nogas	964.750	4823.748	8.28	1143	84.38	2000	
Au	197	1	nogas	-232.484	-1162.421	-570.05	10	-2324.84	2000	
Na	23	2	He	45164.793	225823.963	2.20	7487602	0.60	200000	
Mg	24	2	He	10745.513	53727.564	0.90	845800	1.27	200000	
Al	27	2	He	6.088	30.442	7.84	300	2.03	2000	
K	39	2	He	563.181	2815.905	4.38	28010	2.01	200000	
Ca	43	2	He	13468.100	67340.498	6.78	1273	1057.64	200000	
Ca	44	2	He	14318.432	71592.162	1.92	24107	59.40	200000	
V	51	2	He	0.226	1.131	56.30	190	0.12	2000	
Cr	52	2	He	2.610	13.048	8.96	1197	0.22	2000	
Mn	55	2	He	694.131	3470.656	1.67	139839	0.50	2000	
Fe	56	2	He	3065.797	15328.987	0.94	917661	0.33	200000	
Co	59	2	He	12.339	61.696	2.31	6968	0.18	2000	
Ni	60	2	He	9.715	48.574	7.28	1583	0.61	2000	
Cu	63	2	He	-0.536	-2.682	-14.00	377	-0.14	2000	

Sample Report

Zn	66	2	He	13.962	69.809	9.74	1127	1.24	2000	
As	75	2	He	2.048	10.240	35.72	100	2.05	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Sb	121	2	He	1.525	7.625	16.77	577	0.26	2000	
Se	78	2	He	1.648	8.242	87.43	9	19.02	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	559063	0.81	522917	106.91	70	125	
In	115	1	nogas	683232	1.07	627838	108.82	70	125	
Li	6	1	nogas	238084	1.32	211473	112.58	70	125	
Bi	209	1	nogas	963928	0.49	915562	105.28	70	125	
Ge	72	2	He	30638	1.06	29526	103.77	70	125	

Sample Report

Sample Table

Sample Name	HS17121224-06
Data File Name	160SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-05T16:45:16-06:00
Sample Type	Sample
Dilution	5
Comment	TW B124039
ISTD Ref FileName	020CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	1	nogas	0.010	0.049	147.51	27	0.04	2000	
B	11	1	nogas	426.841	2134.206	1.12	317758	0.13	2000	
Na	23	1	nogas	47000.651	235003.254	0.97	211300421	0.02	200000	
Mg	24	1	nogas	3279.956	16399.782	1.57	10251913	0.03	200000	
Al	27	1	nogas	1.265	6.323	1.69	13852	0.01	2000	
K	39	1	nogas	351.166	1755.832	3.36	2061837	0.02	200000	
Ca	43	1	nogas	5463.507	27317.535	1.06	35887	15.22	200000	
Ca	44	1	nogas	5351.484	26757.419	1.80	591188	0.91	200000	
Ti	47	1	nogas	0.118	0.588	40.94	67	0.18	2000	
V	51	1	nogas	7.802	39.012	16.43	99040	0.01	2000	
Cr	52	1	nogas	0.166	0.831	35.94	4474	0.00	2000	
Mn	55	1	nogas	434.580	2172.902	0.48	2399605	0.02	2000	
Fe	56	1	nogas	121.079	605.394	1.11	773952	0.02	200000	
Co	59	1	nogas	1.858	9.292	7.95	8506	0.02	2000	
Ni	60	1	nogas	1.368	6.842	13.78	1487	0.09	2000	
Cu	63	1	nogas	-0.377	-1.883	-11.61	2474	-0.02	2000	
Zn	66	1	nogas	0.610	3.050	22.68	1370	0.04	2000	
As	75	1	nogas	2.246	11.230	29.65	14066	0.02	2000	
Se	77	1	nogas	47.305	236.526	13.13	4994	0.95	2000	
Se	82	1	nogas	-1.622	-8.110	-102.50	143	-1.13	2000	
Sr	88	1	nogas	87.262	436.308	0.50	551857	0.02	2000	
Mo	95	1	nogas	0.075	0.374	82.57	100	0.07	2000	
Ag	107	1	nogas	0.000	-0.001	-664.99	87	0.00	2000	
Cd	111	1	nogas	0.120	0.600	33.62	97	0.12	2000	
Sn	118	1	nogas	0.036	0.181	119.61	610	0.01	2000	
Sb	121	1	nogas	0.440	2.200	15.06	1677	0.03	2000	
Ba	137	1	nogas	94.120	470.599	1.66	109285	0.09	2000	
Tl	205	1	nogas	0.005	0.026	29.60	153	0.00	2000	
Pb	208	1	nogas	0.016	0.081	39.88	270	0.01	2000	
U	238	1	nogas	0.119	0.593	3.54	2507	0.00	2000	
Si	28	1	nogas	4929.094	24645.468	0.63	8746774	0.06	2000	>LDR
La	139	1	nogas	74.156	370.779	46.28	150	49.44	2000	
Au	197	1	nogas	532.665	2663.323	0.00	0	#DIV/0!	2000	
Na	23	2	He	47533.530	237667.651	3.69	7612338	0.62	200000	
Mg	24	2	He	3253.218	16266.090	2.08	247414	1.31	200000	
Al	27	2	He	-1.036	-5.182	-118.53	100	-1.04	2000	
K	39	2	He	319.279	1596.394	2.77	17669	1.81	200000	
Ca	43	2	He	6078.467	30392.337	17.32	557	1091.90	200000	
Ca	44	2	He	5407.862	27039.312	6.05	8819	61.32	200000	
V	51	2	He	0.261	1.305	38.97	194	0.13	2000	
Cr	52	2	He	0.027	0.137	638.95	183	0.01	2000	
Mn	55	2	He	440.749	2203.746	3.66	85781	0.51	2000	
Fe	56	2	He	121.158	605.792	1.29	35704	0.34	200000	
Co	59	2	He	1.826	9.130	8.30	1007	0.18	2000	

Sample Report

Ni	60	2	He	1.268	6.339	25.20	263	0.48	2000	
Cu	63	2	He	-0.436	-2.178	-82.45	407	-0.11	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Zn	66	2	He	1.005	5.024	76.67	163	0.62	2000	
As	75	2	He	0.028	0.140	787.28	6	0.50	2000	
Sb	121	2	He	0.403	2.016	37.58	160	0.25	2000	
Se	78	2	He	0.445	2.225	314.36	5	9.53	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	549154	0.98	522917	105.02	70	125	
In	115	1	nogas	663167	0.58	627838	105.63	70	125	
Li	6	1	nogas	231151	0.19	211473	109.31	70	125	
Bi	209	1	nogas	953346	0.75	915562	104.13	70	125	
Ge	72	2	He	29606	2.33	29526	100.27	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	162_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-05T16:49:40-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	020CALB.d
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	92.338	1.395	161810	0.22	100	92.3	90	110	
B	11	1	nogas	778.849	1.929	630687	0.96	500	155.8	90	110	CCV Main CR1-2 Failed
Na	23	1	nogas	10355.535	0.995	47055714	0.29	10000	103.6	90	110	
Mg	24	1	nogas	10245.713	0.711	32329471	0.74	10000	102.5	90	110	
Al	27	1	nogas	101.651	1.378	411445	0.94	100	101.7	90	110	
P	31	1	nogas	513.781	0.349	119356	0.42	500	102.8	90	110	
K	39	1	nogas	10144.948	0.595	34252916	0.58	10000	101.4	90	110	
Ca	43	1	nogas	10069.388	1.239	66255	0.62	10000	100.7	90	110	
Ca	44	1	nogas	9873.133	0.490	1083410	0.20	10000	98.7	90	110	
Ti	47	1	nogas	101.400	0.255	33539	0.49	100	101.4	90	110	
V	51	1	nogas	100.744	1.894	555735	2.29	100	100.7	90	110	
Cr	52	1	nogas	99.030	1.281	422310	0.84	100	99.0	90	110	
Mn	55	1	nogas	98.542	1.034	548849	0.68	100	98.5	90	110	
Fe	56	1	nogas	9626.250	0.795	45301833	0.66	10000	96.3	90	110	
Co	59	1	nogas	97.257	1.170	441734	0.79	100	97.3	90	110	
Ni	60	1	nogas	98.866	1.706	98563	2.14	100	98.9	90	110	
Cu	63	1	nogas	98.149	1.848	244556	1.75	100	98.1	90	110	
Zn	66	1	nogas	98.617	2.227	81295	2.27	100	98.6	90	110	
As	75	1	nogas	98.648	1.133	90231	0.37	100	98.6	90	110	
Se	77	1	nogas	118.413	9.341	7518	5.69	100	118.4	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	97.144	9.613	4434	9.70	100	97.1	90	110	
Sr	88	1	nogas	97.586	0.536	618973	0.22	100	97.6	90	110	
Mo	95	1	nogas	96.121	2.740	129334	2.15	100	96.1	90	110	
Ag	107	1	nogas	96.837	1.561	354825	1.17	100	96.8	90	110	
Cd	111	1	nogas	97.374	1.430	79715	1.67	100	97.4	90	110	
Sn	118	1	nogas	94.963	0.949	228130	1.04	100	95.0	90	110	
Sb	121	1	nogas	95.660	1.307	326467	1.03	100	95.7	90	110	
Ba	137	1	nogas	96.306	1.932	113480	1.81	100	96.3	90	110	
Tl	205	1	nogas	96.024	1.097	985943	1.28	100	96.0	90	110	
Pb	208	1	nogas	95.004	0.832	749519	0.12	100	95.0	90	110	
U	238	1	nogas	96.826	2.419	1902373	1.67	100	96.8	90	110	
Li	7	1	nogas	97.817	2.627	417654	1.46	100	97.8	90	110	
Si	28	1	nogas	5497.454	1.248	9715675	0.63	5000	109.9	90	110	
Ba	135	1	nogas	93.347	0.887	65675	0.71	100	93.3	90	110	
La	139	1	nogas	136.042	6.568	220	4.55	100	136.0	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	-225.653	-582.063	10	173.21	100	-225.7	90	110	CCV Main CR1-2 Failed
Tl	203	1	nogas	95.808	0.879	406090	1.24	100	95.8	90	110	
Na	23	2	He	10797.402	2.477	1753360	2.04	10000	108.0	90	110	
Mg	24	2	He	10117.329	2.754	778654	0.87	10000	101.2	90	110	
Al	27	2	He	108.621	5.265	3064	3.30	100	108.6	90	110	
K	39	2	He	9986.458	2.174	394694	0.77	10000	99.9	90	110	
Ca	43	2	He	11316.959	2.648	1047	1.46	10000	113.2	90	110	CCV Main CR1-2 Failed
Ca	44	2	He	10182.366	2.425	16778	3.00	10000	101.8	90	110	
V	51	2	He	98.660	3.061	29993	0.77	100	98.7	90	110	
Cr	52	2	He	101.058	2.333	38660	2.58	100	101.1	90	110	
Mn	55	2	He	98.735	5.774	19451	2.97	100	98.7	90	110	
Fe	56	2	He	10069.125	3.159	2945034	0.49	10000	100.7	90	110	
Co	59	2	He	97.540	4.851	53730	2.06	100	97.5	90	110	
Ni	60	2	He	95.168	3.505	14510	0.69	100	95.2	90	110	
Cu	63	2	He	98.334	3.508	42349	1.73	100	98.3	90	110	
Zn	66	2	He	100.730	4.029	7378	4.54	100	100.7	90	110	
As	75	2	He	97.996	3.660	4456	1.18	100	98.0	90	110	
Sb	121	2	He	94.692	4.024	33999	2.13	100	94.7	90	110	
Se	78	2	He	90.002	1.981	279	3.67	100	90.0	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	550799	0.62	522917	105.33	70	125	
In	115	1	nogas	673000	0.24	627838	107.19	70	125	
Li	6	1	nogas	255526	1.22	211473	120.83	70	125	
Bi	209	1	nogas	958753	0.76	915562	104.72	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	29970	2.89	29526	101.50	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	163_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-05T16:51:49-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	020CALB.d
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	0.030	41.4	60	33.3	1	
B	11	1	nogas	349.538	3.8	271319	3.7	10	CCB Main CR1 Failed
Na	23	1	nogas	51.919	1.3	317390	1.7	100	
Mg	24	1	nogas	2.340	27.3	10005	20.1	100	
Al	27	1	nogas	-1.167	-4.6	4437	4.6	5	
P	31	1	nogas	-1.280	-44.1	7348	2.0	10	
K	39	1	nogas	10.176	38.2	986363	1.7	100	
Ca	43	1	nogas	38.186	25.4	363	18.3	100	
Ca	44	1	nogas	-23.803	-4.1	10400	0.7	100	
Ti	47	1	nogas	0.002	2234.8	30	57.7	2.5	
V	51	1	nogas	4.799	15.9	88077	4.3	2.5	CCB Main CR1 Failed
Cr	52	1	nogas	0.013	644.2	3997	9.2	2.5	
Mn	55	1	nogas	0.010	606.2	4274	8.1	2.5	
Fe	56	1	nogas	3.211	56.8	233255	3.5	100	
Co	59	1	nogas	0.026	69.7	213	39.9	2.5	
Ni	60	1	nogas	0.174	26.5	313	15.1	2.5	
Cu	63	1	nogas	-0.686	-2.3	1790	1.9	2.5	
Zn	66	1	nogas	-0.906	-8.9	143	47.5	2.5	
As	75	1	nogas	0.683	47.1	13402	1.8	2.5	
Se	77	1	nogas	22.045	38.4	4287	6.9	2.5	CCB Main CR1 Failed
Se	82	1	nogas	0.370	487.0	240	34.1	2.5	
Sr	88	1	nogas	0.042	35.8	523	19.1	2.5	
Mo	95	1	nogas	0.059	49.9	83	50.0	2.5	
Ag	107	1	nogas	0.012	51.7	137	16.9	2.5	
Cd	111	1	nogas	0.020	69.2	17	69.3	1	
Sn	118	1	nogas	0.067	122.9	720	27.7	5	
Sb	121	1	nogas	0.364	10.7	1483	9.4	2.5	
Ba	137	1	nogas	-0.110	-26.2	70	51.5	2.5	
Tl	205	1	nogas	0.098	10.2	1153	9.6	1	
Pb	208	1	nogas	0.028	42.7	377	26.2	2.5	
U	238	1	nogas	0.033	15.5	873	12.2	2.5	
Si	28	1	nogas	10.636	14.7	639571	0.7	5	CCB Main CR1 Failed
La	139	1	nogas	-39.053	-59.0	30	88.2	2.5	
Au	197	1	nogas	532.665	0.0	0	#DIV/0!	2.5	CCB Main CR1 Failed
Na	23	2	He	56.410	2.5	12855	3.9	100	
Mg	24	2	He	3.232	29.9	290	26.0	100	
Al	27	2	He	-2.074	-60.6	73	43.8	5	
K	39	2	He	7.419	127.8	5818	7.3	100	
Ca	43	2	He	0.000	#DIV/0!	0	#DIV/0!	100	
Ca	44	2	He	-8.732	-180.8	30	88.2	100	
V	51	2	He	0.112	15.3	154	6.0	2.5	
Cr	52	2	He	-0.298	-25.8	63	45.6	2.5	
Mn	55	2	He	0.146	67.5	47	44.6	2.5	
Fe	56	2	He	3.388	32.3	1720	20.7	100	
Co	59	2	He	0.006	498.4	17	91.7	2.5	
Ni	60	2	He	-0.344	-46.5	23	107.9	2.5	

Continuing Calibration Blank (CCB) Report

Cu	63	2	He	-0.864	-8.7	233	16.2	2.5	
Zn	66	2	He	-1.192	-6.6	7	86.6	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
As	75	2	He	0.144	81.9	11	45.8	2.5	
Sb	121	2	He	0.246	62.8	107	53.3	2.5	
Se	78	2	He	-0.263	-277.8	3	86.6	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	573266	0.37	522917	109.63	70	125	
In	115	1	nogas	700453	1.24	627838	111.57	70	125	
Li	6	1	nogas	239156	0.26	211473	113.09	70	125	
Bi	209	1	nogas	1002779	0.55	915562	109.53	70	125	
Ge	72	2	He	30417	2.57	29526	103.02	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	174_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-05T17:16:20-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	020CALB.d
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	95.411	1.364	162871	0.97	100	95.4	90	110	
B	11	1	nogas	613.816	2.288	486737	1.67	500	122.8	90	110	CCV Main CR1-2 Failed
Na	23	1	nogas	10459.104	1.456	46811479	0.71	10000	104.6	90	110	
Mg	24	1	nogas	10358.101	1.032	32193858	1.13	10000	103.6	90	110	
Al	27	1	nogas	100.996	0.657	408275	0.20	100	101.0	90	110	
P	31	1	nogas	505.637	2.354	117410	2.10	500	101.1	90	110	
K	39	1	nogas	10196.575	0.756	34374271	1.17	10000	102.0	90	110	
Ca	43	1	nogas	9908.986	1.082	65111	1.15	10000	99.1	90	110	
Ca	44	1	nogas	9941.595	0.114	1089286	0.37	10000	99.4	90	110	
Ti	47	1	nogas	99.029	2.175	32711	2.63	100	99.0	90	110	
V	51	1	nogas	98.535	1.761	544068	1.68	100	98.5	90	110	
Cr	52	1	nogas	100.566	0.980	428191	0.70	100	100.6	90	110	
Mn	55	1	nogas	99.362	1.148	552616	1.42	100	99.4	90	110	
Fe	56	1	nogas	9735.953	0.966	45750203	0.87	10000	97.4	90	110	
Co	59	1	nogas	97.748	1.528	443364	1.93	100	97.7	90	110	
Ni	60	1	nogas	99.438	1.326	98982	0.91	100	99.4	90	110	
Cu	63	1	nogas	98.906	0.386	246070	0.84	100	98.9	90	110	
Zn	66	1	nogas	99.646	2.320	82012	1.94	100	99.6	90	110	
As	75	1	nogas	97.091	2.963	88871	2.11	100	97.1	90	110	
Se	77	1	nogas	101.154	8.885	6898	4.26	100	101.2	90	110	
Se	82	1	nogas	98.398	1.756	4481	2.13	100	98.4	90	110	
Sr	88	1	nogas	97.459	0.499	617281	0.38	100	97.5	90	110	
Mo	95	1	nogas	95.760	1.238	128673	0.79	100	95.8	90	110	
Ag	107	1	nogas	96.067	0.605	351511	0.55	100	96.1	90	110	
Cd	111	1	nogas	98.395	1.575	79353	2.24	100	98.4	90	110	
Sn	118	1	nogas	96.956	1.647	229415	0.93	100	97.0	90	110	
Sb	121	1	nogas	96.223	1.589	327911	1.12	100	96.2	90	110	
Ba	137	1	nogas	97.791	1.608	113510	1.72	100	97.8	90	110	
Tl	205	1	nogas	96.303	1.003	986122	1.21	100	96.3	90	110	
Pb	208	1	nogas	95.332	1.684	750037	0.97	100	95.3	90	110	
U	238	1	nogas	98.166	2.883	1923522	2.52	100	98.2	90	110	
Li	7	1	nogas	99.521	0.354	413644	0.96	100	99.5	90	110	
Si	28	1	nogas	5442.535	1.155	9611108	1.07	5000	108.9	90	110	
Ba	135	1	nogas	96.951	1.561	67192	2.07	100	97.0	90	110	
La	139	1	nogas	105.164	23.509	183	13.73	100	105.2	90	110	
Au	197	1	nogas	532.665	0.000	0	#DIV/0!	100	532.7	90	110	CCV Main CR1-2 Failed
Tl	203	1	nogas	96.490	2.474	407815	1.76	100	96.5	90	110	
Na	23	2	He	10548.989	3.861	1725039	2.80	10000	105.5	90	110	
Mg	24	2	He	9973.330	3.027	773011	0.94	10000	99.7	90	110	
Al	27	2	He	99.650	11.392	2844	11.23	100	99.6	90	110	
K	39	2	He	10045.278	3.734	399702	0.89	10000	100.5	90	110	
Ca	43	2	He	10689.476	24.831	993	23.62	10000	106.9	90	110	
Ca	44	2	He	9773.033	2.120	16218	1.66	10000	97.7	90	110	
V	51	2	He	97.871	4.488	29959	1.89	100	97.9	90	110	
Cr	52	2	He	100.418	3.090	38690	3.28	100	100.4	90	110	
Mn	55	2	He	98.745	4.196	19608	4.12	100	98.7	90	110	
Fe	56	2	He	10238.878	3.609	3016182	2.12	10000	102.4	90	110	
Co	59	2	He	99.165	2.382	55052	2.46	100	99.2	90	110	
Ni	60	2	He	99.683	3.229	15304	0.36	100	99.7	90	110	
Cu	63	2	He	99.950	4.381	43332	1.51	100	100.0	90	110	
Zn	66	2	He	104.277	1.708	7689	2.04	100	104.3	90	110	
As	75	2	He	92.128	7.116	4216	3.78	100	92.1	90	110	
Sb	121	2	He	94.606	2.111	34226	2.56	100	94.6	90	110	
Se	78	2	He	95.221	5.923	297	5.72	100	95.2	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	550008	0.46	522917	105.18	70	125	
In	115	1	nogas	662968	0.77	627838	105.60	70	125	
Li	6	1	nogas	248906	0.88	211473	117.70	70	125	
Bi	209	1	nogas	956148	0.72	915562	104.43	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	30187	3.39	29526	102.24	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	175_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-05T17:18:32-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	020CALB.d
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	30.1	87	26.6	1	
B	11	1	nogas	178.674	4.4	145177	4.5	10	CCB Main CR1 Failed
Na	23	1	nogas	48.908	2.2	310043	0.6	100	
Mg	24	1	nogas	2.356	23.3	10306	18.5	100	
Al	27	1	nogas	-1.154	-3.3	4511	4.0	5	
P	31	1	nogas	-0.491	-182.0	7555	2.6	10	
K	39	1	nogas	13.352	21.6	1000928	1.2	100	
Ca	43	1	nogas	35.529	27.3	347	19.6	100	
Ca	44	1	nogas	-22.244	-21.1	10617	5.3	100	
Ti	47	1	nogas	0.040	39.1	43	13.3	2.5	
V	51	1	nogas	1.580	15.4	71897	1.3	2.5	
Cr	52	1	nogas	-0.052	-87.5	3724	5.3	2.5	
Mn	55	1	nogas	0.030	44.0	4407	1.7	2.5	
Fe	56	1	nogas	2.625	36.9	231301	2.8	100	
Co	59	1	nogas	0.016	96.6	167	43.4	2.5	
Ni	60	1	nogas	0.029	249.6	163	46.0	2.5	
Cu	63	1	nogas	-0.709	-4.4	1740	4.9	2.5	
Zn	66	1	nogas	-0.926	-3.7	127	24.1	2.5	
As	75	1	nogas	-1.012	-20.8	12054	1.8	2.5	
Se	77	1	nogas	8.679	90.7	3811	6.9	2.5	CCB Main CR1 Failed
Se	82	1	nogas	-1.991	-76.6	133	51.1	2.5	
Sr	88	1	nogas	0.042	23.4	530	13.1	2.5	
Mo	95	1	nogas	0.062	36.6	87	37.1	2.5	
Ag	107	1	nogas	0.018	68.3	160	28.6	2.5	
Cd	111	1	nogas	0.008	173.2	7	173.2	1	
Sn	118	1	nogas	0.066	61.3	723	12.8	5	
Sb	121	1	nogas	0.253	4.8	1093	3.2	2.5	
Ba	137	1	nogas	-0.089	-45.2	97	52.1	2.5	
Tl	205	1	nogas	0.095	31.1	1147	28.8	1	
Pb	208	1	nogas	0.038	11.0	473	8.0	2.5	
U	238	1	nogas	0.029	28.8	800	22.1	2.5	
Si	28	1	nogas	14.809	32.7	649171	1.1	5	CCB Main CR1 Failed
La	139	1	nogas	-44.761	-41.0	23	89.2	2.5	
Au	197	1	nogas	291.416	143.4	3	173.2	2.5	CCB Main CR1 Failed
Na	23	2	He	51.987	2.8	12278	3.6	100	
Mg	24	2	He	1.752	40.2	177	31.2	100	
Al	27	2	He	-2.959	-32.8	50	52.9	5	
K	39	2	He	3.693	171.2	5741	5.4	100	
Ca	43	2	He	0.000	#DIV/0!	0	#DIV/0!	100	
Ca	44	2	He	-10.936	-63.7	27	43.3	100	
V	51	2	He	0.051	52.4	137	6.8	2.5	
Cr	52	2	He	-0.164	-79.7	117	43.1	2.5	
Mn	55	2	He	0.129	81.4	43	48.0	2.5	
Fe	56	2	He	2.436	21.2	1453	11.7	100	
Co	59	2	He	-0.013	-78.9	7	86.6	2.5	
Ni	60	2	He	-0.256	-77.5	37	83.3	2.5	

Continuing Calibration Blank (CCB) Report

Cu	63	2	He	-0.909	-23.3	217	43.6	2.5	
Zn	66	2	He	-1.103	-18.8	13	114.6	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
As	75	2	He	0.044	165.3	7	50.0	2.5	
Sb	121	2	He	0.315	14.4	133	11.5	2.5	
Se	78	2	He	1.646	24.0	9	13.3	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	575411	0.75	522917	110.04	70	125	
In	115	1	nogas	705977	1.22	627838	112.45	70	125	
Li	6	1	nogas	240521	1.02	211473	113.74	70	125	
Bi	209	1	nogas	1018960	0.67	915562	111.29	70	125	
Ge	72	2	He	30795	1.56	29526	104.30	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	187_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-05T17:45:00-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	020CALB.d
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	0.054	45.6	90	40.1	1	
B	11	1	nogas	122.108	5.4	92973	5.3	10	CCB Main CR1 Failed
Na	23	1	nogas	115.004	2.1	547778	2.9	100	CCB Main CR1 Failed
Mg	24	1	nogas	3.783	28.7	13141	24.6	100	
Al	27	1	nogas	-1.104	-9.3	4197	9.1	5	
P	31	1	nogas	4.185	4.1	7675	1.2	10	
K	39	1	nogas	53.330	8.8	1013308	0.8	100	
Ca	43	1	nogas	27.602	25.9	260	16.8	100	
Ca	44	1	nogas	-7.134	-70.4	10974	3.9	100	
Ti	47	1	nogas	-0.009	-837.5	23	99.0	2.5	
V	51	1	nogas	1.764	18.7	64864	3.0	2.5	
Cr	52	1	nogas	-0.046	-87.6	3340	5.4	2.5	
Mn	55	1	nogas	0.341	6.9	5521	2.0	2.5	
Fe	56	1	nogas	10.945	10.1	242151	1.6	100	
Co	59	1	nogas	0.028	34.4	200	20.0	2.5	
Ni	60	1	nogas	0.178	34.4	283	20.7	2.5	
Cu	63	1	nogas	-0.649	-12.3	1687	11.6	2.5	
Zn	66	1	nogas	-0.881	-6.2	147	27.6	2.5	
As	75	1	nogas	-0.720	-46.7	10947	2.4	2.5	
Se	77	1	nogas	15.651	76.7	3624	11.3	2.5	CCB Main CR1 Failed
Se	82	1	nogas	0.342	461.4	213	30.1	2.5	
Sr	88	1	nogas	0.051	22.1	520	12.0	2.5	
Mo	95	1	nogas	0.096	83.7	120	83.3	2.5	
Ag	107	1	nogas	0.024	47.3	163	23.2	2.5	
Cd	111	1	nogas	0.027	86.6	20	86.6	1	
Sn	118	1	nogas	0.116	119.8	747	41.2	5	
Sb	121	1	nogas	0.196	43.2	793	34.0	2.5	
Ba	137	1	nogas	-0.065	-51.3	110	32.8	2.5	
Tl	205	1	nogas	0.099	21.4	1047	21.0	1	
Pb	208	1	nogas	0.040	8.3	427	7.2	2.5	
U	238	1	nogas	0.029	9.3	703	6.7	2.5	
Si	28	1	nogas	88.360	11.5	691415	1.5	5	CCB Main CR1 Failed
La	139	1	nogas	-35.391	-48.9	30	57.7	2.5	
Au	197	1	nogas	-5.250	-17746.7	7	173.2	2.5	
Na	23	2	He	106.019	4.3	19945	2.3	100	CCB Main CR1 Failed
Mg	24	2	He	3.911	27.6	327	25.7	100	
Al	27	2	He	-2.857	-25.8	50	40.0	5	
K	39	2	He	7.805	25.8	5538	3.0	100	
Ca	43	2	He	0.000	#DIV/0!	0	#DIV/0!	100	
Ca	44	2	He	-3.661	-260.2	37	41.7	100	
V	51	2	He	0.037	112.8	124	8.5	2.5	
Cr	52	2	He	-0.063	-40.2	147	7.9	2.5	
Mn	55	2	He	0.177	49.0	50	34.6	2.5	
Fe	56	2	He	2.324	7.4	1330	2.7	100	
Co	59	2	He	0.019	148.6	23	65.5	2.5	
Ni	60	2	He	-0.265	-39.3	33	45.8	2.5	

Continuing Calibration Blank (CCB) Report

Cu	63	2	He	-0.925	-12.6	197	25.6	2.5	
Zn	66	2	He	-0.945	-38.8	23	107.9	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
As	75	2	He	0.028	419.4	6	91.6	2.5	
Sb	121	2	He	0.262	45.3	107	37.9	2.5	
Se	78	2	He	1.821	93.5	9	58.1	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	512315	0.73	522917	97.97	70	125	
In	115	1	nogas	620369	0.79	627838	98.81	70	125	
Li	6	1	nogas	217321	0.55	211473	102.77	70	125	
Bi	209	1	nogas	894954	1.44	915562	97.75	70	125	
Ge	72	2	He	28878	1.62	29526	97.81	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	188_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-05T17:47:12-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	020CALB.d
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	99.303	1.787	150964	1.71	100	99.3	90	110	
B	11	1	nogas	585.322	3.174	413779	1.77	500	117.1	90	110	CCV Main CR1-2 Failed
Na	23	1	nogas	11579.916	2.136	46967901	1.75	10000	115.8	90	110	CCV Main CR1-2 Failed
Mg	24	1	nogas	10731.846	0.785	30231795	0.91	10000	107.3	90	110	
Al	27	1	nogas	103.148	1.055	377163	0.93	100	103.1	90	110	
P	31	1	nogas	533.916	1.676	111822	1.61	500	106.8	90	110	
K	39	1	nogas	10681.350	1.303	32545412	1.41	10000	106.8	90	110	
Ca	43	1	nogas	10699.052	3.006	63613	3.10	10000	107.0	90	110	
Ca	44	1	nogas	10597.302	0.405	1049984	0.19	10000	106.0	90	110	
Ti	47	1	nogas	103.929	2.688	31061	2.47	100	103.9	90	110	
V	51	1	nogas	100.004	2.099	498850	1.75	100	100.0	90	110	
Cr	52	1	nogas	103.051	1.211	396976	1.07	100	103.1	90	110	
Mn	55	1	nogas	101.468	0.894	510581	0.69	100	101.5	90	110	
Fe	56	1	nogas	10073.859	0.896	42830801	0.68	10000	100.7	90	110	
Co	59	1	nogas	100.683	0.611	413237	0.66	100	100.7	90	110	
Ni	60	1	nogas	102.224	1.783	92081	1.72	100	102.2	90	110	
Cu	63	1	nogas	101.316	1.047	228023	1.04	100	101.3	90	110	
Zn	66	1	nogas	102.726	2.642	76487	2.54	100	102.7	90	110	
As	75	1	nogas	101.268	2.260	83406	1.83	100	101.3	90	110	
Se	77	1	nogas	100.878	9.425	6235	5.06	100	100.9	90	110	
Se	82	1	nogas	101.265	5.111	4167	5.09	100	101.3	90	110	
Sr	88	1	nogas	107.813	0.112	617922	0.25	100	107.8	90	110	
Mo	95	1	nogas	98.254	1.083	119476	1.10	100	98.3	90	110	
Ag	107	1	nogas	100.598	0.467	333096	0.57	100	100.6	90	110	
Cd	111	1	nogas	101.506	1.714	74310	1.20	100	101.5	90	110	
Sn	118	1	nogas	100.113	1.516	215045	0.75	100	100.1	90	110	
Sb	121	1	nogas	100.807	1.599	310884	1.78	100	100.8	90	110	
Ba	137	1	nogas	104.644	0.992	110258	0.50	100	104.6	90	110	
Tl	205	1	nogas	100.855	0.347	922863	0.45	100	100.9	90	110	
Pb	208	1	nogas	99.012	0.100	696168	0.59	100	99.0	90	110	
U	238	1	nogas	101.048	0.997	1769434	0.48	100	101.0	90	110	
Li	7	1	nogas	102.940	1.758	380350	0.24	100	102.9	90	110	
Si	28	1	nogas	5792.933	0.541	9222680	0.69	5000	115.9	90	110	CCV Main CR1-2 Failed
Ba	135	1	nogas	100.711	2.133	63350	0.87	100	100.7	90	110	
La	139	1	nogas	63.720	101.808	127	51.37	100	63.7	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	-38.938	-1271.367	7	86.60	100	-38.9	90	110	CCV Main CR1-2 Failed
Tl	203	1	nogas	101.517	0.761	383449	0.32	100	101.5	90	110	
Na	23	2	He	11762.624	3.539	1733754	0.93	10000	117.6	90	110	CCV Main CR1-2 Failed
Mg	24	2	He	10625.408	2.885	742675	1.91	10000	106.3	90	110	
Al	27	2	He	110.600	12.282	2830	10.76	100	110.6	90	110	CCV Main CR1-2 Failed
K	39	2	He	10561.434	3.466	378708	1.35	10000	105.6	90	110	
Ca	43	2	He	10524.549	10.021	883	8.50	10000	105.2	90	110	
Ca	44	2	He	10435.548	4.875	15604	2.60	10000	104.4	90	110	
V	51	2	He	101.077	3.636	27900	1.35	100	101.1	90	110	
Cr	52	2	He	104.066	2.293	36145	1.82	100	104.1	90	110	
Mn	55	2	He	103.527	6.615	18520	4.34	100	103.5	90	110	
Fe	56	2	He	10669.926	4.520	2833461	2.29	10000	106.7	90	110	
Co	59	2	He	103.239	3.934	51654	1.32	100	103.2	90	110	
Ni	60	2	He	106.262	4.647	14706	3.55	100	106.3	90	110	
Cu	63	2	He	102.911	4.885	40211	2.24	100	102.9	90	110	
Zn	66	2	He	103.509	4.535	6885	5.68	100	103.5	90	110	
As	75	2	He	100.715	6.411	4157	3.98	100	100.7	90	110	
Sb	121	2	He	98.022	3.392	31965	2.09	100	98.0	90	110	
Se	78	2	He	87.725	20.151	247	20.09	100	87.7	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
Ge	72	1	nogas	497715	0.22	522917	95.18	70	125	
In	115	1	nogas	601920	1.45	627838	95.87	70	125	
Li	6	1	nogas	221671	1.43	211473	104.82	70	125	
Bi	209	1	nogas	854435	0.64	915562	93.32	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	27215	2.64	29526	92.17	70	125	

Sample Report

Sample Table

Sample Name	MBLK-124039
Data File Name	193SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-05T17:59:11-06:00
Sample Type	Sample
Dilution	1
Comment	TW B124039
ISTD Ref FileName	020CALB.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	0.008	0.008	49.77	23	0.04	2000	
B	11	1	nogas	68.335	68.335	1.77	58649	0.12	2000	
Na	23	1	nogas	69.558	69.558	2.13	361331	0.02	200000	
Mg	24	1	nogas	7.963	7.963	4.82	25690	0.03	200000	
Al	27	1	nogas	1.577	1.577	5.19	14189	0.01	2000	
K	39	1	nogas	92.371	92.371	4.24	1141923	0.01	200000	
Ca	43	1	nogas	44.594	44.594	14.64	367	12.16	200000	
Ca	44	1	nogas	-17.734	-17.734	-18.63	9986	-0.18	200000	
Ti	47	1	nogas	-0.032	-0.032	-153.84	17	-0.19	2000	
V	51	1	nogas	4.876	4.876	35.67	79633	0.01	2000	
Cr	52	1	nogas	0.019	0.019	142.60	3624	0.00	2000	
Mn	55	1	nogas	0.123	0.123	44.17	4441	0.00	2000	
Fe	56	1	nogas	20.382	20.382	7.45	285547	0.01	200000	
Co	59	1	nogas	0.001	0.001	282.97	87	0.00	2000	
Ni	60	1	nogas	0.015	0.015	140.75	133	0.01	2000	
Cu	63	1	nogas	-0.704	-0.704	-8.19	1573	-0.04	2000	
Zn	66	1	nogas	2.768	2.768	7.40	2937	0.09	2000	
As	75	1	nogas	-0.115	-0.115	-148.64	11484	0.00	2000	
Se	77	1	nogas	20.893	20.893	47.64	3824	0.55	2000	
Se	82	1	nogas	0.286	0.286	467.05	213	0.13	2000	
Sr	88	1	nogas	0.049	0.049	42.05	513	0.01	2000	
Mo	95	1	nogas	0.021	0.021	76.31	27	0.08	2000	
Ag	107	1	nogas	-0.004	-0.004	-10.15	70	-0.01	2000	
Cd	111	1	nogas	0.009	0.009	173.21	7	0.13	2000	
Sn	118	1	nogas	0.036	0.036	91.42	577	0.01	2000	
Sb	121	1	nogas	0.165	0.165	10.70	700	0.02	2000	
Ba	137	1	nogas	-0.043	-0.043	-103.81	137	-0.03	2000	
Tl	205	1	nogas	-0.001	-0.001	-321.52	90	0.00	2000	
Pb	208	1	nogas	0.006	0.006	69.38	183	0.00	2000	
U	238	1	nogas	0.005	0.005	127.38	273	0.00	2000	
Si	28	1	nogas	80.757	80.757	6.93	685277	0.01	2000	
La	139	1	nogas	-22.955	-22.955	-95.52	43	-52.97	2000	
Au	197	1	nogas	265.846	265.846	173.84	3	7975.39	2000	
Na	23	2	He	68.552	68.552	2.76	13949	0.49	200000	
Mg	24	2	He	8.611	8.611	15.52	667	1.29	200000	
Al	27	2	He	1.669	1.669	215.73	167	1.00	2000	
K	39	2	He	70.119	70.119	11.76	7795	0.90	200000	
Ca	43	2	He	112.720	112.720	173.21	10	1127.20	200000	
Ca	44	2	He	13.650	13.650	149.02	63	21.55	200000	
V	51	2	He	0.123	0.123	47.16	147	0.08	2000	

Sample Report

Cr	52	2	He	-0.224	-0.224	-37.65	87	-0.26	2000	
Mn	55	2	He	0.183	0.183	79.91	50	0.37	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Fe	56	2	He	1.589	1.589	26.88	1113	0.14	200000	
Co	59	2	He	-0.012	-0.012	-176.15	7	-0.18	2000	
Ni	60	2	He	-0.447	-0.447	-17.74	7	-6.71	2000	
Cu	63	2	He	-0.810	-0.810	-15.29	240	-0.34	2000	
Zn	66	2	He	2.833	2.833	26.13	283	1.00	2000	
As	75	2	He	0.104	0.104	220.11	9	1.17	2000	
Sb	121	2	He	0.117	0.117	77.77	57	0.21	2000	
Se	78	2	He	0.691	0.691	225.46	5	12.96	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	516547	1.80	522917	98.78	70	125	
In	115	1	nogas	628180	1.30	627838	100.05	70	125	
Li	6	1	nogas	225005	2.05	211473	106.40	70	125	
Bi	209	1	nogas	908310	1.30	915562	99.21	70	125	
Ge	72	2	He	28581	2.53	29526	96.80	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	199_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-05T18:12:36-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	020CALB.d
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	99.072	1.270	170002	1.04	100	99.1	90	110	
B	11	1	nogas	552.681	1.597	441749	0.89	500	110.5	90	110	CCV Main CR1-2 Failed
Na	23	1	nogas	11493.191	1.562	51553956	1.38	10000	114.9	90	110	CCV Main CR1-2 Failed
Mg	24	1	nogas	10841.300	2.051	33772372	1.81	10000	108.4	90	110	
Al	27	1	nogas	104.340	1.455	418303	0.34	100	104.3	90	110	
P	31	1	nogas	546.005	1.689	125241	0.36	500	109.2	90	110	
K	39	1	nogas	10558.851	1.098	35293160	0.32	10000	105.6	90	110	
Ca	43	1	nogas	10682.879	3.098	69659	3.05	10000	106.8	90	110	
Ca	44	1	nogas	10675.558	2.322	1159866	1.59	10000	106.8	90	110	
Ti	47	1	nogas	105.256	5.800	34488	4.62	100	105.3	90	110	
V	51	1	nogas	112.623	3.577	608413	2.31	100	112.6	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	104.817	2.021	442737	1.02	100	104.8	90	110	
Mn	55	1	nogas	103.270	1.601	569810	0.43	100	103.3	90	110	
Fe	56	1	nogas	10106.137	2.210	47118631	1.02	10000	101.1	90	110	
Co	59	1	nogas	101.076	2.298	454925	1.24	100	101.1	90	110	
Ni	60	1	nogas	102.589	1.405	101343	0.31	100	102.6	90	110	
Cu	63	1	nogas	101.825	1.581	251302	0.33	100	101.8	90	110	
Zn	66	1	nogas	104.748	0.563	85529	1.78	100	104.7	90	110	
As	75	1	nogas	109.595	2.317	97987	1.49	100	109.6	90	110	
Se	77	1	nogas	163.347	4.775	9019	2.74	100	163.3	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	98.123	3.230	4434	1.95	100	98.1	90	110	
Sr	88	1	nogas	107.789	1.281	677521	0.52	100	107.8	90	110	
Mo	95	1	nogas	99.171	1.682	132278	2.72	100	99.2	90	110	
Ag	107	1	nogas	99.337	1.612	360709	0.45	100	99.3	90	110	
Cd	111	1	nogas	101.334	0.597	80307	1.46	100	101.3	90	110	
Sn	118	1	nogas	101.170	1.505	235228	1.07	100	101.2	90	110	
Sb	121	1	nogas	100.927	1.115	341345	0.19	100	100.9	90	110	
Ba	137	1	nogas	105.098	2.551	119845	1.06	100	105.1	90	110	
Tl	205	1	nogas	100.395	0.980	1010824	1.38	100	100.4	90	110	
Pb	208	1	nogas	97.972	1.081	757911	0.45	100	98.0	90	110	
U	238	1	nogas	99.946	1.412	1925625	0.75	100	99.9	90	110	
Li	7	1	nogas	101.872	1.157	425112	0.96	100	101.9	90	110	
Si	28	1	nogas	5744.757	1.285	10035115	0.14	5000	114.9	90	110	CCV Main CR1-2 Failed
Ba	135	1	nogas	103.990	0.648	70817	2.07	100	104.0	90	110	
La	139	1	nogas	73.378	26.878	147	14.20	100	73.4	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	-1036.189	-200.869	20	132.29	100	-1036.2	90	110	CCV Main CR1-2 Failed
Tl	203	1	nogas	101.082	1.453	420086	0.84	100	101.1	90	110	
Na	23	2	He	11643.420	2.807	1906287	2.25	10000	116.4	90	110	CCV Main CR1-2 Failed
Mg	24	2	He	10453.511	0.979	811446	0.43	10000	104.5	90	110	
Al	27	2	He	97.444	6.626	2787	6.85	100	97.4	90	110	
K	39	2	He	10459.173	3.134	416602	2.53	10000	104.6	90	110	
Ca	43	2	He	10971.243	2.354	1023	2.03	10000	109.7	90	110	
Ca	44	2	He	10811.421	0.943	17959	0.58	10000	108.1	90	110	
V	51	2	He	102.199	2.591	31333	2.14	100	102.2	90	110	
Cr	52	2	He	103.095	2.498	39762	2.05	100	103.1	90	110	
Mn	55	2	He	102.563	2.465	20392	2.73	100	102.6	90	110	
Fe	56	2	He	10397.072	1.633	3067473	1.64	10000	104.0	90	110	
Co	59	2	He	101.239	1.004	56275	1.53	100	101.2	90	110	
Ni	60	2	He	102.254	2.488	15721	2.14	100	102.3	90	110	
Cu	63	2	He	102.149	0.802	44350	0.33	100	102.1	90	110	
Zn	66	2	He	103.687	1.570	7655	2.04	100	103.7	90	110	
As	75	2	He	106.895	2.398	4903	1.97	100	106.9	90	110	
Sb	121	2	He	99.263	3.111	35950	2.75	100	99.3	90	110	
Se	78	2	He	103.929	3.314	325	3.76	100	103.9	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	545890	1.23	522917	104.39	70	125	
In	115	1	nogas	651540	1.51	627838	103.78	70	125	
Li	6	1	nogas	250198	0.81	211473	118.31	70	125	
Bi	209	1	nogas	940130	0.66	915562	102.68	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	30214	0.55	29526	102.33	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	200_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-05T18:14:47-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	020CALB.d
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	0.028	82.2	57	66.8	1	
B	11	1	nogas	80.864	9.1	70636	8.3	10	CCB Main CR1 Failed
Na	23	1	nogas	74.564	2.8	408908	1.9	100	
Mg	24	1	nogas	5.161	14.5	18581	12.8	100	
Al	27	1	nogas	-1.079	-0.5	4644	1.0	5	
P	31	1	nogas	5.270	56.5	8546	7.1	10	
K	39	1	nogas	52.596	21.0	1094602	2.9	100	
Ca	43	1	nogas	31.920	22.0	310	14.8	100	
Ca	44	1	nogas	-15.375	-37.2	10984	5.8	100	
Ti	47	1	nogas	-0.005	-1921.1	27	108.3	2.5	
V	51	1	nogas	12.500	4.7	123292	2.0	2.5	CCB Main CR1 Failed
Cr	52	1	nogas	0.197	12.5	4651	2.6	2.5	
Mn	55	1	nogas	0.146	32.3	4891	5.0	2.5	
Fe	56	1	nogas	17.544	7.7	293293	1.7	100	
Co	59	1	nogas	0.038	12.3	263	7.9	2.5	
Ni	60	1	nogas	0.138	33.3	267	17.7	2.5	
Cu	63	1	nogas	-0.683	-13.2	1740	12.8	2.5	
Zn	66	1	nogas	-0.961	-6.6	93	55.0	2.5	
As	75	1	nogas	7.112	16.8	18077	4.8	2.5	CCB Main CR1 Failed
Se	77	1	nogas	81.203	12.5	6248	5.3	2.5	CCB Main CR1 Failed
Se	82	1	nogas	-0.591	-271.6	190	36.8	2.5	
Sr	88	1	nogas	0.052	45.1	573	26.6	2.5	
Mo	95	1	nogas	0.076	14.6	103	14.8	2.5	
Ag	107	1	nogas	0.029	56.2	197	31.1	2.5	
Cd	111	1	nogas	0.046	31.6	37	31.5	1	
Sn	118	1	nogas	0.099	47.1	757	14.1	5	
Sb	121	1	nogas	0.177	25.4	793	19.6	2.5	
Ba	137	1	nogas	-0.043	-59.4	143	21.3	2.5	
Tl	205	1	nogas	0.120	32.7	1353	31.0	1	
Pb	208	1	nogas	0.032	33.1	403	21.1	2.5	
U	238	1	nogas	0.039	19.3	967	16.4	2.5	
Si	28	1	nogas	49.701	17.2	684076	2.2	5	CCB Main CR1 Failed
La	139	1	nogas	-43.382	-54.5	23	107.9	2.5	
Au	197	1	nogas	532.665	0.0	0	#DIV/0!	2.5	CCB Main CR1 Failed
Na	23	2	He	67.350	4.2	15010	3.6	100	
Mg	24	2	He	3.987	24.8	357	19.9	100	
Al	27	2	He	-2.989	-1.8	50	0.0	5	
K	39	2	He	12.199	99.0	6145	5.2	100	
Ca	43	2	He	70.048	86.7	7	86.6	100	
Ca	44	2	He	-22.921	-14.5	7	86.6	100	
V	51	2	He	0.326	16.7	225	4.9	2.5	
Cr	52	2	He	-0.268	-25.5	77	32.8	2.5	
Mn	55	2	He	0.253	86.1	70	65.5	2.5	
Fe	56	2	He	2.965	16.7	1630	9.0	100	
Co	59	2	He	0.028	166.5	30	88.2	2.5	
Ni	60	2	He	-0.261	-11.6	37	15.7	2.5	

Continuing Calibration Blank (CCB) Report

Cu	63	2	He	-0.735	-25.9	297	30.6	2.5	
Zn	66	2	He	-0.931	-28.8	27	78.1	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
As	75	2	He	0.114	67.3	10	33.3	2.5	
Sb	121	2	He	0.130	128.8	67	96.4	2.5	
Se	78	2	He	1.188	58.5	7	31.5	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	554661	0.50	522917	106.07	70	125	
In	115	1	nogas	662464	1.12	627838	105.52	70	125	
Li	6	1	nogas	235695	0.92	211473	111.45	70	125	
Bi	209	1	nogas	973879	0.97	915562	106.37	70	125	
Ge	72	2	He	31165	2.94	29526	105.55	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	211_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-05T18:39:02-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	020CALB.d
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	97.749	0.691	163910	1.28	100	97.7	90	110	
B	11	1	nogas	539.126	0.393	421387	0.45	500	107.8	90	110	
Na	23	1	nogas	11195.068	1.575	49688608	1.66	10000	112.0	90	110	CCV Main CR1-2 Failed
Mg	24	1	nogas	10593.900	0.924	32653927	1.04	10000	105.9	90	110	
Al	27	1	nogas	103.583	0.386	411425	1.37	100	103.6	90	110	
P	31	1	nogas	530.400	1.915	120716	1.73	500	106.1	90	110	
K	39	1	nogas	10480.893	0.279	34708278	1.21	10000	104.8	90	110	
Ca	43	1	nogas	10443.731	1.959	67446	0.73	10000	104.4	90	110	
Ca	44	1	nogas	10476.541	1.135	1127690	0.27	10000	104.8	90	110	
Ti	47	1	nogas	103.295	3.579	33533	3.02	100	103.3	90	110	
V	51	1	nogas	111.329	0.846	596556	2.07	100	111.3	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	101.995	1.660	426823	0.53	100	102.0	90	110	
Mn	55	1	nogas	101.405	1.452	554265	0.17	100	101.4	90	110	
Fe	56	1	nogas	9952.086	1.421	45964331	0.29	10000	99.5	90	110	
Co	59	1	nogas	99.896	2.442	445320	1.17	100	99.9	90	110	
Ni	60	1	nogas	99.475	2.048	97343	2.21	100	99.5	90	110	
Cu	63	1	nogas	100.657	2.164	246121	2.48	100	100.7	90	110	
Zn	66	1	nogas	103.217	1.976	83472	0.61	100	103.2	90	110	
As	75	1	nogas	106.847	1.943	94923	0.85	100	106.8	90	110	
Se	77	1	nogas	160.557	17.250	8836	10.70	100	160.6	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	99.727	3.912	4461	3.48	100	99.7	90	110	
Sr	88	1	nogas	107.357	1.660	668345	0.35	100	107.4	90	110	
Mo	95	1	nogas	98.300	1.659	129835	0.52	100	98.3	90	110	
Ag	107	1	nogas	97.791	2.802	351681	1.58	100	97.8	90	110	
Cd	111	1	nogas	102.943	1.466	81593	1.65	100	102.9	90	110	
Sn	118	1	nogas	99.065	1.029	230386	0.38	100	99.1	90	110	
Sb	121	1	nogas	99.665	2.484	333843	1.66	100	99.7	90	110	
Ba	137	1	nogas	105.492	0.453	120335	0.27	100	105.5	90	110	
Tl	205	1	nogas	99.499	0.174	996300	0.96	100	99.5	90	110	
Pb	208	1	nogas	98.740	0.317	759714	1.02	100	98.7	90	110	
U	238	1	nogas	97.451	1.768	1867192	0.66	100	97.5	90	110	
Li	7	1	nogas	102.727	1.038	418715	0.34	100	102.7	90	110	
Si	28	1	nogas	5621.729	1.260	9740178	1.73	5000	112.4	90	110	CCV Main CR1-2 Failed
Ba	135	1	nogas	101.488	2.940	69117	2.66	100	101.5	90	110	
La	139	1	nogas	73.405	37.691	147	19.68	100	73.4	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	532.665	0.000	0	#DIV/0!	100	532.7	90	110	CCV Main CR1-2 Failed
Tl	203	1	nogas	99.684	1.093	412030	1.27	100	99.7	90	110	
Na	23	2	He	11733.432	1.644	1861002	0.50	10000	117.3	90	110	CCV Main CR1-2 Failed
Mg	24	2	He	10515.827	2.296	790723	1.48	10000	105.2	90	110	
Al	27	2	He	99.991	12.764	2767	12.27	100	100.0	90	110	
K	39	2	He	10379.100	0.919	400580	0.95	10000	103.8	90	110	
Ca	43	2	He	12207.379	8.823	1103	9.08	10000	122.1	90	110	CCV Main CR1-2 Failed
Ca	44	2	He	10598.491	2.044	17062	3.65	10000	106.0	90	110	
V	51	2	He	101.833	0.344	30250	1.66	100	101.8	90	110	
Cr	52	2	He	103.156	1.780	38557	3.44	100	103.2	90	110	
Mn	55	2	He	104.176	7.016	20055	5.90	100	104.2	90	110	
Fe	56	2	He	10471.991	1.411	2992917	0.79	10000	104.7	90	110	
Co	59	2	He	101.957	1.485	54897	0.40	100	102.0	90	110	
Ni	60	2	He	102.876	10.143	15307	8.54	100	102.9	90	110	
Cu	63	2	He	101.666	2.635	42760	1.75	100	101.7	90	110	
Zn	66	2	He	102.333	5.811	7318	5.08	100	102.3	90	110	
As	75	2	He	104.531	4.720	4645	4.66	100	104.5	90	110	
Sb	121	2	He	100.736	4.467	35338	3.69	100	100.7	90	110	
Se	78	2	He	92.930	8.692	281	7.12	100	92.9	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	540694	1.33	522917	103.40	70	125	
In	115	1	nogas	651609	0.68	627838	103.79	70	125	
Li	6	1	nogas	244483	0.69	211473	115.61	70	125	
Bi	209	1	nogas	934997	1.11	915562	102.12	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	29272	1.73	29526	99.14	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	212_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-05T18:41:14-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	020CALB.d
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	0.014	66.6	33	45.8	1	
B	11	1	nogas	67.575	8.3	60004	8.4	10	CCB Main CR1 Failed
Na	23	1	nogas	53.391	4.1	302731	2.1	100	
Mg	24	1	nogas	3.905	9.7	14142	7.2	100	
Al	27	1	nogas	-1.083	-5.8	4427	6.5	5	
P	31	1	nogas	8.625	39.7	8872	7.6	10	
K	39	1	nogas	58.092	5.3	1063801	0.7	100	
Ca	43	1	nogas	15.102	11.7	190	5.3	100	
Ca	44	1	nogas	-12.502	-28.1	10797	2.5	100	
Ti	47	1	nogas	-0.012	-392.9	23	65.5	2.5	
V	51	1	nogas	11.921	9.1	115171	5.6	2.5	CCB Main CR1 Failed
Cr	52	1	nogas	0.127	61.1	4161	7.3	2.5	
Mn	55	1	nogas	0.105	20.5	4461	3.0	2.5	
Fe	56	1	nogas	14.994	5.7	268916	2.4	100	
Co	59	1	nogas	0.027	24.9	203	15.0	2.5	
Ni	60	1	nogas	0.088	52.4	207	20.1	2.5	
Cu	63	1	nogas	-0.768	-6.1	1463	8.2	2.5	
Zn	66	1	nogas	-0.875	-1.8	157	7.4	2.5	
As	75	1	nogas	6.315	1.8	16678	1.8	2.5	CCB Main CR1 Failed
Se	77	1	nogas	75.288	12.5	5774	6.3	2.5	CCB Main CR1 Failed
Se	82	1	nogas	0.004	61236.2	207	46.5	2.5	
Sr	88	1	nogas	0.062	12.5	610	9.1	2.5	
Mo	95	1	nogas	0.090	12.4	117	13.1	2.5	
Ag	107	1	nogas	0.025	71.6	173	37.1	2.5	
Cd	111	1	nogas	0.025	132.5	20	132.3	1	
Sn	118	1	nogas	0.060	63.0	657	14.2	5	
Sb	121	1	nogas	0.146	11.9	657	9.3	2.5	
Ba	137	1	nogas	-0.030	-54.7	157	13.3	2.5	
Tl	205	1	nogas	0.097	20.4	1100	19.1	1	
Pb	208	1	nogas	0.030	18.2	383	10.5	2.5	
U	238	1	nogas	0.043	36.6	1043	30.7	2.5	
Si	28	1	nogas	52.411	22.0	658164	2.2	5	CCB Main CR1 Failed
La	139	1	nogas	-55.738	-17.0	10	100.0	2.5	
Au	197	1	nogas	532.665	0.0	0	#DIV/0!	2.5	CCB Main CR1 Failed
Na	23	2	He	52.887	10.2	11861	2.9	100	
Mg	24	2	He	4.298	18.0	360	12.1	100	
Al	27	2	He	-3.650	-17.3	30	57.7	5	
K	39	2	He	16.284	35.2	5971	4.6	100	
Ca	43	2	He	113.225	100.5	10	100.0	100	CCB Main CR1 Failed
Ca	44	2	He	10.488	124.9	60	33.3	100	
V	51	2	He	0.186	27.2	171	6.5	2.5	
Cr	52	2	He	-0.213	-1.9	93	6.2	2.5	
Mn	55	2	He	0.194	97.1	53	65.8	2.5	
Fe	56	2	He	3.339	31.3	1640	14.1	100	
Co	59	2	He	0.019	230.7	23	99.0	2.5	
Ni	60	2	He	-0.203	-12.1	43	13.3	2.5	

Continuing Calibration Blank (CCB) Report

Cu	63	2	He	-0.875	-19.4	220	29.8	2.5	
Zn	66	2	He	-1.143	-12.6	10	100.0	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
As	75	2	He	0.130	175.3	10	100.0	2.5	
Sb	121	2	He	0.135	77.4	63	55.5	2.5	
Se	78	2	He	0.914	197.6	6	88.2	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	530231	1.34	522917	101.40	70	125	
In	115	1	nogas	652245	1.38	627838	103.89	70	125	
Li	6	1	nogas	232141	1.79	211473	109.77	70	125	
Bi	209	1	nogas	961777	1.01	915562	105.05	70	125	
Ge	72	2	He	29463	4.68	29526	99.79	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	223_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-05T19:05:47-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	020CALB.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	100.640	2.068	204393	1.22	100	100.6	90	110	
B	11	1	nogas	585.874	1.069	553514	2.09	500	117.2	90	110	CCV Main CR1-2 Failed
Na	23	1	nogas	11680.304	0.479	62973953	0.11	10000	116.8	90	110	CCV Main CR1-2 Failed
Mg	24	1	nogas	10653.010	1.286	39888010	0.82	10000	106.5	90	110	
Al	27	1	nogas	104.025	1.688	502306	0.85	100	104.0	90	110	
P	31	1	nogas	554.103	2.382	152941	1.38	500	110.8	90	110	CCV Main CR1-2 Failed
K	39	1	nogas	10558.573	1.123	42505782	0.73	10000	105.6	90	110	
Ca	43	1	nogas	10634.905	0.211	83522	0.75	10000	106.3	90	110	
Ca	44	1	nogas	10612.989	2.475	1388830	1.85	10000	106.1	90	110	
Ti	47	1	nogas	103.119	1.515	40708	0.75	100	103.1	90	110	
V	51	1	nogas	117.457	2.721	761334	3.30	100	117.5	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	103.884	1.589	528538	0.81	100	103.9	90	110	
Mn	55	1	nogas	102.575	1.351	681699	0.51	100	102.6	90	110	
Fe	56	1	nogas	10083.003	0.916	56625928	0.73	10000	100.8	90	110	
Co	59	1	nogas	100.158	2.047	542955	1.46	100	100.2	90	110	
Ni	60	1	nogas	101.806	0.598	121135	0.90	100	101.8	90	110	
Cu	63	1	nogas	101.413	2.599	301444	1.84	100	101.4	90	110	
Zn	66	1	nogas	103.934	0.200	102209	0.72	100	103.9	90	110	
As	75	1	nogas	115.241	1.606	123336	0.59	100	115.2	90	110	CCV Main CR1-2 Failed
Se	77	1	nogas	194.047	4.358	12155	2.77	100	194.0	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	107.812	3.038	5844	3.72	100	107.8	90	110	
Sr	88	1	nogas	111.402	0.833	843363	0.66	100	111.4	90	110	CCV Main CR1-2 Failed
Mo	95	1	nogas	98.084	2.525	157522	1.67	100	98.1	90	110	
Ag	107	1	nogas	99.345	2.203	434466	1.55	100	99.3	90	110	
Cd	111	1	nogas	102.666	0.452	98625	1.08	100	102.7	90	110	
Sn	118	1	nogas	101.139	0.913	285077	1.40	100	101.1	90	110	
Sb	121	1	nogas	101.598	2.107	413818	1.27	100	101.6	90	110	
Ba	137	1	nogas	108.131	0.513	149497	1.44	100	108.1	90	110	
Tl	205	1	nogas	100.552	0.683	1212303	1.12	100	100.6	90	110	
Pb	208	1	nogas	99.819	0.524	924730	0.98	100	99.8	90	110	
U	238	1	nogas	97.436	1.378	2248200	1.88	100	97.4	90	110	
Li	7	1	nogas	103.471	0.976	510697	0.29	100	103.5	90	110	
Si	28	1	nogas	5663.102	1.108	11924808	0.79	5000	113.3	90	110	CCV Main CR1-2 Failed
Ba	135	1	nogas	105.068	0.750	86727	1.61	100	105.1	90	110	
La	139	1	nogas	62.041	27.682	163	14.14	100	62.0	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	532.665	0.000	0	#DIV/0!	100	532.7	90	110	CCV Main CR1-2 Failed
Tl	203	1	nogas	100.806	0.539	501687	0.75	100	100.8	90	110	
Na	23	2	He	11783.821	1.831	2360992	1.81	10000	117.8	90	110	CCV Main CR1-2 Failed
Mg	24	2	He	10381.249	1.290	986090	0.85	10000	103.8	90	110	
Al	27	2	He	104.468	2.363	3644	2.22	100	104.5	90	110	
K	39	2	He	10401.690	3.307	506992	2.37	10000	104.0	90	110	
Ca	43	2	He	12772.928	17.799	1457	17.17	10000	127.7	90	110	CCV Main CR1-2 Failed
Ca	44	2	He	10877.775	4.957	22104	3.81	10000	108.8	90	110	
V	51	2	He	101.440	2.731	38054	1.54	100	101.4	90	110	
Cr	52	2	He	102.814	2.276	48525	1.73	100	102.8	90	110	
Mn	55	2	He	102.730	1.545	24992	0.56	100	102.7	90	110	
Fe	56	2	He	10237.277	1.965	3695758	1.49	10000	102.4	90	110	
Co	59	2	He	101.905	3.301	69303	2.51	100	101.9	90	110	
Ni	60	2	He	102.441	2.895	19271	2.14	100	102.4	90	110	
Cu	63	2	He	102.381	2.143	54389	1.49	100	102.4	90	110	
Zn	66	2	He	104.059	5.873	9399	5.57	100	104.1	90	110	
As	75	2	He	104.620	2.586	5872	2.26	100	104.6	90	110	
Sb	121	2	He	102.074	3.537	45246	4.07	100	102.1	90	110	
Se	78	2	He	99.380	11.709	380	11.42	100	99.4	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	657442	0.86	522917	125.73	70	125	ISTD Failed
In	115	1	nogas	789755	1.00	627838	125.79	70	125	ISTD Failed
Li	6	1	nogas	296157	1.23	211473	140.05	70	125	ISTD Failed
Bi	209	1	nogas	1125758	0.52	915562	122.96	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	36974	1.21	29526	125.22	70	125	ISTD Failed

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	224_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-05T19:07:56-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	020CALB.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	0.012	47.8	37	31.5	1	
B	11	1	nogas	73.803	8.3	79423	8.4	10	CCB Main CR1 Failed
Na	23	1	nogas	71.839	1.4	476668	1.5	100	
Mg	24	1	nogas	3.076	6.2	14409	5.7	100	
Al	27	1	nogas	-0.968	-4.3	6128	5.6	5	
P	31	1	nogas	2.913	93.7	9673	8.7	10	
K	39	1	nogas	46.675	11.1	1294103	1.6	100	
Ca	43	1	nogas	22.302	18.1	297	10.8	100	
Ca	44	1	nogas	-23.079	-12.3	12208	3.2	100	
Ti	47	1	nogas	-0.003	-2317.7	33	75.5	2.5	
V	51	1	nogas	18.768	8.6	185654	3.9	2.5	CCB Main CR1 Failed
Cr	52	1	nogas	0.317	25.9	6218	9.0	2.5	
Mn	55	1	nogas	0.098	76.1	5564	6.8	2.5	
Fe	56	1	nogas	10.822	11.0	314871	1.6	100	
Co	59	1	nogas	0.022	4.8	230	0.0	2.5	
Ni	60	1	nogas	0.053	90.1	220	28.4	2.5	
Cu	63	1	nogas	-0.809	-1.6	1720	2.1	2.5	
Zn	66	1	nogas	-0.852	-5.2	220	18.2	2.5	
As	75	1	nogas	10.841	8.3	25323	0.8	2.5	CCB Main CR1 Failed
Se	77	1	nogas	103.099	13.3	8452	5.3	2.5	CCB Main CR1 Failed
Se	82	1	nogas	-1.404	-57.1	187	25.3	2.5	
Sr	88	1	nogas	0.075	16.8	870	13.3	2.5	
Mo	95	1	nogas	0.053	32.6	87	35.3	2.5	
Ag	107	1	nogas	0.021	50.8	200	21.8	2.5	
Cd	111	1	nogas	0.010	98.8	10	100.0	1	
Sn	118	1	nogas	0.044	71.1	753	11.4	5	
Sb	121	1	nogas	0.106	18.2	660	12.0	2.5	
Ba	137	1	nogas	-0.098	-63.1	97	92.7	2.5	
Tl	205	1	nogas	0.088	20.7	1247	20.1	1	
Pb	208	1	nogas	0.028	43.7	450	27.3	2.5	
U	238	1	nogas	0.031	23.3	983	18.8	2.5	
Si	28	1	nogas	2.164	191.6	727877	1.9	5	
La	139	1	nogas	-44.805	-42.5	27	94.4	2.5	
Au	197	1	nogas	115.030	628.8	7	173.2	2.5	CCB Main CR1 Failed
Na	23	2	He	64.155	9.4	17549	4.3	100	
Mg	24	2	He	3.282	19.3	367	18.6	100	
Al	27	2	He	-2.222	-35.1	87	29.0	5	
K	39	2	He	3.124	191.5	7018	1.8	100	
Ca	43	2	He	0.000	#DIV/0!	0	#DIV/0!	100	
Ca	44	2	He	-2.769	-279.2	50	34.6	100	
V	51	2	He	0.462	9.2	325	7.4	2.5	
Cr	52	2	He	-0.163	-37.1	143	17.6	2.5	
Mn	55	2	He	0.117	73.5	50	40.0	2.5	
Fe	56	2	He	1.695	13.2	1510	5.4	100	
Co	59	2	He	0.009	84.8	23	24.7	2.5	
Ni	60	2	He	-0.424	-7.1	13	43.3	2.5	

Continuing Calibration Blank (CCB) Report

Cu	63	2	He	-1.076	-5.3	177	19.9	2.5	
Zn	66	2	He	-1.173	-9.3	10	100.0	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
As	75	2	He	0.098	186.2	11	91.7	2.5	
Sb	121	2	He	0.152	31.6	90	22.2	2.5	
Se	78	2	He	0.830	303.3	7	128.9	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	667791	2.61	522917	127.71	70	125	ISTD Failed
In	115	1	nogas	795715	2.24	627838	126.74	70	125	ISTD Failed
Li	6	1	nogas	285854	1.54	211473	135.17	70	125	ISTD Failed
Bi	209	1	nogas	1184819	1.72	915562	129.41	70	125	ISTD Failed
Ge	72	2	He	37832	2.64	29526	128.13	70	125	ISTD Failed

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	230_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-05T19:27:27-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	020CALB.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	99.616	0.927	191174	0.58	100	99.6	90	110	
B	11	1	nogas	950.138	1.685	839793	2.69	500	190.0	90	110	CCV Main CR1-2 Failed
Na	23	1	nogas	12628.933	1.555	63939993	0.71	10000	126.3	90	110	CCV Main CR1-2 Failed
Mg	24	1	nogas	11125.407	0.872	39125168	0.39	10000	111.3	90	110	CCV Main CR1-2 Failed
Al	27	1	nogas	109.481	2.417	490570	1.45	100	109.5	90	110	
P	31	1	nogas	580.891	1.724	148563	0.90	500	116.2	90	110	CCV Main CR1-2 Failed
K	39	1	nogas	11341.263	3.718	42331854	2.65	10000	113.4	90	110	CCV Main CR1-2 Failed
Ca	43	1	nogas	11899.339	1.484	86805	1.73	10000	119.0	90	110	CCV Main CR1-2 Failed
Ca	44	1	nogas	11250.736	1.783	1366917	0.86	10000	112.5	90	110	CCV Main CR1-2 Failed
Ti	47	1	nogas	108.067	2.083	39629	1.08	100	108.1	90	110	
V	51	1	nogas	110.929	2.615	671580	1.92	100	110.9	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	105.643	1.768	499243	0.86	100	105.6	90	110	
Mn	55	1	nogas	104.291	1.586	643798	0.60	100	104.3	90	110	
Fe	56	1	nogas	10246.620	0.717	53455012	0.44	10000	102.5	90	110	
Co	59	1	nogas	102.360	2.364	515479	1.70	100	102.4	90	110	
Ni	60	1	nogas	104.440	2.114	115427	1.08	100	104.4	90	110	
Cu	63	1	nogas	103.652	2.120	286147	1.41	100	103.7	90	110	
Zn	66	1	nogas	102.288	1.592	93473	2.44	100	102.3	90	110	
As	75	1	nogas	109.367	0.726	109449	1.53	100	109.4	90	110	
Se	77	1	nogas	165.677	7.614	10187	5.85	100	165.7	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	105.514	3.327	5318	2.98	100	105.5	90	110	
Sr	88	1	nogas	109.679	1.096	771354	0.76	100	109.7	90	110	
Mo	95	1	nogas	96.357	1.795	143767	0.95	100	96.4	90	110	
Ag	107	1	nogas	95.902	1.859	389634	1.06	100	95.9	90	110	
Cd	111	1	nogas	102.598	2.575	86613	1.50	100	102.6	90	110	
Sn	118	1	nogas	102.275	0.828	253364	0.93	100	102.3	90	110	
Sb	121	1	nogas	96.502	1.247	365181	0.58	100	96.5	90	110	
Ba	137	1	nogas	107.423	1.789	130520	0.60	100	107.4	90	110	
Tl	205	1	nogas	100.942	4.313	1035131	2.62	100	100.9	90	110	
Pb	208	1	nogas	98.175	2.993	773705	1.21	100	98.2	90	110	
U	238	1	nogas	95.705	2.320	1878876	2.00	100	95.7	90	110	
Li	7	1	nogas	105.067	0.979	489632	0.65	100	105.1	90	110	
Si	28	1	nogas	6021.836	1.754	11737324	0.88	5000	120.4	90	110	CCV Main CR1-2 Failed
Ba	135	1	nogas	103.651	3.360	75180	2.15	100	103.7	90	110	
La	139	1	nogas	46.984	45.475	127	19.87	100	47.0	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	532.665	0.000	0	#DIV/0!	100	532.7	90	110	CCV Main CR1-2 Failed
Tl	203	1	nogas	100.848	3.978	426879	1.42	100	100.8	90	110	
Na	23	2	He	12378.465	1.148	2375960	4.20	10000	123.8	90	110	CCV Main CR1-2 Failed
Mg	24	2	He	10668.984	2.531	970304	1.46	10000	106.7	90	110	
Al	27	2	He	111.631	5.036	3715	1.69	100	111.6	90	110	CCV Main CR1-2 Failed
K	39	2	He	10712.000	1.240	499953	2.73	10000	107.1	90	110	
Ca	43	2	He	11785.736	17.957	1290	19.38	10000	117.9	90	110	CCV Main CR1-2 Failed
Ca	44	2	He	10670.851	1.587	20773	2.01	10000	106.7	90	110	
V	51	2	He	100.592	0.767	36151	2.82	100	100.6	90	110	
Cr	52	2	He	104.070	4.173	47007	0.73	100	104.1	90	110	
Mn	55	2	He	101.240	2.060	23586	2.25	100	101.2	90	110	
Fe	56	2	He	10271.540	1.620	3552220	3.63	10000	102.7	90	110	
Co	59	2	He	100.647	0.553	65571	2.97	100	100.6	90	110	
Ni	60	2	He	100.842	3.792	18163	2.33	100	100.8	90	110	
Cu	63	2	He	97.003	2.113	49385	1.80	100	97.0	90	110	
Zn	66	2	He	106.708	4.054	9229	4.66	100	106.7	90	110	
As	75	2	He	99.622	1.162	5358	4.05	100	99.6	90	110	
Sb	121	2	He	95.091	1.758	40367	3.16	100	95.1	90	110	
Se	78	2	He	108.965	6.352	399	6.55	100	109.0	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	610768	1.06	522917	116.80	70	125	
In	115	1	nogas	694159	1.23	627838	110.56	70	125	
Li	6	1	nogas	279826	1.11	211473	132.32	70	125	ISTD Failed
Bi	209	1	nogas	958140	2.59	915562	104.65	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	35417	3.51	29526	119.95	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	231_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-05T19:29:38-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	020CALB.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	0.025	20.0	60	16.7	1	
B	11	1	nogas	314.866	4.6	277323	5.2	10	CCB Main CR1 Failed
Na	23	1	nogas	467.502	4.8	2520574	4.7	100	CCB Main CR1 Failed
Mg	24	1	nogas	6.228	2.6	25190	2.3	100	
Al	27	1	nogas	-0.823	-6.4	6338	3.6	5	
P	31	1	nogas	8.907	20.7	10457	4.0	10	
K	39	1	nogas	122.672	9.5	1484252	2.6	100	CCB Main CR1 Failed
Ca	43	1	nogas	320.919	6.5	2487	6.6	100	CCB Main CR1 Failed
Ca	44	1	nogas	81.074	6.0	24077	2.7	100	
Ti	47	1	nogas	0.004	1502.1	33	75.5	2.5	
V	51	1	nogas	5.228	19.1	97728	5.6	2.5	CCB Main CR1 Failed
Cr	52	1	nogas	0.192	17.0	5181	3.2	2.5	
Mn	55	1	nogas	0.174	50.4	5648	9.7	2.5	
Fe	56	1	nogas	35.601	6.9	423539	3.5	100	
Co	59	1	nogas	0.027	28.8	237	17.1	2.5	
Ni	60	1	nogas	0.986	9.5	1250	8.5	2.5	
Cu	63	1	nogas	-0.401	-16.1	2727	6.6	2.5	
Zn	66	1	nogas	-0.813	-11.9	240	37.0	2.5	
As	75	1	nogas	4.257	10.8	17689	2.2	2.5	CCB Main CR1 Failed
Se	77	1	nogas	50.304	6.6	5764	2.0	2.5	CCB Main CR1 Failed
Se	82	1	nogas	1.129	164.1	297	30.4	2.5	
Sr	88	1	nogas	0.226	9.9	1880	8.3	2.5	
Mo	95	1	nogas	0.077	17.8	117	17.8	2.5	
Ag	107	1	nogas	0.029	39.0	217	20.8	2.5	
Cd	111	1	nogas	0.015	113.7	13	114.6	1	
Sn	118	1	nogas	0.099	31.9	823	9.1	5	
Sb	121	1	nogas	0.152	24.2	790	17.7	2.5	
Ba	137	1	nogas	-0.090	-27.6	97	31.6	2.5	
Tl	205	1	nogas	0.110	16.6	1283	16.5	1	
Pb	208	1	nogas	0.051	22.2	563	16.5	2.5	
U	238	1	nogas	0.031	14.2	827	12.1	2.5	
Si	28	1	nogas	112.950	8.3	883582	1.6	5	CCB Main CR1 Failed
La	139	1	nogas	-42.405	-12.2	27	21.7	2.5	
Au	197	1	nogas	-437.141	-253.4	13	114.6	2.5	
Na	23	2	He	402.407	4.1	83190	2.6	100	CCB Main CR1 Failed
Mg	24	2	He	4.896	29.0	503	28.3	100	
Al	27	2	He	-3.017	-42.6	57	71.3	5	
K	39	2	He	46.164	16.0	8762	2.7	100	
Ca	43	2	He	0.000	#DIV/0!	0	#DIV/0!	100	
Ca	44	2	He	-5.010	-148.2	43	35.3	100	
V	51	2	He	0.091	33.5	176	8.0	2.5	
Cr	52	2	He	-0.158	-45.8	140	21.4	2.5	
Mn	55	2	He	0.055	123.3	33	45.8	2.5	
Fe	56	2	He	2.392	15.1	1693	5.2	100	
Co	59	2	He	-0.005	-710.9	13	173.2	2.5	
Ni	60	2	He	-0.366	-9.5	23	24.7	2.5	
Cu	63	2	He	-0.964	-0.2	227	2.5	2.5	
Zn	66	2	He	-1.208	-10.8	7	173.2	2.5	

Continuing Calibration Blank (CCB) Report

As	75	2	He	0.204	3.5	17	0.0	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.129	28.0	77	19.9	2.5	
Se	78	2	He	0.884	158.3	7	68.6	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	620615	0.43	522917	118.68	70	125	
In	115	1	nogas	720218	1.17	627838	114.71	70	125	
Li	6	1	nogas	270043	1.09	211473	127.70	70	125	ISTD Failed
Bi	209	1	nogas	997748	1.49	915562	108.98	70	125	
Ge	72	2	He	36279	2.35	29526	122.87	70	125	

Calibration Blank Report

Sample Table

Sample Name	CAL BLK
Data File Name	236CALB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-05T19:52:52-06:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	17	549.91
B	11	1	nogas	92627	0.00
Na	23	1	nogas	1059452	0.00
Mg	24	1	nogas	4301	0.58
Al	27	1	nogas	11150	0.04
P	31	1	nogas	10247	0.01
K	39	1	nogas	1313118	0.00
Ca	43	1	nogas	997	1.19
Ca	44	1	nogas	15340	0.03
Ti	47	1	nogas	17	749.40
V	51	1	nogas	118456	0.00
Cr	52	1	nogas	5391	0.14
Mn	55	1	nogas	6255	0.10
Fe	56	1	nogas	399311	0.00
Co	59	1	nogas	80	31.25
Ni	60	1	nogas	910	1.51
Cu	63	1	nogas	3074	0.28
Zn	66	1	nogas	463	3.50
As	75	1	nogas	18083	0.02
Se	77	1	nogas	6115	0.06
Se	82	1	nogas	233	23.26
Sr	88	1	nogas	507	7.14
Mo	95	1	nogas	13	859.23
Ag	107	1	nogas	57	35.96
Cd	111	1	nogas	3	5196.15
Sn	118	1	nogas	590	2.28
Sb	121	1	nogas	433	4.07
Ba	137	1	nogas	233	4.24
Tl	205	1	nogas	63	28.79
Pb	208	1	nogas	230	3.27
Li	7	1	nogas	23576	0.02
Si	28	1	nogas	727910	0.00
La	139	1	nogas	60	0.00
Na	23	2	He	36952	0.00
Mg	24	2	He	80	27.06
Al	27	2	He	100	43.59
K	39	2	He	7182	0.04
Ca	43	2	He	7	2598.08
Ca	44	2	He	40	165.36
V	51	2	He	224	1.38
Cr	52	2	He	113	66.22
Mn	55	2	He	77	42.82

Calibration Blank Report

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	2	He	1137	1.13
Co	59	2	He	10	1000.00
Ni	60	2	He	67	25.98
Cu	63	2	He	400	2.25
Zn	66	2	He	53	113.01
As	75	2	He	12	643.78
Sb	121	2	He	70	53.99
Se	78	2	He	6	1469.86

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Ge	72	1	nogas	606326	0.56
In	115	1	nogas	717978	1.78
Li	6	1	nogas	264394	1.68
Bi	209	1	nogas	1029814	0.97
Ge	72	2	He	35160	3.05

Calibration Standard Report

Sample Table

Sample Name	2/10/200
Data File Name	237CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-05T19:55:04-06:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	236CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	3814	0.10
B	11	1	nogas	90313	0.00
Na	23	1	nogas	2017825	0.00
Mg	24	1	nogas	770534	0.00
Al	27	1	nogas	29896	0.00
P	31	1	nogas	13068	0.02
K	39	1	nogas	2031134	0.00
Ca	43	1	nogas	2574	0.10
Ca	44	1	nogas	40875	0.01
Ti	47	1	nogas	800	0.63
V	51	1	nogas	126651	0.00
Cr	52	1	nogas	14626	0.01
Mn	55	1	nogas	19291	0.01
Fe	56	1	nogas	1535235	0.00
Co	59	1	nogas	10644	0.04
Ni	60	1	nogas	2824	0.33
Cu	63	1	nogas	10237	0.02
Zn	66	1	nogas	2620	0.32
As	75	1	nogas	20706	0.01
Se	77	1	nogas	5891	0.18
Se	82	1	nogas	293	6.61
Sr	88	1	nogas	15607	0.00
Mo	95	1	nogas	2880	0.26
Ag	107	1	nogas	8599	0.01
Cd	111	1	nogas	1837	0.54
Sn	118	1	nogas	6088	0.11
Sb	121	1	nogas	8136	0.07
Ba	137	1	nogas	3080	0.11
Tl	205	1	nogas	22423	0.02
Pb	208	1	nogas	17934	0.01
Si	28	1	nogas	923220	0.00
La	139	1	nogas	100	10.00
Na	23	2	He	77649	0.01
Mg	24	2	He	19358	0.01
Al	27	2	He	270	5.98
K	39	2	He	17182	0.01
Ca	43	2	He	23	280.57
Ca	44	2	He	350	2.94
V	51	2	He	904	0.21
Cr	52	2	He	957	2.53

Calibration Standard Report

Mn	55	2	He	590	3.20
Fe	56	2	He	74205	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Co	59	2	He	1190	0.51
Ni	60	2	He	413	9.07
Cu	63	2	He	1763	0.58
Zn	66	2	He	243	7.03
As	75	2	He	120	13.89
Sb	121	2	He	853	1.47
Se	78	2	He	10	346.41

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	595421	0.69	606326	98.20	70	125	
In	115	1	nogas	705387	0.83	717978	98.25	70	125	
Li	6	1	nogas	255391	0.11	264394	96.59	70	125	
Bi	209	1	nogas	1012391	1.47	1029814	98.31	70	125	
Ge	72	2	He	33757	2.72	35160	96.01	70	125	

Calibration Standard Report

Sample Table

Sample Name	5/25/500
Data File Name	238CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-05T19:57:17-06:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	
ISTD Ref File Name	236CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	9633	0.03
B	11	1	nogas	97741	0.00
Na	23	1	nogas	3518150	0.00
Mg	24	1	nogas	1932694	0.00
Al	27	1	nogas	49369	0.01
P	31	1	nogas	17295	0.02
K	39	1	nogas	3147266	0.00
Ca	43	1	nogas	4811	0.15
Ca	44	1	nogas	78097	0.00
Ti	47	1	nogas	1827	0.30
V	51	1	nogas	146170	0.00
Cr	52	1	nogas	29826	0.01
Mn	55	1	nogas	37017	0.01
Fe	56	1	nogas	3097710	0.00
Co	59	1	nogas	25940	0.01
Ni	60	1	nogas	6245	0.06
Cu	63	1	nogas	16495	0.00
Zn	66	1	nogas	5581	0.13
As	75	1	nogas	23477	0.01
Se	77	1	nogas	6118	0.07
Se	82	1	nogas	543	1.37
Sr	88	1	nogas	35712	0.00
Mo	95	1	nogas	7362	0.04
Ag	107	1	nogas	20730	0.03
Cd	111	1	nogas	4711	0.05
Sn	118	1	nogas	13683	0.02
Sb	121	1	nogas	19939	0.01
Ba	137	1	nogas	6832	0.06
Tl	205	1	nogas	56162	0.00
Pb	208	1	nogas	43181	0.00
Si	28	1	nogas	1386130	0.00
La	139	1	nogas	70	40.82
Na	23	2	He	130837	0.00
Mg	24	2	He	45763	0.01
Al	27	2	He	373	9.36
K	39	2	He	30146	0.01
Ca	43	2	He	43	122.99
Ca	44	2	He	1073	1.00
V	51	2	He	1942	0.14
Cr	52	2	He	2240	0.05

Calibration Standard Report

Mn	55	2	He	1100	0.93
Fe	56	2	He	177689	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Co	59	2	He	3304	0.08
Ni	60	2	He	1017	0.28
Cu	63	2	He	2734	0.11
Zn	66	2	He	617	4.53
As	75	2	He	291	8.27
Sb	121	2	He	2127	0.23
Se	78	2	He	30	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	587120	0.64	606326	96.83	70	125	
In	115	1	nogas	704286	1.12	717978	98.09	70	125	
Li	6	1	nogas	253821	1.20	264394	96.00	70	125	
Bi	209	1	nogas	1012410	0.68	1029814	98.31	70	125	
Ge	72	2	He	33203	4.33	35160	94.43	70	125	

Calibration Standard Report

Sample Table

Sample Name	10/50/1000
Data File Name	239CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-05T19:59:29-06:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	
ISTD Ref File Name	236CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	19398	0.01
B	11	1	nogas	112591	0.00
Na	23	1	nogas	6679776	0.00
Mg	24	1	nogas	3892181	0.00
Al	27	1	nogas	85523	0.00
P	31	1	nogas	25245	0.01
K	39	1	nogas	5049236	0.00
Ca	43	1	nogas	9052	0.04
Ca	44	1	nogas	140378	0.00
Ti	47	1	nogas	3567	0.04
V	51	1	nogas	173873	0.00
Cr	52	1	nogas	54138	0.00
Mn	55	1	nogas	69566	0.00
Fe	56	1	nogas	5813247	0.00
Co	59	1	nogas	51791	0.00
Ni	60	1	nogas	12682	0.05
Cu	63	1	nogas	32000	0.01
Zn	66	1	nogas	10327	0.06
As	75	1	nogas	28117	0.01
Se	77	1	nogas	6728	0.08
Se	82	1	nogas	743	2.57
Sr	88	1	nogas	72506	0.00
Mo	95	1	nogas	15264	0.03
Ag	107	1	nogas	41866	0.00
Cd	111	1	nogas	9173	0.02
Sn	118	1	nogas	27457	0.01
Sb	121	1	nogas	39087	0.00
Ba	137	1	nogas	13546	0.02
Tl	205	1	nogas	114578	0.00
Pb	208	1	nogas	86974	0.00
Si	28	1	nogas	1903847	0.00
La	139	1	nogas	33	207.85
Na	23	2	He	230772	0.00
Mg	24	2	He	93779	0.00
Al	27	2	He	567	1.47
K	39	2	He	53970	0.00
Ca	43	2	He	120	36.75
Ca	44	2	He	2157	0.20
V	51	2	He	3788	0.09
Cr	52	2	He	4824	0.08

Calibration Standard Report

Mn	55	2	He	2574	0.21
Fe	56	2	He	358177	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Co	59	2	He	6995	0.04
Ni	60	2	He	1737	0.38
Cu	63	2	He	5864	0.08
Zn	66	2	He	917	2.72
As	75	2	He	461	1.01
Sb	121	2	He	4627	0.03
Se	78	2	He	43	67.13

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	582546	1.58	606326	96.08	70	125	
In	115	1	nogas	695681	1.03	717978	96.89	70	125	
Li	6	1	nogas	245390	1.58	264394	92.81	70	125	
Bi	209	1	nogas	1009275	0.64	1029814	98.01	70	125	
Ge	72	2	He	33052	2.99	35160	94.01	70	125	

Calibration Standard Report

Sample Table

Sample Name	100/500/10K
Data File Name	240CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-05T20:01:41-06:00
Sample Type	CalStd
Level	5
Dilution	1
Comment	
ISTD Ref File Name	236CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	178987	0.00
B	11	1	nogas	480446	0.00
Na	23	1	nogas	50189164	0.00
Mg	24	1	nogas	34863466	0.00
Al	27	1	nogas	647489	0.00
P	31	1	nogas	146569	0.00
K	39	1	nogas	37548695	0.00
Ca	43	1	nogas	73528	0.00
Ca	44	1	nogas	1195280	0.00
Ti	47	1	nogas	36732	0.01
V	51	1	nogas	609640	0.00
Cr	52	1	nogas	461587	0.00
Mn	55	1	nogas	594346	0.00
Fe	56	1	nogas	49613314	0.00
Co	59	1	nogas	475198	0.00
Ni	60	1	nogas	104803	0.00
Cu	63	1	nogas	262500	0.00
Zn	66	1	nogas	87134	0.00
As	75	1	nogas	101346	0.00
Se	77	1	nogas	9396	0.05
Se	82	1	nogas	4774	0.06
Sr	88	1	nogas	663481	0.00
Mo	95	1	nogas	137468	0.00
Ag	107	1	nogas	380505	0.00
Cd	111	1	nogas	84347	0.00
Sn	118	1	nogas	247318	0.00
Sb	121	1	nogas	364577	0.00
Ba	137	1	nogas	123583	0.00
Tl	205	1	nogas	1056259	0.00
Pb	208	1	nogas	810565	0.00
Si	28	1	nogas	10379635	0.00
La	139	1	nogas	113	50.05
Na	23	2	He	1833376	0.00
Mg	24	2	He	840700	0.00
Al	27	2	He	4737	0.13
K	39	2	He	436370	0.00
Ca	43	2	He	1063	1.57
Ca	44	2	He	17739	0.01
V	51	2	He	32347	0.00
Cr	52	2	He	41874	0.01

Calibration Standard Report

Mn	55	2	He	21137	0.01
Fe	56	2	He	3211258	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Co	59	2	He	59392	0.00
Ni	60	2	He	15637	0.01
Cu	63	2	He	46430	0.00
Zn	66	2	He	8319	0.03
As	75	2	He	5006	0.01
Sb	121	2	He	39448	0.01
Se	78	2	He	314	3.07

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	555224	0.31	606326	91.57	70	125	
In	115	1	nogas	665089	1.04	717978	92.63	70	125	
Li	6	1	nogas	259926	2.30	264394	98.31	70	125	
Bi	209	1	nogas	965320	1.59	1029814	93.74	70	125	
Ge	72	2	He	31042	3.69	35160	88.29	70	125	

Calibration Standard Report

Sample Table

Sample Name	200/1000/20K
Data File Name	241CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-05T20:03:52-06:00
Sample Type	CalStd
Level	6
Dilution	1
Comment	
ISTD Ref File Name	236CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	348739	0.00
B	11	1	nogas	898463	0.00
Na	23	1	nogas	97251981	0.00
Mg	24	1	nogas	67695233	0.00
Al	27	1	nogas	1226715	0.00
P	31	1	nogas	273397	0.00
K	39	1	nogas	70909958	0.00
Ca	43	1	nogas	137717	0.00
Ca	44	1	nogas	2257036	0.00
Ti	47	1	nogas	70707	0.00
V	51	1	nogas	1096875	0.00
Cr	52	1	nogas	888462	0.00
Mn	55	1	nogas	1146661	0.00
Fe	56	1	nogas	95461575	0.00
Co	59	1	nogas	922886	0.00
Ni	60	1	nogas	202446	0.00
Cu	63	1	nogas	507882	0.00
Zn	66	1	nogas	169117	0.00
As	75	1	nogas	180755	0.00
Se	77	1	nogas	12541	0.02
Se	82	1	nogas	9379	0.05
Sr	88	1	nogas	1313235	0.00
Mo	95	1	nogas	275400	0.00
Ag	107	1	nogas	743590	0.00
Cd	111	1	nogas	166289	0.00
Sn	118	1	nogas	481795	0.00
Sb	121	1	nogas	710133	0.00
Ba	137	1	nogas	242331	0.00
Tl	205	1	nogas	2124261	0.00
Pb	208	1	nogas	1623815	0.00
Si	28	1	nogas	18606204	0.00
La	139	1	nogas	220	9.01
Na	23	2	He	3537212	0.00
Mg	24	2	He	1666636	0.00
Al	27	2	He	8579	0.08
K	39	2	He	843437	0.00
Ca	43	2	He	2210	0.09
Ca	44	2	He	34955	0.00
V	51	2	He	62899	0.00
Cr	52	2	He	80670	0.00

Calibration Standard Report

Mn	55	2	He	41152	0.00
Fe	56	2	He	6151303	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Co	59	2	He	114612	0.00
Ni	60	2	He	32003	0.01
Cu	63	2	He	88614	0.00
Zn	66	2	He	15407	0.03
As	75	2	He	9814	0.02
Sb	121	2	He	76330	0.00
Se	78	2	He	654	1.44

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	535380	1.25	606326	88.30	70	125	
In	115	1	nogas	641953	1.35	717978	89.41	70	125	
Li	6	1	nogas	266400	1.51	264394	100.76	70	125	
Bi	209	1	nogas	915563	0.78	1029814	88.91	70	125	
Ge	72	2	He	29472	1.30	35160	83.82	70	125	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	ICCV
Data File Name	242_ICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-05T20:06:01-06:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	236CALB.d
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	104.798	2.171	170473	0.83	100	104.8	90	110	
B	11	1	nogas	579.280	2.106	515554	0.78	500	115.9	90	110	ICV Main CR1 Failed
Na	23	1	nogas	9626.050	1.959	48288681	1.27	10000	96.3	90	110	
Mg	24	1	nogas	9629.710	2.250	33333579	0.31	10000	96.3	90	110	
Al	27	1	nogas	76.834	1.114	483087	0.96	100	76.8	90	110	ICV Main CR1 Failed
P	31	1	nogas	447.707	1.341	128662	1.13	500	89.5	90	110	ICV Main CR1 Failed
K	39	1	nogas	9673.785	0.576	35267425	0.57	10000	96.7	90	110	
Ca	43	1	nogas	9805.536	1.284	68952	1.07	10000	98.1	90	110	
Ca	44	1	nogas	9812.494	0.842	1128591	1.01	10000	98.1	90	110	
Ti	47	1	nogas	93.788	2.234	33489	2.00	100	93.8	90	110	
V	51	1	nogas	91.919	1.010	563762	0.79	100	91.9	90	110	
Cr	52	1	nogas	97.427	0.952	439192	0.95	100	97.4	90	110	
Mn	55	1	nogas	98.367	0.358	571683	0.14	100	98.4	90	110	
Fe	56	1	nogas	9647.497	1.091	46673077	1.16	10000	96.5	90	110	
Co	59	1	nogas	98.881	0.660	460145	0.66	100	98.9	90	110	
Ni	60	1	nogas	99.490	0.500	101997	0.75	100	99.5	90	110	
Cu	63	1	nogas	98.537	1.368	253638	1.48	100	98.5	90	110	
Zn	66	1	nogas	97.727	1.610	83613	1.34	100	97.7	90	110	
As	75	1	nogas	92.479	0.865	93355	0.45	100	92.5	90	110	
Se	77	1	nogas	58.051	8.311	7558	2.33	100	58.1	90	110	ICV Main CR1 Failed
Se	82	1	nogas	100.631	8.919	4831	8.61	100	100.6	90	110	
Sr	88	1	nogas	96.790	0.224	638573	0.27	100	96.8	90	110	
Mo	95	1	nogas	96.801	1.256	133584	1.08	100	96.8	90	110	
Ag	107	1	nogas	96.057	0.736	359697	0.94	100	96.1	90	110	
Cd	111	1	nogas	97.912	1.698	83656	1.20	100	97.9	90	110	
Sn	118	1	nogas	92.844	1.407	230645	1.71	100	92.8	90	110	
Sb	121	1	nogas	99.504	1.025	356186	1.17	100	99.5	90	110	
Ba	137	1	nogas	98.620	1.219	123012	1.11	100	98.6	90	110	
Tl	205	1	nogas	98.948	0.585	1083864	0.54	100	98.9	90	110	
Pb	208	1	nogas	95.195	0.465	797769	0.48	100	95.2	90	110	
U	238	1	nogas	96.026	2.111	1966364	2.03	100	96.0	90	110	
Li	7	1	nogas	110.746	2.216	456408	0.71	100	110.7	90	110	ICV Main CR1 Failed
Si	28	1	nogas	5125.112	1.482	10029731	1.61	5000	102.5	90	110	
Ba	135	1	nogas	97.249	1.039	70486	1.44	100	97.2	90	110	
La	139	1	nogas	202.307	16.219	217	11.61	100	202.3	90	110	ICV Main CR1 Failed
Au	197	1	nogas	0.000	#DIV/0!	0	#DIV/0!	100	0.0	90	110	ICV Main CR1 Failed
Tl	203	1	nogas	99.226	0.427	447970	0.35	100	99.2	90	110	
Na	23	2	He	9613.333	2.050	1769296	2.77	10000	96.1	90	110	
Mg	24	2	He	9537.736	0.830	816455	1.58	10000	95.4	90	110	
Al	27	2	He	73.139	8.089	3354	7.20	100	73.1	90	110	ICV Main CR1 Failed
K	39	2	He	9499.966	1.062	416231	1.13	10000	95.0	90	110	
Ca	43	2	He	7942.303	11.970	897	11.92	10000	79.4	90	110	ICV Main CR1 Failed
Ca	44	2	He	9434.097	2.731	16979	3.19	10000	94.3	90	110	
V	51	2	He	96.174	1.904	31237	1.88	100	96.2	90	110	
Cr	52	2	He	97.807	1.116	40785	1.86	100	97.8	90	110	
Mn	55	2	He	96.782	5.451	20563	6.17	100	96.8	90	110	
Fe	56	2	He	9839.987	1.691	3129519	1.49	10000	98.4	90	110	
Co	59	2	He	97.501	3.026	57700	2.67	100	97.5	90	110	
Ni	60	2	He	96.704	1.006	15767	1.74	100	96.7	90	110	
Cu	63	2	He	99.197	1.016	45684	0.92	100	99.2	90	110	
Zn	66	2	He	98.945	2.520	7975	3.23	100	98.9	90	110	
As	75	2	He	93.176	3.534	4708	2.81	100	93.2	90	110	
Sn	118	2	He	93.688	3.493	26021	3.15	100	93.7	90	110	
Sb	121	2	He	94.450	1.566	37226	1.99	100	94.5	90	110	
Se	78	2	He	94.657	5.248	317	4.73	100	94.7	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	540519	0.26	606326	89.15	70	125	
In	115	1	nogas	662371	0.50	717978	92.26	70	125	
Li	6	1	nogas	245884	2.05	264394	93.00	70	125	

Initial Calibration Verification (ICV) Report

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Bi	209	1	nogas	955080	0.10	1029814	92.74	70	125	
Ge	72	2	He	30521	0.76	35160	86.81	70	125	

Sample Report

Sample Table

Sample Name	LLCCV2
Data File Name	243SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-05T20:08:12-06:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	236CALB.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	2.372	2.372	6.20	3627	0.07	2000	
B	11	1	nogas	36.761	36.761	33.18	106180	0.03	2000	
Na	23	1	nogas	128.280	128.280	5.95	1547769	0.01	200000	
Mg	24	1	nogas	212.252	212.252	2.17	725027	0.03	200000	
Al	27	1	nogas	2.790	2.790	0.21	27184	0.01	2000	
K	39	1	nogas	195.622	195.622	6.35	1864169	0.01	200000	
Ca	43	1	nogas	179.615	179.615	8.47	2140	8.39	200000	
Ca	44	1	nogas	211.242	211.242	2.48	37761	0.56	200000	
Ti	47	1	nogas	1.887	1.887	16.86	690	0.27	2000	
V	51	1	nogas	-4.479	-4.479	-9.39	83451	-0.01	2000	
Cr	52	1	nogas	1.836	1.836	3.96	13022	0.01	2000	
Mn	55	1	nogas	2.082	2.082	9.18	17599	0.01	2000	
Fe	56	1	nogas	196.062	196.062	1.55	1300058	0.02	200000	
Co	59	1	nogas	2.023	2.023	4.38	9503	0.02	2000	
Ni	60	1	nogas	1.495	1.495	1.19	2357	0.06	2000	
Cu	63	1	nogas	2.536	2.536	12.89	9216	0.03	2000	
Zn	66	1	nogas	2.282	2.282	9.34	2617	0.09	2000	
As	75	1	nogas	-3.392	-3.392	-19.21	14253	-0.02	2000	
Se	77	1	nogas	-24.329	-24.329	-48.37	4577	-0.53	2000	
Se	82	1	nogas	3.217	3.217	45.67	357	0.90	2000	
Sr	88	1	nogas	2.144	2.144	1.69	14620	0.01	2000	
Mo	95	1	nogas	2.159	2.159	3.15	2997	0.07	2000	
Ag	107	1	nogas	2.026	2.026	2.46	7652	0.03	2000	
Cd	111	1	nogas	2.255	2.255	6.39	1903	0.12	2000	
Sn	118	1	nogas	2.170	2.170	5.85	5841	0.04	2000	
Sb	121	1	nogas	2.081	2.081	4.76	7842	0.03	2000	
Ba	137	1	nogas	2.109	2.109	13.31	2800	0.08	2000	
Tl	205	1	nogas	2.075	2.075	4.18	22904	0.01	2000	
Pb	208	1	nogas	2.112	2.112	3.26	17998	0.01	2000	
U	238	1	nogas	1.964	1.964	1.02	40592	0.00	2000	
Si	28	1	nogas	178.159	178.159	5.03	977181	0.02	2000	
La	139	1	nogas	32.404	32.404	71.00	80	40.50	2000	
Au	197	1	nogas	205.270	205.270	100.25	10	2052.70	2000	
Na	23	2	He	146.650	146.650	2.38	57674	0.25	200000	
Mg	24	2	He	197.398	197.398	0.52	16698	1.18	200000	
Al	27	2	He	2.836	2.836	20.75	250	1.13	2000	
K	39	2	He	212.697	212.697	3.81	15170	1.40	200000	
Ca	43	2	He	220.182	220.182	72.42	30	733.94	200000	
Ca	44	2	He	239.893	239.893	41.65	457	52.53	200000	
V	51	2	He	2.172	2.172	5.55	808	0.27	2000	

Sample Report

Cr	52	2	He	1.968	1.968	8.25	903	0.22	2000	
Mn	55	2	He	2.025	2.025	26.11	487	0.42	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Fe	56	2	He	213.204	213.204	1.85	67686	0.31	200000	
Co	59	2	He	2.062	2.062	3.54	1210	0.17	2000	
Ni	60	2	He	2.752	2.752	13.30	373	0.74	2000	
Cu	63	2	He	2.544	2.544	15.20	1620	0.16	2000	
Zn	66	2	He	1.406	1.406	54.33	207	0.68	2000	
As	75	2	He	1.988	1.988	38.41	109	1.83	2000	
Sb	121	2	He	2.240	2.240	15.23	927	0.24	2000	
Se	78	2	He	3.958	3.958	45.02	18	21.99	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	541711	0.28	606326	89.34	70	125	
In	115	1	nogas	653604	1.38	717978	91.03	70	125	
Li	6	1	nogas	230197	0.49	264394	87.07	70	125	
Bi	209	1	nogas	959742	0.42	1029814	93.20	70	125	
Ge	72	2	He	30040	1.24	35160	85.44	70	125	

Low Level Initial Calibration Verification (LLICV) Report

Sample Table

Sample Name	LLCCV5
Data File Name	244LICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-05T20:10:26-06:00
Sample Type	LLICV
Dilution	1
Comment	
ISTD Ref File Name	236CALB.d
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	5.585	1.400	8682	0.64	5	111.7	70	130	
B	11	1	nogas	9.632	33.965	88999	2.89	25	38.5	70	130	LLICV Main CR1 Failed
Na	23	1	nogas	443.831	0.556	3058014	1.35	500	88.8	70	130	
Mg	24	1	nogas	526.193	2.332	1784012	2.17	500	105.2	70	130	
Al	27	1	nogas	5.871	2.121	46107	1.26	5	117.4	70	130	
P	31	1	nogas	27.243	5.310	16411	1.42	25	109.0	70	130	
K	39	1	nogas	487.694	1.031	2890682	1.55	500	97.5	70	130	
Ca	43	1	nogas	457.862	6.306	4067	4.33	500	91.6	70	130	
Ca	44	1	nogas	512.626	1.175	71951	1.88	500	102.5	70	130	
Ti	47	1	nogas	4.675	10.807	1683	10.40	5	93.5	70	130	
V	51	1	nogas	-1.096	-97.738	100142	4.68	5	-21.9	70	130	LLICV Main CR1 Failed
Cr	52	1	nogas	4.870	2.716	26534	3.15	5	97.4	70	130	
Mn	55	1	nogas	5.037	3.920	34571	2.96	5	100.7	70	130	
Fe	56	1	nogas	504.318	1.891	2777930	1.45	500	100.9	70	130	
Co	59	1	nogas	5.122	0.430	23910	1.37	5	102.4	70	130	
Ni	60	1	nogas	4.643	5.262	5554	4.63	5	92.9	70	130	
Cu	63	1	nogas	4.774	7.313	14900	6.10	5	95.5	70	130	
Zn	66	1	nogas	5.077	6.485	4984	5.20	5	101.5	70	130	
As	75	1	nogas	0.856	177.537	17730	6.54	5	17.1	70	130	LLICV Main CR1 Failed
Se	77	1	nogas	-13.382	-93.807	4964	8.67	5	-267.6	70	130	LLICV Main CR1 Failed
Se	82	1	nogas	5.255	47.214	450	25.63	5	105.1	70	130	
Sr	88	1	nogas	5.207	4.887	34787	4.08	5	104.1	70	130	
Mo	95	1	nogas	4.727	3.868	6535	2.91	5	94.5	70	130	
Ag	107	1	nogas	5.050	2.089	18964	1.66	5	101.0	70	130	
Cd	111	1	nogas	5.233	8.753	4367	8.45	5	104.7	70	130	
Sn	118	1	nogas	5.214	1.818	13149	1.98	5	104.3	70	130	
Sb	121	1	nogas	5.271	1.466	19242	1.99	5	105.4	70	130	
Ba	137	1	nogas	5.080	4.252	6385	3.55	5	101.6	70	130	
Tl	205	1	nogas	4.871	1.040	53389	0.40	5	97.4	70	130	
Pb	208	1	nogas	4.831	0.715	40667	0.51	5	96.6	70	130	
U	238	1	nogas	4.828	2.247	98982	1.62	5	96.6	70	130	
Li	7	1	nogas	5.613	3.488	41939	2.25	5	112.3	70	130	
Si	28	1	nogas	397.717	4.774	1377549	3.48	25	1590.9	70	130	LLICV Main CR1 Failed
La	139	1	nogas	20.262	287.714	70	65.47	5	405.2	70	130	LLICV Main CR1 Failed
Au	197	1	nogas	0.000	#DIV/0!	0	#DIV/0!	5	0.0	70	130	LLICV Main CR1 Failed
Na	23	2	He	439.362	0.510	110569	1.66	500	87.9	70	130	
Mg	24	2	He	501.503	2.977	42628	1.86	500	100.3	70	130	
Al	27	2	He	4.707	18.179	333	9.64	5	94.1	70	130	
K	39	2	He	487.197	3.782	27038	3.41	500	97.4	70	130	
Ca	43	2	He	639.525	79.011	77	71.84	500	127.9	70	130	
Ca	44	2	He	571.880	5.212	1053	6.46	500	114.4	70	130	
V	51	2	He	5.007	3.842	1724	4.54	5	100.1	70	130	
Cr	52	2	He	4.843	2.490	2097	4.30	5	96.9	70	130	
Mn	55	2	He	5.194	2.968	1157	4.09	5	103.9	70	130	
Fe	56	2	He	523.991	2.042	166180	0.92	500	104.8	70	130	
Co	59	2	He	5.360	6.351	3157	8.27	5	107.2	70	130	
Ni	60	2	He	6.031	7.494	910	9.77	5	120.6	70	130	
Cu	63	2	He	4.655	12.937	2587	11.60	5	93.1	70	130	
Zn	66	2	He	4.195	28.850	430	24.17	5	83.9	70	130	
As	75	2	He	5.303	17.953	276	17.21	5	106.1	70	130	
Sb	121	2	He	4.846	5.222	1950	3.20	5	96.9	70	130	
Se	78	2	He	5.975	32.243	25	24.77	5	119.5	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	540701	0.96	606326	89.18	70	125	
In	115	1	nogas	646717	0.56	717978	90.07	70	125	
Li	6	1	nogas	234569	0.79	264394	88.72	70	125	
Bi	209	1	nogas	954677	0.69	1029814	92.70	70	125	

Low Level Initial Calibration Verification (LLICV) Report

Ge	72	2	He	30271	1.93	35160	86.09	70	125	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	ICCB
Data File Name	245_ICB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-05T20:12:37-06:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	236CALB.d
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	0.008	213.3	27	94.4	1	
B	11	1	nogas	-29.453	-5.6	61181	2.5	10	
Na	23	1	nogas	-96.985	-1.8	462742	1.3	100	
Mg	24	1	nogas	-0.236	-76.3	3001	20.3	100	
Al	27	1	nogas	-0.916	-4.1	4327	5.0	5	
P	31	1	nogas	1.489	184.8	9596	8.7	10	
K	39	1	nogas	-33.041	-17.0	1060541	1.0	100	
Ca	43	1	nogas	-45.527	-34.5	577	19.9	100	
Ca	44	1	nogas	-16.898	-25.3	11828	3.5	100	
Ti	47	1	nogas	0.089	179.8	47	121.8	2.5	
V	51	1	nogas	-6.070	-10.2	75811	4.6	2.5	
Cr	52	1	nogas	-0.184	-38.6	4011	7.0	2.5	
Mn	55	1	nogas	-0.217	-28.4	4354	7.7	2.5	
Fe	56	1	nogas	-20.994	-10.4	256750	4.6	100	
Co	59	1	nogas	0.005	93.1	93	22.3	2.5	
Ni	60	1	nogas	-0.697	-3.5	123	20.4	2.5	
Cu	63	1	nogas	-0.512	-10.9	1447	10.8	2.5	
Zn	66	1	nogas	-0.657	-12.8	117	60.2	2.5	
As	75	1	nogas	-5.449	-11.1	12598	2.9	2.5	
Se	77	1	nogas	-28.966	-66.8	4421	14.9	2.5	
Se	82	1	nogas	1.308	58.5	270	13.4	2.5	
Sr	88	1	nogas	-0.039	-26.5	197	34.6	2.5	
Mo	95	1	nogas	-0.004	-216.6	7	173.2	2.5	
Ag	107	1	nogas	0.007	184.7	77	61.6	2.5	
Cd	111	1	nogas	0.000	2016.6	3	173.2	1	
Sn	118	1	nogas	0.074	76.0	723	18.3	5	
Sb	121	1	nogas	-0.025	-84.9	297	25.5	2.5	
Ba	137	1	nogas	-0.100	-21.7	90	29.4	2.5	
Tl	205	1	nogas	0.024	38.4	327	31.3	1	
Pb	208	1	nogas	-0.002	-467.6	203	31.6	2.5	
U	238	1	nogas	0.003	199.2	247	54.0	2.5	
Si	28	1	nogas	9.699	58.5	670697	0.6	5	ICB Main CR1 Failed
La	139	1	nogas	-48.314	-30.7	17	69.3	2.5	
Au	197	1	nogas	403.233	0.9	20	0.0	2.5	ICB Main CR1 Failed
Na	23	2	He	-82.045	-5.2	17402	3.8	100	
Mg	24	2	He	0.581	102.3	120	43.3	100	
Al	27	2	He	-2.247	-10.0	30	33.3	5	
K	39	2	He	-12.996	-122.9	5714	11.4	100	
Ca	43	2	He	-52.331	0.0	0	#DIV/0!	100	
Ca	44	2	He	-8.238	-1.3	20	0.0	100	
V	51	2	He	0.019	351.9	125	16.1	2.5	
Cr	52	2	He	0.032	157.7	113	18.4	2.5	
Mn	55	2	He	-0.095	-75.2	47	32.7	2.5	
Fe	56	2	He	-0.635	-69.4	793	18.0	100	

Initial Calibration Blank (ICB) Report

Co	59	2	He	0.002	1424.1	10	173.2	2.5	
Ni	60	2	He	0.514	13.6	13	86.6	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Cu	63	2	He	-0.587	-6.7	220	9.1	2.5	
Zn	66	2	He	-1.155	-12.4	7	173.2	2.5	
As	75	2	He	-0.054	-68.4	8	24.7	2.5	
Sb	121	2	He	-0.062	-123.7	37	83.3	2.5	
Se	78	2	He	0.231	517.6	6	66.7	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	543844	1.09	606326	89.70	70	125	
In	115	1	nogas	659228	1.37	717978	91.82	70	125	
Li	6	1	nogas	233907	0.87	264394	88.47	70	125	
Bi	209	1	nogas	974805	0.86	1029814	94.66	70	125	
Ge	72	2	He	30751	0.97	35160	87.46	70	125	

Sample Report

Sample Table

Sample Name	HS17121169-01SD
Data File Name	247SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-05T20:17:28-06:00
Sample Type	Sample
Dilution	25
Comment	TW B124039 Na
ISTD Ref FileName	236CALB.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	-0.001	-0.026	-1437.81	13	-0.01	2000	
B	11	1	nogas	-42.327	-1058.175	-2.24	52196	-0.08	2000	
Na	23	1	nogas	8706.397	217659.929	1.65	43761319	0.02	200000	
Mg	24	1	nogas	1218.213	30455.318	1.34	4220223	0.03	200000	
Al	27	1	nogas	1.026	25.649	11.64	16518	0.01	2000	
K	39	1	nogas	33.790	844.760	21.88	1310849	0.00	200000	
Ca	43	1	nogas	1356.275	33906.879	6.20	10483	12.94	200000	
Ca	44	1	nogas	1448.131	36203.283	3.45	181108	0.80	200000	
Ti	47	1	nogas	0.115	2.877	197.03	57	0.20	2000	
V	51	1	nogas	-4.047	-101.170	-24.12	86902	0.00	2000	
Cr	52	1	nogas	-0.058	-1.459	-66.88	4621	0.00	2000	
Mn	55	1	nogas	19.203	480.069	3.26	117968	0.02	2000	
Fe	56	1	nogas	12.512	312.792	17.37	422795	0.00	200000	
Co	59	1	nogas	0.321	8.016	3.51	1590	0.02	2000	
Ni	60	1	nogas	-0.166	-4.154	-31.94	673	-0.02	2000	
Cu	63	1	nogas	-0.460	-11.497	-9.02	1593	-0.03	2000	
Zn	66	1	nogas	3.694	92.340	5.40	3871	0.10	2000	
As	75	1	nogas	-2.809	-70.222	-18.79	14950	-0.02	2000	
Se	77	1	nogas	-6.521	-163.036	-149.67	5301	-0.12	2000	
Se	82	1	nogas	0.820	20.500	43.81	250	0.33	2000	
Sr	88	1	nogas	27.674	691.849	1.68	185907	0.01	2000	
Mo	95	1	nogas	0.041	1.035	19.24	70	0.06	2000	
Ag	107	1	nogas	0.000	-0.006	-2822.67	50	0.00	2000	
Cd	111	1	nogas	0.000	0.008	2168.91	3	0.01	2000	
Sn	118	1	nogas	-0.019	-0.484	-45.63	497	0.00	2000	
Sb	121	1	nogas	0.021	0.519	104.15	467	0.00	2000	
Ba	137	1	nogas	24.495	612.386	2.26	30766	0.08	2000	
Tl	205	1	nogas	0.013	0.315	33.18	200	0.01	2000	
Pb	208	1	nogas	-0.001	-0.021	-275.32	210	0.00	2000	
U	238	1	nogas	0.016	0.389	38.54	503	0.00	2000	
Si	28	1	nogas	807.994	20199.854	6.11	2161990	0.04	2000	
La	139	1	nogas	30.969	774.225	143.10	80	38.71	2000	
Au	197	1	nogas	135.150	3378.750	86.60	7	2027.25	2000	
Na	23	2	He	8821.487	220537.180	2.87	1624211	0.54	200000	
Mg	24	2	He	1199.298	29982.447	3.49	102591	1.17	200000	
Al	27	2	He	-0.280	-6.997	-586.10	117	-0.24	2000	
K	39	2	He	51.161	1279.037	7.97	8436	0.61	200000	
Ca	43	2	He	1366.614	34165.349	38.79	160	854.10	200000	
Ca	44	2	He	1387.439	34685.967	7.01	2527	54.91	200000	
V	51	2	He	0.117	2.913	48.50	155	0.08	2000	
Cr	52	2	He	0.036	0.897	302.49	113	0.03	2000	
Mn	55	2	He	19.654	491.348	6.24	4224	0.47	2000	
Fe	56	2	He	31.517	787.913	3.09	11007	0.29	200000	
Co	59	2	He	0.244	6.095	32.20	153	0.16	2000	

Sample Report

Ni	60	2	He	0.865	21.623	27.04	70	1.24	2000	
Cu	63	2	He	-0.603	-15.080	-15.27	210	-0.29	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Zn	66	2	He	4.421	110.534	8.73	450	0.98	2000	
As	75	2	He	0.020	0.499	1970.52	11	0.18	2000	
Sb	121	2	He	-0.069	-1.720	-24.89	33	-0.21	2000	
Se	78	2	He	-0.342	-8.544	-321.56	4	-8.54	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	549541	2.42	606326	90.63	70	125	
In	115	1	nogas	663326	1.37	717978	92.39	70	125	
Li	6	1	nogas	234351	0.23	264394	88.64	70	125	
Bi	209	1	nogas	971564	0.42	1029814	94.34	70	125	
Ge	72	2	He	30501	2.58	35160	86.75	70	125	

Sample Report

Sample Table

Sample Name	HS17121169-01PDS
Data File Name	248SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-05T20:19:40-06:00
Sample Type	Sample
Dilution	5
Comment	TW B124039 Na
ISTD Ref FileName	236CALB.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	108.192	540.958	2.13	167270	0.06	2000	
B	11	1	nogas	-39.896	-199.482	-4.00	53754	-0.07	2000	
Na	23	1	nogas	53979.562	269897.810	0.72	268182748	0.02	200000	
Mg	24	1	nogas	15158.377	75791.884	1.36	52818725	0.03	200000	
Al	27	1	nogas	68.045	340.227	1.78	438371	0.02	2000	
K	39	1	nogas	9471.533	47357.665	1.08	35313498	0.03	200000	
Ca	43	1	nogas	16604.218	83021.092	1.60	118693	13.99	200000	
Ca	44	1	nogas	16778.202	83891.008	0.80	1962271	0.86	200000	
Ti	47	1	nogas	91.273	456.363	3.69	33309	0.27	2000	
V	51	1	nogas	86.867	434.333	1.12	550401	0.02	2000	
Cr	52	1	nogas	92.499	462.495	1.21	426384	0.02	2000	
Mn	55	1	nogas	190.299	951.494	0.98	1124950	0.02	2000	
Fe	56	1	nogas	9346.665	46733.326	2.84	46219160	0.02	200000	
Co	59	1	nogas	94.397	471.986	1.64	448917	0.02	2000	
Ni	60	1	nogas	93.205	466.025	2.52	97712	0.10	2000	
Cu	63	1	nogas	91.815	459.075	1.96	241722	0.04	2000	
Zn	66	1	nogas	116.897	584.487	1.86	102075	0.11	2000	
As	75	1	nogas	90.996	454.981	2.19	94156	0.10	2000	
Se	77	1	nogas	58.324	291.619	7.15	7735	0.75	2000	
Se	82	1	nogas	94.806	474.030	8.14	4664	2.03	2000	
Sr	88	1	nogas	141.629	708.145	0.08	954730	0.01	2000	
Mo	95	1	nogas	93.047	465.236	1.54	131222	0.07	2000	
Ag	107	1	nogas	91.388	456.941	1.30	349721	0.03	2000	
Cd	111	1	nogas	93.614	468.070	0.25	78710	0.12	2000	
Sn	118	1	nogas	-0.013	-0.065	-127.28	503	0.00	2000	
Sb	121	1	nogas	88.240	441.198	2.07	322832	0.03	2000	
Ba	137	1	nogas	223.222	1116.112	0.89	273711	0.08	2000	
Tl	205	1	nogas	91.663	458.314	1.04	986170	0.01	2000	
Pb	208	1	nogas	90.960	454.802	1.25	748693	0.01	2000	
U	238	1	nogas	0.101	0.503	10.84	2197	0.00	2000	
Si	28	1	nogas	3780.899	18904.494	1.64	7735191	0.05	2000	>LDR
La	139	1	nogas	427.722	2138.610	23.04	390	109.67	2000	
Au	197	1	nogas	139.028	695.142	173.21	7	2085.42	2000	
Na	23	2	He	54048.945	270244.724	2.22	10015788	0.54	200000	
Mg	24	2	He	15604.868	78024.341	2.15	1365556	1.14	200000	
Al	27	2	He	64.384	321.920	3.66	3037	2.12	2000	
K	39	2	He	9451.881	47259.403	1.35	423426	2.23	200000	
Ca	43	2	He	15916.813	79584.063	9.37	1830	869.71	200000	
Ca	44	2	He	16050.483	80252.416	1.29	29505	54.40	200000	
V	51	2	He	91.753	458.766	2.91	30467	0.30	2000	
Cr	52	2	He	92.939	464.696	2.40	39619	0.23	2000	
Mn	55	2	He	191.029	955.143	3.13	41410	0.46	2000	
Fe	56	2	He	9372.524	46862.621	1.74	3047598	0.31	200000	
Co	59	2	He	91.257	456.284	2.71	55215	0.17	2000	

Sample Report

Ni	60	2	He	94.155	470.774	1.91	15698	0.60	2000	
Cu	63	2	He	93.419	467.094	0.94	44020	0.21	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Zn	66	2	He	110.973	554.864	5.99	9126	1.22	2000	
As	75	2	He	93.935	469.674	4.01	4852	1.94	2000	
Sb	121	2	He	85.343	426.717	1.47	34393	0.25	2000	
Se	78	2	He	98.056	490.278	8.19	336	29.18	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	552401	0.54	606326	91.11	70	125	
In	115	1	nogas	651779	0.52	717978	90.78	70	125	
Li	6	1	nogas	233647	0.40	264394	88.37	70	125	
Bi	209	1	nogas	938114	0.89	1029814	91.10	70	125	
Ge	72	2	He	31209	2.14	35160	88.76	70	125	

Sample Report

Sample Table

Sample Name	HS17121224-03
Data File Name	249SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-05T20:21:52-06:00
Sample Type	Sample
Dilution	5
Comment	TW B124039 Na
ISTD Ref FileName	236CALB.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	0.130	0.648	20.87	217	0.06	2000	
B	11	1	nogas	-44.966	-224.828	-0.90	50418	-0.09	2000	
Na	23	1	nogas	45498.870	227494.351	1.81	226316638	0.02	200000	
Mg	24	1	nogas	10954.758	54773.790	1.29	38194005	0.03	200000	
Al	27	1	nogas	4.991	24.957	2.66	41503	0.01	2000	
K	39	1	nogas	590.728	2953.639	2.89	3318677	0.02	200000	
Ca	43	1	nogas	15139.014	75695.071	1.90	108122	14.00	200000	
Ca	44	1	nogas	14630.191	73150.955	2.67	1709963	0.86	200000	
Ti	47	1	nogas	0.352	1.760	16.45	143	0.25	2000	
V	51	1	nogas	-5.817	-29.084	-2.36	78159	-0.01	2000	
Cr	52	1	nogas	2.773	13.865	2.70	17519	0.02	2000	
Mn	55	1	nogas	723.608	3618.038	2.36	4254701	0.02	2000	
Fe	56	1	nogas	3159.026	15795.129	0.23	15837245	0.02	200000	
Co	59	1	nogas	13.148	65.741	1.00	62490	0.02	2000	
Ni	60	1	nogas	9.859	49.297	1.42	11077	0.09	2000	
Cu	63	1	nogas	-0.274	-1.370	-12.27	2084	-0.01	2000	
Zn	66	1	nogas	14.606	73.029	0.20	13335	0.11	2000	
As	75	1	nogas	-1.896	-9.479	-14.20	15771	-0.01	2000	
Se	77	1	nogas	-16.983	-84.917	-70.27	4931	-0.34	2000	
Se	82	1	nogas	-0.551	-2.756	-426.14	187	-0.30	2000	
Sr	88	1	nogas	366.049	1830.245	1.49	2462755	0.01	2000	
Mo	95	1	nogas	0.160	0.798	41.53	237	0.07	2000	
Ag	107	1	nogas	0.023	0.116	48.87	140	0.02	2000	
Cd	111	1	nogas	0.083	0.417	95.71	73	0.11	2000	
Sn	118	1	nogas	0.014	0.072	164.61	577	0.00	2000	
Sb	121	1	nogas	0.794	3.970	6.89	3290	0.02	2000	
Ba	137	1	nogas	570.872	2854.359	0.90	707522	0.08	2000	
Tl	205	1	nogas	0.048	0.239	39.42	583	0.01	2000	
Pb	208	1	nogas	0.044	0.222	28.08	583	0.01	2000	
U	238	1	nogas	0.012	0.061	20.93	427	0.00	2000	
Si	28	1	nogas	6926.513	34632.566	0.68	13597107	0.05	2000	>LDR
La	139	1	nogas	1313.073	6565.366	9.79	1097	119.73	2000	
Au	197	1	nogas	268.350	1341.749	173.21	13	2012.62	2000	
Na	23	2	He	45111.131	225555.654	2.72	8311252	0.54	200000	
Mg	24	2	He	10937.916	54689.580	2.04	950965	1.15	200000	
Al	27	2	He	2.507	12.535	43.79	243	1.03	2000	
K	39	2	He	586.401	2932.004	2.65	32039	1.83	200000	
Ca	43	2	He	15022.734	75113.672	6.21	1717	875.05	200000	
Ca	44	2	He	15418.044	77090.220	2.01	28160	54.75	200000	
V	51	2	He	0.377	1.886	50.39	244	0.15	2000	
Cr	52	2	He	3.246	16.230	18.61	1470	0.22	2000	
Mn	55	2	He	740.828	3704.142	1.00	159396	0.46	2000	
Fe	56	2	He	3201.084	16005.421	1.13	1034842	0.31	200000	
Co	59	2	He	12.542	62.711	9.83	7549	0.17	2000	

Sample Report

Ni	60	2	He	10.854	54.272	3.57	1733	0.63	2000	
Cu	63	2	He	-0.590	-2.951	-8.43	220	-0.27	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Zn	66	2	He	13.887	69.437	4.37	1223	1.14	2000	
As	75	2	He	1.719	8.597	32.16	99	1.74	2000	
Sb	121	2	He	0.722	3.608	18.86	350	0.21	2000	
Se	78	2	He	0.817	4.085	76.00	8	10.21	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	551488	0.28	606326	90.96	70	125	
In	115	1	nogas	659131	1.16	717978	91.80	70	125	
Li	6	1	nogas	234766	1.77	264394	88.79	70	125	
Bi	209	1	nogas	955248	2.09	1029814	92.76	70	125	
Ge	72	2	He	31005	1.37	35160	88.18	70	125	

Sample Report

Sample Table

Sample Name	HS17121224-06
Data File Name	250SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-05T20:24:04-06:00
Sample Type	Sample
Dilution	5
Comment	TW B124039 Na
ISTD Ref FileName	236CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	1	nogas	0.003	0.014	597.27	20	0.01	2000	
B	11	1	nogas	-49.615	-248.073	-1.82	48522	-0.10	2000	
Na	23	1	nogas	44121.846	220609.231	2.04	227461763	0.02	200000	
Mg	24	1	nogas	3028.398	15141.989	1.52	10944224	0.03	200000	
Al	27	1	nogas	0.822	4.110	2.94	15988	0.01	2000	
K	39	1	nogas	273.471	1367.354	5.17	2274051	0.01	200000	
Ca	43	1	nogas	5183.015	25915.076	2.38	39278	13.20	200000	
Ca	44	1	nogas	5144.497	25722.484	1.90	637327	0.81	200000	
Ti	47	1	nogas	0.196	0.980	62.72	90	0.22	2000	
V	51	1	nogas	-3.187	-15.935	-29.30	95552	0.00	2000	
Cr	52	1	nogas	-0.003	-0.015	-850.88	5108	0.00	2000	
Mn	55	1	nogas	425.956	2129.781	1.75	2617718	0.02	2000	
Fe	56	1	nogas	90.187	450.936	3.19	840571	0.01	200000	
Co	59	1	nogas	1.929	9.646	3.65	9640	0.02	2000	
Ni	60	1	nogas	0.893	4.464	1.90	1853	0.05	2000	
Cu	63	1	nogas	-0.267	-1.335	-23.76	2194	-0.01	2000	
Zn	66	1	nogas	0.752	3.758	25.67	1397	0.05	2000	
As	75	1	nogas	-2.305	-11.527	-7.53	16111	-0.01	2000	
Se	77	1	nogas	-9.059	-45.294	-106.70	5454	-0.17	2000	
Se	82	1	nogas	0.714	3.568	135.94	257	0.28	2000	
Sr	88	1	nogas	86.310	431.551	1.38	606771	0.01	2000	
Mo	95	1	nogas	0.053	0.263	13.37	90	0.06	2000	
Ag	107	1	nogas	0.019	0.096	14.77	130	0.01	2000	
Cd	111	1	nogas	0.106	0.530	15.77	97	0.11	2000	
Sn	118	1	nogas	-0.046	-0.230	-29.20	443	-0.01	2000	
Sb	121	1	nogas	0.206	1.028	22.78	1193	0.02	2000	
Ba	137	1	nogas	94.320	471.601	1.55	121387	0.08	2000	
Tl	205	1	nogas	0.010	0.051	80.22	180	0.01	2000	
Pb	208	1	nogas	0.009	0.047	69.09	307	0.00	2000	
U	238	1	nogas	0.122	0.612	10.08	2824	0.00	2000	
Si	28	1	nogas	4498.943	22494.717	1.92	9464494	0.05	2000	>LDR
La	139	1	nogas	181.821	909.106	28.32	207	87.98	2000	
Au	197	1	nogas	0.000	0.000	#DIV/0!	0	#DIV/0!	2000	
Na	23	2	He	43325.619	216628.096	4.07	8250814	0.53	200000	
Mg	24	2	He	3009.805	15049.024	3.69	270487	1.11	200000	
Al	27	2	He	0.616	3.078	203.83	163	0.38	2000	
K	39	2	He	304.438	1522.189	12.24	20319	1.50	200000	
Ca	43	2	He	4795.828	23979.142	20.23	570	841.34	200000	
Ca	44	2	He	5093.979	25469.896	5.21	9636	52.86	200000	
V	51	2	He	0.197	0.986	43.04	191	0.10	2000	
Cr	52	2	He	0.235	1.174	50.24	207	0.11	2000	
Mn	55	2	He	433.894	2169.472	4.58	96481	0.45	2000	
Fe	56	2	He	114.976	574.881	2.78	39419	0.29	200000	
Co	59	2	He	2.080	10.401	11.42	1303	0.16	2000	

Sample Report

Ni	60	2	He	1.719	8.595	20.38	220	0.78	2000	
Cu	63	2	He	-0.394	-1.968	-45.39	323	-0.12	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Zn	66	2	He	0.900	4.502	86.83	180	0.50	2000	
As	75	2	He	0.045	0.223	17.28	13	0.33	2000	
Sb	121	2	He	0.194	0.969	63.43	143	0.14	2000	
Se	78	2	He	-0.210	-1.052	-443.36	5	-4.51	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	575961	1.28	606326	94.99	70	125	
In	115	1	nogas	683376	0.85	717978	95.18	70	125	
Li	6	1	nogas	241742	1.59	264394	91.43	70	125	
Bi	209	1	nogas	1005640	0.92	1029814	97.65	70	125	
Ge	72	2	He	32060	3.01	35160	91.18	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	251_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-05T20:26:17-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	236CALB.d
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	102.883	1.976	179428	1.02	100	102.9	90	110	
B	11	1	nogas	460.654	4.844	458330	2.27	500	92.1	90	110	
Na	23	1	nogas	10358.052	1.160	55283799	0.72	10000	103.6	90	110	
Mg	24	1	nogas	9670.954	1.372	35669338	0.73	10000	96.7	90	110	
Al	27	1	nogas	67.161	0.279	455009	0.70	100	67.2	90	110	CCV Main CR1-2 Failed
P	31	1	nogas	436.800	1.780	135109	2.27	500	87.4	90	110	CCV Main CR1-2 Failed
K	39	1	nogas	9682.437	1.390	37920021	0.76	10000	96.8	90	110	
Ca	43	1	nogas	10082.626	1.283	76142	0.56	10000	100.8	90	110	
Ca	44	1	nogas	10179.468	1.730	1257169	0.86	10000	101.8	90	110	
Ti	47	1	nogas	98.740	5.171	37868	4.33	100	98.7	90	110	
V	51	1	nogas	93.985	2.208	616697	1.27	100	94.0	90	110	
Cr	52	1	nogas	97.183	1.679	470638	0.87	100	97.2	90	110	
Mn	55	1	nogas	97.716	0.679	610152	0.64	100	97.7	90	110	
Fe	56	1	nogas	9632.736	1.285	50063308	0.30	10000	96.3	90	110	
Co	59	1	nogas	96.453	1.851	482181	1.32	100	96.5	90	110	
Ni	60	1	nogas	97.096	1.344	106957	0.59	100	97.1	90	110	
Cu	63	1	nogas	95.800	2.257	264973	1.36	100	95.8	90	110	
Zn	66	1	nogas	96.327	1.726	88547	0.75	100	96.3	90	110	
As	75	1	nogas	93.838	2.897	101494	2.03	100	93.8	90	110	
Se	77	1	nogas	66.143	6.839	8436	1.69	100	66.1	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	97.109	6.895	5014	5.81	100	97.1	90	110	
Sr	88	1	nogas	105.556	1.398	748087	0.52	100	105.6	90	110	
Mo	95	1	nogas	94.785	1.058	140526	0.90	100	94.8	90	110	
Ag	107	1	nogas	96.689	1.006	388976	1.22	100	96.7	90	110	
Cd	111	1	nogas	98.440	1.162	87909	1.49	100	98.4	90	110	
Sn	118	1	nogas	98.214	0.634	254954	0.73	100	98.2	90	110	
Sb	121	1	nogas	95.733	1.989	368136	1.07	100	95.7	90	110	
Ba	137	1	nogas	100.471	0.656	130973	0.75	100	100.5	90	110	
Tl	205	1	nogas	94.375	0.459	1074910	1.00	100	94.4	90	110	
Pb	208	1	nogas	93.677	0.728	816259	0.16	100	93.7	90	110	
U	238	1	nogas	95.788	0.508	2039634	1.28	100	95.8	90	110	
Li	7	1	nogas	103.508	1.619	458906	0.97	100	103.5	90	110	
Si	28	1	nogas	5049.785	0.600	10626850	0.51	5000	101.0	90	110	
Ba	135	1	nogas	99.517	1.921	75370	0.57	100	99.5	90	110	
La	139	1	nogas	202.404	29.782	227	22.20	100	202.4	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	264.296	115.078	13	114.56	100	264.3	90	110	CCV Main CR1-2 Failed
Tl	203	1	nogas	95.182	0.696	446824	1.35	100	95.2	90	110	
Na	23	2	He	10404.366	0.767	2048553	1.35	10000	104.0	90	110	
Mg	24	2	He	9568.281	2.015	877363	0.60	10000	95.7	90	110	
Al	27	2	He	69.218	9.492	3407	8.31	100	69.2	90	110	CCV Main CR1-2 Failed
K	39	2	He	9585.939	2.808	449815	1.22	10000	95.9	90	110	
Ca	43	2	He	9795.257	6.516	1183	6.56	10000	98.0	90	110	
Ca	44	2	He	10142.291	3.006	19551	3.00	10000	101.4	90	110	
V	51	2	He	97.295	2.421	33850	1.07	100	97.3	90	110	
Cr	52	2	He	96.405	4.271	43061	3.61	100	96.4	90	110	
Mn	55	2	He	98.224	2.023	22355	2.96	100	98.2	90	110	
Fe	56	2	He	9782.249	2.230	3333258	2.20	10000	97.8	90	110	
Co	59	2	He	96.611	2.689	61252	2.04	100	96.6	90	110	
Ni	60	2	He	95.227	5.624	16628	4.89	100	95.2	90	110	
Cu	63	2	He	95.013	0.572	46904	1.14	100	95.0	90	110	
Zn	66	2	He	96.355	4.808	8319	3.09	100	96.4	90	110	
As	75	2	He	98.192	4.375	5314	2.83	100	98.2	90	110	
Sb	121	2	He	95.672	3.605	40390	2.90	100	95.7	90	110	
Se	78	2	He	97.719	6.801	351	5.48	100	97.7	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	580713	0.97	606326	95.78	70	125	
In	115	1	nogas	692294	1.36	717978	96.42	70	125	
Li	6	1	nogas	263608	2.01	264394	99.70	70	125	
Bi	209	1	nogas	993082	0.77	1029814	96.43	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	32702	1.71	35160	93.01	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	252_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-05T20:28:28-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	236CALB.d
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	0.028	42.1	63	32.9	1	
B	11	1	nogas	-28.696	-22.1	67119	9.1	10	
Na	23	1	nogas	-102.318	-0.9	471713	1.3	100	
Mg	24	1	nogas	2.485	22.5	13308	17.3	100	
Al	27	1	nogas	-0.746	-5.3	5808	5.1	5	
P	31	1	nogas	1.280	76.6	10293	2.4	10	
K	39	1	nogas	-21.450	-63.3	1189678	4.9	100	
Ca	43	1	nogas	-53.778	-29.7	560	21.9	100	
Ca	44	1	nogas	-26.104	-19.2	11637	5.8	100	
Ti	47	1	nogas	0.165	16.0	80	12.5	2.5	
V	51	1	nogas	-3.711	-5.5	94610	0.7	2.5	
Cr	52	1	nogas	-0.070	-59.5	4881	4.1	2.5	
Mn	55	1	nogas	-0.096	-49.6	5454	5.0	2.5	
Fe	56	1	nogas	-22.343	-1.6	270122	0.6	100	
Co	59	1	nogas	0.027	61.8	213	39.3	2.5	
Ni	60	1	nogas	-0.643	-8.1	193	29.4	2.5	
Cu	63	1	nogas	-0.519	-6.8	1540	6.8	2.5	
Zn	66	1	nogas	-0.610	-9.5	170	31.1	2.5	
As	75	1	nogas	-2.292	-19.3	16435	2.2	2.5	
Se	77	1	nogas	-15.719	-28.4	5301	3.9	2.5	
Se	82	1	nogas	0.211	543.3	237	24.0	2.5	
Sr	88	1	nogas	0.003	614.8	510	22.6	2.5	
Mo	95	1	nogas	0.027	37.0	53	28.6	2.5	
Ag	107	1	nogas	0.029	51.7	173	35.3	2.5	
Cd	111	1	nogas	0.029	64.4	30	57.7	1	
Sn	118	1	nogas	0.032	146.3	667	18.1	5	
Sb	121	1	nogas	0.045	65.5	593	19.5	2.5	
Ba	137	1	nogas	-0.070	-69.4	137	47.6	2.5	
Tl	205	1	nogas	0.105	25.3	1327	23.5	1	
Pb	208	1	nogas	0.020	16.9	420	7.1	2.5	
U	238	1	nogas	0.027	28.0	810	21.6	2.5	
Si	28	1	nogas	2.399	154.2	709679	1.5	5	
La	139	1	nogas	-10.866	-190.7	50	34.6	2.5	
Au	197	1	nogas	124.660	173.2	7	173.2	2.5	CCB Main CR1 Failed
Na	23	2	He	-81.593	-6.7	18740	2.6	100	
Mg	24	2	He	1.823	4.1	243	2.4	100	
Al	27	2	He	-0.842	-133.3	100	55.7	5	
K	39	2	He	-9.069	-44.2	6315	2.3	100	
Ca	43	2	He	-25.298	-185.1	3	173.2	100	
Ca	44	2	He	-17.603	-16.6	3	173.2	100	
V	51	2	He	0.115	59.1	167	13.7	2.5	
Cr	52	2	He	0.064	214.8	137	47.0	2.5	
Mn	55	2	He	-0.110	-118.2	47	65.5	2.5	
Fe	56	2	He	1.079	21.8	1440	6.6	100	
Co	59	2	He	0.059	81.7	47	61.9	2.5	
Ni	60	2	He	0.587	25.1	27	94.4	2.5	
Cu	63	2	He	-0.715	-5.9	173	14.5	2.5	
Zn	66	2	He	-1.157	-12.1	7	173.2	2.5	

Continuing Calibration Blank (CCB) Report

As	75	2	He	-0.087	-137.2	7	100.0	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.026	417.4	77	61.6	2.5	
Se	78	2	He	-0.830	-37.0	3	43.3	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	587140	0.54	606326	96.84	70	125	
In	115	1	nogas	710381	0.77	717978	98.94	70	125	
Li	6	1	nogas	254189	2.26	264394	96.14	70	125	
Bi	209	1	nogas	1051317	0.58	1029814	102.09	70	125	
Ge	72	2	He	32992	3.29	35160	93.83	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	253_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-05T20:30:41-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	236CALB.d
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	103.682	2.629	181183	0.61	100	103.7	90	110	
B	11	1	nogas	468.237	5.861	465240	2.47	500	93.6	90	110	
Na	23	1	nogas	10657.123	2.102	55292655	0.80	10000	106.6	90	110	
Mg	24	1	nogas	9846.158	1.835	35322363	1.06	10000	98.5	90	110	
Al	27	1	nogas	66.919	2.685	447571	2.17	100	66.9	90	110	CCV Main CR1-2 Failed
P	31	1	nogas	432.371	1.351	132114	0.82	500	86.5	90	110	CCV Main CR1-2 Failed
K	39	1	nogas	9624.877	2.146	37220726	1.88	10000	96.2	90	110	
Ca	43	1	nogas	10125.859	1.907	75493	2.16	10000	101.3	90	110	
Ca	44	1	nogas	10124.316	0.988	1234519	0.57	10000	101.2	90	110	
Ti	47	1	nogas	97.783	1.129	37033	1.55	100	97.8	90	110	
V	51	1	nogas	92.170	1.171	599242	0.61	100	92.2	90	110	
Cr	52	1	nogas	97.746	1.050	467305	0.75	100	97.7	90	110	
Mn	55	1	nogas	98.077	1.212	604542	0.74	100	98.1	90	110	
Fe	56	1	nogas	9568.115	0.883	49096016	0.49	10000	95.7	90	110	
Co	59	1	nogas	97.476	0.625	481088	0.16	100	97.5	90	110	
Ni	60	1	nogas	97.895	0.898	106456	0.90	100	97.9	90	110	
Cu	63	1	nogas	98.134	1.005	267910	0.62	100	98.1	90	110	
Zn	66	1	nogas	98.723	1.000	89580	1.22	100	98.7	90	110	
As	75	1	nogas	93.552	2.032	99958	2.11	100	93.6	90	110	
Se	77	1	nogas	74.798	9.299	8662	3.56	100	74.8	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	93.047	4.807	4754	4.75	100	93.0	90	110	
Sr	88	1	nogas	105.531	1.504	738362	1.05	100	105.5	90	110	
Mo	95	1	nogas	96.524	1.185	141276	1.11	100	96.5	90	110	
Ag	107	1	nogas	96.350	1.207	382642	0.74	100	96.3	90	110	
Cd	111	1	nogas	96.552	0.943	85171	1.87	100	96.6	90	110	
Sn	118	1	nogas	99.348	1.737	254717	1.24	100	99.3	90	110	
Sb	121	1	nogas	96.105	1.028	364867	0.71	100	96.1	90	110	
Ba	137	1	nogas	100.531	2.738	129424	1.68	100	100.5	90	110	
Tl	205	1	nogas	94.353	0.809	1084750	0.89	100	94.4	90	110	
Pb	208	1	nogas	94.760	0.314	833485	0.81	100	94.8	90	110	
U	238	1	nogas	95.826	0.566	2059521	0.20	100	95.8	90	110	
Li	7	1	nogas	103.693	2.532	460645	1.90	100	103.7	90	110	
Si	28	1	nogas	5058.568	0.790	10507934	0.33	5000	101.2	90	110	
Ba	135	1	nogas	102.370	3.630	76573	2.88	100	102.4	90	110	
La	139	1	nogas	108.511	41.262	147	25.81	100	108.5	90	110	
Au	197	1	nogas	0.000	#DIV/0!	0	#DIV/0!	100	0.0	90	110	CCV Main CR1-2 Failed
Tl	203	1	nogas	94.616	1.341	448339	1.58	100	94.6	90	110	
Na	23	2	He	10812.339	2.642	2079126	0.88	10000	108.1	90	110	
Mg	24	2	He	9807.306	1.313	879139	1.33	10000	98.1	90	110	
Al	27	2	He	67.246	2.451	3240	0.31	100	67.2	90	110	CCV Main CR1-2 Failed
K	39	2	He	9704.768	1.304	445135	0.86	10000	97.0	90	110	
Ca	43	2	He	9914.801	9.354	1170	8.42	10000	99.1	90	110	
Ca	44	2	He	10151.506	2.651	19124	0.64	10000	101.5	90	110	
V	51	2	He	98.110	2.160	33366	1.27	100	98.1	90	110	
Cr	52	2	He	100.881	2.329	44049	2.61	100	100.9	90	110	
Mn	55	2	He	99.553	3.905	22148	4.75	100	99.6	90	110	
Fe	56	2	He	9906.620	3.233	3298753	1.56	10000	99.1	90	110	
Co	59	2	He	100.261	3.251	62122	1.30	100	100.3	90	110	
Ni	60	2	He	99.191	4.092	16935	3.53	100	99.2	90	110	
Cu	63	2	He	96.384	1.234	46500	0.90	100	96.4	90	110	
Zn	66	2	He	97.735	5.160	8245	2.98	100	97.7	90	110	
As	75	2	He	100.307	2.118	5308	0.85	100	100.3	90	110	
Sb	121	2	He	98.449	1.822	40641	3.27	100	98.4	90	110	
Se	78	2	He	84.182	11.881	297	13.49	100	84.2	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
Ge	72	1	nogas	573277	0.47	606326	94.55	70	125	
In	115	1	nogas	683790	1.04	717978	95.24	70	125	
Li	6	1	nogas	264174	2.25	264394	99.92	70	125	
Bi	209	1	nogas	1002421	0.70	1029814	97.34	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	31967	2.07	35160	90.92	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	254_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-05T20:32:53-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	236CALB.d
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	154.7	37	87.7	1	
B	11	1	nogas	-25.796	-32.4	67634	8.9	10	
Na	23	1	nogas	-108.656	-1.9	433170	3.2	100	
Mg	24	1	nogas	2.508	6.1	13208	5.0	100	
Al	27	1	nogas	-0.754	-4.2	5638	2.7	5	
P	31	1	nogas	2.669	65.1	10480	3.6	10	
K	39	1	nogas	-25.312	-16.6	1151197	0.4	100	
Ca	43	1	nogas	-62.959	-18.3	480	16.5	100	
Ca	44	1	nogas	-18.138	-27.3	12371	5.8	100	
Ti	47	1	nogas	0.054	227.0	37	128.9	2.5	
V	51	1	nogas	-4.129	-19.2	90485	3.9	2.5	
Cr	52	1	nogas	-0.140	-27.8	4454	5.1	2.5	
Mn	55	1	nogas	-0.088	-17.1	5398	1.5	2.5	
Fe	56	1	nogas	-24.244	-4.7	255069	3.3	100	
Co	59	1	nogas	0.024	54.9	193	33.7	2.5	
Ni	60	1	nogas	-0.584	-2.6	253	6.0	2.5	
Cu	63	1	nogas	-0.554	-26.2	1417	28.0	2.5	
Zn	66	1	nogas	-0.610	-2.7	167	9.2	2.5	
As	75	1	nogas	-4.154	-14.2	14470	3.1	2.5	
Se	77	1	nogas	-17.761	-36.5	5114	4.0	2.5	
Se	82	1	nogas	-0.924	-146.3	177	37.7	2.5	
Sr	88	1	nogas	0.003	236.4	503	9.4	2.5	
Mo	95	1	nogas	0.059	29.0	100	26.5	2.5	
Ag	107	1	nogas	0.034	50.0	190	36.8	2.5	
Cd	111	1	nogas	0.022	75.1	23	65.5	1	
Sn	118	1	nogas	0.057	68.5	727	14.7	5	
Sb	121	1	nogas	0.045	34.1	583	11.2	2.5	
Ba	137	1	nogas	-0.092	-16.5	107	19.5	2.5	
Tl	205	1	nogas	0.112	13.6	1403	14.3	1	
Pb	208	1	nogas	0.030	7.2	510	3.9	2.5	
U	238	1	nogas	0.030	28.6	870	23.6	2.5	
Si	28	1	nogas	14.503	36.2	719080	1.5	5	CCB Main CR1 Failed
La	139	1	nogas	-18.112	-211.8	43	74.2	2.5	
Au	197	1	nogas	64.087	173.2	3	173.2	2.5	CCB Main CR1 Failed
Na	23	2	He	-88.934	-7.0	17279	3.7	100	
Mg	24	2	He	2.438	10.9	300	8.8	100	
Al	27	2	He	-1.509	-25.4	67	22.9	5	
K	39	2	He	2.722	562.9	6848	8.5	100	
Ca	43	2	He	-52.331	0.0	0	#DIV/0!	100	
Ca	44	2	He	1.371	85.0	40	0.0	100	
V	51	2	He	0.029	71.0	137	2.2	2.5	
Cr	52	2	He	0.000	58183.0	107	27.1	2.5	
Mn	55	2	He	-0.107	-71.8	47	32.7	2.5	
Fe	56	2	He	2.007	38.2	1750	10.9	100	
Co	59	2	He	-0.010	-86.8	3	173.2	2.5	
Ni	60	2	He	0.576	34.6	27	142.0	2.5	
Cu	63	2	He	-0.721	-2.1	170	10.2	2.5	
Zn	66	2	He	-1.080	-17.3	13	114.6	2.5	

Continuing Calibration Blank (CCB) Report

As	75	2	He	-0.041	-322.6	9	78.1	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	-0.014	-294.2	60	33.3	2.5	
Se	78	2	He	2.671	65.6	15	45.8	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
Ge	72	1	nogas	575446	1.12	606326	94.91	70	125	
In	115	1	nogas	703318	0.74	717978	97.96	70	125	
Li	6	1	nogas	248221	2.32	264394	93.88	70	125	
Bi	209	1	nogas	1039247	1.45	1029814	100.92	70	125	
Ge	72	2	He	32972	5.80	35160	93.78	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	265_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-05T20:57:23-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	236CALB.d
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	104.683	0.671	176491	1.24	100	104.7	90	110	
B	11	1	nogas	469.733	1.630	450117	0.78	500	93.9	90	110	
Na	23	1	nogas	10692.805	1.382	54583741	1.63	10000	106.9	90	110	
Mg	24	1	nogas	9818.385	1.416	34652435	0.27	10000	98.2	90	110	
Al	27	1	nogas	66.646	0.075	434268	0.61	100	66.6	90	110	CCV Main CR1-2 Failed
P	31	1	nogas	441.149	0.173	131116	0.70	500	88.2	90	110	CCV Main CR1-2 Failed
K	39	1	nogas	9763.300	1.012	36760367	0.76	10000	97.6	90	110	
Ca	43	1	nogas	10280.345	1.807	74645	2.21	10000	102.8	90	110	
Ca	44	1	nogas	10211.147	1.293	1212733	1.28	10000	102.1	90	110	
Ti	47	1	nogas	97.511	2.608	35974	3.00	100	97.5	90	110	
V	51	1	nogas	99.426	2.595	621073	2.08	100	99.4	90	110	
Cr	52	1	nogas	97.170	0.411	452545	0.34	100	97.2	90	110	
Mn	55	1	nogas	97.785	0.358	587167	0.88	100	97.8	90	110	
Fe	56	1	nogas	9544.887	1.691	47712311	2.22	10000	95.4	90	110	
Co	59	1	nogas	96.892	1.165	465838	1.69	100	96.9	90	110	
Ni	60	1	nogas	98.682	2.208	104532	2.69	100	98.7	90	110	
Cu	63	1	nogas	97.634	2.752	259677	3.16	100	97.6	90	110	
Zn	66	1	nogas	99.659	1.013	88082	1.54	100	99.7	90	110	
As	75	1	nogas	100.835	1.632	103573	1.51	100	100.8	90	110	
Se	77	1	nogas	99.813	3.928	9376	2.11	100	99.8	90	110	
Se	82	1	nogas	96.965	7.090	4817	7.17	100	97.0	90	110	
Sr	88	1	nogas	107.239	0.141	730890	0.69	100	107.2	90	110	
Mo	95	1	nogas	96.955	1.145	138224	0.61	100	97.0	90	110	
Ag	107	1	nogas	96.257	0.152	372376	0.54	100	96.3	90	110	
Cd	111	1	nogas	98.064	2.467	84535	2.07	100	98.1	90	110	
Sn	118	1	nogas	99.784	2.044	250035	1.45	100	99.8	90	110	
Sb	121	1	nogas	98.133	0.470	362907	0.26	100	98.1	90	110	
Ba	137	1	nogas	101.871	1.313	128202	1.59	100	101.9	90	110	
Tl	205	1	nogas	95.077	1.410	1055940	1.01	100	95.1	90	110	
Pb	208	1	nogas	95.421	1.056	810787	0.60	100	95.4	90	110	
U	238	1	nogas	97.127	2.181	2016534	1.71	100	97.1	90	110	
Li	7	1	nogas	103.511	1.138	443598	0.78	100	103.5	90	110	
Si	28	1	nogas	5100.215	1.640	10314312	1.42	5000	102.0	90	110	
Ba	135	1	nogas	102.358	1.616	74845	1.79	100	102.4	90	110	
La	139	1	nogas	137.725	41.055	167	27.06	100	137.7	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	270.840	114.999	13	114.56	100	270.8	90	110	CCV Main CR1-2 Failed
Tl	203	1	nogas	95.667	0.310	437933	0.65	100	95.7	90	110	
Na	23	2	He	10284.970	1.398	1956064	0.93	10000	102.8	90	110	
Mg	24	2	He	9445.675	2.037	836538	1.09	10000	94.5	90	110	
Al	27	2	He	62.971	3.756	3007	3.28	100	63.0	90	110	CCV Main CR1-2 Failed
K	39	2	He	9579.989	1.419	434242	0.62	10000	95.8	90	110	
Ca	43	2	He	11117.538	4.801	1297	5.68	10000	111.2	90	110	CCV Main CR1-2 Failed
Ca	44	2	He	9831.269	3.345	18310	4.35	10000	98.3	90	110	
V	51	2	He	95.696	1.244	32162	0.68	100	95.7	90	110	
Cr	52	2	He	95.404	0.721	41169	1.91	100	95.4	90	110	
Mn	55	2	He	99.011	1.886	21757	0.69	100	99.0	90	110	
Fe	56	2	He	9642.430	1.270	3173399	1.48	10000	96.4	90	110	
Co	59	2	He	96.214	3.122	58921	3.11	100	96.2	90	110	
Ni	60	2	He	94.630	1.999	15961	0.72	100	94.6	90	110	
Cu	63	2	He	95.626	1.467	45594	2.39	100	95.6	90	110	
Zn	66	2	He	94.742	5.222	7905	5.22	100	94.7	90	110	
As	75	2	He	95.702	1.365	5005	2.39	100	95.7	90	110	
Sb	121	2	He	96.845	2.013	39495	2.36	100	96.8	90	110	
Se	78	2	He	87.280	3.882	303	4.95	100	87.3	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
Ge	72	1	nogas	558417	0.55	606326	92.10	70	125	
In	115	1	nogas	668304	0.79	717978	93.08	70	125	
Li	6	1	nogas	254768	0.58	264394	96.36	70	125	
Bi	209	1	nogas	968407	0.69	1029814	94.04	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	31583	1.37	35160	89.83	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	266_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-05T20:59:34-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	236CALB.d
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	0.036	35.6	73	28.4	1	
B	11	1	nogas	-31.940	-25.7	61697	10.2	10	
Na	23	1	nogas	-76.075	-4.5	597319	3.2	100	
Mg	24	1	nogas	2.278	28.2	12274	19.1	100	
Al	27	1	nogas	-0.789	-3.5	5424	2.8	5	
P	31	1	nogas	0.348	476.0	9853	5.5	10	
K	39	1	nogas	-23.236	-33.5	1162159	2.1	100	
Ca	43	1	nogas	-64.525	-20.4	470	20.3	100	
Ca	44	1	nogas	-24.195	-24.8	11664	5.8	100	
Ti	47	1	nogas	0.028	141.3	27	57.3	2.5	
V	51	1	nogas	-0.324	-827.2	110981	12.6	2.5	
Cr	52	1	nogas	-0.011	-321.4	5081	3.6	2.5	
Mn	55	1	nogas	-0.174	-14.1	4884	2.6	2.5	
Fe	56	1	nogas	-26.733	-4.5	242960	2.5	100	
Co	59	1	nogas	0.026	49.1	207	30.7	2.5	
Ni	60	1	nogas	-0.548	-3.4	293	7.1	2.5	
Cu	63	1	nogas	-0.465	-1.5	1660	1.6	2.5	
Zn	66	1	nogas	-0.537	-12.7	233	26.2	2.5	
As	75	1	nogas	0.066	1272.9	18227	3.4	2.5	
Se	77	1	nogas	3.873	231.1	5968	5.6	2.5	CCB Main CR1 Failed
Se	82	1	nogas	-0.249	-705.7	210	40.7	2.5	
Sr	88	1	nogas	0.016	36.5	597	7.6	2.5	
Mo	95	1	nogas	0.048	85.8	83	73.3	2.5	
Ag	107	1	nogas	0.035	61.7	193	44.0	2.5	
Cd	111	1	nogas	0.026	160.9	27	142.0	1	
Sn	118	1	nogas	0.153	28.5	970	12.4	5	
Sb	121	1	nogas	0.166	13.2	1047	8.6	2.5	
Ba	137	1	nogas	-0.076	-24.7	127	19.9	2.5	
Tl	205	1	nogas	0.110	15.4	1360	14.7	1	
Pb	208	1	nogas	0.027	5.7	473	3.2	2.5	
U	238	1	nogas	0.037	11.3	997	9.1	2.5	
Si	28	1	nogas	22.097	13.7	735909	1.3	5	CCB Main CR1 Failed
La	139	1	nogas	-37.579	-18.7	27	21.7	2.5	
Au	197	1	nogas	127.356	86.6	7	86.6	2.5	CCB Main CR1 Failed
Na	23	2	He	-61.762	-6.1	22341	2.0	100	
Mg	24	2	He	1.371	82.1	200	52.7	100	
Al	27	2	He	-1.719	-13.5	57	20.4	5	
K	39	2	He	5.526	82.5	6908	2.6	100	
Ca	43	2	He	30.299	472.4	10	173.2	100	
Ca	44	2	He	1.650	839.9	40	66.1	100	
V	51	2	He	0.208	59.2	197	21.1	2.5	
Cr	52	2	He	0.025	678.2	117	64.9	2.5	
Mn	55	2	He	-0.049	-89.3	60	16.7	2.5	
Fe	56	2	He	1.419	32.8	1537	10.1	100	
Co	59	2	He	0.028	143.3	27	94.4	2.5	
Ni	60	2	He	0.586	5.9	27	21.7	2.5	

Continuing Calibration Blank (CCB) Report

Cu	63	2	He	-0.635	-12.3	210	19.0	2.5	
Zn	66	2	He	-0.691	-51.5	47	65.5	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
As	75	2	He	-0.041	-324.2	9	78.1	2.5	
Sb	121	2	He	0.045	29.2	83	6.9	2.5	
Se	78	2	He	-0.812	-81.3	3	86.6	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	577008	0.66	606326	95.16	70	125	
In	115	1	nogas	696400	0.69	717978	96.99	70	125	
Li	6	1	nogas	242801	0.78	264394	91.83	70	125	
Bi	209	1	nogas	1025937	0.52	1029814	99.62	70	125	
Ge	72	2	He	32571	1.46	35160	92.64	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	277_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-05T21:30:06-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	236CALB.d
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	104.433	0.375	177075	0.54	100	104.4	90	110	
B	11	1	nogas	438.573	2.896	428607	1.62	500	87.7	90	110	CCV Main CR1-2 Failed
Na	23	1	nogas	10364.702	1.494	53824001	1.13	10000	103.6	90	110	
Mg	24	1	nogas	9631.992	0.027	34568534	0.98	10000	96.3	90	110	
Al	27	1	nogas	65.984	0.448	435443	1.37	100	66.0	90	110	CCV Main CR1-2 Failed
P	31	1	nogas	426.258	0.557	128598	1.41	500	85.3	90	110	CCV Main CR1-2 Failed
K	39	1	nogas	9772.772	1.222	37254775	1.34	10000	97.7	90	110	
Ca	43	1	nogas	10089.537	2.086	74190	2.39	10000	100.9	90	110	
Ca	44	1	nogas	10156.921	1.438	1221384	1.13	10000	101.6	90	110	
Ti	47	1	nogas	97.337	0.883	36358	1.85	100	97.3	90	110	
V	51	1	nogas	102.586	0.579	645321	1.08	100	102.6	90	110	
Cr	52	1	nogas	97.426	0.404	459424	1.64	100	97.4	90	110	
Mn	55	1	nogas	98.405	1.252	598190	0.72	100	98.4	90	110	
Fe	56	1	nogas	9708.466	0.907	49126885	1.30	10000	97.1	90	110	
Co	59	1	nogas	98.456	0.704	479252	1.14	100	98.5	90	110	
Ni	60	1	nogas	98.457	0.383	105598	1.77	100	98.5	90	110	
Cu	63	1	nogas	98.637	1.144	265558	0.79	100	98.6	90	110	
Zn	66	1	nogas	100.777	1.837	90159	0.40	100	100.8	90	110	
As	75	1	nogas	102.003	0.993	105887	2.21	100	102.0	90	110	
Se	77	1	nogas	118.079	4.616	10187	2.26	100	118.1	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	96.093	2.784	4834	1.88	100	96.1	90	110	
Sr	88	1	nogas	105.760	0.803	729795	0.67	100	105.8	90	110	
Mo	95	1	nogas	97.363	1.675	140543	1.82	100	97.4	90	110	
Ag	107	1	nogas	98.145	1.313	384412	1.34	100	98.1	90	110	
Cd	111	1	nogas	97.823	1.234	87269	1.12	100	97.8	90	110	
Sn	118	1	nogas	98.756	0.642	256110	1.07	100	98.8	90	110	
Sb	121	1	nogas	97.955	1.980	366726	0.63	100	98.0	90	110	
Ba	137	1	nogas	100.618	1.614	131045	2.27	100	100.6	90	110	
Tl	205	1	nogas	94.675	0.919	1083979	0.54	100	94.7	90	110	
Pb	208	1	nogas	94.756	1.166	830066	1.59	100	94.8	90	110	
U	238	1	nogas	94.964	1.311	2032763	1.75	100	95.0	90	110	
Li	7	1	nogas	103.215	0.810	444944	0.79	100	103.2	90	110	
Si	28	1	nogas	4978.081	0.820	10209576	1.23	5000	99.6	90	110	
Ba	135	1	nogas	101.095	2.043	76490	1.13	100	101.1	90	110	
La	139	1	nogas	147.018	52.150	180	34.70	100	147.0	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	131.757	173.205	7	173.21	100	131.8	90	110	CCV Main CR1-2 Failed
Tl	203	1	nogas	95.111	0.559	448828	0.17	100	95.1	90	110	
Na	23	2	He	10052.056	3.361	1959504	1.55	10000	100.5	90	110	
Mg	24	2	He	9236.520	2.956	838182	0.79	10000	92.4	90	110	
Al	27	2	He	58.645	2.375	2880	3.66	100	58.6	90	110	CCV Main CR1-2 Failed
K	39	2	He	9273.350	2.486	430935	0.75	10000	92.7	90	110	
Ca	43	2	He	10327.783	6.854	1233	4.08	10000	103.3	90	110	
Ca	44	2	He	9716.871	3.890	18533	1.38	10000	97.2	90	110	
V	51	2	He	94.075	3.133	32395	0.28	100	94.1	90	110	
Cr	52	2	He	94.845	4.252	41918	1.25	100	94.8	90	110	
Mn	55	2	He	93.884	4.516	21137	1.61	100	93.9	90	110	
Fe	56	2	He	9410.771	3.496	3172851	1.07	10000	94.1	90	110	
Co	59	2	He	95.485	3.241	59907	0.83	100	95.5	90	110	
Ni	60	2	He	93.988	7.707	16228	4.77	100	94.0	90	110	
Cu	63	2	He	95.565	1.599	46690	1.44	100	95.6	90	110	
Zn	66	2	He	95.130	1.719	8135	2.77	100	95.1	90	110	
As	75	2	He	91.093	2.685	4882	2.06	100	91.1	90	110	
Sb	121	2	He	95.243	0.989	39809	1.98	100	95.2	90	110	
Se	78	2	He	91.577	1.989	326	4.79	100	91.6	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	565414	1.42	606326	93.25	70	125	
In	115	1	nogas	691588	0.91	717978	96.32	70	125	
Li	6	1	nogas	256237	0.90	264394	96.91	70	125	
Bi	209	1	nogas	998316	0.45	1029814	96.94	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	32374	2.94	35160	92.08	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	278_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-05T21:32:17-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	236CALB.d
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	0.032	77.7	67	60.6	1	
B	11	1	nogas	-56.127	-9.8	43888	10.4	10	
Na	23	1	nogas	-119.678	-1.3	370874	0.6	100	
Mg	24	1	nogas	2.527	15.7	13108	12.3	100	
Al	27	1	nogas	-0.805	-3.7	5331	3.0	5	
P	31	1	nogas	1.819	195.6	10283	8.4	10	
K	39	1	nogas	-26.221	-32.9	1153267	1.5	100	
Ca	43	1	nogas	-92.986	-10.0	260	26.6	100	
Ca	44	1	nogas	-34.079	-3.5	10490	1.4	100	
Ti	47	1	nogas	0.090	135.9	50	91.7	2.5	
V	51	1	nogas	3.856	30.8	133509	4.3	2.5	CCB Main CR1 Failed
Cr	52	1	nogas	0.068	64.2	5471	5.1	2.5	
Mn	55	1	nogas	-0.108	-36.5	5301	3.9	2.5	
Fe	56	1	nogas	-27.436	-2.4	239925	2.8	100	
Co	59	1	nogas	0.015	75.0	150	37.1	2.5	
Ni	60	1	nogas	-0.652	-5.3	180	19.2	2.5	
Cu	63	1	nogas	-0.594	-7.0	1313	8.0	2.5	
Zn	66	1	nogas	-0.548	-14.0	223	29.8	2.5	
As	75	1	nogas	2.418	26.6	20343	1.9	2.5	
Se	77	1	nogas	35.112	4.2	7195	1.0	2.5	CCB Main CR1 Failed
Se	82	1	nogas	-0.404	-212.0	203	22.2	2.5	
Sr	88	1	nogas	0.008	203.5	540	21.4	2.5	
Mo	95	1	nogas	0.057	15.4	97	11.9	2.5	
Ag	107	1	nogas	0.020	58.5	133	35.4	2.5	
Cd	111	1	nogas	0.015	42.4	17	34.6	1	
Sn	118	1	nogas	0.056	55.1	717	11.3	5	
Sb	121	1	nogas	0.006	778.3	433	37.6	2.5	
Ba	137	1	nogas	-0.122	-3.5	67	8.7	2.5	
Tl	205	1	nogas	0.110	31.2	1383	30.5	1	
Pb	208	1	nogas	0.025	46.4	460	22.6	2.5	
U	238	1	nogas	0.031	14.8	877	12.3	2.5	
Si	28	1	nogas	-7.838	-96.9	678814	1.6	5	
La	139	1	nogas	-45.372	-53.0	20	100.0	2.5	
Au	197	1	nogas	250.676	173.2	13	173.2	2.5	CCB Main CR1 Failed
Na	23	2	He	-99.990	-3.9	15133	3.9	100	
Mg	24	2	He	2.151	32.5	273	23.5	100	
Al	27	2	He	-1.380	-64.2	73	56.8	5	
K	39	2	He	-11.312	-34.7	6201	3.6	100	
Ca	43	2	He	-24.560	-195.9	3	173.2	100	
Ca	44	2	He	-5.623	-98.4	27	43.3	100	
V	51	2	He	0.331	8.5	243	3.8	2.5	
Cr	52	2	He	-0.010	-682.4	103	31.1	2.5	
Mn	55	2	He	-0.169	-74.7	33	86.6	2.5	
Fe	56	2	He	0.997	75.6	1407	16.7	100	
Co	59	2	He	-0.004	-390.6	7	173.2	2.5	
Ni	60	2	He	0.471	6.9	7	86.6	2.5	
Cu	63	2	He	-0.638	-8.0	210	9.5	2.5	
Zn	66	2	He	-1.200	-5.4	3	173.2	2.5	

Continuing Calibration Blank (CCB) Report

As	75	2	He	0.000	97866.4	11	148.0	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	-0.053	-151.0	43	81.0	2.5	
Se	78	2	He	0.122	493.9	6	33.3	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	578290	1.46	606326	95.38	70	125	
In	115	1	nogas	694888	0.94	717978	96.78	70	125	
Li	6	1	nogas	242137	1.40	264394	91.58	70	125	
Bi	209	1	nogas	1040414	1.08	1029814	101.03	70	125	
Ge	72	2	He	32932	2.61	35160	93.66	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	286_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-05T21:49:56-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	236CALB.d
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	104.438	0.693	185157	1.85	100	104.4	90	110	
B	11	1	nogas	476.324	1.705	478614	0.20	500	95.3	90	110	
Na	23	1	nogas	10584.511	2.546	56867897	2.70	10000	105.8	90	110	
Mg	24	1	nogas	9761.010	2.904	36247538	1.71	10000	97.6	90	110	
Al	27	1	nogas	65.751	0.701	458856	0.13	100	65.8	90	110	CCV Main CR1-2 Failed
P	31	1	nogas	436.698	0.568	139071	1.03	500	87.3	90	110	CCV Main CR1-2 Failed
K	39	1	nogas	9605.685	0.961	38746562	1.51	10000	96.1	90	110	
Ca	43	1	nogas	10078.957	1.414	78376	1.97	10000	100.8	90	110	
Ca	44	1	nogas	10055.127	0.149	1278857	0.53	10000	100.6	90	110	
Ti	47	1	nogas	93.867	3.724	37080	4.16	100	93.9	90	110	
V	51	1	nogas	95.180	2.750	641542	1.93	100	95.2	90	110	
Cr	52	1	nogas	96.658	1.720	481985	1.16	100	96.7	90	110	
Mn	55	1	nogas	96.657	1.682	621443	1.09	100	96.7	90	110	
Fe	56	1	nogas	9561.919	2.894	51166637	2.32	10000	95.6	90	110	
Co	59	1	nogas	96.628	1.968	497352	1.41	100	96.6	90	110	
Ni	60	1	nogas	95.980	2.380	108865	1.83	100	96.0	90	110	
Cu	63	1	nogas	96.578	1.195	275026	0.62	100	96.6	90	110	
Zn	66	1	nogas	98.154	2.334	92891	2.32	100	98.2	90	110	
As	75	1	nogas	99.389	0.986	109573	0.99	100	99.4	90	110	
Se	77	1	nogas	82.846	13.218	9356	4.50	100	82.8	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	96.525	2.529	5134	1.85	100	96.5	90	110	
Sr	88	1	nogas	105.663	1.225	771033	0.97	100	105.7	90	110	
Mo	95	1	nogas	97.094	1.912	148202	1.39	100	97.1	90	110	
Ag	107	1	nogas	97.473	1.215	403731	1.27	100	97.5	90	110	
Cd	111	1	nogas	97.975	0.654	91895	1.50	100	98.0	90	110	
Sn	118	1	nogas	97.251	2.229	265137	1.94	100	97.3	90	110	
Sb	121	1	nogas	98.238	0.543	388972	0.18	100	98.2	90	110	
Ba	137	1	nogas	100.390	1.763	137434	0.79	100	100.4	90	110	
Tl	205	1	nogas	95.123	2.184	1134849	1.56	100	95.1	90	110	
Pb	208	1	nogas	95.523	0.969	871960	1.18	100	95.5	90	110	
U	238	1	nogas	96.791	3.288	2158536	2.37	100	96.8	90	110	
Li	7	1	nogas	103.674	0.969	467165	1.30	100	103.7	90	110	
Si	28	1	nogas	4972.656	1.078	10785487	1.30	5000	99.5	90	110	
Ba	135	1	nogas	99.781	3.345	79370	2.93	100	99.8	90	110	
La	139	1	nogas	101.672	58.085	150	35.28	100	101.7	90	110	
Au	197	1	nogas	0.000	#DIV/0!	0	#DIV/0!	100	0.0	90	110	CCV Main CR1-2 Failed
Tl	203	1	nogas	96.124	0.763	472689	0.69	100	96.1	90	110	
Na	23	2	He	10223.357	3.460	2116152	1.49	10000	102.2	90	110	
Mg	24	2	He	9216.336	1.849	888526	1.06	10000	92.2	90	110	
Al	27	2	He	62.694	3.124	3260	3.84	100	62.7	90	110	CCV Main CR1-2 Failed
K	39	2	He	9283.166	0.324	458357	2.11	10000	92.8	90	110	
Ca	43	2	He	9481.986	9.225	1203	7.54	10000	94.8	90	110	
Ca	44	2	He	9735.110	2.014	19738	3.76	10000	97.4	90	110	
V	51	2	He	93.987	0.606	34390	1.42	100	94.0	90	110	
Cr	52	2	He	96.432	1.042	45293	1.43	100	96.4	90	110	
Mn	55	2	He	95.418	0.881	22832	2.06	100	95.4	90	110	
Fe	56	2	He	9607.232	2.616	3441387	1.96	10000	96.1	90	110	
Co	59	2	He	95.035	2.194	63343	0.46	100	95.0	90	110	
Ni	60	2	He	96.393	1.649	17706	3.24	100	96.4	90	110	
Cu	63	2	He	95.365	0.927	49502	2.62	100	95.4	90	110	
Zn	66	2	He	94.537	3.097	8586	2.31	100	94.5	90	110	
As	75	2	He	96.078	2.895	5469	2.51	100	96.1	90	110	
Sb	121	2	He	92.743	2.915	41162	1.14	100	92.7	90	110	
Se	78	2	He	94.313	5.576	356	3.51	100	94.3	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	597889	0.58	606326	98.61	70	125	
In	115	1	nogas	727076	1.17	717978	101.27	70	125	
Li	6	1	nogas	267899	1.17	264394	101.33	70	125	
Bi	209	1	nogas	1040329	0.93	1029814	101.02	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	34382	1.94	35160	97.79	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	287_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-05T21:52:08-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	236CALB.d
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	76.3	37	41.7	1	
B	11	1	nogas	-47.622	-7.7	52490	6.5	10	
Na	23	1	nogas	-110.818	-1.1	439063	1.4	100	
Mg	24	1	nogas	2.399	29.6	13342	20.8	100	
Al	27	1	nogas	-0.746	-2.8	6018	0.9	5	
P	31	1	nogas	0.960	96.3	10567	1.4	10	
K	39	1	nogas	-13.583	-91.3	1263229	2.9	100	
Ca	43	1	nogas	-89.209	-13.0	303	30.6	100	
Ca	44	1	nogas	-35.023	-5.7	10914	2.1	100	
Ti	47	1	nogas	-0.009	-428.1	13	114.6	2.5	
V	51	1	nogas	-0.698	-80.4	114898	1.3	2.5	
Cr	52	1	nogas	-0.027	-268.9	5274	6.0	2.5	
Mn	55	1	nogas	-0.247	-2.1	4677	1.6	2.5	
Fe	56	1	nogas	-27.451	-7.9	252197	3.8	100	
Co	59	1	nogas	0.033	43.0	253	29.1	2.5	
Ni	60	1	nogas	-0.643	-4.5	200	17.3	2.5	
Cu	63	1	nogas	-0.446	-13.9	1804	8.9	2.5	
Zn	66	1	nogas	-0.592	-11.5	193	33.3	2.5	
As	75	1	nogas	-0.540	-81.2	18657	2.8	2.5	
Se	77	1	nogas	-4.042	-84.5	5968	1.7	2.5	
Se	82	1	nogas	-0.017	-6590.7	233	24.4	2.5	
Sr	88	1	nogas	0.016	88.8	627	17.8	2.5	
Mo	95	1	nogas	0.047	6.2	87	6.7	2.5	
Ag	107	1	nogas	0.049	18.7	263	13.3	2.5	
Cd	111	1	nogas	0.024	89.4	27	78.1	1	
Sn	118	1	nogas	0.040	50.2	720	8.3	5	
Sb	121	1	nogas	0.116	26.8	900	14.2	2.5	
Ba	137	1	nogas	-0.101	-21.6	100	30.0	2.5	
Tl	205	1	nogas	0.124	21.5	1623	21.7	1	
Pb	208	1	nogas	0.035	23.5	573	13.2	2.5	
U	238	1	nogas	0.039	8.7	1113	7.3	2.5	
Si	28	1	nogas	16.225	25.5	763764	2.1	5	CCB Main CR1 Failed
La	139	1	nogas	-54.378	-23.9	13	86.6	2.5	
Au	197	1	nogas	0.000	#DIV/0!	0	#DIV/0!	2.5	
Na	23	2	He	-94.355	-2.7	16852	2.3	100	
Mg	24	2	He	2.011	19.0	270	12.8	100	
Al	27	2	He	-1.168	-19.3	87	13.3	5	
K	39	2	He	-4.902	-386.0	6735	11.6	100	
Ca	43	2	He	2.028	4643.4	7	173.2	100	
Ca	44	2	He	5.611	177.7	50	40.0	100	
V	51	2	He	0.162	48.8	191	14.7	2.5	
Cr	52	2	He	-0.038	-318.7	93	59.0	2.5	
Mn	55	2	He	-0.158	-62.5	37	63.0	2.5	
Fe	56	2	He	1.442	29.9	1623	11.4	100	
Co	59	2	He	0.026	35.0	27	21.7	2.5	
Ni	60	2	He	0.634	20.0	37	63.0	2.5	
Cu	63	2	He	-0.688	-12.2	193	23.3	2.5	
Zn	66	2	He	-1.013	-0.5	20	0.0	2.5	

Continuing Calibration Blank (CCB) Report

As	75	2	He	0.010	908.4	12	41.7	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.102	80.1	113	33.4	2.5	
Se	78	2	He	0.234	271.9	7	34.6	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	608319	1.43	606326	100.33	70	125	
In	115	1	nogas	740357	0.88	717978	103.12	70	125	
Li	6	1	nogas	253790	1.71	264394	95.99	70	125	
Bi	209	1	nogas	1089048	0.99	1029814	105.75	70	125	
Ge	72	2	He	34181	2.11	35160	97.22	70	125	

Calibration Blank Report

Sample Table

Sample Name	CAL BLK
Data File Name	289CALB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-05T21:57:44-06:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	3	5196.15
B	11	1	nogas	25258	0.02
Na	23	1	nogas	372880	0.00
Mg	24	1	nogas	4335	0.40
Al	27	1	nogas	11240	0.03
P	31	1	nogas	10567	0.05
K	39	1	nogas	1205251	0.00
Ca	43	1	nogas	277	11.71
Ca	44	1	nogas	10557	0.05
Ti	47	1	nogas	37	154.83
V	51	1	nogas	130743	0.00
Cr	52	1	nogas	6231	0.14
Mn	55	1	nogas	5921	0.10
Fe	56	1	nogas	273959	0.00
Co	59	1	nogas	87	46.76
Ni	60	1	nogas	453	4.62
Cu	63	1	nogas	2457	0.25
Zn	66	1	nogas	470	2.52
As	75	1	nogas	21584	0.01
Se	77	1	nogas	7068	0.13
Se	82	1	nogas	277	6.17
Sr	88	1	nogas	387	3.86
Mo	95	1	nogas	67	25.98
Ag	107	1	nogas	53	73.18
Cd	111	1	nogas	7	2598.08
Sn	118	1	nogas	767	1.11
Sb	121	1	nogas	573	1.41
Ba	137	1	nogas	283	1.90
Tl	205	1	nogas	130	21.33
Pb	208	1	nogas	263	8.33
Li	7	1	nogas	20916	0.02
Si	28	1	nogas	686724	0.00
La	139	1	nogas	23	280.57
Na	23	2	He	16031	0.02
Mg	24	2	He	93	35.07
Al	27	2	He	87	60.03
K	39	2	He	6655	0.17
Ca	44	2	He	70	93.52
V	51	2	He	227	7.80
Cr	52	2	He	137	17.21
Mn	55	2	He	63	14.39
Fe	56	2	He	1243	0.88

Calibration Blank Report

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Co	59	2	He	17	415.69
Ni	60	2	He	23	106.04
Cu	63	2	He	450	2.75
Zn	66	2	He	53	81.19
As	75	2	He	17	432.63
Sb	121	2	He	57	78.37
Se	78	2	He	4	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Ge	72	1	nogas	610209	1.72
In	115	1	nogas	742039	1.43
Li	6	1	nogas	256544	1.54
Bi	209	1	nogas	1099361	0.50
Ge	72	2	He	34709	5.13

Calibration Standard Report

Sample Table

Sample Name	2/10/200
Data File Name	290CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-05T21:59:56-06:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	289CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	3851	0.10
B	11	1	nogas	33057	0.01
Na	23	1	nogas	1517573	0.00
Mg	24	1	nogas	817942	0.00
Al	27	1	nogas	31405	0.01
P	31	1	nogas	14433	0.01
K	39	1	nogas	2035034	0.00
Ca	43	1	nogas	1923	0.20
Ca	44	1	nogas	38139	0.00
Ti	47	1	nogas	753	1.42
V	51	1	nogas	150641	0.00
Cr	52	1	nogas	17132	0.01
Mn	55	1	nogas	18964	0.01
Fe	56	1	nogas	1458623	0.00
Co	59	1	nogas	11617	0.04
Ni	60	1	nogas	2454	0.45
Cu	63	1	nogas	10683	0.03
Zn	66	1	nogas	2864	0.61
As	75	1	nogas	24511	0.01
Se	77	1	nogas	7425	0.03
Se	82	1	nogas	313	4.70
Sr	88	1	nogas	16271	0.03
Mo	95	1	nogas	3200	0.04
Ag	107	1	nogas	8936	0.01
Cd	111	1	nogas	1823	0.54
Sn	118	1	nogas	6538	0.06
Sb	121	1	nogas	8873	0.04
Ba	137	1	nogas	3034	0.15
Tl	205	1	nogas	24767	0.01
Pb	208	1	nogas	19983	0.01
Si	28	1	nogas	890154	0.00
La	139	1	nogas	83	68.05
Na	23	2	He	55898	0.00
Mg	24	2	He	18907	0.01
Al	27	2	He	237	7.21
K	39	2	He	16164	0.02
Ca	43	2	He	20	433.01
Ca	44	2	He	430	1.08
V	51	2	He	952	0.41
Cr	52	2	He	1113	0.73

Calibration Standard Report

Mn	55	2	He	537	3.15
Fe	56	2	He	75648	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Co	59	2	He	1343	0.78
Ni	60	2	He	430	6.14
Cu	63	2	He	1817	0.10
Zn	66	2	He	260	3.91
As	75	2	He	116	7.21
Sb	121	2	He	1010	0.43
Se	78	2	He	5	2148.08

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	613880	0.81	610209	100.60	70	125	
In	115	1	nogas	742626	0.54	742039	100.08	70	125	
Li	6	1	nogas	255710	0.74	256544	99.67	70	125	
Bi	209	1	nogas	1091480	1.08	1099361	99.28	70	125	
Ge	72	2	He	34823	1.98	34709	100.33	70	125	

Calibration Standard Report

Sample Table

Sample Name	5/25/500
Data File Name	291CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-05T22:02:08-06:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	
ISTD Ref File Name	289CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	9976	0.06
B	11	1	nogas	43483	0.01
Na	23	1	nogas	3092713	0.00
Mg	24	1	nogas	1976086	0.00
Al	27	1	nogas	49359	0.00
P	31	1	nogas	18690	0.01
K	39	1	nogas	3209158	0.00
Ca	43	1	nogas	4287	0.05
Ca	44	1	nogas	76983	0.00
Ti	47	1	nogas	1897	0.49
V	51	1	nogas	163260	0.00
Cr	52	1	nogas	31062	0.01
Mn	55	1	nogas	39245	0.00
Fe	56	1	nogas	3059962	0.00
Co	59	1	nogas	26865	0.01
Ni	60	1	nogas	6015	0.13
Cu	63	1	nogas	16682	0.02
Zn	66	1	nogas	5731	0.10
As	75	1	nogas	27499	0.00
Se	77	1	nogas	7685	0.05
Se	82	1	nogas	447	4.26
Sr	88	1	nogas	37813	0.01
Mo	95	1	nogas	7869	0.02
Ag	107	1	nogas	21464	0.02
Cd	111	1	nogas	5021	0.09
Sn	118	1	nogas	14627	0.02
Sb	121	1	nogas	21798	0.01
Ba	137	1	nogas	7489	0.07
Tl	205	1	nogas	59729	0.00
Pb	208	1	nogas	46852	0.01
Si	28	1	nogas	1409247	0.00
La	139	1	nogas	110	21.87
Na	23	2	He	113658	0.00
Mg	24	2	He	46260	0.00
Al	27	2	He	403	5.71
K	39	2	He	30517	0.00
Ca	43	2	He	40	250.00
Ca	44	2	He	1153	0.65
V	51	2	He	1983	0.18
Cr	52	2	He	2490	0.28

Calibration Standard Report

Mn	55	2	He	1263	0.85
Fe	56	2	He	181912	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Co	59	2	He	3327	0.19
Ni	60	2	He	993	2.25
Cu	63	2	He	2804	0.12
Zn	66	2	He	493	2.51
As	75	2	He	289	6.22
Sb	121	2	He	2217	0.40
Se	78	2	He	16	270.63

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	597887	0.84	610209	97.98	70	125	
In	115	1	nogas	725017	0.65	742039	97.71	70	125	
Li	6	1	nogas	250003	0.40	256544	97.45	70	125	
Bi	209	1	nogas	1056383	0.76	1099361	96.09	70	125	
Ge	72	2	He	33938	2.73	34709	97.78	70	125	

Calibration Standard Report

Sample Table

Sample Name	10/50/1000
Data File Name	292CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-05T22:04:20-06:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	
ISTD Ref File Name	289CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	19795	0.01
B	11	1	nogas	67678	0.00
Na	23	1	nogas	6010891	0.00
Mg	24	1	nogas	4044207	0.00
Al	27	1	nogas	90119	0.00
P	31	1	nogas	27278	0.01
K	39	1	nogas	5219797	0.00
Ca	43	1	nogas	8726	0.03
Ca	44	1	nogas	144809	0.00
Ti	47	1	nogas	4404	0.04
V	51	1	nogas	204455	0.00
Cr	52	1	nogas	58044	0.00
Mn	55	1	nogas	73841	0.00
Fe	56	1	nogas	5981101	0.00
Co	59	1	nogas	54550	0.00
Ni	60	1	nogas	13255	0.01
Cu	63	1	nogas	32862	0.01
Zn	66	1	nogas	10443	0.07
As	75	1	nogas	32949	0.01
Se	77	1	nogas	8579	0.05
Se	82	1	nogas	770	2.11
Sr	88	1	nogas	77307	0.00
Mo	95	1	nogas	15925	0.02
Ag	107	1	nogas	43955	0.00
Cd	111	1	nogas	9763	0.03
Sn	118	1	nogas	29811	0.01
Sb	121	1	nogas	42575	0.01
Ba	137	1	nogas	14567	0.03
Tl	205	1	nogas	124377	0.00
Pb	208	1	nogas	95155	0.00
Si	28	1	nogas	1915603	0.00
La	139	1	nogas	60	55.56
Na	23	2	He	217934	0.00
Mg	24	2	He	93957	0.00
Al	27	2	He	633	1.23
K	39	2	He	54679	0.00
Ca	43	2	He	117	23.62
Ca	44	2	He	2044	0.56
V	51	2	He	3868	0.08
Cr	52	2	He	5044	0.07

Calibration Standard Report

Mn	55	2	He	2474	0.35
Fe	56	2	He	373005	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Co	59	2	He	7122	0.04
Ni	60	2	He	2057	0.37
Cu	63	2	He	5584	0.08
Zn	66	2	He	947	0.39
As	75	2	He	649	2.32
Sb	121	2	He	4621	0.10
Se	78	2	He	36	77.16

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	595686	0.59	610209	97.62	70	125	
In	115	1	nogas	714769	1.10	742039	96.33	70	125	
Li	6	1	nogas	248282	0.86	256544	96.78	70	125	
Bi	209	1	nogas	1054936	0.86	1099361	95.96	70	125	
Ge	72	2	He	34201	1.06	34709	98.54	70	125	

Calibration Standard Report

Sample Table

Sample Name	100/500/10K
Data File Name	293CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-05T22:06:32-06:00
Sample Type	CalStd
Level	5
Dilution	1
Comment	
ISTD Ref File Name	289CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	192052	0.00
B	11	1	nogas	478365	0.00
Na	23	1	nogas	52277039	0.00
Mg	24	1	nogas	37360444	0.00
Al	27	1	nogas	685576	0.00
P	31	1	nogas	154533	0.00
K	39	1	nogas	39720022	0.00
Ca	43	1	nogas	77166	0.00
Ca	44	1	nogas	1268096	0.00
Ti	47	1	nogas	38864	0.00
V	51	1	nogas	675006	0.00
Cr	52	1	nogas	497996	0.00
Mn	55	1	nogas	638712	0.00
Fe	56	1	nogas	53307572	0.00
Co	59	1	nogas	511407	0.00
Ni	60	1	nogas	113437	0.00
Cu	63	1	nogas	285029	0.00
Zn	66	1	nogas	95545	0.00
As	75	1	nogas	115469	0.00
Se	77	1	nogas	10924	0.06
Se	82	1	nogas	5341	0.14
Sr	88	1	nogas	736431	0.00
Mo	95	1	nogas	153384	0.00
Ag	107	1	nogas	417676	0.00
Cd	111	1	nogas	92956	0.00
Sn	118	1	nogas	271920	0.00
Sb	121	1	nogas	401883	0.00
Ba	137	1	nogas	138132	0.00
Tl	205	1	nogas	1182632	0.00
Pb	208	1	nogas	906563	0.00
Si	28	1	nogas	10835215	0.00
La	139	1	nogas	133	17.18
Na	23	2	He	1905283	0.00
Mg	24	2	He	879076	0.00
Al	27	2	He	4764	0.19
K	39	2	He	456472	0.00
Ca	43	2	He	1150	1.05
Ca	44	2	He	18901	0.02
V	51	2	He	34917	0.00
Cr	52	2	He	44675	0.00

Calibration Standard Report

Mn	55	2	He	23249	0.01
Fe	56	2	He	3492632	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Co	59	2	He	63755	0.00
Ni	60	2	He	18090	0.01
Cu	63	2	He	50414	0.00
Zn	66	2	He	8659	0.01
As	75	2	He	5402	0.08
Sb	121	2	He	42823	0.01
Se	78	2	He	406	3.16

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	594314	2.11	610209	97.40	70	125	
In	115	1	nogas	711132	1.09	742039	95.83	70	125	
Li	6	1	nogas	265704	0.97	256544	103.57	70	125	
Bi	209	1	nogas	1052114	0.54	1099361	95.70	70	125	
Ge	72	2	He	32912	1.05	34709	94.82	70	125	

Calibration Standard Report

Sample Table

Sample Name	200/1000/20K
Data File Name	294CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-05T22:08:42-06:00
Sample Type	CalStd
Level	6
Dilution	1
Comment	
ISTD Ref File Name	289CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	375887	0.00
B	11	1	nogas	959345	0.00
Na	23	1	nogas	104315640	0.00
Mg	24	1	nogas	73096310	0.00
Al	27	1	nogas	1341767	0.00
P	31	1	nogas	301458	0.00
K	39	1	nogas	76357923	0.00
Ca	43	1	nogas	154321	0.00
Ca	44	1	nogas	2461117	0.00
Ti	47	1	nogas	76973	0.00
V	51	1	nogas	1226034	0.00
Cr	52	1	nogas	975745	0.00
Mn	55	1	nogas	1255403	0.00
Fe	56	1	nogas	103302511	0.00
Co	59	1	nogas	1009524	0.00
Ni	60	1	nogas	225226	0.00
Cu	63	1	nogas	559721	0.00
Zn	66	1	nogas	190087	0.00
As	75	1	nogas	206882	0.00
Se	77	1	nogas	14253	0.00
Se	82	1	nogas	10383	0.03
Sr	88	1	nogas	1476024	0.00
Mo	95	1	nogas	312469	0.00
Ag	107	1	nogas	827004	0.00
Cd	111	1	nogas	185457	0.00
Sn	118	1	nogas	548508	0.00
Sb	121	1	nogas	807352	0.00
Ba	137	1	nogas	273985	0.00
Tl	205	1	nogas	2399285	0.00
Pb	208	1	nogas	1813711	0.00
Si	28	1	nogas	20304043	0.00
La	139	1	nogas	273	2.79
Na	23	2	He	3705892	0.00
Mg	24	2	He	1762038	0.00
Al	27	2	He	8972	0.04
K	39	2	He	906364	0.00
Ca	43	2	He	2384	0.19
Ca	44	2	He	37190	0.00
V	51	2	He	68982	0.00
Cr	52	2	He	87503	0.00

Calibration Standard Report

Mn	55	2	He	44561	0.00
Fe	56	2	He	6783462	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Co	59	2	He	125650	0.00
Ni	60	2	He	34592	0.01
Cu	63	2	He	97971	0.00
Zn	66	2	He	17176	0.02
As	75	2	He	11016	0.02
Sb	121	2	He	87388	0.00
Se	78	2	He	700	0.78

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	582580	0.29	610209	95.47	70	125	
In	115	1	nogas	700722	0.72	742039	94.43	70	125	
Li	6	1	nogas	289233	1.33	256544	112.74	70	125	
Bi	209	1	nogas	1028799	0.56	1099361	93.58	70	125	
Ge	72	2	He	32107	2.26	34709	92.50	70	125	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	ICCV
Data File Name	295_ICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-05T22:10:52-06:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	289CALB.d
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	106.675	2.786	191871	1.17	100	106.7	90	110	
B	11	1	nogas	566.123	1.862	525464	0.60	500	113.2	90	110	ICV Main CR1 Failed
Na	23	1	nogas	9803.989	1.468	52882745	1.45	10000	98.0	90	110	
Mg	24	1	nogas	9741.360	2.310	36857275	1.19	10000	97.4	90	110	
Al	27	1	nogas	75.427	0.305	529794	0.40	100	75.4	90	110	ICV Main CR1 Failed
P	31	1	nogas	453.106	1.077	146204	1.11	500	90.6	90	110	
K	39	1	nogas	9729.336	1.089	39067650	1.44	10000	97.3	90	110	
Ca	43	1	nogas	9435.698	1.408	75128	1.91	10000	94.4	90	110	
Ca	44	1	nogas	9756.212	0.685	1248597	0.79	10000	97.6	90	110	
Ti	47	1	nogas	94.696	2.057	37638	2.44	100	94.7	90	110	
V	51	1	nogas	88.126	1.115	628848	0.79	100	88.1	90	110	ICV Main CR1 Failed
Cr	52	1	nogas	98.192	0.892	498051	1.15	100	98.2	90	110	
Mn	55	1	nogas	98.109	0.111	639041	0.51	100	98.1	90	110	
Fe	56	1	nogas	9745.079	0.755	52296813	0.27	10000	97.5	90	110	
Co	59	1	nogas	98.390	1.031	512967	0.52	100	98.4	90	110	
Ni	60	1	nogas	97.596	2.823	113576	2.42	100	97.6	90	110	
Cu	63	1	nogas	97.098	1.669	281981	1.40	100	97.1	90	110	
Zn	66	1	nogas	98.841	1.920	97100	1.54	100	98.8	90	110	
As	75	1	nogas	89.792	1.466	108225	1.10	100	89.8	90	110	ICV Main CR1 Failed
Se	77	1	nogas	51.118	29.204	9009	7.07	100	51.1	90	110	ICV Main CR1 Failed
Se	82	1	nogas	98.749	6.054	5421	5.76	100	98.7	90	110	
Sr	88	1	nogas	95.542	0.717	726136	0.20	100	95.5	90	110	
Mo	95	1	nogas	95.627	2.241	153368	2.31	100	95.6	90	110	
Ag	107	1	nogas	96.829	2.043	413287	1.75	100	96.8	90	110	
Cd	111	1	nogas	97.771	1.072	93794	1.03	100	97.8	90	110	
Sn	118	1	nogas	92.888	1.107	263323	1.77	100	92.9	90	110	
Sb	121	1	nogas	98.582	1.167	409772	0.65	100	98.6	90	110	
Ba	137	1	nogas	97.291	1.018	138155	0.36	100	97.3	90	110	
Tl	205	1	nogas	99.659	1.243	1232147	1.79	100	99.7	90	110	
Pb	208	1	nogas	98.283	1.083	921119	0.29	100	98.3	90	110	
U	238	1	nogas	95.331	1.511	2200398	0.24	100	95.3	90	110	
Li	7	1	nogas	110.257	0.915	509716	2.03	100	110.3	90	110	ICV Main CR1 Failed
Si	28	1	nogas	5052.381	0.657	10981576	1.13	5000	101.0	90	110	
Ba	135	1	nogas	97.484	0.768	80811	1.54	100	97.5	90	110	
La	139	1	nogas	203.213	56.094	283	51.07	100	203.2	90	110	ICV Main CR1 Failed
Au	197	1	nogas	-76.571	0.000	0	#DIV/0!	100	-76.6	90	110	ICV Main CR1 Failed
Tl	203	1	nogas	100.779	1.300	511043	0.87	100	100.8	90	110	
Na	23	2	He	10416.544	1.171	1985669	1.91	10000	104.2	90	110	
Mg	24	2	He	9829.492	1.154	883167	1.42	10000	98.3	90	110	
Al	27	2	He	82.505	3.025	3897	5.04	100	82.5	90	110	ICV Main CR1 Failed
K	39	2	He	9817.632	1.916	457170	2.68	10000	98.2	90	110	
Ca	43	2	He	9000.388	2.618	1087	1.41	10000	90.0	90	110	
Ca	44	2	He	9966.506	6.322	18977	3.72	10000	99.7	90	110	
V	51	2	He	98.346	2.298	34736	0.33	100	98.3	90	110	
Cr	52	2	He	101.317	3.536	45457	2.98	100	101.3	90	110	
Mn	55	2	He	97.915	1.606	22468	1.00	100	97.9	90	110	
Fe	56	2	He	9732.221	3.044	3386157	0.73	10000	97.3	90	110	
Co	59	2	He	101.130	3.509	64982	1.06	100	101.1	90	110	
Ni	60	2	He	97.090	2.693	17332	3.36	100	97.1	90	110	
Cu	63	2	He	99.351	4.900	50076	2.46	100	99.4	90	110	
Zn	66	2	He	97.342	6.435	8552	3.83	100	97.3	90	110	
As	75	2	He	98.592	1.771	5528	2.39	100	98.6	90	110	
Sn	118	2	He	95.708	3.511	29614	1.27	100	95.7	90	110	
Sb	121	2	He	95.041	4.062	42208	2.62	100	95.0	90	110	
Se	78	2	He	85.965	12.095	319	12.64	100	86.0	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
Ge	72	1	nogas	602437	0.52	610209	98.73	70	125	
In	115	1	nogas	726612	1.09	742039	97.92	70	125	
Li	6	1	nogas	270649	2.12	256544	105.50	70	125	

Initial Calibration Verification (ICV) Report

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Bi	209	1	nogas	1067915	1.28	1099361	97.14	70	125	
Ge	72	2	He	32915	2.56	34709	94.83	70	125	

Sample Report

Sample Table

Sample Name	LLCCV2
Data File Name	296SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-05T22:13:03-06:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	289CALB.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	2.308	2.308	7.08	3917	0.06	2000	
B	11	1	nogas	51.365	51.365	12.81	67781	0.08	2000	
Na	23	1	nogas	205.360	205.360	1.95	1457529	0.01	200000	
Mg	24	1	nogas	208.648	208.648	2.51	788195	0.03	200000	
Al	27	1	nogas	2.790	2.790	2.34	30250	0.01	2000	
K	39	1	nogas	221.346	221.346	2.84	2049607	0.01	200000	
Ca	43	1	nogas	219.560	219.560	8.80	2013	10.90	200000	
Ca	44	1	nogas	218.319	218.319	3.04	38082	0.57	200000	
Ti	47	1	nogas	2.001	2.001	9.26	830	0.24	2000	
V	51	1	nogas	-5.571	-5.571	-9.92	97392	-0.01	2000	
Cr	52	1	nogas	1.788	1.788	3.87	15090	0.01	2000	
Mn	55	1	nogas	2.102	2.102	5.83	19388	0.01	2000	
Fe	56	1	nogas	208.408	208.408	2.80	1381851	0.02	200000	
Co	59	1	nogas	2.134	2.134	8.24	11201	0.02	2000	
Ni	60	1	nogas	1.899	1.899	19.04	2667	0.07	2000	
Cu	63	1	nogas	2.803	2.803	4.30	10483	0.03	2000	
Zn	66	1	nogas	2.635	2.635	5.61	3144	0.08	2000	
As	75	1	nogas	-3.830	-3.830	-22.00	18724	-0.02	2000	
Se	77	1	nogas	-35.168	-35.168	-17.88	5591	-0.63	2000	
Se	82	1	nogas	0.764	0.764	147.75	313	0.24	2000	
Sr	88	1	nogas	2.121	2.121	1.51	16478	0.01	2000	
Mo	95	1	nogas	1.895	1.895	8.39	3100	0.06	2000	
Ag	107	1	nogas	2.095	2.095	6.25	8986	0.02	2000	
Cd	111	1	nogas	1.999	1.999	9.44	1913	0.10	2000	
Sn	118	1	nogas	2.177	2.177	3.05	6868	0.03	2000	
Sb	121	1	nogas	1.966	1.966	4.48	8719	0.02	2000	
Ba	137	1	nogas	2.197	2.197	8.38	3374	0.07	2000	
Tl	205	1	nogas	2.052	2.052	2.59	25762	0.01	2000	
Pb	208	1	nogas	2.076	2.076	0.22	19917	0.01	2000	
U	238	1	nogas	2.016	2.016	1.03	47228	0.00	2000	
Si	28	1	nogas	169.790	169.790	5.39	1023372	0.02	2000	
La	139	1	nogas	55.077	55.077	105.52	93	59.01	2000	
Au	197	1	nogas	155.854	155.854	258.30	10	1558.54	2000	
Na	23	2	He	190.220	190.220	1.63	53357	0.36	200000	
Mg	24	2	He	197.648	197.648	6.52	18583	1.06	200000	
Al	27	2	He	1.663	1.663	41.76	227	0.73	2000	
K	39	2	He	195.462	195.462	9.84	15924	1.23	200000	
Ca	43	2	He	132.507	132.507	34.72	17	795.04	200000	
Ca	44	2	He	211.580	211.580	14.42	487	43.47	200000	
V	51	2	He	1.961	1.961	1.04	867	0.23	2000	

Sample Report

Cr	52	2	He	2.204	2.204	11.13	1163	0.19	2000	
Mn	55	2	He	2.184	2.184	8.12	583	0.37	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Fe	56	2	He	203.087	203.087	0.57	74839	0.27	200000	
Co	59	2	He	1.948	1.948	17.09	1320	0.15	2000	
Ni	60	2	He	1.601	1.601	19.99	420	0.38	2000	
Cu	63	2	He	2.361	2.361	11.85	1680	0.14	2000	
Zn	66	2	He	2.693	2.693	33.85	280	0.96	2000	
As	75	2	He	1.810	1.810	21.37	122	1.48	2000	
Sb	121	2	He	2.013	2.013	11.53	987	0.20	2000	
Se	78	2	He	3.331	3.331	90.79	17	19.99	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	601803	0.68	610209	98.62	70	125	
In	115	1	nogas	722942	0.77	742039	97.43	70	125	
Li	6	1	nogas	255058	0.19	256544	99.42	70	125	
Bi	209	1	nogas	1078976	0.70	1099361	98.15	70	125	
Ge	72	2	He	34285	1.23	34709	98.78	70	125	

Low Level Initial Calibration Verification (LLICV) Report

Sample Table

Sample Name	LLCCV5
Data File Name	297LICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-05T22:15:16-06:00
Sample Type	LLICV
Dilution	1
Comment	
ISTD Ref File Name	289CALB.d
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	5.770	3.659	9816	2.75	5	115.4	70	130	
B	11	1	nogas	39.390	2.604	58014	1.08	25	157.6	70	130	LLICV Main CR1 Failed
Na	23	1	nogas	517.884	1.785	3124990	1.86	500	103.6	70	130	
Mg	24	1	nogas	521.507	1.707	1967047	2.41	500	104.3	70	130	
Al	27	1	nogas	5.600	2.917	49998	1.62	5	112.0	70	130	
P	31	1	nogas	26.883	2.744	18637	1.24	25	107.5	70	130	
K	39	1	nogas	507.567	1.421	3191145	0.31	500	101.5	70	130	
Ca	43	1	nogas	538.370	8.359	4581	7.73	500	107.7	70	130	
Ca	44	1	nogas	518.193	1.840	76792	1.53	500	103.6	70	130	
Ti	47	1	nogas	5.190	5.935	2114	6.10	5	103.8	70	130	
V	51	1	nogas	-0.791	-122.909	125605	4.43	5	-15.8	70	130	LLICV Main CR1 Failed
Cr	52	1	nogas	5.042	5.918	31663	5.25	5	100.8	70	130	
Mn	55	1	nogas	5.080	1.098	38938	0.50	5	101.6	70	130	
Fe	56	1	nogas	517.886	1.389	3059550	0.63	500	103.6	70	130	
Co	59	1	nogas	5.151	1.629	27155	2.06	5	103.0	70	130	
Ni	60	1	nogas	4.840	9.309	6125	8.27	5	96.8	70	130	
Cu	63	1	nogas	4.783	5.148	16328	4.67	5	95.7	70	130	
Zn	66	1	nogas	5.122	8.249	5621	7.56	5	102.4	70	130	
As	75	1	nogas	-0.316	-183.080	22282	2.36	5	-6.3	70	130	LLICV Main CR1 Failed
Se	77	1	nogas	-30.294	-28.202	5835	5.19	5	-605.9	70	130	LLICV Main CR1 Failed
Se	82	1	nogas	3.569	16.542	463	6.59	5	71.4	70	130	
Sr	88	1	nogas	5.008	2.367	38725	1.71	5	100.2	70	130	
Mo	95	1	nogas	4.991	0.770	8132	1.19	5	99.8	70	130	
Ag	107	1	nogas	5.325	1.462	22960	1.33	5	106.5	70	130	
Cd	111	1	nogas	4.993	7.259	4867	7.65	5	99.9	70	130	
Sn	118	1	nogas	5.050	4.388	15244	3.82	5	101.0	70	130	
Sb	121	1	nogas	5.024	3.495	21591	2.87	5	100.5	70	130	
Ba	137	1	nogas	5.137	2.097	7669	1.63	5	102.7	70	130	
Tl	205	1	nogas	4.859	1.535	60860	2.05	5	97.2	70	130	
Pb	208	1	nogas	5.000	1.787	47634	2.94	5	100.0	70	130	
U	238	1	nogas	4.898	1.352	114501	1.23	5	98.0	70	130	
Li	7	1	nogas	5.909	1.730	45568	0.79	5	118.2	70	130	
Si	28	1	nogas	368.105	4.108	1440308	2.64	25	1472.4	70	130	LLICV Main CR1 Failed
La	139	1	nogas	46.093	91.245	83	66.09	5	921.9	70	130	LLICV Main CR1 Failed
Au	197	1	nogas	230.334	151.256	13	114.56	5	4606.7	70	130	LLICV Main CR1 Failed
Na	23	2	He	501.095	1.599	112967	1.01	500	100.2	70	130	
Mg	24	2	He	498.161	3.678	46040	3.30	500	99.6	70	130	
Al	27	2	He	3.875	38.152	327	20.84	5	77.5	70	130	
K	39	2	He	502.133	1.920	30160	1.73	500	100.4	70	130	
Ca	43	2	He	484.320	29.373	60	28.87	500	96.9	70	130	
Ca	44	2	He	488.574	19.123	1020	17.97	500	97.7	70	130	
V	51	2	He	4.961	1.141	1939	1.07	5	99.2	70	130	
Cr	52	2	He	4.464	15.660	2184	14.23	5	89.3	70	130	
Mn	55	2	He	5.198	6.213	1283	6.35	5	104.0	70	130	
Fe	56	2	He	511.384	0.805	183894	0.36	500	102.3	70	130	
Co	59	2	He	5.290	1.485	3507	1.86	5	105.8	70	130	
Ni	60	2	He	4.804	14.930	997	13.32	5	96.1	70	130	
Cu	63	2	He	5.022	5.626	3022	4.39	5	100.4	70	130	
Zn	66	2	He	6.301	12.064	600	11.67	5	126.0	70	130	
As	75	2	He	4.315	17.641	264	16.93	5	86.3	70	130	
Sb	121	2	He	4.775	9.438	2230	9.07	5	95.5	70	130	
Se	78	2	He	6.234	29.959	27	25.70	5	124.7	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	607258	0.66	610209	99.52	70	125	
In	115	1	nogas	737299	0.44	742039	99.36	70	125	
Li	6	1	nogas	255891	0.95	256544	99.75	70	125	
Bi	209	1	nogas	1079668	1.75	1099361	98.21	70	125	

Low Level Initial Calibration Verification (LLICV) Report

Ge	72	2	He	33790	0.45	34709	97.35	70	125	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	ICCB
Data File Name	298_ICB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-05T22:17:31-06:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	289CALB.d
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	26.6	23	24.7	1	
B	11	1	nogas	4.113	36.6	28940	5.8	10	
Na	23	1	nogas	-20.427	-10.1	262660	3.0	100	
Mg	24	1	nogas	-0.323	-147.2	3101	59.1	100	
Al	27	1	nogas	-0.960	-2.7	4511	3.6	5	
P	31	1	nogas	-0.806	-69.9	10230	1.9	10	
K	39	1	nogas	-4.684	-62.0	1175972	0.6	100	
Ca	43	1	nogas	-10.267	-118.5	193	50.2	100	
Ca	44	1	nogas	-4.993	-56.5	9820	3.2	100	
Ti	47	1	nogas	-0.032	-44.3	23	24.7	2.5	
V	51	1	nogas	-6.454	-1.8	92833	0.4	2.5	
Cr	52	1	nogas	-0.267	-11.9	4831	3.6	2.5	
Mn	55	1	nogas	-0.189	-8.9	4641	1.8	2.5	
Fe	56	1	nogas	-8.478	-21.3	226073	4.3	100	
Co	59	1	nogas	0.012	75.6	147	31.5	2.5	
Ni	60	1	nogas	-0.303	-4.4	117	13.1	2.5	
Cu	63	1	nogas	-0.311	-8.5	1537	5.5	2.5	
Zn	66	1	nogas	-0.390	-22.7	193	44.6	2.5	
As	75	1	nogas	-5.414	-11.9	17296	3.6	2.5	
Se	77	1	nogas	-36.942	-22.5	5548	6.2	2.5	
Se	82	1	nogas	-1.043	-81.2	220	19.8	2.5	
Sr	88	1	nogas	-0.029	-23.4	160	33.1	2.5	
Mo	95	1	nogas	-0.031	-23.3	17	69.3	2.5	
Ag	107	1	nogas	0.013	53.1	110	27.3	2.5	
Cd	111	1	nogas	0.004	291.4	10	100.0	1	
Sn	118	1	nogas	0.005	377.4	773	7.4	5	
Sb	121	1	nogas	-0.043	-80.2	390	35.9	2.5	
Ba	137	1	nogas	-0.107	-39.3	127	47.6	2.5	
Tl	205	1	nogas	0.018	16.6	357	11.3	1	
Pb	208	1	nogas	-0.008	-150.0	183	67.3	2.5	
U	238	1	nogas	0.006	53.7	367	21.9	2.5	
Si	28	1	nogas	-5.473	-18.9	669406	0.8	5	
La	139	1	nogas	15.653	102.6	43	48.0	2.5	ICB Main CR1 Failed
Au	197	1	nogas	227.433	115.8	13	86.6	2.5	ICB Main CR1 Failed
Na	23	2	He	-21.868	-13.3	11501	5.1	100	
Mg	24	2	He	-0.414	-54.1	53	39.0	100	
Al	27	2	He	-1.991	-44.3	53	78.1	5	
K	39	2	He	-0.629	-1227.9	6511	5.8	100	
Ca	43	2	He	0.000	#DIV/0!	0	#DIV/0!	100	
Ca	44	2	He	-27.690	-10.7	13	43.3	100	
V	51	2	He	-0.001	-3129.0	147	8.2	2.5	
Cr	52	2	He	-0.018	-423.7	127	27.7	2.5	
Mn	55	2	He	-0.122	-40.1	33	34.6	2.5	
Fe	56	2	He	-1.331	-7.6	743	4.7	100	

Initial Calibration Blank (ICB) Report

Co	59	2	He	0.001	2918.9	17	91.7	2.5	
Ni	60	2	He	-0.671	0.0	0	#DIV/0!	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Cu	63	2	He	-0.415	-12.0	233	10.8	2.5	
Zn	66	2	He	-0.112	-150.4	23	65.5	2.5	
As	75	2	He	-0.194	-62.0	6	124.9	2.5	
Sb	121	2	He	-0.020	-62.6	47	12.4	2.5	
Se	78	2	He	0.721	152.5	7	62.4	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	604644	0.51	610209	99.09	70	125	
In	115	1	nogas	734503	0.17	742039	98.98	70	125	
Li	6	1	nogas	258641	1.90	256544	100.82	70	125	
Bi	209	1	nogas	1100838	0.82	1099361	100.13	70	125	
Ge	72	2	He	34085	0.21	34709	98.20	70	125	

Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	ICSA
Data File Name	299ICSA.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-05T22:19:43-06:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	289CALB.d
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	0.002	327.2	7	173.2	0	ICSA Main CR1 Failed
B	11	1	nogas	4.833	50.1	28243	6.2	0	ICSA Main CR1 Failed
Na	23	1	nogas	98047.309	1.2	515408095	0.6	0	
Mg	24	1	nogas	95378.422	1.1	353909508	0.2	0	
Al	27	1	nogas	62611.289	0.6	420210940	0.5	0	
P	31	1	nogas	81510.305	0.3	23846164	0.6	0	
K	39	1	nogas	97532.121	2.0	371720275	2.1	0	
Ca	43	1	nogas	95517.859	0.7	739729	0.5	0	
Ca	44	1	nogas	94611.426	0.3	11728403	0.5	0	
Ti	47	1	nogas	1981.610	0.5	767899	0.4	0	
V	51	1	nogas	-14.937	-6.5	43329	12.5	0	ICSA Main CR1 Failed
Cr	52	1	nogas	-0.171	-28.0	5164	4.7	0	ICSA Main CR1 Failed
Mn	55	1	nogas	0.185	25.0	6868	4.6	0	ICSA Main CR1 Failed
Fe	56	1	nogas	96118.792	0.9	501060278	0.5	0	
Co	59	1	nogas	0.073	22.0	453	17.7	0	ICSA Main CR1 Failed
Ni	60	1	nogas	0.125	78.4	597	18.5	0	ICSA Main CR1 Failed
Cu	63	1	nogas	0.397	19.7	3484	6.4	0	ICSA Main CR1 Failed
Zn	66	1	nogas	0.882	31.5	1400	18.6	0	ICSA Main CR1 Failed
As	75	1	nogas	-12.805	-5.8	9923	6.9	0	ICSA Main CR1 Failed
Se	77	1	nogas	-88.443	-8.6	3407	8.5	0	ICSA Main CR1 Failed
Se	82	1	nogas	-2.298	-48.2	150	37.1	0	ICSA Main CR1 Failed
Sr	88	1	nogas	0.871	1.6	6832	1.1	0	ICSA Main CR1 Failed
Mo	95	1	nogas	1938.729	0.4	3033235	0.2	0	
Ag	107	1	nogas	0.040	35.1	217	27.0	0	ICSA Main CR1 Failed
Cd	111	1	nogas	0.688	29.1	640	28.4	0	ICSA Main CR1 Failed
Sn	118	1	nogas	-0.023	-145.9	660	13.9	0	ICSA Main CR1 Failed
Sb	121	1	nogas	0.012	181.6	600	14.5	0	ICSA Main CR1 Failed
Ba	137	1	nogas	0.002	509.7	270	6.4	0	ICSA Main CR1 Failed
Tl	205	1	nogas	0.011	4.1	253	2.3	0	ICSA Main CR1 Failed
Pb	208	1	nogas	0.080	7.1	953	5.3	0	ICSA Main CR1 Failed
Si	28	1	nogas	42.142	6.4	745650	0.6	0	
La	139	1	nogas	57.922	49.5	93	37.6	0	
Na	23	2	He	96000.574	2.8	18002802	1.1	0	
Mg	24	2	He	94528.207	2.8	8412142	0.6	0	
Al	27	2	He	67179.402	2.8	3027338	1.6	0	
K	39	2	He	95410.932	2.7	4346236	1.2	0	
Ca	43	2	He	90249.165	3.5	10797	2.8	0	
Ca	44	2	He	96516.015	3.0	181627	0.3	0	
V	51	2	He	-0.227	-24.7	63	35.2	0	ICSA Main CR1 Failed
Cr	52	2	He	0.122	19.5	183	6.3	0	ICSA Main CR1 Failed
Mn	55	2	He	0.078	372.8	77	83.9	0	ICSA Main CR1 Failed
Fe	56	2	He	93006.077	3.0	32053228	0.9	0	
Co	59	2	He	0.028	25.7	33	17.3	0	ICSA Main CR1 Failed
Ni	60	2	He	-0.332	-48.1	60	50.0	0	ICSA Main CR1 Failed
Cu	63	2	He	-0.044	-125.7	407	5.1	0	ICSA Main CR1 Failed
Zn	66	2	He	0.447	122.6	70	65.5	0	ICSA Main CR1 Failed
As	75	2	He	-0.048	-227.0	13	43.3	0	ICSA Main CR1 Failed
Sb	121	2	He	-0.045	-32.0	33	17.3	0	ICSA Main CR1 Failed
Se	78	2	He	1.545	77.6	9	44.6	0	ICSA Main CR1 Failed

Interference Check Solution A (ICS-A) Report

Interference Check Solution A (ICS-A) Report

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	587933	0.45	610209	96.35	70	125	
In	115	1	nogas	698165	0.37	742039	94.09	70	125	
Li	6	1	nogas	247390	0.68	256544	96.43	70	125	
Bi	209	1	nogas	1016480	0.24	1099361	92.46	70	125	
Ge	72	2	He	32618	3.37	34709	93.98	70	125	

Interference Check Solution AB (ICS-AB) Report

Sample Table

Sample Name	ICSAB
Data File Name	300ICSB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-05T22:22:00-06:00
Sample Type	ICSB
Dilution	1
Comment	
ISTD Ref File Name	289CALB.d
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	104.884	1.272	187875	0.89	100	104.9	80	120	
B	11	1	nogas	545.214	1.326	504911	1.22	100	545.2	80	120	
Na	23	1	nogas	104902.836	1.314	555181112	0.41	100	104902.8	80	120	ICSB Main CR1 Failed
Mg	24	1	nogas	102492.190	0.942	382909984	0.14	100	102492.2	80	120	ICSB Main CR1 Failed
Al	27	1	nogas	61794.907	1.979	415486914	1.02	100	61794.9	80	120	ICSB Main CR1 Failed
K	39	1	nogas	106036.542	2.703	404741376	1.73	100	106036.5	80	120	
Ca	43	1	nogas	103086.299	1.129	799824	0.48	100	103086.3	80	120	ICSB Main CR1 Failed
Ca	44	1	nogas	102933.996	1.298	12782947	0.54	100	102934.0	80	120	
Ti	47	1	nogas	2035.122	1.076	790125	0.62	100	2035.1	80	120	ICSB Main CR1 Failed
V	51	1	nogas	82.284	3.556	582416	2.01	100	82.3	80	120	
Cr	52	1	nogas	95.106	1.122	471883	1.59	100	95.1	80	120	
Mn	55	1	nogas	96.880	1.100	617065	0.35	100	96.9	80	120	
Fe	56	1	nogas	104689.773	0.826	546759946	0.24	100	104689.8	80	120	
Co	59	1	nogas	96.376	0.830	491316	0.44	100	96.4	80	120	
Ni	60	1	nogas	95.690	1.579	108898	1.22	100	95.7	80	120	
Cu	63	1	nogas	95.379	1.696	270873	1.16	100	95.4	80	120	
Zn	66	1	nogas	98.365	1.922	94485	0.99	100	98.4	80	120	
As	75	1	nogas	86.781	1.914	103006	1.29	100	86.8	80	120	
Se	77	1	nogas	14.906	65.687	7408	5.40	100	14.9	80	120	
Se	82	1	nogas	95.078	2.358	5114	3.07	100	95.1	80	120	
Sr	88	1	nogas	98.030	1.499	728455	0.61	100	98.0	80	120	
Mo	95	1	nogas	2009.730	0.852	3150324	0.75	100	2009.7	80	120	ICSB Main CR1 Failed
Ag	107	1	nogas	92.801	0.994	387302	0.36	100	92.8	80	120	
Cd	111	1	nogas	98.642	1.679	91026	2.33	100	98.6	80	120	
Sn	118	1	nogas	99.409	1.443	270987	1.49	100	99.4	80	120	
Sb	121	1	nogas	97.066	1.559	394522	1.29	100	97.1	80	120	
Ba	137	1	nogas	97.247	1.770	132825	1.67	100	97.2	80	120	
Tl	205	1	nogas	95.580	1.975	1127686	1.50	100	95.6	80	120	
Pb	208	1	nogas	98.321	0.840	879458	0.25	100	98.3	80	120	
U	238	1	nogas	101.680	0.651	2240129	1.33	100	101.7	80	120	
Si	28	1	nogas	5138.984	0.806	10909929	0.45	100	5139.0	80	120	ICSB Main CR1 Failed
La	139	1	nogas	348.984	8.638	453	8.92	100	349.0	80	120	ICSB Main CR1 Failed
Na	23	2	He	103789.340	5.119	19490424	1.17	100	103789.3	80	120	ICSB Main CR1 Failed
Mg	24	2	He	102111.979	4.307	9102385	0.52	100	102112.0	80	120	ICSB Main CR1 Failed
Al	27	2	He	65365.117	2.399	2952047	2.28	100	65365.1	80	120	ICSB Main CR1 Failed
K	39	2	He	102243.245	3.827	4665267	0.82	100	102243.2	80	120	ICSB Main CR1 Failed
Ca	43	2	He	98621.243	2.525	11824	2.42	100	98621.2	80	120	
Ca	44	2	He	104702.557	5.024	197328	0.68	100	104702.6	80	120	
V	51	2	He	96.080	4.655	33678	0.32	100	96.1	80	120	
Cr	52	2	He	94.524	3.648	42101	0.93	100	94.5	80	120	
Mn	55	2	He	96.050	3.425	21878	1.28	100	96.1	80	120	
Fe	56	2	He	101167.949	3.809	34930844	0.93	100	101167.9	80	120	
Co	59	2	He	94.811	5.961	60443	1.53	100	94.8	80	120	
Ni	60	2	He	91.769	6.664	16248	2.07	100	91.8	80	120	
Cu	63	2	He	95.389	6.128	47730	2.46	100	95.4	80	120	
Zn	66	2	He	94.098	2.048	8219	3.55	100	94.1	80	120	
As	75	2	He	97.220	1.888	5414	4.32	100	97.2	80	120	
Sb	121	2	He	94.967	3.898	41874	2.52	100	95.0	80	120	
Se	78	2	He	94.361	9.713	346	5.04	100	94.4	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	589072	0.97	610209	96.54	70	125	
In	115	1	nogas	698864	0.68	742039	94.18	70	125	
Li	6	1	nogas	269451	0.63	256544	105.03	70	125	
Bi	209	1	nogas	1019159	0.69	1099361	92.70	70	125	
Ge	72	2	He	32695	4.53	34709	94.20	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	304_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-05T22:33:56-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	289CALB.d
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	101.349	1.024	182221	0.55	100	101.3	90	110	
B	11	1	nogas	490.586	1.037	458708	1.59	500	98.1	90	110	
Na	23	1	nogas	10400.671	1.286	55866755	1.35	10000	104.0	90	110	
Mg	24	1	nogas	9544.164	0.420	35979092	0.47	10000	95.4	90	110	
Al	27	1	nogas	66.316	0.559	456976	0.62	100	66.3	90	110	CCV Main CR1-2 Failed
P	31	1	nogas	434.192	1.621	137467	0.46	500	86.8	90	110	CCV Main CR1-2 Failed
K	39	1	nogas	9831.398	0.824	38604565	0.61	10000	98.3	90	110	
Ca	43	1	nogas	9963.606	1.139	77585	1.08	10000	99.6	90	110	
Ca	44	1	nogas	10321.697	1.367	1291546	0.24	10000	103.2	90	110	
Ti	47	1	nogas	95.535	2.592	37137	1.46	100	95.5	90	110	
V	51	1	nogas	83.484	2.864	589340	1.18	100	83.5	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	96.662	2.370	479639	1.20	100	96.7	90	110	
Mn	55	1	nogas	98.253	2.467	625951	1.36	100	98.3	90	110	
Fe	56	1	nogas	9753.788	1.696	51201104	0.75	10000	97.5	90	110	
Co	59	1	nogas	96.714	1.741	493233	0.73	100	96.7	90	110	
Ni	60	1	nogas	95.258	1.774	108452	0.75	100	95.3	90	110	
Cu	63	1	nogas	96.849	2.352	275122	1.49	100	96.8	90	110	
Zn	66	1	nogas	98.034	1.018	94224	1.53	100	98.0	90	110	
As	75	1	nogas	87.104	2.968	103352	1.95	100	87.1	90	110	CCV Main CR1-2 Failed
Se	77	1	nogas	13.433	72.024	7352	4.01	100	13.4	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	95.196	12.719	5118	10.91	100	95.2	90	110	
Sr	88	1	nogas	105.216	2.663	782106	1.53	100	105.2	90	110	
Mo	95	1	nogas	94.358	2.123	148024	1.20	100	94.4	90	110	
Ag	107	1	nogas	96.992	1.442	404971	0.86	100	97.0	90	110	
Cd	111	1	nogas	96.877	1.484	92712	1.89	100	96.9	90	110	
Sn	118	1	nogas	96.182	0.901	271941	0.56	100	96.2	90	110	
Sb	121	1	nogas	97.095	2.085	394783	0.95	100	97.1	90	110	
Ba	137	1	nogas	98.928	0.690	140133	0.70	100	98.9	90	110	
Tl	205	1	nogas	95.600	0.558	1172127	0.33	100	95.6	90	110	
Pb	208	1	nogas	96.556	0.887	897514	1.17	100	96.6	90	110	
U	238	1	nogas	95.897	1.537	2195438	1.98	100	95.9	90	110	
Li	7	1	nogas	101.450	0.499	470443	0.69	100	101.4	90	110	
Si	28	1	nogas	4998.607	0.631	10635454	1.29	5000	100.0	90	110	
Ba	135	1	nogas	99.986	2.057	82676	2.41	100	100.0	90	110	
La	139	1	nogas	143.212	43.166	207	39.11	100	143.2	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	82.560	333.846	7	173.21	100	82.6	90	110	CCV Main CR1-2 Failed
Tl	203	1	nogas	95.563	0.793	480601	0.59	100	95.6	90	110	
Na	23	2	He	10362.351	3.570	2021920	0.99	10000	103.6	90	110	
Mg	24	2	He	9394.888	2.064	864295	1.19	10000	93.9	90	110	
Al	27	2	He	65.474	11.369	3194	10.06	100	65.5	90	110	CCV Main CR1-2 Failed
K	39	2	He	9417.614	2.203	449220	0.55	10000	94.2	90	110	
Ca	43	2	He	9909.351	5.797	1227	8.17	10000	99.1	90	110	
Ca	44	2	He	9971.090	2.477	19471	5.09	10000	99.7	90	110	
V	51	2	He	93.300	1.995	33756	1.08	100	93.3	90	110	
Cr	52	2	He	95.085	0.783	43709	2.80	100	95.1	90	110	
Mn	55	2	He	93.440	1.439	21964	2.78	100	93.4	90	110	
Fe	56	2	He	9470.205	2.158	3374662	0.68	10000	94.7	90	110	
Co	59	2	He	93.398	0.795	61490	2.40	100	93.4	90	110	
Ni	60	2	He	94.470	2.371	17269	1.71	100	94.5	90	110	
Cu	63	2	He	93.427	1.295	48285	2.68	100	93.4	90	110	
Zn	66	2	He	92.757	2.683	8352	0.55	100	92.8	90	110	
As	75	2	He	92.591	3.290	5318	4.14	100	92.6	90	110	
Sb	121	2	He	94.563	3.181	43007	1.52	100	94.6	90	110	
Se	78	2	He	94.350	5.469	357	2.76	100	94.3	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	589347	1.13	610209	96.58	70	125	
In	115	1	nogas	724811	0.88	742039	97.68	70	125	
Li	6	1	nogas	270458	0.83	256544	105.42	70	125	
Bi	209	1	nogas	1059041	0.53	1099361	96.33	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	33707	2.75	34709	97.11	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	305_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-05T22:36:07-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	289CALB.d
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	0.034	63.1	60	60.1	1	
B	11	1	nogas	23.098	26.7	44041	11.5	10	CCB Main CR1 Failed
Na	23	1	nogas	-8.637	-14.9	320782	3.1	100	
Mg	24	1	nogas	2.871	7.3	15110	5.8	100	
Al	27	1	nogas	-0.577	-9.1	7138	4.3	5	
P	31	1	nogas	-7.131	-5.2	8312	1.0	10	
K	39	1	nogas	3.069	244.8	1204085	2.4	100	
Ca	43	1	nogas	1.977	182.5	290	9.1	100	
Ca	44	1	nogas	3.216	103.1	10847	4.0	100	
Ti	47	1	nogas	0.068	75.4	63	32.9	2.5	
V	51	1	nogas	-11.801	-8.1	62261	7.9	2.5	
Cr	52	1	nogas	-0.418	-10.2	4064	4.5	2.5	
Mn	55	1	nogas	-0.234	-25.4	4341	8.1	2.5	
Fe	56	1	nogas	-6.200	-12.8	237840	1.7	100	
Co	59	1	nogas	0.037	31.6	277	21.8	2.5	
Ni	60	1	nogas	-0.282	-11.3	140	25.8	2.5	
Cu	63	1	nogas	-0.251	-16.3	1707	7.1	2.5	
Zn	66	1	nogas	-0.383	-12.1	200	22.9	2.5	
As	75	1	nogas	-9.869	-6.4	13002	5.4	2.5	
Se	77	1	nogas	-75.689	-5.8	4004	5.1	2.5	
Se	82	1	nogas	-0.656	-54.1	240	8.3	2.5	
Sr	88	1	nogas	0.032	35.9	623	14.4	2.5	
Mo	95	1	nogas	0.106	53.3	237	37.9	2.5	
Ag	107	1	nogas	0.037	45.7	213	35.2	2.5	
Cd	111	1	nogas	0.027	43.3	33	34.6	1	
Sn	118	1	nogas	0.207	180.6	1355	78.8	5	
Sb	121	1	nogas	-0.009	-31.5	530	1.9	2.5	
Ba	137	1	nogas	-0.117	-23.7	113	35.7	2.5	
Tl	205	1	nogas	0.111	15.6	1533	15.7	1	
Pb	208	1	nogas	0.031	21.9	557	13.0	2.5	
U	238	1	nogas	0.042	16.8	1213	15.0	2.5	
Si	28	1	nogas	18.093	34.8	716319	1.7	5	CCB Main CR1 Failed
La	139	1	nogas	0.128	9098.2	23	65.5	2.5	
Au	197	1	nogas	-76.571	0.0	0	#DIV/0!	2.5	
Na	23	2	He	-18.488	-15.9	12251	4.3	100	
Mg	24	2	He	2.847	21.6	360	17.3	100	
Al	27	2	He	-1.988	-40.8	53	71.0	5	
K	39	2	He	15.790	17.0	7345	0.2	100	
Ca	43	2	He	0.000	#DIV/0!	0	#DIV/0!	100	
Ca	44	2	He	-15.937	-67.0	37	56.8	100	
V	51	2	He	-0.113	-44.2	107	16.8	2.5	
Cr	52	2	He	0.060	251.5	163	41.7	2.5	
Mn	55	2	He	-0.109	-59.1	37	41.7	2.5	
Fe	56	2	He	1.657	33.8	1833	10.6	100	
Co	59	2	He	-0.004	-843.2	13	173.2	2.5	
Ni	60	2	He	-0.455	-24.1	40	50.0	2.5	

Continuing Calibration Blank (CCB) Report

Cu	63	2	He	-0.597	-0.9	140	0.0	2.5	
Zn	66	2	He	0.068	427.0	40	66.1	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
As	75	2	He	-0.176	-32.9	7	50.0	2.5	
Sb	121	2	He	-0.006	-1301.6	53	65.8	2.5	
Se	78	2	He	0.546	337.3	6	115.5	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	603555	0.80	610209	98.91	70	125	
In	115	1	nogas	738496	0.44	742039	99.52	70	125	
Li	6	1	nogas	253616	1.07	256544	98.86	70	125	
Bi	209	1	nogas	1095828	1.53	1099361	99.68	70	125	
Ge	72	2	He	34341	1.96	34709	98.94	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	2018-01-05T23:00:30-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	289CALB.d
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	101.761	1.930	192579	2.39	100	101.8	90	110	
B	11	1	nogas	497.721	1.611	489379	1.81	500	99.5	90	110	
Na	23	1	nogas	10199.028	1.153	56500524	0.56	10000	102.0	90	110	
Mg	24	1	nogas	9530.010	1.569	37046513	1.03	10000	95.3	90	110	
Al	27	1	nogas	70.001	2.934	507552	2.12	100	70.0	90	110	CCV Main CR1-2 Failed
P	31	1	nogas	435.616	3.294	145266	1.92	500	87.1	90	110	CCV Main CR1-2 Failed
K	39	1	nogas	9658.007	1.979	39976431	0.59	10000	96.6	90	110	
Ca	43	1	nogas	9599.589	3.180	78767	2.82	10000	96.0	90	110	
Ca	44	1	nogas	9787.752	1.786	1290958	0.23	10000	97.9	90	110	
Ti	47	1	nogas	92.212	4.370	37775	4.30	100	92.2	90	110	
V	51	1	nogas	91.490	1.899	667795	0.48	100	91.5	90	110	
Cr	52	1	nogas	95.661	2.227	500206	0.66	100	95.7	90	110	
Mn	55	1	nogas	97.216	2.161	652642	0.73	100	97.2	90	110	
Fe	56	1	nogas	9715.922	2.572	53734697	1.01	10000	97.2	90	110	
Co	59	1	nogas	96.937	1.479	520903	0.07	100	96.9	90	110	
Ni	60	1	nogas	95.790	2.922	114897	1.81	100	95.8	90	110	
Cu	63	1	nogas	96.038	0.740	287511	0.86	100	96.0	90	110	
Zn	66	1	nogas	96.742	1.580	97982	2.11	100	96.7	90	110	
As	75	1	nogas	92.492	1.932	114210	1.39	100	92.5	90	110	
Se	77	1	nogas	73.839	12.026	10210	3.71	100	73.8	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	92.271	4.792	5238	3.11	100	92.3	90	110	
Sr	88	1	nogas	97.760	1.226	765796	0.36	100	97.8	90	110	
Mo	95	1	nogas	93.618	1.624	154749	0.71	100	93.6	90	110	
Ag	107	1	nogas	95.101	2.345	418345	1.13	100	95.1	90	110	
Cd	111	1	nogas	96.386	1.555	95655	1.46	100	96.4	90	110	
Sn	118	1	nogas	93.095	0.084	273000	0.64	100	93.1	90	110	
Sb	121	1	nogas	94.898	2.183	406578	1.38	100	94.9	90	110	
Ba	137	1	nogas	97.940	1.799	143871	1.45	100	97.9	90	110	
Tl	205	1	nogas	95.798	0.366	1215830	0.65	100	95.8	90	110	
Pb	208	1	nogas	96.685	1.958	930281	2.07	100	96.7	90	110	
U	238	1	nogas	95.286	0.406	2258032	0.90	100	95.3	90	110	
Li	7	1	nogas	104.421	2.106	508976	2.47	100	104.4	90	110	
Si	28	1	nogas	4985.894	3.039	11177043	1.72	5000	99.7	90	110	
Ba	135	1	nogas	95.963	2.608	82285	2.12	100	96.0	90	110	
La	139	1	nogas	160.159	30.632	237	28.13	100	160.2	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	-76.571	0.000	0	#DIV/0!	100	-76.6	90	110	CCV Main CR1-2 Failed
Tl	203	1	nogas	96.233	0.564	500991	1.14	100	96.2	90	110	
Na	23	2	He	10025.318	0.878	2020160	1.40	10000	100.3	90	110	
Mg	24	2	He	9305.308	1.748	883469	0.87	10000	93.1	90	110	
Al	27	2	He	68.118	4.282	3424	3.20	100	68.1	90	110	CCV Main CR1-2 Failed
K	39	2	He	9396.837	1.199	462667	1.40	10000	94.0	90	110	
Ca	43	2	He	9104.846	14.008	1163	15.39	10000	91.0	90	110	
Ca	44	2	He	9551.442	1.674	19237	0.49	10000	95.5	90	110	
V	51	2	He	94.589	1.069	35319	1.15	100	94.6	90	110	
Cr	52	2	He	95.254	3.013	45166	1.36	100	95.3	90	110	
Mn	55	2	He	95.106	5.674	23053	3.72	100	95.1	90	110	
Fe	56	2	He	9349.784	1.214	3438892	1.24	10000	93.5	90	110	
Co	59	2	He	95.509	0.950	64885	1.73	100	95.5	90	110	
Ni	60	2	He	93.755	4.566	17686	3.96	100	93.8	90	110	
Cu	63	2	He	92.184	5.386	49134	3.14	100	92.2	90	110	
Zn	66	2	He	95.099	10.992	8829	9.49	100	95.1	90	110	
As	75	2	He	91.448	4.557	5416	2.52	100	91.4	90	110	
Sb	121	2	He	93.820	2.735	44036	0.68	100	93.8	90	110	
Se	78	2	He	87.957	16.882	345	17.77	100	88.0	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
Ge	72	1	nogas	620997	1.55	610209	101.77	70	125	
In	115	1	nogas	751657	0.57	742039	101.30	70	125	
Li	6	1	nogas	284644	0.46	256544	110.95	70	125	
Bi	209	1	nogas	1096256	0.76	1099361	99.72	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	34782	2.14	34709	100.21	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	317_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-05T23:02:42-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	289CALB.d
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	23.5	93	22.3	1	
B	11	1	nogas	24.322	29.4	43337	13.4	10	CCB Main CR1 Failed
Na	23	1	nogas	64.380	4.7	661849	1.7	100	
Mg	24	1	nogas	5.392	11.4	22920	9.0	100	
Al	27	1	nogas	-0.719	-9.2	5688	7.6	5	
P	31	1	nogas	-2.979	-20.7	8822	1.3	10	
K	39	1	nogas	22.747	63.2	1182682	5.5	100	
Ca	43	1	nogas	-5.495	-96.6	213	19.5	100	
Ca	44	1	nogas	2.164	61.6	9890	2.5	100	
Ti	47	1	nogas	0.018	257.1	40	43.3	2.5	
V	51	1	nogas	-4.424	-1.4	96187	1.6	2.5	
Cr	52	1	nogas	-0.281	-5.3	4384	2.9	2.5	
Mn	55	1	nogas	-0.111	-24.8	4741	3.1	2.5	
Fe	56	1	nogas	6.261	12.1	281079	2.0	100	
Co	59	1	nogas	0.044	32.5	293	24.2	2.5	
Ni	60	1	nogas	-0.170	-12.8	250	8.0	2.5	
Cu	63	1	nogas	-0.350	-14.0	1310	8.8	2.5	
Zn	66	1	nogas	-0.292	-37.0	267	35.6	2.5	
As	75	1	nogas	-5.479	-7.8	15881	3.3	2.5	
Se	77	1	nogas	-27.699	-22.9	5451	5.5	2.5	
Se	82	1	nogas	-1.658	-28.7	173	14.5	2.5	
Sr	88	1	nogas	0.092	11.4	997	6.0	2.5	
Mo	95	1	nogas	0.006	292.5	70	37.8	2.5	
Ag	107	1	nogas	0.040	14.9	207	10.1	2.5	
Cd	111	1	nogas	0.044	28.2	47	24.7	1	
Sn	118	1	nogas	-0.009	-66.6	690	2.5	5	
Sb	121	1	nogas	-0.009	-249.8	487	18.0	2.5	
Ba	137	1	nogas	-0.119	-31.8	103	49.7	2.5	
Tl	205	1	nogas	0.116	34.0	1520	32.6	1	
Pb	208	1	nogas	0.030	22.5	520	12.6	2.5	
U	238	1	nogas	0.038	22.1	1057	19.1	2.5	
Si	28	1	nogas	52.628	13.4	726477	3.1	5	CCB Main CR1 Failed
La	139	1	nogas	-12.296	-76.4	7	173.2	2.5	
Au	197	1	nogas	3.225	4285.2	3	173.2	2.5	CCB Main CR1 Failed
Na	23	2	He	56.292	13.1	23095	2.2	100	
Mg	24	2	He	5.280	19.8	503	17.9	100	
Al	27	2	He	-0.492	-43.7	107	5.4	5	
K	39	2	He	19.374	26.3	6435	4.4	100	
Ca	43	2	He	0.000	#DIV/0!	0	#DIV/0!	100	
Ca	44	2	He	-30.479	-11.4	7	86.6	100	
V	51	2	He	0.096	162.6	157	28.0	2.5	
Cr	52	2	He	-0.090	-55.2	80	21.7	2.5	
Mn	55	2	He	-0.018	-479.2	50	34.6	2.5	
Fe	56	2	He	2.530	46.0	1833	16.4	100	
Co	59	2	He	0.028	59.1	30	33.3	2.5	
Ni	60	2	He	-0.628	-5.9	7	86.6	2.5	

Continuing Calibration Blank (CCB) Report

Cu	63	2	He	-0.364	-21.4	223	13.7	2.5	
Zn	66	2	He	0.140	179.3	40	50.0	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
As	75	2	He	-0.245	-15.8	2	86.6	2.5	
Sb	121	2	He	-0.027	-397.9	37	110.2	2.5	
Se	78	2	He	0.397	100.7	5	24.7	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	557124	1.30	610209	91.30	70	125	
In	115	1	nogas	692856	0.24	742039	93.37	70	125	
Li	6	1	nogas	243859	0.45	256544	95.06	70	125	
Bi	209	1	nogas	1034973	1.43	1099361	94.14	70	125	
Ge	72	2	He	29392	3.17	34709	84.68	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	328_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-05T23:27:11-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	289CALB.d
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	102.105	1.423	178856	0.69	100	102.1	90	110	
B	11	1	nogas	490.852	1.920	447102	1.37	500	98.2	90	110	
Na	23	1	nogas	9687.261	1.100	53091876	1.08	10000	96.9	90	110	
Mg	24	1	nogas	9287.741	0.778	35706866	0.78	10000	92.9	90	110	
Al	27	1	nogas	68.243	1.172	476909	0.44	100	68.2	90	110	CCV Main CR1-2 Failed
P	31	1	nogas	416.012	1.402	134108	0.54	500	83.2	90	110	CCV Main CR1-2 Failed
K	39	1	nogas	9324.111	1.685	37216353	0.85	10000	93.2	90	110	
Ca	43	1	nogas	9370.828	2.320	74073	2.44	10000	93.7	90	110	
Ca	44	1	nogas	9633.102	1.382	1224030	0.77	10000	96.3	90	110	
Ti	47	1	nogas	93.403	1.327	36853	0.53	100	93.4	90	110	
V	51	1	nogas	94.073	1.020	657846	1.60	100	94.1	90	110	
Cr	52	1	nogas	93.663	0.748	471925	0.72	100	93.7	90	110	
Mn	55	1	nogas	95.494	0.597	617676	0.68	100	95.5	90	110	
Fe	56	1	nogas	9465.969	0.403	50441929	0.66	10000	94.7	90	110	
Co	59	1	nogas	94.893	1.546	491172	1.21	100	94.9	90	110	
Ni	60	1	nogas	93.005	1.383	107493	2.15	100	93.0	90	110	
Cu	63	1	nogas	94.760	1.166	273262	0.37	100	94.8	90	110	
Zn	66	1	nogas	94.411	1.050	92113	1.52	100	94.4	90	110	
As	75	1	nogas	92.256	1.081	109788	1.35	100	92.3	90	110	
Se	77	1	nogas	87.329	6.326	10363	2.30	100	87.3	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	93.875	5.032	5131	5.46	100	93.9	90	110	
Sr	88	1	nogas	96.923	0.815	731315	0.07	100	96.9	90	110	
Mo	95	1	nogas	91.999	0.361	146490	0.88	100	92.0	90	110	
Ag	107	1	nogas	93.751	1.882	397253	1.20	100	93.8	90	110	
Cd	111	1	nogas	93.670	3.345	91545	2.97	100	93.7	90	110	
Sn	118	1	nogas	89.793	1.555	259363	1.93	100	89.8	90	110	CCV Main CR1-2 Failed
Sb	121	1	nogas	95.913	1.054	395859	1.70	100	95.9	90	110	
Ba	137	1	nogas	94.079	0.939	136122	0.96	100	94.1	90	110	
Tl	205	1	nogas	93.392	0.388	1158902	0.95	100	93.4	90	110	
Pb	208	1	nogas	93.390	0.360	878572	1.04	100	93.4	90	110	
U	238	1	nogas	90.775	1.291	2103414	2.30	100	90.8	90	110	
Li	7	1	nogas	104.791	1.258	472713	0.18	100	104.8	90	110	
Si	28	1	nogas	4818.192	2.188	10427131	1.30	5000	96.4	90	110	
Ba	135	1	nogas	93.125	1.652	78660	2.34	100	93.1	90	110	
La	139	1	nogas	107.238	26.286	163	21.50	100	107.2	90	110	
Au	197	1	nogas	2.667	5145.954	3	173.21	100	2.7	90	110	CCV Main CR1-2 Failed
Tl	203	1	nogas	94.134	0.340	479137	0.77	100	94.1	90	110	
Na	23	2	He	10396.867	1.691	1879595	1.45	10000	104.0	90	110	
Mg	24	2	He	9461.752	0.230	806301	0.71	10000	94.6	90	110	
Al	27	2	He	69.990	11.295	3154	10.56	100	70.0	90	110	CCV Main CR1-2 Failed
K	39	2	He	9476.641	1.396	418725	1.86	10000	94.8	90	110	
Ca	43	2	He	9752.296	11.525	1117	11.20	10000	97.5	90	110	
Ca	44	2	He	10090.798	3.320	18236	2.83	10000	100.9	90	110	
V	51	2	He	95.376	1.624	31961	1.58	100	95.4	90	110	
Cr	52	2	He	96.281	2.478	40979	2.06	100	96.3	90	110	
Mn	55	2	He	94.206	1.076	20506	0.92	100	94.2	90	110	
Fe	56	2	He	9557.749	1.948	3154813	1.54	10000	95.6	90	110	
Co	59	2	He	97.810	2.013	59633	2.15	100	97.8	90	110	
Ni	60	2	He	94.728	3.393	16041	3.81	100	94.7	90	110	
Cu	63	2	He	96.363	1.292	46106	1.27	100	96.4	90	110	
Zn	66	2	He	98.881	4.337	8246	3.91	100	98.9	90	110	
As	75	2	He	90.467	3.591	4812	3.87	100	90.5	90	110	
Sb	121	2	He	95.355	3.684	40179	3.94	100	95.4	90	110	
Se	78	2	He	94.991	10.183	333	9.61	100	95.0	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	598104	0.79	610209	98.02	70	125	
In	115	1	nogas	740294	1.09	742039	99.76	70	125	
Li	6	1	nogas	263516	1.34	256544	102.72	70	125	
Bi	209	1	nogas	1071846	1.10	1099361	97.50	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	31212	0.50	34709	89.92	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	329_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-05T23:29:22-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	289CALB.d
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	0.048	47.1	80	45.1	1	
B	11	1	nogas	20.755	27.7	39882	10.6	10	CCB Main CR1 Failed
Na	23	1	nogas	45.924	6.5	585148	1.8	100	
Mg	24	1	nogas	5.634	6.9	24423	7.1	100	
Al	27	1	nogas	-0.775	-11.3	5418	9.8	5	
P	31	1	nogas	-3.471	-57.4	8829	5.4	10	
K	39	1	nogas	4.707	154.9	1136108	2.6	100	
Ca	43	1	nogas	-2.366	-86.8	240	7.2	100	
Ca	44	1	nogas	1.959	295.0	10026	6.1	100	
Ti	47	1	nogas	0.025	263.1	43	58.1	2.5	
V	51	1	nogas	1.180	46.0	127660	1.4	2.5	
Cr	52	1	nogas	-0.258	-12.9	4564	2.5	2.5	
Mn	55	1	nogas	-0.137	-15.5	4664	3.6	2.5	
Fe	56	1	nogas	6.321	25.1	286035	1.9	100	
Co	59	1	nogas	0.026	16.9	207	11.2	2.5	
Ni	60	1	nogas	-0.122	-39.5	307	18.0	2.5	
Cu	63	1	nogas	-0.265	-19.7	1563	8.0	2.5	
Zn	66	1	nogas	-0.308	-18.6	257	21.5	2.5	
As	75	1	nogas	-2.009	-26.1	19264	2.9	2.5	
Se	77	1	nogas	2.176	696.3	6648	7.8	2.5	
Se	82	1	nogas	-1.374	-103.7	190	36.8	2.5	
Sr	88	1	nogas	0.087	11.4	977	6.3	2.5	
Mo	95	1	nogas	0.032	54.8	110	24.1	2.5	
Ag	107	1	nogas	0.027	47.1	157	32.8	2.5	
Cd	111	1	nogas	0.022	101.6	27	78.1	1	
Sn	118	1	nogas	-0.029	-124.3	643	15.3	5	
Sb	121	1	nogas	0.016	167.7	593	18.0	2.5	
Ba	137	1	nogas	-0.089	-4.0	147	3.9	2.5	
Tl	205	1	nogas	0.128	4.8	1687	5.5	1	
Pb	208	1	nogas	0.024	32.2	477	13.5	2.5	
U	238	1	nogas	0.041	27.0	1140	23.4	2.5	
Si	28	1	nogas	32.214	22.4	699313	1.4	5	CCB Main CR1 Failed
La	139	1	nogas	-1.614	-495.9	20	50.0	2.5	
Au	197	1	nogas	317.439	155.1	17	124.9	2.5	CCB Main CR1 Failed
Na	23	2	He	42.356	12.7	22187	2.5	100	
Mg	24	2	He	5.375	18.9	547	17.6	100	
Al	27	2	He	-1.137	-108.6	87	63.5	5	
K	39	2	He	6.556	193.9	6311	7.4	100	
Ca	43	2	He	0.000	#DIV/0!	0	#DIV/0!	100	
Ca	44	2	He	-8.344	-384.6	47	121.8	100	
V	51	2	He	0.136	37.1	182	10.8	2.5	
Cr	52	2	He	-0.111	-83.7	77	49.4	2.5	
Mn	55	2	He	-0.095	-144.3	37	83.3	2.5	
Fe	56	2	He	1.894	15.5	1757	6.2	100	
Co	59	2	He	0.019	45.7	27	21.7	2.5	
Ni	60	2	He	-0.572	-15.6	17	91.7	2.5	

Continuing Calibration Blank (CCB) Report

Cu	63	2	He	-0.368	-49.0	237	35.4	2.5	
Zn	66	2	He	-0.006	-6560.3	30	100.0	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
As	75	2	He	-0.249	-14.4	2	86.6	2.5	
Sb	121	2	He	0.005	589.1	53	21.7	2.5	
Se	78	2	He	1.086	205.0	7	103.3	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	566457	1.02	610209	92.83	70	125	
In	115	1	nogas	700919	0.62	742039	94.46	70	125	
Li	6	1	nogas	240306	1.35	256544	93.67	70	125	
Bi	209	1	nogas	1055246	1.58	1099361	95.99	70	125	
Ge	72	2	He	31419	1.83	34709	90.52	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	340_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-05T23:53:41-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	289CALB.d
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	102.603	1.428	174700	0.19	100	102.6	90	110	
B	11	1	nogas	509.922	2.071	450481	1.05	500	102.0	90	110	
Na	23	1	nogas	10007.249	1.178	50259952	0.47	10000	100.1	90	110	
Mg	24	1	nogas	9508.277	0.794	33506743	0.58	10000	95.1	90	110	
Al	27	1	nogas	69.433	1.089	457568	0.45	100	69.4	90	110	CCV Main CR1-2 Failed
P	31	1	nogas	429.942	1.848	130418	0.73	500	86.0	90	110	CCV Main CR1-2 Failed
K	39	1	nogas	9672.822	2.232	36378073	1.09	10000	96.7	90	110	
Ca	43	1	nogas	9606.891	2.020	71623	1.02	10000	96.1	90	110	
Ca	44	1	nogas	9846.495	1.195	1180069	0.22	10000	98.5	90	110	
Ti	47	1	nogas	95.191	2.893	35426	1.81	100	95.2	90	110	
V	51	1	nogas	95.487	1.607	628039	0.89	100	95.5	90	110	
Cr	52	1	nogas	96.230	0.247	457255	0.93	100	96.2	90	110	
Mn	55	1	nogas	96.343	0.330	587839	0.89	100	96.3	90	110	
Fe	56	1	nogas	9569.004	0.688	48099510	0.42	10000	95.7	90	110	
Co	59	1	nogas	96.869	1.486	473032	1.70	100	96.9	90	110	
Ni	60	1	nogas	95.872	1.498	104521	2.44	100	95.9	90	110	
Cu	63	1	nogas	97.047	0.754	263965	0.96	100	97.0	90	110	
Zn	66	1	nogas	97.681	1.090	89891	1.83	100	97.7	90	110	
As	75	1	nogas	95.065	3.282	106078	2.43	100	95.1	90	110	
Se	77	1	nogas	87.310	19.661	9773	5.85	100	87.3	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	92.054	2.887	4751	3.29	100	92.1	90	110	
Sr	88	1	nogas	99.988	1.536	711667	0.47	100	100.0	90	110	
Mo	95	1	nogas	94.798	0.613	142393	0.55	100	94.8	90	110	
Ag	107	1	nogas	96.935	2.186	387467	1.25	100	96.9	90	110	
Cd	111	1	nogas	97.870	1.452	90476	1.53	100	97.9	90	110	
Sn	118	1	nogas	94.726	1.121	258734	0.68	100	94.7	90	110	
Sb	121	1	nogas	99.352	1.258	386768	0.38	100	99.4	90	110	
Ba	137	1	nogas	97.142	0.785	132931	0.19	100	97.1	90	110	
Tl	205	1	nogas	96.135	1.664	1154192	0.15	100	96.1	90	110	
Pb	208	1	nogas	96.849	0.907	881587	0.84	100	96.8	90	110	
U	238	1	nogas	95.090	0.386	2131908	1.22	100	95.1	90	110	
Li	7	1	nogas	105.418	1.126	462178	1.94	100	105.4	90	110	
Si	28	1	nogas	4935.673	1.269	10062024	1.44	5000	98.7	90	110	
Ba	135	1	nogas	97.917	1.362	78210	0.74	100	97.9	90	110	
La	139	1	nogas	116.857	7.253	167	6.93	100	116.9	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	-76.571	0.000	0	#DIV/0!	100	-76.6	90	110	CCV Main CR1-2 Failed
Tl	203	1	nogas	96.951	0.392	477518	1.26	100	97.0	90	110	
Na	23	2	He	10018.706	1.511	1781013	2.18	10000	100.2	90	110	
Mg	24	2	He	9419.900	2.366	788930	1.51	10000	94.2	90	110	
Al	27	2	He	68.958	2.362	3057	3.04	100	69.0	90	110	CCV Main CR1-2 Failed
K	39	2	He	9394.095	0.800	408027	1.00	10000	93.9	90	110	
Ca	43	2	He	8548.584	16.009	963	16.78	10000	85.5	90	110	CCV Main CR1-2 Failed
Ca	44	2	He	9723.124	1.966	17275	1.72	10000	97.2	90	110	
V	51	2	He	95.498	1.355	31456	1.55	100	95.5	90	110	
Cr	52	2	He	97.315	2.039	40708	0.85	100	97.3	90	110	
Mn	55	2	He	94.489	3.398	20212	2.24	100	94.5	90	110	
Fe	56	2	He	9485.782	0.854	3078064	1.92	10000	94.9	90	110	
Co	59	2	He	96.769	0.562	57991	1.04	100	96.8	90	110	
Ni	60	2	He	93.894	4.664	15624	3.74	100	93.9	90	110	
Cu	63	2	He	97.351	1.059	45778	0.79	100	97.4	90	110	
Zn	66	2	He	98.547	2.581	8079	2.85	100	98.5	90	110	
As	75	2	He	97.303	1.700	5086	2.80	100	97.3	90	110	
Sb	121	2	He	96.913	0.633	40140	1.93	100	96.9	90	110	
Se	78	2	He	90.822	8.454	313	7.17	100	90.8	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	564242	1.10	610209	92.47	70	125	
In	115	1	nogas	700181	0.63	742039	94.36	70	125	
Li	6	1	nogas	256145	1.26	256544	99.84	70	125	
Bi	209	1	nogas	1037196	1.53	1099361	94.35	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	30681	1.53	34709	88.40	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	341_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-05T23:55:52-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	289CALB.d
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	23.0	130	23.1	1	
B	11	1	nogas	24.899	23.6	44061	11.4	10	CCB Main CR1 Failed
Na	23	1	nogas	8.091	8.3	387803	1.2	100	
Mg	24	1	nogas	4.113	11.6	18714	8.8	100	
Al	27	1	nogas	-0.734	-8.6	5698	6.6	5	
P	31	1	nogas	-0.908	-148.0	9583	4.7	10	
K	39	1	nogas	5.676	70.2	1142711	0.6	100	
Ca	43	1	nogas	1.112	561.1	267	17.7	100	
Ca	44	1	nogas	-3.388	-94.5	9416	3.4	100	
Ti	47	1	nogas	0.106	73.8	73	39.4	2.5	
V	51	1	nogas	-1.048	-67.9	116114	3.3	2.5	
Cr	52	1	nogas	-0.236	-37.9	4684	9.7	2.5	
Mn	55	1	nogas	-0.034	-111.4	5301	4.9	2.5	
Fe	56	1	nogas	2.841	76.3	269308	3.4	100	
Co	59	1	nogas	0.030	36.4	230	23.0	2.5	
Ni	60	1	nogas	-0.214	-6.9	207	7.4	2.5	
Cu	63	1	nogas	-0.312	-5.6	1440	3.5	2.5	
Zn	66	1	nogas	-0.320	-11.4	247	13.0	2.5	
As	75	1	nogas	-2.354	-25.0	19004	2.5	2.5	
Se	77	1	nogas	-7.722	-201.8	6298	8.7	2.5	
Se	82	1	nogas	-1.999	-96.2	160	59.6	2.5	
Sr	88	1	nogas	0.045	21.5	680	10.3	2.5	
Mo	95	1	nogas	0.007	137.0	73	20.8	2.5	
Ag	107	1	nogas	0.045	20.4	230	15.7	2.5	
Cd	111	1	nogas	0.011	148.1	17	91.7	1	
Sn	118	1	nogas	-0.003	-841.3	723	9.2	5	
Sb	121	1	nogas	-0.006	-513.9	510	23.8	2.5	
Ba	137	1	nogas	-0.121	-17.7	103	27.9	2.5	
Tl	205	1	nogas	0.117	14.5	1593	13.8	1	
Pb	208	1	nogas	0.037	7.3	613	4.7	2.5	
U	238	1	nogas	0.038	14.9	1090	12.6	2.5	
Si	28	1	nogas	39.583	18.0	715533	2.6	5	CCB Main CR1 Failed
La	139	1	nogas	3.688	551.0	27	94.4	2.5	CCB Main CR1 Failed
Au	197	1	nogas	-76.571	0.0	0	#DIV/0!	2.5	
Na	23	2	He	8.471	56.2	15654	5.3	100	
Mg	24	2	He	3.711	53.7	393	42.7	100	
Al	27	2	He	-2.246	-32.9	37	83.3	5	
K	39	2	He	7.497	58.6	6188	1.1	100	
Ca	43	2	He	29.041	173.2	3	173.2	100	
Ca	44	2	He	-13.634	-50.6	37	31.5	100	
V	51	2	He	0.141	36.4	179	7.6	2.5	
Cr	52	2	He	-0.054	-425.7	100	98.5	2.5	
Mn	55	2	He	-0.075	-164.3	40	66.1	2.5	
Fe	56	2	He	2.158	17.7	1797	8.4	100	
Co	59	2	He	0.037	160.3	37	95.8	2.5	
Ni	60	2	He	-0.446	-44.4	37	87.7	2.5	

Continuing Calibration Blank (CCB) Report

Cu	63	2	He	-0.456	-6.1	190	5.3	2.5	
Zn	66	2	He	-0.004	-8645.5	30	88.2	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
As	75	2	He	-0.268	-14.1	1	173.2	2.5	
Sb	121	2	He	0.023	449.9	60	72.6	2.5	
Se	78	2	He	0.923	38.1	7	17.3	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	568010	0.70	610209	93.08	70	125	
In	115	1	nogas	709796	1.30	742039	95.65	70	125	
Li	6	1	nogas	245284	1.36	256544	95.61	70	125	
Bi	209	1	nogas	1078943	0.59	1099361	98.14	70	125	
Ge	72	2	He	30591	2.03	34709	88.14	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	352_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-06T00:20:09-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	289CALB.d
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	105.267	0.368	163108	1.41	100	105.3	90	110	
B	11	1	nogas	494.443	3.528	398104	2.19	500	98.9	90	110	
Na	23	1	nogas	10041.399	1.027	48362543	0.74	10000	100.4	90	110	
Mg	24	1	nogas	9581.005	2.440	32378218	2.44	10000	95.8	90	110	
Al	27	1	nogas	70.112	1.268	442650	0.92	100	70.1	90	110	CCV Main CR1-2 Failed
P	31	1	nogas	439.540	0.778	127560	0.39	500	87.9	90	110	CCV Main CR1-2 Failed
K	39	1	nogas	9765.855	1.880	35186564	1.50	10000	97.7	90	110	
Ca	43	1	nogas	9663.617	0.516	69043	0.62	10000	96.6	90	110	
Ca	44	1	nogas	9920.218	1.580	1139225	1.54	10000	99.2	90	110	
Ti	47	1	nogas	96.634	2.412	34471	3.15	100	96.6	90	110	
V	51	1	nogas	84.666	2.495	546818	2.72	100	84.7	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	96.538	0.553	439532	0.53	100	96.5	90	110	
Mn	55	1	nogas	98.279	0.650	574479	0.30	100	98.3	90	110	
Fe	56	1	nogas	9749.239	0.395	46954789	0.53	10000	97.5	90	110	
Co	59	1	nogas	97.955	1.018	458334	0.74	100	98.0	90	110	
Ni	60	1	nogas	97.087	0.828	101413	1.58	100	97.1	90	110	
Cu	63	1	nogas	97.101	1.531	253062	0.74	100	97.1	90	110	
Zn	66	1	nogas	96.583	1.053	85167	0.98	100	96.6	90	110	
As	75	1	nogas	88.215	0.703	95774	0.27	100	88.2	90	110	CCV Main CR1-2 Failed
Se	77	1	nogas	41.398	5.186	7739	0.66	100	41.4	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	101.785	2.403	5008	2.83	100	101.8	90	110	
Sr	88	1	nogas	99.687	0.689	679953	1.04	100	99.7	90	110	
Mo	95	1	nogas	94.477	1.324	135979	0.66	100	94.5	90	110	
Ag	107	1	nogas	96.521	1.512	369720	0.92	100	96.5	90	110	
Cd	111	1	nogas	98.622	1.545	84762	1.49	100	98.6	90	110	
Sn	118	1	nogas	95.586	0.994	242733	0.99	100	95.6	90	110	
Sb	121	1	nogas	98.821	0.912	368646	0.46	100	98.8	90	110	
Ba	137	1	nogas	99.816	1.147	126986	1.20	100	99.8	90	110	
Tl	205	1	nogas	97.360	0.935	1080017	1.53	100	97.4	90	110	
Pb	208	1	nogas	97.953	0.707	823758	1.29	100	98.0	90	110	
U	238	1	nogas	97.806	2.129	2025386	0.15	100	97.8	90	110	
Li	7	1	nogas	107.531	1.705	428527	0.96	100	107.5	90	110	
Si	28	1	nogas	4942.122	2.428	9652415	1.49	5000	98.8	90	110	
Ba	135	1	nogas	100.039	0.755	74290	0.81	100	100.0	90	110	
La	139	1	nogas	115.497	26.481	153	22.91	100	115.5	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	11.669	1309.777	3	173.21	100	11.7	90	110	CCV Main CR1-2 Failed
Tl	203	1	nogas	98.208	1.861	446793	0.21	100	98.2	90	110	
Na	23	2	He	9860.699	5.567	1718818	2.82	10000	98.6	90	110	
Mg	24	2	He	9329.613	2.737	766647	1.12	10000	93.3	90	110	
Al	27	2	He	70.092	4.435	3047	4.75	100	70.1	90	110	CCV Main CR1-2 Failed
K	39	2	He	9464.471	4.832	403058	1.72	10000	94.6	90	110	
Ca	43	2	He	9871.044	19.297	1087	16.78	10000	98.7	90	110	
Ca	44	2	He	9667.760	2.399	16855	2.05	10000	96.7	90	110	
V	51	2	He	95.295	3.581	30787	0.52	100	95.3	90	110	
Cr	52	2	He	95.949	4.668	39368	2.23	100	95.9	90	110	
Mn	55	2	He	95.830	1.182	20125	3.47	100	95.8	90	110	
Fe	56	2	He	9341.565	3.092	2973252	0.70	10000	93.4	90	110	
Co	59	2	He	96.035	4.367	56443	1.97	100	96.0	90	110	
Ni	60	2	He	96.207	5.096	15701	2.91	100	96.2	90	110	
Cu	63	2	He	94.994	5.089	43813	2.33	100	95.0	90	110	
Zn	66	2	He	92.619	7.527	7465	10.59	100	92.6	90	110	
As	75	2	He	95.780	8.786	4905	5.93	100	95.8	90	110	
Sb	121	2	He	96.011	5.023	38990	2.17	100	96.0	90	110	
Se	78	2	He	97.341	13.612	329	10.63	100	97.3	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	540665	0.78	610209	88.60	70	125	
In	115	1	nogas	650957	0.06	742039	87.73	70	125	
Li	6	1	nogas	233079	1.77	256544	90.85	70	125	
Bi	209	1	nogas	958252	2.01	1099361	87.16	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	30114	3.13	34709	86.76	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	353_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-06T00:22:20-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	289CALB.d
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	0.047	86.1	73	82.2	1	
B	11	1	nogas	19.957	25.1	37323	10.7	10	CCB Main CR1 Failed
Na	23	1	nogas	41.467	3.2	524993	1.1	100	
Mg	24	1	nogas	6.013	5.1	24054	3.4	100	
Al	27	1	nogas	-0.746	-4.1	5411	4.3	5	
P	31	1	nogas	1.195	146.6	9786	5.8	10	
K	39	1	nogas	16.147	3.1	1135762	1.4	100	
Ca	43	1	nogas	2.585	446.6	267	30.5	100	
Ca	44	1	nogas	2.121	196.4	9693	6.1	100	
Ti	47	1	nogas	0.067	229.4	57	97.2	2.5	
V	51	1	nogas	-10.101	-6.3	65099	5.0	2.5	
Cr	52	1	nogas	-0.461	-20.1	3480	11.0	2.5	
Mn	55	1	nogas	0.094	63.6	5848	7.2	2.5	
Fe	56	1	nogas	2.026	29.2	255044	1.8	100	
Co	59	1	nogas	0.041	46.1	270	32.3	2.5	
Ni	60	1	nogas	-0.174	-26.2	240	19.1	2.5	
Cu	63	1	nogas	-0.340	-11.4	1313	8.1	2.5	
Zn	66	1	nogas	-0.328	-12.3	230	15.7	2.5	
As	75	1	nogas	-9.207	-12.5	12328	7.0	2.5	
Se	77	1	nogas	-59.170	-21.3	4211	9.6	2.5	
Se	82	1	nogas	-1.652	-13.1	170	5.9	2.5	
Sr	88	1	nogas	0.066	2.8	800	2.5	2.5	
Mo	95	1	nogas	0.023	153.9	93	55.0	2.5	
Ag	107	1	nogas	0.038	40.6	193	29.9	2.5	
Cd	111	1	nogas	0.027	150.0	30	120.2	1	
Sn	118	1	nogas	-0.022	-359.6	640	32.3	5	
Sb	121	1	nogas	0.005	204.8	530	5.7	2.5	
Ba	137	1	nogas	-0.084	-44.3	147	33.6	2.5	
Tl	205	1	nogas	0.132	21.9	1660	20.5	1	
Pb	208	1	nogas	0.038	34.2	573	19.1	2.5	
U	238	1	nogas	0.047	1.1	1213	0.5	2.5	
Si	28	1	nogas	40.389	11.6	689477	2.3	5	CCB Main CR1 Failed
La	139	1	nogas	21.487	46.1	47	24.7	2.5	CCB Main CR1 Failed
Au	197	1	nogas	-76.571	0.0	0	#DIV/0!	2.5	
Na	23	2	He	32.822	15.1	19648	1.2	100	
Mg	24	2	He	6.858	9.9	647	10.3	100	
Al	27	2	He	-1.458	-56.2	70	51.5	5	
K	39	2	He	11.707	51.3	6278	1.1	100	
Ca	43	2	He	62.464	173.2	7	173.2	100	
Ca	44	2	He	-15.266	-44.8	33	34.6	100	
V	51	2	He	-0.102	-104.3	98	35.4	2.5	
Cr	52	2	He	-0.048	-124.9	100	26.5	2.5	
Mn	55	2	He	0.009	890.3	57	27.0	2.5	
Fe	56	2	He	2.717	21.7	1953	12.6	100	
Co	59	2	He	-0.001	-2381.8	13	114.6	2.5	
Ni	60	2	He	-0.530	-23.8	23	89.2	2.5	

Continuing Calibration Blank (CCB) Report

Cu	63	2	He	-0.507	-17.3	163	21.5	2.5	
Zn	66	2	He	-0.076	-108.1	23	24.7	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
As	75	2	He	-0.140	-51.4	8	49.5	2.5	
Sb	121	2	He	-0.056	-163.2	27	142.0	2.5	
Se	78	2	He	-0.032	-2972.9	3	91.7	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	546147	1.20	610209	89.50	70	125	
In	115	1	nogas	673618	0.62	742039	90.78	70	125	
Li	6	1	nogas	228238	0.79	256544	88.97	70	125	
Bi	209	1	nogas	1005986	0.76	1099361	91.51	70	125	
Ge	72	2	He	30174	3.17	34709	86.93	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	364_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-06T00:46:45-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	289CALB.d
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	105.865	0.967	179724	1.19	100	105.9	90	110	
B	11	1	nogas	487.197	2.768	430250	2.40	500	97.4	90	110	
Na	23	1	nogas	10090.097	1.776	52589018	0.53	10000	100.9	90	110	
Mg	24	1	nogas	9626.961	2.492	35207493	2.06	10000	96.3	90	110	
Al	27	1	nogas	69.524	0.253	480006	1.21	100	69.5	90	110	CCV Main CR1-2 Failed
P	31	1	nogas	438.313	0.700	139100	0.78	500	87.7	90	110	CCV Main CR1-2 Failed
K	39	1	nogas	9692.843	0.331	38192345	1.04	10000	96.9	90	110	
Ca	43	1	nogas	9627.478	0.803	75208	1.87	10000	96.3	90	110	
Ca	44	1	nogas	9926.033	0.509	1246265	1.20	10000	99.3	90	110	
Ti	47	1	nogas	94.873	1.553	36993	0.42	100	94.9	90	110	
V	51	1	nogas	84.676	1.064	597853	1.72	100	84.7	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	95.754	0.502	476686	0.99	100	95.8	90	110	
Mn	55	1	nogas	97.585	0.356	623705	1.25	100	97.6	90	110	
Fe	56	1	nogas	9768.210	0.196	51436990	1.41	10000	97.7	90	110	
Co	59	1	nogas	97.771	1.231	500129	0.28	100	97.8	90	110	
Ni	60	1	nogas	96.965	1.573	110723	1.18	100	97.0	90	110	
Cu	63	1	nogas	97.286	0.587	277223	1.45	100	97.3	90	110	
Zn	66	1	nogas	98.324	1.022	94793	2.32	100	98.3	90	110	
As	75	1	nogas	88.133	0.382	104635	1.15	100	88.1	90	110	CCV Main CR1-2 Failed
Se	77	1	nogas	11.472	56.616	7298	2.22	100	11.5	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	94.651	5.463	5108	4.16	100	94.7	90	110	
Sr	88	1	nogas	100.126	1.031	746609	0.50	100	100.1	90	110	
Mo	95	1	nogas	94.755	1.158	149107	1.16	100	94.8	90	110	
Ag	107	1	nogas	96.693	0.786	404948	0.87	100	96.7	90	110	
Cd	111	1	nogas	97.531	0.668	92413	0.36	100	97.5	90	110	
Sn	118	1	nogas	96.575	0.331	270381	1.33	100	96.6	90	110	
Sb	121	1	nogas	102.188	1.139	416770	1.54	100	102.2	90	110	
Ba	137	1	nogas	100.975	1.496	141625	1.89	100	101.0	90	110	
Tl	205	1	nogas	97.547	1.146	1196829	0.54	100	97.5	90	110	
Pb	208	1	nogas	97.945	0.977	911054	0.84	100	97.9	90	110	
U	238	1	nogas	95.570	1.643	2189579	2.12	100	95.6	90	110	
Li	7	1	nogas	107.793	0.063	470654	0.24	100	107.8	90	110	
Si	28	1	nogas	4977.073	0.099	10624351	1.35	5000	99.5	90	110	
Ba	135	1	nogas	101.118	0.946	82786	1.43	100	101.1	90	110	
La	139	1	nogas	153.362	35.930	217	31.42	100	153.4	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	479.784	160.288	23	137.77	100	479.8	90	110	CCV Main CR1-2 Failed
Tl	203	1	nogas	98.229	0.681	494366	0.31	100	98.2	90	110	
Na	23	2	He	9851.638	2.349	1889096	1.02	10000	98.5	90	110	
Mg	24	2	He	9217.203	2.825	832644	0.46	10000	92.2	90	110	
Al	27	2	He	69.432	11.604	3317	10.40	100	69.4	90	110	CCV Main CR1-2 Failed
K	39	2	He	9345.172	2.610	437809	0.35	10000	93.5	90	110	
Ca	43	2	He	9263.719	8.985	1127	11.24	10000	92.6	90	110	
Ca	44	2	He	9926.974	3.526	19021	1.97	10000	99.3	90	110	
V	51	2	He	93.850	2.990	33340	0.57	100	93.9	90	110	
Cr	52	2	He	94.450	1.426	42629	1.11	100	94.4	90	110	
Mn	55	2	He	96.214	5.878	22195	4.47	100	96.2	90	110	
Fe	56	2	He	9425.290	1.094	3299137	1.46	10000	94.3	90	110	
Co	59	2	He	94.808	2.935	61275	1.15	100	94.8	90	110	
Ni	60	2	He	95.702	3.379	17179	2.75	100	95.7	90	110	
Cu	63	2	He	93.072	4.003	47215	2.05	100	93.1	90	110	
Zn	66	2	He	94.166	3.966	8326	2.02	100	94.2	90	110	
As	75	2	He	97.876	3.327	5516	0.84	100	97.9	90	110	
Sb	121	2	He	96.984	2.003	43324	0.94	100	97.0	90	110	
Se	78	2	He	88.029	0.802	328	2.66	100	88.0	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
Ge	72	1	nogas	591117	1.31	610209	96.87	70	125	
In	115	1	nogas	717680	1.00	742039	96.72	70	125	
Li	6	1	nogas	255357	0.23	256544	99.54	70	125	
Bi	209	1	nogas	1059830	0.87	1099361	96.40	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	33102	2.47	34709	95.37	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	365_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-06T00:48:56-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	289CALB.d
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	29.2	90	29.4	1	
B	11	1	nogas	29.307	22.2	45091	11.5	10	CCB Main CR1 Failed
Na	23	1	nogas	27.905	16.4	495872	2.5	100	
Mg	24	1	nogas	6.203	13.1	26662	12.8	100	
Al	27	1	nogas	-0.738	-6.1	5821	6.6	5	
P	31	1	nogas	1.086	84.2	10400	3.6	10	
K	39	1	nogas	20.493	10.1	1227165	1.9	100	
Ca	43	1	nogas	-11.450	-93.8	177	46.1	100	
Ca	44	1	nogas	3.577	104.0	10503	2.9	100	
Ti	47	1	nogas	-0.056	-27.2	13	43.3	2.5	
V	51	1	nogas	-11.951	-3.8	59279	5.1	2.5	
Cr	52	1	nogas	-0.457	-8.7	3730	6.6	2.5	
Mn	55	1	nogas	0.078	81.7	6131	5.6	2.5	
Fe	56	1	nogas	2.790	55.3	275760	1.8	100	
Co	59	1	nogas	0.053	4.7	350	5.0	2.5	
Ni	60	1	nogas	-0.163	-44.7	270	31.6	2.5	
Cu	63	1	nogas	-0.350	-5.0	1370	4.4	2.5	
Zn	66	1	nogas	-0.344	-13.6	230	19.0	2.5	
As	75	1	nogas	-10.622	-5.3	11844	4.9	2.5	
Se	77	1	nogas	-67.591	-1.8	4171	1.4	2.5	
Se	82	1	nogas	-1.740	-63.8	177	31.2	2.5	
Sr	88	1	nogas	0.068	33.4	863	18.5	2.5	
Mo	95	1	nogas	0.015	155.6	87	40.5	2.5	
Ag	107	1	nogas	0.046	59.2	240	48.1	2.5	
Cd	111	1	nogas	0.057	50.3	60	44.1	1	
Sn	118	1	nogas	-0.033	-56.5	647	7.3	5	
Sb	121	1	nogas	0.745	13.1	3540	12.5	2.5	
Ba	137	1	nogas	-0.034	-171.1	227	35.9	2.5	
Tl	205	1	nogas	0.115	11.3	1543	11.1	1	
Pb	208	1	nogas	0.032	39.5	550	22.0	2.5	
U	238	1	nogas	0.047	26.5	1287	22.6	2.5	
Si	28	1	nogas	42.345	11.6	738906	2.7	5	CCB Main CR1 Failed
La	139	1	nogas	16.374	146.2	43	70.5	2.5	CCB Main CR1 Failed
Au	197	1	nogas	80.649	337.7	7	173.2	2.5	CCB Main CR1 Failed
Na	23	2	He	21.903	28.8	18937	4.7	100	
Mg	24	2	He	7.058	10.3	707	9.4	100	
Al	27	2	He	-2.071	-31.6	47	61.9	5	
K	39	2	He	18.392	68.1	6995	7.0	100	
Ca	43	2	He	111.110	173.2	13	173.2	100	CCB Main CR1 Failed
Ca	44	2	He	4.739	639.1	73	78.7	100	
V	51	2	He	-0.087	-45.9	109	11.2	2.5	
Cr	52	2	He	-0.024	-69.0	117	4.9	2.5	
Mn	55	2	He	0.005	3500.5	60	60.1	2.5	
Fe	56	2	He	2.620	18.8	2047	9.2	100	
Co	59	2	He	0.018	252.3	27	108.3	2.5	
Ni	60	2	He	-0.478	-7.2	33	17.3	2.5	

Continuing Calibration Blank (CCB) Report

Cu	63	2	He	-0.402	-39.1	227	33.7	2.5	
Zn	66	2	He	-0.056	-650.4	27	114.6	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
As	75	2	He	-0.064	-390.6	12	110.2	2.5	
Sb	121	2	He	0.615	24.1	320	21.6	2.5	
Se	78	2	He	1.587	114.5	9	68.9	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	582219	1.43	610209	95.41	70	125	
In	115	1	nogas	716068	0.80	742039	96.50	70	125	
Li	6	1	nogas	232453	1.43	256544	90.61	70	125	
Bi	209	1	nogas	1063407	1.06	1099361	96.73	70	125	
Ge	72	2	He	32171	1.47	34709	92.69	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	369_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-06T00:57:47-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	289CALB.d
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	105.593	1.941	169716	2.12	100	105.6	90	110	
B	11	1	nogas	492.956	3.866	411811	2.87	500	98.6	90	110	
Na	23	1	nogas	10057.273	1.481	49332528	0.72	10000	100.6	90	110	
Mg	24	1	nogas	9626.915	0.921	33135302	1.00	10000	96.3	90	110	
Al	27	1	nogas	69.107	0.966	452721	0.92	100	69.1	90	110	CCV Main CR1-2 Failed
P	31	1	nogas	445.973	1.877	134102	1.30	500	89.2	90	110	CCV Main CR1-2 Failed
K	39	1	nogas	9631.696	1.002	36012802	1.11	10000	96.3	90	110	
Ca	43	1	nogas	9560.538	2.115	70850	1.75	10000	95.6	90	110	
Ca	44	1	nogas	9816.170	0.648	1169373	0.59	10000	98.2	90	110	
Ti	47	1	nogas	94.507	1.065	34965	1.46	100	94.5	90	110	
V	51	1	nogas	82.661	4.802	556559	3.91	100	82.7	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	96.251	0.103	454568	0.48	100	96.3	90	110	
Mn	55	1	nogas	96.659	2.035	586126	1.63	100	96.7	90	110	
Fe	56	1	nogas	9692.728	1.124	48421585	0.68	10000	96.9	90	110	
Co	59	1	nogas	97.494	1.280	473166	0.85	100	97.5	90	110	
Ni	60	1	nogas	99.063	0.809	107318	0.99	100	99.1	90	110	
Cu	63	1	nogas	97.079	0.533	262451	0.87	100	97.1	90	110	
Zn	66	1	nogas	97.757	0.665	89409	0.94	100	97.8	90	110	
As	75	1	nogas	87.772	2.757	98952	2.43	100	87.8	90	110	CCV Main CR1-2 Failed
Se	77	1	nogas	20.500	43.702	7258	4.65	100	20.5	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	86.527	6.237	4454	6.29	100	86.5	90	110	CCV Main CR1-2 Failed
Sr	88	1	nogas	99.671	0.435	705151	0.02	100	99.7	90	110	
Mo	95	1	nogas	94.700	1.122	141381	0.87	100	94.7	90	110	
Ag	107	1	nogas	97.572	1.494	387680	1.29	100	97.6	90	110	
Cd	111	1	nogas	97.692	0.448	88562	0.18	100	97.7	90	110	
Sn	118	1	nogas	94.832	1.166	254008	0.74	100	94.8	90	110	
Sb	121	1	nogas	101.380	1.025	392266	0.58	100	101.4	90	110	
Ba	137	1	nogas	99.264	2.106	133198	1.88	100	99.3	90	110	
Tl	205	1	nogas	96.633	0.278	1112866	1.25	100	96.6	90	110	
Pb	208	1	nogas	98.373	1.820	858778	1.25	100	98.4	90	110	
U	238	1	nogas	95.945	3.116	2062597	1.98	100	95.9	90	110	
Li	7	1	nogas	107.137	1.436	442990	1.35	100	107.1	90	110	
Si	28	1	nogas	4966.317	0.230	10058887	0.23	5000	99.3	90	110	
Ba	135	1	nogas	97.843	2.285	76637	1.87	100	97.8	90	110	
La	139	1	nogas	138.678	25.501	190	22.94	100	138.7	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	429.133	59.085	20	50.00	100	429.1	90	110	CCV Main CR1-2 Failed
Tl	203	1	nogas	98.180	1.244	463741	0.22	100	98.2	90	110	
Na	23	2	He	9712.977	2.435	1782334	2.28	10000	97.1	90	110	
Mg	24	2	He	9293.179	1.875	803351	1.49	10000	92.9	90	110	
Al	27	2	He	74.329	4.023	3390	4.54	100	74.3	90	110	CCV Main CR1-2 Failed
K	39	2	He	9359.076	1.643	419561	1.47	10000	93.6	90	110	
Ca	43	2	He	8814.710	14.068	1023	13.30	10000	88.1	90	110	CCV Main CR1-2 Failed
Ca	44	2	He	9624.379	4.613	17646	3.77	10000	96.2	90	110	
V	51	2	He	94.010	2.428	31956	1.38	100	94.0	90	110	
Cr	52	2	He	96.469	2.769	41647	1.31	100	96.5	90	110	
Mn	55	2	He	95.427	0.310	21073	1.42	100	95.4	90	110	
Fe	56	2	He	9331.481	1.052	3124795	0.58	10000	93.3	90	110	
Co	59	2	He	98.169	4.390	60693	2.75	100	98.2	90	110	
Ni	60	2	He	98.623	1.897	16939	2.91	100	98.6	90	110	
Cu	63	2	He	93.359	2.340	45320	0.68	100	93.4	90	110	
Zn	66	2	He	93.308	8.657	7899	9.26	100	93.3	90	110	
As	75	2	He	97.673	1.749	5269	1.69	100	97.7	90	110	
Sb	121	2	He	97.745	2.262	41777	2.05	100	97.7	90	110	
Se	78	2	He	76.995	7.904	275	6.19	100	77.0	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
Ge	72	1	nogas	560798	0.44	610209	91.90	70	125	
In	115	1	nogas	686618	0.43	742039	92.53	70	125	
Li	6	1	nogas	241760	0.78	256544	94.24	70	125	
Bi	209	1	nogas	994738	1.18	1099361	90.48	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	31666	1.62	34709	91.23	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	370_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-06T00:59:59-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	289CALB.d
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	24.0	90	22.2	1	
B	11	1	nogas	35.207	24.7	49245	12.3	10	CCB Main CR1 Failed
Na	23	1	nogas	9.420	10.7	386966	0.7	100	
Mg	24	1	nogas	4.429	7.5	19482	7.5	100	
Al	27	1	nogas	-0.731	-6.7	5718	5.1	5	
P	31	1	nogas	2.115	4.1	10430	1.8	10	
K	39	1	nogas	20.934	43.6	1197824	1.4	100	
Ca	43	1	nogas	-7.310	-27.2	203	5.7	100	
Ca	44	1	nogas	5.579	167.4	10483	10.4	100	
Ti	47	1	nogas	0.077	151.5	63	71.2	2.5	
V	51	1	nogas	-12.113	-3.8	56907	3.6	2.5	
Cr	52	1	nogas	-0.429	-16.1	3767	7.9	2.5	
Mn	55	1	nogas	-0.006	-547.3	5468	2.1	2.5	
Fe	56	1	nogas	-0.590	-171.5	251920	1.8	100	
Co	59	1	nogas	0.047	24.1	313	19.5	2.5	
Ni	60	1	nogas	-0.229	-39.5	190	51.8	2.5	
Cu	63	1	nogas	-0.301	-20.2	1470	11.8	2.5	
Zn	66	1	nogas	-0.393	-19.0	180	40.1	2.5	
As	75	1	nogas	-10.890	-4.2	11307	3.9	2.5	
Se	77	1	nogas	-72.346	-9.6	3887	5.2	2.5	
Se	82	1	nogas	-0.030	-3830.8	257	22.8	2.5	
Sr	88	1	nogas	0.042	38.0	663	19.2	2.5	
Mo	95	1	nogas	0.033	143.7	113	66.2	2.5	
Ag	107	1	nogas	0.047	53.3	237	41.0	2.5	
Cd	111	1	nogas	0.022	186.1	27	142.0	1	
Sn	118	1	nogas	0.018	249.3	773	16.4	5	
Sb	121	1	nogas	1.227	8.7	5338	9.5	2.5	
Ba	137	1	nogas	-0.096	-30.7	137	29.6	2.5	
Tl	205	1	nogas	0.121	30.6	1573	28.6	1	
Pb	208	1	nogas	0.028	21.2	500	11.1	2.5	
U	238	1	nogas	0.042	8.9	1143	8.4	2.5	
Si	28	1	nogas	55.658	1.9	746024	2.0	5	CCB Main CR1 Failed
La	139	1	nogas	-1.558	-901.3	20	86.6	2.5	
Au	197	1	nogas	330.104	113.4	17	91.7	2.5	CCB Main CR1 Failed
Na	23	2	He	5.233	20.9	16178	0.8	100	
Mg	24	2	He	3.221	11.4	377	7.7	100	
Al	27	2	He	-1.358	-1.3	80	0.0	5	
K	39	2	He	2.610	403.7	6415	7.6	100	
Ca	43	2	He	27.566	173.2	3	173.2	100	
Ca	44	2	He	-20.378	-15.2	27	21.7	100	
V	51	2	He	-0.135	-71.2	95	34.4	2.5	
Cr	52	2	He	-0.105	-107.4	83	60.4	2.5	
Mn	55	2	He	0.031	446.2	67	45.8	2.5	
Fe	56	2	He	1.611	42.2	1737	14.2	100	
Co	59	2	He	0.033	166.4	37	95.8	2.5	
Ni	60	2	He	-0.425	-43.7	43	74.2	2.5	

Continuing Calibration Blank (CCB) Report

Cu	63	2	He	-0.471	-15.5	197	19.3	2.5	
Zn	66	2	He	-0.140	-80.4	20	50.0	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
As	75	2	He	-0.150	-62.2	8	65.5	2.5	
Sb	121	2	He	1.181	17.2	577	16.5	2.5	
Se	78	2	He	1.878	59.5	11	39.0	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	567720	1.72	610209	93.04	70	125	
In	115	1	nogas	700837	1.57	742039	94.45	70	125	
Li	6	1	nogas	231310	1.50	256544	90.16	70	125	
Bi	209	1	nogas	1038212	1.15	1099361	94.44	70	125	
Ge	72	2	He	32805	1.00	34709	94.51	70	125	

Sample Report

Sample Table

Sample Name	LLICV2
Data File Name	371SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-06T01:02:12-06:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	289CALB.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	2.393	2.393	3.78	3634	0.07	2000	
B	11	1	nogas	14.071	14.071	8.68	32931	0.04	2000	
Na	23	1	nogas	207.556	207.556	0.63	1352839	0.02	200000	
Mg	24	1	nogas	207.926	207.926	0.63	723295	0.03	200000	
Al	27	1	nogas	2.794	2.794	2.41	28497	0.01	2000	
K	39	1	nogas	237.926	237.926	1.51	1989849	0.01	200000	
Ca	43	1	nogas	195.331	195.331	8.24	1713	11.40	200000	
Ca	44	1	nogas	216.963	216.963	2.61	35684	0.61	200000	
Ti	47	1	nogas	2.288	2.288	22.69	887	0.26	2000	
V	51	1	nogas	-9.538	-9.538	-6.98	70494	-0.01	2000	
Cr	52	1	nogas	1.536	1.536	1.43	13015	0.01	2000	
Mn	55	1	nogas	2.279	2.279	2.01	19321	0.01	2000	
Fe	56	1	nogas	230.381	230.381	1.58	1410969	0.02	200000	
Co	59	1	nogas	2.047	2.047	4.36	10113	0.02	2000	
Ni	60	1	nogas	1.830	1.830	4.58	2434	0.08	2000	
Cu	63	1	nogas	2.773	2.773	5.06	9786	0.03	2000	
Zn	66	1	nogas	2.574	2.574	16.08	2904	0.09	2000	
As	75	1	nogas	-7.270	-7.270	-17.06	14533	-0.05	2000	
Se	77	1	nogas	-63.920	-63.920	-13.79	4197	-1.52	2000	
Se	82	1	nogas	0.873	0.873	44.74	300	0.29	2000	
Sr	88	1	nogas	2.032	2.032	0.79	14870	0.01	2000	
Mo	95	1	nogas	2.028	2.028	4.42	3117	0.07	2000	
Ag	107	1	nogas	2.184	2.184	0.54	8813	0.02	2000	
Cd	111	1	nogas	1.908	1.908	5.93	1723	0.11	2000	
Sn	118	1	nogas	1.991	1.991	2.82	5985	0.03	2000	
Sb	121	1	nogas	3.033	3.033	4.14	12372	0.02	2000	
Ba	137	1	nogas	2.250	2.250	4.34	3254	0.07	2000	
Tl	205	1	nogas	2.046	2.046	1.41	24243	0.01	2000	
Pb	208	1	nogas	2.133	2.133	2.50	19306	0.01	2000	
U	238	1	nogas	1.955	1.955	1.46	43246	0.00	2000	
Si	28	1	nogas	130.600	130.600	7.23	887869	0.01	2000	
La	139	1	nogas	67.980	67.980	7.21	103	65.79	2000	
Au	197	1	nogas	330.945	330.945	153.10	17	1985.67	2000	
Na	23	2	He	206.309	206.309	2.41	52892	0.39	200000	
Mg	24	2	He	198.007	198.007	2.91	17426	1.14	200000	
Al	27	2	He	1.087	1.087	113.76	187	0.58	2000	
K	39	2	He	210.197	210.197	3.57	15564	1.35	200000	
Ca	43	2	He	56.701	56.701	173.21	7	850.52	200000	
Ca	44	2	He	181.579	181.579	21.32	400	45.39	200000	
V	51	2	He	1.935	1.935	8.41	803	0.24	2000	

Sample Report

Cr	52	2	He	1.872	1.872	15.21	943	0.20	2000	
Mn	55	2	He	1.665	1.665	9.84	430	0.39	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Fe	56	2	He	200.861	200.861	1.05	69268	0.29	200000	
Co	59	2	He	2.088	2.088	2.60	1323	0.16	2000	
Ni	60	2	He	1.992	1.992	25.46	460	0.43	2000	
Cu	63	2	He	2.446	2.446	17.73	1613	0.15	2000	
Zn	66	2	He	2.052	2.052	23.05	207	0.99	2000	
As	75	2	He	1.628	1.628	38.17	104	1.56	2000	
Sb	121	2	He	2.654	2.654	34.40	1200	0.22	2000	
Se	78	2	He	3.258	3.258	39.62	15	21.25	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	566449	1.43	610209	92.83	70	125	
In	115	1	nogas	681895	0.14	742039	91.89	70	125	
Li	6	1	nogas	228235	0.89	256544	88.97	70	125	
Bi	209	1	nogas	1018527	1.30	1099361	92.65	70	125	
Ge	72	2	He	32077	0.13	34709	92.42	70	125	

Low Level Initial Calibration Verification (LLICV) Report

Sample Table

Sample Name	LLICV5
Data File Name	372LICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-06T01:04:23-06:00
Sample Type	LLICV
Dilution	1
Comment	
ISTD Ref File Name	289CALB.d
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	6.205	0.350	9633	1.37	5	124.1	70	130	
B	11	1	nogas	24.429	8.356	41545	2.59	25	97.7	70	130	
Na	23	1	nogas	523.392	0.792	2954037	1.17	500	104.7	70	130	
Mg	24	1	nogas	520.422	1.206	1838151	1.24	500	104.1	70	130	
Al	27	1	nogas	5.726	3.174	47905	2.07	5	114.5	70	130	
P	31	1	nogas	28.971	0.705	18143	0.76	25	115.9	70	130	
K	39	1	nogas	518.238	1.039	3044393	0.91	500	103.6	70	130	
Ca	43	1	nogas	500.334	2.990	4027	2.90	500	100.1	70	130	
Ca	44	1	nogas	526.206	2.663	73270	1.85	500	105.2	70	130	
Ti	47	1	nogas	4.977	5.396	1910	5.76	5	99.5	70	130	
V	51	1	nogas	-5.956	-19.659	90454	6.52	5	-119.1	70	130	LLICV Main CR1 Failed
Cr	52	1	nogas	4.783	2.313	28577	1.38	5	95.7	70	130	
Mn	55	1	nogas	5.217	1.123	37508	1.33	5	104.3	70	130	
Fe	56	1	nogas	528.934	2.724	2936838	2.03	500	105.8	70	130	
Co	59	1	nogas	5.100	2.238	25312	1.91	5	102.0	70	130	
Ni	60	1	nogas	5.067	2.987	6018	2.86	5	101.3	70	130	
Cu	63	1	nogas	4.856	3.106	15574	2.49	5	97.1	70	130	
Zn	66	1	nogas	5.608	7.915	5744	7.62	5	112.2	70	130	
As	75	1	nogas	-3.268	-10.375	18304	2.03	5	-65.4	70	130	LLICV Main CR1 Failed
Se	77	1	nogas	-45.262	-22.053	4934	7.74	5	-905.2	70	130	LLICV Main CR1 Failed
Se	82	1	nogas	4.520	38.125	483	17.60	5	90.4	70	130	
Sr	88	1	nogas	5.150	1.247	37492	1.70	5	103.0	70	130	
Mo	95	1	nogas	4.849	1.641	7442	2.09	5	97.0	70	130	
Ag	107	1	nogas	5.347	4.612	21714	5.02	5	106.9	70	130	
Cd	111	1	nogas	5.248	1.531	4877	1.95	5	105.0	70	130	
Sn	118	1	nogas	4.975	0.521	14333	1.00	5	99.5	70	130	
Sb	121	1	nogas	5.939	5.046	23934	4.47	5	118.8	70	130	
Ba	137	1	nogas	5.383	4.374	7649	3.36	5	107.7	70	130	
Tl	205	1	nogas	4.909	1.753	59371	1.40	5	98.2	70	130	
Pb	208	1	nogas	5.033	1.087	46297	1.38	5	100.7	70	130	
U	238	1	nogas	4.911	1.280	110877	0.41	5	98.2	70	130	
Li	7	1	nogas	5.895	3.485	41525	2.88	5	117.9	70	130	
Si	28	1	nogas	361.442	4.743	1343152	2.11	25	1445.8	70	130	LLICV Main CR1 Failed
La	139	1	nogas	65.328	30.424	103	24.35	5	1306.6	70	130	LLICV Main CR1 Failed
Au	197	1	nogas	-76.571	0.000	0	#DIV/0!	5	-1531.4	70	130	LLICV Main CR1 Failed
Na	23	2	He	507.086	2.902	106346	1.02	500	101.4	70	130	
Mg	24	2	He	498.367	3.626	42919	2.71	500	99.7	70	130	
Al	27	2	He	4.765	26.318	343	16.04	5	95.3	70	130	
K	39	2	He	508.222	5.625	28363	2.94	500	101.6	70	130	
Ca	43	2	He	604.287	41.757	70	42.86	500	120.9	70	130	
Ca	44	2	He	527.594	14.765	1020	12.25	500	105.5	70	130	
V	51	2	He	4.788	6.180	1747	4.20	5	95.8	70	130	
Cr	52	2	He	5.413	6.238	2444	7.21	5	108.3	70	130	
Mn	55	2	He	5.293	6.382	1217	6.38	5	105.9	70	130	
Fe	56	2	He	506.275	3.564	169633	2.13	500	101.3	70	130	
Co	59	2	He	4.955	5.986	3060	4.58	5	99.1	70	130	
Ni	60	2	He	4.811	0.959	930	1.86	5	96.2	70	130	
Cu	63	2	He	4.493	6.844	2564	5.75	5	89.9	70	130	
Zn	66	2	He	5.681	10.016	507	7.98	5	113.6	70	130	
As	75	2	He	4.967	5.429	281	4.79	5	99.3	70	130	
Sb	121	2	He	6.162	5.851	2667	5.11	5	123.2	70	130	
Se	78	2	He	6.966	25.460	28	21.43	5	139.3	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
Ge	72	1	nogas	571803	0.46	610209	93.71	70	125	
In	115	1	nogas	703053	1.09	742039	94.75	70	125	
Li	6	1	nogas	233452	1.18	256544	91.00	70	125	
Bi	209	1	nogas	1042662	0.88	1099361	94.84	70	125	

Low Level Initial Calibration Verification (LLICV) Report

Ge	72	2	He	31493	1.66	34709	90.73	70	125	

Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	ICSA
Data File Name	373ICSA.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-06T01:06:35-06:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	289CALB.d
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	0.014	122.8	23	107.9	0	ICSA Main CR1 Failed
B	11	1	nogas	-2.833	-106.0	20122	10.2	0	ICSA Main CR1 Failed
Na	23	1	nogas	94979.647	0.4	477115261	0.3	0	
Mg	24	1	nogas	93083.447	0.5	330052174	0.2	0	
Al	27	1	nogas	60958.740	1.0	398139207	0.8	0	
P	31	1	nogas	80362.612	1.0	22879562	1.1	0	
K	39	1	nogas	96311.891	0.6	357228708	0.6	0	
Ca	43	1	nogas	94146.884	0.5	709555	0.6	0	
Ca	44	1	nogas	93746.316	0.7	11309384	0.8	0	
Ti	47	1	nogas	1944.657	0.7	733359	0.7	0	
V	51	1	nogas	-19.178	-0.6	19315	2.9	0	ICSA Main CR1 Failed
Cr	52	1	nogas	-0.295	-20.3	4437	6.3	0	ICSA Main CR1 Failed
Mn	55	1	nogas	0.279	22.4	7262	5.4	0	ICSA Main CR1 Failed
Fe	56	1	nogas	95956.940	0.6	486801678	0.5	0	
Co	59	1	nogas	0.070	6.0	427	4.9	0	ICSA Main CR1 Failed
Ni	60	1	nogas	0.506	16.4	1000	9.0	0	ICSA Main CR1 Failed
Cu	63	1	nogas	0.413	28.5	3434	9.3	0	ICSA Main CR1 Failed
Zn	66	1	nogas	1.023	9.7	1493	6.1	0	ICSA Main CR1 Failed
As	75	1	nogas	-14.695	-1.7	7942	2.9	0	ICSA Main CR1 Failed
Se	77	1	nogas	-104.935	-0.3	2697	0.4	0	ICSA Main CR1 Failed
Se	82	1	nogas	-0.132	-471.1	253	12.1	0	ICSA Main CR1 Failed
Sr	88	1	nogas	0.914	0.6	6958	0.6	0	ICSA Main CR1 Failed
Mo	95	1	nogas	1968.689	2.3	2997429	2.2	0	
Ag	107	1	nogas	0.035	62.5	193	46.4	0	ICSA Main CR1 Failed
Cd	111	1	nogas	0.716	19.3	653	19.4	0	ICSA Main CR1 Failed
Sn	118	1	nogas	0.036	152.6	803	17.7	0	ICSA Main CR1 Failed
Sb	121	1	nogas	0.582	8.0	2830	6.5	0	ICSA Main CR1 Failed
Ba	137	1	nogas	-0.019	-150.0	237	16.0	0	ICSA Main CR1 Failed
Tl	205	1	nogas	0.009	34.0	227	16.7	0	ICSA Main CR1 Failed
Pb	208	1	nogas	0.092	14.3	1037	10.3	0	ICSA Main CR1 Failed
Si	28	1	nogas	55.611	6.9	751734	1.0	0	
La	139	1	nogas	75.904	13.0	113	10.2	0	
Na	23	2	He	94155.623	1.2	16752306	0.3	0	
Mg	24	2	He	91595.800	0.7	7734952	2.0	0	
Al	27	2	He	64935.584	1.2	2776360	1.6	0	
K	39	2	He	95811.391	1.4	4140724	1.0	0	
Ca	43	2	He	87734.478	7.7	9960	8.0	0	
Ca	44	2	He	96526.219	1.0	172360	1.1	0	
V	51	2	He	-0.277	-7.2	43	16.5	0	ICSA Main CR1 Failed
Cr	52	2	He	0.239	19.1	223	9.3	0	ICSA Main CR1 Failed
Mn	55	2	He	0.234	51.3	107	23.6	0	ICSA Main CR1 Failed
Fe	56	2	He	92210.902	1.1	30152573	0.6	0	
Co	59	2	He	0.031	61.6	33	34.6	0	ICSA Main CR1 Failed
Ni	60	2	He	-0.349	-56.7	53	60.3	0	ICSA Main CR1 Failed
Cu	63	2	He	-0.083	-231.8	367	23.8	0	ICSA Main CR1 Failed
Zn	66	2	He	1.287	33.7	137	27.7	0	ICSA Main CR1 Failed
As	75	2	He	-0.205	-35.7	4	86.6	0	ICSA Main CR1 Failed
Sb	121	2	He	0.445	41.7	237	33.9	0	ICSA Main CR1 Failed
Se	78	2	He	3.218	25.9	15	20.8	0	ICSA Main CR1 Failed

Interference Check Solution A (ICS-A) Report

Interference Check Solution A (ICS-A) Report

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	572151	0.13	610209	93.76	70	125	
In	115	1	nogas	684734	0.97	742039	92.28	70	125	
Li	6	1	nogas	225615	0.74	256544	87.94	70	125	
Bi	209	1	nogas	993099	0.90	1099361	90.33	70	125	
Ge	72	2	He	30932	1.46	34709	89.12	70	125	

Interference Check Solution AB (ICS-AB) Report

Sample Table

Sample Name	ICSAB
Data File Name	374ICSB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\010
Acq Date Time	2018-01-06T01:08:53-06:00
Sample Type	ICSB
Dilution	1
Comment	
ISTD Ref File Name	289CALB.d
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	108.068	2.082	172441	0.72	100	108.1	80	120	
B	11	1	nogas	561.579	1.543	462586	0.55	100	561.6	80	120	
Na	23	1	nogas	104394.968	1.231	528053828	0.96	100	104395.0	80	120	
Mg	24	1	nogas	102442.941	0.729	365791767	0.60	100	102442.9	80	120	
Al	27	1	nogas	61486.341	0.225	399746341	0.23	100	61486.3	80	120	ICSB Main CR1 Failed
K	39	1	nogas	106422.678	1.334	392798050	1.24	100	106422.7	80	120	
Ca	43	1	nogas	104172.183	0.185	781483	0.29	100	104172.2	80	120	
Ca	44	1	nogas	102946.955	1.599	12361326	1.59	100	102947.0	80	120	
Ti	47	1	nogas	2046.790	0.217	768338	0.51	100	2046.8	80	120	
V	51	1	nogas	79.104	1.814	546121	1.16	100	79.1	80	120	
Cr	52	1	nogas	95.115	1.079	456261	0.94	100	95.1	80	120	
Mn	55	1	nogas	97.237	1.014	598798	0.68	100	97.2	80	120	
Fe	56	1	nogas	105841.403	2.144	534436962	1.83	100	105841.4	80	120	
Co	59	1	nogas	97.387	1.178	480012	0.91	100	97.4	80	120	
Ni	60	1	nogas	96.586	1.336	106272	1.18	100	96.6	80	120	
Cu	63	1	nogas	96.868	1.036	265957	0.88	100	96.9	80	120	
Zn	66	1	nogas	99.066	1.847	92009	1.84	100	99.1	80	120	
As	75	1	nogas	86.055	0.415	98939	0.62	100	86.1	80	120	
Se	77	1	nogas	3.825	38.077	6748	0.76	100	3.8	80	120	
Se	82	1	nogas	99.625	4.697	5168	4.15	100	99.6	80	120	
Sr	88	1	nogas	101.522	0.564	729426	0.40	100	101.5	80	120	
Mo	95	1	nogas	2051.043	0.653	3108505	0.51	100	2051.0	80	120	
Ag	107	1	nogas	96.372	0.793	388891	1.07	100	96.4	80	120	
Cd	111	1	nogas	100.607	1.069	91793	1.64	100	100.6	80	120	
Sn	118	1	nogas	101.091	1.488	272456	1.09	100	101.1	80	120	
Sb	121	1	nogas	101.864	0.795	400280	0.67	100	101.9	80	120	
Ba	137	1	nogas	102.398	1.644	138270	1.07	100	102.4	80	120	
Tl	205	1	nogas	97.255	1.305	1113766	1.36	100	97.3	80	120	
Pb	208	1	nogas	99.975	0.177	867988	0.85	100	100.0	80	120	
U	238	1	nogas	101.670	2.392	2174002	2.52	100	101.7	80	120	
Si	28	1	nogas	5129.705	0.286	10530617	0.59	100	5129.7	80	120	ICSB Main CR1 Failed
La	139	1	nogas	293.480	29.851	380	27.73	100	293.5	80	120	ICSB Main CR1 Failed
Na	23	2	He	104918.756	2.707	18157231	0.11	100	104918.8	80	120	
Mg	24	2	He	104142.711	2.738	8553853	0.94	100	104142.7	80	120	ICSB Main CR1 Failed
Al	27	2	He	65832.234	3.869	2737239	1.23	100	65832.2	80	120	ICSB Main CR1 Failed
K	39	2	He	105636.428	2.828	4440310	0.60	100	105636.4	80	120	
Ca	43	2	He	100014.885	5.539	11037	3.17	100	100014.9	80	120	ICSB Main CR1 Failed
Ca	44	2	He	109544.293	1.984	190284	0.69	100	109544.3	80	120	ICSB Main CR1 Failed
V	51	2	He	100.219	1.637	32372	1.12	100	100.2	80	120	
Cr	52	2	He	100.565	0.501	41276	2.86	100	100.6	80	120	
Mn	55	2	He	97.956	1.480	20556	1.31	100	98.0	80	120	
Fe	56	2	He	104790.144	2.996	33330367	0.37	100	104790.1	80	120	ICSB Main CR1 Failed
Co	59	2	He	100.701	3.844	59168	1.40	100	100.7	80	120	
Ni	60	2	He	94.960	5.581	15494	3.92	100	95.0	80	120	
Cu	63	2	He	99.134	4.241	45701	2.19	100	99.1	80	120	
Zn	66	2	He	102.594	3.982	8252	5.39	100	102.6	80	120	
As	75	2	He	101.858	6.299	5222	6.59	100	101.9	80	120	
Sb	121	2	He	103.756	0.161	42154	2.53	100	103.8	80	120	
Se	78	2	He	93.935	1.741	318	2.74	100	93.9	80	120	

QC ISTD Table

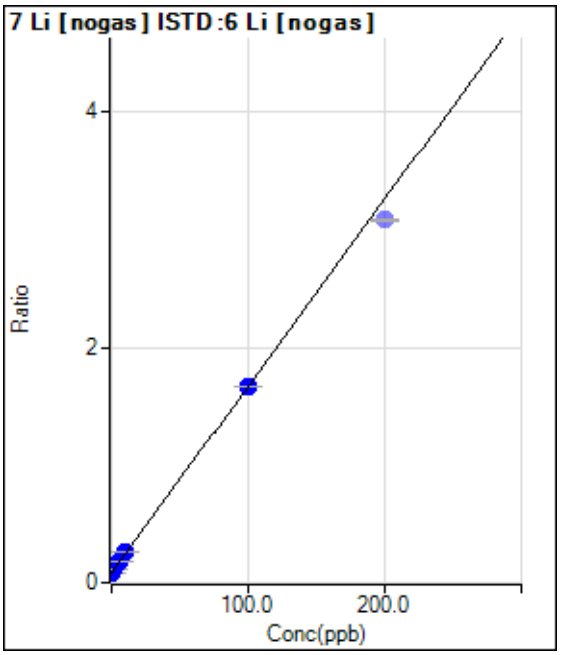
Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	569529	0.33	610209	93.33	70	125	
In	115	1	nogas	691014	0.58	742039	93.12	70	125	
Li	6	1	nogas	240070	1.63	256544	93.58	70	125	
Bi	209	1	nogas	989193	0.80	1099361	89.98	70	125	
Ge	72	2	He	30100	2.66	34709	86.72	70	125	

Calibration for 026_ICV.d

Batch Folder: C:\Agilent\ICPMH\1\DATA\010518A.b\
Analysis File: 010518A.batch.bin
DA Date-Time: 1/5/2018 10:38:02 PM
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	020CALB.d	CAL BLK	1/5/2018 11:13:19 AM
2	021CALS.d	2/10/200	1/5/2018 11:15:31 AM
3	022CALS.d	5/25/500	1/5/2018 11:17:43 AM
4	023CALS.d	10/50/1000	1/5/2018 11:19:54 AM
5	024CALS.d	100/500/10K	1/5/2018 11:22:05 AM
6	025CALS.d	200/1000/20K	1/5/2018 11:24:17 AM
7			

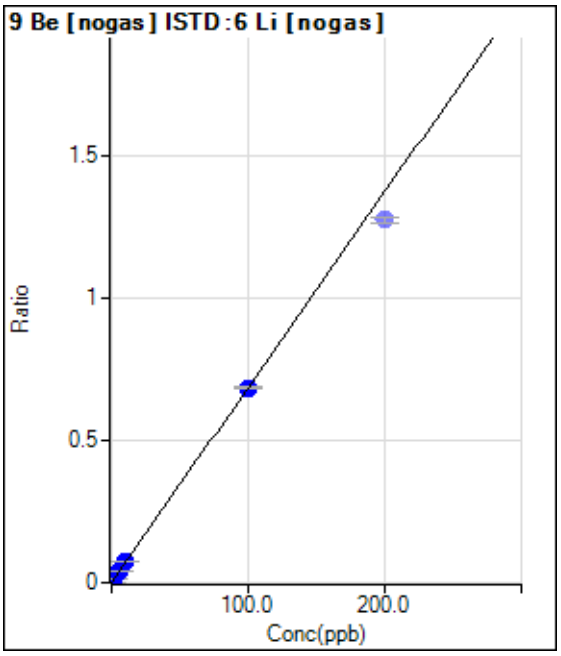
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	17395.34	0.0823	P	4.1
2	☐	2.000	2.334	25491.65	0.1193	P	3.2
3	☐	5.000	5.866	36246.89	0.1754	P	3.2
4	☐	10.000	11.065	53794.40	0.2579	P	0.8
5	☐	100.000	99.844	375027.73	1.6670	P	0.4
6	☑	200.000		732070.66	3.0826	P	0.6
7	☐	1.000					

y = 0.0159 * x + 0.0823
R = 0.9999
DL = 0.6306
BEC = 5.183

Weight: <None>
Min Conc: <None>

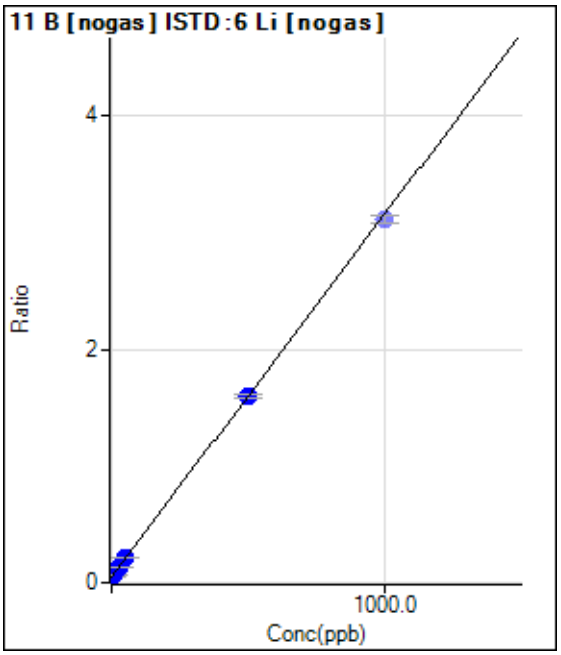


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	10.00	0.0000	P	100.
2	☐	2.000	2.017	2966.97	0.0139	P	7.0
3	☐	5.000	5.601	7951.88	0.0385	P	3.8
4	☐	10.000	10.868	15550.29	0.0746	P	5.8
5	☐	100.000	99.883	154114.62	0.6851	P	1.4
6	☑	200.000		302651.92	1.2745	P	1.5
7	☐	1.000					

y = 0.0069 * x + 4.7682E-005
R = 1.0000
DL = 0.02096
BEC = 0.006953

Weight: <None>
Min Conc: <None>

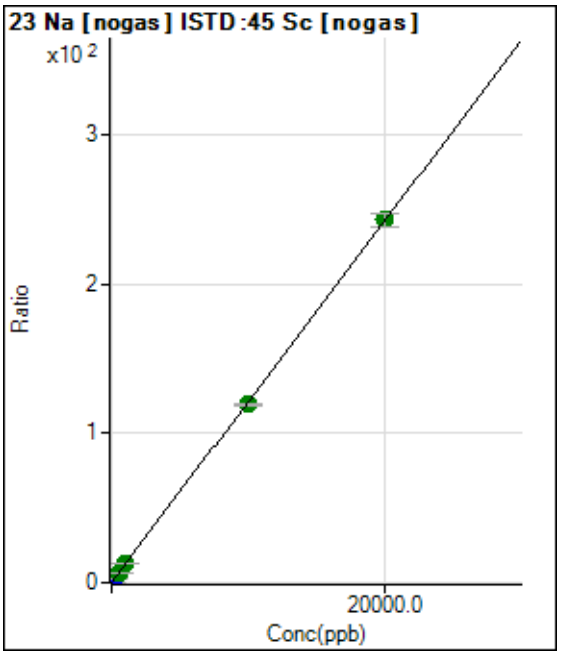
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	10213.09	0.0483	P	6.7
2	☐	10.000	7.522	15320.11	0.0717	P	0.7
3	☐	25.000	25.795	26550.05	0.1285	P	4.1
4	☐	50.000	52.652	44201.42	0.2119	P	3.5
5	☐	500.000	499.745	360267.47	1.6012	P	2.2
6	☑	1000.000		738368.79	3.1097	P	2.3
7	☐	5.000					

y = 0.0031 * x + 0.0483
R = 1.0000
DL = 3.112
BEC = 15.55

Weight: <None>
Min Conc: <None>

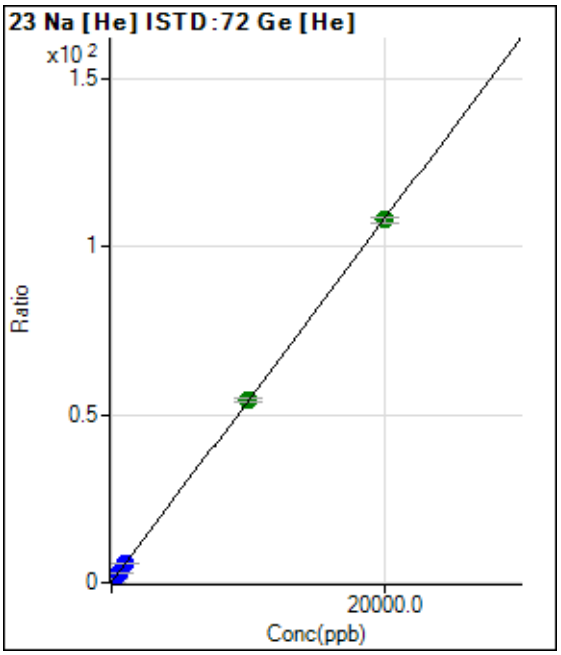


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	64798.50	0.1850	P	2.3
2	☐	200.000	219.412	985287.75	2.8379	P	2.1
3	☐	500.000	538.050	2361000.18	6.6904	A	0.9
4	☐	1000.000	1035.852	4522233.05	12.7091	A	1.5
5	☐	10000.00	9856.495	42045198.86	119.355	A	1.4
6	☐	20000.00	20068.815	85407743.58	242.828	A	3.6
7	☐	100.000					

y = 0.0121 * x + 0.1850
R = 1.0000
DL = 1.034
BEC = 15.3

Weight: <None>
Min Conc: <None>

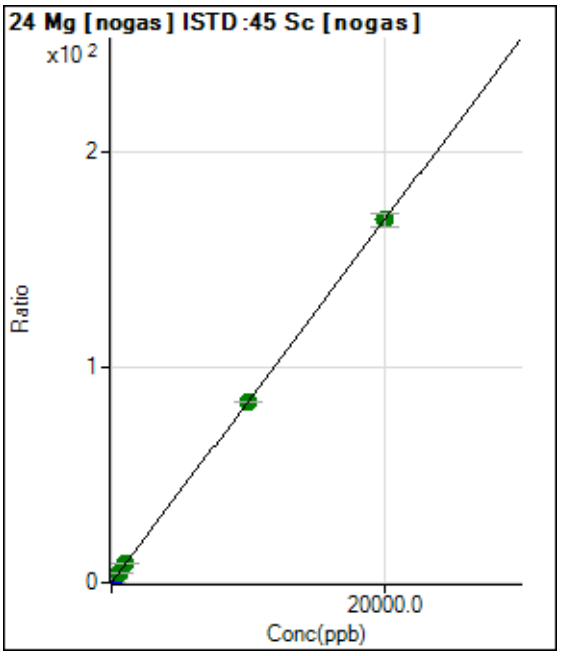
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3467.08	0.1174	P	6.6
2	☐	200.000	214.878	36885.26	1.2797	P	3.8
3	☐	500.000	521.511	87423.70	2.9384	P	0.7
4	☐	1000.000	1052.236	174307.43	5.8092	P	1.8
5	☐	10000.00	10081.109	1610580.50	54.6489	A	1.9
6	☐	20000.00	19956.147	3148098.91	108.065	A	1.3
7	☐	100.000					

y = 0.0054 * x + 0.1174
R = 1.0000
DL = 4.304
BEC = 21.7

Weight: <None>
Min Conc: <None>

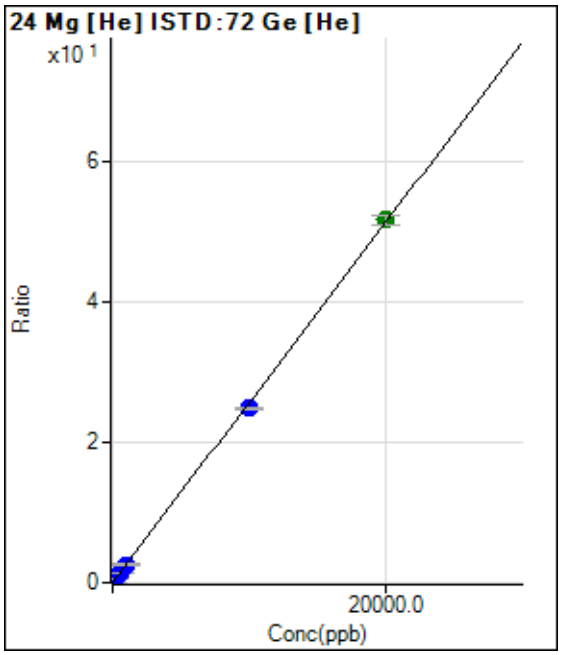


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2100.65	0.0060	P	69.4
2	☐	200.000	220.498	645769.06	1.8598	P	0.9
3	☐	500.000	550.671	1636029.07	4.6357	A	1.8
4	☐	1000.000	1062.372	3179377.29	8.9377	A	2.4
5	☐	10000.00	9980.488	29561655.87	83.9157	A	0.6
6	☐	20000.00	20005.166	59159561.74	168.197	A	3.4
7	☐	100.000					

y = 0.0084 * x + 0.0060
R = 1.0000
DL = 1.48
BEC = 0.7111

Weight: <None>
Min Conc: <None>

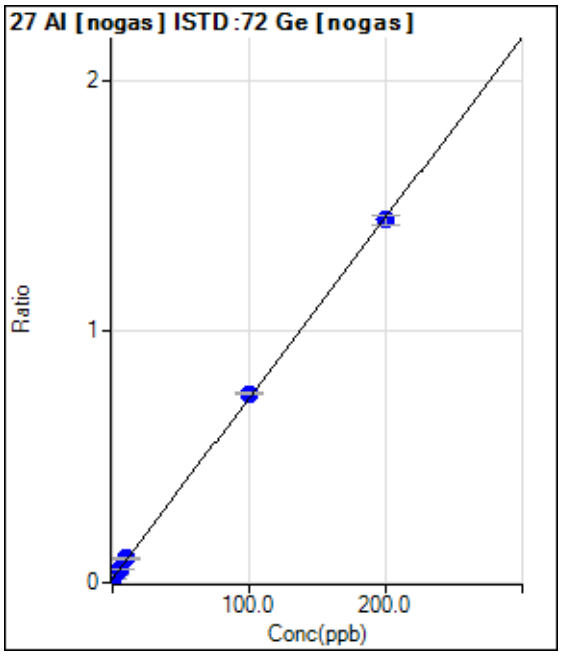
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	36.67	0.0012	P	83.0
2	☐	200.000	203.031	15066.65	0.5229	P	5.5
3	☐	500.000	506.345	38742.82	1.3021	P	1.6
4	☐	1000.000	1010.580	77940.53	2.5976	P	1.9
5	☐	10000.00	9690.079	733773.40	24.8965	P	1.4
6	☐	20000.00	20154.243	1508187.01	51.7805	A	2.4
7	☐	100.000					

y = 0.0026 * x + 0.0012
R = 0.9998
DL = 1.201
BEC = 0.4821

Weight: <None>
Min Conc: <None>

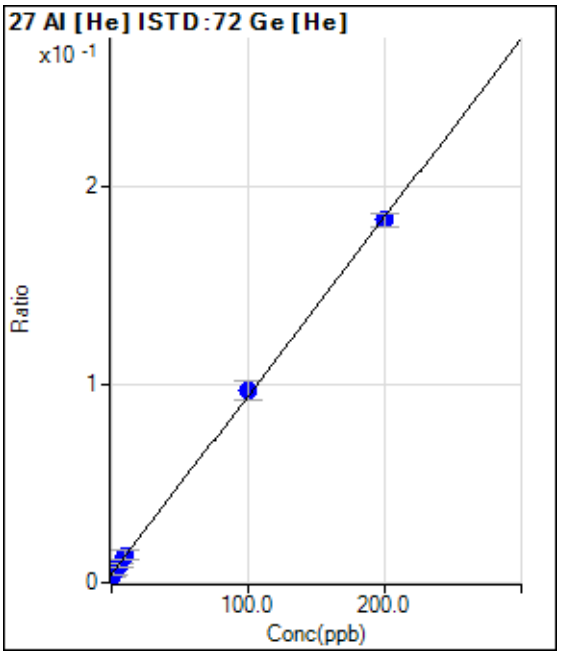


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	8435.50	0.0161	P	3.5
2	☐	2.000	1.740	15070.09	0.0286	P	3.5
3	☐	5.000	5.111	28216.07	0.0529	P	1.2
4	☐	10.000	11.095	51040.65	0.0959	P	1.2
5	☐	100.000	102.543	397458.86	0.7534	P	0.9
6	☐	200.000	198.674	758098.66	1.4446	P	2.7
7	☐	1.000					

y = 0.0072 * x + 0.0161
R = 0.9999
DL = 0.2389
BEC = 2.244

Weight: <None>
Min Conc: <None>

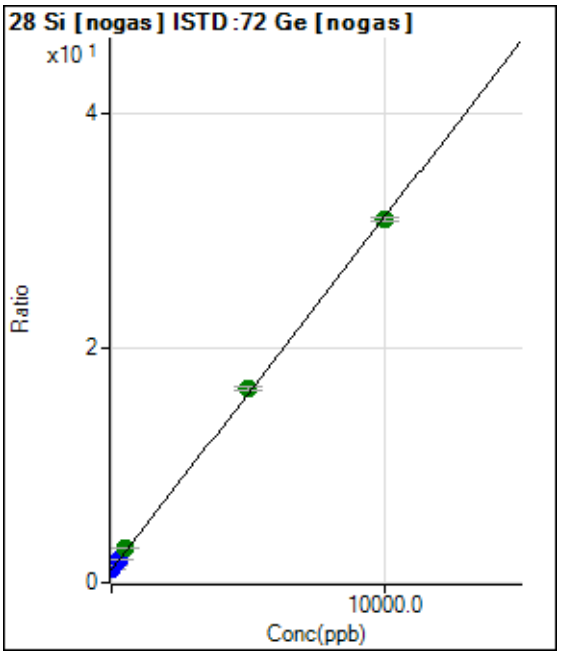
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-1.390	90.00	0.0030	P	38.4
2	☐	2.000	1.132	153.34	0.0053	P	48.8
3	☐	5.000	5.034	263.34	0.0088	P	25.4
4	☐	10.000	10.775	420.02	0.0140	P	33.7
5	☐	100.000	102.960	2866.96	0.0972	P	9.7
6	☐	200.000	198.489	5344.25	0.1834	P	3.7
7	☐	1.000					

y = 9.0223E-004 * x + 0.0043
R = 0.9998
DL = 3.89
BEC = 4.768

Weight: <None>
Min Conc: <None>

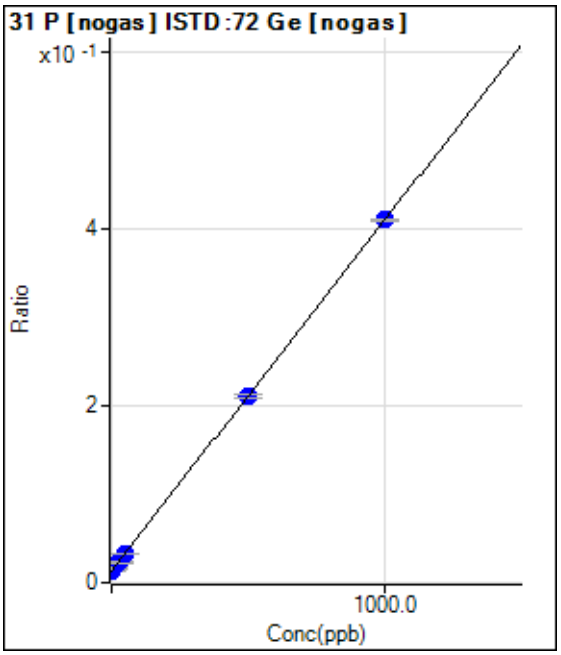


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	566648.29	1.0836	P	1.5
2	☐	100.000	108.729	742259.16	1.4111	P	1.2
3	☐	250.000	276.310	1022196.34	1.9158	P	0.2
4	☐	500.000	636.349	1596541.44	3.0001	A	1.3
5	☐	5000.000	5146.058	8746590.08	16.5818	A	2.2
6	☐	10000.00	9919.409	16246758.93	30.9574	A	1.1
7	☐	50.000					

y = 0.0030 * x + 1.0836
R = 0.9998
DL = 16.37
BEC = 359.8

Weight: <None>
Min Conc: <None>

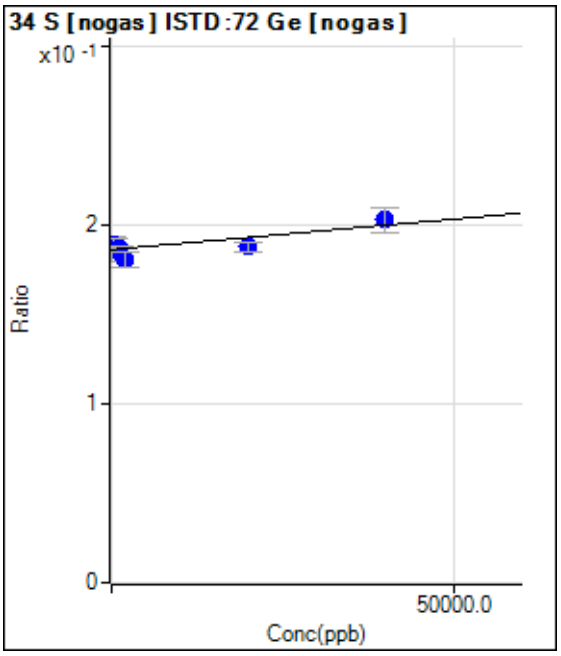
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6968.20	0.0133	P	5.9
2	☐	10.000	7.537	8575.62	0.0163	P	7.4
3	☐	25.000	24.100	12197.74	0.0229	P	4.3
4	☐	50.000	49.505	17518.98	0.0329	P	3.6
5	☐	500.000	497.367	110878.78	0.2102	P	1.8
6	☐	1000.000	1001.388	215033.89	0.4097	P	0.6
7	☐	5.000					

y = 3.9584E-004 * x + 0.0133
R = 1.0000
DL = 5.934
BEC = 33.66

Weight: <None>
Min Conc: <None>

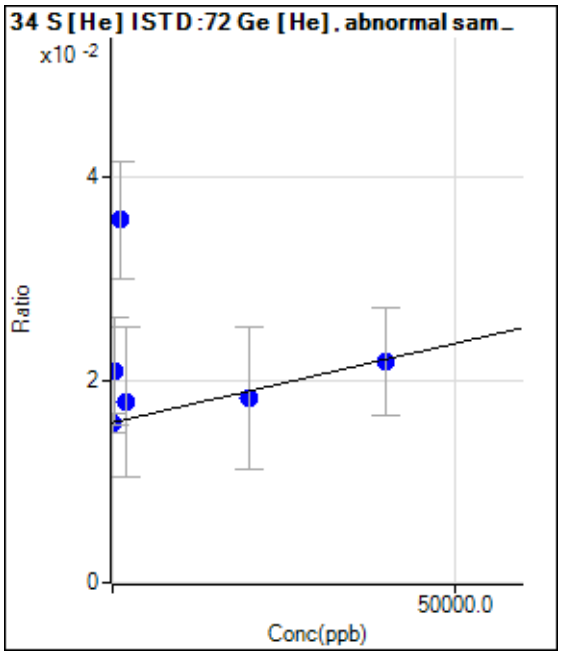


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	97522.72	0.1865	P	7.7
2	☐	400.000	7814.741	99468.60	0.1891	P	3.5
3	☐	1000.000	3392.791	100103.57	0.1876	P	0.5
4	☐	2000.000	-17073.366	96115.02	0.1806	P	4.5
5	☐	20000.00	4349.759	99130.86	0.1879	P	2.5
6	☐	40000.00	48644.821	106537.02	0.2030	P	6.8
7	☐	200.000					

y = 3.4108E-007 * x + 0.1865
R = 0.8456
DL = 1.26E+05
BEC = 5.467E+05

Weight: <None>
Min Conc: <None>

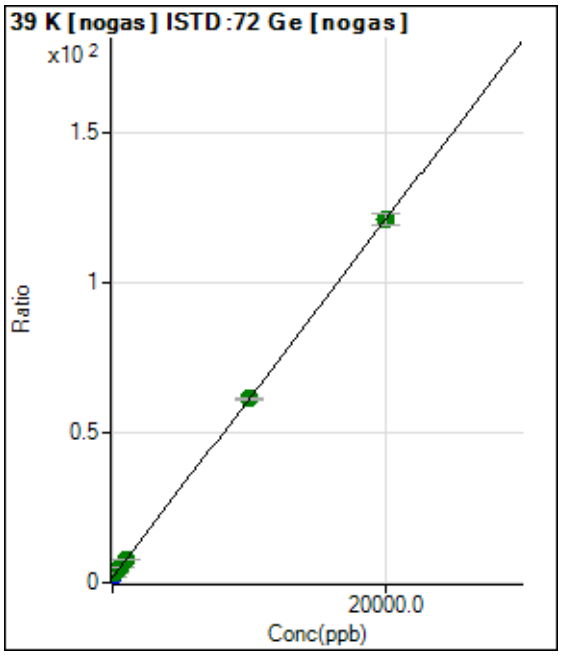
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	466.78	0.0158	P	12.5
2	☐	400.000	32927.848	600.16	0.0209	P	50.8
3	☐	1000.000	128286.117	1066.95	0.0358	P	32.4
4	☐	2000.000	12653.710	533.45	0.0178	P	83.5
5	☐	20000.00	15562.284	533.45	0.0182	P	77.3
6	☐	40000.00	38178.741	633.50	0.0218	P	48.7
7	☐	200.000					

y = 1.5592E-007 * x + 0.0158
R = -0.1055
DL = 3.793E+04
BEC = 1.014E+05

Weight: <None>
Min Conc: <None>

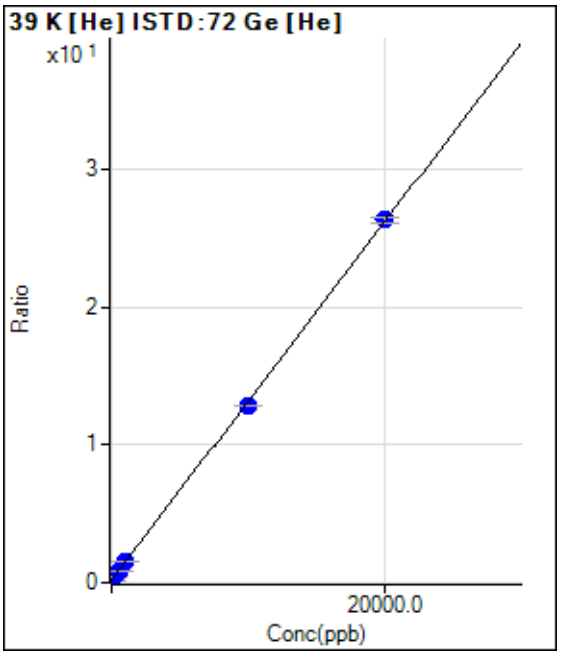


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	867942.57	1.6598	P	0.9
2	☐	200.000	221.809	1569294.34	2.9832	A	0.5
3	☐	500.000	541.887	2610670.56	4.8929	A	0.8
4	☐	1000.000	1059.215	4246746.45	7.9795	A	0.7
5	☐	10000.00	10003.895	32361531.97	61.3469	A	0.7
6	☐	20000.00	19993.826	63469378.50	120.950	A	3.0
7	☐	100.000					

y = 0.0060 * x + 1.6598
R = 1.0000
DL = 7.677
BEC = 278.2

Weight: <None>
Min Conc: <None>

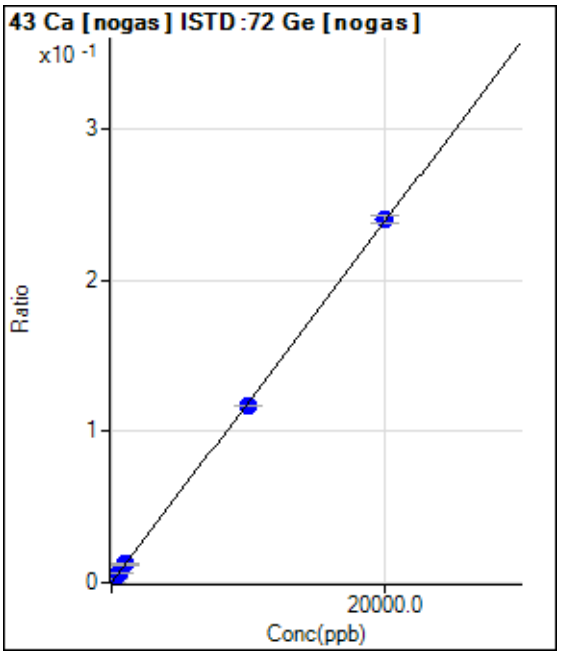
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	5360.92	0.1816	P	5.5
2	☐	200.000	201.535	12788.24	0.4438	P	5.0
3	☐	500.000	503.154	24878.11	0.8362	P	3.7
4	☐	1000.000	1036.133	45886.97	1.5297	P	3.8
5	☐	10000.00	9751.885	379359.24	12.8698	P	0.8
6	☐	20000.00	20122.156	767878.24	26.3626	P	1.5
7	☐	100.000					

y = 0.0013 * x + 0.1816
R = 0.9999
DL = 22.95
BEC = 139.6

Weight: <None>
Min Conc: <None>

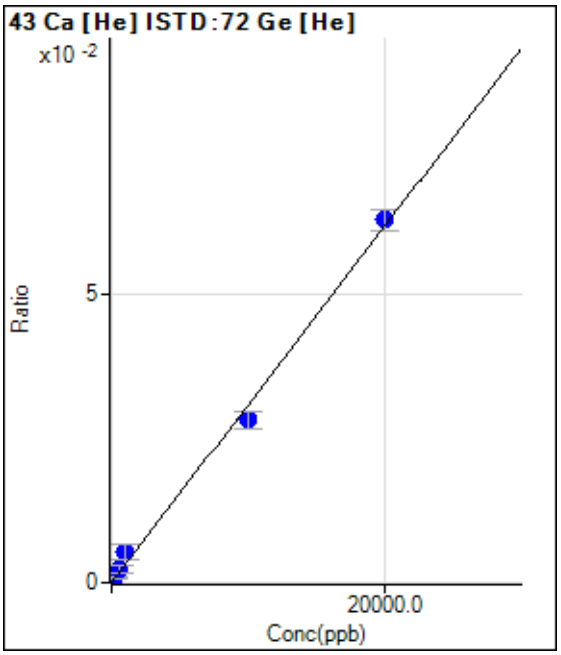


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	93.33	0.0002	P	60.9
2	☐	200.000	227.371	1520.10	0.0029	P	8.9
3	☐	500.000	537.611	3517.10	0.0066	P	1.7
4	☐	1000.000	1020.407	6571.38	0.0124	P	5.8
5	☐	10000.00	9775.512	61611.92	0.1168	P	0.4
6	☐	20000.00	20110.010	125990.07	0.2401	P	2.0
7	☐	100.000					

y = 1.1929E-005 * x + 1.7828E-004
R = 0.9999
DL = 27.3
BEC = 14.95

Weight: <None>
Min Conc: <None>

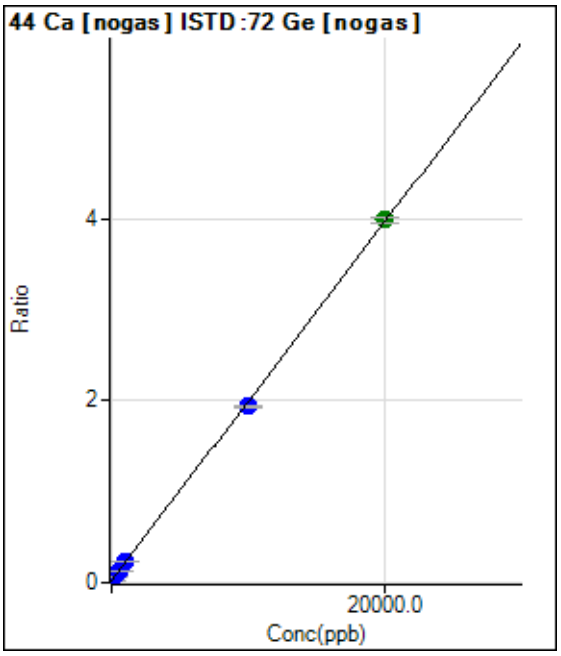
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	0.00	0.0000	P	
2	☐	200.000	262.321	23.33	0.0008	P	25.3
3	☐	500.000	763.804	70.00	0.0024	P	57.7
4	☐	1000.000	1685.717	156.67	0.0052	P	50.5
5	☐	10000.00	9168.473	833.37	0.0283	P	10.7
6	☐	20000.00	20374.259	1833.48	0.0629	P	6.1
7	☐	100.000					

y = 3.0875E-006 * x + 0.0000E+000
R = 0.9980
DL = 0
BEC = 0

Weight: <None>
Min Conc: <None>

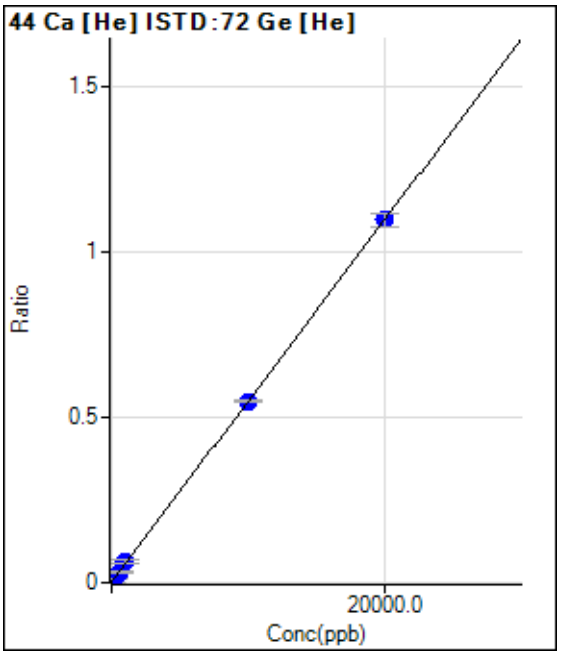


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	11937.66	0.0228	P	1.7
2	☐	200.000	205.180	33262.01	0.0632	P	0.7
3	☐	500.000	511.366	65907.15	0.1235	P	1.1
4	☐	1000.000	1040.883	121231.10	0.2278	P	1.6
5	☐	10000.00	9735.714	1023329.96	1.9400	P	1.3
6	☐	20000.00	20129.763	2092636.74	3.9867	A	1.8
7	☐	100.000					

y = 1.9692E-004 * x + 0.0228
R = 0.9999
DL = 5.777
BEC = 115.9

Weight: <None>
Min Conc: <None>

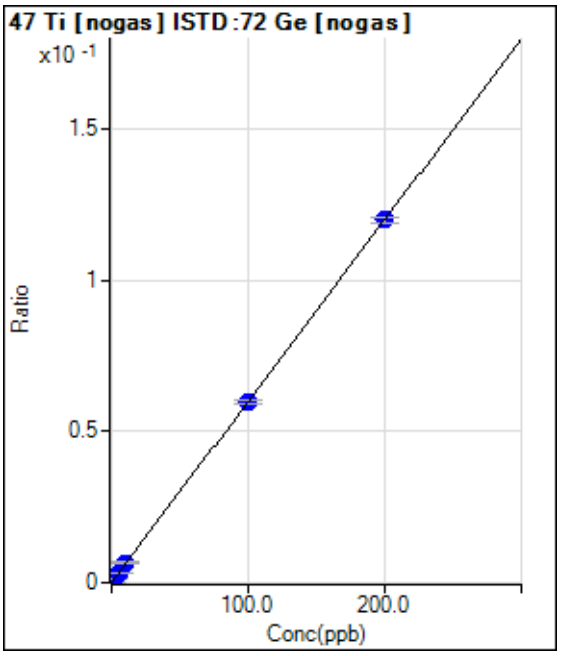
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	43.33	0.0015	P	47.9
2	☐	200.000	226.471	400.02	0.0139	P	9.0
3	☐	500.000	526.936	903.37	0.0304	P	14.4
4	☐	1000.000	1120.431	1890.15	0.0629	P	14.9
5	☐	10000.00	9966.751	16154.44	0.5481	P	1.2
6	☐	20000.00	20009.665	32009.67	1.0989	P	3.8
7	☐	100.000					

y = 5.4846E-005 * x + 0.0015
R = 1.0000
DL = 38.47
BEC = 26.76

Weight: <None>
Min Conc: <None>

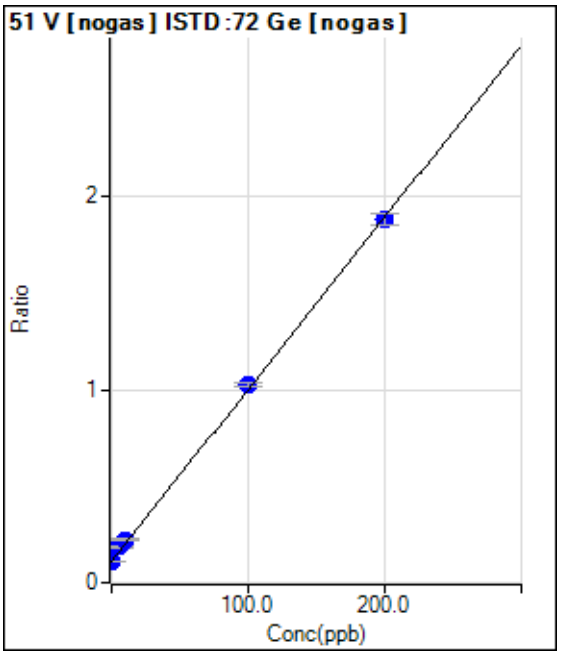


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	26.67	0.0001	P	86.6
2	☐	2.000	1.994	656.70	0.0012	P	17.4
3	☐	5.000	5.217	1696.78	0.0032	P	7.7
4	☐	10.000	10.620	3417.07	0.0064	P	9.6
5	☐	100.000	99.671	31575.61	0.0599	P	1.5
6	☐	200.000	200.128	63043.89	0.1201	P	1.4
7	☐	1.000					

y = 6.0001E-004 * x + 5.0972E-005
R = 1.0000
DL = 0.2207
BEC = 0.08495

Weight: <None>
Min Conc: <None>

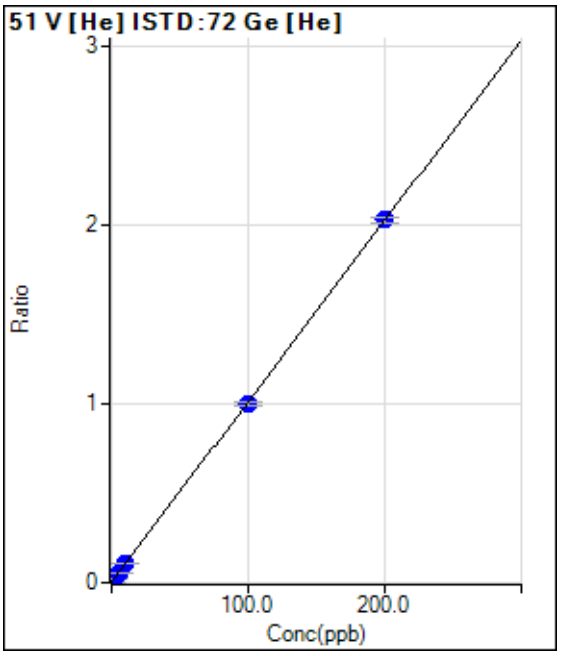
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	57974.87	0.1109	P	6.6
2	☐	2.000	7.365	92866.48	0.1765	P	1.6
3	☐	5.000	8.620	100142.64	0.1877	P	3.8
4	☐	10.000	12.588	118725.48	0.2231	P	1.4
5	☐	100.000	102.307	539562.55	1.0228	P	2.0
6	☐	200.000	198.573	987042.11	1.8809	P	3.2
7	☐	1.000					

y = 0.0089 * x + 0.1109
R = 0.9997
DL = 2.475
BEC = 12.44

Weight: <None>
Min Conc: <None>

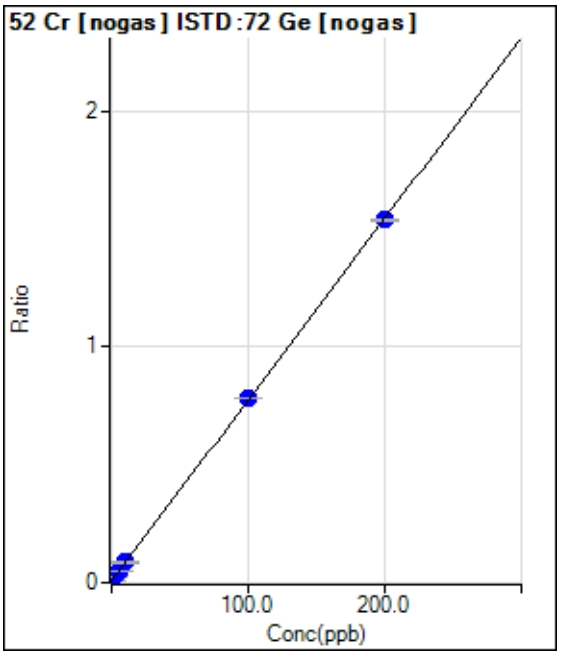


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.026	108.00	0.0037	P	14.3
2	☐	2.000	2.110	727.35	0.0253	P	9.6
3	☐	5.000	5.153	1666.75	0.0560	P	1.6
4	☐	10.000	10.375	3265.65	0.1088	P	0.7
5	☐	100.000	98.824	29558.30	1.0030	P	1.8
6	☐	200.000	200.564	59178.41	2.0316	P	1.3
7	☐	1.000					

y = 0.0101 * x + 0.0039
R = 1.0000
DL = 0.1557
BEC = 0.3881

Weight: <None>
Min Conc: <None>

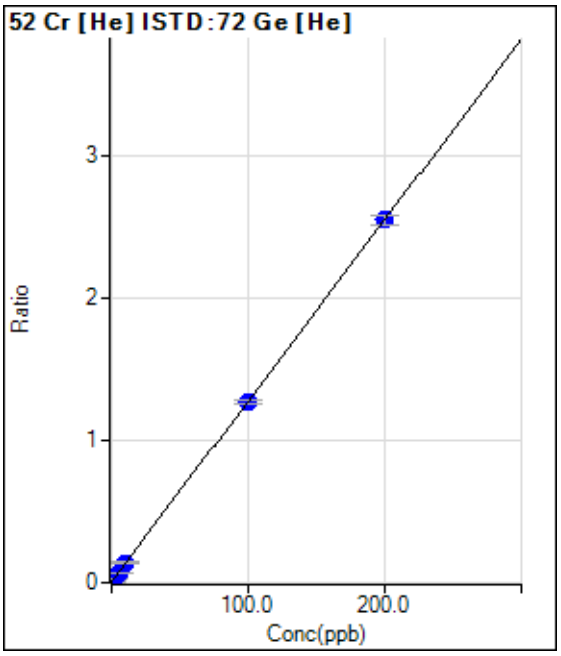
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3593.81	0.0069	P	5.1
2	☐	2.000	2.440	13465.47	0.0256	P	4.9
3	☐	5.000	5.477	26090.04	0.0489	P	2.1
4	☐	10.000	10.287	45667.08	0.0858	P	2.4
5	☐	100.000	100.955	412275.18	0.7815	P	0.6
6	☐	200.000	199.492	807025.46	1.5376	P	0.4
7	☐	1.000					

y = 0.0077 * x + 0.0069
R = 1.0000
DL = 0.1367
BEC = 0.8958

Weight: <None>
Min Conc: <None>

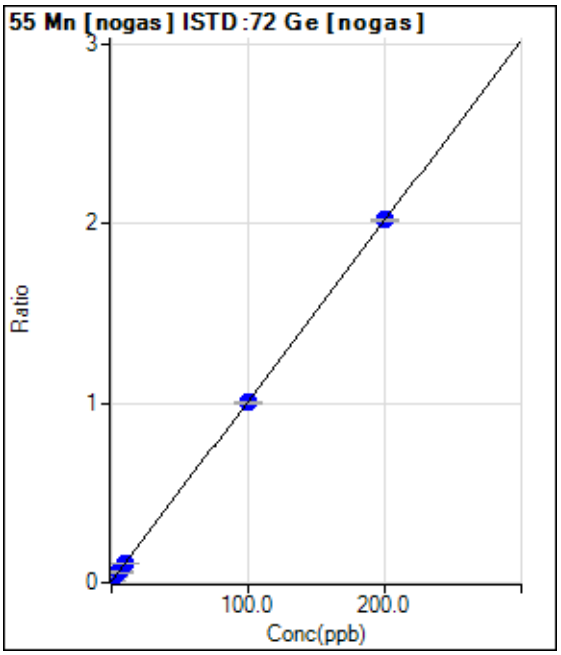


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	173.34	0.0059	P	39.8
2	☐	2.000	1.805	833.37	0.0288	P	13.3
3	☐	5.000	5.022	2073.50	0.0697	P	5.9
4	☐	10.000	10.391	4140.59	0.1379	P	6.5
5	☐	100.000	99.631	37497.55	1.2721	P	1.8
6	☐	200.000	200.166	74271.95	2.5499	P	2.8
7	☐	1.000					

y = 0.0127 * x + 0.0059
R = 1.0000
DL = 0.5522
BEC = 0.4625

Weight: <None>
Min Conc: <None>

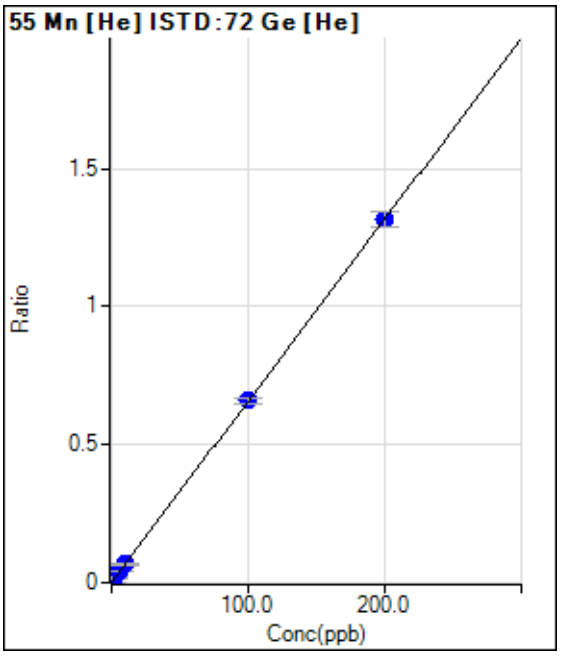
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3847.18	0.0074	P	1.1
2	☐	2.000	2.151	15226.90	0.0289	P	2.2
3	☐	5.000	5.222	31889.86	0.0598	P	4.8
4	☐	10.000	10.332	59107.54	0.1111	P	1.4
5	☐	100.000	99.043	528317.69	1.0015	P	0.8
6	☐	200.000	200.455	1059869.57	2.0195	P	0.6
7	☐	1.000					

y = 0.0100 * x + 0.0074
R = 1.0000
DL = 0.0246
BEC = 0.733

Weight: <None>
Min Conc: <None>

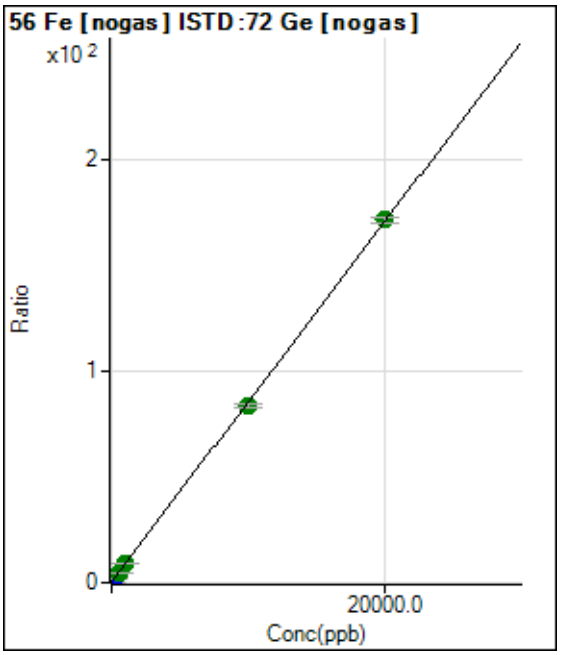


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	16.67	0.0006	P	125.
2	☐	2.000	2.367	463.35	0.0161	P	31.0
3	☐	5.000	5.896	1170.07	0.0393	P	1.9
4	☐	10.000	10.075	2003.49	0.0668	P	9.5
5	☐	100.000	100.224	19437.99	0.6595	P	2.6
6	☐	200.000	199.858	38282.79	1.3146	P	4.3
7	☐	1.000					

y = 0.0066 * x + 5.6352E-004
R = 1.0000
DL = 0.3214
BEC = 0.08571

Weight: <None>
Min Conc: <None>

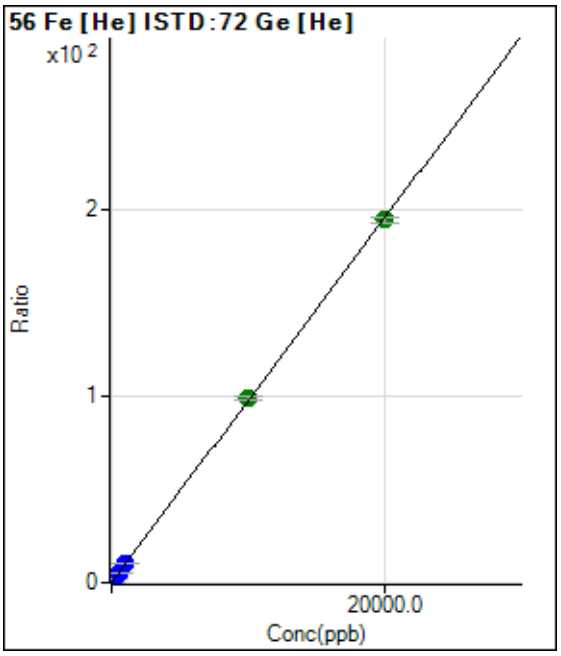
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	198494.62	0.3796	P	3.6
2	☐	200.000	209.144	1135214.28	2.1583	P	3.6
3	☐	500.000	524.956	2584526.10	4.8443	A	2.0
4	☐	1000.000	1037.992	4900068.99	9.2075	A	1.9
5	☐	10000.00	9755.454	43965425.98	83.3479	A	1.8
6	☐	20000.00	20119.658	90013012.43	171.493	A	1.5
7	☐	100.000					

y = 0.0085 * x + 0.3796
R = 0.9999
DL = 4.764
BEC = 44.63

Weight: <None>
Min Conc: <None>

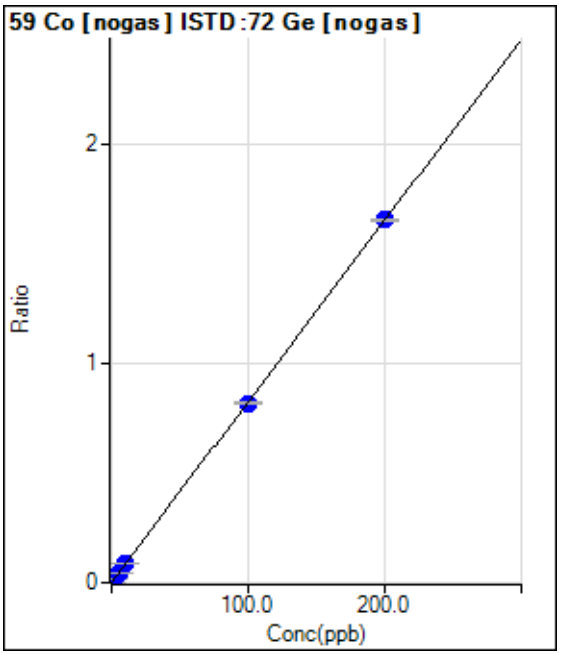


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	690.03	0.0234	P	15.2
2	☐	200.000	217.515	61887.21	2.1469	P	3.4
3	☐	500.000	535.413	156205.48	5.2505	P	1.7
4	☐	1000.000	1070.662	314350.17	10.4759	P	2.0
5	☐	10000.00	10168.334	2926201.21	99.2939	A	2.0
6	☐	20000.00	19911.239	5662790.75	194.411	A	1.5
7	☐	100.000					

y = 0.0098 * x + 0.0234
R = 1.0000
DL = 1.09
BEC = 2.395

Weight: <None>
Min Conc: <None>

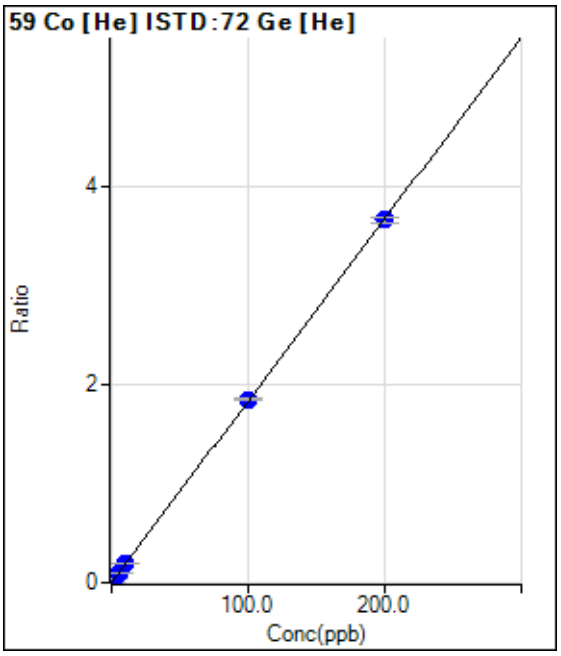
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	83.33	0.0002	P	18.3
2	☐	2.000	2.096	9175.96	0.0174	P	5.2
3	☐	5.000	5.156	22768.79	0.0427	P	2.0
4	☐	10.000	10.397	45700.82	0.0859	P	2.7
5	☐	100.000	99.153	431318.30	0.8176	P	1.1
6	☐	200.000	200.399	867237.88	1.6524	P	0.4
7	☐	1.000					

y = 0.0082 * x + 1.5935E-004
R = 1.0000
DL = 0.01061
BEC = 0.01933

Weight: <None>
Min Conc: <None>

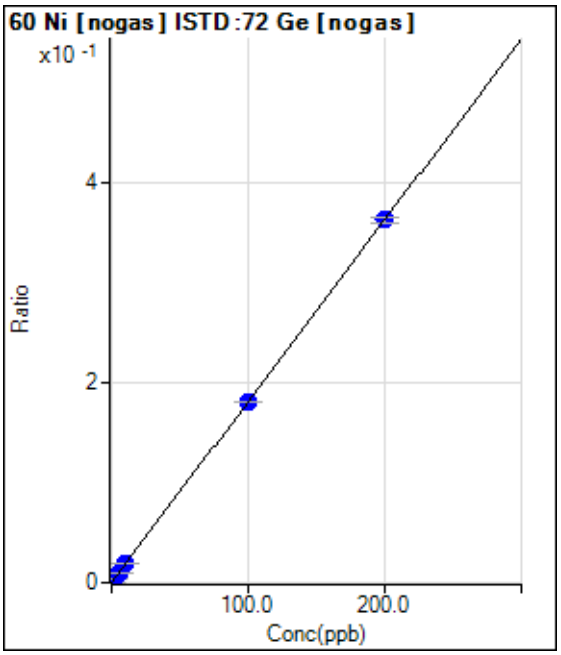


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	13.33	0.0005	P	86.6
2	☐	2.000	2.419	1296.74	0.0449	P	9.7
3	☐	5.000	5.354	2943.64	0.0989	P	5.2
4	☐	10.000	10.300	5697.74	0.1899	P	4.9
5	☐	100.000	100.681	54603.31	1.8523	P	1.1
6	☐	200.000	199.631	106969.30	3.6722	P	1.4
7	☐	1.000					

y = 0.0184 * x + 4.5258E-004
R = 1.0000
DL = 0.06393
BEC = 0.02461

Weight: <None>
Min Conc: <None>

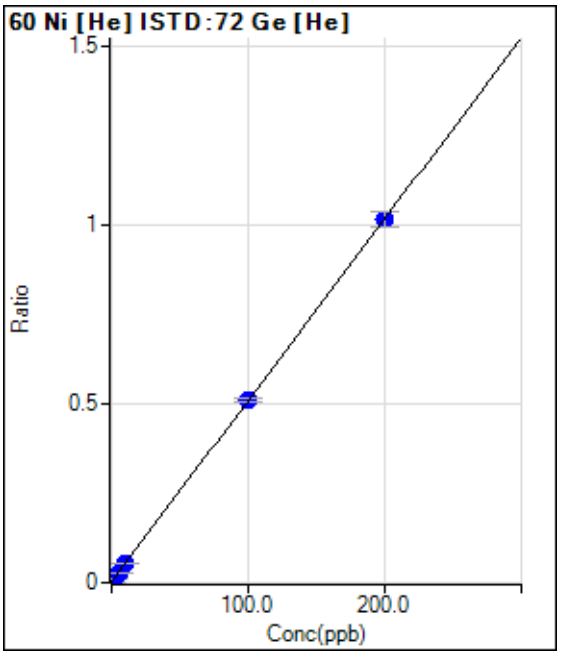
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.005	116.67	0.0002	P	21.7
2	☐	2.000	2.014	2036.83	0.0039	P	4.2
3	☐	5.000	5.039	4984.17	0.0093	P	1.7
4	☐	10.000	10.205	9939.69	0.0187	P	3.9
5	☐	100.000	99.516	95017.03	0.1801	P	0.6
6	☐	200.000	200.231	190102.05	0.3622	P	1.4
7	☐	1.000					

y = 0.0018 * x + 2.3158E-004
R = 1.0000
DL = 0.08051
BEC = 0.1281

Weight: <None>
Min Conc: <None>

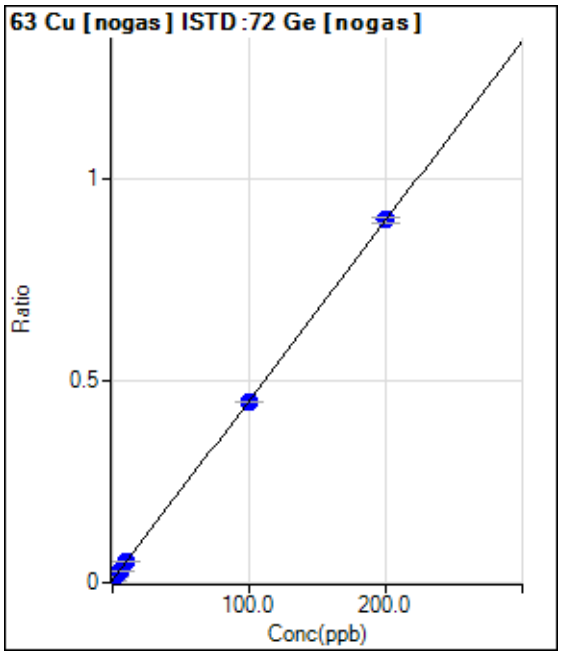


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.382	16.67	0.0006	P	124.
2	☐	2.000	1.703	320.01	0.0111	P	14.1
3	☐	5.000	4.950	820.04	0.0276	P	5.1
4	☐	10.000	10.378	1653.45	0.0551	P	4.6
5	☐	100.000	100.729	15113.52	0.5126	P	2.0
6	☐	200.000	199.621	29515.78	1.0135	P	4.3
7	☐	1.000					

y = 0.0051 * x + 0.0025
R = 1.0000
DL = 0.417
BEC = 0.4932

Weight: <None>
Min Conc: <None>

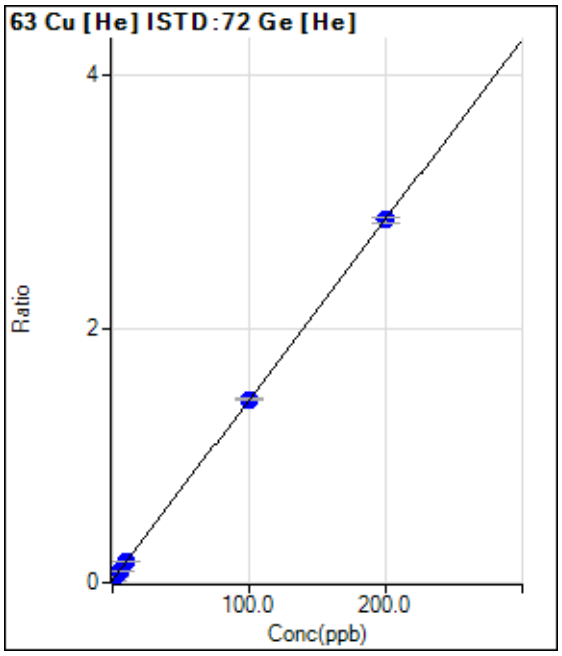
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3233.72	0.0062	P	7.9
2	☐	2.000	1.983	7905.28	0.0150	P	3.0
3	☐	5.000	5.127	15497.29	0.0291	P	6.9
4	☐	10.000	10.262	27652.61	0.0520	P	2.4
5	☐	100.000	99.154	236589.74	0.4485	P	1.0
6	☐	200.000	200.407	472440.06	0.9002	P	1.6
7	☐	1.000					

y = 0.0045 * x + 0.0062
R = 1.0000
DL = 0.3306
BEC = 1.386

Weight: <None>
Min Conc: <None>

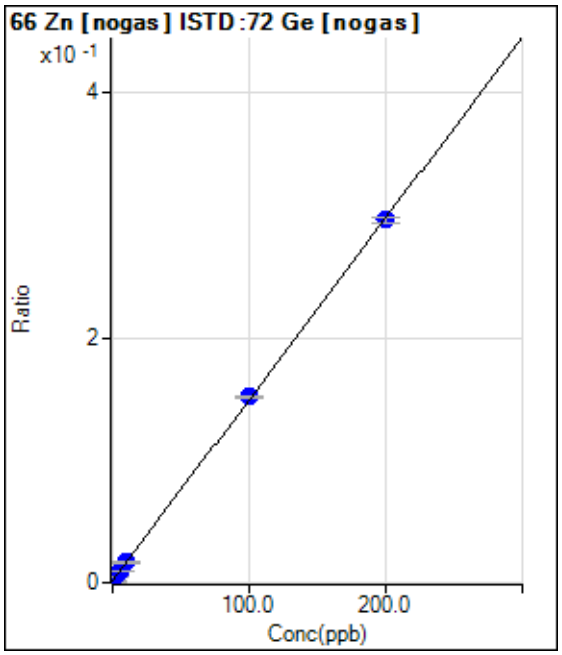


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.250	483.35	0.0164	P	18.5
2	☐	2.000	2.061	1416.76	0.0491	P	2.9
3	☐	5.000	4.728	2586.93	0.0869	P	4.5
4	☐	10.000	10.377	5010.85	0.1670	P	6.6
5	☐	100.000	100.190	42446.02	1.4402	P	1.2
6	☐	200.000	199.892	83116.89	2.8535	P	1.3
7	☐	1.000					

y = 0.0142 * x + 0.0199
R = 1.0000
DL = 0.6403
BEC = 1.404

Weight: <None>
Min Conc: <None>

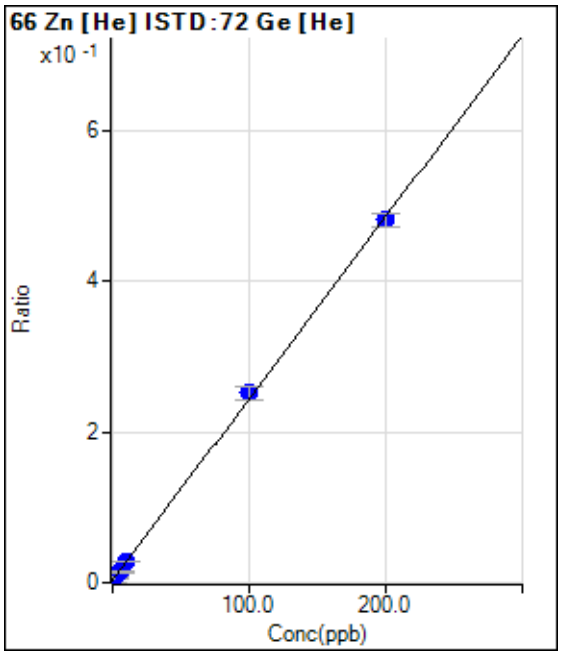
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.627	346.68	0.0007	P	48.6
2	☐	2.000	1.781	2223.53	0.0042	P	3.5
3	☐	5.000	4.928	4740.75	0.0089	P	3.4
4	☐	10.000	10.102	8805.77	0.0165	P	1.6
5	☐	100.000	101.636	80223.62	0.1521	P	1.0
6	☐	200.000	199.181	155591.80	0.2965	P	1.6
7	☐	1.000					

y = 0.0015 * x + 0.0016
R = 0.9999
DL = 0.652
BEC = 1.075

Weight: <None>
Min Conc: <None>

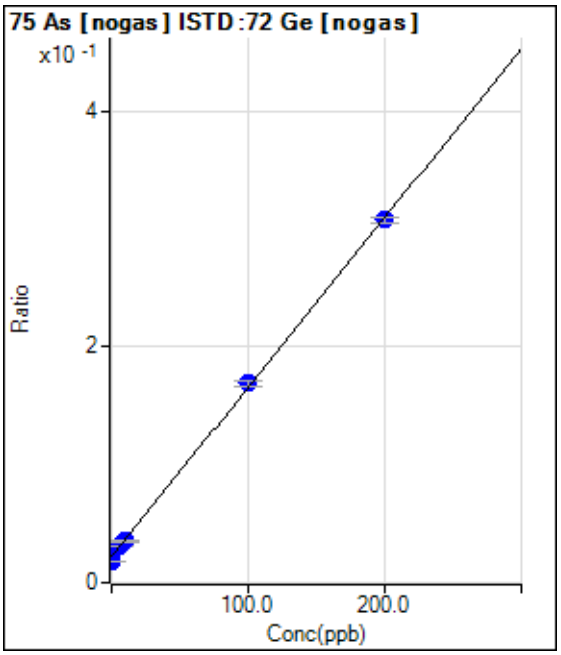


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-1.237	3.33	0.0001	P	173.
2	☐	2.000	1.370	183.34	0.0064	P	38.7
3	☐	5.000	4.986	450.01	0.0151	P	14.4
4	☐	10.000	10.359	843.37	0.0281	P	8.1
5	☐	100.000	103.066	7418.41	0.2519	P	6.8
6	☐	200.000	198.456	14049.38	0.4821	P	3.8
7	☐	1.000					

y = 0.0024 * x + 0.0031
R = 0.9998
DL = 0.242
BEC = 1.284

Weight: <None>
Min Conc: <None>

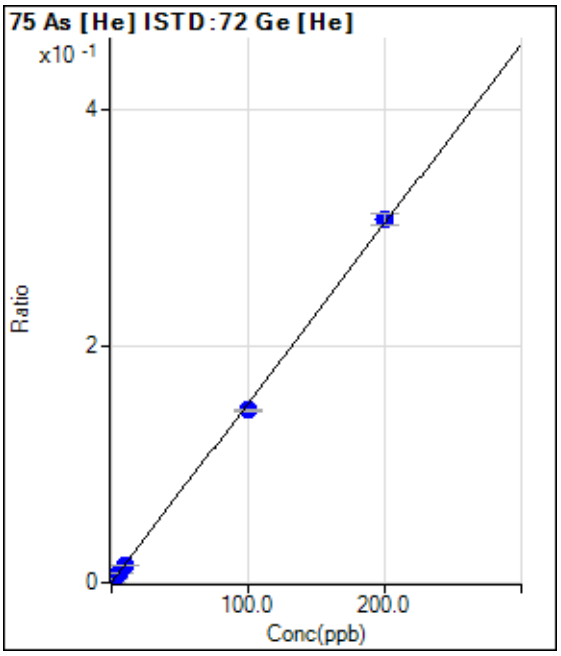
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-2.946	9506.19	0.0182	P	3.8
2	☐	2.000	3.628	14519.80	0.0276	P	0.9
3	☐	5.000	6.128	16638.41	0.0312	P	1.5
4	☐	10.000	9.135	18894.06	0.0355	P	5.9
5	☐	100.000	102.112	89034.89	0.1688	P	2.1
6	☐	200.000	198.943	161437.01	0.3076	P	1.4
7	☐	1.000					

y = 0.0014 * x + 0.0224
R = 0.9997
DL = 1.442
BEC = 15.62

Weight: <None>
Min Conc: <None>

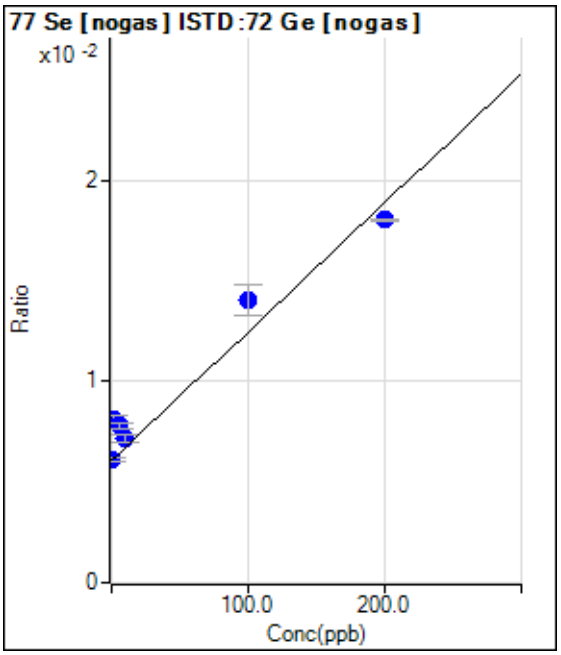


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4.44	0.0002	P	173.
2	☐	2.000	2.118	96.67	0.0034	P	16.7
3	☐	5.000	5.270	242.23	0.0081	P	9.0
4	☐	10.000	9.687	445.57	0.0148	P	2.9
5	☐	100.000	95.847	4289.46	0.1455	P	1.7
6	☐	200.000	202.084	8933.49	0.3067	P	3.2
7	☐	1.000					

y = 0.0015 * x + 1.5033E-004
R = 0.9997
DL = 0.515
BEC = 0.09911

Weight: <None>
Min Conc: <None>

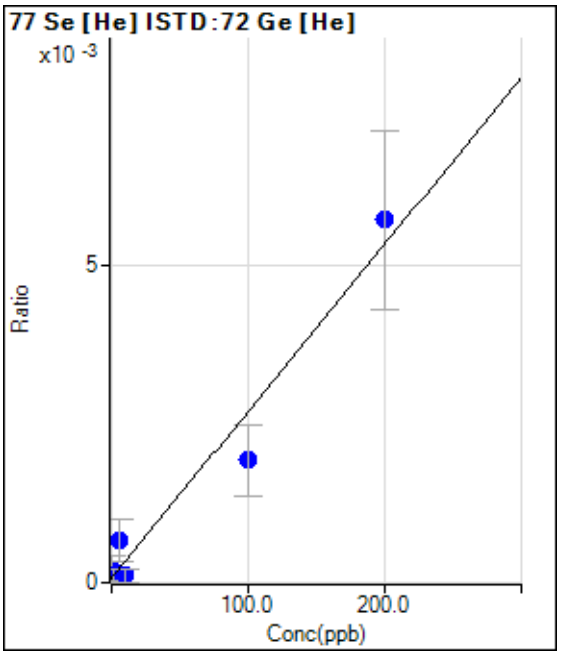
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3173.71	0.0061	P	3.0
2	☐	2.000	31.489	4253.97	0.0081	P	5.8
3	☐	5.000	27.186	4167.26	0.0078	P	3.4
4	☐	10.000	17.314	3820.51	0.0072	P	6.1
5	☐	100.000	124.208	7391.74	0.0140	P	10.8
6	☐	200.000	186.681	9456.11	0.0180	P	0.8
7	☐	1.000					

y = 6.4004E-005 * x + 0.0061
R = 0.9824
DL = 8.543
BEC = 94.82

Weight: <None>
Min Conc: <None>

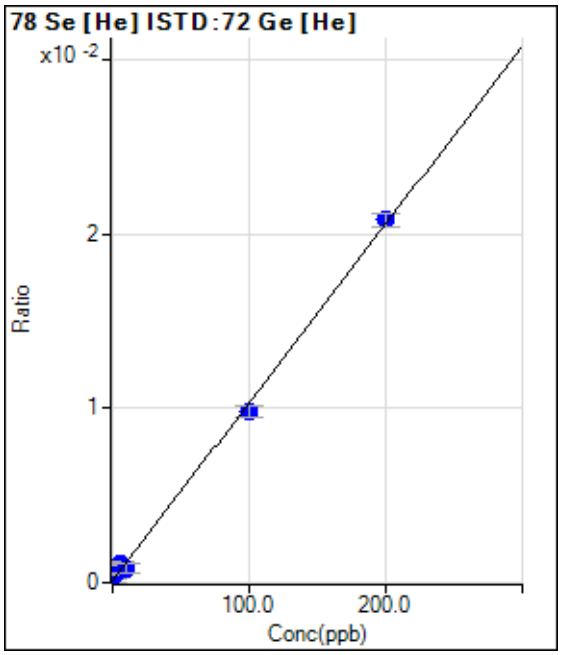


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	5.785	6.67	0.0002	P	173.
2	☐	2.000	1.663	3.33	0.0001	P	173.
3	☐	5.000	22.861	20.00	0.0007	P	100.
4	☐	10.000	1.426	3.33	0.0001	P	173.
5	☐	100.000	70.559	56.67	0.0019	P	57.2
6	☐	200.000	214.706	166.67	0.0057	P	49.0
7	☐	1.000					

y = 2.6363E-005 * x + 7.2283E-005
R = 0.9781
DL = 44.31
BEC = 2.742

Weight: <None>
Min Conc: <None>

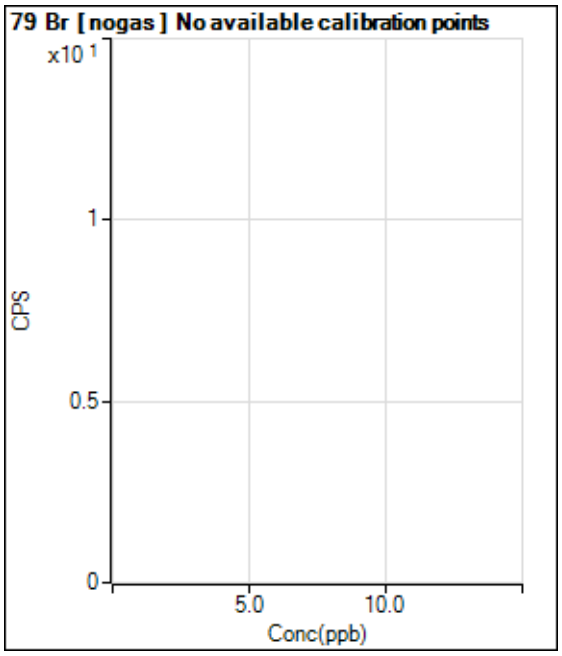
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3.33	0.0001	P	125.
2	☐	2.000	3.172	12.67	0.0004	P	21.7
3	☐	5.000	9.398	32.00	0.0011	P	18.2
4	☐	10.000	6.940	24.67	0.0008	P	56.5
5	☐	100.000	95.068	290.00	0.0098	P	6.0
6	☐	200.000	202.498	606.68	0.0208	P	3.8
7	☐	1.000					

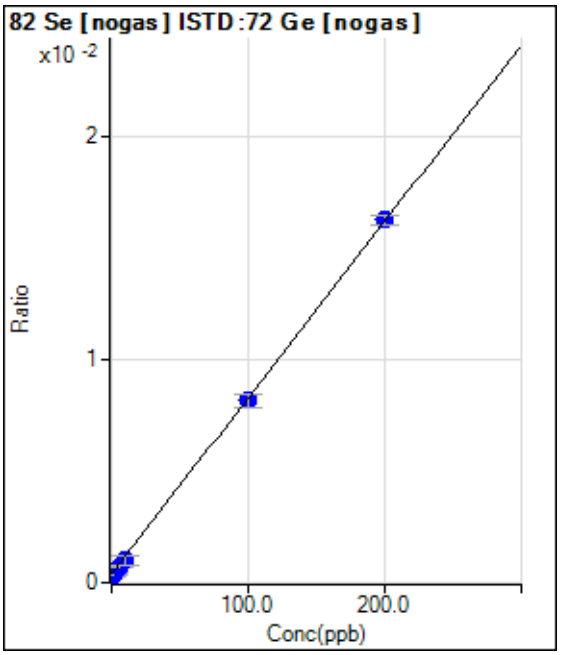
y = 1.0229E-004 * x + 1.1337E-004
R = 0.9991
DL = 4.16
BEC = 1.108

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

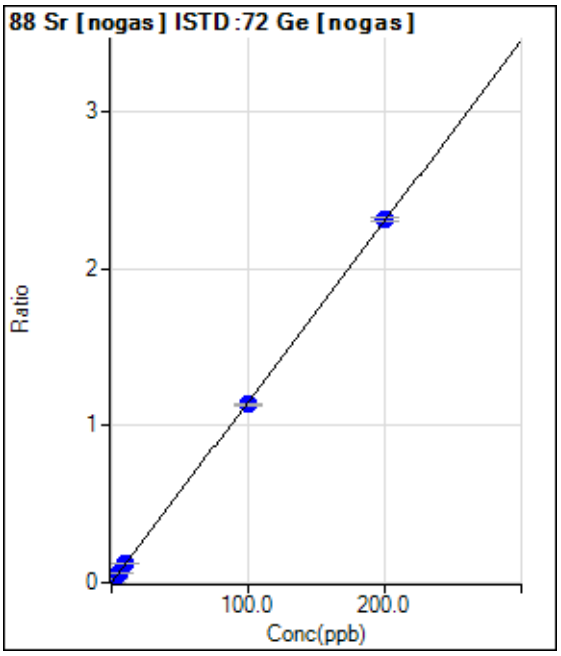
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	203.34	0.0004	P	46.1
2	☐	2.000	-0.035	203.34	0.0004	P	12.1
3	☐	5.000	4.258	386.68	0.0007	P	13.6
4	☐	10.000	7.999	543.36	0.0010	P	43.7
5	☐	100.000	98.340	4293.96	0.0081	P	8.0
6	☐	200.000	200.969	8519.00	0.0162	P	2.5
7	☐	1.000					

y = 7.8832E-005 * x + 3.8926E-004
R = 0.9999
DL = 6.83
BEC = 4.938

Weight: <None>
Min Conc: <None>

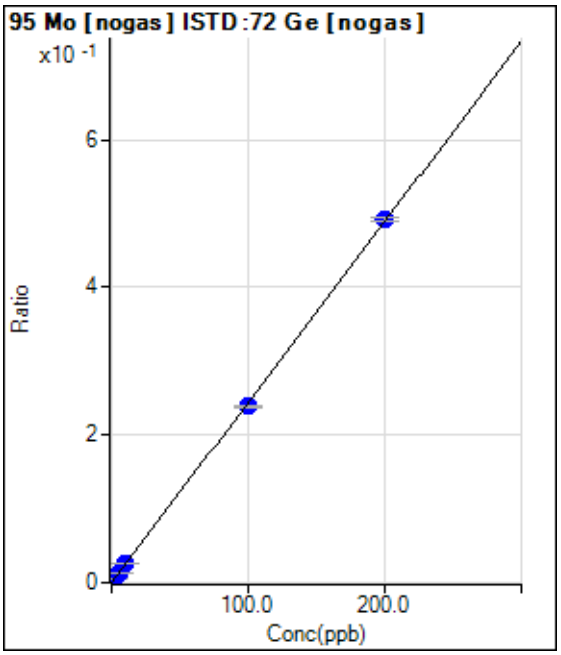


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	226.68	0.0004	P	13.7
2	☐	2.000	2.148	13235.43	0.0252	P	3.5
3	☐	5.000	5.026	31098.98	0.0583	P	3.2
4	☐	10.000	10.343	63596.53	0.1195	P	0.8
5	☐	100.000	98.486	598273.57	1.1342	P	1.1
6	☐	200.000	200.738	1212948.68	2.3112	P	1.2
7	☐	1.000					

y = 0.0115 * x + 4.3359E-004
R = 1.0000
DL = 0.01548
BEC = 0.03767

Weight: <None>
Min Conc: <None>

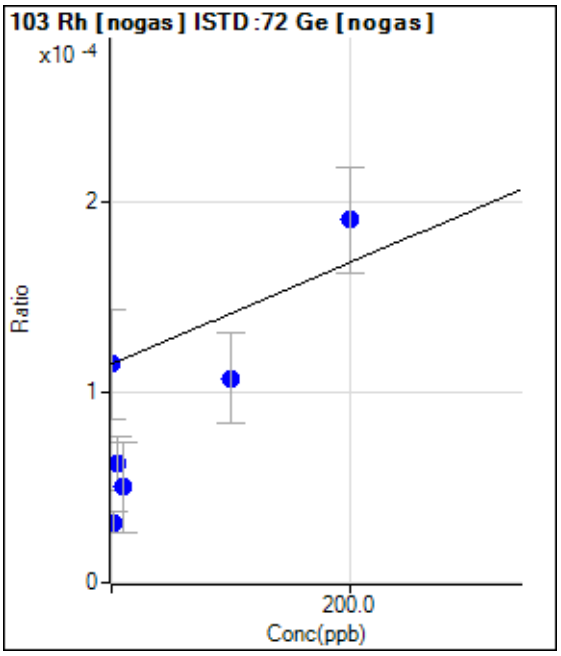
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	0.00	0.0000	P	
2	☐	2.000	2.145	2756.96	0.0052	P	7.5
3	☐	5.000	5.167	6734.86	0.0126	P	3.3
4	☐	10.000	10.437	13569.09	0.0255	P	3.9
5	☐	100.000	97.840	126093.54	0.2390	P	1.1
6	☐	200.000	201.053	257786.15	0.4912	P	1.1
7	☐	1.000					

y = 0.0024 * x + 0.0000E+000
R = 0.9999
DL = 0
BEC = 0

Weight: <None>
Min Conc: <None>

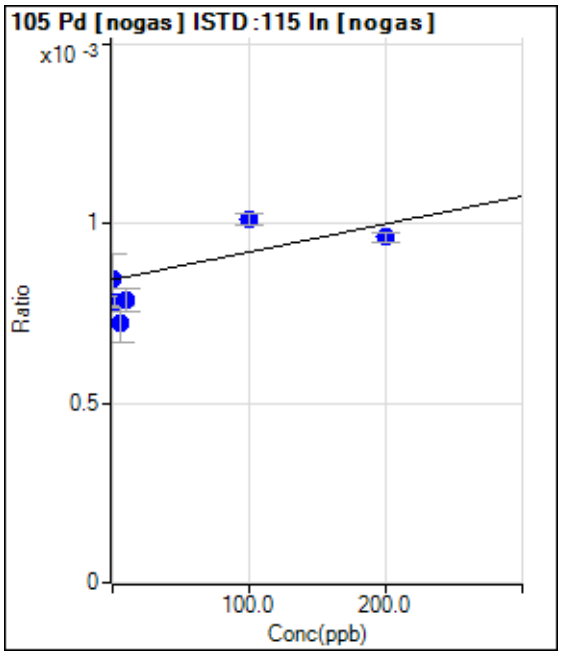


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	60.00	0.0001	P	49.6
2	☐	2.000	-311.999	16.67	0.0000	P	34.2
3	☐	5.000	-195.915	33.33	0.0001	P	45.7
4	☐	10.000	-243.225	26.67	0.0000	P	94.3
5	☐	100.000	-27.395	56.67	0.0001	P	44.2
6	☐	200.000	284.521	100.00	0.0002	P	29.0
7	☐	1.000					

y = 2.6577E-007 * x + 1.1456E-004
R = 0.8590
DL = 641
BEC = 431

Weight: <None>
Min Conc: <None>

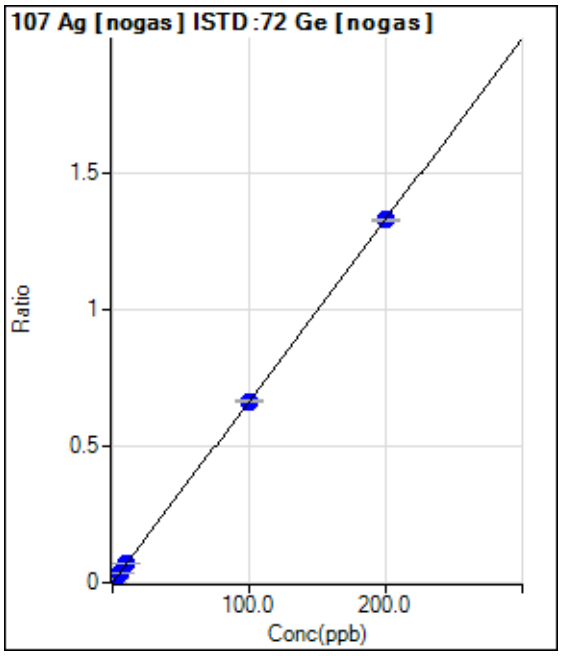
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	530.02	0.0008	P	16.8
2	☐	2.000	-77.618	496.69	0.0008	P	4.1
3	☐	5.000	-157.167	456.69	0.0007	P	14.1
4	☐	10.000	-72.493	510.02	0.0008	P	8.2
5	☐	100.000	214.370	643.36	0.0010	P	3.2
6	☐	200.000	151.790	606.69	0.0010	P	2.9
7	☐	1.000					

y = 7.7863E-007 * x + 8.4458E-004
R = 0.7965
DL = 547.1
BEC = 1085

Weight: <None>
Min Conc: <None>

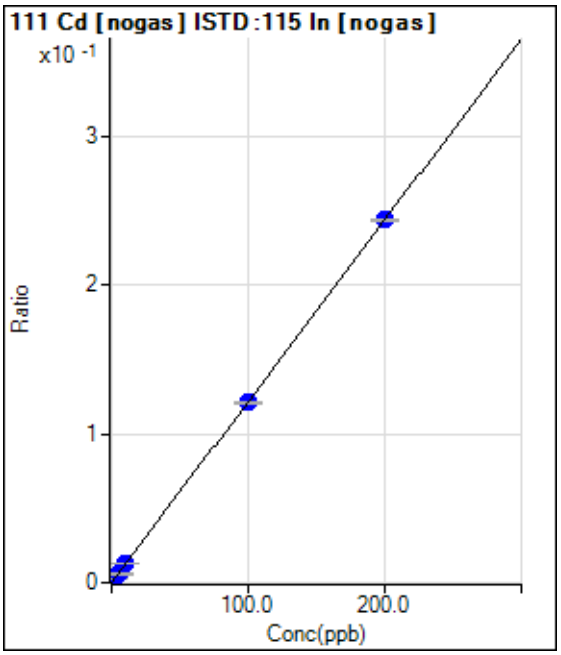


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	83.34	0.0002	P	77.3
2	☐	2.000	2.129	7531.88	0.0143	P	1.3
3	☐	5.000	5.405	19268.21	0.0361	P	2.4
4	☐	10.000	10.580	37532.84	0.0705	P	0.9
5	☐	100.000	100.103	351284.49	0.6660	P	1.7
6	☐	200.000	199.908	697919.03	1.3298	P	0.8
7	☐	1.000					

y = 0.0067 * x + 1.5936E-004
R = 1.0000
DL = 0.05553
BEC = 0.02396

Weight: <None>
Min Conc: <None>

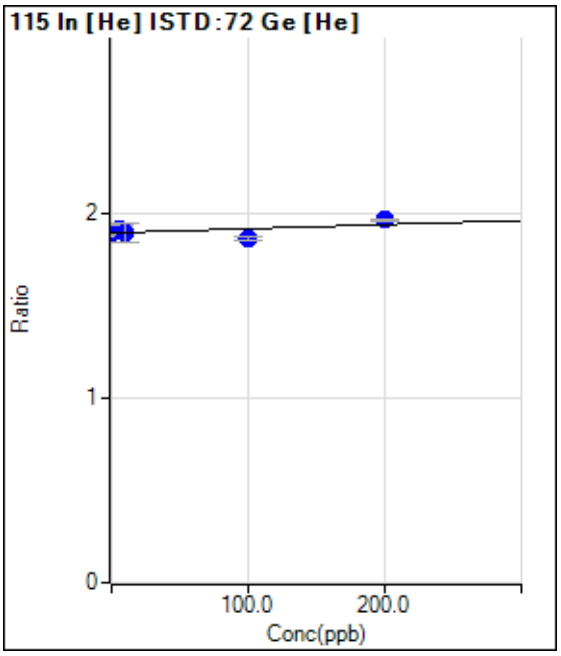
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	0.00	0.0000	P	
2	☐	2.000	2.212	1703.46	0.0027	P	12.4
3	☐	5.000	4.811	3707.16	0.0059	P	5.1
4	☐	10.000	10.512	8278.89	0.0128	P	0.8
5	☐	100.000	99.383	76864.74	0.1209	P	0.9
6	☐	200.000	200.285	153471.47	0.2436	P	0.9
7	☐	1.000					

y = 0.0012 * x + 0.0000E+000
R = 1.0000
DL = 0
BEC = 0

Weight: <None>
Min Conc: <None>

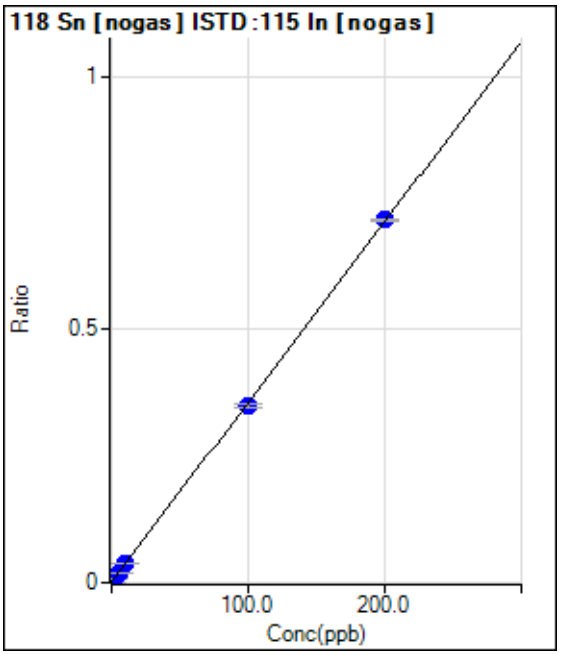


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	55908.11	1.8935	P	1.2
2	☐	2.000	51.981	54921.52	1.9052	P	3.3
3	☐	5.000	82.144	56891.72	1.9120	P	2.5
4	☐	10.000	4.566	56818.30	1.8945	P	5.2
5	☐	100.000	-124.842	54978.38	1.8654	P	1.3
6	☐	200.000	310.264	57202.54	1.9635	P	0.7
7	☐	1.000					

y = 2.2544E-004 * x + 1.8935
R = 0.5607
DL = 297.3
BEC = 8399

Weight: <None>
Min Conc: <None>

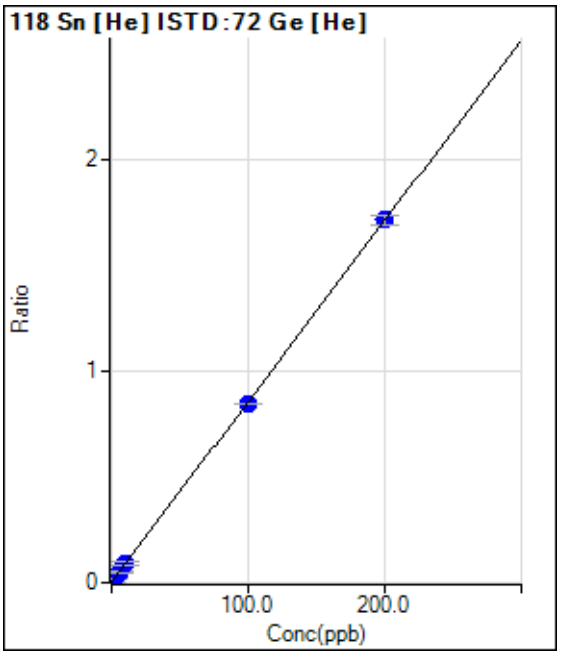
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	496.68	0.0008	P	9.8
2	☐	2.000	2.051	5124.28	0.0081	P	9.2
3	☐	5.000	5.259	12351.56	0.0195	P	7.1
4	☐	10.000	10.169	23957.78	0.0370	P	4.8
5	☐	100.000	97.799	221914.85	0.3491	P	2.3
6	☐	200.000	201.085	451637.57	0.7169	P	0.5
7	☐	1.000					

y = 0.0036 * x + 7.9095E-004
R = 0.9999
DL = 0.06545
BEC = 0.2221

Weight: <None>
Min Conc: <None>

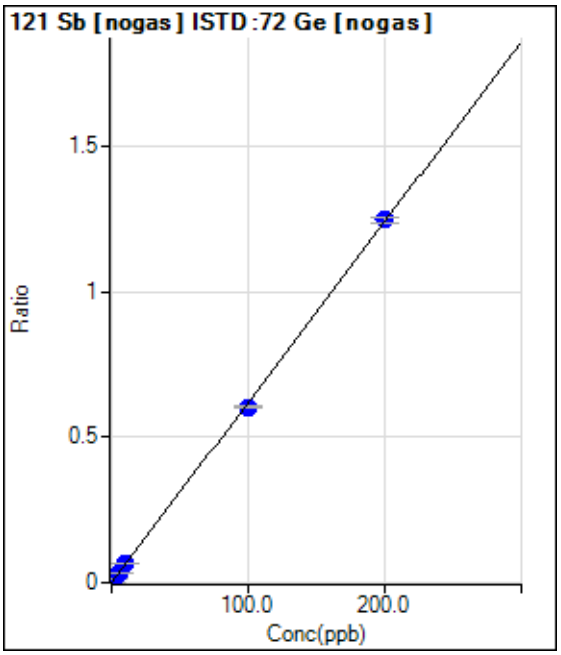


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	80.00	0.0027	P	12.6
2	☐	2.000	1.919	550.02	0.0191	P	13.8
3	☐	5.000	5.459	1470.10	0.0494	P	4.6
4	☐	10.000	10.339	2733.63	0.0911	P	17.6
5	☐	100.000	98.905	25016.03	0.8487	P	0.5
6	☐	200.000	200.520	50032.95	1.7179	P	2.6
7	☐	1.000					

y = 0.0086 * x + 0.0027
R = 1.0000
DL = 0.1201
BEC = 0.3168

Weight: <None>
Min Conc: <None>

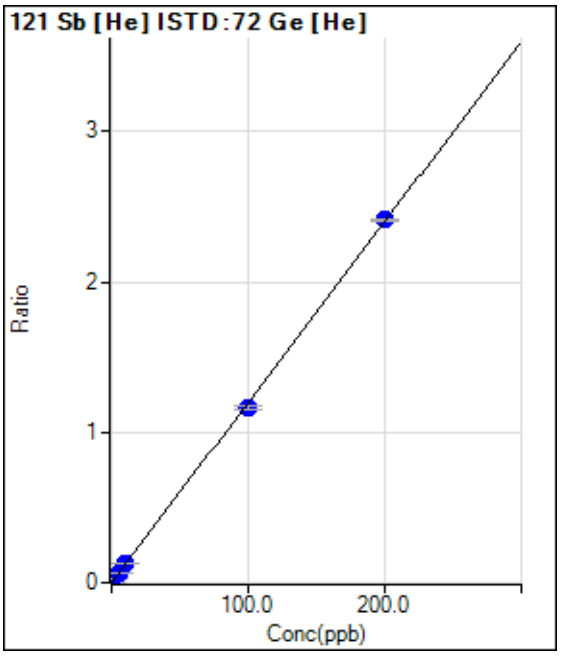
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	173.33	0.0003	P	12.5
2	☐	2.000	2.131	7115.06	0.0135	P	4.7
3	☐	5.000	5.246	17509.64	0.0328	P	3.3
4	☐	10.000	10.340	34256.04	0.0644	P	1.4
5	☐	100.000	97.374	318275.13	0.6034	P	0.9
6	☐	200.000	201.289	654400.39	1.2469	P	1.5
7	☐	1.000					

y = 0.0062 * x + 3.3161E-004
R = 0.9999
DL = 0.02004
BEC = 0.05355

Weight: <None>
Min Conc: <None>

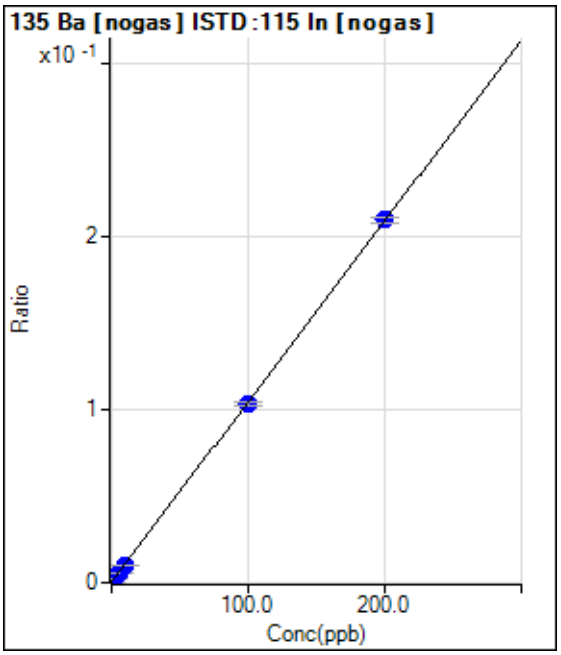


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	16.67	0.0006	P	34.7
2	☐	2.000	2.625	923.38	0.0320	P	4.1
3	☐	5.000	5.320	1913.50	0.0643	P	13.6
4	☐	10.000	10.421	3763.84	0.1254	P	1.6
5	☐	100.000	97.419	34416.48	1.1678	P	2.1
6	☐	200.000	201.255	70263.52	2.4120	P	0.7
7	☐	1.000					

y = 0.0120 * x + 5.6460E-004
R = 0.9999
DL = 0.04907
BEC = 0.04712

Weight: <None>
Min Conc: <None>

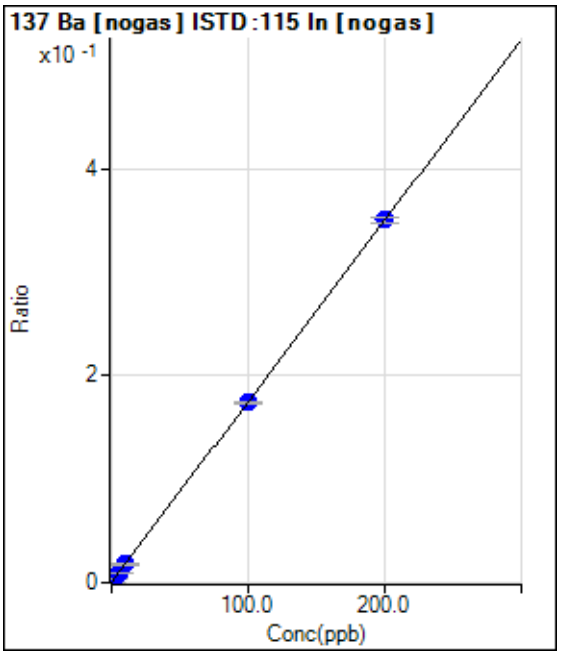
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	146.67	0.0002	P	32.6
2	☐	2.000	2.087	1526.77	0.0024	P	0.9
3	☐	5.000	4.986	3440.43	0.0054	P	7.3
4	☐	10.000	9.528	6588.13	0.0102	P	5.9
5	☐	100.000	98.673	65595.85	0.1031	P	2.1
6	☐	200.000	200.686	131994.15	0.2095	P	1.6
7	☐	1.000					

y = 0.0010 * x + 2.3380E-004
R = 1.0000
DL = 0.2193
BEC = 0.2242

Weight: <None>
Min Conc: <None>

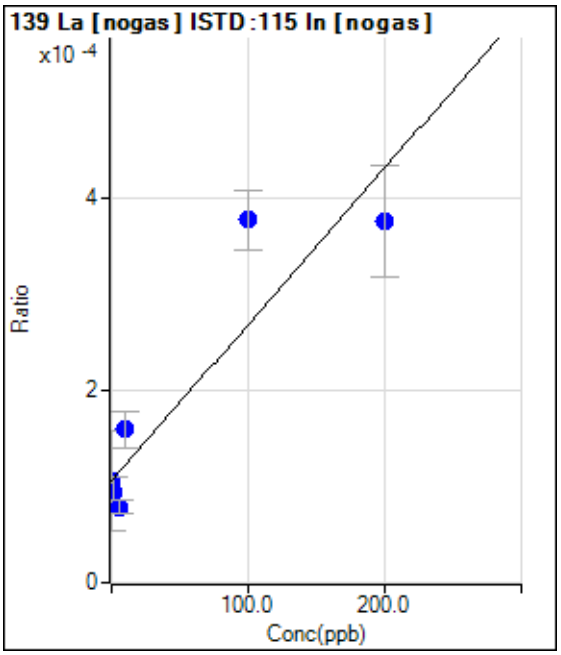


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	183.34	0.0003	P	20.5
2	☐	2.000	1.940	2333.55	0.0037	P	9.3
3	☐	5.000	5.008	5727.83	0.0090	P	1.2
4	☐	10.000	9.970	11470.93	0.0177	P	4.7
5	☐	100.000	99.249	110483.20	0.1738	P	1.0
6	☐	200.000	200.377	220816.95	0.3505	P	1.5
7	☐	1.000					

y = 0.0017 * x + 2.9197E-004
R = 1.0000
DL = 0.1029
BEC = 0.167

Weight: <None>
Min Conc: <None>

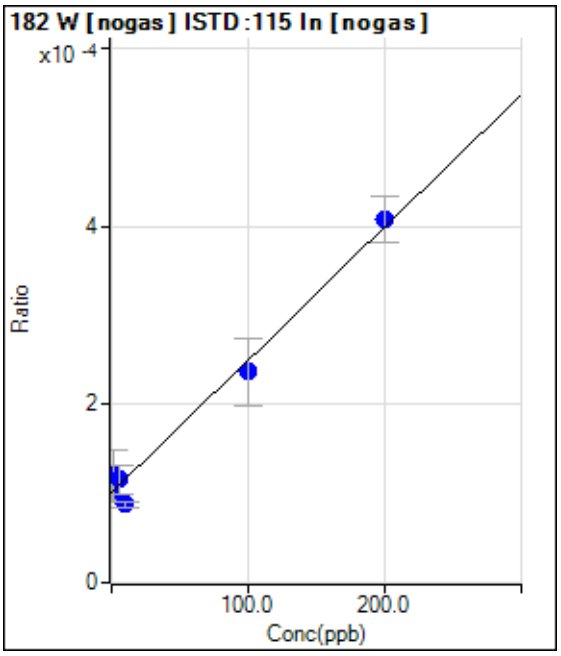
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	66.67	0.0001	P	99.5
2	☐	2.000	-7.042	60.00	0.0001	P	32.5
3	☐	5.000	-16.710	50.00	0.0001	P	18.7
4	☐	10.000	32.870	103.33	0.0002	P	23.4
5	☐	100.000	166.836	240.01	0.0004	P	16.7
6	☐	200.000	166.072	236.67	0.0004	P	31.0
7	☐	1.000					

y = 1.6240E-006 * x + 1.0596E-004
R = 0.9082
DL = 194.8
BEC = 65.24

Weight: <None>
Min Conc: <None>

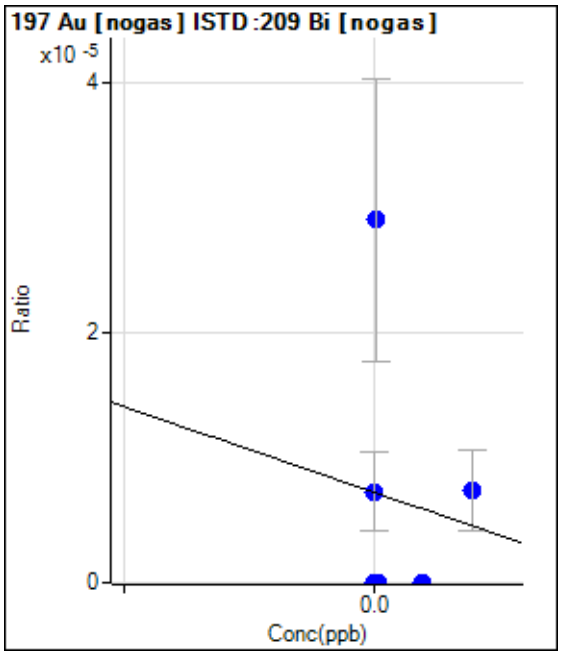


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	63.33	0.0001	P	18.2
2	☐	2.000	13.525	76.67	0.0001	P	45.5
3	☐	5.000	9.788	73.33	0.0001	P	27.1
4	☐	10.000	-8.995	56.67	0.0001	P	9.1
5	☐	100.000	90.881	150.00	0.0002	P	31.3
6	☐	200.000	205.274	256.68	0.0004	P	12.8
7	☐	1.000					

y = 1.4919E-006 * x + 1.0087E-004
R = 0.9911
DL = 36.88
BEC = 67.61

Weight: <None>
Min Conc: <None>

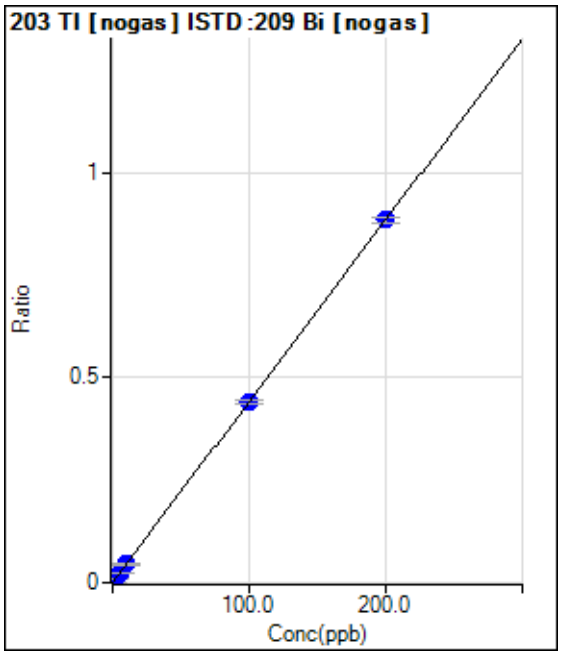
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6.67	0.0000	P	86.6
2	☐	2.000	532.665	0.00	0.0000	P	
3	☐	5.000	-1599.318	26.67	0.0000	P	78.2
4	☐	10.000	532.665	0.00	0.0000	P	
5	☐	100.000	532.665	0.00	0.0000	P	
6	☐	200.000	-7.664	6.67	0.0000	P	86.6
7	☐	1.000					

y = -1.3636E-008 * x + 7.2633E-006
R = -0.1500
DL = -1384
BEC = -532.7

Weight: <None>
Min Conc: <None>

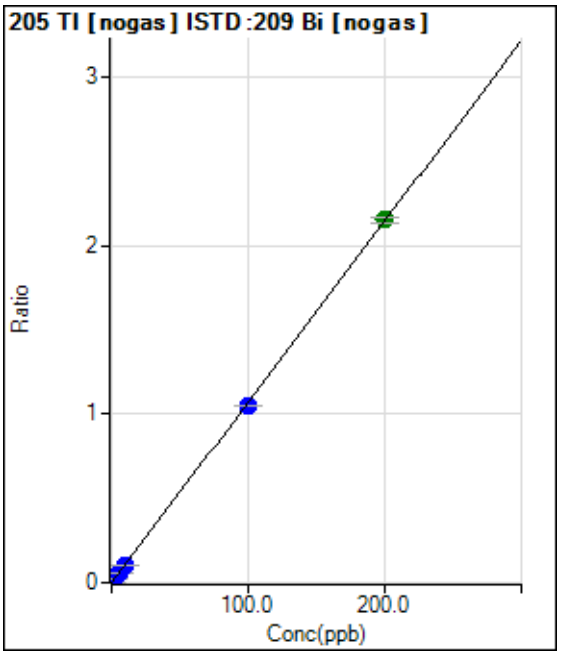


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	93.33	0.0001	P	22.0
2	☐	2.000	1.870	7728.77	0.0084	P	1.3
3	☐	5.000	5.190	21184.79	0.0230	P	1.8
4	☐	10.000	10.098	41272.47	0.0447	P	3.6
5	☐	100.000	99.659	398699.34	0.4406	P	1.4
6	☐	200.000	200.162	798329.57	0.8848	P	1.5
7	☐	1.000					

y = 0.0044 * x + 1.0190E-004
R = 1.0000
DL = 0.01521
BEC = 0.02305

Weight: <None>
Min Conc: <None>

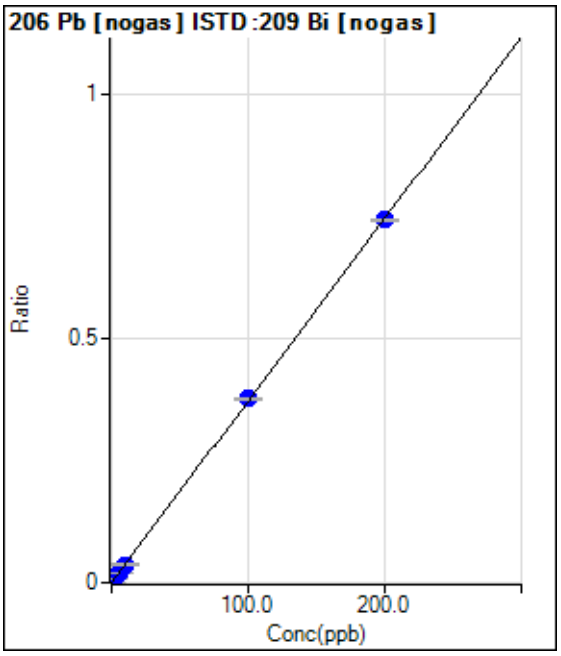
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	96.67	0.0001	P	32.0
2	☐	2.000	1.972	19606.15	0.0212	P	1.8
3	☐	5.000	4.973	49061.54	0.0534	P	1.7
4	☐	10.000	9.844	97345.49	0.1055	P	2.5
5	☐	100.000	98.395	953656.76	1.0538	P	0.1
6	☐	200.000	200.811	1940364.50	2.1505	A	1.8
7	☐	1.000					

y = 0.0107 * x + 1.0564E-004
R = 1.0000
DL = 0.009462
BEC = 0.009866

Weight: <None>
Min Conc: <None>

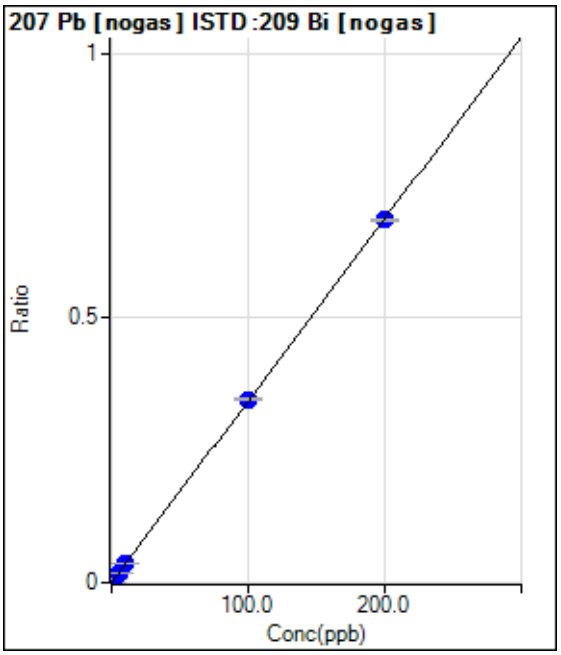


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	116.67	0.0001	P	4.5
2	☐	2.000	2.059	7198.52	0.0078	P	5.4
3	☐	5.000	5.142	17720.57	0.0193	P	2.8
4	☐	10.000	10.002	34472.25	0.0374	P	2.9
5	☐	100.000	100.974	340378.30	0.3761	P	1.0
6	☐	200.000	199.509	670409.91	0.7430	P	0.3
7	☐	1.000					

y = 0.0037 * x + 1.2741E-004
R = 1.0000
DL = 0.004664
BEC = 0.03422

Weight: <None>
Min Conc: <None>

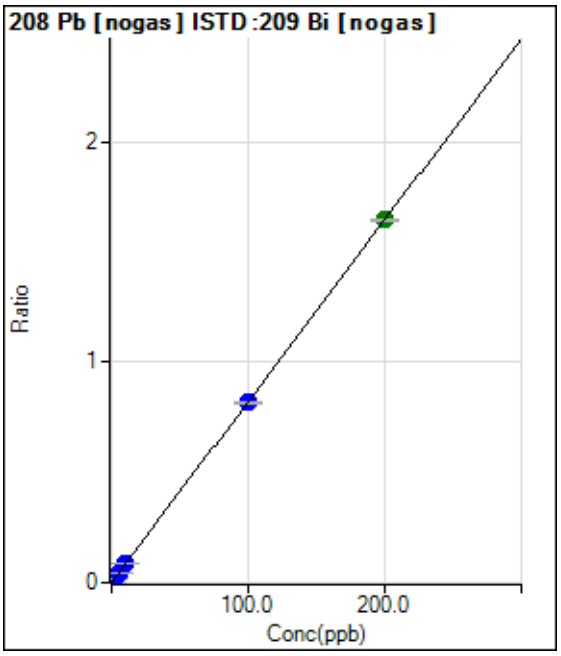
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	76.67	0.0001	P	40.2
2	☐	2.000	2.017	6468.17	0.0070	P	4.9
3	☐	5.000	5.287	16759.47	0.0182	P	3.6
4	☐	10.000	10.199	32357.65	0.0351	P	0.9
5	☐	100.000	100.735	312872.93	0.3457	P	0.8
6	☐	200.000	199.615	618036.52	0.6850	P	0.2
7	☐	1.000					

y = 0.0034 * x + 8.3799E-005
R = 1.0000
DL = 0.02948
BEC = 0.02442

Weight: <None>
Min Conc: <None>

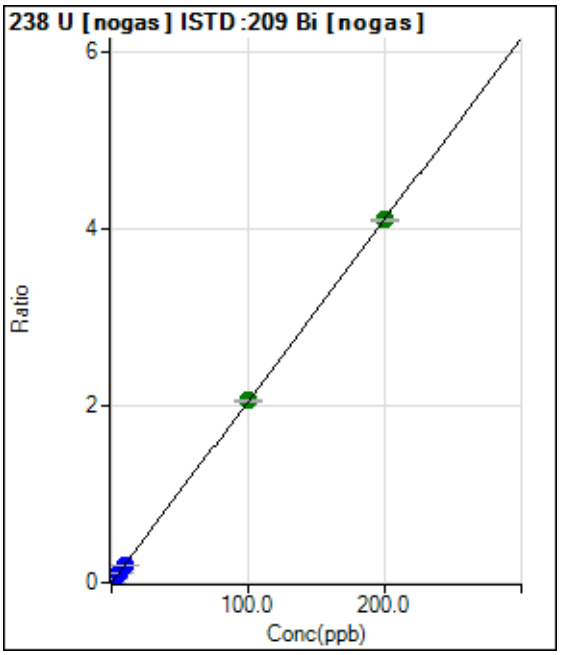


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	136.67	0.0001	P	40.9
2	☐	2.000	2.040	15644.98	0.0169	P	1.7
3	☐	5.000	5.105	38755.77	0.0421	P	0.9
4	☐	10.000	10.142	77115.74	0.0836	P	1.1
5	☐	100.000	99.489	740905.51	0.8187	P	0.8
6	☐	200.000	200.246	1486561.90	1.6477	A	0.8
7	☐	1.000					

y = 0.0082 * x + 1.4902E-004
R = 1.0000
DL = 0.02225
BEC = 0.01811

Weight: <None>
Min Conc: <None>

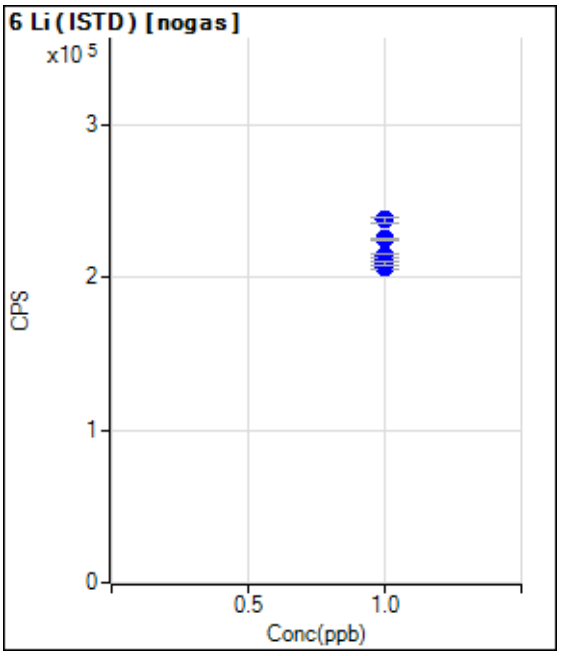
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	183.34	0.0002	P	16.9
2	☐	2.000	1.994	37921.31	0.0411	P	2.5
3	☐	5.000	4.932	93116.51	0.1013	P	0.5
4	☐	10.000	9.698	183531.20	0.1989	P	1.9
5	☐	100.000	100.167	1857839.30	2.0529	A	0.8
6	☐	200.000	199.934	3696956.92	4.0974	A	0.6
7	☐	1.000					

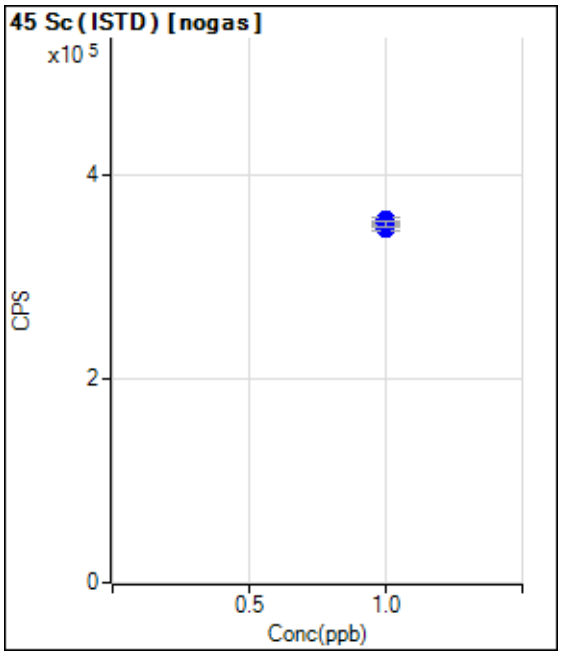
y = 0.0205 * x + 2.0010E-004
R = 1.0000
DL = 0.004943
BEC = 0.009765

Weight: <None>
Min Conc: <None>

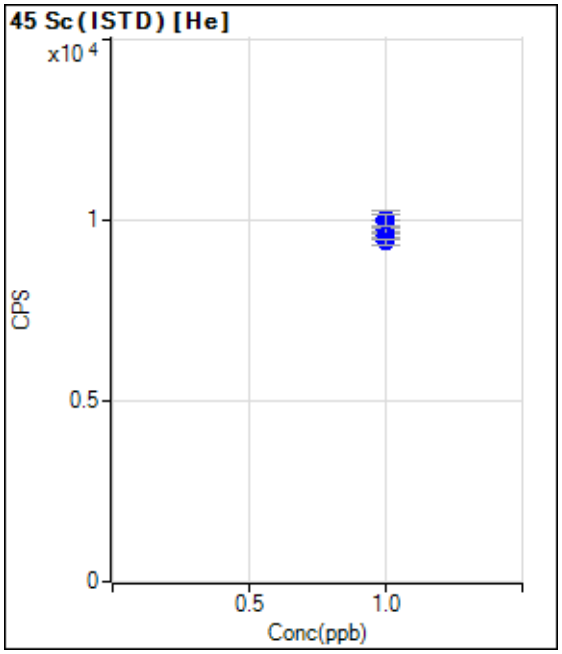


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		211472.98		P	1.2
2	☐	1.000		213696.99		P	1.3
3	☐	1.000		206727.51		P	1.2
4	☐	1.000		208600.64		P	1.2
5	☐	1.000		224973.24		P	0.7
6	☐	1.000		237495.61		P	1.8
7	☐	1.000					

Calibration for 026_ICV.d

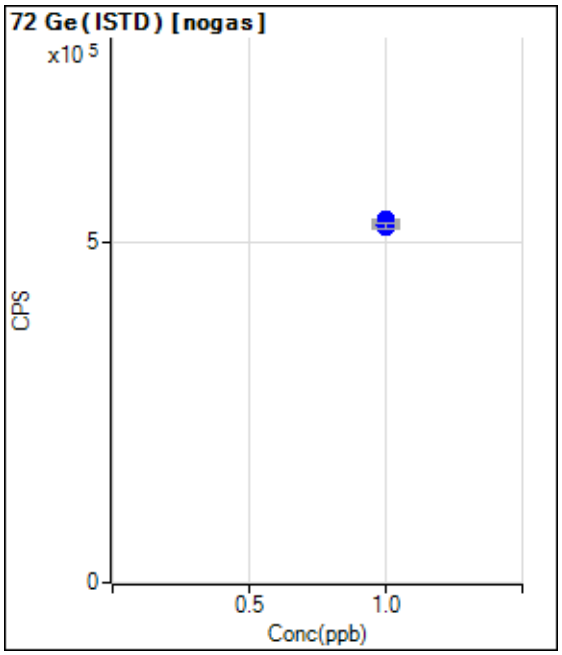


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		350142.61		P	0.8
2	☐	1.000		347216.18		P	0.8
3	☐	1.000		352895.09		P	0.8
4	☐	1.000		355790.48		P	1.4
5	☐	1.000		352282.42		P	0.9
6	☐	1.000		351845.05		P	1.6
7	☐	1.000					

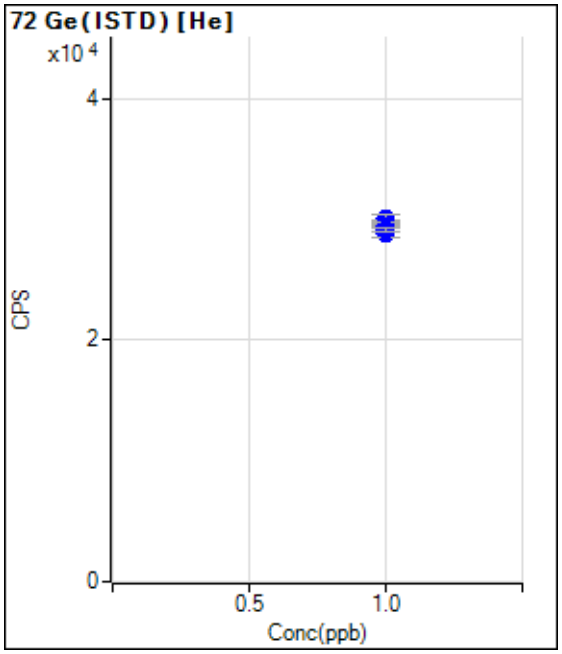


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		9936.34		P	6.5
2	☐	1.000		9592.79		P	1.9
3	☐	1.000		9749.62		P	5.2
4	☐	1.000		10043.10		P	4.7
5	☐	1.000		9996.37		P	3.2
6	☐	1.000		9399.39		P	1.7
7	☐	1.000					

Calibration for 026_ICV.d

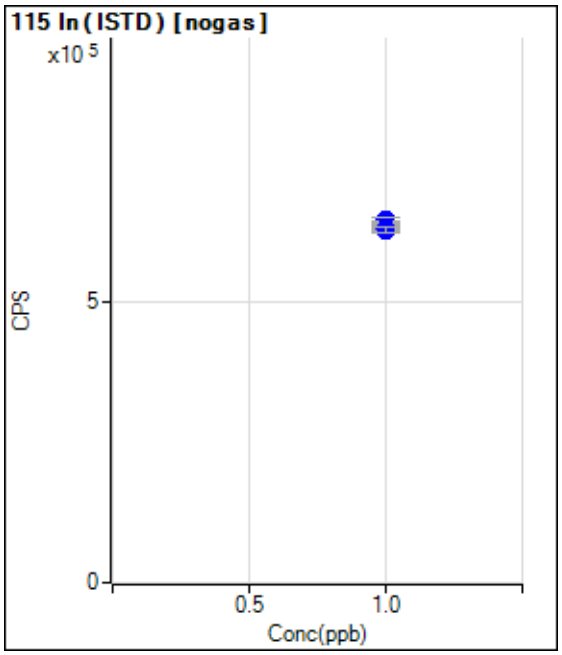


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		522917.04		P	0.5
2	☐	1.000		526041.14		P	0.8
3	☐	1.000		533572.43		P	0.7
4	☐	1.000		532193.24		P	0.6
5	☐	1.000		527534.89		P	0.7
6	☐	1.000		524852.33		P	1.2
7	☐	1.000					

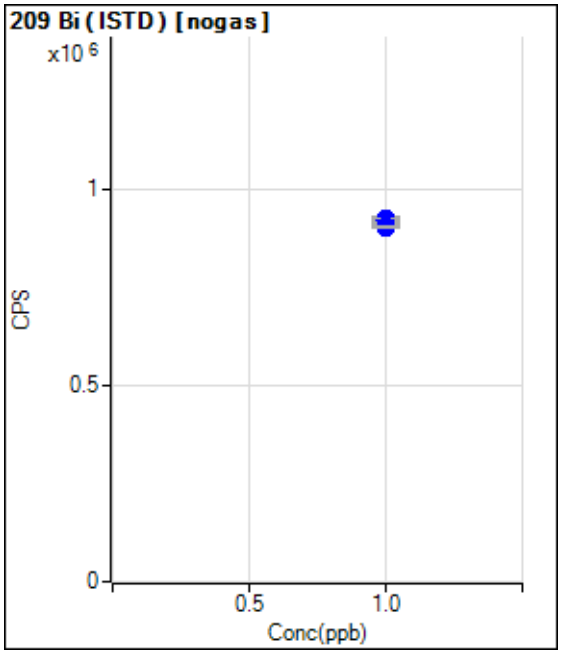


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		29525.91		P	0.5
2	☐	1.000		28844.75		P	3.0
3	☐	1.000		29753.00		P	0.7
4	☐	1.000		30013.25		P	2.2
5	☐	1.000		29475.73		P	1.7
6	☐	1.000		29131.82		P	1.5
7	☐	1.000					

Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		627838.27		P	0.4
2	☐	1.000		633423.32		P	1.1
3	☐	1.000		633286.92		P	1.6
4	☐	1.000		647527.19		P	1.2
5	☐	1.000		635889.14		P	1.7
6	☐	1.000		629998.78		P	1.3
7	☐	1.000					



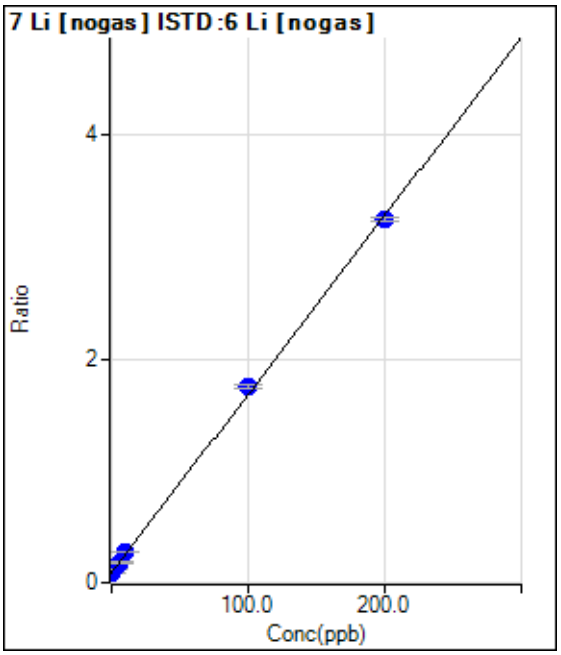
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		915562.43		P	0.6
2	☐	1.000		923823.89		P	1.4
3	☐	1.000		919580.12		P	1.0
4	☐	1.000		922494.52		P	1.0
5	☐	1.000		905004.75		P	0.8
6	☐	1.000		902242.88		P	0.6
7	☐	1.000					

Calibration for 242_ICV.d

Batch Folder: C:\Agilent\ICPMH\1\DATA\010518A.b\
Analysis File: 010518A.batch.bin
DA Date-Time: 1/5/2018 10:38:02 PM
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	236CALB.d	CAL BLK	1/5/2018 7:52:52 PM
2	237CALS.d	2/10/200	1/5/2018 7:55:04 PM
3	238CALS.d	5/25/500	1/5/2018 7:57:17 PM
4	239CALS.d	10/50/1000	1/5/2018 7:59:29 PM
5	240CALS.d	100/500/10K	1/5/2018 8:01:41 PM
6	241CALS.d	200/1000/20K	1/5/2018 8:03:52 PM
7			

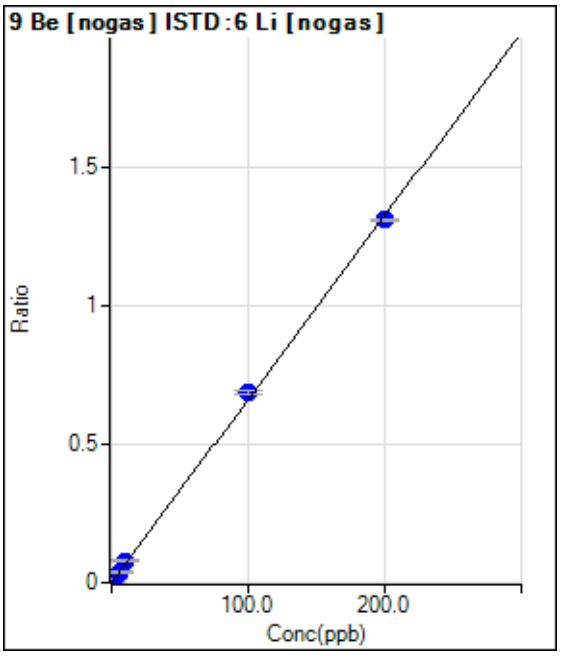
Calibration for 242_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	23575.72	0.0892	P	4.5
2	☐	2.000	2.279	32068.82	0.1256	P	1.2
3	☐	5.000	5.695	45698.35	0.1801	P	3.6
4	☐	10.000	11.618	67382.62	0.2746	P	1.7
5	☐	100.000	104.345	455859.20	1.7545	P	2.8
6	☐	200.000	197.726	864348.79	3.2449	P	1.1
7	☐	1.000					

y = 0.0160 * x + 0.0892
R = 0.9997
DL = 0.7577
BEC = 5.589

Weight: <None>
Min Conc: <None>

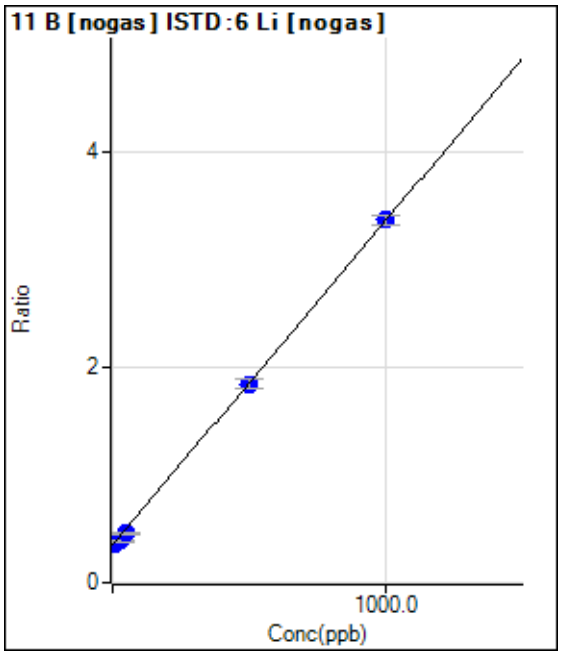


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	16.67	0.0001	P	91.6
2	☐	2.000	2.247	3813.82	0.0149	P	3.8
3	☐	5.000	5.725	9632.78	0.0379	P	2.3
4	☐	10.000	11.940	19397.51	0.0791	P	2.9
5	☐	100.000	104.088	178987.13	0.6888	P	1.8
6	☐	200.000	197.838	348738.60	1.3091	P	0.4
7	☐	1.000					

y = 0.0066 * x + 6.3629E-005
R = 0.9997
DL = 0.02642
BEC = 0.009616

Weight: <None>
Min Conc: <None>

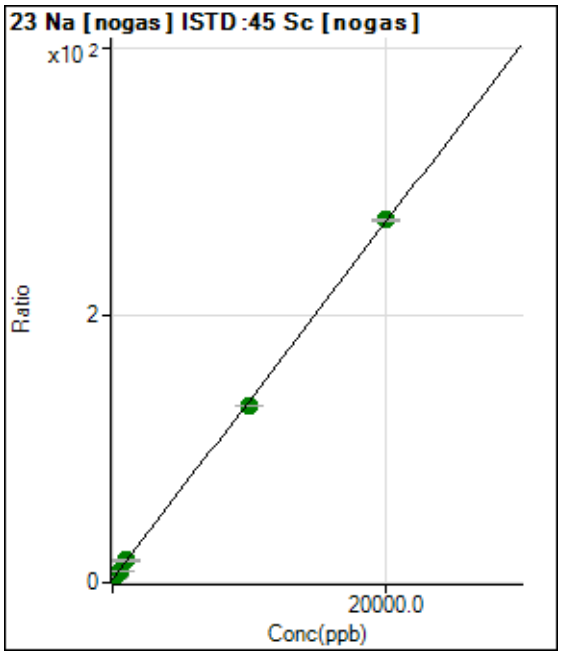
Calibration for 242_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	92627.33	0.3504	P	1.5
2	☐	10.000	1.083	90312.57	0.3536	P	1.6
3	☐	25.000	11.524	97740.83	0.3851	P	1.6
4	☐	50.000	35.979	112590.86	0.4589	P	1.8
5	☐	500.000	497.220	480446.41	1.8497	P	5.0
6	☐	1000.000	1002.517	898462.83	3.3735	P	2.6
7	☐	5.000					

y = 0.0030 * x + 0.3504
R = 0.9999
DL = 5.246
BEC = 116.2

Weight: <None>
Min Conc: <None>

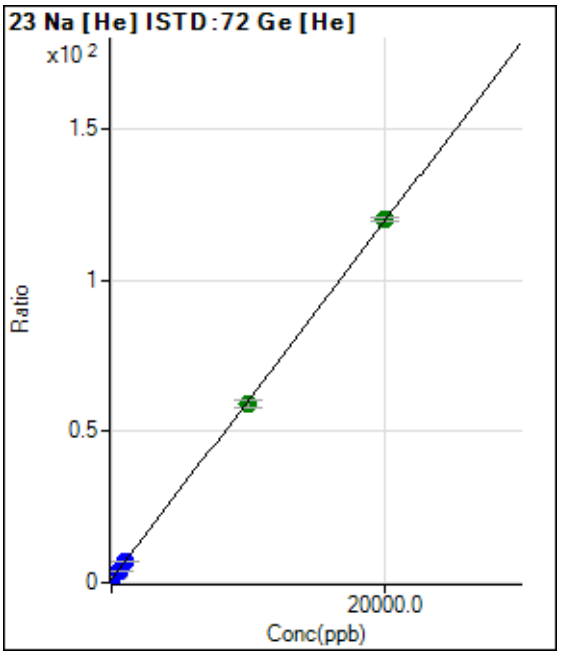


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1059452.43	2.5683	M	2.4
2	☐	200.000	183.123	2017824.65	5.0144	A	0.4
3	☐	500.000	462.585	3518150.21	8.7475	A	2.7
4	☐	1000.000	1071.312	6679776.45	16.8788	A	8.3
5	☐	10000.00	9716.111	50189163.62	132.355	A	0.9
6	☐	20000.00	20139.483	97251981.34	271.590	A	0.9
7	☐	100.000					

y = 0.0134 * x + 2.5683
R = 0.9998
DL = 14.08
BEC = 192.3

Weight: <None>
Min Conc: <None>

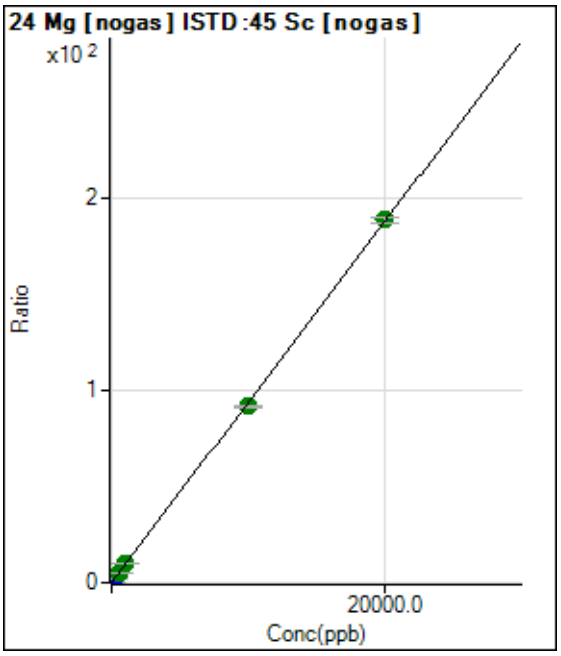
Calibration for 242_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	36952.02	1.0517	P	3.8
2	☐	200.000	211.191	77648.75	2.3020	P	8.2
3	☐	500.000	489.237	130836.60	3.9481	P	6.6
4	☐	1000.000	1002.430	230771.95	6.9863	P	3.1
5	☐	10000.00	9807.064	1833375.75	59.1109	A	3.8
6	☐	20000.00	20096.504	3537211.72	120.025	A	1.0
7	☐	100.000					

y = 0.0059 * x + 1.0517
R = 0.9999
DL = 20.44
BEC = 177.7

Weight: <None>
Min Conc: <None>

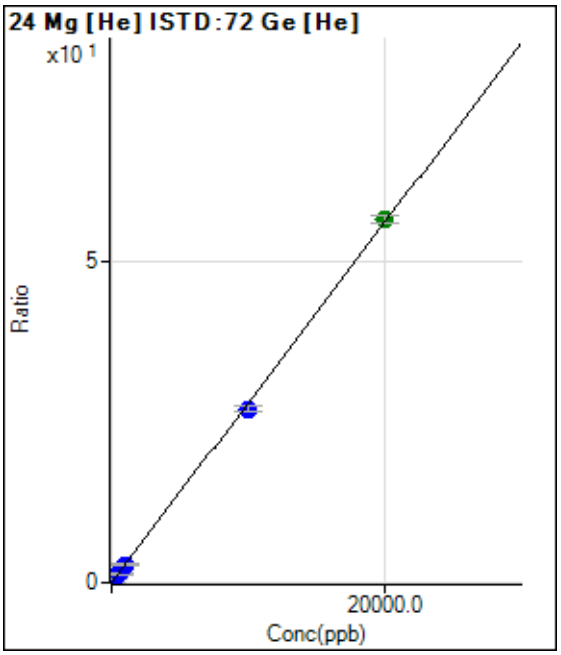


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4301.49	0.0105	P	27.1
2	☐	200.000	202.565	770533.81	1.9149	P	0.7
3	☐	500.000	509.983	1932693.92	4.8050	A	2.4
4	☐	1000.000	1046.423	3892180.94	9.8483	A	3.1
5	☐	10000.00	9778.074	34863466.40	91.9379	A	0.6
6	☐	20000.00	20108.367	67695232.76	189.057	A	1.4
7	☐	100.000					

y = 0.0094 * x + 0.0105
R = 0.9999
DL = 0.9055
BEC = 1.114

Weight: <None>
Min Conc: <None>

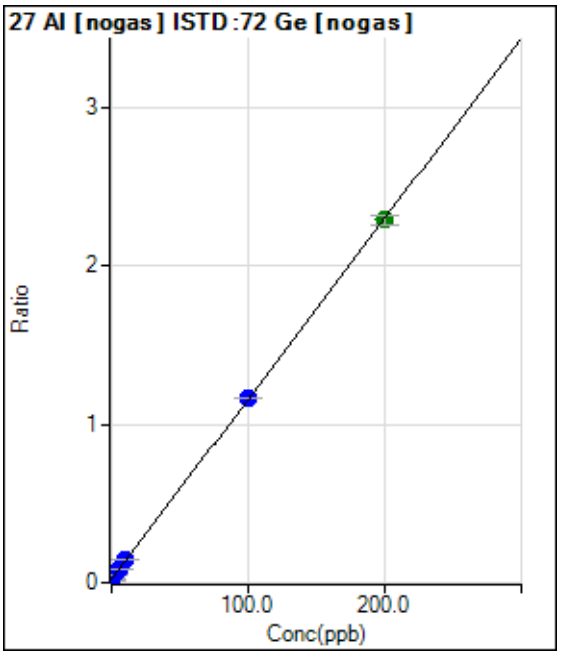
Calibration for 242_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	80.00	0.0023	P	18.4
2	☐	200.000	203.818	19357.63	0.5738	P	4.0
3	☐	500.000	491.252	45762.51	1.3799	P	4.7
4	☐	1000.000	1011.258	93779.45	2.8382	P	1.8
5	☐	10000.00	9663.563	840700.25	27.1024	P	3.0
6	☐	20000.00	20167.836	1666636.07	56.5601	A	2.3
7	☐	100.000					

y = 0.0028 * x + 0.0023
R = 0.9998
DL = 0.4458
BEC = 0.8084

Weight: <None>
Min Conc: <None>

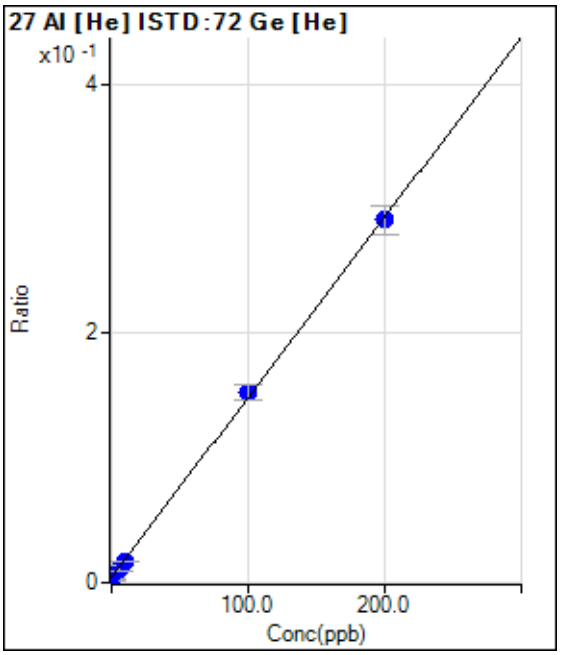


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	11150.45	0.0184	P	4.3
2	☐	2.000	2.793	29895.61	0.0502	P	1.3
3	☐	5.000	5.766	49369.09	0.0841	P	2.1
4	☐	10.000	11.275	85522.54	0.1468	P	2.7
5	☐	100.000	100.747	647488.87	1.1662	P	0.7
6	☐	200.000	199.536	1226715.29	2.2917	A	2.6
7	☐	1.000					

y = 0.0114 * x + 0.0184
R = 1.0000
DL = 0.2067
BEC = 1.614

Weight: <None>
Min Conc: <None>

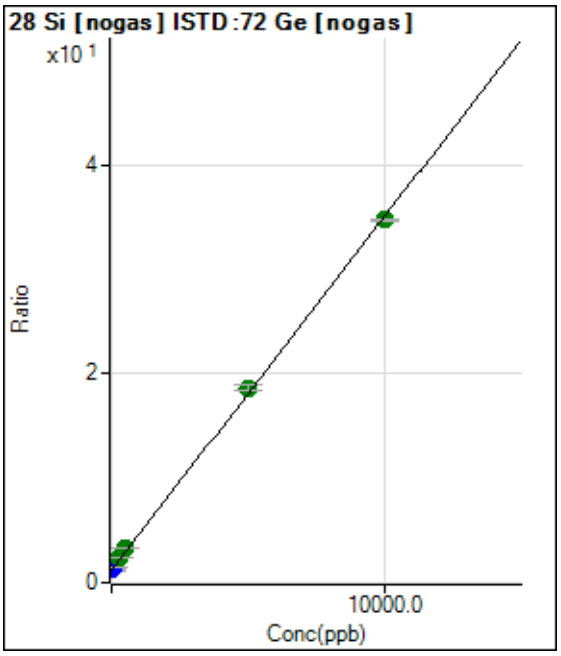
Calibration for 242_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.961	100.00	0.0028	P	43.0
2	☐	2.000	2.619	270.01	0.0080	P	17.0
3	☐	5.000	4.946	373.35	0.0114	P	39.7
4	☐	10.000	8.933	566.69	0.0171	P	5.9
5	☐	100.000	102.829	4737.40	0.1528	P	8.1
6	☐	200.000	198.634	8578.94	0.2913	P	8.1
7	☐	1.000					

y = 0.0014 * x + 0.0042
R = 0.9998
DL = 2.527
BEC = 2.922

Weight: <None>
Min Conc: <None>

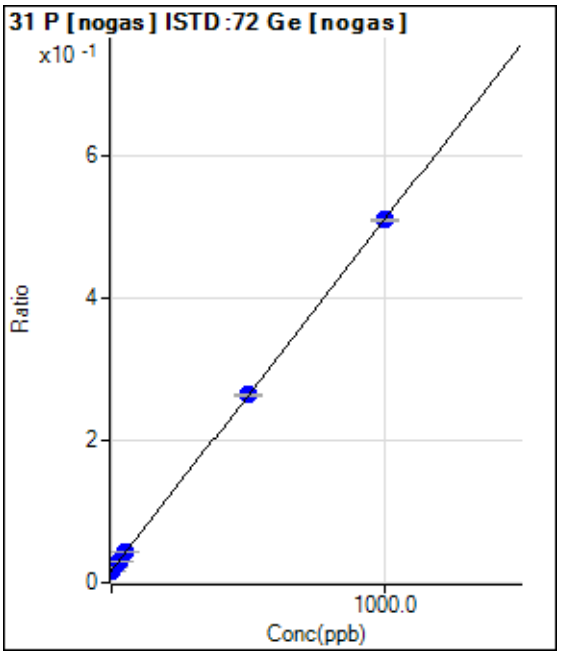


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	727909.57	1.2005	P	1.0
2	☐	100.000	103.360	923219.83	1.5505	P	0.2
3	☐	250.000	342.641	1386129.72	2.3608	A	1.3
4	☐	500.000	610.721	1903846.59	3.2686	A	1.3
5	☐	5000.000	5166.154	10379634.84	18.6943	A	2.0
6	☐	10000.00	9909.037	18606203.89	34.7548	A	0.8
7	☐	50.000					

y = 0.0034 * x + 1.2005
R = 0.9998
DL = 10.41
BEC = 354.5

Weight: <None>
Min Conc: <None>

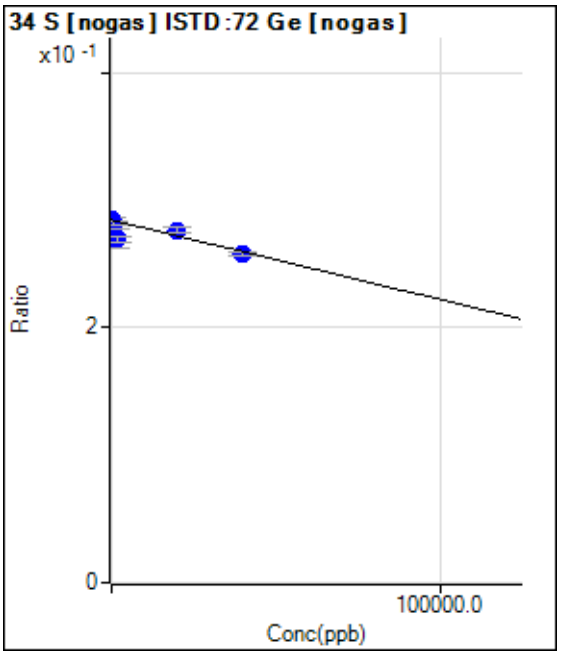
Calibration for 242_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	10246.53	0.0169	P	1.8
2	☐	10.000	10.224	13068.39	0.0220	P	2.8
3	☐	25.000	25.418	17295.45	0.0295	P	2.7
4	☐	50.000	53.520	25245.05	0.0433	P	0.2
5	☐	500.000	500.227	146569.31	0.2640	P	0.8
6	☐	1000.000	999.698	273396.58	0.5107	P	0.8
7	☐	5.000					

y = 4.9393E-004 * x + 0.0169
R = 1.0000
DL = 1.897
BEC = 34.22

Weight: <None>
Min Conc: <None>

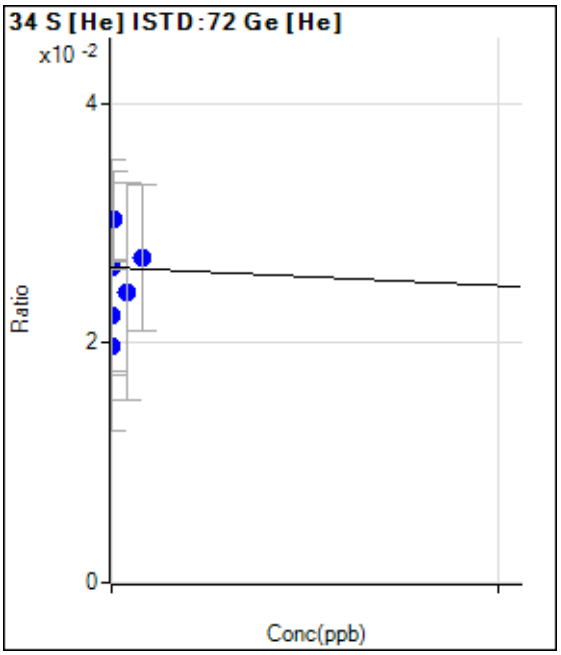


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	172438.58	0.2844	P	1.9
2	☐	400.000	3978.898	167851.21	0.2819	P	1.3
3	☐	1000.000	23232.450	158434.93	0.2699	P	5.9
4	☐	2000.000	23984.155	156985.88	0.2695	P	1.5
5	☐	20000.00	12919.280	153429.49	0.2763	P	1.6
6	☐	40000.00	41849.552	138301.39	0.2583	P	1.1
7	☐	200.000					

y = -6.2282E-007 * x + 0.2844
R = -0.7061
DL = -2.617E+04
BEC = -4.566E+05

Weight: <None>
Min Conc: <None>

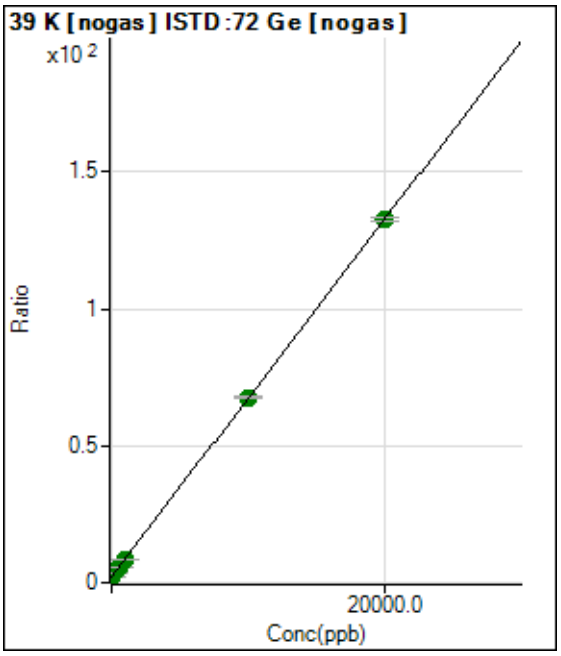
Calibration for 242_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	933.59	0.0263	P	67.9
2	☐	400.000	2147527.17	666.83	0.0198	P	71.8
3	☐	1000.000	1331465.19	733.51	0.0223	P	41.3
4	☐	2000.000	-1307228.14	1000.22	0.0303	P	26.7
5	☐	20000.00	673274.453	766.91	0.0243	P	74.6
6	☐	40000.00	-275908.721	800.19	0.0271	P	44.8
7	☐	200.000					

y = -3.0356E-009 * x + 0.0263
R = 0.2509
DL = -1.765E+07
BEC = -8.666E+06

Weight: <None>
Min Conc: <None>

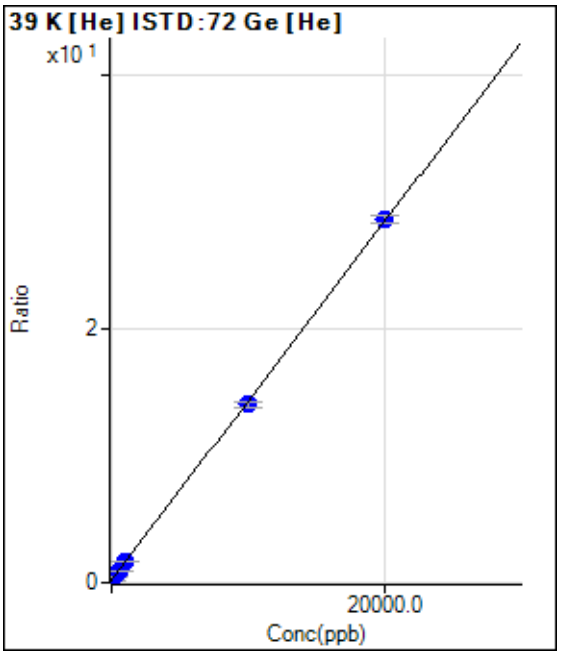


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1313118.45	2.1658	A	1.6
2	☐	200.000	191.056	2031133.70	3.4116	A	3.0
3	☐	500.000	489.953	3147265.57	5.3607	A	1.1
4	☐	1000.000	997.167	5049235.53	8.6682	A	0.9
5	☐	10000.00	10038.874	37548694.59	67.6281	A	0.9
6	☐	20000.00	19981.045	70909957.84	132.459	A	1.1
7	☐	100.000					

y = 0.0065 * x + 2.1658
R = 1.0000
DL = 15.66
BEC = 332.1

Weight: <None>
Min Conc: <None>

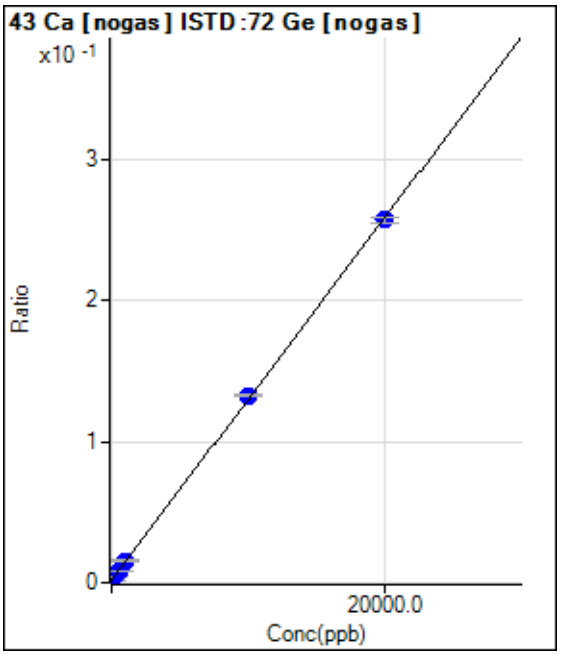
Calibration for 242_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	7181.61	0.2043	P	3.1
2	☐	200.000	215.526	17181.93	0.5091	P	1.0
3	☐	500.000	498.293	30146.23	0.9089	P	4.0
4	☐	1000.000	1010.779	53969.80	1.6336	P	2.7
5	☐	10000.00	9803.591	436369.91	14.0670	P	2.9
6	☐	20000.00	20097.553	843437.10	28.6232	P	2.2
7	☐	100.000					

y = 0.0014 * x + 0.2043
R = 0.9999
DL = 13.43
BEC = 144.5

Weight: <None>
Min Conc: <None>

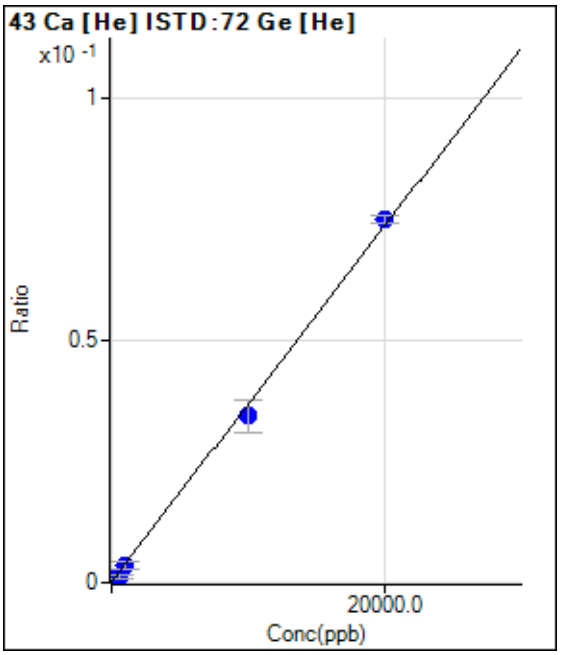


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	996.72	0.0016	P	11.8
2	☐	200.000	208.586	2573.59	0.0043	P	2.6
3	☐	500.000	510.245	4810.76	0.0082	P	7.6
4	☐	1000.000	1082.439	9052.49	0.0155	P	4.8
5	☐	10000.00	10183.866	73527.64	0.1324	P	0.9
6	☐	20000.00	19903.603	137717.44	0.2573	P	1.5
7	☐	100.000					

y = 1.2842E-005 * x + 0.0016
R = 0.9999
DL = 45.36
BEC = 128

Weight: <None>
Min Conc: <None>

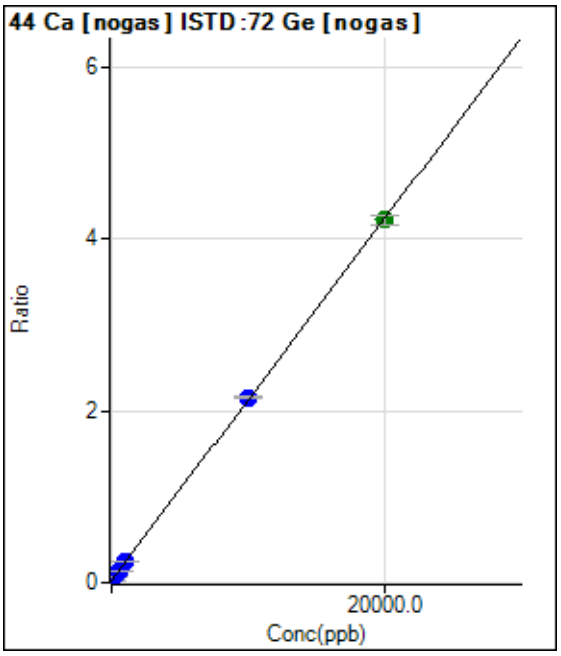
Calibration for 242_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6.67	0.0002	P	173.
2	☐	200.000	133.658	23.33	0.0007	P	62.9
3	☐	500.000	308.847	43.33	0.0013	P	58.2
4	☐	1000.000	944.660	120.00	0.0037	P	46.1
5	☐	10000.00	9304.797	1063.39	0.0344	P	19.4
6	☐	20000.00	20355.811	2210.19	0.0750	P	2.3
7	☐	100.000					

y = 3.6750E-006 * x + 1.9232E-004
R = 0.9992
DL = 271.9
BEC = 52.33

Weight: <None>
Min Conc: <None>

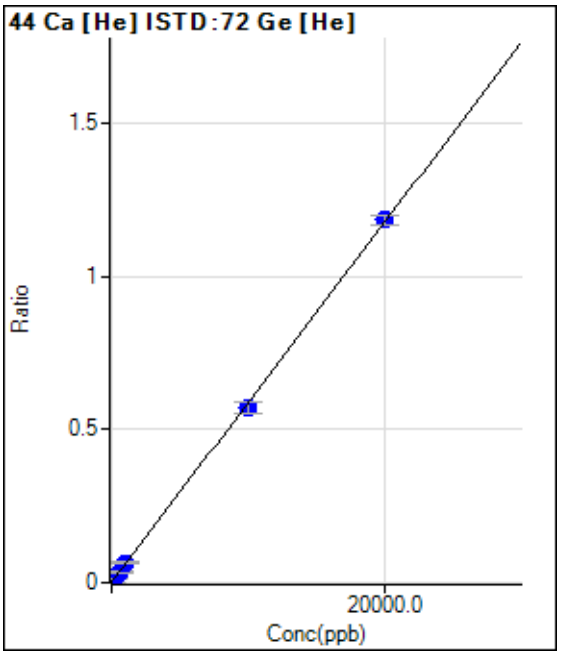


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	15340.39	0.0253	P	4.4
2	☐	200.000	206.226	40874.79	0.0687	P	2.9
3	☐	500.000	512.365	78097.46	0.1330	P	2.0
4	☐	1000.000	1026.035	140378.08	0.2410	P	2.2
5	☐	10000.00	10121.028	1195280.14	2.1528	P	1.0
6	☐	20000.00	19937.813	2257035.96	4.2164	A	2.5
7	☐	100.000					

y = 2.1021E-004 * x + 0.0253
R = 1.0000
DL = 15.89
BEC = 120.4

Weight: <None>
Min Conc: <None>

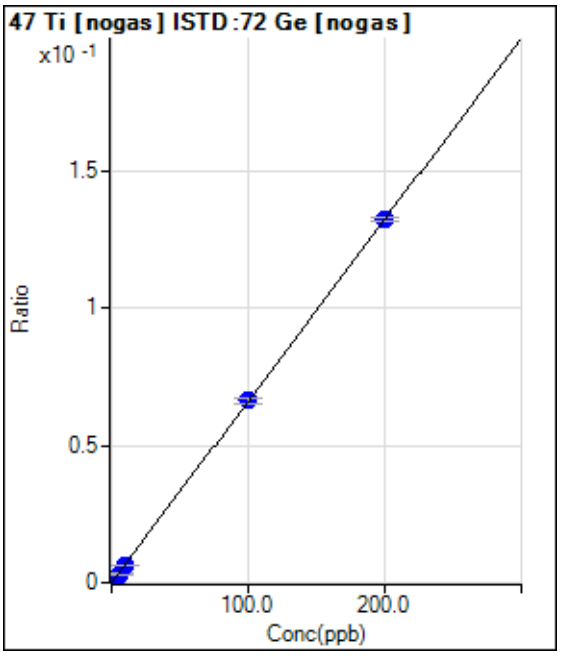
Calibration for 242_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	40.00	0.0011	P	66.6
2	☐	200.000	156.824	350.01	0.0104	P	9.1
3	☐	500.000	532.422	1073.40	0.0325	P	15.0
4	☐	1000.000	1089.639	2156.85	0.0653	P	2.8
5	☐	10000.00	9706.692	17739.42	0.5723	P	6.0
6	☐	20000.00	20141.793	34955.41	1.1863	P	2.8
7	☐	100.000					

y = 5.8841E-005 * x + 0.0011
R = 0.9998
DL = 38.55
BEC = 19.29

Weight: <None>
Min Conc: <None>

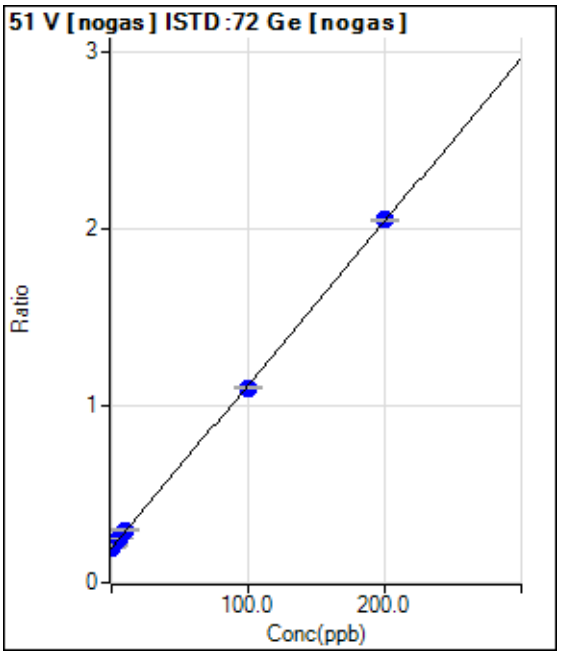


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	16.67	0.0000	P	125.
2	☐	2.000	1.993	800.04	0.0013	P	5.4
3	☐	5.000	4.669	1826.81	0.0031	P	4.9
4	☐	10.000	9.234	3567.11	0.0061	P	2.7
5	☐	100.000	100.143	36732.21	0.0662	P	2.5
6	☐	200.000	199.975	70706.53	0.1321	P	0.9
7	☐	1.000					

y = 6.6034E-004 * x + 2.7560E-005
R = 1.0000
DL = 0.1569
BEC = 0.04174

Weight: <None>
Min Conc: <None>

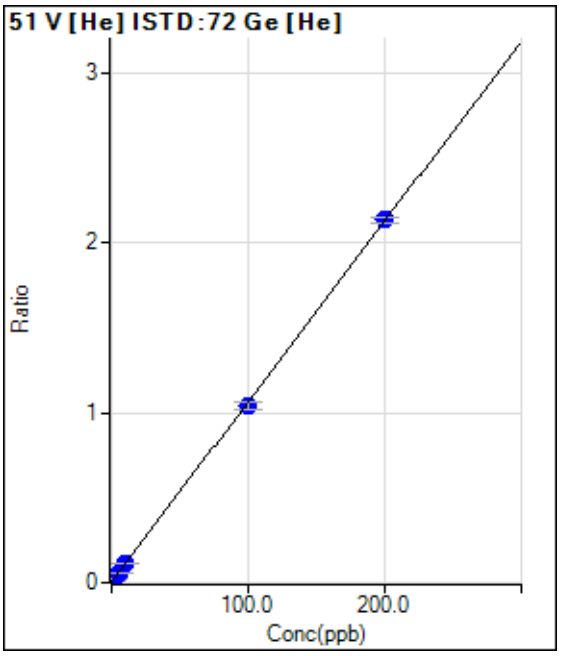
Calibration for 242_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	118455.74	0.1954	P	1.8
2	☐	2.000	1.889	126651.34	0.2128	P	7.0
3	☐	5.000	5.812	146170.04	0.2490	P	1.8
4	☐	10.000	11.190	173873.21	0.2985	P	2.6
5	☐	100.000	97.885	609639.63	1.0980	P	1.1
6	☐	200.000	200.979	1096874.76	2.0487	P	0.9
7	☐	1.000					

y = 0.0092 * x + 0.1954
R = 0.9999
DL = 1.125
BEC = 21.19

Weight: <None>
Min Conc: <None>

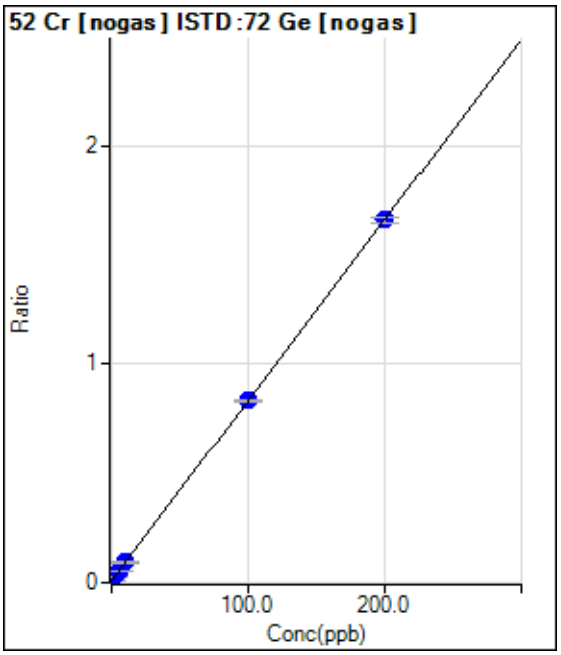


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.237	224.00	0.0064	P	6.0
2	☐	2.000	2.163	904.03	0.0268	P	3.1
3	☐	5.000	5.162	1942.12	0.0586	P	6.1
4	☐	10.000	10.455	3788.42	0.1147	P	5.0
5	☐	100.000	98.023	32347.24	1.0431	P	4.1
6	☐	200.000	200.960	62899.16	2.1344	P	1.4
7	☐	1.000					

y = 0.0106 * x + 0.0039
R = 0.9999
DL = 0.1087
BEC = 0.3642

Weight: <None>
Min Conc: <None>

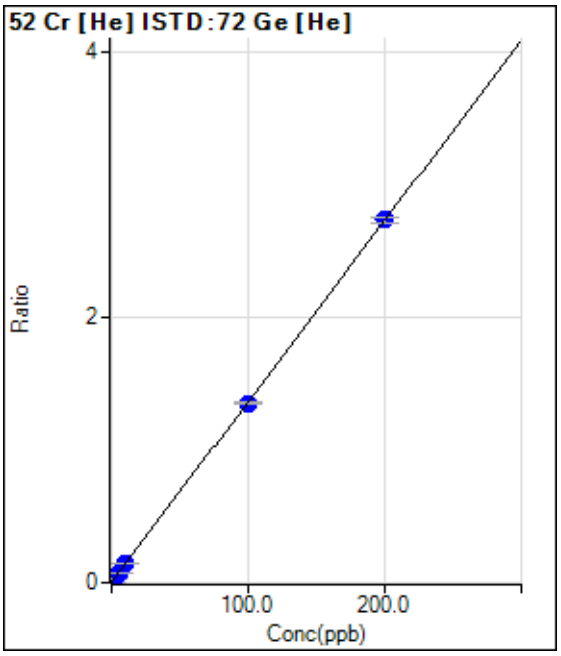
Calibration for 242_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	5391.03	0.0089	P	7.7
2	☐	2.000	1.900	14626.48	0.0246	P	1.3
3	☐	5.000	5.081	29825.98	0.0508	P	3.6
4	☐	10.000	10.188	54138.09	0.0929	P	1.3
5	☐	100.000	99.711	461587.39	0.8314	P	1.8
6	☐	200.000	200.134	888462.20	1.6597	P	1.8
7	☐	1.000					

y = 0.0082 * x + 0.0089
R = 1.0000
DL = 0.2495
BEC = 1.078

Weight: <None>
Min Conc: <None>

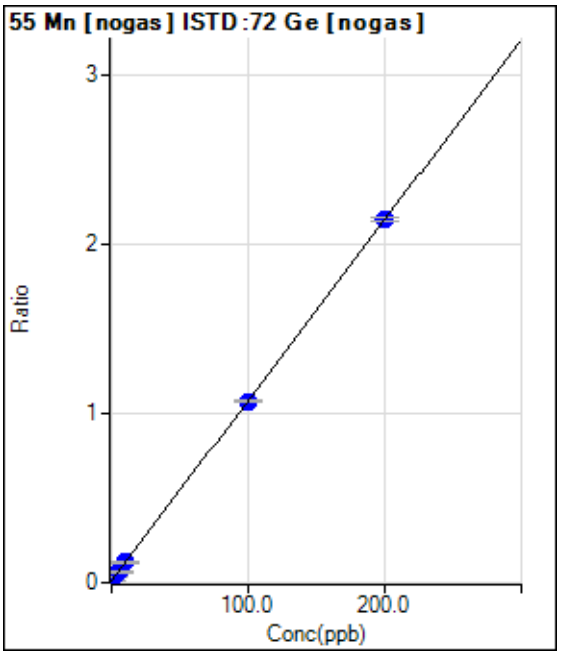


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	113.34	0.0033	P	76.1
2	☐	2.000	1.838	956.71	0.0283	P	23.5
3	☐	5.000	4.719	2240.20	0.0676	P	5.0
4	☐	10.000	10.481	4824.12	0.1461	P	5.7
5	☐	100.000	98.766	41874.09	1.3493	P	1.1
6	☐	200.000	200.602	80670.06	2.7372	P	1.6
7	☐	1.000					

y = 0.0136 * x + 0.0033
R = 1.0000
DL = 0.5451
BEC = 0.2386

Weight: <None>
Min Conc: <None>

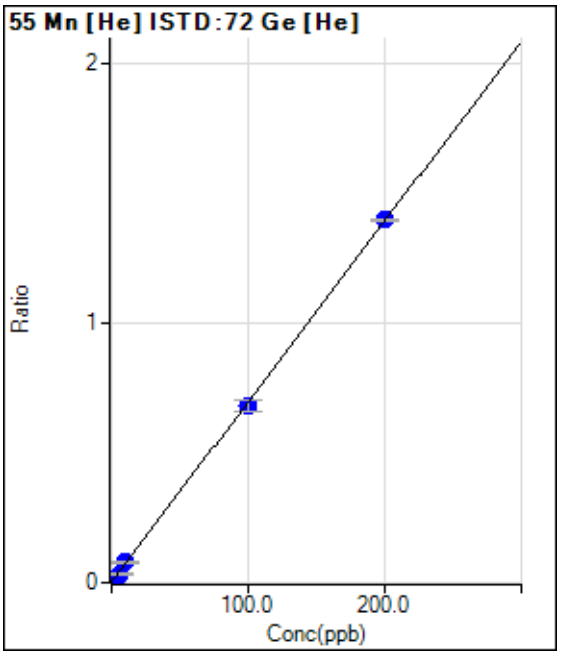
Calibration for 242_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6254.59	0.0103	P	5.9
2	☐	2.000	2.074	19291.08	0.0324	P	2.2
3	☐	5.000	4.953	37016.76	0.0631	P	3.7
4	☐	10.000	10.248	69565.94	0.1194	P	0.8
5	☐	100.000	99.570	594345.78	1.0705	P	0.7
6	☐	200.000	200.203	1146660.71	2.1420	P	1.2
7	☐	1.000					

y = 0.0106 * x + 0.0103
R = 1.0000
DL = 0.1718
BEC = 0.9688

Weight: <None>
Min Conc: <None>

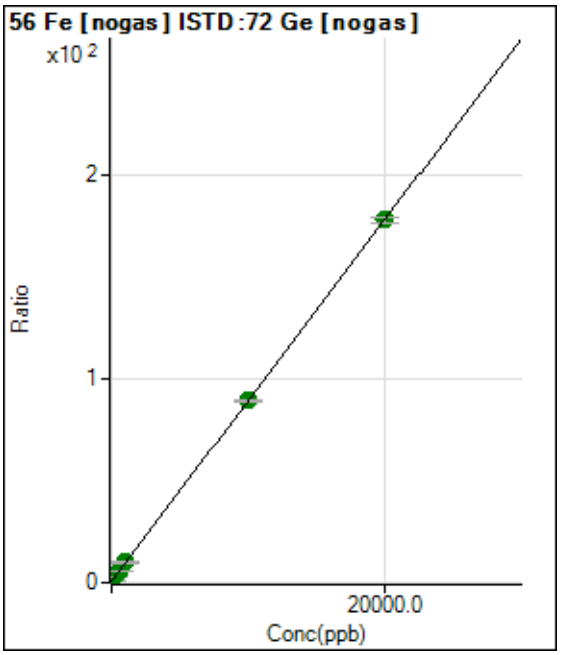


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	76.67	0.0022	P	32.9
2	☐	2.000	2.215	590.02	0.0175	P	21.3
3	☐	5.000	4.462	1100.05	0.0331	P	9.2
4	☐	10.000	10.920	2573.59	0.0779	P	6.7
5	☐	100.000	97.977	21136.53	0.6818	P	5.8
6	☐	200.000	200.977	41152.39	1.3963	P	0.8
7	☐	1.000					

y = 0.0069 * x + 0.0022
R = 0.9999
DL = 0.3098
BEC = 0.314

Weight: <None>
Min Conc: <None>

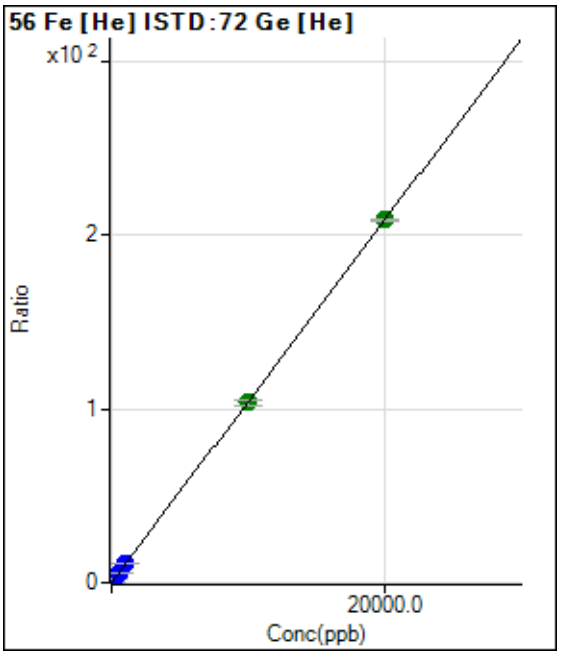
Calibration for 242_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	399310.82	0.6585	P	2.3
2	☐	200.000	216.181	1535235.13	2.5787	A	2.1
3	☐	500.000	519.904	3097710.29	5.2763	A	1.8
4	☐	1000.000	1049.515	5813246.62	9.9804	A	1.6
5	☐	10000.00	9986.471	49613313.61	89.3591	A	1.2
6	☐	20000.00	20003.629	95461575.05	178.332	A	1.8
7	☐	100.000					

y = 0.0089 * x + 0.6585
R = 1.0000
DL = 5.041
BEC = 74.14

Weight: <None>
Min Conc: <None>

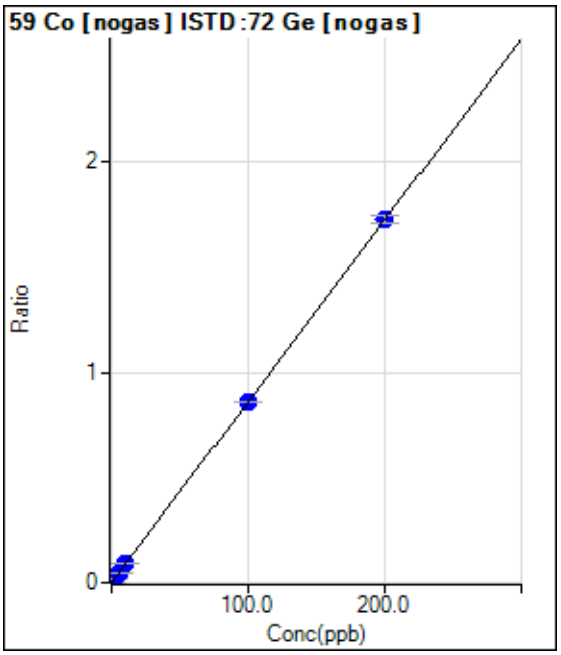


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1136.73	0.0324	P	15.0
2	☐	200.000	207.986	74205.15	2.1991	P	2.7
3	☐	500.000	511.466	177689.34	5.3606	P	5.9
4	☐	1000.000	1037.557	358176.96	10.8412	P	2.6
5	☐	10000.00	9933.940	3211257.77	103.519	A	2.9
6	☐	20000.00	20030.786	6151302.62	208.703	A	0.6
7	☐	100.000					

y = 0.0104 * x + 0.0324
R = 1.0000
DL = 1.402
BEC = 3.111

Weight: <None>
Min Conc: <None>

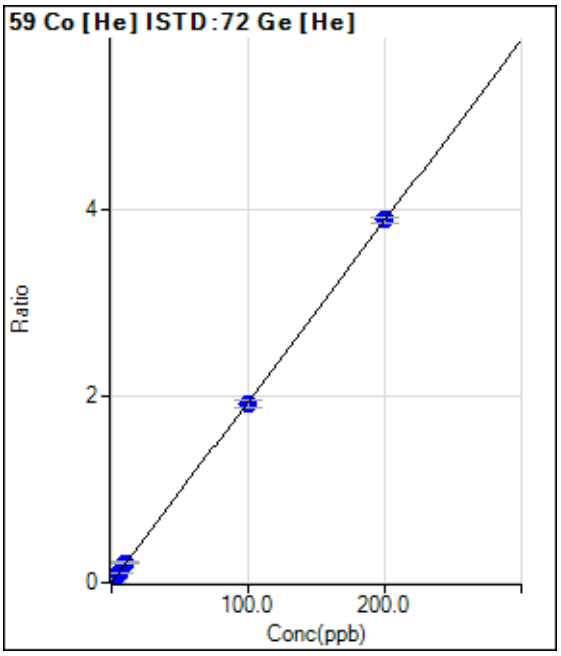
Calibration for 242_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	80.00	0.0001	P	25.2
2	☐	2.000	2.062	10643.50	0.0179	P	4.9
3	☐	5.000	5.118	25939.85	0.0442	P	2.0
4	☐	10.000	10.315	51791.07	0.0889	P	1.6
5	☐	100.000	99.412	475198.43	0.8559	P	0.2
6	☐	200.000	200.275	922886.37	1.7241	P	2.2
7	☐	1.000					

y = 0.0086 * x + 1.3198E-004
R = 1.0000
DL = 0.01161
BEC = 0.01533

Weight: <None>
Min Conc: <None>

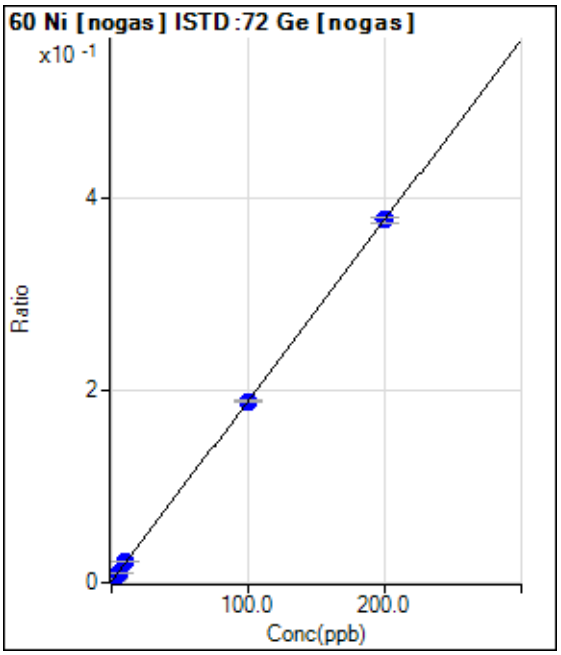


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	10.00	0.0003	P	101.
2	☐	2.000	1.805	1190.06	0.0353	P	6.7
3	☐	5.000	5.128	3303.72	0.0997	P	7.3
4	☐	10.000	10.910	6994.87	0.2118	P	5.0
5	☐	100.000	98.777	59392.07	1.9154	P	4.5
6	☐	200.000	200.565	114611.50	3.8889	P	1.4
7	☐	1.000					

y = 0.0194 * x + 2.8392E-004
R = 1.0000
DL = 0.04465
BEC = 0.01464

Weight: <None>
Min Conc: <None>

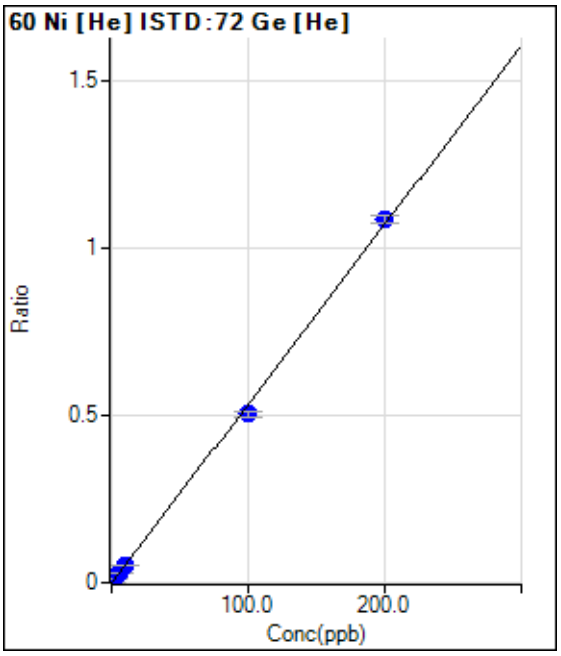
Calibration for 242_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.020	910.04	0.0015	P	14.1
2	☐	2.000	1.702	2823.62	0.0047	P	8.5
3	☐	5.000	4.837	6244.57	0.0106	P	4.3
4	☐	10.000	10.751	12681.57	0.0218	P	5.8
5	☐	100.000	99.520	104802.81	0.1888	P	1.0
6	☐	200.000	200.209	202445.86	0.3782	P	1.7
7	☐	1.000					

y = 0.0019 * x + 0.0015
R = 1.0000
DL = 0.3372
BEC = 0.8179

Weight: <None>
Min Conc: <None>

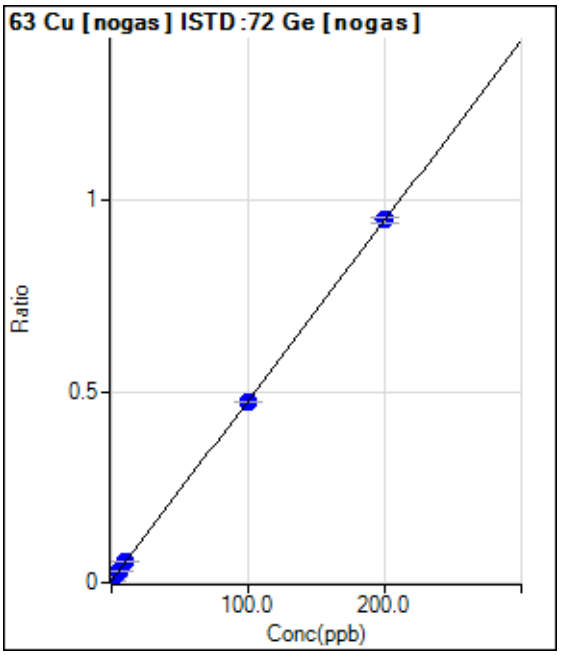


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.786	66.67	0.0019	P	14.1
2	☐	2.000	2.702	413.35	0.0122	P	35.0
3	☐	5.000	6.145	1016.72	0.0306	P	3.6
4	☐	10.000	10.227	1736.79	0.0526	P	6.2
5	☐	100.000	94.376	15637.42	0.5041	P	3.0
6	☐	200.000	202.765	32003.48	1.0857	P	2.0
7	☐	1.000					

y = 0.0054 * x - 0.0023
R = 0.9994
DL = 0.149
BEC = -0.4334

Weight: <None>
Min Conc: <None>

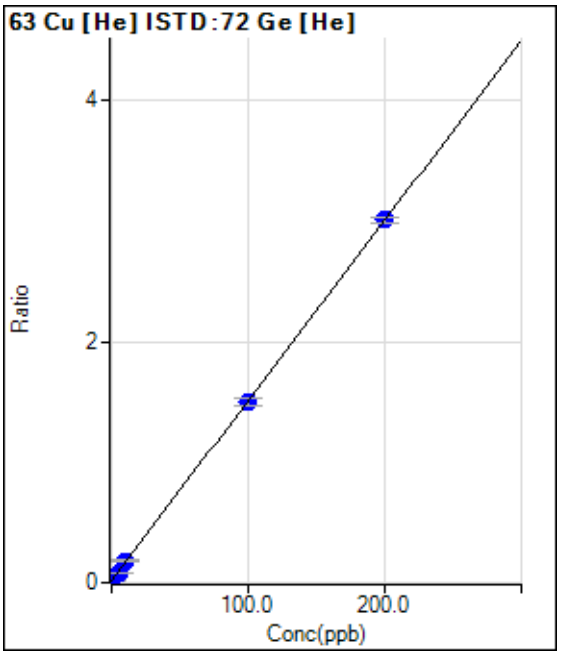
Calibration for 242_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3073.67	0.0051	P	8.1
2	☐	2.000	2.574	10236.59	0.0172	P	2.7
3	☐	5.000	4.888	16494.86	0.0281	P	0.9
4	☐	10.000	10.586	32000.11	0.0549	P	2.0
5	☐	100.000	99.289	262499.80	0.4728	P	0.6
6	☐	200.000	200.323	507882.21	0.9487	P	1.3
7	☐	1.000					

y = 0.0047 * x + 0.0051
R = 1.0000
DL = 0.2606
BEC = 1.076

Weight: <None>
Min Conc: <None>

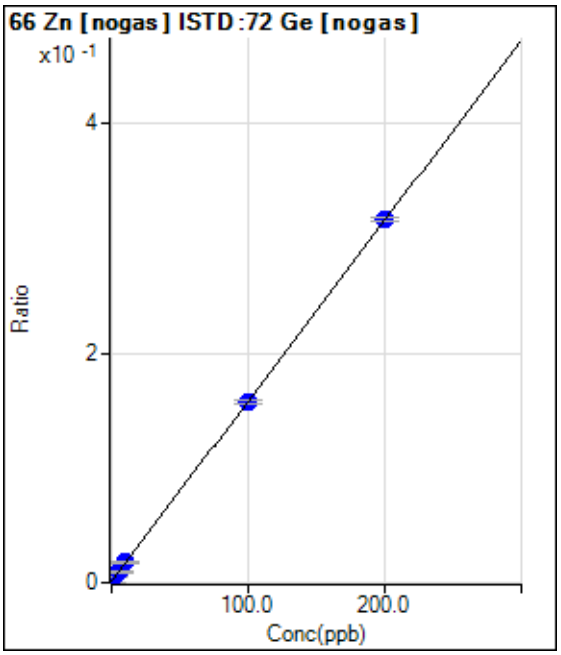


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.305	400.01	0.0114	P	6.9
2	☐	2.000	2.429	1763.47	0.0522	P	7.4
3	☐	5.000	4.451	2733.60	0.0824	P	1.6
4	☐	10.000	10.836	5864.44	0.1777	P	7.5
5	☐	100.000	99.242	46429.60	1.4975	P	5.0
6	☐	200.000	200.347	88613.74	3.0070	P	1.5
7	☐	1.000					

y = 0.0149 * x + 0.0159
R = 1.0000
DL = 0.1583
BEC = 1.066

Weight: <None>
Min Conc: <None>

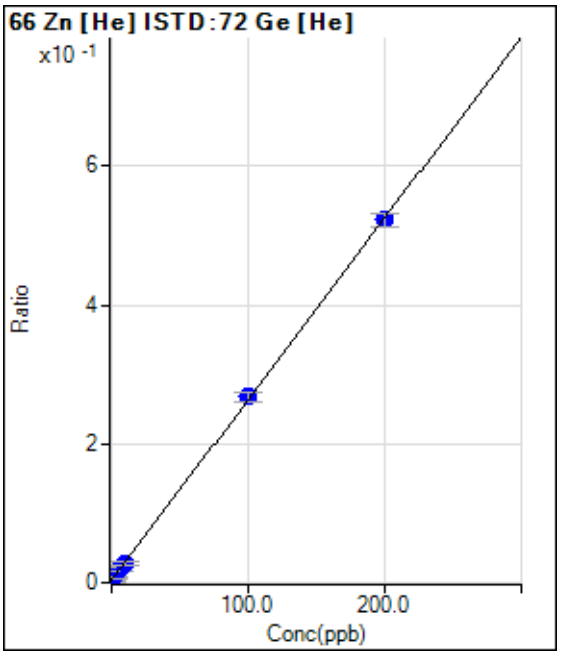
Calibration for 242_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.308	463.35	0.0008	P	15.6
2	☐	2.000	2.009	2620.25	0.0044	P	8.9
3	☐	5.000	5.262	5581.02	0.0095	P	8.1
4	☐	10.000	10.490	10326.65	0.0177	P	5.0
5	☐	100.000	99.157	87133.95	0.1569	P	1.8
6	☐	200.000	200.390	169117.45	0.3159	P	1.0
7	☐	1.000					

y = 0.0016 * x + 0.0012
R = 1.0000
DL = 0.2282
BEC = 0.7944

Weight: <None>
Min Conc: <None>

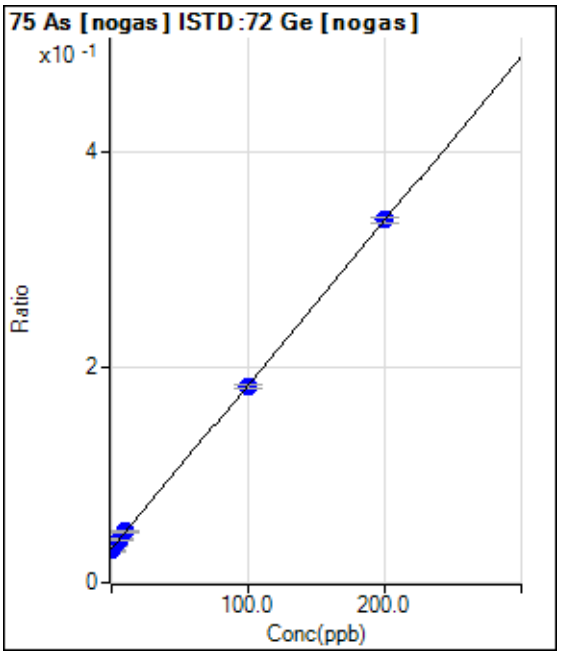


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.651	53.33	0.0015	P	62.2
2	☐	2.000	1.528	243.34	0.0072	P	17.7
3	☐	5.000	5.933	616.69	0.0187	P	30.8
4	☐	10.000	9.355	916.71	0.0276	P	22.0
5	☐	100.000	101.641	8318.80	0.2683	P	5.3
6	☐	200.000	199.193	15407.21	0.5227	P	3.5
7	☐	1.000					

y = 0.0026 * x + 0.0032
R = 0.9999
DL = 1.096
BEC = 1.238

Weight: <None>
Min Conc: <None>

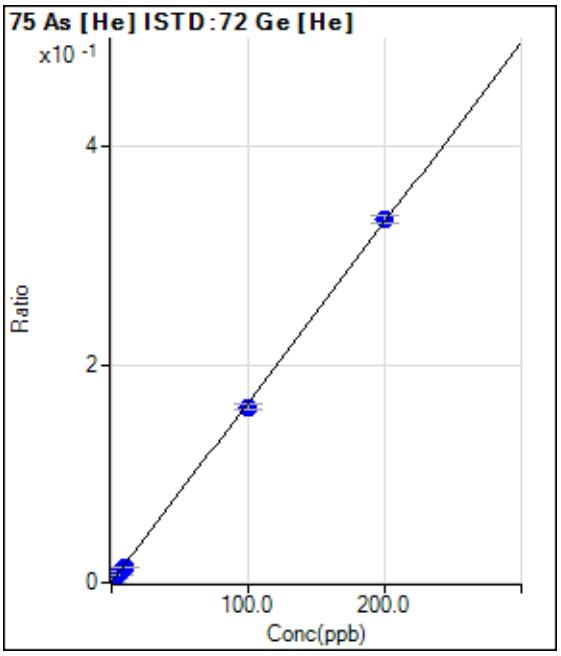
Calibration for 242_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-1.094	18083.17	0.0298	P	2.2
2	☐	2.000	2.153	20706.29	0.0348	P	2.7
3	☐	5.000	5.563	23476.58	0.0400	P	1.9
4	☐	10.000	10.992	28116.97	0.0483	P	3.8
5	☐	100.000	98.905	101345.83	0.1825	P	2.0
6	☐	200.000	200.482	180754.65	0.3376	P	1.5
7	☐	1.000					

y = 0.0015 * x + 0.0315
R = 0.9999
DL = 1.29
BEC = 20.62

Weight: <None>
Min Conc: <None>

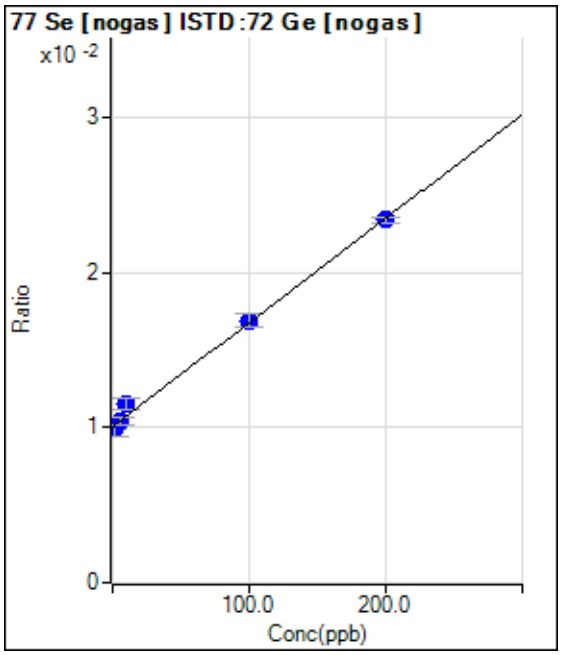


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	12.22	0.0003	P	75.5
2	☐	2.000	1.941	120.00	0.0035	P	14.7
3	☐	5.000	5.107	291.12	0.0088	P	24.0
4	☐	10.000	8.248	461.12	0.0140	P	7.3
5	☐	100.000	97.475	5006.32	0.1614	P	3.1
6	☐	200.000	201.348	9813.96	0.3330	P	2.1
7	☐	1.000					

y = 0.0017 * x + 3.4243E-004
R = 0.9999
DL = 0.4697
BEC = 0.2072

Weight: <None>
Min Conc: <None>

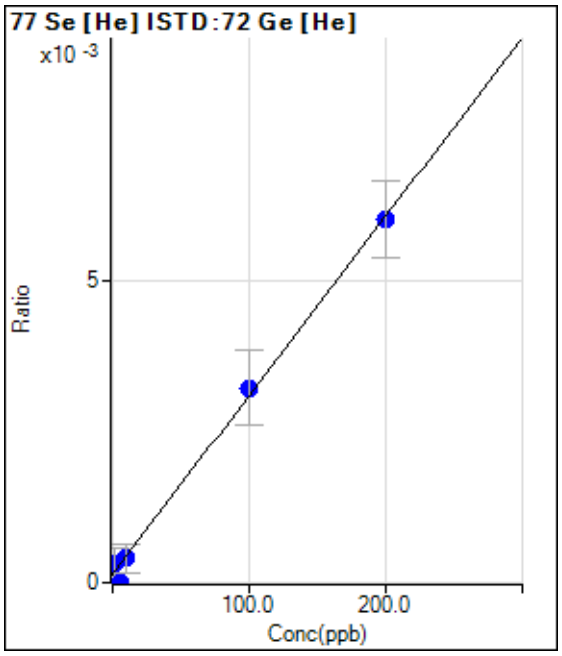
Calibration for 242_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6114.58	0.0101	P	3.4
2	☐	2.000	-2.884	5891.14	0.0099	P	9.9
3	☐	5.000	5.024	6117.87	0.0104	P	4.7
4	☐	10.000	21.884	6728.14	0.0116	P	6.4
5	☐	100.000	101.819	9396.11	0.0169	P	5.1
6	☐	200.000	198.545	12541.49	0.0234	P	1.7
7	☐	1.000					

y = 6.7187E-005 * x + 0.0101
R = 0.9976
DL = 15.29
BEC = 150.1

Weight: <None>
Min Conc: <None>

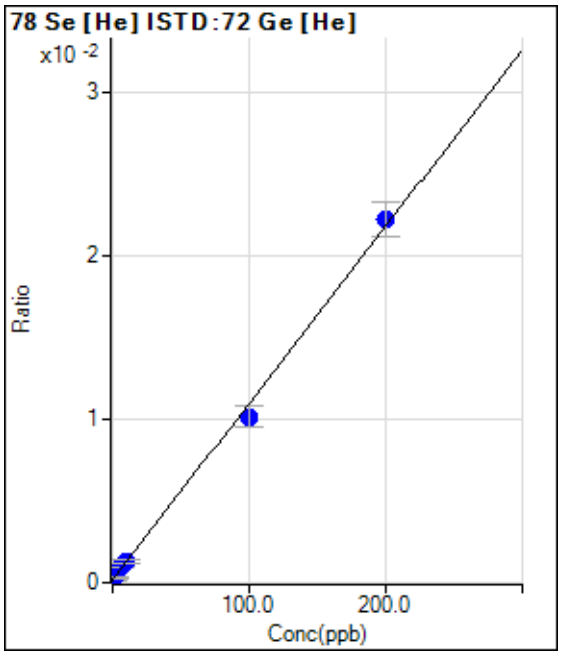


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	4.856	10.00	0.0003	P	3.0
2	☐	2.000	5.464	10.00	0.0003	P	173.
3	☐	5.000	-4.781	0.00	0.0000	P	
4	☐	10.000	9.050	13.33	0.0004	P	116.
5	☐	100.000	104.307	100.00	0.0032	P	39.0
6	☐	200.000	198.104	176.67	0.0060	P	21.1
7	☐	1.000					

y = 2.9531E-005 * x + 1.4118E-004
R = 0.9977
DL = 0.8667
BEC = 4.781

Weight: <None>
Min Conc: <None>

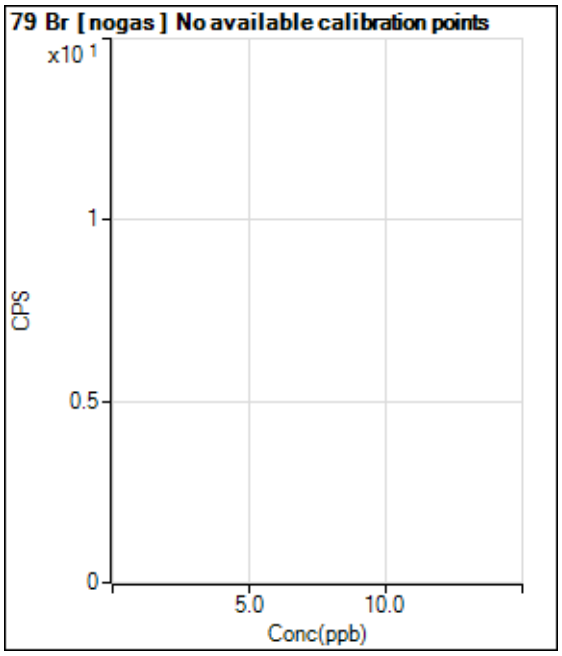
Calibration for 242_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6.00	0.0002	P	89.1
2	☐	2.000	1.152	10.00	0.0003	P	31.7
3	☐	5.000	6.798	30.00	0.0009	P	4.4
4	☐	10.000	10.327	42.67	0.0013	P	26.1
5	☐	100.000	92.290	314.00	0.0101	P	12.7
6	☐	200.000	203.802	654.02	0.0222	P	9.5
7	☐	1.000					

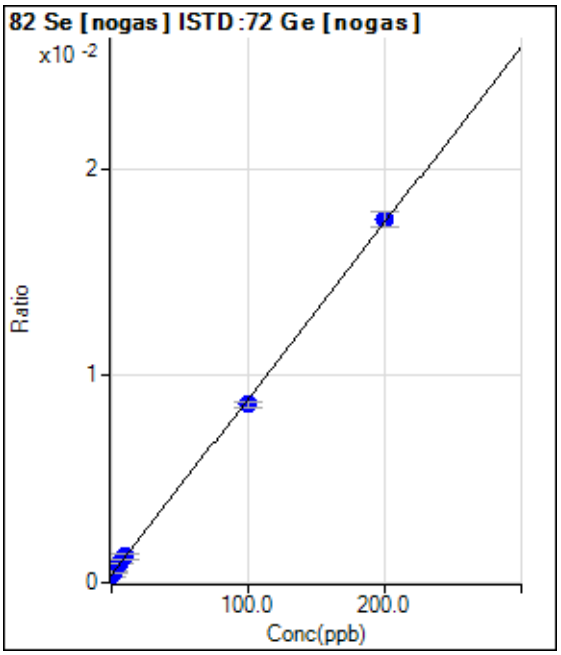
y = 1.0806E-004 * x + 1.7011E-004
R = 0.9989
DL = 4.206
BEC = 1.574

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

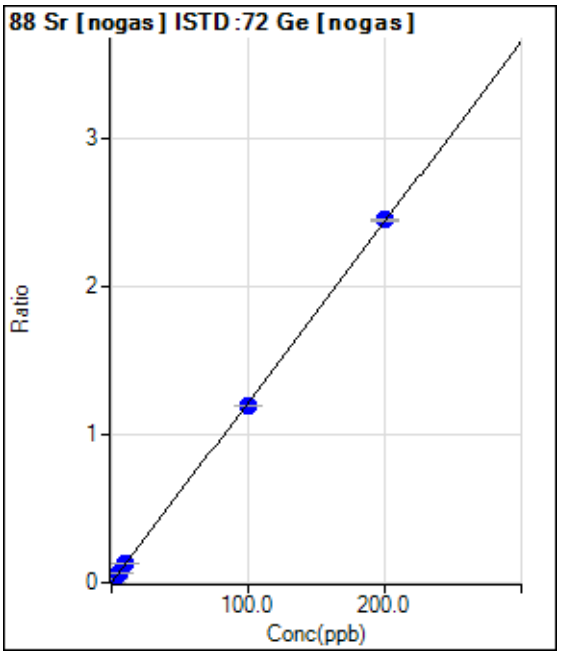
Calibration for 242_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	233.34	0.0004	P	54.4
2	☐	2.000	1.267	293.34	0.0005	P	19.8
3	☐	5.000	6.353	543.36	0.0009	P	6.8
4	☐	10.000	10.512	743.36	0.0013	P	20.3
5	☐	100.000	96.644	4774.13	0.0086	P	2.6
6	☐	200.000	201.626	9379.46	0.0175	P	4.2
7	☐	1.000					

y = 8.4981E-005 * x + 3.8528E-004
R = 0.9998
DL = 7.404
BEC = 4.534

Weight: <None>
Min Conc: <None>

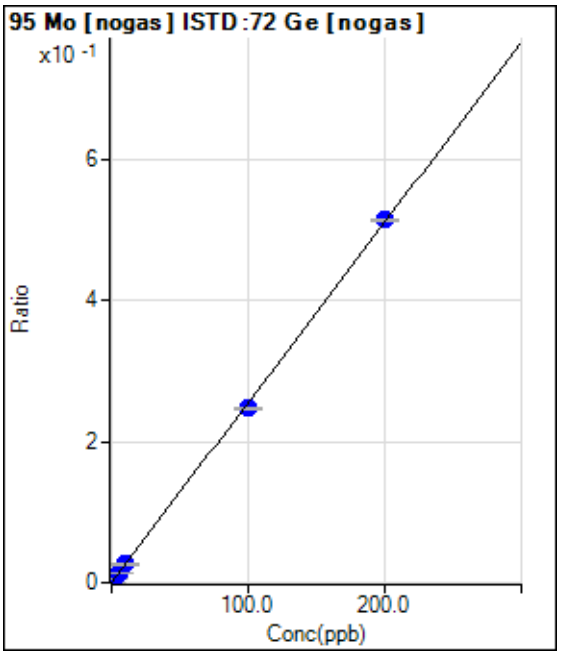


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	506.68	0.0008	P	36.6
2	☐	2.000	2.080	15607.43	0.0262	P	0.1
3	☐	5.000	4.918	35711.55	0.0608	P	1.3
4	☐	10.000	10.135	72505.51	0.1245	P	1.3
5	☐	100.000	97.903	663481.48	1.1950	P	0.3
6	☐	200.000	201.043	1313235.21	2.4530	P	0.5
7	☐	1.000					

y = 0.0122 * x + 8.3681E-004
R = 0.9999
DL = 0.07537
BEC = 0.06861

Weight: <None>
Min Conc: <None>

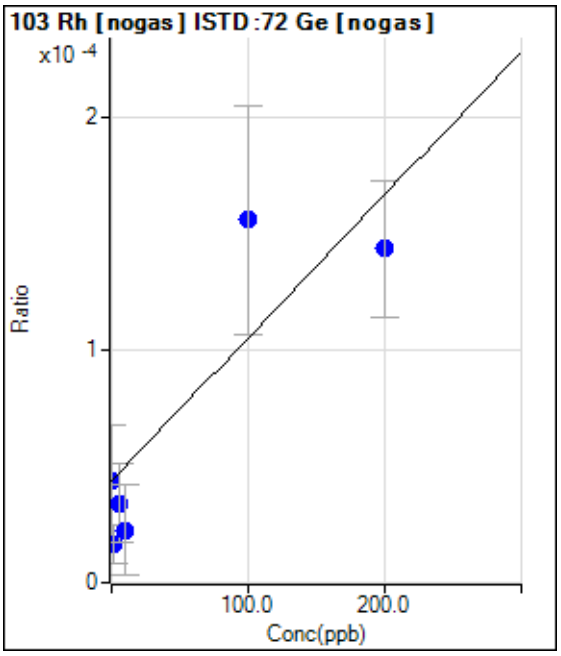
Calibration for 242_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	13.33	0.0000	P	114.
2	☐	2.000	1.886	2880.31	0.0048	P	6.8
3	☐	5.000	4.903	7361.72	0.0125	P	2.9
4	☐	10.000	10.257	15263.83	0.0262	P	4.7
5	☐	100.000	96.976	137467.66	0.2476	P	1.1
6	☐	200.000	201.503	275400.37	0.5144	P	0.8
7	☐	1.000					

y = 0.0026 * x + 2.1915E-005
R = 0.9998
DL = 0.0294
BEC = 0.008584

Weight: <None>
Min Conc: <None>

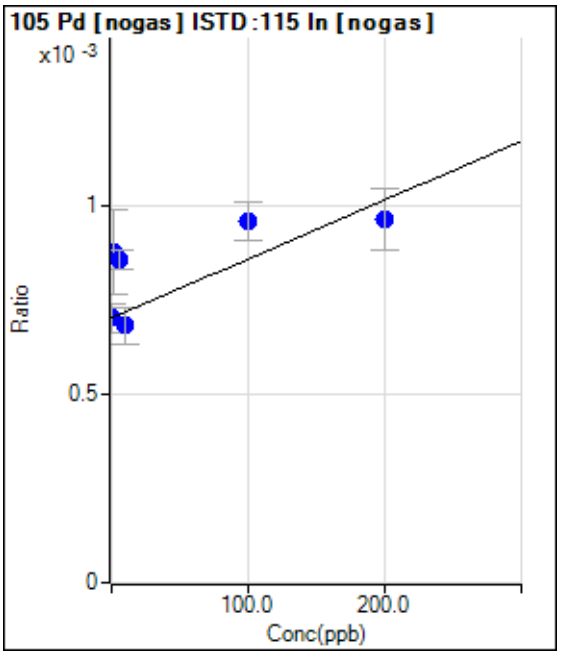


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	26.67	0.0000	P	107.
2	☐	2.000	-44.008	10.00	0.0000	P	100.
3	☐	5.000	-15.686	20.00	0.0000	P	99.9
4	☐	10.000	-34.694	13.33	0.0000	P	173.
5	☐	100.000	182.297	86.67	0.0002	P	63.2
6	☐	200.000	162.064	76.67	0.0001	P	40.7
7	☐	1.000					

y = 6.1486E-007 * x + 4.3811E-005
R = 0.8822
DL = 230.4
BEC = 71.25

Weight: <None>
Min Conc: <None>

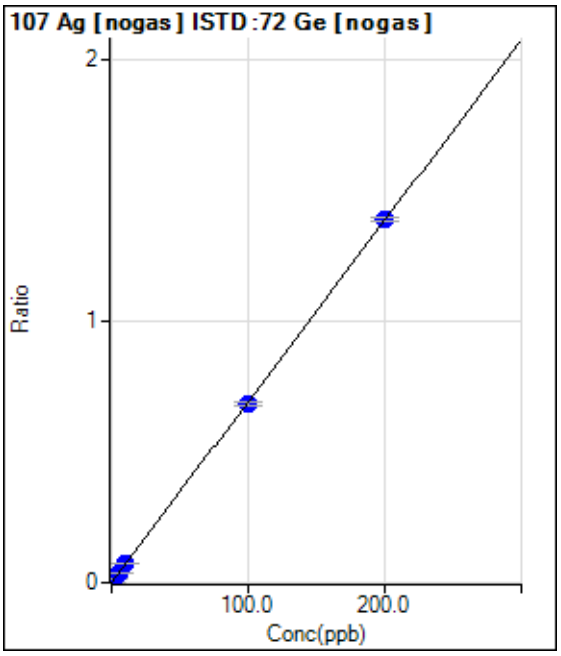
Calibration for 242_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	503.35	0.0007	P	10.9
2	☐	2.000	110.669	616.69	0.0009	P	25.7
3	☐	5.000	99.178	603.36	0.0009	P	5.7
4	☐	10.000	-13.325	473.35	0.0007	P	14.5
5	☐	100.000	163.257	636.69	0.0010	P	10.9
6	☐	200.000	166.097	616.69	0.0010	P	16.9
7	☐	1.000					

y = 1.5639E-006 * x + 7.0190E-004
R = 0.7013
DL = 146.6
BEC = 448.8

Weight: <None>
Min Conc: <None>

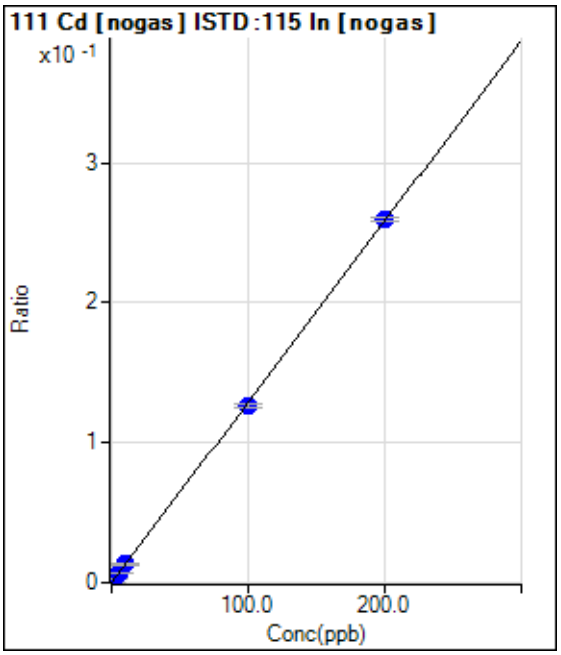


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	56.67	0.0001	P	20.5
2	☐	2.000	2.071	8599.07	0.0144	P	0.6
3	☐	5.000	5.085	20730.00	0.0353	P	7.4
4	☐	10.000	10.363	41866.35	0.0719	P	0.7
5	☐	100.000	98.926	380504.83	0.6853	P	1.5
6	☐	200.000	200.516	743589.73	1.3890	P	1.1
7	☐	1.000					

y = 0.0069 * x + 9.3477E-005
R = 1.0000
DL = 0.008306
BEC = 0.01349

Weight: <None>
Min Conc: <None>

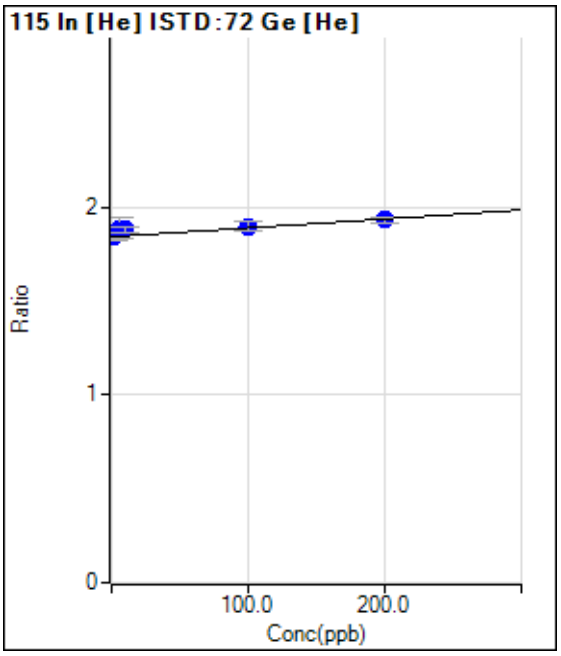
Calibration for 242_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3.33	0.0000	P	173.
2	☐	2.000	2.015	1836.81	0.0026	P	9.4
3	☐	5.000	5.181	4710.76	0.0067	P	1.4
4	☐	10.000	10.219	9172.75	0.0132	P	2.2
5	☐	100.000	98.320	84347.28	0.1268	P	2.2
6	☐	200.000	200.824	166288.65	0.2591	P	0.9
7	☐	1.000					

y = 0.0013 * x + 4.5521E-006
R = 0.9999
DL = 0.01834
BEC = 0.003529

Weight: <None>
Min Conc: <None>

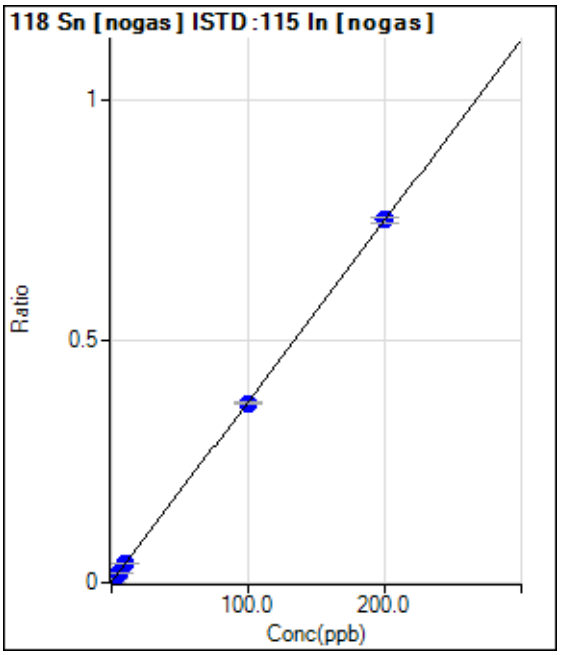


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	64810.37	1.8439	P	1.7
2	☐	2.000	8.759	62361.30	1.8481	P	2.2
3	☐	5.000	93.222	62595.50	1.8884	P	5.9
4	☐	10.000	79.764	62183.51	1.8820	P	1.7
5	☐	100.000	116.959	58928.75	1.8997	P	3.0
6	☐	200.000	185.759	56948.58	1.9326	P	2.0
7	☐	1.000					

y = 4.7740E-004 * x + 1.8439
R = 0.8632
DL = 197.7
BEC = 3862

Weight: <None>
Min Conc: <None>

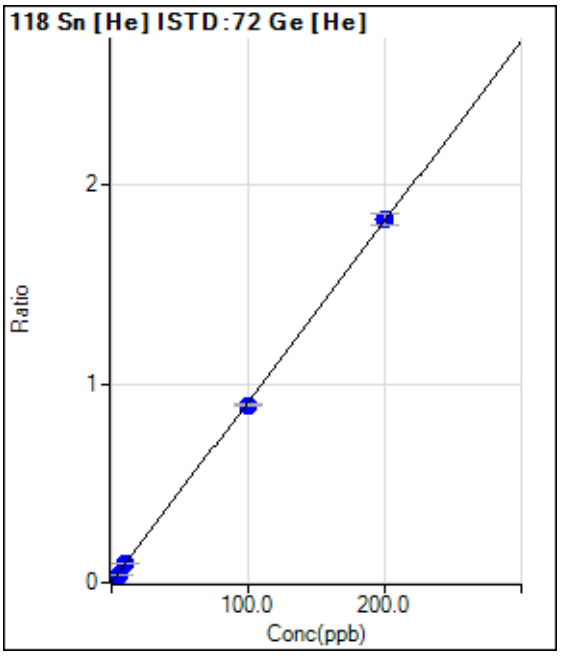
Calibration for 242_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	590.02	0.0008	P	12.1
2	☐	2.000	2.087	6087.95	0.0086	P	6.3
3	☐	5.000	4.973	13682.62	0.0194	P	2.2
4	☐	10.000	10.328	27456.64	0.0395	P	2.0
5	☐	100.000	99.177	247317.82	0.3719	P	1.7
6	☐	200.000	200.395	481795.33	0.7506	P	1.7
7	☐	1.000					

y = 0.0037 * x + 8.2088E-004
R = 1.0000
DL = 0.0797
BEC = 0.2194

Weight: <None>
Min Conc: <None>

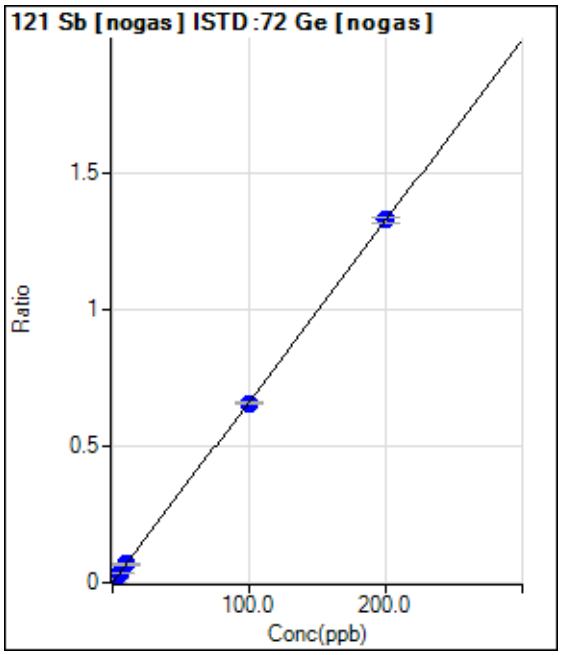


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	66.67	0.0019	P	49.8
2	☐	2.000	2.130	720.03	0.0213	P	20.3
3	☐	5.000	4.370	1380.09	0.0416	P	5.6
4	☐	10.000	10.112	3097.02	0.0937	P	1.8
5	☐	100.000	98.332	27770.55	0.8948	P	2.0
6	☐	200.000	200.843	53794.61	1.8257	P	3.0
7	☐	1.000					

y = 0.0091 * x + 0.0019
R = 0.9999
DL = 0.3152
BEC = 0.2109

Weight: <None>
Min Conc: <None>

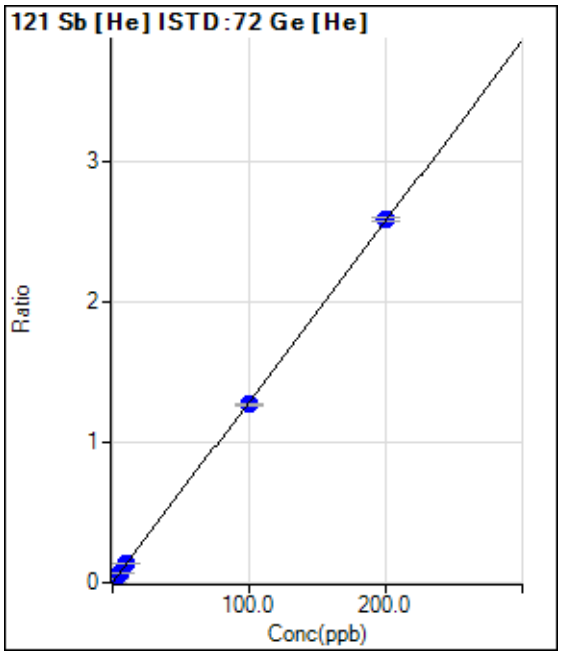
Calibration for 242_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	433.35	0.0007	P	17.1
2	☐	2.000	1.958	8135.50	0.0137	P	6.7
3	☐	5.000	5.025	19939.10	0.0340	P	1.8
4	☐	10.000	10.036	39086.75	0.0671	P	2.4
5	☐	100.000	99.151	364576.73	0.6566	P	1.4
6	☐	200.000	200.423	710132.70	1.3266	P	1.4
7	☐	1.000					

y = 0.0066 * x + 7.1430E-004
R = 1.0000
DL = 0.05549
BEC = 0.108

Weight: <None>
Min Conc: <None>

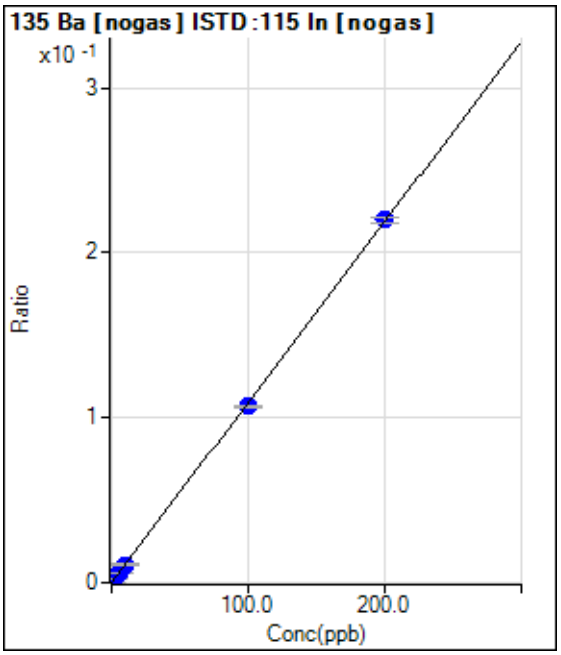


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	70.00	0.0020	P	36.4
2	☐	2.000	1.811	853.38	0.0253	P	14.2
3	☐	5.000	4.823	2126.85	0.0642	P	7.4
4	☐	10.000	10.710	4627.42	0.1401	P	2.0
5	☐	100.000	98.455	39447.79	1.2713	P	1.7
6	☐	200.000	200.743	76329.66	2.5900	P	0.9
7	☐	1.000					

y = 0.0129 * x + 0.0020
R = 0.9999
DL = 0.1681
BEC = 0.1539

Weight: <None>
Min Conc: <None>

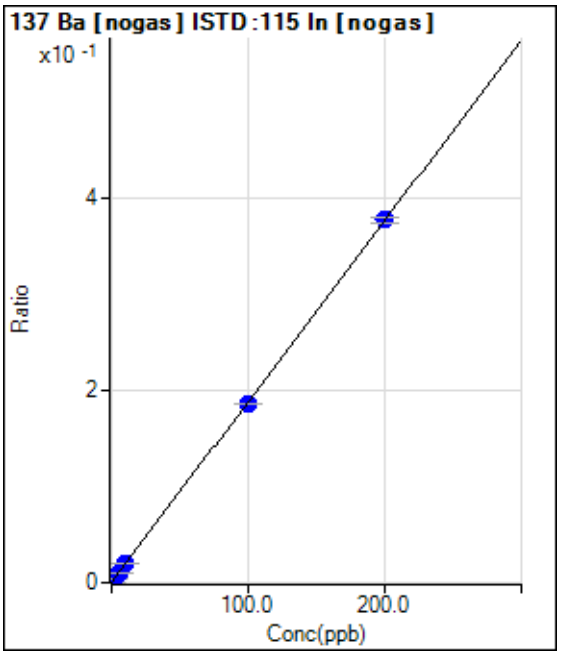
Calibration for 242_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	130.00	0.0002	P	28.0
2	☐	2.000	2.089	1736.80	0.0025	P	12.9
3	☐	5.000	5.441	4314.00	0.0061	P	3.6
4	☐	10.000	9.900	7648.66	0.0110	P	6.7
5	☐	100.000	97.531	70978.15	0.1067	P	0.1
6	☐	200.000	201.227	141204.42	0.2200	P	1.7
7	☐	1.000					

y = 0.0011 * x + 1.8165E-004
R = 0.9999
DL = 0.1397
BEC = 0.1663

Weight: <None>
Min Conc: <None>

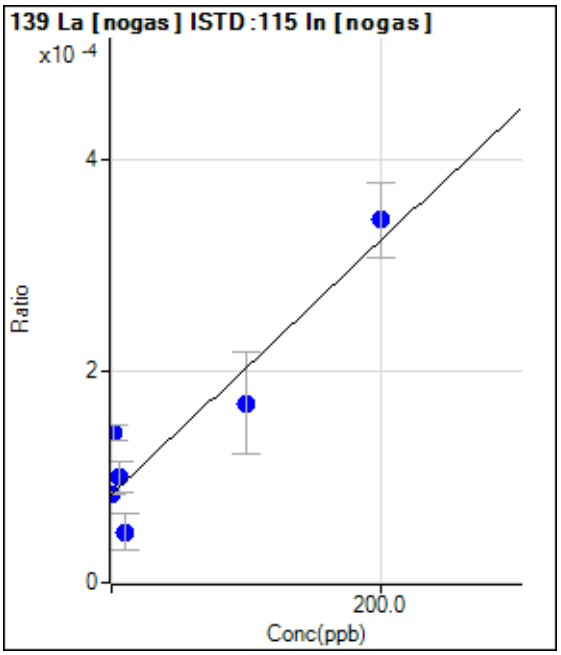


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	233.34	0.0003	P	10.5
2	☐	2.000	2.150	3080.38	0.0044	P	3.6
3	☐	5.000	4.989	6831.60	0.0097	P	4.9
4	☐	10.000	10.184	13545.84	0.0195	P	1.9
5	☐	100.000	98.671	123582.78	0.1858	P	0.5
6	☐	200.000	200.654	242331.36	0.3775	P	1.4
7	☐	1.000					

y = 0.0019 * x + 3.2517E-004
R = 1.0000
DL = 0.05448
BEC = 0.173

Weight: <None>
Min Conc: <None>

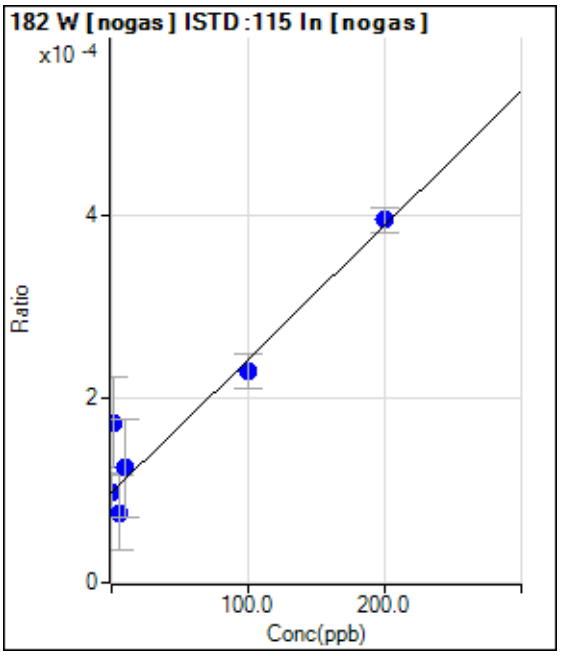
Calibration for 242_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	60.00	0.0001	P	1.8
2	☐	2.000	48.340	100.00	0.0001	P	10.3
3	☐	5.000	13.306	70.00	0.0001	P	29.6
4	☐	10.000	-29.456	33.33	0.0000	P	70.2
5	☐	100.000	71.549	113.33	0.0002	P	56.2
6	☐	200.000	215.527	220.01	0.0003	P	20.7
7	☐	1.000					

y = 1.2044E-006 * x + 8.3586E-005
R = 0.9343
DL = 3.68
BEC = 69.4

Weight: <None>
Min Conc: <None>

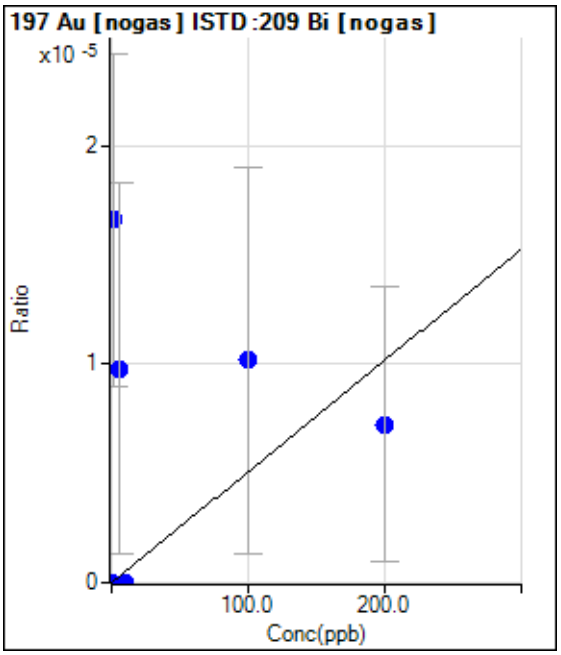


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	70.00	0.0001	P	43.7
2	☐	2.000	52.880	123.34	0.0002	P	56.5
3	☐	5.000	-15.100	53.33	0.0001	P	108.
4	☐	10.000	18.628	86.67	0.0001	P	85.0
5	☐	100.000	91.173	153.34	0.0002	P	15.9
6	☐	200.000	203.976	253.34	0.0004	P	6.6
7	☐	1.000					

y = 1.4566E-006 * x + 9.7645E-005
R = 0.9552
DL = 87.93
BEC = 67.04

Weight: <None>
Min Conc: <None>

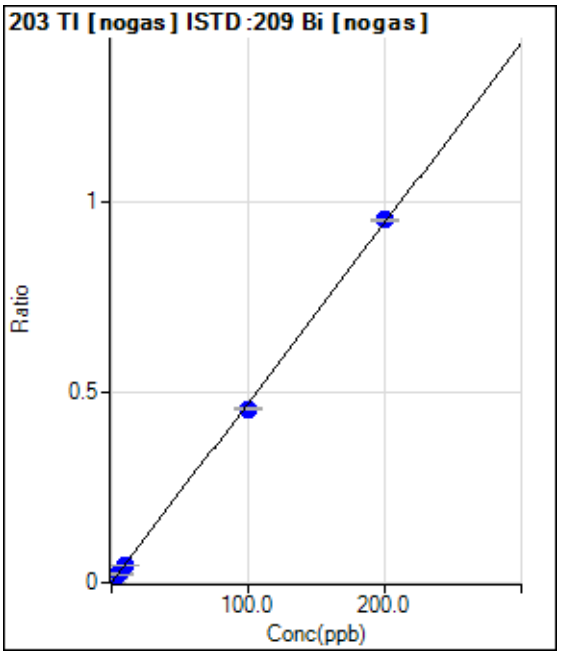
Calibration for 242_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	0.00	0.0000	P	
2	☐	2.000	326.449	16.67	0.0000	P	91.9
3	☐	5.000	192.683	10.00	0.0000	P	173.
4	☐	10.000	0.000	0.00	0.0000	P	
5	☐	100.000	199.914	10.00	0.0000	P	173.
6	☐	200.000	142.607	6.67	0.0000	P	173.
7	☐	1.000					

y = 5.0885E-008 * x + 0.0000E+000
R = 0.0890
DL = 0
BEC = 0

Weight: <None>
Min Conc: <None>

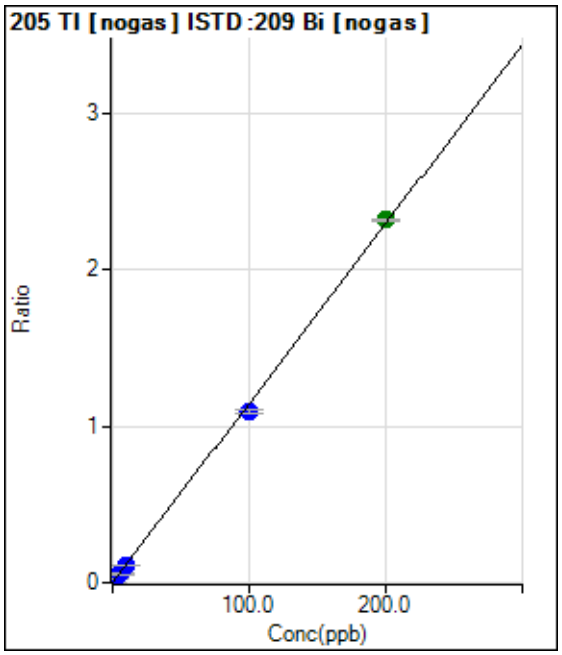


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	43.33	0.0000	P	48.5
2	☐	2.000	1.908	9172.90	0.0091	P	6.4
3	☐	5.000	4.808	23047.40	0.0228	P	2.2
4	☐	10.000	9.835	46958.09	0.0465	P	2.0
5	☐	100.000	96.516	440349.67	0.4562	P	1.4
6	☐	200.000	201.756	873131.50	0.9537	P	0.4
7	☐	1.000					

y = 0.0047 * x + 4.2146E-005
R = 0.9998
DL = 0.01298
BEC = 0.008917

Weight: <None>
Min Conc: <None>

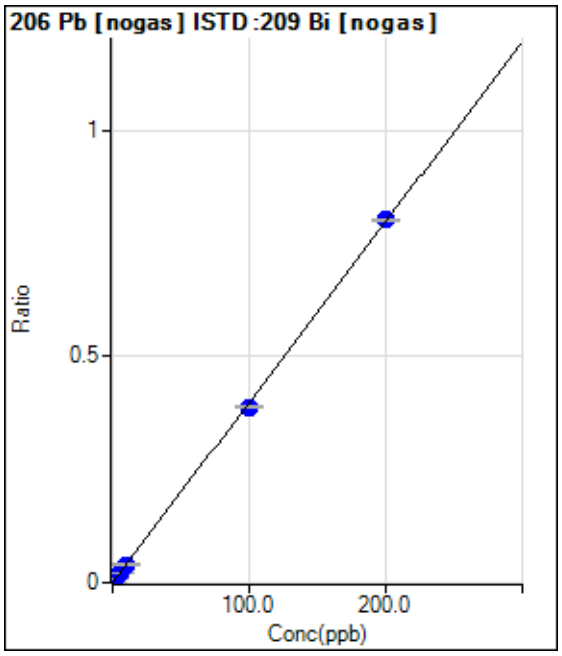
Calibration for 242_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	63.33	0.0001	P	17.4
2	☐	2.000	1.926	22423.38	0.0221	P	3.4
3	☐	5.000	4.832	56162.25	0.0555	P	1.9
4	☐	10.000	9.894	114578.37	0.1135	P	1.3
5	☐	100.000	95.418	1056258.66	1.0944	P	1.5
6	☐	200.000	202.301	2124261.06	2.3201	A	0.6
7	☐	1.000					

y = 0.0115 * x + 6.1433E-005
R = 0.9996
DL = 0.002797
BEC = 0.005357

Weight: <None>
Min Conc: <None>

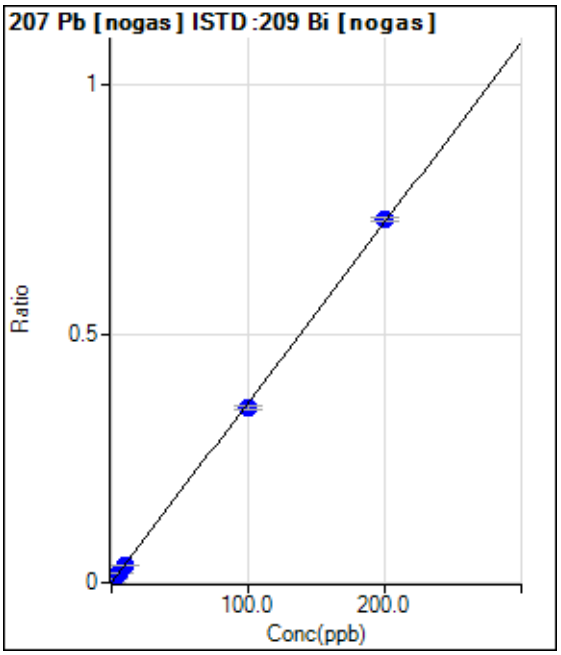


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	130.00	0.0001	P	30.4
2	☐	2.000	2.063	8449.17	0.0083	P	3.7
3	☐	5.000	5.034	20443.76	0.0202	P	0.5
4	☐	10.000	9.953	40172.78	0.0398	P	3.4
5	☐	100.000	97.498	375275.94	0.3888	P	1.4
6	☐	200.000	201.252	734674.02	0.8024	P	0.6
7	☐	1.000					

y = 0.0040 * x + 1.2618E-004
R = 0.9999
DL = 0.02885
BEC = 0.03165

Weight: <None>
Min Conc: <None>

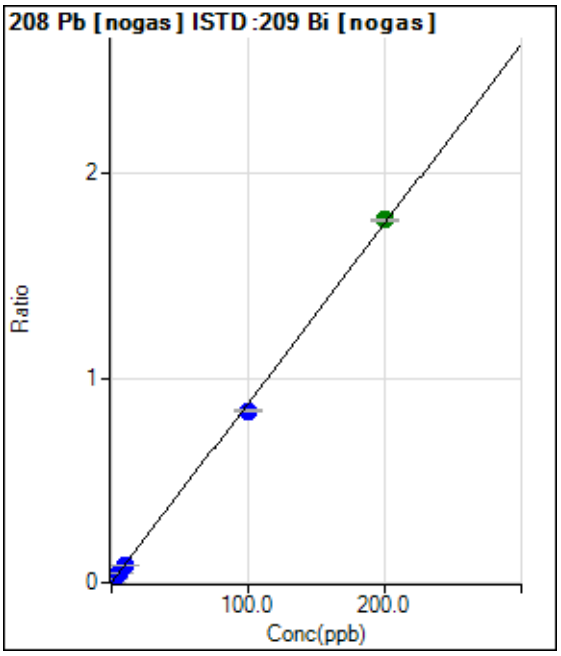
Calibration for 242_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	146.67	0.0001	P	30.2
2	☐	2.000	1.975	7371.89	0.0073	P	1.8
3	☐	5.000	4.870	17970.75	0.0178	P	2.0
4	☐	10.000	10.021	36713.89	0.0364	P	0.7
5	☐	100.000	97.005	338703.33	0.3509	P	1.5
6	☐	200.000	201.500	667199.94	0.7288	P	1.0
7	☐	1.000					

y = 0.0036 * x + 1.4221E-004
R = 0.9998
DL = 0.03562
BEC = 0.03933

Weight: <None>
Min Conc: <None>

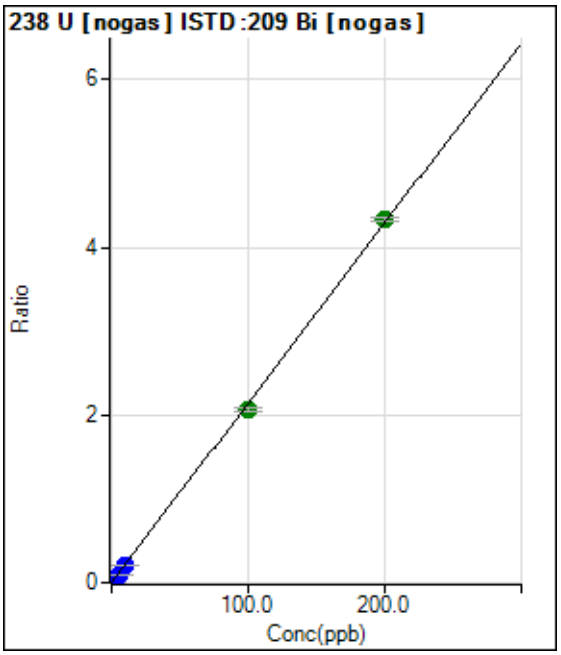


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	230.01	0.0002	P	7.8
2	☐	2.000	1.994	17934.14	0.0177	P	1.5
3	☐	5.000	4.837	43180.98	0.0427	P	1.2
4	☐	10.000	9.799	86974.48	0.0862	P	1.5
5	☐	100.000	95.701	810564.94	0.8397	P	1.1
6	☐	200.000	202.164	1623815.13	1.7736	A	0.7
7	☐	1.000					

y = 0.0088 * x + 2.2339E-004
R = 0.9997
DL = 0.005989
BEC = 0.02547

Weight: <None>
Min Conc: <None>

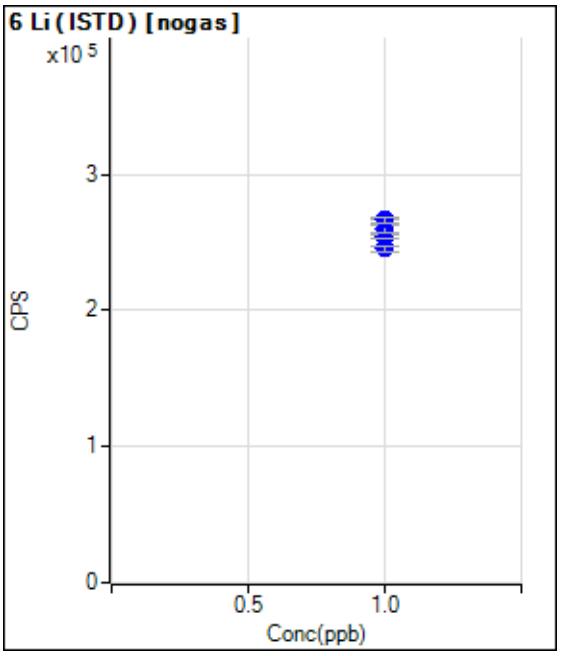
Calibration for 242_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	190.01	0.0002	P	8.4
2	☐	2.000	1.835	40009.96	0.0395	P	1.9
3	☐	5.000	4.755	103398.89	0.1021	P	0.9
4	☐	10.000	9.659	209184.48	0.2073	P	2.0
5	☐	100.000	96.258	1991903.56	2.0639	A	2.0
6	☐	200.000	201.896	3963182.75	4.3286	A	1.0
7	☐	1.000					

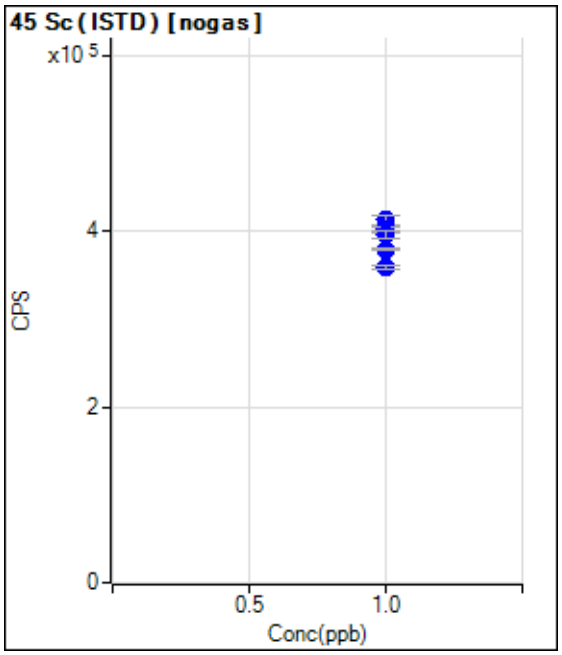
y = 0.0214 * x + 1.8444E-004
R = 0.9998
DL = 0.002173
BEC = 0.008603

Weight: <None>
Min Conc: <None>

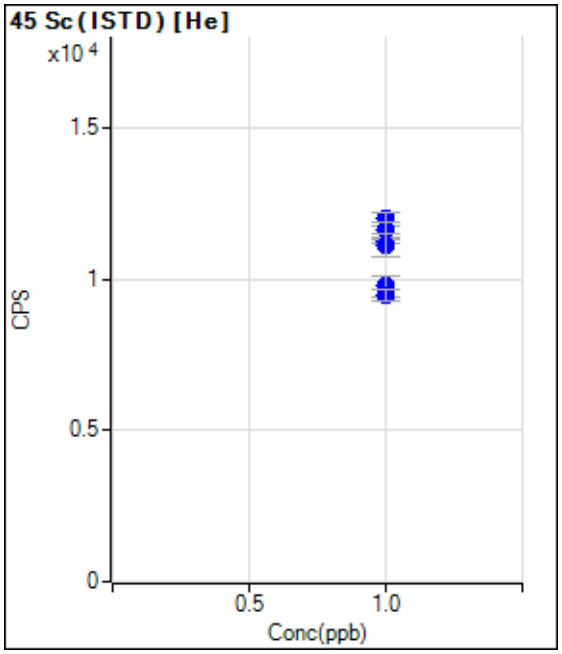


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		264394.01		P	1.7
2	☐	1.000		255390.61		P	0.1
3	☐	1.000		253820.91		P	1.2
4	☐	1.000		245389.53		P	1.6
5	☐	1.000		259926.08		P	2.3
6	☐	1.000		266400.46		P	1.5
7	☐	1.000					

Calibration for 242_ICV.d

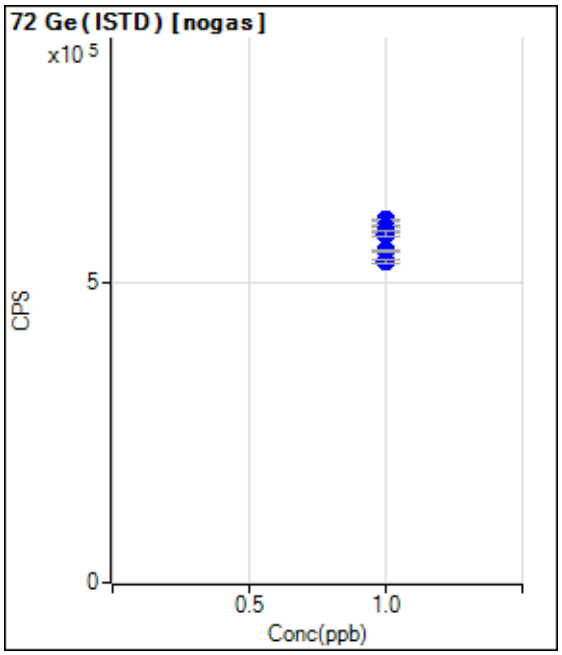


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		412577.66		P	2.5
2	☐	1.000		402409.53		P	1.6
3	☐	1.000		402307.88		P	1.6
4	☐	1.000		395378.36		P	2.0
5	☐	1.000		379213.91		P	0.9
6	☐	1.000		358095.65		P	1.0
7	☐	1.000					

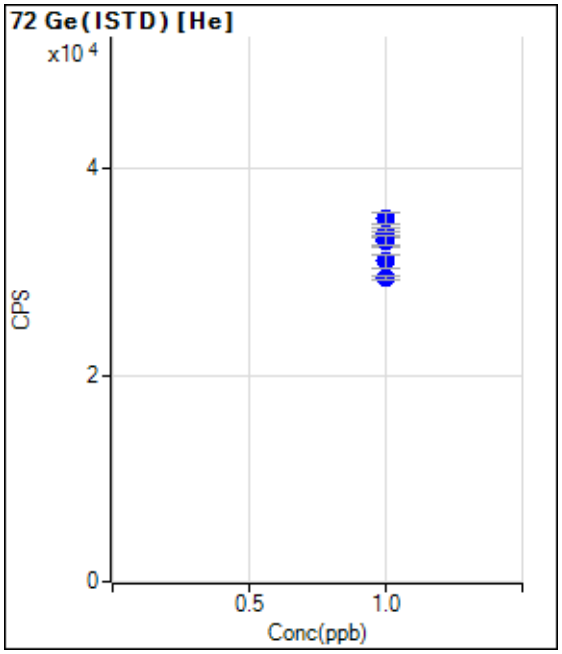


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		12000.99		P	3.4
2	☐	1.000		11277.21		P	1.2
3	☐	1.000		11650.74		P	4.2
4	☐	1.000		11127.11		P	7.3
5	☐	1.000		9773.02		P	6.8
6	☐	1.000		9492.78		P	4.4
7	☐	1.000					

Calibration for 242_ICV.d

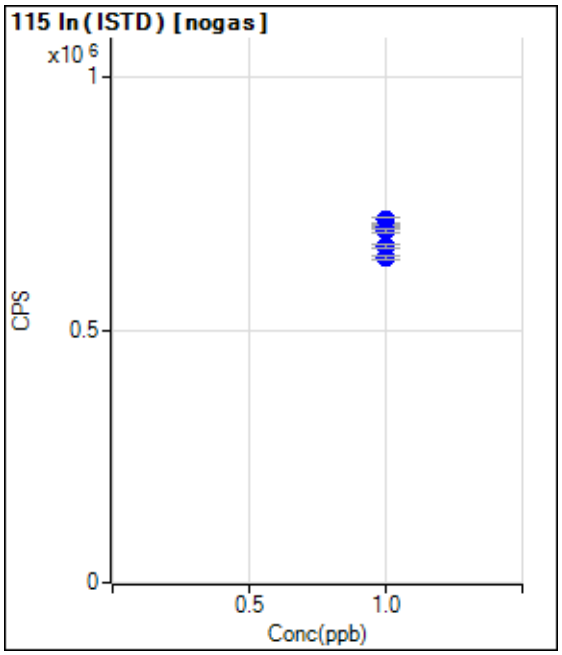


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		606325.55		P	0.6
2	☐	1.000		595420.84		P	0.7
3	☐	1.000		587119.54		P	0.6
4	☐	1.000		582546.33		P	1.6
5	☐	1.000		555223.95		P	0.3
6	☐	1.000		535379.52		P	1.3
7	☐	1.000					

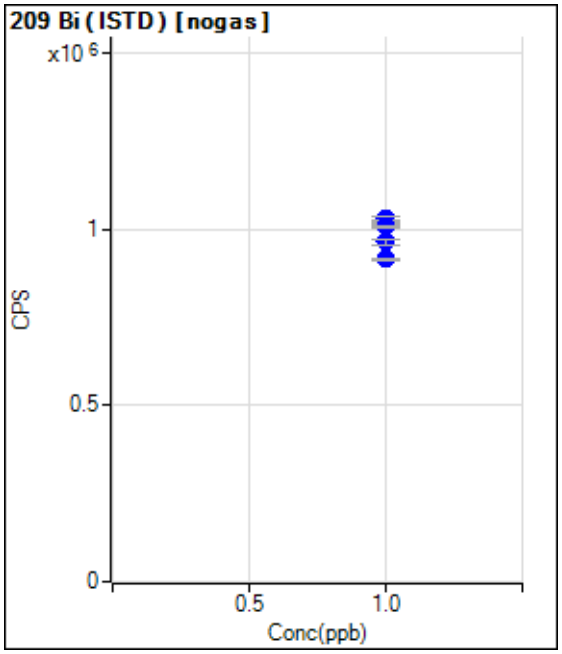


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		35159.85		P	3.0
2	☐	1.000		33757.03		P	2.7
3	☐	1.000		33202.67		P	4.3
4	☐	1.000		33052.44		P	3.0
5	☐	1.000		31041.90		P	3.7
6	☐	1.000		29472.42		P	1.3
7	☐	1.000					

Calibration for 242_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		717977.80		P	1.8
2	☐	1.000		705386.68		P	0.8
3	☐	1.000		704285.62		P	1.1
4	☐	1.000		695680.82		P	1.0
5	☐	1.000		665089.08		P	1.0
6	☐	1.000		641952.97		P	1.4
7	☐	1.000					



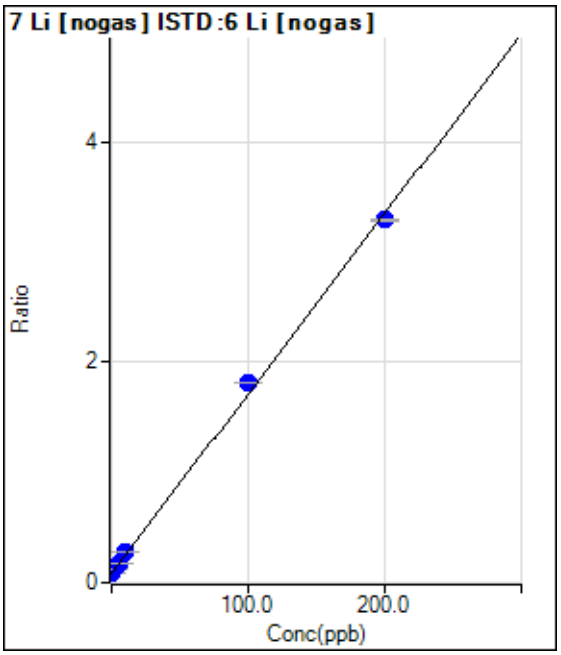
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1029814.13		P	1.0
2	☐	1.000		1012391.50		P	1.5
3	☐	1.000		1012410.24		P	0.7
4	☐	1.000		1009274.67		P	0.6
5	☐	1.000		965320.35		P	1.6
6	☐	1.000		915562.54		P	0.8
7	☐	1.000					

Calibration for 295_ICV.d

Batch Folder: C:\Agilent\ICPMH\1\DATA\010518A.b\
Analysis File: 010518A.batch.bin
DA Date-Time: 1/5/2018 10:38:02 PM
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	289CALB.d	CAL BLK	1/5/2018 9:57:44 PM
2	290CALS.d	2/10/200	1/5/2018 9:59:56 PM
3	291CALS.d	5/25/500	1/5/2018 10:02:08 PM
4	292CALS.d	10/50/1000	1/5/2018 10:04:20 PM
5	293CALS.d	100/500/10K	1/5/2018 10:06:32 PM
6	294CALS.d	200/1000/20K	1/5/2018 10:08:42 PM
7			

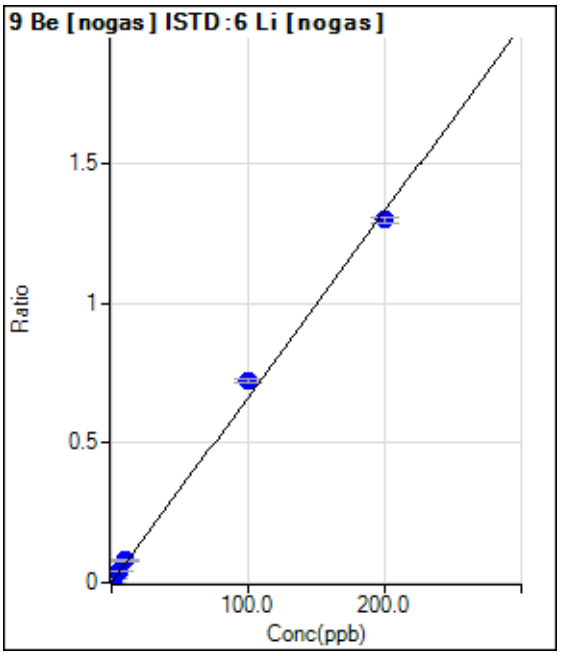
Calibration for 295_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	20915.79	0.0815	P	1.9
2	☐	2.000	2.572	31584.80	0.1235	P	3.8
3	☐	5.000	5.947	44675.69	0.1787	P	1.2
4	☐	10.000	12.265	70005.74	0.2820	P	0.4
5	☐	100.000	106.408	483696.61	1.8205	P	0.4
6	☐	200.000	196.653	953094.60	3.2953	P	0.3
7	☐	1.000					

y = 0.0163 * x + 0.0815
R = 0.9993
DL = 0.2883
BEC = 4.988

Weight: <None>
Min Conc: <None>

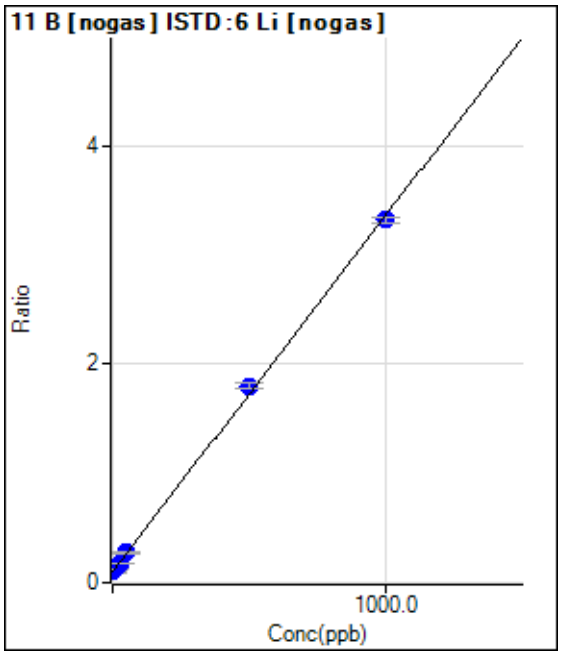


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3.33	0.0000	P	173.
2	☐	2.000	2.263	3850.50	0.0151	P	4.2
3	☐	5.000	6.000	9976.27	0.0399	P	6.1
4	☐	10.000	11.991	19794.57	0.0797	P	1.4
5	☐	100.000	108.729	192051.74	0.7228	P	1.6
6	☐	200.000	195.508	375886.61	1.2998	P	1.5
7	☐	1.000					

y = 0.0066 * x + 1.2777E-005
R = 0.9987
DL = 0.009987
BEC = 0.001922

Weight: <None>
Min Conc: <None>

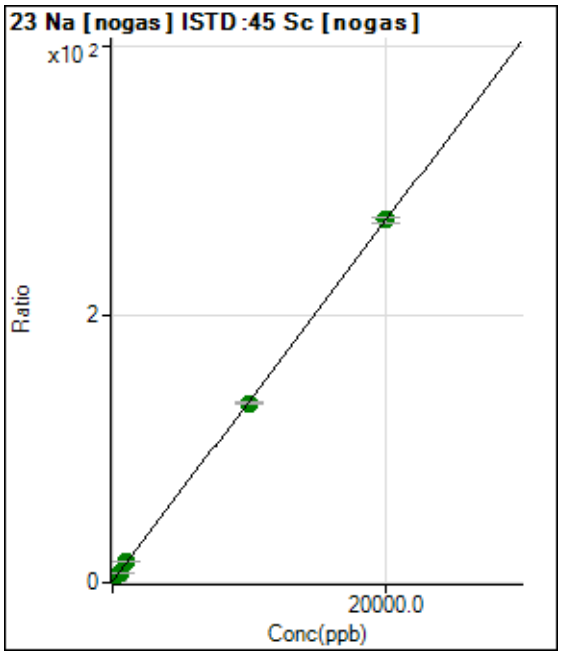
Calibration for 295_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	25258.19	0.0985	P	4.9
2	☐	10.000	9.461	33057.44	0.1293	P	2.3
3	☐	25.000	23.176	43482.83	0.1739	P	2.3
4	☐	50.000	53.480	67677.52	0.2726	P	1.9
5	☐	500.000	522.756	478365.38	1.8007	P	3.5
6	☐	1000.000	988.499	959344.83	3.3174	P	1.8
7	☐	5.000					

y = 0.0033 * x + 0.0985
R = 0.9996
DL = 4.41
BEC = 30.24

Weight: <None>
Min Conc: <None>

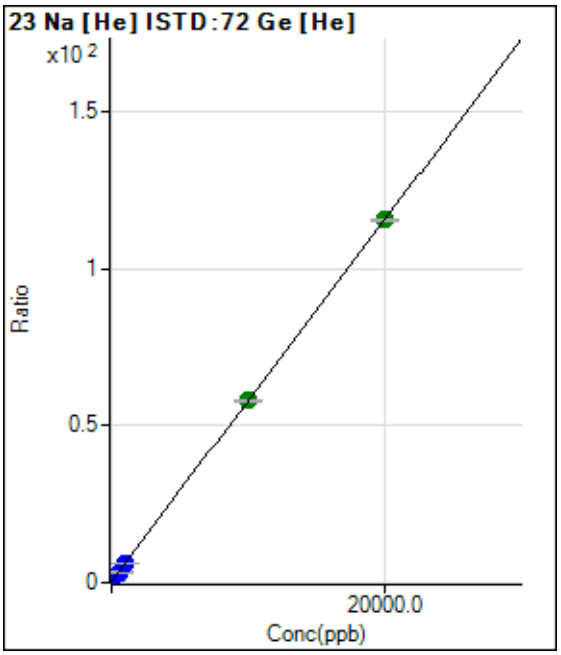


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	372879.77	0.9234	P	1.3
2	☐	200.000	210.289	1517573.44	3.7523	A	1.4
3	☐	500.000	510.761	3092712.51	7.7944	A	0.3
4	☐	1000.000	1077.385	6010891.28	15.4168	A	0.9
5	☐	10000.00	9874.710	52277038.67	133.761	A	1.2
6	☐	20000.00	20058.404	104315639.8	270.755	A	1.8
7	☐	100.000					

y = 0.0135 * x + 0.9234
R = 1.0000
DL = 2.767
BEC = 68.65

Weight: <None>
Min Conc: <None>

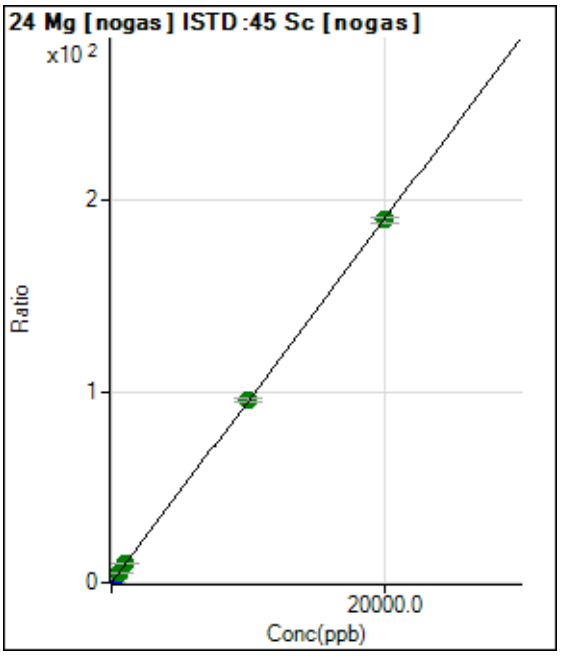
Calibration for 295_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	16030.85	0.4631	P	8.0
2	☐	200.000	198.717	55897.78	1.6053	P	1.7
3	☐	500.000	502.449	113657.98	3.3511	P	3.6
4	☐	1000.000	1028.079	217934.19	6.3723	P	1.3
5	☐	10000.00	9992.363	1905282.89	57.8970	A	1.8
6	☐	20000.00	20002.366	3705892.24	115.432	A	0.6
7	☐	100.000					

y = 0.0057 * x + 0.4631
R = 1.0000
DL = 19.23
BEC = 80.57

Weight: <None>
Min Conc: <None>

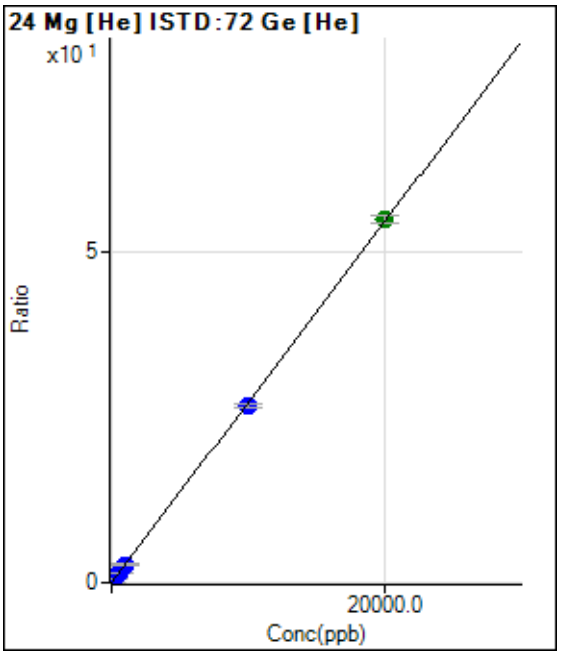


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4334.65	0.0107	P	18.5
2	☐	200.000	211.708	817941.96	2.0224	P	2.0
3	☐	500.000	522.967	1976086.11	4.9801	A	1.5
4	☐	1000.000	1090.617	4044206.73	10.3740	A	1.2
5	☐	10000.00	10060.512	37360443.54	95.6081	A	2.4
6	☐	20000.00	19964.522	73096309.97	189.718	A	1.5
7	☐	100.000					

y = 0.0095 * x + 0.0107
R = 1.0000
DL = 0.6274
BEC = 1.131

Weight: <None>
Min Conc: <None>

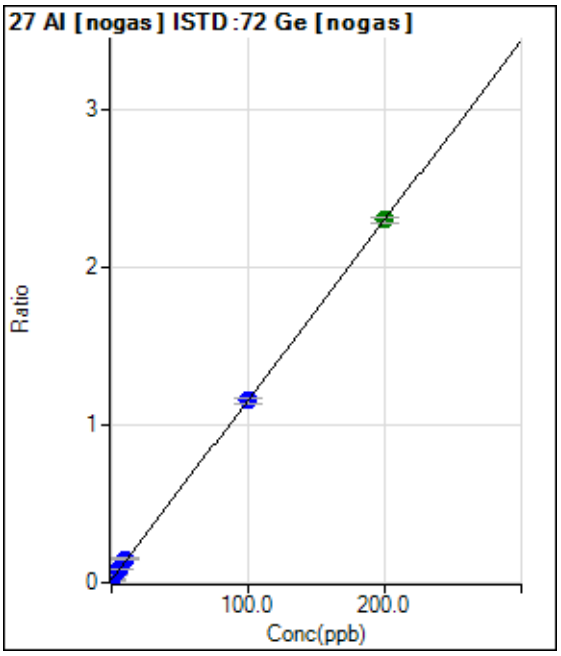
Calibration for 295_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	93.33	0.0027	P	32.7
2	☐	200.000	197.945	18907.10	0.5431	P	2.4
3	☐	500.000	498.708	46260.46	1.3641	P	4.5
4	☐	1000.000	1005.396	93956.95	2.7474	P	1.9
5	☐	10000.00	9783.137	879076.16	26.7102	P	1.6
6	☐	20000.00	20108.215	1762038.20	54.8971	A	2.2
7	☐	100.000					

y = 0.0027 * x + 0.0027
R = 0.9999
DL = 0.9679
BEC = 0.9875

Weight: <None>
Min Conc: <None>

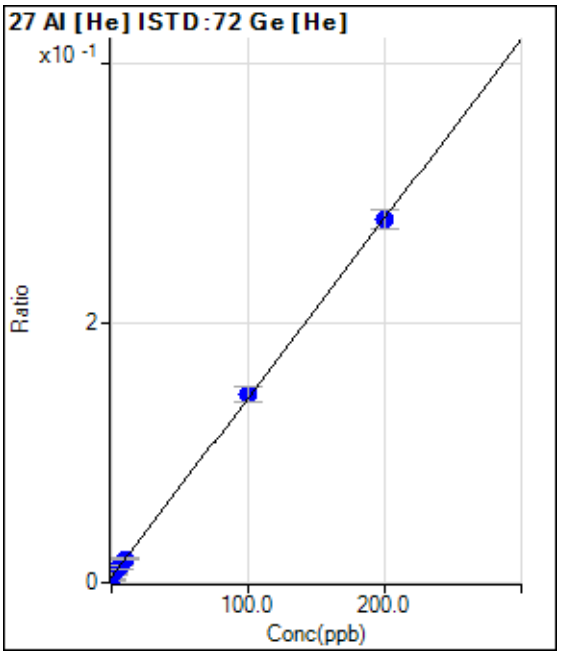


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	11240.42	0.0184	P	1.8
2	☐	2.000	2.868	31404.86	0.0512	P	1.7
3	☐	5.000	5.619	49359.22	0.0826	P	1.1
4	☐	10.000	11.641	90118.77	0.1513	P	2.8
5	☐	100.000	99.474	685576.21	1.1539	P	2.5
6	☐	200.000	200.157	1341766.91	2.3032	A	1.9
7	☐	1.000					

y = 0.0114 * x + 0.0184
R = 1.0000
DL = 0.0876
BEC = 1.613

Weight: <None>
Min Conc: <None>

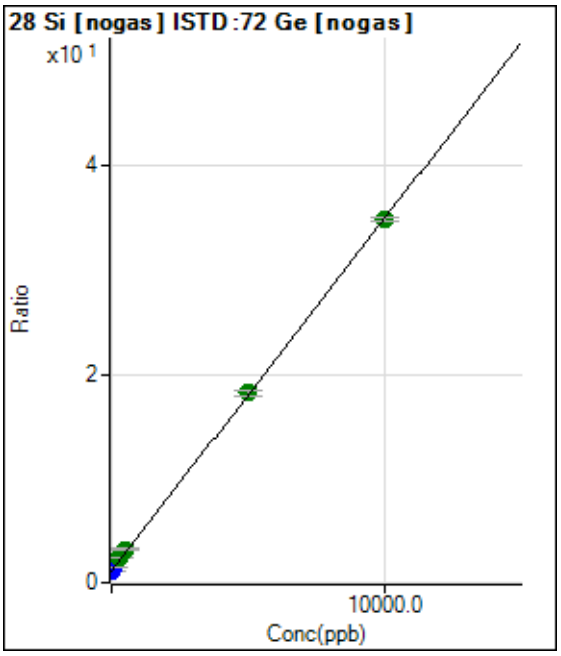
Calibration for 295_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-1.306	86.67	0.0025	P	51.5
2	☐	2.000	1.790	236.68	0.0068	P	16.2
3	☐	5.000	5.488	403.35	0.0119	P	23.6
4	☐	10.000	10.275	633.36	0.0185	P	7.7
5	☐	100.000	101.554	4764.08	0.1447	P	8.2
6	☐	200.000	199.199	8972.45	0.2797	P	5.3
7	☐	1.000					

y = 0.0014 * x + 0.0043
R = 0.9999
DL = 2.808
BEC = 3.122

Weight: <None>
Min Conc: <None>

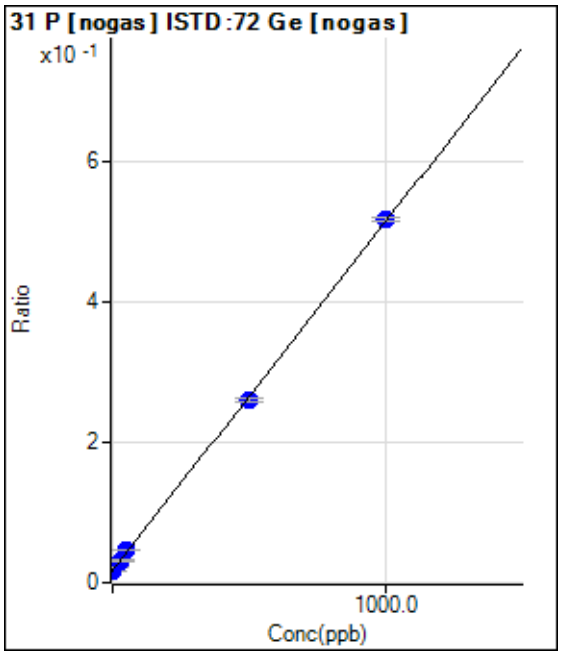


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	686723.50	1.1256	P	2.7
2	☐	100.000	95.865	890153.73	1.4501	P	1.1
3	☐	250.000	363.890	1409246.65	2.3574	A	3.0
4	☐	500.000	617.457	1915602.68	3.2157	A	1.2
5	☐	5000.000	5055.549	10835214.84	18.2389	A	3.1
6	☐	10000.00	9963.547	20304043.03	34.8527	A	1.2
7	☐	50.000					

y = 0.0034 * x + 1.1256
R = 0.9999
DL = 26.65
BEC = 332.5

Weight: <None>
Min Conc: <None>

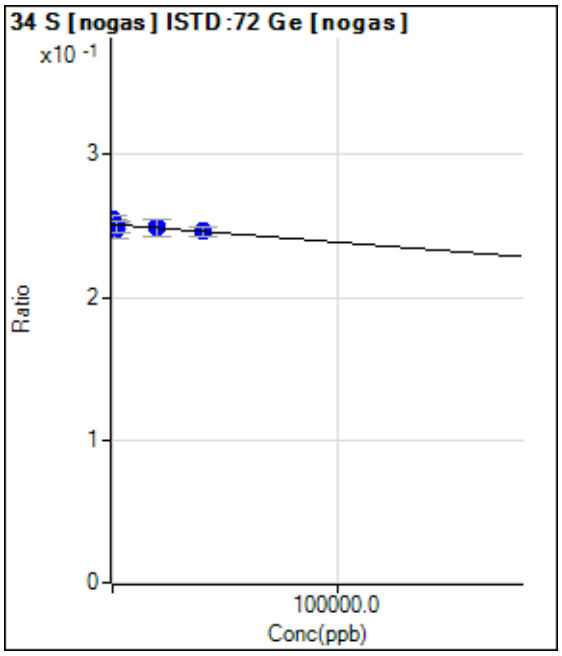
Calibration for 295_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	10566.74	0.0173	P	5.0
2	☐	10.000	12.452	14432.77	0.0235	P	2.4
3	☐	25.000	28.036	18690.20	0.0313	P	3.1
4	☐	50.000	57.243	27278.06	0.0458	P	1.3
5	☐	500.000	487.979	154533.25	0.2600	P	2.5
6	☐	1000.000	1005.548	301457.83	0.5175	P	0.9
7	☐	5.000					

y = 4.9738E-004 * x + 0.0173
R = 0.9999
DL = 5.215
BEC = 34.82

Weight: <None>
Min Conc: <None>

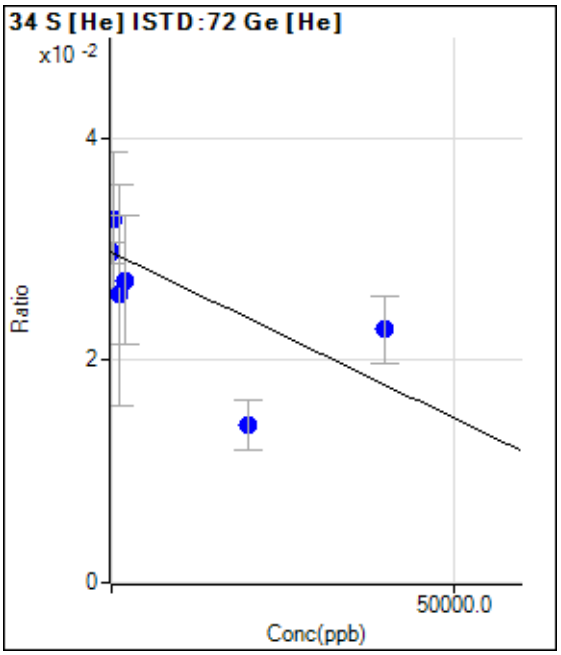


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	153270.51	0.2512	P	2.6
2	☐	400.000	-24921.606	156149.49	0.2544	P	2.5
3	☐	1000.000	37042.950	147413.18	0.2466	P	4.5
4	☐	2000.000	15641.443	148479.04	0.2493	P	3.2
5	☐	20000.00	19302.673	147809.65	0.2488	P	5.2
6	☐	40000.00	39018.734	143513.20	0.2464	P	2.8
7	☐	200.000					

y = -1.2539E-007 * x + 0.2512
R = -0.5569
DL = -1.576E+05
BEC = -2.004E+06

Weight: <None>
Min Conc: <None>

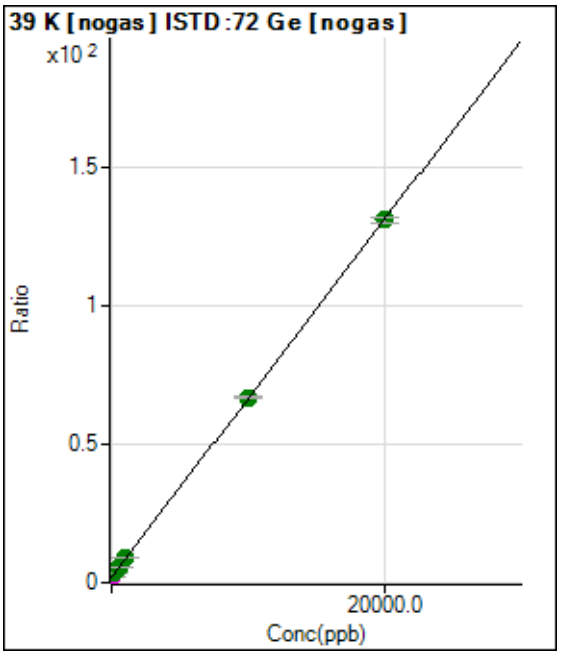
Calibration for 295_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1033.61	0.0297	P	6.3
2	☐	400.000	-9748.612	1133.67	0.0326	P	37.8
3	☐	1000.000	12806.713	866.92	0.0259	P	76.5
4	☐	2000.000	8403.145	933.56	0.0272	P	42.5
5	☐	20000.00	52265.294	466.78	0.0142	P	32.0
6	☐	40000.00	23353.514	733.53	0.0228	P	26.8
7	☐	200.000					

y = -2.9766E-007 * x + 0.0297
R = -0.6135
DL = -1.901E+04
BEC = -9.983E+04

Weight: <None>
Min Conc: <None>

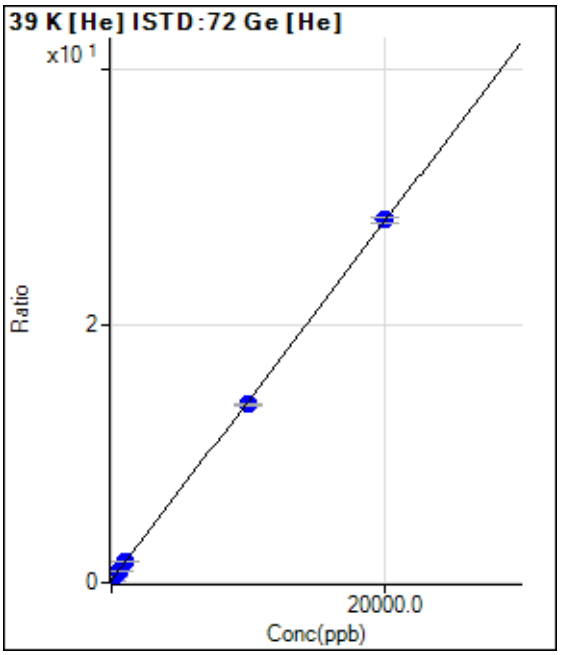


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1205251.13	1.9752	M	2.8
2	☐	200.000	207.393	2035034.03	3.3154	A	2.2
3	☐	500.000	524.963	3209157.69	5.3676	A	0.6
4	☐	1000.000	1050.404	5219796.73	8.7631	A	1.4
5	☐	10000.00	10038.511	39720021.72	66.8458	A	1.4
6	☐	20000.00	19977.526	76357922.54	131.073	A	1.9
7	☐	100.000					

y = 0.0065 * x + 1.9752
R = 1.0000
DL = 25.61
BEC = 305.7

Weight: <None>
Min Conc: <None>

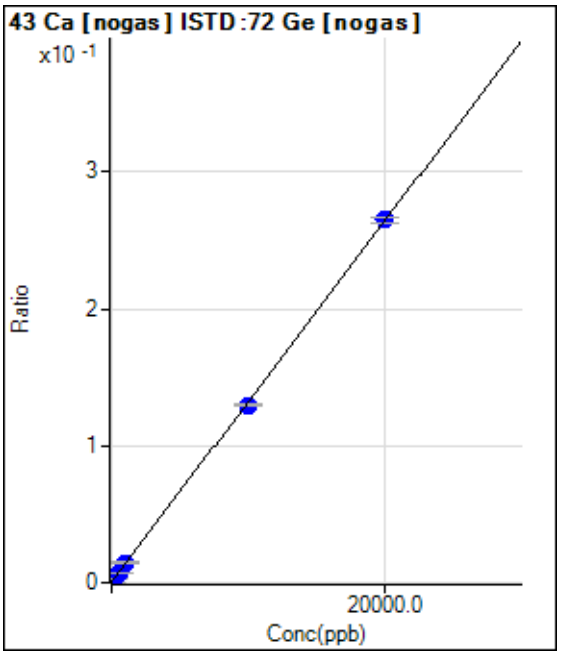
Calibration for 295_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6654.74	0.1919	P	10.8
2	☐	200.000	195.368	16164.37	0.4645	P	5.0
3	☐	500.000	507.121	30516.85	0.8995	P	1.8
4	☐	1000.000	1008.304	54678.66	1.5988	P	1.3
5	☐	10000.00	9802.684	456472.40	13.8698	P	1.0
6	☐	20000.00	20098.111	906363.89	28.2353	P	1.5
7	☐	100.000					

y = 0.0014 * x + 0.1919
R = 0.9999
DL = 44.36
BEC = 137.5

Weight: <None>
Min Conc: <None>

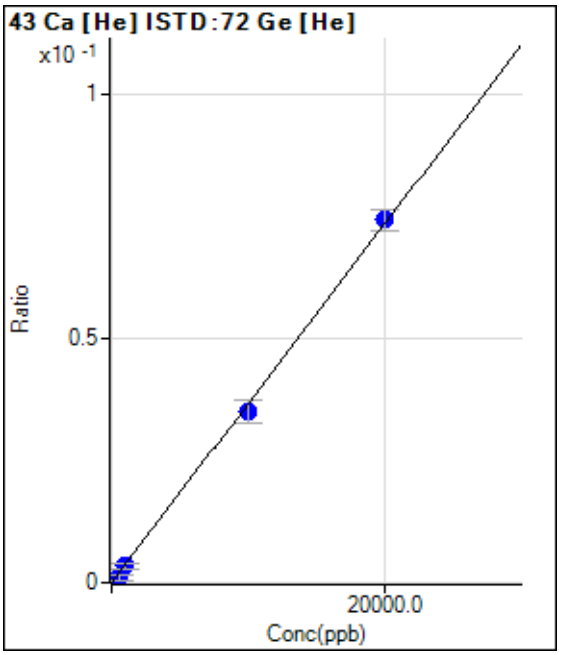


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	276.68	0.0005	P	33.8
2	☐	200.000	203.433	1923.48	0.0031	P	4.0
3	☐	500.000	510.056	4287.30	0.0072	P	2.3
4	☐	1000.000	1077.988	8725.63	0.0146	P	2.7
5	☐	10000.00	9825.834	77166.33	0.1298	P	1.8
6	☐	20000.00	20082.898	154321.19	0.2649	P	1.6
7	☐	100.000					

y = 1.3168E-005 * x + 4.5472E-004
R = 0.9999
DL = 35.05
BEC = 34.53

Weight: <None>
Min Conc: <None>

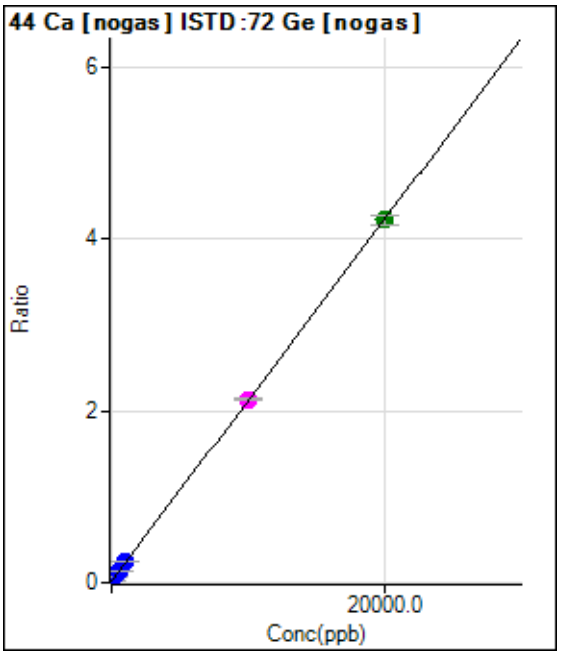
Calibration for 295_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	0.00	0.0000	P	
2	☐	200.000	157.550	20.00	0.0006	P	87.7
3	☐	500.000	318.904	40.00	0.0012	P	101.
4	☐	1000.000	927.931	116.67	0.0034	P	26.7
5	☐	10000.00	9531.021	1150.06	0.0350	P	13.0
6	☐	20000.00	20243.045	2383.55	0.0743	P	5.9
7	☐	100.000					

y = 3.6696E-006 * x + 0.0000E+000
R = 0.9996
DL = 0
BEC = 0

Weight: <None>
Min Conc: <None>

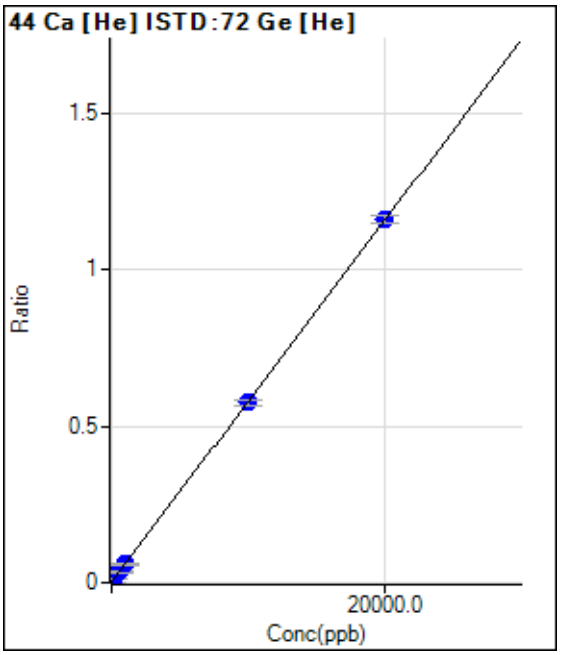


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	10556.70	0.0173	P	3.8
2	☐	200.000	212.838	38138.71	0.0621	P	1.3
3	☐	500.000	529.088	76982.55	0.1288	P	0.5
4	☐	1000.000	1071.872	144809.13	0.2431	P	0.4
5	☐	10000.00	10046.736	1268095.76	2.1338	M	1.2
6	☐	20000.00	19972.183	2461116.94	4.2247	A	2.5
7	☐	100.000					

y = 2.1066E-004 * x + 0.0173
R = 1.0000
DL = 9.281
BEC = 82.09

Weight: <None>
Min Conc: <None>

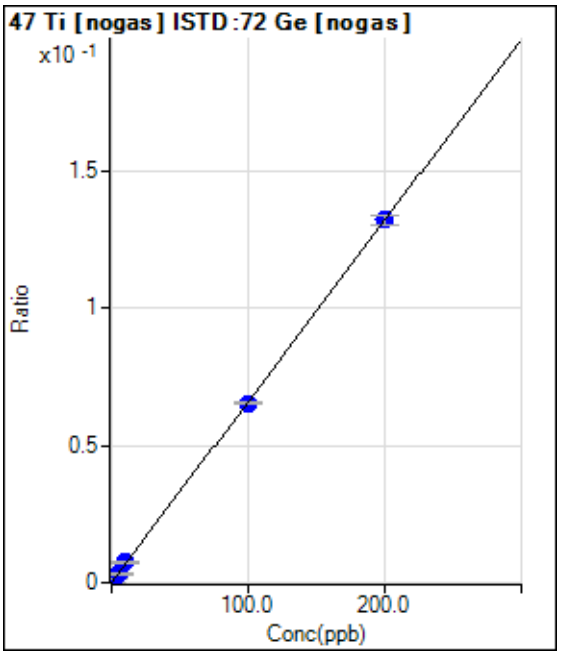
Calibration for 295_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	70.00	0.0020	P	63.5
2	☐	200.000	179.450	430.01	0.0123	P	3.2
3	☐	500.000	553.949	1153.41	0.0340	P	4.9
4	☐	1000.000	1000.173	2043.50	0.0597	P	10.4
5	☐	10000.00	9914.984	18900.50	0.5742	P	3.2
6	☐	20000.00	20041.356	37190.12	1.1586	P	2.0
7	☐	100.000					

y = 5.7711E-005 * x + 0.0020
R = 1.0000
DL = 65.67
BEC = 34.47

Weight: <None>
Min Conc: <None>

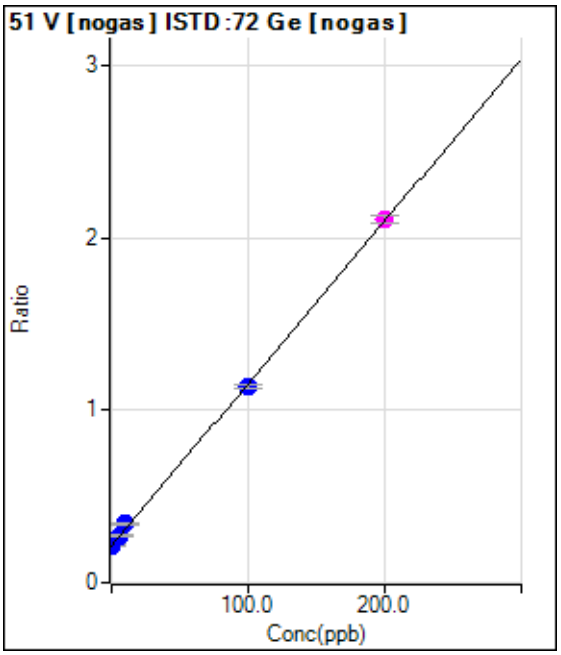


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	36.67	0.0001	P	55.0
2	☐	2.000	1.772	753.37	0.0012	P	10.9
3	☐	5.000	4.721	1896.81	0.0032	P	8.5
4	☐	10.000	11.126	4403.99	0.0074	P	1.5
5	☐	100.000	99.147	38863.84	0.0654	P	1.4
6	☐	200.000	200.380	76973.05	0.1321	P	2.4
7	☐	1.000					

y = 6.5909E-004 * x + 5.9714E-005
R = 1.0000
DL = 0.1496
BEC = 0.0906

Weight: <None>
Min Conc: <None>

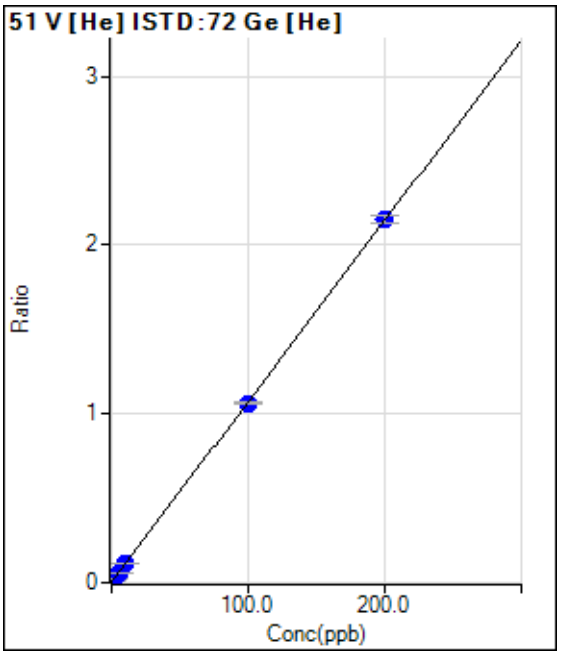
Calibration for 295_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	130742.90	0.2143	P	3.2
2	☐	2.000	3.301	150641.36	0.2454	P	2.1
3	☐	5.000	6.242	163260.30	0.2731	P	1.9
4	☐	10.000	13.701	204455.42	0.3433	P	2.7
5	☐	100.000	97.924	675005.63	1.1361	P	2.0
6	☐	200.000	200.809	1226033.79	2.1046	M	2.2
7	☐	1.000					

y = 0.0094 * x + 0.2143
R = 0.9998
DL = 2.202
BEC = 22.76

Weight: <None>
Min Conc: <None>

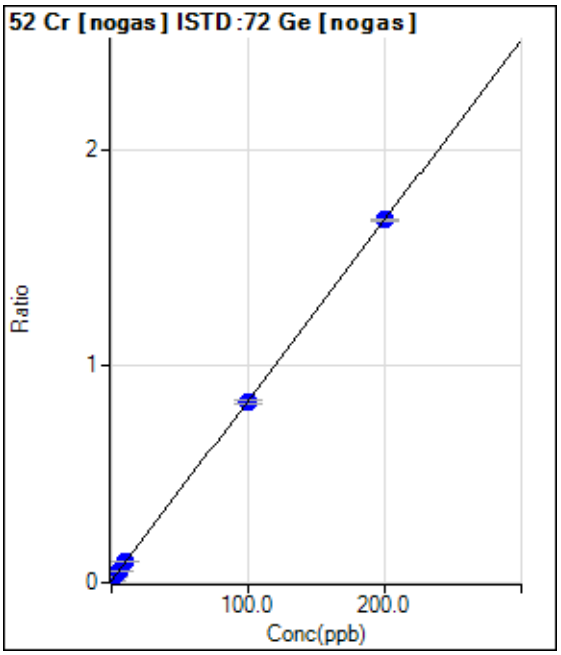


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.203	226.67	0.0065	P	13.3
2	☐	2.000	2.155	952.36	0.0274	P	5.8
3	☐	5.000	5.063	1982.79	0.0585	P	5.3
4	☐	10.000	10.174	3868.44	0.1131	P	2.7
5	☐	100.000	98.833	34916.82	1.0610	P	1.1
6	☐	200.000	200.572	68982.19	2.1486	P	2.2
7	☐	1.000					

y = 0.0107 * x + 0.0043
R = 1.0000
DL = 0.2423
BEC = 0.4054

Weight: <None>
Min Conc: <None>

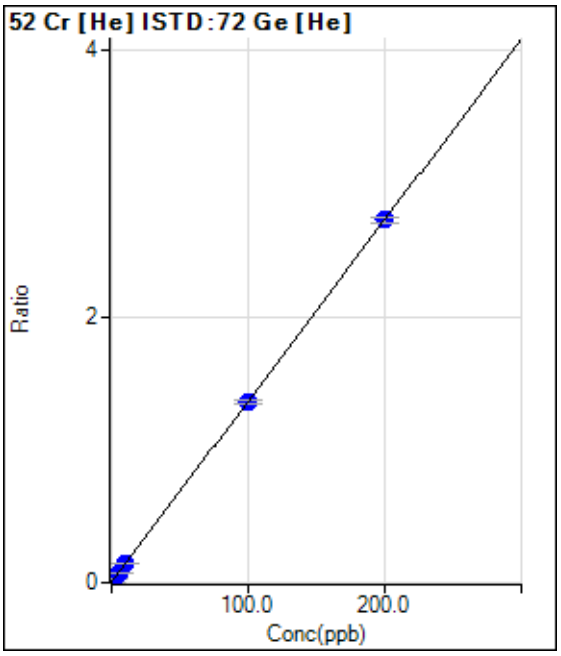
Calibration for 295_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6231.26	0.0102	P	8.0
2	☐	2.000	2.129	17132.15	0.0279	P	1.8
3	☐	5.000	5.020	31061.50	0.0519	P	1.1
4	☐	10.000	10.490	58043.79	0.0974	P	0.4
5	☐	100.000	99.569	497996.33	0.8382	P	2.1
6	☐	200.000	200.189	975744.85	1.6749	P	0.7
7	☐	1.000					

y = 0.0083 * x + 0.0102
R = 1.0000
DL = 0.2955
BEC = 1.228

Weight: <None>
Min Conc: <None>

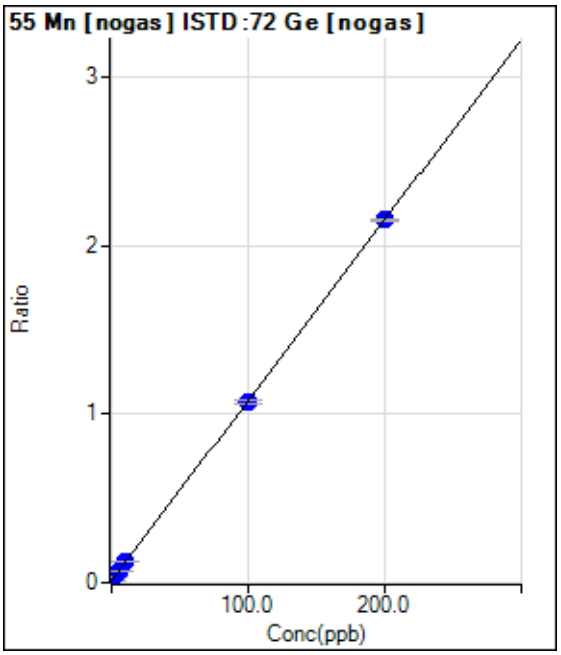


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	136.67	0.0040	P	26.6
2	☐	2.000	2.063	1113.40	0.0320	P	10.0
3	☐	5.000	5.113	2490.22	0.0735	P	9.3
4	☐	10.000	10.559	5044.18	0.1475	P	4.4
5	☐	100.000	99.555	44674.66	1.3575	P	1.3
6	☐	200.000	200.191	87502.66	2.7258	P	1.8
7	☐	1.000					

y = 0.0136 * x + 0.0040
R = 1.0000
DL = 0.2327
BEC = 0.2914

Weight: <None>
Min Conc: <None>

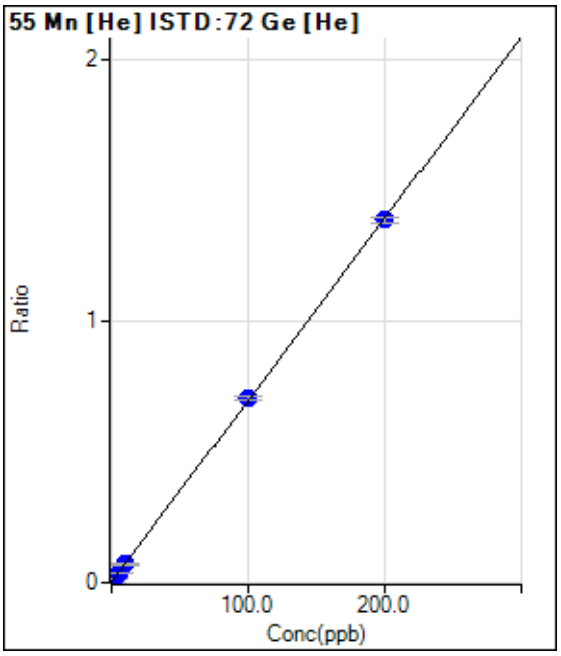
Calibration for 295_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	5921.13	0.0097	P	4.3
2	☐	2.000	1.979	18964.01	0.0309	P	2.7
3	☐	5.000	5.222	39244.89	0.0656	P	1.5
4	☐	10.000	10.666	73840.55	0.1240	P	1.2
5	☐	100.000	99.438	638711.97	1.0750	P	2.4
6	☐	200.000	200.242	1255403.31	2.1549	P	0.5
7	☐	1.000					

y = 0.0107 * x + 0.0097
R = 1.0000
DL = 0.1165
BEC = 0.9054

Weight: <None>
Min Conc: <None>

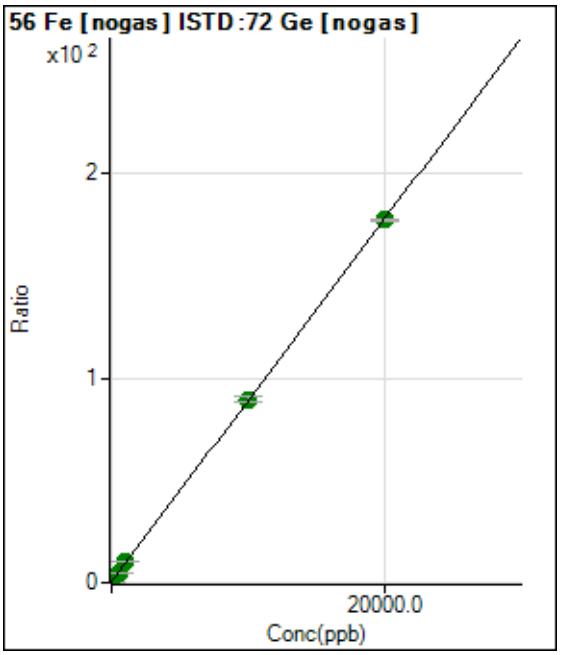


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	63.33	0.0018	P	7.0
2	☐	2.000	1.959	536.69	0.0154	P	18.6
3	☐	5.000	5.088	1263.41	0.0372	P	9.6
4	☐	10.000	10.131	2473.58	0.0723	P	7.7
5	☐	100.000	101.301	23249.36	0.7063	P	1.5
6	☐	200.000	199.341	44561.03	1.3882	P	1.8
7	☐	1.000					

y = 0.0070 * x + 0.0018
R = 1.0000
DL = 0.05506
BEC = 0.2623

Weight: <None>
Min Conc: <None>

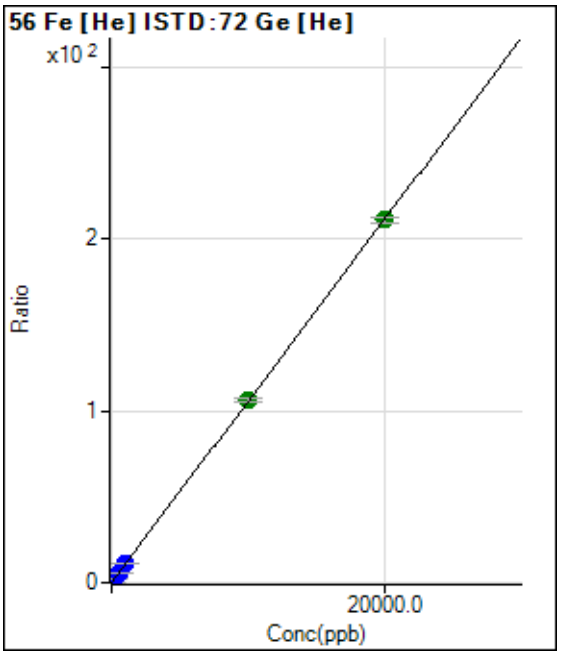
Calibration for 295_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	273959.23	0.4490	P	1.4
2	☐	200.000	217.455	1458623.01	2.3761	A	0.5
3	☐	500.000	526.841	3059961.72	5.1179	A	0.4
4	☐	1000.000	1082.346	5981100.52	10.0409	A	0.9
5	☐	10000.00	10073.710	53307572.03	89.7233	A	2.3
6	☐	20000.00	19958.182	103302510.6	177.320	A	0.8
7	☐	100.000					

y = 0.0089 * x + 0.4490
R = 1.0000
DL = 2.139
BEC = 50.67

Weight: <None>
Min Conc: <None>

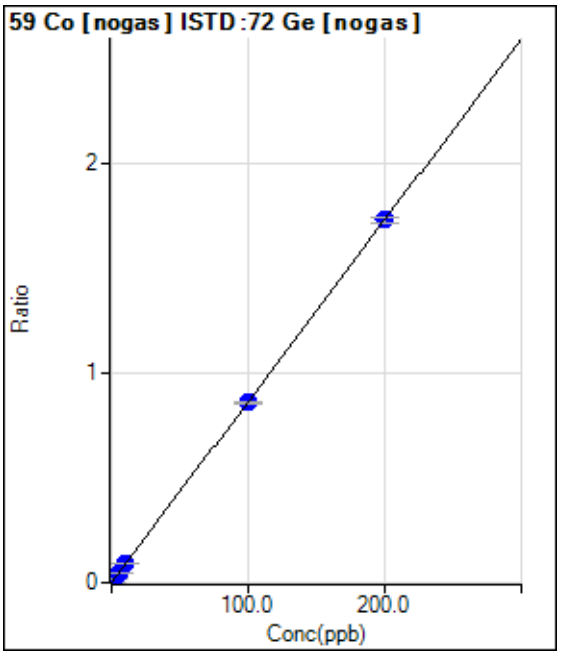


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1243.41	0.0359	P	11.8
2	☐	200.000	202.122	75648.19	2.1728	P	2.7
3	☐	500.000	503.719	181911.70	5.3613	P	1.5
4	☐	1000.000	1028.178	373005.28	10.9060	P	1.4
5	☐	10000.00	10035.870	3492631.92	106.137	A	2.3
6	☐	20000.00	19980.542	6783462.19	211.274	A	1.5
7	☐	100.000					

y = 0.0106 * x + 0.0359
R = 1.0000
DL = 1.197
BEC = 3.394

Weight: <None>
Min Conc: <None>

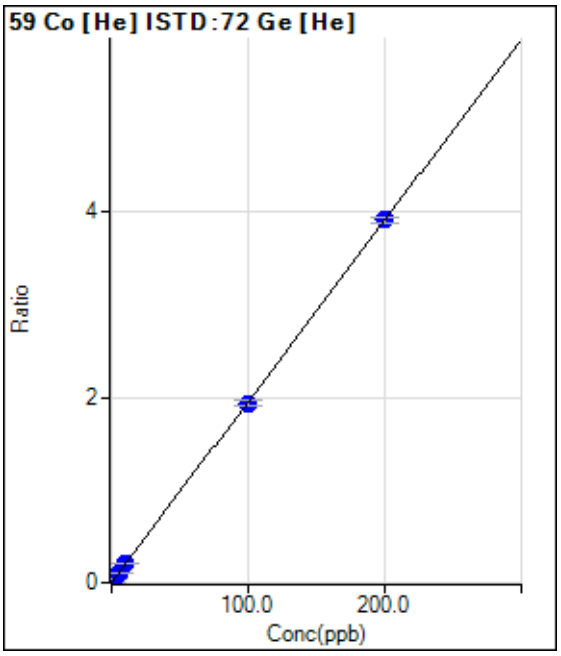
Calibration for 295_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	86.67	0.0001	P	39.4
2	☐	2.000	2.171	11617.49	0.0189	P	5.6
3	☐	5.000	5.177	26864.68	0.0449	P	2.1
4	☐	10.000	10.567	54550.03	0.0916	P	1.4
5	☐	100.000	99.443	511407.27	0.8606	P	1.2
6	☐	200.000	200.244	1009523.58	1.7329	P	1.3
7	☐	1.000					

y = 0.0087 * x + 1.4168E-004
R = 1.0000
DL = 0.01936
BEC = 0.01637

Weight: <None>
Min Conc: <None>

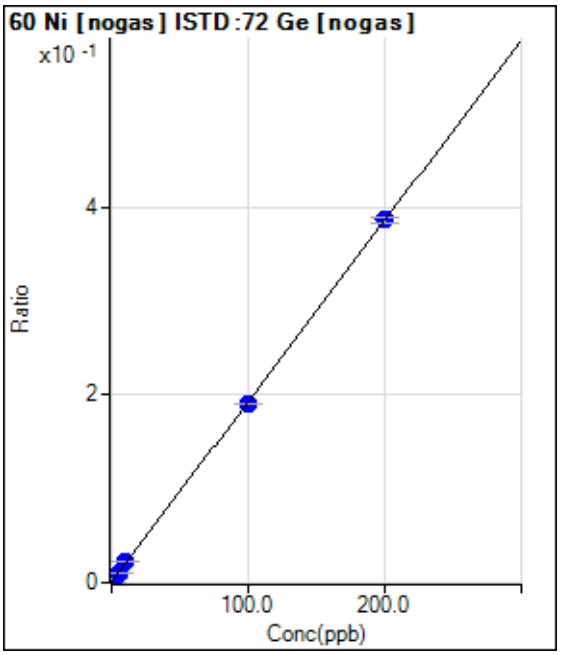


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	16.67	0.0005	P	65.8
2	☐	2.000	1.954	1343.42	0.0386	P	12.4
3	☐	5.000	4.993	3327.07	0.0980	P	3.6
4	☐	10.000	10.640	7121.60	0.2083	P	3.3
5	☐	100.000	99.172	63754.64	1.9372	P	2.6
6	☐	200.000	200.382	125650.49	3.9136	P	1.5
7	☐	1.000					

y = 0.0195 * x + 4.7393E-004
R = 1.0000
DL = 0.04792
BEC = 0.02427

Weight: <None>
Min Conc: <None>

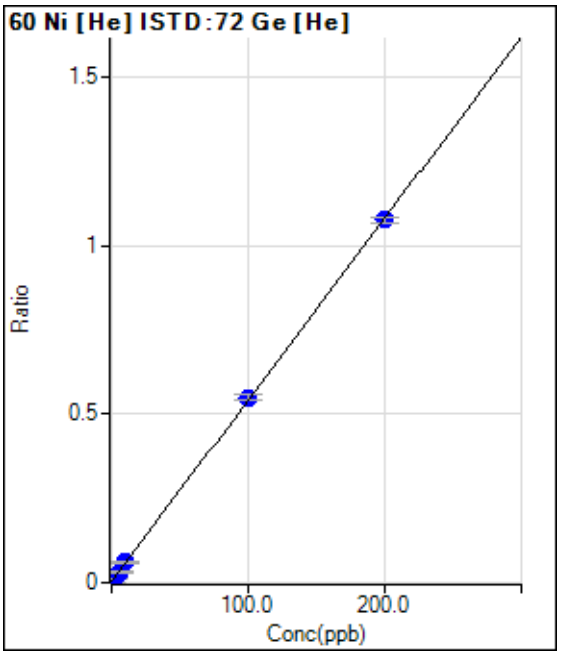
Calibration for 295_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.016	453.35	0.0007	P	22.6
2	☐	2.000	1.674	2453.57	0.0040	P	10.7
3	☐	5.000	4.824	6014.51	0.0101	P	7.0
4	☐	10.000	11.164	13255.34	0.0223	P	2.4
5	☐	100.000	98.809	113437.04	0.1909	P	0.3
6	☐	200.000	200.545	225225.96	0.3866	P	1.8
7	☐	1.000					

y = 0.0019 * x + 7.7523E-004
R = 1.0000
DL = 0.262
BEC = 0.4029

Weight: <None>
Min Conc: <None>

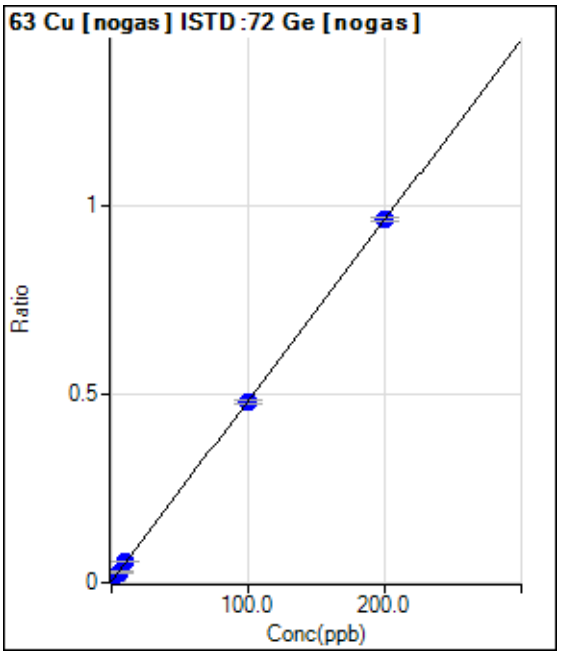


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.546	23.33	0.0007	P	22.9
2	☐	2.000	1.625	430.02	0.0124	P	27.2
3	☐	5.000	4.751	993.38	0.0292	P	20.3
4	☐	10.000	10.500	2056.83	0.0602	P	8.5
5	☐	100.000	101.373	18089.89	0.5497	P	2.8
6	☐	200.000	199.299	34591.83	1.0772	P	1.6
7	☐	1.000					

y = 0.0054 * x + 0.0036
R = 1.0000
DL = 0.08556
BEC = 0.6709

Weight: <None>
Min Conc: <None>

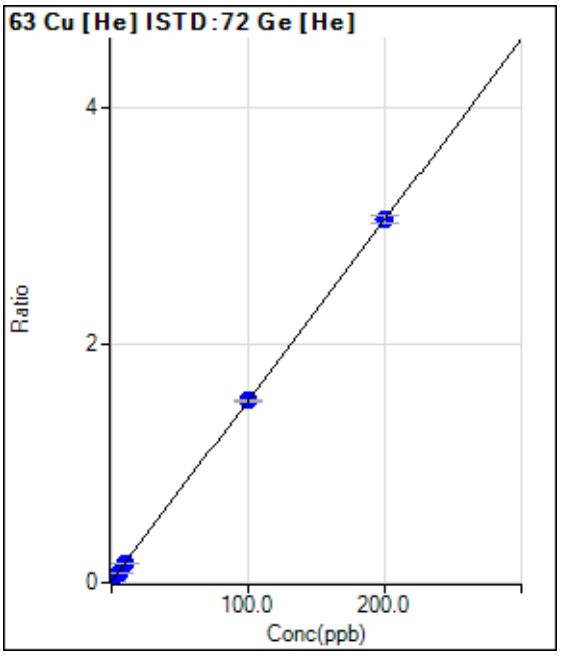
Calibration for 295_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2456.90	0.0040	P	6.8
2	☐	2.000	2.799	10683.45	0.0174	P	3.5
3	☐	5.000	4.995	16681.72	0.0279	P	3.2
4	☐	10.000	10.700	32861.73	0.0552	P	2.7
5	☐	100.000	99.536	285028.56	0.4797	P	2.2
6	☐	200.000	200.189	559720.55	0.9608	P	0.9
7	☐	1.000					

y = 0.0048 * x + 0.0040
R = 1.0000
DL = 0.173
BEC = 0.8428

Weight: <None>
Min Conc: <None>

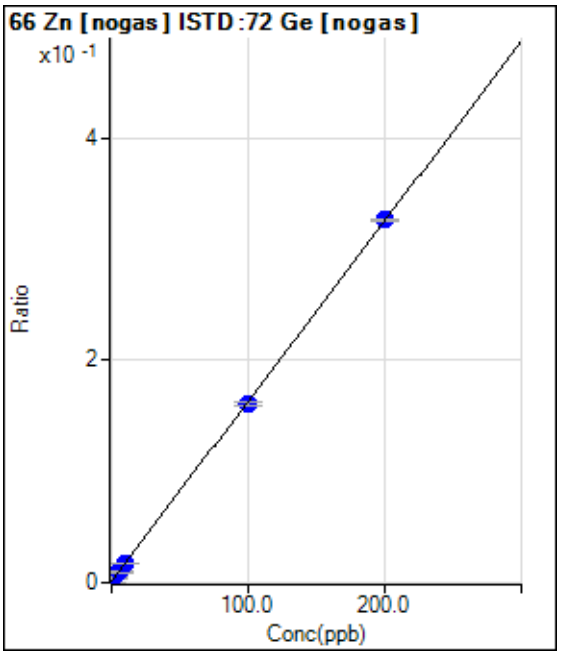


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.014	450.02	0.0129	P	7.6
2	☐	2.000	2.569	1816.80	0.0522	P	2.0
3	☐	5.000	4.573	2803.61	0.0826	P	2.4
4	☐	10.000	9.884	5584.35	0.1633	P	5.0
5	☐	100.000	99.953	50414.20	1.5317	P	1.2
6	☐	200.000	200.034	97971.17	3.0522	P	2.0
7	☐	1.000					

y = 0.0152 * x + 0.0131
R = 1.0000
DL = 0.1937
BEC = 0.8653

Weight: <None>
Min Conc: <None>

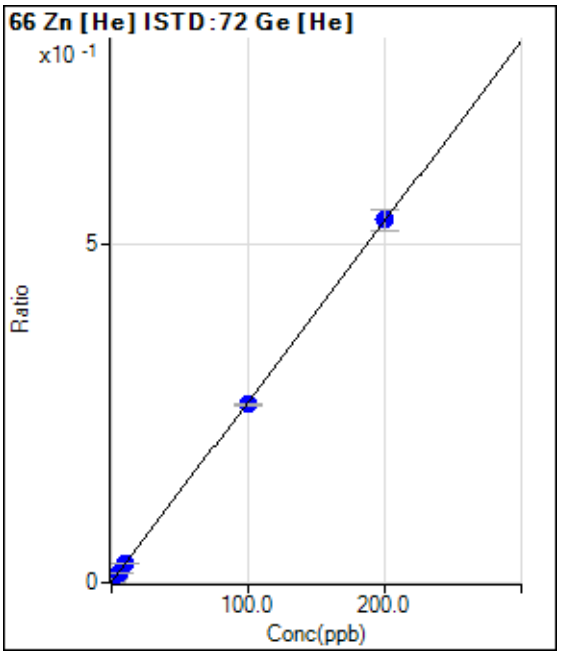
Calibration for 295_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.113	470.02	0.0008	P	10.5
2	☐	2.000	2.288	2863.65	0.0047	P	16.9
3	☐	5.000	5.324	5731.10	0.0096	P	5.1
4	☐	10.000	10.225	10443.37	0.0175	P	6.5
5	☐	100.000	98.597	95544.82	0.1608	P	1.3
6	☐	200.000	200.679	190086.78	0.3263	P	0.9
7	☐	1.000					

y = 0.0016 * x + 9.5255E-004
R = 1.0000
DL = 0.1499
BEC = 0.5876

Weight: <None>
Min Conc: <None>

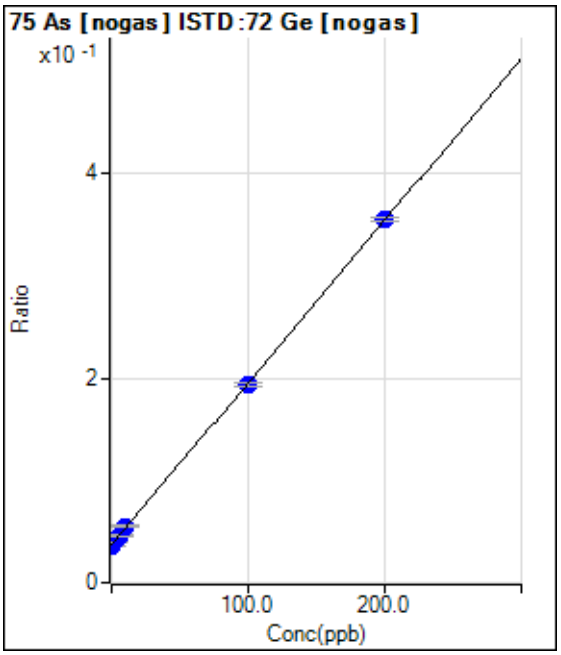


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.218	53.33	0.0016	P	49.1
2	☐	2.000	2.439	260.01	0.0075	P	11.2
3	☐	5.000	5.086	493.35	0.0145	P	10.4
4	☐	10.000	10.029	946.71	0.0277	P	3.4
5	☐	100.000	98.471	8658.99	0.2631	P	1.5
6	☐	200.000	200.756	17175.58	0.5354	P	6.0
7	☐	1.000					

y = 0.0027 * x + 9.8107E-004
R = 1.0000
DL = 0.8647
BEC = 0.3685

Weight: <None>
Min Conc: <None>

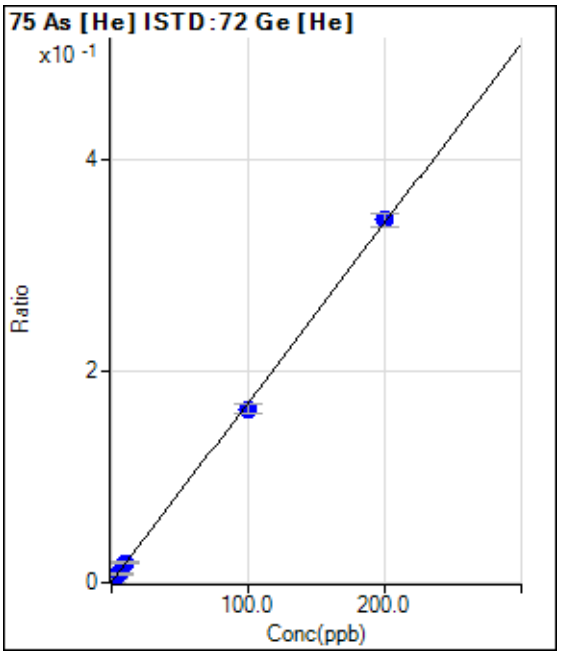
Calibration for 295_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-1.147	21584.11	0.0354	P	0.6
2	☐	2.000	1.726	24511.23	0.0399	P	2.6
3	☐	5.000	5.550	27499.24	0.0460	P	1.9
4	☐	10.000	11.425	32948.87	0.0553	P	3.4
5	☐	100.000	99.060	115468.91	0.1944	P	2.3
6	☐	200.000	200.388	206881.88	0.3551	P	0.9
7	☐	1.000					

y = 0.0016 * x + 0.0372
R = 0.9999
DL = 0.4189
BEC = 23.44

Weight: <None>
Min Conc: <None>

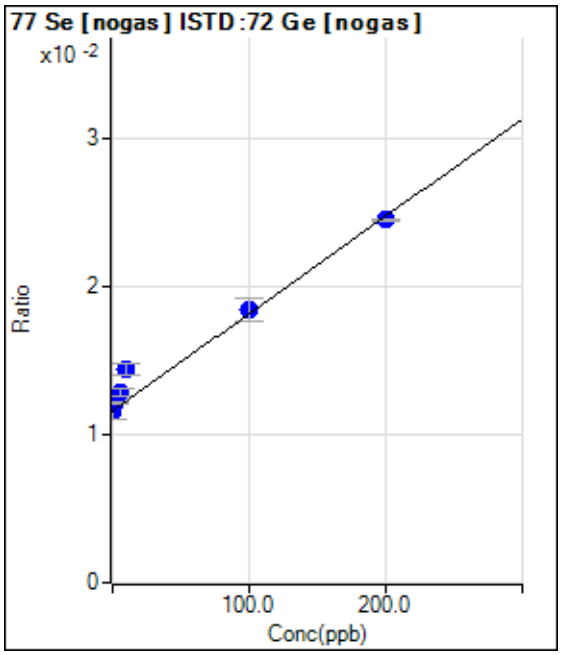


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	16.67	0.0005	P	77.2
2	☐	2.000	1.662	115.56	0.0033	P	6.3
3	☐	5.000	4.714	288.89	0.0085	P	16.1
4	☐	10.000	10.893	648.91	0.0190	P	16.1
5	☐	100.000	96.376	5402.00	0.1642	P	5.2
6	☐	200.000	201.778	11015.85	0.3432	P	3.6
7	☐	1.000					

y = 0.0017 * x + 4.9224E-004
R = 0.9998
DL = 0.6712
BEC = 0.2898

Weight: <None>
Min Conc: <None>

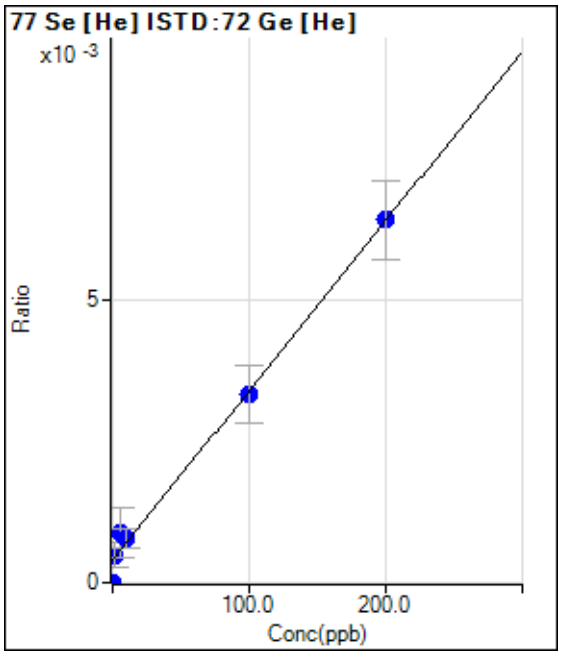
Calibration for 295_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	7068.30	0.0116	P	10.8
2	☐	2.000	7.581	7425.15	0.0121	P	1.5
3	☐	5.000	19.198	7685.23	0.0129	P	4.6
4	☐	10.000	42.782	8579.01	0.0144	P	4.8
5	☐	100.000	103.629	10923.72	0.0184	P	8.1
6	☐	200.000	196.136	14252.82	0.0245	P	0.4
7	☐	1.000					

y = 6.5604E-005 * x + 0.0116
R = 0.9886
DL = 57.39
BEC = 176.8

Weight: <None>
Min Conc: <None>

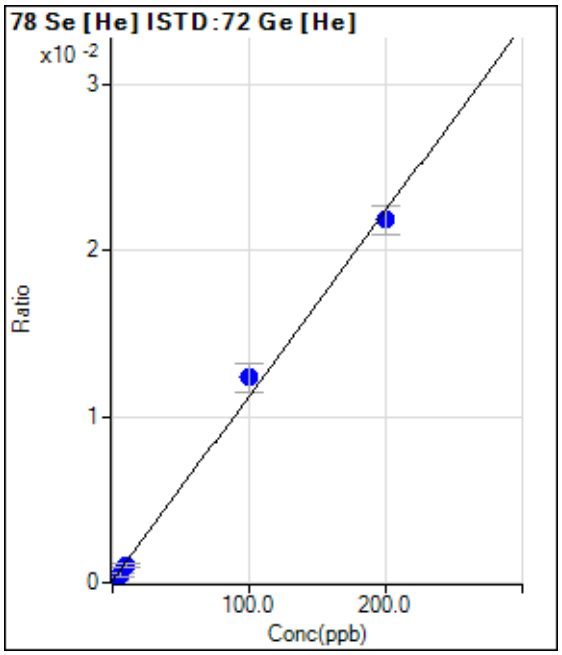


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-13.324	0.00	0.0000	P	
2	☐	2.000	2.797	16.67	0.0005	P	91.7
3	☐	5.000	16.340	30.00	0.0009	P	101.
4	☐	10.000	12.703	26.67	0.0008	P	44.4
5	☐	100.000	97.821	110.00	0.0033	P	31.1
6	☐	200.000	200.663	206.68	0.0064	P	21.6
7	☐	1.000					

y = 3.0040E-005 * x + 4.0026E-004
R = 0.9953
DL = 0
BEC = 13.32

Weight: <None>
Min Conc: <None>

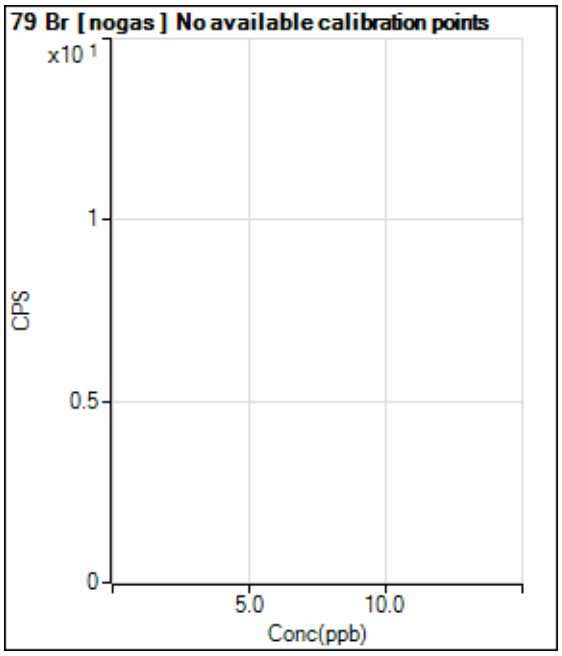
Calibration for 295_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4.00	0.0001	P	5.3
2	☐	2.000	0.345	5.33	0.0002	P	115.
3	☐	5.000	3.232	16.00	0.0005	P	44.9
4	☐	10.000	8.443	36.00	0.0011	P	28.8
5	☐	100.000	109.947	406.01	0.0123	P	13.7
6	☐	200.000	195.165	700.02	0.0218	P	7.7
7	☐	1.000					

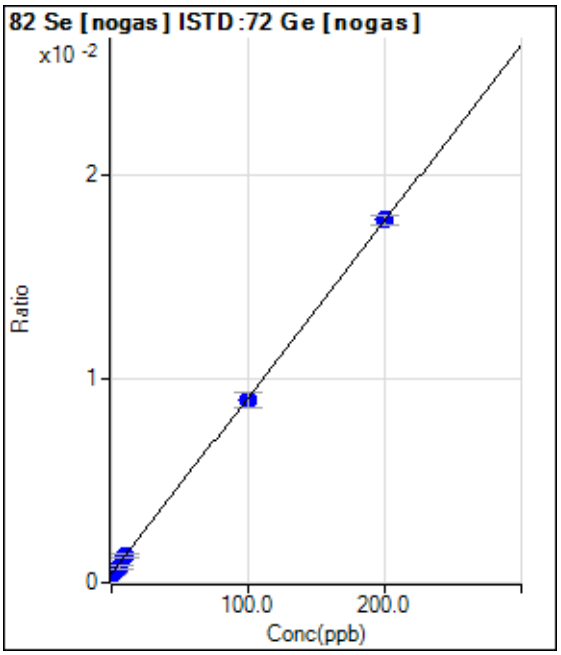
y = 1.1125E-004 * x + 1.1545E-004
R = 0.9980
DL = 0.1643
BEC = 1.038

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

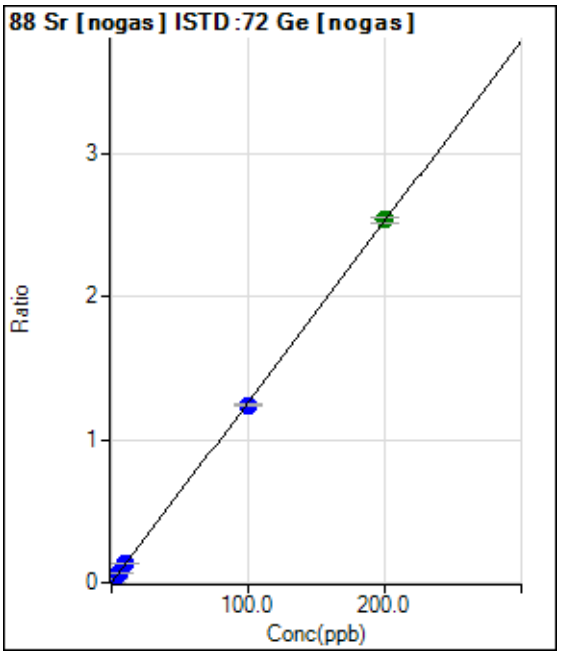
Calibration for 295_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	276.68	0.0005	P	18.6
2	☐	2.000	0.647	313.34	0.0005	P	14.4
3	☐	5.000	3.376	446.68	0.0007	P	18.3
4	☐	10.000	9.685	770.03	0.0013	P	16.0
5	☐	100.000	98.683	5340.94	0.0090	P	8.6
6	☐	200.000	200.729	10383.35	0.0178	P	2.9
7	☐	1.000					

y = 8.6524E-005 * x + 4.5428E-004
R = 1.0000
DL = 2.937
BEC = 5.25

Weight: <None>
Min Conc: <None>

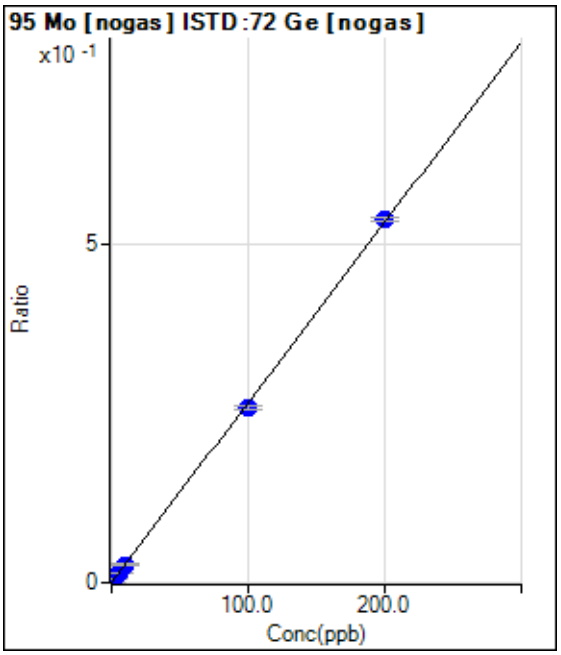


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	386.68	0.0006	P	13.8
2	☐	2.000	2.051	16271.43	0.0265	P	3.7
3	☐	5.000	4.966	37812.89	0.0633	P	3.2
4	☐	10.000	10.241	77307.20	0.1298	P	1.9
5	☐	100.000	98.230	736431.45	1.2392	P	0.8
6	☐	200.000	200.873	1476024.04	2.5335	A	1.8
7	☐	1.000					

y = 0.0126 * x + 6.3298E-004
R = 0.9999
DL = 0.02079
BEC = 0.0502

Weight: <None>
Min Conc: <None>

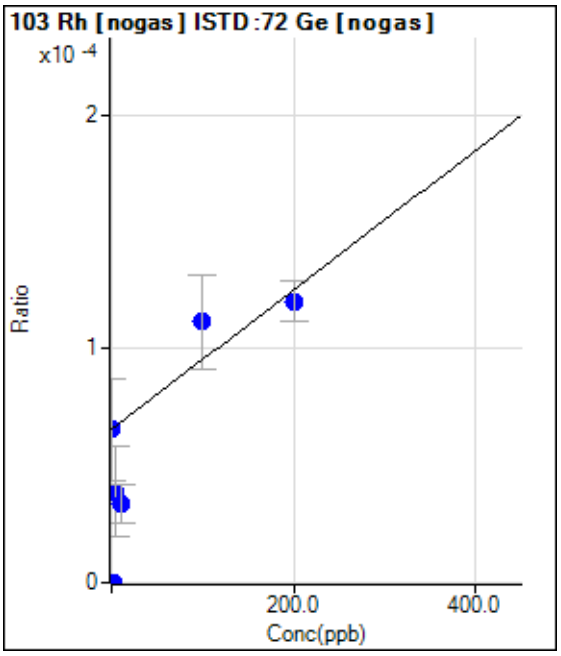
Calibration for 295_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	66.67	0.0001	P	18.8
2	☐	2.000	1.918	3200.37	0.0052	P	2.0
3	☐	5.000	4.905	7868.66	0.0132	P	2.4
4	☐	10.000	10.004	15924.54	0.0267	P	2.1
5	☐	100.000	96.970	153384.29	0.2582	P	1.8
6	☐	200.000	201.518	312469.25	0.5364	P	1.0
7	☐	1.000					

y = 0.0027 * x + 1.0944E-004
R = 0.9998
DL = 0.02314
BEC = 0.04113

Weight: <None>
Min Conc: <None>

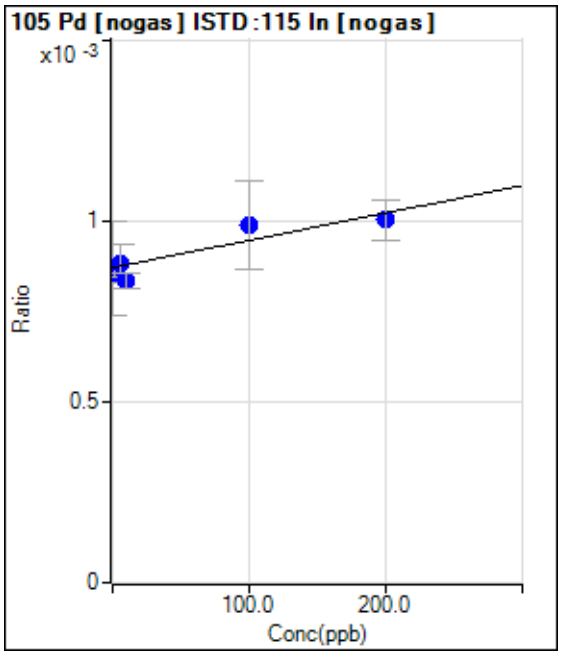


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	40.00	0.0001	P	66.5
2	☐	2.000	-219.860	0.00	0.0000	P	
3	☐	5.000	-89.490	23.33	0.0000	P	98.4
4	☐	10.000	-107.143	20.00	0.0000	P	50.4
5	☐	100.000	154.442	66.67	0.0001	P	36.0
6	☐	200.000	183.217	70.00	0.0001	P	14.6
7	☐	1.000					

y = 2.9818E-007 * x + 6.5558E-005
R = 0.8432
DL = 438.5
BEC = 219.9

Weight: <None>
Min Conc: <None>

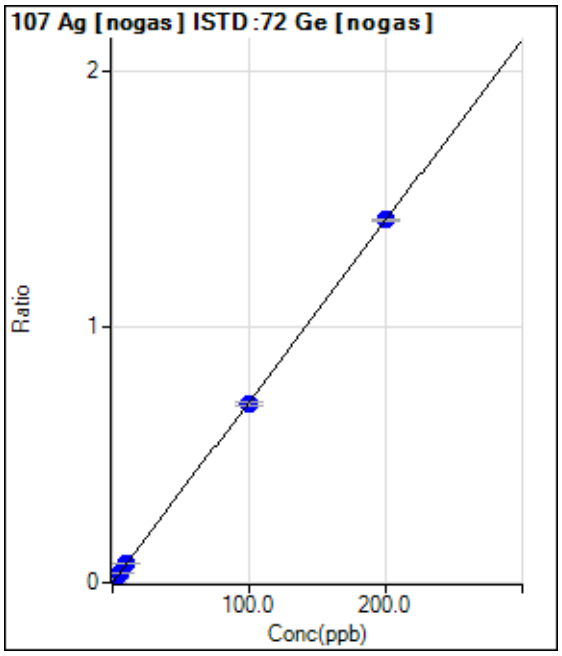
Calibration for 295_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	646.70	0.0009	P	29.9
2	☐	2.000	-18.466	636.69	0.0009	P	3.0
3	☐	5.000	15.117	640.03	0.0009	P	12.5
4	☐	10.000	-47.938	596.69	0.0008	P	4.8
5	☐	100.000	157.266	703.37	0.0010	P	24.7
6	☐	200.000	174.216	703.37	0.0010	P	11.0
7	☐	1.000					

y = 7.5752E-007 * x + 8.7131E-004
R = 0.9128
DL = 1031
BEC = 1150

Weight: <None>
Min Conc: <None>

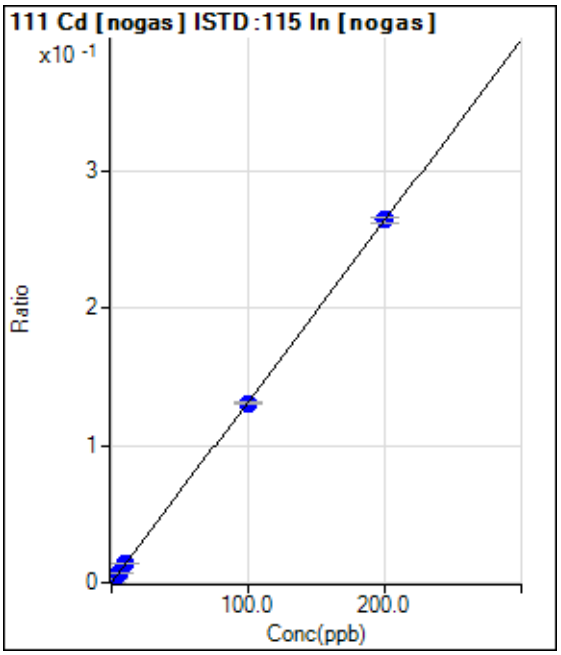


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	53.33	0.0001	P	38.3
2	☐	2.000	2.042	8935.93	0.0146	P	0.9
3	☐	5.000	5.056	21464.27	0.0359	P	4.1
4	☐	10.000	10.404	43954.97	0.0738	P	1.2
5	☐	100.000	99.217	417676.47	0.7030	P	2.1
6	☐	200.000	200.370	827004.28	1.4196	P	0.7
7	☐	1.000					

y = 0.0071 * x + 8.7261E-005
R = 1.0000
DL = 0.01417
BEC = 0.01232

Weight: <None>
Min Conc: <None>

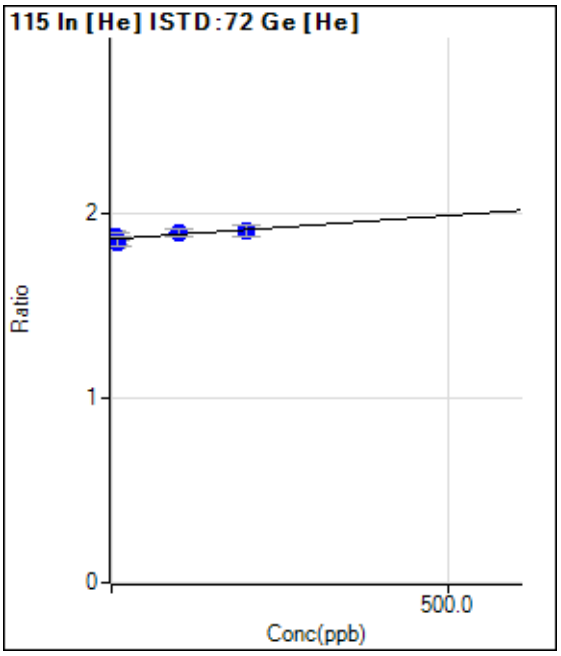
Calibration for 295_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6.67	0.0000	P	173.
2	☐	2.000	1.854	1823.47	0.0025	P	10.4
3	☐	5.000	5.240	5020.88	0.0069	P	5.0
4	☐	10.000	10.340	9763.13	0.0137	P	3.1
5	☐	100.000	99.004	92956.20	0.1307	P	1.4
6	☐	200.000	200.476	185456.60	0.2647	P	1.5
7	☐	1.000					

y = 0.0013 * x + 8.9476E-006
R = 1.0000
DL = 0.03522
BEC = 0.006777

Weight: <None>
Min Conc: <None>

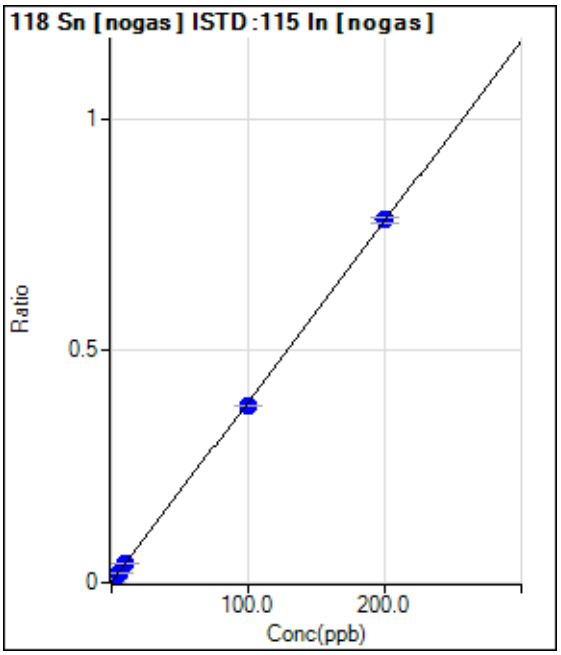


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	64372.25	1.8576	P	5.0
2	☐	2.000	-9.581	64586.17	1.8552	P	2.2
3	☐	5.000	50.654	63455.52	1.8706	P	2.4
4	☐	10.000	-56.072	63030.22	1.8433	P	3.1
5	☐	100.000	144.486	62347.78	1.8946	P	1.9
6	☐	200.000	180.035	61092.94	1.9037	P	3.4
7	☐	1.000					

y = 2.5585E-004 * x + 1.8576
R = 0.8902
DL = 1082
BEC = 7261

Weight: <None>
Min Conc: <None>

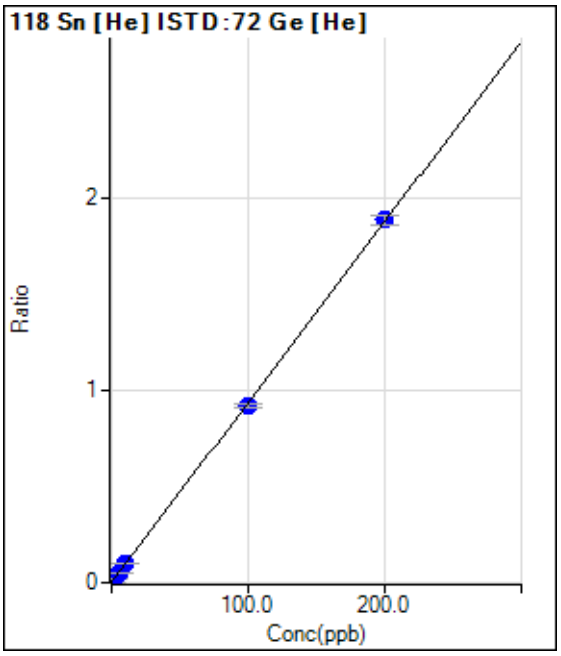
Calibration for 295_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	766.70	0.0010	P	7.5
2	☐	2.000	1.998	6538.17	0.0088	P	3.9
3	☐	5.000	4.921	14626.73	0.0202	P	3.6
4	☐	10.000	10.457	29810.61	0.0417	P	2.5
5	☐	100.000	98.028	271920.28	0.3824	P	0.5
6	☐	200.000	200.965	548508.47	0.7828	P	1.6
7	☐	1.000					

y = 0.0039 * x + 0.0010
R = 0.9999
DL = 0.0601
BEC = 0.2655

Weight: <None>
Min Conc: <None>

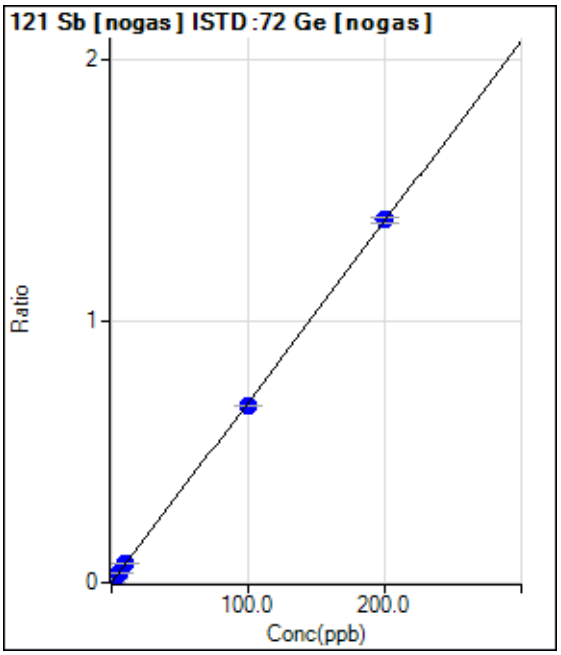


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	60.00	0.0017	P	73.7
2	☐	2.000	1.635	593.35	0.0170	P	7.7
3	☐	5.000	5.446	1793.48	0.0528	P	2.9
4	☐	10.000	10.653	3477.11	0.1017	P	5.5
5	☐	100.000	97.853	30288.19	0.9203	P	1.5
6	☐	200.000	201.033	60628.30	1.8890	P	2.6
7	☐	1.000					

y = 0.0094 * x + 0.0017
R = 0.9999
DL = 0.3985
BEC = 0.1803

Weight: <None>
Min Conc: <None>

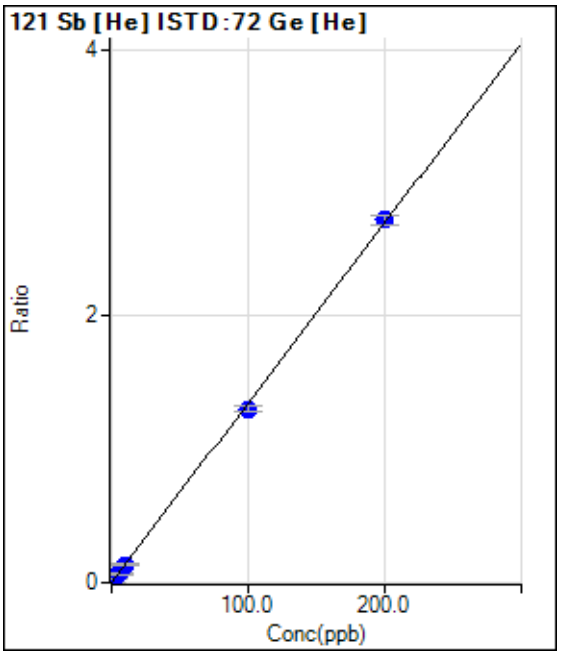
Calibration for 295_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	573.35	0.0009	P	6.9
2	☐	2.000	1.961	8872.54	0.0145	P	4.0
3	☐	5.000	5.155	21798.15	0.0365	P	1.9
4	☐	10.000	10.238	42575.40	0.0715	P	3.2
5	☐	100.000	98.010	401883.47	0.6763	P	0.7
6	☐	200.000	200.980	807352.10	1.3858	P	1.3
7	☐	1.000					

y = 0.0069 * x + 9.3913E-004
R = 0.9999
DL = 0.02826
BEC = 0.1363

Weight: <None>
Min Conc: <None>

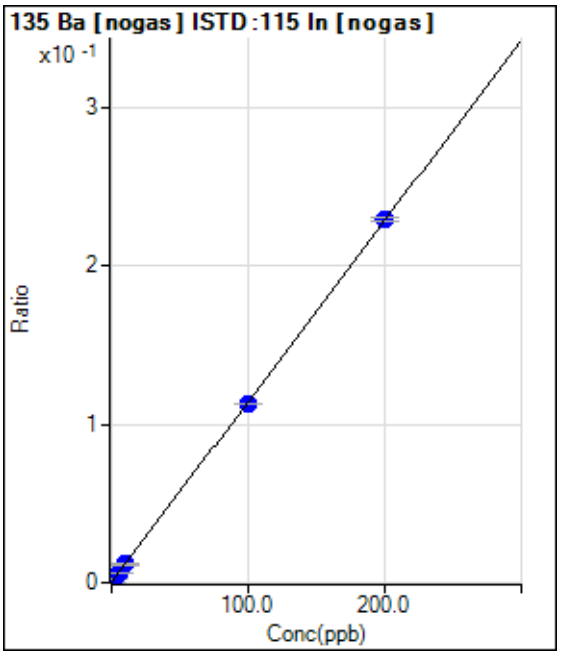


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	56.67	0.0016	P	43.5
2	☐	2.000	2.030	1010.05	0.0290	P	4.2
3	☐	5.000	4.728	2216.87	0.0654	P	10.1
4	☐	10.000	9.899	4620.76	0.1351	P	4.3
5	☐	100.000	96.369	42822.99	1.3009	P	3.6
6	☐	200.000	201.827	87387.98	2.7227	P	2.3
7	☐	1.000					

y = 0.0135 * x + 0.0016
R = 0.9998
DL = 0.1581
BEC = 0.1213

Weight: <None>
Min Conc: <None>

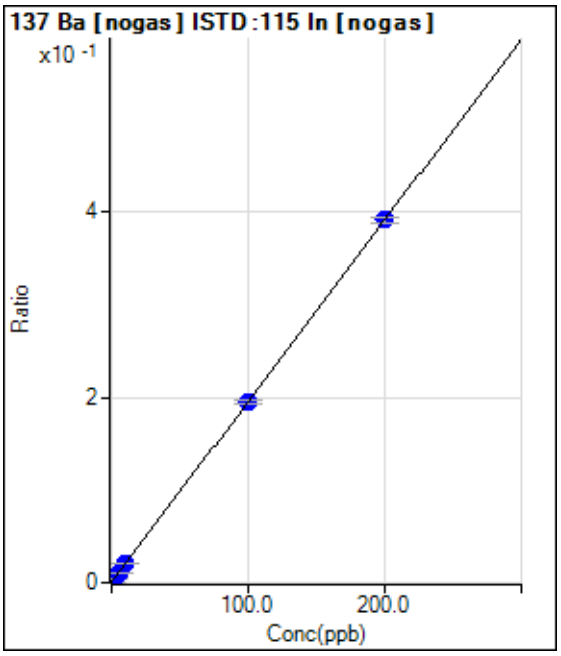
Calibration for 295_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	143.33	0.0002	P	39.6
2	☐	2.000	2.219	2020.18	0.0027	P	8.5
3	☐	5.000	5.016	4280.66	0.0059	P	6.2
4	☐	10.000	10.159	8405.70	0.0118	P	6.2
5	☐	100.000	98.691	80063.37	0.1126	P	0.5
6	☐	200.000	200.644	160245.87	0.2287	P	1.0
7	☐	1.000					

y = 0.0011 * x + 1.9371E-004
R = 1.0000
DL = 0.2023
BEC = 0.1701

Weight: <None>
Min Conc: <None>

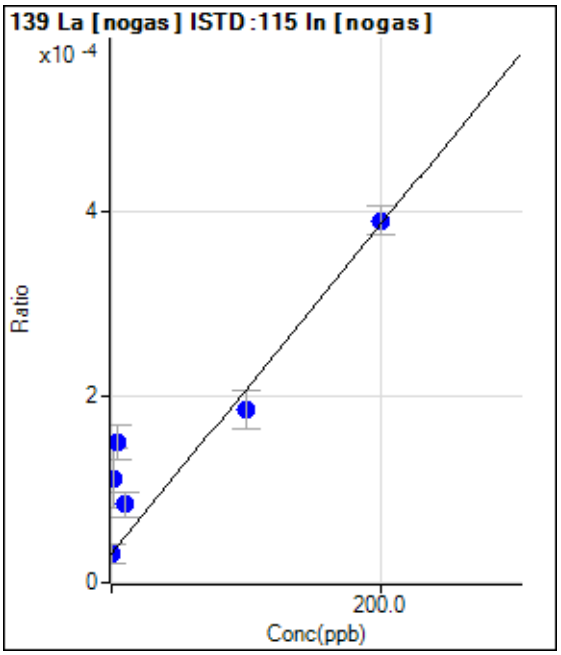


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	283.34	0.0004	P	6.7
2	☐	2.000	1.899	3033.69	0.0041	P	5.1
3	☐	5.000	5.100	7488.56	0.0103	P	5.1
4	☐	10.000	10.251	14566.89	0.0204	P	3.4
5	☐	100.000	99.405	138131.91	0.1943	P	2.2
6	☐	200.000	200.283	273984.87	0.3910	P	1.8
7	☐	1.000					

y = 0.0020 * x + 3.8206E-004
R = 1.0000
DL = 0.03919
BEC = 0.1959

Weight: <None>
Min Conc: <None>

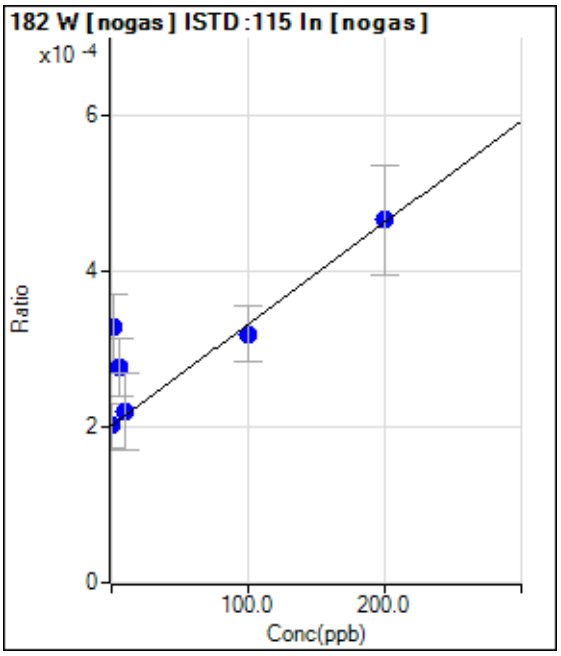
Calibration for 295_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	23.33	0.0000	P	65.1
2	☐	2.000	45.795	83.33	0.0001	P	56.9
3	☐	5.000	68.118	110.00	0.0002	P	24.4
4	☐	10.000	29.797	60.00	0.0001	P	33.5
5	☐	100.000	88.148	133.34	0.0002	P	22.0
6	☐	200.000	202.920	273.34	0.0004	P	7.9
7	☐	1.000					

y = 1.7683E-006 * x + 3.1339E-005
R = 0.9389
DL = 34.62
BEC = 17.72

Weight: <None>
Min Conc: <None>

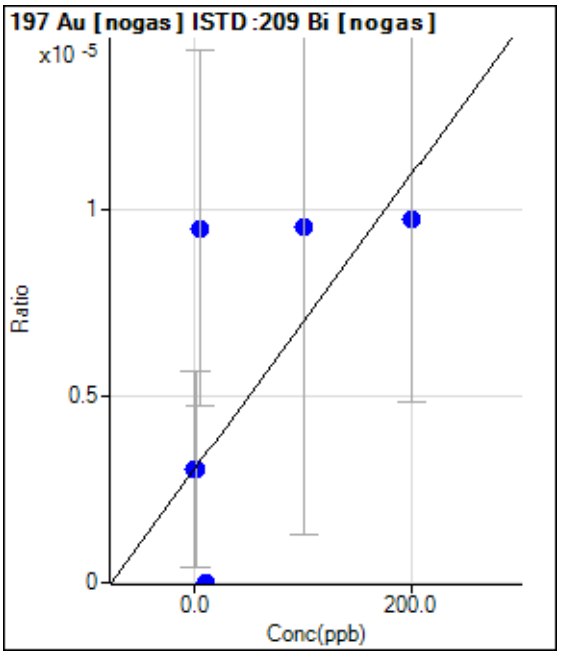


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	150.01	0.0002	P	27.9
2	☐	2.000	96.604	243.34	0.0003	P	26.5
3	☐	5.000	57.182	200.01	0.0003	P	27.0
4	☐	10.000	13.004	156.67	0.0002	P	45.2
5	☐	100.000	90.215	226.68	0.0003	P	22.0
6	☐	200.000	202.492	326.68	0.0005	P	30.4
7	☐	1.000					

y = 1.3039E-006 * x + 2.0163E-004
R = 0.8656
DL = 129.6
BEC = 154.6

Weight: <None>
Min Conc: <None>

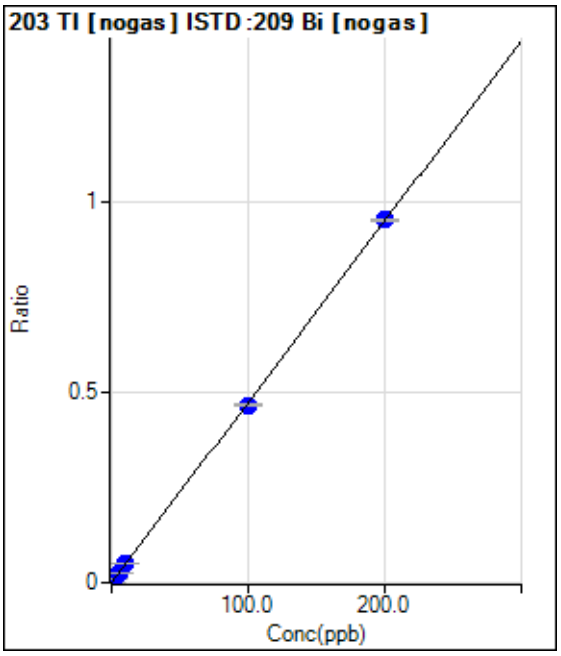
Calibration for 295_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3.33	0.0000	P	173.
2	☐	2.000	0.050	3.33	0.0000	P	173.
3	☐	5.000	162.770	10.00	0.0000	P	100.
4	☐	10.000	-76.571	0.00	0.0000	P	
5	☐	100.000	163.691	10.00	0.0000	P	173.
6	☐	200.000	168.559	10.00	0.0000	P	100.
7	☐	1.000					

y = 3.9730E-008 * x + 3.0422E-006
R = 0.6347
DL = 397.9
BEC = 76.57

Weight: <None>
Min Conc: <None>

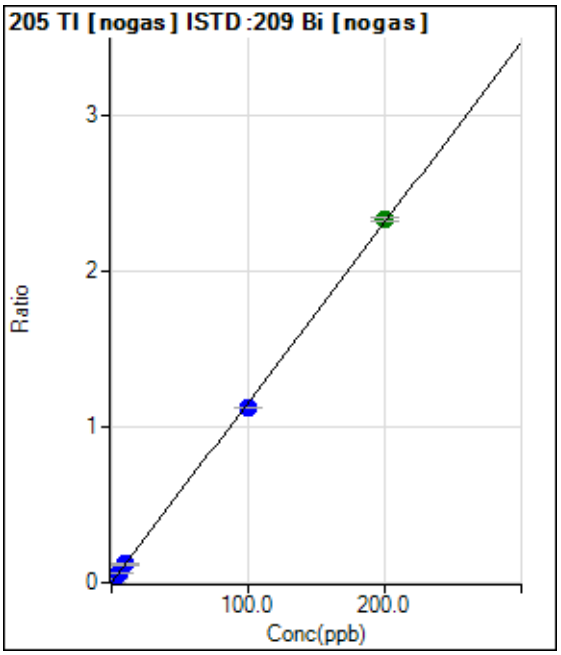


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	73.33	0.0001	P	15.6
2	☐	2.000	1.938	10120.16	0.0093	P	2.9
3	☐	5.000	5.033	25307.64	0.0240	P	4.6
4	☐	10.000	10.179	51054.42	0.0484	P	1.3
5	☐	100.000	98.111	490180.39	0.4659	P	0.8
6	☐	200.000	200.935	981620.46	0.9541	P	0.3
7	☐	1.000					

y = 0.0047 * x + 6.6692E-005
R = 0.9999
DL = 0.006559
BEC = 0.01405

Weight: <None>
Min Conc: <None>

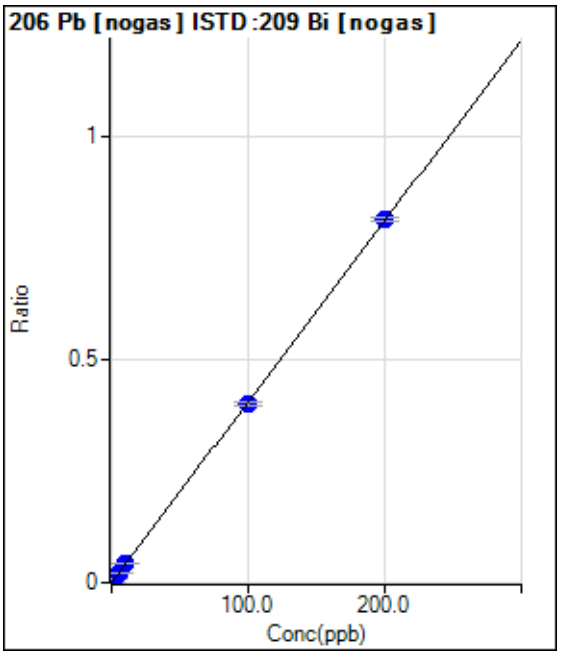
Calibration for 295_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	130.00	0.0001	P	27.7
2	☐	2.000	1.950	24767.01	0.0227	P	2.4
3	☐	5.000	4.875	59729.17	0.0565	P	2.8
4	☐	10.000	10.175	124376.69	0.1179	P	0.8
5	☐	100.000	97.092	1182631.59	1.1241	P	0.3
6	☐	200.000	201.449	2399284.97	2.3321	A	1.1
7	☐	1.000					

y = 0.0116 * x + 1.1822E-004
R = 0.9998
DL = 0.008474
BEC = 0.01021

Weight: <None>
Min Conc: <None>

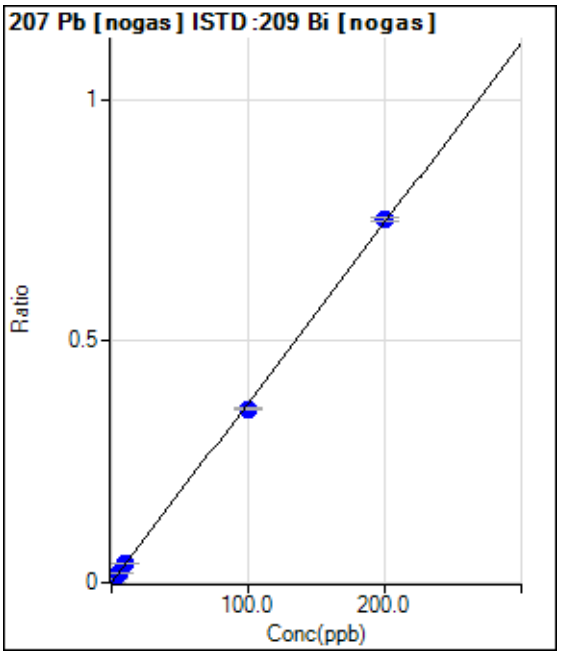


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	116.67	0.0001	P	30.2
2	☐	2.000	2.030	9112.83	0.0083	P	6.3
3	☐	5.000	5.145	22166.35	0.0210	P	2.3
4	☐	10.000	10.545	45260.14	0.0429	P	1.2
5	☐	100.000	98.593	421041.56	0.4002	P	1.7
6	☐	200.000	200.672	837881.24	0.8145	P	1.1
7	☐	1.000					

y = 0.0041 * x + 1.0612E-004
R = 1.0000
DL = 0.02369
BEC = 0.02615

Weight: <None>
Min Conc: <None>

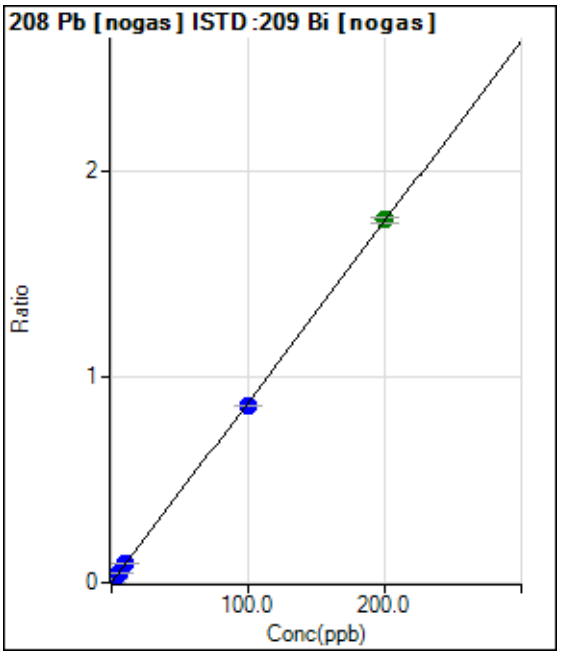
Calibration for 295_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	60.00	0.0001	P	44.4
2	☐	2.000	1.999	8179.06	0.0075	P	5.6
3	☐	5.000	4.901	19339.07	0.0183	P	3.8
4	☐	10.000	10.462	41148.69	0.0390	P	2.1
5	☐	100.000	96.598	378473.35	0.3597	P	0.5
6	☐	200.000	201.680	772568.82	0.7510	P	1.1
7	☐	1.000					

y = 0.0037 * x + 5.4655E-005
R = 0.9998
DL = 0.01955
BEC = 0.01468

Weight: <None>
Min Conc: <None>

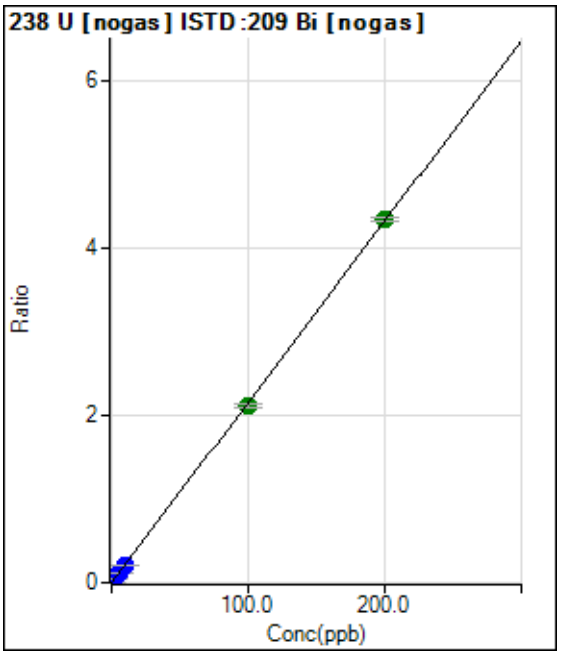


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	263.34	0.0002	P	22.2
2	☐	2.000	2.059	19983.25	0.0183	P	2.1
3	☐	5.000	5.027	46851.82	0.0443	P	2.1
4	☐	10.000	10.253	95155.15	0.0902	P	1.8
5	☐	100.000	98.174	906562.88	0.8617	P	0.5
6	☐	200.000	200.899	1813710.96	1.7630	A	1.4
7	☐	1.000					

y = 0.0088 * x + 2.3962E-004
R = 0.9999
DL = 0.01815
BEC = 0.02731

Weight: <None>
Min Conc: <None>

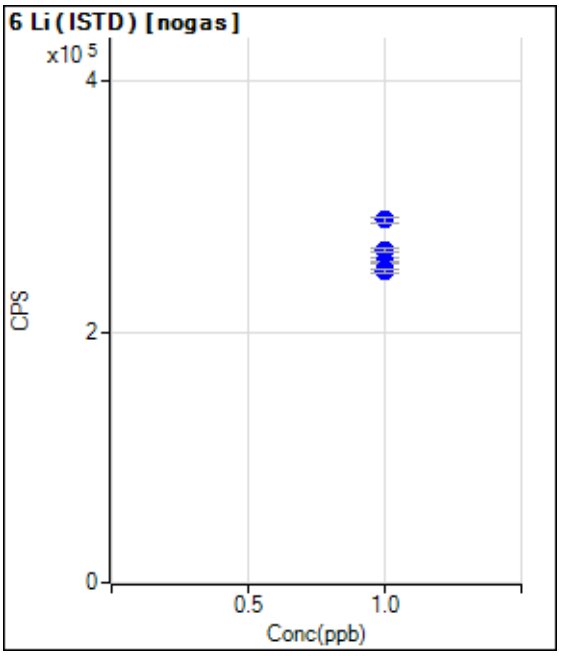
Calibration for 295_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	213.34	0.0002	P	26.2
2	☐	2.000	1.962	46481.87	0.0426	P	2.8
3	☐	5.000	4.977	113842.91	0.1078	P	1.2
4	☐	10.000	10.014	228543.04	0.2167	P	0.9
5	☐	100.000	98.059	2229952.52	2.1197	A	2.8
6	☐	200.000	200.971	4469162.02	4.3441	A	1.1
7	☐	1.000					

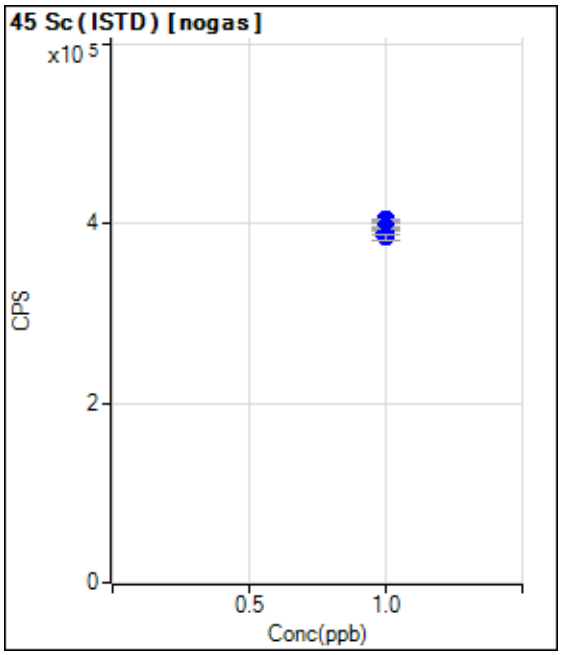
y = 0.0216 * x + 1.9419E-004
R = 0.9999
DL = 0.007051
BEC = 0.008984

Weight: <None>
Min Conc: <None>

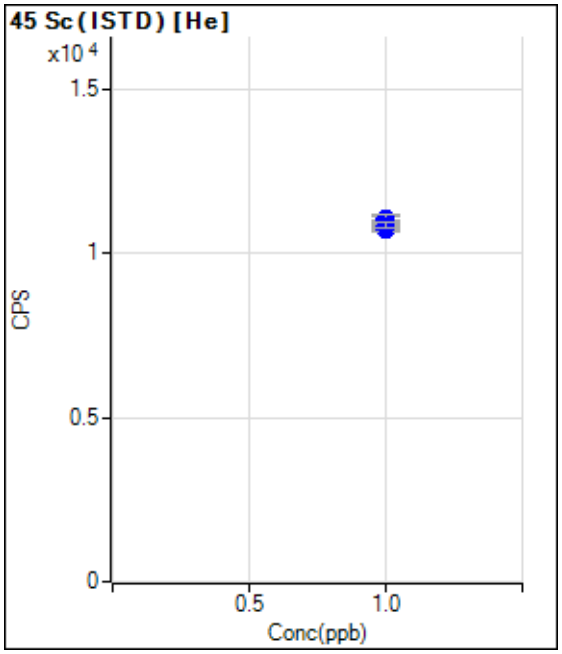


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		256544.27		P	1.5
2	☐	1.000		255710.48		P	0.7
3	☐	1.000		250003.05		P	0.4
4	☐	1.000		248281.58		P	0.9
5	☐	1.000		265704.48		P	1.0
6	☐	1.000		289233.18		P	1.3
7	☐	1.000					

Calibration for 295_ICV.d

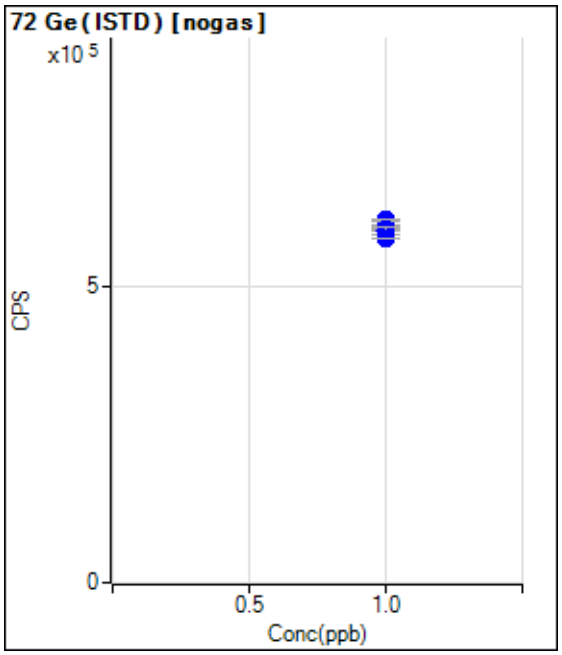


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		403828.52		P	1.0
2	☐	1.000		404447.22		P	0.3
3	☐	1.000		396790.24		P	0.4
4	☐	1.000		389870.03		P	1.0
5	☐	1.000		390860.33		P	1.5
6	☐	1.000		385353.55		P	1.7
7	☐	1.000					

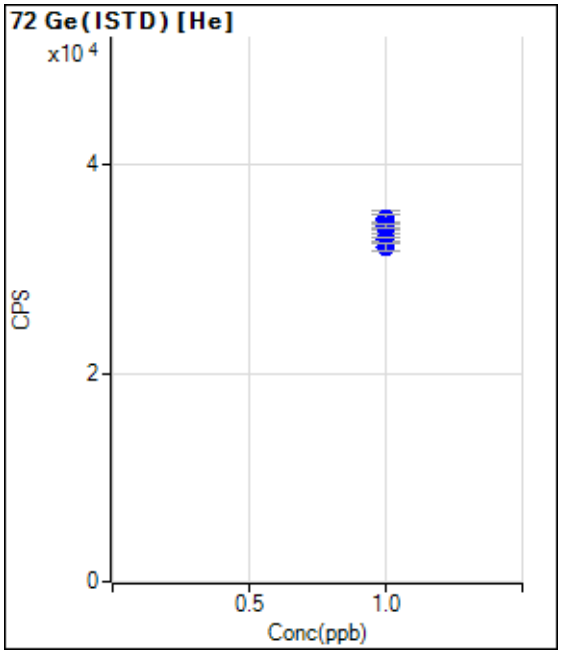


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		11063.74		P	1.2
2	☐	1.000		10960.35		P	4.6
3	☐	1.000		10980.33		P	0.9
4	☐	1.000		10746.86		P	1.4
5	☐	1.000		11013.73		P	3.2
6	☐	1.000		10876.92		P	2.1
7	☐	1.000					

Calibration for 295_ICV.d

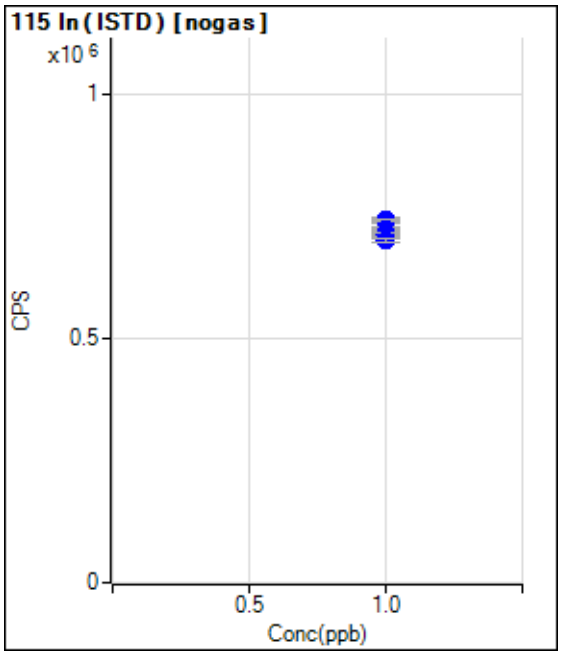


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		610208.71		P	1.7
2	☐	1.000		613880.47		P	0.8
3	☐	1.000		597887.01		P	0.8
4	☐	1.000		595685.58		P	0.6
5	☐	1.000		594314.31		P	2.1
6	☐	1.000		582579.52		P	0.3
7	☐	1.000					

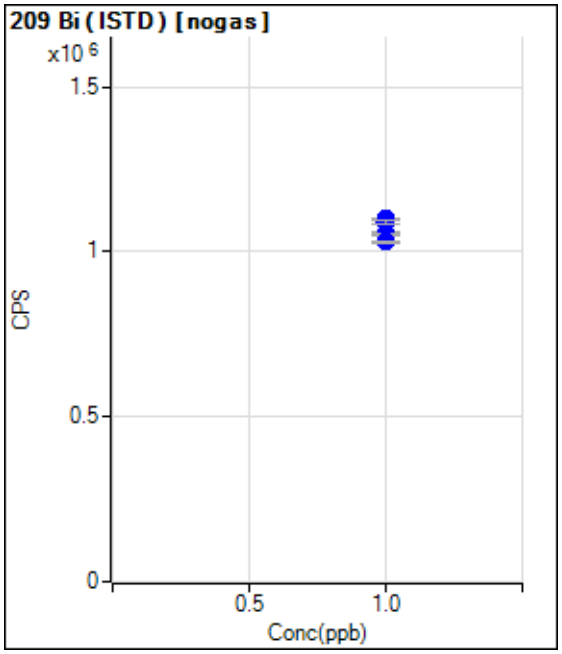


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		34709.15		P	5.1
2	☐	1.000		34822.64		P	2.0
3	☐	1.000		33937.65		P	2.7
4	☐	1.000		34201.21		P	1.1
5	☐	1.000		32912.14		P	1.1
6	☐	1.000		32107.37		P	2.3
7	☐	1.000					

Calibration for 295_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		742038.66		P	1.4
2	☐	1.000		742625.69		P	0.5
3	☐	1.000		725017.46		P	0.7
4	☐	1.000		714768.87		P	1.1
5	☐	1.000		711132.39		P	1.1
6	☐	1.000		700722.00		P	0.7
7	☐	1.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1099360.56		P	0.5
2	☐	1.000		1091480.38		P	1.1
3	☐	1.000		1056382.51		P	0.8
4	☐	1.000		1054936.34		P	0.9
5	☐	1.000		1052113.50		P	0.5
6	☐	1.000		1028798.97		P	0.6
7	☐	1.000					

Sub Contract Data

Bhate Environmental Associates, Inc.
Project: LHAAP 18/24
ALS WO# HS17121224

Case Narrative

Method: 6850
Analysis: Perchlorate
Analysis SOP: LC-MS-CLO4
ALS WO ID(s): 1736221; 1736222; 1800210

Client: ALS Laboratories (Houston, TX)
Matrix: Water
ELMS Batch (HBN): 2032 (206369)

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

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

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

Holding Times: Holding times were met for all analyses.

Dilutions: Samples 1736222003/07 were analyzed and reported at a 1:10 dilutions. Sample 1736222002 was analyzed and reported at a 1:100 dilution. Samples 1736222005/06/08 were analyzed and reported at a 1:1,000 dilutions. The reporting limits have been adjusted accordingly.

Method QC data: The method blank (LMB 582602) was less than 1/2 the CRDL. The recovery for the LCS (582603) was within acceptable parameters.

MS/MSD Analysis: The matrix spike and matrix spike duplicate (MS/MSD) was performed on sample 1736221001 (Client ID: HBW7_122617). 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): None were required for this set.

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

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

Miscellaneous Comments: These samples were analyzed in accordance with the requirements found in the DOD QSM Version 5.1. Manual Integrations were performed for some of the Initial Calibration analyses (datafiles: 28NOVP01/02) along with datafiles 08JAND03/10/26.

Thomas Bosch January 11, 2018
Analyst Date

ANALYTICAL REPORT

Report Date: February 01, 2018

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

Phone: 281 530-5656

E-mail: RJ.Modashia@ALSGlobal.com

Workorder: **34-1736222**
Project ID: HS17121224 122017
Purchase Order: HS17121224
Project Manager Kevin W. Griffiths

Client Sample ID	Lab ID	Collect Date	Receive Date	Sampling Site
18CPTMW04SW_122017	1736222001	12/20/17	12/28/17	HS17121224
18CPTMW04_122017	1736222002	12/20/17	12/28/17	HS17121224
MW2_122017	1736222003	12/20/17	12/28/17	HS17121224
18CPTMW01SW_122017	1736222004	12/20/17	12/28/17	HS17121224
MW5_122017	1736222005	12/20/17	12/28/17	HS17121224
MW3_122017	1736222006	12/21/17	12/28/17	HS17121224
18CPTMW08DW_122117	1736222007	12/21/17	12/28/17	HS17121224
18CPTMW08SW_122117	1736222008	12/21/17	12/28/17	HS17121224

ANALYTICAL REPORT

Workorder: 34-1736222
Client: ALS Environmental (Houston)
Project Manager: Kevin W. Griffiths

Analytical Results

Sample ID: **18CPTMW04SW_122017** | Sampling Site: HS17121224 | Collected: 12/20/2017
Lab ID: 1736222001 | Media: 125 mL Nalgene | Received: 12/28/2017
Matrix: Water | Sampling Parameter: NA

Analysis Method - EPA 6850, DoD QSM

Preparation: Not Applicable
Analysis: EPA 6850, DoD QSM Water | **Instrument ID:** LCMS04
Batch: ELMS/2032 (HBN: 206369) | **Percent Solid:** NA
Analyzed: 01/08/2018 12:09 | **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: **18CPTMW04_122017** | Sampling Site: HS17121224 | Collected: 12/20/2017
Lab ID: 1736222002 | Media: 125 mL Nalgene | Received: 12/28/2017
Matrix: Water | Sampling Parameter: NA

Analysis Method - EPA 6850, DoD QSM

Preparation: Not Applicable
Analysis: EPA 6850, DoD QSM Water | **Instrument ID:** LCMS04
Batch: ELMS/2032 (HBN: 206369) | **Percent Solid:** NA
Analyzed: 01/08/2018 12:28 | **Report Basis:** Wet

Analyte	Result (ug/L)	DL (ug/L)	LOD (ug/L)	LOQ (ug/L)	Dilution	Qual
Perchlorate	**620**	100	200	400	100	

Sample ID: **MW2_122017** | Sampling Site: HS17121224 | Collected: 12/20/2017
Lab ID: 1736222003 | Media: 125 mL Nalgene | Received: 12/28/2017
Matrix: Water | Sampling Parameter: NA

Analysis Method - EPA 6850, DoD QSM

Preparation: Not Applicable
Analysis: EPA 6850, DoD QSM Water | **Instrument ID:** LCMS04
Batch: ELMS/2032 (HBN: 206369) | **Percent Solid:** NA
Analyzed: 01/08/2018 12:47 | **Report Basis:** Wet

Analyte	Result (ug/L)	DL (ug/L)	LOD (ug/L)	LOQ (ug/L)	Dilution	Qual
Perchlorate	**160**	10	20	40	10	

Sample ID: **18CPTMW01SW_122017** | Sampling Site: HS17121224 | Collected: 12/20/2017
Lab ID: 1736222004 | Media: 125 mL Nalgene | Received: 12/28/2017
Matrix: Water | Sampling Parameter: NA

Analysis Method - EPA 6850, DoD QSM

Preparation: Not Applicable
Analysis: EPA 6850, DoD QSM Water | **Instrument ID:** LCMS04
Batch: ELMS/2032 (HBN: 206369) | **Percent Solid:** NA
Analyzed: 01/08/2018 13:46 | **Report Basis:** Wet

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

ANALYTICAL REPORT

Workorder: 34-1736222
Client: ALS Environmental (Houston)
Project Manager: Kevin W. Griffiths

Analytical Results

Sample ID: **MW5_122017** | Sampling Site: HS17121224 | Collected: 12/20/2017
Lab ID: 1736222005 | Media: 125 mL Nalgene | Received: 12/28/2017
Matrix: Water | Sampling Parameter: NA

Analysis Method - EPA 6850, DoD QSM

Preparation: Not Applicable
Analysis: EPA 6850, DoD QSM Water | **Instrument ID:** LCMS04
Batch: ELMS/2032 (HBN: 206369) | **Percent Solid:** NA
Analyzed: 01/08/2018 14:05 | **Report Basis:** Wet

Analyte	Result (ug/L)	DL (ug/L)	LOD (ug/L)	LOQ (ug/L)	Dilution	Qual
Perchlorate	**31000**	1000	2000	4000	1000	

Sample ID: **MW3_122017** | Sampling Site: HS17121224 | Collected: 12/21/2017
Lab ID: 1736222006 | Media: 125 mL Nalgene | Received: 12/28/2017
Matrix: Water | Sampling Parameter: NA

Analysis Method - EPA 6850, DoD QSM

Preparation: Not Applicable
Analysis: EPA 6850, DoD QSM Water | **Instrument ID:** LCMS04
Batch: ELMS/2032 (HBN: 206369) | **Percent Solid:** NA
Analyzed: 01/08/2018 14:24 | **Report Basis:** Wet

Analyte	Result (ug/L)	DL (ug/L)	LOD (ug/L)	LOQ (ug/L)	Dilution	Qual
Perchlorate	**15000**	1000	2000	4000	1000	

Sample ID: **18CPTMW08DW_122117** | Sampling Site: HS17121224 | Collected: 12/21/2017
Lab ID: 1736222007 | Media: 125 mL Nalgene | Received: 12/28/2017
Matrix: Water | Sampling Parameter: NA

Analysis Method - EPA 6850, DoD QSM

Preparation: Not Applicable
Analysis: EPA 6850, DoD QSM Water | **Instrument ID:** LCMS04
Batch: ELMS/2032 (HBN: 206369) | **Percent Solid:** NA
Analyzed: 01/08/2018 14:44 | **Report Basis:** Wet

Analyte	Result (ug/L)	DL (ug/L)	LOD (ug/L)	LOQ (ug/L)	Dilution	Qual
Perchlorate	**220**	10	20	40	10	

Sample ID: **18CPTMW08SW_122117** | Sampling Site: HS17121224 | Collected: 12/21/2017
Lab ID: 1736222008 | Media: 125 mL Nalgene | Received: 12/28/2017
Matrix: Water | Sampling Parameter: NA

Analysis Method - EPA 6850, DoD QSM

Preparation: Not Applicable
Analysis: EPA 6850, DoD QSM Water | **Instrument ID:** LCMS04
Batch: ELMS/2032 (HBN: 206369) | **Percent Solid:** NA
Analyzed: 01/08/2018 15:03 | **Report Basis:** Wet

Analyte	Result (ug/L)	DL (ug/L)	LOD (ug/L)	LOQ (ug/L)	Dilution	Qual
Perchlorate	**31000**	1000	2000	4000	1000	

ANALYTICAL REPORT

Workorder: 34-1736222
Client: ALS Environmental (Houston)
Project Manager: Kevin W. Griffiths

Comments

Workorder: 1736222

Samples 1736222003/07 were analyzed and reported at a 1:10 dilutions. Sample 1736222002 was analyzed and reported at a 1:100 dilution. Samples 1736222005/06/08 were analyzed and reported at a 1:1,000 dilutions. The reporting limits have been adjusted accordingly.

Change sample -04 from 18CPTMWISW_122017 to 18CPTMW01SW_122017

Client want to change IDs the samples for samples 07 and 08

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 01/11/2018 10:56	/S/ Stephen Brose 01/12/2018 07:58

Laboratory Contact Information

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Phone: (801) 266-7700
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Web: www.alsslc.com

ANALYTICAL REPORT

Workorder: 34-1736222
Client: ALS Environmental (Houston)
Project Manager: Kevin W. Griffiths

General Lab Comments

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

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

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

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

Testing Sector	Accreditation Body (Standard)	Certificate Number	Website
Environmental	ANAB (DoD ELAP)	ADE-1420	http://www.anab.org/accredited-organizations/
	Utah (NELAC)	DATA1	http://health.utah.gov/lab/labimp/
	Nevada	UT00009	http://ndep.nv.gov/bsdw/labservice.htm
	Oklahoma	UT00009	http://www.deq.state.ok.us/CSDnew/
	Iowa	IA# 376	http://www.iowadnr.gov/InsideDNR/RegulatoryWater.aspx
	Texas (TNI)	T104704456-11-1	http://www.tceq.texas.gov/field/qa/lab_accred_certif.html
	Washington	C596-16	http://www.ecy.wa.gov/programs/eap/labs/index.html
	Kansas	E-10416	http://www.kdheks.gov/lipo/index.html
Industrial Hygiene	AIHA LAP LLC (ISO 17025 & IHLAP/ELLAP)	101574	http://www.aihaaccreditedlabs.org
	Washington	C596-16	http://www.ecy.wa.gov/programs/eap/labs/index.html
Lead Testing:			
CPSC	ANAB (ISO 17025, CPSC)	ADE-1420	http://www.anab.org/accredited-organizations/
Soil, Dust, Paint ,Air	AIHA LAP LLC (ISO 17025 & IHLAP/ELLAP)	101574	http://www.aihaaccreditedlabs.org
Dietary Supplements	ACLASS (ISO 17025)	ADE-1420	http://www.aclasscorp.com

ANALYTICAL REPORT

Workorder: 34-1736222
Client: ALS Environmental (Houston)
Project Manager: Kevin W. Griffiths

Result Symbol Definitions

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

Qualifier Symbol Definitions

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

Quality Control Sample
Batch Report

Analysis Information

Workorder: 1736222

Limits:	Client SOW/Contract Specified	**Preparation:**	NA	**Analysis:**	EPA 6850
Basis:	DoD QSM	**Batch:**	NA	**Batch:**	ELMS/2032 (HBN: 206369)
		Prepared By:	NA	**Analyzed By:**	Thomas Bosch

Blank

LMB: 582602
Analyzed: 01/08/2018 09:15
Units: ug/L

Analyte	Result	MDL	RL
Perchlorate	ND	1	2.00

Laboratory Control Sample

LCS: 582603
Analyzed: 01/08/2018 09:34
Dilution: 1
Units: ug/L

Analyte	Result	Target	% Rec	QC Limits	
Perchlorate	5.30	5.00	106	78.8	123.8

Matrix Spike - Matrix Spike Duplicate

Sample:	1736221001	**MS:**	582604				**MSD:**	582605			
Analyzed:	01/08/2018 09:55	**Analyzed:**	01/08/2018 10:14				**Analyzed:**	01/08/2018 10:33			
Dilution:	1	**Dilution:**	1				**Dilution:**	1			
Units:	ug/L	**Units:**	ug/L				**Units:**	ug/L			

Analyte	Result	Result	Target	% Rec	QC Limits		Result	% Rec	RPD	QC Limits	
Perchlorate	ND	4.81	5	96.1	78.8	123.8	4.79	95.9	0.221	0.0	20.0

Continuing Calibration Verification

CCV:	582599			**CCV:**	582606			**CCV:**	582608		
Analyzed:	01/08/2018 08:17			**Analyzed:**	01/08/2018 13:08			**Analyzed:**	01/08/2018 16:40		
Units:	ug/L			**Units:**	ug/L			**Units:**	ug/L		
Criteria:	± 15%			**Criteria:**	± 15%			**Criteria:**	± 15%		

Analyte	Result	Target	% Rec.	Result	Target	% Rec.	Result	Target	% Rec.
Perchlorate	26.3	25.0	105	26.2	25.0	105	26.6	25.0	107

Interference Check Sample

ICSA: 582601
Analyzed: 01/08/2018 08:56
Units: ug/L
Criteria: ± 30%

Analyte	Result	Target	% Rec.
Perchlorate	0.880	1.00	88.0

Limit of Detection Verification

LODV:	582600			**LODV:**	582607			**LODV:**	582609		
Analyzed:	01/08/2018 08:36			**Analyzed:**	01/08/2018 13:27			**Analyzed:**	01/08/2018 16:21		
Units:	ug/L			**Units:**	ug/L			**Units:**	ug/L		
Criteria:	± 50%			**Criteria:**	± 50%			**Criteria:**	± 50%		

Analyte	Result	Target	% Rec.	Result	Target	% Rec.	Result	Target	% Rec.
Perchlorate	1.02	1.00	102	1.09	1.00	109	1.02	1.00	102

Quality Control Sample
Batch Report

Analysis Information

Workorder: **1736222**

Limits:	Client SOW/Contract Specified	**Preparation:**	NA	**Analysis:**	EPA 6850
Basis:	DoD QSM	**Batch:**	NA	**Batch:**	ELMS/2032 (HBN: 206369)
		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	/S/ Stephen Brose
01/11/2018 10:56	01/12/2018 07:57

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

1736222

18698/#2

1736222

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: 8293

SUBCONTRACT TO:

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

Phone: +1 801 266 7700

CUSTOMER INFORMATION:

Company:	ALS Houston
Contact:	Sonia West
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Email:	Sonia.West@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:	HS17121224
TSR:	Houston House Acct

	LAB SAMPLE ID / ANALYSIS REQUESTED	CLIENT SAMPLE ID	MATRIX	COLLECT DATE / DUE DATE
1.	**HS17121224-01**	**18CPTMW04SW_122017**	**Water**	**20 Dec 2017 08:55**
	SUB_Perch-6850			04 Jan 2018
2.	**HS17121224-02**	**18CPTMW04_122017**	**Water**	**20 Dec 2017 09:55**
	SUB_Perch-6850			04 Jan 2018
3.	**HS17121224-03**	**MW2_122017**	**Water**	**20 Dec 2017 10:50**
	SUB_Perch-6850			04 Jan 2018
4.	**HS17121224-04**	**18CPTMWISW_122017**	**Water**	**20 Dec 2017 13:00**
	SUB_Perch-6850			04 Jan 2018
5.	**HS17121224-05**	**MW5_122017**	**Water**	**20 Dec 2017 13:55**
	SUB_Perch-6850			04 Jan 2018
6.	**HS17121224-06**	**MW3_122117**	**Water**	**21 Dec 2017 08:45**
	SUB_Perch-6850			04 Jan 2018
7.	**HS17121224-07**	**18CPTMW08SW_122117**	**Water**	**21 Dec 2017 09:45**
	SUB_Perch-6850			04 Jan 2018
8.	**HS17121224-08**	**18CPTMW08DW_122117**	**Water**	**21 Dec 2017 10:45**
	SUB_Perch-6850			04 Jan 2018

Subcontract Chain of Custody

COC ID: 8293

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

QC Level: DOD IV (DoD Data Package)

Relinquished By: _____ Date/Time: Dec 27, 2017 1800

Received By: _____ Date/Time: 12/28/2017 955

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

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

Purchase Order

PO: HS17121224

VENDOR:

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

Phone: +1 801 266 7700

CUSTOMER INFORMATION:

Company:	ALS Houston
Contact:	Sonia West
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Email:	Sonia.West@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:	8293
TSR:	Houston House Acct

Item	Catalog No	Unit Price	Quantity	Ext Price
1. SUB_Perch-6850	NA	$56.25	8	$450.00
			Order Total:	$450.00

ALS - Salt Lake City-Related Information Report (CRIR)

Cooler or Container Information Checklist (Fill In or Circle)

Client Name: ALS Houston — Project/Task/Site: 17306.02

Date/Time of Receipt: 12/28/2017 9:55 — Number of Coolers Received: 1

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

pH Check Performed:							
	Metals	Yes/No/NA	Total Phenolics	Yes/No/NA	NO3/NO2	Yes/No/NA
	Cyanide	Yes/No/NA	TPH – 418.1	Yes/No/NA	Oil & Grease	Yes/No/NA
	Sulfide	Yes/No/NA	COD	Yes/No/NA	Total Phosphorous	Yes/No/NA
	Ammonia	Yes/No/NA	TKN	Yes/No/NA	TOC Preserved	Yes/No/NA

Cooler Received	ALS Cooler No.	Temp.	Cooler Received	ALS Cooler No.	Temp.	Cooler Received	ALSL Cooler No.	Temp.
1	C17-8138	2 °C	4	C17-	°C	7	C17-	°C
2	C17-	°C	5	C17-	°C	8	C17-	°C
3	C17-	°C	6	C17-	°C	9	C17-	°C

Taken By: [signature] (Signature) Marianne Schmidt (Printed Name) 12/28/2017 (Date)

Client-Related Information

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

Briefly Describe the Problem and the Action Taken:

E-mailed to Client? Yes ☐ No ☐

Response Required Within 24 Hours

Project Management

Project Manager Comments:

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

CRIR.dot

Revised 1/1/15

907 2 B 16.00 3525 12.28

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

SHIP DATE: 27DEC17
ACTWGT: 22.90 LB
CAD: 300130/CAFE3108
DIMS: 14x11x10 IN

BILL SENDER

TO KEVIN GRIFFITHS
ALS ENVIRONMENTAL
960 W. LEVOY DRIVE

SALT LAKE CITY UT 84123
(801) 266-7700
REF: HS17121303/1224-SW

FedEx Express

THU - 28 DEC 3:00P
STANDARD OVERNIGHT

TRK# 0201 7376 9751 3525

AX BTFA

84123
UT-US SLC

ALS Environmental

CHAIN-OF-CUSTODY

Project / Job / Task: HS17121224	*Split:*	**Workorder ID:** 1736222	**Level:** ENV_LVL4	**Requested Analysis**	
Client: ALS Environmental (Houston)		**Account:** 8101	**Type:** 125Poly		
Comments:			**Preservatives**		
			COOL		
			Containers		

Item	Collect Date/Time	Sample ID	Lab ID	QC	Matrix	ID(s)	Count	EPA 6850 DoD QSM
1	12/20/2017 08:55	18CPTMW04SW_122017	1736222001		Water	A	1	A
2	12/20/2017 09:55	18CPTMW04_122017	1736222002		Water	A	1	A
3	12/20/2017 10:50	MW2_122017	1736222003		Water	A	1	A
4	12/20/2017 13:00	18CPTMWISW_122017	1736222004		Water	A	1	A
5	12/20/2017 13:55	MW5_122017	1736222005		Water	A	1	A
6	12/21/2017 08:45	MW3_122017	1736222006		Water	A	1	A
7	12/21/2017 09:45	18CPTMW08SW_122117	1736222007		Water	A	1	A
8	12/21/2017 10:45	18CPTMW08DW_122117	1736222008		Water	A	1	A
9								
10								

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ORIGINAL FIELD SAMPLE CHAIN-OF-CUSTODY

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Reason for Transfer / Storage Location
Edwards, Meredith D.	12/28/2017 09:55	ALS Sample Receiving	Sample Login
R.33.1	12/28/2017 14:18 12:03	T. Bosh	Storage 6850

SAMPLE PREPARATION / ANALYSIS CHAIN-OF-CUSTODY

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

Prepared / Analyzed by: _____ Date / Time: _____

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

00874994

atch Worklist

Batch: ELMS/ 2032 **Created:** 1/5/2018 13:16 **Instrument:** **HBN:** 206369

Rule: EPA 6850, DoD QSM Water **Analyst:** T. Bosch **Status:** WP

Workorder: 1736221 [ENV_LVL4]
Workorder: 1736222 [ENV_LVL4]
Workorder: 1800210 [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	582599	CCV for HBN 206369 [ELMS/2032]				CCV	3		E685041C3Q	5311		1/12/2018	
2	582600	LODV for HBN 206369 [ELMS/2032				LODV	3		E6850..D3Q	5311		1/12/2018	
3	582601	ICS for HBN 206369 [ELMS/2032]				ICS	3		E6850..D3Q	5311		1/12/2018	
4	582602	LMB for HBN 206369 [ELMS/2032]				LMB	3		E6850Q413Q	5311		1/12/2018	
5	582603	LCS for HBN 206369 [ELMS/2032]				LCS	3		E6850Q413Q	5311		1/12/2018	
6	1736221001	HBW7_122617				SAMPLE	3	1736221001-A	E6850Q41.3	5480	1/23/2018	1/12/2018	
7	582604	HBW7_122617(1736221001MS)				MS	3		E6850Q413Q	5311		1/12/2018	
8	582605	HBW7_122617(1736221001MSD)				MSD	3		E6850Q413Q	5311		1/12/2018	
9	1736221002	HBW10_122617				SAMPLE	3	1736221002-A	E6850Q41.3	5480	1/23/2018	1/12/2018	
10	1736221003	HBW1_122617				SAMPLE	3	1736221003-A	E6850Q41.3	5480	1/23/2018	1/12/2018	
11	1736221004	GPW1_122617				SAMPLE	3	1736221004-A	E6850Q41.3	5480	1/23/2018	1/12/2018	
12	1736221005	GPW3_122617				SAMPLE	3	1736221005-A	E6850Q41.3	5480	1/23/2018	1/12/2018	
13	1736222001	18CPTMW04SW_122017				SAMPLE	3	1736222001-A	E6850Q41.3	5480	1/17/2018	1/12/2018	
14	1736222002	18CPTMW04_122017				SAMPLE	3	1736222002-A	E6850Q41.3	5480	1/17/2018	1/12/2018	
15	1736222003	MW2_122017				SAMPLE	3	1736222003-A	E6850Q41.3	5480	1/17/2018	1/12/2018	
16	582606	CCV for HBN 206369 [ELMS/2032]				CCV	3		E685041C3Q	5311		1/12/2018	
17	582607	LODV for HBN 206369 [ELMS/2032				LODV	3		E6850..D3Q	5311		1/12/2018	
18	1736222004	18CPTMWISW_122017				SAMPLE	3	1736222004-A	E6850Q41.3	5480	1/17/2018	1/12/2018	
19	1736222005	MW5_122017				SAMPLE	3	1736222005-A	E6850Q41.3	5480	1/17/2018	1/12/2018	
20	1736222006	MW3_122017				SAMPLE	3	1736222006-A	E6850Q41.3	5480	1/18/2018	1/12/2018	
21	1736222007	18CPTMW08SW_122117				SAMPLE	3	1736222007-A	E6850Q41.3	5480	1/18/2018	1/12/2018	
22	1736222008	18CPTMW08DW_122117				SAMPLE	3	1736222008-A	E6850Q41.3	5480	1/18/2018	1/12/2018	
23	1800210001	LH18/24-SP650_122717				SAMPLE	3	1800210001-A	E6850Q41.3	5480	1/24/2018	1/16/2018	
24	582608	CCV for HBN 206369 [ELMS/2032]				CCV	3		E685041C3Q	5311		1/12/2018	
25	582609	LODV for HBN 206369 [ELMS/2032				LODV	3		E6850..D3Q	5311		1/12/2018	

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00874995

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

Analytical Documentation

ALS Work Order #'s & Sample #( )'s: 1736221 (001-05); 1736222 (001-08); 1800210 (001)
ELMS Batch/HBN ID: 2032 (206369)
Prep Date: 01/08/2018 Analysis Date: 01/08/2018 Analyst: T. Bosch
Analyte: **Perchlorate** Matrix: **Water** Method: **6850**
Sequence: \\HPCHEM\1\SEQUENCE\CLO4\2018\JAN\08JAN18D. 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 DI735)/0.1% glacial acetic acid (JT-Baker Lot 04802).
Eluent B1: 95% ACN (B&J Lot DI735)/ 5% ASTM Type II water (ALS)/0.1% glacial acetic acid (JT-Baker Lot 04802).

STANDARDS: Internal Standard Spiking Solution Horizon# 38780. Dilutions of Working Standard Solution ID 32373 used for CCV's, LODV's, RLVS and IPC.

CALIBRATION CURVE: Used curve from 11/28/2017, sequence 28NOV17P.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: 25µL
Column: KP-RPPX C8 separator, 250mm Mobile Phase: 70% Eluent A1; 30% Eluent B1

FLOW GRADIENT:

Time (min.)	Flow (mL/min)
0	0.65
4.0	0.65
5.0	0.25
14.5	0.25
15.0	0.65
17.5	0.65

QC DATA: 5.0µL of QC Solution Horizon ID 36749 was used for LCS 582603; Target = 5.0µg/L. ASTM type II water was used for LMB 582602.

MS/MSD: MS/MSD was performed on sample 1736221001 (Client ID: HBW7_122617). 5.0µl of Working Standard Solution Horizon ID 36735 was added to 10.0mL of sample preparation. Spike target = 5.0µg/L.

COMMENTS:

1) Results reported in µg/L. Samples 1736222003/07 were analyzed and reported at a 1:10 dilutions. Sample 1736222002 was analyzed and reported at a 1:100 dilution. Samples 1736222005/06/08 were analyzed and reported at a 1:1,000 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) Due to limitations of the Chemstation Software, many of the chromatographic peaks require manual integration. Manual Integrations were performed for some of the Initial Calibration analyses (datafiles: 28NOVP01,02) along with datafiles 08JAND02/10/26.
5) Notebook: \\alsltws013\ORGANIC\BOSCH\LCMS\Perchlorates\Waters\2018\ 206369-DOD-ALS-HSTN-LCMS4 or through \\ALSLTWS013\DATAREVIEW\HBN#

STANDARD REPORT

Working Standard - CLO4 WRK

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

Standard: 36735
MFG: ALS/SLC
MFG Lot: TNB: 05/10/17
Part ID:

Created By: T. Bosch
Create Date: 05/10/2017
Lab Lot: CLO4 WRK

Amount: 10 mL
Expires: 05/10/2018
Usable: Yes

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
36734	CLO4 INT	6850 Intermdt AccStd 10.ug/mL	CLO4 INT	0.1 mL	05/10/2018

STANDARD REPORT

Constituent

Stock Standard - CLO4 STOCK

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

Standard: 36733
MFG: AccuStandard
MFG Lot: 216095148
Part ID: IC-PER-10X-1

Created By: T. Bosch
Create Date: 5/10/2017
Lab Lot: CLO4 STOCK

Amount: 100 mL
Expires: 10/4/2018
Usable: Yes

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: 10/6/2005	Expires: 11/7/2025
MFG Lot:	Lab Lot: LAB 109	Usable: Yes
Part ID:		

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: 36734
MFG: ALS/SLC
MFG Lot: TNB: 05/10/17
Part ID:

Created By: T. Bosch
Create Date: 05/10/2017
Lab Lot: CLO4 INT

Amount: 10 mL
Expires: 05/10/2018
Usable: Yes

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
36733	CLO4 STOCK	6850 Stock AccStd 1,000ug/mL	CLO4 STOCK	0.1 mL	10/04/2018

STANDARD REPORT

Working Standard - CLO4 QC WRK

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

Standard: 36750
MFG: ALS/SLC
MFG Lot: TNB: 05/11/17
Part ID:

Created By: T. Bosch
Create Date: 05/11/2017
Lab Lot: CLO4 QC WRK 100.ug/L

Amount: 10 mL
Expires: 05/11/2018
Usable: Yes

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
36749	CLO4 QC INT	6850 QC Intrmdt Std-QC 10ug/mL	CLO4 QC INT 10.ug/mL	0.1 mL	05/11/2018

STANDARD REPORT

Constituent

Working Standard - CLO4 QC INT

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

Standard: 36749 | Created By: T. Bosch | Amount: 10 mL

MFG: ALS/SLC | Create Date: 05/11/2017 | Expires: 05/11/2018

MFG Lot: TNB: 05/11/2017 | Lab Lot: CLO4 QC INT 10.ug/mL | Usable: Yes

Part ID:

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: 10/6/2005	Expires: 11/7/2025
MFG Lot:	Lab Lot: LAB 109	Usable: Yes
Part ID:		

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

STANDARD REPORT

Constituent

Stock Standard - CLO4 QCSTOCK

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

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

Created By: T. Bosch
Create Date: 5/11/2017
Lab Lot: CLO4 QC STOCK

Amount: 100 mL
Expires: 3/31/2020
Usable: Yes

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: **38780**
MFG: ALS/SLC
MFG Lot: TNB: 10/09/17
Pipette ID: Not Provided

Created By: Thomas Bosch
Create Date: 10/09/2017 01:10PM
Verified By: Thomas Bosch
Verify Date:

Amount: 10 mL
Expires: 10/09/2018
Usable: Yes
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
23118	CLO4ISTDSTK	Perchlorate ISTD Stock	CLO4ISTDSTK	0.1 mL	02/27/2024

STANDARD REPORT

Constituent

Stock Standard - CLO4ISTDSTK

CLO4ISTDSTK		Description - Perchlorate ISTD Stock
Standard: 23118	Created By: Thomas Bosch	Amount: 1 mL
MFG: Cambridge Isotope	Create Date: 04/04/2014 03:04PM	Expires: 02/27/2024
MFG Lot: SDDG-013	Verified By: Thomas Bosch	Usable: Yes
Part ID: OLM-7310-S	Verify Date: 02/05/2009 12:02AM	Lab Lot: CLO4ISTDSTK

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

ULTRA SCIENTIFIC
Analytical Solutions

Certificate of Analysis

ISO Guide 34 Reference Material

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.

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER
ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY

ULTRA SCIENTIFIC
Analytical Solutions

Certificate of Analysis

TRIPLE ISO CERTIFICATION ISO 9001 ISO GUIDE 34 ISO GUIDE 31 ULTRA

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® Inc.

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

CERTIFICATE OF ANALYSIS

AccuTrace™ Reference Standard

Catalog No: IC-PER-10X-1
Description: Perchlorate Standard
Element: Perchlorate (ClO_4)
SRM: Ind. Std.
Lot: 216095148
Matrix: Water
Hazards: *Refer to SDS for complete safety information*

Signal Word: Warning

Date Certified: Oct 4, 2016
Expiration: Oct 4, 2018
Sample Size: 100 mL
Components: 1
Storage Condition: Ambient (>5 °C)
Included on ISO/IEC 17025 Scope of Accreditation: Yes
Included on ISO Guide 34 Scope of Accreditation: Yes

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

The gravimetric uncertainty for this product is ±0.2%. See reverse side for details.
The final solution was checked against an independent standard to verify its concentration.
We use the highest purity raw materials available to minimize impurity levels in the final solution. Typically 99.999%+ pure starting materials are used as well as ASTM Type I 18 megohm deionized water.
All solutions are filtered through a 0.2 µm filter prior to being bottled.
All glassware used in preparation is Class A and calibrated regularly.
All weights are traceable through NIST, Test No. 822-275872-11
All bottles are triple rinsed with deionized water prior to use.
Shake bottle prior to use and do not pipette directly out of the bottle. Use only cleaned Class A volumetric glassware.
We certify the accuracy of this standard to be ±0.5% of the stated value until its expiration date provided it is kept tightly capped and stored under the conditions stated above.

Certified By: Meigan O'Leary
Meigan O'Leary, Inorganic QC Manager

For use in routine laboratory analysis.

AccuStandard is accredited to ISO Guide 34, ISO/IEC 17025 and certified to ISO 9001

Cambridge Isotope Laboratories, Inc.

Certificate of Analysis

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

23118

Product Name: (Isotopic Label & Enrichment Specification)	PERCHLORIC ACID, SODIUM SALT (18O4, 90%+) 100 UG/ML IN WATER
Lot Number:	SDDG-013
Catalog Number:	OLM-7310-S

Product Information

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

Certification

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

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

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

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

Approved by: T. J. Eckersley

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

Quality Control Tests and Results

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

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

Raw Data

Batch Report: C:\HPCHEM\1\DATA\08JAN18D\08JAN18D.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
*	582599 CCV@25	Vial 71	1	Control	1	1.14549e6	12.385	26.33777
*	582600 LODV@1.	Vial 72	1	Control	2	3.76805e4	12.280	1.01562
*	582601 ICS@1.	Vial 73	1	Control	3	2.49371e4	12.041	8.80302e-1
*	582602 LMB	Vial 74	1	Control	4	0.00000	0.000	0.00000
*	582603 LCS@5.	Vial 75	1	Control	5	1.94973e5	12.214	5.29911
*	1736221001	Vial 76	1	Sample	6	3.10872e4	12.036	8.87960e-1
*	582604 362211S	Vial 77	1	Sample	7	1.88371e5	12.094	4.80522
*	582605 362211D	Vial 78	1	Sample	8	1.58240e5	12.104	4.79464
*	1736221002	Vial 79	1	Sample	9	0.00000	0.000	0.00000
*	1736221003	Vial 80	1	Sample	10	3.27694e4	12.080	1.09251
*	1736221004	Vial 81	1	Sample	11	0.00000	0.000	0.00000
*	1736221005	Vial 82	1	Sample	12	0.00000	0.000	0.00000
*	1736222001	Vial 83	1	Sample	13	0.00000	0.000	0.00000
*	1736222002 100	Vial 84	1	Sample	14	2.60214e5	12.305	619.85991
*	1736222003 10X	Vial 85	1	Sample	15	6.72525e5	12.179	156.64971
*	582606 CCV@25	Vial 71	1	Control	16	1.18870e6	12.418	26.24661
*	582607 LODV@1.	Vial 72	1	Control	17	4.31770e4	12.270	1.08695
*	1736222004	Vial 86	1	Sample	18	0.00000	0.000	0.00000
*	1736222005 1K	Vial 87	1	Sample	19	1.37562e6	12.336	3.13188e4
*	1736222006 1K	Vial 88	1	Sample	20	6.15407e5	12.349	1.46859e4
*	1736222007 10X	Vial 89	1	Sample	21	9.38833e5	12.207	218.62778
*	1736222008 1K	Vial 90	1	Sample	22	1.37499e6	12.353	3.08094e4
*	1800210001	Vial 92	1	Sample	25	4.57609e4	11.942	1.45940
*	582609 LODV@1.	Vial 72	1	Control	26	4.08069e4	12.259	1.01832
*	582608 CCV@25	Vial 71	1	Control	27	1.19004e6	12.409	26.63706

#*	Sample	Location	Inj	SampleType	Run	CLO4-85 Area	CLO4-85 RT	CLO4-85 Amount
*	582599 CCV@25	Vial 71	1	Control	1	3.52643e5	12.404	25.76585
*	582600 LODV@1.	Vial 72	1	Control	2	1.39901e4	12.288	9.40188e-1
*	582601 ICS@1.	Vial 73	1	Control	3	1.03139e4	12.050	8.95950e-1
*	582602 LMB	Vial 74	1	Control	4	0.00000	0.000	0.00000
*	582603 LCS@5.	Vial 75	1	Control	5	6.50763e4	12.223	5.30195
*	1736221001	Vial 76	1	Sample	6	1.12375e4	12.091	7.66309e-1
*	582604 362211S	Vial 77	1	Sample	7	6.41747e4	12.116	4.88509
*	582605 362211D	Vial 78	1	Sample	8	5.29940e4	12.110	4.78922
*	1736221002	Vial 79	1	Sample	9	0.00000	0.000	0.00000
*	1736221003	Vial 80	1	Sample	10	1.04691e4	12.074	8.57578e-1
*	1736221004	Vial 81	1	Sample	11	0.00000	0.000	0.00000
*	1736221005	Vial 82	1	Sample	12	0.00000	0.000	0.00000
*	1736222001	Vial 83	1	Sample	13	0.00000	0.000	0.00000
*	1736222002 100	Vial 84	1	Sample	14	8.44845e4	12.321	607.51704
*	1736222003 10X	Vial 85	1	Sample	15	2.19018e5	12.203	158.99673
*	582606 CCV@25	Vial 71	1	Control	16	3.67172e5	12.433	25.75282
*	582607 LODV@1.	Vial 72	1	Control	17	1.52559e4	12.260	9.63602e-1
*	1736222004	Vial 86	1	Sample	18	0.00000	0.000	0.00000
*	1736222005 1K	Vial 87	1	Sample	19	4.14786e5	12.354	3.02457e4
*	1736222006 1K	Vial 88	1	Sample	20	1.97524e5	12.362	1.46723e4
*	1736222007 10X	Vial 89	1	Sample	21	2.99209e5	12.220	219.55160
*	1736222008 1K	Vial 90	1	Sample	22	4.16880e5	12.373	2.98845e4
*	1800210001	Vial 92	1	Sample	25	1.87732e4	11.977	1.62643
*	582609 LODV@1.	Vial 72	1	Control	26	1.60463e4	12.270	1.01089
*	582608 CCV@25	Vial 71	1	Control	27	3.65901e5	12.425	26.03858

#*	Sample	Location	Inj	SampleType	Run	CLO4-89-ISTD Area	CLO4-89-ISTD RT	CLO4-89-ISTD Amount
*	582599 CCV@25	Vial 71	1	Control	1	1.77131e5	12.405	5.00000
*	582600 LODV@1.	Vial 72	1	Control	2	1.75472e5	12.294	5.00000

Batch Report: C:\HPCHEM\1\DATA\08JAN18D\08JAN18D.B

#*	Sample	Location	Inj	SampleType	Run	CLO4-89-ISTD Area	CLO4-89-ISTD RT	CLO4-89-ISTD Amount
*	582601 ICS@1.	Vial 73	1	Control	3	1.34582e5	12.058	5.00000
*	582602 LMB	Vial 74	1	Control	4	1.82149e5	12.427	5.00000
*	582603 LCS@5.	Vial 75	1	Control	5	1.66838e5	12.232	5.00000
*	1736221001	Vial 76	1	Sample	6	1.66279e5	12.070	5.00000
*	582604 362211S	Vial 77	1	Sample	7	1.78298e5	12.114	5.00000
*	582605 362211D	Vial 78	1	Sample	8	1.50118e5	12.119	5.00000
*	1736221002	Vial 79	1	Sample	9	1.39148e5	12.106	5.00000
*	1736221003	Vial 80	1	Sample	10	1.41559e5	12.094	5.00000
*	1736221004	Vial 81	1	Sample	11	1.63910e5	12.197	5.00000
*	1736221005	Vial 82	1	Sample	12	1.69085e5	12.238	5.00000
*	1736222001	Vial 83	1	Sample	13	1.63059e5	11.956	5.00000
*	1736222002 100	Vial 84	1	Sample	14	1.89341e5	12.321	500.00000
*	1736222003 10X	Vial 85	1	Sample	15	1.84162e5	12.202	50.00000
*	582606 CCV@25	Vial 71	1	Control	16	1.84530e5	12.435	5.00000
*	582607 LODV@1.	Vial 72	1	Control	17	1.87499e5	12.281	5.00000
*	1736222004	Vial 86	1	Sample	18	1.57843e5	12.007	5.00000
*	1736222005 1K	Vial 87	1	Sample	19	1.74782e5	12.358	5000.00000
*	1736222006 1K	Vial 88	1	Sample	20	1.80647e5	12.371	5000.00000
*	1736222007 10X	Vial 89	1	Sample	21	1.78667e5	12.222	50.00000
*	1736222008 1K	Vial 90	1	Sample	22	1.78008e5	12.374	5000.00000
*	1800210001	Vial 92	1	Sample	25	1.46856e5	11.966	5.00000
*	582609 LODV@1.	Vial 72	1	Control	26	1.89512e5	12.280	5.00000
*	582608 CCV@25	Vial 71	1	Control	27	1.81696e5	12.430	5.00000

*** End of Report ***

Sequence: C:\HPCHEM\1\SEQUENCE\CLO4\2018\JAN\08JAN18D.S

Sequence Table:

Method and Injection Info Part:

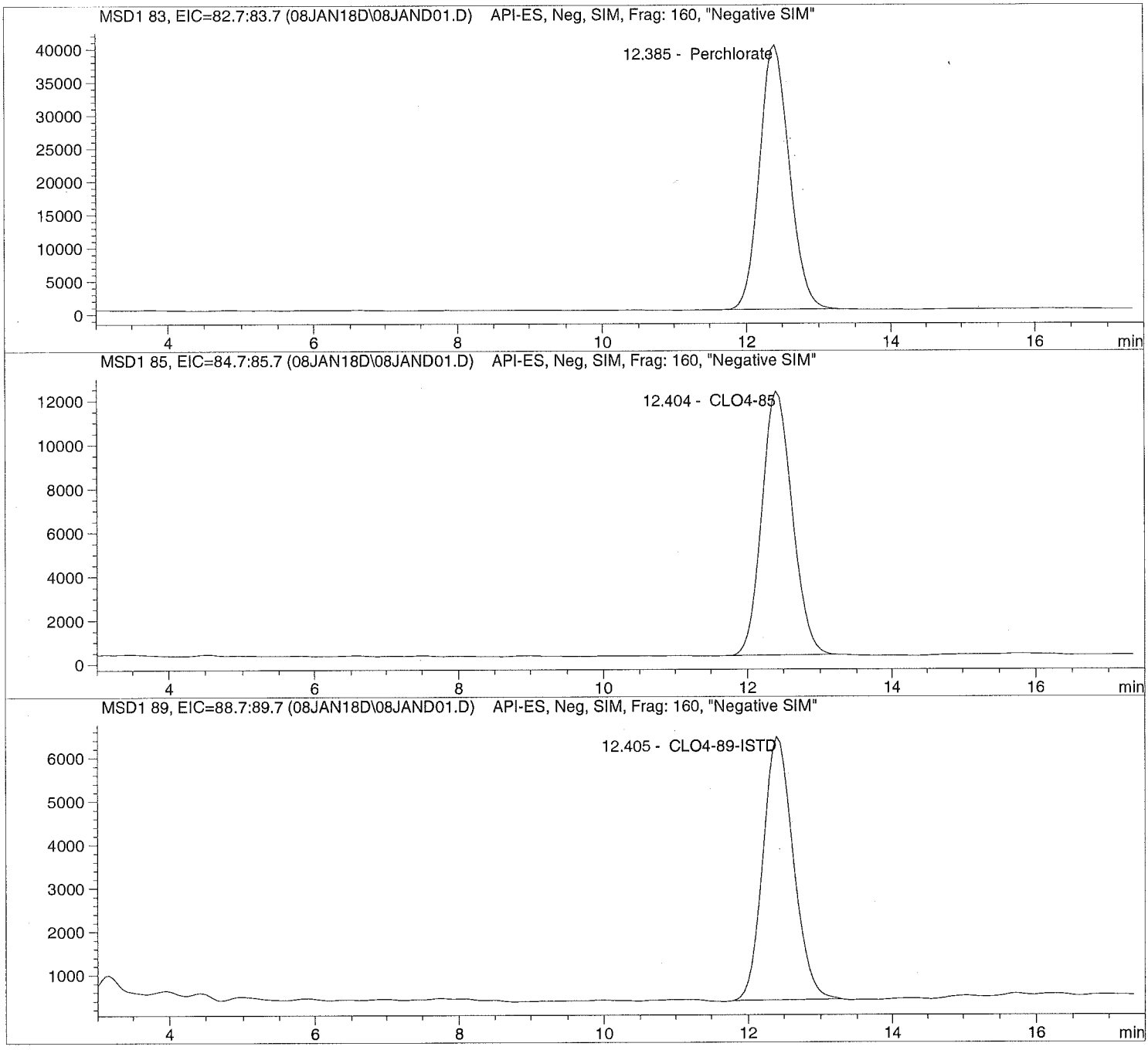
Line	Location	SampleName	Method	Inj	SampleType	InjVolume	DataFile
1	Vial 71	582599 CCV@25	CLO4-DOD	1	Ctrl Samp		
2	Vial 72	582600 LODV@1.	CLO4-DOD	1	Ctrl Samp		
3	Vial 73	582601 ICS@1.	CLO4-DOD	1	Ctrl Samp		
4	Vial 74	582602 LMB	CLO4-DOD	1	Ctrl Samp		
5	Vial 75	582603 LCS@5.	CLO4-DOD	1	Ctrl Samp		
6	Vial 76	1736221001	CLO4-DOD	1	Sample		
7	Vial 77	582604 362211S	CLO4-DOD	1	Sample		
8	Vial 78	582605 362211D	CLO4-DOD	1	Sample		
9	Vial 79	1736221002	CLO4-DOD	1	Sample		
10	Vial 80	1736221003	CLO4-DOD	1	Sample		
11	Vial 81	1736221004	CLO4-DOD	1	Sample		
12	Vial 82	1736221005	CLO4-DOD	1	Sample		
13	Vial 83	1736222001	CLO4-DOD	1	Sample		
14	Vial 84	1736222002 100	CLO4-DOD	1	Sample		
15	Vial 85	1736222003 10X	CLO4-DOD	1	Sample		
16	Vial 71	582606 CCV@25	CLO4-DOD	1	Ctrl Samp		
17	Vial 72	582607 LODV@1.	CLO4-DOD	1	Ctrl Samp		
18	Vial 86	1736222004	CLO4-DOD	1	Sample		
19	Vial 87	1736222005 1K	CLO4-DOD	1	Sample		
20	Vial 88	1736222006 1K	CLO4-DOD	1	Sample		
21	Vial 89	1736222007 10X	CLO4-DOD	1	Sample		
22	Vial 90	1736222008 1K	CLO4-DOD	1	Sample		
23	Vial 91	1800210001 10X	CLO4-DOD	1	Sample		
24	Vial 71	582608 CCV@25	CLO4-DOD	1	Ctrl Samp		
25	Vial 92	1800210001	CLO4-DOD	1	Sample		
26	Vial 72	582609 LODV@1.	CLO4-DOD	1	Ctrl Samp		
27	Vial 71	582608 CCV@25	CLO4-DOD	1	Ctrl Samp		

Data file: C:\HPCHEM\1\DATA\08JAN18D\08JAND01.D Sample Name: 582599 CCV@25

Injection Date:	1/08/2018 08:17:41	Seq Line:	1
Sample Name:	582599 CCV@25	Location:	Vial 71
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\08JAN18D\08JAND01.D Sample Name: 582599 CCV@25

Injection Date:	1/08/2018 08:17:41	Seq Line:	1
Sample Name:	582599 CCV@25	Location:	Vial 71
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Wed, 20. Dec. 2017,08:01:52 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
12.385	BBA	1145492.5	26.3378	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.404	PBA	352643.5	25.7658	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.405	PBA	177130.7	5.0000	CLO4-89-ISTD

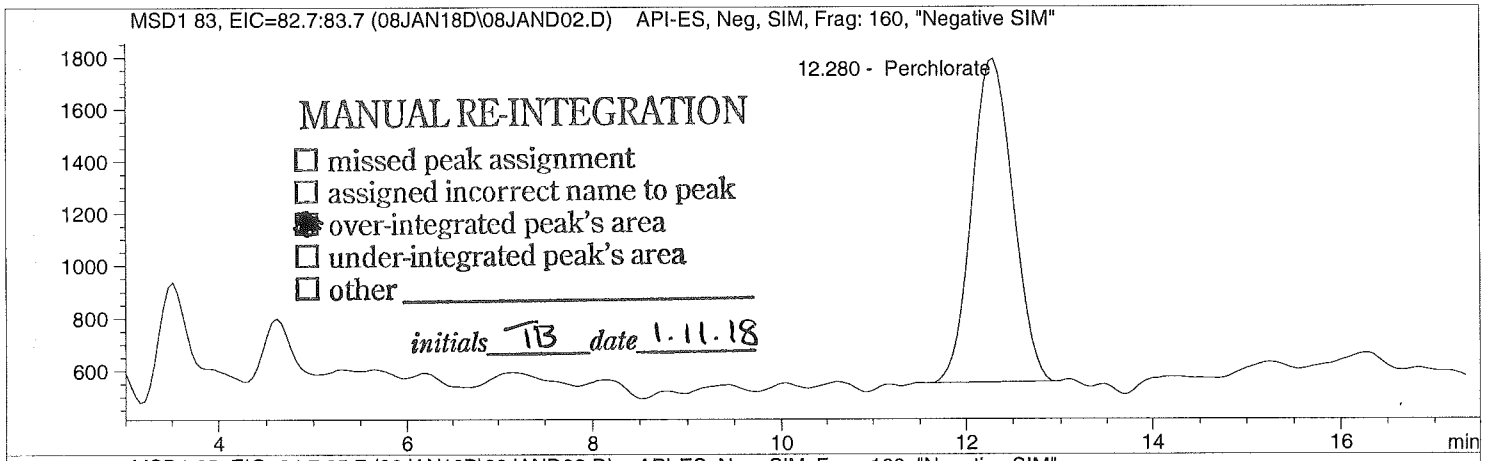
*** End of Report ***

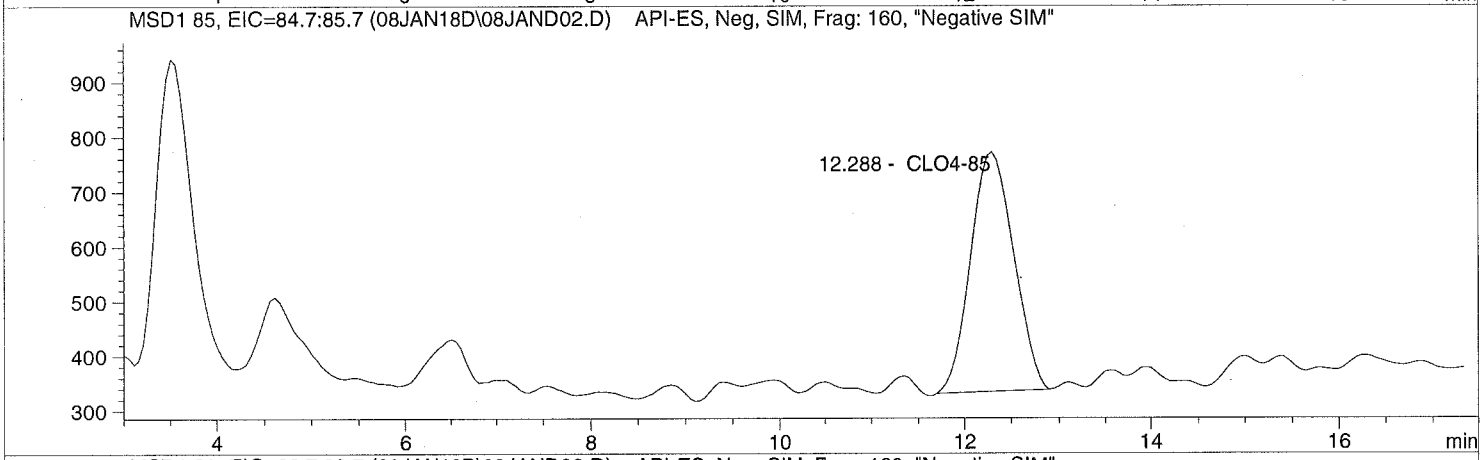
Data file: C:\HPCHEM\1\DATA\08JAN18D\08JAND02.D Sample Name: 582600 LODV@1.

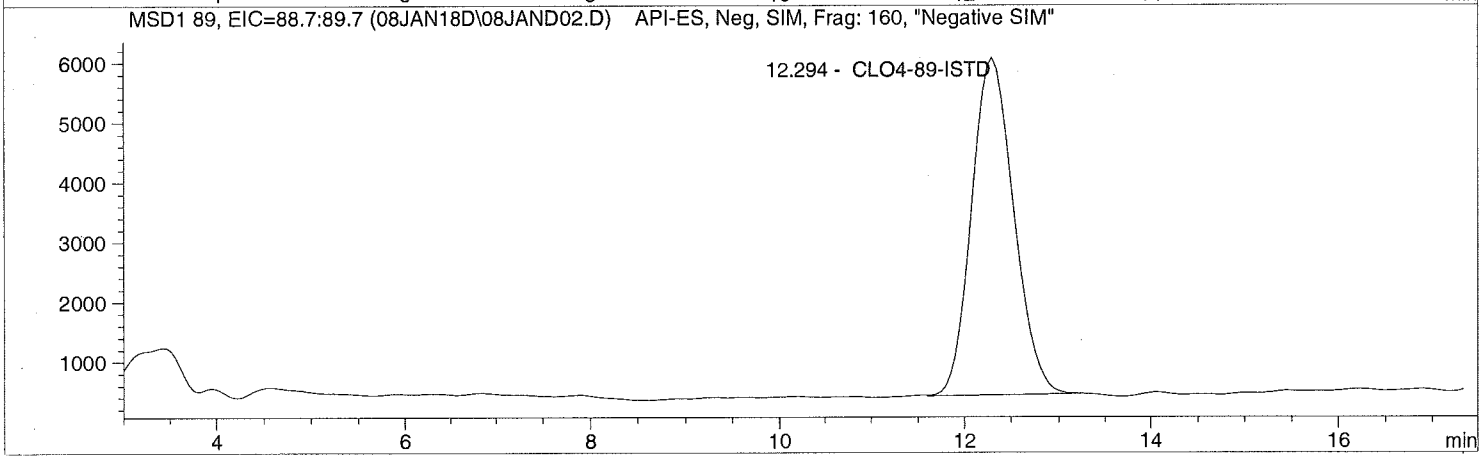
Injection Date:	1/08/2018 08:36:51	Seq Line:	2
Sample Name:	582600 LODV@1.	Location:	Vial 72
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis







Data file: C:\HPCHEM\1\DATA\08JAN18D\08JAND02.D Sample Name: 582600 LODV@1.

Injection Date:	1/08/2018 08:36:51	Seq Line:	2
Sample Name:	582600 LODV@1.	Location:	Vial 72
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Wed, 20. Dec. 2017,08:01:52 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
12.280	MM	37680.5	1.0156	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.288	PBA	13990.1	0.9402	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.294	BBA	175472.0	5.0000	CLO4-89-ISTD

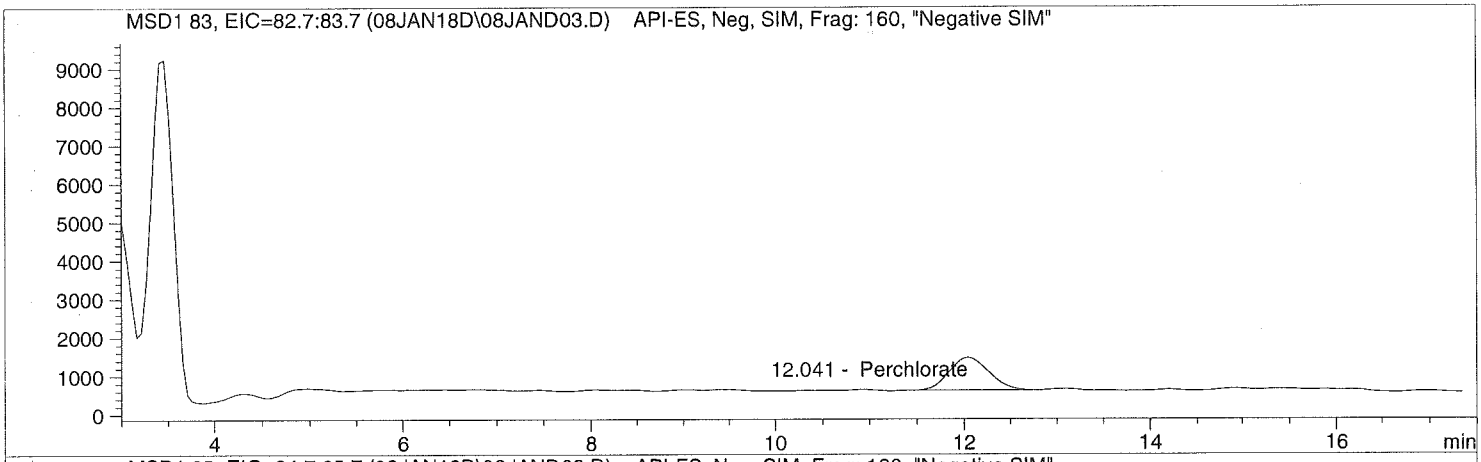
*** End of Report ***

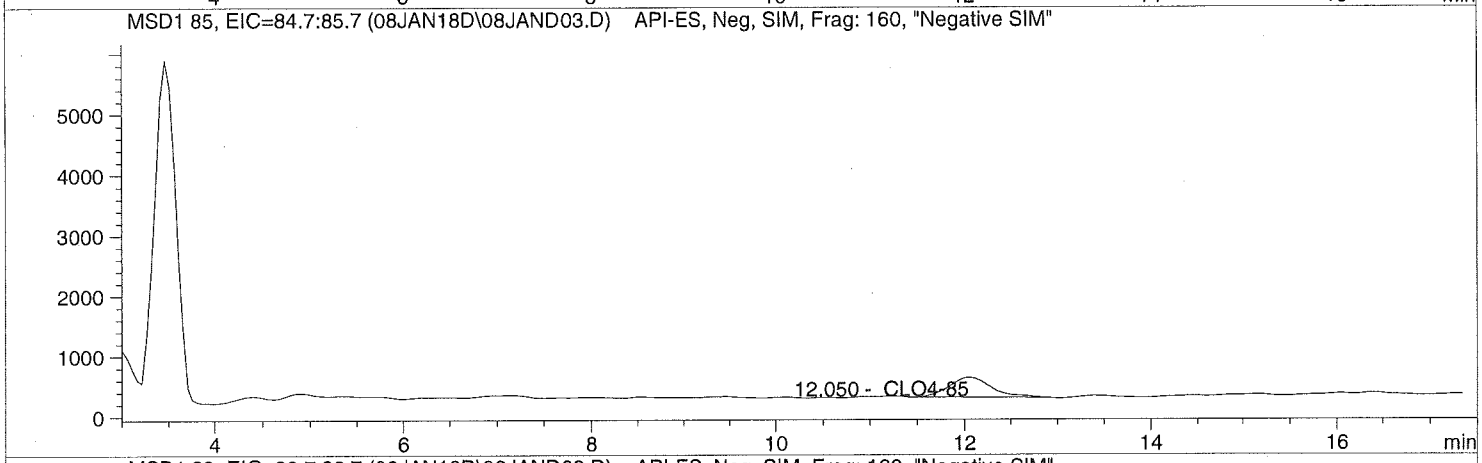
Data file: C:\HPCHEM\1\DATA\08JAN18D\08JAND03.D Sample Name: 582601 ICS@1.

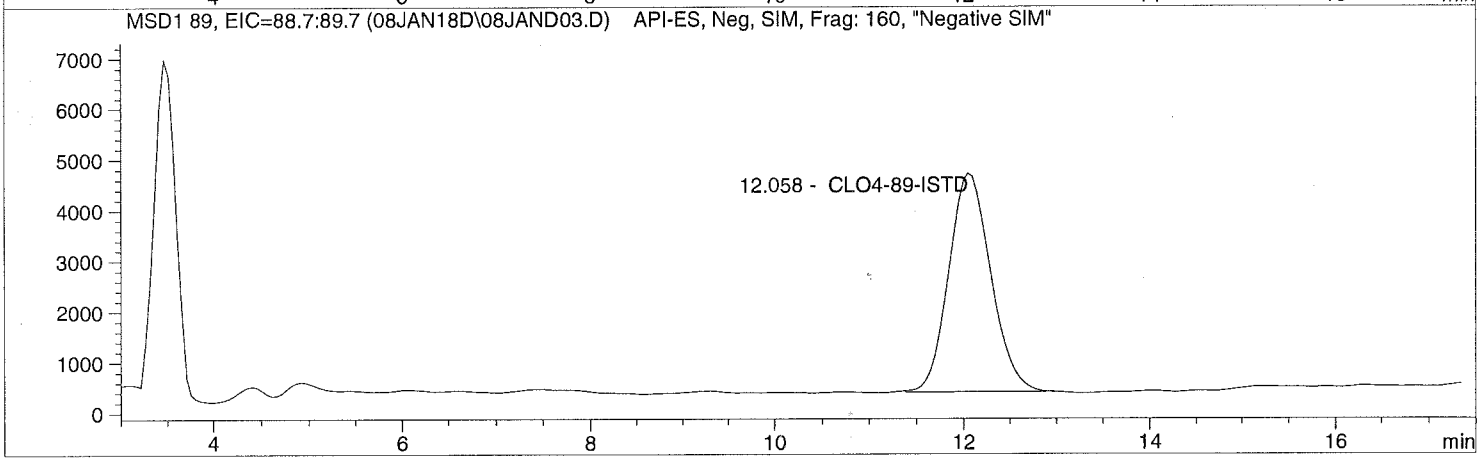
Injection Date:	1/08/2018 08:56:03	Seq Line:	3
Sample Name:	582601 ICS@1.	Location:	Vial 73
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis







Data file: C:\HPCHEM\1\DATA\08JAN18D\08JAND03.D Sample Name: 582601 ICS@1.

Injection Date:	1/08/2018 08:56:03	Seq Line:	3
Sample Name:	582601 ICS@1.	Location:	Vial 73
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Wed, 20. Dec. 2017,08:01:52 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
12.041	PBA	24937.1	0.8803	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.050	PBA	10313.9	0.8959	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.058	BBA	134582.5	5.0000	CLO4-89-ISTD

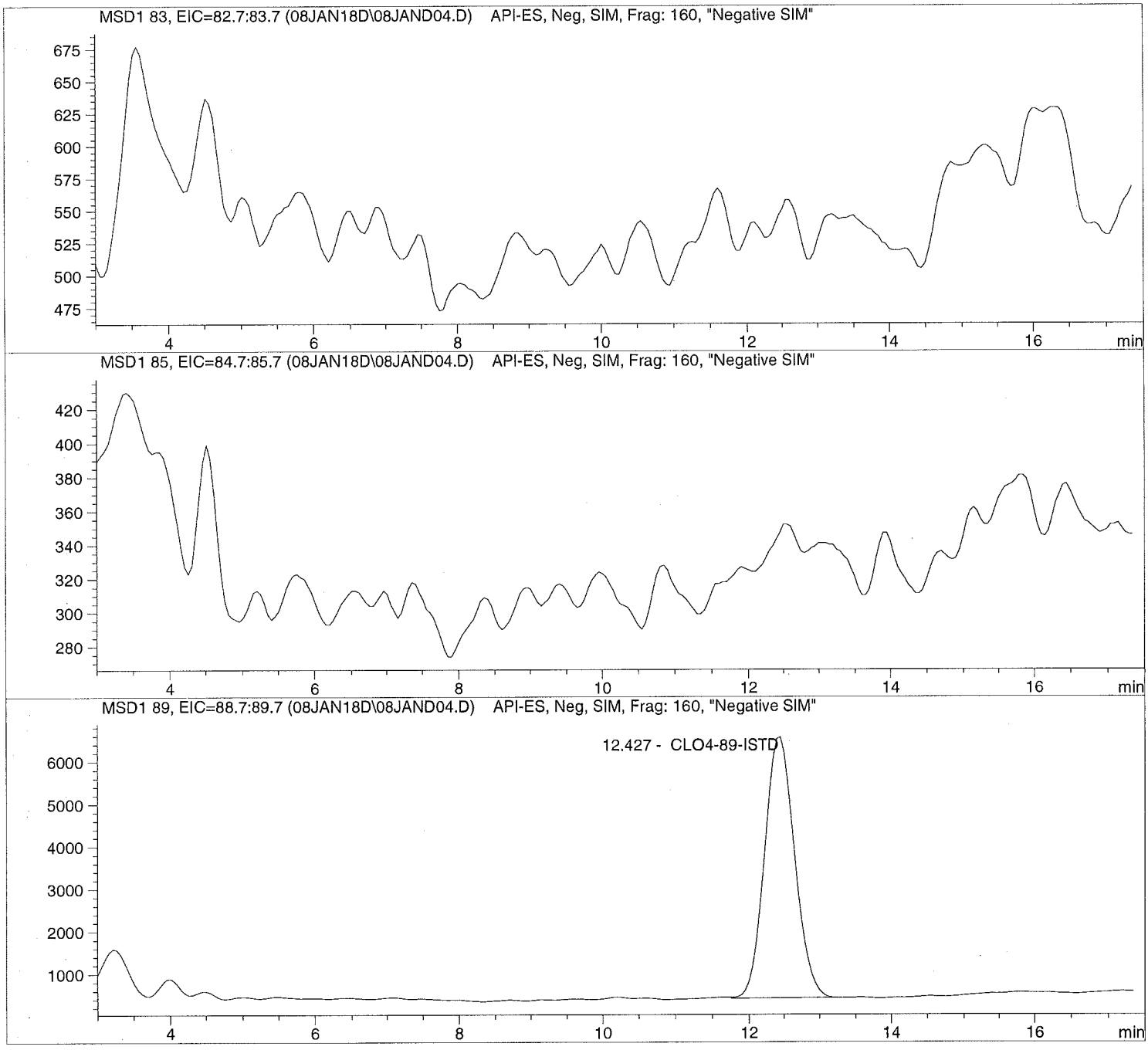
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\08JAN18D\08JAND04.D Sample Name: 582602 LMB

Injection Date:	1/08/2018 09:15:17	Seq Line:	4
Sample Name:	582602 LMB	Location:	Vial 74
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\08JAN18D\08JAND04.D Sample Name: 582602 LMB

Injection Date:	1/08/2018 09:15:17	Seq Line:	4
Sample Name:	582602 LMB	Location:	Vial 74
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Wed, 20. Dec. 2017,08:01:52 am
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
12.427	BBA	182149.0	5.0000	CLO4-89-ISTD

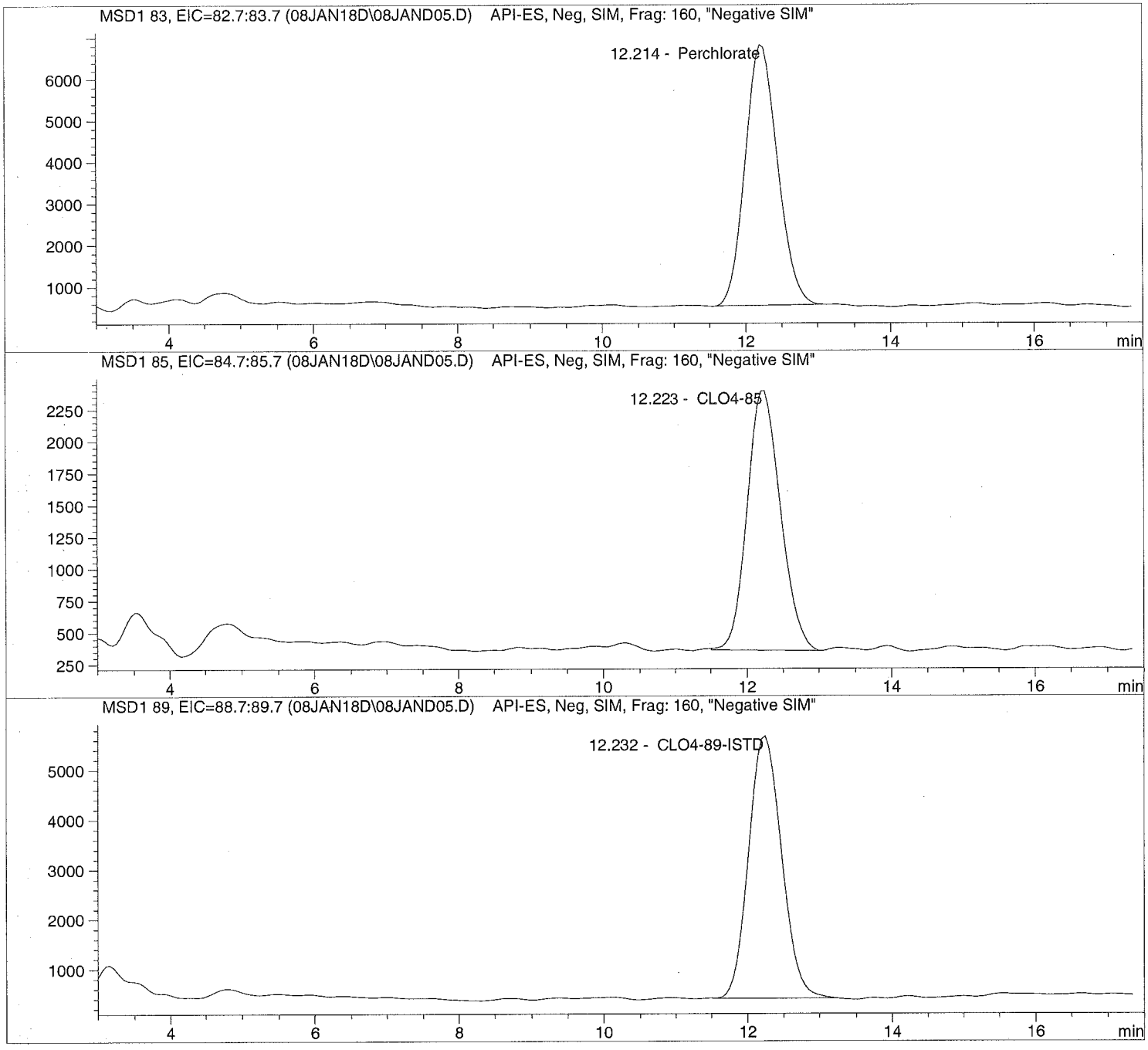
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\08JAN18D\08JAND05.D Sample Name: 582603 LCS@5.

Injection Date:	1/08/2018 09:34:27	Seq Line:	5
Sample Name:	582603 LCS@5.	Location:	Vial 75
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\08JAN18D\08JAND05.D Sample Name: 582603 LCS@5.

Injection Date:	1/08/2018 09:34:27	Seq Line:	5
Sample Name:	582603 LCS@5.	Location:	Vial 75
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Wed, 20. Dec. 2017,08:01:52 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
12.214	PBA	194972.6	5.2991	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.223	BBA	65076.3	5.3019	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.232	BBA	166837.8	5.0000	CLO4-89-ISTD

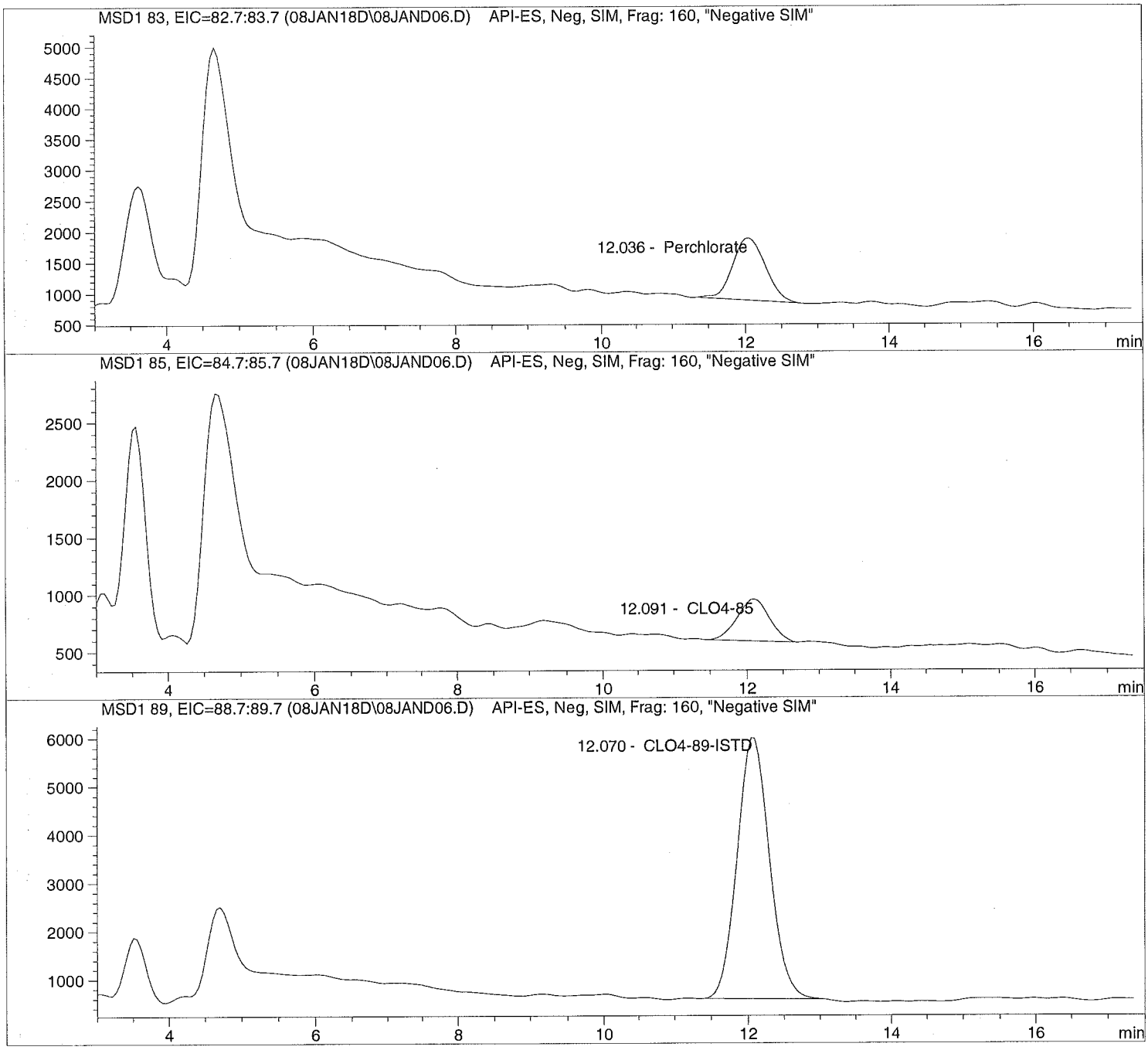
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\08JAN18D\08JAND06.D Sample Name: 1736221001

Injection Date:	1/08/2018 09:55:06	Seq Line:	6
Sample Name:	1736221001	Location:	Vial 76
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\08JAN18D\08JAND06.D Sample Name: 1736221001

Injection Date:	1/08/2018 09:55:06	Seq Line:	6
Sample Name:	1736221001	Location:	Vial 76
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Wed, 20. Dec. 2017,08:01:52 am
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
12.036	PBA	31087.2	0.8880	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.091	PBA	11237.5	0.7663	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.070	BBA	166279.1	5.0000	CLO4-89-ISTD

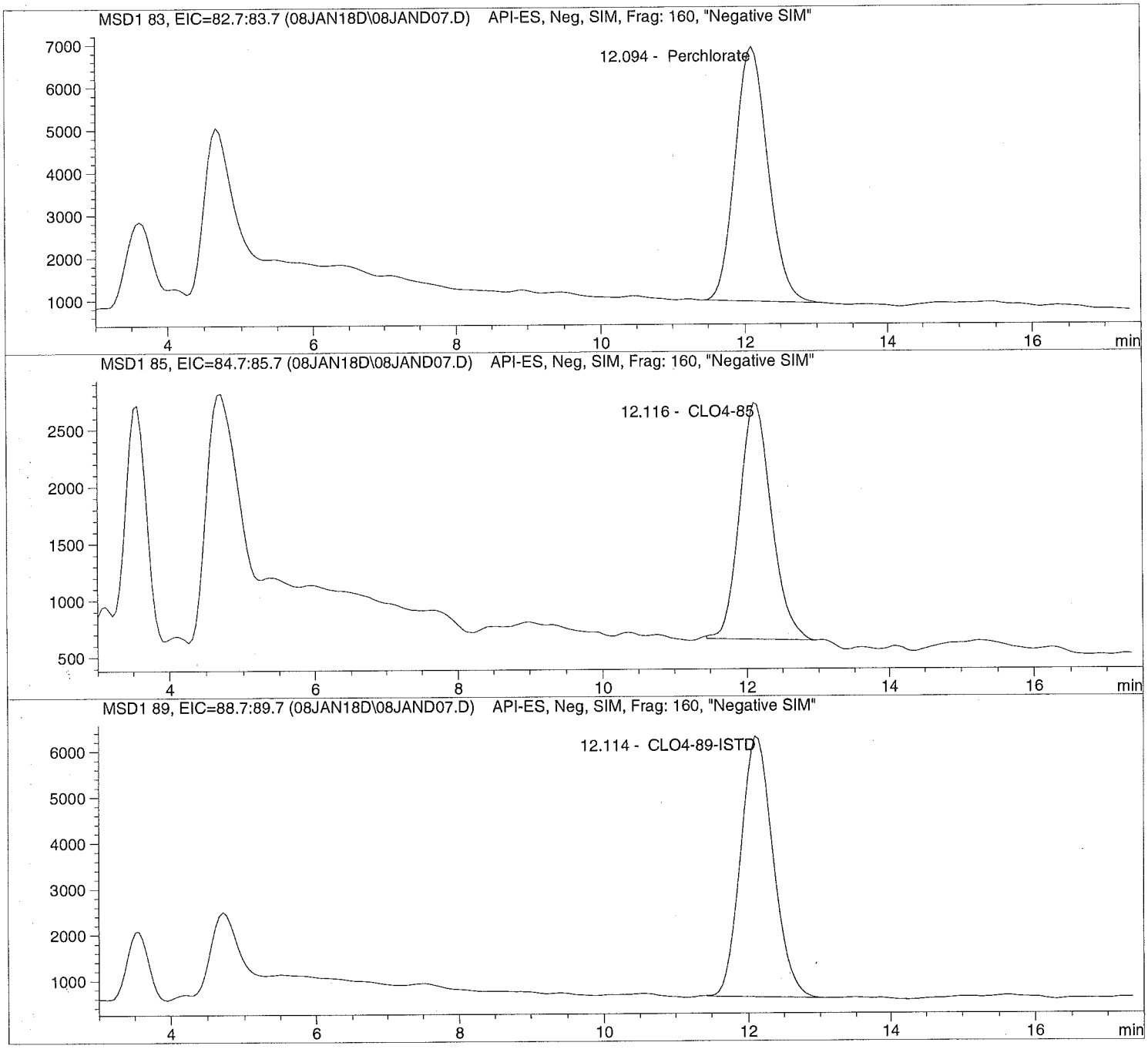
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\08JAN18D\08JAND07.D Sample Name: 582604 362211S

Injection Date:	1/08/2018 10:14:18	Seq Line:	7
Sample Name:	582604 362211S	Location:	Vial 77
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\08JAN18D\08JAND07.D Sample Name: 582604 362211S

Injection Date:	1/08/2018 10:14:18	Seq Line:	7
Sample Name:	582604 362211S	Location:	Vial 77
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Wed, 20. Dec. 2017,08:01:52 am
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
12.094	PBA	188371.2	4.8052	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.116	BBA	64174.7	4.8851	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.114	BBA	178297.8	5.0000	CLO4-89-ISTD

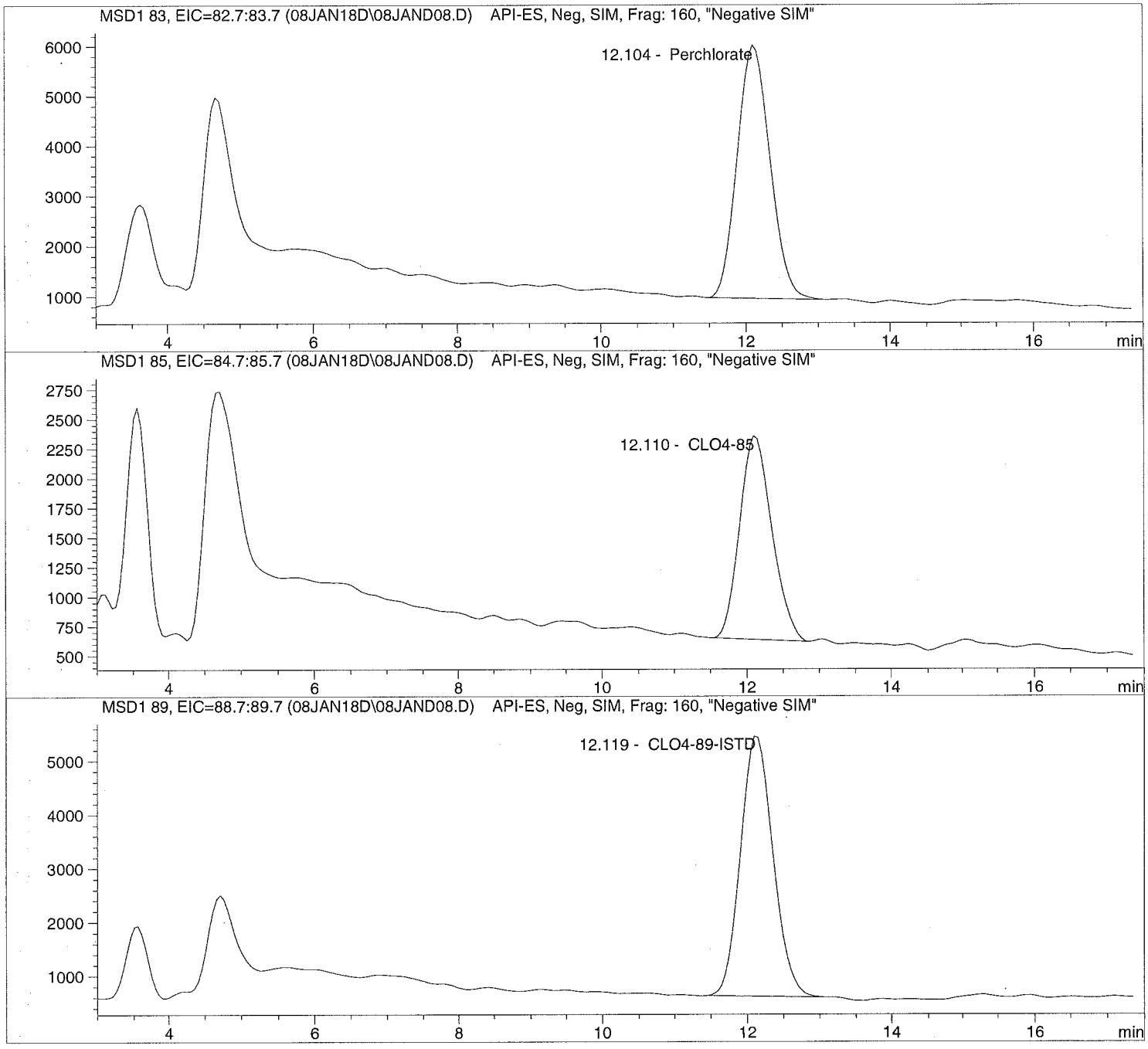
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\08JAN18D\08JAND08.D Sample Name: 582605 362211D

Injection Date:	1/08/2018 10:33:30	Seq Line:	8
Sample Name:	582605 362211D	Location:	Vial 78
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\08JAN18D\08JAND08.D Sample Name: 582605 362211D

Injection Date:	1/08/2018 10:33:30	Seq Line:	8
Sample Name:	582605 362211D	Location:	Vial 78
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Wed, 20. Dec. 2017,08:01:52 am
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
12.104	PBA	158239.9	4.7946	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.110	PBA	52994.0	4.7892	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.119	PBA	150118.3	5.0000	CLO4-89-ISTD

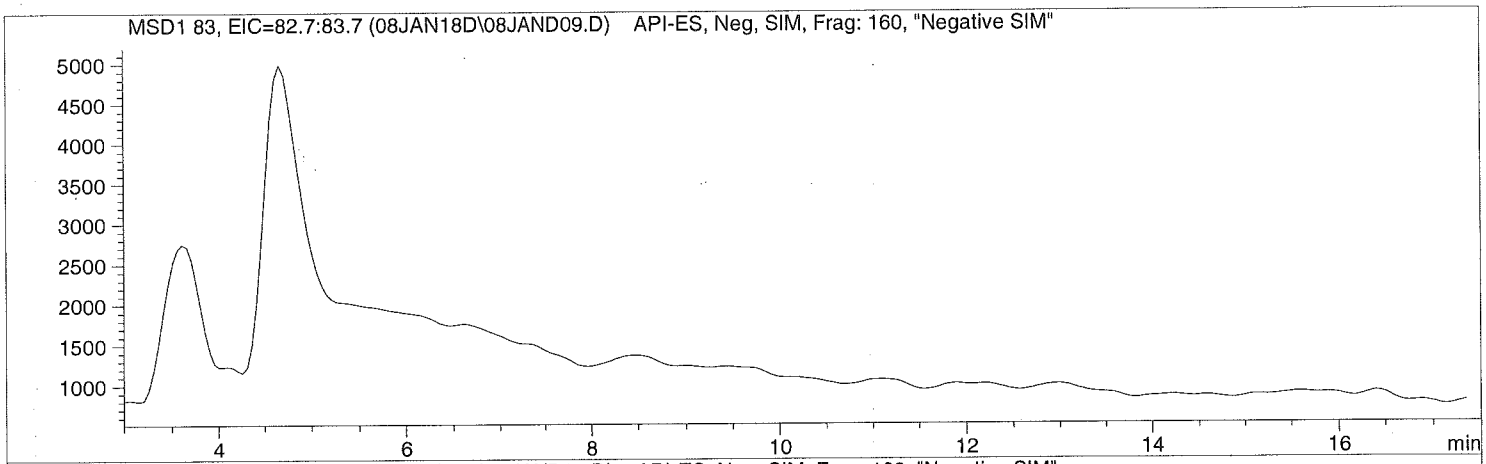
*** End of Report ***

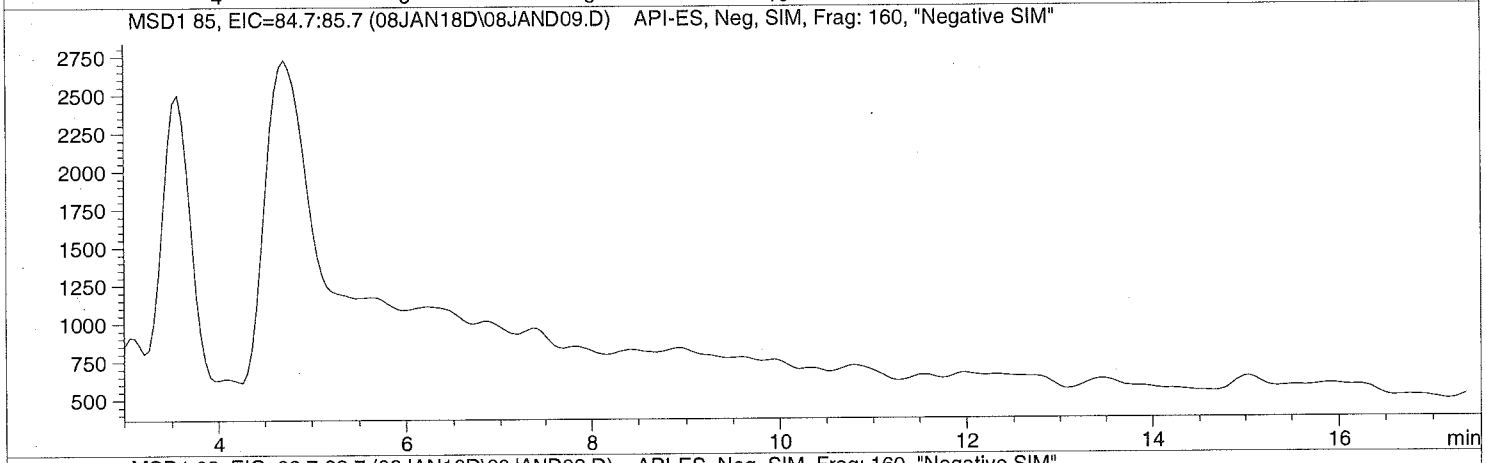
Data file: C:\HPCHEM\1\DATA\08JAN18D\08JAND09.D Sample Name: 1736221002

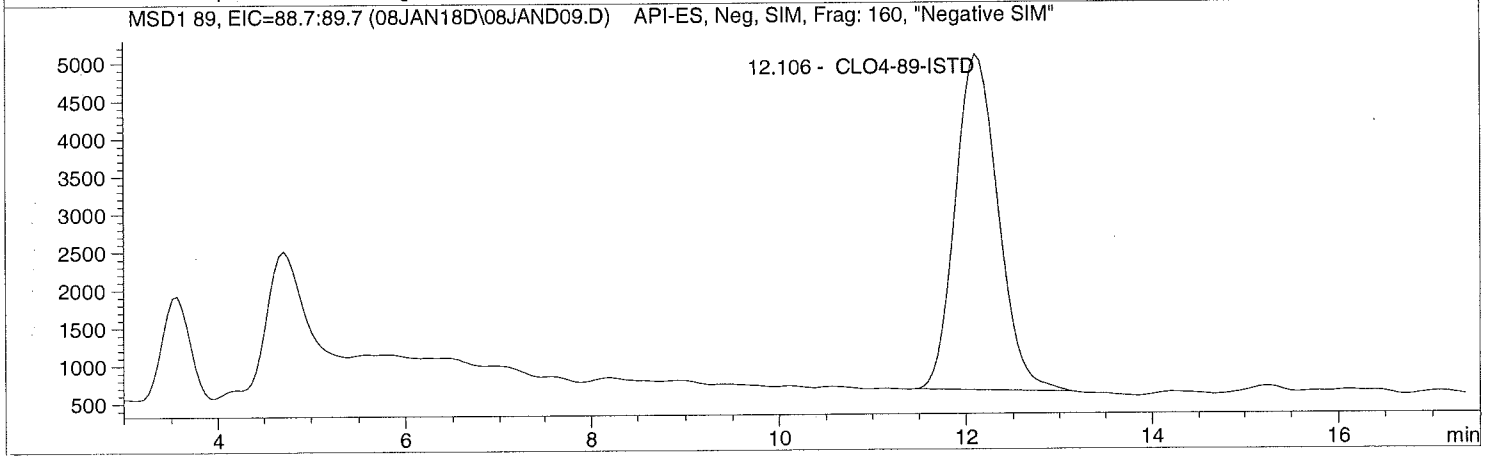
Injection Date:	1/08/2018 10:52:41	Seq Line:	9
Sample Name:	1736221002	Location:	Vial 79
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis







Data file: C:\HPCHEM\1\DATA\08JAN18D\08JAND09.D Sample Name: 1736221002

Injection Date:	1/08/2018 10:52:41	Seq Line:	9
Sample Name:	1736221002	Location:	Vial 79
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Wed, 20. Dec. 2017,08:01:52 am
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
12.106	BBA	139148.3	5.0000	CLO4-89-ISTD

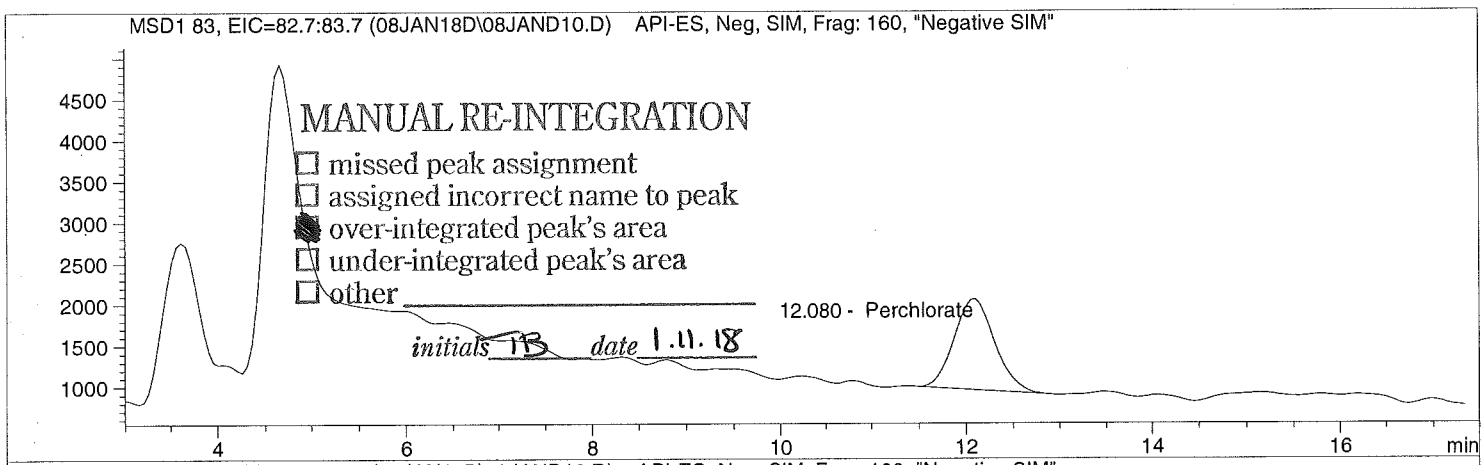
*** End of Report ***

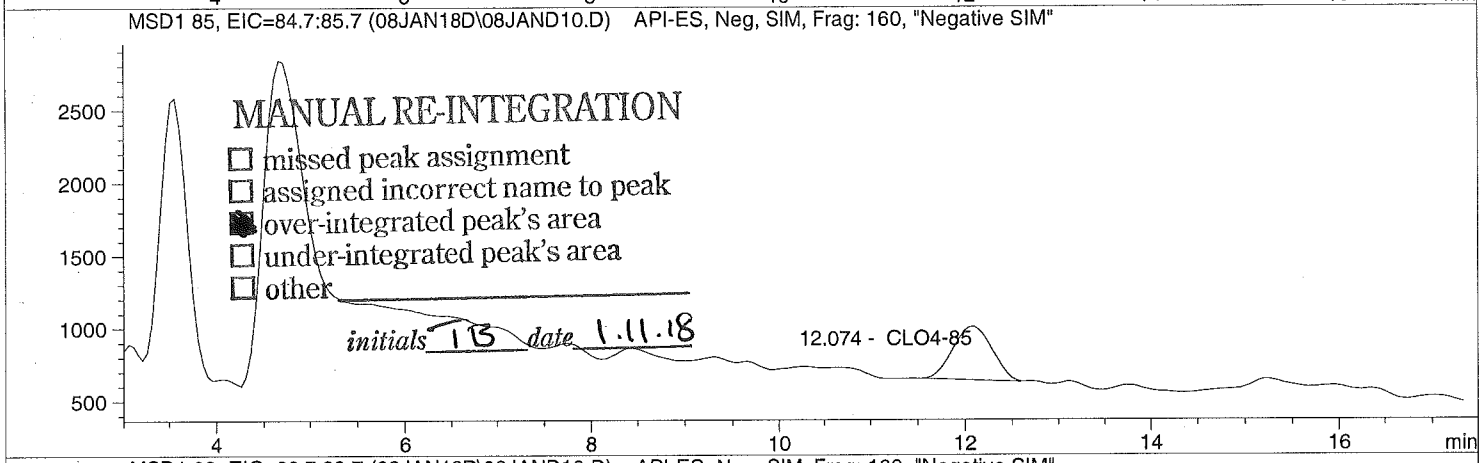
Data file: C:\HPCHEM\1\DATA\08JAN18D\08JAND10.D Sample Name: 1736221003

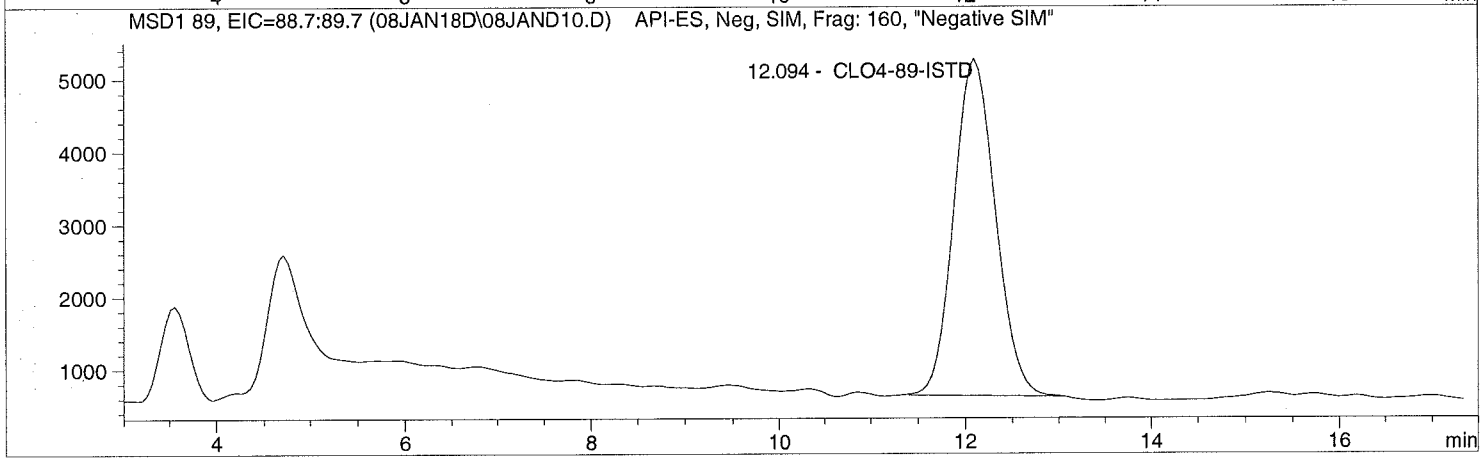
Injection Date:	1/08/2018 11:11:49	Seq Line:	10
Sample Name:	1736221003	Location:	Vial 80
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis







Data file: C:\HPCHEM\1\DATA\08JAN18D\08JAND10.D Sample Name: 1736221003

Injection Date:	1/08/2018 11:11:49	Seq Line:	10
Sample Name:	1736221003	Location:	Vial 80
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Wed, 20. Dec. 2017,08:01:52 am
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
12.080	MM	32769.4	1.0925	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.074	MM	10469.1	0.8576	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.094	BBA	141559.2	5.0000	CLO4-89-ISTD

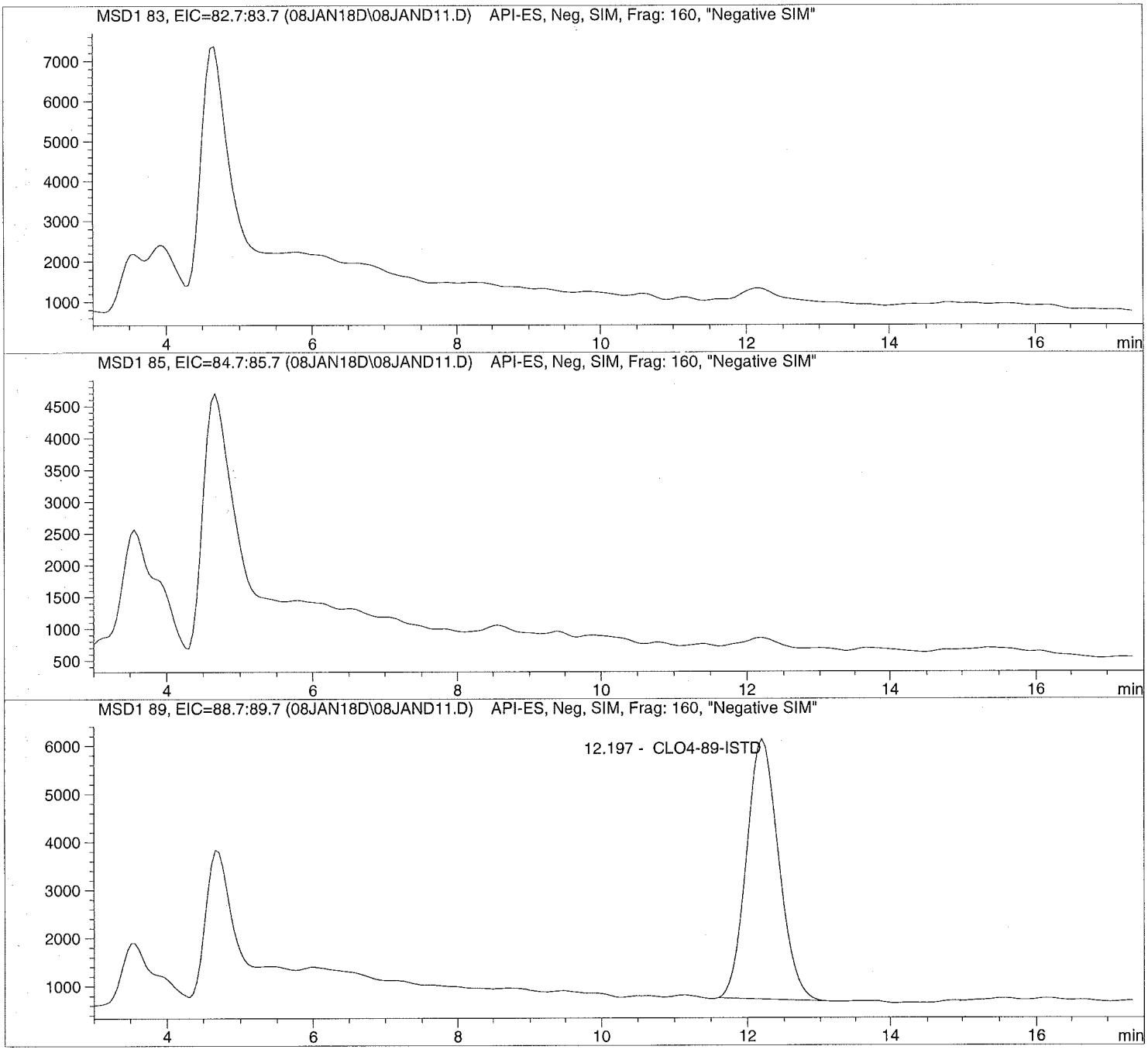
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\08JAN18D\08JAND11.D Sample Name: 1736221004

Injection Date:	1/08/2018 11:31:01	Seq Line:	11
Sample Name:	1736221004	Location:	Vial 81
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\08JAN18D\08JAND11.D Sample Name: 1736221004

Injection Date:	1/08/2018 11:31:01	Seq Line:	11
Sample Name:	1736221004	Location:	Vial 81
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis

Sample Information

Sorted By: Signal
Calib. Data Modified: Wed, 20. Dec. 2017,08:01:52 am
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
12.197	PBA	163910.3	5.0000	CLO4-89-ISTD

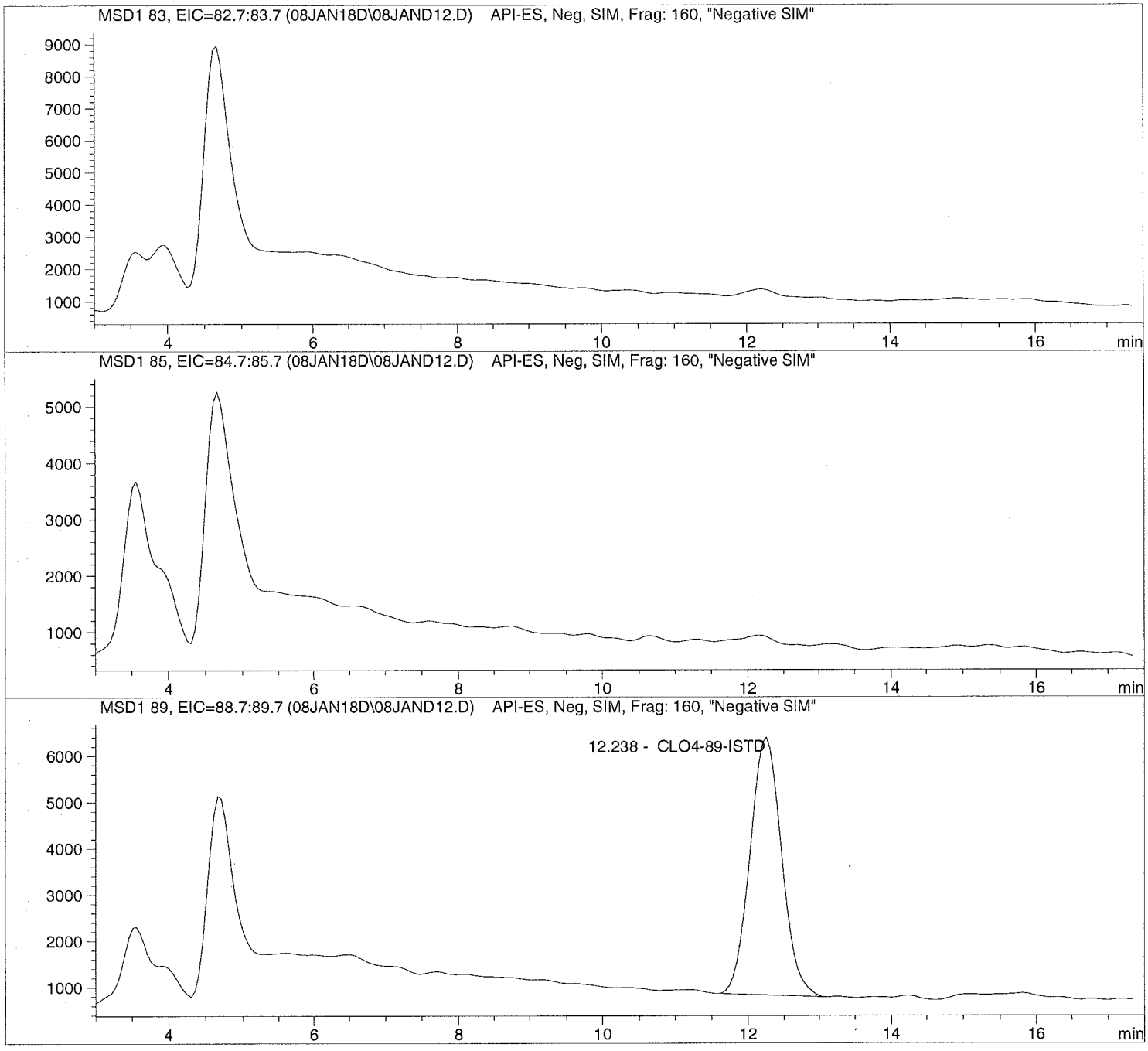
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\08JAN18D\08JAND12.D Sample Name: 1736221005

Injection Date:	1/08/2018 11:50:08	Seq Line:	12
Sample Name:	1736221005	Location:	Vial 82
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\08JAN18D\08JAND12.D Sample Name: 1736221005

Injection Date:	1/08/2018 11:50:08	Seq Line:	12
Sample Name:	1736221005	Location:	Vial 82
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Wed, 20. Dec. 2017,08:01:52 am
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
12.238	PBA	169084.7	5.0000	CLO4-89-ISTD

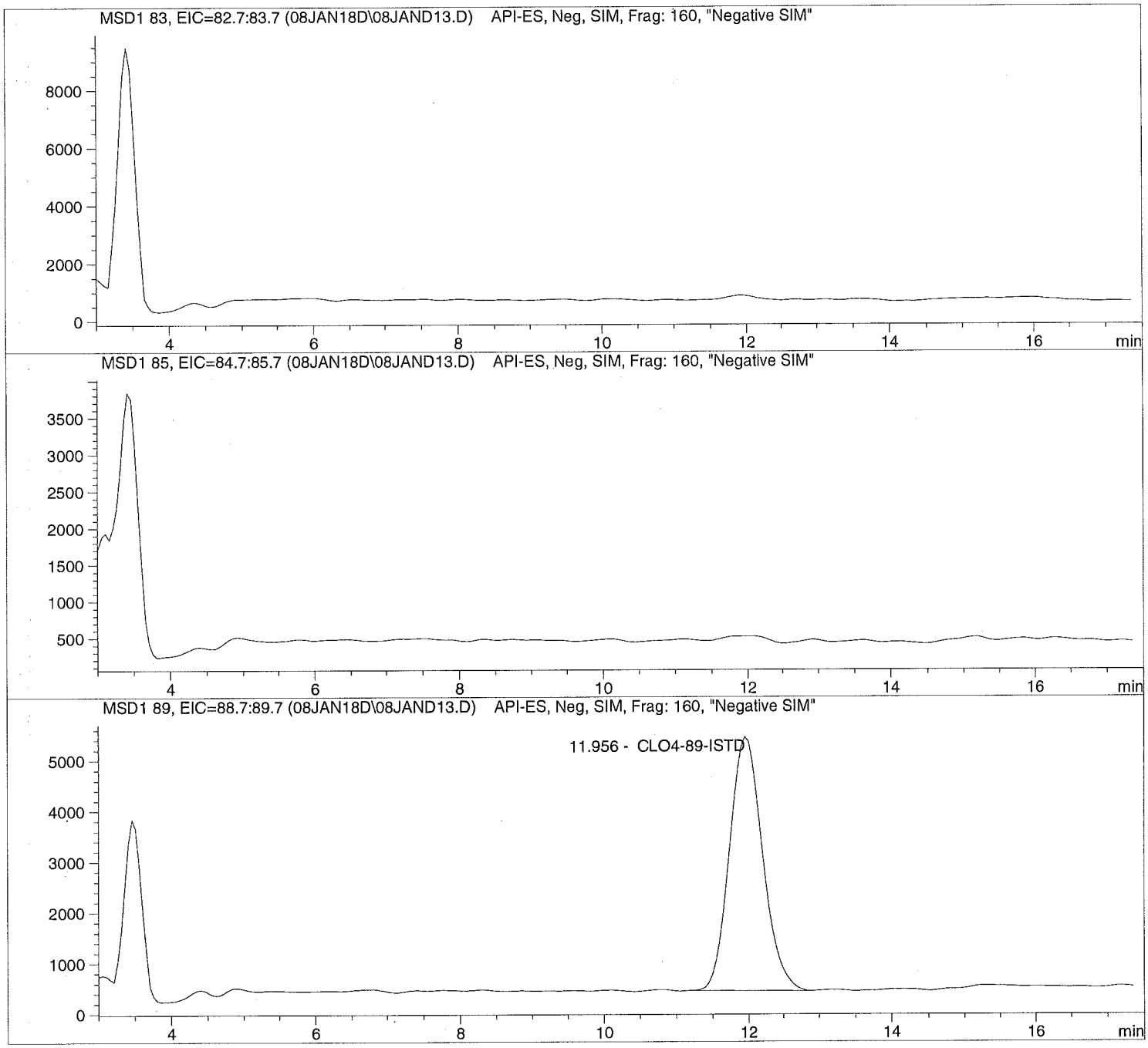
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\08JAN18D\08JAND13.D Sample Name: 1736222001

Injection Date:	1/08/2018 12:09:16	Seq Line:	13
Sample Name:	1736222001	Location:	Vial 83
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\08JAN18D\08JAND13.D Sample Name: 1736222001

Injection Date:	1/08/2018 12:09:16	Seq Line:	13
Sample Name:	1736222001	Location:	Vial 83
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Wed, 20. Dec. 2017,08:01:52 am
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
11.956	BBA	163058.7	5.0000	CLO4-89-ISTD

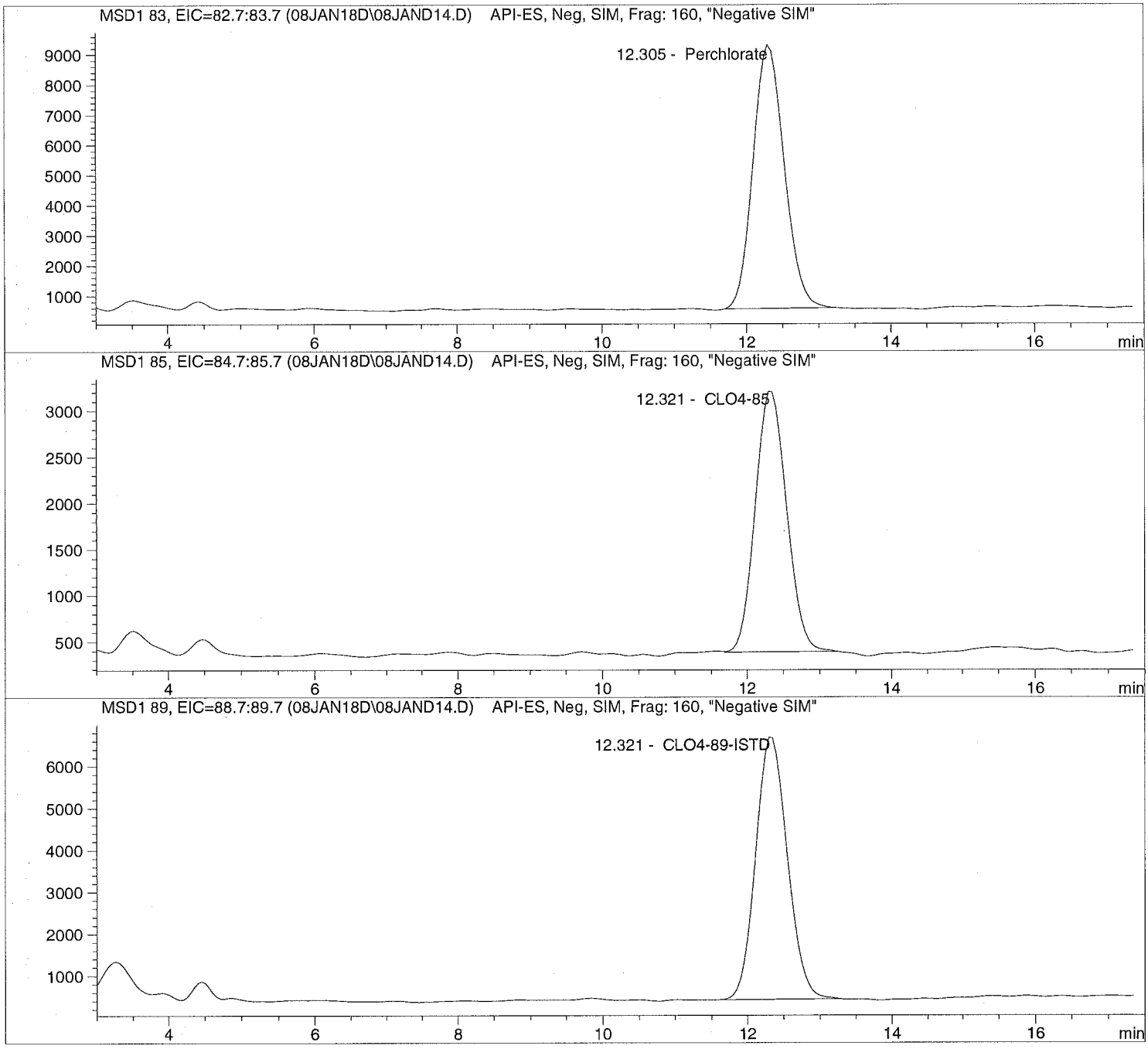
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\08JAN18D\08JAND14.D Sample Name: 1736222002 100

Injection Date:	1/08/2018 12:28:24	Seq Line:	14
Sample Name:	1736222002 100	Location:	Vial 84
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\08JAN18D\08JAND14.D Sample Name: 1736222002 100

Injection Date:	1/08/2018 12:28:24	Seq Line:	14
Sample Name:	1736222002 100	Location:	Vial 84
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Wed, 20. Dec. 2017,08:01:52 am
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
12.305	BBA	260213.5	619.8599	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.321	BBA	84484.5	607.5170	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.321	BBA	189341.2	500.0000	CLO4-89-ISTD

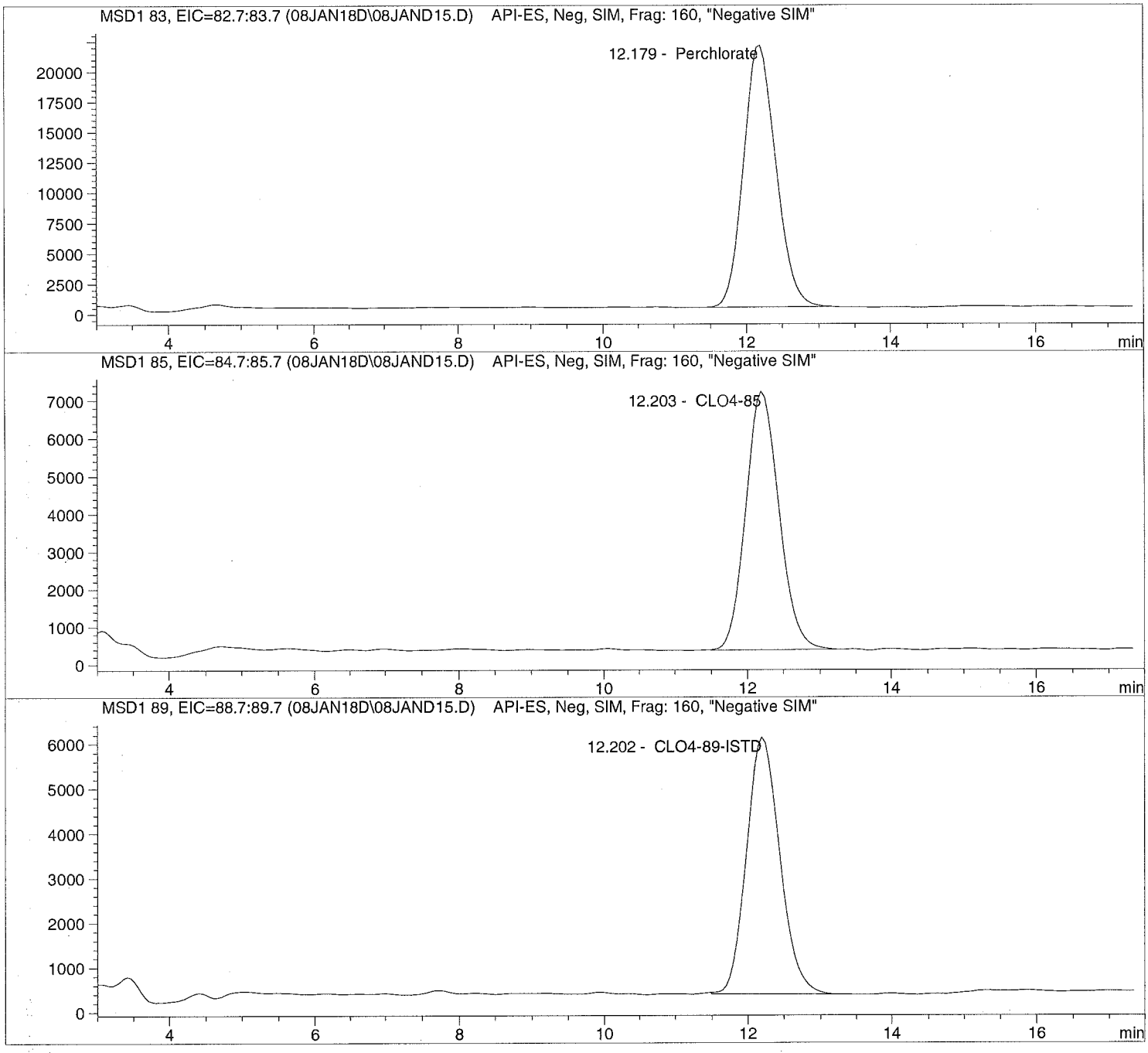
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\08JAN18D\08JAND15.D Sample Name: 1736222003 10X

Injection Date:	1/08/2018 12:47:33	Seq Line:	15
Sample Name:	1736222003 10X	Location:	Vial 85
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\08JAN18D\08JAND15.D Sample Name: 1736222003 10X

Injection Date:	1/08/2018 12:47:33	Seq Line:	15
Sample Name:	1736222003 10X	Location:	Vial 85
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Wed, 20. Dec. 2017,08:01:52 am
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
12.179	PBA	672525.0	156.6497	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.203	BBA	219017.6	158.9967	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.202	BBA	184162.5	50.0000	CLO4-89-ISTD

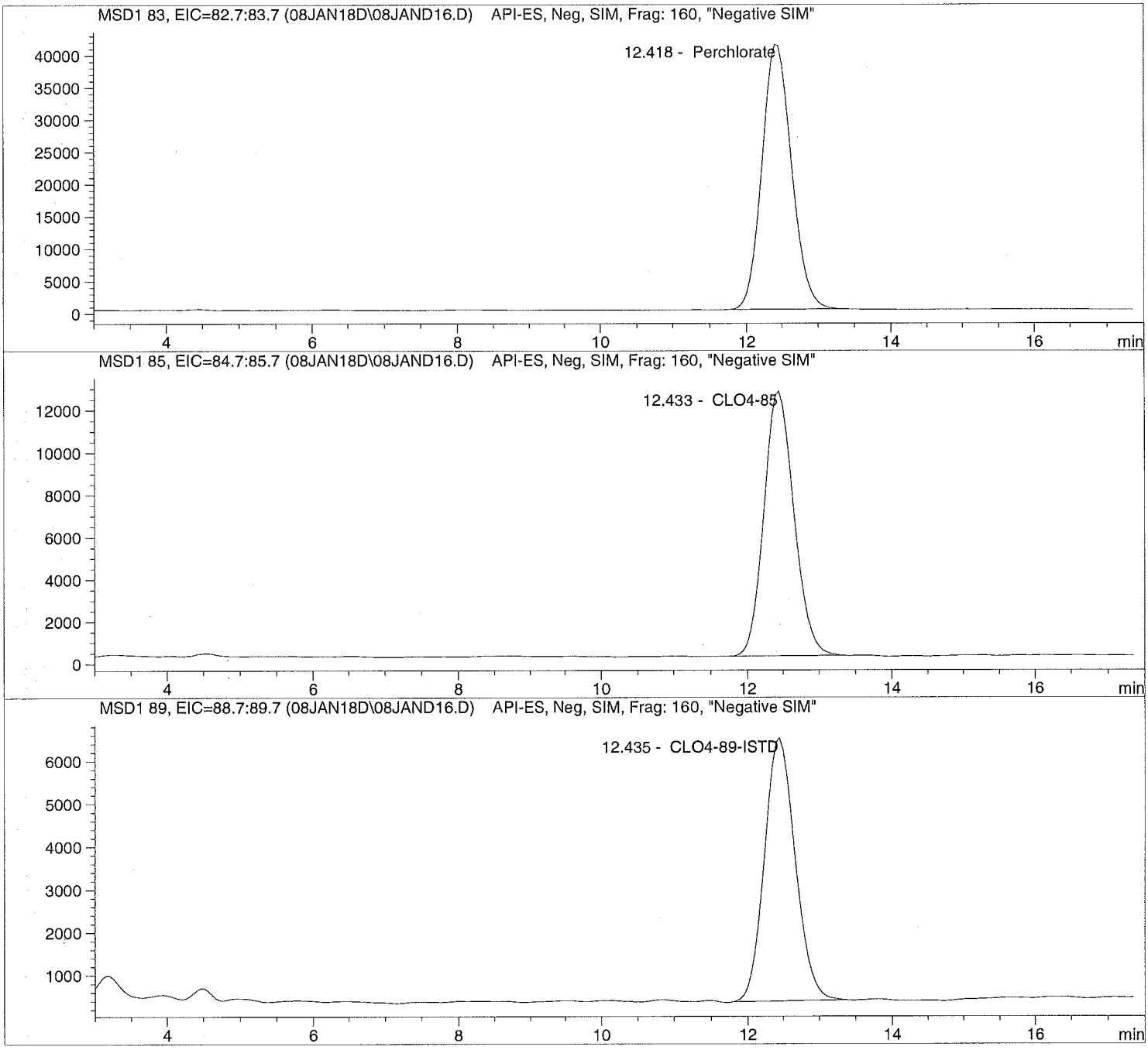
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\08JAN18D\08JAND16.D Sample Name: 582606 CCV@25

Injection Date:	1/08/2018 13:08:12	Seq Line:	16
Sample Name:	582606 CCV@25	Location:	Vial 71
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\08JAN18D\08JAND16.D Sample Name: 582606 CCV@25

Injection Date:	1/08/2018 13:08:12	Seq Line:	16
Sample Name:	582606 CCV@25	Location:	Vial 71
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Wed, 20. Dec. 2017,08:01:52 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
12.418	PBA	1188700.2	26.2466	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.433	PBA	367172.0	25.7528	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.435	PBA	184529.9	5.0000	CLO4-89-ISTD

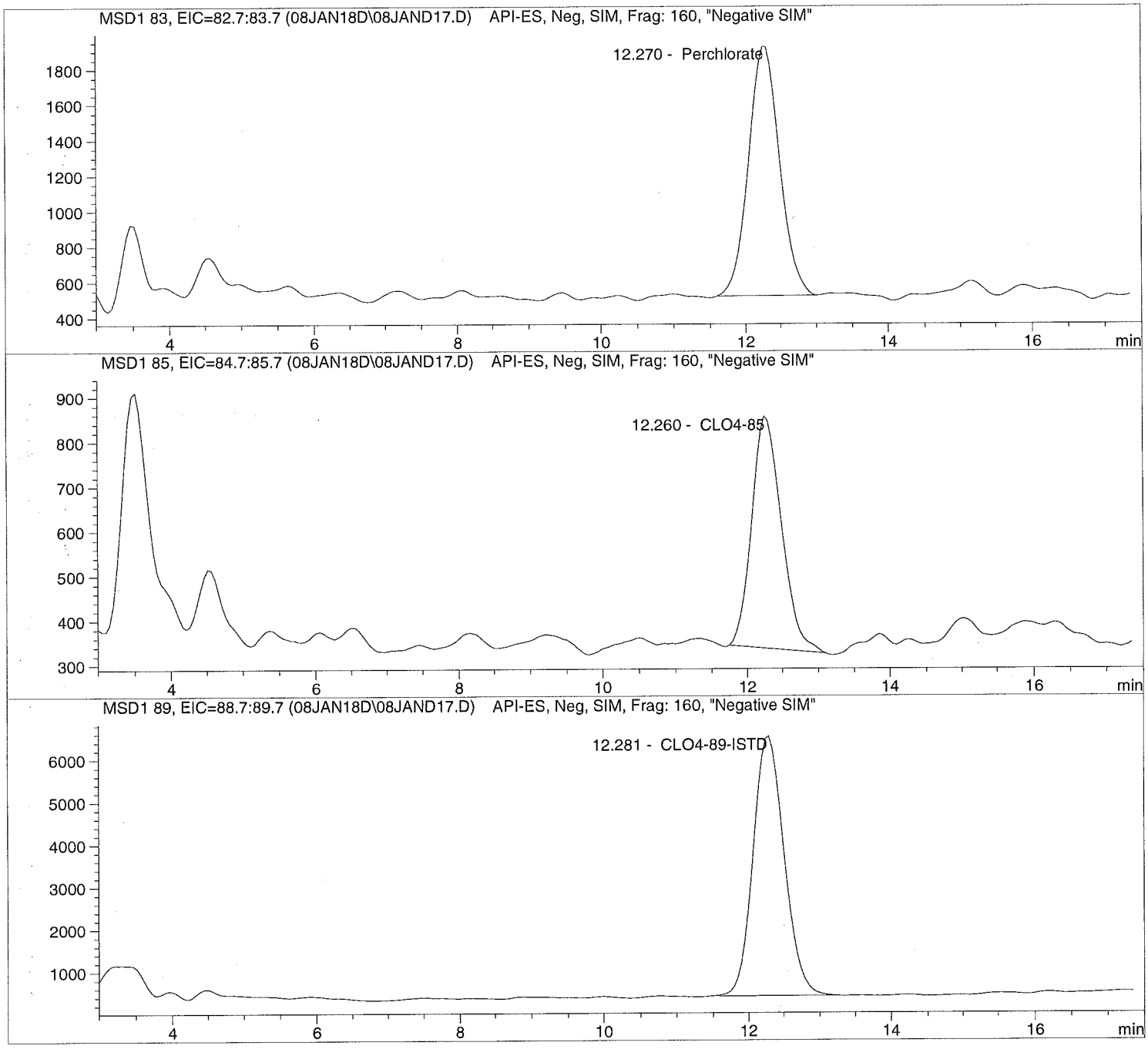
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\08JAN18D\08JAND17.D Sample Name: 582607 LODV@1.

Injection Date:	1/08/2018 13:27:20	Seq Line:	17
Sample Name:	582607 LODV@1.	Location:	Vial 72
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\08JAN18D\08JAND17.D Sample Name: 582607 LODV@1.

Injection Date:	1/08/2018 13:27:20	Seq Line:	17
Sample Name:	582607 LODV@1.	Location:	Vial 72
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Wed, 20. Dec. 2017,08:01:52 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
12.270	PBA	43177.0	1.0870	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.260	PBA	15255.9	0.9636	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.281	BBA	187499.3	5.0000	CLO4-89-ISTD

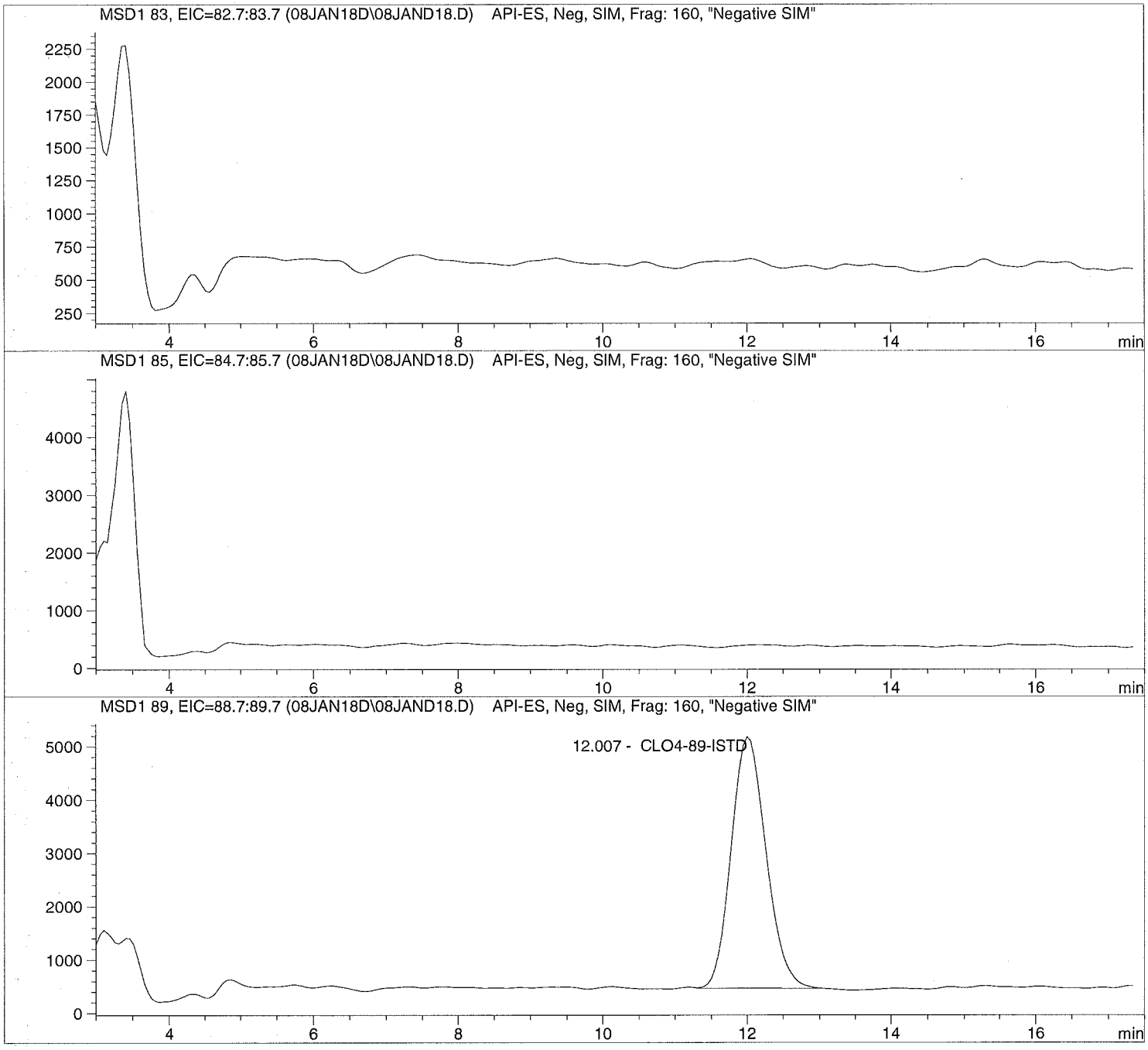
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\08JAN18D\08JAND18.D Sample Name: 1736222004

Injection Date:	1/08/2018 13:46:29	Seq Line:	18
Sample Name:	1736222004	Location:	Vial 86
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\08JAN18D\08JAND18.D Sample Name: 1736222004

Injection Date:	1/08/2018 13:46:29	Seq Line:	18
Sample Name:	1736222004	Location:	Vial 86
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Wed, 20. Dec. 2017,08:01:52 am
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
12.007	BBA	157843.1	5.0000	CLO4-89-ISTD

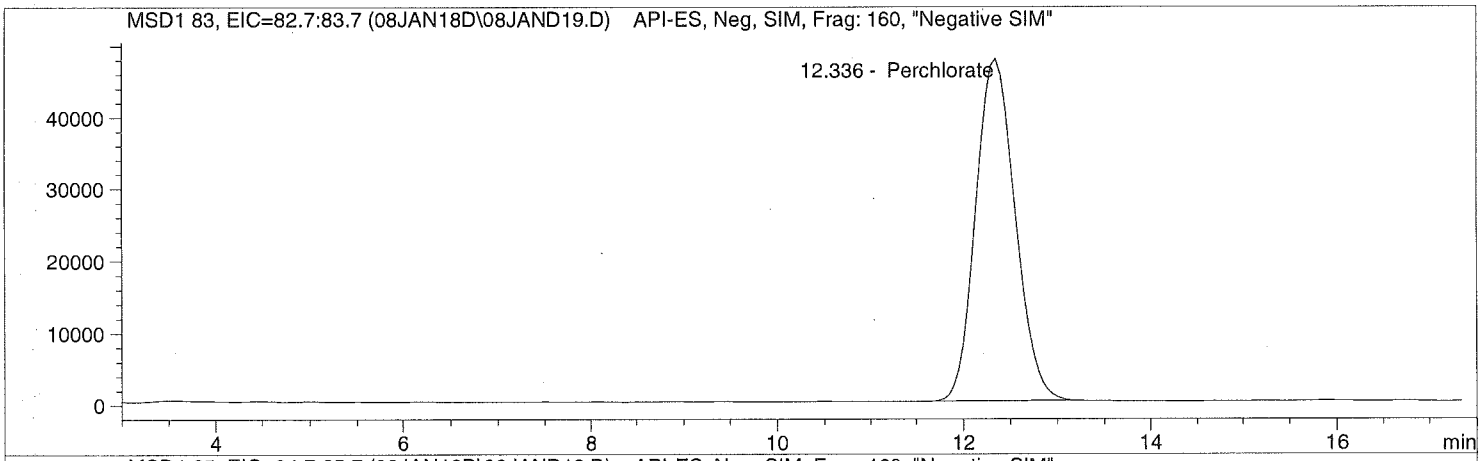
*** End of Report ***

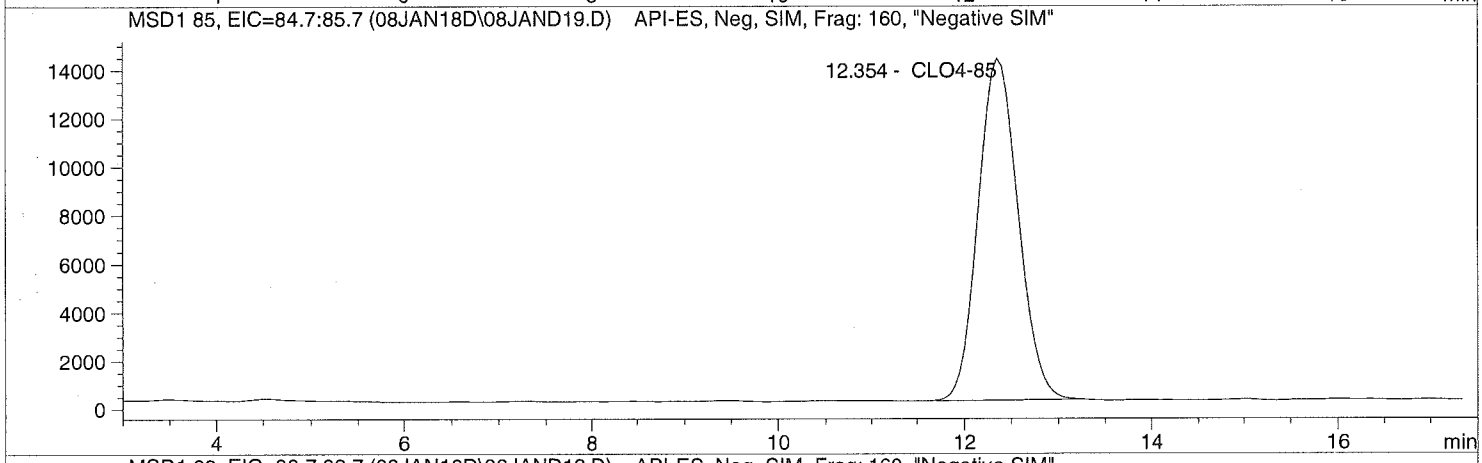
Data file: C:\HPCHEM\1\DATA\08JAN18D\08JAND19.D Sample Name: 1736222005 1K

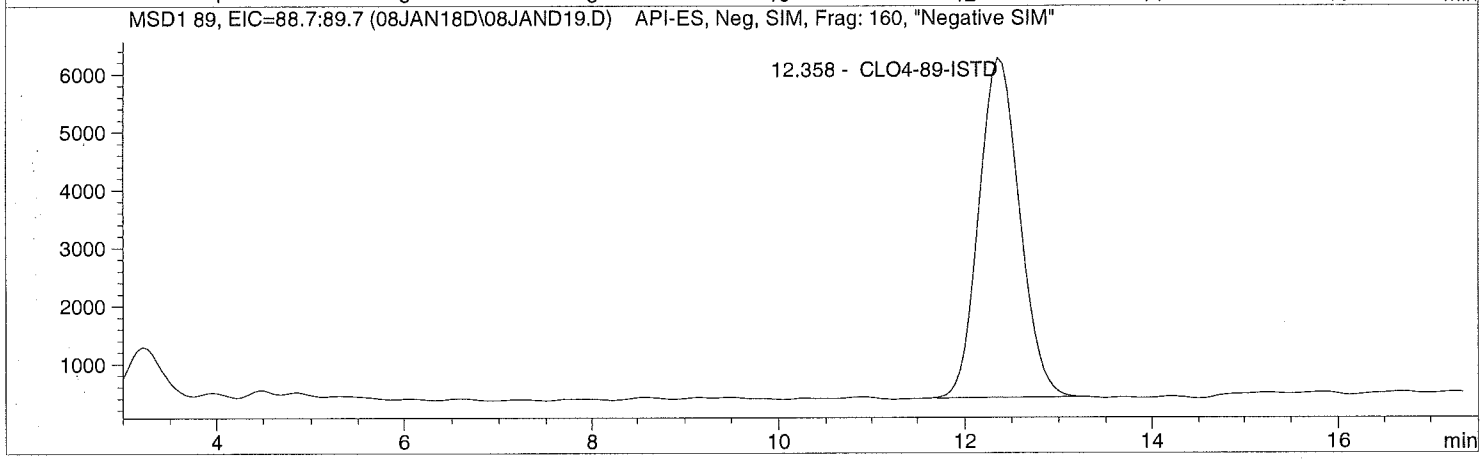
Injection Date:	1/08/2018 14:05:39	Seq Line:	19
Sample Name:	1736222005 1K	Location:	Vial 87
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis







Data file: C:\HPCHEM\1\DATA\08JAN18D\08JAND19.D Sample Name: 1736222005 1K

Injection Date:	1/08/2018 14:05:39	Seq Line:	19
Sample Name:	1736222005 1K	Location:	Vial 87
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Wed, 20. Dec. 2017,08:01:52 am
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
12.336	PBA	1375622.1	31318.8180	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.354	PBA	414786.1	30245.6824	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.358	PBA	174781.8	5000.0000	CLO4-89-ISTD

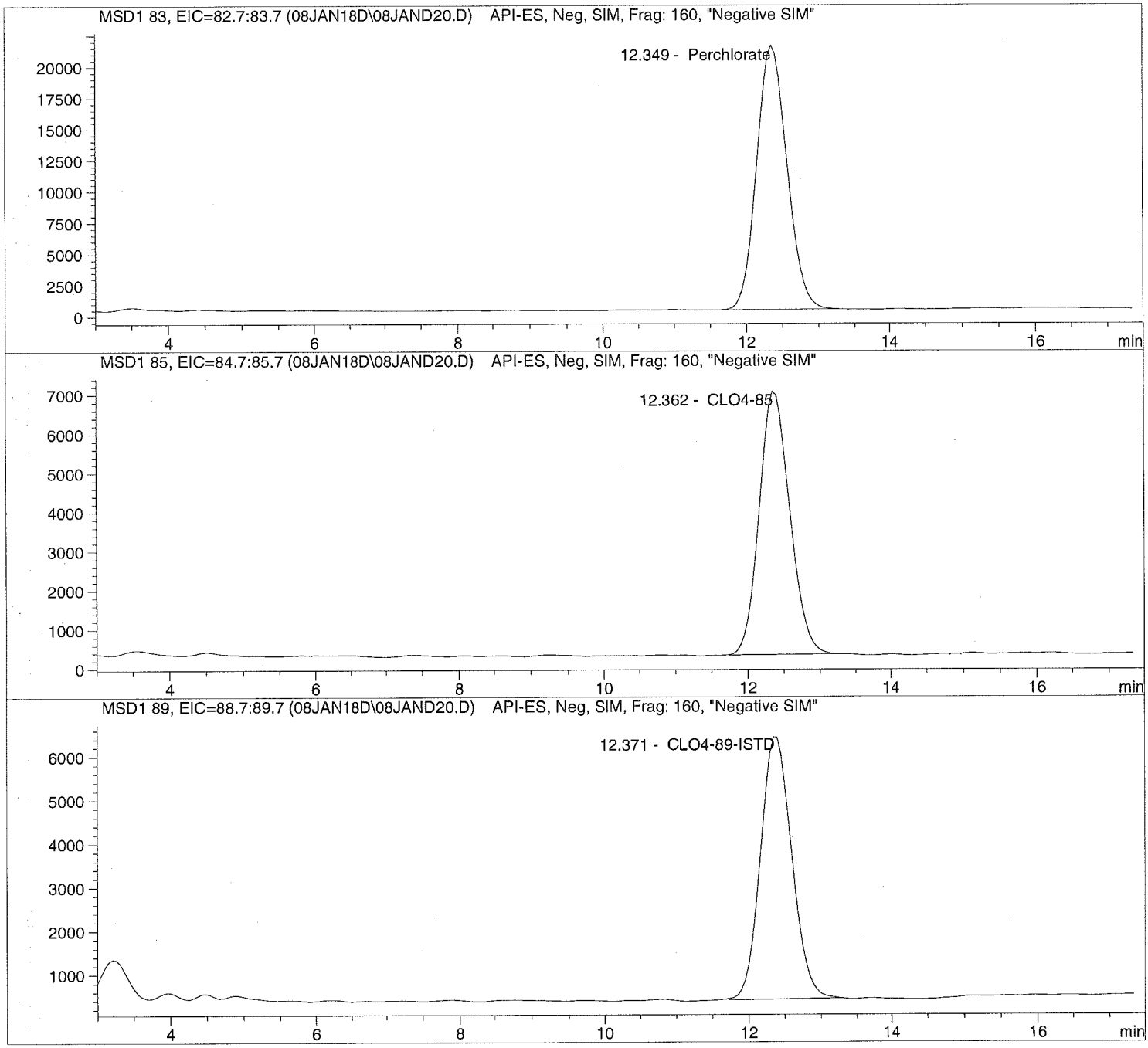
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\08JAN18D\08JAND20.D Sample Name: 1736222006 1K

Injection Date:	1/08/2018 14:24:48	Seq Line:	20
Sample Name:	1736222006 1K	Location:	Vial 88
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\08JAN18D\08JAND20.D Sample Name: 1736222006 1K

Injection Date:	1/08/2018 14:24:48	Seq Line:	20
Sample Name:	1736222006 1K	Location:	Vial 88
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Wed, 20. Dec. 2017,08:01:52 am
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
12.349	PBA	615406.7	14685.8937	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.362	BBA	197523.7	14672.3128	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.371	BBA	180646.8	5000.0000	CLO4-89-ISTD

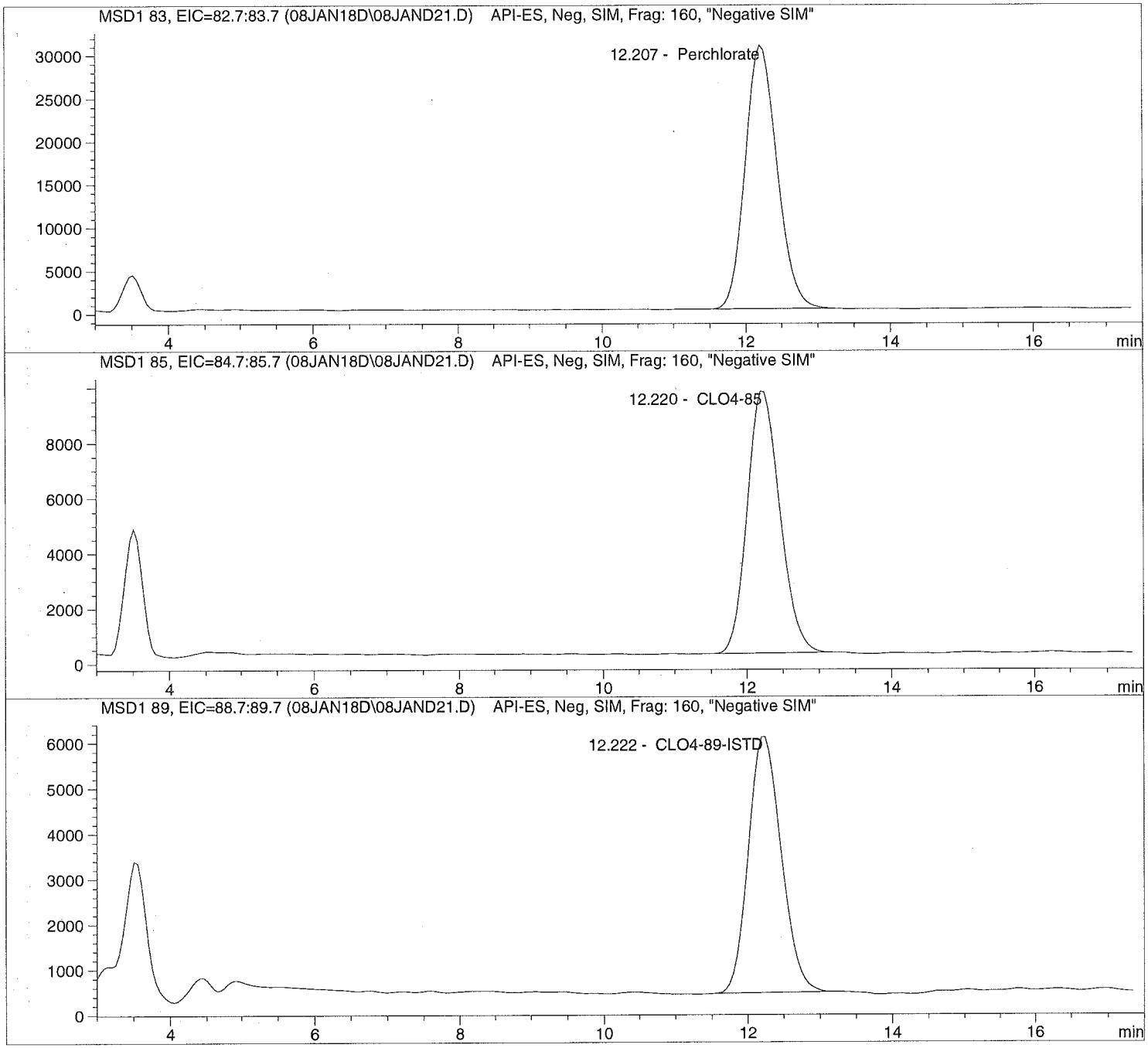
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\08JAN18D\08JAND21.D Sample Name: 1736222007 10X

Injection Date:	1/08/2018 14:44:00	Seq Line:	21
Sample Name:	1736222007 10X	Location:	Vial 89
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\08JAN18D\08JAND21.D Sample Name: 1736222007 10X

Injection Date:	1/08/2018 14:44:00	Seq Line:	21
Sample Name:	1736222007 10X	Location:	Vial 89
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Wed, 20. Dec. 2017,08:01:52 am
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
12.207	PBA	938832.6	218.6278	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.220	PBA	299209.2	219.5516	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.222	PBA	178666.8	50.0000	CLO4-89-ISTD

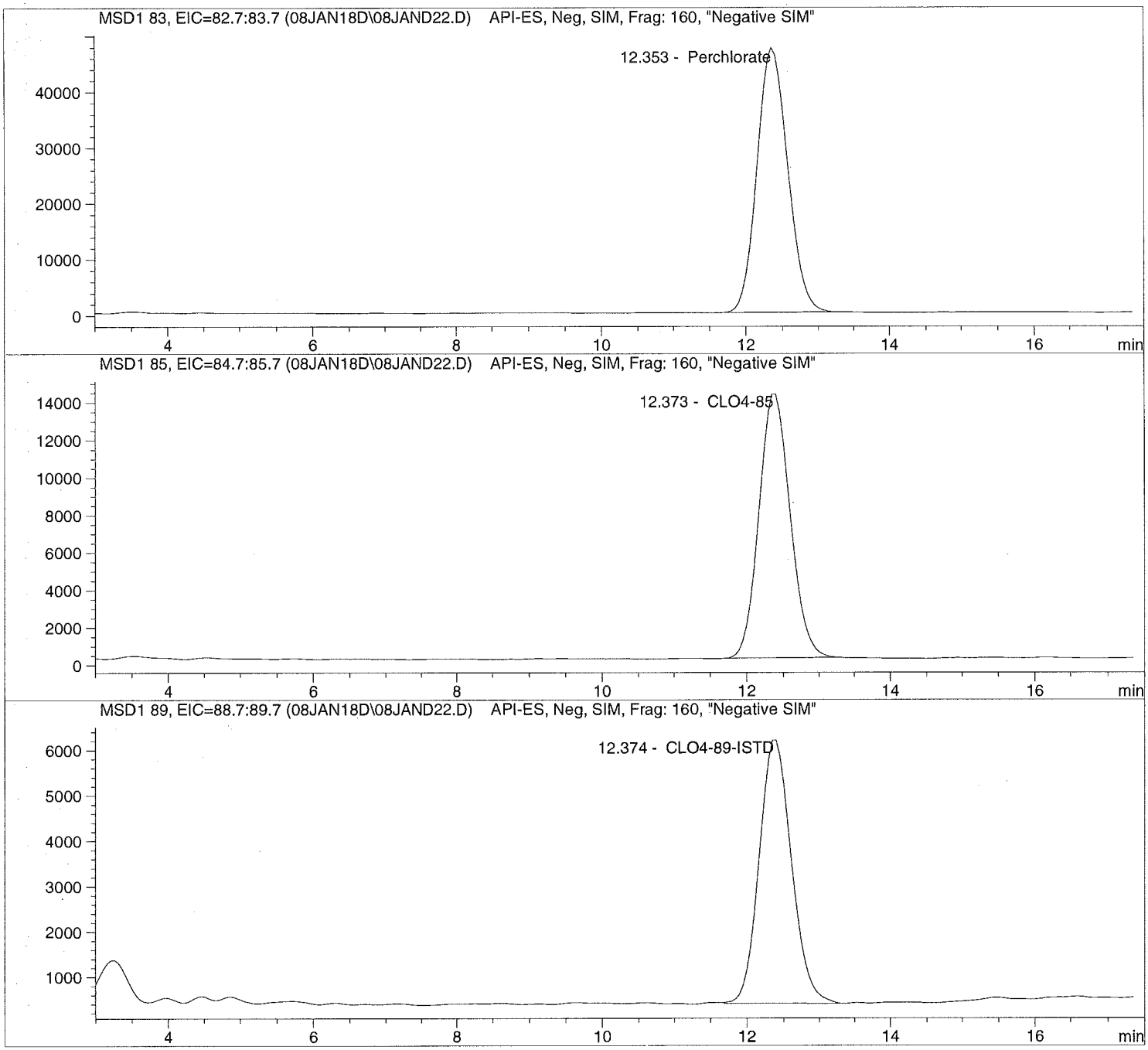
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\08JAN18D\08JAND22.D Sample Name: 1736222008 1K

Injection Date:	1/08/2018 15:03:11	Seq Line:	22
Sample Name:	1736222008 1K	Location:	Vial 90
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\08JAN18D\08JAND22.D Sample Name: 1736222008 1K

Injection Date:	1/08/2018 15:03:11	Seq Line:	22
Sample Name:	1736222008 1K	Location:	Vial 90
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Wed, 20. Dec. 2017,08:01:52 am
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
12.353	PBA	1374991.0	30809.3521	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.373	PBA	416880.0	29884.5170	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.374	BBA	178007.8	5000.0000	CLO4-89-ISTD

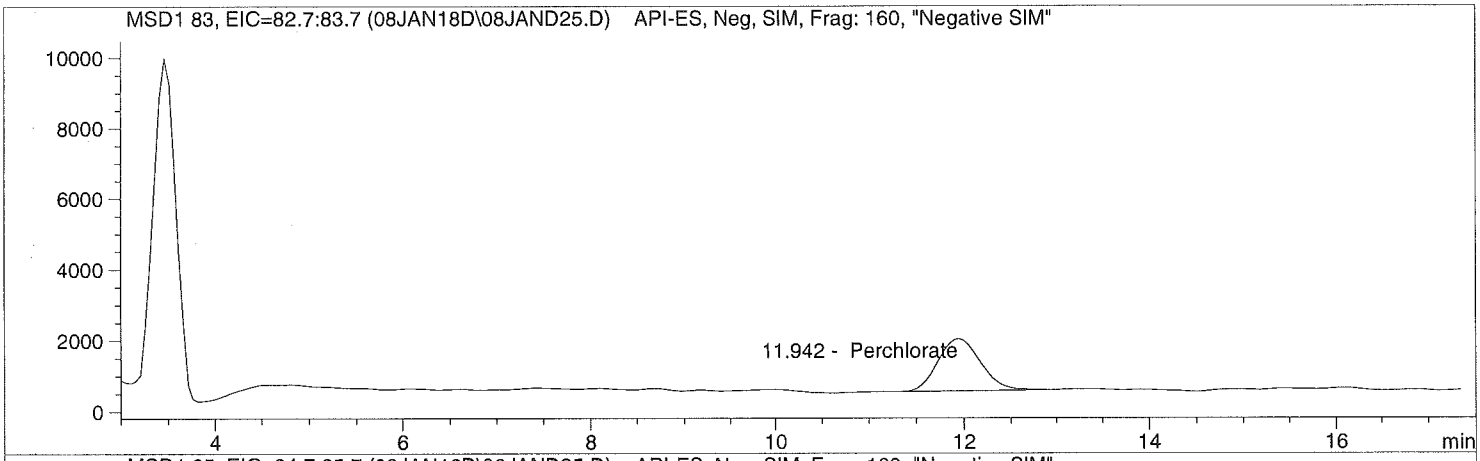
*** End of Report ***

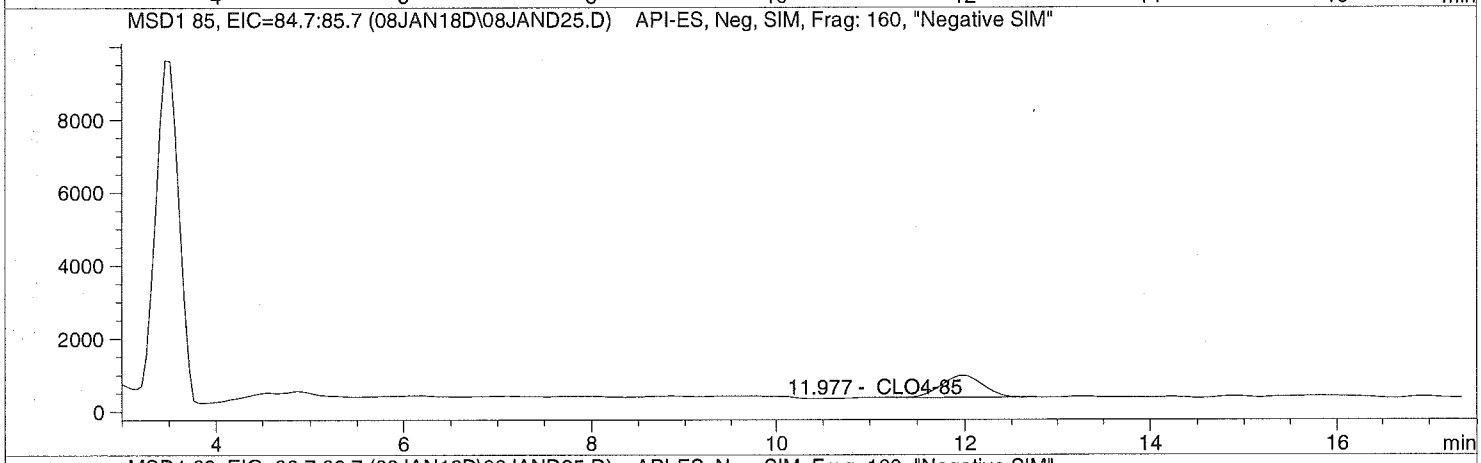
Data file: C:\HPCHEM\1\DATA\08JAN18D\08JAND25.D Sample Name: 1800210001

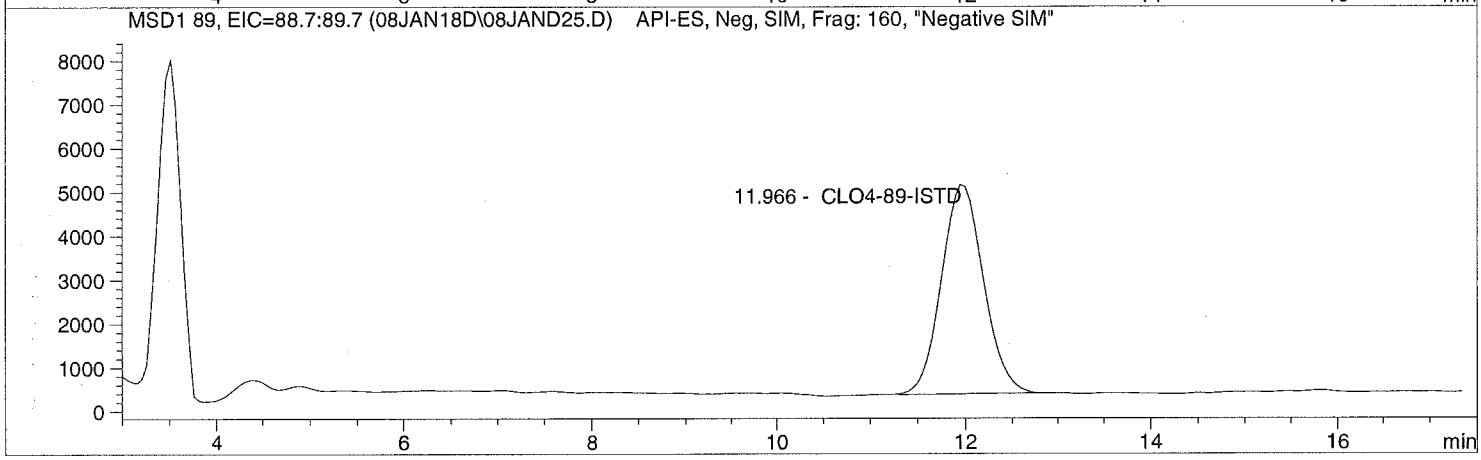
Injection Date:	1/08/2018 16:00:36	Seq Line:	25
Sample Name:	1800210001	Location:	Vial 92
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis







Data file: C:\HPCHEM\1\DATA\08JAN18D\08JAND25.D Sample Name: 1800210001

Injection Date:	1/08/2018 16:00:36	Seq Line:	25
Sample Name:	1800210001	Location:	Vial 92
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Wed, 20. Dec. 2017,08:01:52 am
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
11.942	BBA	45760.9	1.4594	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
11.977	BBA	18773.2	1.6264	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
11.966	BBA	146856.5	5.0000	CLO4-89-ISTD

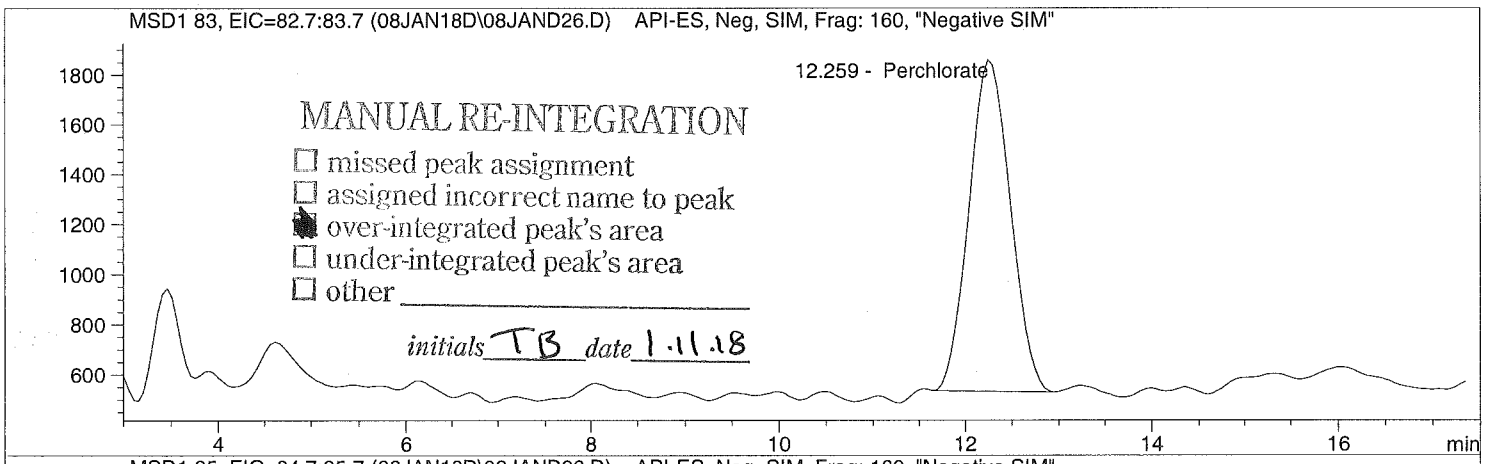
*** End of Report ***

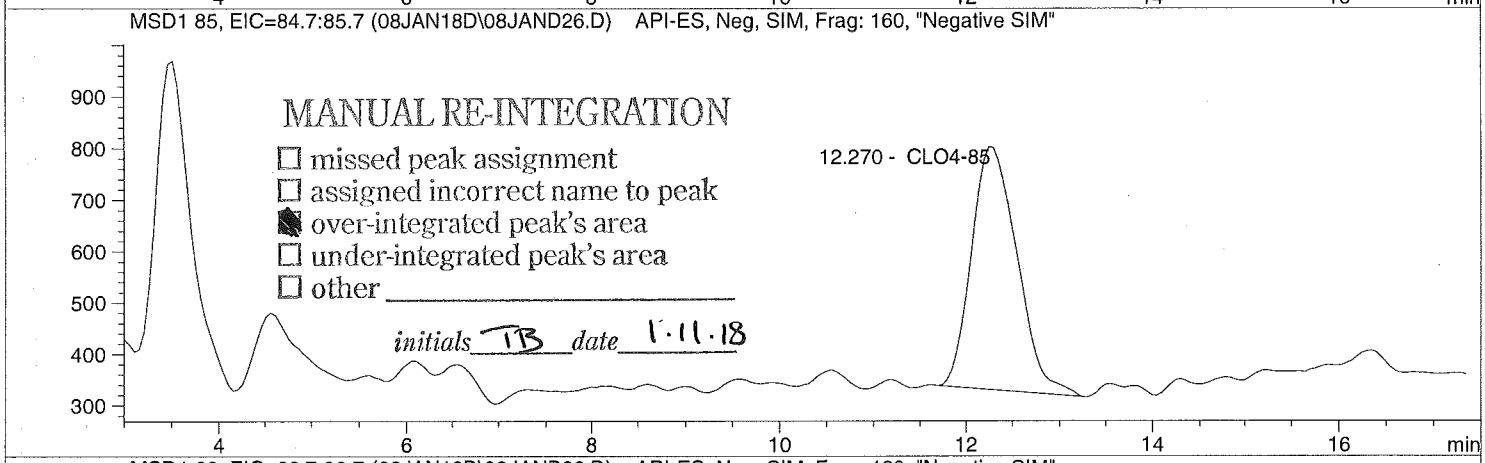
Data file: C:\HPCHEM\1\DATA\08JAN18D\08JAND26.D Sample Name: 582609 LODV@1.

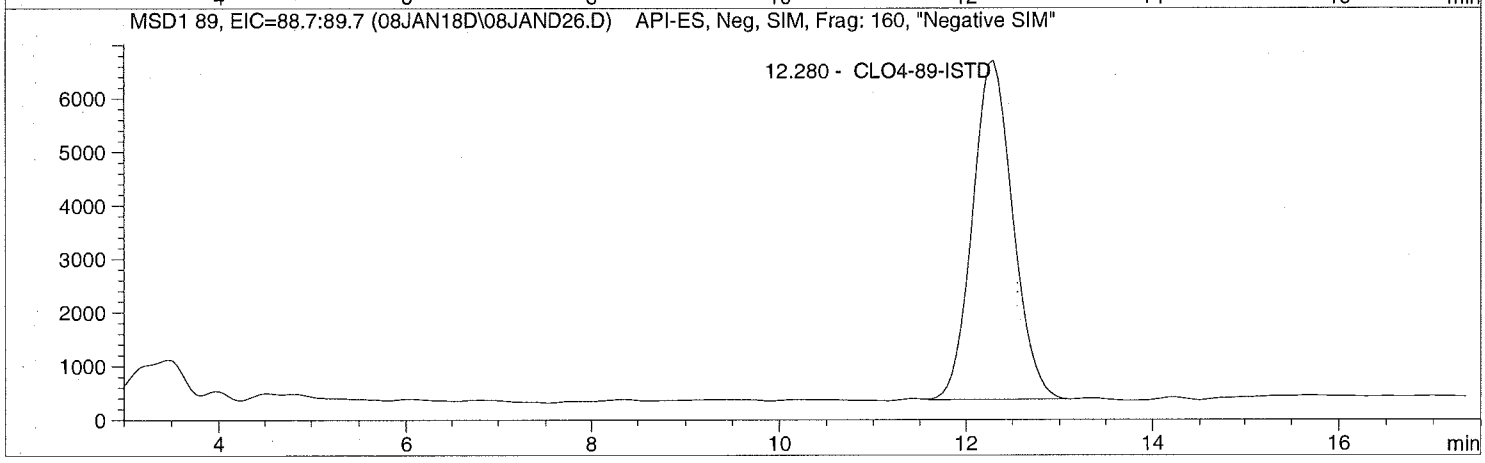
Injection Date:	1/08/2018 16:21:37	Seq Line:	26
Sample Name:	582609 LODV@1.	Location:	Vial 72
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis







Data file: C:\HPCHEM\1\DATA\08JAN18D\08JAND26.D Sample Name: 582609 LODV@1.

Injection Date:	1/08/2018 16:21:37	Seq Line:	26
Sample Name:	582609 LODV@1.	Location:	Vial 72
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Wed, 20. Dec. 2017,08:01:52 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
12.259	MM	40806.9	1.0183	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.270	MM	16046.3	1.0109	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.280	BBA	189512.5	5.0000	CLO4-89-ISTD

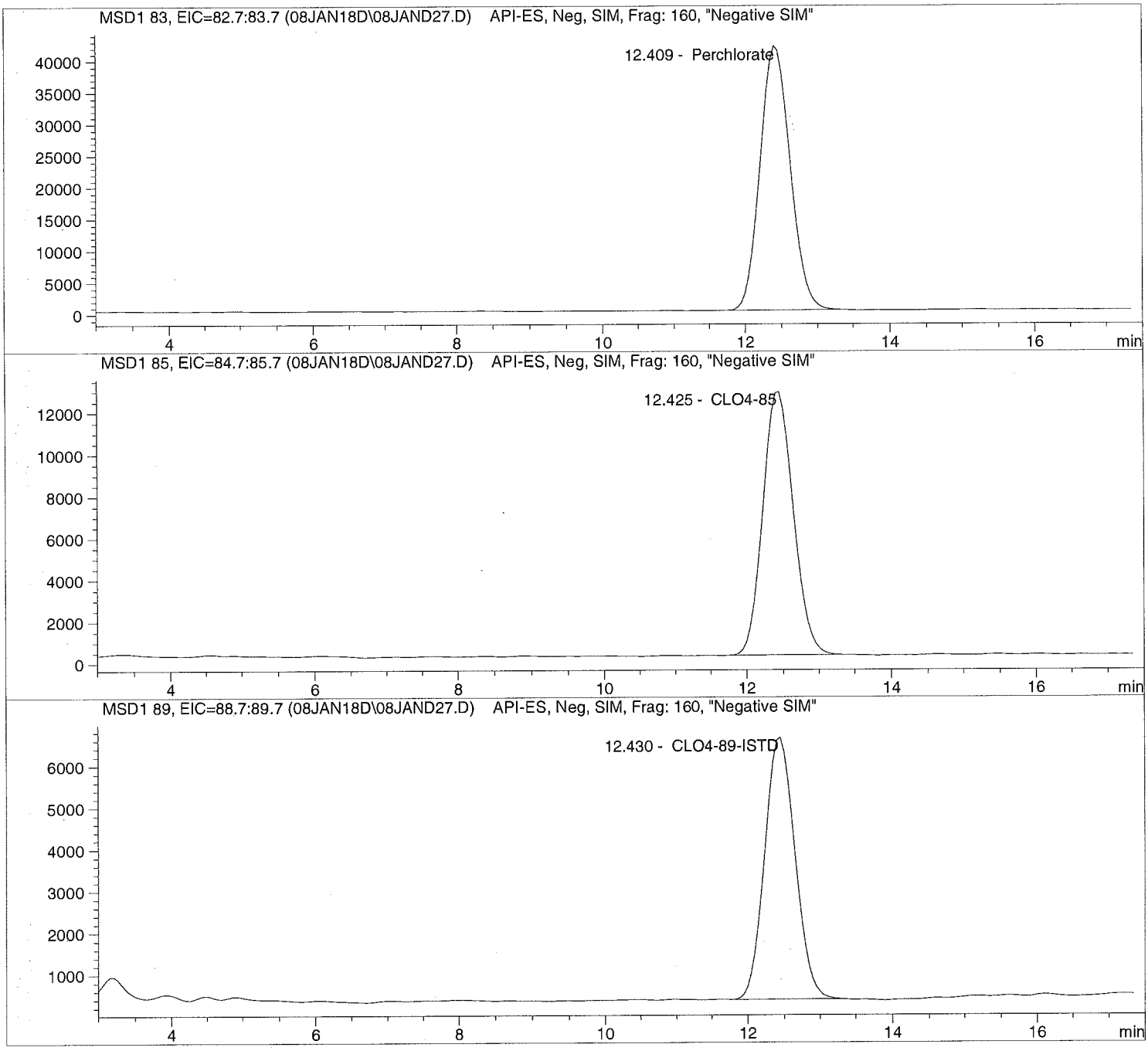
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\08JAN18D\08JAND27.D Sample Name: 582608 CCV@25

Injection Date:	1/08/2018 16:40:46	Seq Line:	27
Sample Name:	582608 CCV@25	Location:	Vial 71
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\08JAN18D\08JAND27.D Sample Name: 582608 CCV@25

Injection Date:	1/08/2018 16:40:46	Seq Line:	27
Sample Name:	582608 CCV@25	Location:	Vial 71
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Wed, 20. Dec. 2017,08:01:52 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
12.409	PBA	1190044.5	26.6371	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.425	PBA	365901.1	26.0386	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.430	PBA	181695.7	5.0000	CLO4-89-ISTD

*** End of Report ***

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

Raw Data

Initial Calibration

ethod C:\HPCHEM\1\METHODS\CLO4-DPR.M

Calibration Table

Perchlorate

Calib. Data Modified : 11/29/2017 8:02:06 AM

Calculate : Internal Standard
Based on : Peak Area

Rel. Reference Window : 20.000 %
Abs. Reference Window : 0.000 min
Rel. Non-ref. Window : 20.000 %
Abs. Non-ref. Window : 0.000 min
Use Multiplier & Dilution Factor with ISTDs
Uncalibrated Peaks : not reported
Partial Calibration : No recalibration if peaks missing

Curve Type : Quadratic (some peaks differ, see below)
Origin : Ignored (some peaks differ, see below)
Weight : Linear (Amnt) (some peaks differ, see below)

Recalibration Settings:
Average Response : Average all calibrations
Average Retention Time: Floating Average New 75%

Calibration Report Options :
Printout of recalibrations within a sequence:
Calibration Table after Recalibration
Normal Report after Recalibration
If the sequence is done with bracketing:
Results of first cycle (ending previous bracket)

Default Sample ISTD Information (if not set in sample table):

ISTD #	ISTD Amount	Name
1	5.00000	CLO4-89-ISTD

Signal 1: MSD1 83, EIC=82.7:83.7
Signal 2: MSD1 85, EIC=84.7:85.7
Signal 3: MSD1 89, EIC=88.7:89.7

RetTime [min]	Sig	Lvl	Amount	Area	Amt/Area	Ref	Grp	Name
12.090	1	1	1.00000	4.10942e4	2.43343e-5		1	Perchlorate
		2	2.00000	7.74077e4	2.58372e-5			
		3	5.00000	1.92985e5	2.59088e-5			
		4	10.00000	3.91583e5	2.55374e-5			
		5	25.00000	1.09763e6	2.27764e-5			
		6	50.00000	2.29834e6	2.17549e-5			
		7	75.00000	3.73021e6	2.01061e-5			
12.106	2	1	1.00000	1.56787e4	6.37808e-5		1	CLO4-85
		2	2.00000	2.80487e4	7.13046e-5			
		3	5.00000	6.51323e4	7.67668e-5			
		4	10.00000	1.31325e5	7.61471e-5			
		5	25.00000	3.46913e5	7.20642e-5			
		6	50.00000	6.96156e5	7.18230e-5			
		7	75.00000	1.13077e6	6.63264e-5			
12.107	3	1	5.00000	1.88880e5	2.64718e-5	+I1		CLO4-89-ISTD
		2	5.00000	1.81109e5	2.76076e-5			
		3	5.00000	1.75128e5	2.85505e-5			
		4	5.00000	1.80962e5	2.76301e-5			
		5	5.00000	1.75597e5	2.84743e-5			
		6	5.00000	1.69148e5	2.95599e-5			
		7	5.00000	1.64867e5	3.03275e-5			

ethod C:\HPCHEM\1\METHODS\CLO4-DPR.M

More compound-specific settings:

Compound: Perchlorate
- Time Window : From 8.390 min To 13.052 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

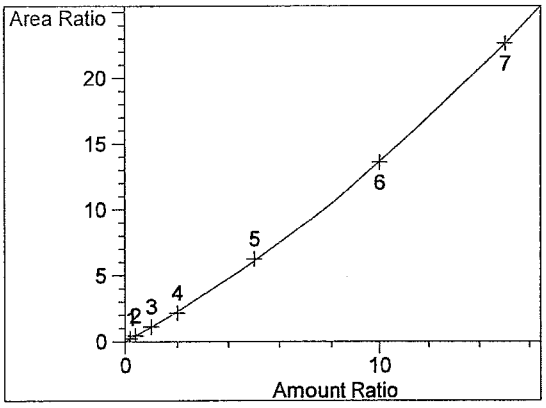
Compound: CLO4-85
- Time Window : From 8.366 min To 13.046 min
- Curve Type : Quadratic
- Origin : Ignored
- Calibration Level Weights:/
  - Level 1 : 1
  - Level 2 : 0.5
  - Level 3 : 0.2
  - Level 4 : 0.1
  - Level 5 : 0.04
  - Level 6 : 0.02
  - Level 7 : 0.013333

Compound: CLO4-89-ISTD
- Time Window : From 8.457 min To 13.107 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

Peak Sum Table

No Entries in table

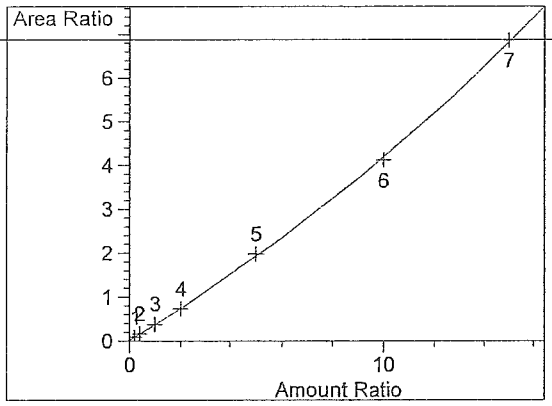
Calibration Curves



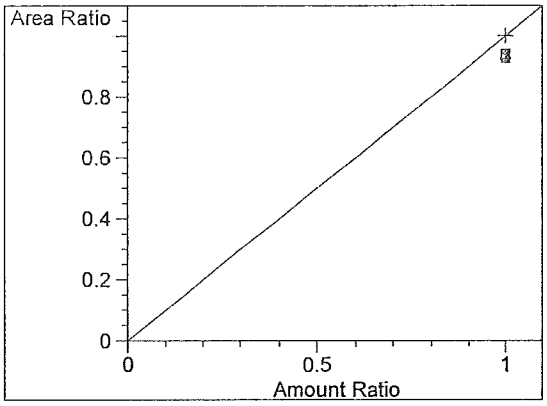
Perchlorate at exp. RT: 12.090
MSD1 83, EIC=82.7:83.7
Correlation: 0.99991
Residual Std. Dev.: 0.08487
Formula: $y = ax^2 + bx + c$
- a: 2.87739e-2
- b: 1.07712
- c: -5.23718e-3
- x: Amount Ratio
- y: Area Ratio

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

ethod C:\HPCHEM\1\METHODS\CLO4-DPR.M



CLO4-85 at exp. RT: 12.106
MSD1 85, EIC=84.7:85.7
Correlation: 0.99988
Residual Std. Dev.: 0.04548
Formula: $y = ax^2 + bx + c$
a: 7.12800e-3
b: 3.46840e-1
c: 1.42573e-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: 12.107
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

Batch Report: C:\HPCHEM\1\DATA\28NOV17P\28NOV17P.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
	*	ICAL1@ 1.0ug/L Vial 71	1	Control	1	4.10942e4	12.029	1.02861
	*	ICAL2@ 2.0ug/L Vial 72	1	Control	2	7.74077e4	12.054	1.98725
	*	ICAL3@ 5.0ug/L Vial 73	1	Control	3	1.92985e5	12.090	5.00575
	*	ICAL4@ 10.ug/L Vial 74	1	Control	4	3.91583e5	12.084	9.57892
	*	ICAL5@ 25.ug/L Vial 75	1	Control	5	1.09763e6	12.065	25.55231
	*	ICAL6@ 50.ug/L Vial 76	1	Control	6	2.29834e6	12.065	49.83164
	*	ICAL7@ 75.ug/L Vial 77	1	Control	7	3.73021e6	12.090	74.99992
	*	ICAL Verf@10ug/L Vial 78	1	Control	8	3.83615e5	12.163	9.59533

#	*	Sample Location	Inj	SampleType	Run	CLO4-85 Area	CLO4-85 RT	CLO4-85 Amount
	*	ICAL1@ 1.0ug/L Vial 71	1	Control	1	1.56787e4	12.053	9.87106e-1
	*	ICAL2@ 2.0ug/L Vial 72	1	Control	2	2.80487e4	12.066	2.01046
	*	ICAL3@ 5.0ug/L Vial 73	1	Control	3	6.51323e4	12.106	5.05104
	*	ICAL4@ 10.ug/L Vial 74	1	Control	4	1.31325e5	12.101	9.85678
	*	ICAL5@ 25.ug/L Vial 75	1	Control	5	3.46913e5	12.084	25.58435
	*	ICAL6@ 50.ug/L Vial 76	1	Control	6	6.96156e5	12.080	49.18282
	*	ICAL7@ 75.ug/L Vial 77	1	Control	7	1.13077e6	12.106	75.33907
	*	ICAL Verf@10ug/L Vial 78	1	Control	8	1.31460e5	12.177	10.08554

#	*	Sample Location	Inj	SampleType	Run	CLO4-89-ISTD Area	CLO4-89-ISTD RT	CLO4-89-ISTD Amount
	*	ICAL1@ 1.0ug/L Vial 71	1	Control	1	1.88880e5	12.050	5.00000
	*	ICAL2@ 2.0ug/L Vial 72	1	Control	2	1.81109e5	12.078	5.00000
	*	ICAL3@ 5.0ug/L Vial 73	1	Control	3	1.75128e5	12.110	5.00000
	*	ICAL4@ 10.ug/L Vial 74	1	Control	4	1.80962e5	12.109	5.00000
	*	ICAL5@ 25.ug/L Vial 75	1	Control	5	1.75597e5	12.084	5.00000
	*	ICAL6@ 50.ug/L Vial 76	1	Control	6	1.69148e5	12.086	5.00000
	*	ICAL7@ 75.ug/L Vial 77	1	Control	7	1.64867e5	12.107	5.00000
	*	ICAL Verf@10ug/L Vial 78	1	Control	8	1.76961e5	12.181	5.00000

*** End of Report ***

Sequence: C:\HPCHEM\1\SEQUENCE\CLO4\2017\NOV\28NOV17P.S

Sequence Table:

Method and Injection Info Part:

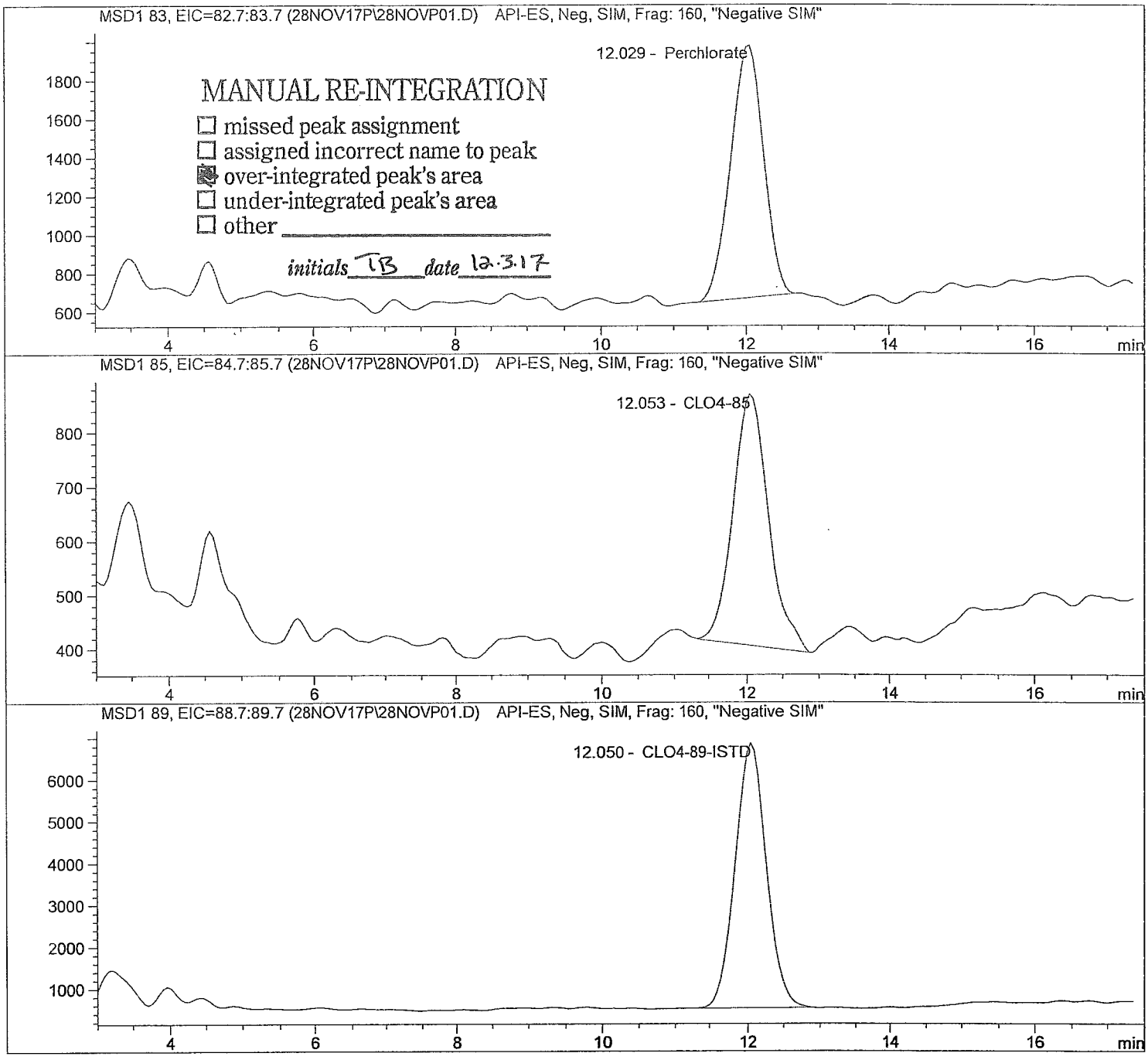
Line	Location	SampleName	Method	Inj	SampleType	InjVolume	DataFile
1	Vial 71	ICAL1@ 1.0ug/L	CLO4-DOD	1	Ctrl Samp		
2	Vial 72	ICAL2@ 2.0ug/L	CLO4-DOD	1	Ctrl Samp		
3	Vial 73	ICAL3@ 5.0ug/L	CLO4-DOD	1	Ctrl Samp		
4	Vial 74	ICAL4@ 10.ug/L	CLO4-DOD	1	Ctrl Samp		
5	Vial 75	ICAL5@ 25.ug/L	CLO4-DOD	1	Ctrl Samp		
6	Vial 76	ICAL6@ 50.ug/L	CLO4-DOD	1	Ctrl Samp		
7	Vial 77	ICAL7@ 75.ug/L	CLO4-DOD	1	Ctrl Samp		
8	Vial 78	ICAL Verf@10ug/L	CLO4-DOD	1	Ctrl Samp		

Data file: C:\HPCHEM\1\DATA\28NOV17P\28NOVP01.D Sample Name: ICAL1@ 1.0ug/L

Injection Date:	11/28/2017 09:08:10	Seq Line:	1
Sample Name:	ICAL1@ 1.0ug/L	Location:	Vial 71
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2017 11:06:36

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\28NOV17P\28NOVP01.D Sample Name: ICAL1@ 1.0ug/L

Injection Date:	11/28/2017 09:08:10	Seq Line:	1
Sample Name:	ICAL1@ 1.0ug/L	Location:	Vial 71
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2017 11:06:36

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Wed, 29. Nov. 2017,08:02:06 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
12.029	MM	41094.2	1.0286	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.053	BBA	15678.7	0.9871	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.050	BBA	188880.3	5.0000	CLO4-89-ISTD

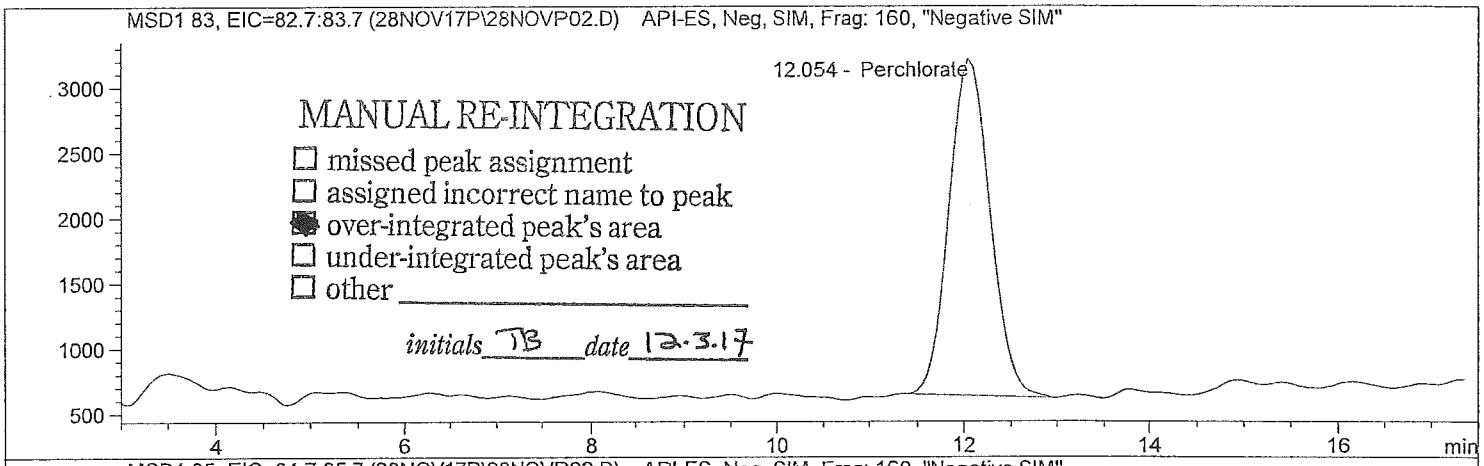
*** End of Report ***

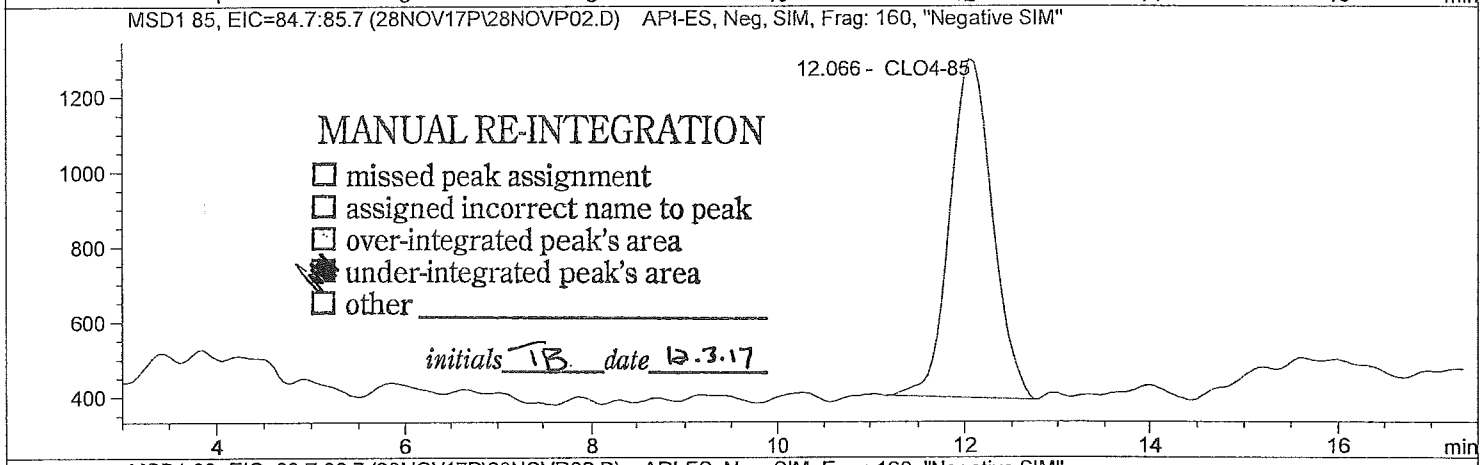
Data file: C:\HPCHEM\1\DATA\28NOV17P\28NOVP02.D Sample Name: ICAL2@ 2.0ug/L

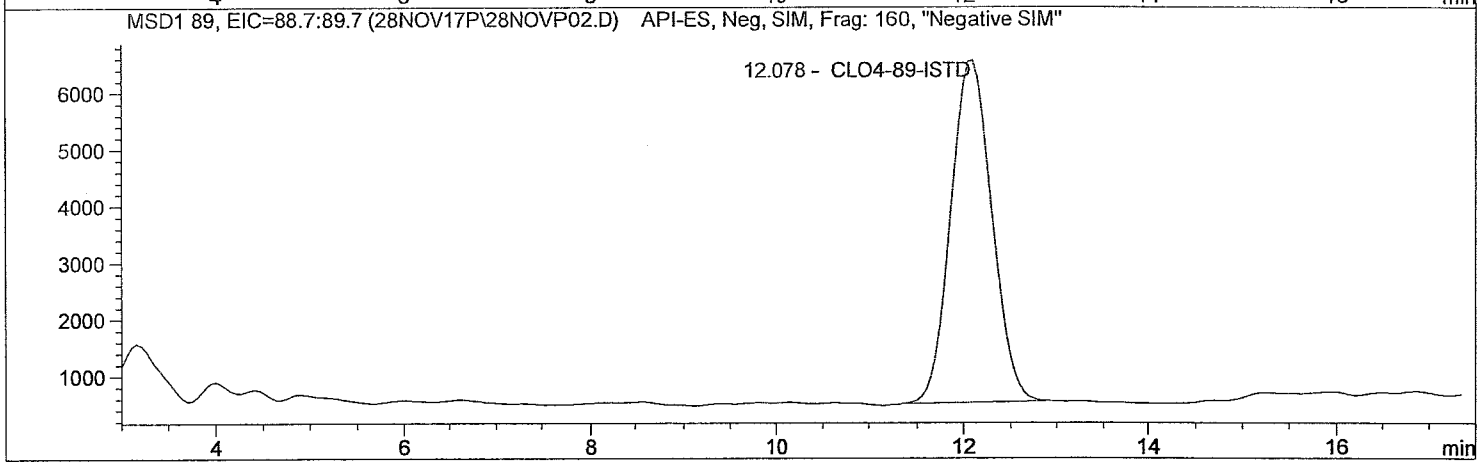
Injection Date:	11/28/2017 09:33:49	Seq Line:	2
Sample Name:	ICAL2@ 2.0ug/L	Location:	Vial 72
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2017 11:06:36

Perchlorate analysis







Data file: C:\HPCHEM\1\DATA\28NOV17P\28NOVP02.D Sample Name: ICAL2@ 2.0ug/L

Injection Date:	11/28/2017 09:33:49	Seq Line:	2
Sample Name:	ICAL2@ 2.0ug/L	Location:	Vial 72
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2017 11:06:36

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Wed, 29. Nov. 2017,08:02:06 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
12.054	MM	77407.7	1.9872	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.066	MM	28048.7	2.0105	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.078	PBA	181109.4	5.0000	CLO4-89-ISTD

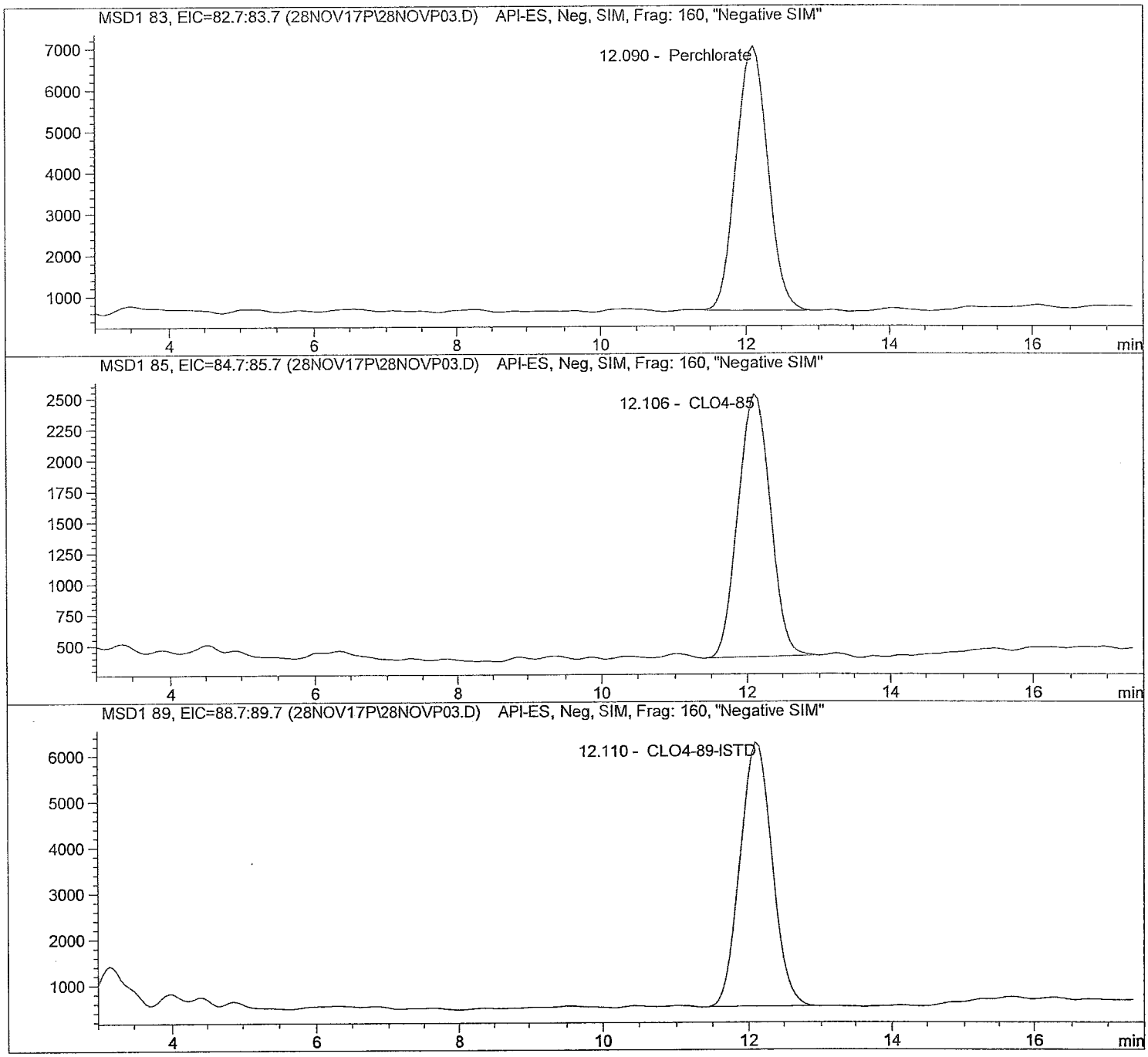
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\28NOV17P\28NOVP03.D Sample Name: ICAL3@ 5.0ug/L

Injection Date:	11/28/2017 09:53:00	Seq Line:	3
Sample Name:	ICAL3@ 5.0ug/L	Location:	Vial 73
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2017 11:06:36

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\28NOV17P\28NOVP03.D Sample Name: ICAL3@ 5.0ug/L

Injection Date:	11/28/2017 09:53:00	Seq Line:	3
Sample Name:	ICAL3@ 5.0ug/L	Location:	Vial 73
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2017 11:06:36

Perchlorate analysis

Sample Information

Sorted By: Signal
Calib. Data Modified: Wed, 29. Nov. 2017,08:02:06 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
12.090	BBA	192984.6	5.0058	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.106	PBA	65132.3	5.0510	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.110	PBA	175128.5	5.0000	CLO4-89-ISTD

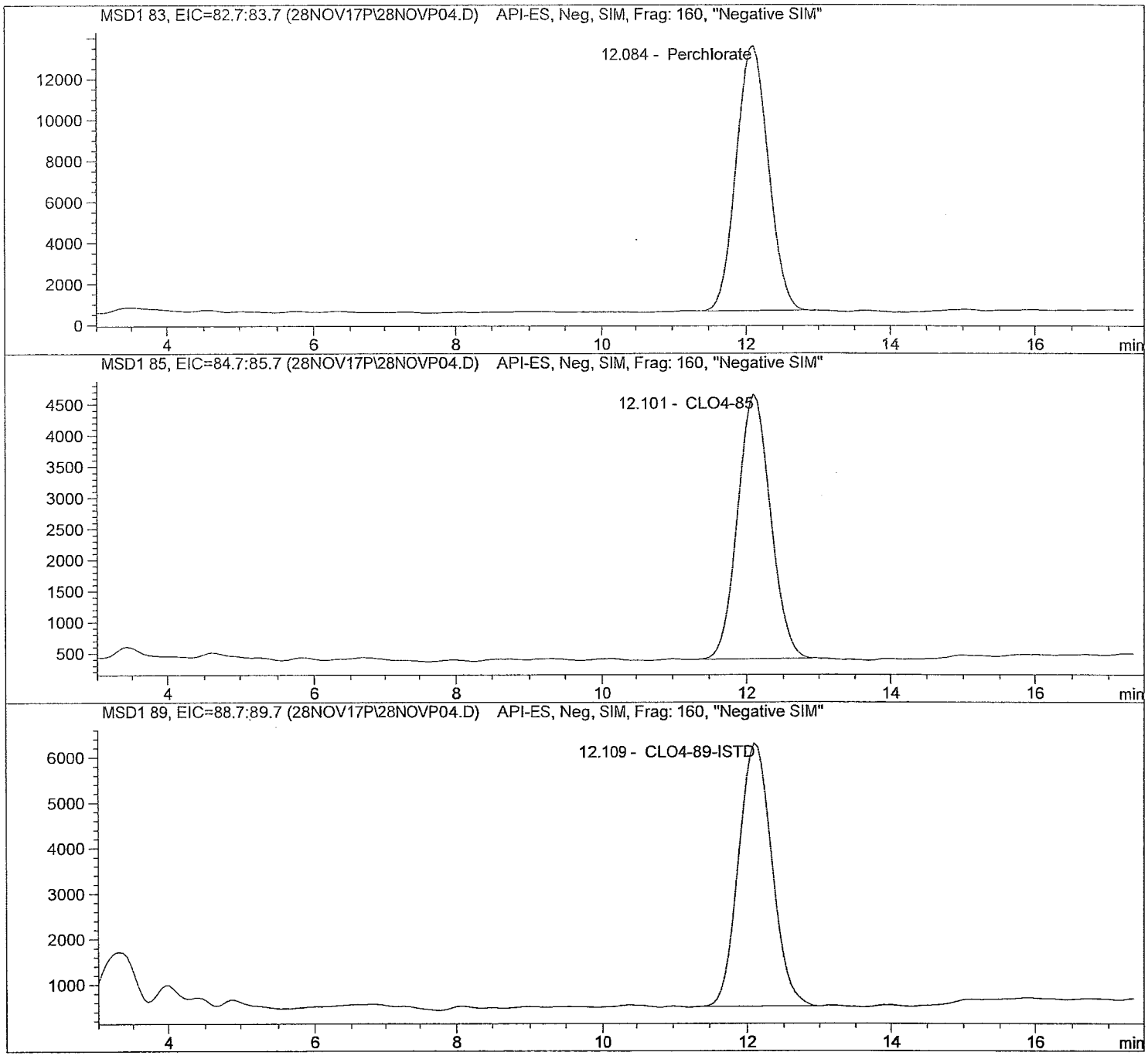
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\28NOV17P\28NOVP04.D Sample Name: ICAL4@ 10.ug/L

Injection Date:	11/28/2017 10:12:13	Seq Line:	4
Sample Name:	ICAL4@ 10.ug/L	Location:	Vial 74
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2017 11:06:36

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\28NOV17P\28NOVP04.D Sample Name: ICAL4@ 10.ug/L

Injection Date:	11/28/2017 10:12:13	Seq Line:	4
Sample Name:	ICAL4@ 10.ug/L	Location:	Vial 74
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2017 11:06:36

Perchlorate analysis

Sample Information

Sorted By: Signal
Calib. Data Modified: Wed, 29. Nov. 2017,08:02:06 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
12.084	BBA	391582.9	9.5789	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.101	PBA	131324.7	9.8568	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.109	PBA	180962.1	5.0000	CLO4-89-ISTD

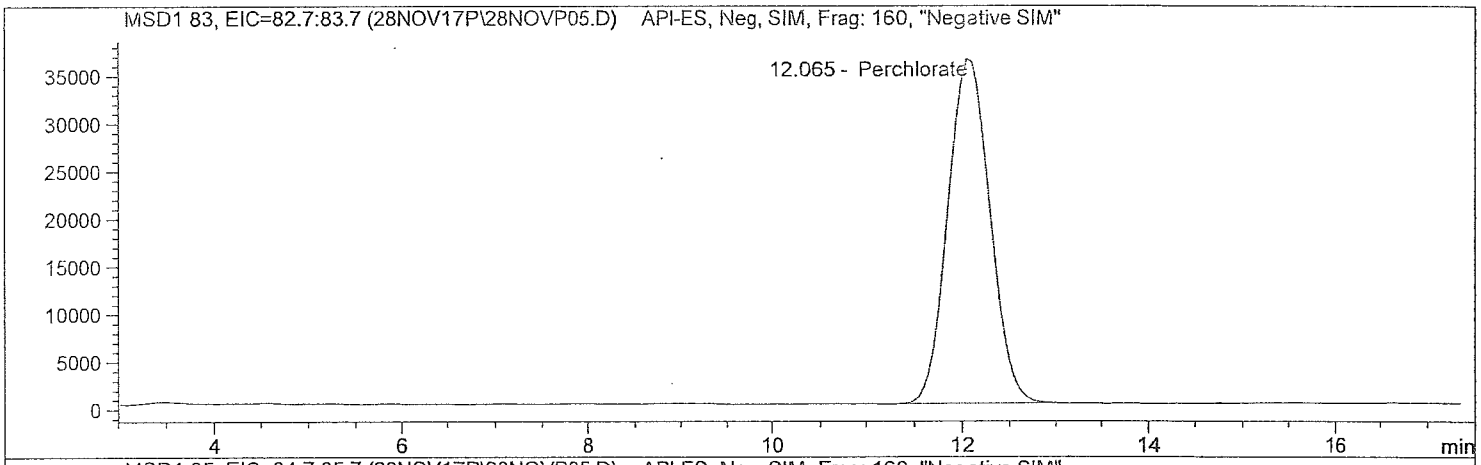
*** End of Report ***

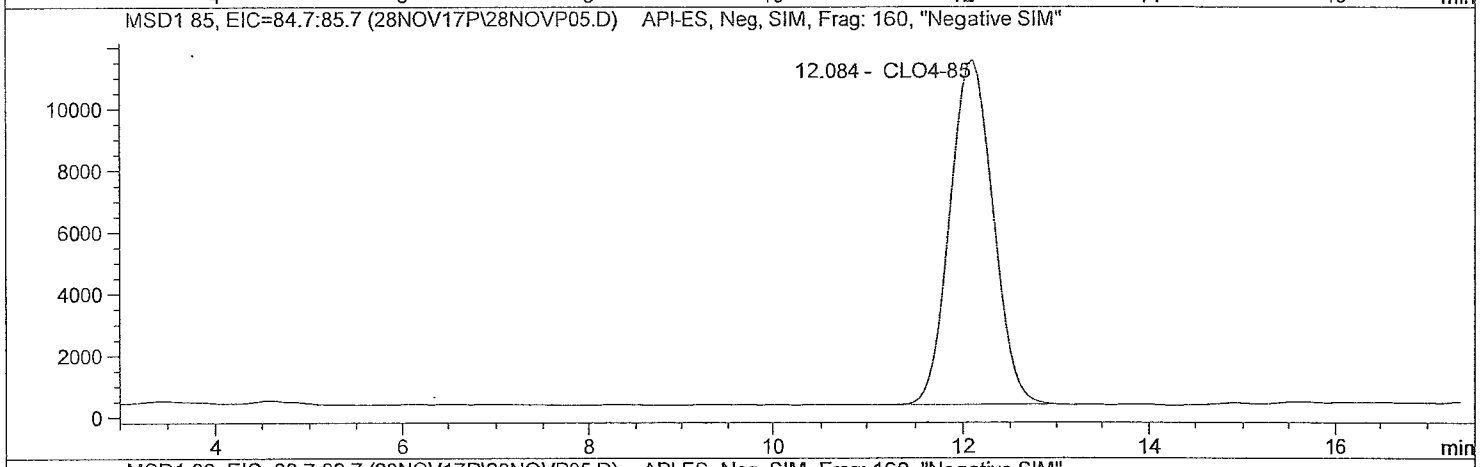
Data file: C:\HPCHEM\1\DATA\28NOV17P\28NOVP05.D Sample Name: ICAL5@ 25.ug/L

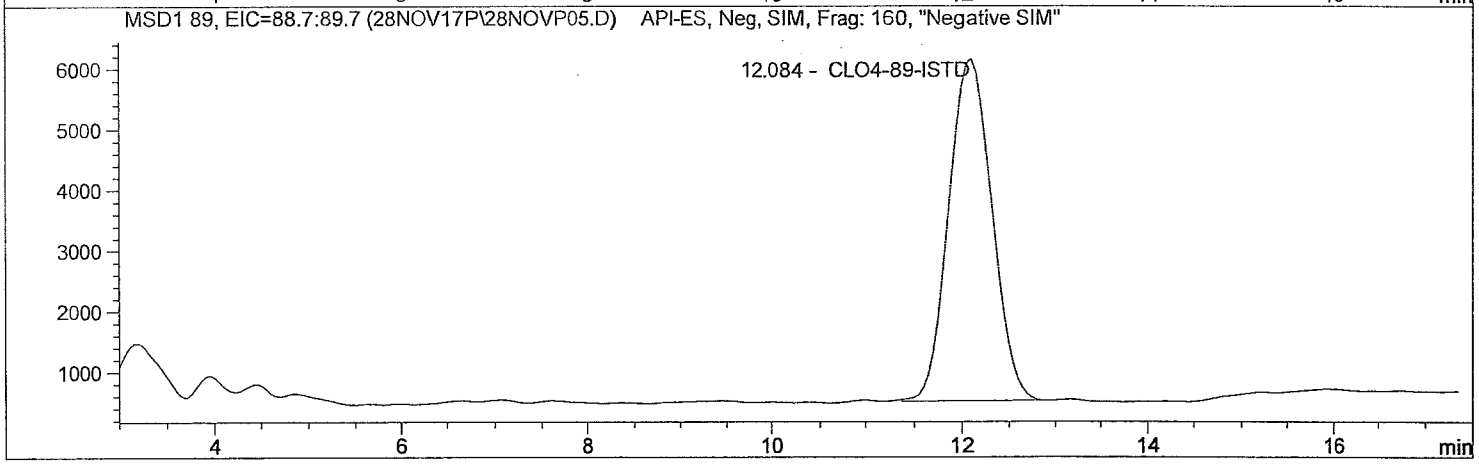
Injection Date:	11/28/2017 10:31:23	Seq Line:	5
Sample Name:	ICAL5@ 25.ug/L	Location:	Vial 75
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2017 11:06:36

Perchlorate analysis







Data file: C:\HPCHEM\1\DATA\28NOV17P\28NOVP05.D Sample Name: ICAL5@ 25.ug/L

Injection Date:	11/28/2017 10:31:23	Seq Line:	5
Sample Name:	ICAL5@ 25.ug/L	Location:	Vial 75
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2017 11:06:36

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Wed, 29. Nov. 2017,08:02:06 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
12.065	PBA	1097625.1	25.5523	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.084	PBA	346912.7	25.5843	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.084	BBA	175597.1	5.0000	CLO4-89-ISTD

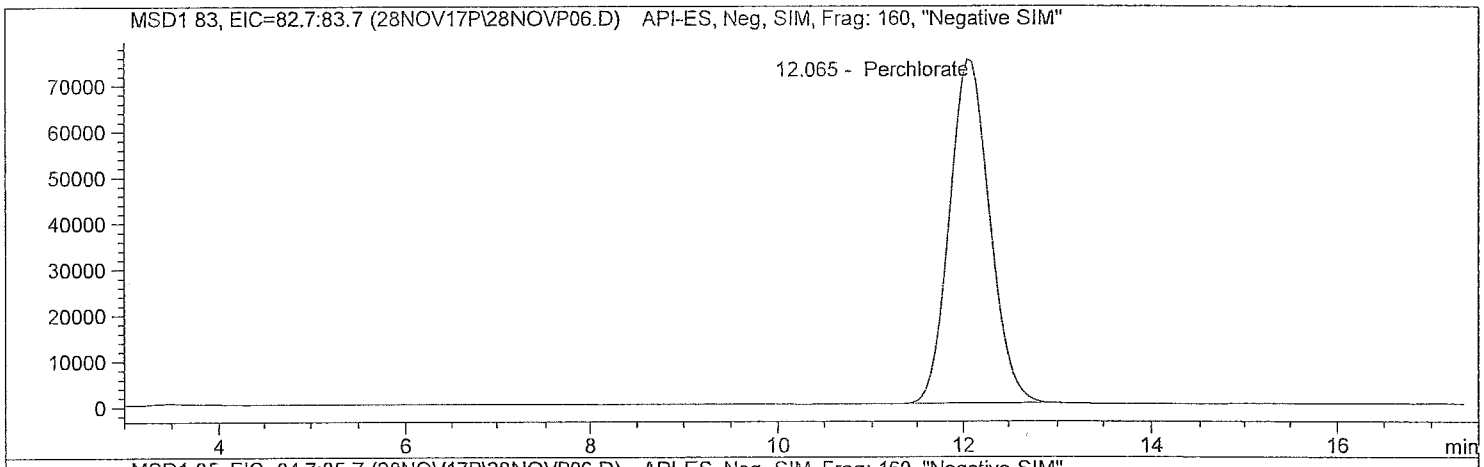
*** End of Report ***

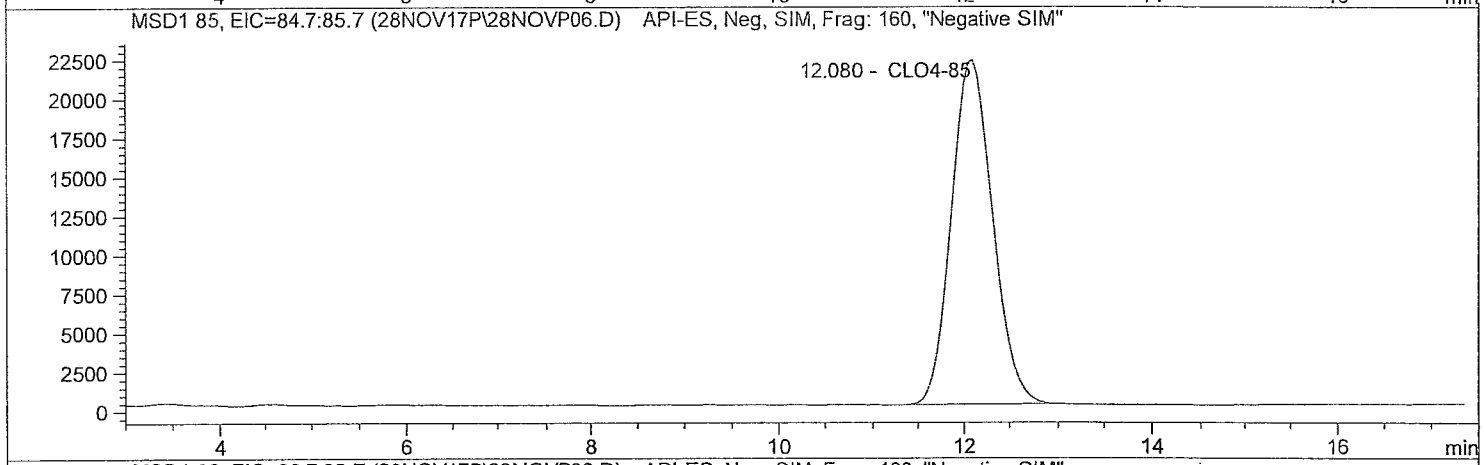
Data file: C:\HPCHEM\1\DATA\28NOV17P\28NOVP06.D Sample Name: ICAL6@ 50.ug/L

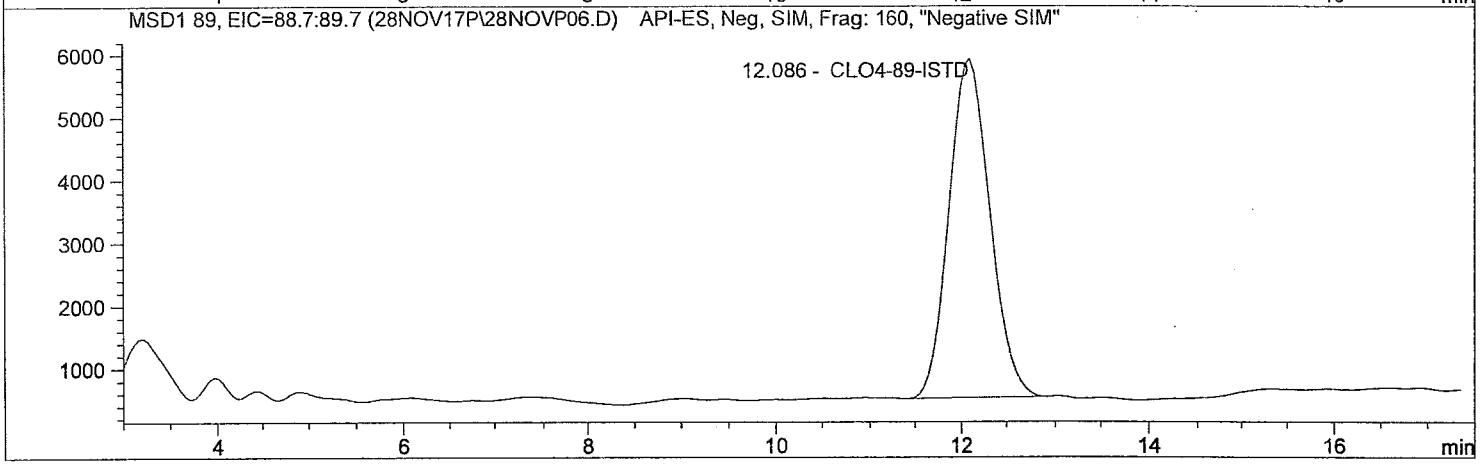
Injection Date:	11/28/2017 10:50:33	Seq Line:	6
Sample Name:	ICAL6@ 50.ug/L	Location:	Vial 76
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2017 11:06:36

Perchlorate analysis







Data file: C:\HPCHEM\1\DATA\28NOV17P\28NOVP06.D Sample Name: ICAL6@ 50.ug/L

Injection Date:	11/28/2017 10:50:33	Seq Line:	6
Sample Name:	ICAL6@ 50.ug/L	Location:	Vial 76
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2017 11:06:36

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Wed, 29. Nov. 2017,08:02:06 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
12.065	BBA	2298336.2	49.8316	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.080	PBA	696155.7	49.1828	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.086	PBA	169148.1	5.0000	CLO4-89-ISTD

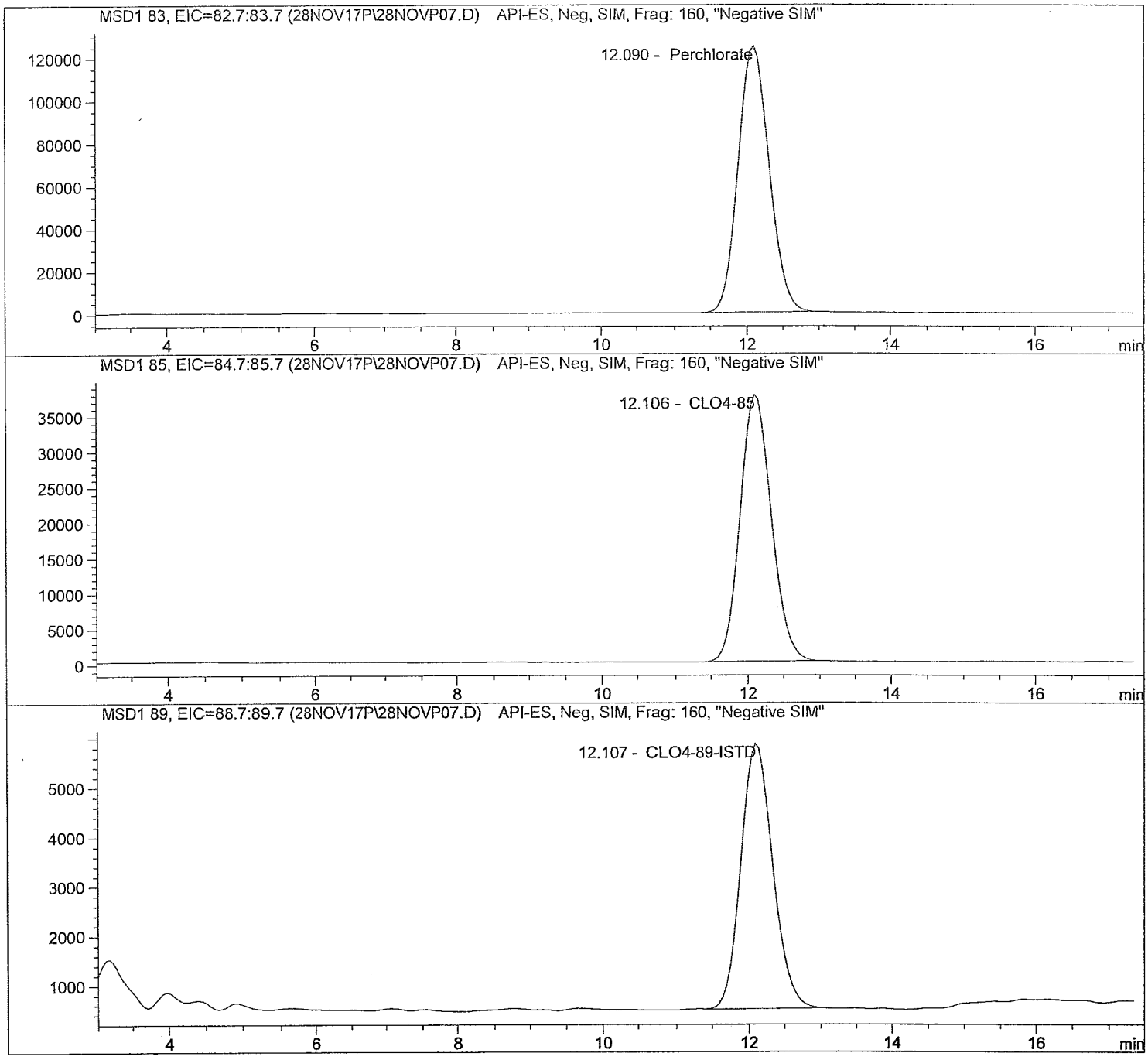
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\28NOV17P\28NOVP07.D Sample Name: ICAL7@ 75.ug/L

Injection Date:	11/28/2017 11:09:43	Seq Line:	7
Sample Name:	ICAL7@ 75.ug/L	Location:	Vial 77
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2017 11:06:36

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\28NOV17P\28NOVP07.D Sample Name: ICAL7@ 75.ug/L

Injection Date:	11/28/2017 11:09:43	Seq Line:	7
Sample Name:	ICAL7@ 75.ug/L	Location:	Vial 77
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2017 11:06:36

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Wed, 29. Nov. 2017, 08:02:06 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
12.090	PBA	3730211.3	74.9999	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.106	PBA	1130772.0	75.3391	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.107	BBA	164866.7	5.0000	CLO4-89-ISTD

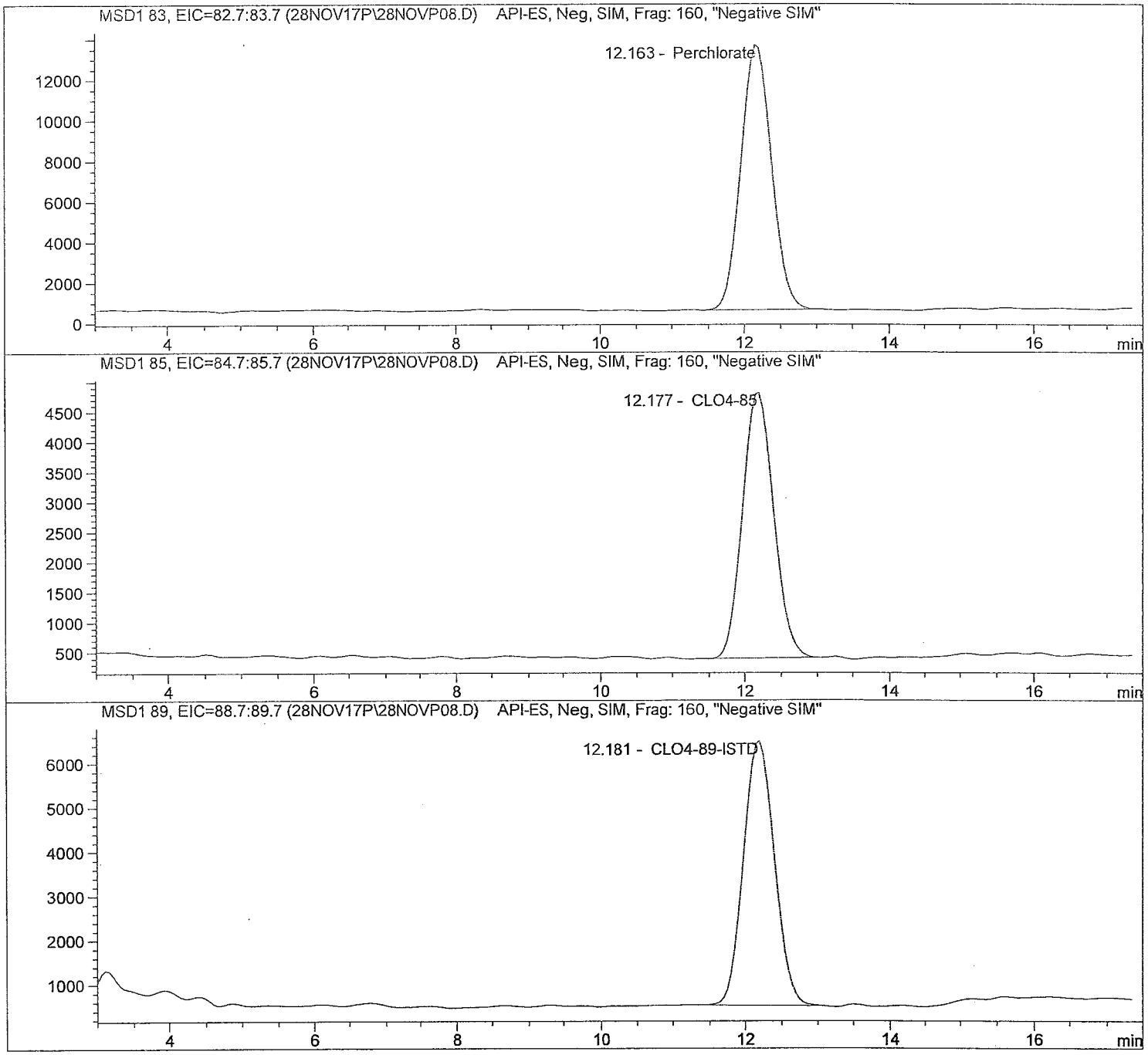
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\28NOV17P\28NOVP08.D Sample Name: ICAL Verf@10ug/L

Injection Date:	11/28/2017 11:28:53	Seq Line:	8
Sample Name:	ICAL Verf@10ug/L	Location:	Vial 78
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2017 11:06:36

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\28NOV17P\28NOVP08.D Sample Name: ICAL Verf@10ug/L

Injection Date:	11/28/2017 11:28:53	Seq Line:	8
Sample Name:	ICAL Verf@10ug/L	Location:	Vial 78
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2017 11:06:36

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Wed, 29. Nov. 2017,08:02:06 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
12.163	PBA	383615.2	9.5953	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.177	PBA	131459.5	10.0855	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.181	BBA	176961.2	5.0000	CLO4-89-ISTD

*** End of Report ***

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

Raw Data

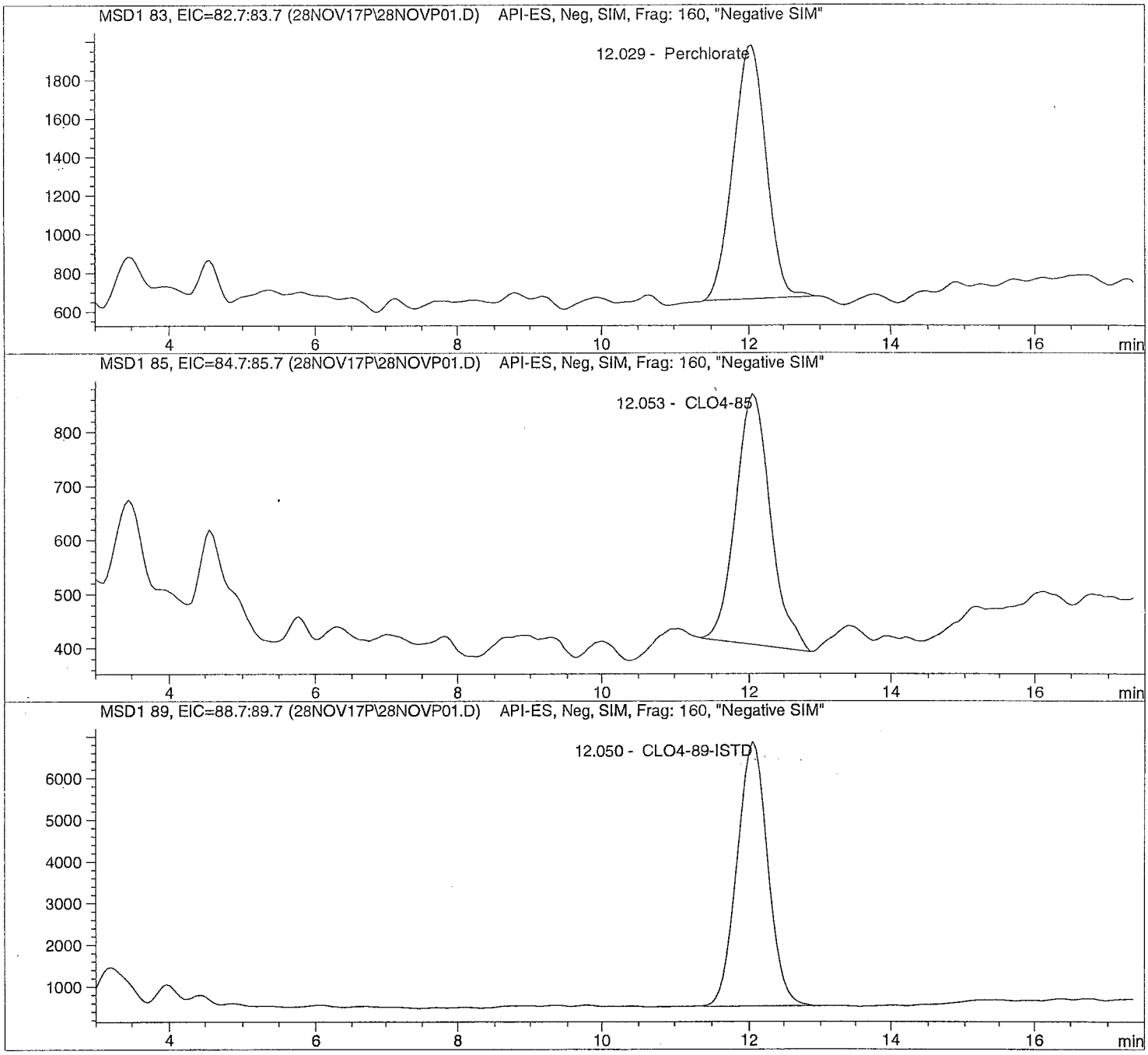
Unmodified

Data file: C:\HPCHEM\1\DATA\28NOV17P\28NOVP01.D Sample Name: ICAL1@ 1.0ug/L

Injection Date:	11/28/2017 09:08:10	Seq Line:	1
Sample Name:	ICAL1@ 1.0ug/L	Location:	Vial 71
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2017 11:06:36

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\28NOV17P\28NOVP01.D Sample Name: ICAL1@ 1.0ug/L

Injection Date:	11/28/2017 09:08:10	Seq Line:	1
Sample Name:	ICAL1@ 1.0ug/L	Location:	Vial 71
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2017 11:06:36

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Wed, 29. Nov. 2017,08:02:06 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
12.029	BBA	42017.4	1.0510	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.053	BBA	15678.7	0.9871	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.050	BBA	188880.3	5.0000	CLO4-89-ISTD

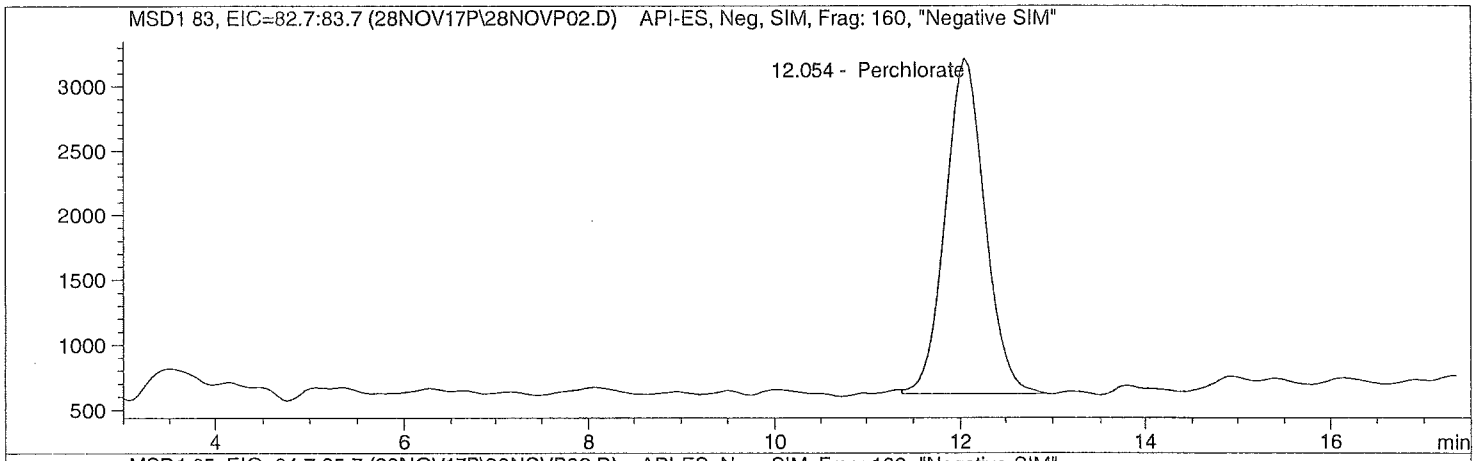
*** End of Report ***

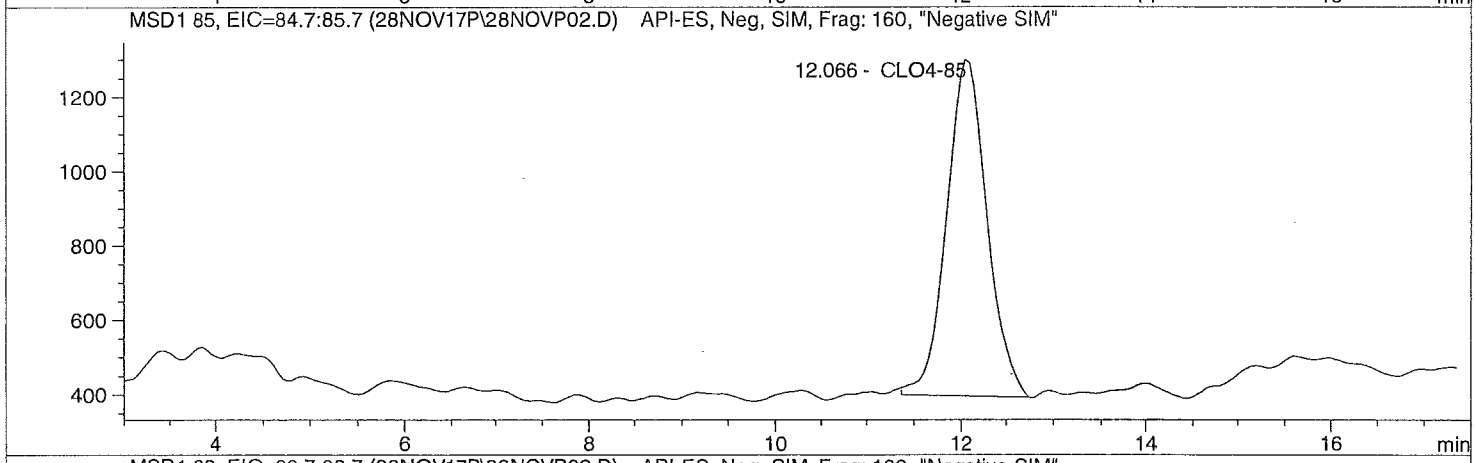
Data file: C:\HPCHEM\1\DATA\28NOV17P\28NOVP02.D Sample Name: ICAL2@ 2.0ug/L

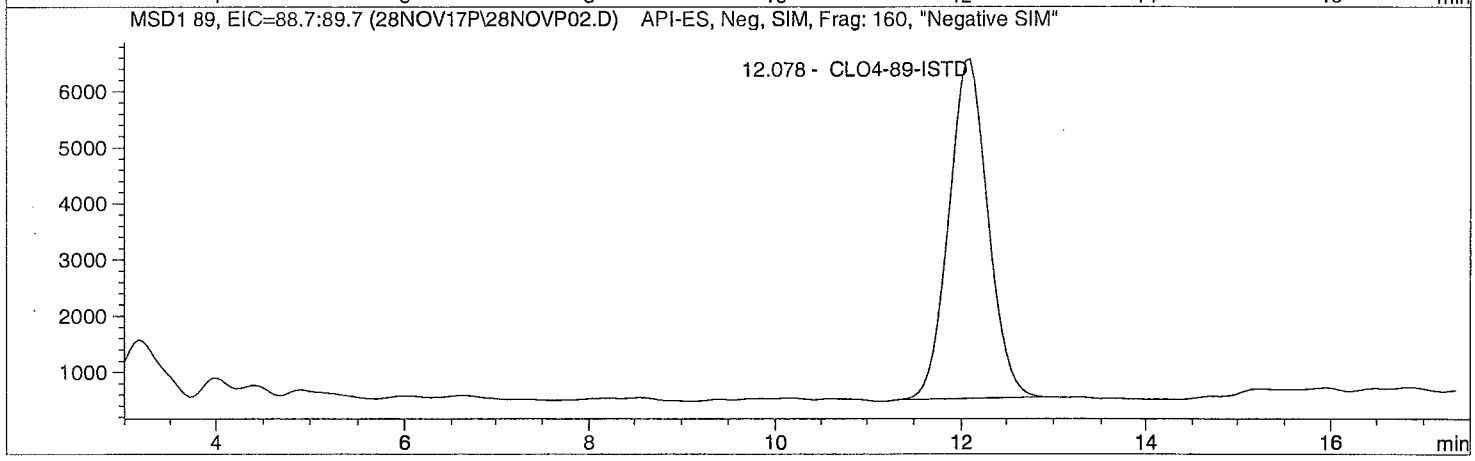
Injection Date:	11/28/2017 09:33:49	Seq Line:	2
Sample Name:	ICAL2@ 2.0ug/L	Location:	Vial 72
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2017 11:06:36

Perchlorate analysis







Data file: C:\HPCHEM\1\DATA\28NOV17P\28NOVP02.D Sample Name: ICAL2@ 2.0ug/L

Injection Date:	11/28/2017 09:33:49	Seq Line:	2
Sample Name:	ICAL2@ 2.0ug/L	Location:	Vial 72
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/3/2017 11:06:36

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Wed, 29. Nov. 2017,08:02:06 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
12.054	BBA	78519.1	2.0151	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.066	BBA	28009.6	2.0074	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.078	PBA	181109.4	5.0000	CLO4-89-ISTD

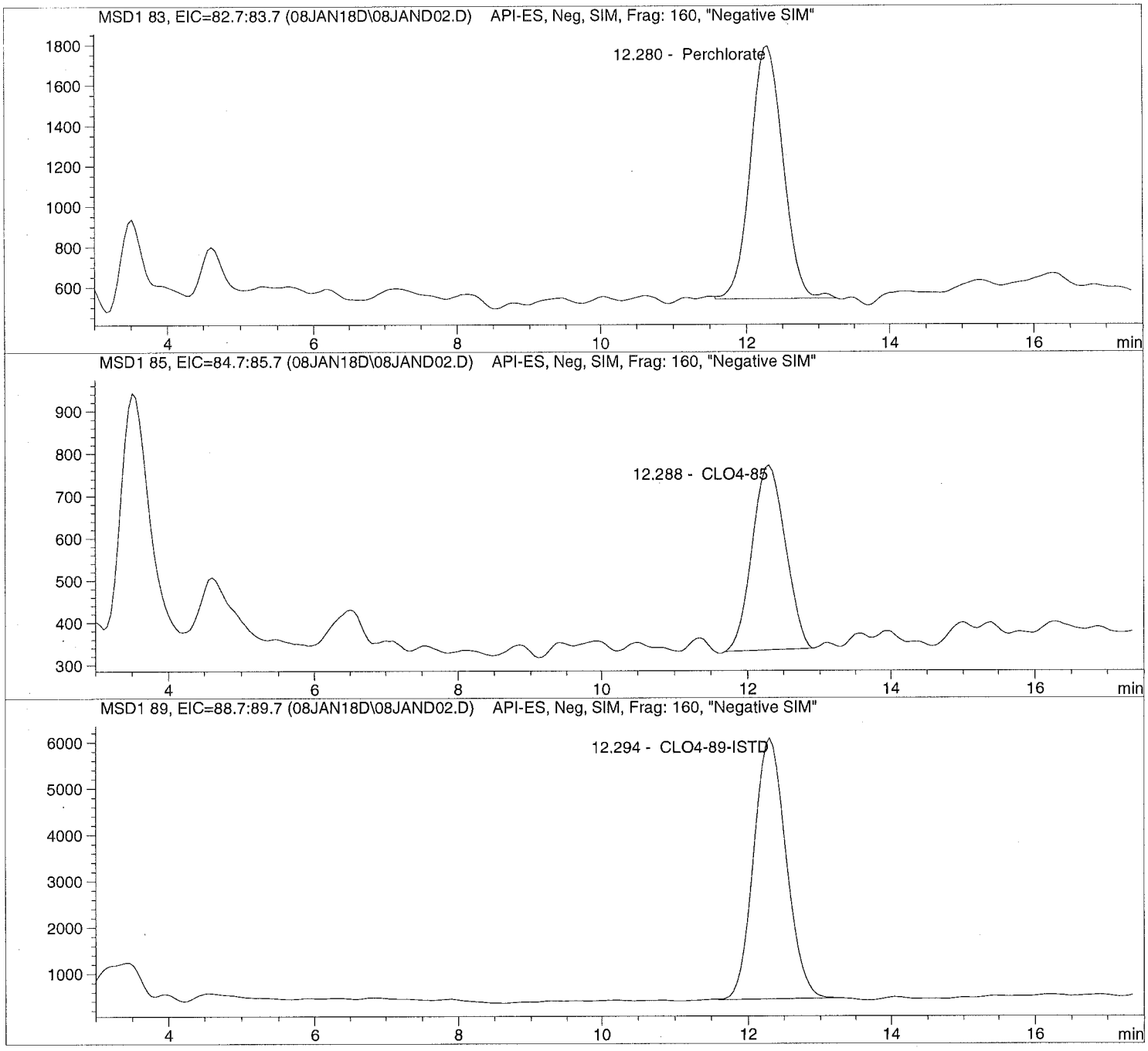
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\08JAN18D\08JAND02.D Sample Name: 582600 LODV@1.

Injection Date:	1/08/2018 08:36:51	Seq Line:	2
Sample Name:	582600 LODV@1.	Location:	Vial 72
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\08JAN18D\08JAND02.D Sample Name: 582600 LODV@1.

Injection Date:	1/08/2018 08:36:51	Seq Line:	2
Sample Name:	582600 LODV@1.	Location:	Vial 72
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Wed, 20. Dec. 2017,08:01:52 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
12.280	BBA	39034.0	1.0510	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.288	PBA	13990.1	0.9402	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.294	BBA	175472.0	5.0000	CLO4-89-ISTD

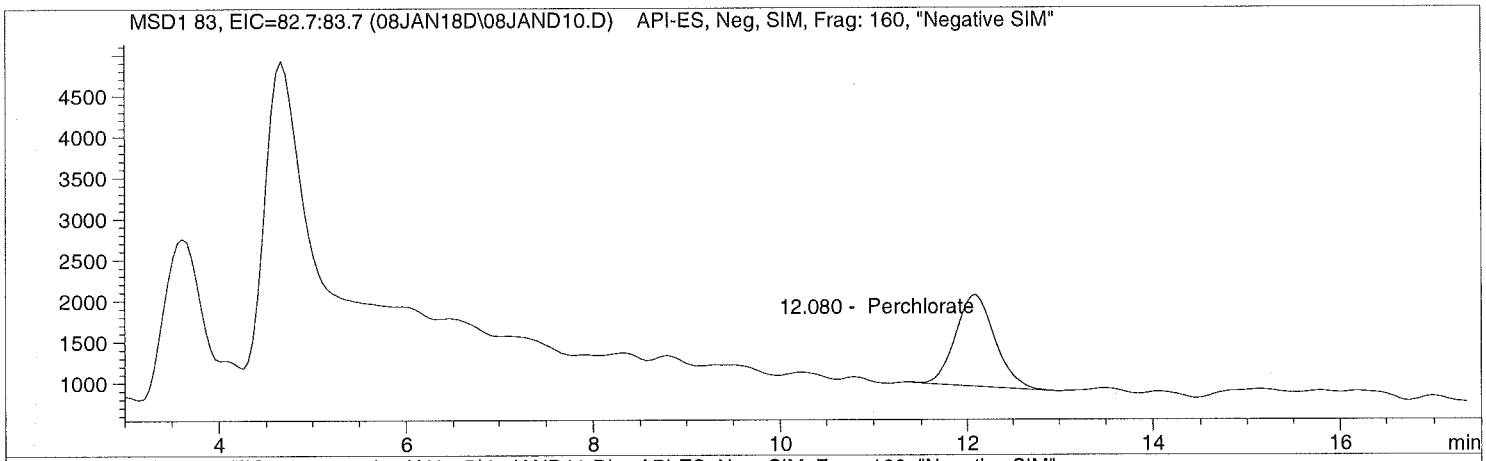
*** End of Report ***

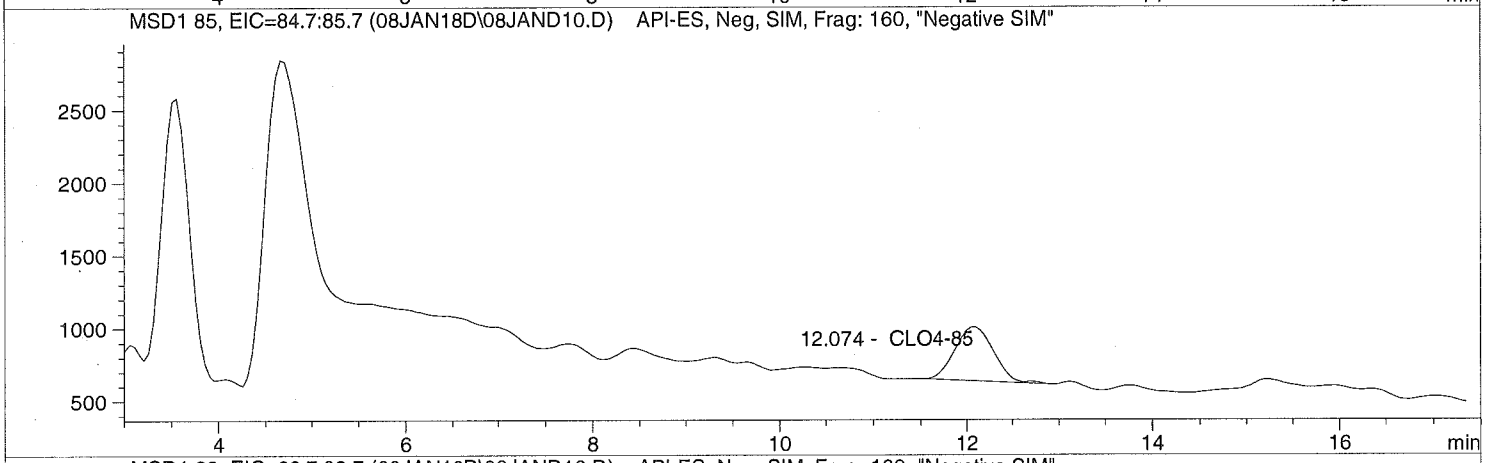
Data file: C:\HPCHEM\1\DATA\08JAN18D\08JAND10.D Sample Name: 1736221003

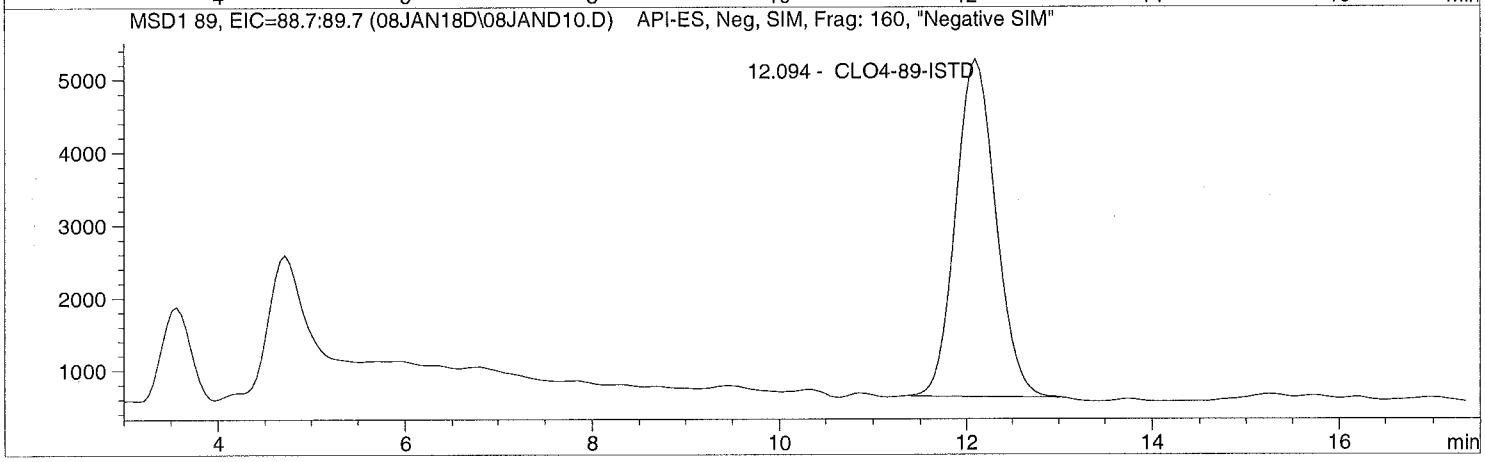
Injection Date:	1/08/2018 11:11:49	Seq Line:	10
Sample Name:	1736221003	Location:	Vial 80
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis







Data file: C:\HPCHEM\1\DATA\08JAN18D\08JAND10.D Sample Name: 1736221003

Injection Date:	1/08/2018 11:11:49	Seq Line:	10
Sample Name:	1736221003	Location:	Vial 80
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Wed, 20. Dec. 2017,08:01:52 am
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
12.080	BBA	33243.2	1.1079	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.074	PBA	10836.0	0.8947	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.094	BBA	141559.2	5.0000	CLO4-89-ISTD

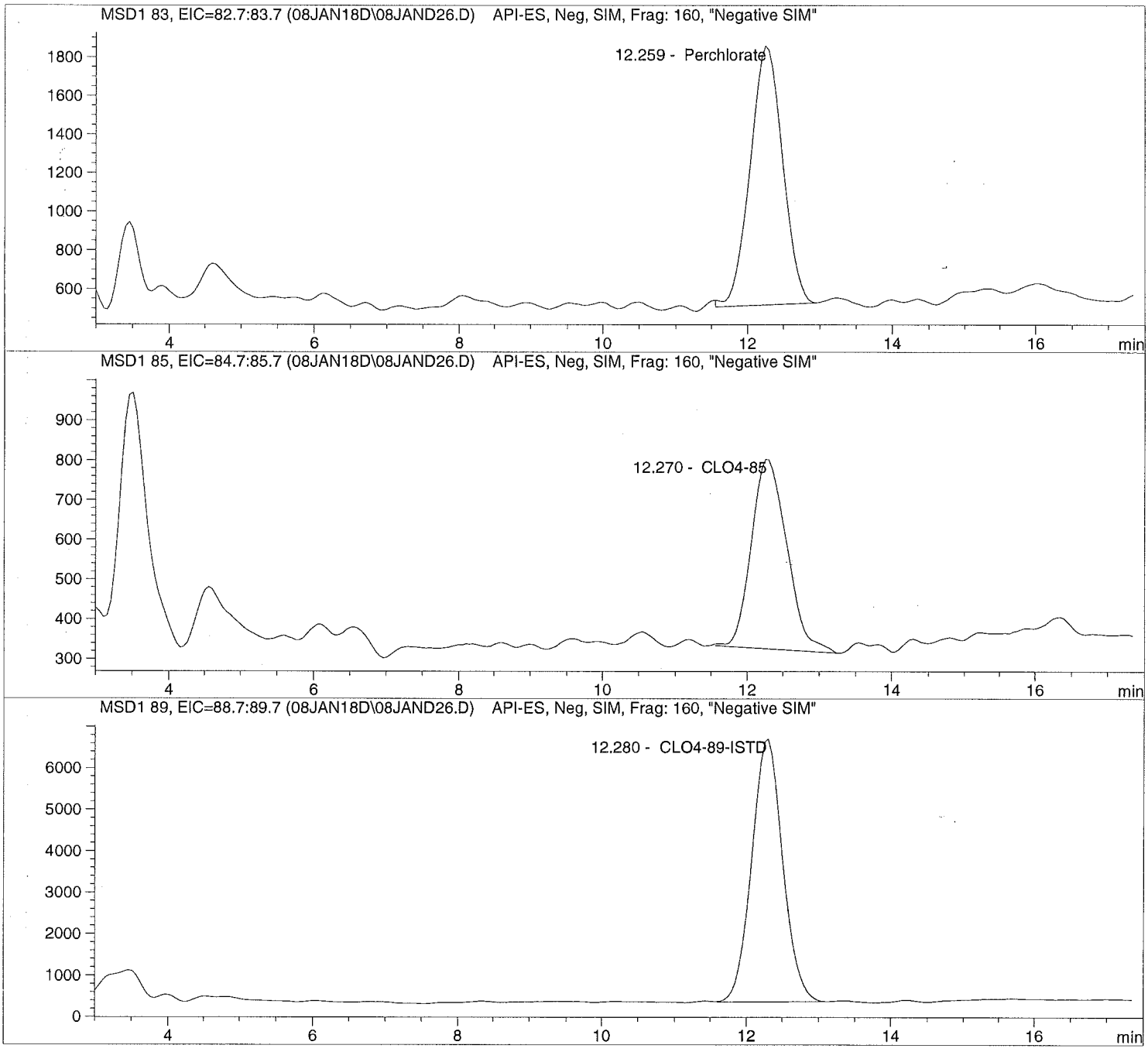
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\08JAN18D\08JAND26.D Sample Name: 582609 LODV@1.

Injection Date:	1/08/2018 16:21:37	Seq Line:	26
Sample Name:	582609 LODV@1.	Location:	Vial 72
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\08JAN18D\08JAND26.D Sample Name: 582609 LODV@1.

Injection Date:	1/08/2018 16:21:37	Seq Line:	26
Sample Name:	582609 LODV@1.	Location:	Vial 72
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	25 µl

Acq. Method: CLO4-DOD.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-DPR.M
Last Changed: 12/20/2017 08:11:26

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Wed, 20. Dec. 2017,08:01:52 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
12.259	BBA	41926.3	1.0454	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.270	BBA	16347.7	1.0336	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.280	BBA	189512.5	5.0000	CLO4-89-ISTD

*** End of Report ***

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

WorkOrder: HS17100709

Groundwater Treatment Plant Monthly Influent Sample

Bhate Environmental Associates, Inc.

Marcia Olive
445 Union Blvd Ste 129
Lakewood CO 80228

03-Nov-2017

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

October 28, 2017

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

Work Order: **HS17100709**

Laboratory Results for: **Groundwater Treatment Plant Monthly Influent Sample**

Dear Marcia,

ALS Environmental received 1 sample(s) on Oct 13, 2017 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,

Sonia West

Generated By: Jumoke.Lawal
Sonia West
Project Manager

ALS Group USA, Corp Date: 28-Oct-17

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Monthly Influent Sample
Work Order: HS17100709

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS17100709-01	LH18/24-SP140_101217	Water		12-Oct-2017 14:00	13-Oct-2017 08:25	☐

ALS Group USA, Corp Date: 28-Oct-17

Client: Bhate Environmental Associates, Inc. **CASE NARRATIVE**
Project: Groundwater Treatment Plant Monthly Influent Sample
Work Order: HS17100709

Work Order Comments

- For sample LH18/24-SP140_101217, the metals container was received with the pH >2. The laboratory added 1 mL of nitric acid (Lot#295177602) on October 13, 2017 an proceeded with the analysis.

Work Order Comments

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

Metals by Method SW6020

Batch ID: 121126

Sample ID: HS17100768-10MS

- MS and MSD are for an unrelated sample

WetChemistry by Method SW7196

Batch ID: R303427

Sample ID: HS17100695-01MS

- MS and MSD are for an unrelated sample

ALS Group USA, Corp Date: 28-Oct-17

Client: Bhate Environmental Associates, Inc.

ANALYTICAL REPORT

Project: Groundwater Treatment Plant Monthly Influent Sample WorkOrder:HS17100709

Sample ID: LH18/24-SP140_101217 Lab ID:HS17100709-01

Collection Date: 12-Oct-2017 14:00 Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		**Method:SW6020**				Prep:SW3010A / 18-Oct-2017		Analyst: RPM
Selenium	0.00200	U	0.00110	0.00200	0.00200	mg/L	1	20-Oct-2017 10:18
Silver	0.00100	U	0.000200	0.00100	0.00200	mg/L	1	20-Oct-2017 10:18
HEXAVALENT CHROMIUM BY SW7196A		**Method:SW7196**				Prep:SW7196		Analyst: JHD
Chromium, Hexavalent	0.00500	U	0.00600	0.00500	0.0100	mg/L	1	13-Oct-2017 13:40
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: SUB
Subcontract Analysis	See Attached		0	0			1	27-Oct-2017 16:05

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

ALS Group USA, Corp Date: 28-Oct-17

WEIGHT LOG

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Monthly Influent Sample
WorkOrder: HS17100709

Batch ID: 121126 **Method:** ICP-MS METALS BY SW6020A **Prep:** 3010A

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS17100709-01	1	10	10 (mL)	1

ALS Group USA, Corp Date: 28-Oct-17

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Monthly Influent Sample
WorkOrder: HS17100709

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID 121126	**Test Name :** ICP-MS METALS BY SW6020A			**Matrix:** Water		
HS17100709-01	LH18/24-SP140_101217	12 Oct 2017 14:00		18 Oct 2017 13:00	20 Oct 2017 10:18	1
Batch ID R303427	**Test Name :** HEXAVALENT CHROMIUM BY SW7196A			**Matrix:** Water		
HS17100709-01	LH18/24-SP140_101217	12 Oct 2017 14:00			13 Oct 2017 13:40	1
Batch ID R304313	**Test Name :** SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)			**Matrix:** Water		
HS17100709-01	LH18/24-SP140_101217	12 Oct 2017 14:00			27 Oct 2017 16:05	1

ALS Group USA, Corp Date: 28-Oct-17

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Monthly Influent Sample
WorkOrder: HS17100709

QC BATCH REPORT

Batch ID: 121126 **Instrument: ICPMS05** **Method: SW6020**

MBLK Sample ID: **MBLK-121126** Units: **mg/L** Analysis Date: **20-Oct-2017 09:46**
Client ID: Run ID: **ICPMS05_303769** SeqNo: **4271694** PrepDate: **18-Oct-2017** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Selenium	0.00200	0.00200								U
Silver	0.00100	0.00200								U

LCS Sample ID: **LCS-121126** Units: **mg/L** Analysis Date: **20-Oct-2017 09:52**
Client ID: Run ID: **ICPMS05_303769** SeqNo: **4271697** PrepDate: **18-Oct-2017** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Selenium	0.04798	0.00200	0.05	0	96.0	80 - 120				
Silver	0.04612	0.00200	0.05	0	92.2	80 - 120				

MS Sample ID: **HS17100768-10MS** Units: **mg/L** Analysis Date: **20-Oct-2017 10:03**
Client ID: Run ID: **ICPMS05_303769** SeqNo: **4271702** PrepDate: **18-Oct-2017** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Selenium	0.02944	0.00200	0.05	0	58.9	80 - 120				S
Silver	0.04369	0.00200	0.05	0	87.4	80 - 120				

MSD Sample ID: **HS17100768-10MSD** Units: **mg/L** Analysis Date: **20-Oct-2017 10:04**
Client ID: Run ID: **ICPMS05_303769** SeqNo: **4271703** PrepDate: **18-Oct-2017** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Selenium	0.03107	0.00200	0.05	0	62.1	80 - 120	0.02944	5.38	20	S
Silver	0.04367	0.00200	0.05	0	87.3	80 - 120	0.04369	0.0412	20	

PDS Sample ID: **HS17100768-10PDS** Units: **mg/L** Analysis Date: **20-Oct-2017 10:06**
Client ID: Run ID: **ICPMS05_303769** SeqNo: **4271704** PrepDate: **18-Oct-2017** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Selenium	0.095	0.00200	0.1	0	95.0	75 - 125				
Silver	0.0875	0.00200	0.1	0	87.5	75 - 125				

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

ALS Group USA, Corp Date: 28-Oct-17

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Monthly Influent Sample
WorkOrder: HS17100709

QC BATCH REPORT

Batch ID: 121126 **Instrument: ICPMS05** **Method: SW6020**

SD Sample ID: **HS17100768-10SD** Units: **mg/L** Analysis Date: **20-Oct-2017 10:00**
Client ID: Run ID: **ICPMS05_303769** SeqNo: **4271701** PrepDate: **18-Oct-2017** DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual
Selenium	0.0100	0.0100					-0.000037	0	10	U
Silver	0.00500	0.0100					0.000017	0	10	U

The following samples were analyzed in this batch: HS17100709-01

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

ALS Group USA, Corp Date: 28-Oct-17

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Monthly Influent Sample
WorkOrder: HS17100709

QC BATCH REPORT

Batch ID: R303427 **Instrument: UV-2450** **Method: SW7196**

MBLK Sample ID: **MBLK-303427** Units: **mg/L** Analysis Date: **13-Oct-2017 13:40**
Client ID: Run ID: **UV-2450_303427** SeqNo: **4263910** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.00500	0.0100								U

LCS Sample ID: **LCS-303427** Units: **mg/L** Analysis Date: **13-Oct-2017 13:40**
Client ID: Run ID: **UV-2450_303427** SeqNo: **4263911** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.286	0.0100	0.25	0	114	80 - 120				

LCSD Sample ID: **LCSD-303427** Units: **mg/L** Analysis Date: **13-Oct-2017 13:40**
Client ID: Run ID: **UV-2450_303427** SeqNo: **4263912** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.286	0.0100	0.25	0	114	80 - 120	0.286	0	20	

MS Sample ID: **HS17100695-01MS** Units: **mg/L** Analysis Date: **13-Oct-2017 13:40**
Client ID: Run ID: **UV-2450_303427** SeqNo: **4263914** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.149	0.0100	0.25	-0.006	62.0	75 - 125				S

MSD Sample ID: **HS17100695-01MSD** Units: **mg/L** Analysis Date: **13-Oct-2017 13:40**
Client ID: Run ID: **UV-2450_303427** SeqNo: **4263915** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.152	0.0100	0.25	-0.006	63.2	75 - 125	0.149	1.99	20	S

The following samples were analyzed in this batch: HS17100709-01

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

ALS Group USA, Corp Date: 28-Oct-17

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Monthly Influent Sample
WorkOrder: **HS17100709**

QUALIFIERS, ACRONYMS, UNITS

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

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

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	17-027-0	27-Mar-2018
California	2919 2016-2018	31-Jul-2018
Illinois	004112	09-May-2018
Kentucky	123043	30-Apr-2018
Louisiana	03087 2017-2017	30-Jun-2018
North Carolina	624-2017	31-Dec-2017
North Dakota	R193 2017-2017	30-Apr-2018
Oklahoma	2017-088	31-Aug-2018
Texas	T104704231-17-19	30-Apr-2018

ALS Group USA, Corp Date: 28-Oct-17

Sample Receipt Checklist

Client Name: Bhate Environmental
Work Order: HS17100709
Date/Time Received: **13-Oct-2017 08:25**
Received by: **JRM**

Checklist completed by: *Jared R. Makan* eSignature 13-Oct-2017 Date
Reviewed by: *Sonia West* eSignature 15-Oct-2017 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):	1.7c/2.0c UC/C	IR11	
Cooler(s)/Kit(s):	Blue		
Date/Time sample(s) sent to storage:	10/13/2017 08:35		
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:	Jared R. Makan		

Login Notes: Metals bottle pH>2. Preserved with 1ml HNO3 on 10/13/2017 @ 10:30am Acid lot # 295177602.

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

CHAIN OF CUSTODY

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

Page 1 of 1

Project: BHATE LONGHORN ARMY AMMN. PLANT (LHAAP) GROUNDWATER TREATMENT PLANT (GWTP) KARNACK, TEXAS	Project No. NWO1312.0150.0 16.0001
Job: **GROUNDWATER TREATMENT PLANT MONTHLY INFLUENT SAMPLES**	
Prepared By: Scott Beesinger	P.O. Number

Field Sample I.D.	Sample Matrix	Date / Time	MS / MSD	No. OF CONTAINERS	Analyses: SILVER & SELENIUM	HEXAVALENT CHROMIUM	PERCHLORATE	Remarks (Preservatives, etc.)	Lab I.D.#
LH18/24-SP140_101217	Water	10/12/17 / 14:00		1	X			HNO3	
LH18/24-SP140_101217	Water	10/12/17 / 14:00		2		X	X	NONE	

Additional Remarks: **STANDARD TURN AROUND TIME**

Relinquished By:	Date	Time	Received By:	Date	Time	Relinquished By:	Date	Time	Received By:	Date	Time
	10/12/17	14:30									

For Lab Use Only

Received At Lab By:	Date	Time	Airbill No.	Opened By:	Date	Time	Temp of Container	Seal No.	Condition
J. Imamura	10/13/17	08:35							

Remarks:

Cooler - Blue IR#
Temp 1.7 CF 0.3

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

HS17100709

Bhate Environmental Associates, Inc.
oundwater Treatment Plant Monthly Influent Sample

Metals Raw Data

Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Monthly Influent Sample
ALS WO# HS17100709

ALS Group USA, Corp Date: 31-Oct-17

Form 2 - Initial and Continuing Calibration Verification

Client: Bhate Environmental Associates, Inc. Run ID: ICPMS05_303769
Project: Groundwater Treatment Plant Monthly Influent Sample Instrument: ICPMS05
WorkOrder: HS17100709 Method: SW6020

ICV	Date: 20-Oct-2017 08:38		Seq: 4271467	ICV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Selenium	100	103.04	103	90-110	
Silver	100	98.913	99	90-110	

CCV1	Date: 20-Oct-2017 09:00		Seq: 4271478	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Selenium	100	98.363	98	90-110	
Silver	100	98.052	98	90-110	

CCV2	Date: 20-Oct-2017 09:24		Seq: 4271531	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Selenium	100	97.682	98	90-110	
Silver	100	98.62	99	90-110	

CCV3	Date: 20-Oct-2017 09:48		Seq: 4271695	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Selenium	100	96.696	97	90-110	
Silver	100	98.132	98	90-110	

CCV4	Date: 20-Oct-2017 10:12		Seq: 4271709	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Selenium	100	99.154	99	90-110	
Silver	100	100.28	100	90-110	

CCV5	Date: 20-Oct-2017 10:37		Seq: 4271830	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Selenium	100	97.63	98	90-110	
Silver	100	99.581	100	90-110	

CCV6	Date: 20-Oct-2017 11:01		Seq: 4272188	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Selenium	100	98.255	98	90-110	
Silver	100	98.149	98	90-110	

CCV7	Date: 20-Oct-2017 11:25		Seq: 4272200	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Selenium	100	95.887	96	90-110	
Silver	100	96.576	97	90-110	

CCV8	Date: 20-Oct-2017 11:50		Seq: 4272212	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Selenium	100	97.809	98	90-110	
Silver	100	97.808	98	90-110	

CCV9	Date: 20-Oct-2017 12:14		Seq: 4272416	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Selenium	100	94.494	95	90-110	
Silver	100	97.146	97	90-110	

CCV10	Date: 20-Oct-2017 12:38		Seq: 4272428	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Selenium	100	94.223	94	90-110	
Silver	100	94.304	94	90-110	

CCV11	Date: 20-Oct-2017 13:03		Seq: 4272440	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Selenium	100	98.298	98	90-110	
Silver	100	98.205	98	90-110	

ALS Group USA, Corp Date: 31-Oct-17

Form 2 - Initial and Continuing Calibration Verification

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Monthly Influent Sample
WorkOrder: HS17100709

Run ID: ICPMS05_303769
Instrument: ICPMS05
Method: SW6020

CCV12	Date: 20-Oct-2017 13:27		Seq: 4272472	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Selenium	100	93.797	94	90-110	
Silver	100	96.624	97	90-110	
CCV13	Date: 20-Oct-2017 14:01		Seq: 4273663	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Selenium	100	94.877	95	90-110	
Silver	100	97.298	97	90-110	
CCV14	Date: 20-Oct-2017 14:25		Seq: 4273675	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Selenium	100	92.43	92	90-110	
Silver	100	95.138	95	90-110	
CCV15	Date: 20-Oct-2017 14:37		Seq: 4273681	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Selenium	100	95.722	96	90-110	
Silver	100	94.286	94	90-110	

Form 3 - BLANKS

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Monthly Influent Sample
WorkOrder: HS17100709

Run ID: ICPMS05_303769
Instrument: ICPMS05
Method: SW6020

ICB	Date: 20-Oct-2017 08:44		Seq: 4271470	ICB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	
CCB1	Date: 20-Oct-2017 09:02		Seq: 4271479	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	
CCB2	Date: 20-Oct-2017 09:26		Seq: 4271535	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	
MBLK-121126	Date: 20-Oct-2017 09:46		Seq: 4271694	MBLK	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	
CCB3	Date: 20-Oct-2017 09:50		Seq: 4271696	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	
CCB4	Date: 20-Oct-2017 10:14		Seq: 4271711	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	
CCB5	Date: 20-Oct-2017 10:39		Seq: 4271831	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	
CCB6	Date: 20-Oct-2017 11:03		Seq: 4272189	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	
CCB7	Date: 20-Oct-2017 11:27		Seq: 4272201	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	
CCB8	Date: 20-Oct-2017 11:52		Seq: 4272213	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	
CCB9	Date: 20-Oct-2017 12:16		Seq: 4272417	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	
CCB10	Date: 20-Oct-2017 12:40		Seq: 4272429	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	

Form 3 - BLANKS

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Monthly Influent Sample
WorkOrder: HS17100709

Run ID: ICPMS05_303769
Instrument: ICPMS05
Method: SW6020

CCB11	Date: 20-Oct-2017 13:04		Seq: 4272441	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	

CCB12	Date: 20-Oct-2017 13:29		Seq: 4272473	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	

CCB13	Date: 20-Oct-2017 14:03		Seq: 4273664	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	

CCB14	Date: 20-Oct-2017 14:27		Seq: 4273676	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	

CCB15	Date: 20-Oct-2017 14:39		Seq: 4273682	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	

ALS Group USA, Corp Date: 31-Oct-17

Form 4 - ICP Interference Check Sample

Client: Bhate Environmental Associates, Inc. Run ID:ICPMS05_303769

Project: Groundwater Treatment Plant Monthly Influent Sample Instrument:ICPMS05

WorkOrder: HS17100709 Method:SW6020

ICSA	Date: 20-Oct-2017 08:46	Seq: 4271471	ICSA	Units: ug/L
Analyte	**True**	**Found**	**%R**	
Selenium		-0.205	0	
Silver		0.046	0	
ICSAB	Date: 20-Oct-2017 08:48	Seq: 4271472	ICSAB	Units: ug/L
Analyte	**True**	**Found**	**%R**	
Selenium	100	92.79	92.8	
Silver	100	86.74	86.7	
ICSA	Date: 20-Oct-2017 14:45	Seq: 4273685	ICSA	Units: ug/L
Analyte	**True**	**Found**	**%R**	
Selenium		-0.343	0	
Silver		0.041	0	
ICSAB	Date: 20-Oct-2017 14:47	Seq: 4273686	ICSAB	Units: ug/L
Analyte	**True**	**Found**	**%R**	
Selenium	100	86.17	86.2	
Silver	100	91.61	91.6	

ALS Group USA, Corp Date: 31-Oct-17

Form 5A - Matrix Spike/Matrix Spike Duplicate Recovery

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Monthly Influent Sample
WorkOrder: HS17100709

Date Analyzed: 20-Oct-2017 10:04
Date Extracted: 18-Oct-2017 13:00
Units: ug/L

Matrix Spike: HS17100768-10MS
Client Sample ID:

Analysis Method: SW6020

Analyte	Sample Result	MS Result	Spike Amount	% Rec	MSD Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
Selenium	2.000	29.44	50.00	58.9	31.07	50.00	62.1	80-120	5.38	20
Silver	2.000	43.69	50.00	87.4	43.67	50.00	87.3	80-120	0.0412	20

ALS Group USA, Corp Date: 31-Oct-17

Form 5B - Post Digest Sample Recovery

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Monthly Influent Sample
WorkOrder: HS17100709

Date Analyzed: 20-Oct-2017 10:06
Date Extracted: 18-Oct-2017 13:00
Units: ug/L

Lab Sample ID: HS17100768-10PDS
Client Sample ID:

Analysis Method: SW6020

Analyte	Sample Result	PDS Result	Spike Amount	% Rec	% Rec Limits
Selenium	0	95	100	95	75-125
Silver	0	87.5	100	88	75-125

ALS Group USA, Corp

Date: 31-Oct-17

Form 7 - Laboratory Control Sample

Client: Bhate Environmental Associates, Inc.

Project: Groundwater Treatment Plant Monthly Influent Sample

WorkOrder: HS17100709

Date Analyzed: 20-Oct-2017 09:52

Date Extracted: 18-Oct-2017 13:00

Units: ug/L

Lab Sample ID: LCS-121126

Analysis Method: SW6020

Analyte	Spike Amount	LCS Result	% Rec	% Rec Limits
Selenium	50	47.98	96	80-120
Silver	50	46.12	92	80-120

ALS Group USA, Corp Date: 31-Oct-17

Form 8 - ICP Serial Dilutions

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Monthly Influent Sample
WorkOrder: HS17100709

Date Analyzed: 20-Oct-2017 10:00
Date Extracted: 18-Oct-2017 13:00
Units: ug/L

Lab Sample ID: HS17100768-10SD
Client Sample ID:

Analysis Method: SW6020

Analyte	Sample Result	C	SD Result	C	RPD	Q
Selenium	0	U	0	U	0	
Silver	0	U	0	U	0	

ALS Group USA, Corp Date: 31-Oct-17

Form 11 - INTERNAL STANDARD ASSOCIATION

Client: Bhate Environmental Associates, Inc. Instrument:ICPMS05
Project: Groundwater Treatment Plant Monthly Influent Sample
WorkOrder: HS17100709

Mass	Analyte	Assoc Int Standard 1	Assoc Int Standard 2	Mode
9	Beryllium	Lithium		Ar
11	Boron	Lithium		Ar
23	Sodium	Germanium		Ar
24	Magnesium	Germanium		Ar
27	Aluminum	Germanium		Ar
39	Potassium	Germanium		Ar
44	Calcium	Germanium		Ar
47	Titanium	Germanium		Ar
51	Vanadium	Germanium		ArHe
52	Chromium	Germanium		ArHe
55	Manganese	Germanium		ArHe
56	Iron	Germanium		ArHe
59	Cobalt	Germanium		ArHe
60	Nickel	Germanium		ArHe
63	Copper	Germanium		ArHe
66	Zinc	Germanium		ArHe
75	Arsenic	Germanium		ArHe
78	Selenium	Germanium		ArHe
88	Strontium	Germanium		Ar
95	Molybdenum	Germanium		Ar
105	Palladium	Germanium		Ar
107	Silver	Germanium		Ar
114	Cadmium	Indium		Ar
118	Tin	Germanium		Ar
121	Antimony	Germanium		ArHe
137	Barium	Indium		Ar
205	Thallium	Bismuth		Ar
208	Lead	Bismuth		Ar

ALS Group USA, Corp Date: 31-Oct-17

FORM 12 - PREPARATION LOG

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Monthly Influent Sample
WorkOrder: HS17100709
Start Date: 18-Oct-2017 13:00 End Date: 18-Oct-2017 17:30

Batch ID: 121126
Prep Code: 3010A
Method: SW3010A
Technician:

SampID	ClientID	Matrix	Init Wt	Init Vol	FinalVol (mL)	PrepFac
HS17100709-01	LH18/24-SP140_101217	Water		10	10	1
HS17100768-10MS				10	10	1
HS17100768-10MSD				10	10	1
HS17100768-10PDS				10	10	1
HS17100768-10SD				10	10	1
LCS-121126				10	10	1
MBLK-121126				10	10	1

ALS Group USA, Corp Date: 31-Oct-17

FORM 13 - ANALYSIS RUN LOG

Client: Bhate Environmental Associates, Inc. Run ID:ICPMS05_303769

Project: Groundwater Treatment Plant Monthly Influent Sample Instrument:ICPMS05

WorkOrder: HS17100709 Method:

Start Date: 20-Oct-2017 End Date: 20-Oct-2017

Sample No.	D/F	Time	FileID	Analytes
ICPMS05_303769_Tune	1	20-Oct-2017 00:00	ICPMS05_303769_Tune_1	
CAL BLK	1	20-Oct-2017 08:24	004CALB.d_4271460	AG SE
2/10/200	1	20-Oct-2017 08:26	005CALS.d_4271461	AG SE
5/25/500	1	20-Oct-2017 08:28	006CALS.d_4271462	AG SE
10/50/1000	1	20-Oct-2017 08:30	007CALS.d_4271463	AG SE
100/500/10K	1	20-Oct-2017 08:32	008CALS.d_4271464	AG SE
200/1000/20K	1	20-Oct-2017 08:34	009CALS.d_4271465	AG SE
ICV	1	20-Oct-2017 08:38	011_ICV.d_4271467	AG SE
LLICV2	1	20-Oct-2017 08:40	012SMPL.d_4271468	AG SE
LLICV5	1	20-Oct-2017 08:42	013LICV.d_4271469	AG SE
ICB	1	20-Oct-2017 08:44	014_ICB.d_4271470	AG SE
ICSA	1	20-Oct-2017 08:46	015ICSA.d_4271471	AG SE
ICSAB	1	20-Oct-2017 08:48	016ICSB.d_4271472	AG SE
CCV 1	1	20-Oct-2017 09:00	022_CCV.d_4271478	AG SE
CCB 1	1	20-Oct-2017 09:02	023_CCB.d_4271479	AG SE
CCV 2	1	20-Oct-2017 09:24	034_CCV.d_4271531	AG SE
CCB 2	1	20-Oct-2017 09:26	035_CCB.d_4271535	AG SE
MBLK-121126	1	20-Oct-2017 09:46	045SMPL.d_4271694	AG SE
CCV 3	1	20-Oct-2017 09:48	046_CCV.d_4271695	AG SE
CCB 3	1	20-Oct-2017 09:50	047_CCB.d_4271696	AG SE
LCS-121126	1	20-Oct-2017 09:52	048SMPL.d_4271697	AG SE
ZZZZZZSD	5	20-Oct-2017 10:00	052SMPL.d_4271701	AG SE
ZZZZZZMS	1	20-Oct-2017 10:03	053SMPL.d_4271702	AG SE
ZZZZZZMSD	1	20-Oct-2017 10:04	054SMPL.d_4271703	AG SE
ZZZZZZPDS	1	20-Oct-2017 10:06	055SMPL.d_4271704	AG SE
CCV 4	1	20-Oct-2017 10:12	058_CCV.d_4271709	AG SE
CCB 4	1	20-Oct-2017 10:14	059_CCB.d_4271711	AG SE
LH18/24-SP140_101217	1	20-Oct-2017 10:18	061SMPL.d_4271821	AG SE
CCV 5	1	20-Oct-2017 10:37	070_CCV.d_4271830	AG SE
CCB 5	1	20-Oct-2017 10:39	071_CCB.d_4271831	AG SE
CCV 6	1	20-Oct-2017 11:01	082_CCV.d_4272188	AG SE
CCB 6	1	20-Oct-2017 11:03	083_CCB.d_4272189	AG SE
CCV 7	1	20-Oct-2017 11:25	094_CCV.d_4272200	AG SE
CCB 7	1	20-Oct-2017 11:27	095_CCB.d_4272201	AG SE
CCV 8	1	20-Oct-2017 11:50	106_CCV.d_4272212	AG SE
CCB 8	1	20-Oct-2017 11:52	107_CCB.d_4272213	AG SE
CCV 9	1	20-Oct-2017 12:14	118_CCV.d_4272416	AG SE
CCB 9	1	20-Oct-2017 12:16	119_CCB.d_4272417	AG SE
CCV 10	1	20-Oct-2017 12:38	130_CCV.d_4272428	AG SE
CCB 10	1	20-Oct-2017 12:40	131_CCB.d_4272429	AG SE
CCV 11	1	20-Oct-2017 13:03	142_CCV.d_4272440	AG SE
CCB 11	1	20-Oct-2017 13:04	143_CCB.d_4272441	AG SE
CCV 12	1	20-Oct-2017 13:27	154_CCV.d_4272472	AG SE
CCB 12	1	20-Oct-2017 13:29	155_CCB.d_4272473	AG SE
CCV 13	1	20-Oct-2017 14:01	171_CCV.d_4273663	AG SE
CCB 13	1	20-Oct-2017 14:03	172_CCB.d_4273664	AG SE
CCV 14	1	20-Oct-2017 14:25	183_CCV.d_4273675	AG SE
CCB 14	1	20-Oct-2017 14:27	184_CCB.d_4273676	AG SE
CCV 15	1	20-Oct-2017 14:37	189_CCV.d_4273681	AG SE
CCB 15	1	20-Oct-2017 14:39	190_CCB.d_4273682	AG SE
LLCCV5	1	20-Oct-2017 14:41	191LICV.d_4273683	AG SE
LLCCV2	1	20-Oct-2017 14:43	192SMPL.d_4273684	AG SE
ICSA	1	20-Oct-2017 14:45	193ICSA.d_4273685	AG SE
B	1	20-Oct-2017 14:47	194ICSB.d_4273686	AG SE

Tune Report

Batch Folder C:\Agilent\ICPMH\1\DATA\102017A.b
Report Comment
Instrument Name G3281A JP11080910

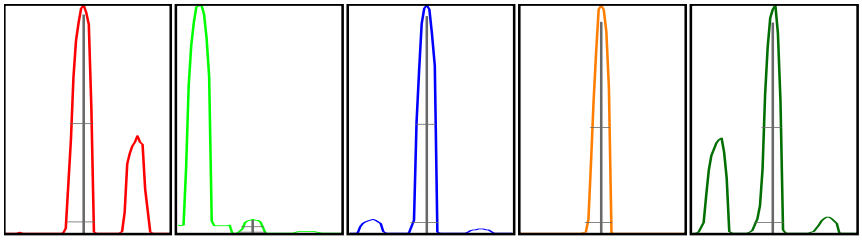
[nogas]

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		7541				NaN	-	
24		26712				NaN	-	
59		42880				NaN	-	
115		52469				NaN	-	
208		33247				NaN	-	

Mass	RSD% (Actual)	RSD% (Required)	RSD% (Flag)	Background (Actual)	Background (Required)	Background (Flag)
9	2.17	5.00				
24	0.85	5.00				
59	1.11	5.00				
115	0.66	5.00				
208	0.84	5.00				

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	7797	7578	7404	7528	7396
24	27076	26546	26584	26560	26794
59	43541	43129	42580	42839	42312
115	52043	52544	52515	52972	52274
208	33359	32960	33261	33649	33005

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	1980.91	8.95	8.9 - 9.1		0.39	0.492	0.750	
24	7114.33	23.90	23.9 - 24.1		0.38	0.488	0.750	
59	12079.69	58.95	58.9 - 59.1		0.37	0.455	0.750	
115	15641.30	115.00	114.9 - 115.1		0.33	0.459	0.750	
208	9756.01	208.00	207.9 - 208.1		0.33	0.513	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	0.35 L/min	S/C Temp	2 ℃
RF Matching	1.70 V	Option Gas	0.0 %	Makeup/Dilution Gas	0.50 L/min
Smpl Depth	8.0 mm	Nebulizer Pump	0.10 rps	Gas Switch	Dilution Gas

Lenses Parameters

Extract 1	0.0 V	Omega Lens	8.0 V	Deflect	15.6 V
Extract 2	-200.0 V	Cell Entrance	-38 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		130				NaN	-	
24		1576				NaN	-	
59		18373				NaN	-	

Tune Report

Mass	RSD% (Actual)	RSD% (Required)	RSD% (Flag)	Background (Actual)	Background (Required)	Background (Flag)
9	4.13	5.00				
24	2.30	5.00				
59	1.60	5.00				

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	130	139	130	124	129
24	1618	1561	1539	1612	1551
59	18836	18497	18173	18168	18192

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	33.76	8.90	8.9 - 9.1		0.39	0.495	0.750	
24	421.22	23.90	23.9 - 24.1		0.38	0.485	0.750	
59	5323.23	58.95	58.9 - 59.1		0.35	0.445	0.750	

X = 5 **Integration Time [sec]** 0.1 **Acquisition Time [sec]** 100.6 **Y Axis** Linear

Tune Parameters

Plasma Paramters

RF Power	1600 W	Carrier Gas	0.35 L/min	S/C Temp	2 ℃
RF Matching	1.70 V	Option Gas	0.0 %	Makeup/Dilution Gas	0.50 L/min
Smpl Depth	8.0 mm	Nebulizer Pump	0.10 rps	Gas Switch	Dilution Gas

Lenses Parameters

Extract 1	0.0 V	Omega Lens	8.0 V	Deflect	2.0 V
Extract 2	-200.0 V	Cell Entrance	-32 V	Plate Bias	-60 V
Omega Bias	-100 V	Cell Exit	-70 V		

Cell Parameters

OctP Bias	-18.0 V	He Flow	4.5 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 Blank Report

Sample Table

Sample Name	CAL BLK
Data File Name	004CALB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102
Acq Date Time	2017-10-20T08:24:20-05:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	30	111.11
Na	23	1	nogas	2125724	0.00
Mg	24	1	nogas	12673	0.11
Al	27	1	nogas	12928	0.00
K	39	1	nogas	4950250	0.00
Ti	47	1	nogas	200	13.92
V	51	1	nogas	757177	0.00
Cr	52	1	nogas	30456	0.02
Mn	55	1	nogas	13008	0.01
Co	59	1	nogas	843	0.91
Ni	60	1	nogas	1613	0.83
Cu	63	1	nogas	4594	0.12
Zn	66	1	nogas	3277	0.15
As	75	1	nogas	142071	0.01
Sr	88	1	nogas	687	1.44
Ag	107	1	nogas	290	4.29
Sb	121	1	nogas	1850	0.19
Tl	205	1	nogas	100	10.00
Pb	208	1	nogas	487	3.20
[Pb]	206	1	nogas	93	33.14
[Pb]	207	1	nogas	107	39.63
Na	23	2	He	154444	0.00
Mg	24	2	He	780	0.72
Al	27	2	He	307	10.33
K	39	2	He	72800	0.00
Ca	43	2	He	17	749.40
Ca	44	2	He	1183	0.55
V	51	2	He	4805	0.11
Cr	52	2	He	2540	0.21
Mn	55	2	He	887	3.39
Fe	56	2	He	8739	0.05
Co	59	2	He	310	6.24
Ni	60	2	He	273	6.74
Cu	63	2	He	1460	0.17
Zn	66	2	He	833	0.83
As	75	2	He	234	7.91
Se	78	2	He	66	43.80
B	11	1	nogas	56447	0.00
Si	28	1	nogas	922866	0.00
Ca	43	1	nogas	693	2.48
Ca	44	1	nogas	149269	0.00
Fe	56	1	nogas	938515	0.00

Calibration Blank Report

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Se	77	1	nogas	47382	0.01
Se	82	1	nogas	383	6.43
Mo	95	1	nogas	83	71.03
Sn	118	1	nogas	703	2.60
Ba	137	1	nogas	160	42.97
Sb	121	2	He	613	0.85
Li	7	1	nogas	30191	0.02
P	31	1	nogas	38864	0.01
La	139	1	nogas	93	43.46

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	6	1	nogas	309366	3.78
Ge	72	1	nogas	1624816	2.30
In	115	1	nogas	1701792	3.42
Bi	209	1	nogas	1450658	1.84
Ge	72	2	He	341080	1.51

Calibration Standard Report

Sample Table

Sample Name	2/10/200
Data File Name	005CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102
Acq Date Time	2017-10-20T08:26:22-05:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	4241	0.09
Na	23	1	nogas	4010316	0.00
Mg	24	1	nogas	1498257	0.00
Al	27	1	nogas	30141	0.01
K	39	1	nogas	6594402	0.00
Ti	47	1	nogas	1990	0.52
V	51	1	nogas	834677	0.00
Cr	52	1	nogas	54103	0.01
Mn	55	1	nogas	40047	0.00
Co	59	1	nogas	26433	0.00
Ni	60	1	nogas	7252	0.09
Cu	63	1	nogas	18747	0.03
Zn	66	1	nogas	5804	0.04
As	75	1	nogas	153656	0.00
Sr	88	1	nogas	31412	0.00
Ag	107	1	nogas	18827	0.03
Cd	111	1	nogas	4054	0.06
Sb	121	1	nogas	18086	0.02
Tl	205	1	nogas	29868	0.01
Pb	208	1	nogas	42626	0.00
[Pb]	206	1	nogas	10040	0.05
[Pb]	207	1	nogas	9556	0.03
Na	23	2	He	261140	0.00
Mg	24	2	He	65731	0.00
Al	27	2	He	557	4.76
K	39	2	He	128207	0.00
Ca	43	2	He	160	3.91
Ca	44	2	He	3874	0.06
V	51	2	He	10049	0.04
Cr	52	2	He	8949	0.05
Mn	55	2	He	4707	0.17
Fe	56	2	He	585034	0.00
Co	59	2	He	9766	0.01
Ni	60	2	He	2664	0.34
Cu	63	2	He	8009	0.09
Zn	66	2	He	1557	1.67
As	75	2	He	1347	0.62
Se	78	2	He	133	17.22
B	11	1	nogas	58507	0.00
Si	28	1	nogas	1366088	0.00

Calibration Standard Report

Ca	43	1	nogas	4017	0.13
Ca	44	1	nogas	199903	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	3665966	0.00
Se	77	1	nogas	50691	0.01
Se	82	1	nogas	770	2.04
Mo	95	1	nogas	6451	0.06
Sn	118	1	nogas	10647	0.06
Ba	137	1	nogas	5094	0.12
Sb	121	2	He	5634	0.05
P	31	1	nogas	42441	0.00
La	139	1	nogas	53	20.30

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	308789	1.12	309366	99.81	70	125	
Ge	72	1	nogas	1656407	2.38	1624816	101.94	70	125	
In	115	1	nogas	1741183	3.10	1701792	102.31	70	125	
Bi	209	1	nogas	1546878	5.89	1450658	106.63	70	125	
Ge	72	2	He	345507	0.43	341080	101.30	70	125	

Calibration Standard Report

Sample Table

Sample Name	5/25/500
Data File Name	006CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102
Acq Date Time	2017-10-20T08:28:22-05:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	10663	0.02
Na	23	1	nogas	6972087	0.00
Mg	24	1	nogas	3684840	0.00
Al	27	1	nogas	53212	0.00
K	39	1	nogas	9241722	0.00
Ti	47	1	nogas	4381	0.06
V	51	1	nogas	904219	0.00
Cr	52	1	nogas	87678	0.00
Mn	55	1	nogas	83489	0.00
Co	59	1	nogas	63664	0.00
Ni	60	1	nogas	16277	0.01
Cu	63	1	nogas	39897	0.01
Zn	66	1	nogas	12531	0.03
As	75	1	nogas	168757	0.00
Sr	88	1	nogas	79222	0.00
Ag	107	1	nogas	45813	0.00
Cd	111	1	nogas	9243	0.02
Sb	121	1	nogas	41553	0.00
Tl	205	1	nogas	77176	0.00
Pb	208	1	nogas	105843	0.00
[Pb]	206	1	nogas	26495	0.01
[Pb]	207	1	nogas	23264	0.01
Na	23	2	He	433529	0.00
Mg	24	2	He	159697	0.00
Al	27	2	He	947	2.13
K	39	2	He	213123	0.00
Ca	43	2	He	420	4.09
Ca	44	2	He	8282	0.02
V	51	2	He	18269	0.02
Cr	52	2	He	18509	0.01
Mn	55	2	He	10667	0.04
Fe	56	2	He	1483808	0.00
Co	59	2	He	23676	0.02
Ni	60	2	He	6575	0.08
Cu	63	2	He	17919	0.03
Zn	66	2	He	3637	0.11
As	75	2	He	2972	0.13
Se	78	2	He	249	3.09
B	11	1	nogas	67971	0.00
Si	28	1	nogas	1671855	0.00

Calibration Standard Report

Ca	43	1	nogas	9046	0.04
Ca	44	1	nogas	278060	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	7636672	0.00
Se	77	1	nogas	52325	0.01
Se	82	1	nogas	890	2.52
Mo	95	1	nogas	16404	0.03
Sn	118	1	nogas	25535	0.02
Ba	137	1	nogas	12008	0.03
Sb	121	2	He	13162	0.01
P	31	1	nogas	45873	0.00
La	139	1	nogas	70	40.82

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	307104	3.25	309366	99.27	70	125	
Ge	72	1	nogas	1649573	2.24	1624816	101.52	70	125	
In	115	1	nogas	1722638	1.33	1701792	101.22	70	125	
Bi	209	1	nogas	1480529	0.59	1450658	102.06	70	125	
Ge	72	2	He	344114	1.14	341080	100.89	70	125	

Calibration Standard Report

Sample Table

Sample Name	10/50/1000
Data File Name	007CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102
Acq Date Time	2017-10-20T08:30:22-05:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	21522	0.01
Na	23	1	nogas	12044424	0.00
Mg	24	1	nogas	7357137	0.00
Al	27	1	nogas	96729	0.01
K	39	1	nogas	13513645	0.00
Ti	47	1	nogas	9056	0.07
V	51	1	nogas	996723	0.00
Cr	52	1	nogas	144269	0.00
Mn	55	1	nogas	151840	0.00
Co	59	1	nogas	126783	0.00
Ni	60	1	nogas	30923	0.00
Cu	63	1	nogas	77800	0.00
Zn	66	1	nogas	23916	0.01
As	75	1	nogas	187349	0.00
Sr	88	1	nogas	158023	0.00
Ag	107	1	nogas	90215	0.00
Cd	111	1	nogas	18597	0.02
Sb	121	1	nogas	79060	0.00
Tl	205	1	nogas	150298	0.00
Pb	208	1	nogas	209952	0.00
[Pb]	206	1	nogas	50827	0.00
[Pb]	207	1	nogas	46574	0.00
Na	23	2	He	712515	0.00
Mg	24	2	He	322802	0.00
Al	27	2	He	1680	0.83
K	39	2	He	351100	0.00
Ca	43	2	He	970	1.54
Ca	44	2	He	15393	0.03
V	51	2	He	31710	0.00
Cr	52	2	He	34446	0.01
Mn	55	2	He	20549	0.02
Fe	56	2	He	2906714	0.00
Co	59	2	He	47378	0.00
Ni	60	2	He	13035	0.02
Cu	63	2	He	34079	0.01
Zn	66	2	He	7102	0.03
As	75	2	He	5793	0.03
Se	78	2	He	387	2.02
B	11	1	nogas	80791	0.00
Si	28	1	nogas	2189282	0.00

Calibration Standard Report

Ca	43	1	nogas	18139	0.02
Ca	44	1	nogas	415448	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	14108484	0.00
Se	77	1	nogas	54977	0.01
Se	82	1	nogas	1710	0.94
Mo	95	1	nogas	33105	0.00
Sn	118	1	nogas	50661	0.01
Ba	137	1	nogas	24705	0.01
Sb	121	2	He	25008	0.01
P	31	1	nogas	53934	0.00
La	139	1	nogas	47	95.59

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	302217	2.60	309366	97.69	70	125	
Ge	72	1	nogas	1607946	1.49	1624816	98.96	70	125	
In	115	1	nogas	1730581	2.59	1701792	101.69	70	125	
Bi	209	1	nogas	1536240	3.32	1450658	105.90	70	125	
Ge	72	2	He	344031	2.84	341080	100.87	70	125	

Calibration Standard Report

Sample Table

Sample Name	100/500/10K
Data File Name	008CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102
Acq Date Time	2017-10-20T08:32:24-05:00
Sample Type	CalStd
Level	5
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	215518	0.00
Na	23	1	nogas	98965050	0.00
Mg	24	1	nogas	69962772	0.00
Al	27	1	nogas	836055	0.00
K	39	1	nogas	90828225	0.00
Ti	47	1	nogas	86325	0.00
V	51	1	nogas	2205167	0.00
Cr	52	1	nogas	1117446	0.00
Mn	55	1	nogas	1433618	0.00
Co	59	1	nogas	1257742	0.00
Ni	60	1	nogas	288509	0.00
Cu	63	1	nogas	702754	0.00
Zn	66	1	nogas	220299	0.00
As	75	1	nogas	419752	0.00
Sr	88	1	nogas	1528951	0.00
Ag	107	1	nogas	901759	0.00
Cd	111	1	nogas	183775	0.00
Sb	121	1	nogas	779951	0.00
Tl	205	1	nogas	1591873	0.00
Pb	208	1	nogas	2111623	0.00
[Pb]	206	1	nogas	517793	0.00
[Pb]	207	1	nogas	469965	0.00
Na	23	2	He	5656862	0.00
Mg	24	2	He	3097876	0.00
Al	27	2	He	14036	0.01
K	39	2	He	2909381	0.00
Ca	43	2	He	8312	0.08
Ca	44	2	He	142007	0.00
V	51	2	He	267607	0.00
Cr	52	2	He	314277	0.00
Mn	55	2	He	193337	0.00
Fe	56	2	He	27172040	0.00
Co	59	2	He	459580	0.00
Ni	60	2	He	122673	0.00
Cu	63	2	He	328970	0.00
Zn	66	2	He	67130	0.00
As	75	2	He	53885	0.00
Se	78	2	He	3660	0.07
B	11	1	nogas	355315	0.00
Si	28	1	nogas	11198999	0.00

Calibration Standard Report

Ca	43	1	nogas	171561	0.00
Ca	44	1	nogas	2916879	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	126090132	0.00
Se	77	1	nogas	69413	0.01
Se	82	1	nogas	12678	0.03
Mo	95	1	nogas	320848	0.00
Sn	118	1	nogas	499444	0.00
Ba	137	1	nogas	244248	0.00
Sb	121	2	He	233182	0.00
P	31	1	nogas	185871	0.00
La	139	1	nogas	250	9.73

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	281350	2.67	309366	90.94	70	125	
Ge	72	1	nogas	1651554	3.30	1624816	101.65	70	125	
In	115	1	nogas	1680764	2.39	1701792	98.76	70	125	
Bi	209	1	nogas	1448159	1.73	1450658	99.83	70	125	
Ge	72	2	He	329065	0.95	341080	96.48	70	125	

Calibration Standard Report

Sample Table

Sample Name	200/1000/20K
Data File Name	009CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102
Acq Date Time	2017-10-20T08:34:21-05:00
Sample Type	CalStd
Level	6
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	416402	0.00
Na	23	1	nogas	197691309	0.00
Mg	24	1	nogas	139646870	0.00
Al	27	1	nogas	1653278	0.00
K	39	1	nogas	169415312	0.00
Ti	47	1	nogas	169790	0.00
V	51	1	nogas	3362505	0.00
Cr	52	1	nogas	2270320	0.00
Mn	55	1	nogas	2810991	0.00
Co	59	1	nogas	2457762	0.00
Ni	60	1	nogas	541048	0.00
Cu	63	1	nogas	1378486	0.00
Zn	66	1	nogas	429519	0.00
As	75	1	nogas	651580	0.00
Sr	88	1	nogas	3026402	0.00
Ag	107	1	nogas	1814523	0.00
Cd	111	1	nogas	356189	0.00
Sb	121	1	nogas	1570042	0.00
Tl	205	1	nogas	3105163	0.00
Pb	208	1	nogas	4169661	0.00
[Pb]	206	1	nogas	1001819	0.00
[Pb]	207	1	nogas	906576	0.00
Na	23	2	He	10957547	0.00
Mg	24	2	He	5958010	0.00
Al	27	2	He	27597	0.00
K	39	2	He	5309505	0.00
Ca	43	2	He	17058	0.03
Ca	44	2	He	282106	0.00
V	51	2	He	517954	0.00
Cr	52	2	He	609084	0.00
Mn	55	2	He	382287	0.00
Fe	56	2	He	53876434	0.00
Co	59	2	He	882319	0.00
Ni	60	2	He	234052	0.00
Cu	63	2	He	623209	0.00
Zn	66	2	He	130635	0.00
As	75	2	He	103988	0.00
Se	78	2	He	6871	0.03
B	11	1	nogas	661354	0.00
Si	28	1	nogas	20469272	0.00

Calibration Standard Report

Ca	43	1	nogas	324749	0.00
Ca	44	1	nogas	5385520	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	252498347	0.00
Se	77	1	nogas	81110	0.00
Se	82	1	nogas	24744	0.01
Mo	95	1	nogas	628109	0.00
Sn	118	1	nogas	974141	0.00
Ba	137	1	nogas	475554	0.00
Sb	121	2	He	469114	0.00
P	31	1	nogas	317562	0.00
La	139	1	nogas	283	3.81

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	257251	1.34	309366	83.15	70	125	
Ge	72	1	nogas	1604735	0.70	1624816	98.76	70	125	
In	115	1	nogas	1587722	0.44	1701792	93.30	70	125	
Bi	209	1	nogas	1387198	0.50	1450658	95.63	70	125	
Ge	72	2	He	328608	0.59	341080	96.34	70	125	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	ICV
Data File Name	011_ICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102
Acq Date Time	2017-10-20T08:38:23-05:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
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	104.226	2.601	211493	2.10	100	104.2	90	110	
Na	23	1	nogas	10391.056	1.720	104510475	0.87	10000	103.9	90	110	
Mg	24	1	nogas	10247.052	2.486	72317352	3.37	10000	102.5	90	110	
Al	27	1	nogas	102.145	1.293	853738	0.93	100	102.1	90	110	
K	39	1	nogas	9702.235	2.006	85651406	1.24	10000	97.0	90	110	
Ti	47	1	nogas	99.660	2.911	85210	2.69	100	99.7	90	110	
V	51	1	nogas	101.251	5.439	2110430	3.59	100	101.3	90	110	
Cr	52	1	nogas	98.625	2.105	1131683	1.53	100	98.6	90	110	
Mn	55	1	nogas	100.915	2.636	1432992	2.07	100	100.9	90	110	
Co	59	1	nogas	97.226	1.117	1204074	0.52	100	97.2	90	110	
Ni	60	1	nogas	100.508	0.791	277512	0.12	100	100.5	90	110	
Cu	63	1	nogas	100.293	0.820	697929	1.14	100	100.3	90	110	
Zn	66	1	nogas	101.612	1.686	220747	2.23	100	101.6	90	110	
As	75	1	nogas	98.560	4.781	402151	2.64	100	98.6	90	110	
Sr	88	1	nogas	101.831	3.377	1548955	2.69	100	101.8	90	110	
Ag	107	1	nogas	98.913	1.072	899050	1.35	100	98.9	90	110	
Cd	111	1	nogas	100.752	3.066	184157	2.52	100	100.8	90	110	
Sb	121	1	nogas	101.728	2.323	800598	2.25	100	101.7	90	110	
Tl	205	1	nogas	92.497	3.481	1546354	3.61	100	92.5	90	110	
Pb	208	1	nogas	95.228	4.060	2131661	0.97	100	95.2	90	110	
U	238	1	nogas	98.315	6.161	2289177	3.84	100	98.3	90	110	
[Pb]	206	1	nogas	96.120	4.687	518926	0.20	100	96.1	90	110	
[Pb]	207	1	nogas	97.807	3.768	478265	0.94	100	97.8	90	110	
Na	23	2	He	9745.454	3.037	5464182	3.26	10000	97.5	90	110	
Mg	24	2	He	9988.452	1.280	3015274	1.59	10000	99.9	90	110	
Al	27	2	He	100.458	1.050	14085	1.28	100	100.5	90	110	
K	39	2	He	9917.104	2.056	2713051	2.00	10000	99.2	90	110	
Ca	43	2	He	9671.555	1.283	8259	1.21	10000	96.7	90	110	
Ca	44	2	He	9879.042	1.602	140706	1.27	10000	98.8	90	110	
V	51	2	He	99.842	2.529	263673	2.19	100	99.8	90	110	
Cr	52	2	He	101.722	1.587	314356	1.90	100	101.7	90	110	
Mn	55	2	He	102.252	1.456	197237	1.77	100	102.3	90	110	
Fe	56	2	He	9905.467	2.455	26876705	2.78	10000	99.1	90	110	
Co	59	2	He	101.178	1.328	452546	1.15	100	101.2	90	110	
Ni	60	2	He	100.251	2.291	119414	2.20	100	100.3	90	110	
Cu	63	2	He	101.055	0.691	321196	0.74	100	101.1	90	110	
Zn	66	2	He	100.735	2.808	66702	2.84	100	100.7	90	110	
As	75	2	He	101.129	1.619	53326	1.32	100	101.1	90	110	
Se	78	2	He	103.040	4.346	3632	4.50	100	103.0	90	110	
B	11	1	nogas	556.795	6.135	366420	2.92	500	111.4	90	110	ICV Main CR1 Failed
Si	28	1	nogas	5290.550	1.398	11406413	1.81	5000	105.8	90	110	
Ca	43	1	nogas	9853.657	1.819	162552	2.00	10000	98.5	90	110	
Ca	44	1	nogas	9708.637	1.182	2726385	0.80	10000	97.1	90	110	
Fe	56	1	nogas	9791.251	1.065	124346982	1.73	10000	97.9	90	110	
Se	77	1	nogas	94.189	12.153	64324	2.79	100	94.2	90	110	
Se	82	1	nogas	102.637	5.726	12945	5.30	100	102.6	90	110	
Mo	95	1	nogas	100.303	0.204	317319	0.61	100	100.3	90	110	
Sn	118	1	nogas	100.038	3.481	499606	1.96	100	100.0	90	110	
Ba	137	1	nogas	100.664	4.416	245363	0.97	100	100.7	90	110	
Sb	121	2	He	105.284	2.399	248151	2.25	100	105.3	90	110	
Li	7	1	nogas	108.951	2.702	522524	2.73	100	109.0	90	110	
P	31	1	nogas	505.598	0.848	181667	1.09	500	101.1	90	110	
La	139	1	nogas	98.642	47.215	200	30.42	100	98.6	90	110	
Au	197	1	nogas	-46.786	-144.235	3	173.21	100	-46.8	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	265166	2.49	309366	85.71	70	125	
Ge	72	1	nogas	1618297	0.68	1624816	99.60	70	125	
In	115	1	nogas	1639457	5.28	1701792	96.34	70	125	
Bi	209	1	nogas	1500348	4.71	1450658	103.43	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	330402	0.33	341080	96.87	70	125	

Sample Report

Sample Table

Sample Name	LLICV2
Data File Name	012SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102
Acq Date Time	2017-10-20T08:40:22-05:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	004CALB.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	1.932	1.932	9.76	4257	0.05	2000	
Na	23	1	nogas	172.188	172.188	2.21	3796100	0.00	200000	
Mg	24	1	nogas	202.753	202.753	1.21	1473732	0.01	200000	
Al	27	1	nogas	2.176	2.176	4.82	30175	0.01	2000	
K	39	1	nogas	182.961	182.961	5.83	6322686	0.00	200000	
Ti	47	1	nogas	2.186	2.186	8.44	2023	0.11	2000	
V	51	1	nogas	4.318	4.318	55.18	796109	0.00	2000	
Cr	52	1	nogas	1.985	1.985	10.82	51476	0.00	2000	
Mn	55	1	nogas	1.841	1.841	3.17	38077	0.00	2000	
Co	59	1	nogas	2.094	2.094	1.31	26216	0.01	2000	
Ni	60	1	nogas	1.632	1.632	6.94	7508	0.02	2000	
Cu	63	1	nogas	2.019	2.019	1.14	18159	0.01	2000	
Zn	66	1	nogas	1.973	1.973	4.57	6128	0.03	2000	
As	75	1	nogas	7.145	7.145	36.91	166004	0.00	2000	
Sr	88	1	nogas	2.178	2.178	4.70	33119	0.01	2000	
Ag	107	1	nogas	2.067	2.067	3.71	18674	0.01	2000	
Cd	111	1	nogas	2.098	2.098	2.18	3884	0.05	2000	
Sb	121	1	nogas	2.956	2.956	2.76	24544	0.01	2000	
Tl	205	1	nogas	1.916	1.916	4.17	32813	0.01	2000	
Pb	208	1	nogas	1.905	1.905	3.47	44121	0.00	2000	
U	238	1	nogas	1.817	1.817	3.57	43373	0.00	2000	
[Pb]	206	1	nogas	1.932	1.932	1.73	10760	0.02	2000	
[Pb]	207	1	nogas	1.949	1.949	2.49	9856	0.02	2000	
Na	23	2	He	176.281	176.281	1.08	245851	0.07	200000	
Mg	24	2	He	209.063	209.063	0.19	63872	0.33	200000	
Al	27	2	He	1.237	1.237	18.64	433	0.29	2000	
K	39	2	He	176.518	176.518	1.08	119795	0.15	200000	
Ca	43	2	He	188.006	188.006	33.98	177	106.42	200000	
Ca	44	2	He	177.015	177.015	11.52	3650	4.85	200000	
V	51	2	He	1.596	1.596	3.57	9290	0.02	2000	
Cr	52	2	He	2.062	2.062	4.84	8786	0.02	2000	
Mn	55	2	He	1.915	1.915	4.86	4537	0.04	2000	
Fe	56	2	He	208.699	208.699	2.62	574670	0.04	200000	
Co	59	2	He	2.086	2.086	0.81	9629	0.02	2000	
Ni	60	2	He	1.736	1.736	6.36	2957	0.06	2000	
Cu	63	2	He	1.475	1.475	2.61	7615	0.02	2000	
Zn	66	2	He	2.061	2.061	6.46	1870	0.11	2000	
As	75	2	He	2.226	2.226	3.43	1397	0.16	2000	
Se	78	2	He	1.867	1.867	19.00	138	1.35	2000	
B	11	1	nogas	34.419	34.419	10.81	75427	0.05	2000	

Sample Report

Si	28	1	nogas	214.771	214.771	4.48	1317912	0.02	2000	
Ca	43	1	nogas	204.987	204.987	6.22	3977	5.15	200000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Ca	44	1	nogas	147.064	147.064	5.56	183981	0.08	200000	
Fe	56	1	nogas	204.585	204.585	5.03	3441070	0.01	200000	
Se	77	1	nogas	39.557	39.557	24.31	53318	0.07	2000	
Se	82	1	nogas	2.446	2.446	27.00	667	0.37	2000	
Mo	95	1	nogas	2.137	2.137	7.55	6698	0.03	2000	
Sn	118	1	nogas	1.953	1.953	6.05	10543	0.02	2000	
Ba	137	1	nogas	2.047	2.047	8.54	5204	0.04	2000	
Sb	121	2	He	2.956	2.956	4.41	7548	0.04	2000	
La	139	1	nogas	-30.642	-30.642	-115.55	57	-54.07	2000	
Au	197	1	nogas	34.685	34.685	601.39	10	346.85	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	286536	3.46	309366	92.62	70	125	
Ge	72	1	nogas	1585331	1.14	1624816	97.57	70	125	
In	115	1	nogas	1658645	2.57	1701792	97.46	70	125	
Bi	209	1	nogas	1532100	2.23	1450658	105.61	70	125	
Ge	72	2	He	330520	0.64	341080	96.90	70	125	

Low Level Initial Calibration Verification (LLICV) Report

Sample Table

Sample Name	LLICV5
Data File Name	013LICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102
Acq Date Time	2017-10-20T08:42:23-05:00
Sample Type	LLICV
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
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	4.617	2.408	10590	5.33	5	92.3	70	130	
Na	23	1	nogas	453.491	2.692	6680950	2.78	500	90.7	70	130	
Mg	24	1	nogas	485.721	1.017	3539204	1.86	500	97.1	70	130	
Al	27	1	nogas	4.948	0.854	52848	1.57	5	99.0	70	130	
K	39	1	nogas	478.481	4.937	8783056	0.26	500	95.7	70	130	
Ti	47	1	nogas	4.678	7.251	4134	8.78	5	93.6	70	130	
V	51	1	nogas	8.175	25.739	851606	3.33	5	163.5	70	130	LLICV Main CR1 Failed
Cr	52	1	nogas	4.919	2.619	84065	1.25	5	98.4	70	130	
Mn	55	1	nogas	4.862	3.349	80192	0.78	5	97.2	70	130	
Co	59	1	nogas	5.167	2.151	63845	1.40	5	103.3	70	130	
Ni	60	1	nogas	4.709	7.173	15827	5.39	5	94.2	70	130	
Cu	63	1	nogas	4.992	2.034	38524	0.27	5	99.8	70	130	
Zn	66	1	nogas	4.650	2.127	11847	3.08	5	93.0	70	130	
As	75	1	nogas	10.204	37.199	174619	5.23	5	204.1	70	130	LLICV Main CR1 Failed
Sr	88	1	nogas	4.978	3.509	75255	1.59	5	99.6	70	130	
Ag	107	1	nogas	5.109	2.232	46034	1.48	5	102.2	70	130	
Cd	111	1	nogas	4.968	3.748	9233	1.95	5	99.4	70	130	
Sb	121	1	nogas	5.590	3.457	45062	1.45	5	111.8	70	130	
Tl	205	1	nogas	4.650	0.574	76864	0.95	5	93.0	70	130	
Pb	208	1	nogas	4.811	1.388	106872	1.88	5	96.2	70	130	
U	238	1	nogas	4.676	0.947	107698	1.96	5	93.5	70	130	
[Pb]	206	1	nogas	4.837	1.813	25901	2.60	5	96.7	70	130	
[Pb]	207	1	nogas	4.946	2.996	24001	3.58	5	98.9	70	130	
Na	23	2	He	462.749	2.320	407142	0.26	500	92.5	70	130	
Mg	24	2	He	499.086	1.028	153332	1.09	500	99.8	70	130	
Al	27	2	He	3.704	25.034	783	17.24	5	74.1	70	130	
K	39	2	He	485.944	0.701	202174	0.45	500	97.2	70	130	
Ca	43	2	He	486.384	22.208	437	22.01	500	97.3	70	130	
Ca	44	2	He	483.103	0.498	8075	0.82	500	96.6	70	130	
V	51	2	He	4.528	3.837	17093	1.51	5	90.6	70	130	
Cr	52	2	He	5.138	5.226	18443	3.36	5	102.8	70	130	
Mn	55	2	He	4.647	5.061	9906	4.27	5	92.9	70	130	
Fe	56	2	He	511.578	3.162	1413792	2.00	500	102.3	70	130	
Co	59	2	He	5.156	2.228	23646	1.10	5	103.1	70	130	
Ni	60	2	He	4.519	7.319	6325	5.50	5	90.4	70	130	
Cu	63	2	He	4.541	3.985	17485	2.06	5	90.8	70	130	
Zn	66	2	He	4.710	6.208	3657	6.25	5	94.2	70	130	
As	75	2	He	5.132	4.588	2961	5.45	5	102.6	70	130	
Se	78	2	He	4.557	38.219	233	24.85	5	91.1	70	130	
B	11	1	nogas	22.407	14.542	70189	0.79	25	89.6	70	130	
Si	28	1	nogas	359.152	4.446	1607675	0.94	25	1436.6	70	130	LLICV Main CR1 Failed
Ca	43	1	nogas	499.162	8.577	8759	6.89	500	99.8	70	130	
Ca	44	1	nogas	457.275	5.718	266255	2.63	500	91.5	70	130	
Fe	56	1	nogas	511.816	4.448	7276353	1.88	500	102.4	70	130	
Se	77	1	nogas	47.577	38.539	55064	6.05	5	951.5	70	130	LLICV Main CR1 Failed
Se	82	1	nogas	6.109	14.401	1113	10.98	5	122.2	70	130	
Mo	95	1	nogas	5.161	6.708	16158	4.65	5	103.2	70	130	
Sn	118	1	nogas	4.866	1.132	25379	2.66	5	97.3	70	130	
Ba	137	1	nogas	4.999	9.891	12535	7.95	5	100.0	70	130	
Sb	121	2	He	5.559	2.670	13846	3.48	5	111.2	70	130	
Li	7	1	nogas	4.496	6.038	52259	5.79	5	89.9	70	130	
P	31	1	nogas	25.498	23.717	45275	3.29	25	102.0	70	130	
La	139	1	nogas	-57.083	-23.222	27	57.28	5	-1141.7	70	130	LLICV Main CR1 Failed
Au	197	1	nogas	164.033	1.613	20	0.00	5	3280.7	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	298701	3.08	309366	96.55	70	125	
Ge	72	1	nogas	1595134	2.02	1624816	98.17	70	125	

Low Level Initial Calibration Verification (LLICV) Report

In	115	1	nogas	1665839	1.96	1701792	97.89	70	125	
Bi	209	1	nogas	1480501	1.05	1450658	102.06	70	125	
Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	2	He	334687	1.25	341080	98.13	70	125	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	ICB
Data File Name	014_ICB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102
Acq Date Time	2017-10-20T08:44:23-05:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
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	0.027	60.8	90	40.1	1	
Na	23	1	nogas	-16.942	-10.0	1897689	0.6	100	
Mg	24	1	nogas	2.005	6.7	26825	4.0	100	
Al	27	1	nogas	0.803	18.8	19137	5.2	5	
K	39	1	nogas	-22.400	-33.6	4661528	0.8	100	
Ti	47	1	nogas	-0.027	-150.3	173	18.5	2.5	
V	51	1	nogas	10.416	25.7	878221	3.9	2.5	ICB Main CR1 Failed
Cr	52	1	nogas	0.242	60.4	32482	4.7	2.5	
Mn	55	1	nogas	0.023	83.5	13055	1.8	2.5	
Co	59	1	nogas	-0.004	-194.2	780	12.2	2.5	
Ni	60	1	nogas	-0.610	-7.6	1517	7.5	2.5	
Cu	63	1	nogas	-0.033	-80.1	4277	3.2	2.5	
Zn	66	1	nogas	1.741	6.4	5654	4.4	2.5	
As	75	1	nogas	13.558	36.2	182374	5.8	2.5	ICB Main CR1 Failed
Sr	88	1	nogas	0.062	4.9	1590	2.7	2.5	
Ag	107	1	nogas	0.020	34.8	467	13.1	2.5	
Cd	111	1	nogas	0.021	26.4	40	25.0	1	
Sb	121	1	nogas	0.402	18.9	4914	11.9	2.5	
Tl	205	1	nogas	0.032	16.6	627	14.4	1	
Pb	208	1	nogas	0.022	27.7	960	13.3	2.5	
U	238	1	nogas	0.016	35.2	467	27.2	2.5	
[Pb]	206	1	nogas	0.037	42.8	287	28.4	2.5	
[Pb]	207	1	nogas	0.016	52.9	183	22.0	2.5	
Na	23	2	He	-20.184	-21.7	140679	1.1	100	
Mg	24	2	He	1.981	17.3	1373	7.8	100	
Al	27	2	He	0.758	176.3	373	50.7	5	
K	39	2	He	-15.795	-10.5	68595	0.6	100	
Ca	43	2	He	57.817	40.3	67	31.2	100	
Ca	44	2	He	-2.573	-409.3	1127	12.8	100	
V	51	2	He	-0.129	-42.9	4891	4.1	2.5	
Cr	52	2	He	0.049	130.5	2647	6.4	2.5	
Mn	55	2	He	-0.102	-39.7	670	10.8	2.5	
Fe	56	2	He	2.354	12.3	15070	4.6	100	
Co	59	2	He	-0.011	-174.0	253	33.6	2.5	
Ni	60	2	He	-0.498	-12.8	320	25.0	2.5	
Cu	63	2	He	-0.561	-8.2	1217	10.9	2.5	
Zn	66	2	He	1.781	4.9	1710	4.2	2.5	
As	75	2	He	0.159	24.7	316	5.3	2.5	
Se	78	2	He	-0.146	-204.2	69	14.2	2.5	
B	11	1	nogas	-1.596	-187.2	53850	2.4	10	
Si	28	1	nogas	-12.252	-60.7	879325	0.8	5	
Ca	43	1	nogas	13.395	29.5	897	8.2	100	
Ca	44	1	nogas	-41.441	-30.3	135298	2.1	100	
Fe	56	1	nogas	-7.193	-11.3	829476	1.3	100	

Initial Calibration Blank (ICB) Report

Se	77	1	nogas	78.199	29.6	60324	6.3	2.5	ICB Main CR1 Failed
Se	82	1	nogas	0.776	67.9	467	12.2	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Mo	95	1	nogas	0.036	35.1	193	21.5	2.5	
Sn	118	1	nogas	0.058	39.6	987	10.4	5	
Ba	137	1	nogas	0.192	1.3	640	1.6	2.5	
Sb	121	2	He	0.357	16.1	1453	8.6	2.5	
P	31	1	nogas	19.790	15.2	43540	0.9	10	ICB Main CR1 Failed
La	139	1	nogas	-4.148	-470.2	87	24.0	2.5	
Au	197	1	nogas	167.992	130.8	20	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	301109	1.77	309366	97.33	70	125	
Ge	72	1	nogas	1589743	1.33	1624816	97.84	70	125	
In	115	1	nogas	1679644	1.42	1701792	98.70	70	125	
Bi	209	1	nogas	1456032	0.56	1450658	100.37	70	125	
Ge	72	2	He	335319	1.36	341080	98.31	70	125	

Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	ICSA
Data File Name	015ICSA.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102
Acq Date Time	2017-10-20T08:46:26-05:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
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	0.036	39.3	103	29.6	0	ICSA Main CR1 Failed
Na	23	1	nogas	106469.102	1.7	1005339089	2.0	0	
Mg	24	1	nogas	104120.684	3.9	701820532	4.1	0	
Al	27	1	nogas	105914.085	3.4	818087828	3.0	0	
K	39	1	nogas	108482.987	3.9	851612902	4.0	0	
Ti	47	1	nogas	2209.627	4.8	1767962	2.9	0	
V	51	1	nogas	12.855	11.0	869480	0.4	0	
Cr	52	1	nogas	2.027	2.5	49731	1.5	0	ICSA Main CR1 Failed
Mn	55	1	nogas	0.089	20.6	13342	1.1	0	ICSA Main CR1 Failed
Co	59	1	nogas	0.094	19.8	1883	13.3	0	ICSA Main CR1 Failed
Ni	60	1	nogas	-0.009	-1804.1	2984	12.4	0	ICSA Main CR1 Failed
Cu	63	1	nogas	0.842	9.2	9753	3.6	0	ICSA Main CR1 Failed
Zn	66	1	nogas	4.295	2.5	10560	1.2	0	ICSA Main CR1 Failed
As	75	1	nogas	22.661	12.8	195965	1.6	0	
Sr	88	1	nogas	1.058	6.6	15744	6.3	0	ICSA Main CR1 Failed
Ag	107	1	nogas	0.046	23.3	663	12.2	0	ICSA Main CR1 Failed
Cd	111	1	nogas	1.093	9.5	1923	6.0	0	ICSA Main CR1 Failed
Sb	121	1	nogas	0.488	6.4	5324	2.9	0	ICSA Main CR1 Failed
Tl	205	1	nogas	0.018	13.9	363	8.8	0	ICSA Main CR1 Failed
Pb	208	1	nogas	0.105	4.8	2623	5.1	0	ICSA Main CR1 Failed
[Pb]	206	1	nogas	0.114	7.9	650	8.0	0	ICSA Main CR1 Failed
[Pb]	207	1	nogas	0.105	9.9	570	8.8	0	ICSA Main CR1 Failed
Na	23	2	He	99193.455	0.4	52950588	2.3	0	
Mg	24	2	He	100318.594	2.2	29546880	0.8	0	
Al	27	2	He	101388.005	3.5	13613978	2.6	0	
K	39	2	He	97619.526	1.1	26062242	1.1	0	
Ca	43	2	He	92921.987	4.8	77277	3.1	0	
Ca	44	2	He	96568.359	5.4	1331883	3.2	0	
V	51	2	He	-0.134	-6.6	4691	1.7	0	ICSA Main CR1 Failed
Cr	52	2	He	1.371	6.4	6501	2.4	0	ICSA Main CR1 Failed
Mn	55	2	He	0.003	1292.2	843	11.4	0	ICSA Main CR1 Failed
Fe	56	2	He	97615.119	3.7	258335376	1.5	0	
Co	59	2	He	-0.015	-39.4	227	11.1	0	ICSA Main CR1 Failed
Ni	60	2	He	-0.403	-7.7	417	9.1	0	ICSA Main CR1 Failed
Cu	63	2	He	-0.140	-11.9	2464	0.2	0	ICSA Main CR1 Failed
Zn	66	2	He	3.061	7.9	2464	4.3	0	ICSA Main CR1 Failed
As	75	2	He	0.304	5.9	378	3.7	0	ICSA Main CR1 Failed
Se	78	2	He	-0.205	-114.6	65	9.9	0	ICSA Main CR1 Failed
B	11	1	nogas	9.199	75.8	56872	5.7	0	ICSA Main CR1 Failed
Si	28	1	nogas	306.921	8.9	1433170	1.6	0	
Ca	43	1	nogas	109151.743	3.7	1682475	1.9	0	
Ca	44	1	nogas	105018.600	3.6	26296655	2.3	0	
Fe	56	1	nogas	107536.021	1.3	1272597462	0.7	0	
Se	77	1	nogas	123.703	7.3	65384	1.7	0	
Se	82	1	nogas	0.587	165.4	423	24.8	0	ICSA Main CR1 Failed
Mo	95	1	nogas	2288.975	1.6	6793871	2.3	0	
Sn	118	1	nogas	0.095	35.9	1110	15.9	0	ICSA Main CR1 Failed
Ba	137	1	nogas	0.229	40.6	690	32.0	0	ICSA Main CR1 Failed
Sb	121	2	He	0.447	13.4	1603	6.3	0	ICSA Main CR1 Failed

Interference Check Solution A (ICS-A) Report

P	31	1	nogas	204512.702	3.6	54267361	1.6	0	
La	139	1	nogas	150.778	67.5	247	43.7	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	278865	2.38	309366	90.14	70	125	
Ge	72	1	nogas	1518701	2.00	1624816	93.47	70	125	
In	115	1	nogas	1580927	3.80	1701792	92.90	70	125	
Bi	209	1	nogas	1372781	1.47	1450658	94.63	70	125	
Ge	72	2	He	322539	2.14	341080	94.56	70	125	

Interference Check Solution AB (ICS-AB) Report

Sample Table

Sample Name	ICSAB
Data File Name	016ICSB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102
Acq Date Time	2017-10-20T08:48:30-05:00
Sample Type	ICSB
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
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	97.213	3.940	194972	2.68	100	97.2	80	120	
Na	23	1	nogas	119217.815	4.404	1116664792	3.76	100	119217.8	80	120	ICSB Main CR1 Failed
Mg	24	1	nogas	115344.383	2.085	771410634	0.69	100	115344.4	80	120	
Al	27	1	nogas	105737.561	2.777	839578361	1.53	100	105737.6	80	120	ICSB Main CR1 Failed
K	39	1	nogas	114050.302	6.089	919763254	4.85	100	114050.3	80	120	ICSB Main CR1 Failed
Ti	47	1	nogas	2316.098	5.830	1905323	4.63	100	2316.1	80	120	
V	51	1	nogas	105.958	5.103	2096319	2.44	100	106.0	80	120	
Cr	52	1	nogas	91.101	3.448	1010508	2.11	100	91.1	80	120	
Mn	55	1	nogas	92.663	5.426	1270064	4.42	100	92.7	80	120	
Co	59	1	nogas	89.956	1.944	1074679	0.70	100	90.0	80	120	
Ni	60	1	nogas	93.956	2.484	250432	1.30	100	94.0	80	120	
Cu	63	1	nogas	93.840	4.285	630113	3.54	100	93.8	80	120	
Zn	66	1	nogas	98.494	2.596	206431	1.47	100	98.5	80	120	
As	75	1	nogas	111.803	5.838	420400	2.62	100	111.8	80	120	
Sr	88	1	nogas	94.316	3.768	1383902	2.72	100	94.3	80	120	
Ag	107	1	nogas	86.743	5.444	760516	5.08	100	86.7	80	120	
Cd	111	1	nogas	91.213	7.068	160480	4.00	100	91.2	80	120	
Sb	121	1	nogas	97.122	1.450	737399	0.44	100	97.1	80	120	
Tl	205	1	nogas	87.530	3.514	1332371	2.59	100	87.5	80	120	
Pb	208	1	nogas	92.571	2.819	1887906	1.80	100	92.6	80	120	
U	238	1	nogas	100.296	0.932	2128544	1.50	100	100.3	80	120	
[Pb]	206	1	nogas	93.871	1.981	461841	0.95	100	93.9	80	120	
[Pb]	207	1	nogas	93.822	4.305	417910	3.33	100	93.8	80	120	
Na	23	2	He	112997.279	1.340	58778972	1.43	100	112997.3	80	120	ICSB Main CR1 Failed
Mg	24	2	He	112975.945	0.538	32447607	1.24	100	112975.9	80	120	ICSB Main CR1 Failed
Al	27	2	He	103296.314	0.577	13525499	0.89	100	103296.3	80	120	ICSB Main CR1 Failed
K	39	2	He	107236.114	1.757	28622485	1.75	100	107236.1	80	120	
Ca	43	2	He	105994.008	2.505	85962	1.10	100	105994.0	80	120	ICSB Main CR1 Failed
Ca	44	2	He	108547.425	6.525	1459569	5.09	100	108547.4	80	120	
V	51	2	He	94.447	1.268	237624	0.54	100	94.4	80	120	
Cr	52	2	He	94.132	1.131	277027	2.32	100	94.1	80	120	
Mn	55	2	He	93.044	0.821	170864	1.23	100	93.0	80	120	
Fe	56	2	He	112750.278	3.482	290953742	2.15	100	112750.3	80	120	ICSB Main CR1 Failed
Co	59	2	He	94.714	4.562	403053	3.59	100	94.7	80	120	
Ni	60	2	He	92.097	3.430	104440	2.06	100	92.1	80	120	
Cu	63	2	He	94.030	0.707	284622	1.58	100	94.0	80	120	
Zn	66	2	He	95.946	2.182	60484	2.66	100	95.9	80	120	
As	75	2	He	92.081	1.532	46227	1.68	100	92.1	80	120	
Se	78	2	He	92.789	2.948	3118	1.48	100	92.8	80	120	
B	11	1	nogas	988.554	1.597	654650	1.08	100	988.6	80	120	ICSB Main CR1 Failed
Si	28	1	nogas	9747.350	4.424	19520154	3.28	100	9747.3	80	120	ICSB Main CR1 Failed
Ca	43	1	nogas	115693.374	4.211	1833506	3.29	100	115693.4	80	120	ICSB Main CR1 Failed
Ca	44	1	nogas	112305.146	1.582	28910955	2.29	100	112305.1	80	120	ICSB Main CR1 Failed
Fe	56	1	nogas	113338.269	4.057	1378532497	2.84	100	113338.3	80	120	ICSB Main CR1 Failed
Se	77	1	nogas	182.988	14.473	77572	4.77	100	183.0	80	120	ICSB Main CR1 Failed
Se	82	1	nogas	96.849	4.500	11807	4.87	100	96.8	80	120	
Mo	95	1	nogas	2349.177	5.196	7165138	4.09	100	2349.2	80	120	ICSB Main CR1 Failed
Sn	118	1	nogas	93.806	3.381	451414	1.30	100	93.8	80	120	
Ba	137	1	nogas	94.302	5.872	221424	2.81	100	94.3	80	120	
Sb	121	2	He	98.345	1.383	220614	0.89	100	98.3	80	120	
La	139	1	nogas	376.008	6.554	487	2.37	100	376.0	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	262102	1.37	309366	84.72	70	125	
Ge	72	1	nogas	1561213	1.26	1624816	96.09	70	125	
In	115	1	nogas	1578652	3.00	1701792	92.76	70	125	
Bi	209	1	nogas	1365467	1.08	1450658	94.13	70	125	
Ge	72	2	He	314436	1.41	341080	92.19	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	022_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102
Acq Date Time	2017-10-20T09:00:38-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
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	102.641	5.278	226562	3.32	100	102.6	90	110	
Na	23	1	nogas	9946.679	2.222	105726632	0.75	10000	99.5	90	110	
Mg	24	1	nogas	9966.929	2.813	74247910	0.67	10000	99.7	90	110	
Al	27	1	nogas	105.134	3.320	907220	2.21	100	105.1	90	110	
K	39	1	nogas	10348.604	3.367	94027585	2.29	10000	103.5	90	110	
Ti	47	1	nogas	99.240	3.128	87634	1.03	100	99.2	90	110	
V	51	1	nogas	106.595	6.618	2252946	2.03	100	106.6	90	110	
Cr	52	1	nogas	97.618	2.762	1157264	0.38	100	97.6	90	110	
Mn	55	1	nogas	103.373	1.486	1516125	0.84	100	103.4	90	110	
Co	59	1	nogas	102.836	4.647	1314917	2.34	100	102.8	90	110	
Ni	60	1	nogas	103.556	2.612	295290	2.72	100	103.6	90	110	
Cu	63	1	nogas	101.189	1.438	727352	1.00	100	101.2	90	110	
Zn	66	1	nogas	102.939	2.546	230936	1.15	100	102.9	90	110	
As	75	1	nogas	100.107	5.163	419436	1.76	100	100.1	90	110	
Sr	88	1	nogas	105.533	0.569	1658777	2.30	100	105.5	90	110	
Ag	107	1	nogas	98.052	1.148	920800	2.47	100	98.1	90	110	
Cd	111	1	nogas	99.143	4.059	190769	2.78	100	99.1	90	110	
Sb	121	1	nogas	103.510	3.356	841238	1.27	100	103.5	90	110	
Tl	205	1	nogas	98.243	1.649	1616422	2.33	100	98.2	90	110	
Pb	208	1	nogas	98.030	1.441	2160592	0.92	100	98.0	90	110	
U	238	1	nogas	104.519	1.905	2396543	0.21	100	104.5	90	110	
[Pb]	206	1	nogas	99.172	1.746	527252	0.53	100	99.2	90	110	
[Pb]	207	1	nogas	99.895	1.811	480897	0.85	100	99.9	90	110	
Na	23	2	He	10027.563	0.901	5666930	1.25	10000	100.3	90	110	
Mg	24	2	He	10227.151	0.816	3114226	0.88	10000	102.3	90	110	
Al	27	2	He	106.167	6.030	15003	6.32	100	106.2	90	110	
K	39	2	He	10171.940	1.864	2780896	1.81	10000	101.7	90	110	
Ca	43	2	He	9590.972	1.268	8262	1.69	10000	95.9	90	110	
Ca	44	2	He	9881.559	1.790	141969	1.24	10000	98.8	90	110	
V	51	2	He	103.148	1.949	274606	1.19	100	103.1	90	110	
Cr	52	2	He	102.272	2.707	318760	2.05	100	102.3	90	110	
Mn	55	2	He	101.484	0.482	197483	1.63	100	101.5	90	110	
Fe	56	2	He	10169.457	0.973	27831988	0.69	10000	101.7	90	110	
Co	59	2	He	104.433	3.073	471134	2.50	100	104.4	90	110	
Ni	60	2	He	103.831	2.036	124712	0.37	100	103.8	90	110	
Cu	63	2	He	103.953	1.945	333179	1.02	100	104.0	90	110	
Zn	66	2	He	103.601	0.909	69195	2.41	100	103.6	90	110	
As	75	2	He	100.809	0.460	53629	1.57	100	100.8	90	110	
Se	78	2	He	98.363	1.054	3500	1.23	100	98.4	90	110	
B	11	1	nogas	491.749	1.514	384992	0.80	500	98.3	90	110	
Si	28	1	nogas	5334.418	3.365	11871163	2.46	5000	106.7	90	110	
Ca	43	1	nogas	10485.581	2.490	178625	1.84	10000	104.9	90	110	
Ca	44	1	nogas	10193.451	4.267	2948573	2.67	10000	101.9	90	110	
Fe	56	1	nogas	10251.547	2.203	134419541	0.25	10000	102.5	90	110	
Se	77	1	nogas	96.470	14.937	66869	3.17	100	96.5	90	110	
Se	82	1	nogas	96.969	3.082	12658	3.30	100	97.0	90	110	
Mo	95	1	nogas	102.656	1.960	335449	0.46	100	102.7	90	110	
Sn	118	1	nogas	99.097	2.795	521127	0.97	100	99.1	90	110	
Ba	137	1	nogas	99.060	2.554	254347	1.24	100	99.1	90	110	
Sb	121	2	He	102.841	1.040	244545	1.67	100	102.8	90	110	
Li	7	1	nogas	109.182	1.812	569791	1.49	100	109.2	90	110	
P	31	1	nogas	513.284	3.103	189879	1.04	500	102.7	90	110	
La	139	1	nogas	222.996	18.741	353	11.78	100	223.0	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	82.148	92.307	13	43.30	100	82.1	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	288567	2.01	309366	93.28	70	125	
Ge	72	1	nogas	1672045	2.32	1624816	102.91	70	125	
In	115	1	nogas	1724791	1.88	1701792	101.35	70	125	
Bi	209	1	nogas	1475629	1.80	1450658	101.72	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	333319	1.64	341080	97.72	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	023_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102
Acq Date Time	2017-10-20T09:02:35-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
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	0.038	28.7	117	21.6	1	
Na	23	1	nogas	58.875	13.3	2748715	1.6	100	
Mg	24	1	nogas	10.486	2.7	91007	3.7	100	
Al	27	1	nogas	2.815	17.2	36984	10.2	5	
K	39	1	nogas	-25.701	-38.1	4841725	0.9	100	
Ti	47	1	nogas	0.028	360.7	230	38.6	2.5	
V	51	1	nogas	3.975	92.5	828767	5.2	2.5	CCB Main CR1 Failed
Cr	52	1	nogas	-0.107	-8.0	29931	0.6	2.5	
Mn	55	1	nogas	0.173	12.4	15800	1.1	2.5	
Co	59	1	nogas	0.006	225.7	933	17.7	2.5	
Ni	60	1	nogas	-0.599	-9.2	1617	8.8	2.5	
Cu	63	1	nogas	-0.013	-305.4	4611	6.8	2.5	
Zn	66	1	nogas	0.072	121.8	2220	8.0	2.5	
As	75	1	nogas	4.406	84.7	166642	5.0	2.5	CCB Main CR1 Failed
Sr	88	1	nogas	0.322	3.6	5718	2.3	2.5	
Ag	107	1	nogas	0.044	20.5	707	11.5	2.5	
Cd	111	1	nogas	0.047	5.5	93	6.2	1	
Sb	121	1	nogas	0.319	8.9	4464	5.9	2.5	
Tl	205	1	nogas	0.134	42.8	2387	39.9	1	
Pb	208	1	nogas	0.039	33.7	1403	20.4	2.5	
U	238	1	nogas	0.044	35.0	1153	30.6	2.5	
[Pb]	206	1	nogas	0.038	40.1	307	26.2	2.5	
[Pb]	207	1	nogas	0.037	55.0	297	33.3	2.5	
Na	23	2	He	57.502	13.5	187037	1.6	100	
Mg	24	2	He	12.987	2.7	4831	0.9	100	
Al	27	2	He	3.847	34.3	820	23.5	5	
K	39	2	He	-4.674	-85.1	71556	1.5	100	
Ca	43	2	He	52.754	54.3	63	39.7	100	
Ca	44	2	He	7.680	105.7	1297	7.8	100	
V	51	2	He	-0.169	-24.0	4873	0.8	2.5	
Cr	52	2	He	0.027	377.9	2630	13.7	2.5	
Mn	55	2	He	0.152	7.6	1187	1.0	2.5	
Fe	56	2	He	7.083	4.7	28599	2.0	100	
Co	59	2	He	-0.012	-102.2	253	21.7	2.5	
Ni	60	2	He	-0.514	-10.3	307	22.2	2.5	
Cu	63	2	He	-0.498	-7.8	1443	8.2	2.5	
Zn	66	2	He	0.004	5415.1	533	25.5	2.5	
As	75	2	He	0.140	12.7	311	3.1	2.5	
Se	78	2	He	-0.299	-110.8	65	19.7	2.5	
B	11	1	nogas	8.794	40.4	61473	4.9	10	
Si	28	1	nogas	3.903	51.8	951633	1.2	5	
Ca	43	1	nogas	28.312	42.7	1187	16.4	100	
Ca	44	1	nogas	-116.556	-10.9	120874	2.0	100	
Fe	56	1	nogas	6.133	13.3	1038932	0.9	100	
Se	77	1	nogas	34.918	44.0	54963	4.4	2.5	CCB Main CR1 Failed
Se	82	1	nogas	-0.242	-373.2	360	31.3	2.5	
Mo	95	1	nogas	0.121	21.7	477	18.8	2.5	
Sn	118	1	nogas	0.070	59.7	1103	19.6	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.079	22.1	377	12.0	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.258	9.3	1240	4.0	2.5	
P	31	1	nogas	0.038	10625.5	39762	2.9	10	
La	139	1	nogas	44.549	147.3	150	52.9	2.5	CCB Main CR1 Failed
Au	197	1	nogas	236.183	31.3	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	302389	0.82	309366	97.74	70	125	
Ge	72	1	nogas	1660813	0.88	1624816	102.22	70	125	
In	115	1	nogas	1767058	0.91	1701792	103.84	70	125	
Bi	209	1	nogas	1535122	1.55	1450658	105.82	70	125	
Ge	72	2	He	341490	1.47	341080	100.12	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	034_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102
Acq Date Time	2017-10-20T09:24:41-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
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	99.038	5.390	223325	3.06	100	99.0	90	110	
Na	23	1	nogas	10294.421	3.022	105351732	3.03	10000	102.9	90	110	
Mg	24	1	nogas	10034.659	1.423	72028637	1.61	10000	100.3	90	110	
Al	27	1	nogas	103.043	3.656	860948	2.52	100	103.0	90	110	
K	39	1	nogas	10426.080	2.598	91664848	1.27	10000	104.3	90	110	
Ti	47	1	nogas	101.523	1.774	86812	2.55	100	101.5	90	110	
V	51	1	nogas	108.318	4.396	2205616	4.12	100	108.3	90	110	
Cr	52	1	nogas	97.351	1.447	1117449	0.26	100	97.4	90	110	
Mn	55	1	nogas	104.742	1.442	1486858	0.51	100	104.7	90	110	
Co	59	1	nogas	101.480	1.974	1256607	0.93	100	101.5	90	110	
Ni	60	1	nogas	105.283	1.247	290589	2.44	100	105.3	90	110	
Cu	63	1	nogas	103.901	0.890	722837	0.63	100	103.9	90	110	
Zn	66	1	nogas	104.437	1.706	226788	0.51	100	104.4	90	110	
As	75	1	nogas	97.726	2.628	400083	2.29	100	97.7	90	110	
Sr	88	1	nogas	106.104	2.555	1613852	1.33	100	106.1	90	110	
Ag	107	1	nogas	98.620	1.728	896294	1.03	100	98.6	90	110	
Cd	111	1	nogas	95.542	0.867	184984	2.48	100	95.5	90	110	
Sb	121	1	nogas	105.890	1.304	833377	2.34	100	105.9	90	110	
Tl	205	1	nogas	98.775	5.601	1615453	1.57	100	98.8	90	110	
Pb	208	1	nogas	96.947	6.134	2123986	2.22	100	96.9	90	110	
U	238	1	nogas	104.560	3.661	2385061	1.67	100	104.6	90	110	
[Pb]	206	1	nogas	98.652	7.619	521140	3.32	100	98.7	90	110	
[Pb]	207	1	nogas	98.620	5.873	471997	2.26	100	98.6	90	110	
Na	23	2	He	10058.717	1.973	5569777	2.01	10000	100.6	90	110	
Mg	24	2	He	9987.405	1.663	2980094	1.58	10000	99.9	90	110	
Al	27	2	He	102.758	1.696	14242	4.11	100	102.8	90	110	
K	39	2	He	10077.264	0.708	2755691	0.69	10000	100.8	90	110	
Ca	43	2	He	10126.818	7.922	8542	6.62	10000	101.3	90	110	
Ca	44	2	He	9697.571	2.402	136529	0.51	10000	97.0	90	110	
V	51	2	He	100.831	3.713	263068	0.87	100	100.8	90	110	
Cr	52	2	He	102.003	3.641	311447	1.09	100	102.0	90	110	
Mn	55	2	He	100.601	2.184	191805	1.40	100	100.6	90	110	
Fe	56	2	He	10044.582	1.794	26936888	1.25	10000	100.4	90	110	
Co	59	2	He	104.376	3.661	461268	0.90	100	104.4	90	110	
Ni	60	2	He	104.282	4.359	122683	1.60	100	104.3	90	110	
Cu	63	2	He	104.718	5.738	328631	2.94	100	104.7	90	110	
Zn	66	2	He	104.147	4.266	68117	2.11	100	104.1	90	110	
As	75	2	He	101.852	3.331	53071	1.15	100	101.9	90	110	
Se	78	2	He	97.682	3.115	3406	0.53	100	97.7	90	110	
B	11	1	nogas	498.214	4.695	397619	1.70	500	99.6	90	110	
Si	28	1	nogas	5383.484	3.642	11587919	2.50	5000	107.7	90	110	
Ca	43	1	nogas	10354.700	0.720	170775	0.62	10000	103.5	90	110	
Ca	44	1	nogas	10075.107	3.093	2823853	3.17	10000	100.8	90	110	
Fe	56	1	nogas	9975.908	0.830	126662895	0.48	10000	99.8	90	110	
Se	77	1	nogas	88.080	9.345	63233	3.49	100	88.1	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	105.405	3.801	13282	2.60	100	105.4	90	110	
Mo	95	1	nogas	102.927	1.527	325614	1.62	100	102.9	90	110	
Sn	118	1	nogas	97.041	1.994	513310	0.10	100	97.0	90	110	
Ba	137	1	nogas	94.425	3.535	243806	1.59	100	94.4	90	110	
Sb	121	2	He	104.846	3.796	244167	1.03	100	104.8	90	110	
Li	7	1	nogas	107.012	3.850	570966	2.06	100	107.0	90	110	
P	31	1	nogas	505.117	3.661	181499	2.04	500	101.0	90	110	
La	139	1	nogas	163.152	36.437	287	26.18	100	163.2	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	2.404	6351.942	7	173.21	100	2.4	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	294835	2.53	309366	95.30	70	125	
Ge	72	1	nogas	1618335	1.25	1624816	99.60	70	125	
In	115	1	nogas	1734727	1.97	1701792	101.94	70	125	
Bi	209	1	nogas	1469499	5.23	1450658	101.30	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	326678	2.82	341080	95.78	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	035_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102
Acq Date Time	2017-10-20T09:26:41-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
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	0.048	12.0	150	6.7	1	
Na	23	1	nogas	75.677	10.3	2894102	0.6	100	
Mg	24	1	nogas	10.428	9.6	89529	6.1	100	
Al	27	1	nogas	1.492	17.5	26022	7.1	5	
K	39	1	nogas	-27.406	-68.3	4866982	0.7	100	
Ti	47	1	nogas	0.019	168.1	223	11.3	2.5	
V	51	1	nogas	8.351	42.4	896108	3.0	2.5	CCB Main CR1 Failed
Cr	52	1	nogas	0.024	400.1	31694	1.6	2.5	
Mn	55	1	nogas	0.090	26.9	14733	2.0	2.5	
Co	59	1	nogas	0.014	34.7	1043	7.3	2.5	
Ni	60	1	nogas	-0.627	-10.3	1550	9.9	2.5	
Cu	63	1	nogas	0.072	105.0	5254	9.1	2.5	
Zn	66	1	nogas	0.162	61.6	2437	7.0	2.5	
As	75	1	nogas	5.586	91.9	171043	5.6	2.5	CCB Main CR1 Failed
Sr	88	1	nogas	0.318	4.4	5714	6.5	2.5	
Ag	107	1	nogas	0.046	4.5	737	4.4	2.5	
Cd	111	1	nogas	0.051	76.9	100	78.1	1	
Sb	121	1	nogas	0.547	12.7	6351	7.2	2.5	
Tl	205	1	nogas	0.148	44.1	2524	41.2	1	
Pb	208	1	nogas	0.052	26.9	1630	17.4	2.5	
U	238	1	nogas	0.044	47.0	1127	41.5	2.5	
[Pb]	206	1	nogas	0.065	42.0	440	31.8	2.5	
[Pb]	207	1	nogas	0.065	20.2	423	14.4	2.5	
Na	23	2	He	68.259	8.5	190629	0.3	100	
Mg	24	2	He	9.701	3.6	3757	1.6	100	
Al	27	2	He	0.870	68.7	390	20.4	5	
K	39	2	He	-7.023	-27.2	70931	0.7	100	
Ca	43	2	He	45.724	69.8	57	50.9	100	
Ca	44	2	He	-10.209	-97.2	1023	14.0	100	
V	51	2	He	-0.015	-711.8	5218	5.3	2.5	
Cr	52	2	He	-0.028	-214.2	2424	9.2	2.5	
Mn	55	2	He	0.075	112.8	1020	16.2	2.5	
Fe	56	2	He	4.682	5.5	21606	4.8	100	
Co	59	2	He	0.013	105.8	367	16.4	2.5	
Ni	60	2	He	-0.555	-9.4	253	26.3	2.5	
Cu	63	2	He	-0.501	-4.7	1417	4.5	2.5	
Zn	66	2	He	0.118	118.8	603	14.1	2.5	
As	75	2	He	0.051	134.8	259	13.0	2.5	
Se	78	2	He	-0.101	-269.1	71	12.9	2.5	
B	11	1	nogas	26.724	30.6	79690	7.2	10	CCB Main CR1 Failed
Si	28	1	nogas	-8.224	-186.5	934481	0.5	5	
Ca	43	1	nogas	23.677	16.0	1120	7.8	100	
Ca	44	1	nogas	-189.601	-6.3	101815	0.9	100	
Fe	56	1	nogas	2.724	84.6	1003032	0.1	100	
Se	77	1	nogas	38.784	72.5	56107	7.5	2.5	CCB Main CR1 Failed
Se	82	1	nogas	0.570	35.9	467	8.1	2.5	
Mo	95	1	nogas	0.167	14.0	630	10.4	2.5	
Sn	118	1	nogas	0.079	59.2	1127	20.0	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.112	26.5	453	16.3	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.519	12.0	1850	6.8	2.5	
P	31	1	nogas	-2.364	-142.7	39392	0.9	10	
La	139	1	nogas	-4.044	-382.4	90	22.2	2.5	
Au	197	1	nogas	-2.619	-2749.6	7	86.6	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	325172	3.17	309366	105.11	70	125	
Ge	72	1	nogas	1675396	2.88	1624816	103.11	70	125	
In	115	1	nogas	1732835	2.49	1701792	101.82	70	125	
Bi	209	1	nogas	1477046	1.56	1450658	101.82	70	125	
Ge	72	2	He	337125	1.62	341080	98.84	70	125	

Sample Report

Sample Table

Sample Name	MBLK-121126
Data File Name	045SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102
Acq Date Time	2017-10-20T09:46:51-05:00
Sample Type	Sample
Dilution	1
Comment	B121126 TW
ISTD Ref FileName	004CALB.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	-0.001	-0.001	-327.57	30	0.00	2000	
Na	23	1	nogas	91.823	91.823	3.17	3276272	0.00	200000	
Mg	24	1	nogas	9.002	9.002	2.96	84609	0.01	200000	
Al	27	1	nogas	4.152	4.152	8.74	51030	0.01	2000	
K	39	1	nogas	-42.344	-42.344	-34.21	4965425	0.00	200000	
Ti	47	1	nogas	-0.026	-0.026	-190.78	193	-0.01	2000	
V	51	1	nogas	6.967	6.967	48.31	919342	0.00	2000	
Cr	52	1	nogas	-0.304	-0.304	-32.57	29247	0.00	2000	
Mn	55	1	nogas	-0.362	-0.362	-8.76	8532	0.00	2000	
Co	59	1	nogas	-0.042	-0.042	-4.23	347	-0.01	2000	
Ni	60	1	nogas	-0.529	-0.529	-15.65	1917	-0.03	2000	
Cu	63	1	nogas	0.028	0.028	103.32	5174	0.00	2000	
Zn	66	1	nogas	-0.231	-0.231	-5.69	1640	-0.01	2000	
As	75	1	nogas	-3.391	-3.391	-89.19	154583	0.00	2000	
Sr	88	1	nogas	0.036	0.036	21.06	1340	0.00	2000	
Ag	107	1	nogas	0.011	0.011	38.22	420	0.00	2000	
Cd	111	1	nogas	0.002	0.002	173.21	3	0.05	2000	
Sb	121	1	nogas	0.003	0.003	1056.31	2023	0.00	2000	
Tl	205	1	nogas	-0.002	-0.002	-31.85	73	0.00	2000	
Pb	208	1	nogas	-0.008	-0.008	-41.27	360	0.00	2000	
U	238	1	nogas	-0.002	-0.002	-38.26	63	0.00	2000	
[Pb]	206	1	nogas	0.001	0.001	113.78	113	0.00	2000	
[Pb]	207	1	nogas	-0.008	-0.008	-120.76	77	-0.01	2000	
Na	23	2	He	79.031	79.031	8.47	207069	0.04	200000	
Mg	24	2	He	9.216	9.216	9.23	3797	0.24	200000	
Al	27	2	He	2.307	2.307	9.56	623	0.37	2000	
K	39	2	He	-4.914	-4.914	-69.48	71492	-0.01	200000	
Ca	43	2	He	13.847	13.847	139.04	30	46.16	200000	
Ca	44	2	He	-47.120	-47.120	-13.90	517	-9.12	200000	
V	51	2	He	-0.164	-0.164	-47.37	5079	0.00	2000	
Cr	52	2	He	-0.078	-0.078	-106.51	2384	0.00	2000	
Mn	55	2	He	-0.262	-0.262	-9.02	380	-0.07	2000	
Fe	56	2	He	-0.075	-0.075	-171.86	8879	0.00	200000	
Co	59	2	He	-0.056	-0.056	-1.83	53	-0.11	2000	
Ni	60	2	He	-0.591	-0.591	-5.19	220	-0.27	2000	
Cu	63	2	He	-0.548	-0.548	-12.66	1330	-0.04	2000	
Zn	66	2	He	-0.353	-0.353	-27.62	303	-0.12	2000	
As	75	2	He	-0.036	-0.036	-113.80	224	-0.02	2000	
Se	78	2	He	-0.453	-0.453	-47.67	62	-0.73	2000	
B	11	1	nogas	6.182	6.182	38.95	67761	0.01	2000	
Si	28	1	nogas	133.997	133.997	9.96	1284967	0.01	2000	
Ca	43	1	nogas	-10.470	-10.470	-52.58	563	-1.86	200000	

Sample Report

Ca	44	1	nogas	-293.633	-293.633	-3.13	76737	-0.38	200000	
Fe	56	1	nogas	-8.063	-8.063	-22.13	903689	0.00	200000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Se	77	1	nogas	0.264	0.264	5938.18	51273	0.00	2000	
Se	82	1	nogas	0.133	0.133	185.82	430	0.03	2000	
Mo	95	1	nogas	0.023	0.023	62.53	167	0.01	2000	
Sn	118	1	nogas	-0.059	-0.059	-14.45	433	-0.01	2000	
Ba	137	1	nogas	0.036	0.036	66.45	277	0.01	2000	
Sb	121	2	He	0.000	0.000	22060.81	640	0.00	2000	
La	139	1	nogas	-22.810	-22.810	-35.41	73	-31.10	2000	
Au	197	1	nogas	63.979	63.979	265.06	13	479.84	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	343616	2.06	309366	111.07	70	125	
Ge	72	1	nogas	1755026	1.51	1624816	108.01	70	125	
In	115	1	nogas	1871952	1.98	1701792	110.00	70	125	
Bi	209	1	nogas	1650138	2.55	1450658	113.75	70	125	
Ge	72	2	He	354997	1.70	341080	104.08	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	046_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102
Acq Date Time	2017-10-20T09:48:51-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
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	103.558	2.955	232357	0.64	100	103.6	90	110	
Na	23	1	nogas	10135.024	2.792	107850636	1.41	10000	101.4	90	110	
Mg	24	1	nogas	9984.893	1.670	74510508	0.81	10000	99.8	90	110	
Al	27	1	nogas	100.545	2.153	883576	0.51	100	100.5	90	110	
K	39	1	nogas	10255.510	5.339	94853571	3.82	10000	102.6	90	110	
Ti	47	1	nogas	100.225	4.301	90052	2.32	100	100.2	90	110	
V	51	1	nogas	116.955	4.717	2438957	1.04	100	117.0	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	98.340	3.297	1186080	0.86	100	98.3	90	110	
Mn	55	1	nogas	104.194	2.665	1554839	1.32	100	104.2	90	110	
Co	59	1	nogas	101.199	6.492	1316847	5.20	100	101.2	90	110	
Ni	60	1	nogas	103.662	5.857	300577	3.34	100	103.7	90	110	
Cu	63	1	nogas	101.376	2.915	741377	0.47	100	101.4	90	110	
Zn	66	1	nogas	101.755	0.943	232389	1.61	100	101.8	90	110	
As	75	1	nogas	101.843	7.071	431383	2.38	100	101.8	90	110	
Sr	88	1	nogas	103.779	6.623	1658467	4.62	100	103.8	90	110	
Ag	107	1	nogas	98.132	2.956	937531	2.02	100	98.1	90	110	
Cd	111	1	nogas	97.121	2.130	189915	2.35	100	97.1	90	110	
Sb	121	1	nogas	101.161	3.471	836680	1.01	100	101.2	90	110	
Tl	205	1	nogas	95.302	9.519	1604993	4.85	100	95.3	90	110	
Pb	208	1	nogas	96.741	3.483	2186740	1.41	100	96.7	90	110	
U	238	1	nogas	99.507	5.965	2338481	1.72	100	99.5	90	110	
[Pb]	206	1	nogas	98.257	4.068	535683	1.15	100	98.3	90	110	
[Pb]	207	1	nogas	99.496	3.570	491236	1.38	100	99.5	90	110	
Na	23	2	He	10059.285	2.464	5658523	3.55	10000	100.6	90	110	
Mg	24	2	He	10176.147	1.119	3083883	0.56	10000	101.8	90	110	
Al	27	2	He	102.948	0.598	14486	1.50	100	102.9	90	110	
K	39	2	He	10483.163	1.773	2863754	1.73	10000	104.8	90	110	
Ca	43	2	He	9477.130	4.211	8122	2.55	10000	94.8	90	110	
Ca	44	2	He	9717.978	2.910	138963	2.00	10000	97.2	90	110	
V	51	2	He	102.639	1.349	272003	1.42	100	102.6	90	110	
Cr	52	2	He	103.647	2.034	321476	0.89	100	103.6	90	110	
Mn	55	2	He	102.149	1.566	197812	1.60	100	102.1	90	110	
Fe	56	2	He	10082.544	2.003	27461008	1.07	10000	100.8	90	110	
Co	59	2	He	104.820	2.074	470653	1.45	100	104.8	90	110	
Ni	60	2	He	105.192	1.632	125744	0.87	100	105.2	90	110	
Cu	63	2	He	104.186	0.846	332378	1.42	100	104.2	90	110	
Zn	66	2	He	100.738	1.491	66963	0.66	100	100.7	90	110	
As	75	2	He	99.920	0.456	52904	1.27	100	99.9	90	110	
Se	78	2	He	96.696	1.460	3426	2.46	100	96.7	90	110	
B	11	1	nogas	489.690	2.693	389759	0.21	500	97.9	90	110	
Si	28	1	nogas	5281.833	5.111	11966335	2.47	5000	105.6	90	110	
Ca	43	1	nogas	10201.208	4.246	176831	2.99	10000	102.0	90	110	
Ca	44	1	nogas	9669.875	5.797	2855547	5.58	10000	96.7	90	110	
Fe	56	1	nogas	9915.767	5.149	132295720	3.27	10000	99.2	90	110	
Se	77	1	nogas	112.906	22.605	71136	4.47	100	112.9	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	101.828	1.027	13509	2.65	100	101.8	90	110	
Mo	95	1	nogas	100.769	2.061	335103	1.10	100	100.8	90	110	
Sn	118	1	nogas	97.387	3.520	520308	2.40	100	97.4	90	110	
Ba	137	1	nogas	97.869	0.952	255333	0.89	100	97.9	90	110	
Sb	121	2	He	104.941	1.960	248297	0.56	100	104.9	90	110	
Li	7	1	nogas	113.020	1.605	598451	2.40	100	113.0	90	110	CCV Main CR1-2 Failed
P	31	1	nogas	498.411	5.370	188757	2.06	500	99.7	90	110	
La	139	1	nogas	141.900	19.590	263	11.60	100	141.9	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	198.726	125.648	23	89.21	100	198.7	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	293259	2.39	309366	94.79	70	125	
Ge	72	1	nogas	1701610	2.46	1624816	104.73	70	125	
In	115	1	nogas	1752121	1.11	1701792	102.96	70	125	
Bi	209	1	nogas	1514843	4.84	1450658	104.42	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	331739	1.69	341080	97.26	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	047_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102
Acq Date Time	2017-10-20T09:50:49-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
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	26.3	183	20.7	1	
Na	23	1	nogas	101.455	8.2	3243548	0.9	100	CCB Main CR1 Failed
Mg	24	1	nogas	9.433	10.6	84374	7.9	100	
Al	27	1	nogas	1.437	7.6	25327	2.9	5	
K	39	1	nogas	-14.709	-33.4	4931113	0.7	100	
Ti	47	1	nogas	-0.063	-90.3	150	33.3	2.5	
V	51	1	nogas	14.554	12.8	973374	2.0	2.5	CCB Main CR1 Failed
Cr	52	1	nogas	0.078	239.0	32025	6.8	2.5	
Mn	55	1	nogas	0.114	15.8	14930	2.1	2.5	
Co	59	1	nogas	0.014	93.8	1033	16.2	2.5	
Ni	60	1	nogas	-0.488	-20.1	1923	13.5	2.5	
Cu	63	1	nogas	0.078	43.0	5248	3.4	2.5	
Zn	66	1	nogas	0.130	37.5	2347	4.4	2.5	
As	75	1	nogas	8.089	38.5	176120	4.1	2.5	CCB Main CR1 Failed
Sr	88	1	nogas	0.285	3.7	5144	2.8	2.5	
Ag	107	1	nogas	0.043	24.6	693	14.0	2.5	
Cd	111	1	nogas	0.038	54.2	77	54.3	1	
Sb	121	1	nogas	0.296	23.2	4274	12.9	2.5	
Tl	205	1	nogas	0.138	43.6	2550	45.8	1	
Pb	208	1	nogas	0.035	23.4	1353	18.4	2.5	
U	238	1	nogas	0.044	14.7	1183	17.6	2.5	
[Pb]	206	1	nogas	0.029	26.7	263	12.2	2.5	
[Pb]	207	1	nogas	0.049	41.4	367	32.0	2.5	
Na	23	2	He	109.513	5.5	215708	0.4	100	CCB Main CR1 Failed
Mg	24	2	He	8.561	6.9	3440	5.1	100	
Al	27	2	He	1.311	85.9	457	34.9	5	
K	39	2	He	0.630	258.8	72968	0.6	100	
Ca	43	2	He	41.503	40.4	53	28.6	100	
Ca	44	2	He	-8.093	-124.4	1063	12.8	100	
V	51	2	He	0.035	77.9	5404	2.7	2.5	
Cr	52	2	He	-0.099	-77.6	2224	11.1	2.5	
Mn	55	2	He	0.063	6.1	1007	0.6	2.5	
Fe	56	2	He	4.350	3.1	20882	1.3	100	
Co	59	2	He	-0.016	-37.4	237	12.2	2.5	
Ni	60	2	He	-0.535	-1.7	280	3.6	2.5	
Cu	63	2	He	-0.449	-7.4	1600	6.0	2.5	
Zn	66	2	He	0.088	109.8	590	10.3	2.5	
As	75	2	He	0.115	29.9	297	6.8	2.5	
Se	78	2	He	-0.128	-640.1	71	42.0	2.5	
B	11	1	nogas	13.651	71.6	69216	8.0	10	CCB Main CR1 Failed
Si	28	1	nogas	-26.981	-19.1	887866	0.1	5	
Ca	43	1	nogas	25.376	16.8	1137	5.4	100	
Ca	44	1	nogas	-248.724	-4.7	84775	2.7	100	
Fe	56	1	nogas	5.301	43.2	1027142	2.7	100	
Se	77	1	nogas	54.345	13.8	58534	1.7	2.5	CCB Main CR1 Failed
Se	82	1	nogas	0.182	176.7	413	10.9	2.5	
Mo	95	1	nogas	0.115	68.0	457	55.1	2.5	
Sn	118	1	nogas	0.061	48.5	1073	14.9	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.093	42.3	420	25.1	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.208	19.2	1117	7.3	2.5	
P	31	1	nogas	-1.614	-386.9	39234	3.6	10	
La	139	1	nogas	-1.084	-3816.9	97	52.1	2.5	
Au	197	1	nogas	75.767	251.4	13	114.6	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	323127	3.03	309366	104.45	70	125	
Ge	72	1	nogas	1659233	1.15	1624816	102.12	70	125	
In	115	1	nogas	1796732	0.11	1701792	105.58	70	125	
Bi	209	1	nogas	1567554	4.60	1450658	108.06	70	125	
Ge	72	2	He	340471	1.32	341080	99.82	70	125	

Sample Report

Sample Table

Sample Name	LCS-121126
Data File Name	048SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102
Acq Date Time	2017-10-20T09:52:50-05:00
Sample Type	Sample
Dilution	1
Comment	B121126 TW
ISTD Ref FileName	004CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	1	nogas	48.446	48.446	5.90	113601	0.04	2000	
Na	23	1	nogas	4576.020	4576.020	1.26	52801196	0.01	200000	
Mg	24	1	nogas	4510.605	4510.605	0.55	35645417	0.01	200000	
Al	27	1	nogas	98.655	98.655	1.98	896053	0.01	2000	
K	39	1	nogas	4789.965	4789.965	4.71	48620219	0.01	200000	
Ti	47	1	nogas	143.940	143.940	2.74	133546	0.11	2000	
V	51	1	nogas	63.911	63.911	9.55	1747783	0.00	2000	
Cr	52	1	nogas	45.936	45.936	1.87	590078	0.01	2000	
Mn	55	1	nogas	46.558	46.558	3.57	725349	0.01	2000	
Co	59	1	nogas	47.174	47.174	4.21	634594	0.01	2000	
Ni	60	1	nogas	48.846	48.846	6.96	148098	0.03	2000	
Cu	63	1	nogas	48.991	48.991	5.33	372489	0.01	2000	
Zn	66	1	nogas	49.877	49.877	2.86	118748	0.04	2000	
As	75	1	nogas	47.352	47.352	11.96	294928	0.02	2000	
Sr	88	1	nogas	100.914	100.914	6.78	1665534	0.01	2000	
Ag	107	1	nogas	46.123	46.123	2.30	455391	0.01	2000	
Cd	111	1	nogas	47.312	47.312	3.55	95492	0.05	2000	
Sb	121	1	nogas	50.400	50.400	4.94	431465	0.01	2000	
Tl	205	1	nogas	40.726	40.726	5.03	736837	0.01	2000	
Pb	208	1	nogas	44.099	44.099	3.34	1069586	0.00	2000	
U	238	1	nogas	93.964	93.964	5.44	2370833	0.00	2000	
[Pb]	206	1	nogas	45.016	45.016	4.80	263269	0.02	2000	
[Pb]	207	1	nogas	44.732	44.732	3.15	236991	0.02	2000	
Na	23	2	He	4682.411	4682.411	2.55	2829280	0.17	200000	
Mg	24	2	He	4901.734	4901.734	3.86	1548706	0.32	200000	
Al	27	2	He	99.411	99.411	3.58	14589	0.68	2000	
K	39	2	He	5013.092	5013.092	3.09	1407446	0.36	200000	
Ca	43	2	He	4673.594	4673.594	9.99	4181	111.79	200000	
Ca	44	2	He	4588.990	4588.990	3.98	69038	6.65	200000	
V	51	2	He	47.302	47.302	3.05	133588	0.04	2000	
Cr	52	2	He	47.991	47.991	1.89	156596	0.03	2000	
Mn	55	2	He	47.883	47.883	4.41	97112	0.05	2000	
Fe	56	2	He	4772.600	4772.600	5.53	13551411	0.04	200000	
Co	59	2	He	49.321	49.321	4.13	230996	0.02	2000	
Ni	60	2	He	48.091	48.091	6.00	60416	0.08	2000	
Cu	63	2	He	49.091	49.091	2.78	164897	0.03	2000	
Zn	66	2	He	49.662	49.662	3.13	34687	0.14	2000	
As	75	2	He	46.873	46.873	4.56	25999	0.18	2000	
Se	78	2	He	47.980	47.980	7.85	1810	2.65	2000	
B	11	1	nogas	887.333	887.333	8.20	692137	0.13	2000	
Si	28	1	nogas	9436.398	9436.398	1.84	21314766	0.04	2000	>LDR
Ca	43	1	nogas	4945.432	4945.432	5.36	88913	5.56	200000	
Ca	44	1	nogas	4715.897	4715.897	6.34	1519970	0.31	200000	
Fe	56	1	nogas	4642.947	4642.947	2.57	64561133	0.01	200000	

Sample Report

Se	77	1	nogas	62.622	62.622	27.34	63588	0.10	2000	
Se	82	1	nogas	48.679	48.679	4.88	6881	0.71	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Mo	95	1	nogas	49.117	49.117	5.72	168656	0.03	2000	
Sn	118	1	nogas	95.889	95.889	1.23	529118	0.02	2000	
Ba	137	1	nogas	46.693	46.693	5.76	125782	0.04	2000	
Sb	121	2	He	50.911	50.911	3.68	125891	0.04	2000	
La	139	1	nogas	28.674	28.674	80.31	133	21.51	2000	
Au	197	1	nogas	65.665	65.665	200.08	13	492.49	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	306816	4.40	309366	99.18	70	125	
Ge	72	1	nogas	1758121	3.38	1624816	108.20	70	125	
In	115	1	nogas	1809482	2.51	1701792	106.33	70	125	
Bi	209	1	nogas	1624460	3.66	1450658	111.98	70	125	
Ge	72	2	He	345957	2.61	341080	101.43	70	125	

Sample Report

Sample Table

Sample Name	HS17100768-10SD
Data File Name	052SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102
Acq Date Time	2017-10-20T10:00:58-05:00
Sample Type	Sample
Dilution	5
Comment	B121126 TW
ISTD Ref FileName	004CALB.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	0.042	186.57	47	0.02	2000	
Na	23	1	nogas	338862.418	1694312.091	3.19	3458975544	0.01	200000	>LDR
Mg	24	1	nogas	32003.295	160016.477	2.54	233555264	0.01	200000	
Al	27	1	nogas	1.438	7.189	12.65	25601	0.01	2000	
K	39	1	nogas	782.830	3914.151	4.44	11863484	0.01	200000	
Ti	47	1	nogas	0.275	1.373	36.69	450	0.06	2000	
V	51	1	nogas	40.992	204.961	10.12	1351487	0.00	2000	
Cr	52	1	nogas	-0.298	-1.490	-34.76	28018	0.00	2000	
Mn	55	1	nogas	326.353	1631.764	3.79	4772668	0.01	2000	
Co	59	1	nogas	0.411	2.057	9.24	6141	0.01	2000	
Ni	60	1	nogas	1.394	6.968	13.87	7265	0.02	2000	
Cu	63	1	nogas	0.855	4.273	6.15	10873	0.01	2000	
Zn	66	1	nogas	0.433	2.163	46.73	3040	0.01	2000	
As	75	1	nogas	17.022	85.110	14.29	201697	0.01	2000	
Sr	88	1	nogas	1375.066	6875.330	3.66	21669872	0.01	2000	
Ag	107	1	nogas	0.009	0.043	89.75	383	0.00	2000	
Cd	111	1	nogas	0.004	0.019	86.60	7	0.06	2000	
Sb	121	1	nogas	0.025	0.124	99.37	2114	0.00	2000	
Tl	205	1	nogas	0.002	0.011	28.91	130	0.00	2000	
Pb	208	1	nogas	-0.004	-0.021	-19.51	383	0.00	2000	
U	238	1	nogas	7.125	35.623	2.09	155070	0.00	2000	
[Pb]	206	1	nogas	0.002	0.010	252.98	100	0.00	2000	
[Pb]	207	1	nogas	-0.009	-0.047	-62.66	60	-0.02	2000	
Na	23	2	He	332966.110	1664830.549	2.64	178924337	0.19	200000	>LDR
Mg	24	2	He	33529.630	167648.150	3.53	9965736	0.34	200000	
Al	27	2	He	1.683	8.413	12.14	487	0.35	2000	
K	39	2	He	802.355	4011.774	1.80	286413	0.28	200000	
Ca	43	2	He	91298.995	456494.973	2.70	76622	119.16	200000	
Ca	44	2	He	93632.035	468160.174	5.22	1302805	7.19	200000	
V	51	2	He	0.990	4.948	11.02	7595	0.01	2000	
Cr	52	2	He	0.081	0.404	65.14	2670	0.00	2000	
Mn	55	2	He	346.570	1732.852	2.37	656183	0.05	2000	
Fe	56	2	He	527.459	2637.295	2.26	1416982	0.04	200000	
Co	59	2	He	0.345	1.726	2.43	1817	0.02	2000	
Ni	60	2	He	-0.273	-1.366	-22.14	573	-0.05	2000	
Cu	63	2	He	-0.376	-1.881	-15.60	1753	-0.02	2000	
Zn	66	2	He	0.193	0.965	83.78	630	0.03	2000	
As	75	2	He	7.337	36.686	1.46	4018	0.18	2000	
Se	78	2	He	-0.656	-3.280	-49.18	50	-1.31	2000	
B	11	1	nogas	2131.961	10659.807	1.77	1500000	0.14	2000	>LDR
Si	28	1	nogas	13580.579	67902.897	4.56	28842955	0.05	2000	>LDR
Ca	43	1	nogas	95473.703	477368.514	2.04	1626424	5.87	200000	
Ca	44	1	nogas	88840.153	444200.763	1.31	24615812	0.36	200000	
Fe	56	1	nogas	515.637	2578.186	3.23	7704741	0.01	200000	
Se	77	1	nogas	69.176	345.880	9.78	61982	0.11	2000	
Se	82	1	nogas	2.348	11.740	21.72	693	0.34	2000	

Sample Report

Mo	95	1	nogas	0.167	0.837	19.61	637	0.03	2000	
Sn	118	1	nogas	-0.019	-0.096	-100.99	577	0.00	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Ba	137	1	nogas	54.710	273.548	1.96	132988	0.04	2000	
Sb	121	2	He	-0.004	-0.018	-550.46	577	0.00	2000	
La	139	1	nogas	137.007	685.034	7.37	240	57.08	2000	
Au	197	1	nogas	91.775	458.874	335.03	13	688.31	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	289866	2.25	309366	93.70	70	125	
Ge	72	1	nogas	1678201	3.07	1624816	103.29	70	125	
In	115	1	nogas	1631954	1.91	1701792	95.90	70	125	
Bi	209	1	nogas	1399493	0.83	1450658	96.47	70	125	
Ge	72	2	He	325466	2.96	341080	95.42	70	125	

Sample Report

Sample Table

Sample Name	HS17100768-10MS
Data File Name	053SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102
Acq Date Time	2017-10-20T10:03:01-05:00
Sample Type	Sample
Dilution	1
Comment	B121126 TW
ISTD Ref FileName	004CALB.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	59.280	59.280	2.54	100089	0.06	2000	
Na	23	1	nogas	OR	OR	#VALUE!	OR	#VALUE!	200000	
Mg	24	1	nogas	171593.321	171593.321	2.64	1200418427	0.01	200000	
Al	27	1	nogas	105.164	105.164	1.81	825455	0.01	2000	
K	39	1	nogas	8953.312	8953.312	3.55	74609814	0.01	200000	
Ti	47	1	nogas	149.824	149.824	1.16	120304	0.12	2000	
V	51	1	nogas	119.684	119.684	1.47	2215104	0.01	2000	
Cr	52	1	nogas	47.478	47.478	2.50	526644	0.01	2000	
Mn	55	1	nogas	1871.135	1871.135	3.73	24741632	0.01	2000	>LDR
Co	59	1	nogas	48.012	48.012	4.84	558684	0.01	2000	
Ni	60	1	nogas	51.643	51.643	3.71	135387	0.04	2000	
Cu	63	1	nogas	48.449	48.449	2.67	318923	0.02	2000	
Zn	66	1	nogas	48.328	48.328	0.55	99658	0.05	2000	
As	75	1	nogas	126.912	126.912	0.42	445810	0.03	2000	
Sr	88	1	nogas	7635.285	7635.285	2.31	109070125	0.01	2000	>LDR
Ag	107	1	nogas	43.690	43.690	4.68	373111	0.01	2000	
Cd	111	1	nogas	45.044	45.044	0.53	77869	0.06	2000	
Sb	121	1	nogas	49.777	49.777	3.97	368794	0.01	2000	
Tl	205	1	nogas	43.865	43.865	2.80	623135	0.01	2000	
Pb	208	1	nogas	47.629	47.629	3.33	906524	0.01	2000	
U	238	1	nogas	149.776	149.776	3.60	2965087	0.01	2000	
[Pb]	206	1	nogas	48.846	48.846	2.10	224304	0.02	2000	
[Pb]	207	1	nogas	48.179	48.179	3.90	200286	0.02	2000	
Na	23	2	He	1781136.034	1781136.034	1.71	876616574	0.20	200000	>LDR
Mg	24	2	He	181090.904	181090.904	0.84	49320288	0.37	200000	>LDR
Al	27	2	He	104.777	104.777	6.34	13248	0.79	2000	
K	39	2	He	8452.222	8452.222	1.64	2323053	0.36	200000	
Ca	43	2	He	495839.821	495839.821	1.35	381364	130.02	200000	>LDR
Ca	44	2	He	501827.832	501827.832	0.66	6398785	7.84	200000	>LDR
V	51	2	He	52.261	52.261	1.73	126773	0.04	2000	
Cr	52	2	He	48.696	48.696	1.25	136959	0.04	2000	
Mn	55	2	He	1903.934	1903.934	1.11	3300528	0.06	2000	>LDR
Fe	56	2	He	7240.810	7240.810	0.79	17731161	0.04	200000	
Co	59	2	He	49.804	49.804	2.30	201163	0.02	2000	
Ni	60	2	He	46.674	46.674	3.49	50607	0.09	2000	
Cu	63	2	He	46.718	46.718	2.47	135441	0.03	2000	
Zn	66	2	He	47.995	47.995	2.62	28923	0.17	2000	
As	75	2	He	89.940	89.940	1.68	42824	0.21	2000	
Se	78	2	He	29.441	29.441	1.52	984	2.99	2000	
B	11	1	nogas	13372.932	13372.932	1.59	6948081	0.19	2000	>LDR
Si	28	1	nogas	85346.204	85346.204	2.23	159777901	0.05	2000	>LDR
Ca	43	1	nogas	511682.867	511682.867	2.30	7896135	6.48	200000	>LDR
Ca	44	1	nogas	495264.580	495264.580	4.44	123623671	0.40	200000	>LDR
Fe	56	1	nogas	7338.612	7338.612	4.47	87724060	0.01	200000	
Se	77	1	nogas	249.723	249.723	1.61	87007	0.29	2000	
Se	82	1	nogas	36.799	36.799	8.94	4584	0.80	2000	
Mo	95	1	nogas	49.531	49.531	3.18	147211	0.03	2000	
Sn	118	1	nogas	95.532	95.532	2.32	451173	0.02	2000	
Ba	137	1	nogas	333.510	333.510	1.72	768720	0.04	2000	

Sample Report

Sb	121	2	He	50.811	50.811	2.52	108352	0.05	2000	
La	139	1	nogas	855.288	855.288	11.46	980	87.27	2000	
Au	197	1	nogas	251.516	251.516	29.56	23	1077.93	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	220556	1.14	309366	71.29	70	125	
Ge	72	1	nogas	1520930	3.22	1624816	93.61	70	125	
In	115	1	nogas	1548948	2.38	1701792	91.02	70	125	
Bi	209	1	nogas	1274517	2.57	1450658	87.86	70	125	
Ge	72	2	He	298169	0.22	341080	87.42	70	125	

Sample Report

Sample Table

Sample Name	HS17100768-10MSD
Data File Name	054SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102
Acq Date Time	2017-10-20T10:04:59-05:00
Sample Type	Sample
Dilution	1
Comment	B121126 TW
ISTD Ref FileName	004CALB.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	58.206	58.206	1.77	97355	0.06	2000	
Na	23	1	nogas	OR	OR	#VALUE!	OR	#VALUE!	200000	
Mg	24	1	nogas	173089.857	173089.857	2.06	1204160094	0.01	200000	
Al	27	1	nogas	102.924	102.924	4.11	798047	0.01	2000	
K	39	1	nogas	9259.579	9259.579	2.74	76072008	0.01	200000	
Ti	47	1	nogas	147.012	147.012	2.43	116567	0.13	2000	
V	51	1	nogas	129.991	129.991	7.40	2314572	0.01	2000	
Cr	52	1	nogas	46.142	46.142	3.72	506339	0.01	2000	
Mn	55	1	nogas	1863.492	1863.492	2.60	24349510	0.01	2000	>LDR
Co	59	1	nogas	46.698	46.698	4.20	537001	0.01	2000	
Ni	60	1	nogas	50.630	50.630	5.75	131157	0.04	2000	
Cu	63	1	nogas	47.531	47.531	4.96	309066	0.02	2000	
Zn	66	1	nogas	48.745	48.745	2.60	99239	0.05	2000	
As	75	1	nogas	136.245	136.245	6.20	462167	0.03	2000	
Sr	88	1	nogas	7787.038	7787.038	3.47	109870728	0.01	2000	>LDR
Ag	107	1	nogas	43.672	43.672	1.11	368626	0.01	2000	
Cd	111	1	nogas	45.293	45.293	2.19	76774	0.06	2000	
Sb	121	1	nogas	49.792	49.792	3.96	364452	0.01	2000	
Tl	205	1	nogas	43.484	43.484	3.22	615210	0.01	2000	
Pb	208	1	nogas	46.538	46.538	4.86	881954	0.01	2000	
U	238	1	nogas	144.511	144.511	1.75	2850368	0.01	2000	
[Pb]	206	1	nogas	46.829	46.829	5.06	214062	0.02	2000	
[Pb]	207	1	nogas	47.608	47.608	4.30	197097	0.02	2000	
Na	23	2	He	1850870.073	1850870.073	1.86	909922306	0.20	200000	>LDR
Mg	24	2	He	188014.890	188014.890	2.95	51144814	0.37	200000	>LDR
Al	27	2	He	101.605	101.605	4.27	12841	0.79	2000	
K	39	2	He	8303.767	8303.767	1.99	2283529	0.36	200000	
Ca	43	2	He	498899.450	498899.450	1.22	383303	130.16	200000	>LDR
Ca	44	2	He	492855.700	492855.700	3.14	6277124	7.85	200000	>LDR
V	51	2	He	50.846	50.846	1.90	123338	0.04	2000	
Cr	52	2	He	49.297	49.297	0.96	138476	0.04	2000	
Mn	55	2	He	1944.148	1944.148	5.10	3365984	0.06	2000	>LDR
Fe	56	2	He	7384.471	7384.471	3.79	18061483	0.04	200000	
Co	59	2	He	49.165	49.165	4.08	198339	0.02	2000	
Ni	60	2	He	45.978	45.978	3.32	49805	0.09	2000	
Cu	63	2	He	44.030	44.030	2.54	127670	0.03	2000	
Zn	66	2	He	45.791	45.791	3.74	27581	0.17	2000	
As	75	2	He	87.957	87.957	1.57	41839	0.21	2000	
Se	78	2	He	31.068	31.068	8.48	1033	3.01	2000	
B	11	1	nogas	14157.185	14157.185	2.45	7283610	0.19	2000	>LDR
Si	28	1	nogas	86042.757	86042.757	6.25	159019621	0.05	2000	>LDR
Ca	43	1	nogas	528612.851	528612.851	5.31	8054532	6.56	200000	>LDR
Ca	44	1	nogas	501443.968	501443.968	1.89	123709851	0.41	200000	>LDR
Fe	56	1	nogas	7356.491	7356.491	5.59	86872279	0.01	200000	
Se	77	1	nogas	288.015	288.015	13.01	92286	0.31	2000	
Se	82	1	nogas	36.322	36.322	4.84	4481	0.81	2000	
Mo	95	1	nogas	49.661	49.661	5.18	145766	0.03	2000	
Sn	118	1	nogas	93.572	93.572	0.58	433496	0.02	2000	
Ba	137	1	nogas	344.780	344.780	1.91	779374	0.04	2000	

Sample Report

Sb	121	2	He	49.516	49.516	2.58	105484	0.05	2000	
La	139	1	nogas	857.484	857.484	10.63	963	89.01	2000	
Au	197	1	nogas	389.562	389.562	151.72	33	1168.69	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	218548	2.43	309366	70.64	70	125	
Ge	72	1	nogas	1502451	2.69	1624816	92.47	70	125	
In	115	1	nogas	1518863	0.73	1701792	89.25	70	125	
Bi	209	1	nogas	1269520	2.97	1450658	87.51	70	125	
Ge	72	2	He	297868	1.02	341080	87.33	70	125	

Sample Report

Sample Table

Sample Name	HS17100768-10PDS
Data File Name	055SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102
Acq Date Time	2017-10-20T10:06:58-05:00
Sample Type	Sample
Dilution	1
Comment	B121126 TW
ISTD Ref FileName	004CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	1	nogas	123.187	123.187	2.90	202233	0.06	2000	
Na	23	1	nogas	OR	OR	#VALUE!	OR	#VALUE!	200000	
Mg	24	1	nogas	171004.671	171004.671	2.05	1174775793	0.01	200000	
Al	27	1	nogas	104.466	104.466	2.28	797645	0.01	2000	
K	39	1	nogas	13758.666	13758.666	2.16	109115898	0.01	200000	
Ti	47	1	nogas	191.356	191.356	1.58	149347	0.13	2000	
V	51	1	nogas	177.612	177.612	4.40	2863041	0.01	2000	
Cr	52	1	nogas	93.813	93.813	1.54	985114	0.01	2000	
Mn	55	1	nogas	1838.489	1838.489	1.62	23656663	0.01	2000	>LDR
Co	59	1	nogas	95.711	95.711	2.15	1083265	0.01	2000	
Ni	60	1	nogas	99.956	99.956	1.24	252237	0.04	2000	
Cu	63	1	nogas	97.010	97.010	3.35	616978	0.02	2000	
Zn	66	1	nogas	94.733	94.733	3.87	188165	0.05	2000	
As	75	1	nogas	185.481	185.481	3.10	569818	0.03	2000	
Sr	88	1	nogas	7391.004	7391.004	0.89	102712458	0.01	2000	>LDR
Ag	107	1	nogas	87.505	87.505	1.98	726810	0.01	2000	
Cd	111	1	nogas	92.773	92.773	1.84	153824	0.06	2000	
Sb	121	1	nogas	101.866	101.866	1.95	732598	0.01	2000	
Tl	205	1	nogas	87.456	87.456	1.46	1238201	0.01	2000	
Pb	208	1	nogas	95.543	95.543	1.20	1812176	0.01	2000	
U	238	1	nogas	142.336	142.336	0.47	2809079	0.01	2000	
[Pb]	206	1	nogas	97.788	97.788	1.57	447410	0.02	2000	
[Pb]	207	1	nogas	96.724	96.724	0.57	400747	0.02	2000	
Na	23	2	He	1715568.880	1715568.880	1.03	832957214	0.21	200000	>LDR
Mg	24	2	He	181889.433	181889.433	3.93	48863499	0.37	200000	>LDR
Al	27	2	He	103.005	103.005	3.93	12848	0.80	2000	
K	39	2	He	12421.004	12421.004	2.29	3379669	0.37	200000	
Ca	43	2	He	475053.620	475053.620	3.51	360316	131.84	200000	>LDR
Ca	44	2	He	469777.218	469777.218	1.78	5908602	7.95	200000	>LDR
V	51	2	He	101.231	101.231	0.75	237955	0.04	2000	
Cr	52	2	He	99.872	99.872	2.74	274717	0.04	2000	
Mn	55	2	He	1878.113	1878.113	2.75	3210948	0.06	2000	>LDR
Fe	56	2	He	11983.171	11983.171	3.11	28933410	0.04	200000	
Co	59	2	He	97.071	97.071	3.44	386408	0.03	2000	
Ni	60	2	He	91.912	91.912	2.22	97515	0.09	2000	
Cu	63	2	He	92.703	92.703	0.10	262518	0.04	2000	
Zn	66	2	He	95.073	95.073	0.75	56070	0.17	2000	
As	75	2	He	136.321	136.321	1.08	63917	0.21	2000	
Se	78	2	He	94.996	94.996	4.25	2985	3.18	2000	
B	11	1	nogas	12546.591	12546.591	1.57	6342784	0.20	2000	>LDR
Si	28	1	nogas	72402.924	72402.924	1.96	131983218	0.05	2000	>LDR
Ca	43	1	nogas	490395.009	490395.009	2.04	7361545	6.66	200000	>LDR
Ca	44	1	nogas	483518.573	483518.573	1.25	117451655	0.41	200000	>LDR
Fe	56	1	nogas	11934.304	11934.304	1.97	138307691	0.01	200000	
Se	77	1	nogas	349.451	349.451	6.73	101123	0.35	2000	
Se	82	1	nogas	107.348	107.348	2.51	12358	0.87	2000	
Mo	95	1	nogas	99.022	99.022	0.40	286272	0.03	2000	
Sn	118	1	nogas	95.247	95.247	1.79	431604	0.02	2000	
Ba	137	1	nogas	376.997	376.997	4.71	833207	0.05	2000	

Sample Report

Sb	121	2	He	103.079	103.079	0.15	216294	0.05	2000	
La	139	1	nogas	966.418	966.418	15.24	1050	92.03	2000	
Au	197	1	nogas	-37.964	-37.964	-218.00	3	-1138.92	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	214581	3.39	309366	69.36	70	125	ISTD Failed
Ge	72	1	nogas	1478859	0.67	1624816	91.02	70	125	
In	115	1	nogas	1486083	2.52	1701792	87.32	70	125	
Bi	209	1	nogas	1269825	1.51	1450658	87.53	70	125	
Ge	72	2	He	294127	1.35	341080	86.23	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\102
Acq Date Time	2017-10-20T10:12:58-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
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	98.297	3.926	225879	1.15	100	98.3	90	110	
Na	23	1	nogas	10689.643	2.774	109476719	2.05	10000	106.9	90	110	
Mg	24	1	nogas	10142.940	2.994	72909066	2.21	10000	101.4	90	110	
Al	27	1	nogas	103.639	4.553	869013	1.95	100	103.6	90	110	
K	39	1	nogas	10323.301	3.826	91148950	1.31	10000	103.2	90	110	
Ti	47	1	nogas	101.149	2.230	86817	1.31	100	101.1	90	110	
V	51	1	nogas	155.629	2.298	2850332	2.97	100	155.6	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	100.431	2.926	1156224	1.23	100	100.4	90	110	
Mn	55	1	nogas	105.804	3.992	1507091	0.84	100	105.8	90	110	
Co	59	1	nogas	100.592	4.747	1249824	1.48	100	100.6	90	110	
Ni	60	1	nogas	105.306	5.279	291528	1.96	100	105.3	90	110	
Cu	63	1	nogas	101.922	3.256	711776	1.38	100	101.9	90	110	
Zn	66	1	nogas	104.683	4.508	228099	1.31	100	104.7	90	110	
As	75	1	nogas	117.346	3.309	451768	1.75	100	117.3	90	110	CCV Main CR1-2 Failed
Sr	88	1	nogas	107.047	1.696	1634963	1.89	100	107.0	90	110	
Ag	107	1	nogas	100.280	2.832	914817	0.48	100	100.3	90	110	
Cd	111	1	nogas	99.137	1.377	188496	1.27	100	99.1	90	110	
Sb	121	1	nogas	103.888	3.686	820435	0.65	100	103.9	90	110	
Tl	205	1	nogas	97.011	2.221	1627198	1.10	100	97.0	90	110	
Pb	208	1	nogas	96.003	3.690	2156687	0.53	100	96.0	90	110	
U	238	1	nogas	99.828	2.454	2333878	0.83	100	99.8	90	110	
[Pb]	206	1	nogas	97.157	2.719	526622	0.56	100	97.2	90	110	
[Pb]	207	1	nogas	98.398	4.278	482770	1.00	100	98.4	90	110	
Na	23	2	He	10582.461	2.135	5738425	1.81	10000	105.8	90	110	
Mg	24	2	He	10230.612	0.794	2993707	1.58	10000	102.3	90	110	
Al	27	2	He	102.737	5.169	13956	4.72	100	102.7	90	110	
K	39	2	He	9947.034	3.371	2721019	3.28	10000	99.5	90	110	
Ca	43	2	He	9848.367	3.342	8152	3.61	10000	98.5	90	110	
Ca	44	2	He	9794.758	2.336	135221	1.13	10000	97.9	90	110	
V	51	2	He	103.003	1.808	263509	0.84	100	103.0	90	110	
Cr	52	2	He	102.690	3.318	307549	2.82	100	102.7	90	110	
Mn	55	2	He	101.312	2.500	189430	2.52	100	101.3	90	110	
Fe	56	2	He	10163.277	0.568	26730241	1.52	10000	101.6	90	110	
Co	59	2	He	103.386	1.166	448213	0.15	100	103.4	90	110	
Ni	60	2	He	104.165	2.521	120218	1.22	100	104.2	90	110	
Cu	63	2	He	103.837	2.886	319772	1.62	100	103.8	90	110	
Zn	66	2	He	102.357	2.017	65685	1.59	100	102.4	90	110	
As	75	2	He	100.574	1.231	51407	0.13	100	100.6	90	110	
Se	78	2	He	99.154	2.814	3390	3.27	100	99.2	90	110	
B	11	1	nogas	767.421	3.827	594451	0.71	500	153.5	90	110	CCV Main CR1-2 Failed
Si	28	1	nogas	5366.679	4.882	11595149	1.33	5000	107.3	90	110	
Ca	43	1	nogas	10162.301	4.571	168211	2.89	10000	101.6	90	110	
Ca	44	1	nogas	9891.776	4.595	2787531	5.85	10000	98.9	90	110	
Fe	56	1	nogas	10263.061	3.250	130756636	0.56	10000	102.6	90	110	
Se	77	1	nogas	183.276	3.637	80846	3.54	100	183.3	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	105.073	4.318	13292	2.49	100	105.1	90	110	
Mo	95	1	nogas	101.054	3.142	320858	0.79	100	101.1	90	110	
Sn	118	1	nogas	98.756	2.500	513047	0.72	100	98.8	90	110	
Ba	137	1	nogas	97.532	3.428	247337	1.01	100	97.5	90	110	
Sb	121	2	He	103.153	1.725	235663	0.43	100	103.2	90	110	
Li	7	1	nogas	109.800	3.748	600185	2.05	100	109.8	90	110	
P	31	1	nogas	514.374	6.357	184736	1.88	500	102.9	90	110	
La	139	1	nogas	116.760	56.807	227	32.52	100	116.8	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	154.841	154.253	20	100.00	100	154.8	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	300419	2.80	309366	97.11	70	125	
Ge	72	1	nogas	1625278	3.36	1624816	100.03	70	125	
In	115	1	nogas	1704043	2.64	1701792	100.13	70	125	
Bi	209	1	nogas	1505020	3.25	1450658	103.75	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	320282	1.30	341080	93.90	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	059_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102
Acq Date Time	2017-10-20T10:14:56-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
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	0.031	26.1	107	19.5	1	
Na	23	1	nogas	463.697	1.9	6861763	0.6	100	CCB Main CR1 Failed
Mg	24	1	nogas	13.288	7.1	110043	5.2	100	
Al	27	1	nogas	1.262	9.8	24613	1.6	5	
K	39	1	nogas	-41.155	-93.2	4848888	1.3	100	
Ti	47	1	nogas	-0.007	-1375.3	203	38.2	2.5	
V	51	1	nogas	57.412	22.0	1607094	6.0	2.5	CCB Main CR1 Failed
Cr	52	1	nogas	-0.300	-48.4	28552	0.7	2.5	
Mn	55	1	nogas	0.218	20.7	16968	4.8	2.5	
Co	59	1	nogas	0.011	158.4	1037	21.3	2.5	
Ni	60	1	nogas	0.420	23.5	4604	2.8	2.5	
Cu	63	1	nogas	0.301	12.6	7045	2.8	2.5	
Zn	66	1	nogas	0.161	17.2	2494	5.1	2.5	
As	75	1	nogas	19.111	24.3	211319	3.0	2.5	CCB Main CR1 Failed
Sr	88	1	nogas	0.383	6.7	6871	2.3	2.5	
Ag	107	1	nogas	0.041	12.8	697	5.0	2.5	
Cd	111	1	nogas	0.056	47.9	110	47.2	1	
Sb	121	1	nogas	0.223	18.8	3807	9.1	2.5	
Tl	205	1	nogas	0.147	51.0	2660	47.4	1	
Pb	208	1	nogas	0.037	32.7	1380	17.8	2.5	
U	238	1	nogas	0.044	26.7	1180	22.8	2.5	
[Pb]	206	1	nogas	0.051	28.8	390	19.4	2.5	
[Pb]	207	1	nogas	0.037	65.4	303	38.6	2.5	
Na	23	2	He	511.778	2.0	420546	0.7	100	CCB Main CR1 Failed
Mg	24	2	He	15.803	8.8	5418	6.8	100	
Al	27	2	He	0.757	29.6	360	7.3	5	
K	39	2	He	-8.734	-12.4	70475	0.4	100	
Ca	43	2	He	56.912	50.9	63	36.5	100	
Ca	44	2	He	2.227	187.9	1157	6.1	100	
V	51	2	He	1.340	10.0	8457	2.8	2.5	
Cr	52	2	He	0.010	410.0	2444	4.4	2.5	
Mn	55	2	He	0.117	65.2	1060	13.7	2.5	
Fe	56	2	He	4.823	5.5	21149	4.7	100	
Co	59	2	He	-0.020	-66.9	207	27.9	2.5	
Ni	60	2	He	-0.537	-2.0	263	5.8	2.5	
Cu	63	2	He	-0.559	-6.9	1183	11.3	2.5	
Zn	66	2	He	0.194	51.9	630	10.4	2.5	
As	75	2	He	0.249	33.6	351	10.8	2.5	
Se	78	2	He	0.174	258.1	78	20.4	2.5	
B	11	1	nogas	244.056	2.2	242043	1.7	10	CCB Main CR1 Failed
Si	28	1	nogas	-29.295	-87.9	910480	0.3	5	
Ca	43	1	nogas	30.116	23.0	1253	5.3	100	
Ca	44	1	nogas	-273.230	-5.3	80573	1.7	100	
Fe	56	1	nogas	12.130	83.2	1148464	7.9	100	
Se	77	1	nogas	100.991	28.4	69255	3.3	2.5	CCB Main CR1 Failed
Se	82	1	nogas	0.666	101.6	487	13.7	2.5	
Mo	95	1	nogas	0.124	9.6	503	12.9	2.5	
Sn	118	1	nogas	0.079	34.7	1147	14.0	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.097	14.5	420	10.4	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.206	17.0	1060	9.0	2.5	
P	31	1	nogas	-5.095	-196.5	39391	2.0	10	
La	139	1	nogas	31.433	105.2	133	31.2	2.5	CCB Main CR1 Failed
Au	197	1	nogas	-5.630	-2464.9	7	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	320915	1.03	309366	103.73	70	125	
Ge	72	1	nogas	1714434	5.97	1624816	105.52	70	125	
In	115	1	nogas	1754463	1.61	1701792	103.10	70	125	
Bi	209	1	nogas	1570496	2.97	1450658	108.26	70	125	
Ge	72	2	He	324143	1.43	341080	95.03	70	125	

Sample Report

Sample Table

Sample Name	HS17100709-01
Data File Name	061SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102
Acq Date Time	2017-10-20T10:18:56-05:00
Sample Type	Sample
Dilution	1
Comment	B121126 TW
ISTD Ref FileName	004CALB.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	1.471	1.471	4.98	3424	0.04	2000	
Na	23	1	nogas	OR	OR	#VALUE!	OR	#VALUE!	200000	
Mg	24	1	nogas	280659.873	280659.873	1.61	2134955714	0.01	200000	>LDR
Al	27	1	nogas	1368.996	1368.996	1.37	10962454	0.01	2000	
K	39	1	nogas	2049.318	2049.318	6.93	21346264	0.01	200000	
Ti	47	1	nogas	30.137	30.137	5.12	25164	0.12	2000	
V	51	1	nogas	79.561	79.561	6.07	1767498	0.00	2000	
Cr	52	1	nogas	63.983	63.983	1.81	723616	0.01	2000	
Mn	55	1	nogas	8069.703	8069.703	2.44	110325168	0.01	2000	>LDR
Co	59	1	nogas	137.826	137.826	2.17	1657599	0.01	2000	
Ni	60	1	nogas	188.476	188.476	2.26	502743	0.04	2000	
Cu	63	1	nogas	47.409	47.409	1.31	322839	0.01	2000	
Zn	66	1	nogas	1752.352	1752.352	0.94	3666688	0.05	2000	
As	75	1	nogas	60.989	60.989	7.84	297662	0.02	2000	
Sr	88	1	nogas	8700.795	8700.795	3.02	128502625	0.01	2000	>LDR
Ag	107	1	nogas	0.023	0.023	5.18	480	0.00	2000	
Cd	111	1	nogas	4.353	4.353	1.08	7628	0.06	2000	
Sb	121	1	nogas	0.710	0.710	2.91	7212	0.01	2000	
Tl	205	1	nogas	0.141	0.141	2.33	2194	0.01	2000	
Pb	208	1	nogas	3.132	3.132	1.85	63146	0.00	2000	
U	238	1	nogas	18.846	18.846	1.65	392649	0.00	2000	
[Pb]	206	1	nogas	3.426	3.426	2.37	16632	0.02	2000	
[Pb]	207	1	nogas	3.000	3.000	3.99	13219	0.02	2000	
Na	23	2	He	671398.381	671398.381	1.97	346487315	0.19	200000	>LDR
Mg	24	2	He	303156.177	303156.177	2.59	86540052	0.35	200000	>LDR
Al	27	2	He	1259.274	1259.274	5.73	164063	0.77	2000	
K	39	2	He	1886.484	1886.484	0.85	575043	0.33	200000	
Ca	43	2	He	490172.807	490172.807	2.75	395148	124.05	200000	>LDR
Ca	44	2	He	484374.335	484374.335	3.86	6472129	7.48	200000	>LDR
V	51	2	He	7.947	7.947	4.43	24335	0.03	2000	
Cr	52	2	He	64.783	64.783	2.92	190192	0.03	2000	
Mn	55	2	He	8005.730	8005.730	1.47	14548806	0.06	2000	>LDR
Fe	56	2	He	29585.897	29585.897	2.19	75914447	0.04	200000	
Co	59	2	He	133.800	133.800	3.86	565879	0.02	2000	
Ni	60	2	He	180.958	180.958	4.42	203138	0.09	2000	
Cu	63	2	He	44.158	44.158	3.89	134310	0.03	2000	
Zn	66	2	He	1616.887	1616.887	2.21	1005378	0.16	2000	
As	75	2	He	14.030	14.030	3.49	7183	0.20	2000	
Se	78	2	He	0.534	0.534	129.52	87	0.62	2000	
B	11	1	nogas	643.654	643.654	5.39	509411	0.13	2000	
Si	28	1	nogas	211589.362	211589.362	0.70	408350127	0.05	2000	>LDR
Ca	43	1	nogas	518415.335	518415.335	5.17	8269519	6.27	200000	>LDR
Ca	44	1	nogas	509404.438	509404.438	5.25	131476445	0.39	200000	>LDR
Fe	56	1	nogas	31073.097	31073.097	3.71	381305267	0.01	200000	
Se	77	1	nogas	244.518	244.518	4.32	88987	0.27	2000	
Se	82	1	nogas	2.506	2.506	39.49	667	0.38	2000	

Sample Report

Mo	95	1	nogas	2.474	2.474	0.25	7682	0.03	2000	
Sn	118	1	nogas	0.412	0.412	17.63	2614	0.02	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Ba	137	1	nogas	390.099	390.099	2.25	911379	0.04	2000	
Sb	121	2	He	0.696	0.696	15.67	2114	0.03	2000	
La	139	1	nogas	66243.541	66243.541	0.83	70367	94.14	2000	>LDR
Au	197	1	nogas	281.980	281.980	28.03	27	1057.42	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	301653	2.70	309366	97.51	70	125	
Ge	72	1	nogas	1572139	1.37	1624816	96.76	70	125	
In	115	1	nogas	1570087	1.72	1701792	92.26	70	125	
Bi	209	1	nogas	1340436	1.48	1450658	92.40	70	125	
Ge	72	2	He	312639	2.38	341080	91.66	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	070_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102
Acq Date Time	2017-10-20T10:37:22-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
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	95.231	2.188	235313	0.42	100	95.2	90	110	
Na	23	1	nogas	11114.450	3.813	119469624	2.43	10000	111.1	90	110	CCV Main CR1-2 Failed
Mg	24	1	nogas	10081.763	1.579	76133462	0.36	10000	100.8	90	110	
Al	27	1	nogas	104.065	0.901	913324	0.99	100	104.1	90	110	
K	39	1	nogas	10391.535	1.807	95981652	0.22	10000	103.9	90	110	
Ti	47	1	nogas	102.328	1.329	91888	0.70	100	102.3	90	110	
V	51	1	nogas	110.890	5.978	2351343	2.37	100	110.9	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	98.232	2.385	1183907	0.86	100	98.2	90	110	
Mn	55	1	nogas	107.950	3.544	1608718	1.85	100	108.0	90	110	
Co	59	1	nogas	104.824	4.261	1363142	3.32	100	104.8	90	110	
Ni	60	1	nogas	103.815	3.482	300874	1.81	100	103.8	90	110	
Cu	63	1	nogas	101.622	3.286	742492	1.81	100	101.6	90	110	
Zn	66	1	nogas	104.388	3.008	238059	1.49	100	104.4	90	110	
As	75	1	nogas	93.903	3.047	409930	1.13	100	93.9	90	110	
Sr	88	1	nogas	104.764	2.165	1673719	0.77	100	104.8	90	110	
Ag	107	1	nogas	99.581	0.946	950642	0.96	100	99.6	90	110	
Cd	111	1	nogas	101.844	2.263	198329	0.87	100	101.8	90	110	
Sb	121	1	nogas	102.007	1.066	843179	0.79	100	102.0	90	110	
Tl	205	1	nogas	96.543	3.937	1644068	2.57	100	96.5	90	110	
Pb	208	1	nogas	95.828	3.227	2186459	1.90	100	95.8	90	110	
U	238	1	nogas	101.839	3.475	2417553	2.33	100	101.8	90	110	
[Pb]	206	1	nogas	96.356	1.608	530435	0.82	100	96.4	90	110	
[Pb]	207	1	nogas	97.230	3.057	484581	1.71	100	97.2	90	110	
Na	23	2	He	10927.664	3.408	6042013	2.59	10000	109.3	90	110	
Mg	24	2	He	10335.101	3.427	3085418	1.80	10000	103.4	90	110	
Al	27	2	He	96.923	5.261	13452	4.90	100	96.9	90	110	
K	39	2	He	10129.119	2.264	2769496	2.20	10000	101.3	90	110	
Ca	43	2	He	9548.012	2.663	8065	2.19	10000	95.5	90	110	
Ca	44	2	He	10216.203	1.520	143903	0.81	10000	102.2	90	110	
V	51	2	He	101.873	3.248	265987	1.50	100	101.9	90	110	
Cr	52	2	He	104.408	2.053	319085	1.15	100	104.4	90	110	
Mn	55	2	He	105.125	3.869	200519	2.67	100	105.1	90	110	
Fe	56	2	He	10282.317	0.677	27598790	1.28	10000	102.8	90	110	
Co	59	2	He	107.312	0.951	474817	0.99	100	107.3	90	110	
Ni	60	2	He	106.873	1.221	125877	1.16	100	106.9	90	110	
Cu	63	2	He	105.310	2.688	330951	1.58	100	105.3	90	110	
Zn	66	2	He	105.277	2.923	68934	2.64	100	105.3	90	110	
As	75	2	He	102.338	3.627	53367	1.99	100	102.3	90	110	
Se	78	2	He	97.630	2.869	3407	1.48	100	97.6	90	110	
B	11	1	nogas	659.047	4.610	557053	1.83	500	131.8	90	110	CCV Main CR1-2 Failed
Si	28	1	nogas	5263.722	0.612	11924805	1.65	5000	105.3	90	110	
Ca	43	1	nogas	10510.118	1.686	182044	1.18	10000	105.1	90	110	
Ca	44	1	nogas	10056.928	4.409	2959877	2.91	10000	100.6	90	110	
Fe	56	1	nogas	10337.173	2.486	137796007	0.66	10000	103.4	90	110	
Se	77	1	nogas	72.925	22.505	63481	3.12	100	72.9	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	101.061	1.915	13395	2.01	100	101.1	90	110	
Mo	95	1	nogas	100.992	2.871	335493	1.14	100	101.0	90	110	
Sn	118	1	nogas	98.050	0.998	521948	2.13	100	98.1	90	110	
Ba	137	1	nogas	96.690	4.182	251178	2.80	100	96.7	90	110	
Sb	121	2	He	104.751	3.432	244179	1.73	100	104.8	90	110	
Li	7	1	nogas	105.467	1.786	621092	0.76	100	105.5	90	110	
P	31	1	nogas	502.470	3.686	189846	1.98	500	100.5	90	110	
La	139	1	nogas	134.667	54.437	253	33.57	100	134.7	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	275.974	87.142	30	66.67	100	276.0	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	322919	2.47	309366	104.38	70	125	
Ge	72	1	nogas	1699894	1.86	1624816	104.62	70	125	
In	115	1	nogas	1745609	2.89	1701792	102.57	70	125	
Bi	209	1	nogas	1527810	1.35	1450658	105.32	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	326885	1.73	341080	95.84	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	071_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102
Acq Date Time	2017-10-20T10:39:20-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
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	31.4	177	22.9	1	
Na	23	1	nogas	557.714	5.6	8104022	0.3	100	CCB Main CR1 Failed
Mg	24	1	nogas	24.072	2.2	196127	3.3	100	
Al	27	1	nogas	1.390	9.8	25898	1.1	5	
K	39	1	nogas	-29.350	-94.0	4991495	0.9	100	
Ti	47	1	nogas	0.043	94.1	253	17.8	2.5	
V	51	1	nogas	2.879	171.8	843573	3.4	2.5	CCB Main CR1 Failed
Cr	52	1	nogas	-0.760	-22.8	23265	4.1	2.5	
Mn	55	1	nogas	0.952	8.9	28072	0.6	2.5	
Co	59	1	nogas	0.036	15.6	1363	1.8	2.5	
Ni	60	1	nogas	0.544	31.1	4991	4.7	2.5	
Cu	63	1	nogas	0.338	33.1	7355	6.4	2.5	
Zn	66	1	nogas	0.611	32.1	3534	9.3	2.5	
As	75	1	nogas	-2.392	-205.0	154345	4.1	2.5	
Sr	88	1	nogas	0.430	5.9	7698	3.5	2.5	
Ag	107	1	nogas	0.068	29.6	957	14.8	2.5	
Cd	111	1	nogas	0.056	15.1	113	13.5	1	
Sb	121	1	nogas	0.255	6.0	4097	1.8	2.5	
Tl	205	1	nogas	0.139	45.1	2537	45.9	1	
Pb	208	1	nogas	0.062	5.0	1967	3.4	2.5	
U	238	1	nogas	0.061	12.4	1600	13.6	2.5	
[Pb]	206	1	nogas	0.061	12.0	443	11.6	2.5	
[Pb]	207	1	nogas	0.074	10.8	490	12.7	2.5	
Na	23	2	He	582.470	1.9	465201	0.5	100	CCB Main CR1 Failed
Mg	24	2	He	22.246	12.6	7432	10.5	100	
Al	27	2	He	0.648	154.9	350	38.7	5	
K	39	2	He	-4.750	-61.6	71536	1.1	100	
Ca	43	2	He	47.773	38.7	57	27.0	100	
Ca	44	2	He	-9.849	-40.3	1003	4.7	100	
V	51	2	He	-0.189	-27.4	4642	2.1	2.5	
Cr	52	2	He	0.036	87.3	2560	3.5	2.5	
Mn	55	2	He	0.608	12.3	2017	7.9	2.5	
Fe	56	2	He	10.917	4.5	37906	2.7	100	
Co	59	2	He	0.030	62.3	433	18.5	2.5	
Ni	60	2	He	-0.506	-11.1	303	20.9	2.5	
Cu	63	2	He	-0.498	-3.3	1390	3.3	2.5	
Zn	66	2	He	0.142	192.9	607	30.6	2.5	
As	75	2	He	0.037	102.5	246	7.7	2.5	
Se	78	2	He	0.161	67.5	79	5.3	2.5	
B	11	1	nogas	170.838	9.9	204342	0.8	10	CCB Main CR1 Failed
Si	28	1	nogas	-40.855	-51.0	892823	0.3	5	
Ca	43	1	nogas	40.410	33.9	1440	13.0	100	
Ca	44	1	nogas	-289.486	-5.3	76523	1.6	100	
Fe	56	1	nogas	8.051	79.8	1104704	8.3	100	
Se	77	1	nogas	3.372	618.3	50895	3.1	2.5	CCB Main CR1 Failed
Se	82	1	nogas	0.193	161.2	430	6.2	2.5	
Mo	95	1	nogas	0.124	9.0	507	10.9	2.5	
Sn	118	1	nogas	0.115	18.7	1390	6.4	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.125	41.2	513	29.3	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.236	4.6	1143	3.1	2.5	
P	31	1	nogas	-4.591	-271.9	39802	4.4	10	
La	139	1	nogas	52.415	68.4	163	24.7	2.5	CCB Main CR1 Failed
Au	197	1	nogas	144.302	210.2	20	132.3	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	351663	6.46	309366	113.67	70	125	
Ge	72	1	nogas	1725837	4.91	1624816	106.22	70	125	
In	115	1	nogas	1822789	2.64	1701792	107.11	70	125	
Bi	209	1	nogas	1557645	4.73	1450658	107.38	70	125	
Ge	72	2	He	328971	0.92	341080	96.45	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	082_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102
Acq Date Time	2017-10-20T11:01:39-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
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	95.746	4.802	236130	3.02	100	95.7	90	110	
Na	23	1	nogas	10687.047	1.951	115372432	1.23	10000	106.9	90	110	
Mg	24	1	nogas	10108.958	2.761	76607714	3.04	10000	101.1	90	110	
Al	27	1	nogas	103.606	4.675	910383	3.26	100	103.6	90	110	
K	39	1	nogas	10322.988	2.301	95543306	2.80	10000	103.2	90	110	
Ti	47	1	nogas	101.719	8.023	91390	5.91	100	101.7	90	110	
V	51	1	nogas	119.397	6.677	2474536	3.08	100	119.4	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	100.413	7.568	1210627	5.80	100	100.4	90	110	
Mn	55	1	nogas	107.935	4.097	1610589	1.51	100	107.9	90	110	
Co	59	1	nogas	100.437	1.898	1309072	4.46	100	100.4	90	110	
Ni	60	1	nogas	101.253	1.103	294063	1.52	100	101.3	90	110	
Cu	63	1	nogas	100.309	2.717	734063	0.58	100	100.3	90	110	
Zn	66	1	nogas	103.562	2.253	236568	1.22	100	103.6	90	110	
As	75	1	nogas	102.010	3.791	432238	1.69	100	102.0	90	110	
Sr	88	1	nogas	104.019	4.899	1663735	3.11	100	104.0	90	110	
Ag	107	1	nogas	98.149	2.862	938114	0.43	100	98.1	90	110	
Cd	111	1	nogas	97.235	3.424	193398	2.58	100	97.2	90	110	
Sb	121	1	nogas	102.581	2.204	849188	2.24	100	102.6	90	110	
Tl	205	1	nogas	95.581	4.478	1617534	2.46	100	95.6	90	110	
Pb	208	1	nogas	97.552	1.523	2212634	0.52	100	97.6	90	110	
U	238	1	nogas	100.595	2.134	2373702	0.41	100	100.6	90	110	
[Pb]	206	1	nogas	98.735	2.425	540168	0.55	100	98.7	90	110	
[Pb]	207	1	nogas	99.905	2.086	494925	0.28	100	99.9	90	110	
Na	23	2	He	10431.010	3.341	5840036	1.29	10000	104.3	90	110	
Mg	24	2	He	10145.335	4.627	3063409	2.97	10000	101.5	90	110	
Al	27	2	He	97.199	3.106	13645	2.54	100	97.2	90	110	
K	39	2	He	10305.482	0.991	2816450	0.96	10000	103.1	90	110	
Ca	43	2	He	9813.203	7.505	8379	5.71	10000	98.1	90	110	
Ca	44	2	He	9741.790	5.632	138769	3.17	10000	97.4	90	110	
V	51	2	He	102.019	2.212	269480	0.93	100	102.0	90	110	
Cr	52	2	He	101.606	6.211	313960	3.85	100	101.6	90	110	
Mn	55	2	He	99.723	4.981	192390	2.55	100	99.7	90	110	
Fe	56	2	He	10319.668	4.750	28002561	2.44	10000	103.2	90	110	
Co	59	2	He	105.904	1.145	474031	1.57	100	105.9	90	110	
Ni	60	2	He	105.114	0.699	125270	2.11	100	105.1	90	110	
Cu	63	2	He	105.981	2.495	336887	0.88	100	106.0	90	110	
Zn	66	2	He	104.480	3.829	69181	1.36	100	104.5	90	110	
As	75	2	He	100.683	3.640	53110	1.25	100	100.7	90	110	
Se	78	2	He	98.255	3.128	3468	0.92	100	98.3	90	110	
B	11	1	nogas	607.907	3.960	517646	1.84	500	121.6	90	110	CCV Main CR1-2 Failed
Si	28	1	nogas	5300.859	3.098	12016841	1.69	5000	106.0	90	110	
Ca	43	1	nogas	10374.534	2.650	180018	3.64	10000	103.7	90	110	
Ca	44	1	nogas	9881.919	3.932	2915042	1.21	10000	98.8	90	110	
Fe	56	1	nogas	10251.359	3.361	136881057	3.04	10000	102.5	90	110	
Se	77	1	nogas	107.292	9.038	70172	2.91	100	107.3	90	110	
Se	82	1	nogas	102.171	7.321	13552	6.07	100	102.2	90	110	
Mo	95	1	nogas	101.274	3.467	336878	0.90	100	101.3	90	110	
Sn	118	1	nogas	98.279	3.214	534180	2.05	100	98.3	90	110	
Ba	137	1	nogas	96.921	2.400	257212	1.19	100	96.9	90	110	
Sb	121	2	He	100.577	3.579	237163	1.14	100	100.6	90	110	
Li	7	1	nogas	102.652	2.554	604307	0.75	100	102.7	90	110	
P	31	1	nogas	505.042	3.181	190888	1.05	500	101.0	90	110	
La	139	1	nogas	104.368	44.212	223	26.24	100	104.4	90	110	
Au	197	1	nogas	-5.475	-2539.490	7	173.21	100	-5.5	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	322363	1.79	309366	104.20	70	125	
Ge	72	1	nogas	1702605	2.62	1624816	104.79	70	125	
In	115	1	nogas	1782535	1.23	1701792	104.74	70	125	
Bi	209	1	nogas	1518637	1.97	1450658	104.69	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	330702	2.50	341080	96.96	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	083_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102
Acq Date Time	2017-10-20T11:03:38-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
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	0.035	1.7	130	0.0	1	
Na	23	1	nogas	239.768	4.0	4807439	0.7	100	CCB Main CR1 Failed
Mg	24	1	nogas	7.452	9.8	70884	9.0	100	
Al	27	1	nogas	0.590	38.5	18556	7.2	5	
K	39	1	nogas	-30.731	-53.5	4899565	0.6	100	
Ti	47	1	nogas	0.009	605.7	217	18.7	2.5	
V	51	1	nogas	15.087	29.6	1001734	3.9	2.5	CCB Main CR1 Failed
Cr	52	1	nogas	-0.252	-56.5	28856	4.0	2.5	
Mn	55	1	nogas	0.101	44.2	15073	4.3	2.5	
Co	59	1	nogas	-0.003	-30.5	843	3.4	2.5	
Ni	60	1	nogas	-0.327	-34.2	2430	14.2	2.5	
Cu	63	1	nogas	-0.019	-289.0	4661	7.6	2.5	
Zn	66	1	nogas	-0.058	-57.9	1973	1.1	2.5	
As	75	1	nogas	7.233	59.0	177627	4.2	2.5	CCB Main CR1 Failed
Sr	88	1	nogas	0.206	6.3	3994	1.9	2.5	
Ag	107	1	nogas	0.035	16.5	637	11.6	2.5	
Cd	111	1	nogas	0.030	42.8	60	44.1	1	
Sb	121	1	nogas	0.393	19.3	5171	13.9	2.5	
Tl	205	1	nogas	0.136	44.3	2510	47.0	1	
Pb	208	1	nogas	0.028	30.2	1193	21.1	2.5	
U	238	1	nogas	0.034	14.5	940	17.5	2.5	
[Pb]	206	1	nogas	0.044	32.3	347	21.7	2.5	
[Pb]	207	1	nogas	0.023	87.1	237	46.7	2.5	
Na	23	2	He	280.005	1.3	303973	0.6	100	CCB Main CR1 Failed
Mg	24	2	He	7.210	8.8	2947	6.1	100	
Al	27	2	He	0.087	492.0	277	21.8	5	
K	39	2	He	-14.640	-39.6	68903	2.2	100	
Ca	43	2	He	4.228	2.7	20	0.0	100	
Ca	44	2	He	-28.414	-28.1	750	15.4	100	
V	51	2	He	0.026	264.0	5247	2.9	2.5	
Cr	52	2	He	0.140	25.3	2904	4.1	2.5	
Mn	55	2	He	-0.047	-111.2	770	13.7	2.5	
Fe	56	2	He	3.799	3.4	18873	1.8	100	
Co	59	2	He	-0.006	-23.7	277	2.1	2.5	
Ni	60	2	He	-0.526	-8.9	283	19.4	2.5	
Cu	63	2	He	-0.628	-2.4	993	5.2	2.5	
Zn	66	2	He	-0.233	-20.4	363	8.4	2.5	
As	75	2	He	0.105	41.1	284	8.3	2.5	
Se	78	2	He	-0.476	-54.5	57	16.1	2.5	
B	11	1	nogas	107.092	7.1	154153	3.0	10	CCB Main CR1 Failed
Si	28	1	nogas	-40.603	-30.9	879069	0.3	5	
Ca	43	1	nogas	9.605	94.0	890	16.6	100	
Ca	44	1	nogas	-334.710	-3.2	62712	1.9	100	
Fe	56	1	nogas	-1.553	-134.9	959196	0.5	100	
Se	77	1	nogas	45.585	45.8	58116	4.3	2.5	CCB Main CR1 Failed
Se	82	1	nogas	-0.058	-1107.5	393	24.2	2.5	
Mo	95	1	nogas	0.113	57.1	467	49.4	2.5	
Sn	118	1	nogas	0.068	52.7	1103	15.3	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.057	36.2	323	18.1	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.319	19.5	1353	11.3	2.5	
P	31	1	nogas	-3.308	-237.5	39579	2.6	10	
La	139	1	nogas	-3.292	-436.5	93	16.4	2.5	
Au	197	1	nogas	186.895	95.0	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	355737	1.25	309366	114.99	70	125	
Ge	72	1	nogas	1696606	3.29	1624816	104.42	70	125	
In	115	1	nogas	1789373	2.28	1701792	105.15	70	125	
Bi	209	1	nogas	1569882	5.63	1450658	108.22	70	125	
Ge	72	2	He	332206	0.48	341080	97.40	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	094_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102
Acq Date Time	2017-10-20T11:25:55-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
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	100.150	2.078	240170	2.15	100	100.2	90	110	
Na	23	1	nogas	10665.409	2.683	114236723	1.24	10000	106.7	90	110	
Mg	24	1	nogas	10594.708	3.174	79637750	1.14	10000	105.9	90	110	
Al	27	1	nogas	100.535	1.666	892022	1.79	100	100.5	90	110	
K	39	1	nogas	10085.674	3.918	94257981	1.65	10000	100.9	90	110	
Ti	47	1	nogas	99.969	0.819	90732	2.49	100	100.0	90	110	
V	51	1	nogas	121.380	2.282	2526019	2.33	100	121.4	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	98.368	3.325	1198448	4.45	100	98.4	90	110	
Mn	55	1	nogas	99.226	2.729	1495572	2.21	100	99.2	90	110	
Co	59	1	nogas	95.640	3.021	1256805	1.73	100	95.6	90	110	
Ni	60	1	nogas	100.472	6.133	294178	3.42	100	100.5	90	110	
Cu	63	1	nogas	98.422	4.413	726607	2.17	100	98.4	90	110	
Zn	66	1	nogas	102.917	3.097	237165	0.38	100	102.9	90	110	
As	75	1	nogas	103.894	4.752	441144	1.65	100	103.9	90	110	
Sr	88	1	nogas	99.214	3.874	1601224	1.80	100	99.2	90	110	
Ag	107	1	nogas	96.576	1.509	931574	1.42	100	96.6	90	110	
Cd	111	1	nogas	98.894	1.206	188447	0.85	100	98.9	90	110	
Sb	121	1	nogas	98.931	2.763	826145	0.10	100	98.9	90	110	
Tl	205	1	nogas	97.697	3.092	1632820	3.97	100	97.7	90	110	
Pb	208	1	nogas	96.983	2.323	2170730	0.36	100	97.0	90	110	
U	238	1	nogas	101.309	3.132	2358880	0.61	100	101.3	90	110	
[Pb]	206	1	nogas	97.881	1.081	528610	1.54	100	97.9	90	110	
[Pb]	207	1	nogas	99.719	2.190	487560	1.26	100	99.7	90	110	
Na	23	2	He	10267.987	3.982	5659244	2.04	10000	102.7	90	110	
Mg	24	2	He	9995.187	3.292	2970357	1.05	10000	100.0	90	110	
Al	27	2	He	98.941	1.106	13669	2.81	100	98.9	90	110	
K	39	2	He	9667.250	3.228	2646532	3.14	10000	96.7	90	110	
Ca	43	2	He	9230.016	1.962	7765	3.75	10000	92.3	90	110	
Ca	44	2	He	9628.516	1.640	135075	0.73	10000	96.3	90	110	
V	51	2	He	100.326	2.301	260871	0.83	100	100.3	90	110	
Cr	52	2	He	101.515	0.791	308976	2.15	100	101.5	90	110	
Mn	55	2	He	100.618	2.090	191112	0.22	100	100.6	90	110	
Fe	56	2	He	10126.844	3.412	27048337	1.12	10000	101.3	90	110	
Co	59	2	He	103.789	2.325	457078	0.33	100	103.8	90	110	
Ni	60	2	He	103.832	1.538	121766	1.39	100	103.8	90	110	
Cu	63	2	He	104.072	0.701	325690	1.70	100	104.1	90	110	
Zn	66	2	He	102.900	2.162	67101	3.30	100	102.9	90	110	
As	75	2	He	100.237	3.971	52033	1.63	100	100.2	90	110	
Se	78	2	He	95.887	5.185	3332	3.73	100	95.9	90	110	
B	11	1	nogas	548.185	1.964	459466	2.07	500	109.6	90	110	
Si	28	1	nogas	5017.896	1.565	11531100	1.36	5000	100.4	90	110	
Ca	43	1	nogas	10338.785	4.114	180886	1.84	10000	103.4	90	110	
Ca	44	1	nogas	9776.042	5.564	2910700	2.94	10000	97.8	90	110	
Fe	56	1	nogas	9904.518	5.169	133382607	2.41	10000	99.0	90	110	
Se	77	1	nogas	135.700	10.866	76239	1.62	100	135.7	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	97.664	5.249	13085	2.52	100	97.7	90	110	
Mo	95	1	nogas	98.185	4.645	329455	1.99	100	98.2	90	110	
Sn	118	1	nogas	99.244	3.071	516699	1.48	100	99.2	90	110	
Ba	137	1	nogas	98.402	0.886	250196	1.39	100	98.4	90	110	
Sb	121	2	He	101.812	2.118	236306	0.60	100	101.8	90	110	
Li	7	1	nogas	106.085	0.886	606093	1.29	100	106.1	90	110	
P	31	1	nogas	481.914	3.307	185649	0.40	500	96.4	90	110	
La	139	1	nogas	144.668	6.095	260	3.85	100	144.7	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	491.225	17.083	47	12.37	100	491.2	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	313292	0.93	309366	101.27	70	125	
Ge	72	1	nogas	1717858	2.71	1624816	105.73	70	125	
In	115	1	nogas	1707607	1.75	1701792	100.34	70	125	
Bi	209	1	nogas	1498907	2.56	1450658	103.33	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	325431	2.28	341080	95.41	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	095_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102
Acq Date Time	2017-10-20T11:27:55-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
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	57.2	157	41.5	1	
Na	23	1	nogas	178.235	4.0	4221019	0.4	100	CCB Main CR1 Failed
Mg	24	1	nogas	7.557	12.6	72997	9.6	100	
Al	27	1	nogas	0.637	10.8	19187	2.5	5	
K	39	1	nogas	-46.994	-30.6	4807567	0.5	100	
Ti	47	1	nogas	0.020	647.4	230	51.3	2.5	
V	51	1	nogas	12.705	39.2	978266	4.7	2.5	CCB Main CR1 Failed
Cr	52	1	nogas	-0.142	-43.7	30469	1.9	2.5	
Mn	55	1	nogas	0.319	39.8	18453	7.8	2.5	
Co	59	1	nogas	0.003	205.6	930	10.8	2.5	
Ni	60	1	nogas	-0.351	-33.0	2380	11.4	2.5	
Cu	63	1	nogas	-0.124	-30.7	3937	5.0	2.5	
Zn	66	1	nogas	-0.172	-27.3	1733	5.0	2.5	
As	75	1	nogas	7.355	59.7	179792	4.0	2.5	CCB Main CR1 Failed
Sr	88	1	nogas	0.179	3.8	3600	4.1	2.5	
Ag	107	1	nogas	0.049	46.8	773	28.7	2.5	
Cd	111	1	nogas	0.046	55.7	90	58.8	1	
Sb	121	1	nogas	0.541	7.4	6451	5.5	2.5	
Tl	205	1	nogas	0.111	52.6	2090	48.7	1	
Pb	208	1	nogas	0.025	40.7	1127	20.7	2.5	
U	238	1	nogas	0.043	29.9	1190	25.9	2.5	
[Pb]	206	1	nogas	0.031	26.4	283	16.3	2.5	
[Pb]	207	1	nogas	0.029	57.9	270	32.3	2.5	
Na	23	2	He	222.708	1.8	270475	0.6	100	CCB Main CR1 Failed
Mg	24	2	He	7.504	1.0	3014	1.6	100	
Al	27	2	He	0.446	99.5	323	17.9	5	
K	39	2	He	-26.263	-15.1	65809	1.6	100	
Ca	43	2	He	20.236	122.0	33	62.4	100	
Ca	44	2	He	-20.375	-38.2	857	11.8	100	
V	51	2	He	-0.026	-265.3	5074	3.1	2.5	
Cr	52	2	He	0.090	136.1	2727	13.1	2.5	
Mn	55	2	He	0.240	28.9	1313	9.3	2.5	
Fe	56	2	He	3.393	6.5	17635	4.3	100	
Co	59	2	He	0.001	191.0	307	3.8	2.5	
Ni	60	2	He	-0.547	-4.3	257	11.9	2.5	
Cu	63	2	He	-0.648	-6.9	923	14.7	2.5	
Zn	66	2	He	-0.250	-8.9	350	4.9	2.5	
As	75	2	He	0.144	35.7	302	7.8	2.5	
Se	78	2	He	-0.345	-59.5	61	10.5	2.5	
B	11	1	nogas	70.506	10.4	123053	2.3	10	CCB Main CR1 Failed
Si	28	1	nogas	-46.648	-22.7	875608	0.5	5	
Ca	43	1	nogas	18.932	21.9	1063	8.5	100	
Ca	44	1	nogas	-341.839	-1.9	61387	1.5	100	
Fe	56	1	nogas	-2.248	-64.7	960283	2.8	100	
Se	77	1	nogas	48.842	31.3	59381	3.6	2.5	CCB Main CR1 Failed
Se	82	1	nogas	0.426	171.1	457	17.7	2.5	
Mo	95	1	nogas	0.095	22.8	407	19.7	2.5	
Sn	118	1	nogas	0.070	30.9	1090	12.7	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.080	14.2	373	9.4	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.380	14.7	1483	7.8	2.5	
P	31	1	nogas	-2.664	-116.0	40213	0.5	10	
La	139	1	nogas	-24.147	-51.2	67	22.9	2.5	
Au	197	1	nogas	375.751	29.8	40	25.0	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	354235	3.94	309366	114.50	70	125	
Ge	72	1	nogas	1714060	2.68	1624816	105.49	70	125	
In	115	1	nogas	1743579	3.23	1701792	102.46	70	125	
Bi	209	1	nogas	1600291	1.03	1450658	110.31	70	125	
Ge	72	2	He	329678	1.12	341080	96.66	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	106_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102
Acq Date Time	2017-10-20T11:50:04-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
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	94.590	0.296	223654	0.11	100	94.6	90	110	
Na	23	1	nogas	11005.942	1.413	110398648	1.48	10000	110.1	90	110	CCV Main CR1-2 Failed
Mg	24	1	nogas	10557.482	2.168	74372841	2.44	10000	105.6	90	110	
Al	27	1	nogas	103.188	3.401	868479	2.43	100	103.2	90	110	
K	39	1	nogas	10000.130	3.238	88757469	1.55	10000	100.0	90	110	
Ti	47	1	nogas	99.922	5.059	85997	1.79	100	99.9	90	110	
V	51	1	nogas	151.867	4.862	2807518	1.50	100	151.9	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	98.694	3.254	1140413	0.70	100	98.7	90	110	
Mn	55	1	nogas	102.372	3.419	1464018	2.79	100	102.4	90	110	
Co	59	1	nogas	98.456	5.002	1227724	3.56	100	98.5	90	110	
Ni	60	1	nogas	104.513	6.673	290232	3.13	100	104.5	90	110	
Cu	63	1	nogas	100.587	5.894	704397	2.44	100	100.6	90	110	
Zn	66	1	nogas	103.798	5.133	226894	1.24	100	103.8	90	110	
As	75	1	nogas	115.721	6.160	448889	0.77	100	115.7	90	110	CCV Main CR1-2 Failed
Sr	88	1	nogas	104.024	4.123	1593202	1.04	100	104.0	90	110	
Ag	107	1	nogas	97.808	4.737	894841	1.03	100	97.8	90	110	
Cd	111	1	nogas	102.476	3.074	185680	0.55	100	102.5	90	110	
Sb	121	1	nogas	103.316	3.497	818738	1.60	100	103.3	90	110	
Tl	205	1	nogas	105.369	2.452	1651281	1.09	100	105.4	90	110	
Pb	208	1	nogas	101.976	3.341	2140667	1.06	100	102.0	90	110	
U	238	1	nogas	104.041	0.826	2273226	1.67	100	104.0	90	110	
[Pb]	206	1	nogas	104.686	5.999	529904	3.69	100	104.7	90	110	
[Pb]	207	1	nogas	103.730	2.797	475675	0.89	100	103.7	90	110	
Na	23	2	He	10195.874	1.909	5431865	1.75	10000	102.0	90	110	
Mg	24	2	He	10162.483	1.252	2918618	1.33	10000	101.6	90	110	
Al	27	2	He	97.842	2.512	13058	2.45	100	97.8	90	110	
K	39	2	He	9500.982	1.605	2602266	1.56	10000	95.0	90	110	
Ca	43	2	He	9011.077	1.401	7322	1.08	10000	90.1	90	110	
Ca	44	2	He	9559.853	0.269	129583	0.79	10000	95.6	90	110	
V	51	2	He	101.586	0.969	255160	0.51	100	101.6	90	110	
Cr	52	2	He	101.817	2.343	299323	1.85	100	101.8	90	110	
Mn	55	2	He	99.499	1.413	182609	1.13	100	99.5	90	110	
Fe	56	2	He	10235.215	1.097	26420981	1.60	10000	102.4	90	110	
Co	59	2	He	104.696	0.263	445523	0.69	100	104.7	90	110	
Ni	60	2	He	103.621	2.216	117405	2.40	100	103.6	90	110	
Cu	63	2	He	103.875	0.384	314037	0.82	100	103.9	90	110	
Zn	66	2	He	102.385	1.643	64491	1.62	100	102.4	90	110	
As	75	2	He	99.619	1.213	49983	1.48	100	99.6	90	110	
Se	78	2	He	97.809	1.749	3283	1.41	100	97.8	90	110	
B	11	1	nogas	568.907	2.378	467971	1.73	500	113.8	90	110	CCV Main CR1-2 Failed
Si	28	1	nogas	5259.269	3.070	11423899	1.15	5000	105.2	90	110	
Ca	43	1	nogas	10258.811	4.235	170343	1.11	10000	102.6	90	110	
Ca	44	1	nogas	9778.445	5.070	2762943	0.92	10000	97.8	90	110	
Fe	56	1	nogas	10075.926	1.875	128906078	3.82	10000	100.8	90	110	
Se	77	1	nogas	187.712	14.288	81844	3.96	100	187.7	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	97.454	7.753	12384	3.81	100	97.5	90	110	
Mo	95	1	nogas	99.838	4.677	317974	2.26	100	99.8	90	110	
Sn	118	1	nogas	100.581	1.928	498229	2.57	100	100.6	90	110	
Ba	137	1	nogas	101.420	4.520	245114	1.86	100	101.4	90	110	
Sb	121	2	He	103.706	1.328	232576	1.84	100	103.7	90	110	
Li	7	1	nogas	104.707	1.073	590197	0.80	100	104.7	90	110	
P	31	1	nogas	516.208	6.770	185846	1.52	500	103.2	90	110	
La	139	1	nogas	111.555	48.101	210	25.20	100	111.6	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	352.047	57.031	33	45.83	100	352.0	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	308890	0.38	309366	99.85	70	125	
Ge	72	1	nogas	1630869	3.84	1624816	100.37	70	125	
In	115	1	nogas	1624403	2.73	1701792	95.45	70	125	
Bi	209	1	nogas	1405987	2.42	1450658	96.92	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	314344	0.52	341080	92.16	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	107_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102
Acq Date Time	2017-10-20T11:52:03-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
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	7.5	193	6.0	1	
Na	23	1	nogas	231.824	5.5	4569446	1.1	100	CCB Main CR1 Failed
Mg	24	1	nogas	9.342	2.9	82730	2.2	100	
Al	27	1	nogas	0.558	13.8	18403	5.2	5	
K	39	1	nogas	-33.371	-54.5	4896818	1.3	100	
Ti	47	1	nogas	0.063	105.5	267	20.7	2.5	
V	51	1	nogas	48.391	3.7	1476666	3.9	2.5	CCB Main CR1 Failed
Cr	52	1	nogas	-0.010	-815.6	31844	3.7	2.5	
Mn	55	1	nogas	0.116	40.0	15353	2.7	2.5	
Co	59	1	nogas	0.011	95.8	1020	10.9	2.5	
Ni	60	1	nogas	-0.327	-16.2	2440	7.5	2.5	
Cu	63	1	nogas	-0.084	-19.7	4214	3.6	2.5	
Zn	66	1	nogas	-0.100	-38.1	1887	2.9	2.5	
As	75	1	nogas	16.765	8.8	204130	3.7	2.5	CCB Main CR1 Failed
Sr	88	1	nogas	0.274	9.4	5111	7.9	2.5	
Ag	107	1	nogas	0.044	43.4	730	25.6	2.5	
Cd	111	1	nogas	0.041	13.6	80	12.5	1	
Sb	121	1	nogas	0.385	12.1	5121	5.9	2.5	
Tl	205	1	nogas	0.225	33.6	4031	36.1	1	
Pb	208	1	nogas	0.029	42.3	1210	27.2	2.5	
U	238	1	nogas	0.046	27.5	1237	27.5	2.5	
[Pb]	206	1	nogas	0.035	7.3	297	8.5	2.5	
[Pb]	207	1	nogas	0.026	98.0	247	55.2	2.5	
Na	23	2	He	271.782	2.7	288506	0.9	100	CCB Main CR1 Failed
Mg	24	2	He	9.242	4.6	3434	3.8	100	
Al	27	2	He	0.413	70.4	310	12.9	5	
K	39	2	He	-26.753	-23.2	65678	2.5	100	
Ca	43	2	He	41.484	29.7	50	20.0	100	
Ca	44	2	He	-26.875	-32.8	743	16.0	100	
V	51	2	He	0.831	4.6	7077	1.0	2.5	
Cr	52	2	He	0.061	135.0	2564	9.4	2.5	
Mn	55	2	He	-0.046	-130.0	743	14.5	2.5	
Fe	56	2	He	5.230	2.6	21943	1.4	100	
Co	59	2	He	-0.011	-152.1	243	30.8	2.5	
Ni	60	2	He	-0.497	-3.7	307	6.8	2.5	
Cu	63	2	He	-0.624	-9.5	970	18.6	2.5	
Zn	66	2	He	-0.255	-37.3	337	18.1	2.5	
As	75	2	He	0.100	59.6	271	11.7	2.5	
Se	78	2	He	-0.193	-31.9	65	3.6	2.5	
B	11	1	nogas	91.761	5.9	139192	3.3	10	CCB Main CR1 Failed
Si	28	1	nogas	-54.957	-13.2	852975	0.5	5	
Ca	43	1	nogas	8.493	78.6	877	14.8	100	
Ca	44	1	nogas	-342.656	-0.7	60795	1.5	100	
Fe	56	1	nogas	2.049	7.4	1011423	2.3	100	
Se	77	1	nogas	92.505	3.8	67381	1.4	2.5	CCB Main CR1 Failed
Se	82	1	nogas	-0.168	-722.2	380	41.8	2.5	
Mo	95	1	nogas	0.153	2.1	597	3.5	2.5	
Sn	118	1	nogas	0.070	56.5	1087	21.8	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.059	28.0	317	15.9	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.280	17.1	1213	8.5	2.5	
P	31	1	nogas	1.314	162.6	41155	1.5	10	
La	139	1	nogas	1.221	3644.3	97	57.0	2.5	
Au	197	1	nogas	109.144	218.4	17	124.9	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	350104	0.41	309366	113.17	70	125	
Ge	72	1	nogas	1703348	2.16	1624816	104.83	70	125	
In	115	1	nogas	1731398	2.50	1701792	101.74	70	125	
Bi	209	1	nogas	1553296	3.72	1450658	107.08	70	125	
Ge	72	2	He	320059	0.56	341080	93.84	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	118_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102
Acq Date Time	2017-10-20T12:14:12-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
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	89.361	2.772	233471	2.54	100	89.4	90	110	CCV Main CR1-2 Failed
Na	23	1	nogas	10448.436	1.427	114365590	1.78	10000	104.5	90	110	
Mg	24	1	nogas	10286.796	2.086	78999968	2.63	10000	102.9	90	110	
Al	27	1	nogas	100.882	1.916	907475	1.21	100	100.9	90	110	
K	39	1	nogas	10071.528	2.421	95478877	2.11	10000	100.7	90	110	
Ti	47	1	nogas	100.284	1.853	92270	1.79	100	100.3	90	110	
V	51	1	nogas	109.200	5.774	2385178	3.23	100	109.2	90	110	
Cr	52	1	nogas	97.113	0.898	1199672	0.20	100	97.1	90	110	
Mn	55	1	nogas	104.084	1.833	1590063	1.32	100	104.1	90	110	
Co	59	1	nogas	100.314	1.329	1336965	2.04	100	100.3	90	110	
Ni	60	1	nogas	99.208	2.119	294799	1.61	100	99.2	90	110	
Cu	63	1	nogas	99.238	3.484	743092	2.98	100	99.2	90	110	
Zn	66	1	nogas	103.628	3.480	242158	2.69	100	103.6	90	110	
As	75	1	nogas	99.243	2.733	434637	1.39	100	99.2	90	110	
Sr	88	1	nogas	105.124	1.947	1721091	2.58	100	105.1	90	110	
Ag	107	1	nogas	97.146	2.915	950067	2.33	100	97.1	90	110	
Cd	111	1	nogas	98.891	2.261	194657	1.50	100	98.9	90	110	
Sb	121	1	nogas	100.234	2.978	848790	2.20	100	100.2	90	110	
Tl	205	1	nogas	98.582	4.040	1625526	2.99	100	98.6	90	110	
Pb	208	1	nogas	98.398	1.837	2174152	1.45	100	98.4	90	110	
U	238	1	nogas	105.637	1.866	2428441	1.51	100	105.6	90	110	
[Pb]	206	1	nogas	99.893	1.363	532480	1.64	100	99.9	90	110	
[Pb]	207	1	nogas	100.559	2.931	485290	2.27	100	100.6	90	110	
Na	23	2	He	10140.915	0.930	5665539	1.70	10000	101.4	90	110	
Mg	24	2	He	10011.808	1.307	3014778	1.84	10000	100.1	90	110	
Al	27	2	He	96.727	3.554	13542	4.61	100	96.7	90	110	
K	39	2	He	9993.648	0.906	2733429	0.88	10000	99.9	90	110	
Ca	43	2	He	9534.087	5.111	8119	4.16	10000	95.3	90	110	
Ca	44	2	He	9714.533	1.354	138031	0.77	10000	97.1	90	110	
V	51	2	He	101.519	0.581	267367	1.37	100	101.5	90	110	
Cr	52	2	He	102.462	1.044	315807	0.63	100	102.5	90	110	
Mn	55	2	He	98.246	0.710	189057	0.45	100	98.2	90	110	
Fe	56	2	He	10040.279	1.808	27169572	0.70	10000	100.4	90	110	
Co	59	2	He	104.058	2.940	464168	1.78	100	104.1	90	110	
Ni	60	2	He	102.537	1.395	121805	0.92	100	102.5	90	110	
Cu	63	2	He	104.210	1.502	330276	0.72	100	104.2	90	110	
Zn	66	2	He	102.522	0.420	67706	1.01	100	102.5	90	110	
As	75	2	He	98.292	1.462	51704	0.47	100	98.3	90	110	
Se	78	2	He	94.494	5.474	3328	5.14	100	94.5	90	110	
B	11	1	nogas	481.234	2.699	447039	2.16	500	96.2	90	110	
Si	28	1	nogas	5112.382	3.076	11892452	2.20	5000	102.2	90	110	
Ca	43	1	nogas	10203.779	1.138	181103	0.97	10000	102.0	90	110	
Ca	44	1	nogas	9808.756	0.461	2962634	1.23	10000	98.1	90	110	
Fe	56	1	nogas	10120.659	1.939	138257141	1.17	10000	101.2	90	110	
Se	77	1	nogas	108.702	13.045	72046	3.08	100	108.7	90	110	
Se	82	1	nogas	102.040	3.201	13852	2.99	100	102.0	90	110	
Mo	95	1	nogas	98.436	2.871	335071	2.27	100	98.4	90	110	
Sn	118	1	nogas	99.812	2.559	536865	0.98	100	99.8	90	110	
Ba	137	1	nogas	96.095	3.309	252317	0.95	100	96.1	90	110	
Sb	121	2	He	101.388	1.320	238417	2.22	100	101.4	90	110	
Li	7	1	nogas	100.438	3.047	626894	2.37	100	100.4	90	110	
P	31	1	nogas	502.514	2.556	194537	1.56	500	100.5	90	110	
La	139	1	nogas	97.473	47.761	213	28.64	100	97.5	90	110	
Au	197	1	nogas	82.170	235.488	13	114.56	100	82.2	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	341330	0.59	309366	110.33	70	125	
Ge	72	1	nogas	1741445	0.79	1624816	107.18	70	125	
In	115	1	nogas	1764309	2.70	1701792	103.67	70	125	
Bi	209	1	nogas	1479224	1.04	1450658	101.97	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	329581	1.15	341080	96.63	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	119_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102
Acq Date Time	2017-10-20T12:16:10-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
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	0.045	51.2	157	39.0	1	
Na	23	1	nogas	138.609	5.2	3715732	0.8	100	CCB Main CR1 Failed
Mg	24	1	nogas	7.487	8.4	71182	7.0	100	
Al	27	1	nogas	0.581	7.6	18633	2.0	5	
K	39	1	nogas	-44.445	-7.4	4813044	0.7	100	
Ti	47	1	nogas	0.051	109.3	257	18.4	2.5	
V	51	1	nogas	10.605	26.1	945691	3.3	2.5	CCB Main CR1 Failed
Cr	52	1	nogas	-0.214	-49.3	29507	3.9	2.5	
Mn	55	1	nogas	0.039	130.5	14249	4.3	2.5	
Co	59	1	nogas	0.004	464.7	940	26.5	2.5	
Ni	60	1	nogas	-0.523	-5.4	1880	5.1	2.5	
Cu	63	1	nogas	-0.105	-24.9	4071	5.0	2.5	
Zn	66	1	nogas	-0.153	-29.6	1773	6.5	2.5	
As	75	1	nogas	6.478	47.5	176897	4.1	2.5	CCB Main CR1 Failed
Sr	88	1	nogas	0.198	11.6	3900	8.3	2.5	
Ag	107	1	nogas	0.058	6.7	863	3.3	2.5	
Cd	111	1	nogas	0.036	68.5	73	70.0	1	
Sb	121	1	nogas	0.369	12.3	5001	8.2	2.5	
Tl	205	1	nogas	0.163	39.5	2950	43.4	1	
Pb	208	1	nogas	0.038	6.8	1410	11.1	2.5	
U	238	1	nogas	0.047	15.0	1247	20.4	2.5	
[Pb]	206	1	nogas	0.042	20.5	337	21.5	2.5	
[Pb]	207	1	nogas	0.023	35.5	230	13.0	2.5	
Na	23	2	He	170.879	4.1	244956	1.6	100	CCB Main CR1 Failed
Mg	24	2	He	7.176	3.9	2947	3.1	100	
Al	27	2	He	0.130	562.7	283	35.7	5	
K	39	2	He	-26.526	-12.6	65738	1.4	100	
Ca	43	2	He	4.154	560.8	20	100.0	100	
Ca	44	2	He	-29.744	-30.2	733	17.4	100	
V	51	2	He	-0.143	-19.2	4824	1.6	2.5	
Cr	52	2	He	0.090	61.5	2760	6.2	2.5	
Mn	55	2	He	-0.104	-46.5	663	14.0	2.5	
Fe	56	2	He	4.700	5.0	21403	2.9	100	
Co	59	2	He	-0.010	-226.0	260	37.9	2.5	
Ni	60	2	He	-0.493	-4.4	323	7.8	2.5	
Cu	63	2	He	-0.655	-8.0	910	18.2	2.5	
Zn	66	2	He	-0.160	-92.8	413	23.9	2.5	
As	75	2	He	0.070	86.1	267	11.9	2.5	
Se	78	2	He	-0.155	-138.1	69	11.0	2.5	
B	11	1	nogas	57.203	16.4	112561	5.7	10	CCB Main CR1 Failed
Si	28	1	nogas	-47.139	-8.4	871471	0.6	5	
Ca	43	1	nogas	4.582	121.3	810	12.3	100	
Ca	44	1	nogas	-341.961	-0.8	61133	0.1	100	
Fe	56	1	nogas	-9.672	-14.4	857779	1.2	100	
Se	77	1	nogas	43.632	24.0	58183	3.3	2.5	CCB Main CR1 Failed
Se	82	1	nogas	0.588	172.2	477	26.4	2.5	
Mo	95	1	nogas	0.118	29.2	480	25.0	2.5	
Sn	118	1	nogas	0.047	42.4	1013	10.9	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.038	32.5	277	11.0	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.246	18.0	1183	8.7	2.5	
P	31	1	nogas	7.122	5.6	42989	1.0	10	
La	139	1	nogas	-10.194	-328.2	87	46.6	2.5	
Au	197	1	nogas	70.059	193.3	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	355711	1.30	309366	114.98	70	125	
Ge	72	1	nogas	1707317	1.18	1624816	105.08	70	125	
In	115	1	nogas	1826144	1.47	1701792	107.31	70	125	
Bi	209	1	nogas	1547864	6.74	1450658	106.70	70	125	
Ge	72	2	He	333309	0.21	341080	97.72	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	130_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102
Acq Date Time	2017-10-20T12:38:37-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
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	94.581	3.532	240626	1.92	100	94.6	90	110	
Na	23	1	nogas	10574.538	1.582	118599765	0.47	10000	105.7	90	110	
Mg	24	1	nogas	10213.328	1.382	80401150	2.42	10000	102.1	90	110	
Al	27	1	nogas	100.028	1.350	926105	1.37	100	100.0	90	110	
K	39	1	nogas	10200.743	3.674	99410108	1.23	10000	102.0	90	110	
Ti	47	1	nogas	99.111	3.339	93811	0.99	100	99.1	90	110	
V	51	1	nogas	110.421	5.050	2472300	1.96	100	110.4	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	98.218	2.957	1247914	1.05	100	98.2	90	110	
Mn	55	1	nogas	101.029	2.997	1588256	0.42	100	101.0	90	110	
Co	59	1	nogas	97.203	0.740	1333255	2.28	100	97.2	90	110	
Ni	60	1	nogas	99.613	4.719	304429	2.09	100	99.6	90	110	
Cu	63	1	nogas	99.991	5.749	769938	3.11	100	100.0	90	110	
Zn	66	1	nogas	103.108	4.208	247869	1.58	100	103.1	90	110	
As	75	1	nogas	97.668	5.207	442761	2.39	100	97.7	90	110	
Sr	88	1	nogas	101.688	4.261	1712507	2.96	100	101.7	90	110	
Ag	107	1	nogas	94.304	3.894	948811	2.00	100	94.3	90	110	
Cd	111	1	nogas	98.704	2.163	198846	1.25	100	98.7	90	110	
Sb	121	1	nogas	101.549	3.352	884672	0.76	100	101.5	90	110	
Tl	205	1	nogas	95.980	6.203	1706855	4.25	100	96.0	90	110	
Pb	208	1	nogas	93.372	3.372	2225398	1.11	100	93.4	90	110	
U	238	1	nogas	96.799	4.805	2399839	2.61	100	96.8	90	110	
[Pb]	206	1	nogas	94.245	4.076	541937	3.35	100	94.2	90	110	
[Pb]	207	1	nogas	95.177	3.998	495462	2.03	100	95.2	90	110	
Na	23	2	He	10349.714	1.834	5943476	1.52	10000	103.5	90	110	
Mg	24	2	He	10284.050	3.418	3183788	0.94	10000	102.8	90	110	
Al	27	2	He	99.675	6.800	14332	5.31	100	99.7	90	110	
K	39	2	He	10378.361	1.650	2835852	1.61	10000	103.8	90	110	
Ca	43	2	He	9451.861	3.548	8279	2.08	10000	94.5	90	110	
Ca	44	2	He	9471.681	1.917	138474	2.70	10000	94.7	90	110	
V	51	2	He	101.082	3.752	273703	0.84	100	101.1	90	110	
Cr	52	2	He	102.240	2.757	324057	0.87	100	102.2	90	110	
Mn	55	2	He	99.651	2.000	197212	1.47	100	99.7	90	110	
Fe	56	2	He	10121.994	2.196	28170856	0.67	10000	101.2	90	110	
Co	59	2	He	103.886	2.667	476602	0.40	100	103.9	90	110	
Ni	60	2	He	103.249	3.528	126106	1.36	100	103.2	90	110	
Cu	63	2	He	103.346	1.805	336916	1.38	100	103.3	90	110	
Zn	66	2	He	101.843	0.838	69188	2.22	100	101.8	90	110	
As	75	2	He	100.491	2.887	54353	0.09	100	100.5	90	110	
Se	78	2	He	94.223	4.846	3413	4.38	100	94.2	90	110	
B	11	1	nogas	488.133	2.884	440766	1.81	500	97.6	90	110	
Si	28	1	nogas	5092.717	0.507	12197591	2.09	5000	101.9	90	110	
Ca	43	1	nogas	10134.520	5.776	184977	3.44	10000	101.3	90	110	
Ca	44	1	nogas	9960.125	6.394	3090633	3.56	10000	99.6	90	110	
Fe	56	1	nogas	10052.014	3.241	141345236	3.83	10000	100.5	90	110	
Se	77	1	nogas	103.321	14.796	73056	3.50	100	103.3	90	110	
Se	82	1	nogas	99.339	2.247	13892	3.53	100	99.3	90	110	
Mo	95	1	nogas	100.022	1.905	350368	1.23	100	100.0	90	110	
Sn	118	1	nogas	100.229	1.657	551833	1.31	100	100.2	90	110	
Ba	137	1	nogas	96.448	3.031	259251	2.55	100	96.4	90	110	
Sb	121	2	He	101.970	2.331	246558	0.64	100	102.0	90	110	
Li	7	1	nogas	102.181	4.589	620514	3.18	100	102.2	90	110	
P	31	1	nogas	493.987	3.754	197472	0.39	500	98.8	90	110	
La	139	1	nogas	112.420	66.193	237	39.94	100	112.4	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	145.557	156.288	20	100.00	100	145.6	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	332499	1.88	309366	107.48	70	125	
Ge	72	1	nogas	1792369	2.55	1624816	110.31	70	125	
In	115	1	nogas	1805528	2.09	1701792	106.10	70	125	
Bi	209	1	nogas	1596392	2.73	1450658	110.05	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	339067	2.90	341080	99.41	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	131_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102
Acq Date Time	2017-10-20T12:40:35-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
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	0.041	16.4	150	13.3	1	
Na	23	1	nogas	136.539	4.1	3831207	0.9	100	CCB Main CR1 Failed
Mg	24	1	nogas	7.752	4.2	75967	4.1	100	
Al	27	1	nogas	0.717	5.9	20688	0.9	5	
K	39	1	nogas	-56.137	-30.4	4916049	0.4	100	
Ti	47	1	nogas	0.039	21.3	257	2.2	2.5	
V	51	1	nogas	10.127	29.1	980096	2.9	2.5	CCB Main CR1 Failed
Cr	52	1	nogas	-0.197	-26.6	31013	0.7	2.5	
Mn	55	1	nogas	-0.008	-482.9	14146	1.5	2.5	
Co	59	1	nogas	0.001	856.3	940	13.9	2.5	
Ni	60	1	nogas	-0.552	-7.5	1873	3.9	2.5	
Cu	63	1	nogas	-0.191	-4.4	3590	2.0	2.5	
Zn	66	1	nogas	-0.193	-20.7	1753	2.7	2.5	
As	75	1	nogas	5.456	83.5	181678	4.8	2.5	CCB Main CR1 Failed
Sr	88	1	nogas	0.183	6.4	3820	2.4	2.5	
Ag	107	1	nogas	0.047	7.1	790	6.7	2.5	
Cd	111	1	nogas	0.034	62.9	70	62.3	1	
Sb	121	1	nogas	0.436	2.4	5808	4.1	2.5	
Tl	205	1	nogas	0.147	36.7	2834	38.4	1	
Pb	208	1	nogas	0.036	21.8	1433	14.8	2.5	
U	238	1	nogas	0.040	28.6	1143	28.1	2.5	
[Pb]	206	1	nogas	0.045	10.6	373	4.1	2.5	
[Pb]	207	1	nogas	0.037	69.7	320	46.2	2.5	
Na	23	2	He	186.934	0.5	250067	0.9	100	CCB Main CR1 Failed
Mg	24	2	He	7.811	15.8	3094	11.9	100	
Al	27	2	He	0.109	498.1	277	27.4	5	
K	39	2	He	-21.087	-7.5	67186	0.6	100	
Ca	43	2	He	16.208	124.1	30	57.7	100	
Ca	44	2	He	-28.966	-32.6	733	17.8	100	
V	51	2	He	-0.101	-119.0	4861	5.7	2.5	
Cr	52	2	He	0.132	57.8	2847	7.5	2.5	
Mn	55	2	He	-0.088	-31.8	683	8.1	2.5	
Fe	56	2	He	4.574	2.1	20749	1.7	100	
Co	59	2	He	-0.006	-88.7	273	7.6	2.5	
Ni	60	2	He	-0.523	-6.9	283	14.3	2.5	
Cu	63	2	He	-0.654	-3.2	900	7.7	2.5	
Zn	66	2	He	-0.319	-10.9	303	6.9	2.5	
As	75	2	He	0.109	34.7	283	7.7	2.5	
Se	78	2	He	-0.086	-305.9	70	12.5	2.5	
B	11	1	nogas	40.809	5.2	101004	1.8	10	CCB Main CR1 Failed
Si	28	1	nogas	-59.667	-18.6	882266	0.1	5	
Ca	43	1	nogas	8.035	56.7	907	6.7	100	
Ca	44	1	nogas	-349.091	-0.3	61755	2.6	100	
Fe	56	1	nogas	-8.306	-18.5	914465	1.3	100	
Se	77	1	nogas	38.201	53.6	59601	4.3	2.5	CCB Main CR1 Failed
Se	82	1	nogas	-0.041	-558.8	413	6.1	2.5	
Mo	95	1	nogas	0.082	28.1	377	24.1	2.5	
Sn	118	1	nogas	0.078	9.8	1207	3.3	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.065	42.9	357	21.4	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.377	31.1	1473	19.4	2.5	
P	31	1	nogas	0.390	1605.6	42758	1.8	10	
La	139	1	nogas	7.061	12.6	110	0.0	2.5	CCB Main CR1 Failed
Au	197	1	nogas	66.795	198.0	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	363031	1.02	309366	117.35	70	125	
Ge	72	1	nogas	1782823	2.78	1624816	109.72	70	125	
In	115	1	nogas	1855426	1.02	1701792	109.03	70	125	
Bi	209	1	nogas	1643029	3.73	1450658	113.26	70	125	
Ge	72	2	He	328419	0.71	341080	96.29	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	142_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102
Acq Date Time	2017-10-20T13:03:01-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
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	95.711	4.720	239723	1.96	100	95.7	90	110	
Na	23	1	nogas	10697.187	3.077	116778153	0.79	10000	107.0	90	110	
Mg	24	1	nogas	10336.638	3.810	79188643	0.28	10000	103.4	90	110	
Al	27	1	nogas	100.670	2.107	895681	0.92	100	100.7	90	110	
K	39	1	nogas	10513.726	1.806	98346404	0.11	10000	105.1	90	110	
Ti	47	1	nogas	99.133	2.764	90237	3.70	100	99.1	90	110	
V	51	1	nogas	115.456	6.436	2448204	3.61	100	115.5	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	99.084	6.594	1209368	4.89	100	99.1	90	110	
Mn	55	1	nogas	103.890	5.421	1569143	3.77	100	103.9	90	110	
Co	59	1	nogas	102.359	4.916	1348674	3.42	100	102.4	90	110	
Ni	60	1	nogas	102.187	2.975	300186	1.37	100	102.2	90	110	
Cu	63	1	nogas	101.121	1.302	748910	1.12	100	101.1	90	110	
Zn	66	1	nogas	104.964	1.244	242646	2.28	100	105.0	90	110	
As	75	1	nogas	102.110	4.356	437610	1.64	100	102.1	90	110	
Sr	88	1	nogas	107.916	3.170	1746912	1.64	100	107.9	90	110	
Ag	107	1	nogas	98.205	2.361	950014	2.19	100	98.2	90	110	
Cd	111	1	nogas	99.414	0.515	195157	1.86	100	99.4	90	110	
Sb	121	1	nogas	100.499	2.707	841740	1.77	100	100.5	90	110	
Tl	205	1	nogas	96.029	6.512	1639035	2.26	100	96.0	90	110	
Pb	208	1	nogas	95.839	4.712	2192650	0.65	100	95.8	90	110	
U	238	1	nogas	98.180	5.597	2336491	1.55	100	98.2	90	110	
[Pb]	206	1	nogas	97.083	5.102	535744	0.84	100	97.1	90	110	
[Pb]	207	1	nogas	97.575	4.267	487689	1.06	100	97.6	90	110	
Na	23	2	He	10170.236	1.100	5593140	0.68	10000	101.7	90	110	
Mg	24	2	He	10157.555	1.210	3011142	0.95	10000	101.6	90	110	
Al	27	2	He	96.579	1.519	13308	1.44	100	96.6	90	110	
K	39	2	He	10276.260	0.677	2808670	0.66	10000	102.8	90	110	
Ca	43	2	He	10000.963	3.620	8385	3.20	10000	100.0	90	110	
Ca	44	2	He	9591.722	3.256	134195	3.09	10000	95.9	90	110	
V	51	2	He	101.651	0.443	263557	0.50	100	101.7	90	110	
Cr	52	2	He	105.664	1.032	320585	1.44	100	105.7	90	110	
Mn	55	2	He	102.199	0.546	193596	0.98	100	102.2	90	110	
Fe	56	2	He	10189.717	2.290	27151583	2.63	10000	101.9	90	110	
Co	59	2	He	106.495	1.356	467790	1.77	100	106.5	90	110	
Ni	60	2	He	104.965	2.361	122739	1.97	100	105.0	90	110	
Cu	63	2	He	105.737	3.549	329888	3.21	100	105.7	90	110	
Zn	66	2	He	104.463	0.152	67910	0.32	100	104.5	90	110	
As	75	2	He	101.607	1.343	52617	1.10	100	101.6	90	110	
Se	78	2	He	98.298	5.356	3405	4.82	100	98.3	90	110	
B	11	1	nogas	465.253	4.988	416307	0.44	500	93.1	90	110	
Si	28	1	nogas	5123.221	2.082	11785974	1.23	5000	102.5	90	110	
Ca	43	1	nogas	10587.074	2.799	185803	1.83	10000	105.9	90	110	
Ca	44	1	nogas	10018.216	1.749	2990096	3.14	10000	100.2	90	110	
Fe	56	1	nogas	10212.337	3.193	137965041	2.19	10000	102.1	90	110	
Se	77	1	nogas	123.396	21.356	74084	6.00	100	123.4	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	96.606	2.955	12998	4.41	100	96.6	90	110	
Mo	95	1	nogas	102.192	2.649	344028	1.07	100	102.2	90	110	
Sn	118	1	nogas	98.075	3.002	526053	2.64	100	98.1	90	110	
Ba	137	1	nogas	97.576	3.606	255456	1.58	100	97.6	90	110	
Sb	121	2	He	102.859	1.130	238102	1.07	100	102.9	90	110	
Li	7	1	nogas	103.618	3.261	619362	2.71	100	103.6	90	110	
P	31	1	nogas	504.882	2.444	193118	0.71	500	101.0	90	110	
La	139	1	nogas	151.647	25.334	277	18.19	100	151.6	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	199.071	73.612	23	49.49	100	199.1	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	327637	4.66	309366	105.91	70	125	
Ge	72	1	nogas	1722562	1.59	1624816	106.02	70	125	
In	115	1	nogas	1759020	2.15	1701792	103.36	70	125	
Bi	209	1	nogas	1533556	4.24	1450658	105.71	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	324474	0.44	341080	95.13	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	143_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102
Acq Date Time	2017-10-20T13:04:57-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
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	78.3	143	56.0	1	
Na	23	1	nogas	139.750	4.2	3751990	0.8	100	CCB Main CR1 Failed
Mg	24	1	nogas	7.057	13.2	68311	11.2	100	
Al	27	1	nogas	0.792	5.8	20378	2.9	5	
K	39	1	nogas	-39.386	-22.4	4834501	0.4	100	
Ti	47	1	nogas	-0.045	-147.6	170	36.7	2.5	
V	51	1	nogas	14.942	10.7	1002635	3.1	2.5	CCB Main CR1 Failed
Cr	52	1	nogas	-0.026	-162.6	31587	2.6	2.5	
Mn	55	1	nogas	0.094	72.3	14993	5.4	2.5	
Co	59	1	nogas	-0.006	-188.9	810	19.3	2.5	
Ni	60	1	nogas	-0.473	-8.6	2013	5.0	2.5	
Cu	63	1	nogas	-0.152	-9.4	3707	4.4	2.5	
Zn	66	1	nogas	-0.247	-8.0	1550	1.9	2.5	
As	75	1	nogas	9.320	21.3	183761	4.2	2.5	CCB Main CR1 Failed
Sr	88	1	nogas	0.169	6.7	3417	4.0	2.5	
Ag	107	1	nogas	0.041	18.2	690	8.8	2.5	
Cd	111	1	nogas	0.066	39.7	130	38.5	1	
Sb	121	1	nogas	0.330	6.0	4654	1.7	2.5	
Tl	205	1	nogas	0.151	34.1	2820	41.3	1	
Pb	208	1	nogas	0.034	13.8	1333	13.5	2.5	
U	238	1	nogas	0.038	39.5	1057	43.8	2.5	
[Pb]	206	1	nogas	0.040	3.5	327	6.4	2.5	
[Pb]	207	1	nogas	0.011	50.1	173	16.7	2.5	
Na	23	2	He	174.520	5.2	244296	1.0	100	CCB Main CR1 Failed
Mg	24	2	He	6.987	11.8	2857	7.8	100	
Al	27	2	He	0.491	90.4	330	18.4	5	
K	39	2	He	-27.795	-21.2	65400	2.4	100	
Ca	43	2	He	23.855	73.3	37	41.7	100	
Ca	44	2	He	-27.070	-64.3	763	32.2	100	
V	51	2	He	-0.020	-411.1	5089	3.6	2.5	
Cr	52	2	He	0.091	80.0	2732	7.0	2.5	
Mn	55	2	He	-0.116	-47.5	633	18.0	2.5	
Fe	56	2	He	3.931	4.9	19094	3.1	100	
Co	59	2	He	-0.019	-40.7	217	16.2	2.5	
Ni	60	2	He	-0.451	-8.9	370	12.4	2.5	
Cu	63	2	He	-0.671	-6.8	853	17.6	2.5	
Zn	66	2	He	-0.326	-13.5	300	10.0	2.5	
As	75	2	He	0.112	13.7	286	3.6	2.5	
Se	78	2	He	-0.404	-38.4	59	8.5	2.5	
B	11	1	nogas	14.826	45.2	78418	2.7	10	CCB Main CR1 Failed
Si	28	1	nogas	-42.210	-19.3	877590	0.1	5	
Ca	43	1	nogas	15.260	11.1	990	2.0	100	
Ca	44	1	nogas	-352.941	-1.0	57796	2.3	100	
Fe	56	1	nogas	-5.399	-38.4	910295	2.1	100	
Se	77	1	nogas	57.219	10.3	60524	3.7	2.5	CCB Main CR1 Failed
Se	82	1	nogas	0.372	168.3	447	16.5	2.5	
Mo	95	1	nogas	0.108	42.1	443	32.7	2.5	
Sn	118	1	nogas	0.080	58.5	1173	23.9	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.063	36.6	337	20.9	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.274	16.5	1237	7.6	2.5	
P	31	1	nogas	5.817	23.1	42401	1.0	10	
La	139	1	nogas	-6.202	-474.1	90	40.1	2.5	
Au	197	1	nogas	109.167	60.5	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	361550	4.76	309366	116.87	70	125	
Ge	72	1	nogas	1699525	1.93	1624816	104.60	70	125	
In	115	1	nogas	1782388	2.79	1701792	104.74	70	125	
Bi	209	1	nogas	1578108	8.78	1450658	108.79	70	125	
Ge	72	2	He	329766	1.24	341080	96.68	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\102
Acq Date Time	2017-10-20T13:27:13-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
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	90.735	5.636	240184	2.84	100	90.7	90	110	
Na	23	1	nogas	10564.888	1.751	119584132	1.67	10000	105.6	90	110	
Mg	24	1	nogas	10299.845	2.762	81811502	2.74	10000	103.0	90	110	
Al	27	1	nogas	103.418	2.097	949371	2.37	100	103.4	90	110	
K	39	1	nogas	9935.847	0.642	96224594	0.26	10000	99.4	90	110	
Ti	47	1	nogas	100.789	0.128	94662	0.43	100	100.8	90	110	
V	51	1	nogas	133.607	3.413	2794024	2.28	100	133.6	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	99.413	1.997	1252802	1.60	100	99.4	90	110	
Mn	55	1	nogas	107.058	2.717	1669094	2.43	100	107.1	90	110	
Co	59	1	nogas	102.145	1.679	1389483	1.33	100	102.1	90	110	
Ni	60	1	nogas	98.324	0.666	298291	0.43	100	98.3	90	110	
Cu	63	1	nogas	96.958	0.947	741318	1.22	100	97.0	90	110	
Zn	66	1	nogas	104.229	1.763	248643	1.44	100	104.2	90	110	
As	75	1	nogas	108.721	6.373	470176	3.97	100	108.7	90	110	
Sr	88	1	nogas	102.204	1.651	1707988	1.98	100	102.2	90	110	
Ag	107	1	nogas	96.624	2.332	964654	2.01	100	96.6	90	110	
Cd	111	1	nogas	98.077	1.174	201558	1.00	100	98.1	90	110	
Sb	121	1	nogas	101.597	0.155	878303	0.29	100	101.6	90	110	
Tl	205	1	nogas	93.292	4.601	1679252	3.56	100	93.3	90	110	
Pb	208	1	nogas	92.219	1.676	2224421	1.14	100	92.2	90	110	
U	238	1	nogas	98.375	1.591	2468889	1.50	100	98.4	90	110	
[Pb]	206	1	nogas	93.065	2.816	541492	2.22	100	93.1	90	110	
[Pb]	207	1	nogas	93.136	1.546	490714	1.02	100	93.1	90	110	
Na	23	2	He	10399.419	1.673	5871944	1.24	10000	104.0	90	110	
Mg	24	2	He	10213.135	1.126	3110388	1.13	10000	102.1	90	110	
Al	27	2	He	94.645	3.670	13405	4.03	100	94.6	90	110	
K	39	2	He	10106.679	0.689	2763522	0.67	10000	101.1	90	110	
Ca	43	2	He	9442.590	2.267	8135	2.29	10000	94.4	90	110	
Ca	44	2	He	9668.781	1.645	138973	2.13	10000	96.7	90	110	
V	51	2	He	100.708	1.998	268280	1.60	100	100.7	90	110	
Cr	52	2	He	105.105	2.123	327617	2.43	100	105.1	90	110	
Mn	55	2	He	100.331	1.085	195256	0.74	100	100.3	90	110	
Fe	56	2	He	10068.490	0.959	27560384	1.12	10000	100.7	90	110	
Co	59	2	He	106.329	2.075	479787	1.81	100	106.3	90	110	
Ni	60	2	He	103.632	2.176	124508	2.08	100	103.6	90	110	
Cu	63	2	He	103.347	2.346	331312	1.89	100	103.3	90	110	
Zn	66	2	He	101.229	2.964	67615	2.44	100	101.2	90	110	
As	75	2	He	98.877	1.229	52610	1.46	100	98.9	90	110	
Se	78	2	He	93.797	2.685	3342	2.51	100	93.8	90	110	
B	11	1	nogas	625.766	5.061	570112	1.67	500	125.2	90	110	CCV Main CR1-2 Failed
Si	28	1	nogas	5110.068	2.177	12135813	2.01	5000	102.2	90	110	
Ca	43	1	nogas	10278.260	0.789	186213	0.82	10000	102.8	90	110	
Ca	44	1	nogas	9709.035	0.426	2994994	0.49	10000	97.1	90	110	
Fe	56	1	nogas	10265.310	2.299	143138403	2.01	10000	102.7	90	110	
Se	77	1	nogas	138.595	16.789	79517	5.87	100	138.6	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	99.549	2.631	13805	2.54	100	99.5	90	110	
Mo	95	1	nogas	98.484	1.194	342241	1.36	100	98.5	90	110	
Sn	118	1	nogas	97.446	2.755	547213	1.79	100	97.4	90	110	
Ba	137	1	nogas	95.364	0.598	261494	0.55	100	95.4	90	110	
Sb	121	2	He	102.493	2.052	243753	2.42	100	102.5	90	110	
Li	7	1	nogas	101.523	0.221	642410	3.06	100	101.5	90	110	
P	31	1	nogas	492.346	0.849	195436	0.95	500	98.5	90	110	
La	139	1	nogas	95.955	36.907	220	20.83	100	96.0	90	110	
Au	197	1	nogas	180.713	95.312	23	65.47	100	180.7	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	346200	3.05	309366	111.91	70	125	
Ge	72	1	nogas	1777606	0.34	1624816	109.40	70	125	
In	115	1	nogas	1841475	0.98	1701792	108.21	70	125	
Bi	209	1	nogas	1614816	1.04	1450658	111.32	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	333339	0.50	341080	97.73	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	155_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102
Acq Date Time	2017-10-20T13:29:11-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
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	41.1	253	33.6	1	
Na	23	1	nogas	150.390	6.4	3992409	1.1	100	CCB Main CR1 Failed
Mg	24	1	nogas	11.204	1.9	103841	0.2	100	
Al	27	1	nogas	1.307	17.4	25945	5.4	5	
K	39	1	nogas	-62.845	-28.4	4841999	0.9	100	
Ti	47	1	nogas	0.060	110.3	277	23.2	2.5	
V	51	1	nogas	35.264	10.2	1348262	5.3	2.5	CCB Main CR1 Failed
Cr	52	1	nogas	-0.118	-95.1	31924	5.6	2.5	
Mn	55	1	nogas	0.130	17.3	16257	4.1	2.5	
Co	59	1	nogas	0.012	164.6	1083	22.8	2.5	
Ni	60	1	nogas	-0.448	-16.3	2180	7.6	2.5	
Cu	63	1	nogas	-0.154	-2.8	3867	3.5	2.5	
Zn	66	1	nogas	-0.067	-141.1	2050	12.5	2.5	
As	75	1	nogas	11.416	15.6	198149	4.6	2.5	CCB Main CR1 Failed
Sr	88	1	nogas	0.306	9.6	5871	9.2	2.5	
Ag	107	1	nogas	0.050	21.6	817	13.4	2.5	
Cd	111	1	nogas	0.033	60.3	67	60.6	1	
Sb	121	1	nogas	0.223	21.5	3941	8.7	2.5	
Tl	205	1	nogas	0.148	49.4	2754	47.8	1	
Pb	208	1	nogas	0.043	34.8	1560	22.9	2.5	
U	238	1	nogas	0.044	36.0	1213	32.8	2.5	
[Pb]	206	1	nogas	0.039	23.4	327	15.1	2.5	
[Pb]	207	1	nogas	0.053	56.5	397	39.9	2.5	
Na	23	2	He	203.040	2.0	265457	0.4	100	CCB Main CR1 Failed
Mg	24	2	He	11.785	2.9	4397	3.0	100	
Al	27	2	He	0.799	41.5	380	11.5	5	
K	39	2	He	-24.441	-29.1	66293	2.9	100	
Ca	43	2	He	45.995	57.1	57	40.8	100	
Ca	44	2	He	-24.731	-23.1	813	9.9	100	
V	51	2	He	0.347	11.9	6170	1.1	2.5	
Cr	52	2	He	0.105	58.2	2837	7.0	2.5	
Mn	55	2	He	-0.080	-89.0	717	19.9	2.5	
Fe	56	2	He	4.549	4.1	21216	3.1	100	
Co	59	2	He	0.000	-24606.1	307	19.9	2.5	
Ni	60	2	He	-0.513	-9.4	303	19.0	2.5	
Cu	63	2	He	-0.618	-4.6	1040	8.4	2.5	
Zn	66	2	He	-0.247	-40.5	360	19.4	2.5	
As	75	2	He	0.127	6.9	300	1.1	2.5	
Se	78	2	He	0.260	155.6	84	16.7	2.5	
B	11	1	nogas	137.291	3.0	190971	2.7	10	CCB Main CR1 Failed
Si	28	1	nogas	-81.181	-15.2	833103	0.9	5	
Ca	43	1	nogas	10.667	96.1	950	16.5	100	
Ca	44	1	nogas	-360.793	-0.8	58184	3.1	100	
Fe	56	1	nogas	-1.224	-366.6	1009400	3.4	100	
Se	77	1	nogas	65.569	16.2	64996	5.1	2.5	CCB Main CR1 Failed
Se	82	1	nogas	0.219	470.6	447	30.6	2.5	
Mo	95	1	nogas	0.069	32.6	330	21.9	2.5	
Sn	118	1	nogas	0.062	42.7	1107	14.5	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.052	15.2	317	6.6	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.169	32.4	1010	12.4	2.5	
P	31	1	nogas	-0.309	-1505.5	42441	0.9	10	
La	139	1	nogas	-37.947	-47.1	53	43.3	2.5	
Au	197	1	nogas	106.448	164.4	17	91.7	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	378770	2.09	309366	122.43	70	125	
Ge	72	1	nogas	1778208	2.71	1624816	109.44	70	125	
In	115	1	nogas	1840376	1.84	1701792	108.14	70	125	
Bi	209	1	nogas	1603113	1.36	1450658	110.51	70	125	
Ge	72	2	He	336887	0.83	341080	98.77	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	171_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102
Acq Date Time	2017-10-20T14:01:17-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
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	93.296	1.851	234744	0.40	100	93.3	90	110	
Na	23	1	nogas	12396.390	0.511	135321795	0.52	10000	124.0	90	110	CCV Main CR1-2 Failed
Mg	24	1	nogas	10283.589	2.830	78995489	2.70	10000	102.8	90	110	
Al	27	1	nogas	104.148	2.942	940053	1.64	100	104.1	90	110	
K	39	1	nogas	10518.800	6.198	99840458	4.65	10000	105.2	90	110	
Ti	47	1	nogas	102.705	1.929	94863	0.80	100	102.7	90	110	
V	51	1	nogas	118.098	3.243	2523454	0.64	100	118.1	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	103.183	4.067	1277684	3.71	100	103.2	90	110	
Mn	55	1	nogas	106.997	0.535	1641355	3.16	100	107.0	90	110	
Co	59	1	nogas	107.130	4.166	1432640	1.51	100	107.1	90	110	
Ni	60	1	nogas	106.490	3.923	317329	1.23	100	106.5	90	110	
Cu	63	1	nogas	100.405	4.634	754437	2.00	100	100.4	90	110	
Zn	66	1	nogas	101.931	1.940	239199	0.93	100	101.9	90	110	
As	75	1	nogas	101.100	5.093	441379	1.36	100	101.1	90	110	
Sr	88	1	nogas	103.700	1.658	1705146	3.90	100	103.7	90	110	
Ag	107	1	nogas	97.298	3.752	955240	2.65	100	97.3	90	110	
Cd	111	1	nogas	97.047	1.338	196210	1.43	100	97.0	90	110	
Sb	121	1	nogas	102.815	2.942	874092	2.18	100	102.8	90	110	
Tl	205	1	nogas	95.760	7.723	1569738	4.88	100	95.8	90	110	
Pb	208	1	nogas	97.412	3.430	2141170	0.70	100	97.4	90	110	
U	238	1	nogas	101.139	2.598	2313684	2.16	100	101.1	90	110	
[Pb]	206	1	nogas	97.711	3.847	518058	0.95	100	97.7	90	110	
[Pb]	207	1	nogas	100.027	3.889	480209	1.22	100	100.0	90	110	
Na	23	2	He	12244.956	0.943	6898582	1.26	10000	122.4	90	110	CCV Main CR1-2 Failed
Mg	24	2	He	10044.583	0.929	3063928	0.93	10000	100.4	90	110	
Al	27	2	He	94.069	3.500	13345	3.53	100	94.1	90	110	
K	39	2	He	10485.735	1.921	2864439	1.87	10000	104.9	90	110	
Ca	43	2	He	9945.565	1.309	8582	2.16	10000	99.5	90	110	
Ca	44	2	He	9687.815	1.334	139450	0.62	10000	96.9	90	110	
V	51	2	He	101.332	1.567	270332	0.48	100	101.3	90	110	
Cr	52	2	He	102.537	0.888	320186	1.62	100	102.5	90	110	
Mn	55	2	He	98.885	1.528	192754	0.86	100	98.9	90	110	
Fe	56	2	He	9992.224	0.849	27395281	1.10	10000	99.9	90	110	
Co	59	2	He	104.490	1.563	472241	1.14	100	104.5	90	110	
Ni	60	2	He	102.399	1.894	123226	1.23	100	102.4	90	110	
Cu	63	2	He	104.548	1.488	335661	0.80	100	104.5	90	110	
Zn	66	2	He	100.990	2.181	67582	3.15	100	101.0	90	110	
As	75	2	He	100.867	1.528	53744	0.47	100	100.9	90	110	
Se	78	2	He	94.877	2.179	3384	1.09	100	94.9	90	110	
B	11	1	nogas	481.783	3.105	431034	3.20	500	96.4	90	110	
Si	28	1	nogas	5202.382	3.006	12131504	1.06	5000	104.0	90	110	
Ca	43	1	nogas	10324.692	3.583	183913	1.40	10000	103.2	90	110	
Ca	44	1	nogas	10030.850	2.050	3038093	1.90	10000	100.3	90	110	
Fe	56	1	nogas	10648.212	3.568	145950091	0.96	10000	106.5	90	110	
Se	77	1	nogas	95.265	17.164	69673	1.95	100	95.3	90	110	
Se	82	1	nogas	99.234	5.027	13529	2.26	100	99.2	90	110	
Mo	95	1	nogas	100.669	2.915	343989	0.59	100	100.7	90	110	
Sn	118	1	nogas	99.355	0.439	548947	0.34	100	99.4	90	110	
Ba	137	1	nogas	93.484	0.895	252185	1.00	100	93.5	90	110	
Sb	121	2	He	102.087	0.505	243174	1.31	100	102.1	90	110	
Li	7	1	nogas	102.164	2.839	613589	1.99	100	102.2	90	110	
P	31	1	nogas	544.678	5.328	208104	1.87	500	108.9	90	110	
La	139	1	nogas	134.422	18.401	263	11.60	100	134.4	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	84.890	230.814	13	114.56	100	84.9	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	328777	1.87	309366	106.27	70	125	
Ge	72	1	nogas	1748813	2.65	1624816	107.63	70	125	
In	115	1	nogas	1811535	0.11	1701792	106.45	70	125	
Bi	209	1	nogas	1472400	2.98	1450658	101.50	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	333879	1.06	341080	97.89	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	172_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102
Acq Date Time	2017-10-20T14:03:15-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
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	0.050	40.6	167	33.0	1	
Na	23	1	nogas	1823.048	1.6	22215949	0.6	100	CCB Main CR1 Failed
Mg	24	1	nogas	12.399	7.2	110614	8.3	100	
Al	27	1	nogas	1.414	2.6	26870	0.7	5	
K	39	1	nogas	-26.115	-42.0	5165752	0.7	100	
Ti	47	1	nogas	0.050	119.5	267	22.6	2.5	
V	51	1	nogas	9.119	25.7	960365	1.8	2.5	CCB Main CR1 Failed
Cr	52	1	nogas	-0.824	-7.5	23178	1.6	2.5	
Mn	55	1	nogas	-0.028	-167.0	13775	4.1	2.5	
Co	59	1	nogas	0.011	145.1	1073	22.4	2.5	
Ni	60	1	nogas	2.176	8.8	10020	3.9	2.5	
Cu	63	1	nogas	0.929	9.8	12054	4.3	2.5	
Zn	66	1	nogas	-0.284	-11.8	1533	6.8	2.5	
As	75	1	nogas	0.769	326.6	167767	2.3	2.5	
Sr	88	1	nogas	0.346	6.5	6508	5.3	2.5	
Ag	107	1	nogas	0.048	48.8	800	31.3	2.5	
Cd	111	1	nogas	0.039	30.3	80	33.1	1	
Sb	121	1	nogas	0.203	15.4	3767	7.6	2.5	
Tl	205	1	nogas	0.270	46.2	4514	43.1	1	
Pb	208	1	nogas	0.033	23.2	1227	11.9	2.5	
U	238	1	nogas	0.048	44.6	1210	38.9	2.5	
[Pb]	206	1	nogas	0.052	39.0	367	26.2	2.5	
[Pb]	207	1	nogas	0.039	23.9	293	14.2	2.5	
Na	23	2	He	1900.033	1.5	1200653	1.1	100	CCB Main CR1 Failed
Mg	24	2	He	11.877	6.4	4394	4.8	100	
Al	27	2	He	0.362	133.0	317	21.0	5	
K	39	2	He	7.254	54.2	74732	1.4	100	
Ca	43	2	He	225.336	152.4	210	140.3	100	CCB Main CR1 Failed
Ca	44	2	He	94.689	187.8	2509	100.7	100	
V	51	2	He	-0.185	-31.8	4733	3.6	2.5	
Cr	52	2	He	0.093	62.4	2780	6.9	2.5	
Mn	55	2	He	-0.099	-81.9	673	23.0	2.5	
Fe	56	2	He	4.102	4.5	19841	2.9	100	
Co	59	2	He	-0.028	-43.8	177	32.2	2.5	
Ni	60	2	He	-0.453	-16.8	373	24.9	2.5	
Cu	63	2	He	-0.670	-7.4	867	18.0	2.5	
Zn	66	2	He	-0.252	-54.2	353	25.5	2.5	
As	75	2	He	0.085	91.9	276	14.9	2.5	
Se	78	2	He	-0.238	-89.2	66	10.9	2.5	
B	11	1	nogas	40.918	9.0	97017	2.5	10	CCB Main CR1 Failed
Si	28	1	nogas	-54.560	-14.8	888962	0.3	5	
Ca	43	1	nogas	24.598	34.6	1203	14.6	100	
Ca	44	1	nogas	-344.627	-1.5	62739	3.5	100	
Fe	56	1	nogas	-1.483	-164.6	1004079	3.0	100	
Se	77	1	nogas	15.278	69.0	54776	2.0	2.5	CCB Main CR1 Failed
Se	82	1	nogas	-0.409	-151.8	363	25.0	2.5	
Mo	95	1	nogas	0.108	13.7	467	12.6	2.5	
Sn	118	1	nogas	0.061	8.9	1090	1.8	5	
Ba	137	1	nogas	0.044	7.0	293	3.9	2.5	

Continuing Calibration Blank (CCB) Report

Sb	121	2	He	0.205	16.0	1090	7.2	2.5	
P	31	1	nogas	18.890	44.9	48269	3.6	10	CCB Main CR1 Failed
La	139	1	nogas	-7.501	-227.6	90	22.2	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Au	197	1	nogas	205.721	29.9	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	348429	1.15	309366	112.63	70	125	
Ge	72	1	nogas	1773499	1.97	1624816	109.15	70	125	
In	115	1	nogas	1822723	2.63	1701792	107.11	70	125	
Bi	209	1	nogas	1473137	3.43	1450658	101.55	70	125	
Ge	72	2	He	334569	0.50	341080	98.09	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	183_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102
Acq Date Time	2017-10-20T14:25:28-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
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	96.505	4.756	222649	2.05	100	96.5	90	110	
Na	23	1	nogas	12075.659	2.602	128406924	3.53	10000	120.8	90	110	CCV Main CR1-2 Failed
Mg	24	1	nogas	10025.632	2.011	74968660	1.29	10000	100.3	90	110	
Al	27	1	nogas	100.088	3.117	880310	0.36	100	100.1	90	110	
K	39	1	nogas	10080.952	4.115	93409956	1.32	10000	100.8	90	110	
Ti	47	1	nogas	98.813	0.887	88927	2.58	100	98.8	90	110	
V	51	1	nogas	92.320	2.439	2094898	1.46	100	92.3	90	110	
Cr	52	1	nogas	96.271	4.749	1162775	2.90	100	96.3	90	110	
Mn	55	1	nogas	105.020	3.174	1568510	1.85	100	105.0	90	110	
Co	59	1	nogas	97.731	5.823	1272709	3.51	100	97.7	90	110	
Ni	60	1	nogas	102.777	3.139	298456	0.66	100	102.8	90	110	
Cu	63	1	nogas	100.803	2.259	738021	1.06	100	100.8	90	110	
Zn	66	1	nogas	103.368	1.181	236276	2.16	100	103.4	90	110	
As	75	1	nogas	81.529	2.812	377564	1.39	100	81.5	90	110	CCV Main CR1-2 Failed
Sr	88	1	nogas	105.048	3.524	1680996	0.89	100	105.0	90	110	
Ag	107	1	nogas	95.138	3.197	909641	0.42	100	95.1	90	110	
Cd	111	1	nogas	95.680	4.114	191721	3.08	100	95.7	90	110	
Sb	121	1	nogas	104.024	2.884	861200	0.15	100	104.0	90	110	
Tl	205	1	nogas	99.458	2.338	1612868	1.86	100	99.5	90	110	
Pb	208	1	nogas	98.559	0.442	2141457	0.63	100	98.6	90	110	
U	238	1	nogas	99.873	2.925	2257369	2.01	100	99.9	90	110	
[Pb]	206	1	nogas	100.354	1.755	525946	0.82	100	100.4	90	110	
[Pb]	207	1	nogas	101.148	0.939	480024	0.08	100	101.1	90	110	
Na	23	2	He	11670.321	2.174	6467711	1.94	10000	116.7	90	110	CCV Main CR1-2 Failed
Mg	24	2	He	9790.001	3.616	2934665	3.69	10000	97.9	90	110	
Al	27	2	He	93.349	3.109	13015	2.83	100	93.3	90	110	
K	39	2	He	9462.179	3.827	2591935	3.72	10000	94.6	90	110	
Ca	43	2	He	9358.067	5.194	7935	5.05	10000	93.6	90	110	
Ca	44	2	He	9333.044	1.850	132064	1.73	10000	93.3	90	110	
V	51	2	He	99.748	0.868	261596	0.73	100	99.7	90	110	
Cr	52	2	He	101.908	1.976	312714	2.05	100	101.9	90	110	
Mn	55	2	He	98.867	2.536	189390	2.39	100	98.9	90	110	
Fe	56	2	He	10018.943	2.039	26992134	1.88	10000	100.2	90	110	
Co	59	2	He	103.233	2.322	458490	2.12	100	103.2	90	110	
Ni	60	2	He	101.878	0.843	120488	0.61	100	101.9	90	110	
Cu	63	2	He	102.900	2.412	324713	2.30	100	102.9	90	110	
Zn	66	2	He	100.021	0.642	65769	0.74	100	100.0	90	110	
As	75	2	He	99.969	0.620	52349	0.39	100	100.0	90	110	
Se	78	2	He	92.430	2.235	3242	2.36	100	92.4	90	110	
B	11	1	nogas	531.958	2.304	430777	0.88	500	106.4	90	110	
Si	28	1	nogas	5017.081	2.228	11431519	1.79	5000	100.3	90	110	
Ca	43	1	nogas	10521.623	1.782	182581	1.05	10000	105.2	90	110	
Ca	44	1	nogas	10083.462	2.205	2973541	1.54	10000	100.8	90	110	
Fe	56	1	nogas	10008.852	3.776	133703811	2.94	10000	100.1	90	110	
Se	77	1	nogas	22.903	30.066	54094	3.85	100	22.9	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	101.881	4.599	13519	2.13	100	101.9	90	110	
Mo	95	1	nogas	100.198	3.844	333405	1.08	100	100.2	90	110	
Sn	118	1	nogas	97.762	2.872	535350	1.13	100	97.8	90	110	
Ba	137	1	nogas	93.875	4.565	250913	2.38	100	93.9	90	110	
Sb	121	2	He	100.791	0.803	235929	0.92	100	100.8	90	110	
Li	7	1	nogas	103.559	2.309	570179	1.05	100	103.6	90	110	
P	31	1	nogas	509.049	1.967	192183	1.26	500	101.8	90	110	
La	139	1	nogas	109.005	43.460	230	24.21	100	109.0	90	110	
Au	197	1	nogas	168.748	76.187	20	50.00	100	168.7	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	301665	2.85	309366	97.51	70	125	
Ge	72	1	nogas	1703347	2.83	1624816	104.83	70	125	
In	115	1	nogas	1796153	2.31	1701792	105.54	70	125	
Bi	209	1	nogas	1454518	0.94	1450658	100.27	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	328089	0.22	341080	96.19	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	184_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102
Acq Date Time	2017-10-20T14:27:25-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
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	50.8	167	38.6	1	
Na	23	1	nogas	1397.788	3.0	17115325	0.3	100	CCB Main CR1 Failed
Mg	24	1	nogas	14.441	1.1	123391	3.2	100	
Al	27	1	nogas	1.536	5.2	26593	0.6	5	
K	39	1	nogas	-40.115	-18.6	4791835	0.9	100	
Ti	47	1	nogas	0.233	42.0	417	22.8	2.5	
V	51	1	nogas	-5.718	-11.6	706700	2.4	2.5	
Cr	52	1	nogas	-1.060	-2.0	19304	1.1	2.5	
Mn	55	1	nogas	-0.034	-71.3	13011	4.5	2.5	
Co	59	1	nogas	0.012	33.9	1023	3.1	2.5	
Ni	60	1	nogas	2.207	6.9	9626	5.4	2.5	
Cu	63	1	nogas	1.604	2.9	16334	3.6	2.5	
Zn	66	1	nogas	-0.265	-16.0	1500	8.1	2.5	
As	75	1	nogas	-10.333	-2.3	130184	2.5	2.5	
Sr	88	1	nogas	0.388	5.7	6855	3.7	2.5	
Ag	107	1	nogas	0.043	43.1	707	22.7	2.5	
Cd	111	1	nogas	0.079	32.4	157	35.2	1	
Sb	121	1	nogas	0.191	24.8	3484	9.5	2.5	
Tl	205	1	nogas	0.214	40.6	3891	39.0	1	
Pb	208	1	nogas	0.032	18.2	1290	11.2	2.5	
U	238	1	nogas	0.041	25.7	1140	22.4	2.5	
[Pb]	206	1	nogas	0.034	17.2	297	7.0	2.5	
[Pb]	207	1	nogas	0.039	24.1	320	11.3	2.5	
Na	23	2	He	1528.804	2.0	973562	1.1	100	CCB Main CR1 Failed
Mg	24	2	He	14.980	2.9	5224	2.1	100	
Al	27	2	He	0.900	79.0	383	25.6	5	
K	39	2	He	-8.446	-25.3	70552	0.8	100	
Ca	43	2	He	83.547	71.4	87	58.1	100	
Ca	44	2	He	-0.658	-432.7	1127	3.6	100	
V	51	2	He	-0.602	-6.1	3558	2.3	2.5	
Cr	52	2	He	0.034	101.8	2540	4.1	2.5	
Mn	55	2	He	-0.055	-18.2	743	2.1	2.5	
Fe	56	2	He	5.422	2.7	22945	1.2	100	
Co	59	2	He	-0.015	-46.3	233	13.1	2.5	
Ni	60	2	He	-0.411	-4.8	413	6.1	2.5	
Cu	63	2	He	-0.580	-5.2	1127	8.1	2.5	
Zn	66	2	He	-0.225	-40.5	363	16.8	2.5	
As	75	2	He	0.007	191.4	229	3.0	2.5	
Se	78	2	He	-0.333	-25.5	61	5.0	2.5	
B	11	1	nogas	41.826	3.1	91028	2.0	10	CCB Main CR1 Failed
Si	28	1	nogas	-71.140	-14.3	811139	0.8	5	
Ca	43	1	nogas	39.203	25.1	1393	12.9	100	
Ca	44	1	nogas	-333.323	-2.6	62768	2.7	100	
Fe	56	1	nogas	-5.872	-51.5	896957	2.5	100	
Se	77	1	nogas	-39.556	-5.3	41752	2.9	2.5	
Se	82	1	nogas	-0.104	-70.0	383	1.5	2.5	
Mo	95	1	nogas	0.105	48.1	430	36.5	2.5	
Sn	118	1	nogas	0.037	82.7	937	20.4	5	
Ba	137	1	nogas	0.061	8.1	330	6.1	2.5	

Continuing Calibration Blank (CCB) Report

Sb	121	2	He	0.099	35.0	820	10.4	2.5	
P	31	1	nogas	17.454	22.1	45502	1.2	10	CCB Main CR1 Failed
La	139	1	nogas	13.790	99.7	113	13.5	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	109.541	66.5	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	324424	2.48	309366	104.87	70	125	
Ge	72	1	nogas	1686686	1.98	1624816	103.81	70	125	
In	115	1	nogas	1777210	2.46	1701792	104.43	70	125	
Bi	209	1	nogas	1593028	4.27	1450658	109.81	70	125	
Ge	72	2	He	327150	0.54	341080	95.92	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	189_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102
Acq Date Time	2017-10-20T14:37:27-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
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	94.107	2.735	220740	0.84	100	94.1	90	110	
Na	23	1	nogas	10889.342	1.863	117140765	2.08	10000	108.9	90	110	
Mg	24	1	nogas	9624.823	1.209	72692372	0.19	10000	96.2	90	110	
Al	27	1	nogas	97.446	4.703	850204	1.27	100	97.4	90	110	
K	39	1	nogas	10068.564	5.892	92501204	1.58	10000	100.7	90	110	
Ti	47	1	nogas	99.350	5.276	88592	1.10	100	99.3	90	110	
V	51	1	nogas	78.314	10.638	1879895	0.82	100	78.3	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	94.741	5.104	1135148	0.86	100	94.7	90	110	
Mn	55	1	nogas	104.473	5.044	1546879	0.80	100	104.5	90	110	
Co	59	1	nogas	95.574	5.229	1234574	2.33	100	95.6	90	110	
Ni	60	1	nogas	100.863	7.927	290161	2.50	100	100.9	90	110	
Cu	63	1	nogas	100.552	6.104	729541	1.99	100	100.6	90	110	
Zn	66	1	nogas	104.278	4.934	236203	0.55	100	104.3	90	110	
As	75	1	nogas	74.975	9.732	356758	0.48	100	75.0	90	110	CCV Main CR1-2 Failed
Sr	88	1	nogas	106.528	1.786	1692493	4.44	100	106.5	90	110	
Ag	107	1	nogas	94.286	7.726	892939	2.33	100	94.3	90	110	
Cd	111	1	nogas	94.753	3.326	187178	2.35	100	94.8	90	110	
Sb	121	1	nogas	103.577	5.532	850024	1.41	100	103.6	90	110	
Tl	205	1	nogas	98.514	2.395	1559589	2.24	100	98.5	90	110	
Pb	208	1	nogas	97.879	0.984	2076091	1.30	100	97.9	90	110	
U	238	1	nogas	100.551	1.190	2218884	0.88	100	100.6	90	110	
[Pb]	206	1	nogas	100.159	0.327	512479	0.66	100	100.2	90	110	
[Pb]	207	1	nogas	99.079	1.255	459041	1.54	100	99.1	90	110	
Na	23	2	He	10978.649	1.513	5914831	0.88	10000	109.8	90	110	
Mg	24	2	He	9803.439	3.019	2851885	0.93	10000	98.0	90	110	
Al	27	2	He	95.802	5.916	12958	5.33	100	95.8	90	110	
K	39	2	He	9583.988	1.499	2624365	1.46	10000	95.8	90	110	
Ca	43	2	He	9568.140	4.920	7872	2.87	10000	95.7	90	110	
Ca	44	2	He	9438.568	0.913	129643	1.27	10000	94.4	90	110	
V	51	2	He	99.808	3.122	254037	1.54	100	99.8	90	110	
Cr	52	2	He	102.529	1.455	305383	0.68	100	102.5	90	110	
Mn	55	2	He	97.374	1.364	181085	0.98	100	97.4	90	110	
Fe	56	2	He	10044.483	3.909	26260751	2.22	10000	100.4	90	110	
Co	59	2	He	105.495	2.979	454738	1.44	100	105.5	90	110	
Ni	60	2	He	104.063	2.414	119434	0.78	100	104.1	90	110	
Cu	63	2	He	106.034	2.844	324653	0.86	100	106.0	90	110	
Zn	66	2	He	102.730	1.653	65575	3.01	100	102.7	90	110	
As	75	2	He	101.288	2.351	51478	0.85	100	101.3	90	110	
Se	78	2	He	95.722	4.468	3256	2.65	100	95.7	90	110	
B	11	1	nogas	490.929	6.990	408080	3.56	500	98.2	90	110	
Si	28	1	nogas	4900.079	5.622	11088720	1.57	5000	98.0	90	110	
Ca	43	1	nogas	10378.260	7.189	178406	3.02	10000	103.8	90	110	
Ca	44	1	nogas	10053.289	6.271	2938079	1.39	10000	100.5	90	110	
Fe	56	1	nogas	9944.114	4.509	131711432	0.91	10000	99.4	90	110	
Se	77	1	nogas	-3.629	-523.272	48535	2.44	100	-3.6	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	101.399	5.542	13345	2.62	100	101.4	90	110	
Mo	95	1	nogas	101.782	4.916	335909	2.86	100	101.8	90	110	
Sn	118	1	nogas	97.111	1.272	524378	1.63	100	97.1	90	110	
Ba	137	1	nogas	91.797	2.433	241995	2.23	100	91.8	90	110	
Sb	121	2	He	101.020	1.509	229540	1.17	100	101.0	90	110	
Li	7	1	nogas	100.801	1.071	564958	1.97	100	100.8	90	110	
P	31	1	nogas	495.528	4.495	186590	1.80	500	99.1	90	110	
La	139	1	nogas	66.836	38.473	177	18.20	100	66.8	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	218.159	91.116	23	65.47	100	218.2	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	306581	2.85	309366	99.10	70	125	
Ge	72	1	nogas	1690697	5.23	1624816	104.05	70	125	
In	115	1	nogas	1770470	1.57	1701792	104.04	70	125	
Bi	209	1	nogas	1419853	0.34	1450658	97.88	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	318540	2.14	341080	93.39	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	190_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102
Acq Date Time	2017-10-20T14:39:24-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
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	0.049	37.0	157	29.5	1	
Na	23	1	nogas	880.122	3.1	11455825	1.0	100	CCB Main CR1 Failed
Mg	24	1	nogas	12.968	6.4	110784	4.4	100	
Al	27	1	nogas	1.699	7.5	28035	2.7	5	
K	39	1	nogas	-40.845	-20.2	4791861	0.4	100	
Ti	47	1	nogas	0.185	18.1	373	8.2	2.5	
V	51	1	nogas	-17.316	-5.5	545415	1.3	2.5	
Cr	52	1	nogas	-1.241	-4.5	17215	2.6	2.5	
Mn	55	1	nogas	-0.081	-19.2	12331	1.7	2.5	
Co	59	1	nogas	0.012	81.3	1027	12.4	2.5	
Ni	60	1	nogas	2.209	6.2	9639	2.8	2.5	
Cu	63	1	nogas	1.535	6.3	15850	3.2	2.5	
Zn	66	1	nogas	-0.179	-83.5	1693	19.3	2.5	
As	75	1	nogas	-16.605	-7.9	113652	2.1	2.5	
Sr	88	1	nogas	0.389	1.6	6885	1.8	2.5	
Ag	107	1	nogas	0.044	15.0	723	7.6	2.5	
Cd	111	1	nogas	0.057	22.5	110	24.1	1	
Sb	121	1	nogas	0.190	19.9	3484	10.2	2.5	
Tl	205	1	nogas	0.212	43.9	3597	43.4	1	
Pb	208	1	nogas	0.046	42.8	1503	29.2	2.5	
U	238	1	nogas	0.045	39.0	1143	36.1	2.5	
[Pb]	206	1	nogas	0.055	31.1	387	23.9	2.5	
[Pb]	207	1	nogas	0.058	55.8	390	40.7	2.5	
Na	23	2	He	967.536	0.9	680488	0.6	100	CCB Main CR1 Failed
Mg	24	2	He	10.988	10.4	4091	8.1	100	
Al	27	2	He	1.681	14.1	497	6.2	5	
K	39	2	He	-13.321	-3.6	69254	0.2	100	
Ca	43	2	He	62.807	56.5	70	42.9	100	
Ca	44	2	He	-0.637	-817.4	1143	5.8	100	
V	51	2	He	-0.979	-2.5	2630	1.7	2.5	
Cr	52	2	He	0.133	59.3	2880	7.5	2.5	
Mn	55	2	He	-0.104	-12.0	660	4.5	2.5	
Fe	56	2	He	4.907	2.7	21880	0.7	100	
Co	59	2	He	-0.013	-83.9	243	19.4	2.5	
Ni	60	2	He	-0.400	-3.7	433	3.5	2.5	
Cu	63	2	He	-0.624	-9.9	1003	18.7	2.5	
Zn	66	2	He	-0.193	-13.5	390	5.1	2.5	
As	75	2	He	-0.061	-90.5	197	15.1	2.5	
Se	78	2	He	-0.073	-473.6	71	17.8	2.5	
B	11	1	nogas	28.555	11.1	83175	0.7	10	CCB Main CR1 Failed
Si	28	1	nogas	-67.524	-6.9	819898	1.3	5	
Ca	43	1	nogas	21.790	22.7	1097	9.0	100	
Ca	44	1	nogas	-327.162	-0.9	64572	0.2	100	
Fe	56	1	nogas	-16.423	-9.6	759820	2.9	100	
Se	77	1	nogas	-63.215	-15.1	37305	3.8	2.5	
Se	82	1	nogas	0.129	273.2	413	10.1	2.5	
Mo	95	1	nogas	0.104	11.1	430	10.1	2.5	
Sn	118	1	nogas	0.067	33.7	1070	12.3	5	
Ba	137	1	nogas	0.083	28.2	380	17.3	2.5	

Continuing Calibration Blank (CCB) Report

Sb	121	2	He	0.100	15.5	833	3.5	2.5	
P	31	1	nogas	19.762	24.3	46244	2.1	10	CCB Main CR1 Failed
La	139	1	nogas	-29.499	-30.9	60	16.7	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Au	197	1	nogas	-43.767	-166.1	3	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	333555	3.56	309366	107.82	70	125	
Ge	72	1	nogas	1688848	1.24	1624816	103.94	70	125	
In	115	1	nogas	1737532	1.42	1701792	102.10	70	125	
Bi	209	1	nogas	1476877	0.79	1450658	101.81	70	125	
Ge	72	2	He	331999	0.98	341080	97.34	70	125	

Low Level Initial Calibration Verification (LLICV) Report

Sample Table

Sample Name	LLCCV5
Data File Name	191LICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102
Acq Date Time	2017-10-20T14:41:24-05:00
Sample Type	LLICV
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
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	4.134	3.051	10697	1.97	5	82.7	70	130	
Na	23	1	nogas	1175.577	2.740	14652363	1.12	500	235.1	70	130	LLICV Main CR1 Failed
Mg	24	1	nogas	520.154	4.947	3960585	2.23	500	104.0	70	130	
Al	27	1	nogas	4.631	4.592	54820	3.22	5	92.6	70	130	
K	39	1	nogas	437.712	4.581	9215883	1.78	500	87.5	70	130	
Ti	47	1	nogas	4.786	5.974	4604	6.09	5	95.7	70	130	
V	51	1	nogas	-13.399	-8.601	618227	2.38	5	-268.0	70	130	LLICV Main CR1 Failed
Cr	52	1	nogas	3.552	1.907	75294	2.58	5	71.0	70	130	
Mn	55	1	nogas	4.831	2.501	86993	0.74	5	96.6	70	130	
Co	59	1	nogas	4.812	1.147	64915	0.50	5	96.2	70	130	
Ni	60	1	nogas	6.546	2.870	22651	1.04	5	130.9	70	130	LLICV Main CR1 Failed
Cu	63	1	nogas	6.213	3.419	51082	2.17	5	124.3	70	130	
Zn	66	1	nogas	4.644	4.898	12901	3.46	5	92.9	70	130	
As	75	1	nogas	-14.049	-13.328	124069	3.74	5	-281.0	70	130	LLICV Main CR1 Failed
Sr	88	1	nogas	4.877	3.564	80430	2.11	5	97.5	70	130	
Ag	107	1	nogas	4.997	4.380	49112	3.79	5	99.9	70	130	
Cd	111	1	nogas	4.941	3.135	9773	2.26	5	98.8	70	130	
Sb	121	1	nogas	5.008	3.329	44237	2.06	5	100.2	70	130	
Tl	205	1	nogas	4.612	5.775	77253	1.92	5	92.2	70	130	
Pb	208	1	nogas	4.717	3.961	106277	1.67	5	94.3	70	130	
U	238	1	nogas	4.623	1.764	108025	2.15	5	92.5	70	130	
[Pb]	206	1	nogas	4.870	4.295	26435	0.52	5	97.4	70	130	
[Pb]	207	1	nogas	4.802	4.396	23624	1.55	5	96.0	70	130	
Na	23	2	He	1291.469	0.929	849950	0.52	500	258.3	70	130	LLICV Main CR1 Failed
Mg	24	2	He	507.858	1.175	153315	1.09	500	101.6	70	130	
Al	27	2	He	3.804	10.785	783	8.31	5	76.1	70	130	
K	39	2	He	465.180	2.324	196646	1.46	500	93.0	70	130	
Ca	43	2	He	453.008	21.483	400	19.84	500	90.6	70	130	
Ca	44	2	He	420.697	5.757	7058	4.89	500	84.1	70	130	
V	51	2	He	3.961	4.167	15336	2.25	5	79.2	70	130	
Cr	52	2	He	5.086	2.054	17969	0.68	5	101.7	70	130	
Mn	55	2	He	4.753	4.774	9936	3.62	5	95.1	70	130	
Fe	56	2	He	524.209	3.923	1423367	2.78	500	104.8	70	130	
Co	59	2	He	5.201	2.913	23435	1.81	5	104.0	70	130	
Ni	60	2	He	4.752	4.694	6491	4.26	5	95.0	70	130	
Cu	63	2	He	4.469	2.043	16961	1.80	5	89.4	70	130	
Zn	66	2	He	4.800	8.962	3654	8.73	5	96.0	70	130	
As	75	2	He	5.120	7.760	2901	6.28	5	102.4	70	130	
Se	78	2	He	4.933	11.252	243	8.00	5	98.7	70	130	
B	11	1	nogas	31.934	4.750	86798	3.20	25	127.7	70	130	
Si	28	1	nogas	246.093	4.102	1512582	0.10	25	984.4	70	130	LLICV Main CR1 Failed
Ca	43	1	nogas	502.835	0.791	9623	1.30	500	100.6	70	130	
Ca	44	1	nogas	131.728	14.482	197438	1.28	500	26.3	70	130	LLICV Main CR1 Failed
Fe	56	1	nogas	503.045	1.642	7820494	1.88	500	100.6	70	130	
Se	77	1	nogas	-65.426	-6.805	38000	0.85	5	-1308.5	70	130	LLICV Main CR1 Failed
Se	82	1	nogas	5.004	18.816	1067	10.54	5	100.1	70	130	
Mo	95	1	nogas	4.705	0.688	16084	2.00	5	94.1	70	130	
Sn	118	1	nogas	4.635	0.885	25756	1.61	5	92.7	70	130	
Ba	137	1	nogas	4.752	3.460	12705	4.37	5	95.0	70	130	
Sb	121	2	He	5.098	1.703	12525	2.40	5	102.0	70	130	
Li	7	1	nogas	4.524	4.361	59287	2.21	5	90.5	70	130	
P	31	1	nogas	36.743	7.376	52797	0.81	25	147.0	70	130	LLICV Main CR1 Failed
La	139	1	nogas	-13.929	-55.847	80	12.50	5	-278.6	70	130	LLICV Main CR1 Failed
Au	197	1	nogas	36.217	342.317	10	100.00	5	724.3	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	337213	3.76	309366	109.00	70	125	
Ge	72	1	nogas	1739608	1.50	1624816	107.06	70	125	
In	115	1	nogas	1772527	0.94	1701792	104.16	70	125	
Bi	209	1	nogas	1502725	3.93	1450658	103.59	70	125	

Low Level Initial Calibration Verification (LLICV) Report

Ge	72	2	He	328899	1.13	341080	96.43	70	125	

Sample Report

Sample Table

Sample Name	LLCCV2
Data File Name	192SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102
Acq Date Time	2017-10-20T14:43:23-05:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	004CALB.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	1.713	1.713	3.65	4381	0.04	2000	
Na	23	1	nogas	815.865	815.865	1.50	11085930	0.01	200000	
Mg	24	1	nogas	206.505	206.505	4.79	1618120	0.01	200000	
Al	27	1	nogas	2.070	2.070	12.44	31163	0.01	2000	
K	39	1	nogas	164.657	164.657	12.74	6570070	0.00	200000	
Ti	47	1	nogas	2.098	2.098	14.84	2070	0.10	2000	
V	51	1	nogas	-14.389	-14.389	-11.52	585757	0.00	2000	
Cr	52	1	nogas	0.747	0.747	13.16	40358	0.00	2000	
Mn	55	1	nogas	1.819	1.819	6.74	40194	0.00	2000	
Co	59	1	nogas	1.980	1.980	5.99	26409	0.01	2000	
Ni	60	1	nogas	4.132	4.132	7.20	15100	0.03	2000	
Cu	63	1	nogas	3.417	3.417	5.94	29407	0.01	2000	
Zn	66	1	nogas	1.899	1.899	3.10	6361	0.03	2000	
As	75	1	nogas	-14.040	-14.040	-10.14	120381	-0.01	2000	
Sr	88	1	nogas	2.044	2.044	5.05	33114	0.01	2000	
Ag	107	1	nogas	2.011	2.011	4.00	19348	0.01	2000	
Cd	111	1	nogas	2.030	2.030	4.16	4081	0.05	2000	
Sb	121	1	nogas	2.005	2.005	2.87	18337	0.01	2000	
Tl	205	1	nogas	1.879	1.879	5.71	31517	0.01	2000	
Pb	208	1	nogas	1.924	1.924	2.72	43631	0.00	2000	
U	238	1	nogas	1.782	1.782	5.71	41631	0.00	2000	
[Pb]	206	1	nogas	1.924	1.924	6.46	10497	0.02	2000	
[Pb]	207	1	nogas	1.926	1.926	7.28	9536	0.02	2000	
Na	23	2	He	943.095	943.095	2.57	665472	0.14	200000	
Mg	24	2	He	201.951	201.951	0.84	61872	0.33	200000	
Al	27	2	He	1.814	1.814	24.78	513	0.35	2000	
K	39	2	He	173.673	173.673	1.91	119038	0.15	200000	
Ca	43	2	He	231.372	231.372	34.08	213	108.45	200000	
Ca	44	2	He	138.266	138.266	6.15	3107	4.45	200000	
V	51	2	He	0.955	0.955	3.35	7644	0.01	2000	
Cr	52	2	He	2.186	2.186	5.20	9182	0.02	2000	
Mn	55	2	He	1.660	1.660	13.37	4051	0.04	2000	
Fe	56	2	He	200.691	200.691	2.77	554079	0.04	200000	
Co	59	2	He	2.055	2.055	3.34	9509	0.02	2000	
Ni	60	2	He	1.488	1.488	17.27	2667	0.06	2000	
Cu	63	2	He	1.526	1.526	4.45	7795	0.02	2000	
Zn	66	2	He	1.957	1.957	10.40	1807	0.11	2000	
As	75	2	He	1.776	1.776	6.95	1162	0.15	2000	
Se	78	2	He	1.650	1.650	21.43	131	1.26	2000	
B	11	1	nogas	18.622	18.622	41.42	74995	0.02	2000	
Si	28	1	nogas	2.880	2.880	539.56	964453	0.00	2000	
Ca	43	1	nogas	189.139	189.139	5.86	3964	4.77	200000	
Ca	44	1	nogas	-161.093	-161.093	-9.32	110476	-0.15	200000	
Fe	56	1	nogas	202.810	202.810	4.41	3639406	0.01	200000	
Se	77	1	nogas	-64.532	-64.532	-14.77	37025	-0.17	2000	
Se	82	1	nogas	1.952	1.952	23.23	647	0.30	2000	

Sample Report

Mo	95	1	nogas	2.047	2.047	7.08	6828	0.03	2000	
Sn	118	1	nogas	1.898	1.898	4.06	11160	0.02	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Ba	137	1	nogas	1.856	1.856	6.21	5148	0.04	2000	
Sb	121	2	He	2.047	2.047	2.72	5424	0.04	2000	
La	139	1	nogas	10.056	10.056	314.95	110	9.14	2000	
Au	197	1	nogas	-44.196	-44.196	-162.84	3	-1325.87	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	331849	3.06	309366	107.27	70	125	
Ge	72	1	nogas	1688069	3.13	1624816	103.89	70	125	
In	115	1	nogas	1803049	3.45	1701792	105.95	70	125	
Bi	209	1	nogas	1501326	3.54	1450658	103.49	70	125	
Ge	72	2	He	331275	2.20	341080	97.13	70	125	

Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	ICSA
Data File Name	193ICSA.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102
Acq Date Time	2017-10-20T14:45:23-05:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
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	0.013	152.8	63	77.9	0	ICSA Main CR1 Failed
Na	23	1	nogas	106760.662	3.0	1053761990	2.3	0	
Mg	24	1	nogas	104764.215	4.0	738135833	3.4	0	
Al	27	1	nogas	108743.521	2.4	858893107	0.4	0	
K	39	1	nogas	108688.202	2.2	872431753	1.3	0	
Ti	47	1	nogas	2239.414	1.5	1833689	2.8	0	
V	51	1	nogas	-5.296	-51.1	655747	3.7	0	ICSA Main CR1 Failed
Cr	52	1	nogas	0.651	19.8	36106	2.1	0	ICSA Main CR1 Failed
Mn	55	1	nogas	-0.002	-1801.4	12418	3.1	0	ICSA Main CR1 Failed
Co	59	1	nogas	0.044	21.9	1330	9.1	0	ICSA Main CR1 Failed
Ni	60	1	nogas	3.486	8.4	12204	5.0	0	ICSA Main CR1 Failed
Cu	63	1	nogas	2.224	6.7	19137	3.0	0	ICSA Main CR1 Failed
Zn	66	1	nogas	4.162	6.9	10517	3.4	0	ICSA Main CR1 Failed
As	75	1	nogas	0.144	1454.1	145401	1.4	0	ICSA Main CR1 Failed
Sr	88	1	nogas	1.095	4.4	16628	4.0	0	ICSA Main CR1 Failed
Ag	107	1	nogas	0.041	18.9	640	12.5	0	ICSA Main CR1 Failed
Cd	111	1	nogas	0.937	16.5	1703	15.6	0	ICSA Main CR1 Failed
Sb	121	1	nogas	0.018	132.8	1903	7.4	0	ICSA Main CR1 Failed
Tl	205	1	nogas	0.021	37.8	407	29.3	0	ICSA Main CR1 Failed
Pb	208	1	nogas	0.090	8.0	2230	6.2	0	ICSA Main CR1 Failed
[Pb]	206	1	nogas	0.101	7.4	567	6.7	0	ICSA Main CR1 Failed
[Pb]	207	1	nogas	0.095	24.8	507	20.0	0	ICSA Main CR1 Failed
Na	23	2	He	104451.212	3.7	52480803	4.0	0	
Mg	24	2	He	102935.270	0.4	28550822	2.0	0	
Al	27	2	He	96401.389	1.0	12188974	1.1	0	
K	39	2	He	92916.911	1.5	24810255	1.5	0	
Ca	43	2	He	91990.672	0.4	72063	1.8	0	
Ca	44	2	He	94733.533	3.7	1231186	4.7	0	
V	51	2	He	-0.630	-6.7	3235	2.3	0	ICSA Main CR1 Failed
Cr	52	2	He	1.569	3.5	6681	0.9	0	ICSA Main CR1 Failed
Mn	55	2	He	-0.087	-12.4	633	4.6	0	ICSA Main CR1 Failed
Fe	56	2	He	103402.100	1.2	257777049	2.7	0	
Co	59	2	He	-0.026	-22.6	170	15.6	0	ICSA Main CR1 Failed
Ni	60	2	He	-0.277	-21.6	530	12.4	0	ICSA Main CR1 Failed
Cu	63	2	He	-0.362	-13.0	1680	9.2	0	ICSA Main CR1 Failed
Zn	66	2	He	3.200	5.9	2407	6.3	0	ICSA Main CR1 Failed
As	75	2	He	0.184	12.5	298	3.4	0	ICSA Main CR1 Failed
Se	78	2	He	-0.343	-83.9	57	17.4	0	ICSA Main CR1 Failed
B	11	1	nogas	20.942	22.0	74188	4.1	0	
Si	28	1	nogas	90.481	101.2	1053209	15.4	0	
Ca	43	1	nogas	114042.709	4.4	1797725	3.2	0	
Ca	44	1	nogas	108050.783	3.9	27664475	2.7	0	
Fe	56	1	nogas	106064.804	5.0	1282994562	3.0	0	
Se	77	1	nogas	9.102	100.3	46894	1.0	0	
Se	82	1	nogas	1.011	42.2	483	8.4	0	ICSA Main CR1 Failed
Mo	95	1	nogas	2266.336	3.3	6877135	2.3	0	
Sn	118	1	nogas	0.065	35.5	993	12.6	0	ICSA Main CR1 Failed
Ba	137	1	nogas	0.213	27.0	670	18.3	0	ICSA Main CR1 Failed
Sb	121	2	He	-0.003	-1092.1	540	11.3	0	ICSA Main CR1 Failed

Interference Check Solution A (ICS-A) Report

P	31	1	nogas	202765.514	3.4	55022816	1.1	0	
La	139	1	nogas	354.829	52.6	483	45.2	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	320243	0.89	309366	103.52	70	125	
Ge	72	1	nogas	1553202	2.39	1624816	95.59	70	125	
In	115	1	nogas	1631100	2.54	1701792	95.85	70	125	
Bi	209	1	nogas	1323873	0.50	1450658	91.26	70	125	
Ge	72	2	He	303640	1.64	341080	89.02	70	125	

Interference Check Solution AB (ICS-AB) Report

Sample Table

Sample Name	ICSAB
Data File Name	194ICSB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102
Acq Date Time	2017-10-20T14:47:28-05:00
Sample Type	ICSB
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
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	88.917	2.748	199894	1.64	100	88.9	80	120	
Na	23	1	nogas	120372.844	2.419	1155191292	1.34	100	120372.8	80	120	ICSB Main CR1 Failed
Mg	24	1	nogas	115060.568	1.401	788526801	1.54	100	115060.6	80	120	
Al	27	1	nogas	110810.234	1.780	863721934	1.54	100	110810.2	80	120	ICSB Main CR1 Failed
K	39	1	nogas	123333.750	4.785	975985855	3.52	100	123333.8	80	120	ICSB Main CR1 Failed
Ti	47	1	nogas	2346.838	4.215	1894748	1.44	100	2346.8	80	120	
V	51	1	nogas	98.708	1.712	1966274	2.34	100	98.7	80	120	
Cr	52	1	nogas	94.291	4.700	1025242	2.21	100	94.3	80	120	
Mn	55	1	nogas	97.173	3.872	1306701	2.36	100	97.2	80	120	
Co	59	1	nogas	93.891	4.673	1100309	1.50	100	93.9	80	120	
Ni	60	1	nogas	101.155	6.264	264236	3.79	100	101.2	80	120	
Cu	63	1	nogas	95.905	5.388	631797	3.67	100	95.9	80	120	
Zn	66	1	nogas	101.038	2.690	207833	2.74	100	101.0	80	120	
As	75	1	nogas	94.693	4.186	371442	1.86	100	94.7	80	120	
Sr	88	1	nogas	100.804	5.702	1451556	4.63	100	100.8	80	120	
Ag	107	1	nogas	91.614	3.555	788143	0.90	100	91.6	80	120	
Cd	111	1	nogas	96.570	2.940	169751	2.06	100	96.6	80	120	
Sb	121	1	nogas	101.050	4.868	752534	2.06	100	101.1	80	120	
Tl	205	1	nogas	92.706	1.863	1330153	0.83	100	92.7	80	120	
Pb	208	1	nogas	95.571	0.984	1837265	0.45	100	95.6	80	120	
U	238	1	nogas	99.341	3.163	1986626	2.16	100	99.3	80	120	
[Pb]	206	1	nogas	99.095	0.904	459556	0.82	100	99.1	80	120	
[Pb]	207	1	nogas	97.137	1.550	407868	0.49	100	97.1	80	120	
Na	23	2	He	115034.731	1.278	56436057	0.87	100	115034.7	80	120	
Mg	24	2	He	115972.464	2.346	31410934	1.16	100	115972.5	80	120	ICSB Main CR1 Failed
Al	27	2	He	98584.742	2.393	12173854	1.46	100	98584.7	80	120	ICSB Main CR1 Failed
K	39	2	He	100046.085	1.565	26708270	1.56	100	100046.1	80	120	ICSB Main CR1 Failed
Ca	43	2	He	104343.708	1.576	79825	0.35	100	104343.7	80	120	ICSB Main CR1 Failed
Ca	44	2	He	107075.311	2.797	1358530	1.64	100	107075.3	80	120	ICSB Main CR1 Failed
V	51	2	He	97.370	0.526	230947	1.50	100	97.4	80	120	
Cr	52	2	He	100.009	0.527	277454	1.56	100	100.0	80	120	
Mn	55	2	He	92.840	0.926	160806	1.09	100	92.8	80	120	
Fe	56	2	He	116981.723	3.340	284745629	2.35	100	116981.7	80	120	ICSB Main CR1 Failed
Co	59	2	He	99.065	3.278	397633	2.05	100	99.1	80	120	
Ni	60	2	He	96.483	3.452	103161	2.18	100	96.5	80	120	
Cu	63	2	He	98.135	1.530	280023	0.49	100	98.1	80	120	
Zn	66	2	He	96.837	1.485	57578	2.50	100	96.8	80	120	
As	75	2	He	96.510	2.066	45684	0.96	100	96.5	80	120	
Se	78	2	He	86.171	3.688	2736	2.86	100	86.2	80	120	
B	11	1	nogas	961.554	3.872	715004	2.57	100	961.6	80	120	ICSB Main CR1 Failed
Si	28	1	nogas	9936.316	3.063	19515470	1.93	100	9936.3	80	120	ICSB Main CR1 Failed
Ca	43	1	nogas	123183.035	4.767	1915262	1.86	100	123183.0	80	120	
Ca	44	1	nogas	119469.418	1.629	30175185	1.71	100	119469.4	80	120	
Fe	56	1	nogas	120327.582	4.031	1436560932	3.18	100	120327.6	80	120	ICSB Main CR1 Failed
Se	77	1	nogas	95.496	13.134	61126	2.79	100	95.5	80	120	
Se	82	1	nogas	102.002	1.966	12184	1.83	100	102.0	80	120	
Mo	95	1	nogas	2428.207	3.873	7272749	4.35	100	2428.2	80	120	ICSB Main CR1 Failed
Sn	118	1	nogas	97.597	2.144	468943	2.68	100	97.6	80	120	
Ba	137	1	nogas	93.716	3.310	219780	2.03	100	93.7	80	120	
Sb	121	2	He	98.090	2.383	207524	1.13	100	98.1	80	120	
La	139	1	nogas	307.659	5.168	413	3.70	100	307.7	80	120	ICSB Main CR1 Failed

QC ISTD Table

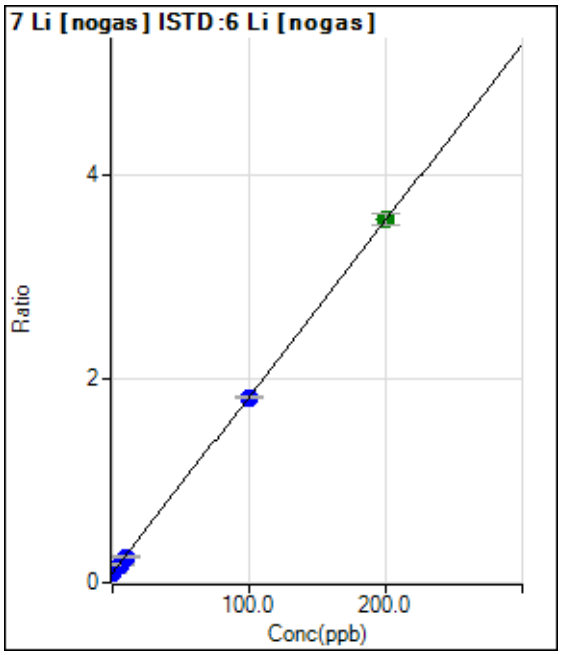
Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	293788	2.34	309366	94.96	70	125	
Ge	72	1	nogas	1532828	3.32	1624816	94.34	70	125	
In	115	1	nogas	1575316	1.28	1701792	92.57	70	125	
Bi	209	1	nogas	1286977	1.15	1450658	88.72	70	125	
Ge	72	2	He	296575	1.28	341080	86.95	70	125	

Calibration for 011_ICV.d

Batch Folder: C:\Agilent\ICPMH\1\DATA\102017A.b\
Analysis File: 102017A.batch.bin
DA Date-Time: 2017-10-20 09:52:54
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	004CALB.d	CAL BLK	2017-10-20 08:24:20
2	005CALS.d	2/10/200	2017-10-20 08:26:22
3	006CALS.d	5/25/500	2017-10-20 08:28:22
4	007CALS.d	10/50/1000	2017-10-20 08:30:22
5	008CALS.d	100/500/10K	2017-10-20 08:32:24
6	009CALS.d	200/1000/20K	2017-10-20 08:34:21
7			

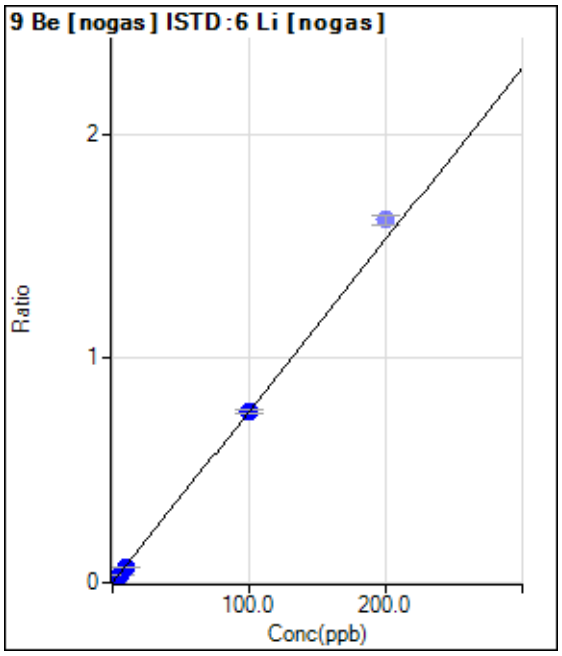
Calibration for 011_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	30191.24	0.0975	P	1.9
2	☐	2.000	1.689	39147.50	0.1268	P	2.2
3	☐	5.000	4.688	54859.71	0.1787	P	2.5
4	☐	10.000	9.080	76986.96	0.2548	P	2.1
5	☐	100.000	99.398	511809.72	1.8188	P	1.2
6	☐	200.000	200.358	917763.40	3.5671	A	3.0
7	☐	1.000					

y = 0.0173 * x + 0.0975
R = 1.0000
DL = 0.3184
BEC = 5.633

Weight: <None>
Min Conc: <None>

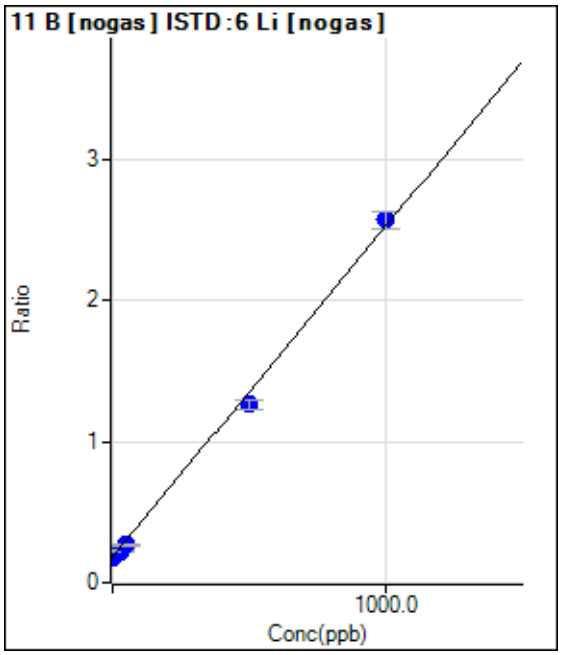


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	30.00	0.0001	P	33.5
2	☐	2.000	1.782	4240.55	0.0137	P	3.9
3	☐	5.000	4.528	10663.18	0.0348	P	4.7
4	☐	10.000	9.293	21522.48	0.0712	P	1.7
5	☐	100.000	100.099	215518.05	0.7662	P	2.0
6	☑	200.000		416402.26	1.6191	P	2.9
7	☐	1.000					

y = 0.0077 * x + 9.6889E-005
R = 1.0000
DL = 0.01271
BEC = 0.01266

Weight: <None>
Min Conc: <None>

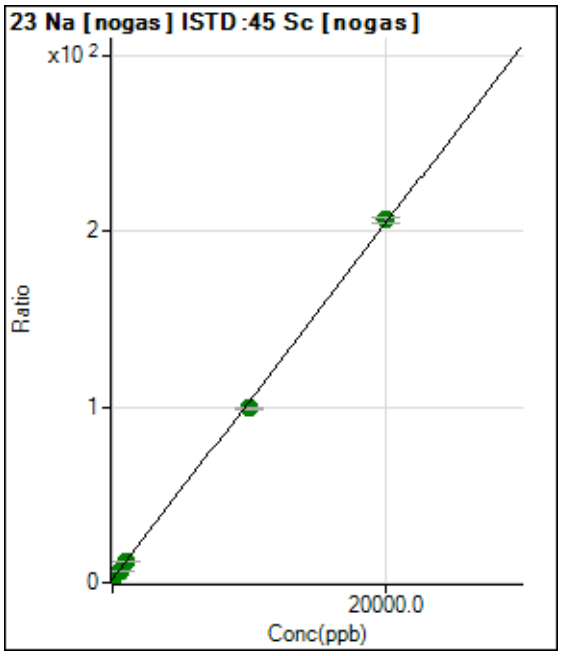
Calibration for 011_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	56447.32	0.1827	P	4.3
2	☐	10.000	2.924	58506.89	0.1895	P	2.1
3	☐	25.000	16.613	67971.21	0.2216	P	5.2
4	☐	50.000	36.217	80790.55	0.2675	P	4.1
5	☐	500.000	461.685	355315.48	1.2640	P	4.9
6	☐	1000.000	1020.127	661354.13	2.5719	P	4.5
7	☐	5.000					

y = 0.0023 * x + 0.1827
R = 0.9991
DL = 10.14
BEC = 77.99

Weight: <None>
Min Conc: <None>

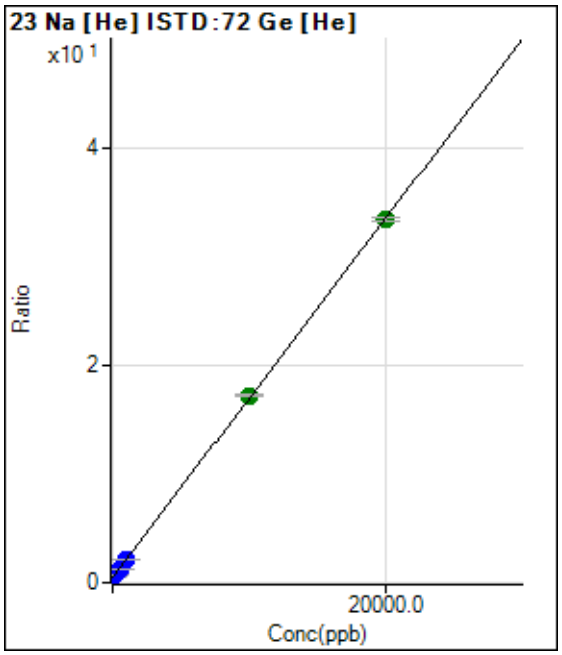


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2125724.40	2.0717	A	2.7
2	☐	200.000	187.996	4010315.59	3.9758	A	3.5
3	☐	500.000	478.767	6972087.40	6.9209	A	2.9
4	☐	1000.000	957.793	12044423.97	11.7727	A	3.4
5	☐	10000.00	9609.101	98965050.13	99.3983	A	0.7
6	☐	20000.00	20198.211	197691308.5	206.651	A	1.4
7	☐	100.000					

y = 0.0101 * x + 2.0717
R = 0.9997
DL = 16.37
BEC = 204.5

Weight: <None>
Min Conc: <None>

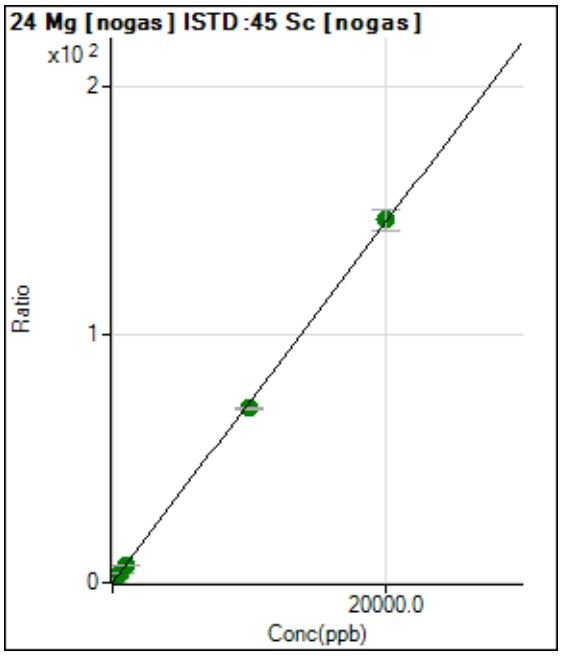
Calibration for 011_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	154444.14	0.4529	P	2.0
2	☐	200.000	183.536	261139.61	0.7558	P	0.2
3	☐	500.000	488.979	433529.21	1.2599	P	1.3
4	☐	1000.000	980.964	712514.86	2.0719	P	2.2
5	☐	10000.00	10142.212	5656862.21	17.1918	A	1.0
6	☐	20000.00	19930.286	10957546.51	33.3462	A	0.9
7	☐	100.000					

y = 0.0017 * x + 0.4529
R = 1.0000
DL = 16.58
BEC = 274.4

Weight: <None>
Min Conc: <None>

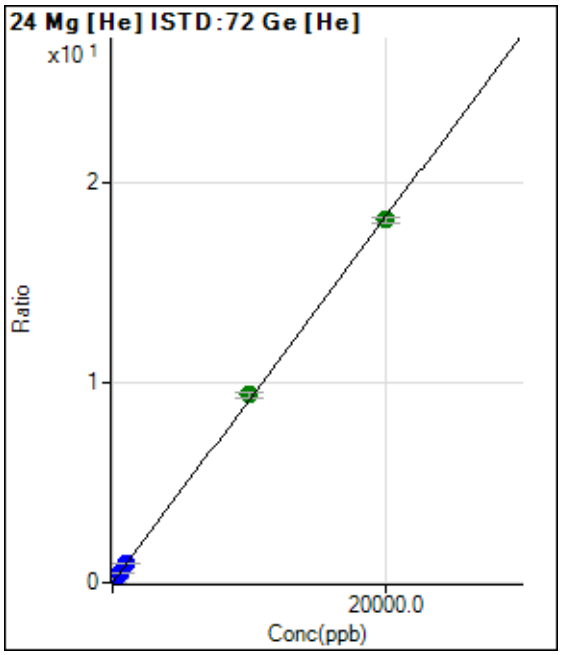


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	12673.17	0.0123	P	11.7
2	☐	200.000	203.086	1498256.84	1.4835	A	3.1
3	☐	500.000	503.168	3684840.06	3.6573	A	2.6
4	☐	1000.000	991.293	7357136.88	7.1933	A	2.9
5	☐	10000.00	9699.124	69962772.40	70.2729	A	1.2
6	☐	20000.00	20150.763	139646869.7	145.984	A	5.6
7	☐	100.000					

y = 0.0072 * x + 0.0123
R = 0.9998
DL = 0.5983
BEC = 1.702

Weight: <None>
Min Conc: <None>

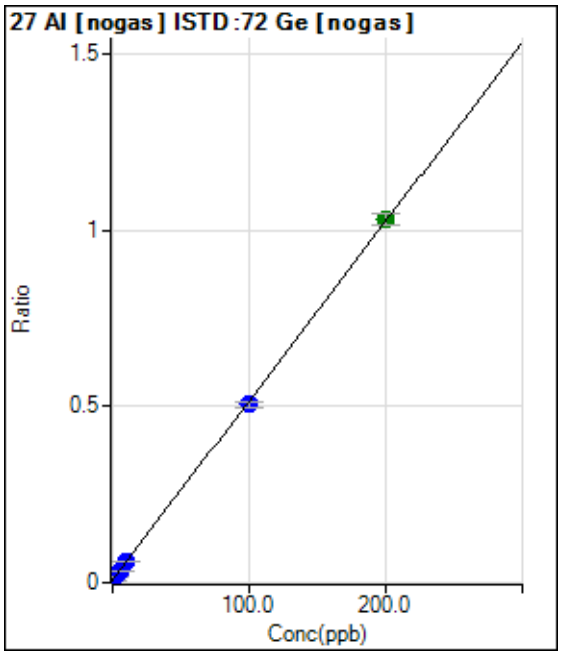
Calibration for 011_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	780.03	0.0023	P	4.9
2	☐	200.000	205.788	65731.41	0.1903	P	1.8
3	☐	500.000	505.609	159697.23	0.4641	P	1.6
4	☐	1000.000	1025.344	322802.29	0.9388	P	3.2
5	☐	10000.00	10304.009	3097876.10	9.4141	A	3.0
6	☐	20000.00	19846.530	5958009.70	18.1303	A	1.6
7	☐	100.000					

y = 9.1341E-004 * x + 0.0023
R = 0.9998
DL = 0.3671
BEC = 2.503

Weight: <None>
Min Conc: <None>

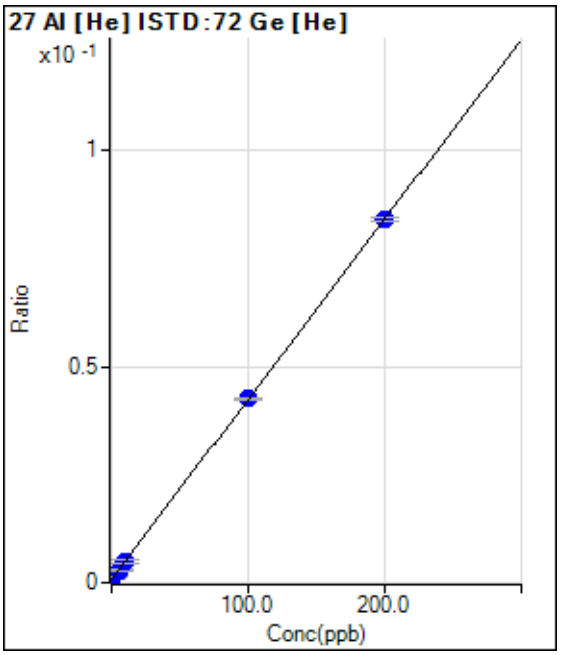


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	12928.07	0.0080	P	2.7
2	☐	2.000	2.014	30141.21	0.0182	P	4.9
3	☐	5.000	4.780	53212.36	0.0323	P	3.8
4	☐	10.000	10.269	96728.95	0.0602	P	7.1
5	☐	100.000	98.009	836055.33	0.5065	P	3.0
6	☐	200.000	200.987	1653277.63	1.0304	A	3.3
7	☐	1.000					

y = 0.0051 * x + 0.0080
R = 0.9999
DL = 0.1274
BEC = 1.565

Weight: <None>
Min Conc: <None>

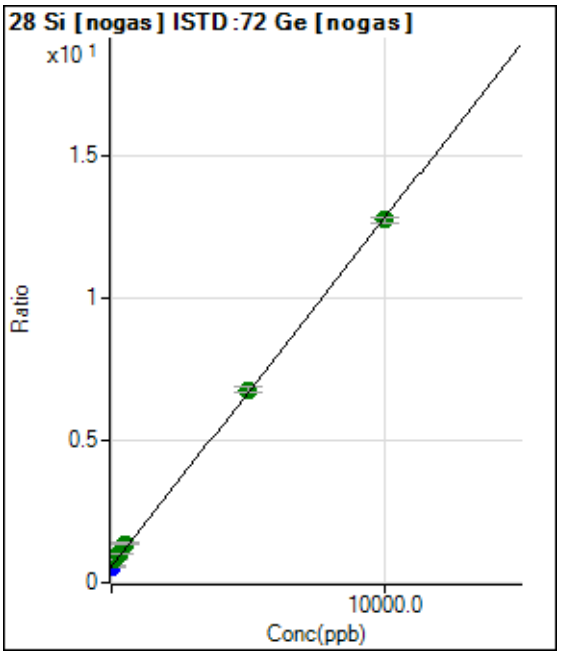
Calibration for 011_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.254	306.68	0.0009	P	32.8
2	☐	2.000	1.959	556.68	0.0016	P	26.8
3	☐	5.000	4.696	946.71	0.0028	P	20.2
4	☐	10.000	9.820	1680.11	0.0049	P	14.2
5	☐	100.000	100.509	14035.51	0.0427	P	1.3
6	☐	200.000	199.763	27597.26	0.0840	P	0.9
7	☐	1.000					

y = 4.1644E-004 * x + 7.9617E-004
R = 1.0000
DL = 2.129
BEC = 1.912

Weight: <None>
Min Conc: <None>

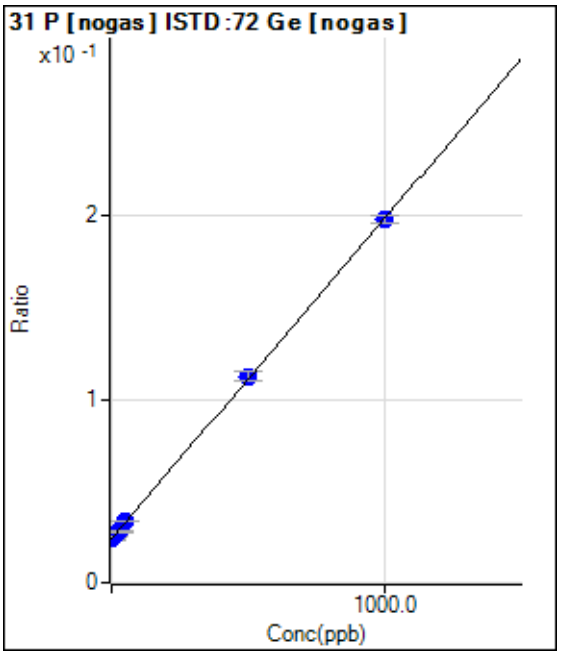


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	922866.42	0.5682	P	2.6
2	☐	100.000	209.587	1366087.53	0.8249	A	1.6
3	☐	250.000	363.805	1671855.44	1.0138	A	2.3
4	☐	500.000	648.179	2189282.36	1.3621	A	4.1
5	☐	5000.000	5075.792	11198998.58	6.7851	A	3.2
6	☐	10000.00	9950.754	20469271.78	12.7560	A	1.6
7	☐	5.000					

y = 0.0012 * x + 0.5682
R = 0.9999
DL = 36.46
BEC = 463.9

Weight: <None>
Min Conc: <None>

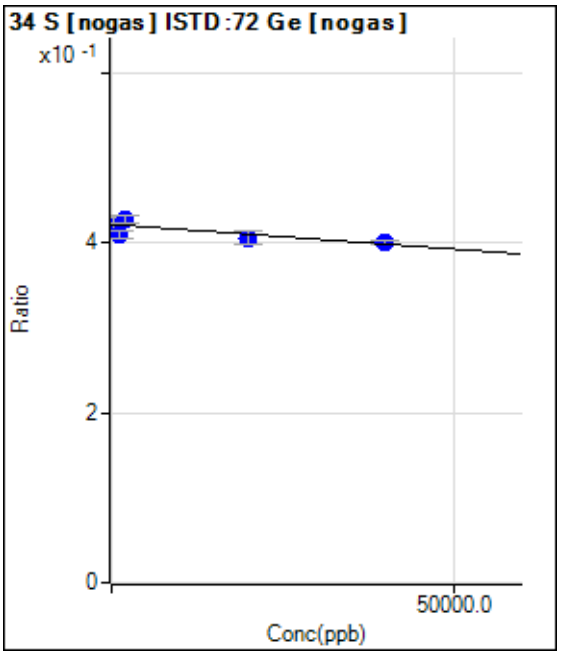
Calibration for 011_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	38863.80	0.0239	P	4.7
2	☐	10.000	9.744	42441.31	0.0256	P	4.1
3	☐	25.000	22.196	45872.67	0.0278	P	1.0
4	☐	50.000	55.031	53933.61	0.0335	P	2.1
5	☐	500.000	507.827	185870.75	0.1126	P	4.7
6	☐	1000.000	995.908	317561.76	0.1979	P	2.0
7	☐	5.000					

y = 1.7469E-004 * x + 0.0239
R = 0.9999
DL = 19.15
BEC = 137

Weight: <None>
Min Conc: <None>

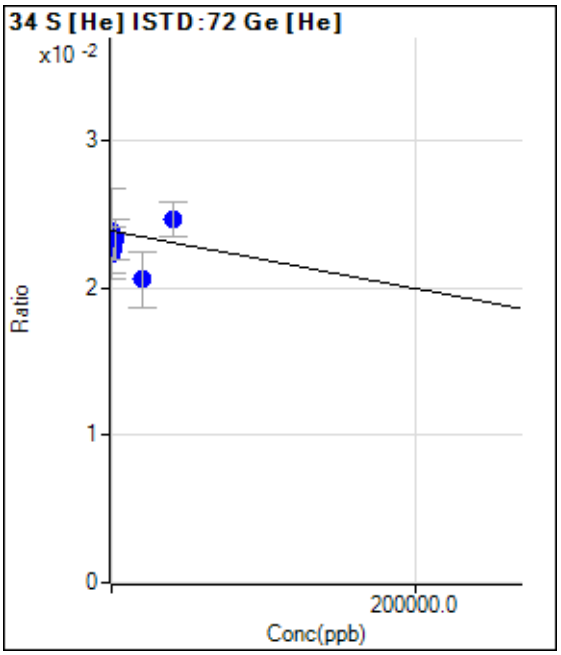


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	684621.79	0.4215	P	2.3
2	☐	400.000	3065.348	694718.99	0.4197	P	4.5
3	☐	1000.000	20219.062	675670.90	0.4097	P	2.4
4	☐	2000.000	-8868.455	686026.20	0.4266	P	2.1
5	☐	20000.00	27953.916	668717.35	0.4053	P	4.0
6	☐	40000.00	36059.335	642744.19	0.4005	P	0.8
7	☐	100.000					

y = -5.8103E-007 * x + 0.4215
R = -0.8169
DL = -4.983E+04
BEC = -7.254E+05

Weight: <None>
Min Conc: <None>

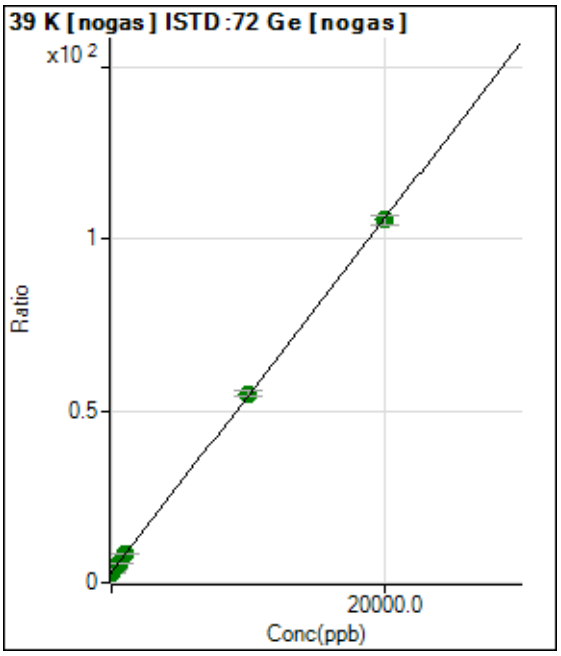
Calibration for 011_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	8136.62	0.0239	P	24.5
2	☐	400.000	77592.410	7736.32	0.0224	P	16.0
3	☐	1000.000	58095.154	7836.74	0.0228	P	7.7
4	☐	2000.000	29260.376	8036.60	0.0233	P	11.7
5	☐	20000.00	168899.92	6769.76	0.0206	P	17.9
6	☐	40000.00	-38012.28	8103.63	0.0247	P	9.6
7	☐	100.000					

y = -1.9627E-008 * x + 0.0239
R = 0.1916
DL = -8.969E+05
BEC = -1.218E+06

Weight: <None>
Min Conc: <None>

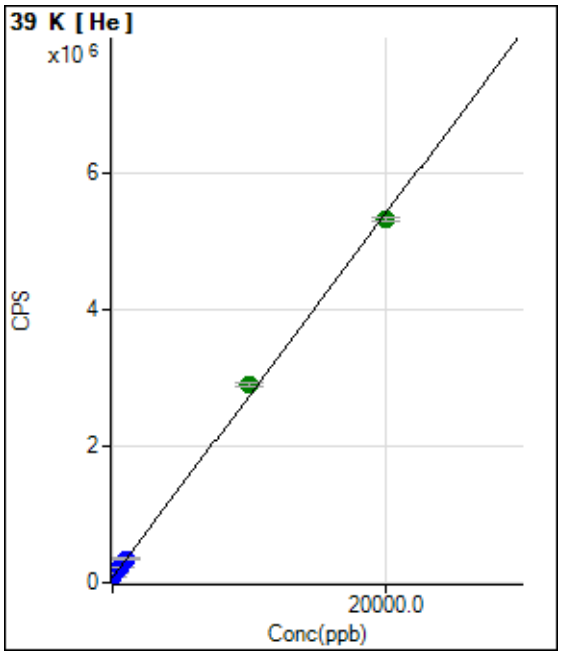


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4950250.11	3.0477	A	2.4
2	☐	200.000	182.078	6594402.23	3.9838	A	4.3
3	☐	500.000	497.405	9241721.56	5.6051	A	3.2
4	☐	1000.000	1041.748	13513645.09	8.4038	A	2.8
5	☐	10000.00	10109.649	90828224.95	55.0259	A	2.7
6	☐	20000.00	19943.332	169415312.1	105.585	A	2.7
7	☐	100.000					

y = 0.0051 * x + 3.0477
R = 1.0000
DL = 42.36
BEC = 592.8

Weight: <None>
Min Conc: <None>

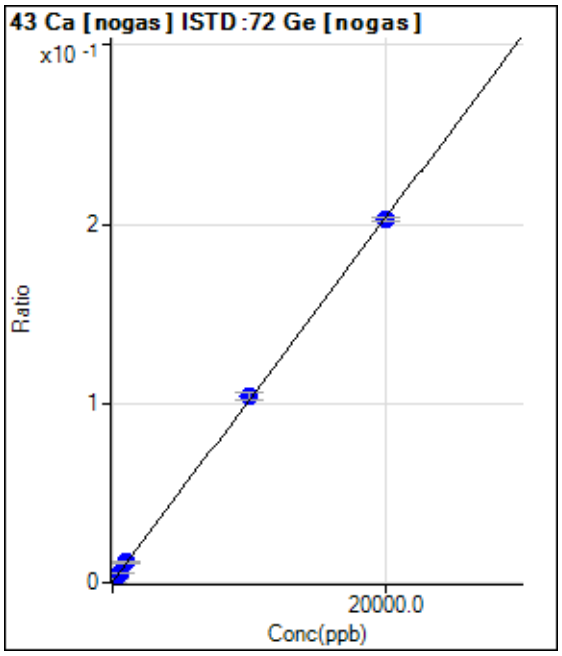
Calibration for 011_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	72800.48		P	0.2
2	☐	200.000	208.115	128207.32		P	1.7
3	☐	500.000	527.070	213123.31		P	0.9
4	☐	1000.000	1045.328	351100.32		P	1.9
5	☐	10000.00	10654.543	2909380.79		A	1.9
6	☐	20000.00	19669.704	5309505.13		A	1.2
7	☐	100.000					

y = 266.2320 * x + 72800.4833
R = 0.9992
DL = 1.795
BEC = 273.4

Weight: <None>
Min Conc: <None>

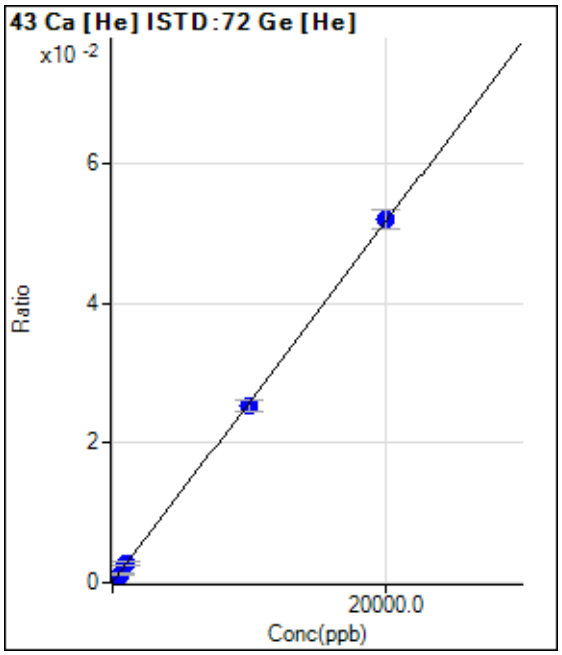


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	693.36	0.0004	P	19.3
2	☐	200.000	197.037	4017.19	0.0024	P	7.3
3	☐	500.000	498.038	9045.66	0.0055	P	2.5
4	☐	1000.000	1069.021	18139.24	0.0113	P	2.1
5	☐	10000.00	10200.779	171561.08	0.1040	P	3.9
6	☐	20000.00	19896.238	324748.67	0.2024	P	1.2
7	☐	100.000					

y = 1.0150E-005 * x + 4.2782E-004
R = 0.9999
DL = 24.45
BEC = 42.15

Weight: <None>
Min Conc: <None>

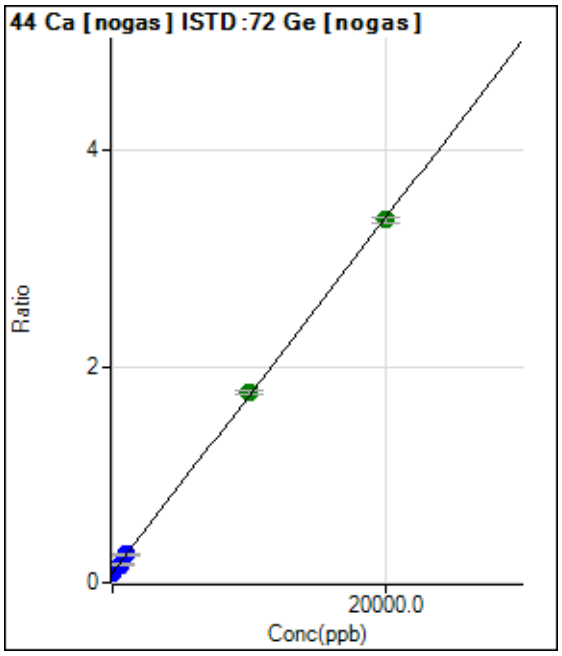
Calibration for 011_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	16.67	0.0000	P	124.
2	☐	200.000	160.450	160.00	0.0005	P	6.6
3	☐	500.000	454.685	420.02	0.0012	P	18.2
4	☐	1000.000	1073.794	970.04	0.0028	P	14.7
5	☐	10000.00	9775.632	8312.02	0.0253	P	6.9
6	☐	20000.00	20110.023	17058.18	0.0519	P	5.2
7	☐	100.000					

y = 2.5794E-006 * x + 4.9299E-005
R = 0.9999
DL = 71.62
BEC = 19.11

Weight: <None>
Min Conc: <None>

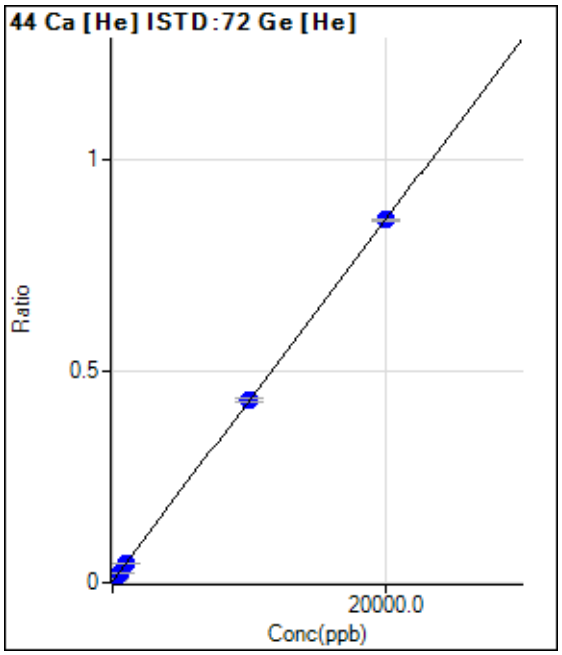


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	149269.04	0.0919	P	3.6
2	☐	200.000	175.476	199902.94	0.1207	P	1.5
3	☐	500.000	467.694	278059.54	0.1686	P	3.4
4	☐	1000.000	1014.909	415447.71	0.2584	P	2.3
5	☐	10000.00	10208.666	2916879.12	1.7668	A	2.1
6	☐	20000.00	19895.974	5385519.71	3.3562	A	1.9
7	☐	100.000					

y = 1.6407E-004 * x + 0.0919
R = 0.9999
DL = 59.99
BEC = 560.2

Weight: <None>
Min Conc: <None>

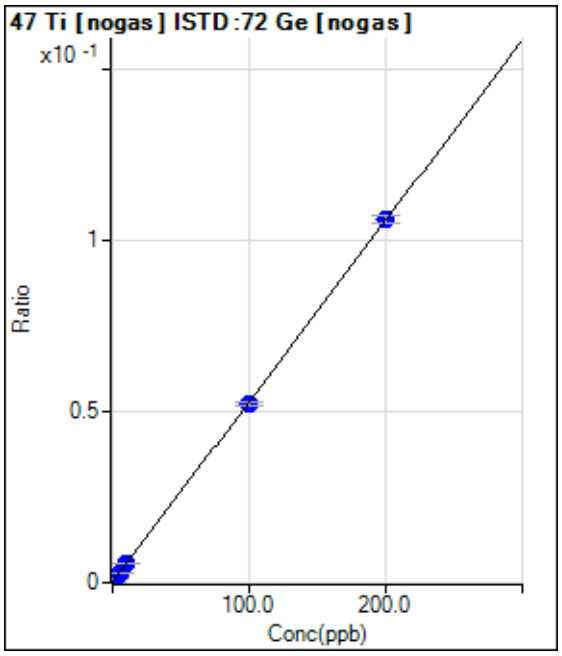
Calibration for 011_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1183.40	0.0035	P	7.8
2	☐	200.000	181.001	3873.82	0.0112	P	1.9
3	☐	500.000	481.805	8281.97	0.0241	P	3.0
4	☐	1000.000	965.952	15393.30	0.0448	P	5.3
5	☐	10000.00	10010.603	142006.81	0.4315	P	1.8
6	☐	20000.00	19997.046	282106.24	0.8585	P	0.7
7	☐	100.000					

y = 4.2758E-005 * x + 0.0035
R = 1.0000
DL = 19.08
BEC = 81.21

Weight: <None>
Min Conc: <None>

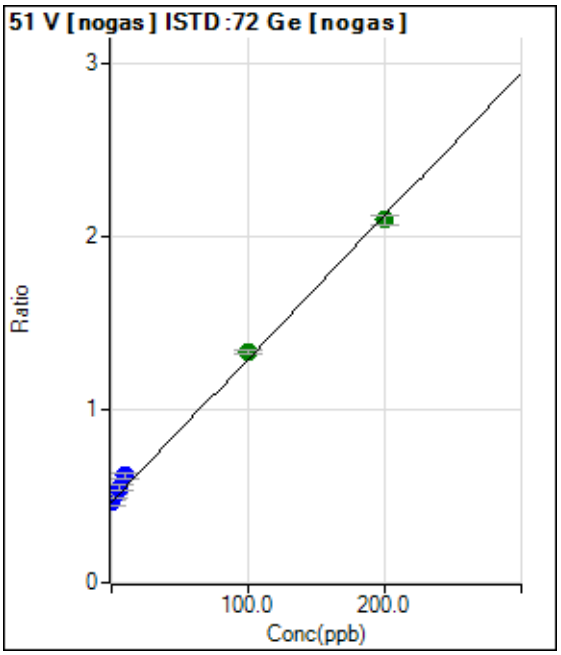


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	200.01	0.0001	P	30.1
2	☐	2.000	2.042	1990.14	0.0012	P	8.1
3	☐	5.000	4.803	4380.61	0.0027	P	0.8
4	☐	10.000	10.452	9055.73	0.0056	P	6.6
5	☐	100.000	98.970	86324.97	0.0523	P	2.2
6	☐	200.000	200.497	169790.44	0.1058	P	2.1
7	☐	1.000					

y = 5.2713E-004 * x + 1.2366E-004
R = 1.0000
DL = 0.2121
BEC = 0.2346

Weight: <None>
Min Conc: <None>

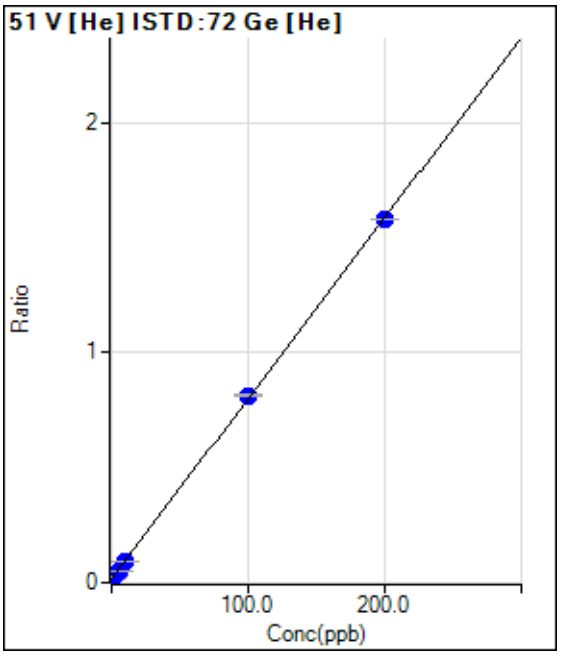
Calibration for 011_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	757177.12	0.4663	P	7.1
2	☐	2.000	4.522	834676.70	0.5037	P	3.9
3	☐	5.000	9.942	904218.51	0.5486	P	7.0
4	☐	10.000	18.588	996723.17	0.6201	P	5.4
5	☐	100.000	105.053	2205167.04	1.3356	A	2.0
6	☐	200.000	196.895	3362505.02	2.0955	A	2.4
7	☐	1.000					

y = 0.0083 * x + 0.4663
R = 0.9991
DL = 12.04
BEC = 56.35

Weight: <None>
Min Conc: <None>

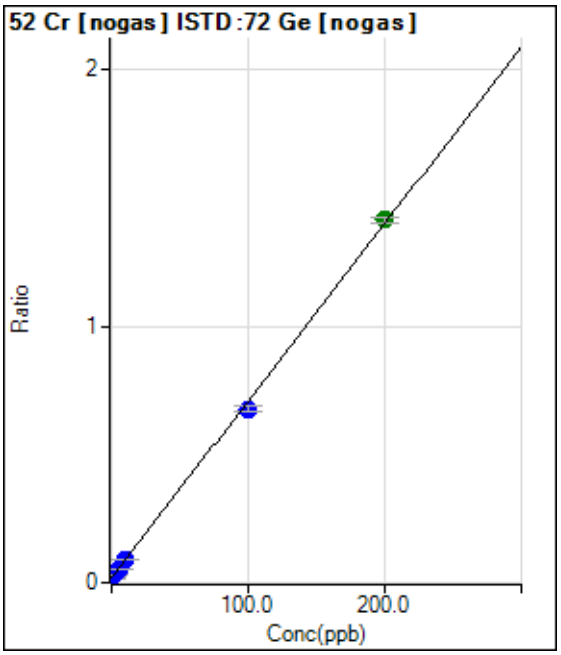


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.192	4805.30	0.0141	P	5.3
2	☐	2.000	1.721	10048.73	0.0291	P	4.0
3	☐	5.000	4.784	18268.99	0.0531	P	2.8
4	☐	10.000	9.777	31710.30	0.0922	P	2.7
5	☐	100.000	101.782	267606.55	0.8133	P	1.0
6	☐	200.000	199.128	517953.97	1.5762	P	0.2
7	☐	1.000					

y = 0.0078 * x + 0.0156
R = 0.9999
DL = 0.2854
BEC = 1.99

Weight: <None>
Min Conc: <None>

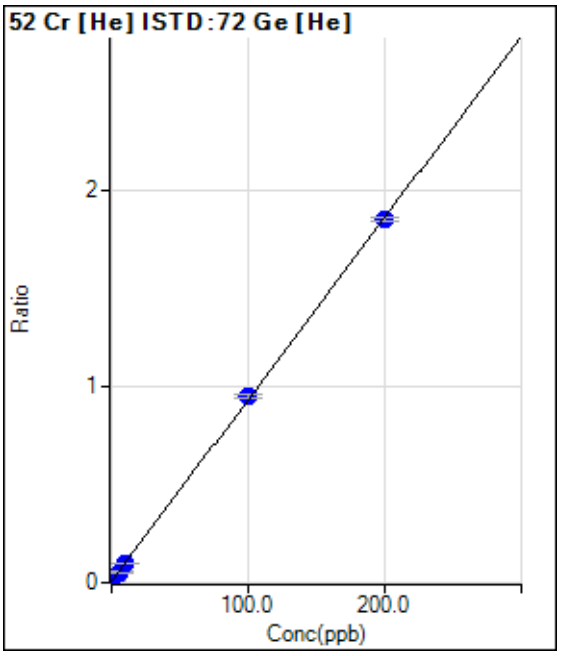
Calibration for 011_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	30455.57	0.0188	P	7.5
2	☐	2.000	2.012	54102.64	0.0327	P	2.3
3	☐	5.000	4.987	87678.16	0.0532	P	4.1
4	☐	10.000	10.284	144268.83	0.0897	P	3.1
5	☐	100.000	95.370	1117446.08	0.6769	P	3.3
6	☐	200.000	202.301	2270320.18	1.4148	A	1.9
7	☐	1.000					

y = 0.0069 * x + 0.0188
R = 0.9996
DL = 0.6135
BEC = 2.719

Weight: <None>
Min Conc: <None>

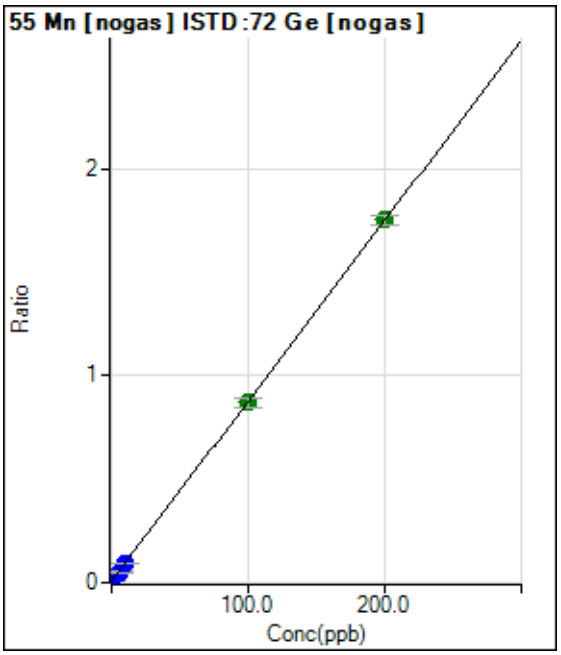


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2540.22	0.0074	P	4.0
2	☐	2.000	1.989	8948.99	0.0259	P	4.7
3	☐	5.000	4.994	18509.49	0.0538	P	1.2
4	☐	10.000	9.985	34446.10	0.1001	P	2.4
5	☐	100.000	102.116	314277.38	0.9551	P	2.0
6	☐	200.000	198.943	609083.52	1.8536	P	1.1
7	☐	1.000					

y = 0.0093 * x + 0.0074
R = 0.9999
DL = 0.0963
BEC = 0.8023

Weight: <None>
Min Conc: <None>

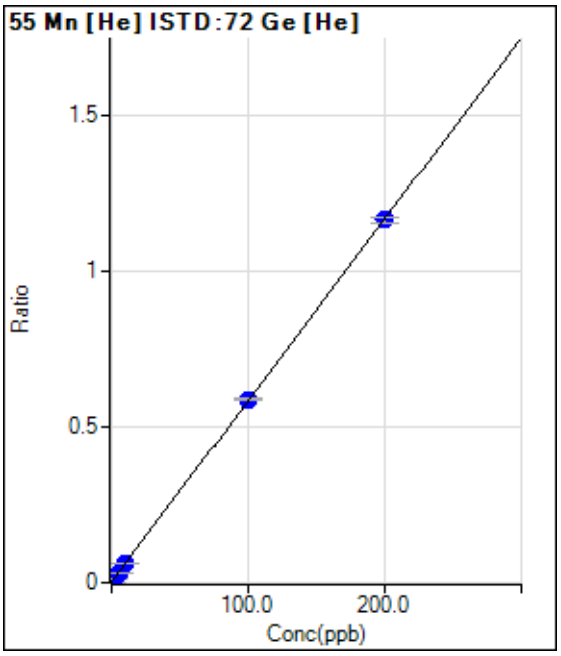
Calibration for 011_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	13008.13	0.0080	P	3.5
2	☐	2.000	1.861	40047.38	0.0242	P	4.0
3	☐	5.000	4.901	83488.71	0.0506	P	2.2
4	☐	10.000	9.939	151840.37	0.0944	P	2.0
5	☐	100.000	99.000	1433617.58	0.8689	A	5.2
6	☐	200.000	200.507	2810991.42	1.7516	A	2.4
7	☐	1.000					

y = 0.0087 * x + 0.0080
R = 1.0000
DL = 0.09794
BEC = 0.9211

Weight: <None>
Min Conc: <None>

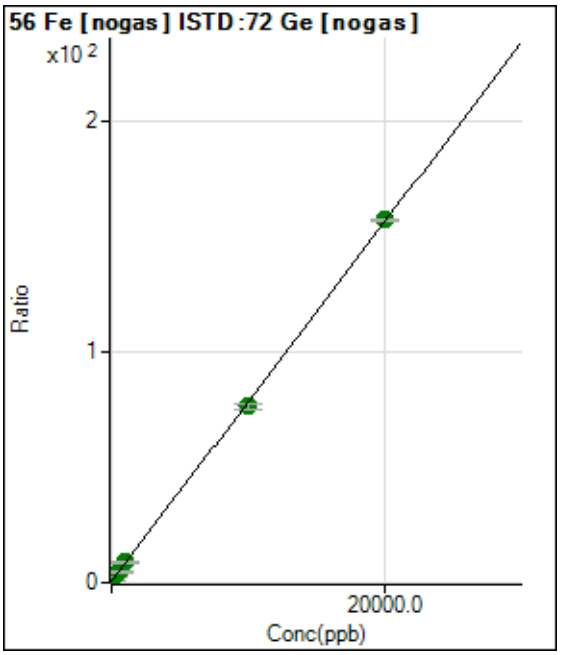


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	886.71	0.0026	P	28.4
2	☐	2.000	1.899	4707.36	0.0136	P	8.6
3	☐	5.000	4.887	10666.62	0.0310	P	4.3
4	☐	10.000	9.827	20548.53	0.0597	P	2.5
5	☐	100.000	100.630	193336.91	0.5875	P	0.9
6	☐	200.000	199.697	382287.03	1.1634	P	1.5
7	☐	1.000					

y = 0.0058 * x + 0.0026
R = 1.0000
DL = 0.3803
BEC = 0.446

Weight: <None>
Min Conc: <None>

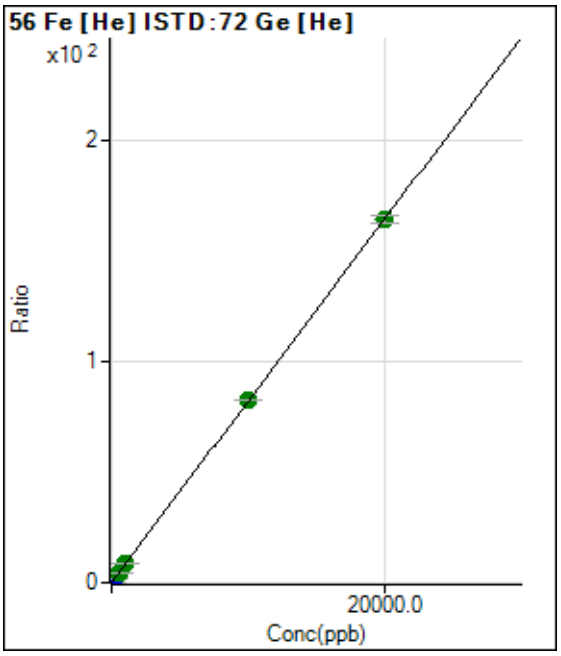
Calibration for 011_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	938515.06	0.5778	P	2.5
2	☐	200.000	210.153	3665966.49	2.2145	A	4.0
3	☐	500.000	520.491	7636671.78	4.6315	A	3.0
4	☐	1000.000	1052.517	14108484.17	8.7751	A	1.1
5	☐	10000.00	9736.630	126090131.9	76.4091	A	3.9
6	☐	20000.00	20128.445	252498347.3	157.343	A	0.6
7	☐	100.000					

y = 0.0078 * x + 0.5778
R = 0.9999
DL = 5.569
BEC = 74.19

Weight: <None>
Min Conc: <None>

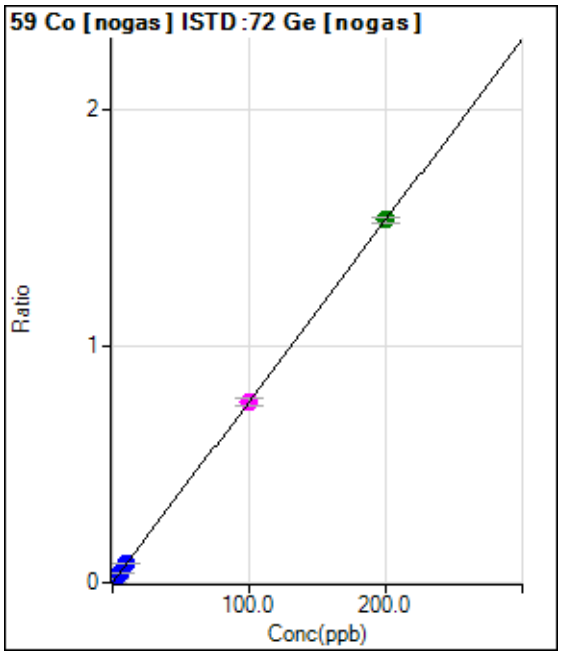


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	8738.97	0.0256	P	4.9
2	☐	200.000	203.154	585034.34	1.6933	P	1.8
3	☐	500.000	522.258	1483808.31	4.3129	A	3.0
4	☐	1000.000	1026.959	2906714.02	8.4561	A	4.6
5	☐	10000.00	10055.579	27172040.43	82.5734	A	0.8
6	☐	20000.00	19970.275	53876434.20	163.964	A	2.0
7	☐	100.000					

y = 0.0082 * x + 0.0256
R = 1.0000
DL = 0.4635
BEC = 3.122

Weight: <None>
Min Conc: <None>

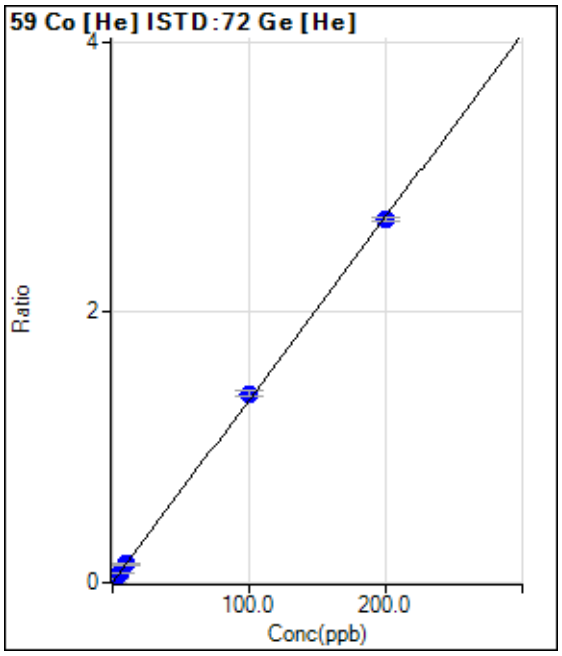
Calibration for 011_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	843.37	0.0005	P	6.9
2	☐	2.000	2.020	26432.87	0.0160	P	3.1
3	☐	5.000	4.982	63663.71	0.0386	P	4.7
4	☐	10.000	10.244	126783.28	0.0789	P	2.2
5	☐	100.000	99.591	1257742.30	0.7622	M	3.7
6	☐	200.000	200.193	2457761.73	1.5315	A	1.7
7	☐	1.000					

y = 0.0076 * x + 5.1893E-004
R = 1.0000
DL = 0.01407
BEC = 0.06785

Weight: <None>
Min Conc: <None>

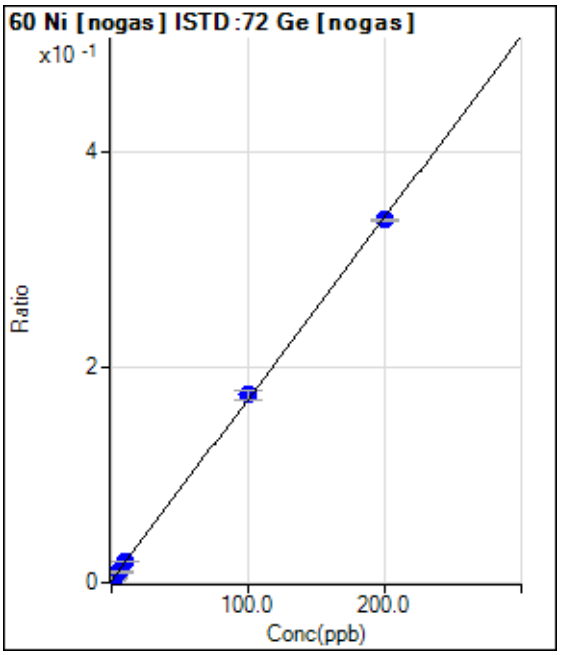


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	310.01	0.0009	P	20.5
2	☐	2.000	2.022	9766.10	0.0283	P	1.1
3	☐	5.000	5.020	23675.66	0.0688	P	4.7
4	☐	10.000	10.120	47378.25	0.1378	P	4.1
5	☐	100.000	103.173	459579.53	1.3967	P	2.8
6	☐	200.000	198.407	882318.71	2.6851	P	1.2
7	☐	1.000					

y = 0.0135 * x + 9.1056E-004
R = 0.9998
DL = 0.04146
BEC = 0.06731

Weight: <None>
Min Conc: <None>

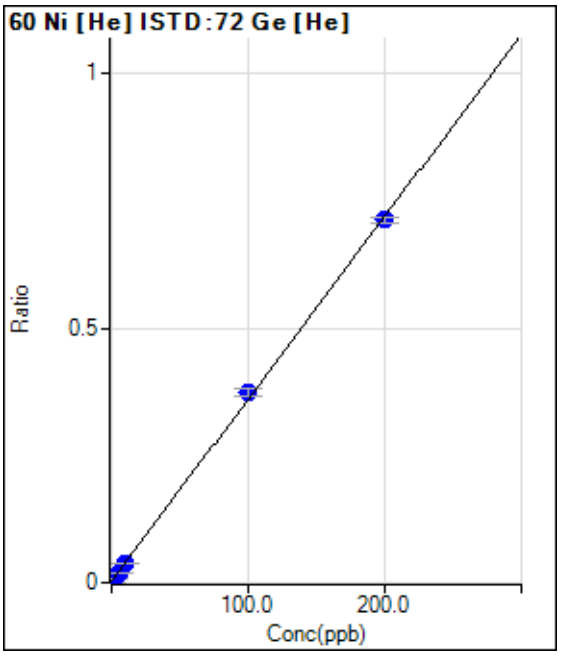
Calibration for 011_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.588	1613.44	0.0010	P	12.5
2	☐	2.000	1.423	7251.58	0.0044	P	9.0
3	☐	5.000	4.676	16277.44	0.0099	P	1.2
4	☐	10.000	10.229	30923.10	0.0192	P	1.9
5	☐	100.000	102.514	288509.38	0.1749	P	4.8
6	☐	200.000	198.745	541048.01	0.3372	P	0.7
7	☐	1.000					

y = 0.0017 * x + 0.0020
R = 0.9999
DL = 0.2208
BEC = 1.176

Weight: <None>
Min Conc: <None>

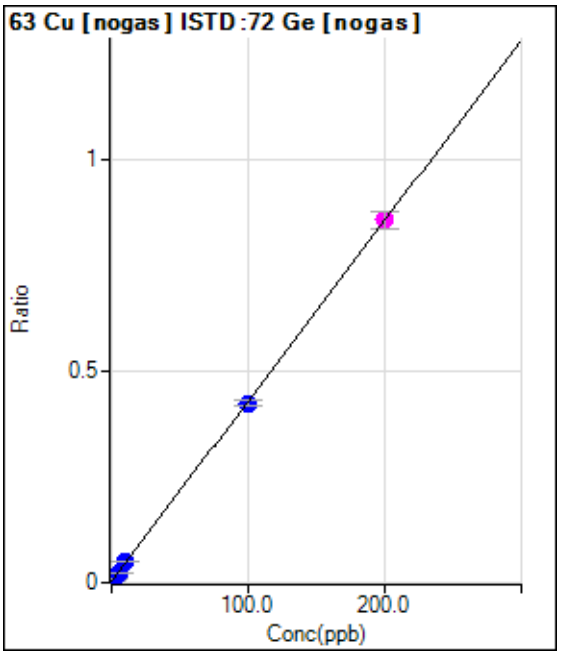


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.540	273.34	0.0008	P	19.7
2	☐	2.000	1.390	2663.58	0.0077	P	9.1
3	☐	5.000	4.574	6574.65	0.0191	P	4.2
4	☐	10.000	9.835	13034.84	0.0379	P	4.9
5	☐	100.000	103.432	122672.68	0.3728	P	3.7
6	☐	200.000	198.309	234052.18	0.7123	P	1.4
7	☐	1.000					

y = 0.0036 * x + 0.0027
R = 0.9998
DL = 0.1324
BEC = 0.7645

Weight: <None>
Min Conc: <None>

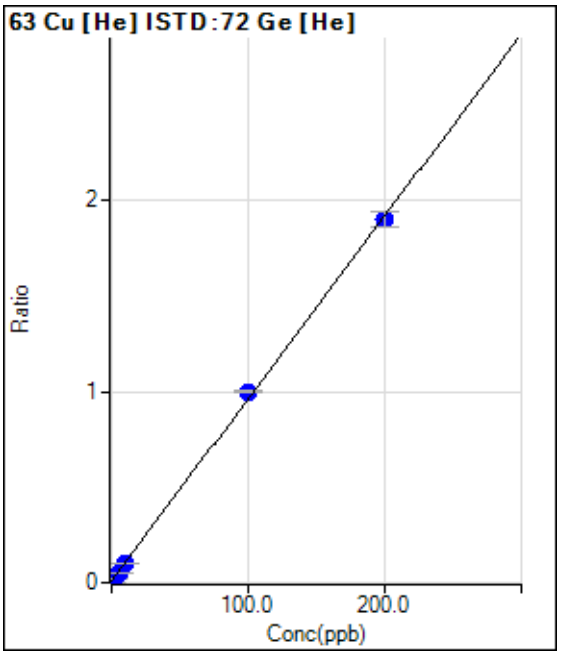
Calibration for 011_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4593.98	0.0028	P	7.5
2	☐	2.000	1.990	18746.57	0.0113	P	7.8
3	☐	5.000	5.000	39897.38	0.0242	P	2.8
4	☐	10.000	10.664	77799.67	0.0484	P	0.7
5	☐	100.000	99.010	702753.77	0.4258	P	3.3
6	☐	200.000	200.462	1378486.02	0.8592	M	4.4
7	☐	1.000					

y = 0.0043 * x + 0.0028
R = 1.0000
DL = 0.1501
BEC = 0.6626

Weight: <None>
Min Conc: <None>

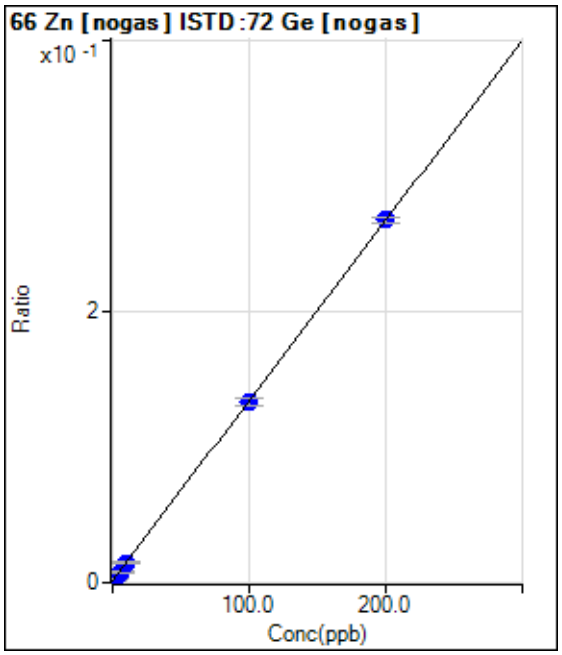


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.493	1460.08	0.0043	P	3.2
2	☐	2.000	1.490	8008.57	0.0232	P	6.7
3	☐	5.000	4.524	17919.10	0.0521	P	6.2
4	☐	10.000	9.457	34078.91	0.0991	P	3.3
5	☐	100.000	103.956	328969.91	0.9998	P	1.6
6	☐	200.000	198.066	623208.95	1.8968	P	4.3
7	☐	1.000					

y = 0.0095 * x + 0.0090
R = 0.9997
DL = 0.04289
BEC = 0.9418

Weight: <None>
Min Conc: <None>

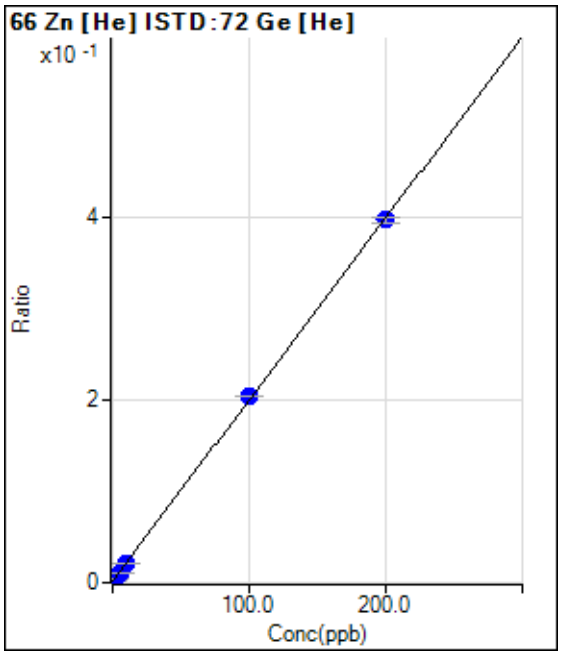
Calibration for 011_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.583	3277.03	0.0020	P	3.8
2	☐	2.000	1.702	5804.36	0.0035	P	3.7
3	☐	5.000	4.783	12531.17	0.0076	P	6.1
4	☐	10.000	10.248	23916.09	0.0149	P	2.3
5	☐	100.000	99.376	220298.57	0.1334	P	3.5
6	☐	200.000	200.308	429518.74	0.2677	P	1.7
7	☐	1.000					

y = 0.0013 * x + 0.0012
R = 1.0000
DL = 0.1714
BEC = 0.9333

Weight: <None>
Min Conc: <None>

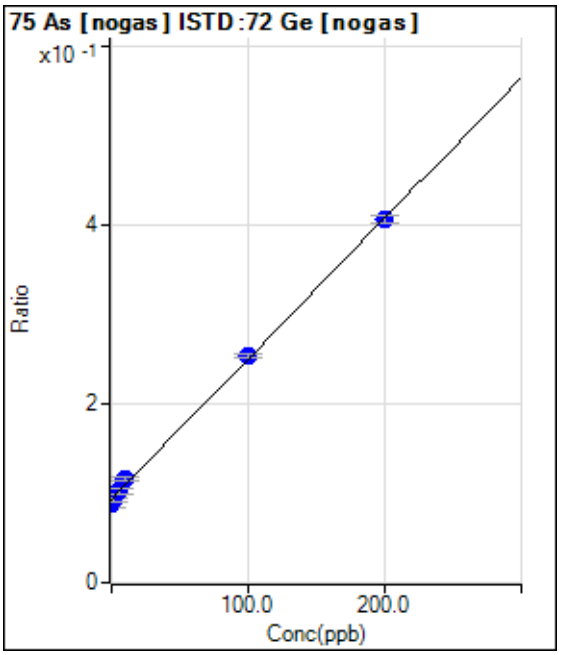


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.446	833.37	0.0024	P	7.8
2	☐	2.000	1.481	1556.76	0.0045	P	25.8
3	☐	5.000	4.531	3637.11	0.0106	P	3.0
4	☐	10.000	9.605	7101.51	0.0207	P	4.3
5	☐	100.000	101.802	67130.12	0.2040	P	0.6
6	☐	200.000	199.136	130635.28	0.3976	P	1.3
7	☐	1.000					

y = 0.0020 * x + 0.0016
R = 0.9999
DL = 0.2874
BEC = 0.7836

Weight: <None>
Min Conc: <None>

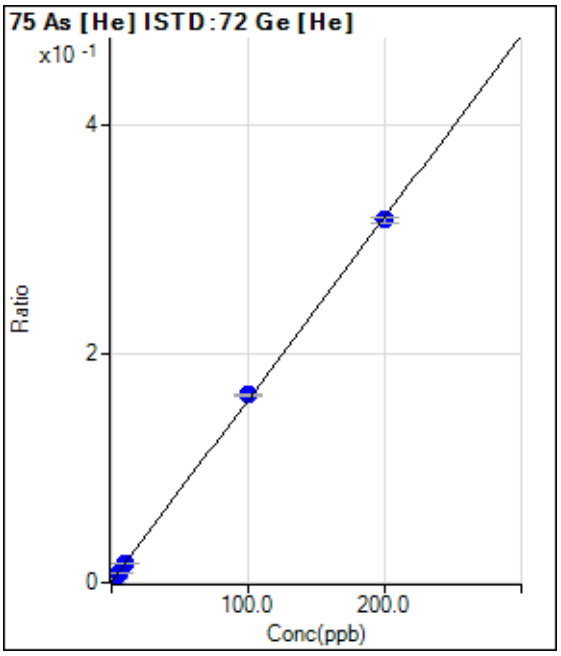
Calibration for 011_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-3.777	142071.14	0.0875	P	8.4
2	☐	2.000	-0.453	153656.37	0.0927	P	3.7
3	☐	5.000	5.680	168757.38	0.1024	P	5.7
4	☐	10.000	14.694	187348.56	0.1166	P	4.3
5	☐	100.000	102.166	419752.40	0.2542	P	2.3
6	☐	200.000	198.690	651580.41	0.4061	P	2.2
7	☐	1.000					

y = 0.0016 * x + 0.0934
R = 0.9993
DL = 14.01
BEC = 59.38

Weight: <None>
Min Conc: <None>

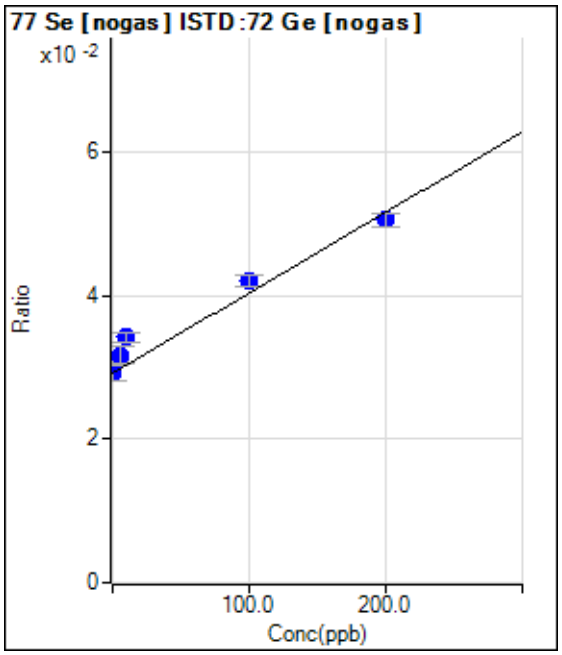


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	234.45	0.0007	P	19.7
2	☐	2.000	2.020	1346.73	0.0039	P	8.8
3	☐	5.000	5.004	2972.48	0.0086	P	4.9
4	☐	10.000	10.171	5793.17	0.0169	P	4.4
5	☐	100.000	102.602	53884.94	0.1637	P	1.1
6	☐	200.000	198.690	103988.36	0.3164	P	1.4
7	☐	1.000					

y = 0.0016 * x + 6.8851E-004
R = 0.9999
DL = 0.2561
BEC = 0.4332

Weight: <None>
Min Conc: <None>

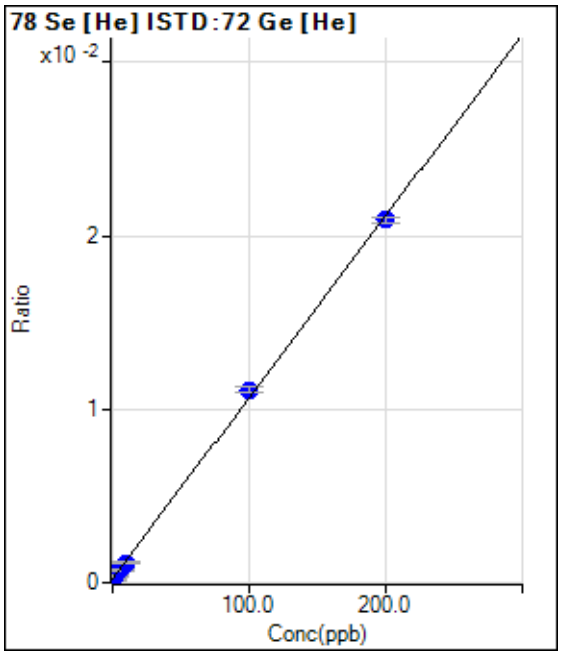
Calibration for 011_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	47382.07	0.0292	P	7.9
2	☐	2.000	12.591	50690.97	0.0306	P	1.9
3	☐	5.000	22.789	52325.48	0.0317	P	7.1
4	☐	10.000	44.713	54976.66	0.0342	P	4.2
5	☐	100.000	114.476	69412.80	0.0420	P	3.8
6	☐	200.000	190.476	81110.50	0.0506	P	3.7
7	☐	1.000					

y = 1.1216E-004 * x + 0.0292
R = 0.9857
DL = 61.82
BEC = 260.2

Weight: <None>
Min Conc: <None>

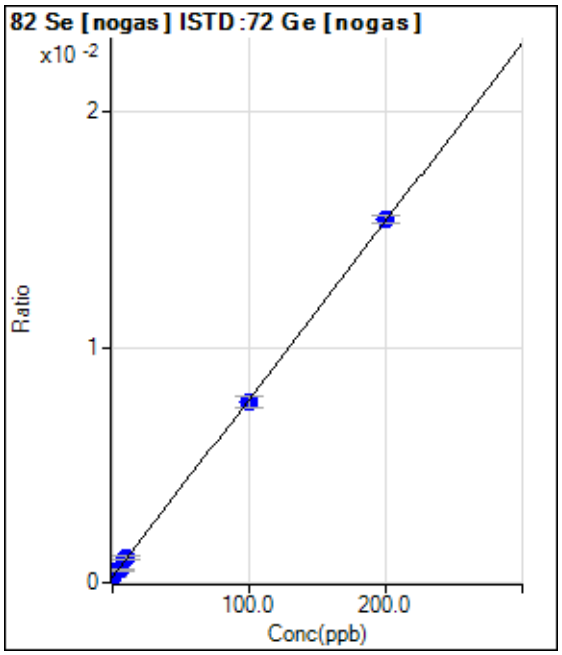


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.270	66.00	0.0002	P	30.0
2	☐	2.000	1.566	133.33	0.0004	P	22.8
3	☐	5.000	4.808	249.33	0.0007	P	7.9
4	☐	10.000	8.666	387.34	0.0011	P	10.4
5	☐	100.000	104.310	3660.38	0.0111	P	2.5
6	☐	200.000	197.921	6870.65	0.0209	P	1.6
7	☐	1.000					

y = 1.0451E-004 * x + 2.2223E-004
R = 0.9996
DL = 1.67
BEC = 2.126

Weight: <None>
Min Conc: <None>

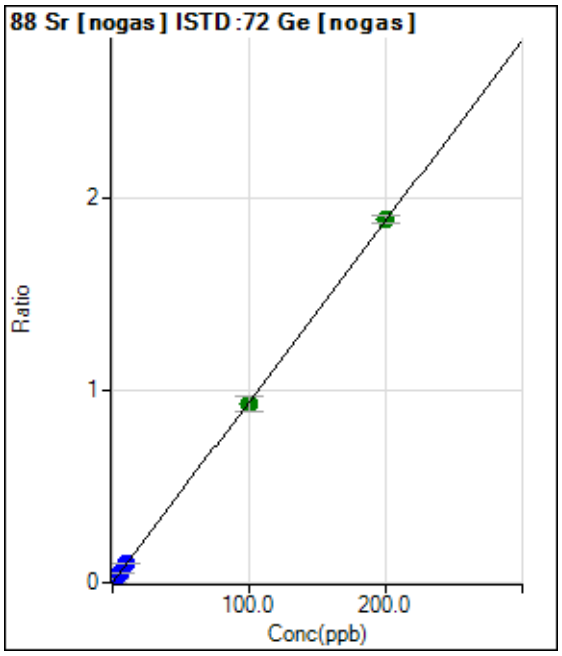
Calibration for 011_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	383.34	0.0002	P	22.4
2	☐	2.000	3.045	770.04	0.0005	P	16.9
3	☐	5.000	4.008	890.04	0.0005	P	21.1
4	☐	10.000	10.936	1710.12	0.0011	P	15.1
5	☐	100.000	98.478	12678.01	0.0077	P	6.4
6	☐	200.000	200.728	24743.99	0.0154	P	2.1
7	☐	1.000					

y = 7.5653E-005 * x + 2.3518E-004
R = 0.9999
DL = 2.089
BEC = 3.109

Weight: <None>
Min Conc: <None>

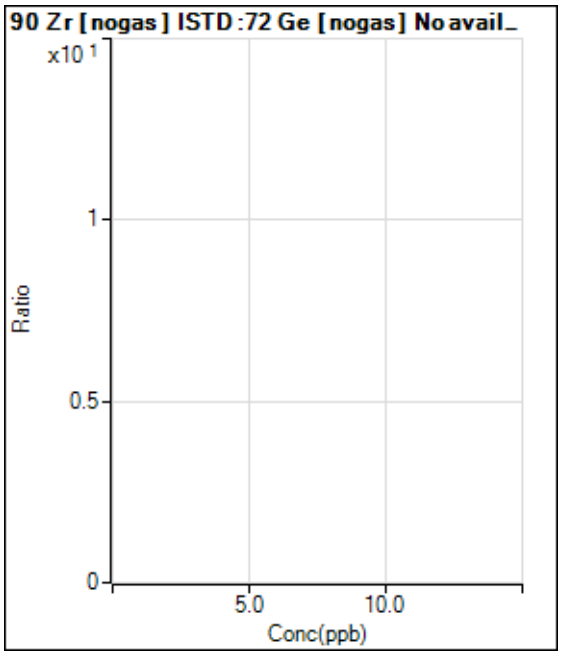


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	686.69	0.0004	P	7.8
2	☐	2.000	1.974	31411.65	0.0190	P	3.3
3	☐	5.000	5.069	79221.94	0.0481	P	4.0
4	☐	10.000	10.415	158022.93	0.0983	P	2.2
5	☐	100.000	98.633	1528951.12	0.9272	A	8.3
6	☐	200.000	200.661	3026402.35	1.8860	A	2.1
7	☐	1.000					

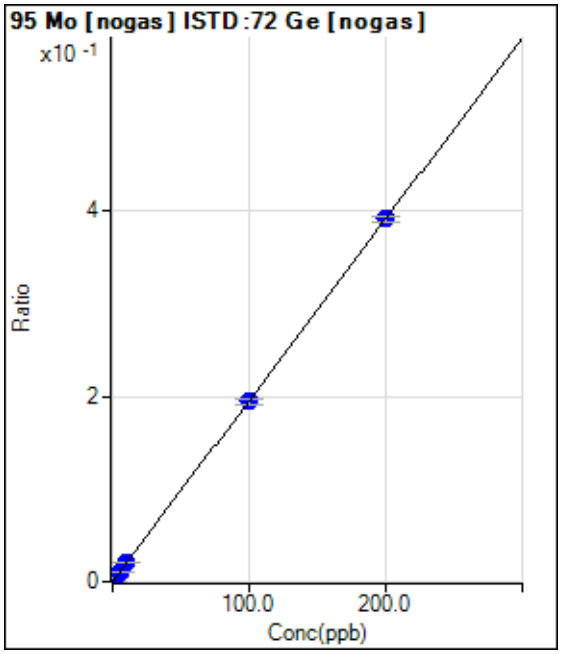
y = 0.0094 * x + 4.2215E-004
R = 1.0000
DL = 0.01051
BEC = 0.04493

Weight: <None>
Min Conc: <None>

Calibration for 011_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

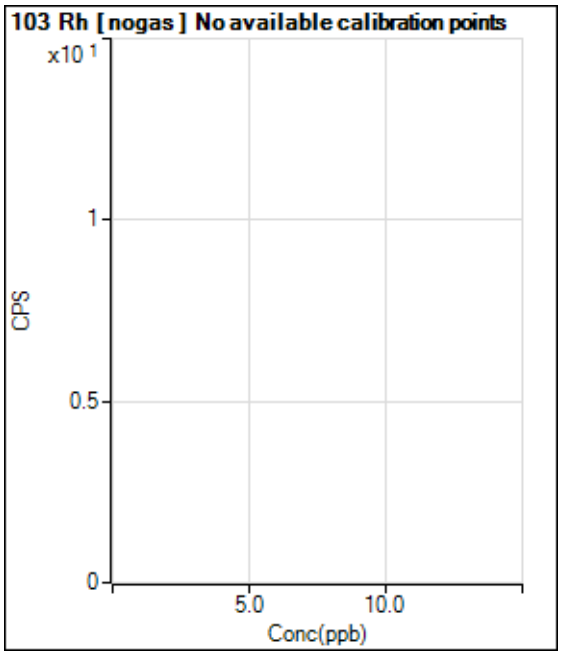


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	83.33	0.0001	P	57.1
2	☐	2.000	1.968	6451.30	0.0039	P	5.6
3	☐	5.000	5.067	16404.45	0.0100	P	7.1
4	☐	10.000	10.510	33104.57	0.0206	P	2.4
5	☐	100.000	99.430	320847.90	0.1944	P	2.9
6	☐	200.000	200.258	628109.31	0.3914	P	1.4
7	☐	1.000					

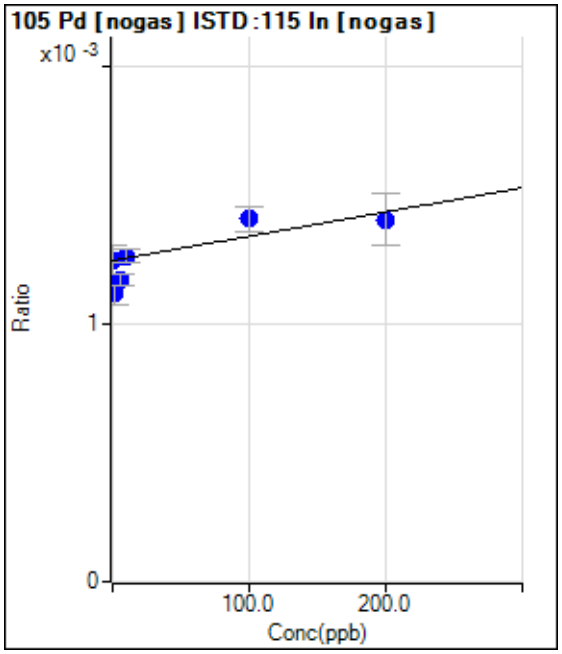
y = 0.0020 * x + 5.0941E-005
R = 1.0000
DL = 0.04463
BEC = 0.02606

Weight: <None>
Min Conc: <None>

Calibration for 011_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			53.33		P	39.0
2	☐			60.00		P	33.3
3	☐			33.33		P	69.3
4	☐			73.33		P	39.4
5	☐			123.33		P	30.7
6	☐			196.67		P	33.9
7	☐						

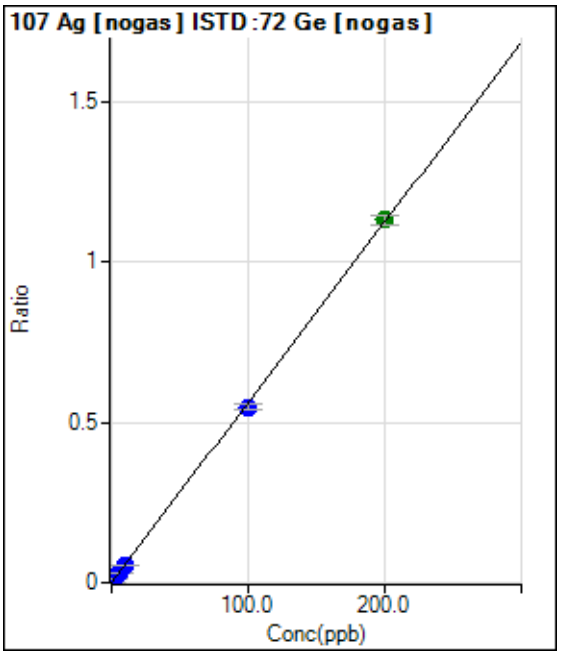


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2120.17	0.0012	P	9.0
2	☐	2.000	-132.533	1956.82	0.0011	P	8.4
3	☐	5.000	-82.624	2013.49	0.0012	P	3.7
4	☐	10.000	17.136	2186.84	0.0013	P	4.4
5	☐	100.000	171.163	2363.54	0.0014	P	6.9
6	☐	200.000	167.598	2230.18	0.0014	P	14.2
7	☐	1.000					

y = 9.4074E-007 * x + 0.0012
R = 0.8326
DL = 359.4
BEC = 1325

Weight: <None>
Min Conc: <None>

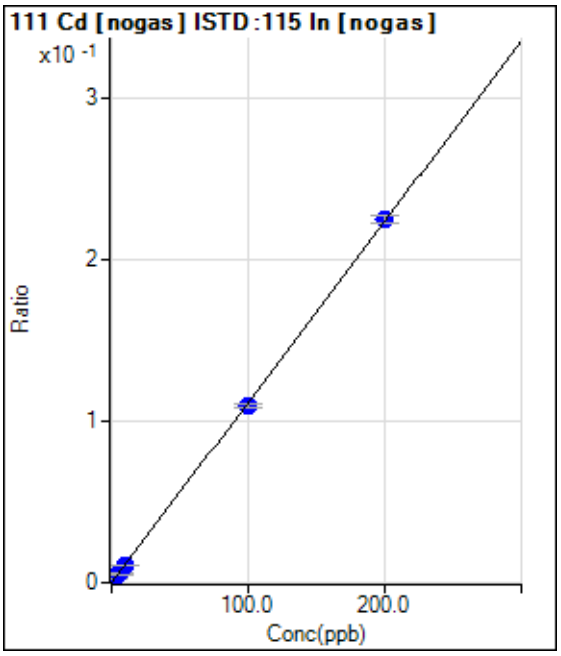
Calibration for 011_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	290.01	0.0002	P	14.3
2	☐	2.000	1.995	18827.03	0.0114	P	7.0
3	☐	5.000	4.918	45813.39	0.0278	P	4.2
4	☐	10.000	9.963	90214.94	0.0561	P	2.3
5	☐	100.000	97.285	901759.10	0.5464	P	3.4
6	☐	200.000	201.362	1814522.63	1.1308	A	2.5
7	☐	1.000					

y = 0.0056 * x + 1.7880E-004
R = 0.9999
DL = 0.01371
BEC = 0.03184

Weight: <None>
Min Conc: <None>

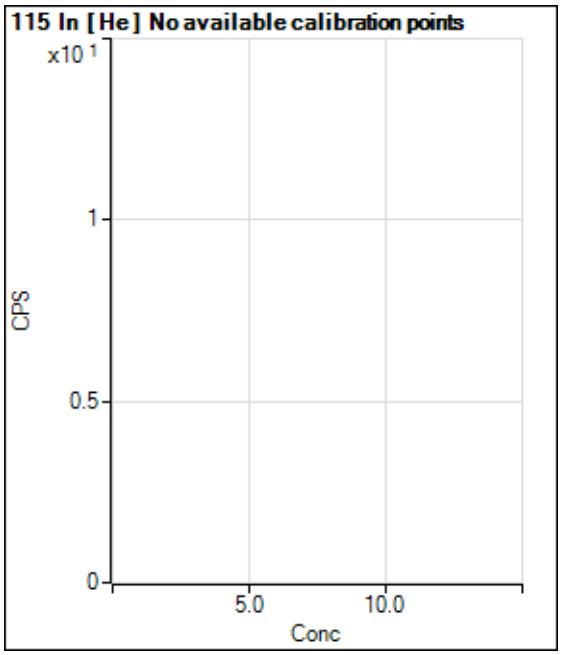


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	0.00	0.0000	P	
2	☐	2.000	2.088	4053.86	0.0023	P	5.5
3	☐	5.000	4.808	9242.57	0.0054	P	2.2
4	☐	10.000	9.638	18596.83	0.0108	P	6.1
5	☐	100.000	98.005	183774.51	0.1094	P	2.5
6	☐	200.000	201.019	356189.28	0.2243	P	2.3
7	☐	1.000					

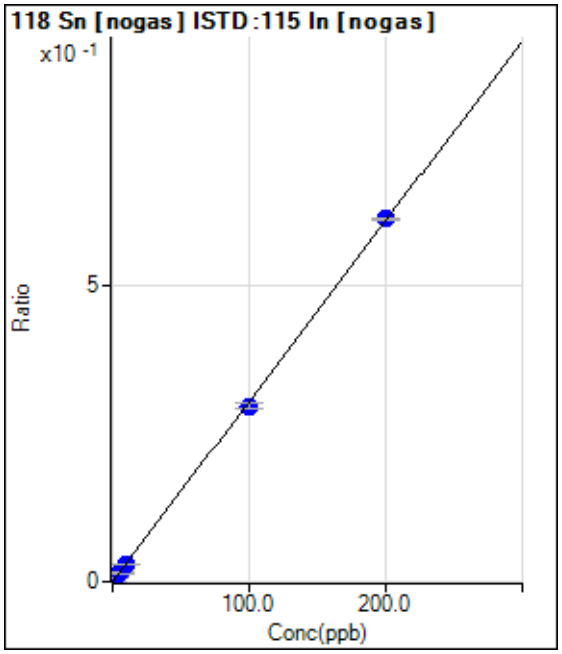
y = 0.0011 * x + 0.0000E+000
R = 0.9999
DL = 0
BEC = 0

Weight: <None>
Min Conc: <None>

Calibration for 011_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			453480.60		P	1.4
2	☐			453549.34		P	1.7
3	☐			459832.69		P	0.5
4	☐			451640.78		P	1.8
5	☐			439676.60		P	0.3
6	☐			424271.25		P	1.5
7	☐						

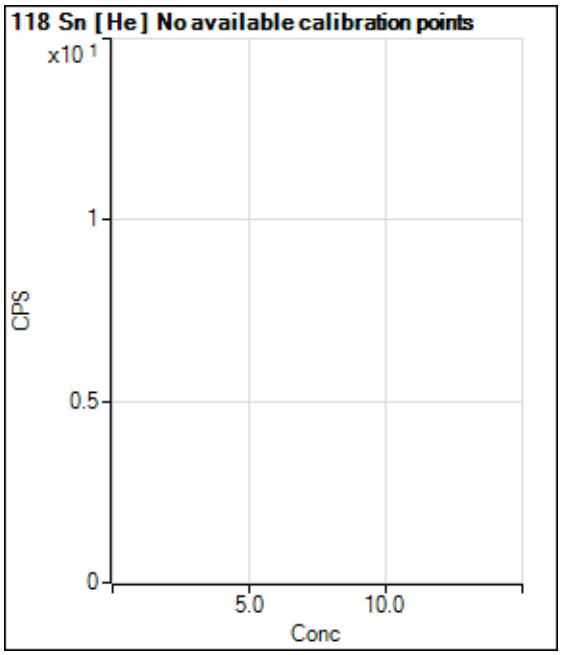


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	703.36	0.0004	P	14.7
2	☐	2.000	1.871	10646.84	0.0061	P	3.4
3	☐	5.000	4.734	25535.49	0.0148	P	6.1
4	☐	10.000	9.475	50660.82	0.0293	P	0.6
5	☐	100.000	97.468	499444.03	0.2973	P	4.1
6	☐	200.000	201.300	974141.13	0.6135	P	0.8
7	☐	1.000					

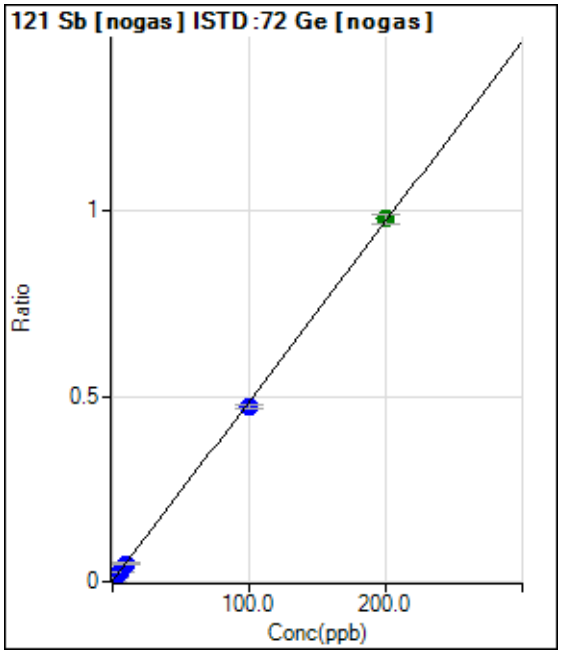
y = 0.0030 * x + 4.1193E-004
R = 0.9999
DL = 0.05952
BEC = 0.1352

Weight: <None>
Min Conc: <None>

Calibration for 011_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			260.01		P	24.0
2	☐			3657.13		P	3.4
3	☐			8508.91		P	10.1
4	☐			16895.16		P	0.6
5	☐			161601.18		P	0.7
6	☐			315285.89		P	0.7
7	☐						

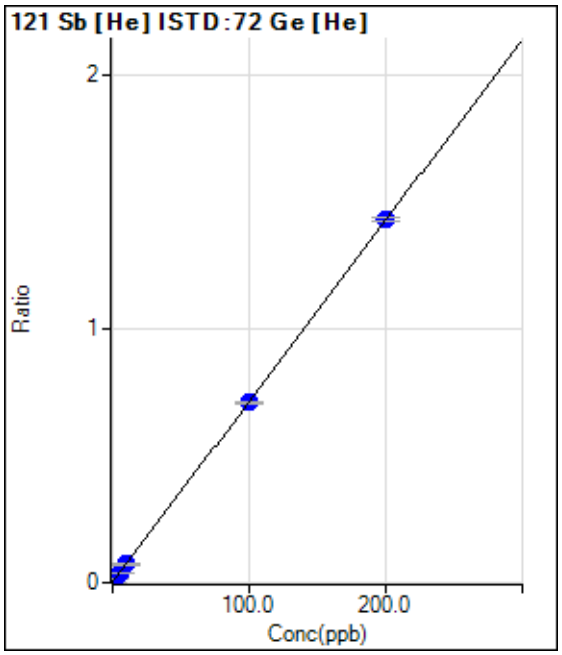


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1850.14	0.0011	P	5.0
2	☐	2.000	2.015	18086.37	0.0109	P	2.0
3	☐	5.000	4.957	41553.27	0.0252	P	0.4
4	☐	10.000	9.900	79059.71	0.0492	P	1.5
5	☐	100.000	97.150	779951.08	0.4725	P	2.5
6	☐	200.000	201.431	1570042.37	0.9785	A	2.6
7	☐	1.000					

y = 0.0049 * x + 0.0011
R = 0.9999
DL = 0.03543
BEC = 0.2348

Weight: <None>
Min Conc: <None>

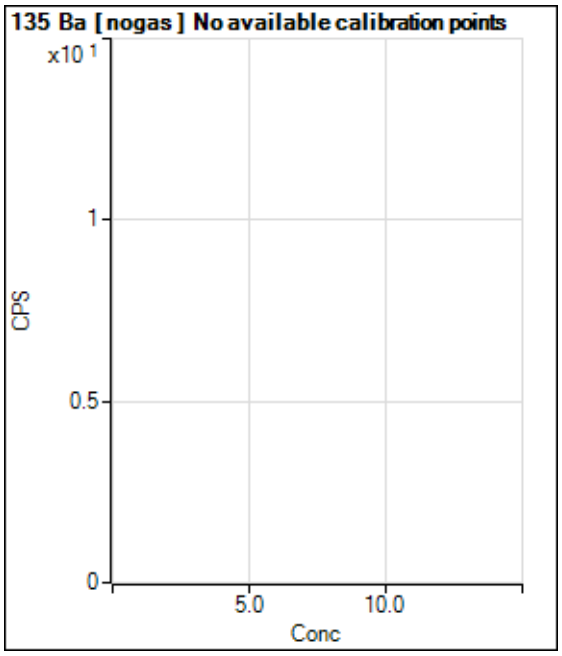
Calibration for 011_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	613.35	0.0018	P	6.3
2	☐	2.000	2.039	5634.36	0.0163	P	2.5
3	☐	5.000	5.123	13161.91	0.0383	P	2.2
4	☐	10.000	9.968	25008.25	0.0727	P	3.5
5	☐	100.000	99.317	233182.21	0.7086	P	0.5
6	☐	200.000	200.340	469113.68	1.4276	P	1.0
7	☐	1.000					

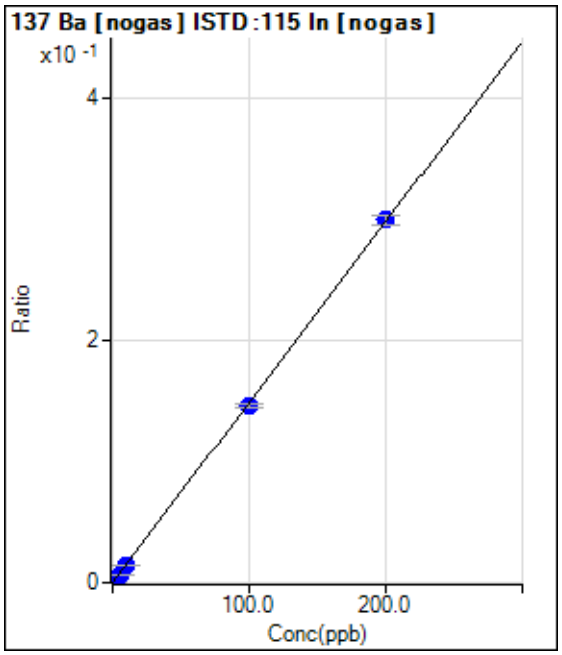
y = 0.0071 * x + 0.0018
R = 1.0000
DL = 0.0478
BEC = 0.2528

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			90.00		P	98.8
2	☐			2863.63		P	4.2
3	☐			6851.50		P	6.4
4	☐			14413.01		P	5.6
5	☐			141539.11		P	2.1
6	☐			270070.39		P	1.2
7	☐						

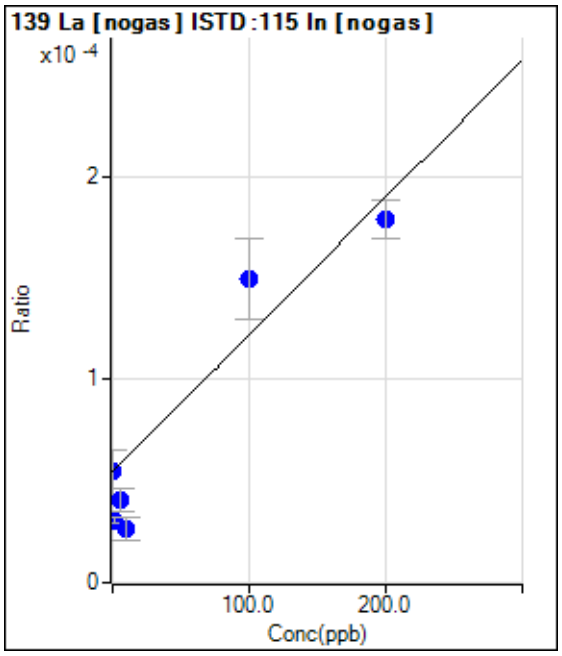
Calibration for 011_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	160.00	0.0001	P	69.7
2	☐	2.000	1.903	5094.16	0.0029	P	6.1
3	☐	5.000	4.620	12007.75	0.0070	P	3.9
4	☐	10.000	9.536	24704.74	0.0143	P	4.2
5	☐	100.000	97.618	244248.40	0.1454	P	2.3
6	☐	200.000	201.224	475553.74	0.2995	P	2.7
7	☐	1.000					

y = 0.0015 * x + 9.5202E-005
R = 0.9999
DL = 0.1337
BEC = 0.06398

Weight: <None>
Min Conc: <None>

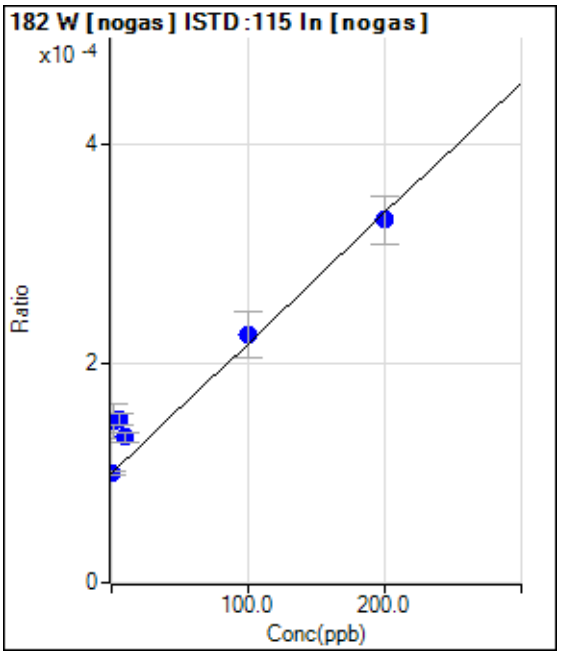


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	93.33	0.0001	P	38.8
2	☐	2.000	-35.331	53.33	0.0000	P	10.8
3	☐	5.000	-20.444	70.00	0.0000	P	29.5
4	☐	10.000	-40.983	46.67	0.0000	P	42.8
5	☐	100.000	140.348	250.01	0.0001	P	26.2
6	☐	200.000	183.385	283.34	0.0002	P	10.7
7	☐	100.000					

y = 6.7579E-007 * x + 5.4518E-005
R = 0.9519
DL = 93.87
BEC = 80.67

Weight: <None>
Min Conc: <None>

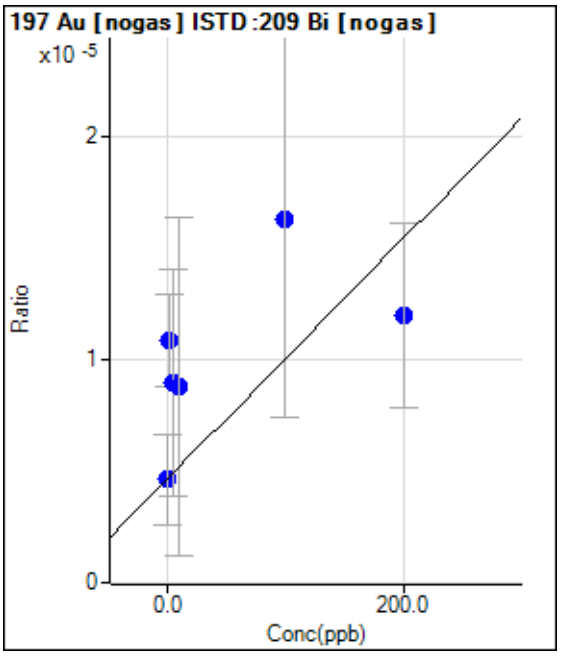
Calibration for 011_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	170.00	0.0001	P	3.0
2	☐	2.000	39.891	256.68	0.0001	P	21.0
3	☐	5.000	41.224	256.68	0.0001	P	7.3
4	☐	10.000	27.883	230.01	0.0001	P	6.8
5	☐	100.000	106.523	380.01	0.0002	P	18.4
6	☐	200.000	194.560	526.68	0.0003	P	12.9
7	☐	1.000					

y = 1.1912E-006 * x + 9.9847E-005
R = 0.9806
DL = 7.462
BEC = 83.82

Weight: <None>
Min Conc: <None>

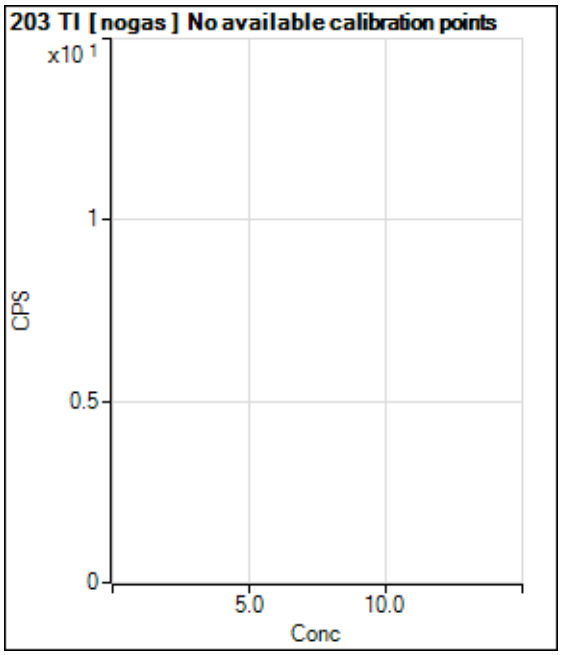


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6.67	0.0000	P	86.6
2	☐	2.000	115.793	16.67	0.0000	P	37.9
3	☐	5.000	80.032	13.33	0.0000	P	114.
4	☐	10.000	77.175	13.33	0.0000	P	173.
5	☐	100.000	215.489	23.33	0.0000	P	109.
6	☐	200.000	135.883	16.67	0.0000	P	68.7
7	☐	100.000					

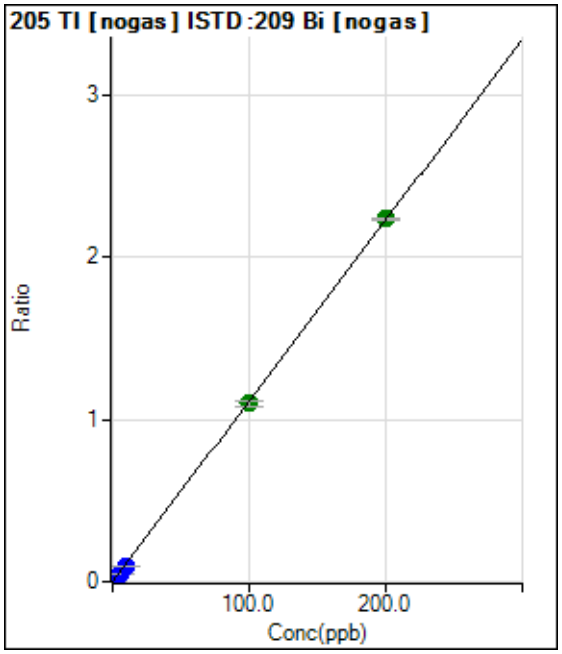
y = 5.4088E-008 * x + 4.6378E-006
R = 0.5853
DL = 222.8
BEC = 85.75

Weight: <None>
Min Conc: <None>

Calibration for 011_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			76.67		P	41.9
2	☐			12615.11		P	0.6
3	☐			31043.29		P	2.0
4	☐			64256.60		P	3.1
5	☐			635907.39		P	1.8
6	☐			1257339.80		P	1.1
7	☐						

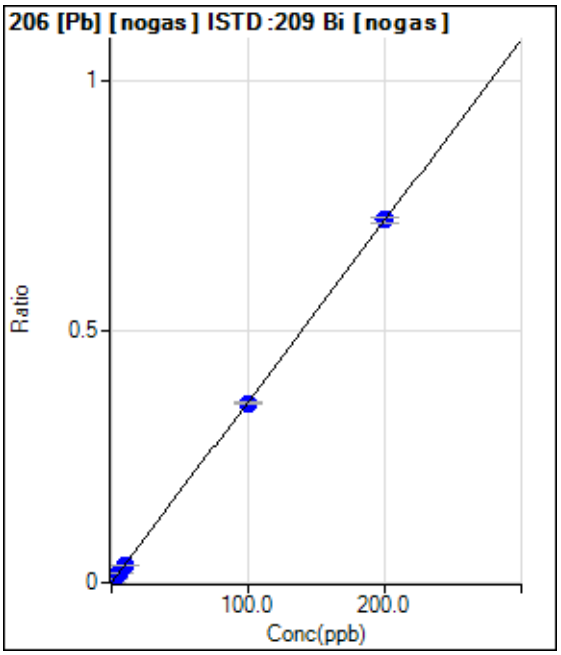


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	100.00	0.0001	P	11.8
2	☐	2.000	1.731	29867.91	0.0194	P	8.0
3	☐	5.000	4.669	77175.75	0.0521	P	2.1
4	☐	10.000	8.772	150298.31	0.0979	P	2.2
5	☐	100.000	98.620	1591872.68	1.0996	A	3.3
6	☐	200.000	200.762	3105162.77	2.2385	A	0.5
7	☐	1.000					

y = 0.0111 * x + 6.9035E-005
R = 1.0000
DL = 0.002199
BEC = 0.006192

Weight: <None>
Min Conc: <None>

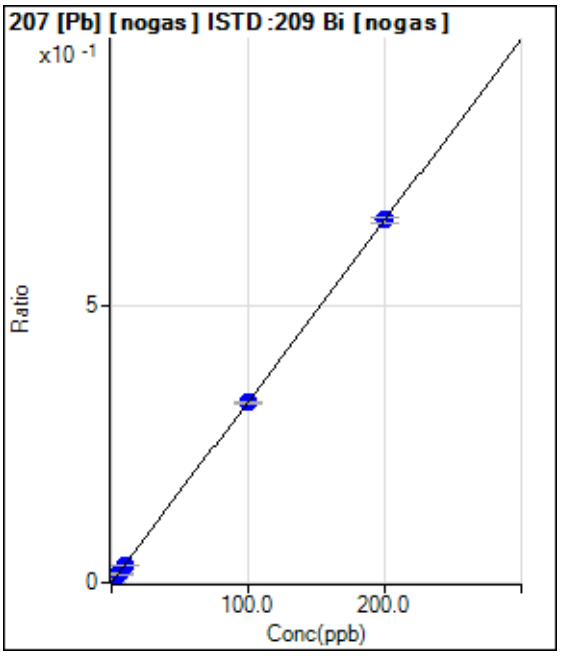
Calibration for 011_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	93.33	0.0001	P	29.7
2	☐	2.000	1.788	10039.95	0.0065	P	7.2
3	☐	5.000	4.949	26495.29	0.0179	P	1.9
4	☐	10.000	9.167	50826.81	0.0331	P	1.3
5	☐	100.000	99.236	517792.82	0.3576	P	1.7
6	☐	200.000	200.427	1001818.65	0.7222	P	1.3
7	☐	1.000					

y = 0.0036 * x + 6.4135E-005
R = 1.0000
DL = 0.01586
BEC = 0.0178

Weight: <None>
Min Conc: <None>

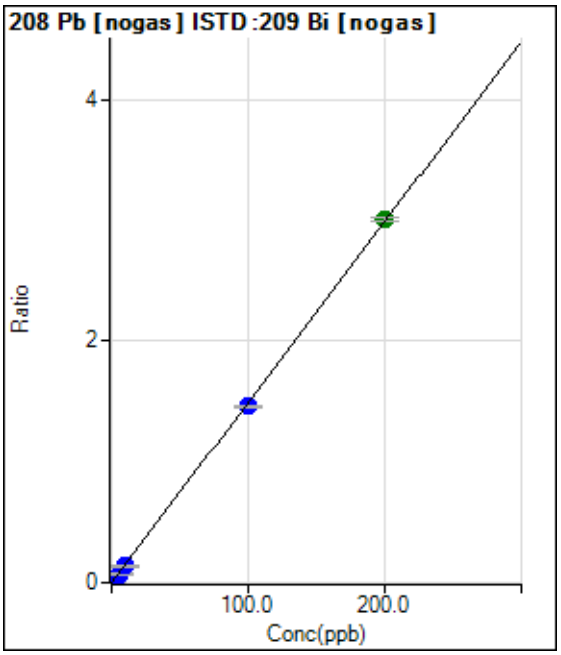


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	106.67	0.0001	P	43.5
2	☐	2.000	1.874	9556.33	0.0062	P	4.4
3	☐	5.000	4.795	23263.89	0.0157	P	3.5
4	☐	10.000	9.273	46573.87	0.0303	P	1.2
5	☐	100.000	99.466	469965.33	0.3246	P	1.3
6	☐	200.000	200.310	906575.95	0.6535	P	1.6
7	☐	1.000					

y = 0.0033 * x + 7.3734E-005
R = 1.0000
DL = 0.02946
BEC = 0.0226

Weight: <None>
Min Conc: <None>

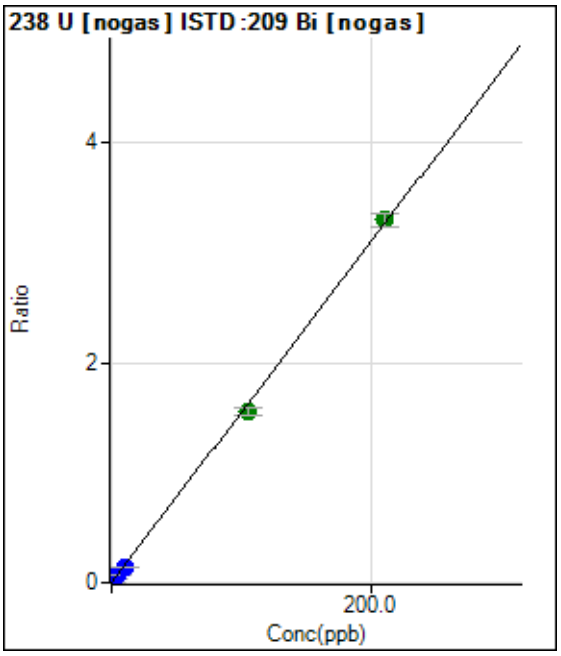
Calibration for 011_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	486.68	0.0003	P	15.5
2	☐	2.000	1.827	42626.28	0.0276	P	6.1
3	☐	5.000	4.765	105842.94	0.0715	P	1.9
4	☐	10.000	9.133	209951.61	0.1367	P	2.4
5	☐	100.000	97.617	2111622.85	1.4582	P	1.0
6	☐	200.000	201.242	4169660.77	3.0059	A	1.1
7	☐	1.000					

y = 0.0149 * x + 3.3551E-004
R = 0.9999
DL = 0.01044
BEC = 0.02246

Weight: <None>
Min Conc: <None>

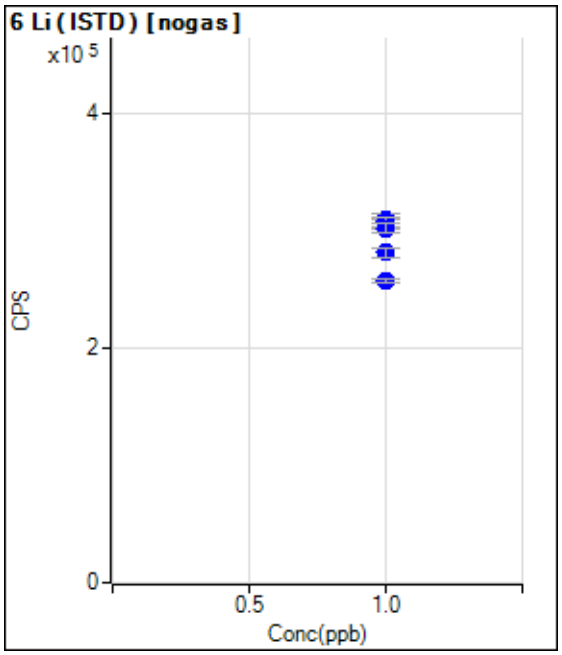


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	106.67	0.0001	P	33.5
2	☐	2.000	1.796	43209.25	0.0280	P	4.3
3	☐	5.000	4.582	105533.09	0.0713	P	1.8
4	☐	10.000	9.043	215708.43	0.1406	P	7.0
5	☐	105.000	100.422	2259099.19	1.5608	A	4.5
6	☐	210.000	212.346	4577812.43	3.3003	A	3.4
7	☐	1.000					

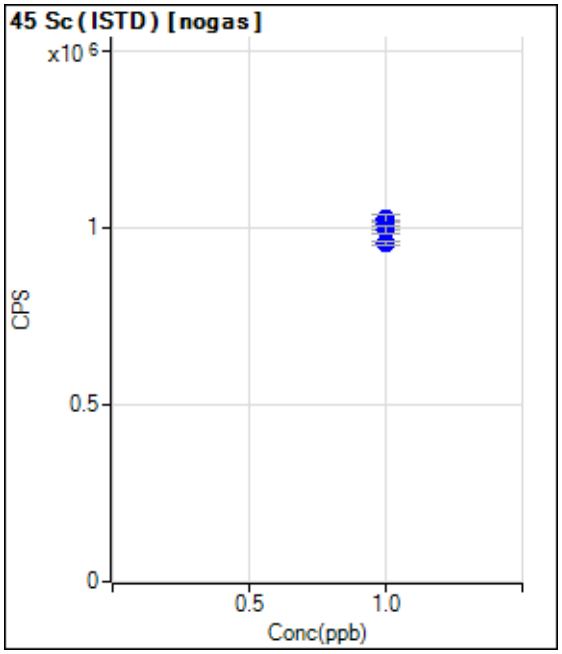
y = 0.0155 * x + 7.3703E-005
R = 0.9997
DL = 0.004769
BEC = 0.004742

Weight: <None>
Min Conc: <None>

Calibration for 011_ICV.d

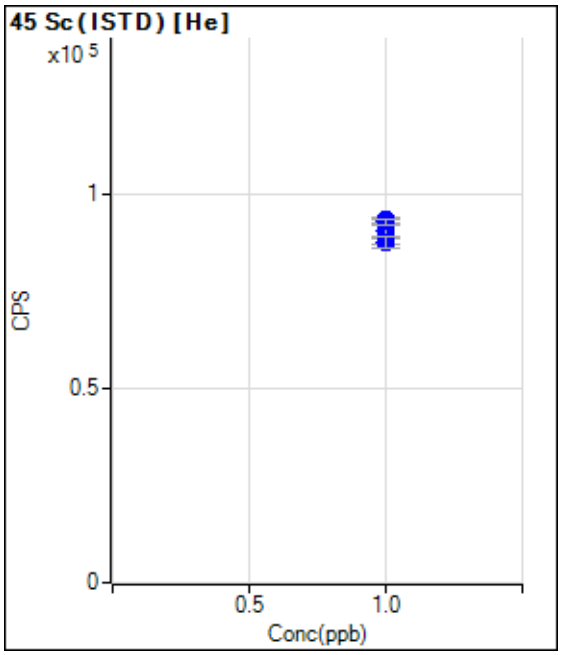


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		309365.50		P	3.8
2	☐	1.000		308789.23		P	1.1
3	☐	1.000		307104.29		P	3.2
4	☐	1.000		302216.69		P	2.6
5	☐	1.000		281349.51		P	2.7
6	☐	1.000		257250.64		P	1.3
7	☐	1.000					

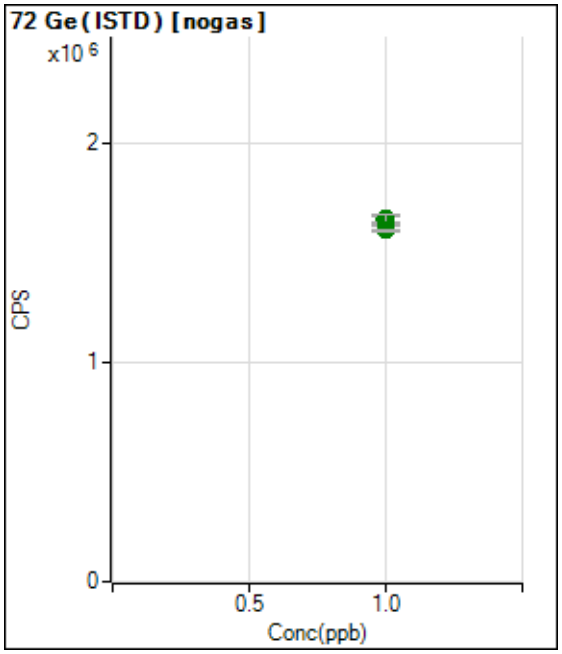


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1026496.57		P	2.2
2	☐	1.000		1009355.89		P	2.9
3	☐	1.000		1007677.02		P	1.9
4	☐	1.000		1022890.71		P	3.0
5	☐	1.000		995576.18		P	2.0
6	☐	1.000		956715.51		P	0.9
7	☐	1.000					

Calibration for 011_ICV.d

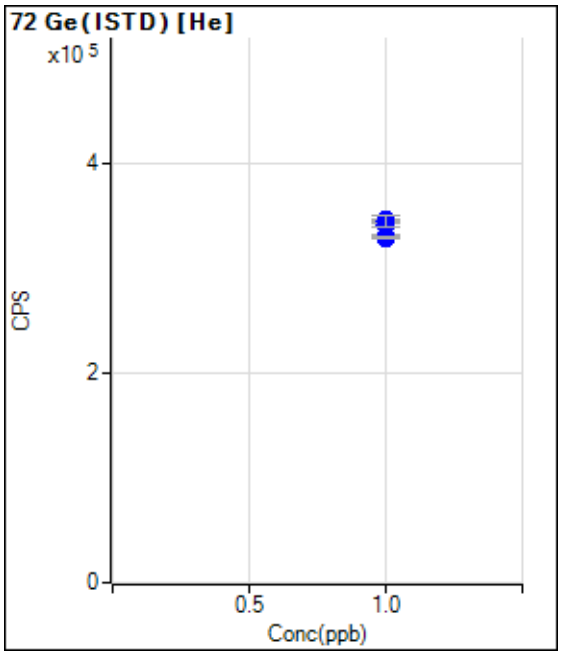


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		90631.51		P	3.6
2	☐	1.000		93360.89		P	1.9
3	☐	1.000		93113.18		P	2.2
4	☐	1.000		92804.69		P	1.2
5	☐	1.000		87737.80		P	1.7
6	☐	1.000		87446.22		P	3.4
7	☐	1.000					

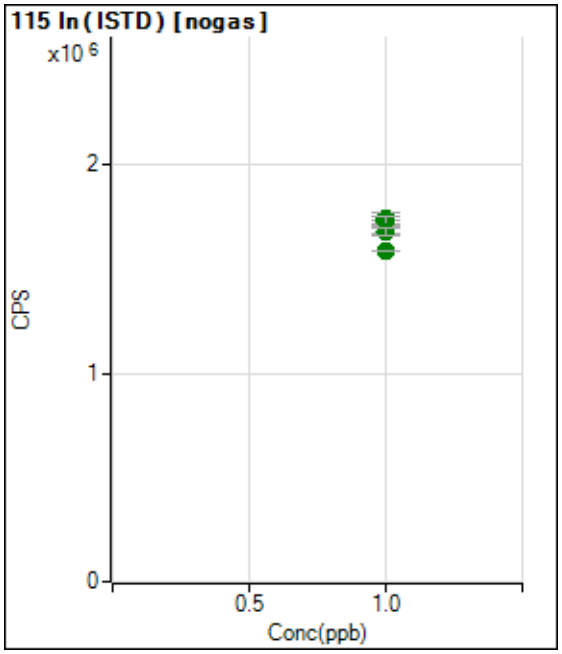


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1624816.22		A	2.3
2	☐	1.000		1656407.27		A	2.4
3	☐	1.000		1649572.95		A	2.2
4	☐	1.000		1607946.23		A	1.5
5	☐	1.000		1651553.93		A	3.3
6	☐	1.000		1604734.92		A	0.7
7	☐	1.000					

Calibration for 011_ICV.d

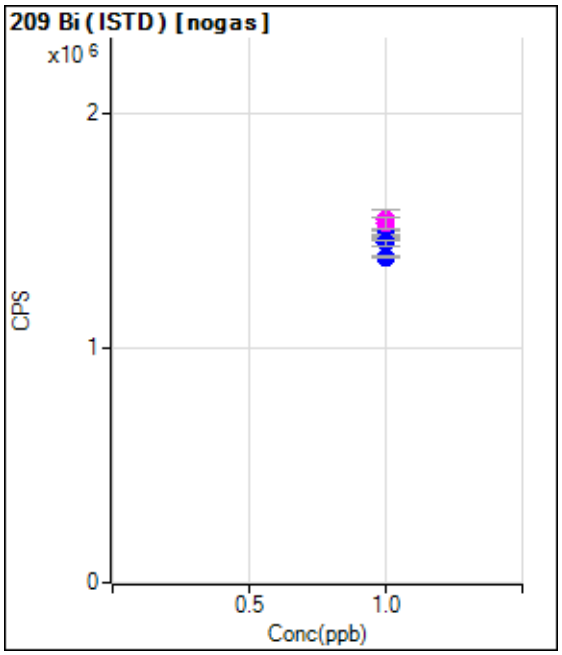


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		341080.10		P	1.5
2	☐	1.000		345507.25		P	0.4
3	☐	1.000		344113.51		P	1.1
4	☐	1.000		344031.46		P	2.8
5	☐	1.000		329065.15		P	1.0
6	☐	1.000		328608.04		P	0.6
7	☐	1.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1701791.90		A	3.4
2	☐	1.000		1741182.64		A	3.1
3	☐	1.000		1722638.41		A	1.3
4	☐	1.000		1730581.19		A	2.6
5	☐	1.000		1680764.11		A	2.4
6	☐	1.000		1587721.64		A	0.4
7	☐	1.000					

Calibration for 011_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1450657.90		P	1.8
2	☐	1.000		1546878.41		M	5.9
3	☐	1.000		1480529.09		P	0.6
4	☐	1.000		1536240.39		M	3.3
5	☐	1.000		1448158.78		P	1.7
6	☐	1.000		1387197.79		P	0.5
7	☐	1.000					

Wet Chemistry Raw Data

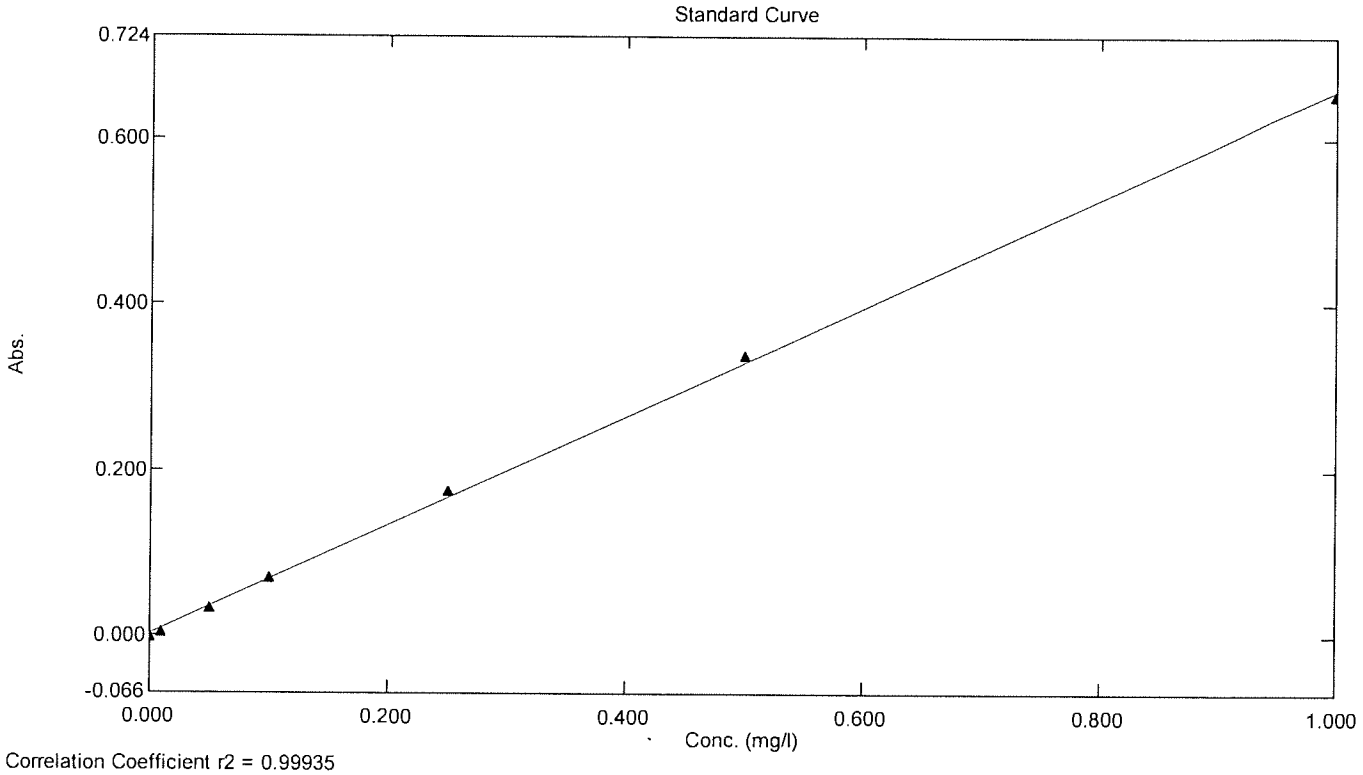
Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Monthly Influent Sample
ALS WO# HS17100709

HSI7100709

Standard Table Report

10/31/2017 09:09:37 AM

File Name: Q:\UVProbe\CR6+_UNKNOWN\171013_CR6_W.pho



Correlation Coefficient r2 = 0.99935

Standard Table

	Sample ID	Type	Ex	Conc	WL540.0	Wgt.Factor	Comments
1	STD1	Standard		0.000	-0.000	1.000	
2	STD2	Standard		0.010	0.005	1.000	
3	STD3	Standard		0.050	0.033	1.000	
4	STD4	Standard		0.100	0.069	1.000	
5	STD5	Standard		0.250	0.174	1.000	
6	STD6	Standard		0.500	0.340	1.000	
7	STD7	Standard		1.000	0.652	1.000	
8							

Sample Table Report

10/31/2017 09:09:39 AM

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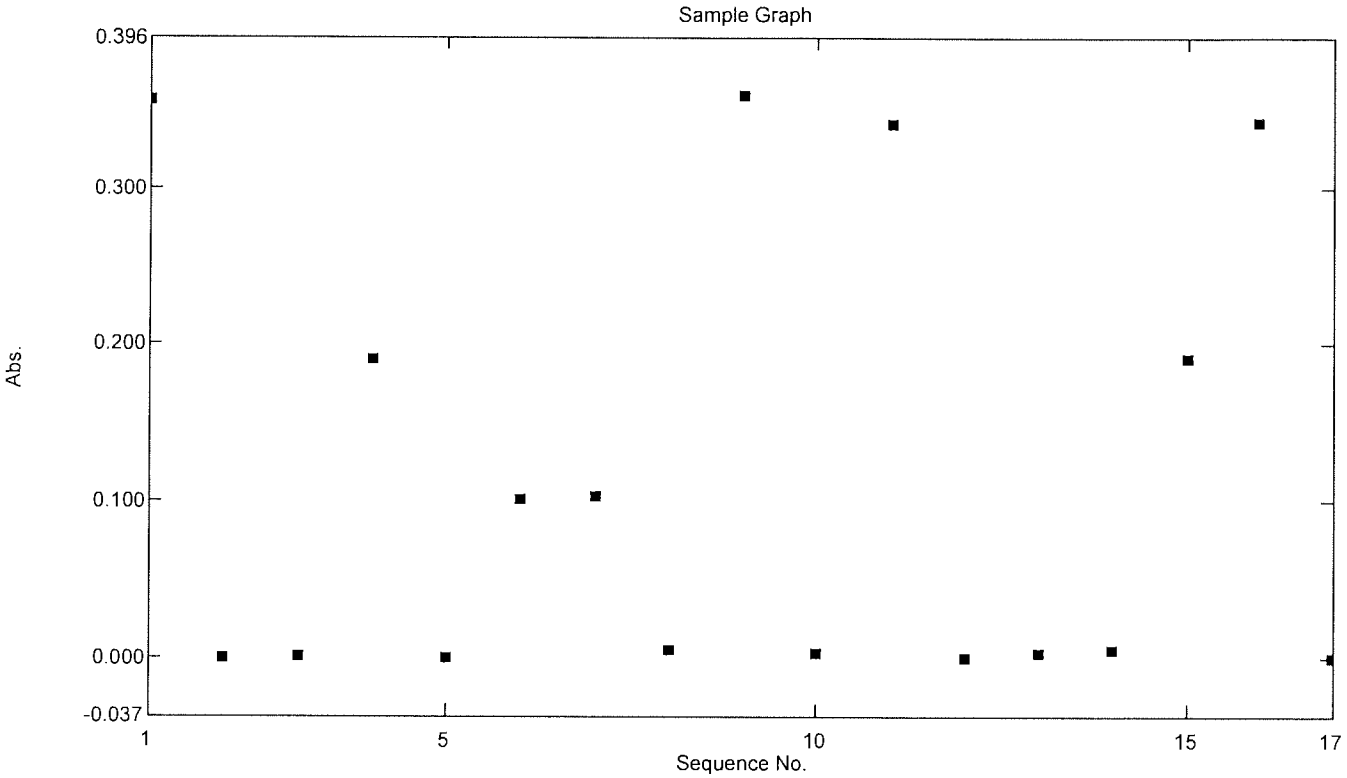

Sample Table

	Sample ID	Type	Ex	Conc	WL540.0	Comments
1	CCV	Unknown		0.538	0.356	
2	CCB	Unknown		-0.004	0.000	
3	MBLK	Unknown		-0.004	0.001	
4	LCS	Unknown		0.286	0.190	
5	17100695.01	Unknown		-0.006	-0.001	
6	17100695.01MS	Unknown		0.149	0.101	
7	17100695.01MSD	Unknown		0.152	0.103	
8	17100695.02	Unknown		0.002	0.005	
9	CCV2	Unknown		0.544	0.360	
10	CCB2	Unknown		0.000	0.003	
11	CCV3	Unknown		0.516	0.341	
12	CCB3	Unknown		-0.005	-0.000	
13	17100709.01	Unknown		-0.000	0.003	1:40PM
14	17100719.02 JNO	Unknown		0.003	0.005	01:42PM HS171007I2-01
15	LCSD	Unknown		0.286	0.191	
16	CCV4	Unknown		0.517	0.342	
17	CCB4	Unknown		-0.005	-0.001	
18						

Sub Contract Data

Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Monthly Influent Sample
ALS WO# HS17100709

Case Narrative

Method: 6850
Analysis: Perchlorate
Analysis SOP: LC-MS-CLO4
ALS WO ID(s): 1728943; 1728945; 1728946; 1729349

Client: ALS Laboratories (Houston, TX)
Matrix: Water
ELMS Batch (HBN): 1985 (201123)

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

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

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

Holding Times: Holding times were met for all analyses.

Dilutions: Sample 1728946001 was re-analyzed and reported at a 1 in 1,000 dilution. The reporting limits have been adjusted accordingly.

Method QC data: The method blank (LMB 571097) was less than 1/2 the CRDL. The recovery for the LCS (571098) was within acceptable parameters.

MS/MSD Analysis: The matrix spike and matrix spike duplicate (MS/MSD) was performed on sample 1728943001 (Client ID: LH18/24-SP650_101217). 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): None were required for this set.

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

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

Miscellaneous Comments: These samples were analyzed in accordance with the requirements found in the DOD QSM Version 5.0. Manual Integrations were performed for some of the Initial Calibration analyses (datafiles: 21AUGP01-03) along with datafiles 25OCTP02/03/07/08/11.

Thomas Bosch October 27, 2017
Date

ANALYTICAL REPORT

Report Date: October 27, 2017

Sonia West
ALS Environmental
10450 Stancliff Rd.
Suite 210
Houston, TX 77099

Phone: (281) 530-5656

E-mail: Sonia.West@alsglobal.com

Workorder: **34-1728946**
Project ID: HS17100709 101217
Purchase Order: HS17100709
Project Manager Kevin W. Griffiths

Client Sample ID	Lab ID	Collect Date	Receive Date	Sampling Site
LH18/24-SP140_101217	1728946001	10/12/17	10/14/17	

ANALYTICAL REPORT

Workorder: 34-1728946
Client: ALS Environmental (Houston)
Project Manager: Kevin W. Griffiths

Analytical Results

Sample ID: **LH18/24-SP140_101217**	Sampling Site: NA	Collected: 10/12/2017
Lab ID: 1728946001	Media: 125 mL Nalgene	Received: 10/14/2017
Matrix: Water	Sampling Parameter: NA	

Analysis Method - EPA 6850, DoD QSM

Preparation: Not Applicable	**Analysis:** EPA 6850, DoD QSM Water	**Instrument ID:** LCMS04
	Batch: ELMS/1985 (HBN: 201123)	**Percent Solid:** NA
	Analyzed: 10/25/2017 12:42	**Report Basis:** Wet

Analyte	Result (ug/L)	DL (ug/L)	LOD (ug/L)	LOQ (ug/L)	Dilution	Qual
Perchlorate	**4800**	1000	2000	4000	1000	

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 10/26/2017 14:50	/S/ Stephen Brose 10/27/2017 10:17

Laboratory Contact Information

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

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

ANALYTICAL REPORT

Workorder: 34-1728946
Client: ALS Environmental (Houston)
Project Manager: Kevin W. Griffiths

General Lab Comments

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

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

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

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

Testing Sector	Accreditation Body (Standard)	Certificate Number	Website
Environmental	ANAB (DoD ELAP)	ADE-1420	http://www.anab.org/accredited-organizations/
	Utah (NELAC)	DATA1	http://health.utah.gov/lab/labimp/
	Nevada	UT00009	http://ndep.nv.gov/bsdw/labservice.htm
	Oklahoma	UT00009	http://www.deq.state.ok.us/CSDnew/
	Iowa	IA# 376	http://www.iowadnr.gov/InsideDNR/RegulatoryWater.aspx
	Texas (TNI)	T104704456-11-1	http://www.tceq.texas.gov/field/qa/lab_accred_certif.html
	Washington	C596-16	http://www.ecy.wa.gov/programs/eap/labs/index.html
	Kansas	E-10416	http://www.kdheks.gov/lipo/index.html
Industrial Hygiene	AIHA LAP LLC (ISO 17025 & IHLAP/ELLAP)	101574	http://www.aihaaccreditedlabs.org
	Washington	C596-16	http://www.ecy.wa.gov/programs/eap/labs/index.html
Lead Testing:			
CPSC	ANAB (ISO 17025, CPSC)	ADE-1420	http://www.anab.org/accredited-organizations/
Soil, Dust, Paint ,Air	AIHA LAP LLC (ISO 17025 & IHLAP/ELLAP)	101574	http://www.aihaaccreditedlabs.org
Dietary Supplements	ACLASS (ISO 17025)	ADE-1420	http://www.aclasscorp.com

ANALYTICAL REPORT

Workorder: 34-1728946
Client: ALS Environmental (Houston)
Project Manager: Kevin W. Griffiths

Result Symbol Definitions

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

Qualifier Symbol Definitions

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

Quality Control Sample
Batch Report

Analysis Information

Workorder: 1728946

Limits:	Client SOW/Contract Specified	**Preparation:**	NA	**Analysis:**	EPA 6850
Basis:	DoD QSM	**Batch:**	NA	**Batch:**	ELMS/1985 (HBN: 201123)
		Prepared By:	NA	**Analyzed By:**	Thomas Bosch

Blank

LMB: 571097
Analyzed: 10/25/2017 10:02
Units: ug/L

Analyte	Result	MDL	RL
Perchlorate	ND	1	2.00

Laboratory Control Sample

LCS: 571098
Analyzed: 10/25/2017 10:22
Dilution: 1
Units: ug/L

Analyte	Result	Target	% Rec	QC Limits	
Perchlorate	5.29	5.00	106	78.8	123.8

Matrix Spike - Matrix Spike Duplicate

Sample:	1728943001	**MS:**	571099				**MSD:**	571100			
Analyzed:	10/25/2017 10:44	**Analyzed:**	10/25/2017 11:03				**Analyzed:**	10/25/2017 11:23			
Dilution:	1	**Dilution:**	1				**Dilution:**	1			
Units:	ug/L	**Units:**	ug/L				**Units:**	ug/L			

Analyte	Result	Result	Target	% Rec	QC Limits		Result	% Rec	RPD	QC Limits	
Perchlorate	ND	4.48	5	89.6	78.8	123.8	4.52	90.4	0.9	0.0	20.0

Continuing Calibration Verification

CCV:	571094			**CCV:**	571101	
Analyzed:	10/25/2017 09:02			**Analyzed:**	10/25/2017 14:46	
Units:	ug/L			**Units:**	ug/L	
Criteria:	± 15%			**Criteria:**	± 15%	

Analyte	Result	Target	% Rec.	Result	Target	% Rec.
Perchlorate	26.4	25.0	106	23.8	25.0	95.3

Interference Check Sample

ICSA: 571096
Analyzed: 10/25/2017 09:43
Units: ug/L
Criteria: ± 30%

Analyte	Result	Target	% Rec.
Perchlorate	1.15	1.00	115

Limit of Detection Verification

LODV:	571095			**LODV:**	571102	
Analyzed:	10/25/2017 09:24			**Analyzed:**	10/25/2017 15:06	
Units:	ug/L			**Units:**	ug/L	
Criteria:	± 50%			**Criteria:**	± 50%	

Analyte	Result	Target	% Rec.	Result	Target	% Rec.
Perchlorate	0.839	1.00	83.9	0.968	1.00	96.8

Quality Control Sample
Batch Report

Analysis Information

Workorder: **1728946**

Limits:	Client SOW/Contract Specified	**Preparation:**	NA	**Analysis:**	EPA 6850
Basis:	DoD QSM	**Batch:**	NA	**Batch:**	ELMS/1985 (HBN: 201123)
		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	/S/ Stephen Brose
10/26/2017 14:50	10/27/2017 10:17

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

00875281

10450 Stancliff Rd, Ste 210
Houston, TX 77099
T: +1 281 530 5656
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W 1728946

1728946

Subcontract Chain of Custody

COC ID: 7814

SUBCONTRACT TO:

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

Phone: +1 801 266 7700

CUSTOMER INFORMATION:

Company:	ALS Houston
Contact:	Sonia West
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Email:	Sonia.West@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:	HS17100709
TSR:	Danielle Winnings

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS17100709-01**	**LH18/24-SP140_101217**	**Water**	**12 Oct 2017 14:00**
	SUB_Perch-6850			27 Oct 2017

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

QC Level: DOD IV (DoD Data Package)

Relinquished By: _____ Date/Time: Oct 13, 2017 1800

Received By: _____ Date/Time: 10/14/17 855

Cooler ID(s): 7945 Temperature(s): 2

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

COOLER OR CONTAINER INFORMATION CHECKLIST (Fill In or Circle)

Client Name: ALS Houston

Project/Task/Site: 1728946

Date/Time of Receipt: 10/14/17 855

Number of Coolers Received: 1

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

pH Check Performed:							
	Metals	Yes/No/NA	Total Phenolics	Yes/No/NA	NO3/NO2	Yes/No/NA
	Cyanide	Yes/No/NA	TPH – 418.1	Yes/No/NA	Oil & Grease	Yes/No/NA
	Sulfide	Yes/No/NA	COD	Yes/No/NA	Total Phosphorous	Yes/No/NA
	Ammonia	Yes/No/NA	TKN	Yes/No/NA	TOC Preserved	Yes/No/NA

Cooler Received	ALS Cooler No.	Temp.	Cooler Received	ALS Cooler No.	Temp.	Cooler Received	ALSL Cooler No.	Temp.
1	C17- 7915	2 °C	4	C17-	°C	7	C17-	°C
2	C17-	°C	5	C17-	°C	8	C17-	°C
3	C17-	°C	6	C17-	°C	9	C17-	°C

Taken By: Mereel H Delaro / Mereel H Delaro / 10/14/17

Signature / Printed Name / Date

CLIENT-RELATED INFORMATION

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

BRIEFLY DESCRIBE THE PROBLEM AND THE ACTION TAKEN:

E-mailed to Client? YES ☐ NO ☐

Response Required Within 24 Hours

PROJECT MANAGEMENT

PROJECT MANAGER COMMENTS:

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

CRIR.dot

Revised 1/1/15

ALS
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ALS

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

SHIP DATE: 13OCT17
ACTWGT: 9.60 LB
CAD: 300130/CAFE3108
DIMS: 14x11x10 IN
BILL SENDER

TO KEVIN GRIFFITHS
ALS ENVIRONMENTAL
960 W. LEVOY DRIVE

SALT LAKE CITY UT 84123
(801) 266-7700
REF: HS17100709/12/14

FedEx Express

TRK# 0201 7376 9749 3519

SATURDAY 12:00P
PRIORITY OVERNIGHT

XO BTFA

84123
UT-US SLC

R1 98
ST F1

1
12:00 A
3519
10.14

Part# 159469-434 FIT2EXP 10/17

00875284

ALS Environmental

CHAIN-OF-CUSTODY

Project / Job / Task: HS17100709	Split:	Workorder ID: 1728946	Level: ENV_LVL4
Client: ALS Environmental (Houston)		Account: 8101	Type: 125Poly
Comments:			Preservatives: COOL

Item	Collect Date/Time	Sample ID	Lab ID	QC	Matrix	Containers ID(s)	Containers Count	Requested Analysis: EPA 6850, DoD QSM
1	10/12/2017 14:00	LH18/24-SP140_101217	1728946001		Water	A	1	A
2								
3								
4								
5								
6								
7								
8								
9								
10								

186 of 281

ORIGINAL FIELD SAMPLE CHAIN-OF-CUSTODY

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Reason for Transfer / Storage Location
Warath, Julie	10/14/2017 08:55	ALS Sample Receiving	Sample Login
Julie Warath	10/16/17 1300	14C	Storage
R-33.1	10.25.17/07:55	T.Bond	6850

SAMPLE PREPARATION / ANALYSIS CHAIN-OF-CUSTODY

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

Prepared / Analyzed by: _____ Date / Time: _____

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

tch Worklist

Batch: ELMS/ 1985 **Created:** 10/20/2017 11:25 **Instrument:** **HBN:** 201123
Rule: EPA 6850, DoD QSM Water **Analyst:** T. Bosch **Status:** WP

Workorder: 1728943 [ENV_LVL4]
Workorder: 1728945 [ENV_LVL4]
Workorder: 1728946 [ENV_LVL4]
Workorder: 1729349 [ENV_LVL4]
Workorder: 1729821 [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	571094	CCV for HBN 201123 [ELMS/1985]				CCV	3		E685041C3Q	5311		10/27/2017	
2	571095	LODV for HBN 201123 [ELMS/1985				LODV	3		E6850..D3Q	5311		10/27/2017	
3	571096	ICS for HBN 201123 [ELMS/1985]				ICS	3		E6850..D3Q	5311		10/27/2017	
4	571097	LMB for HBN 201123 [ELMS/1985]				LMB	3		E6850Q413Q	5311		10/27/2017	
5	571098	LCS for HBN 201123 [ELMS/1985]				LCS	3		E6850Q413Q	5311		10/27/2017	
6	1728943001	LH18/24-SP650_101217				SAMPLE	3	1728943001-A	E6850Q41.3	5480	11/9/2017	11/4/2017	
7	571099	LH18/24-SP650...(1728943001MS)				MS	3		E6850Q413Q	5311		10/27/2017	
8	571100	LH18/24-SP65...(1728943001MSD)				MSD	3		E6850Q413Q	5311		10/27/2017	
9	1728945001	LH18/24-SP650_101217				SAMPLE	3	1728945001-A	E6850Q41.3	5480	11/9/2017	11/4/2017	
10	1728946001	LH18/24-SP140_101217				SAMPLE	3	1728946001-A	E6850Q41.3	5480	11/9/2017	11/4/2017	
11	1729349001	LH18/24-SP650_101817				SAMPLE	3	1729349001-A	E6850Q41.3	5480	11/15/2017	11/10/2017	
12	1729821001	LH18/24-SP650_1017W				SAMPLE	3	1729821001-A	E6850Q41.3	5480	11/2/2017	10/27/2017	
13	571101	CCV for HBN 201123 [ELMS/1985]				CCV	3		E685041C3Q	5311		10/27/2017	
14	571102	LODV for HBN 201123 [ELMS/1985				LODV	3		E6850..D3Q	5311		10/27/2017	

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

Analytical Documentation

ALS Work Order #'s & Sample #( )'s: 1728943 (001); 1728945 (001); 1728946 (001); 1729349 (001); 1729821 (001)
ELMS Batch/HBN ID: 1985 (201123)
Prep Date: 10/25/2017 Analysis Date: 10/25/2017 Analyst: T. Bosch
Analyte: **Perchlorate** Matrix: **Water** Method: **6850**
Sequence:\\HPCHEM\1\SEQUENCE\CLO4\2017\OCT\25OCT17P.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 DI735)/0.1% glacial acetic acid (JT-Baker Lot 04802).
Eluent B1: 95% ACN (B&J Lot DI735)/ 5% ASTM Type II water (ALS)/0.1% glacial acetic acid (JT-Baker Lot 04802).

STANDARDS: Internal Standard Spiking Solution Horizon# 38780. Dilutions of Working Standard Solution ID 32373 used for CCV's, LODV's, RLVS and IPC.

CALIBRATION CURVE: Used curve from 08/21/2017, sequence 21AUG17P.s Offline Quantitation Method: CLO4-PR3.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: 6 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	0.60
4.0	0.60
5.0	0.25
14.5	0.25
15.0	0.60
17.5	0.60

QC DATA: 5.0µL of QC Solution Horizon ID 36749 was used for LCS 570667; Target = 5.0µg/L. ASTM type II water was used for LMB 570666.

MS/MSD: MS/MSD was performed on sample 1728943001 (Client ID: LH18/24-SP650_101217). 5.0µl of Working Standard Solution Horizon ID 36735 was added to 10.0mL of sample preparation. Spike target = 5.0µg/L.

COMMENTS:

1) Results reported in µg/L. Sample 1728946001 was re-analyzed and reported at a 1 in 1,000 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: \\ALSLTWS013\LCMS\LCMS04\2017\OCT\HBN# or through NuGenesis\Tree\PrintData\LCMS\DefaultView.
4) Due to limitations of the Chemstation Software, many of the chromatographic peaks require manual integration. Manual Integrations were performed for some of the Initial Calibration analyses (datafiles: 21AUGP01-03) along with datafiles 25OCTP02/03/07/08/11.
5) Notebook: \\alsltws013\ORGANIC\BOSCH\LCMS\Perchlorates\Waters\2017\CLO4-201123-L-ALS-HSTN-KLSO or through \\ALSLTWS013\DATAREVIEW\HBN#

STANDARD REPORT

Working Standard - CLO4 WRK

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

Standard: 36735
MFG: ALS/SLC
MFG Lot: TNB: 05/10/17
Part ID:

Created By: T. Bosch
Create Date: 05/10/2017
Lab Lot: CLO4 WRK

Amount: 10 mL
Expires: 05/10/2018
Usable: Yes

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
36734	CLO4 INT	6850 Intermdt AccStd 10.ug/mL	CLO4 INT	0.1 mL	05/10/2018

STANDARD REPORT

Constituent

Stock Standard - CLO4 STOCK

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

Standard: 36733
MFG: AccuStandard
MFG Lot: 216095148
Part ID: IC-PER-10X-1

Created By: T. Bosch
Create Date: 5/10/2017
Lab Lot: CLO4 STOCK

Amount: 100 mL
Expires: 10/4/2018
Usable: Yes

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: 10/6/2005	Expires: 11/7/2025
MFG Lot:	Lab Lot: LAB 109	Usable: Yes
Part ID:		

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: 36734
MFG: ALS/SLC
MFG Lot: TNB: 05/10/17
Part ID:

Created By: T. Bosch
Create Date: 05/10/2017
Lab Lot: CLO4 INT

Amount: 10 mL
Expires: 05/10/2018
Usable: Yes

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
36733	CLO4 STOCK	6850 Stock AccStd 1,000ug/mL	CLO4 STOCK	0.1 mL	10/04/2018

STANDARD REPORT

Working Standard - CLO4 QC WRK

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

Standard: 36750
MFG: ALS/SLC
MFG Lot: TNB: 05/11/17
Part ID:

Created By: T. Bosch
Create Date: 05/11/2017
Lab Lot: CLO4 QC WRK 100.ug/L

Amount: 10 mL
Expires: 05/11/2018
Usable: Yes

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
36749	CLO4 QC INT	6850 QC Intrmdt Std-QC 10ug/mL	CLO4 QC INT 10.ug/mL	0.1 mL	05/11/2018

STANDARD REPORT

Constituent

Working Standard - CLO4 QC INT

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

Standard: 36749
MFG: ALS/SLC
MFG Lot: TNB: 05/11/2017
Part ID:

Created By: T. Bosch
Create Date: 05/11/2017
Lab Lot: CLO4 QC INT 10.ug/mL

Amount: 10 mL
Expires: 05/11/2018
Usable: Yes

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: 10/6/2005	Expires: 11/7/2025
MFG Lot:	Lab Lot: LAB 109	Usable: Yes
Part ID:		

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

STANDARD REPORT

Constituent

Stock Standard - CLO4 QCSTOCK

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

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

Created By: T. Bosch
Create Date: 5/11/2017
Lab Lot: CLO4 QC STOCK

Amount: 100 mL
Expires: 3/31/2020
Usable: Yes

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: 38780	Created By: Thomas Bosch	Amount: 10 mL
MFG: ALS/SLC	Create Date: 10/09/2017 01:10PM	Expires: 10/09/2018
MFG Lot: TNB: 10/09/17	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
23118	CLO4ISTDSTK	Perchlorate ISTD Stock	CLO4ISTDSTK	0.1 mL	02/27/2024

STANDARD REPORT

Constituent

Stock Standard - CLO4ISTDSTK

CLO4ISTDSTK — **Description - Perchlorate ISTD Stock**

Standard:	23118	**Created By:**	Thomas Bosch	**Amount:**	1 mL
MFG:	Cambridge Isotope	**Create Date:**	04/04/2014 03:04PM	**Expires:**	02/27/2024
MFG Lot:	SDDG-013	**Verified By:**	Thomas Bosch	**Usable:**	Yes
Part ID:	OLM-7310-S	**Verify Date:**	02/05/2009 12:02AM	**Lab Lot:**	CLO4ISTDSTK

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

ULTRA SCIENTIFIC
Analytical Solutions

Certificate of Analysis

TRIPLE ISO CERTIFICATION ISO 17025 • ISO GUIDE 34 • ISO 9001 ULTRA

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.

ANAB ACCREDITED ISO 17025 REFERENCE MATERIAL PRODUCER
ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY

ALS

ULTRA SCIENTIFIC
Analytical Solutions

Certificate of Analysis

TRIPLE ISO CERTIFICATION ULTRA ISO 17025 ISO GUIDE 34 ISO 9001

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

ANAB ACCREDITED ISO GUIDE 34 REFERENCE MATERIAL PRODUCER

ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY

ALS

125 Market Street
New Haven, CT 06513
USA

AccuStandard®, Inc.

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

CERTIFICATE OF ANALYSIS

AccuTrace™ Reference Standard

Catalog No: IC-PER-10X-1
Description: Perchlorate Standard
Element: Perchlorate (ClO_4)
SRM: Ind. Std.
Lot: 216095148
Matrix: Water
Hazards: *Refer to SDS for complete safety information*

Signal Word: Warning

Date Certified: Oct 4, 2016
Expiration: Oct 4, 2018
Sample Size: 100 mL
Components: 1
Storage Condition: Ambient (>5 °C)
Included on ISO/IEC 17025 Scope of Accreditation: Yes
Included on ISO Guide 34 Scope of Accreditation: Yes

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

The gravimetric uncertainty for this product is ±0.2%. See reverse side for details.
The final solution was checked against an independent standard to verify its concentration.
We use the highest purity raw materials available to minimize impurity levels in the final solution. Typically 99.999%+ pure starting materials are used as well as ASTM Type I 18 megohm deionized water.
All solutions are filtered through a 0.2 µm filter prior to being bottled.
All glassware used in preparation is Class A and calibrated regularly.
All weights are traceable through NIST, Test No. 822-275872-11
All bottles are triple rinsed with deionized water prior to use.
Shake bottle prior to use and do not pipette directly out of the bottle. Use only cleaned Class A volumetric glassware.
We certify the accuracy of this standard to be ±0.5% of the stated value until its expiration date provided it is kept tightly capped and stored under the conditions stated above.

Certified By: Meigan O'Leary
Meigan O'Leary, Inorganic QC Manager

For use in routine laboratory analysis.

Cambridge Isotope Laboratories, Inc.

Certificate of Analysis

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

23118

Product Name: (Isotopic Label & Enrichment Specification)	PERCHLORIC ACID, SODIUM SALT (18O4, 90%+) 100 UG/ML IN WATER
Lot Number:	SDDG-013
Catalog Number:	OLM-7310-S

Product Information

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

Certification

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

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

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

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

Approved by: T. J. Eckersley

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

Quality Control Tests and Results

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

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

Raw Data

Batch Report: C:\HPCHEM\1\DATA\25OCT17P\25OCT17P.B

Batch Review Method:
C:\HPCHEM\1\METHODS\CLO4-PR3.M

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

#*	Sample	Location	Inj	SampleType	Run	CLO4-89-ISTD Area	CLO4-89-ISTD RT	CLO4-89-ISTD Amount
*	571094 CCV@25	Vial 81	1	Control	1	5.07839e5	12.477	5.00000
*	571095 LODV@1.	Vial 82	1	Control	2	5.87535e5	12.518	5.00000
*	571096 ICS@1.	Vial 83	1	Control	3	3.96155e5	12.246	5.00000
*	571097 LMB	Vial 84	1	Control	4	6.68336e5	12.435	5.00000
*	571098 LCS@5.	Vial 85	1	Control	5	6.65647e5	12.053	5.00000
*	1728943001	Vial 86	1	Sample	6	4.70592e5	12.157	5.00000
*	571099 289431S	Vial 87	1	Sample	7	4.66918e5	12.127	5.00000
*	571100 289431D	Vial 88	1	Sample	8	5.24243e5	12.117	5.00000
*	1728945001	Vial 89	1	Sample	9	4.60455e5	12.109	5.00000
*	1728946001	Vial 90	1	Sample	10	2.94801e5	10.198	5.00000
*	1729349001	Vial 91	1	Sample	11	4.46975e5	11.983	5.00000
*	1728946001 1K	Vial 71	1	Sample	12	5.98771e5	12.478	5000.00000
*	Rinse	Vial 72	1	Sample	13	0.00000	0.000	0.00000
*	1729821001	Vial 92	1	Sample	14	3.92983e5	12.135	5.00000
*	571101 CCV@25	Vial 81	1	Control	15	5.86465e5	12.119	5.00000
*	571102 LODV@1.	Vial 82	1	Control	16	6.36963e5	12.465	5.00000

#*	Sample	Location	Inj	SampleType	Run	Perchlorate Area	Perchlorate RT	Perchlorate Amount
*	571094 CCV@25	Vial 81	1	Control	1	3.48090e6	12.453	26.43897
*	571095 LODV@1.	Vial 82	1	Control	2	1.05939e5	12.486	8.38965e-1
*	571096 ICS@1.	Vial 83	1	Control	3	9.86085e4	12.204	1.15261
*	571097 LMB	Vial 84	1	Control	4	0.00000	0.000	0.00000
*	571098 LCS@5.	Vial 85	1	Control	5	7.88523e5	12.038	5.29061
*	1728943001	Vial 86	1	Sample	6	0.00000	0.000	0.00000
*	571099 289431S	Vial 87	1	Sample	7	4.65291e5	12.108	4.47866
*	571100 289431D	Vial 88	1	Sample	8	5.27314e5	12.088	4.51921
*	1728945001	Vial 89	1	Sample	9	0.00000	0.000	0.00000
*	1728946001	Vial 90	1	Sample	10	5.98622e8	10.207	1043.03365
*	1729349001	Vial 91	1	Sample	11	4.79980e4	11.934	5.03905e-1
*	1728946001 1K	Vial 71	1	Sample	12	6.41886e5	12.455	4805.68409
*	Rinse	Vial 72	1	Sample	13	0.00000	0.000	0.00000
*	1729821001	Vial 92	1	Sample	14	0.00000	0.000	0.00000
*	571101 CCV@25	Vial 81	1	Control	15	3.56041e6	12.091	23.81767
*	571102 LODV@1.	Vial 82	1	Control	16	1.32751e5	12.440	9.67623e-1

#*	Sample	Location	Inj	SampleType	Run	CLO4-85 Area	CLO4-85 RT	CLO4-85 Amount
*	571094 CCV@25	Vial 81	1	Control	1	1.10813e6	12.467	27.31669
*	571095 LODV@1.	Vial 82	1	Control	2	4.28376e4	12.497	1.02423
*	571096 ICS@1.	Vial 83	1	Control	3	3.22687e4	12.206	1.14363
*	571097 LMB	Vial 84	1	Control	4	0.00000	0.000	0.00000
*	571098 LCS@5.	Vial 85	1	Control	5	2.47122e5	12.042	5.11794
*	1728943001	Vial 86	1	Sample	6	0.00000	0.000	0.00000
*	571099 289431S	Vial 87	1	Sample	7	1.48406e5	12.125	4.39612
*	571100 289431D	Vial 88	1	Sample	8	1.66736e5	12.107	4.39896
*	1728945001	Vial 89	1	Sample	9	0.00000	0.000	0.00000
*	1728946001	Vial 90	1	Sample	10	2.21716e8	10.218	1404.77710
*	1729349001	Vial 91	1	Sample	11	1.42527e4	11.985	4.49144e-1
*	1728946001 1K	Vial 71	1	Sample	12	2.07773e5	12.473	4790.74371
*	Rinse	Vial 72	1	Sample	13	0.00000	0.000	0.00000
*	1729821001	Vial 92	1	Sample	14	0.00000	0.000	0.00000
*	571101 CCV@25	Vial 81	1	Control	15	1.09294e6	12.102	23.68621
*	571102 LODV@1.	Vial 82	1	Control	16	5.13231e4	12.438	1.13133

*** End of Report ***

Sequence: C:\HPCHEM\1\SEQUENCE\CLO4\2017\OCT\25OCT17P.S

Sequence Table:

Method and Injection Info Part:

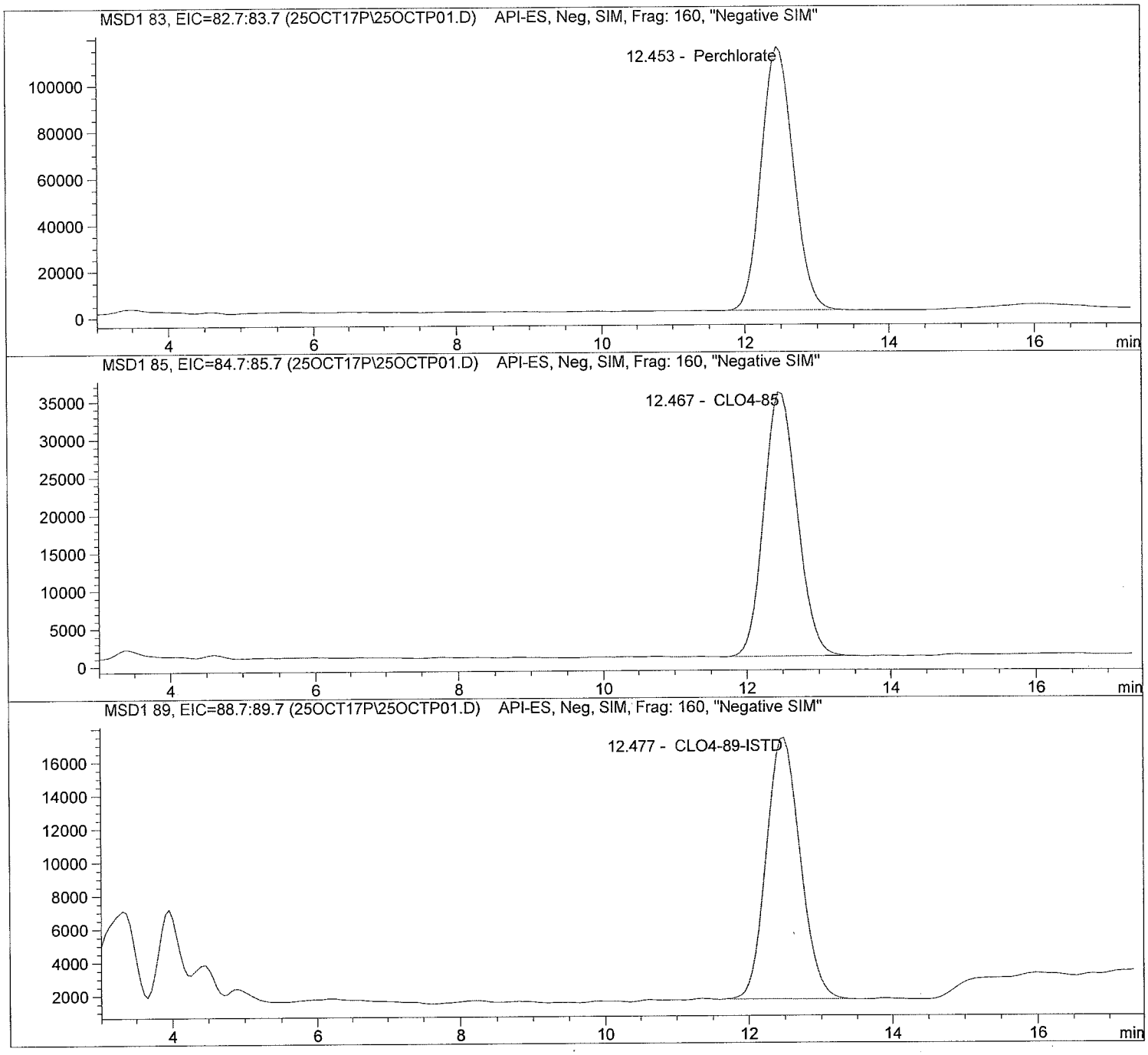
Line	Location	SampleName		Method	Inj	SampleType	InjVolume	DataFile
1	Vial 81	571094	CCV@25	CLO4-AQN	1	Ctrl Samp		
2	Vial 82	571095	LODV@1.	CLO4-AQN	1	Ctrl Samp		
3	Vial 83	571096	ICS@1.	CLO4-AQN	1	Ctrl Samp		
4	Vial 84	571097	LMB	CLO4-AQN	1	Ctrl Samp		
5	Vial 85	571098	LCS@5.	CLO4-AQN	1	Ctrl Samp		
6	Vial 86	1728943001		CLO4-AQN	1	Sample		
7	Vial 87	571099	289431S	CLO4-AQN	1	Sample		
8	Vial 88	571100	289431D	CLO4-AQN	1	Sample		
9	Vial 89	1728945001		CLO4-AQN	1	Sample		
10	Vial 90	1728946001		CLO4-AQN	1	Sample		
11	Vial 91	1729349001		CLO4-AQN	1	Sample		
12	Vial 71	1728946001	1K	CLO4-AQN	1	Sample		
13	Vial 72	Rinse		CLO4-AQN	1	Sample		
14	Vial 92	1729821001		CLO4-AQN	1	Sample		
15	Vial 81	571101	CCV@25	CLO4-AQN	1	Ctrl Samp		
16	Vial 82	571102	LODV@1.	CLO4-AQN	1	Ctrl Samp		

Data file: C:\HPCHEM\1\DATA\25OCT17P\25OCTP01.D Sample Name: 571094 CCV@25

Injection Date:	10/25/2017 09:02:43	Seq Line:	1
Sample Name:	571094 CCV@25	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-PR3.M
Last Changed: 10/26/2017 08:21:59

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\25OCT17P\25OCTP01.D Sample Name: 571094 CCV@25

Injection Date:	10/25/2017 09:02:43	Seq Line:	1
Sample Name:	571094 CCV@25	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-PR3.M
Last Changed:	10/26/2017 08:21:59

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Thu, 26. Oct. 2017,08:21:56 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
12.453	PBA	3480904.8	26.4390	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.467	PBA	1108132.5	27.3167	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.477	BBA	507839.4	5.0000	CLO4-89-ISTD

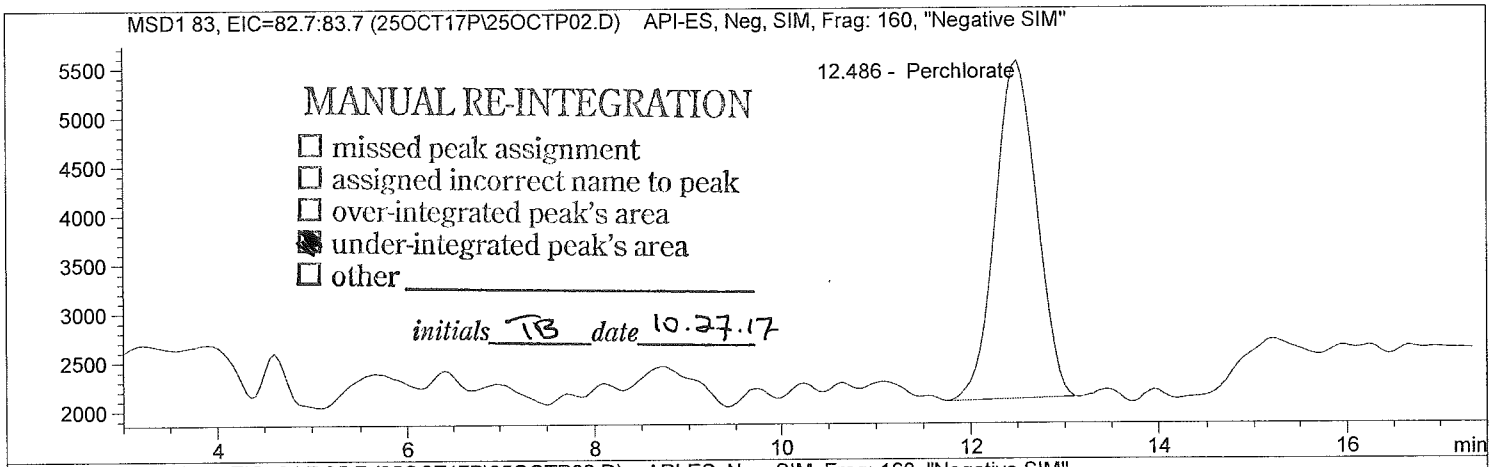
*** End of Report ***

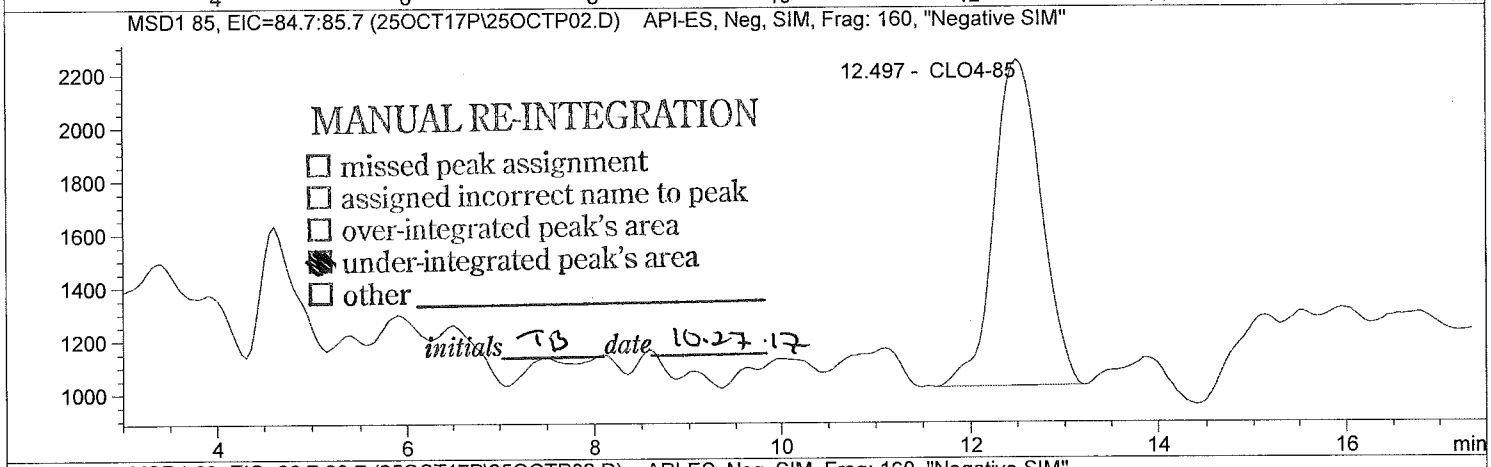
Data file: C:\HPCHEM\1\DATA\25OCT17P\25OCTP02.D Sample Name: 571095 LODV@1.

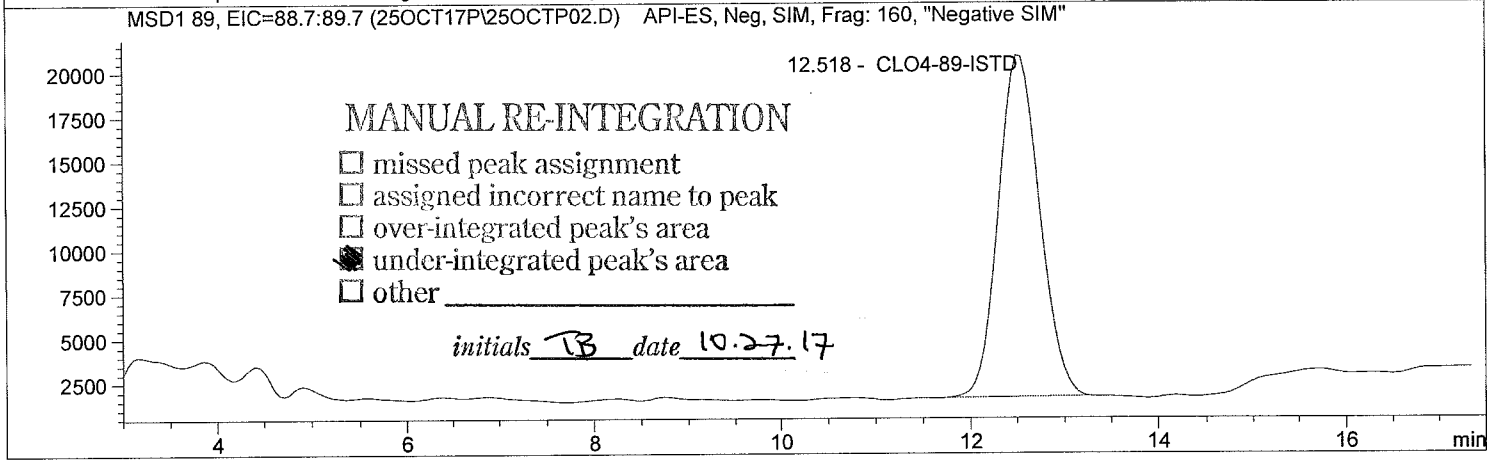
Injection Date:	10/25/2017 09:24:24	Seq Line:	2
Sample Name:	571095 LODV@1.	Location:	Vial 82
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-PR3.M
Last Changed: 10/26/2017 08:21:59

Perchlorate analysis







Data file: C:\HPCHEM\1\DATA\25OCT17P\25OCTP02.D Sample Name: 571095 LODV@1.

Injection Date:	10/25/2017 09:24:24	Seq Line:	2
Sample Name:	571095 LODV@1.	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-PR3.M
Last Changed:	10/26/2017 08:21:59

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Thu, 26. Oct. 2017,08:21:56 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
12.486	MM	105938.9	0.8390	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.497	MM	42837.6	1.0242	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.518	MM	587535.4	5.0000	CLO4-89-ISTD

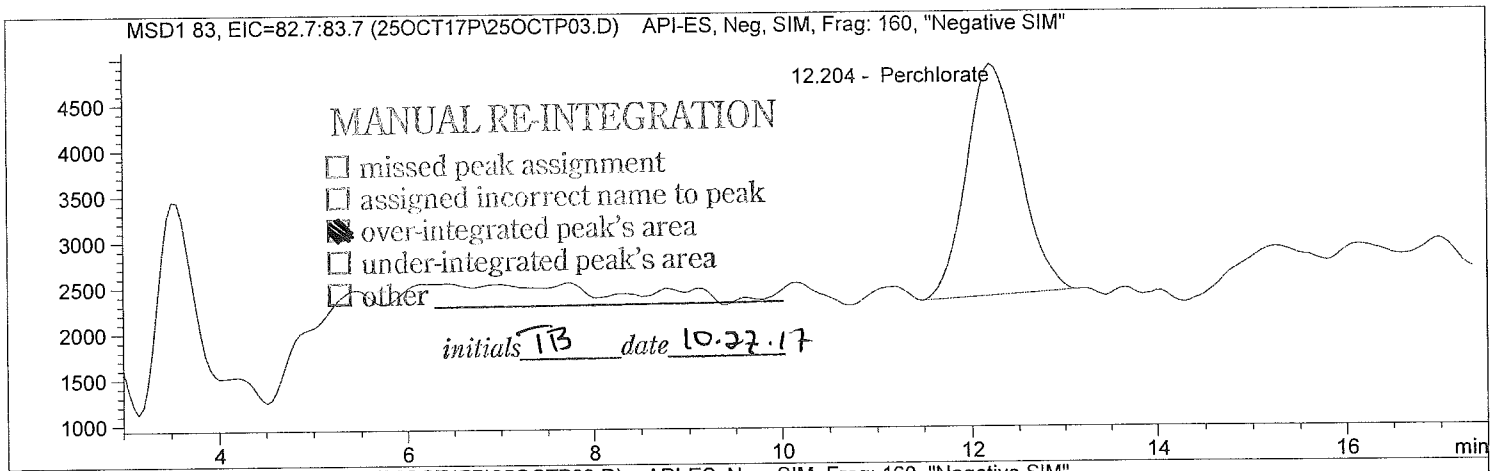
*** End of Report ***

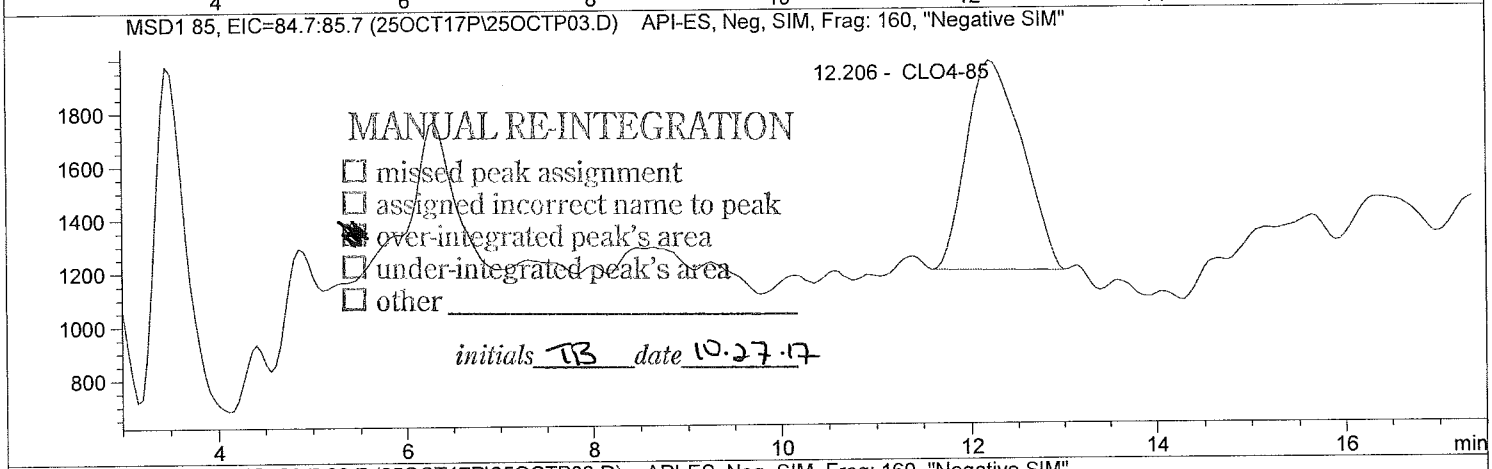
Data file: C:\HPCHEM\1\DATA\25OCT17P\25OCTP03.D Sample Name: 571096 ICS@1.

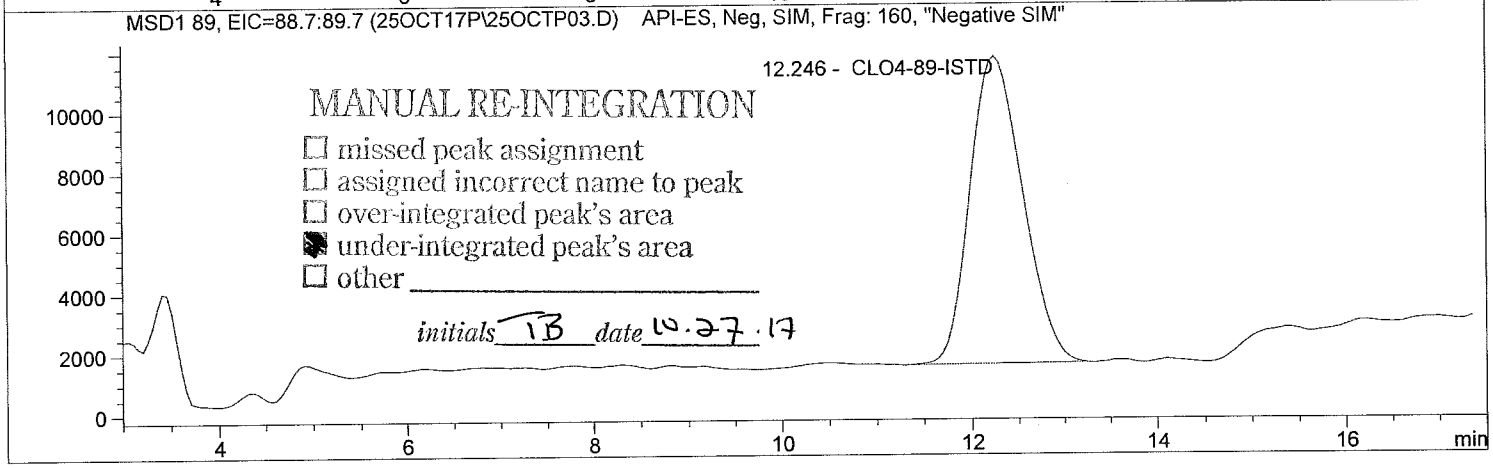
Injection Date:	10/25/2017 09:43:38	Seq Line:	3
Sample Name:	571096 ICS@1.	Location:	Vial 83
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-PR3.M
Last Changed: 10/26/2017 08:21:59

Perchlorate analysis







Data file: C:\HPCHEM\1\DATA\25OCT17P\25OCTP03.D Sample Name: 571096 ICS@1.

Injection Date:	10/25/2017 09:43:38	Seq Line:	3
Sample Name:	571096 ICS@1.	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-PR3.M
Last Changed:	10/26/2017 08:21:59

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Thu, 26. Oct. 2017,08:21:56 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
12.204	MM	98608.5	1.1526	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.206	MM	32268.7	1.1436	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.246	MM	396154.9	5.0000	CLO4-89-ISTD

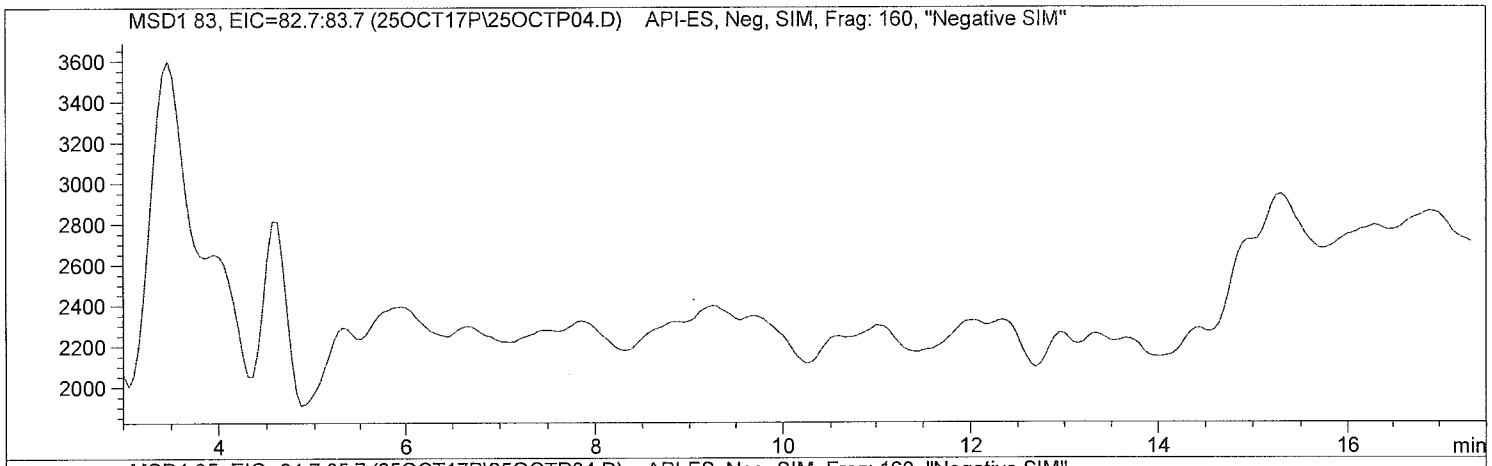
*** End of Report ***

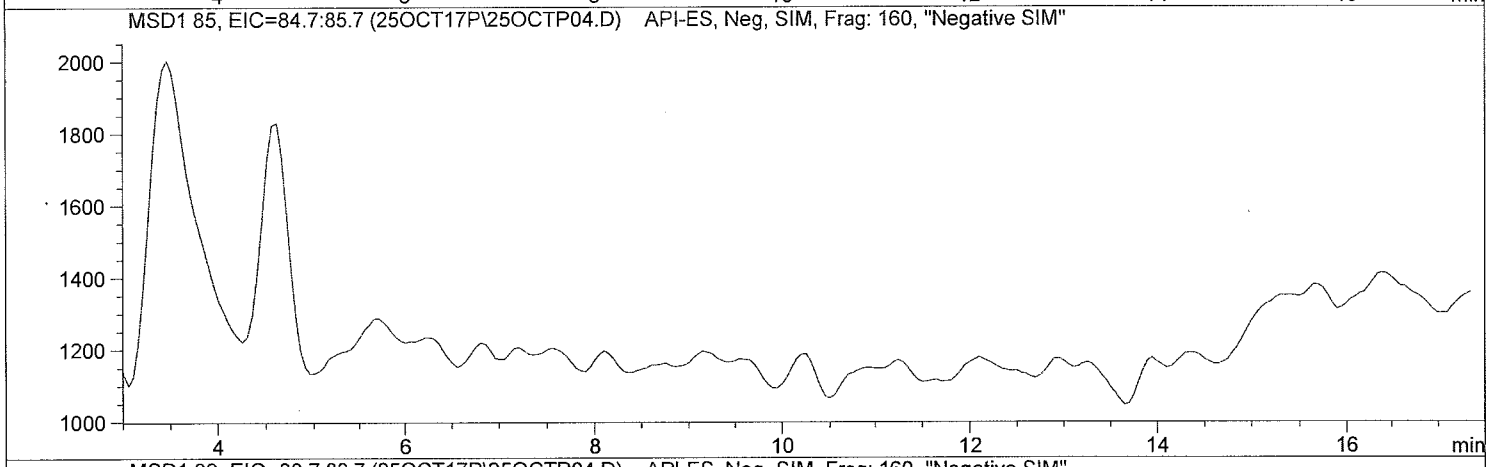
Data file: C:\HPCHEM\1\DATA\25OCT17P\25OCTP04.D Sample Name: 571097 LMB

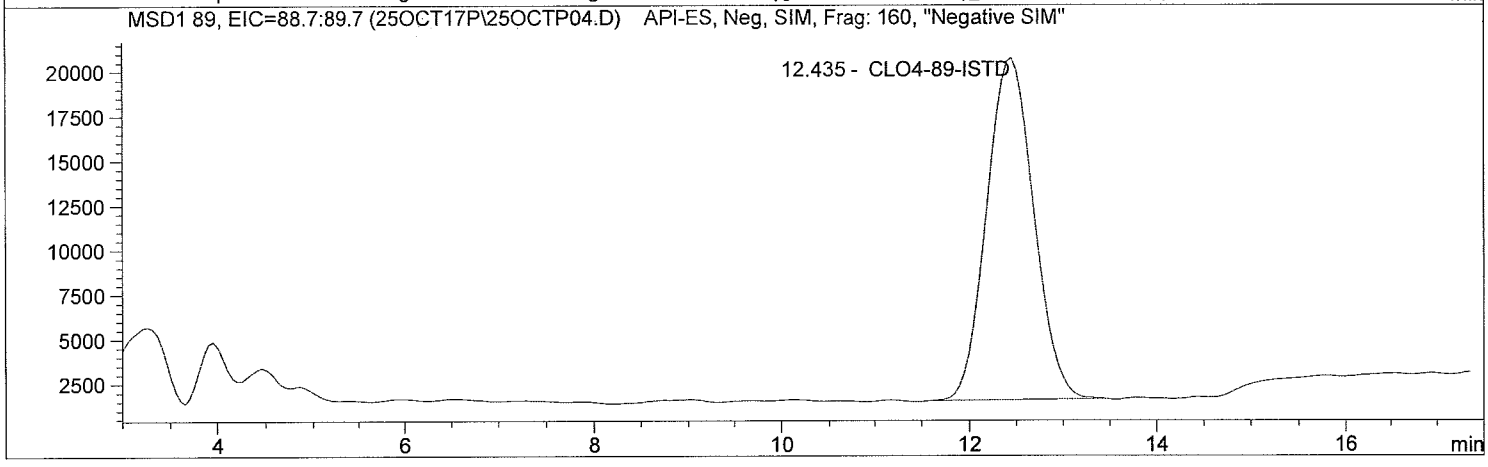
Injection Date:	10/25/2017 10:02:51	Seq Line:	4
Sample Name:	571097 LMB	Location:	Vial 84
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-PR3.M
Last Changed: 10/26/2017 08:21:59

Perchlorate analysis







Data file: C:\HPCHEM\1\DATA\25OCT17P\25OCTP04.D Sample Name: 571097 LMB

Injection Date:	10/25/2017 10:02:51	Seq Line:	4
Sample Name:	571097 LMB	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-PR3.M
Last Changed:	10/26/2017 08:21:59

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Thu, 26. Oct. 2017,08:21:56 am
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
12.435	PBA	668336.3	5.0000	CLO4-89-ISTD

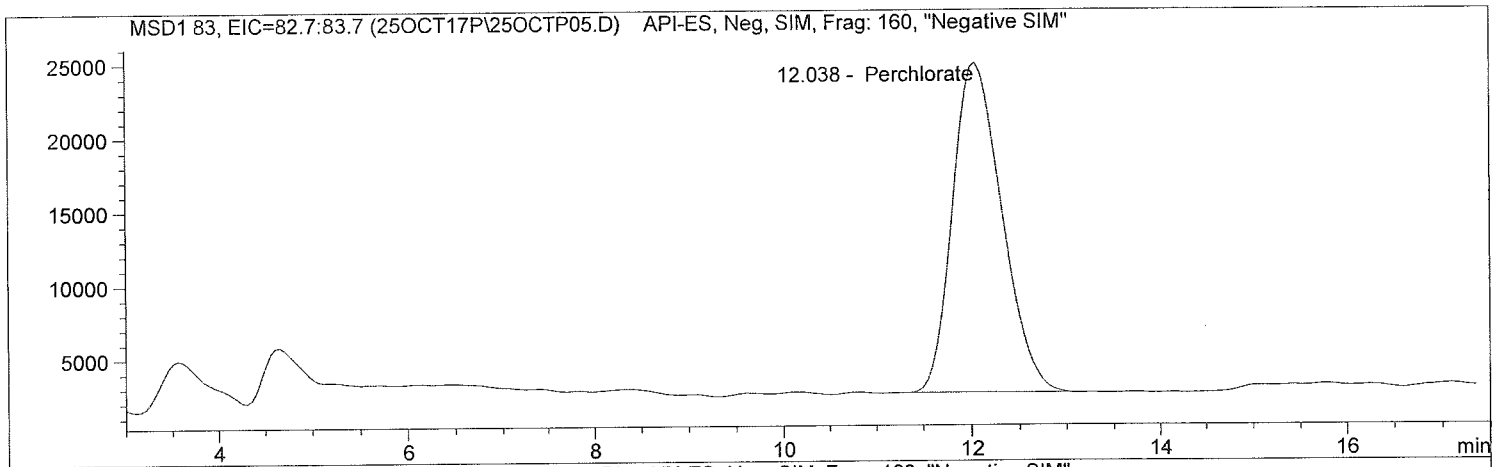
*** End of Report ***

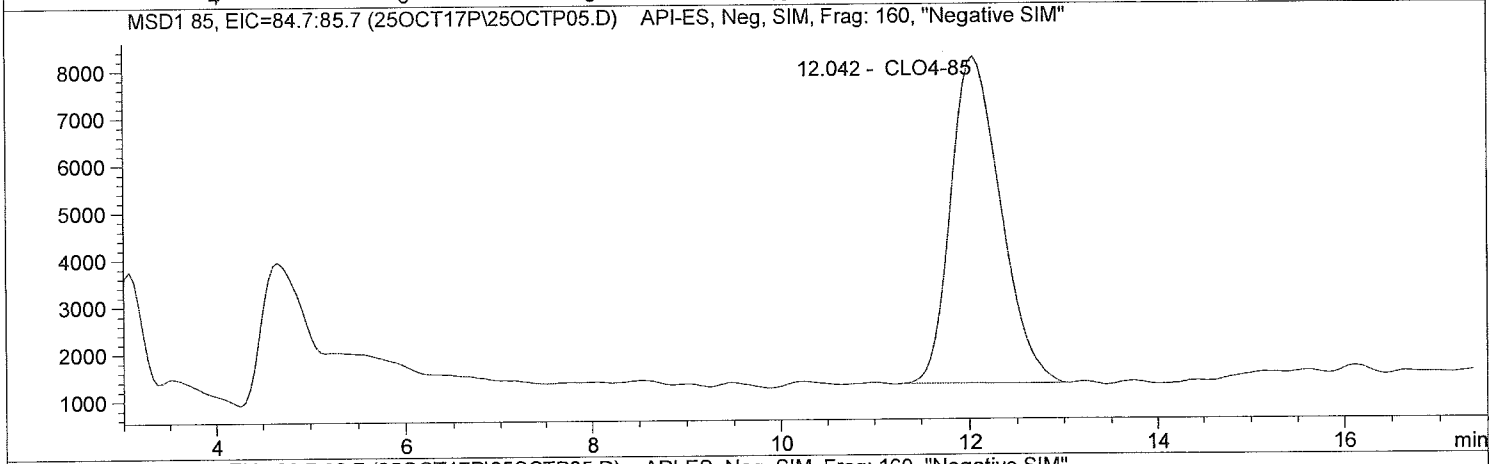
Data file: C:\HPCHEM\1\DATA\25OCT17P\25OCTP05.D Sample Name: 571098 LCS@5.

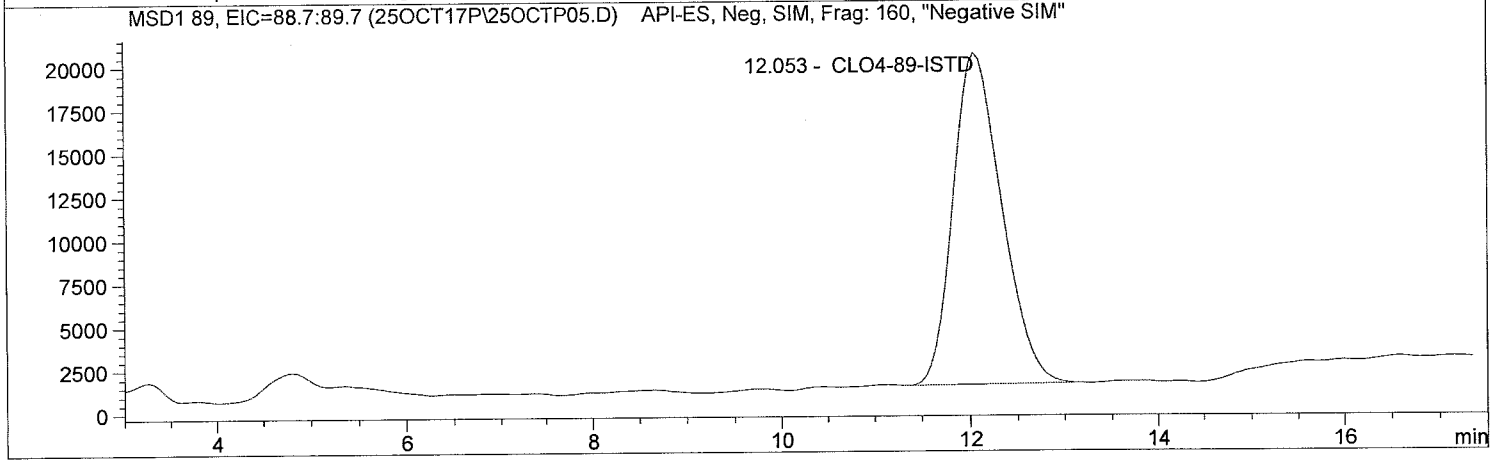
Injection Date:	10/25/2017 10:22:05	Seq Line:	5
Sample Name:	571098 LCS@5.	Location:	Vial 85
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-PR3.M
Last Changed: 10/26/2017 08:21:59

Perchlorate analysis







Data file: C:\HPCHEM\1\DATA\25OCT17P\25OCTP05.D Sample Name: 571098 LCS@5.

Injection Date:	10/25/2017 10:22:05	Seq Line:	5
Sample Name:	571098 LCS@5.	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-PR3.M
Last Changed:	10/26/2017 08:21:59

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Thu, 26. Oct. 2017,08:21:56 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
12.038	BBA	788522.6	5.2906	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.042	PBA	247122.1	5.1179	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.053	PBA	665647.0	5.0000	CLO4-89-ISTD

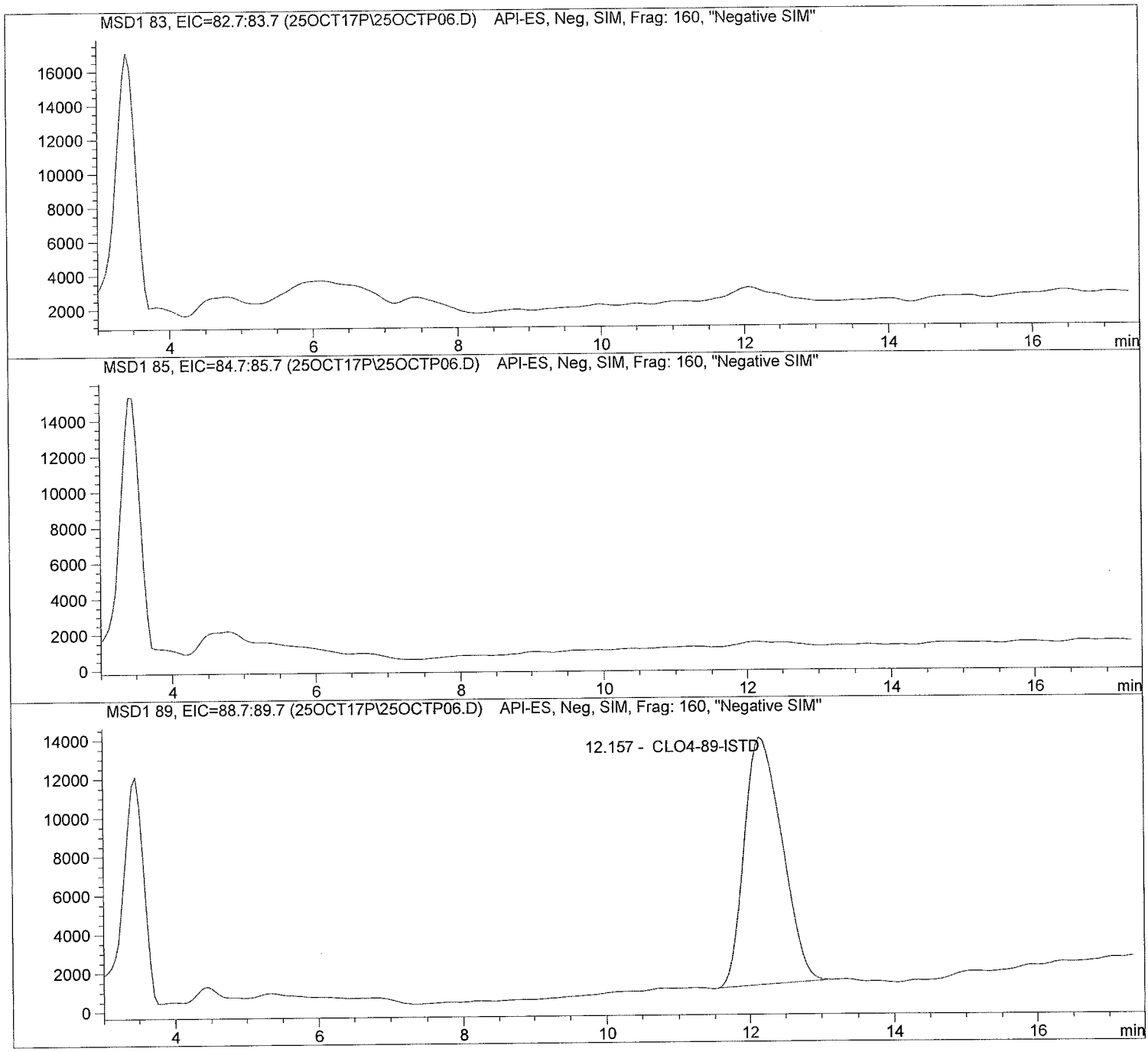
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\25OCT17P\25OCTP06.D Sample Name: 1728943001

Injection Date:	10/25/2017 10:44:39	Seq Line:	6
Sample Name:	1728943001	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-PR3.M
Last Changed:	10/26/2017 08:21:59

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\25OCT17P\25OCTP06.D Sample Name: 1728943001

Injection Date:	10/25/2017 10:44:39	Seq Line:	6
Sample Name:	1728943001	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-PR3.M
Last Changed:	10/26/2017 08:21:59

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Thu, 26. Oct. 2017,08:21:56 am
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
12.157	PBA	470591.7	5.0000	CLO4-89-ISTD

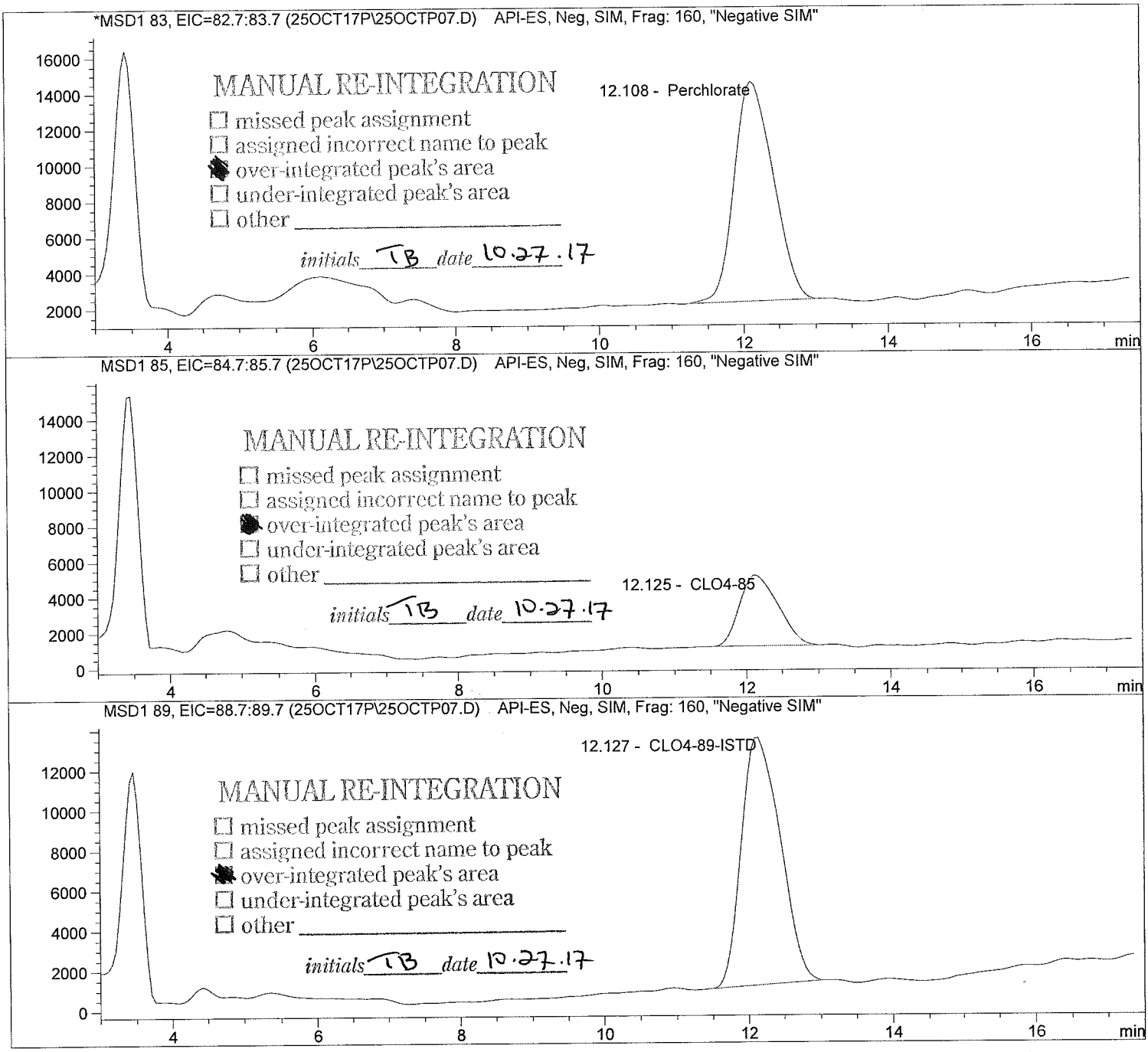
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\25OCT17P\25OCTP07.D Sample Name: 571099 289431S

Injection Date:	10/25/2017 11:03:53	Seq Line:	7
Sample Name:	571099 289431S	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-PR3.M
Last Changed: 10/26/2017 08:21:59

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\25OCT17P\25OCTP07.D Sample Name: 571099 289431S

Injection Date:	10/25/2017 11:03:53	Seq Line:	7
Sample Name:	571099 289431S	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-PR3.M
Last Changed:	10/26/2017 08:21:59

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Thu, 26. Oct. 2017,08:21:56 am
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
12.108	MM	465290.7	4.4787	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.125	MM	148406.0	4.3961	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.127	MM	466917.6	5.0000	CLO4-89-ISTD

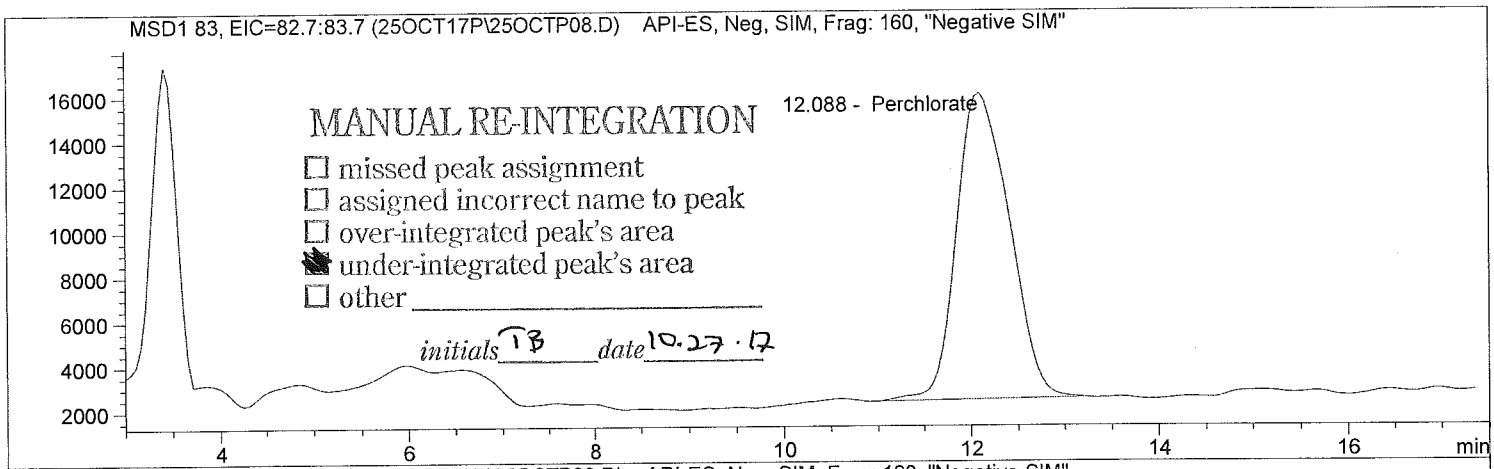
*** End of Report ***

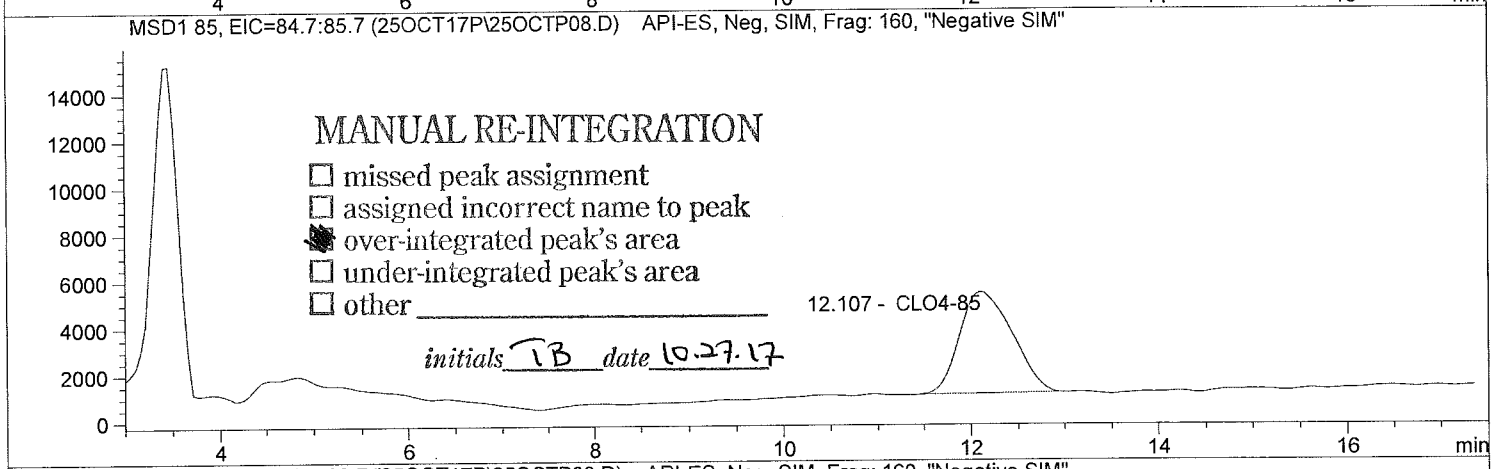
Data file: C:\HPCHEM\1\DATA\25OCT17P\25OCTP08.D Sample Name: 571100 289431D

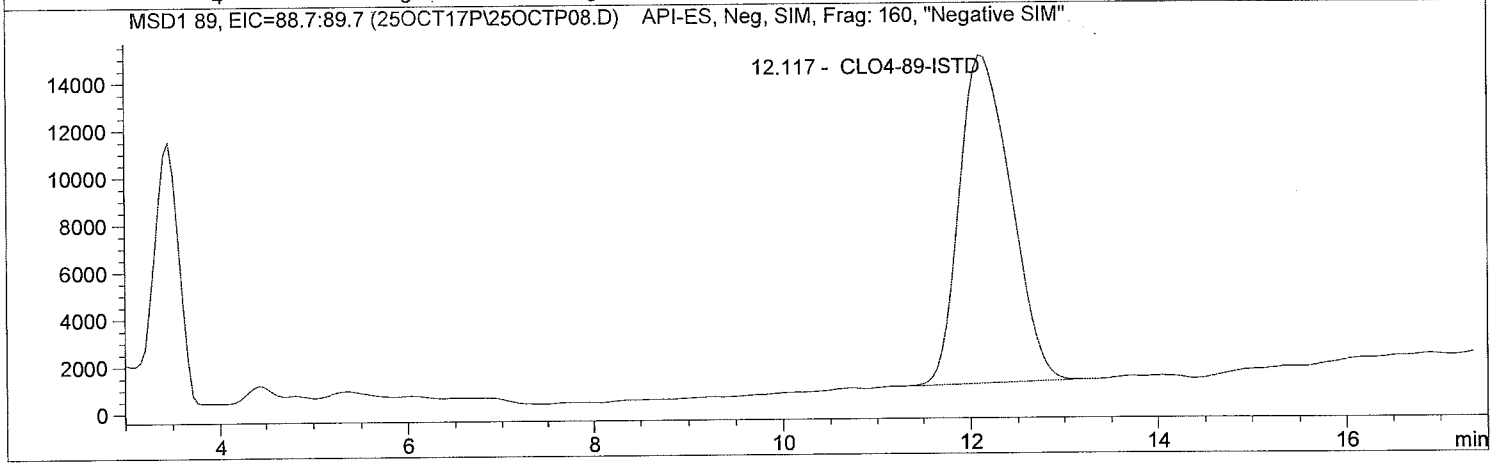
Injection Date:	10/25/2017 11:23:08	Seq Line:	8
Sample Name:	571100 289431D	Location:	Vial 88
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-PR3.M
Last Changed: 10/26/2017 08:21:59

Perchlorate analysis







Data file: C:\HPCHEM\1\DATA\25OCT17P\25OCTP08.D Sample Name: 571100 289431D

Injection Date:	10/25/2017 11:23:08	Seq Line:	8
Sample Name:	571100 289431D	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-PR3.M
Last Changed:	10/26/2017 08:21:59

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Thu, 26. Oct. 2017,08:21:56 am
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
12.088	MM	527314.1	4.5192	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.107	MM	166736.0	4.3990	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.117	BBA	524243.2	5.0000	CLO4-89-ISTD

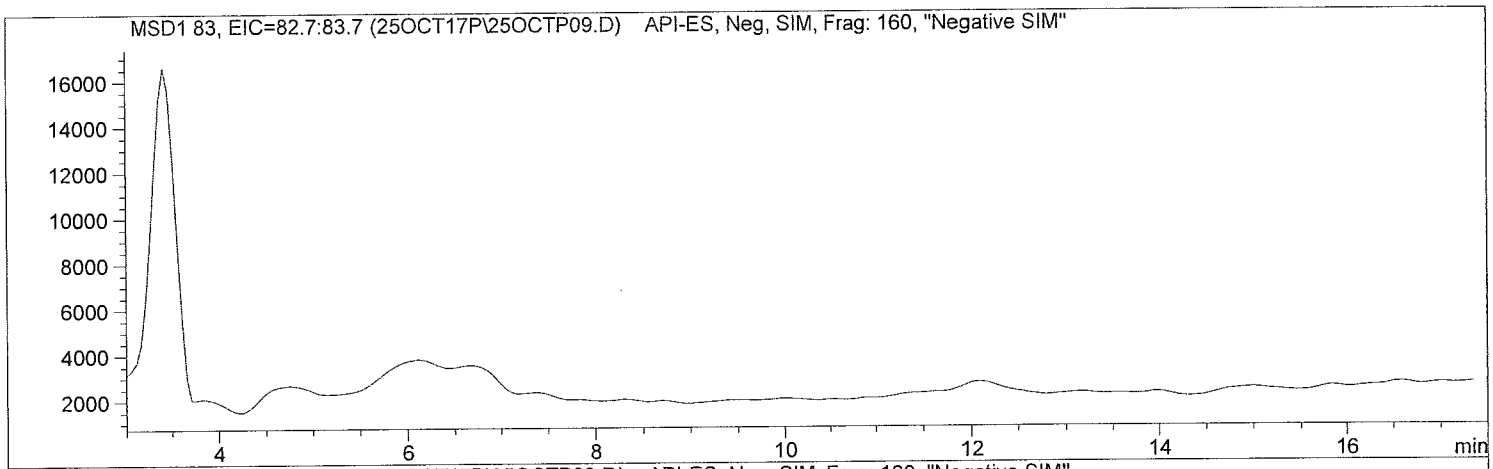
*** End of Report ***

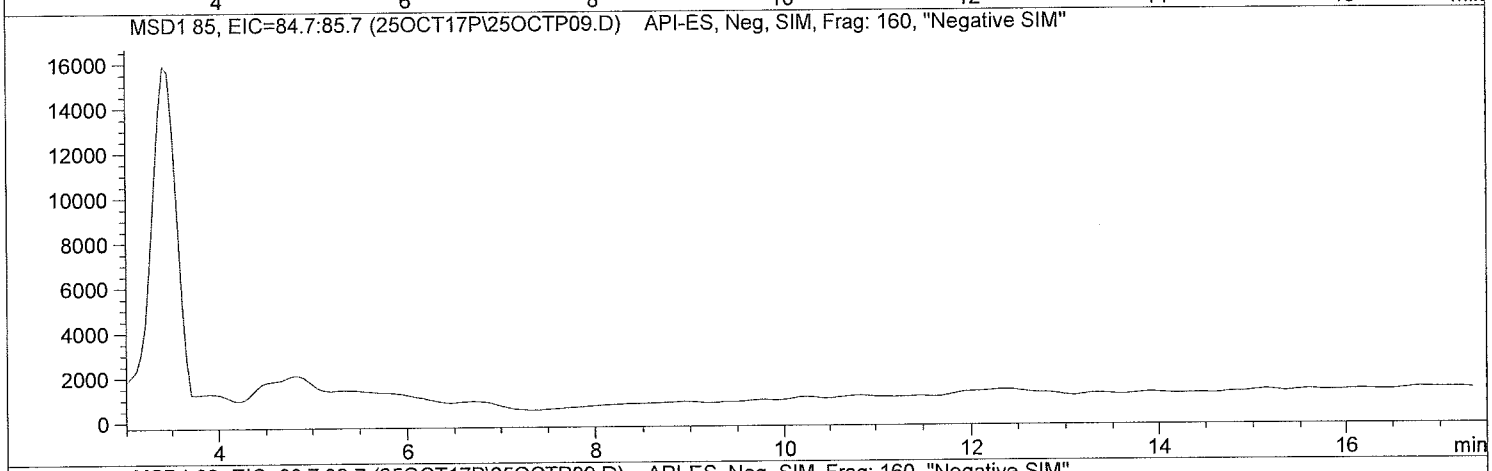
Data file: C:\HPCHEM\1\DATA\25OCT17P\25OCTP09.D Sample Name: 1728945001

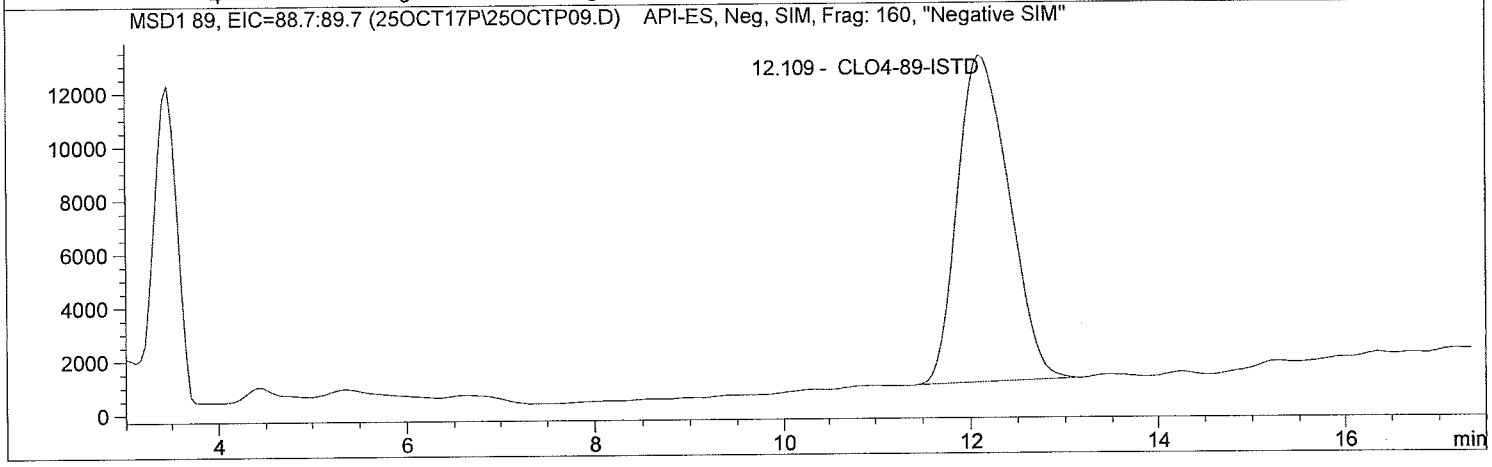
Injection Date:	10/25/2017 11:43:34	Seq Line:	9
Sample Name:	1728945001	Location:	Vial 89
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-PR3.M
Last Changed: 10/26/2017 08:21:59

Perchlorate analysis







Data file: C:\HPCHEM\1\DATA\25OCT17P\25OCTP09.D Sample Name: 1728945001

Injection Date:	10/25/2017 11:43:34	Seq Line:	9
Sample Name:	1728945001	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-PR3.M
Last Changed:	10/26/2017 08:21:59

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Thu, 26. Oct. 2017,08:21:56 am
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
12.109	PBA	460454.9	5.0000	CLO4-89-ISTD

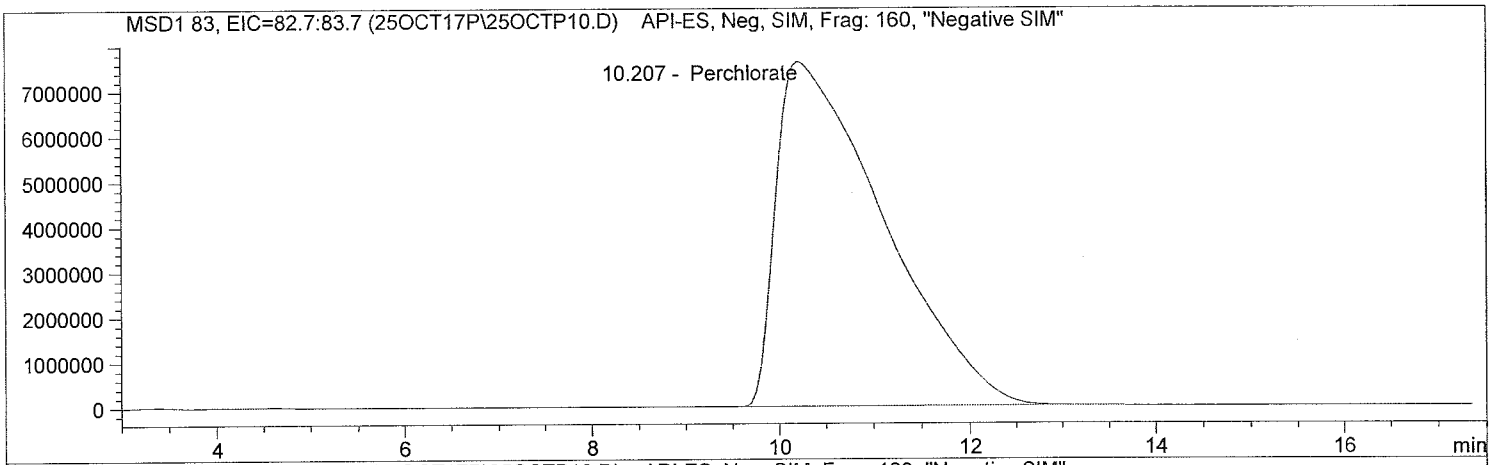
*** End of Report ***

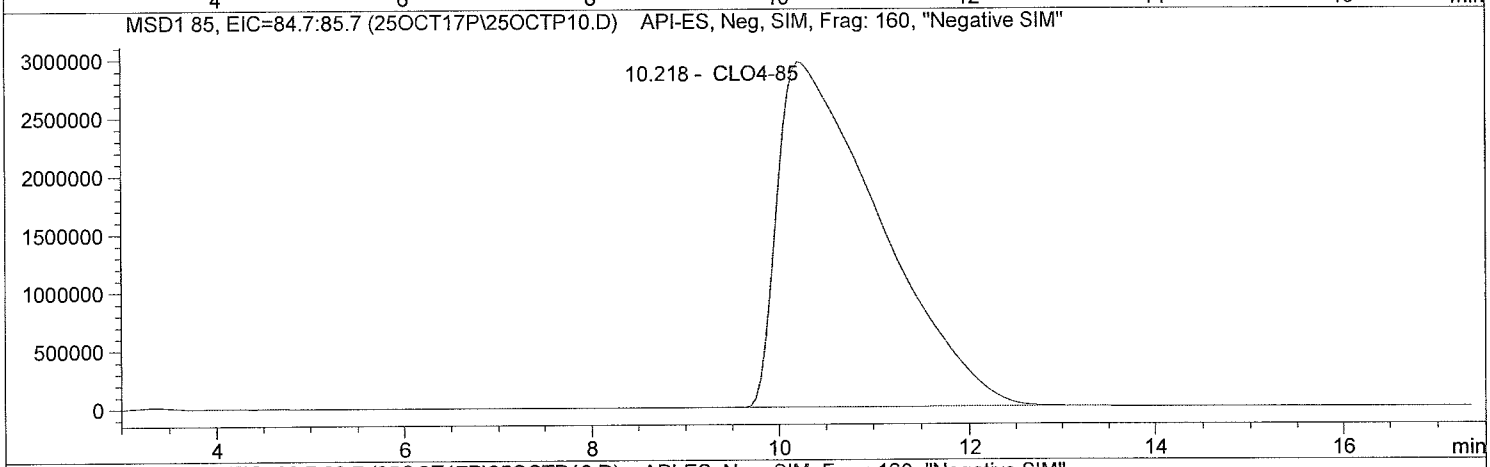
Data file: C:\HPCHEM\1\DATA\25OCT17P\25OCTP10.D Sample Name: 1728946001

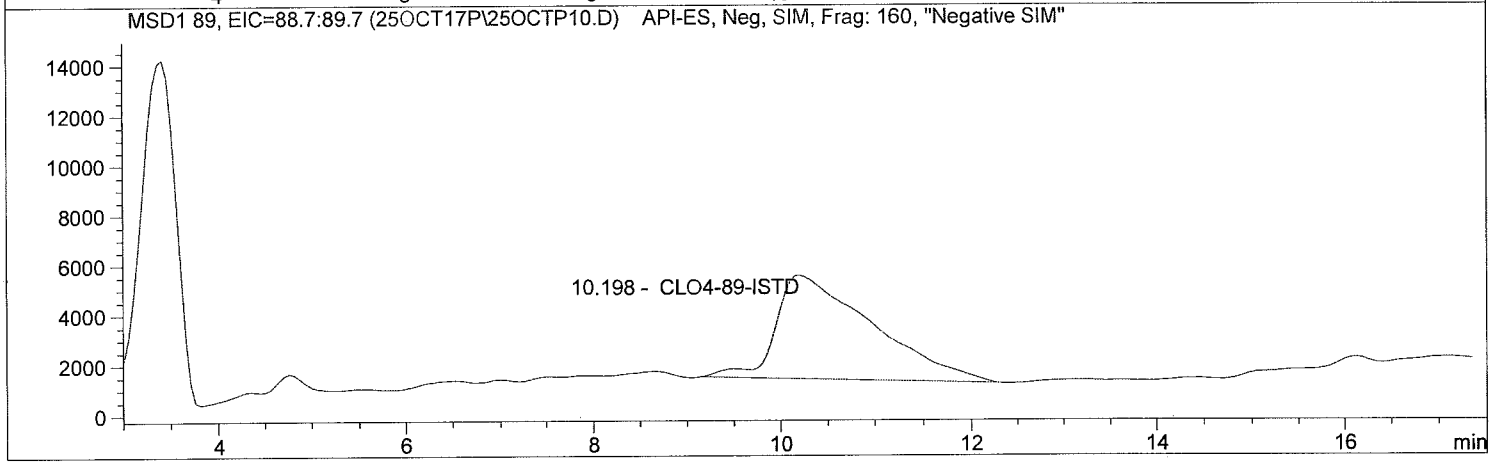
Injection Date:	10/25/2017 12:02:51	Seq Line:	10
Sample Name:	1728946001	Location:	Vial 90
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-PR3.M
Last Changed: 10/26/2017 08:21:59

Perchlorate analysis







Data file: C:\HPCHEM\1\DATA\25OCT17P\25OCTP10.D Sample Name: 1728946001

Injection Date:	10/25/2017 12:02:51	Seq Line:	10
Sample Name:	1728946001	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-PR3.M
Last Changed:	10/26/2017 08:21:59

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Thu, 26. Oct. 2017,08:21:56 am
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
10.207	PBA	598622272.0	1043.0336	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
10.218	PBA	221715600.0	1404.7771	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
10.198	PBA	294801.1	5.0000	CLO4-89-ISTD

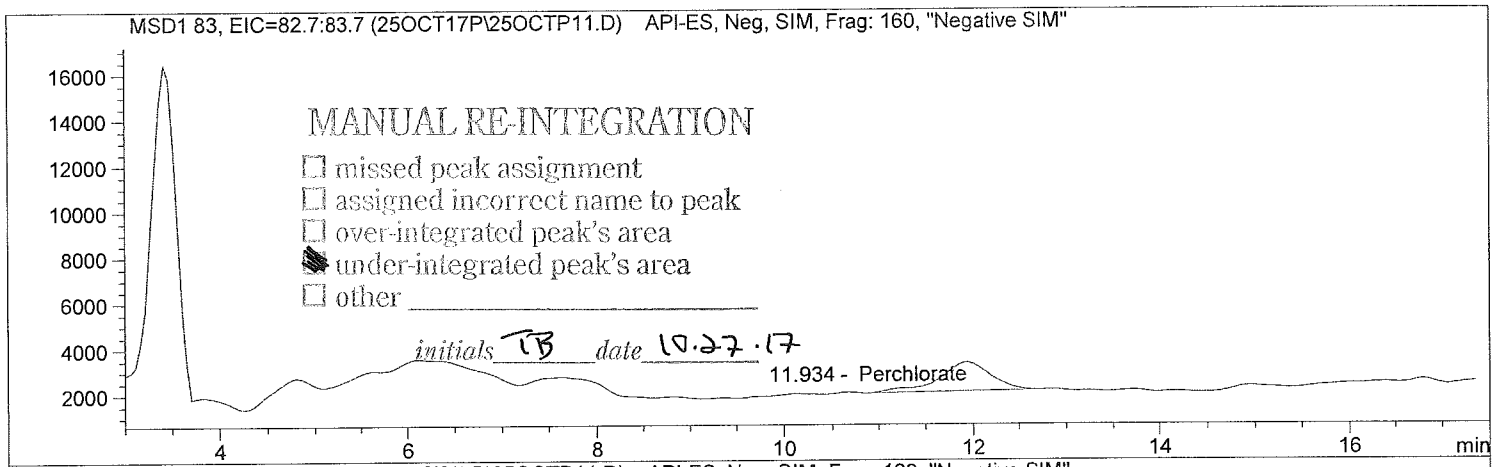
*** End of Report ***

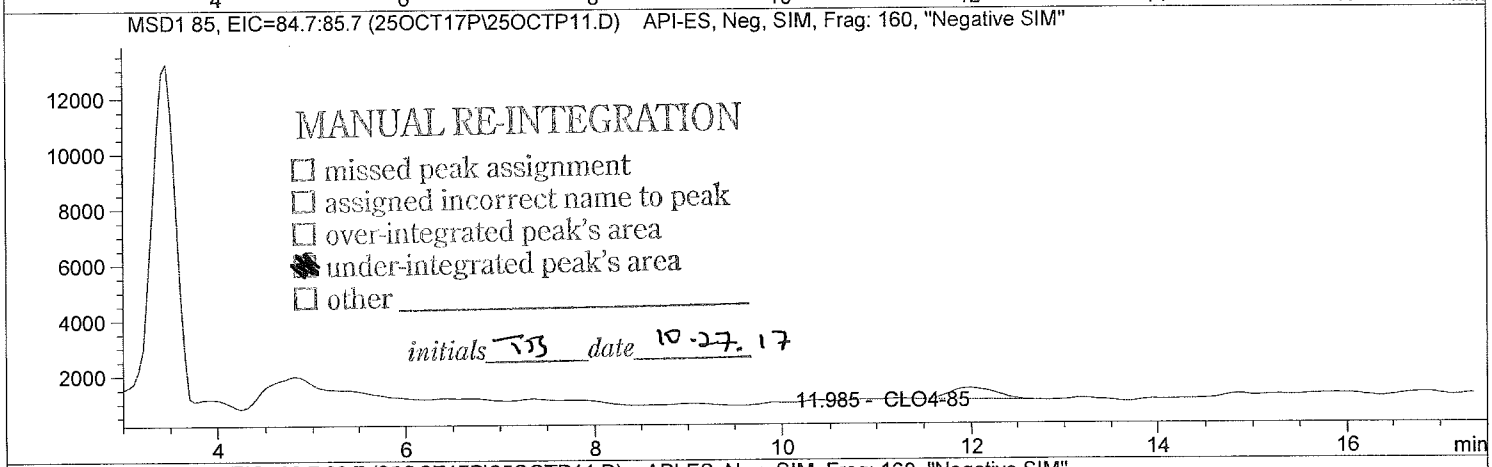
Data file: C:\HPCHEM\1\DATA\25OCT17P\25OCTP11.D Sample Name: 1729349001

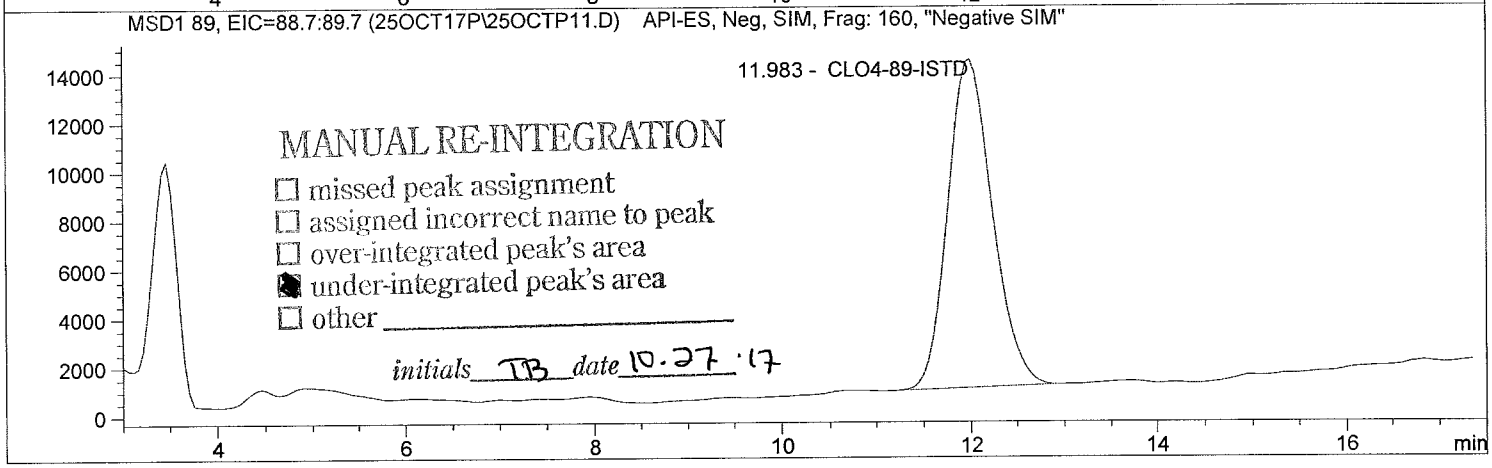
Injection Date:	10/25/2017 12:22:07	Seq Line:	11
Sample Name:	1729349001	Location:	Vial 91
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-PR3.M
Last Changed: 10/26/2017 08:21:59

Perchlorate analysis







Data file: C:\HPCHEM\1\DATA\25OCT17P\25OCTP11.D Sample Name: 1729349001

Injection Date:	10/25/2017 12:22:07	Seq Line:	11
Sample Name:	1729349001	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-PR3.M
Last Changed:	10/26/2017 08:21:59

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Thu, 26. Oct. 2017,08:21:56 am
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
11.934	MM	47998.0	0.5039	Perchlorate

< RL/MDL

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
11.985	MM	14252.7	0.4491	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
11.983	MM	446974.5	5.0000	CLO4-89-ISTD

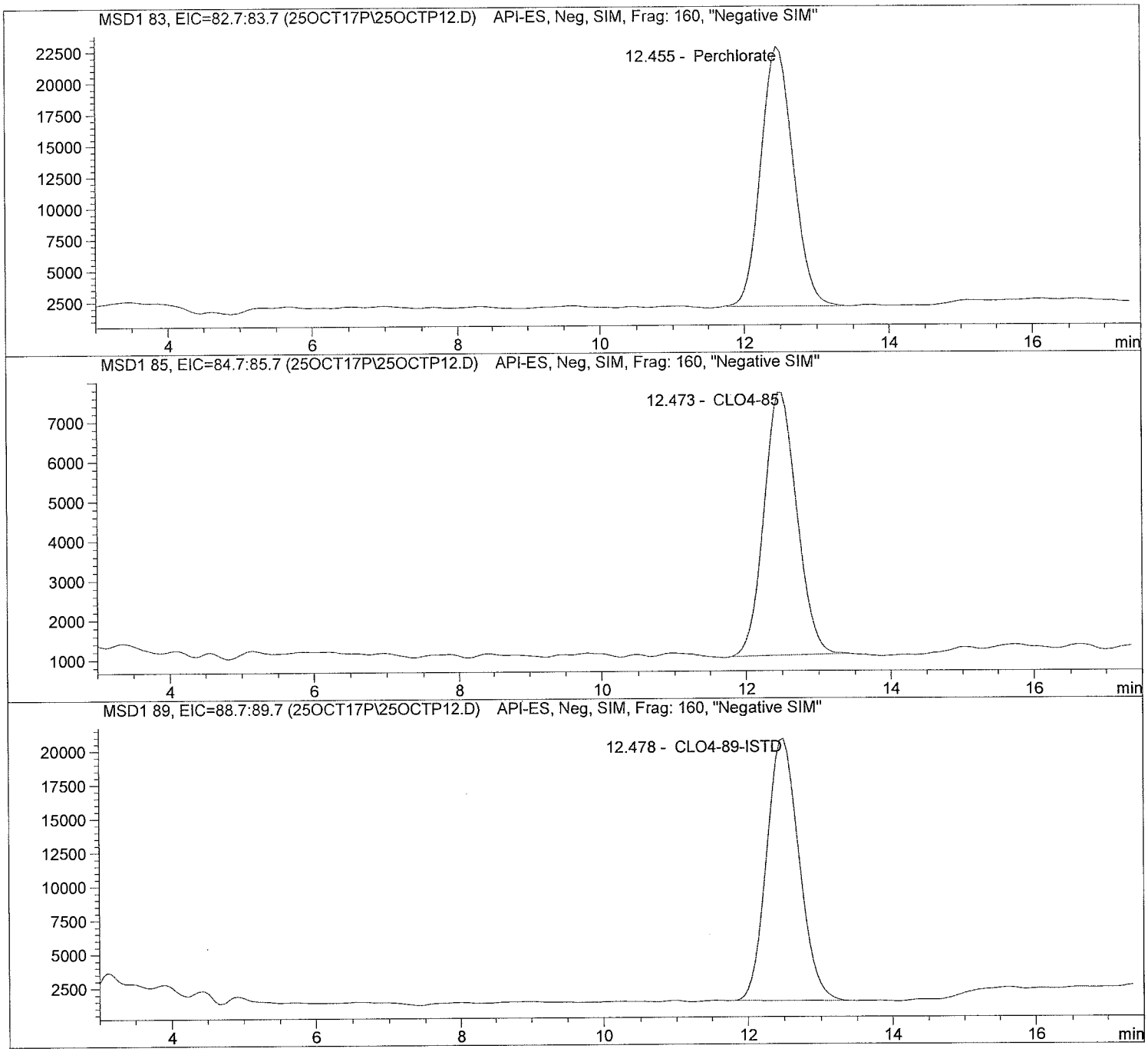
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\25OCT17P\25OCTP12.D Sample Name: 1728946001 1K

Injection Date:	10/25/2017 12:42:54	Seq Line:	12
Sample Name:	1728946001 1K	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-PR3.M
Last Changed: 10/26/2017 08:21:59

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\25OCT17P\25OCTP12.D Sample Name: 1728946001 1K

Injection Date:	10/25/2017 12:42:54	Seq Line:	12
Sample Name:	1728946001 1K	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-PR3.M
Last Changed: 10/26/2017 08:21:59

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Thu, 26. Oct. 2017,08:21:56 am
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
12.455	BBA	641885.6	4805.6841	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.473	PBA	207772.7	4790.7437	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.478	BBA	598771.3	5000.0000	CLO4-89-ISTD

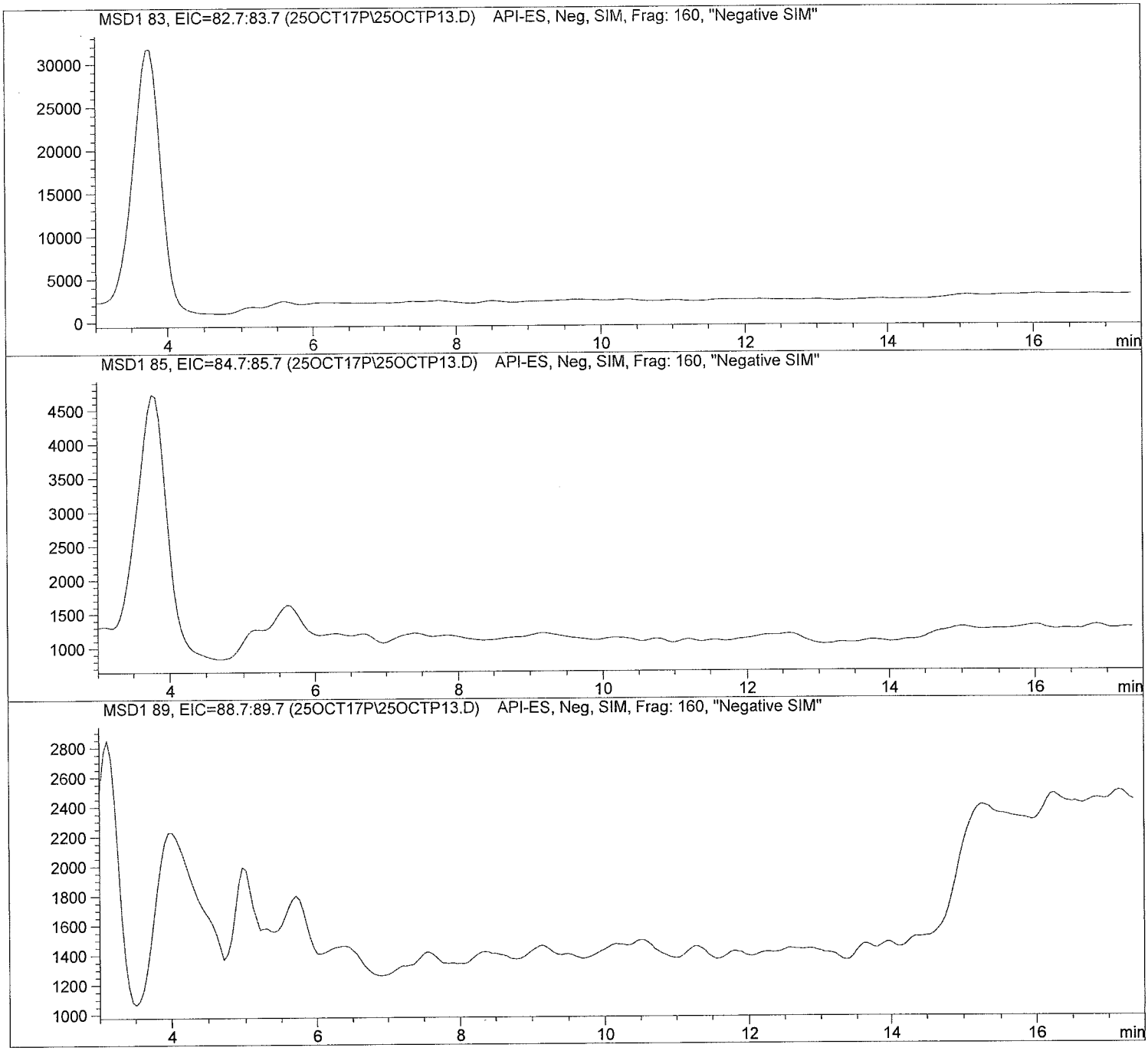
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\25OCT17P\25OCTP13.D Sample Name: Rinse

Injection Date:	10/25/2017 13:02:08	Seq Line:	13
Sample Name:	Rinse	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-PR3.M
Last Changed: 10/26/2017 08:21:59

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\25OCT17P\25OCTP13.D Sample Name: Rinse

Injection Date:	10/25/2017 13:02:08	Seq Line:	13
Sample Name:	Rinse	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-PR3.M
Last Changed: 10/26/2017 08:21:59

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Thu, 26. Oct. 2017,08:21:56 am
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
0.000		0.0	0.0000	CLO4-89-ISTD

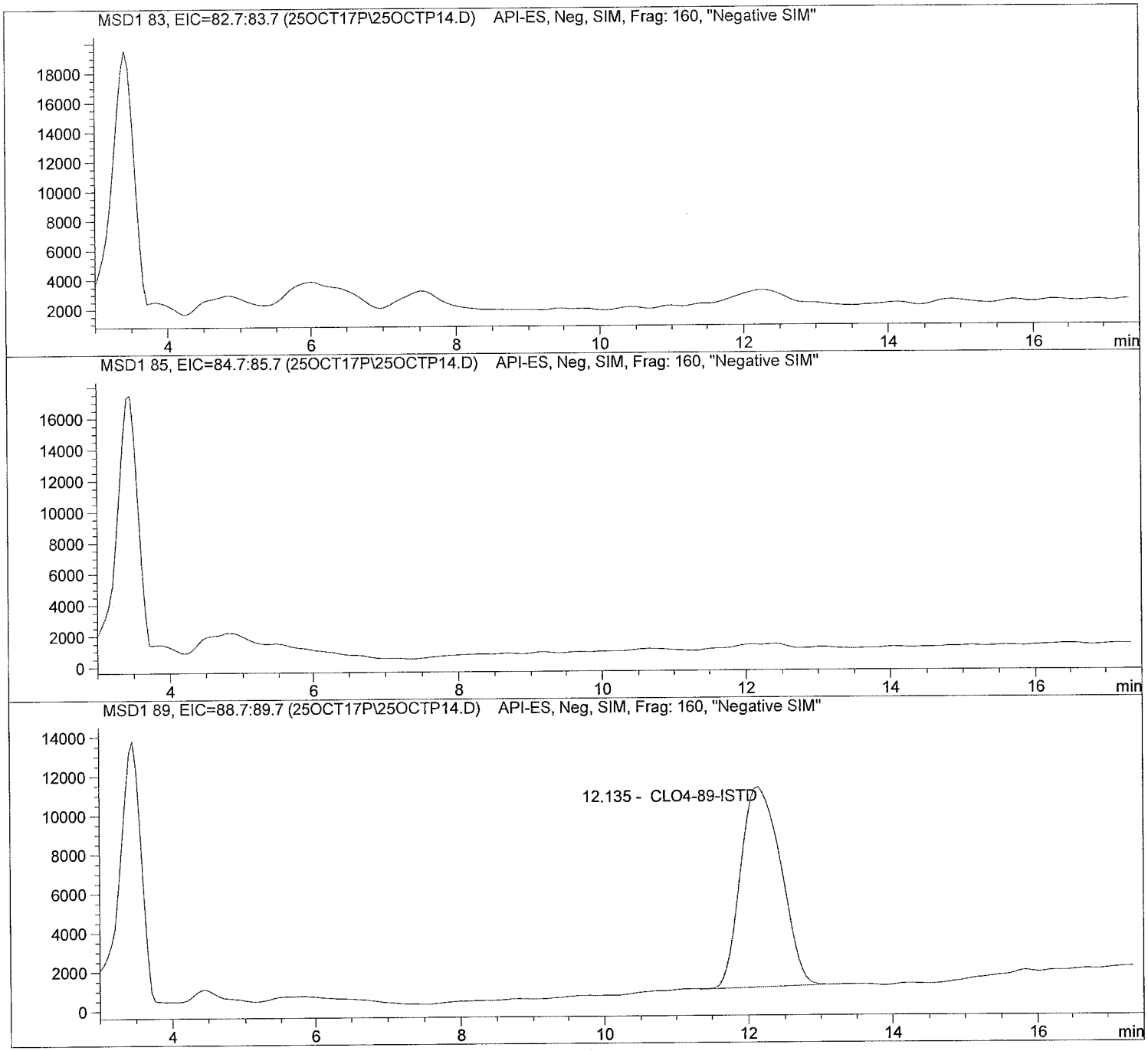
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\25OCT17P\25OCTP14.D Sample Name: 1729821001

Injection Date:	10/25/2017 13:21:24	Seq Line:	14
Sample Name:	1729821001	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-PR3.M
Last Changed: 10/26/2017 08:21:59

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\25OCT17P\25OCTP14.D Sample Name: 1729821001

Injection Date:	10/25/2017 13:21:24	Seq Line:	14
Sample Name:	1729821001	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-PR3.M
Last Changed: 10/26/2017 08:21:59

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Thu, 26. Oct. 2017,08:21:56 am
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
12.135	BBA	392983.3	5.0000	CLO4-89-ISTD

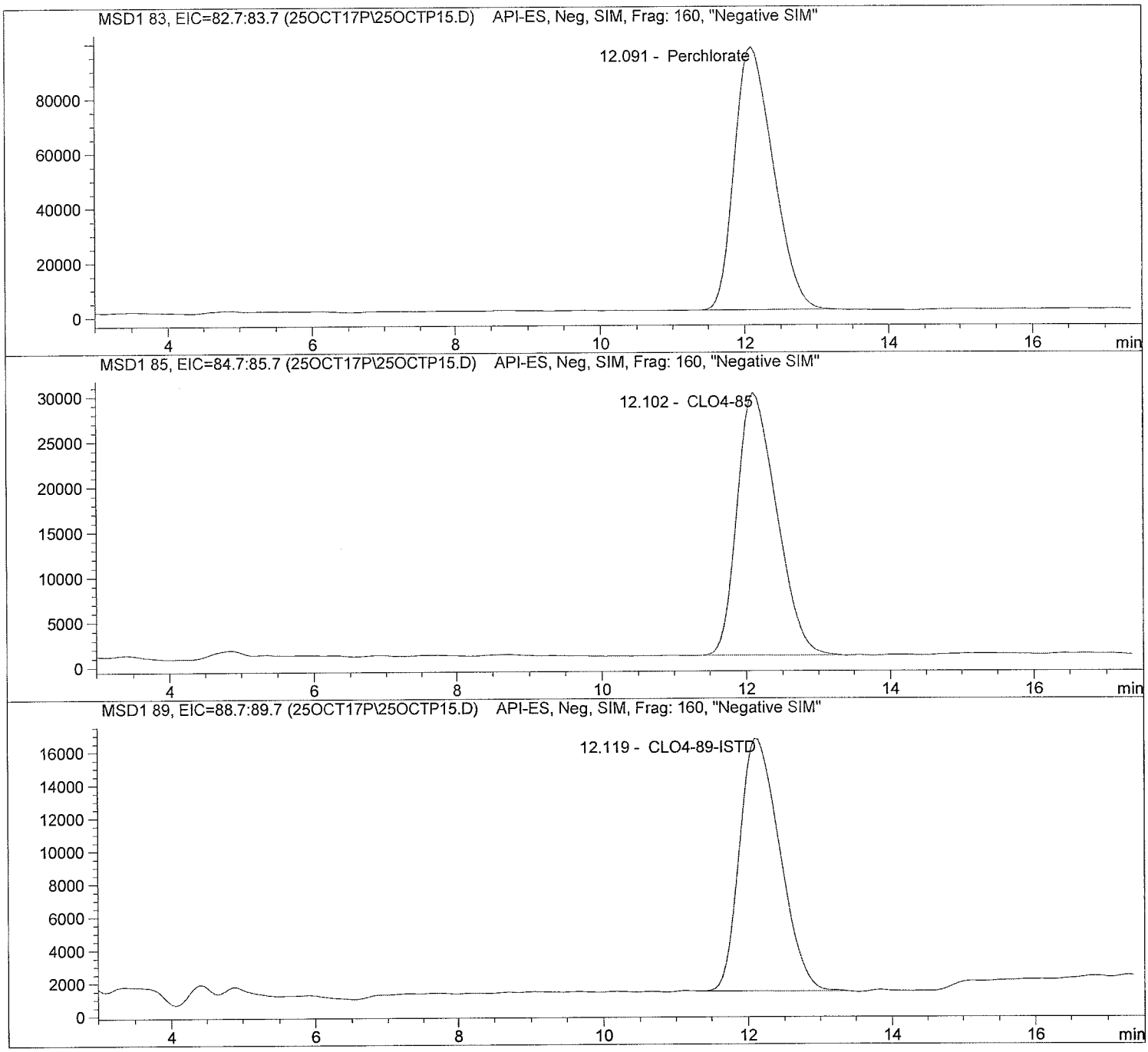
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\25OCT17P\25OCTP15.D Sample Name: 571101 CCV@25

Injection Date:	10/25/2017 14:46:57	Seq Line:	15
Sample Name:	571101 CCV@25	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-PR3.M
Last Changed: 10/26/2017 08:21:59

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\25OCT17P\25OCTP15.D Sample Name: 571101 CCV@25

Injection Date:	10/25/2017 14:46:57	Seq Line:	15
Sample Name:	571101 CCV@25	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-PR3.M
Last Changed:	10/26/2017 08:21:59

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Thu, 26. Oct. 2017,08:21:56 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
12.091	BBA	3560409.2	23.8177	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.102	PBA	1092944.3	23.6862	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.119	BBA	586464.6	5.0000	CLO4-89-ISTD

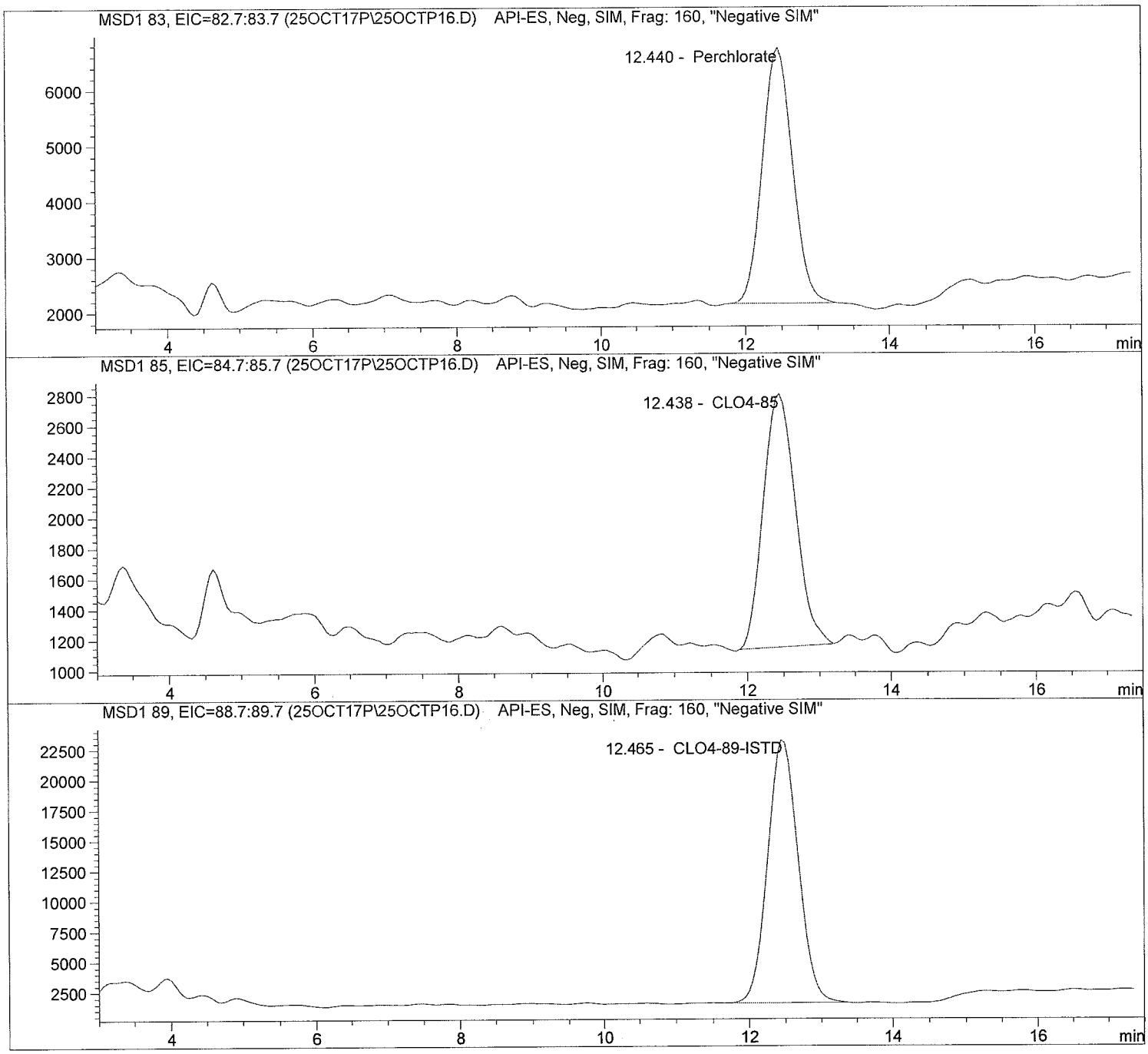
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\25OCT17P\25OCTP16.D Sample Name: 571102 LODV@1.

Injection Date:	10/25/2017 15:06:11	Seq Line:	16
Sample Name:	571102 LODV@1.	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-PR3.M
Last Changed: 10/26/2017 08:21:59

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\25OCT17P\25OCTP16.D Sample Name: 571102 LODV@1.

Injection Date:	10/25/2017 15:06:11	Seq Line:	16
Sample Name:	571102 LODV@1.	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-PR3.M
Last Changed: 10/26/2017 08:21:59

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Thu, 26. Oct. 2017,08:21:56 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
12.440	PBA	132751.2	0.9676	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.438	PBA	51323.1	1.1313	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.465	BBA	636963.2	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\21AUG17P\21AUG17P.B

Batch Review Method:
C:\HPCHEM\1\METHODS\CLO4-PR3.M

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

#*	Sample	Location	Inj	SampleType	Run	CLO4-85 Area	CLO4-85 RT	CLO4-85 Amount
*	ICAL1@ .05ug/L	Vial 71	1	Control	1	4365.90820	12.226	9.14000e-2
*	ICAL2@ .10ug/L	Vial 72	1	Control	2	9514.03027	12.210	2.01141e-1
*	ICAL3@ .20ug/L	Vial 73	1	Control	3	1.35331e4	12.236	2.88584e-1
*	ICAL4@ 0.5ug/L	Vial 74	1	Control	4	2.76171e4	12.161	5.95393e-1
*	ICAL5@ 1.0ug/L	Vial 75	1	Control	5	4.75097e4	12.226	1.01731
*	ICAL6@ 5.0ug/L	Vial 76	1	Control	6	2.30426e5	12.209	5.01082
*	ICAL7@ 10.ug/L	Vial 77	1	Control	7	4.46570e5	12.212	9.64041
*	ICAL8@ 25.ug/L	Vial 78	1	Control	8	1.19993e6	12.134	25.19412
*	ICAL9@ 50.ug/L	Vial 79	1	Control	9	2.60933e6	12.150	49.96977
*	ICAL Verf@10ug/L	Vial 80	1	Control	10	4.49703e5	12.232	9.41499

#*	Sample	Location	Inj	SampleType	Run	Perchlorate Area	Perchlorate RT	Perchlorate Amount
*	ICAL1@ .05ug/L	Vial 71	1	Control	1	8930.38184	12.237	6.88583e-2
*	ICAL2@ .10ug/L	Vial 72	1	Control	2	1.15052e4	12.248	8.73938e-2
*	ICAL3@ .20ug/L	Vial 73	1	Control	3	2.62111e4	12.238	1.91166e-1
*	ICAL4@ 0.5ug/L	Vial 74	1	Control	4	6.28912e4	12.159	4.52946e-1
*	ICAL5@ 1.0ug/L	Vial 75	1	Control	5	1.30706e5	12.231	9.25591e-1
*	ICAL6@ 5.0ug/L	Vial 76	1	Control	6	6.80205e5	12.200	4.80762
*	ICAL7@ 10.ug/L	Vial 77	1	Control	7	1.41057e6	12.196	9.74126
*	ICAL8@ 25.ug/L	Vial 78	1	Control	8	4.00474e6	12.118	25.78802
*	ICAL9@ 50.ug/L	Vial 79	1	Control	9	8.85683e6	12.137	49.73658
*	ICAL Verf@10ug/L	Vial 80	1	Control	10	1.36065e6	12.218	9.14332

#*	Sample	Location	Inj	SampleType	Run	CLO4-89-ISTD Area	CLO4-89-ISTD RT	CLO4-89-ISTD Amount
*	ICAL1@ .05ug/L	Vial 71	1	Control	1	6.73943e5	12.272	5.00000
*	ICAL2@ .10ug/L	Vial 72	1	Control	2	6.67016e5	12.250	5.00000
*	ICAL3@ .20ug/L	Vial 73	1	Control	3	6.61031e5	12.267	5.00000
*	ICAL4@ 0.5ug/L	Vial 74	1	Control	4	6.52904e5	12.190	5.00000
*	ICAL5@ 1.0ug/L	Vial 75	1	Control	5	6.56071e5	12.242	5.00000
*	ICAL6@ 5.0ug/L	Vial 76	1	Control	6	6.34251e5	12.221	5.00000
*	ICAL7@ 10.ug/L	Vial 77	1	Control	7	6.25689e5	12.216	5.00000
*	ICAL8@ 25.ug/L	Vial 78	1	Control	8	6.01523e5	12.141	5.00000
*	ICAL9@ 50.ug/L	Vial 79	1	Control	9	5.97661e5	12.156	5.00000
*	ICAL Verf@10ug/L	Vial 80	1	Control	10	6.45815e5	12.234	5.00000

*** End of Report ***

Method C:\HPCHEM\1\METHODS\CLO4-PR3.M

Calibration Table

Perchlorate

Calib. Data Modified : 8/21/2017 2:55:52 PM

Calculate : Internal Standard
Based on : Peak Area

Rel. Reference Window : 20.000 %
Abs. Reference Window : 0.000 min
Rel. Non-ref. Window : 20.000 %
Abs. Non-ref. Window : 0.000 min
Use Multiplier & Dilution Factor with ISTDs
Uncalibrated Peaks : not reported
Partial Calibration : No recalibration if peaks missing

Curve Type : Quadratic (some peaks differ, see below)
Origin : Ignored (some peaks differ, see below)
Weight : Linear (Amnt) (some peaks differ, see below)

Recalibration Settings:
Average Response : Average all calibrations
Average Retention Time: Floating Average New 75%

Calibration Report Options :
Printout of recalibrations within a sequence:
Calibration Table after Recalibration
Normal Report after Recalibration
If the sequence is done with bracketing:
Results of first cycle (ending previous bracket)

Default Sample ISTD Information (if not set in sample table):

ISTD #	ISTD Amount	Name
1	5.00000	CLO4-89-ISTD

Signal 1: MSD1 83, EIC=82.7:83.7
Signal 2: MSD1 85, EIC=84.7:85.7
Signal 3: MSD1 89, EIC=88.7:89.7

RetTime [min]	Sig	Lvl	Amount	Area	Amt/Area	Ref	Grp	Name
12.226	2	1	5.00000e-2	4365.90820	1.14524e-5		1	CLO4-85
		2	1.00000e-1	9514.03027	1.05108e-5			
		3	2.00000e-1	1.35331e4	1.47786e-5			
		4	5.00000e-1	2.76171e4	1.81047e-5			
		5	1.00000	4.75097e4	2.10483e-5			
		6	5.00000	2.30426e5	2.16990e-5			
		7	10.00000	4.46570e5	2.23929e-5			
		8	25.00000	1.19993e6	2.08345e-5			
		9	50.00000	2.60933e6	1.91620e-5			
12.237	1	1	5.00000e-2	8930.38184	5.59886e-6		1	Perchlorate
		2	1.00000e-1	1.15052e4	8.69173e-6			
		3	2.00000e-1	2.62111e4	7.63037e-6			
		4	5.00000e-1	6.28912e4	7.95024e-6			
		5	1.00000	1.30706e5	7.65074e-6			
		6	5.00000	6.80205e5	7.35073e-6			
		7	10.00000	1.41057e6	7.08933e-6			
		8	25.00000	4.00474e6	6.24259e-6			
		9	50.00000	8.85683e6	5.64536e-6			
12.272	3	1	5.00000	6.73943e5	7.41903e-6	+I1		CLO4-89-ISTD
		2	5.00000	6.67016e5	7.49607e-6			

Method C:\HPCHEM\1\METHODS\CLO4-PR3.M

RetTime [min]	Sig	Lvl	Amount	Area	Amt/Area	Ref	Grp	Name
		3	5.00000	6.61031e5	7.56394e-6			
		4	5.00000	6.52904e5	7.65809e-6			
		5	5.00000	6.56071e5	7.62113e-6			
		6	5.00000	6.34251e5	7.88331e-6			
		7	5.00000	6.25689e5	7.99119e-6			
		8	5.00000	6.01523e5	8.31223e-6			
		9	5.00000	5.97661e5	8.36594e-6			

More compound-specific settings:

Compound: CLO4-85
- Time Window : From 10.676 min To 13.166 min
- Curve Type : Quadratic
- Origin : Forced
- Calibration Level Weights:/
  - Level 1 : 1
  - Level 2 : 1
  - Level 3 : 1
  - Level 4 : 1
  - Level 5 : 1
  - Level 6 : 1
  - Level 7 : 1
  - Level 8 : 1
  - Level 9 : 1

Compound: Perchlorate
- Time Window : From 10.737 min To 13.198 min
- Curve Type : Quadratic
- Origin : Ignored
- Calibration Level Weights:/
  - Level 1 : 1
  - Level 2 : 0.5
  - Level 3 : 0.25
  - Level 4 : 0.1
  - Level 5 : 0.05
  - Level 6 : 0.01
  - Level 7 : 0.005
  - Level 8 : 0.002
  - Level 9 : 0.001

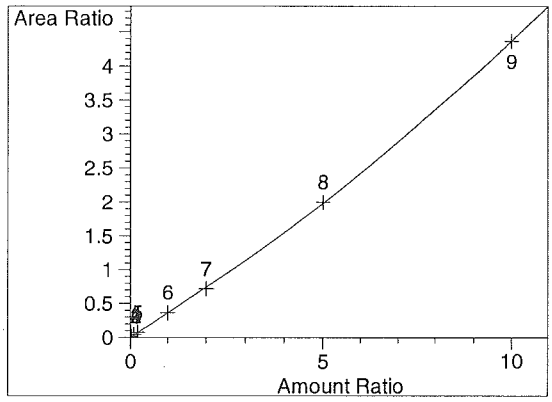
Compound: CLO4-89-ISTD
- Time Window : From 10.704 min To 13.272 min
- Curve Type : Linear
- Origin : Included
- Calibration Level Weights:/
  - Level 1 : 1
  - Level 2 : 1
  - Level 3 : 1
  - Level 4 : 1
  - Level 5 : 1
  - Level 6 : 1
  - Level 7 : 1
  - Level 8 : 1
  - Level 9 : 1

Peak Sum Table

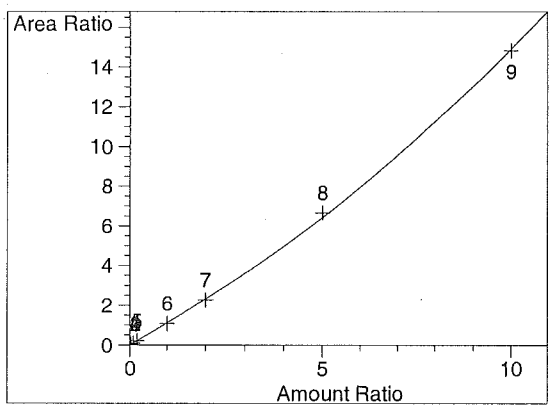
No Entries in table

Method C:\HPCHEM\1\METHODS\CLO4-PR3.M

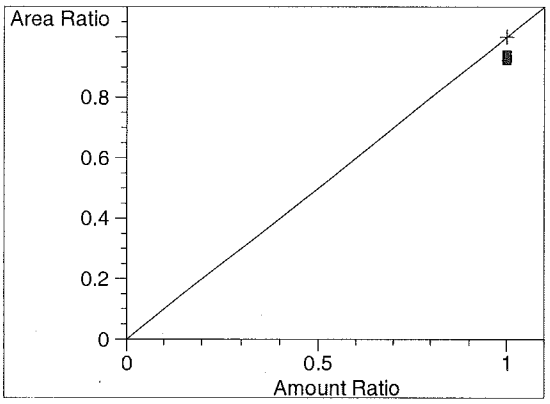
Calibration Curves



CLO4-85 at exp. RT: 12.226
MSD1 85, EIC=84.7:85.7
Correlation: 0.99997
Residual Std. Dev.: 0.01235
Formula: $y = ax^2 + bx$
a: 8.26698e-3
b: 3.54234e-1
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
Level 8 : 1
Level 9 : 1



Perchlorate at exp. RT: 12.237
MSD1 83, EIC=82.7:83.7
Correlation: 0.99970
Residual Std. Dev.: 0.10168
Formula: $y = ax^2 + bx + c$
a: 4.14991e-2
b: 1.07712
c: -1.59065e-3
x: Amount Ratio
y: Area Ratio
Calibration Level Weights:
Level 1 : 1
Level 2 : 0.5
Level 3 : 0.25
Level 4 : 0.1
Level 5 : 0.05
Level 6 : 0.01
Level 7 : 0.005
Level 8 : 0.002
Level 9 : 0.001



CLO4-89-ISTD at exp. RT: 12.272
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
Level 8 : 1
Level 9 : 1

Sequence: C:\HPCHEM\1\SEQUENCE\CLO4\2017\AUG\21AUG17P.S

Sequence Table:

Method and Injection Info Part:

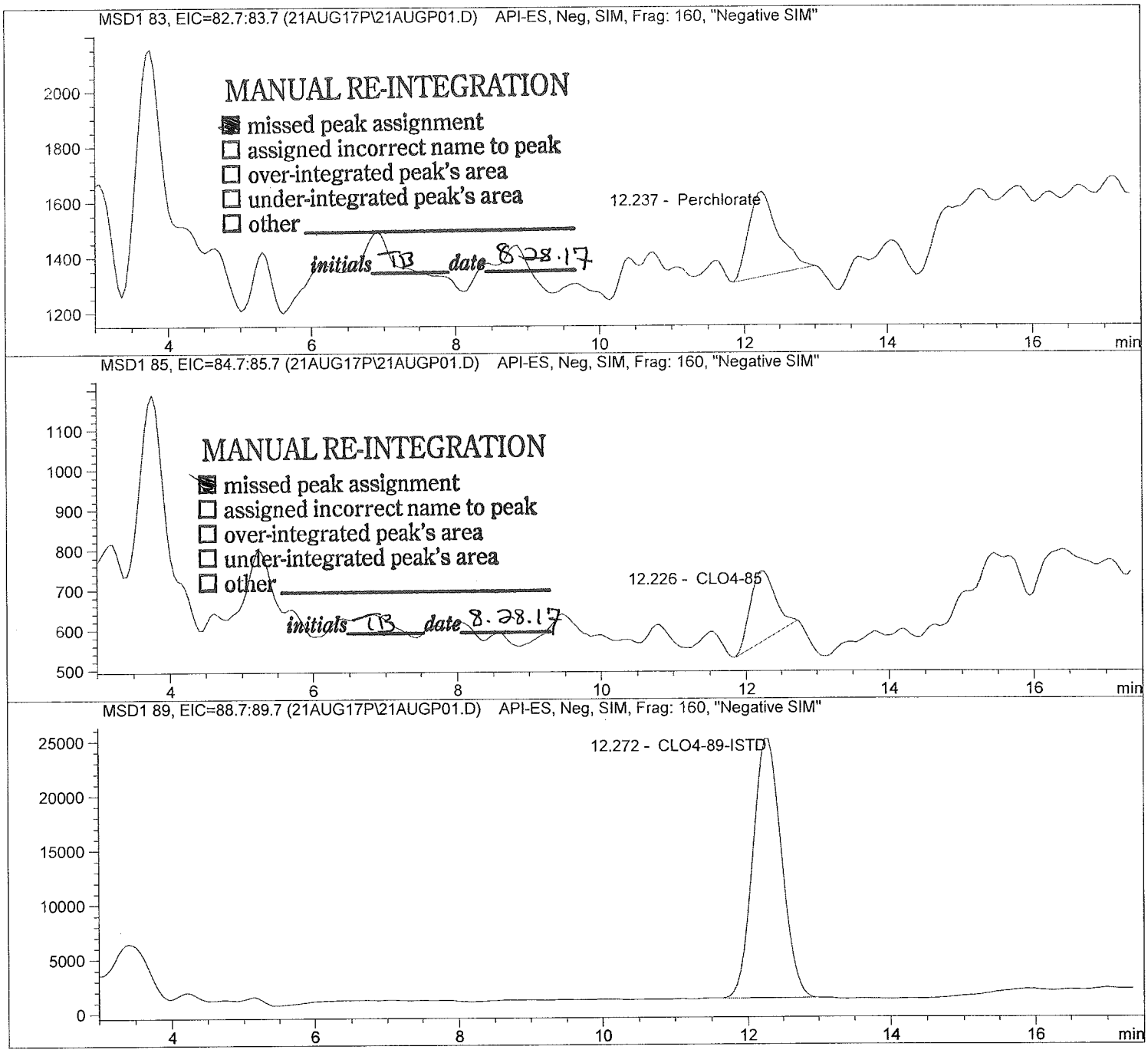
Line	Location	SampleName	Method	Inj	SampleType	InjVolume	DataFile
1	Vial 71	ICAL1@ .05ug/L	CLO4-AQN	1	Ctrl Samp		
2	Vial 72	ICAL2@ .10ug/L	CLO4-AQN	1	Ctrl Samp		
3	Vial 73	ICAL3@ .20ug/L	CLO4-AQN	1	Ctrl Samp		
4	Vial 74	ICAL4@ 0.5ug/L	CLO4-AQN	1	Ctrl Samp		
5	Vial 75	ICAL5@ 1.0ug/L	CLO4-AQN	1	Ctrl Samp		
6	Vial 76	ICAL6@ 5.0ug/L	CLO4-AQN	1	Ctrl Samp		
7	Vial 77	ICAL7@ 10.ug/L	CLO4-AQN	1	Ctrl Samp		
8	Vial 78	ICAL8@ 25.ug/L	CLO4-AQN	1	Ctrl Samp		
9	Vial 79	ICAL9@ 50.ug/L	CLO4-AQN	1	Ctrl Samp		
10	Vial 80	ICAL Verf@10ug/L	CLO4-AQN	1	Ctrl Samp		

Data file: C:\HPCHEM\1\DATA\21AUG17P\21AUGP01.D Sample Name: ICAL1@ .05ug/L

Injection Date:	8/21/2017 09:42:32	Seq Line:	1
Sample Name:	ICAL1@ .05ug/L	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-PR3.M
Last Changed: 8/21/2017 14:55:53

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\21AUG17P\21AUGP01.D Sample Name: ICAL1@ .05ug/L

Injection Date:	8/21/2017 09:42:32	Seq Line:	1
Sample Name:	ICAL1@ .05ug/L	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-PR3.M
Last Changed: 8/21/2017 14:55:53

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 21. Aug. 2017,02:55:52 pm
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	0.050

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.237	MM	8930.4	0.0689	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.226	MM	4365.9	0.0914	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.272	BBA	673942.9	5.0000	CLO4-89-ISTD

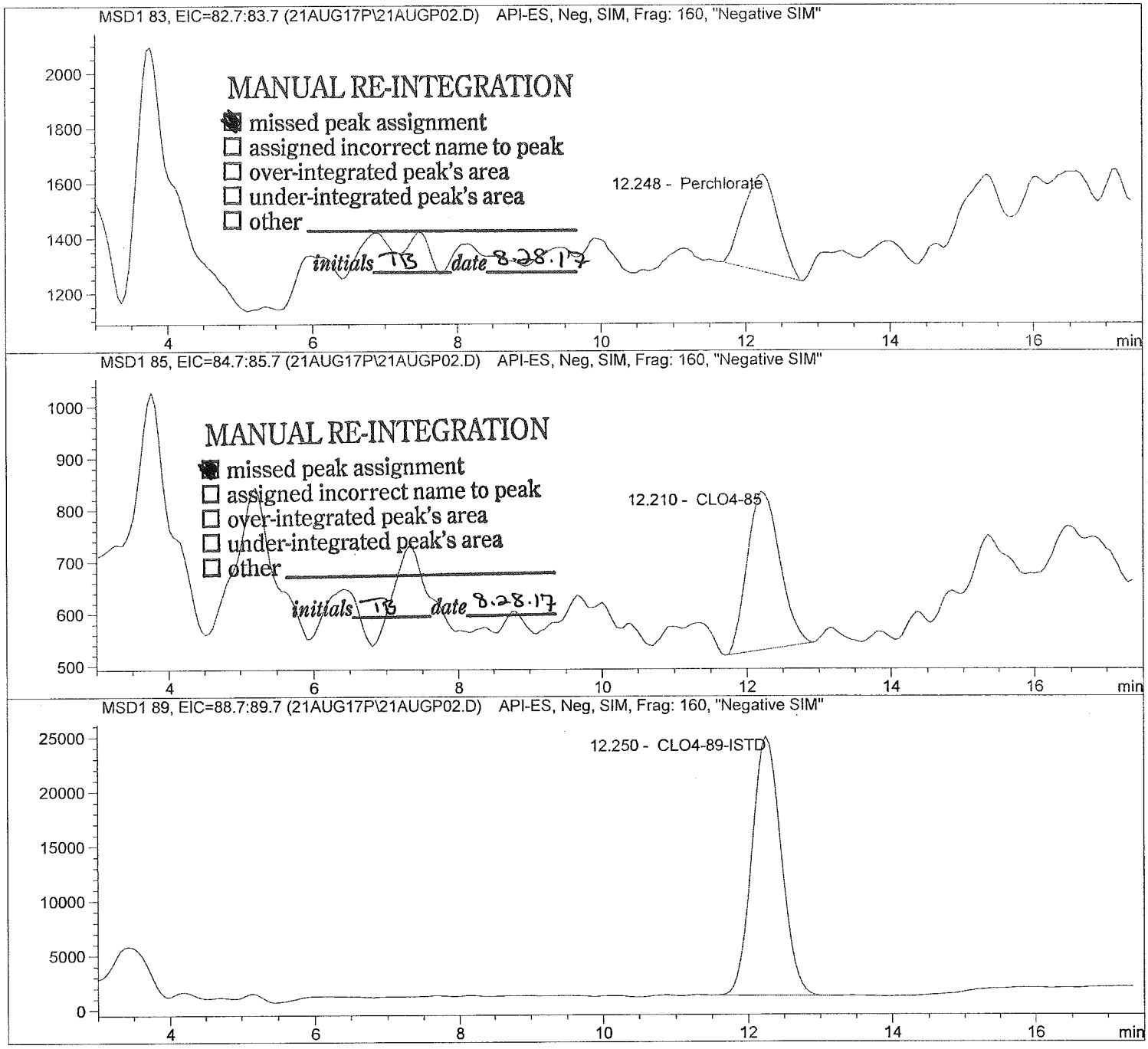
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\21AUG17P\21AUGP02.D Sample Name: ICAL2@ .10ug/L

Injection Date:	8/21/2017 10:01:47	Seq Line:	2
Sample Name:	ICAL2@ .10ug/L	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-PR3.M
Last Changed: 8/21/2017 14:55:53

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\21AUG17P\21AUGP02.D Sample Name: ICAL2@ .10ug/L

Injection Date:	8/21/2017 10:01:47	Seq Line:	2
Sample Name:	ICAL2@ .10ug/L	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-PR3.M
Last Changed:	8/21/2017 14:55:53

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 21. Aug. 2017,02:55:52 pm
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	0.100

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.248	MM	11505.2	0.0874	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.210	MM	9514.0	0.2011	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.250	BBA	667016.3	5.0000	CLO4-89-ISTD

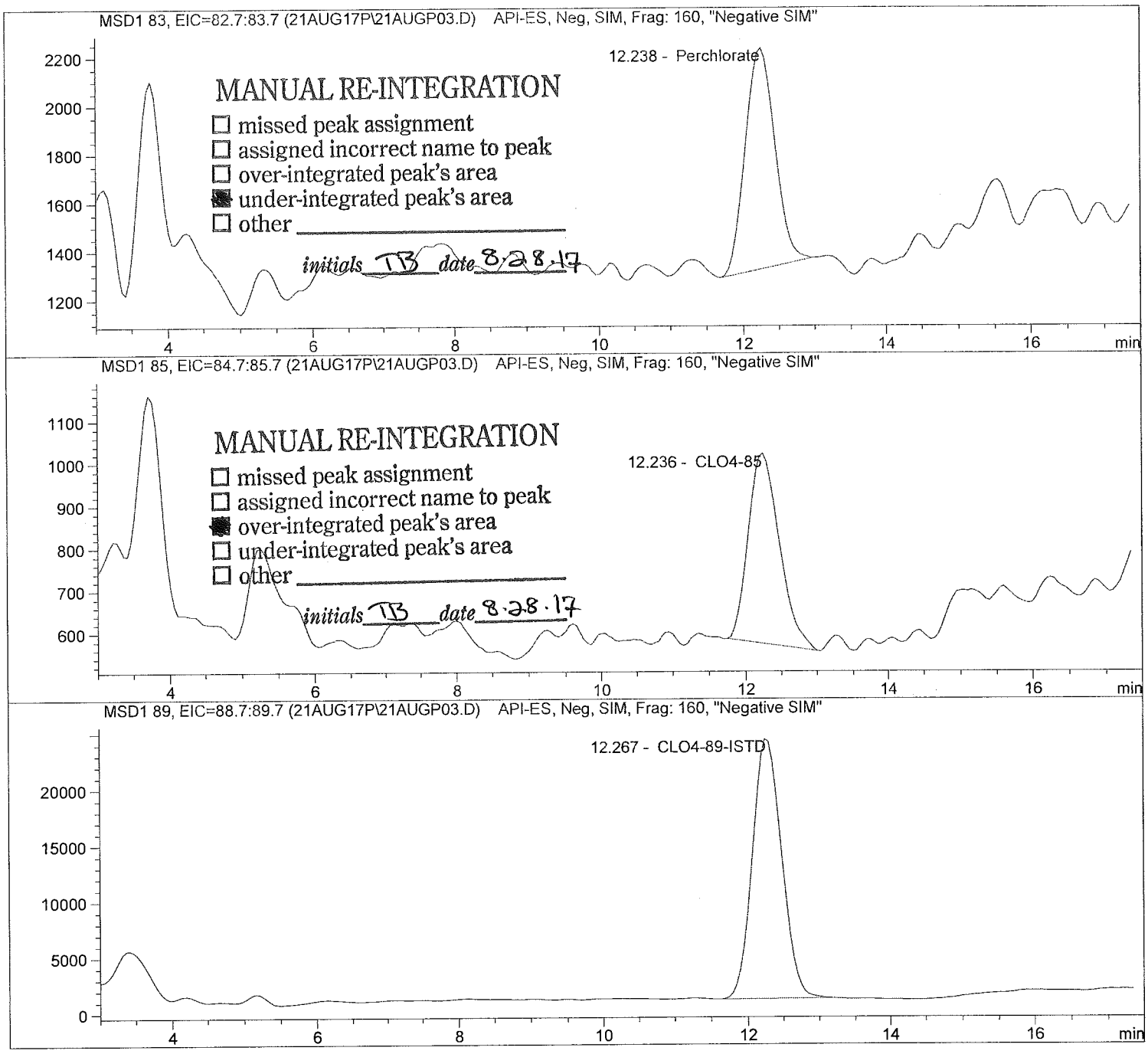
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\21AUG17P\21AUGP03.D Sample Name: ICAL3@ .20ug/L

Injection Date:	8/21/2017 10:21:02	Seq Line:	3
Sample Name:	ICAL3@ .20ug/L	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-PR3.M
Last Changed: 8/21/2017 14:55:53

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\21AUG17P\21AUGP03.D Sample Name: ICAL3@ .20ug/L

Injection Date:	8/21/2017 10:21:02	Seq Line:	3
Sample Name:	ICAL3@ .20ug/L	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-PR3.M
Last Changed:	8/21/2017 14:55:53

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 21. Aug. 2017,02:55:52 pm
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	0.200

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.238	MM	26211.1	0.1912	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.236	MM	13533.1	0.2886	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.267	PBA	661030.8	5.0000	CLO4-89-ISTD

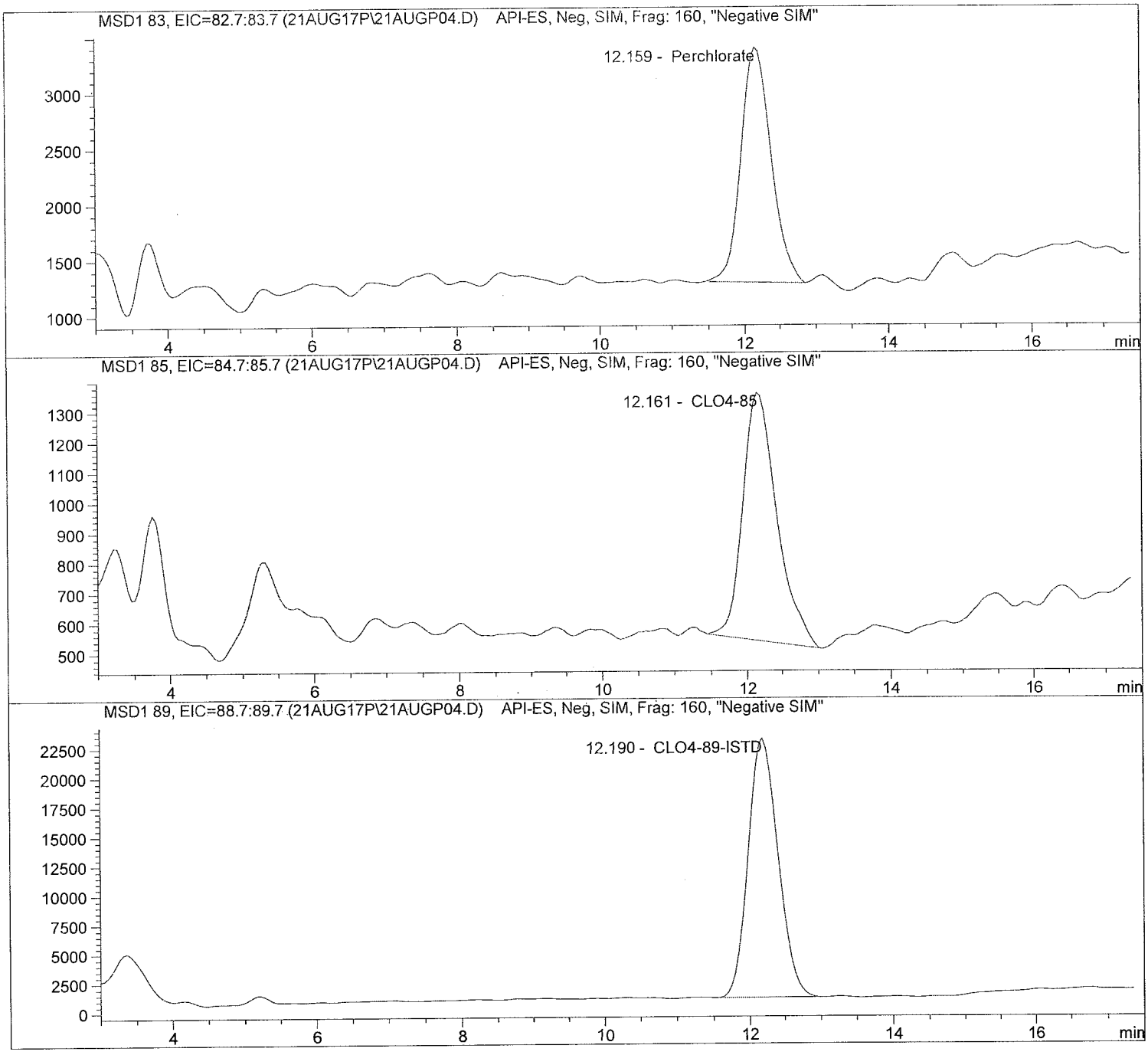
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\21AUG17P\21AUGP04.D Sample Name: ICAL4@ 0.5ug/L

Injection Date:	8/21/2017 10:40:22	Seq Line:	4
Sample Name:	ICAL4@ 0.5ug/L	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-PR3.M
Last Changed: 8/21/2017 14:55:53

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\21AUG17P\21AUGP04.D Sample Name: ICAL4@ 0.5ug/L

Injection Date:	8/21/2017 10:40:22	Seq Line:	4
Sample Name:	ICAL4@ 0.5ug/L	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-PR3.M
Last Changed:	8/21/2017 14:55:53

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 21. Aug. 2017,02:55:52 pm
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	0.500

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.159	BBA	62891.2	0.4529	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.161	PBA	27617.1	0.5954	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.190	PBA	652904.1	5.0000	CLO4-89-ISTD

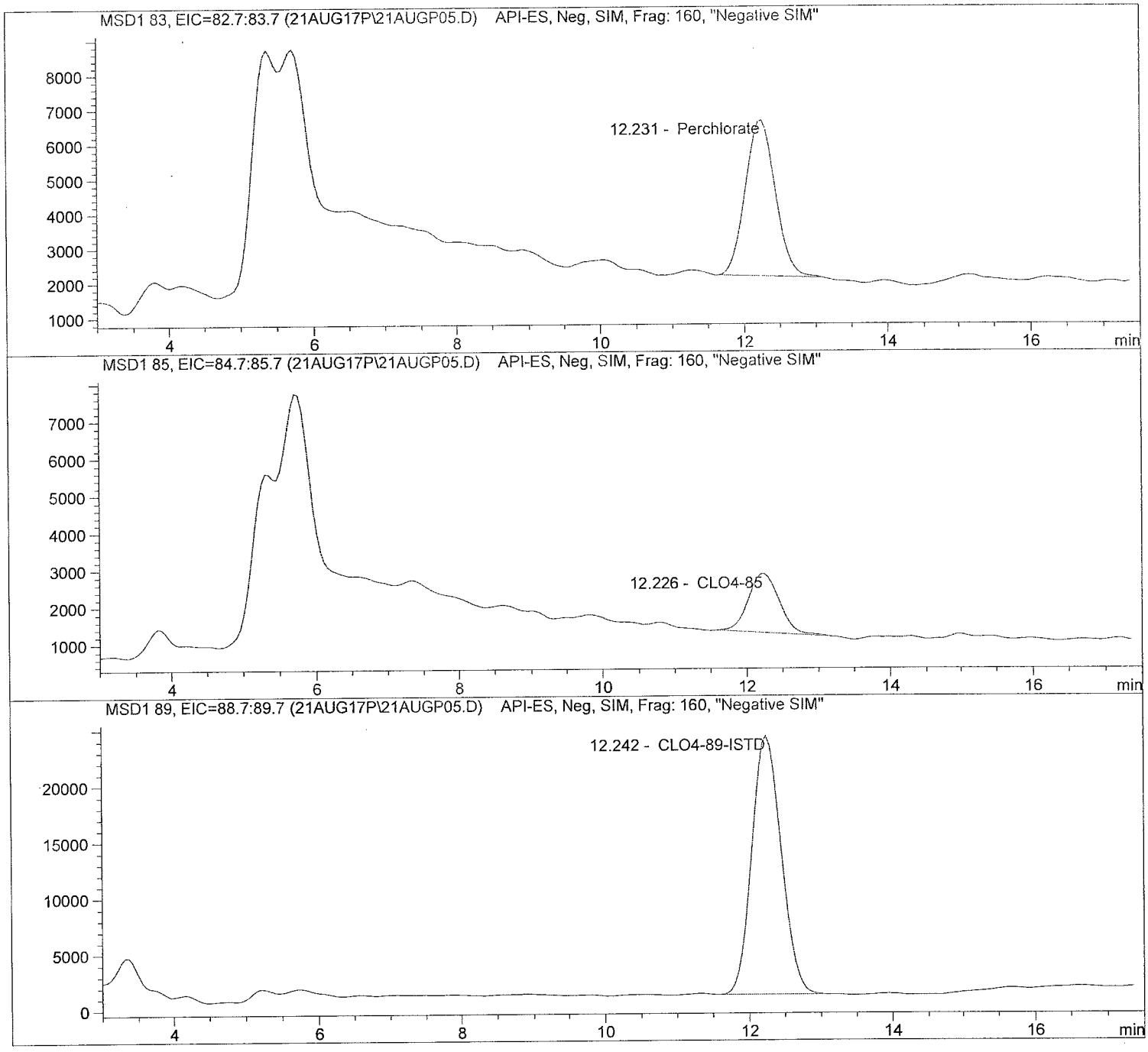
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\21AUG17P\21AUGP05.D Sample Name: ICAL5@ 1.0ug/L

Injection Date:	8/21/2017 10:59:36	Seq Line:	5
Sample Name:	ICAL5@ 1.0ug/L	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-PR3.M
Last Changed: 8/21/2017 14:55:53

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\21AUG17P\21AUGP05.D Sample Name: ICAL5@ 1.0ug/L

Injection Date:	8/21/2017 10:59:36	Seq Line:	5
Sample Name:	ICAL5@ 1.0ug/L	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-PR3.M
Last Changed:	8/21/2017 14:55:53

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 21. Aug. 2017,02:55:52 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
12.231	PBA	130706.3	0.9256	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.226	PBA	47509.7	1.0173	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.242	PBA	656070.7	5.0000	CLO4-89-ISTD

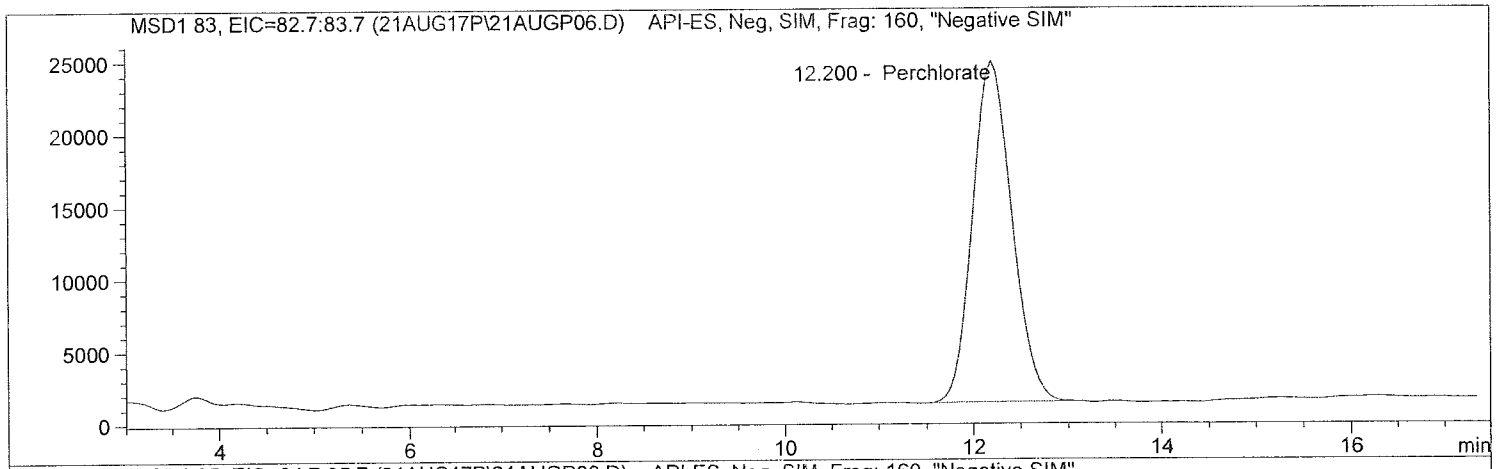
*** End of Report ***

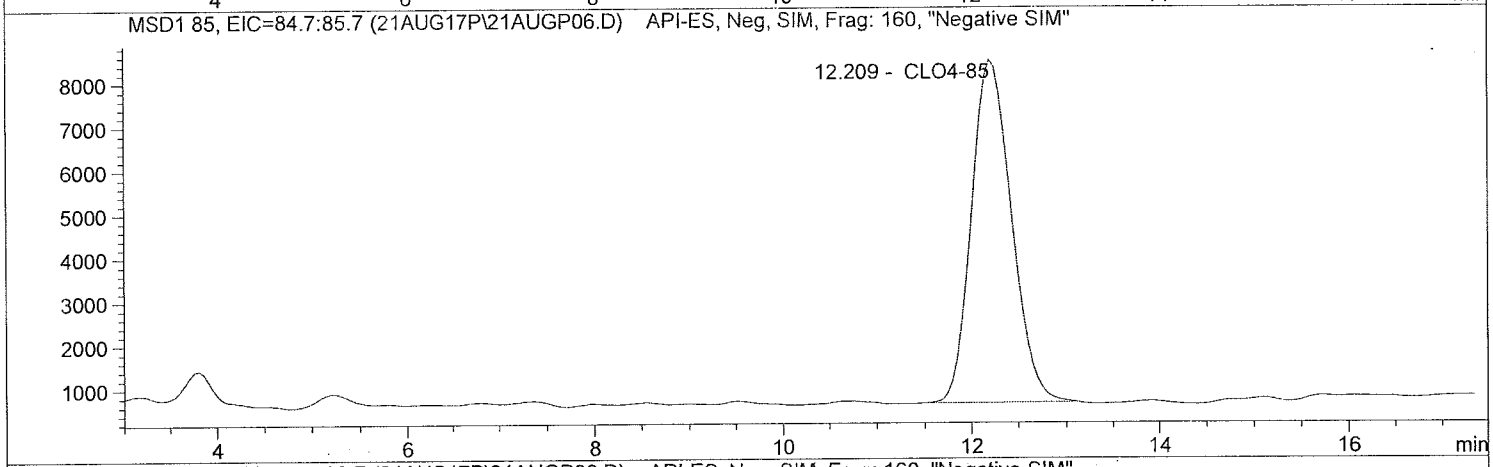
Data file: C:\HPCHEM\1\DATA\21AUG17P\21AUGP06.D Sample Name: ICAL6@ 5.0ug/L

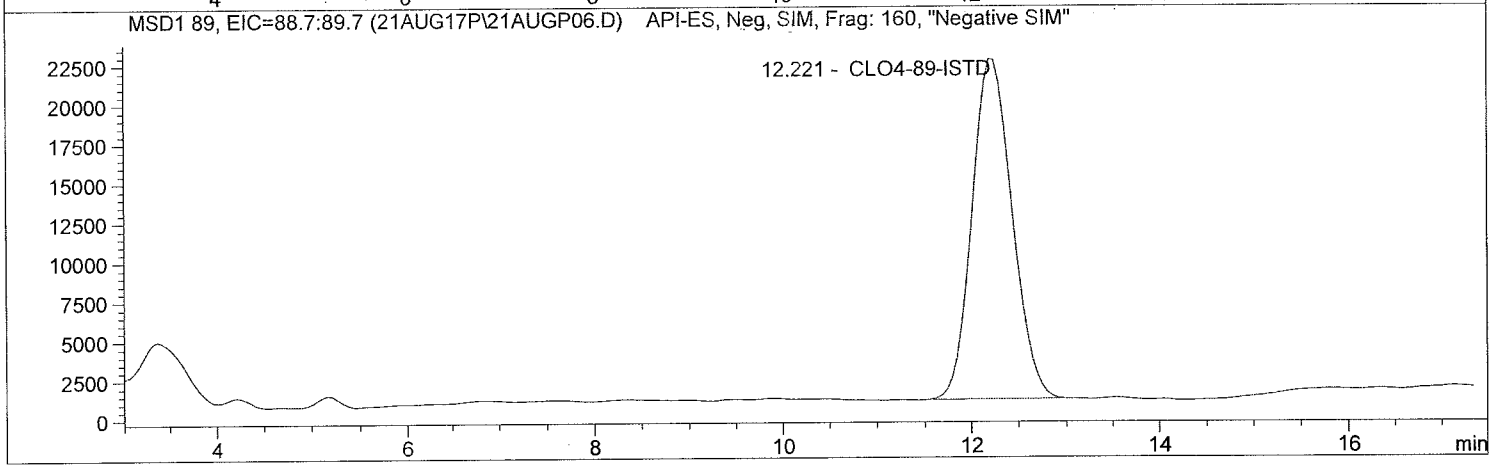
Injection Date:	8/21/2017 11:18:53	Seq Line:	6
Sample Name:	ICAL6@ 5.0ug/L	Location:	Vial 76
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-PR3.M
Last Changed: 8/21/2017 14:55:53

Perchlorate analysis







Data file: C:\HPCHEM\1\DATA\21AUG17P\21AUGP06.D Sample Name: ICAL6@ 5.0ug/L

Injection Date:	8/21/2017 11:18:53	Seq Line:	6
Sample Name:	ICAL6@ 5.0ug/L	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-PR3.M
Last Changed:	8/21/2017 14:55:53

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 21. Aug. 2017,02:55:52 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
12.200	PBA	680204.6	4.8076	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.209	BBA	230425.8	5.0108	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.221	BBA	634251.4	5.0000	CLO4-89-ISTD

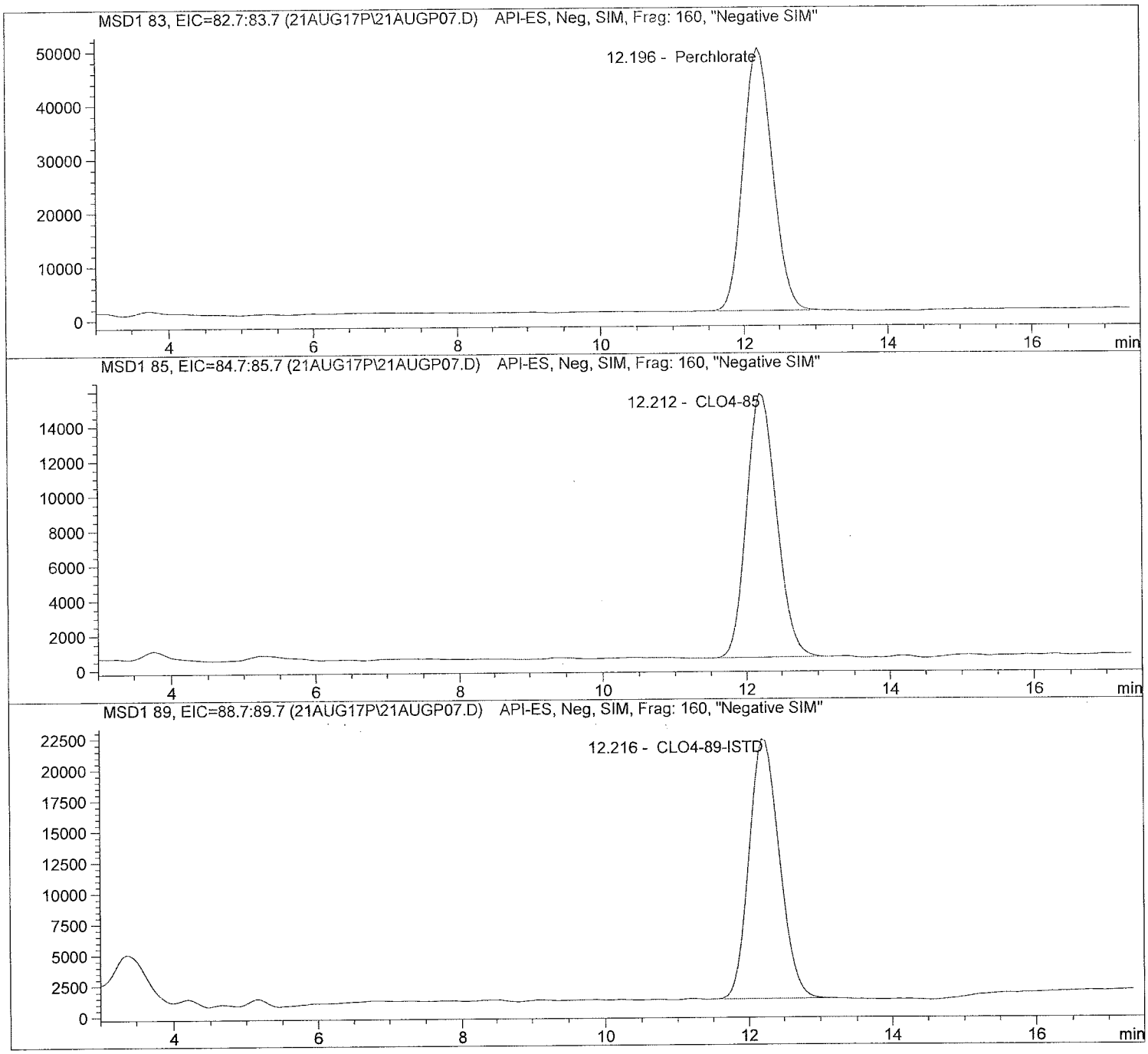
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\21AUG17P\21AUGP07.D Sample Name: ICAL7@ 10.ug/L

Injection Date:	8/21/2017 11:38:12	Seq Line:	7
Sample Name:	ICAL7@ 10.ug/L	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-PR3.M
Last Changed:	8/21/2017 14:55:53

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\21AUG17P\21AUGP07.D Sample Name: ICAL7@ 10.ug/L

Injection Date:	8/21/2017 11:38:12	Seq Line:	7
Sample Name:	ICAL7@ 10.ug/L	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-PR3.M
Last Changed:	8/21/2017 14:55:53

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 21. Aug. 2017,02:55:52 pm
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
12.196	BBA	1410569.9	9.7413	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.212	PBA	446569.7	9.6404	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.216	PBA	625689.1	5.0000	CLO4-89-ISTD

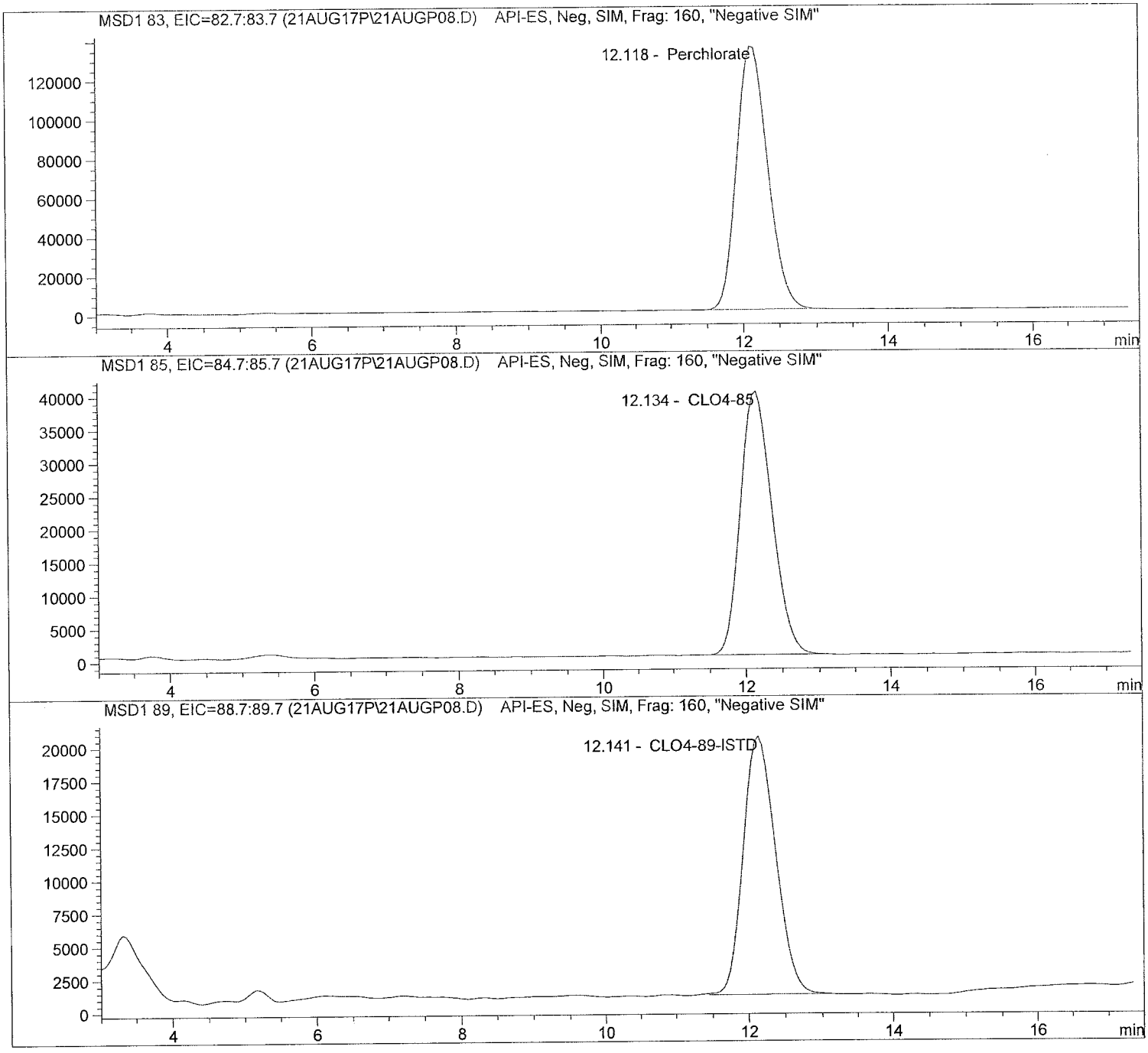
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\21AUG17P\21AUGP08.D Sample Name: ICAL8@ 25.ug/L

Injection Date:	8/21/2017 13:12:50	Seq Line:	8
Sample Name:	ICAL8@ 25.ug/L	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-PR3.M
Last Changed: 8/21/2017 14:55:53

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\21AUG17P\21AUGP08.D Sample Name: ICAL8@ 25.ug/L

Injection Date:	8/21/2017 13:12:50	Seq Line:	8
Sample Name:	ICAL8@ 25.ug/L	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-PR3.M
Last Changed:	8/21/2017 14:55:53

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 21. Aug. 2017,02:55:52 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
12.118	BBA	4004745.0	25.7880	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.134	BBA	1199930.0	25.1941	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.141	BBA	601523.1	5.0000	CLO4-89-ISTD

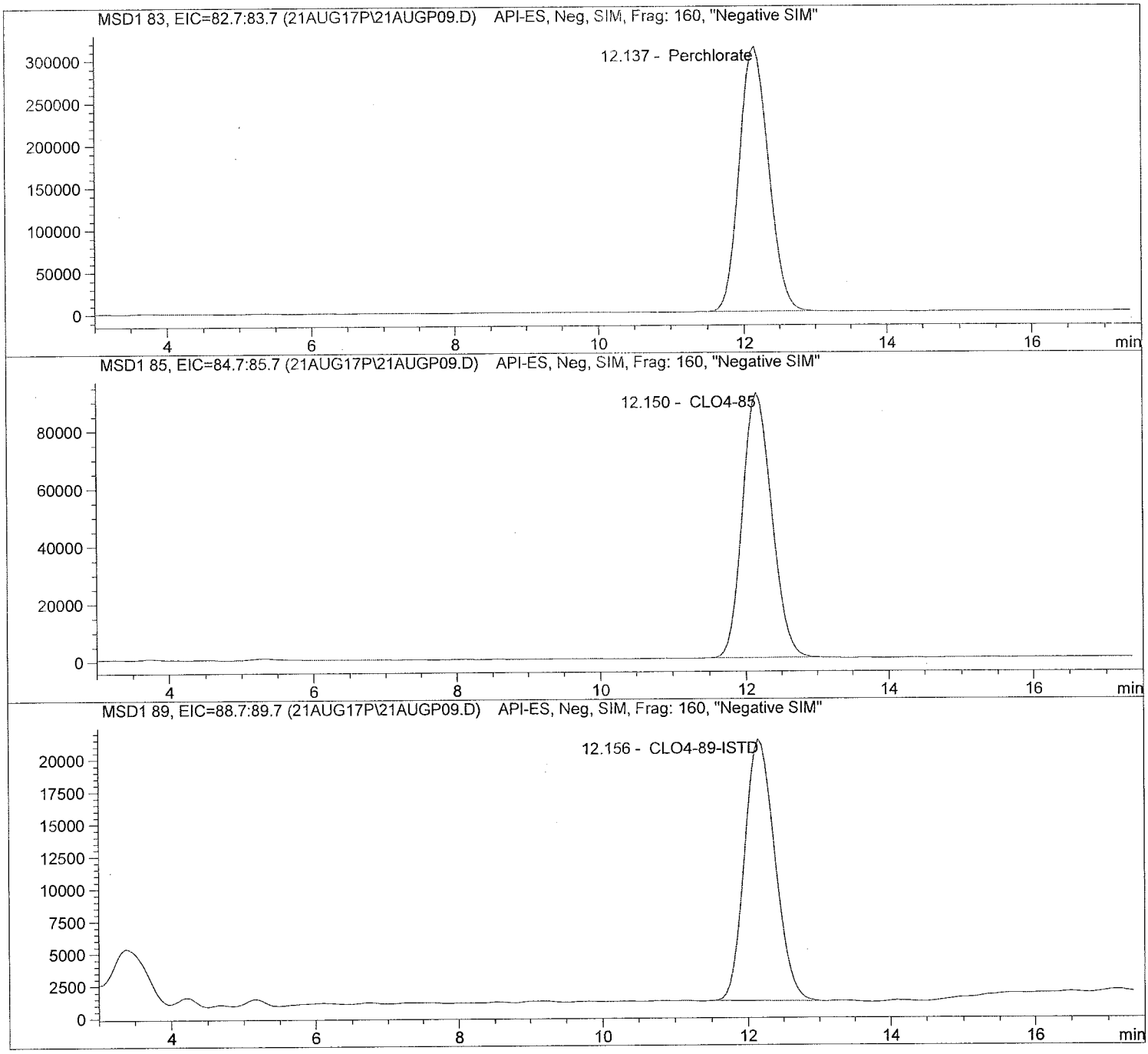
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\21AUG17P\21AUGP09.D Sample Name: ICAL9@ 50.ug/L

Injection Date:	8/21/2017 13:32:10	Seq Line:	9
Sample Name:	ICAL9@ 50.ug/L	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-PR3.M
Last Changed: 8/21/2017 14:55:53

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\21AUG17P\21AUGP09.D Sample Name: ICAL9@ 50.ug/L

Injection Date:	8/21/2017 13:32:10	Seq Line:	9
Sample Name:	ICAL9@ 50.ug/L	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-PR3.M
Last Changed: 8/21/2017 14:55:53

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 21. Aug. 2017,02:55:52 pm
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
12.137	PBA	8856831.0	49.7366	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.150	BBA	2609327.3	49.9698	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.156	BBA	597661.2	5.0000	CLO4-89-ISTD

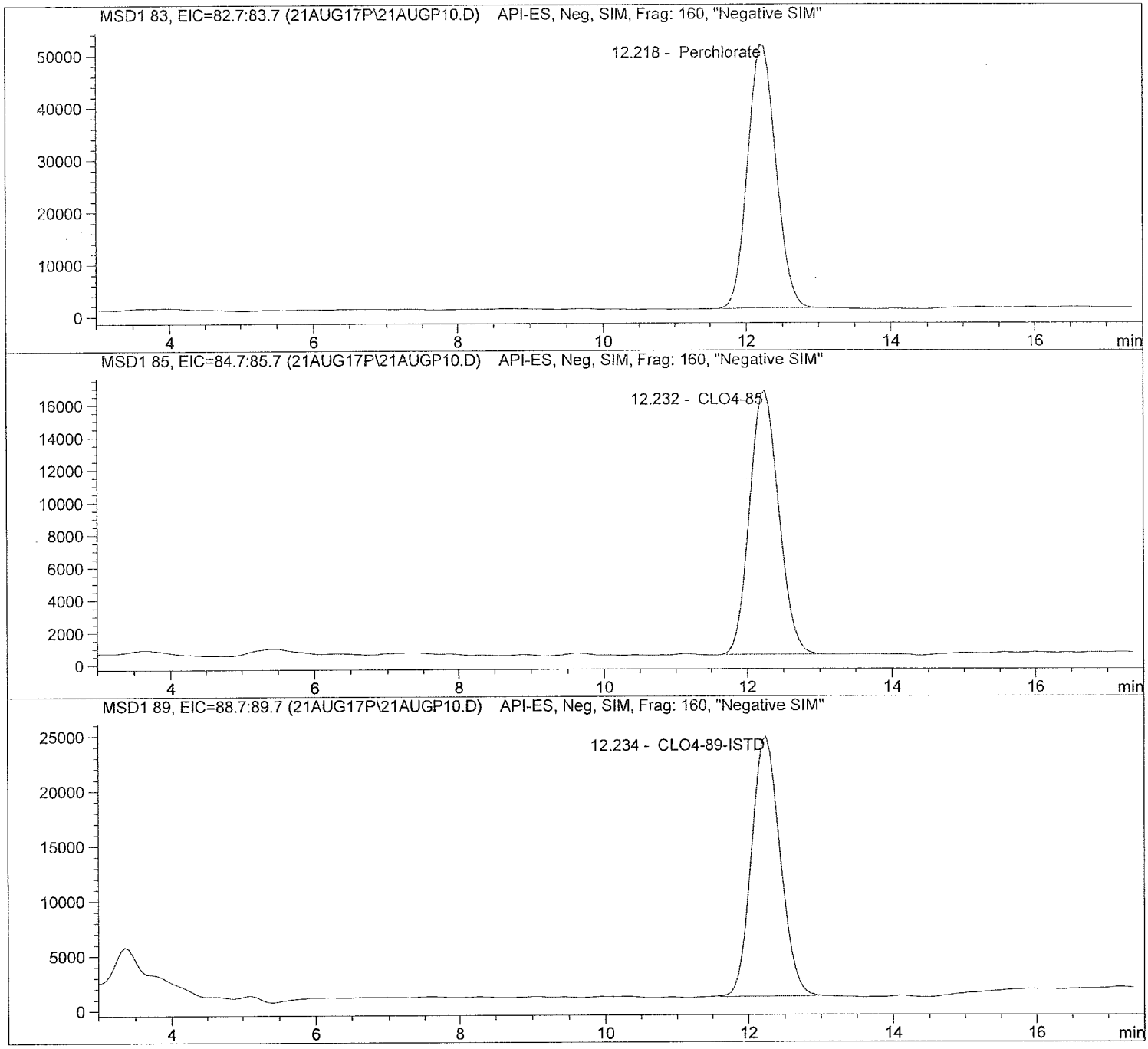
*** End of Report ***

Data file: C:\HPCHEM\1\DATA\21AUG17P\21AUGP10.D Sample Name: ICAL Verf@10ug/L

Injection Date:	8/21/2017 13:51:27	Seq Line:	10
Sample Name:	ICAL Verf@10ug/L	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-PR3.M
Last Changed: 8/21/2017 14:55:53

Perchlorate analysis



Data file: C:\HPCHEM\1\DATA\21AUG17P\21AUGP10.D Sample Name: ICAL Verf@10ug/L

Injection Date:	8/21/2017 13:51:27	Seq Line:	10
Sample Name:	ICAL Verf@10ug/L	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-PR3.M
Last Changed:	8/21/2017 14:55:53

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 21. Aug. 2017,02:55:52 pm
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
12.218	BBA	1360649.7	9.1433	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.232	PBA	449703.0	9.4150	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.234	BBA	645815.0	5.0000	CLO4-89-ISTD

*** End of Report ***

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

Raw Data

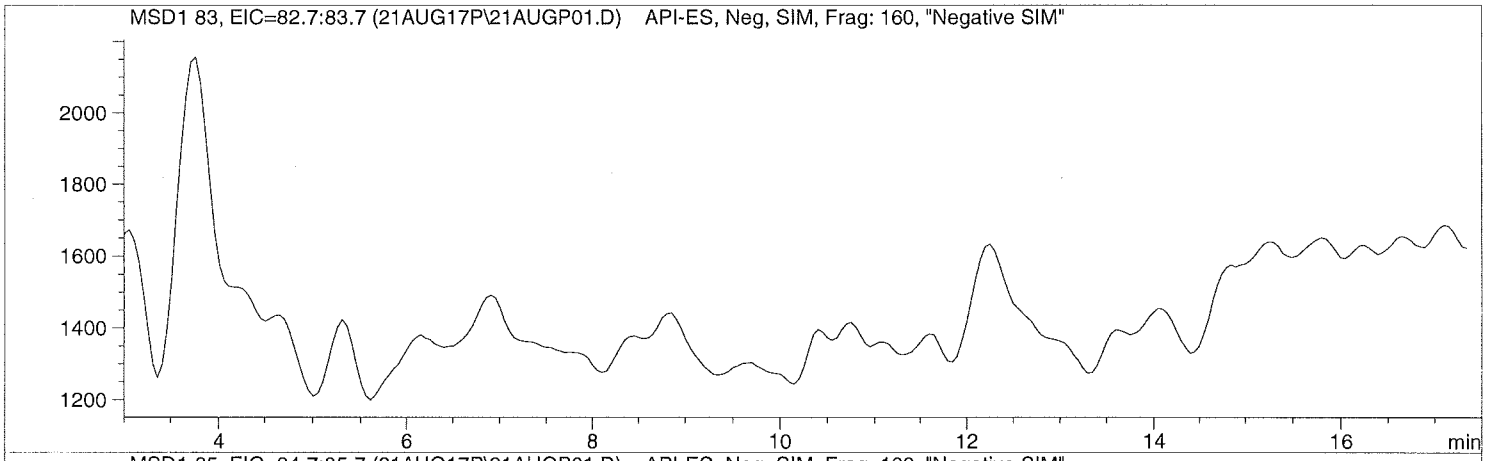
Unmodified

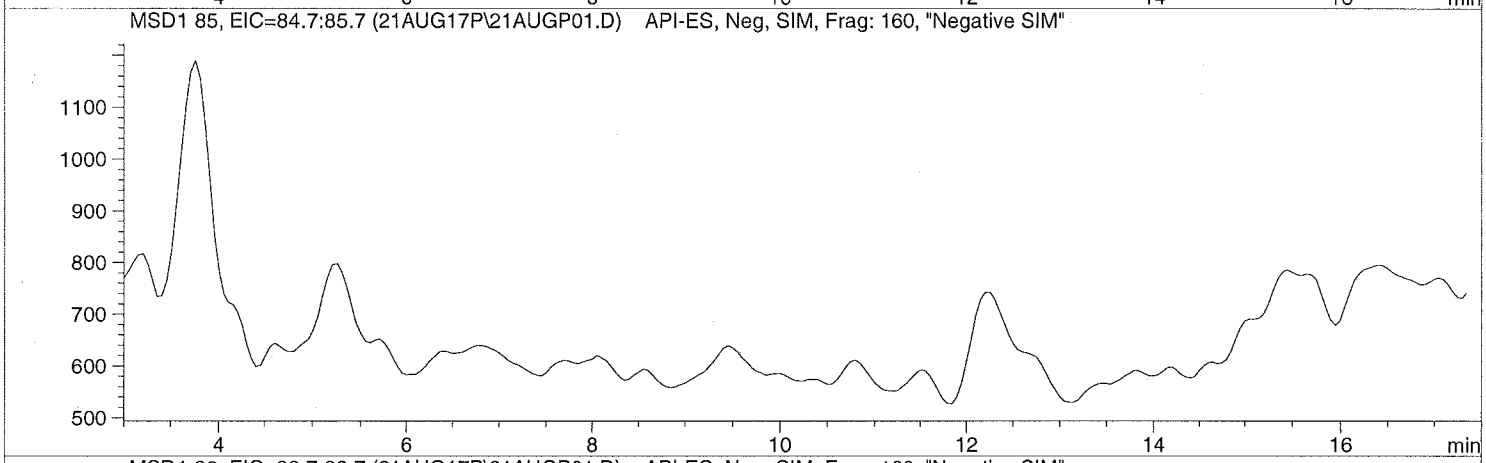
Data file: C:\HPCHEM\1\DATA\21AUG17P\21AUGP01.D Sample Name: ICAL1@ .05ug/L

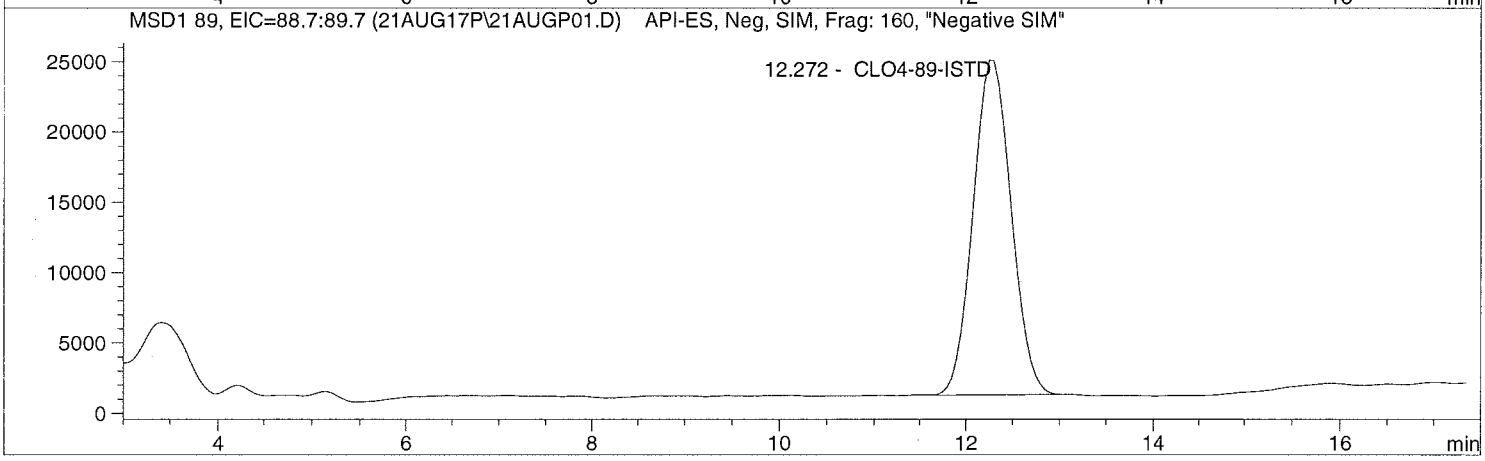
Injection Date:	8/21/2017 09:42:32	Seq Line:	1
Sample Name:	ICAL1@ .05ug/L	Location:	Vial 71
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-PR3.M
Last Changed: 8/21/2017 14:55:53

Perchlorate analysis







Data file: C:\HPCHEM\1\DATA\21AUG17P\21AUGP01.D Sample Name: ICAL1@ .05ug/L

Injection Date:	8/21/2017 09:42:32	Seq Line:	1
Sample Name:	ICAL1@ .05ug/L	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-PR3.M
Last Changed: 8/21/2017 14:55:53

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 21. Aug. 2017,02:55:52 pm
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	0.050

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
12.272	BBA	673942.9	5.0000	CLO4-89-ISTD

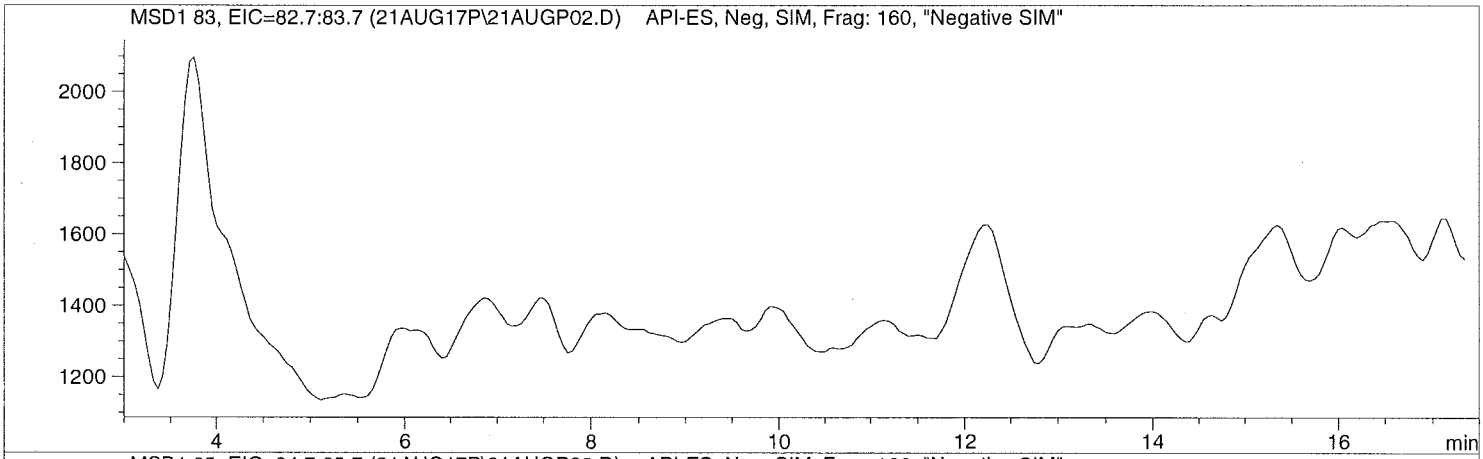
*** End of Report ***

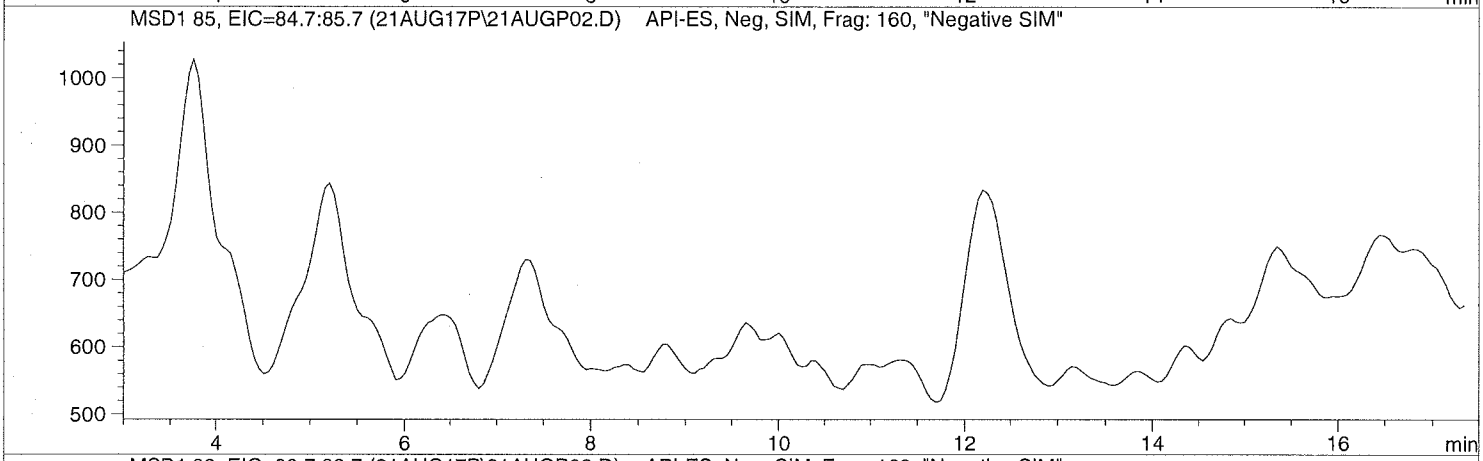
Data file: C:\HPCHEM\1\DATA\21AUG17P\21AUGP02.D Sample Name: ICAL2@ .10ug/L

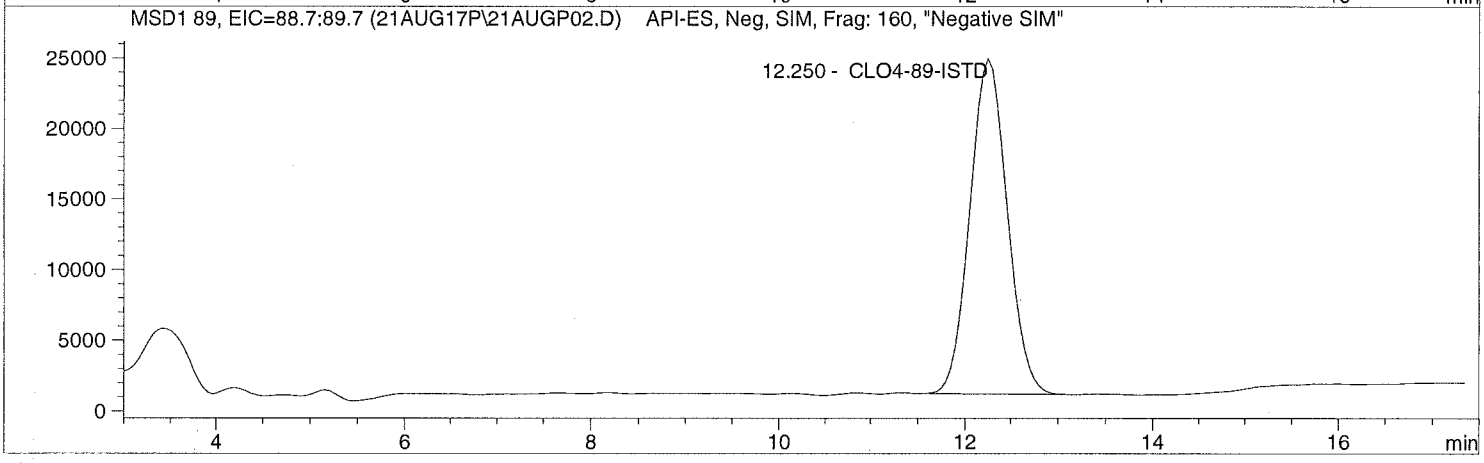
Injection Date:	8/21/2017 10:01:47	Seq Line:	2
Sample Name:	ICAL2@ .10ug/L	Location:	Vial 72
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-PR3.M
Last Changed: 8/21/2017 14:55:53

Perchlorate analysis







Data file: C:\HPCHEM\1\DATA\21AUG17P\21AUGP02.D Sample Name: ICAL2@ .10ug/L

Injection Date:	8/21/2017 10:01:47	Seq Line:	2
Sample Name:	ICAL2@ .10ug/L	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-PR3.M
Last Changed: 8/21/2017 14:55:53

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 21. Aug. 2017,02:55:52 pm
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	0.100

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
12.250	BBA	667016.3	5.0000	CLO4-89-ISTD

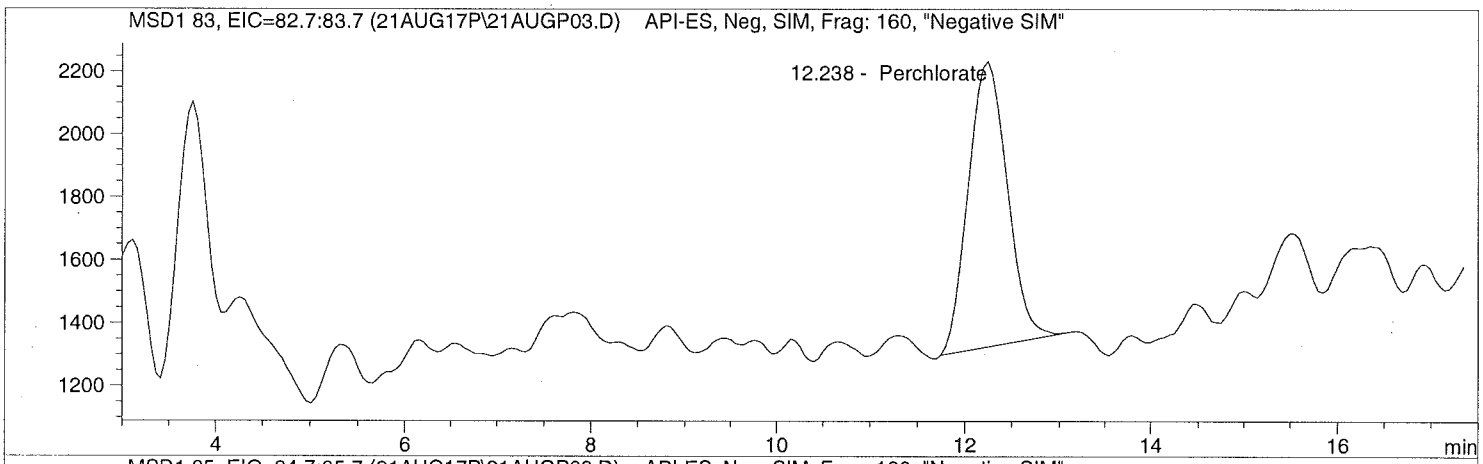
*** End of Report ***

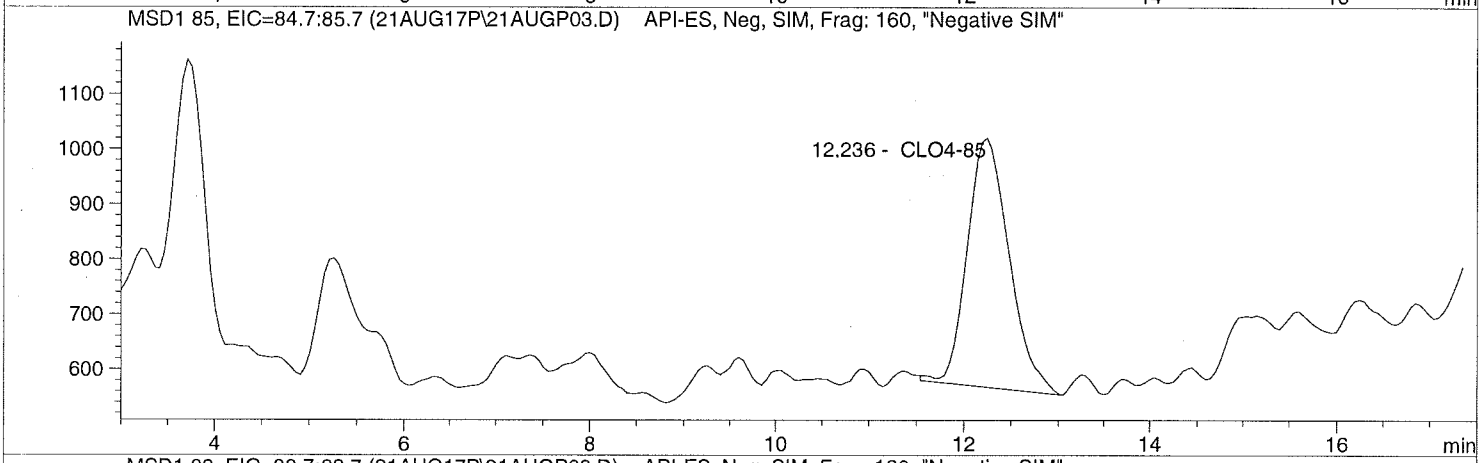
Data file: C:\HPCHEM\1\DATA\21AUG17P\21AUGP03.D Sample Name: ICAL3@ .20ug/L

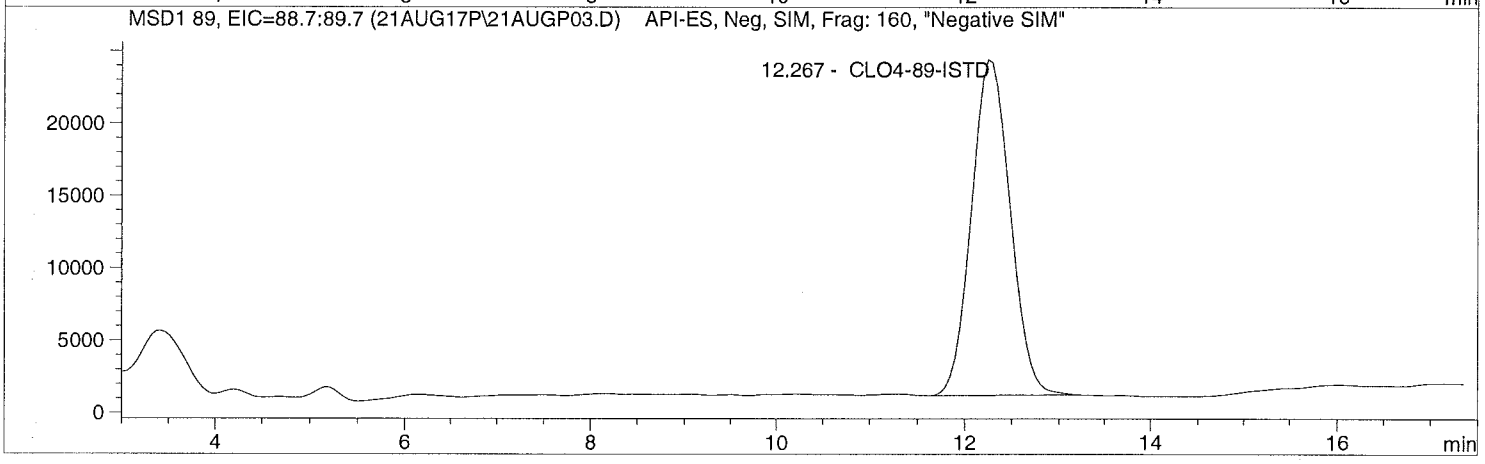
Injection Date:	8/21/2017 10:21:02	Seq Line:	3
Sample Name:	ICAL3@ .20ug/L	Location:	Vial 73
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-PR3.M
Last Changed: 8/21/2017 14:55:53

Perchlorate analysis







Data file: C:\HPCHEM\1\DATA\21AUG17P\21AUGP03.D Sample Name: ICAL3@ .20ug/L

Injection Date:	8/21/2017 10:21:02	Seq Line:	3
Sample Name:	ICAL3@ .20ug/L	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-PR3.M
Last Changed: 8/21/2017 14:55:53

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Mon, 21. Aug. 2017,02:55:52 pm
Multiplier:	1.000000
Dilution:	1.000000
Sample Amount:	0.200

LCMS Results

Signal1: MSD1 83, EIC=82.7:83.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.238	PBA	26023.7	0.1899	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.236	BBA	13974.8	0.2980	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.267	PBA	661030.8	5.0000	CLO4-89-ISTD

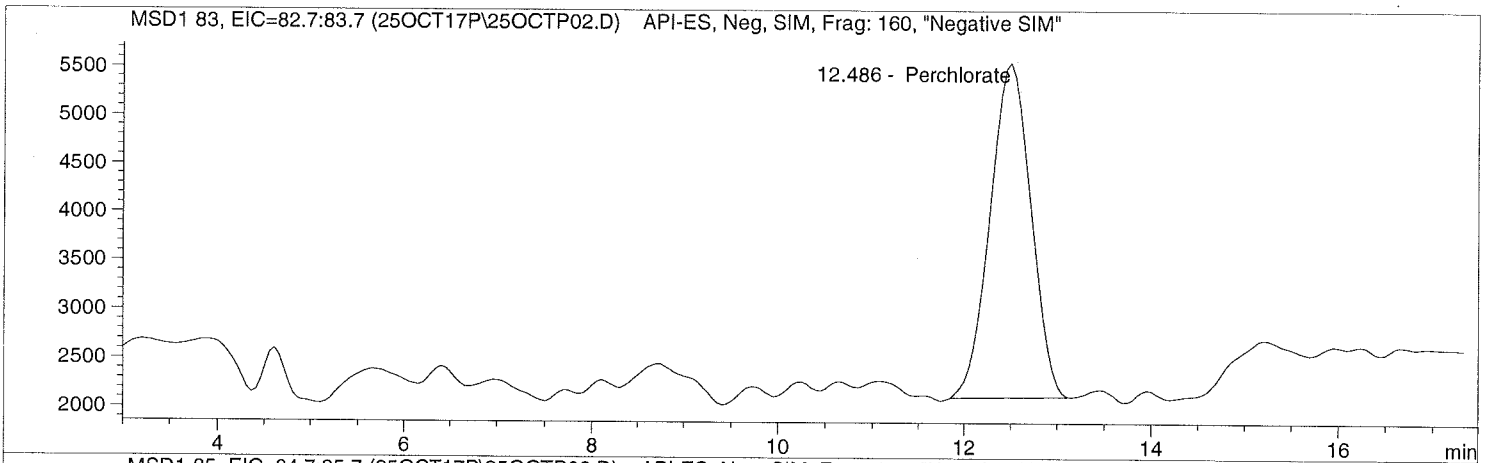
*** End of Report ***

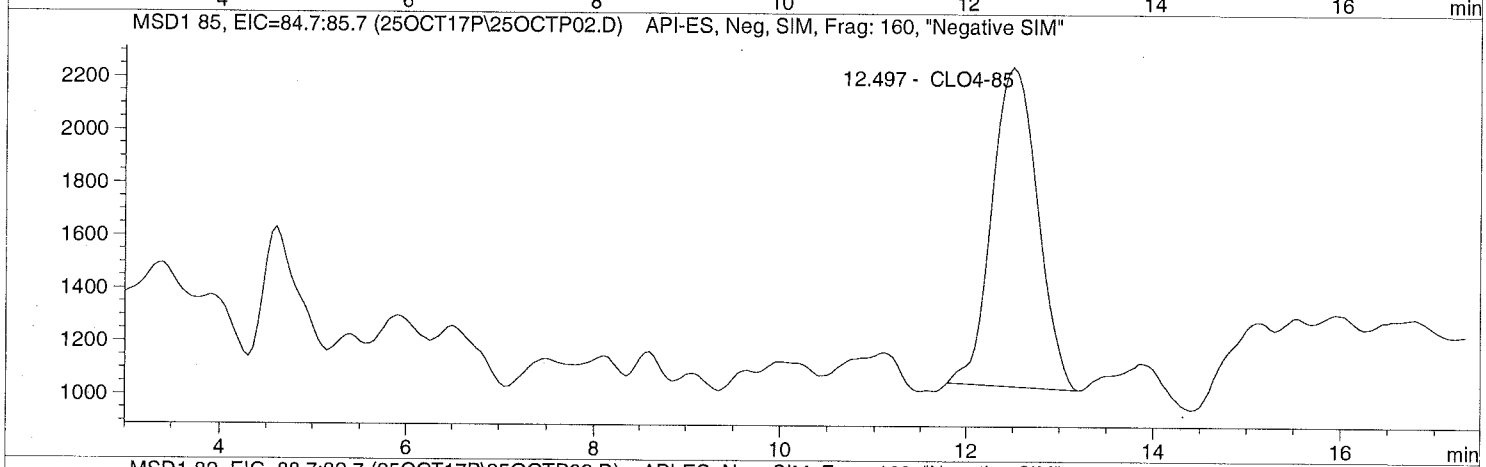
Data file: C:\HPCHEM\1\DATA\25OCT17P\25OCTP02.D Sample Name: 571095 LODV@1.

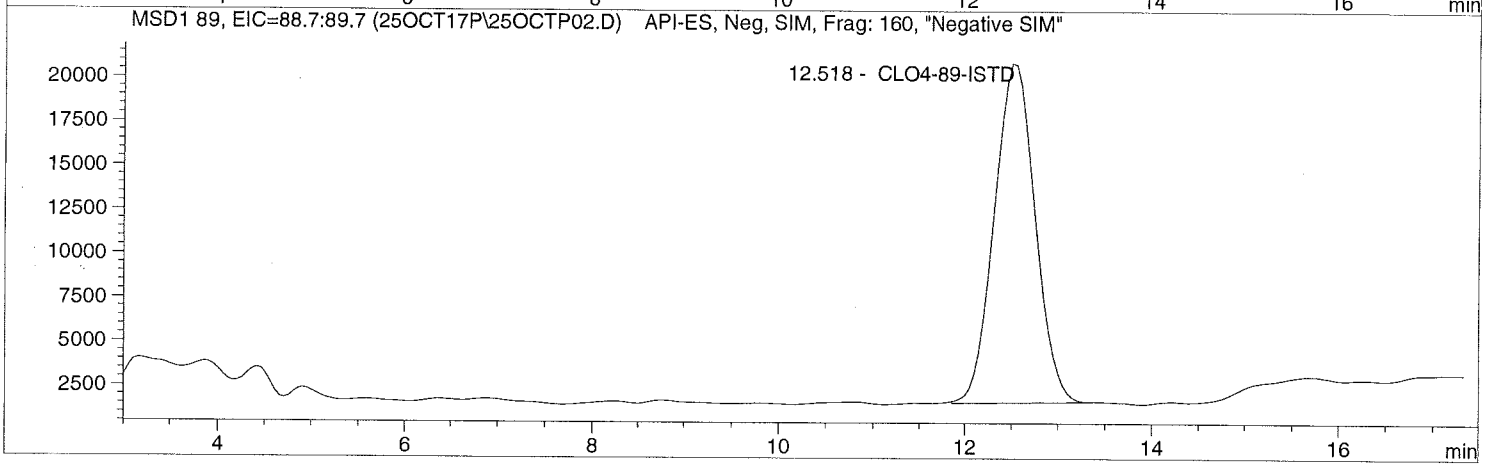
Injection Date:	10/25/2017 09:24:24	Seq Line:	2
Sample Name:	571095 LODV@1.	Location:	Vial 82
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-PR3.M
Last Changed: 10/26/2017 08:21:59

Perchlorate analysis







Data file: C:\HPCHEM\1\DATA\25OCT17P\25OCTP02.D Sample Name: 571095 LODV@1.

Injection Date:	10/25/2017 09:24:24	Seq Line:	2
Sample Name:	571095 LODV@1.	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-PR3.M
Last Changed: 10/26/2017 08:21:59

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Thu, 26. Oct. 2017,08:21:56 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
12.486	PBA	104727.6	0.8301	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.497	PBA	41351.7	0.9895	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.518	BBA	587146.0	5.0000	CLO4-89-ISTD

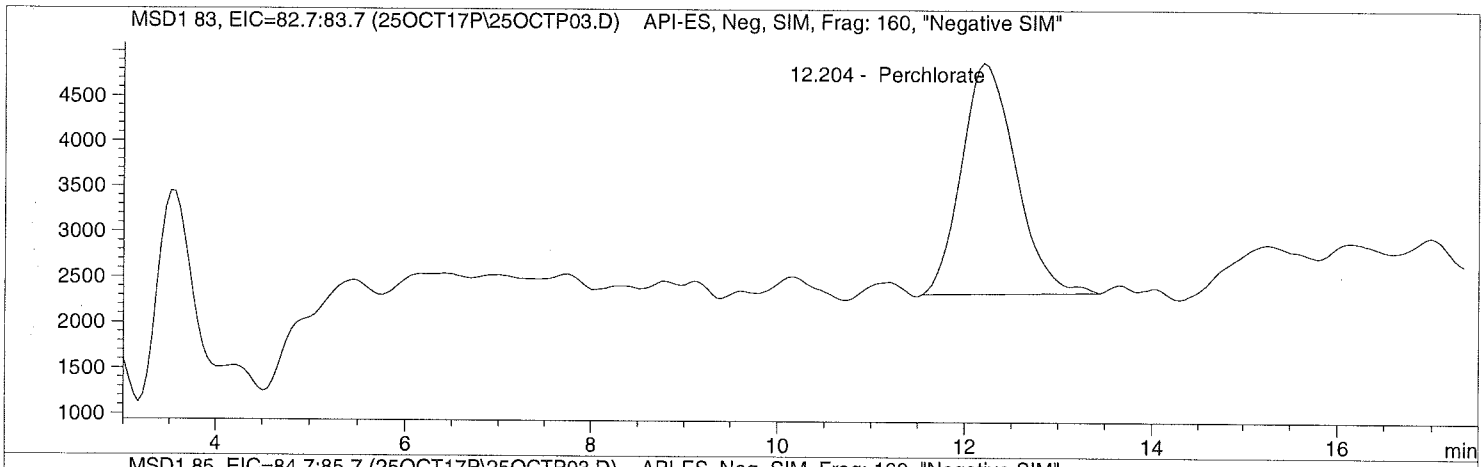
*** End of Report ***

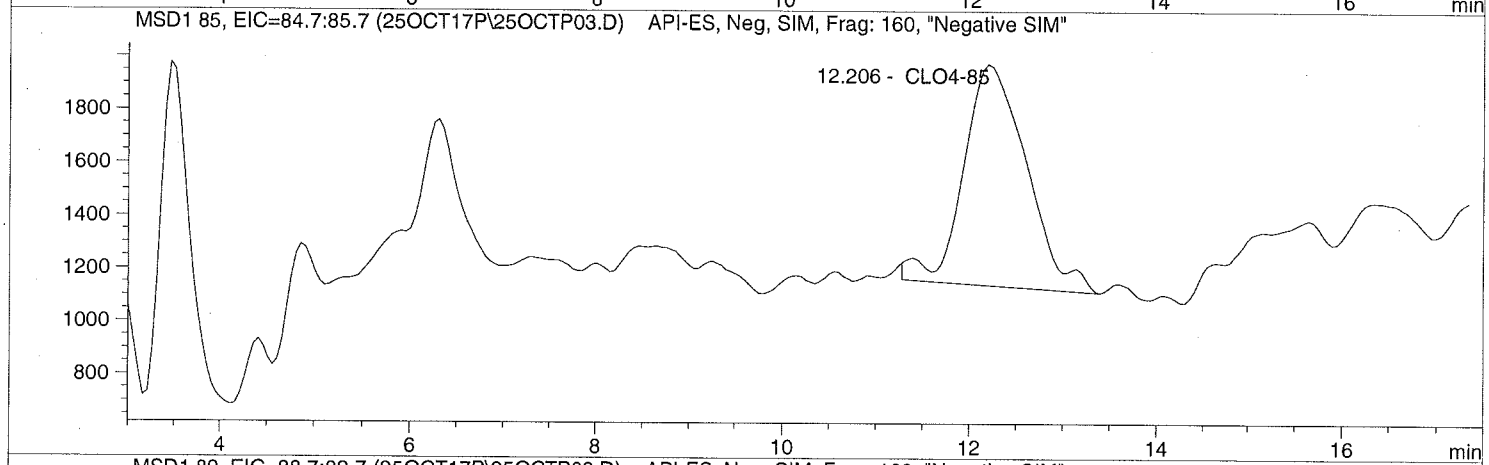
Data file: C:\HPCHEM\1\DATA\25OCT17P\25OCTP03.D Sample Name: 571096 ICS@1.

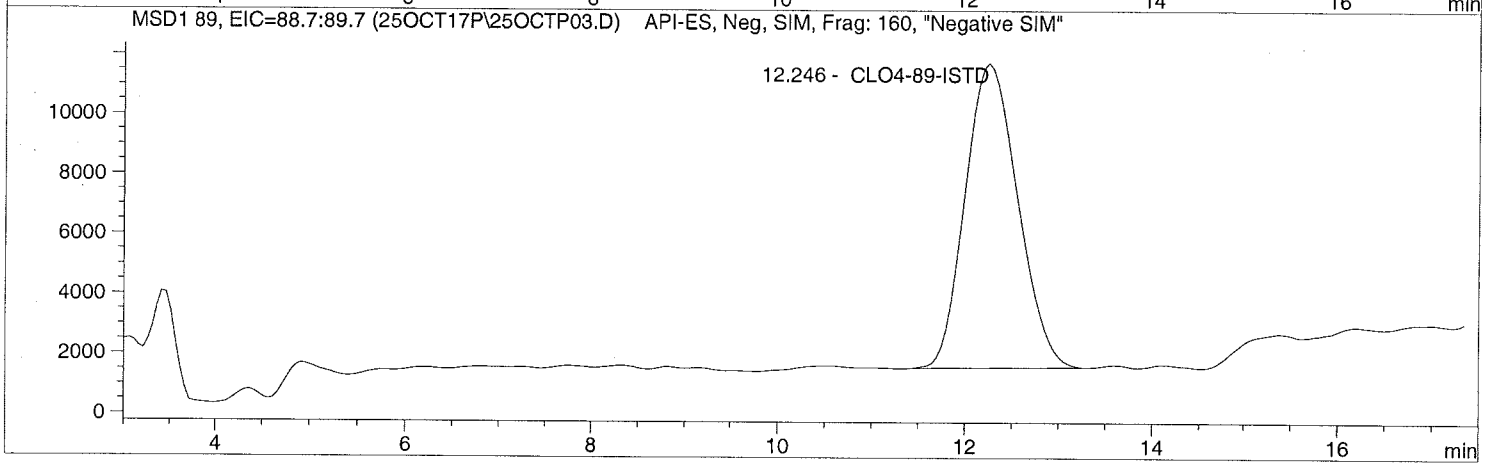
Injection Date:	10/25/2017 09:43:38	Seq Line:	3
Sample Name:	571096 ICS@1.	Location:	Vial 83
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-PR3.M
Last Changed: 10/26/2017 08:21:59

Perchlorate analysis







Data file: C:\HPCHEM\1\DATA\25OCT17P\25OCTP03.D Sample Name: 571096 ICS@1.

Injection Date:	10/25/2017 09:43:38	Seq Line:	3
Sample Name:	571096 ICS@1.	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-PR3.M
Last Changed: 10/26/2017 08:21:59

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Thu, 26. Oct. 2017,08:21:56 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
12.204	PBA	102130.1	1.1974	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.206	BBA	39099.6	1.3892	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.246	PBA	394708.7	5.0000	CLO4-89-ISTD

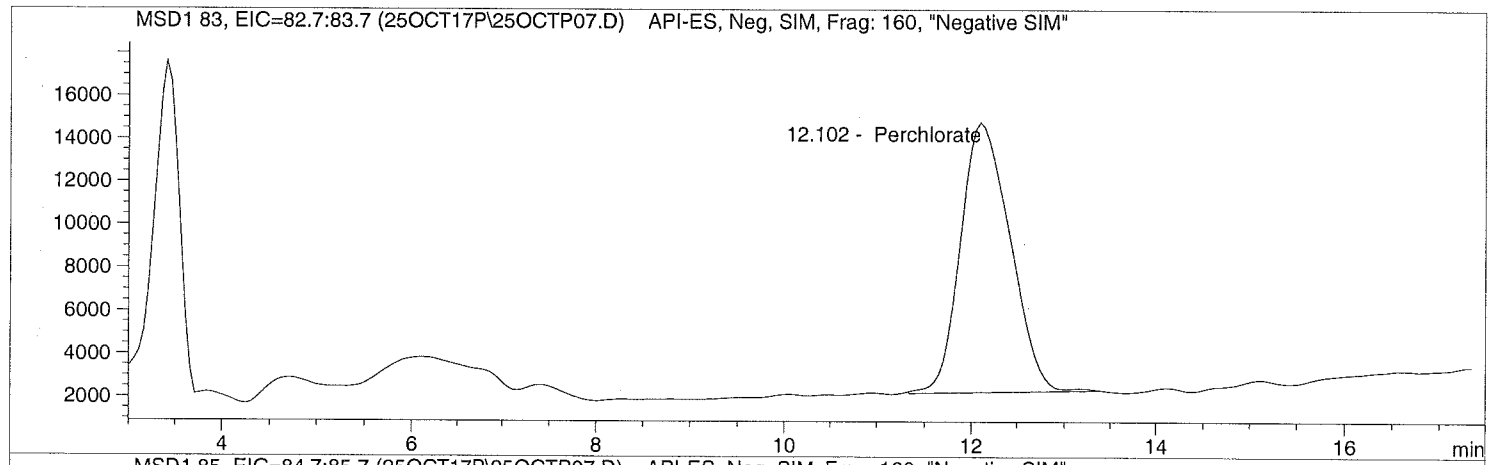
*** End of Report ***

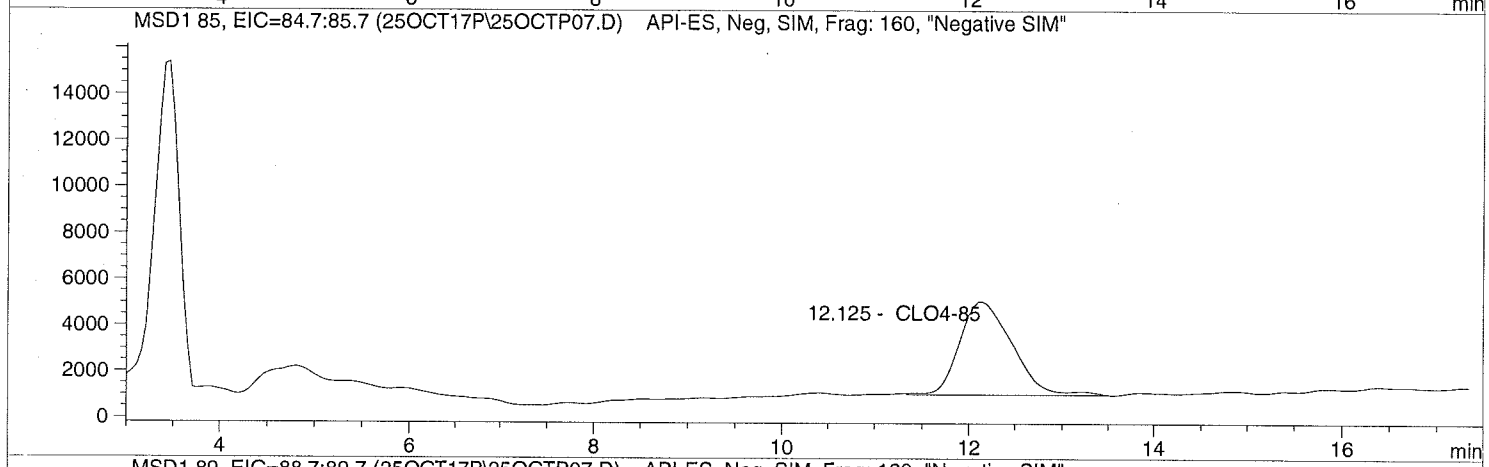
Data file: C:\HPCHEM\1\DATA\25OCT17P\25OCTP07.D Sample Name: 571099 289431S

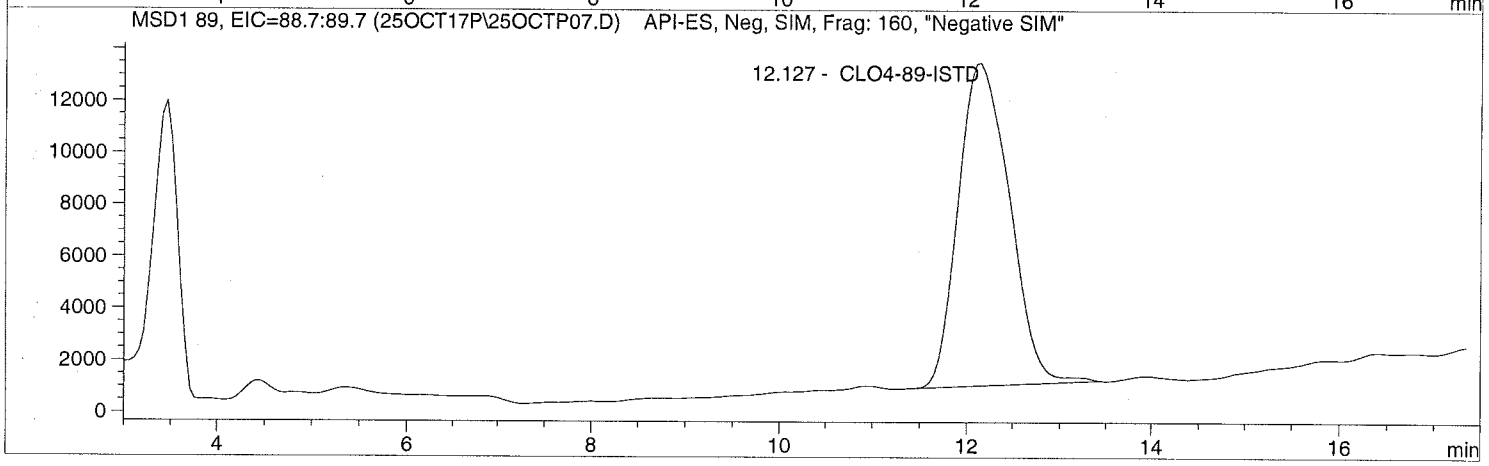
Injection Date:	10/25/2017 11:03:53	Seq Line:	7
Sample Name:	571099 289431S	Location:	Vial 87
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-PR3.M
Last Changed: 10/26/2017 08:21:59

Perchlorate analysis







Data file: C:\HPCHEM\1\DATA\25OCT17P\25OCTP07.D Sample Name: 571099 289431S

Injection Date:	10/25/2017 11:03:53	Seq Line:	7
Sample Name:	571099 289431S	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-PR3.M
Last Changed: 10/26/2017 08:21:59

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Thu, 26. Oct. 2017,08:21:56 am
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
12.102	BBA	470901.2	4.4182	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.125	BBA	160251.8	4.6202	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.127	PBA	479241.3	5.0000	CLO4-89-ISTD

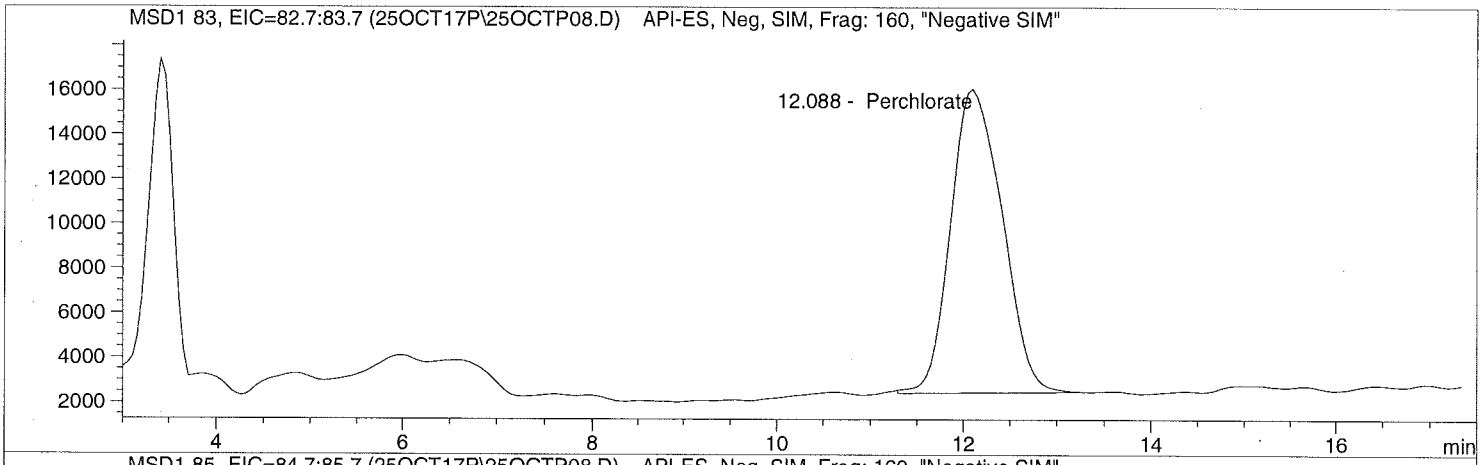
*** End of Report ***

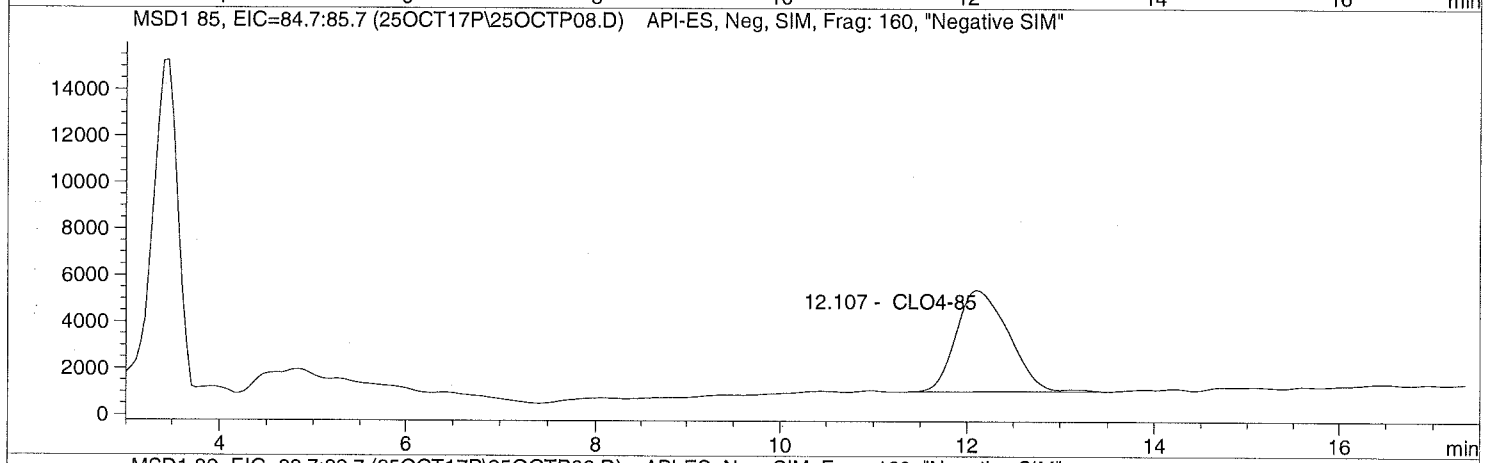
Data file: C:\HPCHEM\1\DATA\25OCT17P\25OCTP08.D Sample Name: 571100 289431D

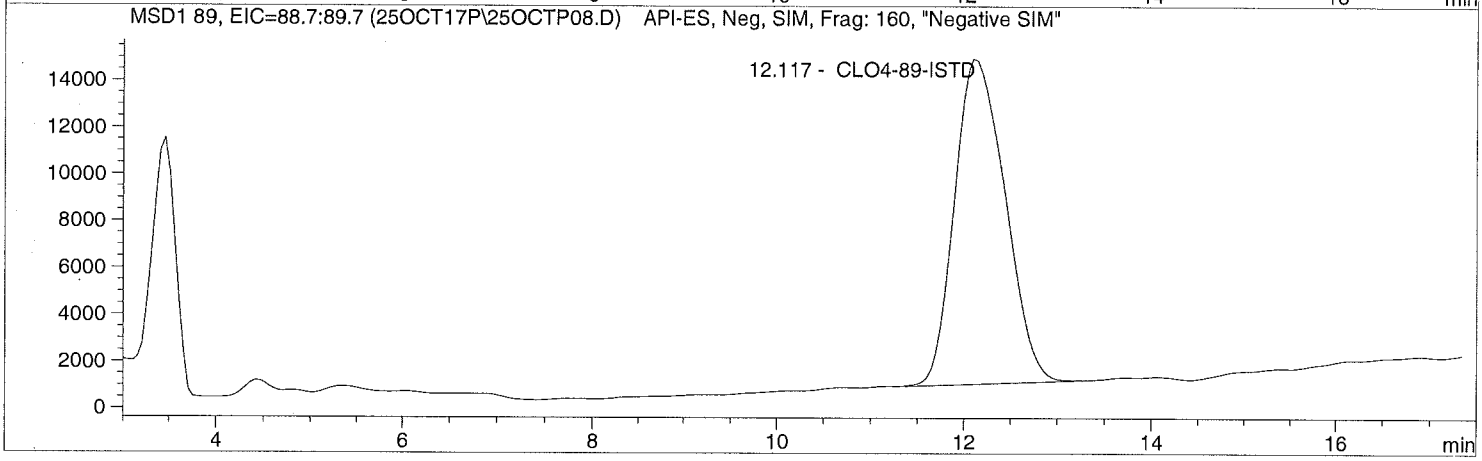
Injection Date:	10/25/2017 11:23:08	Seq Line:	8
Sample Name:	571100 289431D	Location:	Vial 88
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-PR3.M
Last Changed: 10/26/2017 08:21:59

Perchlorate analysis







Data file: C:\HPCHEM\1\DATA\25OCT17P\25OCTP08.D Sample Name: 571100 289431D

Injection Date:	10/25/2017 11:23:08	Seq Line:	8
Sample Name:	571100 289431D	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-PR3.M
Last Changed: 10/26/2017 08:21:59

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Thu, 26. Oct. 2017,08:21:56 am
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
12.088	BBA	523181.5	4.4850	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.107	PBA	171769.7	4.5291	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
12.117	BBA	524243.2	5.0000	CLO4-89-ISTD

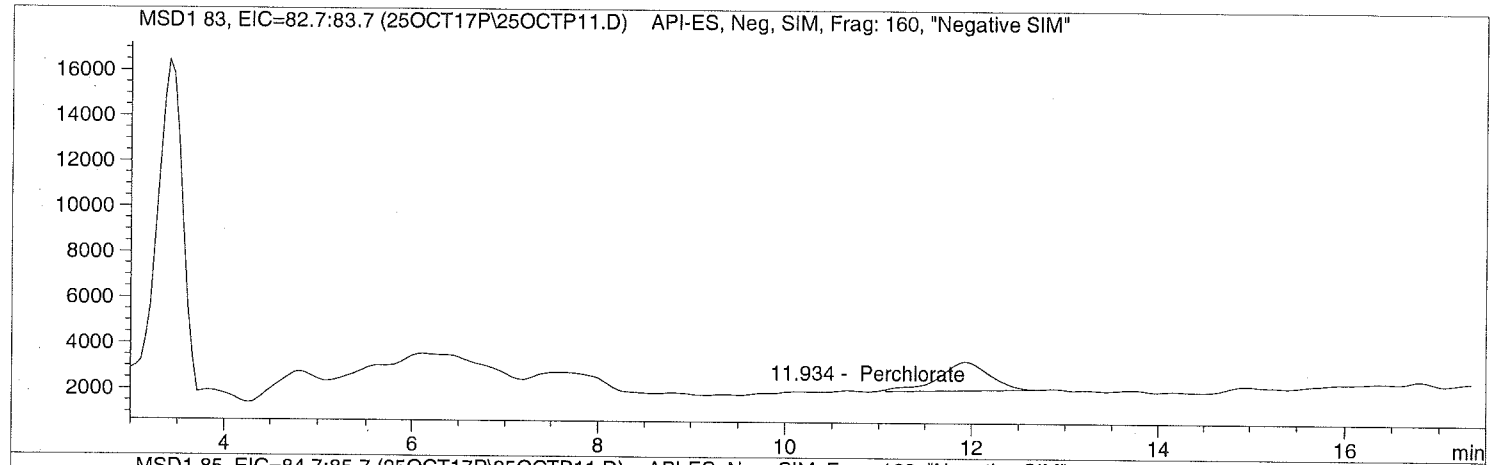
*** End of Report ***

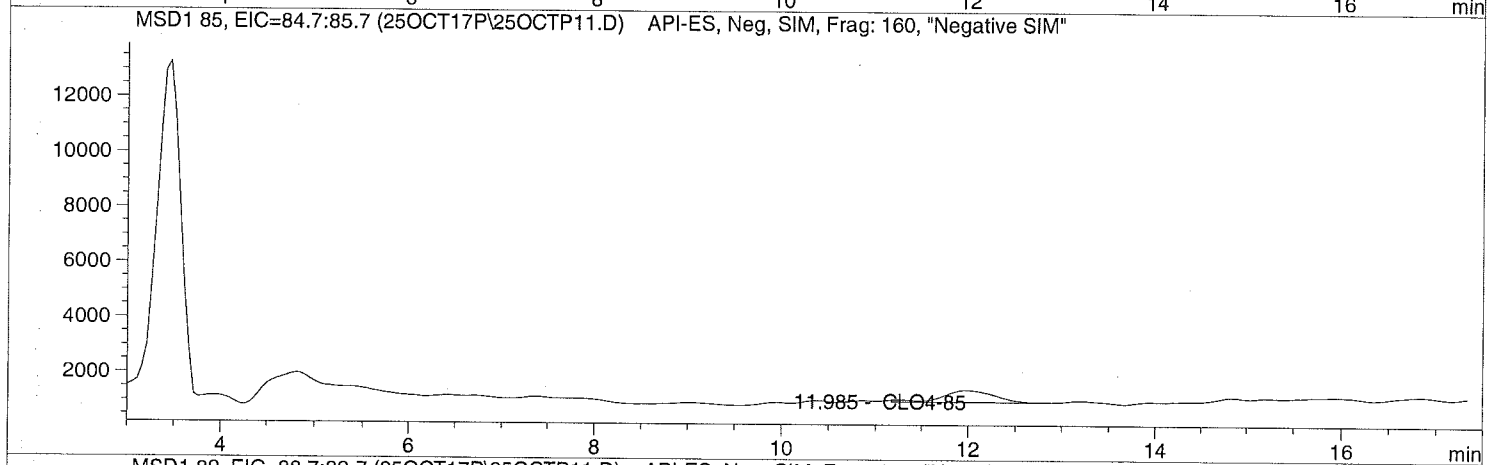
Data file: C:\HPCHEM\1\DATA\25OCT17P\25OCTP11.D Sample Name: 1729349001

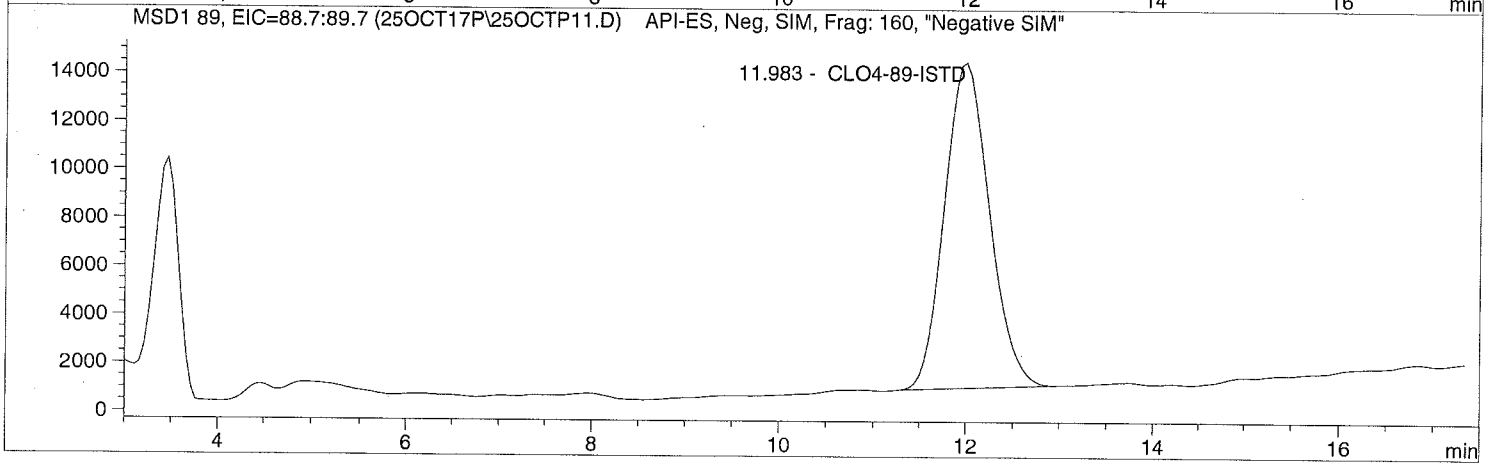
Injection Date:	10/25/2017 12:22:07	Seq Line:	11
Sample Name:	1729349001	Location:	Vial 91
Acq Operator:	TNB	Inj. No.:	1
		Inj. Vol.:	30 µl

Acq. Method: CLO4-AQN.M
Analysis Method: C:\HPCHEM\1\METHODS\CLO4-PR3.M
Last Changed: 10/26/2017 08:21:59

Perchlorate analysis







Data file: C:\HPCHEM\1\DATA\25OCT17P\25OCTP11.D Sample Name: 1729349001

Injection Date:	10/25/2017 12:22:07	Seq Line:	11
Sample Name:	1729349001	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-PR3.M
Last Changed: 10/26/2017 08:21:59

Perchlorate analysis

Sample Information

Sorted By:	Signal
Calib. Data Modified:	Thu, 26. Oct. 2017,08:21:56 am
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
11.934	BBA	46725.3	0.4923	Perchlorate

Signal2: MSD1 85, EIC=84.7:85.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
11.985	BBA	16396.4	0.5182	CLO4-85

Signal3: MSD1 89, EIC=88.7:89.7

RT [min]	Type	Area	Amount [ug/sample]	Compound Name
11.983	PBA	445548.6	5.0000	CLO4-89-ISTD

*** End of Report ***

10450 Stancliff Rd. Suite 210
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www.alsglobal.com

WorkOrder: HS17100712

Monthly Effluent Samples

Bhate Environmental Associates, Inc.

Marcia Olive
445 Union Blvd Ste 129
Lakewood CO 80228

08-Feb-2018

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

October 28, 2017

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

Work Order: **HS17100712**

Laboratory Results for: **Monthly Effluent Samples**

Dear Marcia,

ALS Environmental received 2 sample(s) on Oct 13, 2017 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,

Sonia West

Generated By: Jumoke.Lawal
Sonia West
Project Manager

ALS Group USA, Corp Date: 28-Oct-17

Client: Bhate Environmental Associates, Inc.
Project: Monthly Effluent Samples
Work Order: HS17100712

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS17100712-01	LH18/24-SP650_101217	Water		12-Oct-2017 14:00	13-Oct-2017 08:35	☐
HS17100712-02	Trip Blank	Water	Not ALS	12-Oct-2017 00:00	13-Oct-2017 08:35	☐

ALS Group USA, Corp Date: 28-Oct-17

Client: Bhate Environmental Associates, Inc.
Project: Monthly Effluent Samples
Work Order: HS17100712

CASE NARRATIVE

Work Order Comments

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

GCMS Semivolatiles by Method SW8270SIM

Batch ID: 121033

Sample ID: LCSD-121033

- The RPD between the LCS and LCSD was outside of the control limit.

Sample ID: LH18/24-SP650_101217 (HS17100712-01)

- The surrogate recoveries could not be determined due to dilution below the calibration range.

GCMS Volatiles by Method SW8260

Batch ID: R303553

Sample ID: HS17100646-08MS

- MS and MSD are for an unrelated sample

Sample ID: Trip Blank (HS17100712-02)

- Trichlorofluoromethane hit confirmed by re-analysis of 2nd vial.

Metals by Method SW6020

Batch ID: 121126

Sample ID: HS17100768-10MS

- MS and MSD are for an unrelated sample

WetChemistry by Method SW7196

Batch ID: R303427

Sample ID: HS17100695-01MS

- MS and MSD are for an unrelated sample

ALS Group USA, Corp Date: 28-Oct-17

Client: Bhate Environmental Associates, Inc.
Project: Monthly Effluent Samples
Sample ID: LH18/24-SP650_101217
Collection Date: 12-Oct-2017 14:00

ANALYTICAL REPORT
WorkOrder:HS17100712
Lab ID:HS17100712-01
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	17-Oct-2017 17:31
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	17-Oct-2017 17:31
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	ug/L	1	17-Oct-2017 17:31
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	17-Oct-2017 17:31
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	17-Oct-2017 17:31
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	17-Oct-2017 17:31
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	ug/L	1	17-Oct-2017 17:31
1,2,3-Trichlorobenzene	0.50	U	0.40	0.50	1.0	ug/L	1	17-Oct-2017 17:31
1,2,3-Trichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	17-Oct-2017 17:31
1,2,4-Trichlorobenzene	0.50	U	0.50	0.50	1.0	ug/L	1	17-Oct-2017 17:31
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	17-Oct-2017 17:31
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	17-Oct-2017 17:31
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	17-Oct-2017 17:31
1,2-Dichlorobenzene	0.50	U	0.50	0.50	1.0	ug/L	1	17-Oct-2017 17:31
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	17-Oct-2017 17:31
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	17-Oct-2017 17:31
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	17-Oct-2017 17:31
1,3-Dichlorobenzene	0.50	U	0.40	0.50	1.0	ug/L	1	17-Oct-2017 17:31
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	ug/L	1	17-Oct-2017 17:31
1,4-Dichlorobenzene	0.50	U	0.40	0.50	1.0	ug/L	1	17-Oct-2017 17:31
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	17-Oct-2017 17:31
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	17-Oct-2017 17:31
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	ug/L	1	17-Oct-2017 17:31
2-Hexanone	1.0	U	1.0	1.0	2.0	ug/L	1	17-Oct-2017 17:31
4-Chlorotoluene	0.50	U	0.40	0.50	1.0	ug/L	1	17-Oct-2017 17:31
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	ug/L	1	17-Oct-2017 17:31
4-Methyl-2-pentanone	1.0	U	0.70	1.0	2.0	ug/L	1	17-Oct-2017 17:31
Acetone	**9.1**		**0.40**	**1.0**	**2.0**	**ug/L**	1	17-Oct-2017 17:31
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	17-Oct-2017 17:31
Bromobenzene	0.50	U	0.40	0.50	1.0	ug/L	1	17-Oct-2017 17:31
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	17-Oct-2017 17:31
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	17-Oct-2017 17:31
Bromoform	0.50	U	0.40	0.50	1.0	ug/L	1	17-Oct-2017 17:31
Bromomethane	0.50	U	0.40	0.50	1.0	ug/L	1	17-Oct-2017 17:31
Carbon disulfide	1.0	U	0.60	1.0	2.0	ug/L	1	17-Oct-2017 17:31
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	ug/L	1	17-Oct-2017 17:31
Chlorobenzene	0.50	U	0.30	0.50	1.0	ug/L	1	17-Oct-2017 17:31
Chloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	17-Oct-2017 17:31

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

ALS Group USA, Corp Date: 28-Oct-17

Client: Bhate Environmental Associates, Inc.
Project: Monthly Effluent Samples
Sample ID: LH18/24-SP650_101217
Collection Date: 12-Oct-2017 14:00

ANALYTICAL REPORT
WorkOrder:HS17100712
Lab ID:HS17100712-01
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	17-Oct-2017 17:31
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	17-Oct-2017 17:31
cis-1,2-Dichloroethene	**5.7**		**0.20**	**0.50**	**1.0**	**ug/L**	1	17-Oct-2017 17:31
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	17-Oct-2017 17:31
Dibromochloromethane	0.50	U	0.30	0.50	1.0	ug/L	1	17-Oct-2017 17:31
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	17-Oct-2017 17:31
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	17-Oct-2017 17:31
Ethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	17-Oct-2017 17:31
Hexachlorobutadiene	0.50	U	1.0	0.50	1.0	ug/L	1	17-Oct-2017 17:31
Isopropylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	17-Oct-2017 17:31
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	17-Oct-2017 17:31
Methylene chloride	0.50	U	0.40	0.50	2.0	ug/L	1	17-Oct-2017 17:31
n-Butylbenzene	0.50	U	0.40	0.50	1.0	ug/L	1	17-Oct-2017 17:31
n-Propylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	17-Oct-2017 17:31
Naphthalene	0.50	U	0.30	0.50	1.0	ug/L	1	17-Oct-2017 17:31
o-Xylene	0.50	U	0.30	0.50	1.0	ug/L	1	17-Oct-2017 17:31
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	17-Oct-2017 17:31
Styrene	0.50	U	0.30	0.50	1.0	ug/L	1	17-Oct-2017 17:31
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	17-Oct-2017 17:31
Tetrachloroethene	0.50	U	0.30	0.50	1.0	ug/L	1	17-Oct-2017 17:31
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	17-Oct-2017 17:31
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	17-Oct-2017 17:31
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	17-Oct-2017 17:31
Trichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	17-Oct-2017 17:31
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	17-Oct-2017 17:31
Vinyl chloride	**1.3**		**0.20**	**0.50**	**1.0**	**ug/L**	1	17-Oct-2017 17:31
Surr: 1,2-Dichloroethane-d4	*99.5*			**0**	*81-118*	*%REC*	*1*	*17-Oct-2017 17:31*
Surr: 4-Bromofluorobenzene	*97.8*			**0**	*85-114*	*%REC*	*1*	*17-Oct-2017 17:31*
Surr: Dibromofluoromethane	*99.8*			**0**	*80-119*	*%REC*	*1*	*17-Oct-2017 17:31*
Surr: Toluene-d8	*99.3*			**0**	*89-112*	*%REC*	*1*	*17-Oct-2017 17:31*
SEMIVOLATILES SIM		**Method:SW8270SIM**				Prep:SW3510 / 16-Oct-2017		Analyst: ACN
1,4-Dioxane	**14**		**1.0**	**0**	**1.0**	**ug/L**	100	17-Oct-2017 16:01
Surr: 2-Fluorobiphenyl	*0*	*S*		0	*40-140*	*%REC*	*100*	*17-Oct-2017 16:01*
Surr: 4-Terphenyl-d14	*0*	*S*		0	*40-140*	*%REC*	*100*	*17-Oct-2017 16:01*
Surr: Nitrobenzene-d5	*0*	*S*		0	*40-140*	*%REC*	*100*	*17-Oct-2017 16:01*

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

ALS Group USA, Corp Date: 28-Oct-17

Client: Bhate Environmental Associates, Inc.
Project: Monthly Effluent Samples
Sample ID: LH18/24-SP650_101217
Collection Date: 12-Oct-2017 14:00

ANALYTICAL REPORT
WorkOrder:HS17100712
Lab ID:HS17100712-01
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		**Method:SW6020**				Prep:SW3010A / 18-Oct-2017		Analyst: RPM
Barium	**0.125**		**0.00190**	**0.00250**	**0.00400**	**mg/L**	1	20-Oct-2017 10:21
Lead	0.00100	U	0.000600	0.00100	0.00200	mg/L	1	20-Oct-2017 10:21
Selenium	0.00200	U	0.00110	0.00200	0.00200	mg/L	1	20-Oct-2017 10:21
Silver	0.00100	U	0.000200	0.00100	0.00200	mg/L	1	20-Oct-2017 10:21
HEXAVALENT CHROMIUM BY SW7196A		**Method:SW7196**				Prep:SW7196		Analyst: JHD
Chromium, Hexavalent	0.00500	U	0.00600	0.00500	0.0100	mg/L	1	13-Oct-2017 13:40
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: SUB
Subcontract Analysis	See Attached		0	0			1	27-Oct-2017 16:05

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

ALS Group USA, Corp Date: 28-Oct-17

Client: Bhate Environmental Associates, Inc.
Project: Monthly Effluent Samples
Sample ID: Trip Blank
Collection Date: 12-Oct-2017 00:00

ANALYTICAL REPORT
WorkOrder:HS17100712
Lab ID:HS17100712-02
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	17-Oct-2017 14:37
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	17-Oct-2017 14:37
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	ug/L	1	17-Oct-2017 14:37
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	17-Oct-2017 14:37
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	17-Oct-2017 14:37
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	17-Oct-2017 14:37
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	ug/L	1	17-Oct-2017 14:37
1,2,3-Trichlorobenzene	0.50	U	0.40	0.50	1.0	ug/L	1	17-Oct-2017 14:37
1,2,3-Trichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	17-Oct-2017 14:37
1,2,4-Trichlorobenzene	0.50	U	0.50	0.50	1.0	ug/L	1	17-Oct-2017 14:37
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	17-Oct-2017 14:37
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	17-Oct-2017 14:37
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	17-Oct-2017 14:37
1,2-Dichlorobenzene	0.50	U	0.50	0.50	1.0	ug/L	1	17-Oct-2017 14:37
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	17-Oct-2017 14:37
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	17-Oct-2017 14:37
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	17-Oct-2017 14:37
1,3-Dichlorobenzene	0.50	U	0.40	0.50	1.0	ug/L	1	17-Oct-2017 14:37
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	ug/L	1	17-Oct-2017 14:37
1,4-Dichlorobenzene	0.50	U	0.40	0.50	1.0	ug/L	1	17-Oct-2017 14:37
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	17-Oct-2017 14:37
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	17-Oct-2017 14:37
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	ug/L	1	17-Oct-2017 14:37
2-Hexanone	1.0	U	1.0	1.0	2.0	ug/L	1	17-Oct-2017 14:37
4-Chlorotoluene	0.50	U	0.40	0.50	1.0	ug/L	1	17-Oct-2017 14:37
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	ug/L	1	17-Oct-2017 14:37
4-Methyl-2-pentanone	1.0	U	0.70	1.0	2.0	ug/L	1	17-Oct-2017 14:37
Acetone	1.0	U	0.40	1.0	2.0	ug/L	1	17-Oct-2017 14:37
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	17-Oct-2017 14:37
Bromobenzene	0.50	U	0.40	0.50	1.0	ug/L	1	17-Oct-2017 14:37
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	17-Oct-2017 14:37
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	17-Oct-2017 14:37
Bromoform	0.50	U	0.40	0.50	1.0	ug/L	1	17-Oct-2017 14:37
Bromomethane	0.50	U	0.40	0.50	1.0	ug/L	1	17-Oct-2017 14:37
Carbon disulfide	1.0	U	0.60	1.0	2.0	ug/L	1	17-Oct-2017 14:37
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	ug/L	1	17-Oct-2017 14:37
Chlorobenzene	0.50	U	0.30	0.50	1.0	ug/L	1	17-Oct-2017 14:37
Chloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	17-Oct-2017 14:37

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

ALS Group USA, Corp Date: 28-Oct-17

Client: Bhate Environmental Associates, Inc.
Project: Monthly Effluent Samples
Sample ID: Trip Blank
Collection Date: 12-Oct-2017 00:00

ANALYTICAL REPORT
WorkOrder:HS17100712
Lab ID:HS17100712-02
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	17-Oct-2017 14:37
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	17-Oct-2017 14:37
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	17-Oct-2017 14:37
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	17-Oct-2017 14:37
Dibromochloromethane	0.50	U	0.30	0.50	1.0	ug/L	1	17-Oct-2017 14:37
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	17-Oct-2017 14:37
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	17-Oct-2017 14:37
Ethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	17-Oct-2017 14:37
Hexachlorobutadiene	0.50	U	1.0	0.50	1.0	ug/L	1	17-Oct-2017 14:37
Isopropylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	17-Oct-2017 14:37
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	17-Oct-2017 14:37
Methylene chloride	0.50	U	0.40	0.50	2.0	ug/L	1	17-Oct-2017 14:37
n-Butylbenzene	0.50	U	0.40	0.50	1.0	ug/L	1	17-Oct-2017 14:37
n-Propylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	17-Oct-2017 14:37
Naphthalene	0.50	U	0.30	0.50	1.0	ug/L	1	17-Oct-2017 14:37
o-Xylene	0.50	U	0.30	0.50	1.0	ug/L	1	17-Oct-2017 14:37
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	17-Oct-2017 14:37
Styrene	0.50	U	0.30	0.50	1.0	ug/L	1	17-Oct-2017 14:37
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	17-Oct-2017 14:37
Tetrachloroethene	0.50	U	0.30	0.50	1.0	ug/L	1	17-Oct-2017 14:37
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	17-Oct-2017 14:37
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	17-Oct-2017 14:37
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	17-Oct-2017 14:37
Trichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	17-Oct-2017 14:37
Trichlorofluoromethane	**2.6**		**0.30**	**0.50**	**1.0**	**ug/L**	1	17-Oct-2017 14:37
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	17-Oct-2017 14:37
Surr: 1,2-Dichloroethane-d4	*99.0*			**0**	*81-118*	*%REC*	*1*	*17-Oct-2017 14:37*
Surr: 4-Bromofluorobenzene	*94.0*			**0**	*85-114*	*%REC*	*1*	*17-Oct-2017 14:37*
Surr: Dibromofluoromethane	*99.9*			**0**	*80-119*	*%REC*	*1*	*17-Oct-2017 14:37*
Surr: Toluene-d8	*96.4*			**0**	*89-112*	*%REC*	*1*	*17-Oct-2017 14:37*

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

ALS Group USA, Corp Date: 28-Oct-17

WEIGHT LOG

Client: Bhate Environmental Associates, Inc.
Project: Monthly Effluent Samples
WorkOrder: HS17100712

Batch ID: 121033 **Method:** SEMIVOLATILES SIM **Prep:** 3510_B_SIM

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS17100712-01	1	980	1 (mL)	0.00102

Batch ID: 121126 **Method:** ICP-MS METALS BY SW6020A **Prep:** 3010A

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS17100712-01	1	10	10 (mL)	1

ALS Group USA, Corp Date: 28-Oct-17

Client: Bhate Environmental Associates, Inc.
Project: Monthly Effluent Samples
WorkOrder: HS17100712

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID 121033	**Test Name :** SEMIVOLATILES SIM			**Matrix:** Water		
HS17100712-01	LH18/24-SP650_101217	12 Oct 2017 14:00		16 Oct 2017 15:46	17 Oct 2017 16:01	100
Batch ID 121126	**Test Name :** ICP-MS METALS BY SW6020A			**Matrix:** Water		
HS17100712-01	LH18/24-SP650_101217	12 Oct 2017 14:00		18 Oct 2017 13:00	20 Oct 2017 10:21	1
Batch ID R303427	**Test Name :** HEXAVALENT CHROMIUM BY SW7196A			**Matrix:** Water		
HS17100712-01	LH18/24-SP650_101217	12 Oct 2017 14:00			13 Oct 2017 13:40	1
Batch ID R303553	**Test Name :** VOLATILES ORGANICS BY METHOD 8260C			**Matrix:** Water		
HS17100712-01	LH18/24-SP650_101217	12 Oct 2017 14:00			17 Oct 2017 17:31	1
HS17100712-02	Trip Blank	12 Oct 2017 00:00			17 Oct 2017 14:37	1
Batch ID R304313	**Test Name :** SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)			**Matrix:** Water		
HS17100712-01	LH18/24-SP650_101217	12 Oct 2017 14:00			27 Oct 2017 16:05	1

ALS Group USA, Corp Date: 28-Oct-17

Client: Bhate Environmental Associates, Inc.
Project: Monthly Effluent Samples
WorkOrder: HS17100712

QC BATCH REPORT

Batch ID: 121126 **Instrument: ICPMS05** **Method: SW6020**

MBLK Sample ID: **MBLK-121126** Units: **mg/L** Analysis Date: **20-Oct-2017 09:46**
Client ID: Run ID: **ICPMS05_303769** SeqNo: **4271694** PrepDate: **18-Oct-2017** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Barium	0.00250	0.00400								U
Lead	0.00100	0.00200								U
Selenium	0.00200	0.00200								U
Silver	0.00100	0.00200								U

LCS Sample ID: **LCS-121126** Units: **mg/L** Analysis Date: **20-Oct-2017 09:52**
Client ID: Run ID: **ICPMS05_303769** SeqNo: **4271697** PrepDate: **18-Oct-2017** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Barium	0.04669	0.00400	0.05	0	93.4	80 - 120				
Lead	0.0441	0.00200	0.05	0	88.2	80 - 120				
Selenium	0.04798	0.00200	0.05	0	96.0	80 - 120				
Silver	0.04612	0.00200	0.05	0	92.2	80 - 120				

MS Sample ID: **HS17100768-10MS** Units: **mg/L** Analysis Date: **20-Oct-2017 10:03**
Client ID: Run ID: **ICPMS05_303769** SeqNo: **4271702** PrepDate: **18-Oct-2017** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Barium	0.3335	0.00400	0.05	0.282	103	80 - 120				O
Lead	0.04763	0.00200	0.05	0	95.3	80 - 120				
Selenium	0.02944	0.00200	0.05	0	58.9	80 - 120				S
Silver	0.04369	0.00200	0.05	0	87.4	80 - 120				

MSD Sample ID: **HS17100768-10MSD** Units: **mg/L** Analysis Date: **20-Oct-2017 10:04**
Client ID: Run ID: **ICPMS05_303769** SeqNo: **4271703** PrepDate: **18-Oct-2017** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Barium	0.3448	0.00400	0.05	0.282	126	80 - 120	0.3335	3.32	20	SO
Lead	0.04654	0.00200	0.05	0	93.1	80 - 120	0.04763	2.32	20	
Selenium	0.03107	0.00200	0.05	0	62.1	80 - 120	0.02944	5.38	20	S
Silver	0.04367	0.00200	0.05	0	87.3	80 - 120	0.04369	0.0412	20	

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

ALS Group USA, Corp Date: 28-Oct-17

Client: Bhate Environmental Associates, Inc.
Project: Monthly Effluent Samples
WorkOrder: HS17100712

QC BATCH REPORT

Batch ID: 121126 **Instrument: ICPMS05** **Method: SW6020**

PDS Sample ID: **HS17100768-10PDS** Units: **mg/L** Analysis Date: **20-Oct-2017 10:06**
Client ID: Run ID: **ICPMS05_303769** SeqNo: **4271704** PrepDate: **18-Oct-2017** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Barium	0.377	0.00400	0.1	0.282	95.0	75 - 125				
Lead	0.09554	0.00200	0.1	0	95.5	75 - 125				
Selenium	0.095	0.00200	0.1	0	95.0	75 - 125				
Silver	0.0875	0.00200	0.1	0	87.5	75 - 125				

SD Sample ID: **HS17100768-10SD** Units: **mg/L** Analysis Date: **20-Oct-2017 10:00**
Client ID: Run ID: **ICPMS05_303769** SeqNo: **4271701** PrepDate: **18-Oct-2017** DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual
Barium	0.2735	0.0200					0.282	3	10	
Lead	0.00500	0.0100					0.000032	0	10	U
Selenium	0.0100	0.0100					-0.000037	0	10	U
Silver	0.00500	0.0100					0.000017	0	10	U

The following samples were analyzed in this batch: HS17100712-01

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

ALS Group USA, Corp Date: 28-Oct-17

Client: Bhate Environmental Associates, Inc.
Project: Monthly Effluent Samples
WorkOrder: HS17100712

QC BATCH REPORT

Batch ID: 121033 **Instrument: SV-6** **Method: SW8270SIM**

MBLK Sample ID: **MBLK-121033** Units: **ug/L** Analysis Date: **17-Oct-2017 12:58**
Client ID: Run ID: **SV-6_303557** SeqNo: **4266747** PrepDate: **16-Oct-2017** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,4-Dioxane	0	0.010								U
Surr: 2-Fluorobiphenyl	*0.05753*	*0*	*0.08*	*0*	*71.9*	*40 - 140*				
Surr: 4-Terphenyl-d14	*0.06806*	*0*	*0.08*	*0*	*85.1*	*40 - 140*				
Surr: Nitrobenzene-d5	*0.04378*	*0*	*0.08*	*0*	*54.7*	*40 - 140*				

MBLK Sample ID: **MBLK-121033** Units: **ug/L** Analysis Date: **17-Oct-2017 14:31**
Client ID: Run ID: **SV-6_303557** SeqNo: **4268796** PrepDate: **16-Oct-2017** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,4-Dioxane	0	0.010								U
Surr: 2-Fluorobiphenyl	*0.1014*	*0*	*0.08*	*0*	*127*	*40 - 140*				
Surr: 4-Terphenyl-d14	*0.06461*	*0*	*0.08*	*0*	*80.8*	*40 - 140*				
Surr: Nitrobenzene-d5	*0.04163*	*0*	*0.08*	*0*	*52.0*	*40 - 140*				

LCS Sample ID: **LCS1-121033** Units: **ug/L** Analysis Date: **17-Oct-2017 14:49**
Client ID: Run ID: **SV-6_303557** SeqNo: **4268797** PrepDate: **16-Oct-2017** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,4-Dioxane	0.04104	0.010	0.08	0	51.3	40 - 140				
Surr: 2-Fluorobiphenyl	*0.06907*	*0*	*0.08*	*0*	*86.3*	*40 - 140*				
Surr: 4-Terphenyl-d14	*0.07768*	*0*	*0.08*	*0*	*97.1*	*40 - 140*				
Surr: Nitrobenzene-d5	*0.08484*	*0*	*0.08*	*0*	*106*	*40 - 140*				

LCSD Sample ID: **LCSD1-121033** Units: **ug/L** Analysis Date: **17-Oct-2017 15:08**
Client ID: Run ID: **SV-6_303557** SeqNo: **4268798** PrepDate: **16-Oct-2017** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,4-Dioxane	0.05063	0.010	0.08	0	63.3	40 - 140	0.04104	20.9	20	R
Surr: 2-Fluorobiphenyl	*0.09411*	*0*	*0.08*	*0*	*118*	*40 - 140*	*0.06907*	*30.7*	*20*	R
Surr: 4-Terphenyl-d14	*0.1074*	*0*	*0.08*	*0*	*134*	*40 - 140*	*0.07768*	*32.1*	*20*	R
Surr: Nitrobenzene-d5	*0.09325*	*0*	*0.08*	*0*	*117*	*40 - 140*	*0.08484*	*9.44*	*20*	

The following samples were analyzed in this batch: HS17100712-01

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

ALS Group USA, Corp Date: 28-Oct-17

Client: Bhate Environmental Associates, Inc.
Project: Monthly Effluent Samples
WorkOrder: HS17100712

QC BATCH REPORT

Batch ID: R303553 **Instrument: VOA6** **Method: SW8260**

MBLK Sample ID: **VBLKW-171017** Units: **ug/L** Analysis Date: **17-Oct-2017 13:22**
Client ID: Run ID: **VOA6_303553** SeqNo: **4266594** 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	1.0	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

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

ALS Group USA, Corp Date: 28-Oct-17

Client: Bhate Environmental Associates, Inc.
Project: Monthly Effluent Samples
WorkOrder: HS17100712

QC BATCH REPORT

Batch ID: R303553 **Instrument: VOA6** **Method: SW8260**

MBLK Sample ID: **VBLKW-171017** Units: **ug/L** Analysis Date: **17-Oct-2017 13:22**
Client ID: Run ID: **VOA6_303553** SeqNo: **4266594** 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	0.50	1.0								U
Isopropylbenzene	0.50	1.0								U
m,p-Xylene	1.0	2.0								U
Methylene chloride	0.50	2.0								U
Naphthalene	0.50	1.0								U
n-Butylbenzene	0.50	1.0								U
n-Propylbenzene	0.50	1.0								U
o-Xylene	0.50	1.0								U
sec-Butylbenzene	0.50	1.0								U
Styrene	0.50	1.0								U
tert-Butylbenzene	0.50	1.0								U
Tetrachloroethene	0.50	1.0								U
Toluene	0.50	1.0								U
trans-1,2-Dichloroethene	0.50	1.0								U
trans-1,3-Dichloropropene	0.50	1.0								U
Trichloroethene	0.50	1.0								U
Trichlorofluoromethane	0.50	1.0								U
Vinyl chloride	0.50	1.0								U
Surr: 1,2-Dichloroethane-d4	*49.09*	*1.0*	*50*	*0*	*98.2*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*47.59*	*1.0*	*50*	*0*	*95.2*	*85 - 114*				
Surr: Dibromofluoromethane	*50.41*	*1.0*	*50*	*0*	*101*	*80 - 119*				
Surr: Toluene-d8	*48.87*	*1.0*	*50*	*0*	*97.7*	*89 - 112*				

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

ALS Group USA, Corp Date: 28-Oct-17

Client: Bhate Environmental Associates, Inc.
Project: Monthly Effluent Samples
WorkOrder: HS17100712

QC BATCH REPORT

Batch ID: R303553 **Instrument: VOA6** **Method: SW8260**

LCS Sample ID: **VLCSW-171017** Units: **ug/L** Analysis Date: **17-Oct-2017 11:55**
Client ID: Run ID: **VOA6_303553** SeqNo: **4266593** 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	43.35	1.0	50	0	86.7	78 - 124				
1,1,1-Trichloroethane	45.06	1.0	50	0	90.1	74 - 131				
1,1,2,2-Tetrachloroethane	44.45	1.0	50	0	88.9	71 - 121				
1,1,2-Trichloroethane	43.96	1.0	50	0	87.9	80 - 119				
1,1-Dichloroethane	47.52	1.0	50	0	95.0	77 - 125				
1,1-Dichloroethene	47.43	1.0	50	0	94.9	71 - 131				
1,1-Dichloropropene	45.51	1.0	50	0	91.0	79 - 125				
1,2,3-Trichlorobenzene	39.89	1.0	50	0	79.8	69 - 129				
1,2,3-Trichloropropane	43.96	1.0	50	0	87.9	73 - 122				
1,2,4-Trichlorobenzene	41.9	1.0	50	0	83.8	69 - 130				
1,2,4-Trimethylbenzene	43.06	1.0	50	0	86.1	76 - 124				
1,2-Dibromo-3-chloropropane	39.61	1.0	50	0	79.2	62 - 128				
1,2-Dibromoethane	44.67	1.0	50	0	89.3	77 - 121				
1,2-Dichlorobenzene	42.32	1.0	50	0	84.6	80 - 119				
1,2-Dichloroethane	45.61	1.0	50	0	91.2	73 - 128				
1,2-Dichloropropane	47.74	1.0	50	0	95.5	78 - 122				
1,3,5-Trimethylbenzene	42.52	1.0	50	0	85.0	75 - 124				
1,3-Dichlorobenzene	42.51	1.0	50	0	85.0	80 - 119				
1,3-Dichloropropane	44.3	1.0	50	0	88.6	80 - 119				
1,4-Dichlorobenzene	42.06	1.0	50	0	84.1	79 - 118				
2,2-Dichloropropane	46.52	1.0	50	0	93.0	60 - 139				
2-Butanone	95.9	2.0	100	0	95.9	56 - 143				
2-Chlorotoluene	43.55	1.0	50	0	87.1	79 - 122				
2-Hexanone	87.23	2.0	100	0	87.2	57 - 139				
4-Chlorotoluene	43.09	1.0	50	0	86.2	78 - 122				
4-Isopropyltoluene	42.8	1.0	50	0	85.6	77 - 127				
4-Methyl-2-pentanone	84.5	2.0	100	0	84.5	67 - 130				
Acetone	99.77	2.0	100	0	99.8	39 - 160				
Benzene	47.22	1.0	50	0	94.4	79 - 120				
Bromobenzene	44.49	1.0	50	0	89.0	80 - 120				
Bromochloromethane	46.89	1.0	50	0	93.8	78 - 123				
Bromodichloromethane	46.66	1.0	50	0	93.3	79 - 125				
Bromoform	42.76	1.0	50	0	85.5	66 - 130				
Bromomethane	49.05	1.0	50	0	98.1	53 - 141				

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

ALS Group USA, Corp Date: 28-Oct-17

Client: Bhate Environmental Associates, Inc.
Project: Monthly Effluent Samples
WorkOrder: HS17100712

QC BATCH REPORT

Batch ID: R303553 **Instrument: VOA6** **Method: SW8260**

LCS Sample ID: **VLCSW-171017** Units: **ug/L** Analysis Date: **17-Oct-2017 11:55**
Client ID: Run ID: **VOA6_303553** SeqNo: **4266593** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	93.45	2.0	100	0	93.4	64 - 133				
Carbon tetrachloride	44.37	1.0	50	0	88.7	72 - 136				
Chlorobenzene	44.2	1.0	50	0	88.4	80 - 120				
Chloroethane	45.28	1.0	50	0	90.6	82 - 118				
Chloroform	46.88	1.0	50	0	93.8	79 - 124				
Chloromethane	49.13	1.0	50	0	98.3	50 - 139				
cis-1,2-Dichloroethene	47.86	1.0	50	0	95.7	78 - 123				
cis-1,3-Dichloropropene	47.51	1.0	50	0	95.0	75 - 124				
Dibromochloromethane	44.89	1.0	50	0	89.8	74 - 126				
Dibromomethane	45.57	1.0	50	0	91.1	79 - 123				
Dichlorodifluoromethane	43.69	1.0	50	0	87.4	32 - 152				
Ethylbenzene	43.57	1.0	50	0	87.1	79 - 121				
Hexachlorobutadiene	46.03	1.0	50	0	92.1	66 - 134				
Isopropylbenzene	42.51	1.0	50	0	85.0	72 - 131				
m,p-Xylene	87.16	2.0	100	0	87.2	80 - 121				
Methylene chloride	46.67	2.0	50	0	93.3	74 - 124				
Naphthalene	36.83	1.0	50	0	73.7	61 - 128				
n-Butylbenzene	44.7	1.0	50	0	89.4	75 - 128				
n-Propylbenzene	42.4	1.0	50	0	84.8	76 - 126				
o-Xylene	43.54	1.0	50	0	87.1	78 - 122				
sec-Butylbenzene	42.02	1.0	50	0	84.0	77 - 126				
Styrene	44.87	1.0	50	0	89.7	78 - 128				
tert-Butylbenzene	41.25	1.0	50	0	82.5	78 - 124				
Tetrachloroethene	42.8	1.0	50	0	85.6	74 - 129				
Toluene	45.15	1.0	50	0	90.3	80 - 121				
trans-1,2-Dichloroethene	47.08	1.0	50	0	94.2	75 - 124				
trans-1,3-Dichloropropene	45.92	1.0	50	0	91.8	73 - 127				
Trichloroethene	46.69	1.0	50	0	93.4	79 - 123				
Trichlorofluoromethane	42.06	1.0	50	0	84.1	65 - 141				
Vinyl chloride	48.06	1.0	50	0	96.1	58 - 137				
Surr: 1,2-Dichloroethane-d4	*46.62*	*1.0*	*50*	*0*	*93.2*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*46.88*	*1.0*	*50*	*0*	*93.8*	*85 - 114*				
Surr: Dibromofluoromethane	*48.83*	*1.0*	*50*	*0*	*97.7*	*80 - 119*				
Surr: Toluene-d8	*48.33*	*1.0*	*50*	*0*	*96.7*	*89 - 112*				

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

ALS Group USA, Corp Date: 28-Oct-17

Client: Bhate Environmental Associates, Inc.
Project: Monthly Effluent Samples
WorkOrder: HS17100712

QC BATCH REPORT

Batch ID: R303553 **Instrument: VOA6** **Method: SW8260**

MS Sample ID: **HS17100646-08MS** Units: **ug/L** Analysis Date: **17-Oct-2017 17:56**
Client ID: Run ID: **VOA6_303553** SeqNo: **4267720** 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	44.51	1.0	50	0	89.0	78 - 124				
1,1,1-Trichloroethane	44.8	1.0	50	0	89.6	74 - 131				
1,1,2,2-Tetrachloroethane	52.35	1.0	50	0	105	71 - 121				
1,1,2-Trichloroethane	48.2	1.0	50	0	96.4	80 - 119				
1,1-Dichloroethane	48.88	1.0	50	0	97.8	77 - 125				
1,1-Dichloroethene	45.81	1.0	50	0	91.6	71 - 131				
1,1-Dichloropropene	44.75	1.0	50	0	89.5	79 - 125				
1,2,3-Trichlorobenzene	46.5	1.0	50	0	93.0	69 - 129				
1,2,3-Trichloropropane	52.44	1.0	50	0	105	73 - 122				
1,2,4-Trichlorobenzene	44.04	1.0	50	0	88.1	69 - 130				
1,2,4-Trimethylbenzene	41.01	1.0	50	0	82.0	76 - 124				
1,2-Dibromo-3-chloropropane	52.64	1.0	50	0	105	62 - 128				
1,2-Dibromoethane	49.5	1.0	50	0	99.0	77 - 121				
1,2-Dichlorobenzene	42.76	1.0	50	0	85.5	80 - 119				
1,2-Dichloroethane	50.06	1.0	50	0	100	73 - 128				
1,2-Dichloropropane	49.62	1.0	50	0	99.2	78 - 122				
1,3,5-Trimethylbenzene	40.63	1.0	50	0	81.3	75 - 124				
1,3-Dichlorobenzene	41.95	1.0	50	0	83.9	80 - 119				
1,3-Dichloropropane	47.98	1.0	50	0	96.0	80 - 119				
1,4-Dichlorobenzene	41.69	1.0	50	0	83.4	79 - 118				
2,2-Dichloropropane	44.77	1.0	50	0	89.5	60 - 139				
2-Butanone	122.1	2.0	100	0	122	56 - 143				
2-Chlorotoluene	42.8	1.0	50	0	85.6	79 - 122				
2-Hexanone	105.9	2.0	100	0	106	57 - 139				
4-Chlorotoluene	41.98	1.0	50	0	84.0	78 - 122				
4-Isopropyltoluene	37.42	1.0	50	0	74.8	77 - 127				S
4-Methyl-2-pentanone	108.7	2.0	100	0	109	67 - 130				
Acetone	128.6	2.0	100	0	129	39 - 160				
Benzene	48.75	1.0	50	0	97.5	79 - 120				
Bromobenzene	45.29	1.0	50	0	90.6	80 - 120				
Bromochloromethane	49.29	1.0	50	0	98.6	78 - 123				
Bromodichloromethane	48.85	1.0	50	0	97.7	79 - 125				
Bromoform	49.1	1.0	50	0	98.2	66 - 130				
Bromomethane	33.27	1.0	50	0	66.5	53 - 141				

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

ALS Group USA, Corp Date: 28-Oct-17

Client: Bhate Environmental Associates, Inc.
Project: Monthly Effluent Samples
WorkOrder: HS17100712

QC BATCH REPORT

Batch ID: R303553 **Instrument: VOA6** **Method: SW8260**

MS Sample ID: **HS17100646-08MS** Units: **ug/L** Analysis Date: **17-Oct-2017 17:56**
Client ID: Run ID: **VOA6_303553** SeqNo: **4267720** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	92.44	2.0	100	0	92.4	64 - 133				
Carbon tetrachloride	42.67	1.0	50	0	85.3	72 - 136				
Chlorobenzene	45.58	1.0	50	0	91.2	80 - 120				
Chloroethane	20.5	1.0	50	0	41.0	82 - 118				S
Chloroform	48.56	1.0	50	0	97.1	79 - 124				
Chloromethane	42.98	1.0	50	0	86.0	50 - 139				
cis-1,2-Dichloroethene	49.26	1.0	50	0	98.5	78 - 123				
cis-1,3-Dichloropropene	49.33	1.0	50	0	98.7	75 - 124				
Dibromochloromethane	47.62	1.0	50	0	95.2	74 - 126				
Dibromomethane	51.01	1.0	50	0	102	79 - 123				
Dichlorodifluoromethane	31.31	1.0	50	0	62.6	32 - 152				
Ethylbenzene	43.57	1.0	50	0	87.1	79 - 121				
Hexachlorobutadiene	29.76	1.0	50	0	59.5	66 - 134				S
Isopropylbenzene	41.51	1.0	50	0	83.0	72 - 131				
m,p-Xylene	87.08	2.0	100	0	87.1	80 - 121				
Methylene chloride	48.05	2.0	50	0	96.1	74 - 124				
Naphthalene	47.28	1.0	50	0	94.6	61 - 128				
n-Butylbenzene	37.31	1.0	50	0	74.6	75 - 128				S
n-Propylbenzene	39.82	1.0	50	0	79.6	76 - 126				
o-Xylene	44.05	1.0	50	0	88.1	78 - 122				
sec-Butylbenzene	36.16	1.0	50	0	72.3	77 - 126				S
Styrene	45.38	1.0	50	0	90.8	78 - 128				
tert-Butylbenzene	37.91	1.0	50	0	75.8	78 - 124				S
Tetrachloroethene	41.39	1.0	50	0	82.8	74 - 129				
Toluene	45.92	1.0	50	0	91.8	80 - 121				
trans-1,2-Dichloroethene	47.54	1.0	50	0	95.1	75 - 124				
trans-1,3-Dichloropropene	49.21	1.0	50	0	98.4	73 - 127				
Trichloroethene	45.81	1.0	50	0	91.6	79 - 123				
Trichlorofluoromethane	37.23	1.0	50	0	74.5	65 - 141				
Vinyl chloride	43.11	1.0	50	0	86.2	58 - 137				
Surr: 1,2-Dichloroethane-d4	*50.39*	*1.0*	*50*	*0*	*101*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*50.52*	*1.0*	*50*	*0*	*101*	*85 - 114*				
Surr: Dibromofluoromethane	*51.5*	*1.0*	*50*	*0*	*103*	*80 - 119*				
Surr: Toluene-d8	*50.88*	*1.0*	*50*	*0*	*102*	*89 - 112*				

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

ALS Group USA, Corp Date: 28-Oct-17

Client: Bhate Environmental Associates, Inc.
Project: Monthly Effluent Samples
WorkOrder: HS17100712

QC BATCH REPORT

Batch ID: R303553 **Instrument: VOA6** **Method: SW8260**

MSD Sample ID: **HS17100646-08MSD** Units: **ug/L** Analysis Date: **17-Oct-2017 18:21**
Client ID: Run ID: **VOA6_303553** SeqNo: **4267721** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	43.61	1.0	50	0	87.2	78 - 124	44.51	2.05	20	
1,1,1-Trichloroethane	41.25	1.0	50	0	82.5	74 - 131	44.8	8.25	20	
1,1,2,2-Tetrachloroethane	52.88	1.0	50	0	106	71 - 121	52.35	1.01	20	
1,1,2-Trichloroethane	47.06	1.0	50	0	94.1	80 - 119	48.2	2.38	20	
1,1-Dichloroethane	46.25	1.0	50	0	92.5	77 - 125	48.88	5.53	20	
1,1-Dichloroethene	41.12	1.0	50	0	82.2	71 - 131	45.81	10.8	20	
1,1-Dichloropropene	40.49	1.0	50	0	81.0	79 - 125	44.75	9.99	20	
1,2,3-Trichlorobenzene	57.47	1.0	50	0	115	69 - 129	46.5	21.1	20	R
1,2,3-Trichloropropane	51.91	1.0	50	0	104	73 - 122	52.44	1.03	20	
1,2,4-Trichlorobenzene	51.67	1.0	50	0	103	69 - 130	44.04	15.9	20	
1,2,4-Trimethylbenzene	40.1	1.0	50	0	80.2	76 - 124	41.01	2.25	20	
1,2-Dibromo-3-chloropropane	58.45	1.0	50	0	117	62 - 128	52.64	10.5	20	
1,2-Dibromoethane	48.77	1.0	50	0	97.5	77 - 121	49.5	1.48	20	
1,2-Dichlorobenzene	42.72	1.0	50	0	85.4	80 - 119	42.76	0.0954	20	
1,2-Dichloroethane	47.1	1.0	50	0	94.2	73 - 128	50.06	6.09	20	
1,2-Dichloropropane	47.31	1.0	50	0	94.6	78 - 122	49.62	4.78	20	
1,3,5-Trimethylbenzene	39.59	1.0	50	0	79.2	75 - 124	40.63	2.59	20	
1,3-Dichlorobenzene	41.39	1.0	50	0	82.8	80 - 119	41.95	1.36	20	
1,3-Dichloropropane	47.33	1.0	50	0	94.7	80 - 119	47.98	1.37	20	
1,4-Dichlorobenzene	41.26	1.0	50	0	82.5	79 - 118	41.69	1.04	20	
2,2-Dichloropropane	41.3	1.0	50	0	82.6	60 - 139	44.77	8.05	20	
2-Butanone	117.8	2.0	100	0	118	56 - 143	122.1	3.57	20	
2-Chlorotoluene	40.46	1.0	50	0	80.9	79 - 122	42.8	5.61	20	
2-Hexanone	106.9	2.0	100	0	107	57 - 139	105.9	0.882	20	
4-Chlorotoluene	40.99	1.0	50	0	82.0	78 - 122	41.98	2.39	20	
4-Isopropyltoluene	37.09	1.0	50	0	74.2	77 - 127	37.42	0.884	20	S
4-Methyl-2-pentanone	107.6	2.0	100	0	108	67 - 130	108.7	0.993	20	
Acetone	113.6	2.0	100	0	114	39 - 160	128.6	12.4	20	
Benzene	45.5	1.0	50	0	91.0	79 - 120	48.75	6.9	20	
Bromobenzene	43.94	1.0	50	0	87.9	80 - 120	45.29	3.04	20	
Bromochloromethane	44.94	1.0	50	0	89.9	78 - 123	49.29	9.25	20	
Bromodichloromethane	46.39	1.0	50	0	92.8	79 - 125	48.85	5.15	20	
Bromoform	48.52	1.0	50	0	97.0	66 - 130	49.1	1.19	20	
Bromomethane	33.89	1.0	50	0	67.8	53 - 141	33.27	1.84	20	

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

ALS Group USA, Corp Date: 28-Oct-17

Client: Bhate Environmental Associates, Inc.
Project: Monthly Effluent Samples
WorkOrder: HS17100712

QC BATCH REPORT

Batch ID: R303553 **Instrument: VOA6** **Method: SW8260**

MSD Sample ID: **HS17100646-08MSD** Units: **ug/L** Analysis Date: **17-Oct-2017 18:21**
Client ID: Run ID: **VOA6_303553** SeqNo: **4267721** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Carbon disulfide	85.5	2.0	100	0	85.5	64 - 133	92.44	7.8	20	
Carbon tetrachloride	37.87	1.0	50	0	75.7	72 - 136	42.67	11.9	20	
Chlorobenzene	43.7	1.0	50	0	87.4	80 - 120	45.58	4.21	20	
Chloroethane	62.02	1.0	50	0	124	82 - 118	20.5	101	20	SR
Chloroform	46.85	1.0	50	0	93.7	79 - 124	48.56	3.58	20	
Chloromethane	40.16	1.0	50	0	80.3	50 - 139	42.98	6.79	20	
cis-1,2-Dichloroethene	47.64	1.0	50	0	95.3	78 - 123	49.26	3.34	20	
cis-1,3-Dichloropropene	47.02	1.0	50	0	94.0	75 - 124	49.33	4.8	20	
Dibromochloromethane	46.94	1.0	50	0	93.9	74 - 126	47.62	1.43	20	
Dibromomethane	49.92	1.0	50	0	99.8	79 - 123	51.01	2.16	20	
Dichlorodifluoromethane	27.27	1.0	50	0	54.5	32 - 152	31.31	13.8	20	
Ethylbenzene	41.21	1.0	50	0	82.4	79 - 121	43.57	5.58	20	
Hexachlorobutadiene	33.98	1.0	50	0	68.0	66 - 134	29.76	13.2	20	
Isopropylbenzene	39.57	1.0	50	0	79.1	72 - 131	41.51	4.8	20	
m,p-Xylene	83.32	2.0	100	0	83.3	80 - 121	87.08	4.42	20	
Methylene chloride	46.5	2.0	50	0	93.0	74 - 124	48.05	3.27	20	
Naphthalene	57.97	1.0	50	0	116	61 - 128	47.28	20.3	20	R
n-Butylbenzene	37.45	1.0	50	0	74.9	75 - 128	37.31	0.368	20	S
n-Propylbenzene	37.87	1.0	50	0	75.7	76 - 126	39.82	5.02	20	S
o-Xylene	42.13	1.0	50	0	84.3	78 - 122	44.05	4.47	20	
sec-Butylbenzene	35.56	1.0	50	0	71.1	77 - 126	36.16	1.67	20	S
Styrene	38.89	1.0	50	0	77.8	78 - 128	45.38	15.4	20	S
tert-Butylbenzene	37.21	1.0	50	0	74.4	78 - 124	37.91	1.86	20	S
Tetrachloroethene	38.27	1.0	50	0	76.5	74 - 129	41.39	7.84	20	
Toluene	43.78	1.0	50	0	87.6	80 - 121	45.92	4.77	20	
trans-1,2-Dichloroethene	44.89	1.0	50	0	89.8	75 - 124	47.54	5.75	20	
trans-1,3-Dichloropropene	46.79	1.0	50	0	93.6	73 - 127	49.21	5.05	20	
Trichloroethene	42.64	1.0	50	0	85.3	79 - 123	45.81	7.17	20	
Trichlorofluoromethane	33.05	1.0	50	0	66.1	65 - 141	37.23	11.9	20	
Vinyl chloride	38.75	1.0	50	0	77.5	58 - 137	43.11	10.7	20	
Surr: 1,2-Dichloroethane-d4	*49.95*	*1.0*	*50*	*0*	*99.9*	*81 - 118*	*50.39*	*0.88*	*20*	
Surr: 4-Bromofluorobenzene	*48.94*	*1.0*	*50*	*0*	*97.9*	*85 - 114*	*50.52*	*3.18*	*20*	
Surr: Dibromofluoromethane	*50.73*	*1.0*	*50*	*0*	*101*	*80 - 119*	*51.5*	*1.51*	*20*	
Surr: Toluene-d8	*50.07*	*1.0*	*50*	*0*	*100*	*89 - 112*	*50.88*	*1.59*	*20*	

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

ALS Group USA, Corp Date: 28-Oct-17

Client:	Bhate Environmental Associates, Inc.
Project:	Monthly Effluent Samples
WorkOrder:	HS17100712

QC BATCH REPORT

Batch ID:	**R303553**	**Instrument:**	**VOA6**	**Method:**	**SW8260**

The following samples were analyzed in this batch:	HS17100712-01	HS17100712-02

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

ALS Group USA, Corp Date: 28-Oct-17

Client: Bhate Environmental Associates, Inc.
Project: Monthly Effluent Samples
WorkOrder: HS17100712

QC BATCH REPORT

Batch ID: R303427 **Instrument: UV-2450** **Method: SW7196**

MBLK Sample ID: **MBLK-303427** Units: **mg/L** Analysis Date: **13-Oct-2017 13:40**
Client ID: Run ID: **UV-2450_303427** SeqNo: **4263910** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.00500	0.0100								U

LCS Sample ID: **LCS-303427** Units: **mg/L** Analysis Date: **13-Oct-2017 13:40**
Client ID: Run ID: **UV-2450_303427** SeqNo: **4263911** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.286	0.0100	0.25	0	114	80 - 120				

LCSD Sample ID: **LCSD-303427** Units: **mg/L** Analysis Date: **13-Oct-2017 13:40**
Client ID: Run ID: **UV-2450_303427** SeqNo: **4263912** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.286	0.0100	0.25	0	114	80 - 120	0.286	0	20	

MS Sample ID: **HS17100695-01MS** Units: **mg/L** Analysis Date: **13-Oct-2017 13:40**
Client ID: Run ID: **UV-2450_303427** SeqNo: **4263914** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.149	0.0100	0.25	-0.006	62.0	75 - 125				S

MSD Sample ID: **HS17100695-01MSD** Units: **mg/L** Analysis Date: **13-Oct-2017 13:40**
Client ID: Run ID: **UV-2450_303427** SeqNo: **4263915** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.152	0.0100	0.25	-0.006	63.2	75 - 125	0.149	1.99	20	S

The following samples were analyzed in this batch: HS17100712-01

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

ALS Group USA, Corp Date: 28-Oct-17

Client: Bhate Environmental Associates, Inc.
Project: Monthly Effluent Samples
WorkOrder: **HS17100712**

QUALIFIERS, ACRONYMS, UNITS

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

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

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	17-027-0	27-Mar-2018
California	2919 2016-2018	31-Jul-2018
Illinois	004112	09-May-2018
Kentucky	123043	30-Apr-2018
Louisiana	03087 2017-2017	30-Jun-2018
North Carolina	624-2017	31-Dec-2017
North Dakota	R193 2017-2017	30-Apr-2018
Oklahoma	2017-088	31-Aug-2018
Texas	T104704231-17-19	30-Apr-2018

ALS Group USA, Corp Date: 28-Oct-17

Sample Receipt Checklist

Client Name: Bhate Environmental
Work Order: HS17100712
Date/Time Received: **13-Oct-2017 08:35**
Received by: **JRM**

Checklist completed by: *Jared R. Makan* eSignature 13-Oct-2017 Date
Reviewed by: *Sonia West* eSignature 15-Oct-2017 Date

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

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
TX1005 solids received in hermetically sealed vials?	Yes ☐	No ☐	N/A ☑
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	1.7c/2.0c UC/C	IR11	
Cooler(s)/Kit(s):	Blue		
Date/Time sample(s) sent to storage:	10/13/2017 10:55		
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: Trip Blank not ALS provided.

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

CHAIN OF CUSTODY

Name Of Lab Shipping To: ALS 10450 Stancliff Rd., Suite 210 Houston, TX 77099 (281) 530 – 5656 ATTN: SONIA WEST

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

Project No.
NWO1312.0150.0
16.0001

Job:
GROUNDWATER TREATMENT PLANT MONTHLY EFFLUENT SAMPLES

Prepared By:
Scott Beesinger

P.O. Number

Field Sample I.D.	Sample Matrix	Date / Time	MS / MSD	No. OF CONTAINERS	Analyses: VOLATILES	SILVER, SELENIUM, LEAD, BARIUM	HEXAVALENT CHROMIUM	1, 4 - DIOXANE	PERCHLORATE					Remarks (Preservatives, etc.)	Lab I.D.#
LH18/24-SP650_101217	Water	10/12/17 / 14:00		3	X									HCL	
LH18/24-SP650_101217	Water	10/12/17 / 14:00		4			X	X	X					NONE	
LH18/24-SP650_101217	Water	10/12/17 / 14:00		1		X								HNO3	
Trip Blank	Water	10/12/17		2	X									HCL	

Additional Remarks: **STANDARD TURN AROUND TIME**

Relinquished By:	Date	Time	Received By:	Date	Time	Relinquished By:	Date	Time	Received By:	Date	Time
Scott Beesinger	10/12/17	14:30	J. MAICHIN	10/13/17	08:35						

For Lab Use Only

Received At Lab By:	Date	Time	Airbill No.	Opened By:	Date	Time	Temp of Container	Seal No.	Condition
J. MAICHIN	10/13/17	08:35							

Remarks:

Cooler - Blue 1R11
Temp 1.7 CF0.3

(Word) S:\1-ces\Forms\Chain of Custody - BiWeekly

HS17100712
Bhate Environmental Associates, Inc.
Monthly Effluent Samples

Volatile Organics Raw Data

Bhate Environmental Associates, Inc.
Project: MONTHLY EFFLUENT SAMPLES
ALS WO# HS17100712

FORM 2
WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS17100712

	CLIENT SAMPLE NO.	SMC1 (DCE) #	SMC2 (TOL) #	SMC3 #	OTHER #	TOT OUT
01	VLCSW-171017	93	97	94	98	0
02	VBLKW-0171017	98	98	95	101	0
03	HS17100712-02	99	96	94	100	0
04	HS17100712-02	98	96	95	100	0
05	HS17100712-01	100	99	98	100	0
06	HS17100646-08	101	102	101	103	0
07	HS17100646-08	100	100	98	101	0
08						
09						
10						
11						
12						
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28						

		QC LIMITS
SMC1 (DCE)	= 1,2-Dichloroethane-d4	(70-130)
SMC2 (TOL)	= Toluene-d8	(70-130)
SMC3	= 4-Bromofluorobenzene	(70-130)
OTHER	= Dibromofluoromethane	(70-130)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

FORM 3
WATER VOLATILE METHOD SPIKE RECOVERY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS17100524

Matrix Spike - Sample No.: VSTD-ICV

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE AMOUNT ()	% REC #	QC. LIMITS REC.
1,1,1-Trichloroethane	50.00	45.45	91	80-120
1,1,1,2-Tetrachloroetha	50.00	45.86	92	80-120
tert-Butylbenzene	50.00	43.64	87	80-120
Naphthalene	50.00	50.89	102	80-120
sec-Butylbenzene	50.00	43.25	86	80-120
1,1,2,2-Tetrachloroetha	50.00	49.86	100	80-120
1,1,2-Trichloroethane	50.00	46.21	92	80-120
1,1-Dichloropropene	50.00	46.75	94	80-120
1,1-Dichloroethane	50.00	46.49	93	80-120
1,1-Dichloroethene	50.00	45.63	91	80-120
1,2,4-Trichlorobenzene	50.00	53.20	106	80-120
1,2-Dibromo-3-Chloropro	50.00	50.77	102	80-120
1,2-Dibromoethane	50.00	47.49	95	80-120
1,2-Dichlorobenzene	50.00	46.34	93	80-120
1,2-Dichloroethane	50.00	46.42	93	80-120
1,2-Dichloropropane	50.00	46.89	94	80-120
1,3-Dichlorobenzene	50.00	46.21	92	80-120
1,4-Dichlorobenzene	50.00	45.32	91	80-120
2-Butanone	100.00	99.69	100	80-120
2-Hexanone	100.00	92.25	92	80-120
4-Methyl-2-Pentanone	100.00	90.89	91	80-120
Acetone	100.00	97.69	98	80-120
Benzene	50.00	47.52	95	80-120
Bromodichloromethane	50.00	47.09	94	80-120
Bromoform	50.00	45.93	92	80-120
Bromomethane	50.00	50.64	101	80-120
Carbon Disulfide	100.00	91.15	91	80-120
Carbon Tetrachloride	50.00	46.42	93	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: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS17100524

Matrix Spike - Sample No.: VSTD-ICV

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE AMOUNT ()	% REC #	QC. LIMITS REC.
Chlorobenzene	50.00	46.71	93	80-120
Chloroethane	50.00	44.27	88	80-120
Chloroform	50.00	46.28	92	80-120
Chloromethane	50.00	48.14	96	80-120
cis-1,2-Dichloroethene	50.00	47.14	94	80-120
cis-1,3-Dichloropropene	50.00	47.03	94	80-120
Dibromochloromethane	50.00	46.97	94	80-120
Dichlorodifluoromethane	50.00	45.01	90	80-120
Ethylbenzene	50.00	46.52	93	80-120
Isopropylbenzene	50.00	45.91	92	80-120
Methylene Chloride	50.00	45.22	90	80-120
Tetrachloroethene	50.00	46.15	92	80-120
Toluene	50.00	47.45	95	80-120
trans-1,2-Dichloroethen	50.00	45.95	92	80-120
trans-1,3-Dichloroprope	50.00	46.65	93	80-120
Trichloroethene	50.00	45.84	92	80-120
Trichlorofluoromethane	50.00	45.60	91	80-120
Vinyl Chloride	50.00	46.90	94	80-120
m,p-Xylenes	100.00	93.04	93	80-120
o-Xylene	50.00	45.76	92	80-120
Xylenes (total)	150.00	138.81	92	80-120
1,2,3-Trichloropropane	50.00	47.72	95	80-120
1,2,3-Trichlorobenzene	50.00	55.08	110	80-120
1,2,4-Trimethylbenzene	50.00	45.71	91	80-120
1,3,5-Trimethylbenzene	50.00	45.86	92	80-120
2,2-Dichloropropane	50.00	46.49	93	80-120
1,3-Dichloropropane	50.00	45.93	92	80-120
2-Chlorotoluene	50.00	46.71	93	80-120

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

* Values outside of QC limits

COMMENTS: _____

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FORM 3
WATER VOLATILE METHOD SPIKE RECOVERY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS17100524

Matrix Spike - Sample No.: VSTD-ICV

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE AMOUNT ()	% REC #	QC. LIMITS REC.
4-Chlorotoluene	50.00	45.96	92	80-120
p-Isopropyltoluene	50.00	44.84	90	80-120
Bromochloromethane	50.00	44.64	89	80-120
Bromobenzene	50.00	47.50	95	80-120
Dibromomethane	50.00	46.91	94	80-120
Hexachlorobutadiene	50.00	47.14	94	80-120
n-Propylbenzene	50.00	45.22	90	80-120
n-Butylbenzene	50.00	45.85	92	80-120
Styrene	50.00	46.93	94	80-120

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

* Values outside of QC limits

COMMENTS: _____

_____

FORM 5
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS17100524

Lab File ID: X101001 BFB Injection Date: 10/10/17

Instrument ID: VOA6 BFB Injection Time: 1005

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	23.9
75	30.0 - 60.0% of mass 95	52.0
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.0
173	Less than 2.0% of mass 174	0.6 (1.1)1
174	Greater than 50.0% of mass 95	53.5
175	5.0 - 9.0% of mass 174	4.4 (8.2)1
176	95.0 - 101.0% of mass 174	52.4 (98.0)1
177	5.0 - 9.0% of mass 176	3.9 (7.4)2

1-Value is % mass 174 2-Value is % mass 176

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD000.5	VSTD000.5	X101003	10/10/17	1128
02	VSTD001	VSTD001	X101004	10/10/17	1153
03	VSTD002	VSTD002	X101005	10/10/17	1218
04	VSTD005	VSTD005	X101006	10/10/17	1243
05	VSTD020	VSTD020	X101007	10/10/17	1308
06	VSTD050	VSTD050	X101008	10/10/17	1333
07	VSTD100	VSTD100	X101009	10/10/17	1358
08	VSTD150	VSTD150	X101010	10/10/17	1422
09	VSTD200	VSTD200	X101011	10/10/17	1447
10	VSTD-ICV	VSTD-ICV	X101013	10/10/17	1723
11					
12					
13					
14					
15					
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17					
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20					
21					
22					

FORM V VOA

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS17100524

Instrument ID: VOA6 Calibration Date(s): 10/10/17 10/10/17

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1014 1447

LAB FILE ID: RF0.5: X101003 RF1: X101004 RF2: X101005
RF5: X101006 RF20: X101007 RF50: X101008

COMPOUND	RF0.5	RF1	RF2	RF5	RF20	RF50
1,1,1-Trichloroethane	1.228	0.948	1.009	0.994	0.924	0.928
1,1,1,2-Tetrachloroethane	0.460	0.386	0.374	0.371	0.351	0.339
tert-Butylbenzene	2.089	1.511	1.603	1.557	1.423	1.442
Naphthalene	2916	4030	8735	27541	125593	326975
sec-Butylbenzene	2.643	1.890	2.239	2.113	1.905	1.985
1,1,2,2-Tetrachloroethane	4206	6731	13394	31643	118197	277176
1,1,2-Trichloroethane	0.395	0.337	0.345	0.330	0.314	0.301
1,1-Dichloropropene	0.582	0.525	0.578	0.546	0.523	0.532
1,1-Dichloroethane	1.593	1.289	1.385	1.334	1.261	1.243
1,1-Dichloroethene	0.704	0.519	0.627	0.575	0.558	0.560
1,2,4-Trichlorobenzene	0.459	0.329	0.385	0.428	0.420	0.449
1,2-Dibromo-3-Chloropropane	522	911	1484	3907	13745	33919
1,2-Dibromoethane	0.448	0.366	0.398	0.401	0.373	0.356
1,2-Dichlorobenzene	1.647	1.213	1.258	1.240	1.195	1.179
1,2-Dichloroethane	0.652	0.557	0.614	0.562	0.534	0.534
1,2-Dichloropropane	0.526	0.450	0.463	0.501	0.451	0.439
1,3-Dichlorobenzene	1.700	1.267	1.295	1.278	1.193	1.232
1,4-Dichlorobenzene	1.828	1.342	1.414	1.337	1.228	1.274
2-Butanone	0.288	0.276	0.300	0.293	0.296	0.310
2-Hexanone	0.516	0.371	0.414	0.398	0.398	0.385
4-Methyl-2-Pentanone	0.524	0.434	0.429	0.449	0.433	0.405
Acetone	4739	6610	8765	17904	57879	134851
Benzene	1.813	1.689	1.671	1.657	1.577	1.579
Bromodichloromethane	0.719	0.588	0.559	0.559	0.534	0.527
Bromoform	0.357	0.271	0.281	0.283	0.274	0.262
Bromomethane	0.571	0.543	0.449	0.474	0.432	0.450
Carbon Disulfide	2.178	1.776	1.997	1.863	1.763	1.763
Carbon Tetrachloride	0.465	0.430	0.509	0.463	0.434	0.444
Chlorobenzene	1.228	1.021	1.063	1.009	0.978	0.958
Chloroethane	0.610	0.588	0.539	0.540	0.493	0.477
Chloroform	1.376	1.250	1.332	1.256	1.173	1.158
Chloromethane	4746	8919	17438	39933	152259	371695
cis-1,2-Dichloroethene	0.896	0.744	0.764	0.753	0.741	0.715
cis-1,3-Dichloropropene	0.854	0.710	0.727	0.734	0.700	0.685
Dibromochloromethane	0.503	0.404	0.445	0.437	0.410	0.402
Dichlorodifluoromethane	0.758	0.559	0.682	0.578	0.583	0.638
Ethylbenzene	0.654	0.484	0.534	0.514	0.492	0.477
Isopropylbenzene	1.465	1.107	1.316	1.266	1.211	1.171
Methylene Chloride	0.914	0.860	0.823	0.800	0.715	0.706
Tetrachloroethene	0.333	0.252	0.279	0.269	0.264	0.256
Toluene	1.909	1.566	1.657	1.638	1.589	1.534
trans-1,2-Dichloroethene	0.858	0.621	0.702	0.687	0.657	0.642
trans-1,3-Dichloropropene	0.717	0.647	0.642	0.614	0.586	0.590
Trichloroethene	0.504	0.400	0.407	0.400	0.378	0.375

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS1710052

Instrument ID: VOA6 Calibration Date(s): 10/10/17 10/10/17

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1014 1447

LAB FILE ID: RF0.5: X101003 RF1: X101004 RF2: X101005
RF5: X101006 RF20: X101007 RF50: X101008

COMPOUND	RF0.5	RF1	RF2	RF5	RF20	RF50
Trichlorofluoromethane	1.077	0.749	0.852	0.805	0.762	0.827
Vinyl Chloride	0.975	0.708	0.902	0.847	0.825	0.850
m,p-Xylenes	0.786	0.573	0.619	0.615	0.589	0.581
o-Xylene	0.791	0.618	0.649	0.600	0.598	0.578
Xylenes (total)	0.792	0.586	0.619	0.603	0.590	0.585
1,2,3-Trichloropropane	1.122	0.764	0.849	0.868	0.872	0.862
1,2,3-Trichlorobenzene	0.347	0.229	0.279	0.307	0.294	0.315
1,2,4-Trimethylbenzene	2.808	2.098	2.331	2.218	2.106	2.122
1,3,5-Trimethylbenzene	2.536	1.954	2.144	2.136	1.973	1.979
2,2-Dichloropropane	1.119	1.050	1.048	1.039	0.992	0.984
1,3-Dichloropropane	0.840	0.674	0.758	0.698	0.664	0.642
2-Chlorotoluene	2.478	2.024	2.172	2.086	1.946	1.975
4-Chlorotoluene	3.044	2.325	2.468	2.408	2.280	2.301
p-Isopropyltoluene	2.339	1.654	1.821	1.858	1.677	1.718
Bromochloromethane	0.377	0.376	0.396	0.353	0.318	0.307
Bromobenzene	1.016	0.806	0.877	0.872	0.808	0.838
Dibromomethane	0.316	0.240	0.290	0.266	0.258	0.256
Hexachlorobutadiene	1021	1041	2823	6979	21569	58354
n-Propylbenzene	3.874	2.899	3.132	3.176	2.908	2.959
n-Butylbenzene	1.823	1.240	1.433	1.530	1.406	1.496
Styrene	1.350	1.127	1.156	1.109	1.072	1.035
1,2-Dichloroethane-d4	4869	8408	14296	35051	138773	340941
Dibromofluoromethane	3706	6592	11210	26199	111395	270013
Toluene-d8	13883	25142	43375	94423	398851	994742
4-Bromofluorobenzene	5297	8638	16347	36044	142465	354904

FORM VI VOA

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS1710052

Instrument ID: VOA6 Calibration Date(s): 10/10/17 10/10/17

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1014 1447

LAB FILE ID: RF100: X101009 RF150: X101010 RF200: X101011

COMPOUND	RF100	RF150	RF200
1,1,1-Trichloroethane	0.930	0.936	0.930
1,1,1,2-Tetrachloroethane	0.350	0.346	0.339
tert-Butylbenzene	1.433	1.437	1.402
Naphthalene	677057	1113941	1535347
sec-Butylbenzene	1.917	1.974	1.932
1,1,2,2-Tetrachloroethane	545730	810128	1055403
1,1,2-Trichloroethane	0.301	0.294	0.288
1,1-Dichloropropene	0.529	0.540	0.531
1,1-Dichloroethane	1.262	1.243	1.210
1,1-Dichloroethene	0.562	0.557	0.550
1,2,4-Trichlorobenzene	0.452	0.477	0.481
1,2-Dibromo-3-Chloropropane	65831	100495	136011
1,2-Dibromoethane	0.356	0.350	0.344
1,2-Dichlorobenzene	1.191	1.170	1.155
1,2-Dichloroethane	0.529	0.530	0.511
1,2-Dichloropropane	0.447	0.444	0.439
1,3-Dichlorobenzene	1.230	1.198	1.182
1,4-Dichlorobenzene	1.289	1.247	1.231
2-Butanone	0.297	0.299	0.301
2-Hexanone	0.400	0.399	0.404
4-Methyl-2-Pentanone	0.417	0.414	0.416
Acetone	257034	376636	501328
Benzene	1.611	1.583	1.572
Bromodichloromethane	0.541	0.539	0.533
Bromoform	0.266	0.258	0.255
Bromomethane	0.466	0.496	0.484
Carbon Disulfide	1.753	1.753	1.749
Carbon Tetrachloride	0.450	0.459	0.462
Chlorobenzene	0.982	0.951	0.934
Chloroethane	0.475	0.478	0.468
Chloroform	1.173	1.147	1.119
Chloromethane	748853	1119443	1476509
cis-1,2-Dichloroethene	0.727	0.714	0.694
cis-1,3-Dichloropropene	0.698	0.702	0.704
Dibromochloromethane	0.408	0.399	0.393
Dichlorodifluoromethane	0.619	0.669	0.667
Ethylbenzene	0.486	0.478	0.471
Isopropylbenzene	1.179	1.182	1.159
Methylene Chloride	0.712	0.701	0.692
Tetrachloroethene	0.257	0.255	0.252
Toluene	1.560	1.520	1.496
trans-1,2-Dichloroethene	0.647	0.636	0.629
trans-1,3-Dichloropropene	0.598	0.596	0.584
Trichloroethene	0.385	0.387	0.385

FORM VI VOA

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS1710052

Instrument ID: VOA6 Calibration Date(s): 10/10/17 10/10/17

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1014 1447

LAB FILE ID: RF100: X101009 RF150: X101010 RF200: X101011

COMPOUND	RF100	RF150	RF200
Trichlorofluoromethane	0.805	0.838	0.825
Vinyl Chloride	0.858	0.871	0.868
m,p-Xylenes	0.583	0.577	0.565
o-Xylene	0.588	0.574	0.563
Xylenes (total)	0.594	0.597	0.585
1,2,3-Trichloropropane	0.879	0.842	0.814
1,2,3-Trichlorobenzene	0.324	0.345	0.356
1,2,4-Trimethylbenzene	2.105	2.077	2.011
1,3,5-Trimethylbenzene	1.990	1.968	1.910
2,2-Dichloropropane	0.990	1.000	0.984
1,3-Dichloropropane	0.644	0.622	0.620
2-Chlorotoluene	1.977	1.901	1.878
4-Chlorotoluene	2.320	2.262	2.192
p-Isopropyltoluene	1.672	1.703	1.668
Bromochloromethane	0.301	0.295	0.283
Bromobenzene	0.845	0.805	0.792
Dibromomethane	0.258	0.252	0.246
Hexachlorobutadiene	96788	161761	223916
n-Propylbenzene	2.972	2.924	2.867
n-Butylbenzene	1.411	1.458	1.409
Styrene	1.071	1.028	1.029
1,2-Dichloroethane-d4	681709		
Dibromofluoromethane	550814		
Toluene-d8	2037259		
4-Bromofluorobenzene	718688		

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS1710052

Instrument ID: VOA6 Calibration Date(s): 10/10/17 10/10/17

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1014 1447

COMPOUND	CURVE	COEFFICENTS A0	COEFFICENTS A1	COEFFICENTS A2	%RSD OR R^2	MAX %RSD OR R^2
1,1,1-Trichloroethane	AVRG		0.98078541		9.945	15.000
1,1,1,2-Tetrachloroethane	AVRG		0.36856885		10.291	15.000
tert-Butylbenzene	AVRG		1.54433337		13.942	15.000
Naphthalene	LINR	5.948e-002	0.80478733		0.9974376	0.9900000
sec-Butylbenzene	AVRG		2.06624995		11.819	15.000
1,1,2,2-Tetrachloroethane	LINR	-1.96e-002	1.15153646		0.9995894	0.9900000
1,1,2-Trichloroethane	AVRG		0.32271760		10.408	15.000
1,1-Dichloropropene	AVRG		0.54300023		4.127	15.000
1,1-Dichloroethane	AVRG		1.31320487		8.954	15.000
1,1-Dichloroethene	AVRG		0.57907612		9.446	15.000
1,2,4-Trichlorobenzene	AVRG		0.43124571		11.274	15.000
1,2-Dibromo-3-Chloropropane	LINR	1.753e-003	9.07193640		0.9997738	0.9900000
1,2-Dibromoethane	AVRG		0.37687398		8.821	15.000
1,2-Dichlorobenzene	AVRG		1.24996367		12.202	15.000
1,2-Dichloroethane	AVRG		0.55819611		8.292	15.000
1,2-Dichloropropane	AVRG		0.46231513		6.642	15.000
1,3-Dichlorobenzene	AVRG		1.28616380		12.463	15.000
1,4-Dichlorobenzene	AVRG		1.35457164		13.860	15.000
2-Butanone	AVRG		0.29561958		3.122	15.000
2-Hexanone	AVRG		0.40971185		10.159	15.000
4-Methyl-2-Pentanone	AVRG		0.43560474		8.186	15.000
Acetone	LINR	-6.28e-002	5.84029333		0.9999375	0.9900000
Benzene	AVRG		1.63914659		4.822	15.000
Bromodichloromethane	AVRG		0.56661926		10.649	15.000
Bromoform	AVRG		0.27860296		11.125	15.000
Bromomethane	AVRG		0.48495516		9.401	15.000
Carbon Disulfide	AVRG		1.84393774		8.108	15.000
Carbon Tetrachloride	AVRG		0.45733692		5.084	15.000
Chlorobenzene	AVRG		1.01385254		8.827	15.000
Chloroethane	AVRG		0.51879772		10.217	15.000
Chloroform	AVRG		1.22047141		7.263	15.000
Chloromethane	LINR	5.277e-003	0.98055583		0.9999346	0.9900000
cis-1,2-Dichloroethene	AVRG		0.74988740		7.865	15.000
cis-1,3-Dichloropropene	AVRG		0.72370601		7.038	15.000
Dibromochloromethane	AVRG		0.42234822		8.233	15.000
Dichlorodifluoromethane	AVRG		0.63903284		9.791	15.000
Ethylbenzene	AVRG		0.51008269		11.307	15.000
Isopropylbenzene	AVRG		1.22852311		8.767	15.000
Methylene Chloride	AVRG		0.76949993		10.659	15.000
Tetrachloroethene	AVRG		0.26836531		9.658	15.000
Toluene	AVRG		1.60762897		7.748	15.000
trans-1,2-Dichloroethene	AVRG		0.67549576		10.873	15.000
trans-1,3-Dichloropropene	AVRG		0.61935471		6.985	15.000
Trichloroethene	AVRG		0.40237296		9.830	15.000

FORM VI VOA

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS1710052

Instrument ID: VOA6 Calibration Date(s): 10/10/17 10/10/17

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1014 1447

COMPOUND	CURVE	COEFFICENTS A0	A1	A2	%RSD OR R^2	MAX %RSD OR R^2
Trichlorofluoromethane	AVRG		0.83790218		11.423	15.000
Vinyl Chloride	AVRG		0.85620998		8.228	15.000
m,p-Xylenes	AVRG		0.60978023		11.275	15.000
o-Xylene	AVRG		0.61758240		11.314	15.000
Xylenes (total)	AVRG		0.61670238		10.803	15.000
1,2,3-Trichloropropane	AVRG		0.87475241		11.389	15.000
1,2,3-Trichlorobenzene	AVRG		0.31068032		12.866	15.000
1,2,4-Trimethylbenzene	AVRG		2.20857016		10.999	15.000
1,3,5-Trimethylbenzene	AVRG		2.06575900		9.383	15.000
2,2-Dichloropropane	AVRG		1.02299813		4.430	15.000
1,3-Dichloropropane	AVRG		0.68466482		10.538	15.000
2-Chlorotoluene	AVRG		2.04860978		9.020	15.000
4-Chlorotoluene	AVRG		2.40002499		10.600	15.000
p-Isopropyltoluene	AVRG		1.78996364		12.181	15.000
Bromochloromethane	AVRG		0.33401360		12.547	15.000
Bromobenzene	AVRG		0.85099476		8.103	15.000
Dibromomethane	AVRG		0.26490593		9.023	15.000
Hexachlorobutadiene	LINR	1.229e-002	5.58830222		0.9967239	0.9900000
n-Propylbenzene	AVRG		3.07907830		10.271	15.000
n-Butylbenzene	AVRG		1.46742302		10.616	15.000
Styrene	AVRG		1.10860465		9.139	15.000
1,2-Dichloroethane-d4	2ORDR	-3.04e-003	1.13108115	-2.49e-002	0.9999968	0.9900000
Dibromofluoromethane	2ORDR	-2.69e-003	1.44083816	-6.55e-002	0.9999603	0.9900000
Toluene-d8	2ORDR	-3.34e-003	0.67361520	-1.64e-002	0.9999692	0.9900000
4-Bromofluorobenzene	2ORDR	-5.03e-003	1.87811049	-0.1026315	0.9999914	0.9900000

FORM VI VOA

MSVOA06 -Logbook

Batch: 29513
Date: 10-10-2017
Method: 8260
Comments:

Analyst: Presenta Cabascango
Reviewer:
Laboratory: Houston

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
1	BFB	TUNE	10-10-2017 10:05 am	1.00	50 mL	50 mL	X101001.D	Liquid	Y	NA
2	*auto find/ purged* VSTD000.25	ICAL1	10-10-2017 10:14 am	1.00	50 mL	50 mL	X101002.D	Liquid	Y	NA
3	*0.10 uL cal std/100 mL DI* VSTD000.5	ICAL2	10-10-2017 11:28 am	1.00	50 mL	50 mL	X101003.D	Liquid	Y	NA
4	*0.10 uL cal std/50 mL DI* VSTD001	ICAL3	10-10-2017 11:53 am	1.00	50 mL	50 mL	X101004.D	Liquid	Y	NA
5	*0.20 uL cal std/50 mL DI* VSTD002	ICAL4	10-10-2017 12:18 pm	1.00	50 mL	50 mL	X101005.D	Liquid	Y	NA
6	*0.40 uL cal std/50 mL DI* VSTD005	ICAL5	10-10-2017 12:43 pm	1.00	50 mL	50 mL	X101006.D	Liquid	Y	NA
7	*1.0 uL cal std/50 mL DI* VSTD020	ICAL6	10-10-2017 01:08 pm	1.00	50 mL	50 mL	X101007.D	Liquid	Y	NA
8	*4.0 uL cal std/50 mL DI* VSTD050	ICAL7	10-10-2017 01:33 pm	1.00	50 mL	50 mL	X101008.D	Liquid	Y	NA
9	*10 uL cal std/50 mL DI* VSTD100	ICAL8	10-10-2017 01:58 pm	1.00	50 mL	50 mL	X101009.D	Liquid	Y	NA
10	*20 uL cal std/50 mL DI* VSTD150	ICAL9	10-10-2017 02:22 pm	1.00	50 mL	50 mL	X101010.D	Liquid	Y	NA
11	*30 uL cal std/50 mL DI* VSTD200	ICAL	10-10-2017 02:47 pm	1.00	50 mL	50 mL	X101011.D	Liquid	Y	NA
12	*40 uL cal std/50 mL DI* BLKW	SAMP	10-10-2017 04:29 pm	1.00	50 mL	50 mL	X101012.D	Liquid	Y	NA
13	VSTD050	ICV	10-10-2017 05:23 pm	1.00	50 mL	50 mL	X101013.D	Liquid	Y	NA
	10 uL icv std/50 mL DI									

Chemical	Value
SURR SPK ID	29810-94-03
IS ID	29810-94-04
ICV STD ID	29814-87-01
CAL STD ID	29810-97-01/02
BFB ID	29810-94-03
pH Paper	n/a

Data File: \\NAHSTWS003\Target\CHEM\VOA6.i\X171010.b\X101001.D Page 2

Date : 10-OCT-2017 10:05

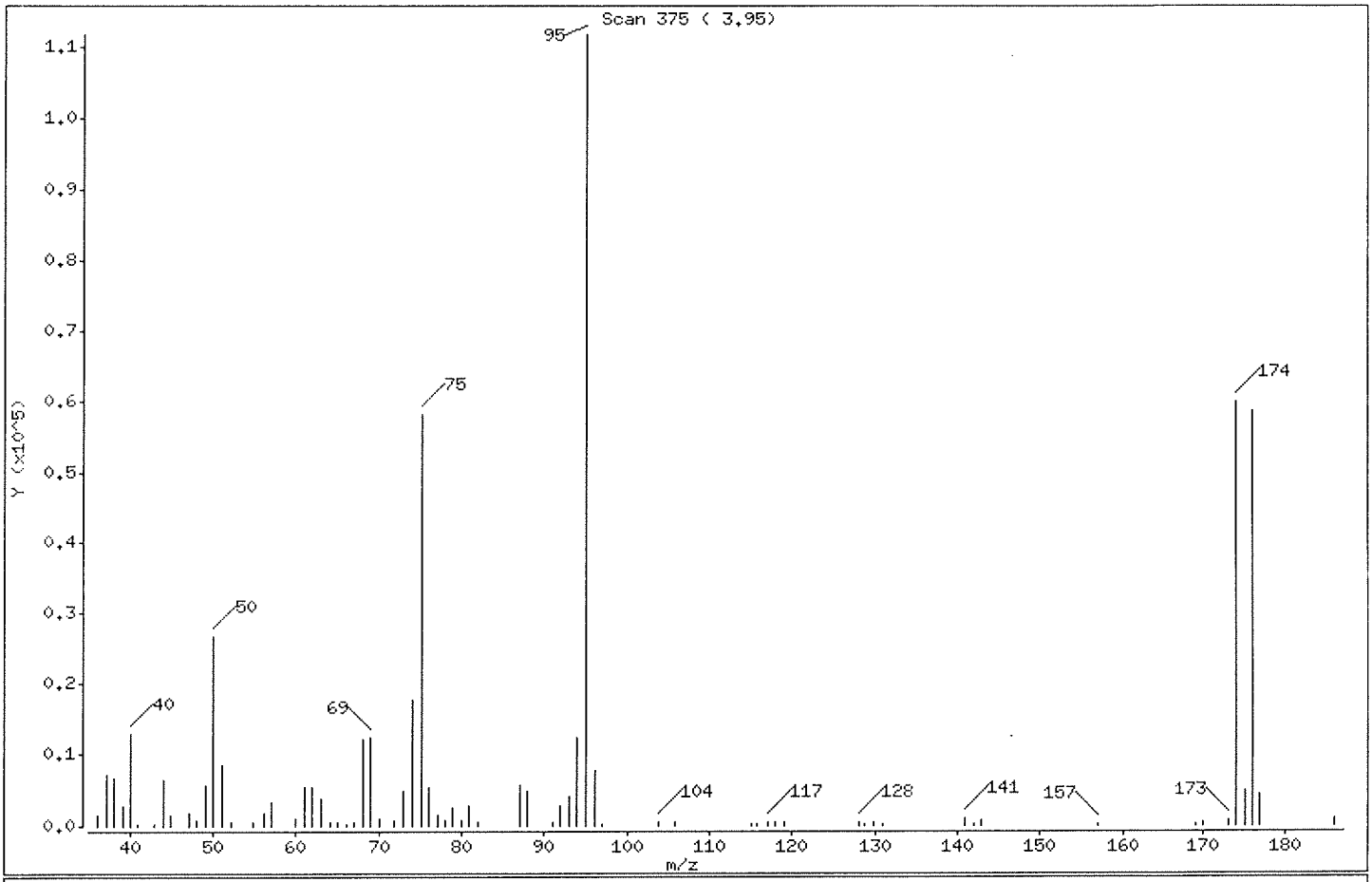
Client ID: BFB Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0 Operator: PC

Column phase: DB624 Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	23.88
75	30.00 - 60.00% of mass 95	51.99
96	5.00 - 9.00% of mass 95	6.95
173	Less than 2.00% of mass 174	0.60 (1.12)
174	Greater than 50.00% of mass 95	53.51
175	5.00 - 9.00% of mass 174	4.37 (8.17)
176	95.00 - 101.00% of mass 174	52.42 (97.97)
177	5.00 - 9.00% of mass 176	3.90 (7.44)

Data File: \\NAHSTWS003\Target\CHEM\VOA6.i\X171010.b\X101001.D

Date : 10-OCT-2017 10:05

Client ID: BFB Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0 Operator: PC

Column phase: DB624 Column diameter: 0.25

Data File: X101001.D
Spectrum: Scan 375 (3.95)
Location of Maximum: 95.00
Number of points: 72

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1579	61.00	5513	80.90	2924	128.80	266
37.10	7183	62.00	5494	81.90	576	129.90	395
38.10	6622	63.00	3893	87.00	5560	130.90	218
39.10	2880	64.10	570	88.00	4773	141.00	928
40.00	12897	65.00	484	91.00	433	142.00	267
41.00	233	66.10	204	92.00	2723	142.90	673
43.00	296	67.00	410	93.00	4109	157.00	299
44.00	6510	68.00	12120	94.00	12452	169.10	210
45.00	1543	69.00	12231	95.00	111840	170.00	449
47.10	1828	70.10	902	96.00	7777	173.10	672
48.00	837	71.90	796	97.00	232	173.90	59840
49.10	5768	73.00	4794	103.80	426	175.00	4887
50.10	26704	74.00	17664	105.90	425	175.90	58624
51.10	8588	75.10	58144	115.00	372	176.90	4360
52.10	543	76.10	5356	115.80	322	186.00	995
54.90	591	77.10	1525	117.00	594		
56.10	1798	78.10	780	117.90	490		
57.00	3414	79.00	2675	119.00	467		
60.00	1073	79.90	737	128.00	492		

Data File: \\NAHSTWS003\Target\CHEM\VOA6.i\X171010.b\X101001.D

Date : 10-OCT-2017 10:05

Client ID: BFB

Instrument: voa6.i

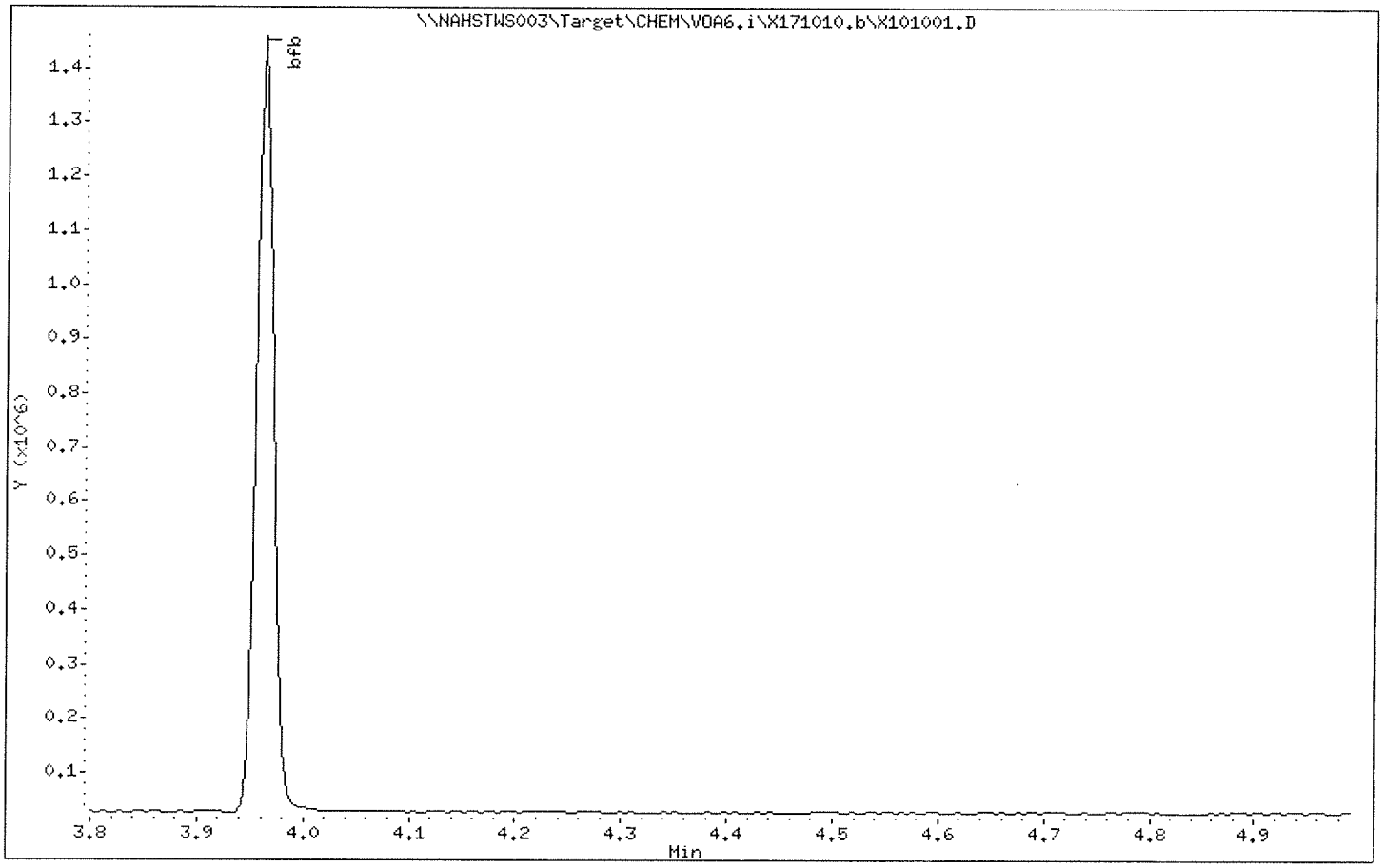
Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25



Data File: \\NAHSTWS003\Target\CHEM\VOA6.i\X171010.b\X101003.D
Report Date: 06-Feb-2018 11:27

ALS Laboratory Group

Data file : \\NAHSTWS003\Target\CHEM\VOA6.i\X171010.b\X101003.D
Lab Smp Id: VSTD000.5 Client Smp ID: VSTD000.5
Inj Date : 10-OCT-2017 11:28
Operator : PC Inst ID: voa6.i
Smp Info : VSTD000.5;VSTD000.5;1;2;
Misc Info : HS16030331;WATER;0;1;
Comment :
Method : \\nahstws003\Target\CHEM\VOA6.i\X171010.b\8260W.m
Meth Date : 06-Feb-2018 11:27 voa6.i Quant Type: ISTD
Cal Date : 10-OCT-2017 14:47 Cal File: X101011.D
Als bottle: 5 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: dn_bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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)
31	1,1,1-Trichloroethane	97	4.240	4.240	(0.980)	4759	0.50000	0.62 (aM)
* 1	Pentafluorobenzene	168	4.325	4.325	(1.000)	387612	50.0000	
$ 30	Dibromofluoromethane	113	4.254	4.254	(0.983)	3706	0.50000	0.55 (a)
* 36	1,4-Difluorobenzene	114	5.085	5.085	(1.000)	656933	50.0000	
$ 35	1,2-Dichloroethane-d4	65	4.612	4.612	(1.066)	4869	0.50000	0.55 (aM)
* 47	Chlorobenzene-d5	117	7.742	7.742	(1.000)	660241	50.0000	
$ 48	Toluene-d8	98	6.474	6.474	(0.836)	13883	0.50000	0.54 (a)
$ 69	4-Bromofluorobenzene	95	8.759	8.759	(1.131)	5297	0.50000	0.50 (a)
* 70	1,4-Dichlorobenzene-d4	152	9.726	9.726	(1.000)	313204	50.0000	
68	1,1,2,2-Tetrachloroethane	83	8.903	8.903	(0.915)	4206	0.50000	(aM)
53	1,1,2-Trichloroethane	83	6.918	6.918	(0.894)	2607	0.50000	0.61 (aM)
32	1,1-Dichloropropene	75	4.426	4.426	(0.870)	3826	0.50000	0.53 (aM)
22	1,1-Dichloroethane	63	3.079	3.079	(0.712)	6175	0.50000	0.60 (aM)
11	1,1-Dichloroethene	96	2.048	2.048	(0.473)	2728	0.50000	0.60 (aM)
90	1,2,4-Trichlorobenzene	180	11.403	11.403	(1.172)	1438	0.50000	0.53 (aM)
89	1,2-Dibromo-3-Chloropropane	155	10.722	10.722	(1.102)	522	0.50000	0.84 (aM)
57	1,2-Dibromoethane	107	7.341	7.341	(0.948)	2956	0.50000	0.59 (aM)
88	1,2-Dichlorobenzene	146	10.056	10.056	(1.034)	5159	0.50000	0.65 (a)
33	1,2-Dichloroethane	62	4.698	4.698	(0.924)	4286	0.50000	0.58 (aM)
42	1,2-Dichloropropane	63	5.543	5.543	(1.090)	3458	0.50000	0.56 (aM)
83	1,3-Dichlorobenzene	146	9.669	9.669	(0.994)	5326	0.50000	0.66 (a)
84	1,4-Dichlorobenzene	146	9.748	9.748	(1.002)	5726	0.50000	0.67 (a)

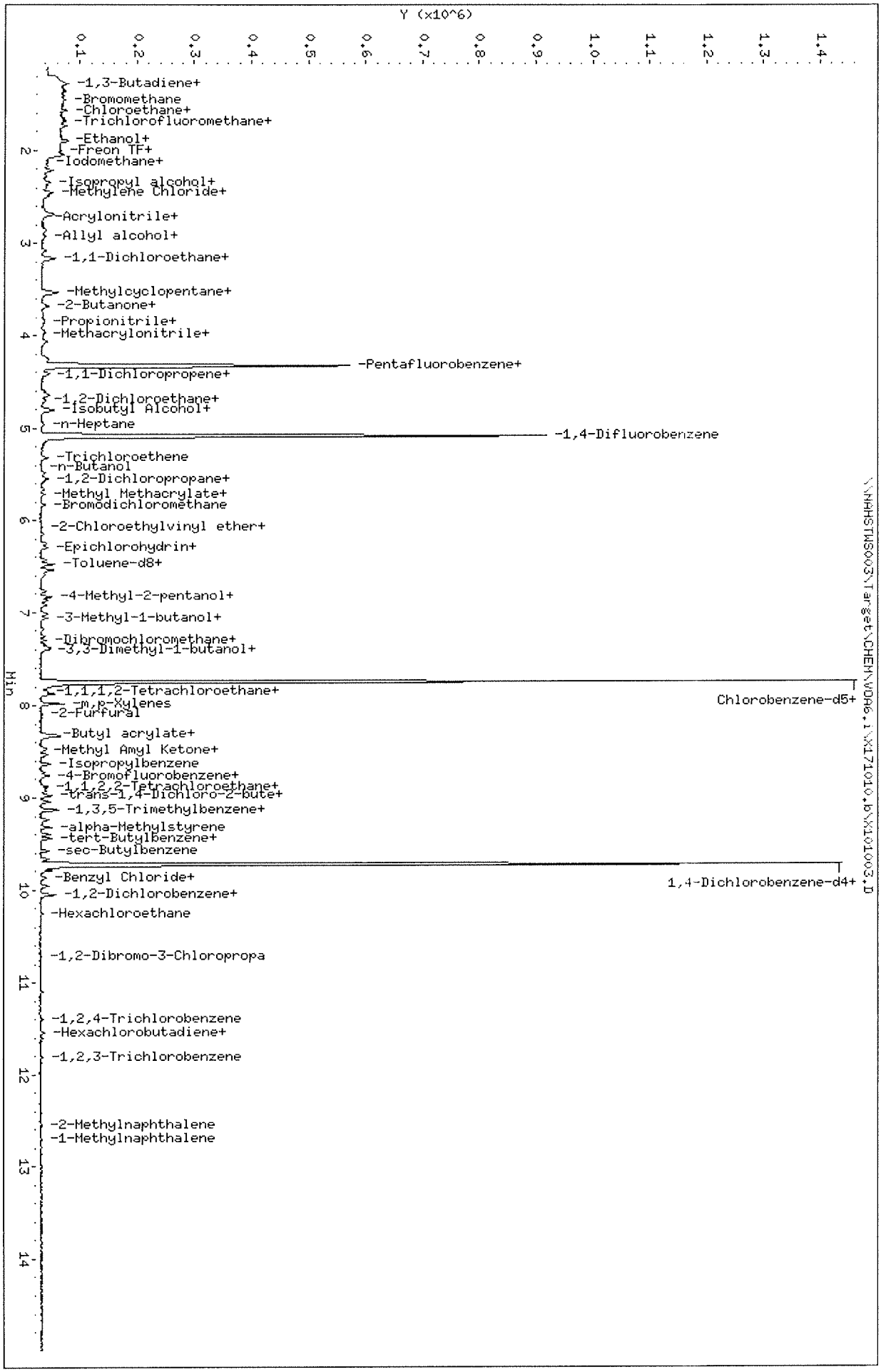
Data File: \\NAHSTWS003\Target\CHEM\VOA6.i\X171010.b\X101003.D
Report Date: 06-Feb-2018 11:27

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
	24 2-Butanone	43	3.767	3.767	(0.871)	2235	1.00000	0.97(a)
	52 2-Hexanone	43	7.298	7.298	(0.943)	6814	1.00000	1.25(aM)
	45 4-Methyl-2-Pentanone	43	6.431	6.431	(0.831)	6916	1.00000	1.20(aM)
	10 Acetone	43	2.126	2.126	(0.492)	4739	1.00000	0.43(aM)
	37 Benzene	78	4.655	4.655	(0.915)	11911	0.50000	0.55(aM)
	39 Bromodichloromethane	83	5.830	5.830	(1.146)	4726	0.50000	0.63(aM)
	66 Bromoform	173	8.480	8.480	(1.095)	2358	0.50000	0.64(aM)
	6 Bromomethane	94	1.460	1.460	(0.338)	2213	0.50000	0.58(a)
	19 Carbon Disulfide	76	2.212	2.212	(0.512)	16888	1.00000	1.18(aM)
	34 Carbon Tetrachloride	117	4.411	4.411	(0.868)	3056	0.50000	0.50(aM)
	59 Chlorobenzene	112	7.764	7.764	(1.003)	8109	0.50000	0.60(aM)
	7 Chloroethane	64	1.525	1.525	(0.353)	2363	0.50000	0.58(aM)
	28 Chloroform	83	4.068	4.068	(0.940)	5333	0.50000	0.56(aM)
	3 Chloromethane	50	1.195	1.195	(0.276)	4746	0.50000	0.86(aM)
	27 cis-1,2-Dichloroethene	96	3.688	3.688	(0.853)	3473	0.50000	0.59(aM)
	46 cis-1,3-Dichloropropene	75	6.252	6.252	(1.230)	5607	0.50000	0.58(aM)
	55 Dibromochloromethane	129	7.255	7.255	(0.937)	3320	0.50000	0.59(a)
	2 Dichlorodifluoromethane	85	1.081	1.081	(0.250)	2937	0.50000	0.59(a)
	61 Ethylbenzene	106	7.871	7.871	(1.017)	4321	0.50000	0.64(aM)
	67 Isopropylbenzene	105	8.630	8.630	(1.115)	9673	0.50000	0.59(aM)
	17 Methylene Chloride	84	2.449	2.449	(0.566)	3545	0.50000	0.59(aM)
	56 Tetrachloroethene	164	7.012	7.012	(0.906)	2200	0.50000	0.62(aM)
	50 Toluene	91	6.532	6.532	(0.844)	12604	0.50000	0.59(aM)
	20 trans-1,2-Dichloroethene	96	2.678	2.678	(0.619)	3326	0.50000	0.63(aM)
	51 trans-1,3-Dichloropropene	75	6.768	6.768	(1.331)	4708	0.50000	0.57(aM)
	38 Trichloroethene	130	5.321	5.321	(1.046)	3311	0.50000	0.62(aM)
	8 Trichlorofluoromethane	101	1.689	1.689	(0.391)	4174	0.50000	0.64(a)
	5 Vinyl Chloride	62	1.260	1.260	(0.291)	3780	0.50000	0.56(aM)
	62 m,p-Xylenes	106	7.971	7.971	(1.030)	10386	1.00000	1.28(aM)
	63 o-Xylene	106	8.308	8.308	(1.073)	5221	0.50000	0.64(aM)
M	95 Xylenes (total)	106				15607	1.50000	(a)
	71 1,2,3-Trichloropropane	75	8.931	8.931	(0.918)	3516	0.50000	0.64(aM)
	93 1,2,3-Trichlorobenzene	180	11.804	11.804	(1.214)	1086	0.50000	0.58(aM)
	79 1,2,4-Trimethylbenzene	105	9.440	9.440	(0.971)	8796	0.50000	0.63(aM)
	75 1,3,5-Trimethylbenzene	105	9.132	9.132	(0.939)	7944	0.50000	0.61(aM)
	26 2,2-Dichloropropane	77	3.666	3.666	(0.848)	4357	0.50000	0.54(aM)
	54 1,3-Dichloropropane	76	7.062	7.062	(0.912)	5544	0.50000	0.61(aM)
	76 2-Chlorotoluene	91	9.039	9.039	(0.929)	7760	0.50000	0.60(aM)
	77 4-Chlorotoluene	91	9.139	9.139	(0.940)	9534	0.50000	0.63(aM)
	82 p-Isopropyltoluene	119	9.712	9.712	(0.999)	7327	0.50000	0.65(aM)
	29 Bromochloromethane	128	3.953	3.953	(0.914)	1461	0.50000	0.56(aM)
	74 Bromobenzene	156	8.874	8.874	(0.912)	3182	0.50000	0.59(aM)
	44 Dibromomethane	93	5.658	5.658	(1.113)	2079	0.50000	0.59(aM)
	91 Hexachlorobutadiene	225	11.539	11.539	(1.186)	1021	0.50000	1.52(a)
	73 n-Propylbenzene	91	8.974	8.974	(0.923)	12133	0.50000	0.62(aM)
	87 n-Butylbenzene	91	10.056	10.056	(1.034)	5709	0.50000	0.62(aM)
	81 sec-Butylbenzene	105	9.583	9.583	(0.985)	8277	0.50000	0.63(aM)
	92 Naphthalene	128	11.603	11.603	(1.193)	2916	0.50000	3.34(a)
	78 tert-Butylbenzene	119	9.397	9.397	(0.966)	6544	0.50000	0.67(aM)
	60 1,1,1,2-Tetrachloroethane	131	7.850	7.850	(1.014)	3034	0.50000	0.62(aM)
	64 Styrene	104	8.330	8.330	(1.076)	8916	0.50000	0.60(aM)

Data File: \\NAHSTWS003\Target\CHEM\VOA6.i\X171010.b\X101003.D
Report Date: 06-Feb-2018 11:27

QC Flag Legend

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



Data File: \\NAHSTWS003\Target\CHEM\VOA6.i\X171010.b\X101003.D
Date : 10-OCT-2017 11:28
Client ID: VSTD000.5
Sample Info: VSTD000.5;VSTD000.5;1;2;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS003\Target\CHEM\VOA6.i\X171010.b\X101004.D
Report Date: 06-Feb-2018 11:27

ALS Laboratory Group

Data file : \\NAHSTWS003\Target\CHEM\VOA6.i\X171010.b\X101004.D
Lab Smp Id: VSTD001 Client Smp ID: VSTD001
Inj Date : 10-OCT-2017 11:53
Operator : PC Inst ID: voa6.i
Smp Info : VSTD001;VSTD001;1;3;
Misc Info : HS16030331;WATER;0;1;
Comment :
Method : \\NAHSTWS003\Target\CHEM\VOA6.i\X171010.b\8260W.m
Meth Date : 06-Feb-2018 11:27 voa6.i Quant Type: ISTD
Cal Date : 10-OCT-2017 11:28 Cal File: X101003.D
Als bottle: 6 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: dn_bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

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

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
	31 1,1,1-Trichloroethane	97	4.239	4.239	(0.980)	7325	1.00000	0.96(a)
*	1 Pentafluorobenzene	168	4.325	4.325	(1.000)	386230	50.0000	
$	30 Dibromofluoromethane	113	4.254	4.254	(0.983)	6992	1.00000	1.09(a)
*	36 1,4-Difluorobenzene	114	5.085	5.085	(1.000)	666506	50.0000	
$	35 1,2-Dichloroethane-d4	65	4.612	4.612	(1.066)	8408	1.00000	1.07(a)
*	47 Chlorobenzene-d5	117	7.742	7.742	(1.000)	664695	50.0000	
$	48 Toluene-d8	98	6.474	6.474	(0.836)	25142	1.00000	1.10(a)
$	69 4-Bromofluorobenzene	95	8.759	8.759	(1.131)	8638	1.00000	0.96(a)
*	70 1,4-Dichlorobenzene-d4	152	9.726	9.726	(1.000)	323044	50.0000	
	68 1,1,2,2-Tetrachloroethane	83	8.902	8.902	(0.915)	6731	1.00000	0.21(a)
	53 1,1,2-Trichloroethane	83	6.925	6.925	(0.895)	4486	1.00000	1.04(a)
	32 1,1-Dichloropropene	75	4.433	4.433	(0.872)	6995	1.00000	0.96(a)
	22 1,1-Dichloroethane	63	3.079	3.079	(0.712)	9957	1.00000	0.98(a)
	11 1,1-Dichloroethene	96	2.055	2.055	(0.475)	4008	1.00000	0.89(a)
	90 1,2,4-Trichlorobenzene	180	11.395	11.395	(1.172)	2126	1.00000	0.76(a)
	89 1,2-Dibromo-3-Chloropropane	155	10.715	10.715	(1.102)	911	1.00000	1.36(a)
	57 1,2-Dibromoethane	107	7.341	7.341	(0.948)	4867	1.00000	0.97(a)
	88 1,2-Dichlorobenzene	146	10.056	10.056	(1.034)	7858	1.00000	0.97(a)
	33 1,2-Dichloroethane	62	4.698	4.698	(0.924)	7424	1.00000	0.99(aM)
	42 1,2-Dichloropropane	63	5.543	5.543	(1.090)	6003	1.00000	0.97(aM)
	83 1,3-Dichlorobenzene	146	9.669	9.669	(0.994)	8186	1.00000	0.98(a)
	84 1,4-Dichlorobenzene	146	9.748	9.748	(1.002)	8670	1.00000	0.99(a)

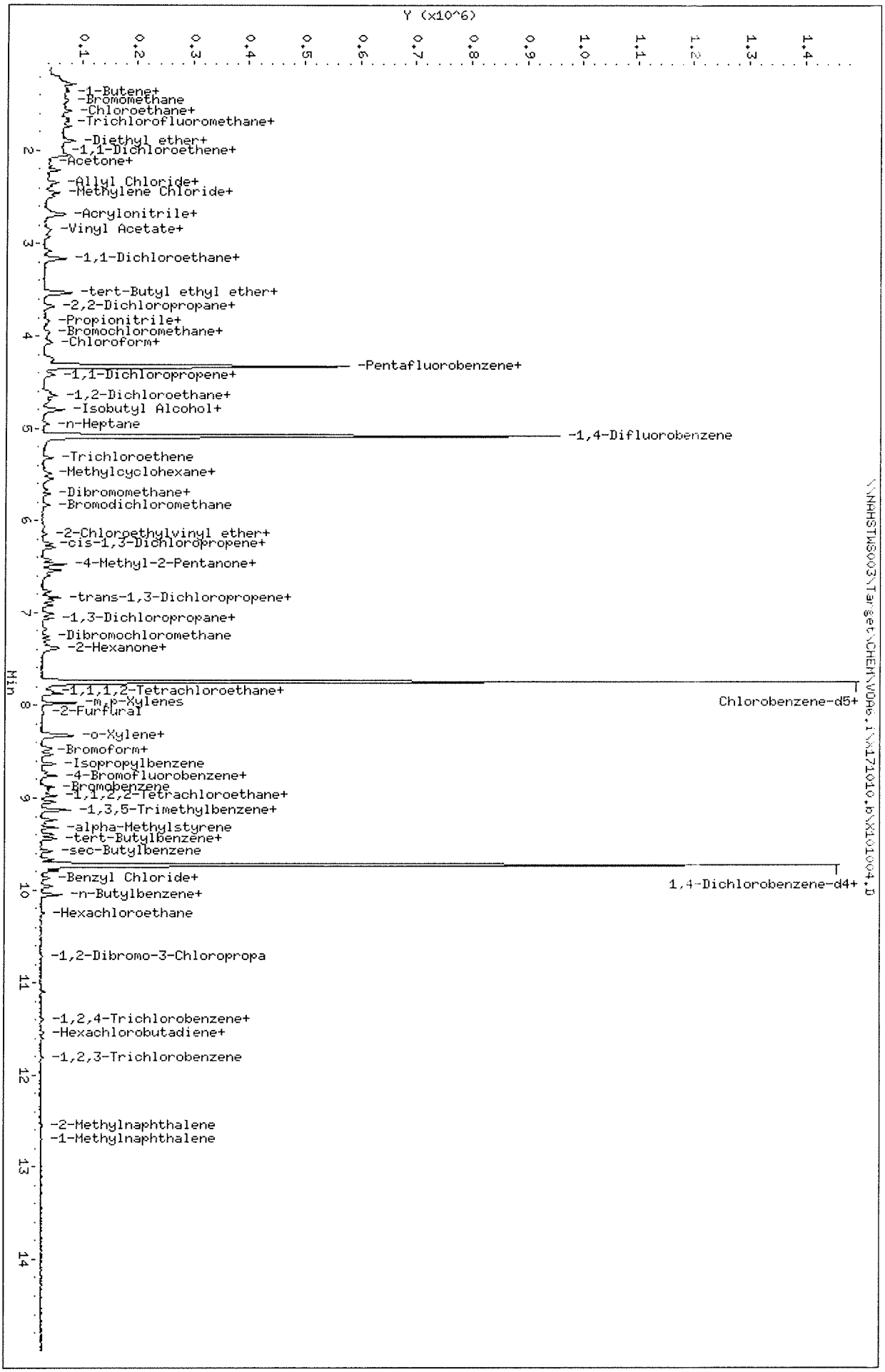
Data File: \\NAHSTWS003\Target\CHEM\VOA6.i\X171010.b\X101004.D
Report Date: 06-Feb-2018 11:27

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
24	2-Butanone	43	3.759	3.759	(0.869)	4271	2.00000	1.87(a)
52	2-Hexanone	43	7.298	7.298	(0.943)	9876	2.00000	1.81(a)
45	4-Methyl-2-Pentanone	43	6.431	6.431	(0.831)	11541	2.00000	1.99(a)
10	Acetone	43	2.119	2.119	(0.490)	6610	2.00000	1.85(a)
37	Benzene	78	4.648	4.648	(0.914)	22515	1.00000	1.03(a)
39	Bromodichloromethane	83	5.830	5.830	(1.146)	7843	1.00000	1.03(a)
66	Bromoform	173	8.480	8.480	(1.095)	3608	1.00000	0.97(Ta)
6	Bromomethane	94	1.460	1.460	(0.338)	4193	1.00000	1.11(aM)
19	Carbon Disulfide	76	2.212	2.212	(0.512)	27434	2.00000	1.92(a)
34	Carbon Tetrachloride	117	4.411	4.411	(0.868)	5426	1.00000	0.93(a)
59	Chlorobenzene	112	7.771	7.771	(1.004)	13469	1.00000	1.00(a)
7	Chloroethane	64	1.525	1.525	(0.353)	4546	1.00000	1.13(aM)
28	Chloroform	83	4.067	4.067	(0.940)	9658	1.00000	1.02(a)
3	Chloromethane	50	1.195	1.195	(0.276)	8919	1.00000	1.39(aM)
27	cis-1,2-Dichloroethene	96	3.688	3.688	(0.853)	5750	1.00000	0.99(a)
46	cis-1,3-Dichloropropene	75	6.245	6.245	(1.228)	9472	1.00000	0.98(a)
55	Dibromochloromethane	129	7.255	7.255	(0.937)	5378	1.00000	0.95(a)
2	Dichlorodifluoromethane	85	1.080	1.080	(0.250)	4316	1.00000	0.87(a)
61	Ethylbenzene	106	7.871	7.871	(1.017)	6434	1.00000	0.94(a)
67	Isopropylbenzene	105	8.630	8.630	(1.115)	14713	1.00000	0.96(a)
17	Methylene Chloride	84	2.449	2.449	(0.566)	6642	1.00000	1.11(a)
56	Tetrachloroethene	164	7.011	7.011	(0.906)	3344	1.00000	0.93(a)
50	Toluene	91	6.539	6.539	(0.845)	20814	1.00000	0.97(a)
20	trans-1,2-Dichloroethene	96	2.678	2.678	(0.619)	4794	1.00000	0.91(a)
51	trans-1,3-Dichloropropene	75	6.768	6.768	(1.331)	8024	1.00000	1.04(a)
38	Trichloroethene	130	5.321	5.321	(1.046)	5333	1.00000	0.99(a)
8	Trichlorofluoromethane	101	1.689	1.689	(0.391)	5789	1.00000	0.89(a)
5	Vinyl Chloride	62	1.260	1.260	(0.291)	5469	1.00000	0.82(a)
62	m,p-Xylenes	106	7.971	7.971	(1.030)	15225	2.00000	1.87(a)
63	o-Xylene	106	8.308	8.308	(1.073)	8210	1.00000	0.99(a)
M 95	Xylenes (total)	106				23435	3.00000	(a)
71	1,2,3-Trichloropropane	75	8.931	8.931	(0.918)	4936	1.00000	0.87(aM)
93	1,2,3-Trichlorobenzene	180	11.804	11.804	(1.214)	1477	1.00000	0.73(aM)
79	1,2,4-Trimethylbenzene	105	9.440	9.440	(0.971)	13553	1.00000	0.94(a)
75	1,3,5-Trimethylbenzene	105	9.132	9.132	(0.939)	12625	1.00000	0.94(a)
26	2,2-Dichloropropane	77	3.673	3.673	(0.849)	8110	1.00000	1.02(a)
54	1,3-Dichloropropane	76	7.062	7.062	(0.912)	8967	1.00000	0.98(a)
76	2-Chlorotoluene	91	9.039	9.039	(0.929)	13078	1.00000	0.98(a)
77	4-Chlorotoluene	91	9.132	9.132	(0.939)	15023	1.00000	0.98(a)
82	p-Isopropyltoluene	119	9.712	9.712	(0.999)	10688	1.00000	0.92(a)
29	Bromochloromethane	128	3.953	3.953	(0.914)	2903	1.00000	1.12(a)
74	Bromobenzene	156	8.874	8.874	(0.912)	5206	1.00000	0.94(a)
44	Dibromomethane	93	5.658	5.658	(1.113)	3206	1.00000	0.90(a)
91	Hexachlorobutadiene	225	11.538	11.538	(1.186)	1041	1.00000	1.61(a)
73	n-Propylbenzene	91	8.974	8.974	(0.923)	18731	1.00000	0.94(a)
87	n-Butylbenzene	91	10.056	10.056	(1.034)	8014	1.00000	0.84(a)
81	sec-Butylbenzene	105	9.583	9.583	(0.985)	12208	1.00000	0.91(a)
92	Naphthalene	128	11.603	11.603	(1.193)	4030	1.00000	3.47(a)
78	tert-Butylbenzene	119	9.397	9.397	(0.966)	9762	1.00000	0.97(a)
60	1,1,1,2-Tetrachloroethane	131	7.850	7.850	(1.014)	5136	1.00000	1.04(a)
64	Styrene	104	8.329	8.329	(1.076)	14989	1.00000	1.01(a)

Data File: \\NAHSTWS003\Target\CHEM\VOA6.i\X171010.b\X101004.D
Report Date: 06-Feb-2018 11:27

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: \\NAHSTWS003\Target\CHEM\VOA6.i\X171010.b\X101004.D
Date : 10-OCT-2017 11:53
Client ID: WSTD001
Sample Info: WSTD001,WSTD001,1,3;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS003\Target\CHEM\VOA6.i\X171010.b\X101005.D
Report Date: 06-Feb-2018 11:27

ALS Laboratory Group

Data file : \\NAHSTWS003\Target\CHEM\VOA6.i\X171010.b\X101005.D
Lab Smp Id: VSTD002 Client Smp ID: VSTD002
Inj Date : 10-OCT-2017 12:18
Operator : PC Inst ID: voa6.i
Smp Info : VSTD002;VSTD002;1;4;
Misc Info : HS16030331;WATER;0;1;
Comment :
Method : \\NAHSTWS003\Target\CHEM\VOA6.i\X171010.b\8260W.m
Meth Date : 06-Feb-2018 11:27 voa6.i Quant Type: ISTD
Cal Date : 10-OCT-2017 11:53 Cal File: X101004.D
Als bottle: 7 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: dn_bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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)
	31 1,1,1-Trichloroethane	97	4.239	4.239	(0.980)	15568	2.00000	2.05(a)
*	1 Pentafluorobenzene	168	4.325	4.325	(1.000)	385876	50.0000	
$	30 Dibromofluoromethane	113	4.254	4.254	(0.983)	11210	2.00000	1.95(a)
*	36 1,4-Difluorobenzene	114	5.085	5.085	(1.000)	666206	50.0000	
$	35 1,2-Dichloroethane-d4	65	4.612	4.612	(1.066)	14296	2.00000	1.94(a)
*	47 Chlorobenzene-d5	117	7.742	7.742	(1.000)	656030	50.0000	
$	48 Toluene-d8	98	6.474	6.474	(0.836)	43375	2.00000	2.05(a)
$	69 4-Bromofluorobenzene	95	8.752	8.752	(1.130)	16547	2.00000	2.08(a)
*	70 1,4-Dichlorobenzene-d4	152	9.726	9.726	(1.000)	321349	50.0000	
	68 1,1,2,2-Tetrachloroethane	83	8.903	8.903	(0.915)	13394	2.00000	1.41(a)
	53 1,1,2-Trichloroethane	83	6.918	6.918	(0.894)	9046	2.00000	2.13(a)
	32 1,1-Dichloropropene	75	4.426	4.426	(0.870)	15414	2.00000	2.13(a)
	22 1,1-Dichloroethane	63	3.079	3.079	(0.712)	21378	2.00000	2.10(a)
	11 1,1-Dichloroethene	96	2.055	2.055	(0.475)	9678	2.00000	2.16(a)
	90 1,2,4-Trichlorobenzene	180	11.403	11.403	(1.172)	4947	2.00000	1.78(a)
	89 1,2-Dibromo-3-Chloropropane	155	10.715	10.715	(1.102)	1484	2.00000	2.18(a)
	57 1,2-Dibromoethane	107	7.341	7.341	(0.948)	10446	2.00000	2.11(a)
	88 1,2-Dichlorobenzene	146	10.056	10.056	(1.034)	16173	2.00000	2.01(a)
	33 1,2-Dichloroethane	62	4.691	4.691	(0.923)	16375	2.00000	2.20(a)
	42 1,2-Dichloropropane	63	5.543	5.543	(1.090)	12340	2.00000	2.00(aM)
	83 1,3-Dichlorobenzene	146	9.669	9.669	(0.994)	16650	2.00000	2.01(a)
	84 1,4-Dichlorobenzene	146	9.748	9.748	(1.002)	18183	2.00000	2.06(a)

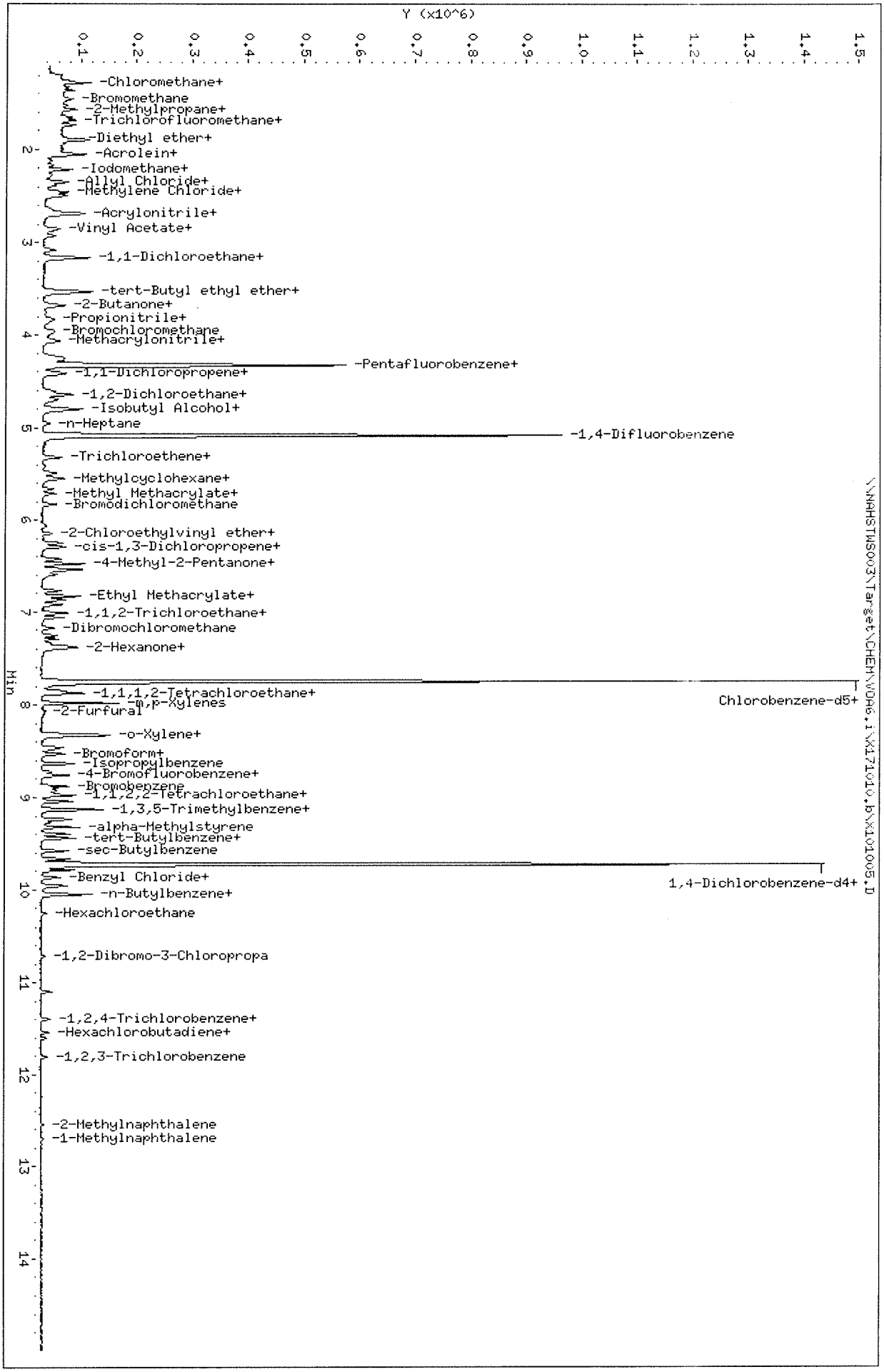
Data File: \\NAHSTWS003\Target\CHEM\VOA6.i\X171010.b\X101005.D
Report Date: 06-Feb-2018 11:27

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
24	2-Butanone	43	3.745	3.745	(0.866)	9750	4.00000	4.55 (a)
52	2-Hexanone	43	7.291	7.291	(0.942)	21721	4.00000	4.04 (a)
45	4-Methyl-2-Pentanone	43	6.424	6.424	(0.830)	22526	4.00000	3.94 (a)
10	Acetone	43	2.119	2.119	(0.490)	8765	4.00000	3.49 (a)
37	Benzene	78	4.648	4.648	(0.914)	44531	2.00000	2.03 (a)
39	Bromodichloromethane	83	5.830	5.830	(1.146)	14894	2.00000	1.97 (a)
66	Bromoform	173	8.480	8.480	(1.095)	7371	2.00000	2.01 (a)
6	Bromomethane	94	1.460	1.460	(0.338)	6934	2.00000	1.85 (a)
19	Carbon Disulfide	76	2.212	2.212	(0.512)	61641	4.00000	4.33 (a)
34	Carbon Tetrachloride	117	4.411	4.411	(0.868)	13563	2.00000	2.22 (a)
59	Chlorobenzene	112	7.764	7.764	(1.003)	27896	2.00000	2.09 (a)
7	Chloroethane	64	1.525	1.525	(0.353)	8318	2.00000	2.07 (aM)
28	Chloroform	83	4.068	4.068	(0.940)	20561	2.00000	2.18 (a)
3	Chloromethane	50	1.195	1.195	(0.276)	17458	2.00000	2.47 (a)
27	cis-1,2-Dichloroethene	96	3.681	3.681	(0.851)	11799	2.00000	2.03 (a)
46	cis-1,3-Dichloropropene	75	6.245	6.245	(1.228)	19366	2.00000	2.08 (a)
55	Dibromochloromethane	129	7.255	7.255	(0.937)	11669	2.00000	2.10 (a)
2	Dichlorodifluoromethane	85	1.081	1.081	(0.250)	10521	2.00000	2.13 (aM)
61	Ethylbenzene	106	7.871	7.871	(1.017)	14011	2.00000	2.09 (a)
67	Isopropylbenzene	105	8.630	8.630	(1.115)	34535	2.00000	2.14 (a)
17	Methylene Chloride	84	2.449	2.449	(0.566)	12710	2.00000	2.14 (a)
56	Tetrachloroethene	164	7.012	7.012	(0.906)	7314	2.00000	2.07 (a)
50	Toluene	91	6.532	6.532	(0.844)	43485	2.00000	2.06 (a)
20	trans-1,2-Dichloroethene	96	2.678	2.678	(0.619)	10840	2.00000	2.07 (a)
51	trans-1,3-Dichloropropene	75	6.768	6.768	(1.331)	17113	2.00000	2.07 (a)
38	Trichloroethene	130	5.321	5.321	(1.046)	10841	2.00000	2.02 (a)
8	Trichlorofluoromethane	101	1.689	1.689	(0.391)	13758	2.00000	2.03 (a)
5	Vinyl Chloride	62	1.260	1.260	(0.291)	13927	2.00000	2.10 (aM)
62	m,p-Xylenes	106	7.971	7.971	(1.030)	32468	4.00000	4.06 (a)
63	o-Xylene	106	8.308	8.308	(1.073)	17034	2.00000	2.10 (a)
M 95	Xylenes (total)	106				49502	6.00000	(a)
71	1,2,3-Trichloropropane	75	8.931	8.931	(0.918)	10910	2.00000	1.94 (aM)
93	1,2,3-Trichlorobenzene	180	11.804	11.804	(1.214)	3582	2.00000	1.79 (a)
79	1,2,4-Trimethylbenzene	105	9.440	9.440	(0.971)	29965	2.00000	2.11 (a)
75	1,3,5-Trimethylbenzene	105	9.132	9.132	(0.939)	27562	2.00000	2.07 (a)
26	2,2-Dichloropropane	77	3.674	3.674	(0.849)	16185	2.00000	2.05 (a)
54	1,3-Dichloropropane	76	7.062	7.062	(0.912)	19887	2.00000	2.21 (a)
76	2-Chlorotoluene	91	9.039	9.039	(0.929)	27924	2.00000	2.12 (a)
77	4-Chlorotoluene	91	9.132	9.132	(0.939)	31719	2.00000	2.05 (a)
82	p-Isopropyltoluene	119	9.712	9.712	(0.999)	23404	2.00000	2.03 (a)
29	Bromochloromethane	128	3.960	3.960	(0.916)	6116	2.00000	2.37 (aM)
74	Bromobenzene	156	8.874	8.874	(0.912)	11269	2.00000	2.06 (a)
44	Dibromomethane	93	5.658	5.658	(1.113)	7729	2.00000	2.18 (aM)
91	Hexachlorobutadiene	225	11.539	11.539	(1.186)	2823	2.00000	3.06 (a)
73	n-Propylbenzene	91	8.974	8.974	(0.923)	40264	2.00000	2.03 (a)
87	n-Butylbenzene	91	10.056	10.056	(1.034)	18420	2.00000	1.95 (a)
81	sec-Butylbenzene	105	9.583	9.583	(0.985)	28775	2.00000	2.16 (a)
92	Naphthalene	128	11.603	11.603	(1.193)	8735	2.00000	4.06 (a)
78	tert-Butylbenzene	119	9.397	9.397	(0.966)	20607	2.00000	2.07 (a)
60	1,1,1,2-Tetrachloroethane	131	7.850	7.850	(1.014)	9818	2.00000	2.03 (a)
64	Styrene	104	8.330	8.330	(1.076)	30342	2.00000	2.08 (a)

Data File: \\NAHSTWS003\Target\CHEM\VOA6.i\X171010.b\X101005.D
Report Date: 06-Feb-2018 11:27

QC Flag Legend

a - Target compound detected but, quantitated amount
    Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.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9
10
11
12
13
14
-Chloromethane+
-Bromomethane
-2-Methylpropane+
-Trichlorofluoromethane+
-Diethyl ether+
-Acrolein+
-Iodomethane+
-Allyl Chloride+
-Methylene Chloride+
-Acrylonitrile+
-Vinyl Acetate+
-1,1-Dichloroethane+
-tert-Butyl ethyl ether+
-2-Butanone+
-Propionitrile+
-Bromochloromethane
-Methacrylonitrile+
-Pentafluorobenzene+
-1,1-Dichloropropene+
-1,2-Dichloroethane+
-Isobutyl Alcohol+
-n-Heptane
-1,4-Difluorobenzene
-Trichloroethene+
-Methylcyclohexane+
-Methyl Methacrylate+
-Bromodichloromethane
-2-Chloroethylvinyl ether+
-cis-1,3-Dichloropropene+
-4-Methyl-2-Pentanone+
-Ethyl Methacrylate+
-1,1,2-Trichloroethane+
-Dibromochloromethane
-2-Hexanone+
-1,1,1,2-Tetrachloroethane+
-m,p-Xylenes
-2-Furfural
Chlorobenzene-d5+
-o-Xylene+
-Bromoform+
-Isopropylbenzene
-4-Bromofluorobenzene+
-Bromobenzene
-1,1,2,2-Tetrachloroethane+
-1,3,5-Trimethylbenzene+
-alpha-Methylstyrene
-tert-Butylbenzene+
-sec-Butylbenzene
-Benzyl Chloride+
-n-Butylbenzene+
1,4-Dichlorobenzene-d4+
-Hexachloroethane
-1,2-Dibromo-3-Chloropropa
-1,2,4-Trichlorobenzene+
-Hexachlorobutadiene+
-1,2,3-Trichlorobenzene
-2-Methylnaphthalene
-1-Methylnaphthalene
\\NAHSTWS003\Target\CHEM\VOA6.I\X171010.B\X101005.D
Data File: \\NAHSTWS003\Target\CHEM\VOA6.I\X171010.B\X101005.D
Date : 10-OCT-2017 12:18
Client ID: VSTD002
Sample Info: VSTD002;VSTD002;1;4;
Purge Volume: 5.0
Column phase: DB624
Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS003\Target\CHEM\VOA6.i\X171010.b\X101006.D
Report Date: 06-Feb-2018 11:27

ALS Laboratory Group

Data file : \\NAHSTWS003\Target\CHEM\VOA6.i\X171010.b\X101006.D
Lab Smp Id: VSTD005 Client Smp ID: VSTD005
Inj Date : 10-OCT-2017 12:43
Operator : PC Inst ID: voa6.i
Smp Info : VSTD005;VSTD005;1;5;
Misc Info : HS16030331;WATER;0;1;
Comment :
Method : \\NAHSTWS003\Target\CHEM\VOA6.i\X171010.b\8260W.m
Meth Date : 06-Feb-2018 11:27 voa6.i Quant Type: ISTD
Cal Date : 10-OCT-2017 12:18 Cal File: X101005.D
Als bottle: 8 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: dn_bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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)
	31 1,1,1-Trichloroethane	97	4.240	4.240	(0.980)	39012	5.00000	5.06
*	1 Pentafluorobenzene	168	4.326	4.326	(1.000)	392557	50.0000	
$	30 Dibromofluoromethane	113	4.254	4.254	(0.983)	26199	5.00000	4.65(a)
*	36 1,4-Difluorobenzene	114	5.085	5.085	(1.000)	670592	50.0000	
$	35 1,2-Dichloroethane-d4	65	4.612	4.612	(1.066)	35051	5.00000	4.88(a)
*	47 Chlorobenzene-d5	117	7.742	7.742	(1.000)	662461	50.0000	
$	48 Toluene-d8	98	6.474	6.474	(0.836)	94423	5.00000	4.61(a)
$	69 4-Bromofluorobenzene	95	8.752	8.752	(1.130)	36044	5.00000	4.84(a)
*	70 1,4-Dichlorobenzene-d4	152	9.726	9.726	(1.000)	323946	50.0000	
	68 1,1,2,2-Tetrachloroethane	83	8.903	8.903	(0.915)	31643	5.00000	4.64(a)
	53 1,1,2-Trichloroethane	83	6.919	6.919	(0.894)	21840	5.00000	5.10
	32 1,1-Dichloropropene	75	4.426	4.426	(0.870)	36620	5.00000	5.02
	22 1,1-Dichloroethane	63	3.079	3.079	(0.712)	52379	5.00000	5.08
	11 1,1-Dichloroethene	96	2.055	2.055	(0.475)	22577	5.00000	4.96(a)
	90 1,2,4-Trichlorobenzene	180	11.395	11.395	(1.172)	13883	5.00000	4.96(a)
	89 1,2-Dibromo-3-Chloropropane	155	10.715	10.715	(1.102)	3907	5.00000	5.55
	57 1,2-Dibromoethane	107	7.341	7.341	(0.948)	26539	5.00000	5.31
	88 1,2-Dichlorobenzene	146	10.056	10.056	(1.034)	40181	5.00000	4.96(a)
	33 1,2-Dichloroethane	62	4.691	4.691	(0.923)	37697	5.00000	5.03
	42 1,2-Dichloropropane	63	5.543	5.543	(1.090)	33605	5.00000	5.41
	83 1,3-Dichlorobenzene	146	9.669	9.669	(0.994)	41386	5.00000	4.96(a)
	84 1,4-Dichlorobenzene	146	9.748	9.748	(1.002)	43315	5.00000	4.93(a)

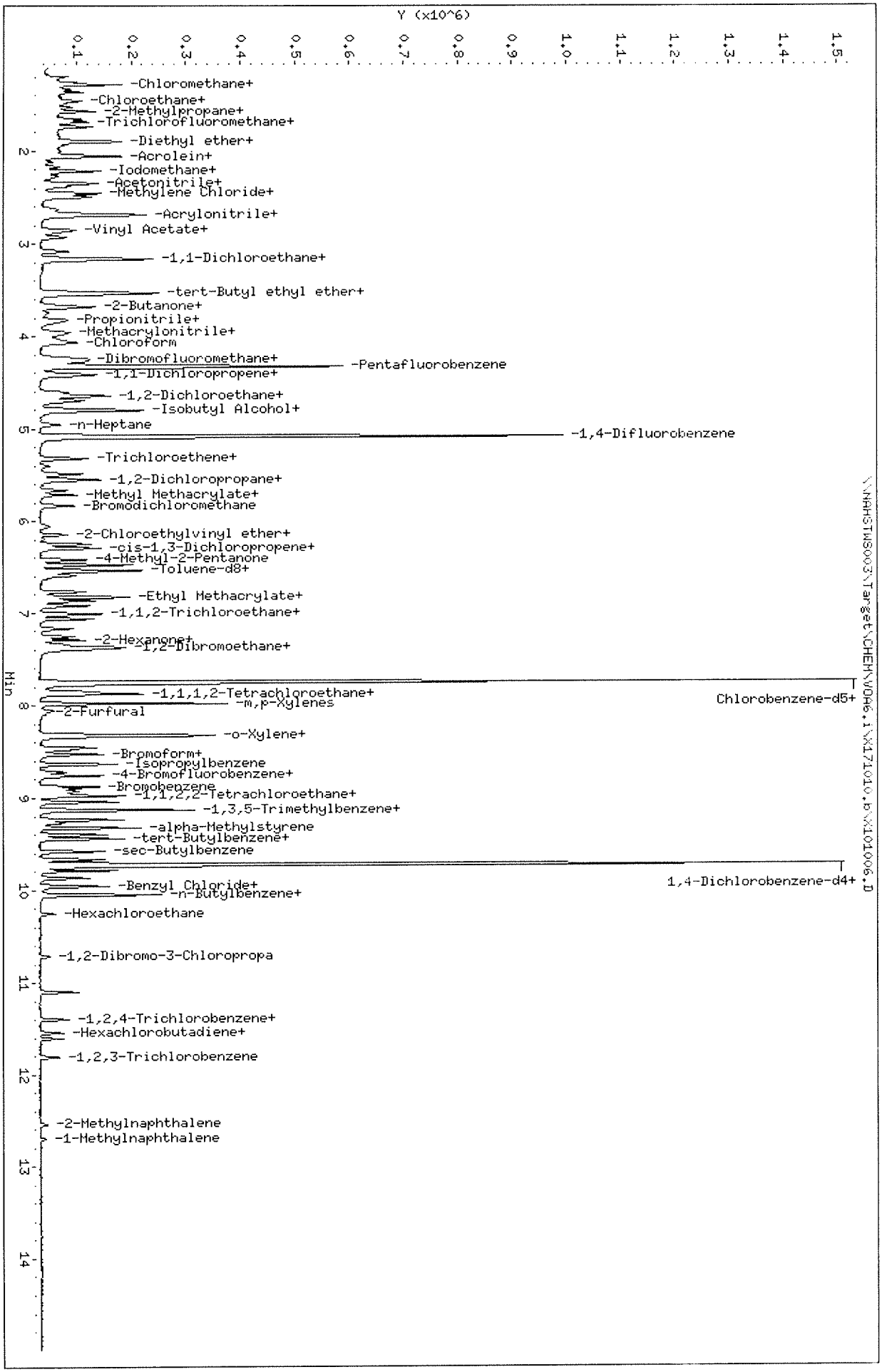
Data File: \\NAHSTWS003\Target\CHEM\VOA6.i\X171010.b\X101006.D
Report Date: 06-Feb-2018 11:27

			QUANT SIG					AMOUNTS	
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/l)	ON-COL (ug/l)
	24	2-Butanone	43	3.745	3.745	(0.866)	23019	10.0000	9.91
	52	2-Hexanone	43	7.291	7.291	(0.942)	52800	10.0000	9.72
	45	4-Methyl-2-Pentanone	43	6.417	6.417	(0.829)	59492	10.0000	10.30
	10	Acetone	43	2.119	2.119	(0.490)	17904	10.0000	10.17
	37	Benzene	78	4.648	4.648	(0.914)	111093	5.00000	5.05
	39	Bromodichloromethane	83	5.830	5.830	(1.146)	37494	5.00000	4.93(a)
	66	Bromoform	173	8.480	8.480	(1.095)	18747	5.00000	5.07
	6	Bromomethane	94	1.460	1.460	(0.338)	18611	5.00000	4.88(aM)
	19	Carbon Disulfide	76	2.212	2.212	(0.512)	146252	10.0000	10.10
	34	Carbon Tetrachloride	117	4.412	4.412	(0.868)	31055	5.00000	5.06
	59	Chlorobenzene	112	7.764	7.764	(1.003)	66842	5.00000	4.97(a)
	7	Chloroethane	64	1.525	1.525	(0.353)	21206	5.00000	5.20
	28	Chloroform	83	4.068	4.068	(0.940)	49297	5.00000	5.14
	3	Chloromethane	50	1.188	1.188	(0.275)	39933	5.00000	5.25
	27	cis-1,2-Dichloroethene	96	3.688	3.688	(0.853)	29578	5.00000	5.02
	46	cis-1,3-Dichloropropene	75	6.245	6.245	(1.228)	49234	5.00000	5.07
	55	Dibromochloromethane	129	7.255	7.255	(0.937)	28938	5.00000	5.17
	2	Dichlorodifluoromethane	85	1.081	1.081	(0.250)	22677	5.00000	4.51(a)
	61	Ethylbenzene	106	7.871	7.871	(1.017)	34021	5.00000	5.03
	67	Isopropylbenzene	105	8.631	8.631	(1.115)	83868	5.00000	5.15
	17	Methylene Chloride	84	2.449	2.449	(0.566)	31401	5.00000	5.19
	56	Tetrachloroethene	164	7.012	7.012	(0.906)	17817	5.00000	5.01
	50	Toluene	91	6.532	6.532	(0.844)	108480	5.00000	5.09
	20	trans-1,2-Dichloroethene	96	2.678	2.678	(0.619)	26967	5.00000	5.08
	51	trans-1,3-Dichloropropene	75	6.761	6.761	(1.330)	41166	5.00000	4.95(a)
	38	Trichloroethene	130	5.321	5.321	(1.046)	26799	5.00000	4.96(a)
	8	Trichlorofluoromethane	101	1.690	1.690	(0.391)	31607	5.00000	4.80(a)
	5	Vinyl Chloride	62	1.260	1.260	(0.291)	33245	5.00000	4.94(a)
	62	m,p-Xylenes	106	7.972	7.972	(1.030)	81493	10.0000	10.08
	63	o-Xylene	106	8.308	8.308	(1.073)	39776	5.00000	4.86(a)
M	95	Xylenes (total)	106				121269	15.0000	(a)
	71	1,2,3-Trichloropropane	75	8.931	8.931	(0.918)	28131	5.00000	4.96(aM)
	93	1,2,3-Trichlorobenzene	180	11.804	11.804	(1.214)	9955	5.00000	4.94(a)
	79	1,2,4-Trimethylbenzene	105	9.440	9.440	(0.971)	71855	5.00000	5.02
	75	1,3,5-Trimethylbenzene	105	9.132	9.132	(0.939)	69204	5.00000	5.17
	26	2,2-Dichloropropane	77	3.667	3.667	(0.848)	40797	5.00000	5.07
	54	1,3-Dichloropropane	76	7.062	7.062	(0.912)	46210	5.00000	5.09
	76	2-Chlorotoluene	91	9.039	9.039	(0.929)	67575	5.00000	5.09
	77	4-Chlorotoluene	91	9.132	9.132	(0.939)	77993	5.00000	5.01
	82	p-Isopropyltoluene	119	9.712	9.712	(0.999)	60193	5.00000	5.19
	29	Bromochloromethane	128	3.953	3.953	(0.914)	13859	5.00000	5.28
	74	Bromobenzene	156	8.874	8.874	(0.912)	28257	5.00000	5.12
	44	Dibromomethane	93	5.658	5.658	(1.113)	17851	5.00000	5.02
	91	Hexachlorobutadiene	225	11.539	11.539	(1.186)	6979	5.00000	6.63
	73	n-Propylbenzene	91	8.974	8.974	(0.923)	102872	5.00000	5.15
	87	n-Butylbenzene	91	10.056	10.056	(1.034)	49557	5.00000	5.21
	81	sec-Butylbenzene	105	9.583	9.583	(0.985)	68465	5.00000	5.11
	92	Naphthalene	128	11.603	11.603	(1.193)	27541	5.00000	6.39
	78	tert-Butylbenzene	119	9.397	9.397	(0.966)	50444	5.00000	5.04
	60	1,1,1,2-Tetrachloroethane	131	7.850	7.850	(1.014)	24609	5.00000	5.03
	64	Styrene	104	8.330	8.330	(1.076)	73447	5.00000	5.00

Data File: \\NAHSTWS003\Target\CHEM\VOA6.i\X171010.b\X101006.D
Report Date: 06-Feb-2018 11:27

QC Flag Legend

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



Data File: \\NAHSTWS003\Target\CHEM\VOA6.i\X171010.b\X101006.D
Date : 10-OCT-2017 12:43
Client ID: VSTD005
Sample Info: VSTD005;VSTD005;1;5;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS003\Target\CHEM\VOA6.i\X171010.b\X101007.D
Report Date: 06-Feb-2018 11:27

ALS Laboratory Group

Data file : \\NAHSTWS003\Target\CHEM\VOA6.i\X171010.b\X101007.D
Lab Smp Id: VSTD020 Client Smp ID: VSTD020
Inj Date : 10-OCT-2017 13:08
Operator : PC Inst ID: voa6.i
Smp Info : VSTD020;VSTD020;1;6;
Misc Info : HS16030331;WATER;0;1;
Comment :
Method : \\NAHSTWS003\Target\CHEM\VOA6.i\X171010.b\8260W.m
Meth Date : 06-Feb-2018 11:27 voa6.i Quant Type: ISTD
Cal Date : 10-OCT-2017 12:43 Cal File: X101006.D
Als bottle: 9 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: dn_bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

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

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
	31 1,1,1-Trichloroethane	97	4.239	4.239	(0.980)	142517	20.0000	18.84
*	1 Pentafluorobenzene	168	4.325	4.325	(1.000)	385613	50.0000	
$	30 Dibromofluoromethane	113	4.254	4.254	(0.983)	111395	20.0000	20.40
*	36 1,4-Difluorobenzene	114	5.085	5.085	(1.000)	649630	50.0000	
$	35 1,2-Dichloroethane-d4	65	4.612	4.612	(1.066)	138773	20.0000	20.03
*	47 Chlorobenzene-d5	117	7.742	7.742	(1.000)	647033	50.0000	
$	48 Toluene-d8	98	6.474	6.474	(0.836)	398851	20.0000	20.28
$	69 4-Bromofluorobenzene	95	8.752	8.752	(1.130)	142465	20.0000	20.17
*	70 1,4-Dichlorobenzene-d4	152	9.726	9.726	(1.000)	320561	50.0000	
	68 1,1,2,2-Tetrachloroethane	83	8.903	8.903	(0.915)	118197	20.0000	20.24
	53 1,1,2-Trichloroethane	83	6.918	6.918	(0.894)	81341	20.0000	19.47
	32 1,1-Dichloropropene	75	4.426	4.426	(0.870)	135837	20.0000	19.25
	22 1,1-Dichloroethane	63	3.072	3.072	(0.710)	194464	20.0000	19.20
	11 1,1-Dichloroethene	96	2.055	2.055	(0.475)	86071	20.0000	19.27
	90 1,2,4-Trichlorobenzene	180	11.395	11.395	(1.172)	53883	20.0000	19.48
	89 1,2-Dibromo-3-Chloropropane	155	10.715	10.715	(1.102)	13745	20.0000	19.53
	57 1,2-Dibromoethane	107	7.341	7.341	(0.948)	96648	20.0000	19.81
	88 1,2-Dichlorobenzene	146	10.056	10.056	(1.034)	153216	20.0000	19.11
	33 1,2-Dichloroethane	62	4.691	4.691	(0.923)	138839	20.0000	19.14
	42 1,2-Dichloropropane	63	5.543	5.543	(1.090)	117210	20.0000	19.51
	83 1,3-Dichlorobenzene	146	9.669	9.669	(0.994)	152939	20.0000	18.94
	84 1,4-Dichlorobenzene	146	9.741	9.741	(1.001)	157509	20.0000	18.13

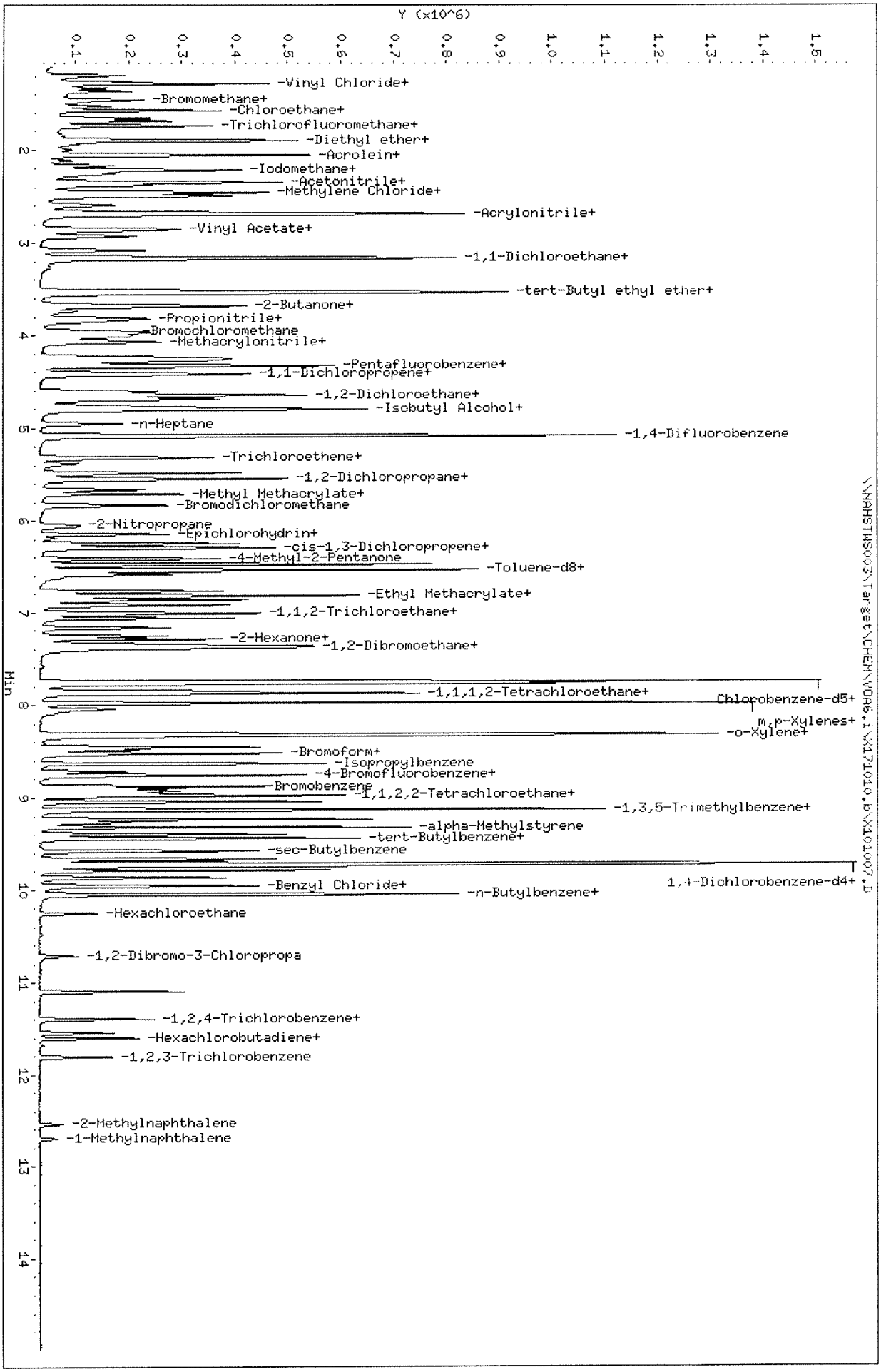
Data File: \\NAHSTWS003\Target\CHEM\VOA6.i\X171010.b\X101007.D
Report Date: 06-Feb-2018 11:27

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)	
24	2-Butanone	43	3.738	3.738	(0.864)	91092	40.0000	40.24	
52	2-Hexanone	43	7.284	7.284	(0.941)	206123	40.0000	38.87	
45	4-Methyl-2-Pentanone	43	6.410	6.410	(0.828)	224337	40.0000	39.79	
10	Acetone	43	2.119	2.119	(0.490)	57879	40.0000	40.69	
37	Benzene	78	4.648	4.648	(0.914)	409889	20.0000	19.24	
39	Bromodichloromethane	83	5.830	5.830	(1.146)	138817	20.0000	18.85	
66	Bromoform	173	8.480	8.480	(1.095)	70979	20.0000	19.68	
6	Bromomethane	94	1.460	1.460	(0.338)	66628	20.0000	17.81	
19	Carbon Disulfide	76	2.212	2.212	(0.512)	543912	40.0000	38.24	
34	Carbon Tetrachloride	117	4.411	4.411	(0.868)	112876	20.0000	18.99	
59	Chlorobenzene	112	7.764	7.764	(1.003)	253108	20.0000	19.09	
7	Chloroethane	64	1.525	1.525	(0.353)	76107	20.0000	19.02	
28	Chloroform	83	4.068	4.068	(0.940)	180968	20.0000	19.22	
3	Chloromethane	50	1.188	1.188	(0.275)	152259	20.0000	19.62	
27	cis-1,2-Dichloroethene	96	3.681	3.681	(0.851)	114298	20.0000	19.26	
46	cis-1,3-Dichloropropene	75	6.245	6.245	(1.228)	181818	20.0000	19.33	
55	Dibromochloromethane	129	7.255	7.255	(0.937)	106031	20.0000	19.40	
2	Dichlorodifluoromethane	85	1.081	1.081	(0.250)	89877	20.0000	18.03	
61	Ethylbenzene	106	7.871	7.871	(1.017)	127320	20.0000	19.28	
67	Isopropylbenzene	105	8.623	8.623	(1.114)	313335	20.0000	19.70	
17	Methylene Chloride	84	2.449	2.449	(0.566)	110310	20.0000	18.58	
56	Tetrachloroethene	164	7.012	7.012	(0.906)	68304	20.0000	19.66	
50	Toluene	91	6.532	6.532	(0.844)	411381	20.0000	19.77	
20	trans-1,2-Dichloroethene	96	2.678	2.678	(0.619)	101300	20.0000	19.44	
51	trans-1,3-Dichloropropene	75	6.761	6.761	(1.330)	152242	20.0000	18.03	
38	Trichloroethene	130	5.321	5.321	(1.046)	98333	20.0000	18.80	
8	Trichlorofluoromethane	101	1.689	1.689	(0.391)	117992	20.0000	18.19	
5	Vinyl Chloride	62	1.260	1.260	(0.291)	127323	20.0000	19.28	
62	m,p-Xylenes	106	7.971	7.971	(1.030)	305076	40.0000	38.66	
63	o-Xylene	106	8.308	8.308	(1.073)	154844	20.0000	19.37	
M 95	Xylenes (total)	106				459920	60.0000		(a)
71	1,2,3-Trichloropropane	75	8.931	8.931	(0.918)	111837	20.0000	19.94	(M)
93	1,2,3-Trichlorobenzene	180	11.804	11.804	(1.214)	37764	20.0000	18.95	
79	1,2,4-Trimethylbenzene	105	9.440	9.440	(0.971)	270096	20.0000	19.07	
75	1,3,5-Trimethylbenzene	105	9.132	9.132	(0.939)	252963	20.0000	19.10	
26	2,2-Dichloropropane	77	3.666	3.666	(0.848)	152968	20.0000	19.38	
54	1,3-Dichloropropane	76	7.062	7.062	(0.912)	171871	20.0000	19.39	
76	2-Chlorotoluene	91	9.039	9.039	(0.929)	249982	20.0000	19.00	
77	4-Chlorotoluene	91	9.132	9.132	(0.939)	292367	20.0000	19.00	
82	p-Isopropyltoluene	119	9.712	9.712	(0.999)	214988	20.0000	18.73	
29	Bromochloromethane	128	3.953	3.953	(0.914)	49132	20.0000	19.07	
74	Bromobenzene	156	8.874	8.874	(0.912)	103657	20.0000	18.99	
44	Dibromomethane	93	5.658	5.658	(1.113)	67157	20.0000	19.61	
91	Hexachlorobutadiene	225	11.539	11.539	(1.186)	21569	20.0000	19.41	
73	n-Propylbenzene	91	8.974	8.974	(0.923)	372948	20.0000	18.89	
87	n-Butylbenzene	91	10.056	10.056	(1.034)	180338	20.0000	19.16	
81	sec-Butylbenzene	105	9.583	9.583	(0.985)	244252	20.0000	18.43	
92	Naphthalene	128	11.603	11.603	(1.193)	125593	20.0000	18.73	
78	tert-Butylbenzene	119	9.397	9.397	(0.966)	182498	20.0000	18.43	
60	1,1,1,2-Tetrachloroethane	131	7.842	7.842	(1.013)	90841	20.0000	19.04	
64	Styrene	104	8.322	8.322	(1.075)	277336	20.0000	19.33	

Data File: \\NAHSTWS003\Target\CHEM\VOA6.i\X171010.b\X101007.D
Report Date: 06-Feb-2018 11:27

QC Flag Legend

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



Data File: \\NAHSTWS003\Target\CHEM\VOA6_1\VA171010_b\VA101007.D
Date : 10-OCT-2017 13:08
Client ID: VSTD020
Sample Info: VSTD020;VSTD020;1;6;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6_1
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS003\Target\CHEM\VOA6.i\X171010.b\X101008.D
Report Date: 06-Feb-2018 11:27

ALS Laboratory Group

Data file : \\NAHSTWS003\Target\CHEM\VOA6.i\X171010.b\X101008.D
Lab Smp Id: VSTD050 Client Smp ID: VSTD050
Inj Date : 10-OCT-2017 13:33
Operator : PC Inst ID: voa6.i
Smp Info : VSTD050;VSTD050;1;7;
Misc Info : HS16030331;WATER;0;1;
Comment :
Method : \\NAHSTWS003\Target\CHEM\VOA6.i\X171010.b\8260W.m
Meth Date : 06-Feb-2018 11:27 voa6.i Quant Type: ISTD
Cal Date : 10-OCT-2017 13:08 Cal File: X101007.D
Als bottle: 10 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: dn_bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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)
31 1,1,1-Trichloroethane	97	4.239	4.239	(0.980)	349671	50.0000	47.30
* 1 Pentafluorobenzene	168	4.325	4.325	(1.000)	376844	50.0000	
$ 30 Dibromofluoromethane	113	4.254	4.254	(0.983)	270013	50.0000	49.80
* 36 1,4-Difluorobenzene	114	5.085	5.085	(1.000)	638834	50.0000	
$ 35 1,2-Dichloroethane-d4	65	4.612	4.612	(1.066)	340941	50.0000	49.99
* 47 Chlorobenzene-d5	117	7.742	7.742	(1.000)	644367	50.0000	
$ 48 Toluene-d8	98	6.474	6.474	(0.836)	994742	50.0000	49.87
$ 69 4-Bromofluorobenzene	95	8.752	8.752	(1.130)	354964	50.0000	49.31
* 70 1,4-Dichlorobenzene-d4	152	9.726	9.726	(1.000)	308789	50.0000	
68 1,1,2,2-Tetrachloroethane	83	8.903	8.903	(0.915)	277176	50.0000	50.70
53 1,1,2-Trichloroethane	83	6.918	6.918	(0.894)	193939	50.0000	46.63
32 1,1-Dichloropropene	75	4.426	4.426	(0.870)	339587	50.0000	48.94
22 1,1-Dichloroethane	63	3.072	3.072	(0.710)	468268	50.0000	47.31
11 1,1-Dichloroethene	96	2.055	2.055	(0.475)	211140	50.0000	48.37
90 1,2,4-Trichlorobenzene	180	11.395	11.395	(1.172)	138568	50.0000	52.02
89 1,2-Dibromo-3-Chloropropane	155	10.715	10.715	(1.102)	33919	50.0000	49.91
57 1,2-Dibromoethane	107	7.341	7.341	(0.948)	229239	50.0000	47.19
88 1,2-Dichlorobenzene	146	10.056	10.056	(1.034)	364205	50.0000	47.17
33 1,2-Dichloroethane	62	4.691	4.691	(0.923)	340945	50.0000	47.80
42 1,2-Dichloropropane	63	5.543	5.543	(1.090)	280327	50.0000	47.45
83 1,3-Dichlorobenzene	146	9.669	9.669	(0.994)	380472	50.0000	47.89
84 1,4-Dichlorobenzene	146	9.748	9.748	(1.002)	393422	50.0000	47.02

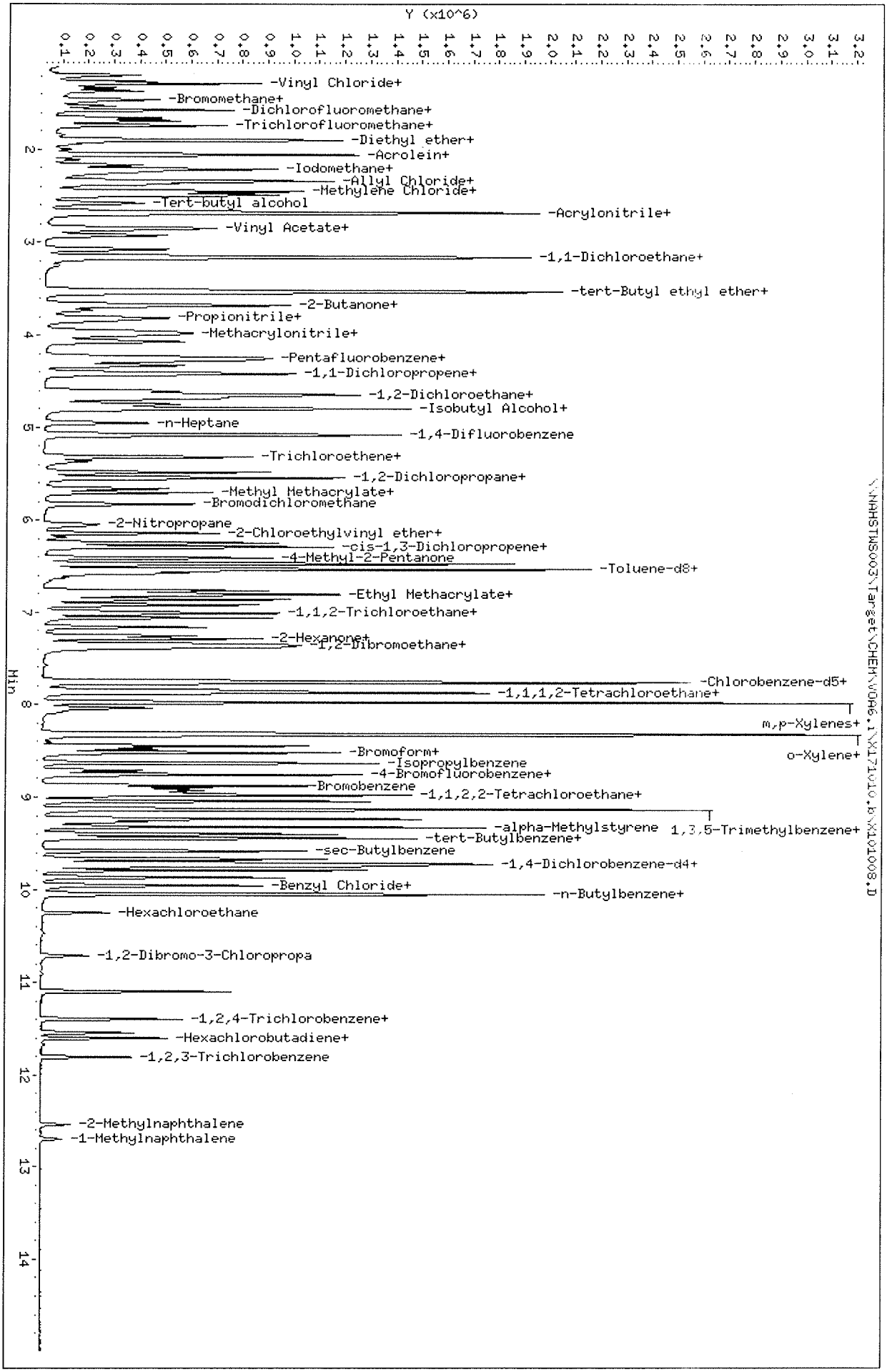
Data File: \\NAHSTWS003\Target\CHEM\VOA6.i\X171010.b\X101008.D
Report Date: 06-Feb-2018 11:27

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)	
24	2-Butanone	43	3.731	3.731	(0.863)	233295	100.000	104.70	
52	2-Hexanone	43	7.284	7.284	(0.941)	496706	100.000	94.07	
45	4-Methyl-2-Pentanone	43	6.410	6.410	(0.828)	521923	100.000	92.97	
10	Acetone	43	2.112	2.112	(0.488)	134851	100.000	101.35	
37	Benzene	78	4.648	4.648	(0.914)	1008825	50.0000	48.17	
39	Bromodichloromethane	83	5.822	5.822	(1.145)	336770	50.0000	46.51	
66	Bromoform	173	8.480	8.480	(1.095)	168536	50.0000	46.94	
6	Bromomethane	94	1.460	1.460	(0.338)	169712	50.0000	46.43	
19	Carbon Disulfide	76	2.212	2.212	(0.512)	1329103	100.000	95.63	
34	Carbon Tetrachloride	117	4.411	4.411	(0.868)	283651	50.0000	48.54	
59	Chlorobenzene	112	7.764	7.764	(1.003)	617592	50.0000	47.26	
7	Chloroethane	64	1.525	1.525	(0.353)	179732	50.0000	45.96	(M)
28	Chloroform	83	4.068	4.068	(0.940)	436283	50.0000	47.42	
3	Chloromethane	50	1.188	1.188	(0.275)	371695	50.0000	48.62	
27	cis-1,2-Dichloroethene	96	3.681	3.681	(0.851)	269450	50.0000	47.67	
46	cis-1,3-Dichloropropene	75	6.245	6.245	(1.228)	437531	50.0000	47.31	
55	Dibromochloromethane	129	7.255	7.255	(0.937)	259103	50.0000	47.60	
2	Dichlorodifluoromethane	85	1.081	1.081	(0.250)	240512	50.0000	49.93	
61	Ethylbenzene	106	7.871	7.871	(1.017)	307324	50.0000	46.75	
67	Isopropylbenzene	105	8.623	8.623	(1.114)	754735	50.0000	47.67	
17	Methylene Chloride	84	2.449	2.449	(0.566)	266274	50.0000	45.91	
56	Tetrachloroethene	164	7.012	7.012	(0.906)	164699	50.0000	47.62	
50	Toluene	91	6.532	6.532	(0.844)	988460	50.0000	47.71	
20	trans-1,2-Dichloroethene	96	2.678	2.678	(0.619)	242050	50.0000	47.54	
51	trans-1,3-Dichloropropene	75	6.761	6.761	(1.330)	377084	50.0000	47.65	
38	Trichloroethene	130	5.321	5.321	(1.046)	239521	50.0000	46.59	
8	Trichlorofluoromethane	101	1.689	1.689	(0.391)	311693	50.0000	49.35	
5	Vinyl Chloride	62	1.260	1.260	(0.291)	320507	50.0000	49.66	
62	m,p-Xylenes	106	7.971	7.971	(1.030)	748582	100.000	95.25	
63	o-Xylene	106	8.308	8.308	(1.073)	372625	50.0000	46.81	
M 95	Xylenes (total)	106				1121207	150.000		(a)
71	1,2,3-Trichloropropane	75	8.931	8.931	(0.918)	266225	50.0000	49.28	(M)
93	1,2,3-Trichlorobenzene	180	11.804	11.804	(1.214)	97202	50.0000	50.06	
79	1,2,4-Trimethylbenzene	105	9.440	9.440	(0.971)	655140	50.0000	48.03	
75	1,3,5-Trimethylbenzene	105	9.132	9.132	(0.939)	611066	50.0000	47.89	
26	2,2-Dichloropropane	77	3.666	3.666	(0.848)	370733	50.0000	48.08	
54	1,3-Dichloropropane	76	7.062	7.062	(0.912)	413508	50.0000	46.86	
76	2-Chlorotoluene	91	9.039	9.039	(0.929)	609776	50.0000	48.19	
77	4-Chlorotoluene	91	9.132	9.132	(0.939)	710648	50.0000	47.94	
82	p-Isopropyltoluene	119	9.712	9.712	(0.999)	530350	50.0000	47.97	
29	Bromochloromethane	128	3.953	3.953	(0.914)	115645	50.0000	45.93	
74	Bromobenzene	156	8.874	8.874	(0.912)	258901	50.0000	49.26	
44	Dibromomethane	93	5.658	5.658	(1.113)	163286	50.0000	48.24	
91	Hexachlorobutadiene	225	11.539	11.539	(1.186)	58354	50.0000	53.41	
73	n-Propylbenzene	91	8.974	8.974	(0.923)	913661	50.0000	48.04	
87	n-Butylbenzene	91	10.049	10.049	(1.033)	462007	50.0000	50.38	
81	sec-Butylbenzene	105	9.583	9.583	(0.985)	612901	50.0000	48.03	
92	Naphthalene	128	11.603	11.603	(1.193)	326975	50.0000	45.58	
78	tert-Butylbenzene	119	9.397	9.397	(0.966)	445453	50.0000	46.70	
60	1,1,1,2-Tetrachloroethane	131	7.850	7.850	(1.014)	218464	50.0000	45.99	
64	Styrene	104	8.322	8.322	(1.075)	666810	50.0000	46.67	

Data File: \\NAHSTWS003\Target\CHEM\VOA6.i\X171010.b\X101008.D
Report Date: 06-Feb-2018 11:27

QC Flag Legend

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



Data File: \\NAHSTWS003\Target\CHEM\VOA6.i\X171010.b\X101008.D
Date : 10-OCT-2017 13:33
Client ID: VSTD050
Sample Info: VSTD050;VSTD050;1;7;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS003\Target\CHEM\VOA6.i\X171010.b\X101009.D
Report Date: 06-Feb-2018 11:27

ALS Laboratory Group

Data file : \\NAHSTWS003\Target\CHEM\VOA6.i\X171010.b\X101009.D
Lab Smp Id: VSTD100 Client Smp ID: VSTD100
Inj Date : 10-OCT-2017 13:58
Operator : PC Inst ID: voa6.i
Smp Info : VSTD100;VSTD100;1;8;
Misc Info : HS16030331;WATER;0;1;
Comment :
Method : \\NAHSTWS003\Target\CHEM\VOA6.i\X171010.b\8260W.m
Meth Date : 06-Feb-2018 11:27 voa6.i Quant Type: ISTD
Cal Date : 10-OCT-2017 13:33 Cal File: X101008.D
Als bottle: 11 Calibration Sample, Level: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: dn_bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

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

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
	31 1,1,1-Trichloroethane	97	4.240	4.240	(0.980)	687167	100.000	94.85
*	1 Pentafluorobenzene	168	4.325	4.325	(1.000)	369317	50.0000	
$	30 Dibromofluoromethane	113	4.254	4.254	(0.983)	550814	100.000	100.03
*	36 1,4-Difluorobenzene	114	5.085	5.085	(1.000)	621134	50.0000	
$	35 1,2-Dichloroethane-d4	65	4.612	4.612	(1.066)	681709	100.000	99.99
*	47 Chlorobenzene-d5	117	7.742	7.742	(1.000)	631220	50.0000	
$	48 Toluene-d8	98	6.474	6.474	(0.836)	2037259	100.000	100.01
$	69 4-Bromofluorobenzene	95	8.752	8.752	(1.130)	718688	100.000	100.01
*	70 1,4-Dichlorobenzene-d4	152	9.726	9.726	(1.000)	301010	50.0000	
	68 1,1,2,2-Tetrachloroethane	83	8.903	8.903	(0.915)	545730	100.000	103.40
	53 1,1,2-Trichloroethane	83	6.918	6.918	(0.894)	379700	100.000	93.19
	32 1,1-Dichloropropene	75	4.426	4.426	(0.870)	657729	100.000	97.50
	22 1,1-Dichloroethane	63	3.072	3.072	(0.710)	931932	100.000	96.07
	11 1,1-Dichloroethene	96	2.055	2.055	(0.475)	415159	100.000	97.06
	90 1,2,4-Trichlorobenzene	180	11.395	11.395	(1.172)	272147	100.000	104.82
	89 1,2-Dibromo-3-Chloropropane	155	10.715	10.715	(1.102)	65831	100.000	99.28
	57 1,2-Dibromoethane	107	7.341	7.341	(0.948)	449604	100.000	94.49
	88 1,2-Dichlorobenzene	146	10.056	10.056	(1.034)	717243	100.000	95.31
	33 1,2-Dichloroethane	62	4.691	4.691	(0.923)	657258	100.000	94.78
	42 1,2-Dichloropropane	63	5.543	5.543	(1.090)	554908	100.000	96.62
	83 1,3-Dichlorobenzene	146	9.669	9.669	(0.994)	740308	100.000	95.61
	84 1,4-Dichlorobenzene	146	9.748	9.748	(1.002)	776092	100.000	95.17

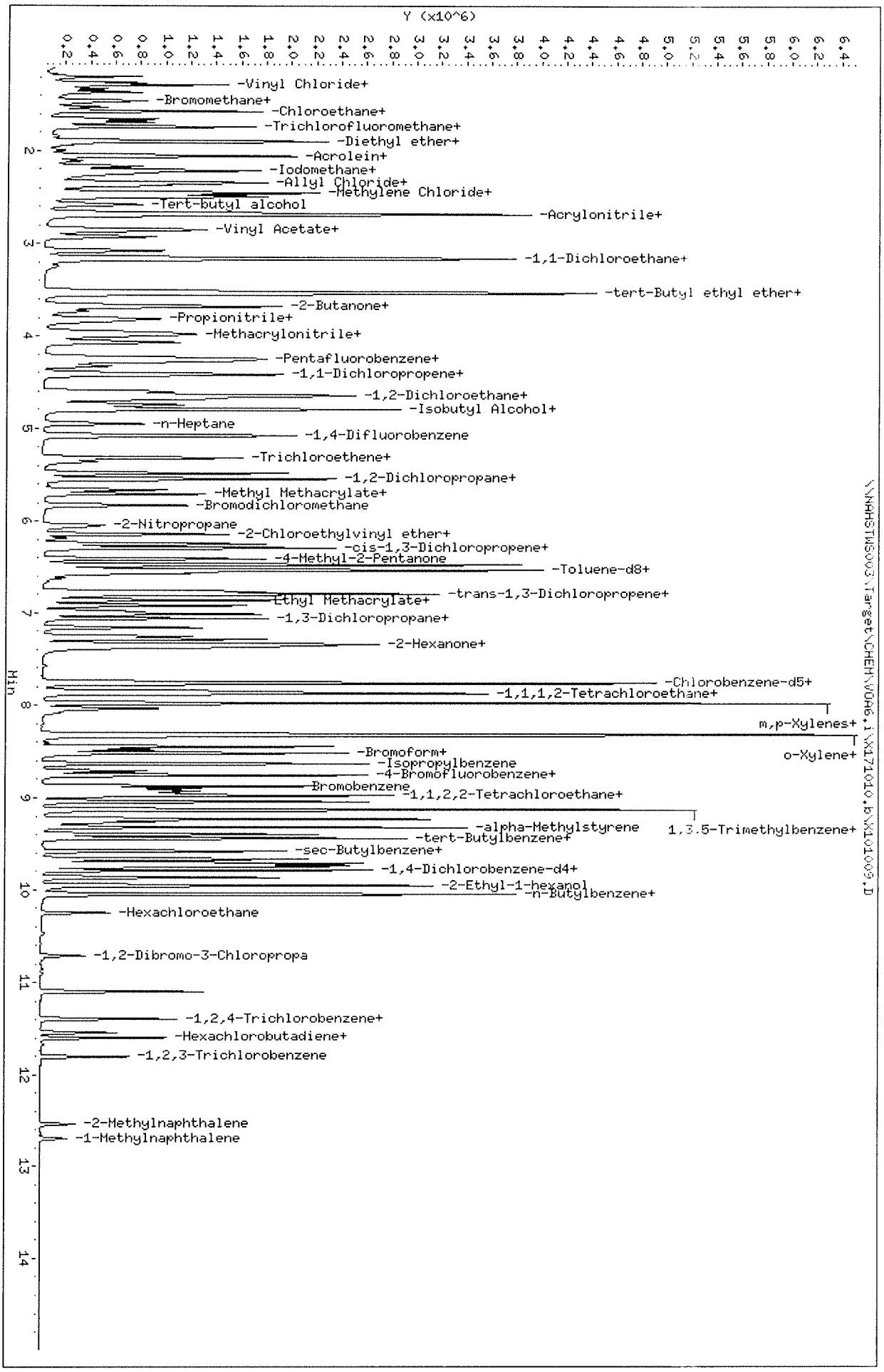
Data File: \\NAHSTWS003\Target\CHEM\VOA6.i\X171010.b\X101009.D
Report Date: 06-Feb-2018 11:27

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)	
24	2-Butanone	43	3.731	3.731	(0.863)	439449	200.000	201.25	(A)
52	2-Hexanone	43	7.284	7.284	(0.941)	1009670	200.000	195.20	
45	4-Methyl-2-Pentanone	43	6.410	6.410	(0.828)	1052217	200.000	191.33	
10	Acetone	43	2.112	2.112	(0.488)	257034	200.000	200.09	(A)
37	Benzene	78	4.648	4.648	(0.914)	2001428	100.000	98.78	
39	Bromodichloromethane	83	5.830	5.830	(1.146)	671661	100.000	95.42	
66	Bromoform	173	8.480	8.480	(1.095)	335757	100.000	95.46	
6	Bromomethane	94	1.460	1.460	(0.338)	343961	100.000	96.02	
19	Carbon Disulfide	76	2.212	2.212	(0.512)	2589759	200.000	190.14	
34	Carbon Tetrachloride	117	4.411	4.411	(0.868)	558443	100.000	98.09	
59	Chlorobenzene	112	7.764	7.764	(1.003)	1239	100.000	96.[illegible]	
7	Chloroethane	64	1.525	1.525	(0.353)	351134	100.000	91.63	
28	Chloroform	83	4.068	4.068	(0.940)	866693	100.000	96.14	
3	Chloromethane	50	1.188	1.188	(0.275)	748853	100.000	99.67	
27	cis-1,2-Dichloroethene	96	3.681	3.681	(0.851)	536704	100.000	96.89	
46	cis-1,3-Dichloropropene	75	6.245	6.245	(1.228)	866768	100.000	96.41	
55	Dibromochloromethane	129	7.255	7.255	(0.937)	515584	100.000	96.69	
2	Dichlorodifluoromethane	85	1.081	1.081	(0.250)	457433	100.000	96.91	
61	Ethylbenzene	106	7.871	7.871	(1.017)	613961	100.000	95.34	
67	Isopropylbenzene	105	8.623	8.623	(1.114)	1489007	100.000	96.00	
17	Methylene Chloride	84	2.449	2.449	(0.566)	525988	100.000	92.54	
56	Tetrachloroethene	164	7.012	7.012	(0.906)	324741	100.000	95.[illegible]	
50	Toluene	91	6.532	6.532	(0.844)	1969216	100.000	97.02	
20	trans-1,2-Dichloroethene	96	2.678	2.678	(0.619)	478246	100.000	95.85	
51	trans-1,3-Dichloropropene	75	6.761	6.761	(1.330)	742968	100.000	96.01	
38	Trichloroethene	130	5.321	5.321	(1.046)	478710	100.000	95.76	
8	Trichlorofluoromethane	101	1.689	1.689	(0.391)	594603	100.000	96.07	
5	Vinyl Chloride	62	1.260	1.260	(0.291)	633468	100.000	100.16	
62	m,p-Xylenes	106	7.971	7.971	(1.030)	1471141	200.000	191.10	
63	o-Xylene	106	8.308	8.308	(1.073)	741727	100.000	95.13	
M 95	Xylenes (total)	106				2212868	300.000		(a)
71	1,2,3-Trichloropropane	75	8.931	8.931	(0.918)	529256	100.000	100.50	(M)
93	1,2,3-Trichlorobenzene	180	11.804	11.804	(1.214)	195198	100.000	104.36	
79	1,2,4-Trimethylbenzene	105	9.440	9.440	(0.971)	1267474	100.000	95.32	
75	1,3,5-Trimethylbenzene	105	9.132	9.132	(0.939)	1198260	100.000	96.35	
26	2,2-Dichloropropane	77	3.666	3.666	(0.848)	731530	100.000	96.81	
54	1,3-Dichloropropane	76	7.062	7.062	(0.912)	813[illegible]	100.000	94.[illegible]	
76	2-Chlorotoluene	91	9.039	9.039	(0.929)	1189[illegible]	100.000	96.48	
77	4-Chlorotoluene	91	9.132	9.132	(0.939)	1396[illegible]	100.000	96.68	
82	p-Isopropyltoluene	119	9.712	9.712	(0.999)	1006[illegible]	100.000	93.41	
29	Bromochloromethane	128	3.960	3.960	(0.916)	222588	100.000	90.22	(M)
74	Bromobenzene	156	8.874	8.874	(0.912)	508744	100.000	99.30	
44	Dibromomethane	93	5.658	5.658	(1.113)	321007	100.000	97.54	
91	Hexachlorobutadiene	225	11.539	11.539	(1.186)	96788	100.000	90.45	
73	n-Propylbenzene	91	8.974	8.974	(0.923)	1789251	100.000	96.62	
87	n-Butylbenzene	91	10.056	10.056	(1.034)	849544	100.000	96.16	
81	sec-Butylbenzene	105	9.583	9.583	(0.985)	1153943	100.000	92.76	
92	Naphthalene	128	11.603	11.603	(1.193)	677057	100.000	93.48	
78	tert-Butylbenzene	119	9.397	9.397	(0.966)	862987	100.000	92.82	
60	1,1,1,2-Tetrachloroethane	131	7.850	7.850	(1.014)	442088	100.000	95.01	
64	Styrene	104	8.322	8.322	(1.075)	1351996	100.000	96.66	

Data File: \\NAHSTWS003\Target\CHEM\VOA6.i\X171010.b\X101009.D
Report Date: 06-Feb-2018 11:27

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: \\NAHSTWS003\Target\CHEM\VOA6.i\X171010.b\X101009.D
Date : 10-OCT-2017 13:58
Client ID: VSTD100
Sample Info: VSTD100;VSTD100;1;8;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS003\Target\CHEM\VOA6.i\X171010.b\X101010.D
Report Date: 06-Feb-2018 11:27

ALS Laboratory Group

Data file : \\NAHSTWS003\Target\CHEM\VOA6.i\X171010.b\X101010.D
Lab Smp Id: VSTD150 Client Smp ID: VSTD150
Inj Date : 10-OCT-2017 14:22
Operator : PC Inst ID: voa6.i
Smp Info : VSTD150;VSTD150;1;9;
Misc Info : HS16030331;WATER;0;1;
Comment :
Method : \\NAHSTWS003\Target\CHEM\VOA6.i\X171010.b\8260W.m
Meth Date : 06-Feb-2018 11:27 voa6.i Quant Type: ISTD
Cal Date : 10-OCT-2017 13:58 Cal File: X101009.D
Als bottle: 12 Calibration Sample, Level: 9
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: dn_bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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)
	31 1,1,1-Trichloroethane	97	4.239	4.239	(0.980)	1027255	150.000	143.15
*	1 Pentafluorobenzene	168	4.325	4.325	(1.000)	365822	50.0000	
$	30 Dibromofluoromethane	113	4.254	4.254	(0.983)	807409	150.000	142.92
*	36 1,4-Difluorobenzene	114	5.085	5.085	(1.000)	611030	50.0000	
$	35 1,2-Dichloroethane-d4	65	4.612	4.612	(1.066)	1005478	150.000	145.89
*	47 Chlorobenzene-d5	117	7.742	7.742	(1.000)	633142	50.0000	
$	48 Toluene-d8	98	6.474	6.474	(0.836)	2976689	150.000	140.10
$	69 4-Bromofluorobenzene	95	8.752	8.752	(1.130)	1051276	150.000	141.62
*	70 1,4-Dichlorobenzene-d4	152	9.726	9.726	(1.000)	308961	50.0000	
	68 1,1,2,2-Tetrachloroethane	83	8.903	8.903	(0.915)	810128	150.000	150.18
	53 1,1,2-Trichloroethane	83	6.918	6.918	(0.894)	557992	150.000	136.54
	32 1,1-Dichloropropene	75	4.426	4.426	(0.870)	990181	150.000	149.21
	22 1,1-Dichloroethane	63	3.072	3.072	(0.710)	1363851	150.000	141.94
	11 1,1-Dichloroethene	96	2.055	2.055	(0.475)	610869	150.000	144.18(M)
	90 1,2,4-Trichlorobenzene	180	11.395	11.395	(1.172)	442001	150.000	166.08
	89 1,2-Dibromo-3-Chloropropane	155	10.715	10.715	(1.102)	100495	150.000	147.81
	57 1,2-Dibromoethane	107	7.341	7.341	(0.948)	665490	150.000	139.44
	88 1,2-Dichlorobenzene	146	10.056	10.056	(1.034)	1082709	150.000	140.35
	33 1,2-Dichloroethane	62	4.691	4.691	(0.923)	971693	150.000	142.43
	42 1,2-Dichloropropane	63	5.543	5.543	(1.090)	814386	150.000	144.74
	83 1,3-Dichlorobenzene	146	9.669	9.669	(0.994)	1109076	150.000	139.73
	84 1,4-Dichlorobenzene	146	9.741	9.741	(1.001)	1153992	150.000	138.04

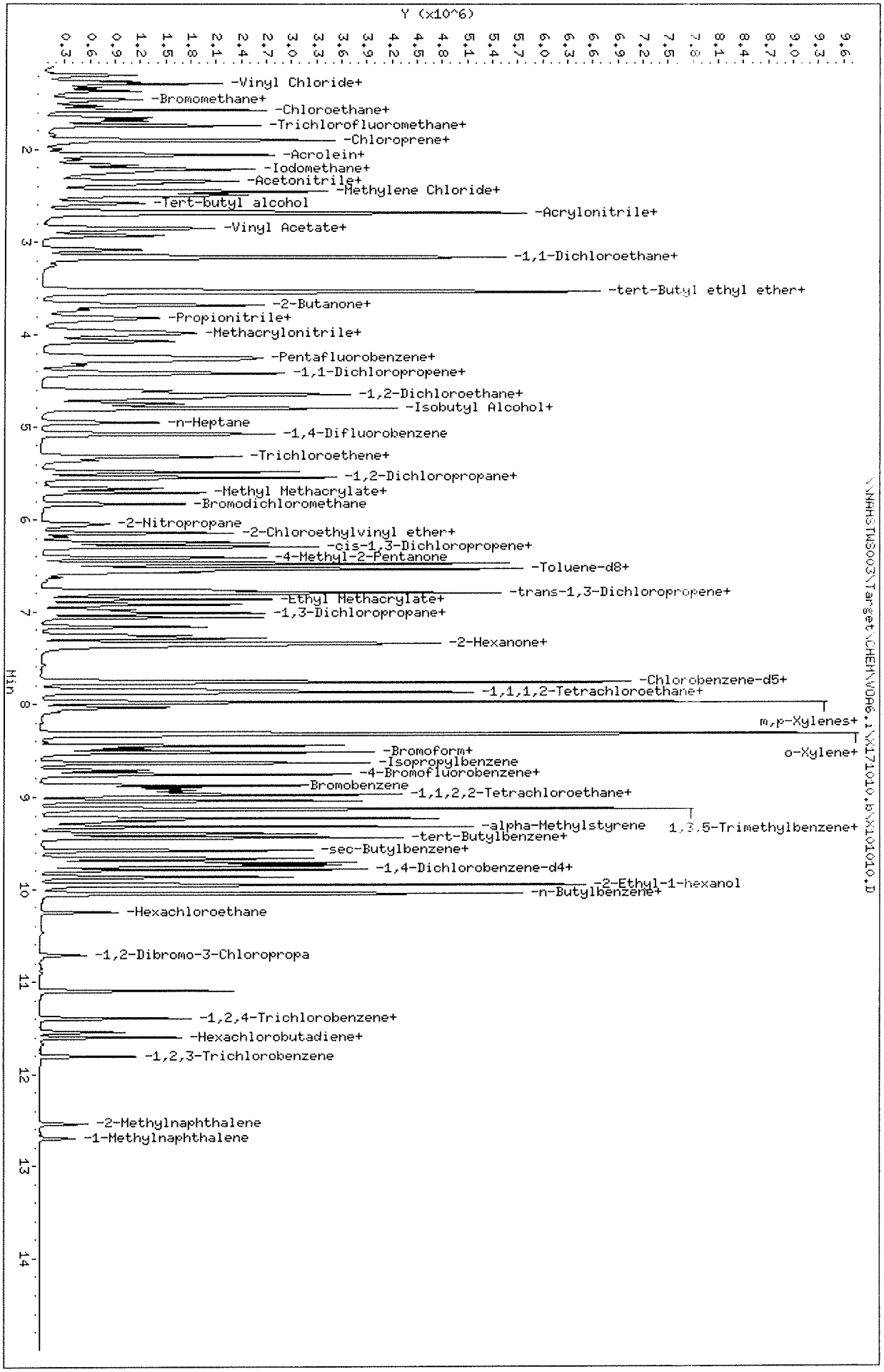
Data File: \\NAHSTWS003\Target\CHEM\VOA6.i\X171010.b\X101010.D
Report Date: 06-Feb-2018 11:27

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
24	2-Butanone	43	3.731	3.731	(0.863)	656143	300.000	303.36 (A)
52	2-Hexanone	43	7.284	7.284	(0.941)	1517499	300.000	292.49 (A)
45	4-Methyl-2-Pentanone	43	6.410	6.410	(0.828)	1571734	300.000	284.94 (A)
10	Acetone	43	2.112	2.112	(0.488)	376635	300.000	297.50 (A)
37	Benzene	78	4.648	4.648	(0.914)	2901936	150.000	144.86
39	Bromodichloromethane	83	5.823	5.823	(1.145)	988224	150.000	142.71
66	Bromoform	173	8.480	8.480	(1.095)	490387	150.000	139.00
6	Bromomethane	94	1.460	1.460	(0.338)	544026	150.000	153.32
19	Carbon Disulfide	76	2.212	2.212	(0.512)	3847459	300.000	285.78 (A)
34	Carbon Tetrachloride	117	4.411	4.411	(0.868)	841250	150.000	150.52
59	Chlorobenzene	112	7.764	7.764	(1.003)	1806011	150.000	140.67
7	Chloroethane	64	1.525	1.525	(0.353)	524463	150.000	138.17
28	Chloroform	83	4.068	4.068	(0.940)	1258886	150.000	140.98
3	Chloromethane	50	1.188	1.188	(0.275)	1119443	150.000	150.29
27	cis-1,2-Dichloroethene	96	3.681	3.681	(0.851)	783202	150.000	142.75
46	cis-1,3-Dichloropropene	75	6.245	6.245	(1.228)	1287432	150.000	145.56
55	Dibromochloromethane	129	7.255	7.255	(0.937)	757747	150.000	141.68
2	Dichlorodifluoromethane	85	1.081	1.081	(0.250)	733784	150.000	156.94
61	Ethylbenzene	106	7.871	7.871	(1.017)	908038	150.000	140.62
67	Isopropylbenzene	105	8.623	8.623	(1.114)	2245545	150.000	144.34
17	Methylene Chloride	84	2.449	2.449	(0.566)	769636	150.000	136.70
56	Tetrachloroethene	164	7.012	7.012	(0.906)	484302	150.000	142.51
50	Toluene	91	6.532	6.532	(0.844)	2887123	150.000	141.82
20	trans-1,2-Dichloroethene	96	2.678	2.678	(0.619)	697965	150.000	141.22
51	trans-1,3-Dichloropropene	75	6.761	6.761	(1.330)	1092226	150.000	144.37
38	Trichloroethene	130	5.321	5.321	(1.046)	710112	150.000	144.41
8	Trichlorofluoromethane	101	1.689	1.689	(0.391)	919730	150.000	150.02
5	Vinyl Chloride	62	1.260	1.260	(0.291)	956366	150.000	152.66
62	m,p-Xylenes	106	7.971	7.971	(1.030)	2191660	300.000	283.83 (A)
63	o-Xylene	106	8.308	8.308	(1.073)	1089461	150.000	139.31
M 95	Xylenes (total)	106				3281121	450.000	(a)
71	1,2,3-Trichloropropane	75	8.931	8.931	(0.918)	779047	150.000	144.31 (M)
93	1,2,3-Trichlorobenzene	180	11.804	11.804	(1.214)	319720	150.000	166.75
79	1,2,4-Trimethylbenzene	105	9.440	9.440	(0.971)	1922510	150.000	141.05
75	1,3,5-Trimethylbenzene	105	9.132	9.132	(0.939)	1822241	150.000	142.94
26	2,2-Dichloropropane	77	3.666	3.666	(0.848)	1097426	150.000	146.62
54	1,3-Dichloropropane	76	7.062	7.062	(0.912)	1181727	150.000	136.30
76	2-Chlorotoluene	91	9.039	9.039	(0.929)	1760111	150.000	139.22
77	4-Chlorotoluene	91	9.132	9.132	(0.939)	2093660	150.000	141.35
82	p-Isopropyltoluene	119	9.712	9.712	(0.999)	1576453	150.000	142.71
29	Bromochloromethane	128	3.960	3.960	(0.916)	323443	150.000	132.35
74	Bromobenzene	156	8.874	8.874	(0.912)	744971	150.000	141.85
44	Dibromomethane	93	5.658	5.658	(1.113)	463015	150.000	143.62
91	Hexachlorobutadiene	225	11.539	11.539	(1.186)	161761	150.000	147.09
73	n-Propylbenzene	91	8.974	8.974	(0.923)	2706592	150.000	142.43
87	n-Butylbenzene	91	10.056	10.056	(1.034)	1350052	150.000	149.08
81	sec-Butylbenzene	105	9.583	9.583	(0.985)	1826856	150.000	143.26
92	Naphthalene	128	11.603	11.603	(1.193)	1113941	150.000	148.24
78	tert-Butylbenzene	119	9.397	9.397	(0.966)	1330122	150.000	139.56
60	1,1,1,2-Tetrachloroethane	131	7.850	7.850	(1.014)	657525	150.000	140.88
64	Styrene	104	8.322	8.322	(1.075)	1952650	150.000	139.09

Data File: \\NAHSTWS003\Target\CHEM\VOA6.i\X171010.b\X101010.D
Report Date: 06-Feb-2018 11:27

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.


Y (x10^6)
Min
-Vinyl Chloride+
-Bromomethane+
-Chloroethane+
-Trichlorofluoromethane+
-Chloroprene+
-Acrolein+
-Iodomethane+
-Acetonitrile+
-Methylene Chloride+
-Tert-butyl alcohol
-Acrylonitrile+
-Vinyl Acetate+
-1,1-Dichloroethane+
-tert-Butyl ethyl ether+
-2-Butanone+
-Propionitrile+
-Methacrylonitrile+
-Pentafluorobenzene+
-1,1-Dichloropropene+
-1,2-Dichloroethane+
-Isobutyl Alcohol+
-n-Heptane
-1,4-Difluorobenzene
-Trichloroethene+
-1,2-Dichloropropane+
-Methyl Methacrylate+
-Bromodichloromethane
-2-Nitropropane
-2-Chloroethylvinyl ether+
-cis-1,3-Dichloropropene+
-4-Methyl-2-Pentanone
-Toluene-d8+
-trans-1,3-Dichloropropene+
-Ethyl Methacrylate+
-1,3-Dichloropropane+
-2-Hexanone+
-Chlorobenzene-d5+
-1,1,1,2-Tetrachloroethane+
m,p-Xylenes+
o-Xylene+
-Bromoform+
-Isopropylbenzene
-4-Bromofluorobenzene+
Bromobenzene
-1,1,2,2-Tetrachloroethane+
-alpha-Methylstyrene
1,3,5-Trimethylbenzene+
-tert-Butylbenzene+
-sec-Butylbenzene+
-1,4-Dichlorobenzene-d4+
-2-Ethyl-1-hexanol
-n-Butylbenzene+
-Hexachloroethane
-1,2-Dibromo-3-Chloropropa
-1,2,4-Trichlorobenzene+
-Hexachlorobutadiene+
-1,2,3-Trichlorobenzene
-2-Methylnaphthalene
-1-Methylnaphthalene
\\NAHSTWS003\Target\CHEM\VOA6.i\X171010.b\X101010.D
Data File: \\NAHSTWS003\Target\CHEM\VOA6.i\X171010.b\X101010.D
Date : 10-OCT-2017 14:22
Client ID: VSTD150
Sample Info: VSTD150;VSTD150;1;9;
Purge Volume: 5.0
Column phase: DB624
Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS003\Target\CHEM\VOA6.i\X171010.b\X101011.D
Report Date: 06-Feb-2018 11:27

ALS Laboratory Group

Data file : \\NAHSTWS003\Target\CHEM\VOA6.i\X171010.b\X101011.D
Lab Smp Id: VSTD200 Client Smp ID: VSTD200
Inj Date : 10-OCT-2017 14:47
Operator : PC Inst ID: voa6.i
Smp Info : VSTD200;VSTD200;1;10;
Misc Info : HS16030331;WATER;0;1;
Comment :
Method : \\NAHSTWS003\Target\CHEM\VOA6.i\X171010.b\8260W.m
Meth Date : 06-Feb-2018 11:27 voa6.i Quant Type: ISTD
Cal Date : 10-OCT-2017 14:22 Cal File: X101010.D
Als bottle: 13 Calibration Sample, Level: 10
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: dn_bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

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

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
	31 1,1,1-Trichloroethane	97	4.240	4.240	(0.980)	1346837	200.000	189.72
*	1 Pentafluorobenzene	168	4.325	4.325	(1.000)	361891	50.0000	
$	30 Dibromofluoromethane	113	4.254	4.254	(0.983)	1013155	200.000	175.90
*	36 1,4-Difluorobenzene	114	5.085	5.085	(1.000)	605229	50.0000	
$	35 1,2-Dichloroethane-d4	65	4.612	4.612	(1.066)	1304355	200.000	187.52
*	47 Chlorobenzene-d5	117	7.742	7.742	(1.000)	627272	50.0000	
$	48 Toluene-d8	98	6.474	6.474	(0.836)	3936343	200.000	178.98
$	69 4-Bromofluorobenzene	95	8.752	8.752	(1.130)	1367102	200.000	180.03
*	70 1,4-Dichlorobenzene-d4	152	9.726	9.726	(1.000)	305564	50.0000	
	68 1,1,2,2-Tetrachloroethane	83	8.903	8.903	(0.915)	1055403	200.000	197.98
	53 1,1,2-Trichloroethane	83	6.926	6.926	(0.895)	722501	200.000	178.45
	32 1,1-Dichloropropene	75	4.426	4.426	(0.870)	1286445	200.000	195.72
	22 1,1-Dichloroethane	63	3.079	3.079	(0.712)	1751045	200.000	184.22
	11 1,1-Dichloroethene	96	2.055	2.055	(0.475)	796023	200.000	189.92(M)
	90 1,2,4-Trichlorobenzene	180	11.395	11.395	(1.172)	588209	200.000	223.18(A)
	89 1,2-Dibromo-3-Chloropropane	155	10.715	10.715	(1.102)	136011	200.000	201.99(A)
	57 1,2-Dibromoethane	107	7.341	7.341	(0.948)	862267	200.000	182.37
	88 1,2-Dichlorobenzene	146	10.056	10.056	(1.034)	1412182	200.000	184.86
	33 1,2-Dichloroethane	62	4.691	4.691	(0.923)	1236234	200.000	182.96
	42 1,2-Dichloropropane	63	5.543	5.543	(1.090)	1062996	200.000	189.95
	83 1,3-Dichlorobenzene	146	9.669	9.669	(0.994)	1445179	200.000	183.86
	84 1,4-Dichlorobenzene	146	9.748	9.748	(1.002)	1504696	200.000	181.76

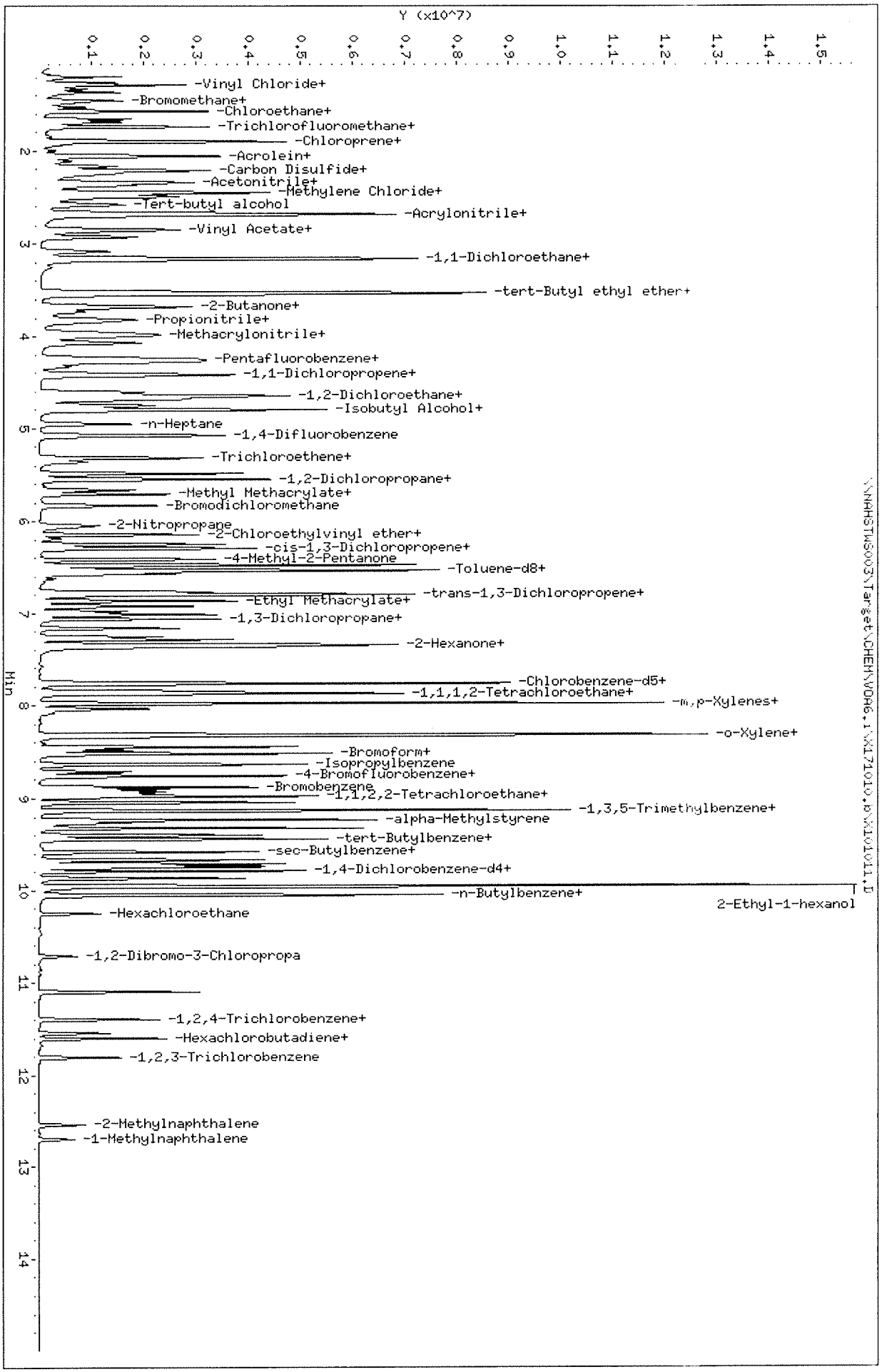
Data File: \\NAHSTWS003\Target\CHEM\VOA6.i\X171010.b\X101011.D
Report Date: 06-Feb-2018 11:27

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
24	2-Butanone	43	3.731	3.731	(0.863)	871732	400.000	407.41(A)
52	2-Hexanone	43	7.284	7.284	(0.941)	2030213	400.000	394.98(A)
45	4-Methyl-2-Pentanone	43	6.410	6.410	(0.828)	2085182	400.000	381.56(A)
10	Acetone	43	2.112	2.112	(0.488)	501328	400.000	401.38(A)
37	Benzene	78	4.648	4.648	(0.914)	3804958	200.000	191.77
39	Bromodichloromethane	83	5.830	5.830	(1.146)	1289436	200.000	188.[illegible]
66	Bromoform	173	8.480	8.480	(1.095)	639971	200.000	183.[illegible]
6	Bromomethane	94	1.453	1.453	(0.336)	700366	200.000	199.53
19	Carbon Disulfide	76	2.212	2.212	(0.512)	5063736	400.000	379.41(A)
34	Carbon Tetrachloride	117	4.411	4.411	(0.868)	1119346	200.000	202.19(A)
59	Chlorobenzene	112	7.771	7.771	(1.004)	2344776	200.000	184.34
7	Chloroethane	64	1.525	1.525	(0.353)	677909	200.000	180.53
28	Chloroform	83	4.068	4.068	(0.940)	1619485	200.000	183.23
3	Chloromethane	50	1.188	1.188	(0.275)	1476509	200.000	200.29(A)
27	cis-1,2-Dichloroethene	96	3.688	3.688	(0.853)	1005214	200.000	185.20(M)
46	cis-1,3-Dichloropropene	75	6.245	6.245	(1.228)	1703619	200.000	194.47
55	Dibromochloromethane	129	7.255	7.255	(0.937)	986345	200.000	186.15
2	Dichlorodifluoromethane	85	1.081	1.081	(0.250)	965107	200.000	208.66(A)
61	Ethylbenzene	106	7.871	7.871	(1.017)	1182773	200.000	184.83
67	Isopropylbenzene	105	8.630	8.630	(1.115)	2908508	200.000	188.71
17	Methylene Chloride	84	2.449	2.449	(0.566)	1002641	200.000	180.00
56	Tetrachloroethene	164	7.012	7.012	(0.906)	631732	200.000	187.45
50	Toluene	91	6.532	6.532	(0.844)	3753557	200.000	186.11
20	trans-1,2-Dichloroethene	96	2.678	2.678	(0.619)	910532	200.000	186.23
51	trans-1,3-Dichloropropene	75	6.761	6.761	(1.330)	1414101	200.000	188.62
38	Trichloroethene	130	5.321	5.321	(1.046)	931410	200.000	191.23
8	Trichlorofluoromethane	101	1.689	1.689	(0.391)	1193771	200.000	196.84
5	Vinyl Chloride	62	1.260	1.260	(0.291)	1257204	200.000	202.86(A)
62	m,p-Xylenes	106	7.971	7.971	(1.030)	2834918	400.000	370.57(A)
63	o-Xylene	106	8.308	8.308	(1.073)	1411763	200.000	182.21
M 95	Xylenes (total)	106				4246681	600.000	(a)
71	1,2,3-Trichloropropane	75	8.931	8.931	(0.918)	995064	200.000	186.13(M)
93	1,2,3-Trichlorobenzene	180	11.804	11.804	(1.214)	434971	200.000	229.09(A)
79	1,2,4-Trimethylbenzene	105	9.440	9.440	(0.971)	2458485	200.000	182.14
75	1,3,5-Trimethylbenzene	105	9.132	9.132	(0.939)	2334767	200.000	184.94
26	2,2-Dichloropropane	77	3.666	3.666	(0.848)	1425109	200.000	192.47
54	1,3-Dichloropropane	76	7.062	7.062	(0.912)	1555345	200.000	181.07
76	2-Chlorotoluene	91	9.039	9.039	(0.929)	2295489	200.000	183.35
77	4-Chlorotoluene	91	9.132	9.132	(0.939)	2679072	200.000	182.65
82	p-Isopropyltoluene	119	9.712	9.712	(0.999)	2038528	200.000	186.35
29	Bromochloromethane	128	3.960	3.960	(0.916)	409116	200.000	169.22
74	Bromobenzene	156	8.874	8.874	(0.912)	967507	200.000	186.03
44	Dibromomethane	93	5.658	5.658	(1.113)	595314	200.000	185.65
91	Hexachlorobutadiene	225	11.539	11.539	(1.186)	223916	200.000	205.36(A)
73	n-Propylbenzene	91	8.974	8.974	(0.923)	3504630	200.000	186.24
87	n-Butylbenzene	91	10.056	10.056	(1.034)	1721697	200.000	191.98
81	sec-Butylbenzene	105	9.583	9.583	(0.985)	2361299	200.000	186.99
92	Naphthalene	128	11.603	11.603	(1.193)	1535347	200.000	205.16(A)
78	tert-Butylbenzene	119	9.397	9.397	(0.966)	1713732	200.000	181.58
60	1,1,1,2-Tetrachloroethane	131	7.850	7.850	(1.014)	851183	200.000	184.08
64	Styrene	104	8.330	8.330	(1.076)	2582507	200.000	185.68

Data File: \\NAHSTWS003\Target\CHEM\VOA6.i\X171010.b\X101011.D
Report Date: 06-Feb-2018 11:27

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: \\NAHSTWS003\Target\CHEM\VOA6.i\X171010.b\X101011.D
Date : 10-OCT-2017 14:47
Client ID: VSTD200
Sample Info: VSTD200;VSTD200;1;10;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS003\Target\CHEM\VOA6.i\X171010.b\X101013.D
Report Date: 06-Feb-2018 11:27

ALS Laboratory Group

Data file : \\NAHSTWS003\Target\CHEM\VOA6.i\X171010.b\X101013.D
Lab Smp Id: VSTD-ICV Client Smp ID: VSTD-ICV
Inj Date : 10-OCT-2017 17:23
Operator : PC Inst ID: voa6.i
Smp Info : VSTD-ICV;VSTD-ICV;2;;ICV
Misc Info : HS16030331;WATER;0;1;
Comment :
Method : \\NAHSTWS003\Target\CHEM\VOA6.i\X171010.b\8260W.m
Meth Date : 06-Feb-2018 11:27 voa6.i Quant Type: ISTD
Cal Date : 10-OCT-2017 14:47 Cal File: X101011.D
Als bottle: 19 QC Sample: METHSPIKE
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: dn_bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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)
	31 1,1,1-Trichloroethane	97	4.232	4.240	(0.978)	330194	45.4590	45.45
*	1 Pentafluorobenzene	168	4.326	4.325	(1.000)	370294	50.0000	
$	30 Dibromofluoromethane	113	4.254	4.254	(0.983)	255846	48.0784	48.07
*	36 1,4-Difluorobenzene	114	5.085	5.085	(1.000)	622750	50.0000	
$	35 1,2-Dichloroethane-d4	65	4.612	4.612	(1.066)	312036	46.6210	46.62
*	47 Chlorobenzene-d5	117	7.742	7.742	(1.000)	624694	50.0000	
$	48 Toluene-d8	98	6.474	6.474	(0.836)	958829	49.6020	49.60
$	69 4-Bromofluorobenzene	95	8.752	8.752	(1.130)	325748	47.3203	47.32
*	70 1,4-Dichlorobenzene-d4	152	9.727	9.726	(1.000)	303011	50.0000	
	68 1,1,2,2-Tetrachloroethane	83	8.903	8.903	(0.915)	267608	49.8685	49.86
	53 1,1,2-Trichloroethane	83	6.919	6.926	(0.894)	186329	46.2126	46.21
	32 1,1-Dichloropropene	75	4.426	4.426	(0.870)	316212	46.7557	46.75
	22 1,1-Dichloroethane	63	3.072	3.079	(0.710)	452146	46.4912	46.49
	11 1,1-Dichloroethene	96	2.055	2.055	(0.475)	195702	45.6335	45.63
	90 1,2,4-Trichlorobenzene	180	11.396	11.395	(1.172)	139054	53.2072	53.20
	89 1,2-Dibromo-3-Chloropropane	155	10.715	10.715	(1.102)	33858	50.7719	50.77
	57 1,2-Dibromoethane	107	7.341	7.341	(0.948)	223641	47.4961	47.49
	88 1,2-Dichlorobenzene	146	10.056	10.056	(1.034)	351056	46.3437	46.34
	33 1,2-Dichloroethane	62	4.691	4.691	(0.923)	322761	46.4249	46.42
	42 1,2-Dichloropropane	63	5.543	5.543	(1.090)	270039	46.8970	46.89
	83 1,3-Dichlorobenzene	146	9.669	9.669	(0.994)	360182	46.2101	46.21
	84 1,4-Dichlorobenzene	146	9.748	9.748	(1.002)	372094	45.3276	45.32

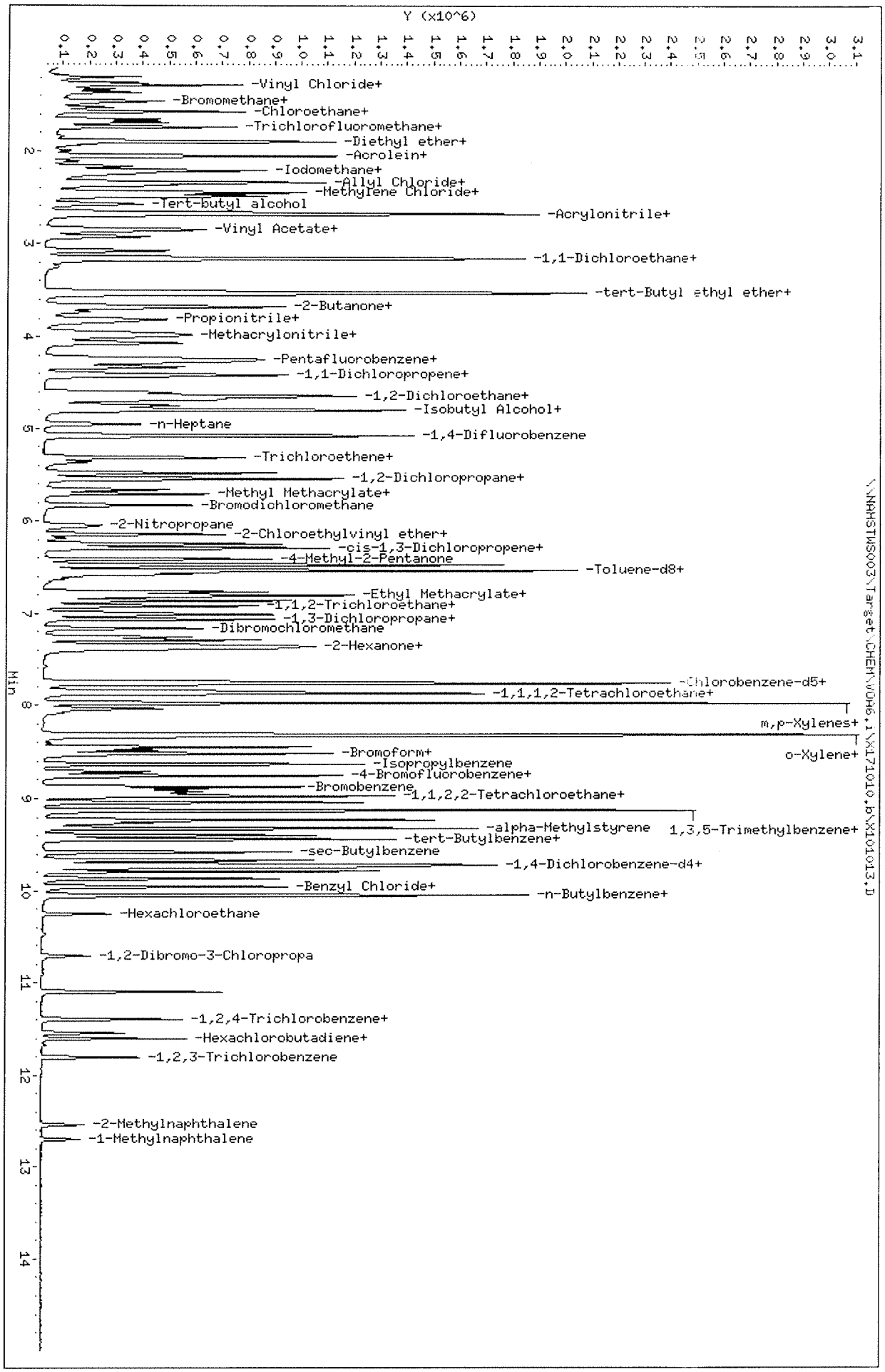
Data File: \\NAHSTWS003\Target\CHEM\VOA6.i\X171010.b\X101013.D
Report Date: 06-Feb-2018 11:27

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
24	2-Butanone	43	3.731	3.731	(0.863)	218264	99.6950	99.69
52	2-Hexanone	43	7.284	7.284	(0.941)	472262	92.2587	92.25
45	4-Methyl-2-Pentanone	43	6.410	6.410	(0.828)	494701	90.8977	90.89
10	Acetone	43	2.112	2.112	(0.488)	127869	97.6987	97.69
37	Benzene	78	4.648	4.648	(0.914)	970253	47.5242	47.52
39	Bromodichloromethane	83	5.830	5.830	(1.146)	332363	47.0953	47.09
66	Bromoform	173	8.480	8.480	(1.095)	159876	45.9304	45.93
6	Bromomethane	94	1.460	1.453	(0.338)	181883	50.6425	50.64
19	Carbon Disulfide	76	2.212	2.212	(0.512)	1244761	91.1516	91.15
34	Carbon Tetrachloride	117	4.412	4.411	(0.868)	264433	46.4233	46.42
59	Chlorobenzene	112	7.764	7.771	(1.003)	591722	46.7138	46.71
7	Chloroethane	64	1.525	1.525	(0.353)	170115	44.2763	44.27
28	Chloroform	83	4.068	4.068	(0.940)	418362	46.2859	46.28
3	Chloromethane	50	1.188	1.188	(0.275)	361661	48.1487	48.14
27	cis-1,2-Dichloroethene	96	3.681	3.688	(0.851)	261819	47.1443	47.14
46	cis-1,3-Dichloropropene	75	6.245	6.245	(1.228)	423935	47.0320	47.03
55	Dibromochloromethane	129	7.255	7.255	(0.937)	247866	46.9731	46.97
2	Dichlorodifluoromethane	85	1.081	1.081	(0.250)	213029	45.0132	45.01
61	Ethylbenzene	106	7.871	7.871	(1.017)	296509	46.5265	46.52
67	Isopropylbenzene	105	8.623	8.630	(1.114)	704708	45.9122	45.91
17	Methylene Chloride	84	2.449	2.449	(0.566)	257738	45.2266	45.22
56	Tetrachloroethene	164	7.012	7.012	(0.906)	154761	46.1570	46.15
50	Toluene	91	6.532	6.532	(0.844)	953124	47.4533	47.45
20	trans-1,2-Dichloroethene	96	2.678	2.678	(0.619)	229881	45.9521	45.95
51	trans-1,3-Dichloropropene	75	6.761	6.761	(1.330)	359920	46.6576	46.65
38	Trichloroethene	130	5.321	5.321	(1.046)	229756	45.8450	45.84
8	Trichlorofluoromethane	101	1.690	1.689	(0.391)	283071	45.6089	45.60
5	Vinyl Chloride	62	1.260	1.260	(0.291)	297435	46.9069	46.90
62	m,p-Xylenes	106	7.972	7.971	(1.030)	708897	93.0492	93.04
63	o-Xylene	106	8.308	8.308	(1.073)	353135	45.7666	45.76
M 95	Xylenes (total)	106				1062032	138.816	138.81
71	1,2,3-Trichloropropane	75	8.931	8.931	(0.918)	252976	47.7206	47.72(M)
93	1,2,3-Trichlorobenzene	180	11.804	11.804	(1.214)	103709	55.0826	55.08
79	1,2,4-Trimethylbenzene	105	9.440	9.440	(0.971)	611894	45.7169	45.71
75	1,3,5-Trimethylbenzene	105	9.132	9.132	(0.939)	574137	45.8614	45.86
26	2,2-Dichloropropane	77	3.667	3.666	(0.848)	352219	46.4903	46.49
54	1,3-Dichloropropane	76	7.062	7.062	(0.912)	392974	45.9397	45.93
76	2-Chlorotoluene	91	9.039	9.039	(0.929)	579988	46.7166	46.71
77	4-Chlorotoluene	91	9.132	9.132	(0.939)	668490	45.9611	45.96
82	p-Isopropyltoluene	119	9.712	9.712	(0.999)	486474	44.8463	44.84
29	Bromochloromethane	128	3.953	3.960	(0.914)	110435	44.6444	44.64
74	Bromobenzene	156	8.874	8.874	(0.912)	244977	47.5018	47.50
44	Dibromomethane	93	5.658	5.658	(1.113)	154779	46.9112	46.91
91	Hexachlorobutadiene	225	11.539	11.539	(1.186)	50463	47.1479	47.14
73	n-Propylbenzene	91	8.974	8.974	(0.923)	843895	45.2251	45.22
87	n-Butylbenzene	91	10.056	10.056	(1.034)	407779	45.8544	45.85
81	sec-Butylbenzene	105	9.583	9.583	(0.985)	541614	43.2532	43.25
92	Naphthalene	128	11.603	11.603	(1.193)	360854	50.8950	50.89
78	tert-Butylbenzene	119	9.397	9.397	(0.966)	408431	43.6405	43.64
60	1,1,1,2-Tetrachloroethane	131	7.850	7.850	(1.014)	211205	45.8657	45.86
64	Styrene	104	8.323	8.330	(1.075)	650153	46.9398	46.93

Data File: \\NAHSTWS003\Target\CHEM\VOA6.i\X171010.b\X101013.D
Report Date: 06-Feb-2018 11:27

QC Flag Legend

M - Compound response manually integrated.



Data File: \\NAHSTWS003\Target\CHEM\VOA6,i\XI71019,b\X101013,D
Date : 19-OCT-2017 17:23
Client ID: VSTD-ICV
Sample Info: VSTD-ICV;VSTD-ICV;2;;ICV
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6,i
Operator: PC
Column diameter: 0.18

FORM 5
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS17100712

Lab File ID: X101701 BFB Injection Date: 10/17/17

Instrument ID: VOA6 BFB Injection Time: 1041

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	19.2
75	30.0 - 60.0% of mass 95	47.2
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.6
173	Less than 2.0% of mass 174	0.7 (0.9)1
174	Greater than 50.0% of mass 95	76.4
175	5.0 - 9.0% of mass 174	5.6 (7.3)1
176	95.0 - 101.0% of mass 174	73.5 (96.3)1
177	5.0 - 9.0% of mass 176	4.8 (6.5)2

1-Value is % mass 174 2-Value is % mass 176

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD050	VSTD050	X101702	10/17/17	1106
02	VLCSW-171017	VLCSW-171017	X101704	10/17/17	1155
03	VBLKW-017101	VBLKW-171017	X101707	10/17/17	1322
04	HS17100712-0	HS17100712-02	X101710	10/17/17	1437
05	HS17100712-0	HS17100712-02N	X101716	10/17/17	1706
06	HS17100712-0	HS17100712-01	X101717	10/17/17	1731
07	HS17100646-0	HS17100646-08M	X101718	10/17/17	1756
08	HS17100646-0	HS17100646-08M	X101719	10/17/17	1821
09	VSTD050-END	VSTD050-END	X101729	10/17/17	2230
10					
11					
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20					
21					
22					

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS17100712

Instrument ID: VOA6 Calibration Date: 10/17/17 Time: 1106

Lab File ID: X101702 Init. Calib. Date(s): 10/10/17 10/10/17

Init. Calib. Times: 1014 1447

GC Column: DB624 ID: 0.18 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Dichlorodifluoromethane	0.6390000	0.5586677	0.5586677	0.1	12.57	20.00	AVRG
Chloromethane	49.129296	50.000000	0.9966888	0.1	1.74	20.00	LINR
Vinyl Chloride	0.8560000	0.8200031	0.8200031	0.1	4.20	20.00	AVRG
Bromomethane	0.4850000	0.4756737	0.4756737	0.1	1.92	20.00	AVRG
Chloroethane	0.5190000	0.4705438	0.4705438	0.1	9.34	20.00	AVRG
Trichlorofluoromethane	0.8380000	0.7083587	0.7083587	0.1	15.47	20.00	AVRG
Acetone	100.28626	100.00000	0.1770897	0.1	-0.29	20.00	LINR
1,1-Dichloroethene	0.5790000	0.5443247	0.5443247	0.1	5.99	20.00	AVRG
Methylene Chloride	0.7690000	0.7137354	0.7137354	0.1	7.19	20.00	AVRG
Carbon Disulfide	1.8440000	1.7466739	1.7466739	0.1	5.28	20.00	AVRG
trans-1,2-Dichloroethene	0.6750000	0.6388362	0.6388362	0.1	5.36	20.00	AVRG
1,1-Dichloroethane	1.3130000	1.2656853	1.2656853	0.2	3.60	20.00	AVRG
2-Butanone	0.2960000	0.2860935	0.2860935	0.1	3.35	20.00	AVRG
cis-1,2-Dichloroethene	0.7500000	0.7286913	0.7286913	0.1	2.84	20.00	AVRG
Chloroform	1.2200000	1.1641574	1.1641574	0.2	4.58	20.00	AVRG
1,1,1-Trichloroethane	0.9810000	0.8994631	0.8994631	0.1	8.31	20.00	AVRG
1,2-Dichloroethane	0.5580000	0.5057684	0.5057684	0.1	9.36	20.00	AVRG
Carbon Tetrachloride	0.4570000	0.4114089	0.4114089	0.1	9.98	20.00	AVRG
Benzene	1.6390000	1.5530203	1.5530203	0.5	5.24	20.00	AVRG
Trichloroethene	0.4020000	0.3671890	0.3671890	0.2	8.66	20.00	AVRG
Styrene	1.1080000	1.0148802	1.0148802	0.3	8.40	20.00	AVRG
Bromodichloromethane	0.5660000	0.5249323	0.5249323	0.2	7.26	20.00	AVRG
1,2-Dichloropropane	0.4620000	0.4362335	0.4362335	0.1	5.58	20.00	AVRG
4-Methyl-2-Pentanone	0.4360000	0.3723044	0.3723044	0.1	14.61	20.00	AVRG
cis-1,3-Dichloropropene	0.7240000	0.6847106	0.6847106	0.2	5.43	20.00	AVRG
Toluene	1.6080000	1.4958094	1.4958094	0.4	6.98	20.00	AVRG
trans-1,3-Dichloropropene	0.6190000	0.5714600	0.5714600	0.1	7.68	20.00	AVRG
2-Hexanone	0.4090000	0.3602252	0.3602252	0.1	11.92	20.00	AVRG
1,1,2-Trichloroethane	0.3230000	0.2879060	0.2879060	0.1	10.86	20.00	AVRG
Dibromochloromethane	0.4220000	0.3882209	0.3882209	0.1	8.00	20.00	AVRG
Tetrachloroethene	0.2680000	0.2386105	0.2386105	0.2	10.97	20.00	AVRG
1,2-Dibromoethane	0.3770000	0.3395189	0.3395189	0.1	9.94	20.00	AVRG
Chlorobenzene	1.0140000	0.9268858	0.9268858	0.5	8.59	20.00	AVRG
Ethylbenzene	0.5100000	0.4600711	0.4600711	0.1	9.79	20.00	AVRG
m,p-Xylenes	0.6100000	0.5475456	0.5475456	0.1	10.24	20.00	AVRG
o-Xylene	0.6180000	0.5539936	0.5539936	0.3	10.36	20.00	AVRG
Bromoform	0.2780000	0.2465274	0.2465274	0.1	11.32	20.00	AVRG
Isopropylbenzene	1.2280000	1.1053708	1.1053708	0.1	9.99	20.00	AVRG
1,1,2,2-Tetrachloroethane	46.497146	50.000000	0.8246090	0.3	7.00	20.00	LINR
tert-Butylbenzene	1.5440000	1.3632630	1.3632630	0.1	11.70	20.00	AVRG
n-Propylbenzene	3.0790000	2.7713200	2.7713200	0.1	9.99	20.00	AVRG
n-Butylbenzene	1.4670000	1.4397868	1.4397868	0.5	1.86	20.00	AVRG

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS1710071

Instrument ID: VOA6 Calibration Date: 10/17/17 Time: 1106

Lab File ID: X101702 Init. Calib. Date(s): 10/10/17 10/10/17

Init. Calib. Times: 1014 1447

GC Column: DB624 ID: 0.18 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
1,1-Dichloropropene	0.5430000	0.4958977	0.4958977	0.1	8.67	20.00	AVRG
Bromochloromethane	0.3340000	0.3127739	0.3127739	0.1	6.36	20.00	AVRG
p-Isopropyltoluene	1.7900000	1.6534141	1.6534141	0.1	7.63	20.00	AVRG
4-Chlorotoluene	2.4000000	2.1878999	2.1878999	0.1	8.84	20.00	AVRG
1,3-Dichlorobenzene	1.2860000	1.1570524	1.1570524	0.6	10.03	20.00	AVRG
Hexachlorobutadiene	49.655367	50.000000	0.1755124	0.1	0.69	20.00	LINR
Dibromomethane	0.2650000	0.2422068	0.2422068	0.1	8.60	20.00	AVRG
sec-Butylbenzene	2.0660000	1.8636900	1.8636900	0.1	9.79	20.00	AVRG
Naphthalene	45.916577	50.000000	1.0671748	0.2	8.17	20.00	LINR
Xylenes (total)	0.6170000	0.5561425	0.5561425	0.1	9.86	20.00	AVRG
1,2,3-Trichloropropane	0.8750000	0.7995725	0.7995725	0.1	8.62	20.00	AVRG
1,2,3-Trichlorobenzene	0.3110000	0.3012271	0.3012271	0.1	3.14	20.00	AVRG
1,2,4-Trimethylbenzene	2.2080000	2.0048262	2.0048262	0.1	9.20	20.00	AVRG
1,3,5-Trimethylbenzene	2.0660000	1.8732771	1.8732771	0.1	9.33	20.00	AVRG
2,2-Dichloropropane	1.0230000	0.9643015	0.9643015	0.1	5.74	20.00	AVRG
1,3-Dichloropropane	0.6850000	0.6134327	0.6134327	0.1	10.45	20.00	AVRG
2-Chlorotoluene	2.0480000	1.8714334	1.8714334	0.1	8.62	20.00	AVRG
Bromobenzene	0.8510000	0.7803143	0.7803143	0.1	8.31	20.00	AVRG
1,4-Dichlorobenzene	1.3540000	1.2058745	1.2058745	0.4	10.94	20.00	AVRG
1,1,1,2-Tetrachloroethane	0.3680000	0.3294409	0.3294409	0.1	10.48	20.00	AVRG
1,2-Dichlorobenzene	1.2500000	1.1129817	1.1129817	0.4	10.96	20.00	AVRG
1,2-Dibromo-3-Chloropropane	44.833975	50.000000	9.86e-002	0.05	10.33	20.00	LINR
1,2,4-Trichlorobenzene	0.4310000	0.4263070	0.4263070	0.2	1.09	20.00	AVRG
1,2-Dichloroethane-d4	47.023299	50.000000	0.8500623	0.1	5.95	20.00	2RDR
Toluene-d8	48.394731	50.000000	1.4961854	0.1	3.21	20.00	2RDR
4-Bromofluorobenzene	47.289556	50.000000	0.5211050	0.1	5.42	20.00	2RDR
Dibromofluoromethane	48.936788	50.000000	0.7036467	0.1	2.13	20.00	2RDR

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS17100712

Instrument ID: VOA6 Calibration Date: 10/17/17 Time: 2230

Lab File ID: X101729 Init. Calib. Date(s): 10/10/17 10/10/17

Init. Calib. Times: 1014 1447

GC Column: DB624 ID: 0.18 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Dichlorodifluoromethane	0.6390000	0.5495423	0.5495423	0.1	14.00	50.00	AVRG
Chloromethane	48.201585	50.000000	0.9777667	0.1	3.60	50.00	LINR
Vinyl Chloride	0.8560000	0.8069255	0.8069255	0.1	5.73	50.00	AVRG
Bromomethane	0.4850000	0.4636971	0.4636971	0.1	4.39	50.00	AVRG
Chloroethane	0.5190000	0.4619418	0.4619418	0.1	10.99	50.00	AVRG
Trichlorofluoromethane	0.8380000	0.7272793	0.7272793	0.1	13.21	50.00	AVRG
Acetone	120.58977	100.00000	0.2118542	0.1	-20.59	50.00	LINR
1,1-Dichloroethene	0.5790000	0.5411996	0.5411996	0.1	6.53	50.00	AVRG
Methylene Chloride	0.7690000	0.7268947	0.7268947	0.1	5.48	50.00	AVRG
Carbon Disulfide	1.8440000	1.6920141	1.6920141	0.1	8.24	50.00	AVRG
trans-1,2-Dichloroethene	0.6750000	0.6336930	0.6336930	0.1	6.12	50.00	AVRG
1,1-Dichloroethane	1.3130000	1.2577754	1.2577754	0.2	4.20	50.00	AVRG
2-Butanone	0.2960000	0.3517462	0.3517462	0.1	-18.83	50.00	AVRG
cis-1,2-Dichloroethene	0.7500000	0.7240427	0.7240427	0.1	3.46	50.00	AVRG
Chloroform	1.2200000	1.1587479	1.1587479	0.2	5.02	50.00	AVRG
1,1,1-Trichloroethane	0.9810000	0.8778520	0.8778520	0.1	10.51	50.00	AVRG
1,2-Dichloroethane	0.5580000	0.5174167	0.5174167	0.1	7.27	50.00	AVRG
Carbon Tetrachloride	0.4570000	0.3956738	0.3956738	0.1	13.42	50.00	AVRG
Benzene	1.6390000	1.5309599	1.5309599	0.5	6.59	50.00	AVRG
Trichloroethene	0.4020000	0.3580439	0.3580439	0.2	10.93	50.00	AVRG
Styrene	1.1080000	0.9954742	0.9954742	0.3	10.16	50.00	AVRG
Bromodichloromethane	0.5660000	0.5247218	0.5247218	0.2	7.29	50.00	AVRG
1,2-Dichloropropane	0.4620000	0.4360784	0.4360784	0.1	5.61	50.00	AVRG
4-Methyl-2-Pentanone	0.4360000	0.4439960	0.4439960	0.1	-1.83	50.00	AVRG
cis-1,3-Dichloropropene	0.7240000	0.6616435	0.6616435	0.2	8.61	50.00	AVRG
Toluene	1.6080000	1.4392242	1.4392242	0.4	10.50	50.00	AVRG
trans-1,3-Dichloropropene	0.6190000	0.5691321	0.5691321	0.1	8.06	50.00	AVRG
2-Hexanone	0.4090000	0.4149166	0.4149166	0.1	-1.45	50.00	AVRG
1,1,2-Trichloroethane	0.3230000	0.3019960	0.3019960	0.1	6.50	50.00	AVRG
Dibromochloromethane	0.4220000	0.3933909	0.3933909	0.1	6.78	50.00	AVRG
Tetrachloroethene	0.2680000	0.2193104	0.2193104	0.2	18.17	50.00	AVRG
1,2-Dibromoethane	0.3770000	0.3633346	0.3633346	0.1	3.62	50.00	AVRG
Chlorobenzene	1.0140000	0.9055644	0.9055644	0.5	10.69	50.00	AVRG
Ethylbenzene	0.5100000	0.4349124	0.4349124	0.1	14.72	50.00	AVRG
m,p-Xylenes	0.6100000	0.5244060	0.5244060	0.1	14.03	50.00	AVRG
o-Xylene	0.6180000	0.5388831	0.5388831	0.3	12.80	50.00	AVRG
Bromoform	0.2780000	0.2648847	0.2648847	0.1	4.72	50.00	AVRG
Isopropylbenzene	1.2280000	1.0188884	1.0188884	0.1	17.03	50.00	AVRG
1,1,2,2-Tetrachloroethane	51.180104	50.000000	0.9059431	0.3	-2.36	50.00	LINR
tert-Butylbenzene	1.5440000	1.1655972	1.1655972	0.1	24.51	50.00	AVRG
n-Propylbenzene	3.0790000	2.4734735	2.4734735	0.1	19.67	50.00	AVRG
n-Butylbenzene	1.4670000	1.1116864	1.1116864	0.5	24.22	50.00	AVRG

FORM VII VOA

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS1710071

Instrument ID: VOA6 Calibration Date: 10/17/17 Time: 2230

Lab File ID: X101729 Init. Calib. Date(s): 10/10/17 10/10/17

Init. Calib. Times: 1014 1447

GC Column: DB624 ID: 0.18 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
1,1-Dichloropropene	0.5430000	0.4795244	0.4795244	0.1	11.69	50.00	AVRG
Bromochloromethane	0.3340000	0.3192054	0.3192054	0.1	4.43	50.00	AVRG
p-Isopropyltoluene	1.7900000	1.3530006	1.3530006	0.1	24.41	50.00	AVRG
4-Chlorotoluene	2.4000000	2.0476459	2.0476459	0.1	14.68	50.00	AVRG
1,3-Dichlorobenzene	1.2860000	1.0835027	1.0835027	0.6	15.75	50.00	AVRG
Hexachlorobutadiene	32.016328	50.000000	0.1123839	0.1	35.97	50.00	LINR
Dibromomethane	0.2650000	0.2523609	0.2523609	0.1	4.77	50.00	AVRG
sec-Butylbenzene	2.0660000	1.5233723	1.5233723	0.1	26.26	50.00	AVRG
Naphthalene	45.248775	50.000000	1.0505791	0.2	9.50	50.00	LINR
Xylenes (total)	0.6170000	0.5407745	0.5407745	0.1	12.35	50.00	AVRG
1,2,3-Trichloropropane	0.8750000	0.8852548	0.8852548	0.1	-1.17	50.00	AVRG
1,2,3-Trichlorobenzene	0.3110000	0.2804031	0.2804031	0.1	9.84	50.00	AVRG
1,2,4-Trimethylbenzene	2.2080000	1.8264827	1.8264827	0.1	17.28	50.00	AVRG
1,3,5-Trimethylbenzene	2.0660000	1.6749925	1.6749925	0.1	18.92	50.00	AVRG
2,2-Dichloropropane	1.0230000	0.8494007	0.8494007	0.1	16.97	50.00	AVRG
1,3-Dichloropropane	0.6850000	0.6291866	0.6291866	0.1	8.15	50.00	AVRG
2-Chlorotoluene	2.0480000	1.7537466	1.7537466	0.1	14.37	50.00	AVRG
Bromobenzene	0.8510000	0.7572864	0.7572864	0.1	11.01	50.00	AVRG
1,4-Dichlorobenzene	1.3540000	1.1429203	1.1429203	0.4	15.59	50.00	AVRG
1,1,1,2-Tetrachloroethane	0.3680000	0.3224957	0.3224957	0.1	12.36	50.00	AVRG
1,2-Dichlorobenzene	1.2500000	1.0799283	1.0799283	0.4	13.60	50.00	AVRG
1,2-Dibromo-3-Chloropropane	51.642422	50.000000	0.1136577	0.05	-3.28	50.00	LINR
1,2,4-Trichlorobenzene	0.4310000	0.3825664	0.3825664	0.2	11.24	50.00	AVRG
1,2-Dichloroethane-d4	49.764269	50.000000	0.9004699	0.1	0.47	50.00	2RDR
Toluene-d8	49.276341	50.000000	1.5244327	0.1	1.45	50.00	2RDR
4-Bromofluorobenzene	48.391103	50.000000	0.5335527	0.1	3.22	50.00	2RDR
Dibromofluoromethane	49.959418	50.000000	0.7188223	0.1	0.08	50.00	2RDR

FORM 8
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS17100712

Lab File ID (Standard): X101702 Date Analyzed: 10/17/17

Instrument ID: VOA6 Time Analyzed: 1106

GC Column: DB624 ID: 0.18 (mm) Heated Purge: (Y/N) N

		IS1(CBZ) AREA #	IS1(CBZ) RT #	IS2(DCB) AREA #	IS2(DCB) RT #	IS3(DFB) AREA #	IS3(DFB) RT #
	12 HOUR STD	441460	7.74	214247	9.73	436342	5.09
	UPPER LIMIT	882920	8.24	428494	10.23	872684	5.59
	LOWER LIMIT	220730	7.24	107124	9.23	218171	4.59
	CLIENT SAMPLE NO.						
01	VLCSW-171017	445724	7.74	217912	9.73	432941	5.09
02	VBLKW-0171017	454656	7.74	224663	9.73	445417	5.09
03	HS17100712-02	466383	7.74	215342	9.73	453759	5.09
04	HS17100712-02	474483	7.74	224065	9.73	458489	5.09
05	HS17100712-01	460888	7.74	227337	9.73	456008	5.09
06	HS17100646-08	439462	7.74	219410	9.73	420327	5.09
07	HS17100646-08	450323	7.74	224739	9.73	441473	5.09
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

IS1 (CBZ) = Chlorobenzene-d5
IS2 (DCB) = 1,4-Dichlorobenzene-d4
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 VIII VOA

FORM 8
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS17100712

Lab File ID (Standard): X101702 Date Analyzed: 10/17/17

Instrument ID: VOA6 Time Analyzed: 1106

GC Column: DB624 ID: 0.18 (mm) Heated Purge: (Y/N) N

		IS4 AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	251271	4.33				
	UPPER LIMIT	502542	4.83				
	LOWER LIMIT	125636	3.83				
	CLIENT SAMPLE NO.						
01	VLCSW-171017	252694	4.33				
02	VBLKW-0171017	255815	4.33				
03	HS17100712-02	260776	4.33				
04	HS17100712-02	263605	4.33				
05	HS17100712-01	263025	4.33				
06	HS17100646-08	248793	4.33				
07	HS17100646-08	254441	4.33				
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

IS4 = Pentafluorobenzene

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

FORM VIII VOA

MSVOA06 -Logbook

Batch: 29522
Date: 10-17-2017
Method: 8260
Comments:

Analyst: Presenta Cabascango
Reviewer:
Laboratory: Houston

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
1	BFB	TUNE	10-17-2017 10:41 am	1.00	50 mL	50 mL	X101701.D	Liquid	Y	na
	auto find/ purged									
2	VSTD050	CCV	10-17-2017 11:06 am	1.00	50 mL	50 mL	X101702.D	Liquid	Y	na
	10 uL cal std/50 mL DI									
3	CCB	SAMP	10-17-2017 11:30 am	1.00	50 mL	50 mL	X101703.D	Liquid	Y	na
4	VLCSW-171017	LCS	10-17-2017 11:55 am	1.00	50 mL	50 mL	X101704.D	Liquid	Y	na
	10 uL cal std/50 mL DI									
5	BLKW	SAMP	10-17-2017 12:32 pm	1.00	50 mL	50 mL	X101705.D	Liquid	Y	na
6	BLKW	SAMP	10-17-2017 12:57 pm	1.00	50 mL	50 mL	X101706.D	Liquid	Y	na
7	VBLKW-171017	MBLK	10-17-2017 01:22 pm	1.00	50 mL	50 mL	X101707.D	Liquid	Y	na
8	HS17100526-01	SAMP	10-17-2017 01:47 pm	1.00	50 mL	50 mL	X101708.D	Liquid	Y	<2
9	HS17100524-01	SAMP	10-17-2017 02:12 pm	1.00	50 mL	50 mL	X101709.D	Liquid	Y	<2
10	HS17100712-02	SAMP	10-17-2017 02:37 pm	1.00	50 mL	50 mL	X101710.D	Liquid	Y	<2
11	HS17100524-02	SAMP	10-17-2017 03:02 pm	1.00	50 mL	50 mL	X101711.D	Liquid	Y	<2
12	HS17100646-04	SAMP	10-17-2017 03:27 pm	1.00	50 mL	50 mL	X101712.D	Liquid	Y	<2
13	HS17100646-05	SAMP	10-17-2017 03:52 pm	1.00	50 mL	50 mL	X101713.D	Liquid	Y	<2
14	HS17100646-06	SAMP	10-17-2017 04:17 pm	1.00	50 mL	50 mL	X101714.D	Liquid	Y	<2
15	HS17100646-08	SAMP	10-17-2017 04:42 pm	1.00	50 mL	50 mL	X101715.D	Liquid	Y	<2
16	HS17100712-02n/r	SAMP	10-17-2017 05:06 pm	1.00	50 mL	50 mL	X101716.D	Liquid	Y	<2
17	HS17100712-01	SAMP	10-17-2017 05:31 pm	1.00	50 mL	50 mL	X101717.D	Liquid	Y	<2
18	HS17100646-08MS	MS	10-17-2017 05:56 pm	1.00	50 mL	50 mL	X101718.D	Liquid	Y	<2
	5 uL cal std/25 mL sample									
19	HS17100646-08MSD	MSD	10-17-2017 06:21 pm	1.00	50 mL	50 mL	X101719.D	Liquid	Y	<2
	5 uL cal std/25 mL sample									
20	HS17100643-13	SAMP	10-17-2017 06:46 pm	10.00	5 mL	50 mL	X101720.D	Liquid	Y	<2
21	HS17100643-05	SAMP	10-17-2017 07:11 pm	25.00	2 mL	50 mL	X101721.D	Liquid	Y	<2
22	HS17100524-02	SAMP	10-17-2017 07:36 pm	5.00	10 mL	50 mL	X101722.D	Liquid	Y	<2
23	HS17100643-04	SAMP	10-17-2017 08:00 pm	100.0(	500 µL	50 mL	X101723.D	Liquid	Y	<2
24	HS17100643-06	SAMP	10-17-2017 08:25 pm	100.0(	500 µL	50 mL	X101724.D	Liquid	Y	<2
25	HS17100643-15	SAMP	10-17-2017 08:50 pm	100.0(	500 µL	50 mL	X101725.D	Liquid	Y	<2
26	HS17100646-09	SAMP	10-17-2017 09:15 pm	1.00	50 mL	50 mL	X101726.D	Liquid	Y	<2
27	HS17100770-01	SAMP	10-17-2017 09:40 pm	1.00	50 mL	50 mL	X101727.D	Liquid	Y	<2
28	HS17100646-10	SAMP	10-17-2017 10:05 pm	1.00	50 mL	50 mL	X101728.D	Liquid	Y	<2
29	VSTD050-END	CCV	10-17-2017 10:30 pm	1.00	50 mL	50 mL	X101729.D	Liquid	Y	<2na
	10 uL cal std/50 mL DI									

Chemical	Value
SURR SPK ID	29810-98-03
IS ID	29810-98-04
LCS/MS ID	29810-98-01/02
BFB ID	29810-98-03
pH Paper	634-37-03

Data File: \\NAHSTWS003\Target\CHEM\VOA6.i\X171017.b\X101701.D

Date : 17-OCT-2017 10:41

Client ID: BFB

Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

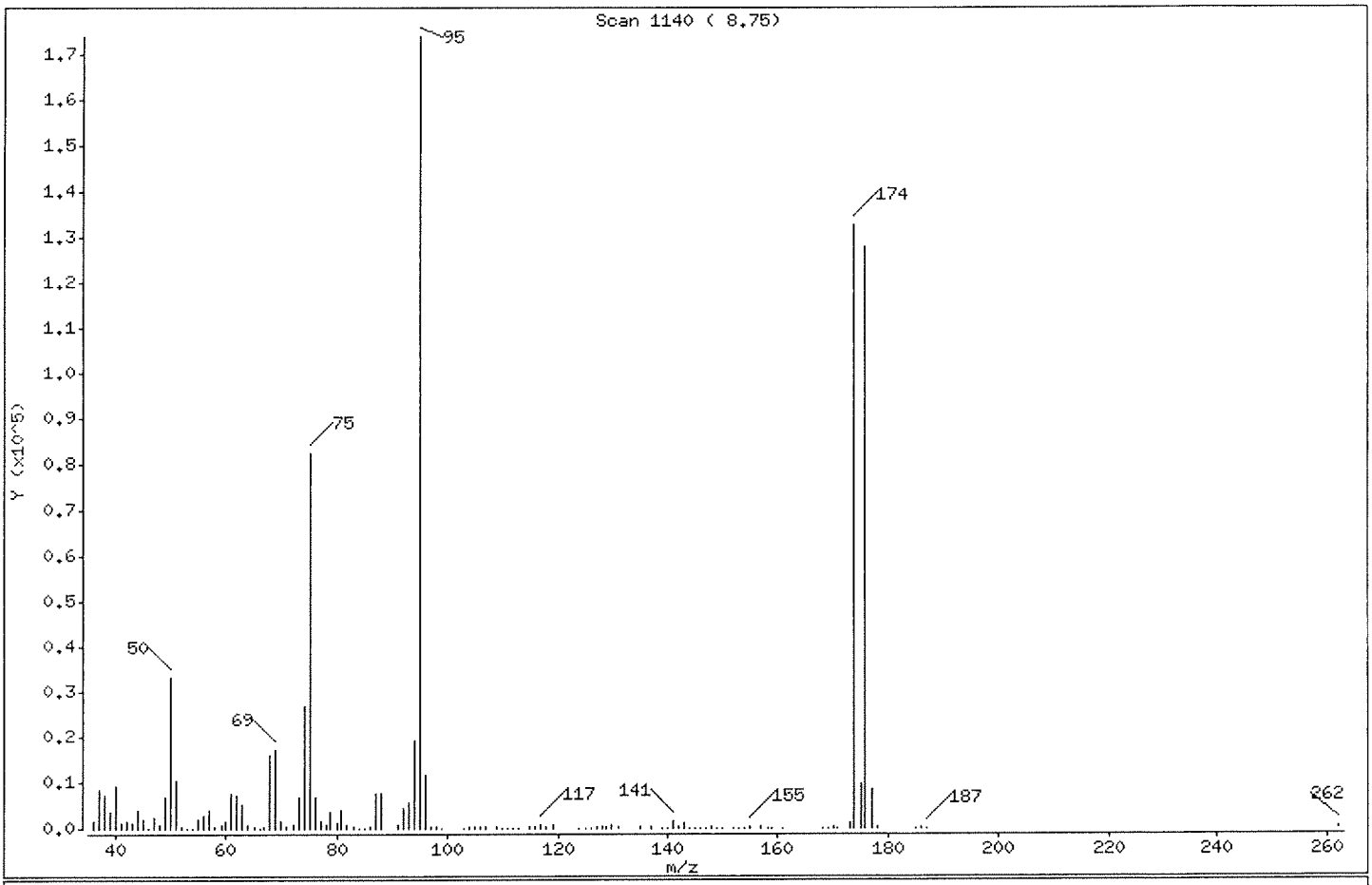
Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	19.19
75	30.00 - 60.00% of mass 95	47.24
96	5.00 - 9.00% of mass 95	6.58
173	Less than 2.00% of mass 174	0.67 (0.88)
174	Greater than 50.00% of mass 95	76.39
175	5.00 - 9.00% of mass 174	5.60 (7.33)
176	95.00 - 101.00% of mass 174	73.54 (96.27)
177	5.00 - 9.00% of mass 176	4.82 (6.55)

Data File: \\NAHSTWS003\Target\CHEM\VOA6.i\X171017.b\X101701.D

Date : 17-OCT-2017 10:41

Client ID: BFB

Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25

Data File: X101701.D
Spectrum: Scan 1140 (8.75)
Location of Maximum: 95.00
Number of points: 121

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.10	1445	67.00	556	102.90	81	144.90	72
37.10	8418	68.00	16160	103.90	540	145.80	162
38.10	7308	69.00	17240	104.90	284	146.90	111
39.10	3547	70.00	1721	105.90	510	147.90	310
40.00	9218	71.00	223	106.90	248	148.90	114
41.10	1060	72.00	836	108.90	276	149.90	105
42.10	1412	73.00	6676	110.00	124	151.80	108
43.00	1038	74.00	26816	111.00	55	152.90	106
44.00	4099	75.00	82208	111.90	61	153.90	131
45.00	2025	76.00	6900	112.80	90	154.90	480
45.90	87	77.00	1439	115.00	371	156.80	385
47.00	2391	78.00	896	116.00	533	158.10	70
47.90	997	78.90	3708	117.00	850	158.90	124
49.00	6974	80.00	1254	117.80	545	160.80	155
50.00	33400	80.90	3990	119.00	818	168.10	85
51.00	10369	81.90	866	123.80	55	169.10	141
52.10	482	83.10	279	125.10	69	170.10	338
52.90	157	84.10	81	126.10	62	170.90	128
54.00	150	85.10	59	127.00	224	173.00	1168
55.10	2198	86.00	277	128.00	592	173.90	132928
56.00	2637	87.00	7467	128.90	443	175.00	9745
57.00	4183	88.00	7753	129.80	618	175.90	127968
58.00	272	91.00	682	130.90	223	177.00	8379
59.10	631	92.00	4271	134.90	231	177.90	223
60.00	1761	93.00	5588	136.90	219	185.10	122
61.00	7612	94.00	19120	139.10	62	186.00	584
62.00	7236	95.00	174016	140.10	127	187.10	73
63.00	5233	96.00	11451	140.90	1614	262.10	228
64.00	667	97.00	340	141.90	326		
65.10	298	97.90	497	142.90	1270		
66.10	180	98.90	57	144.00	76		

Data File: \\NAHSTWS003\Target\CHEM\VOA6.i\X171017.b\X101701.D

Date : 17-OCT-2017 10:41

Client ID: BFB

Instrument: voa6.i

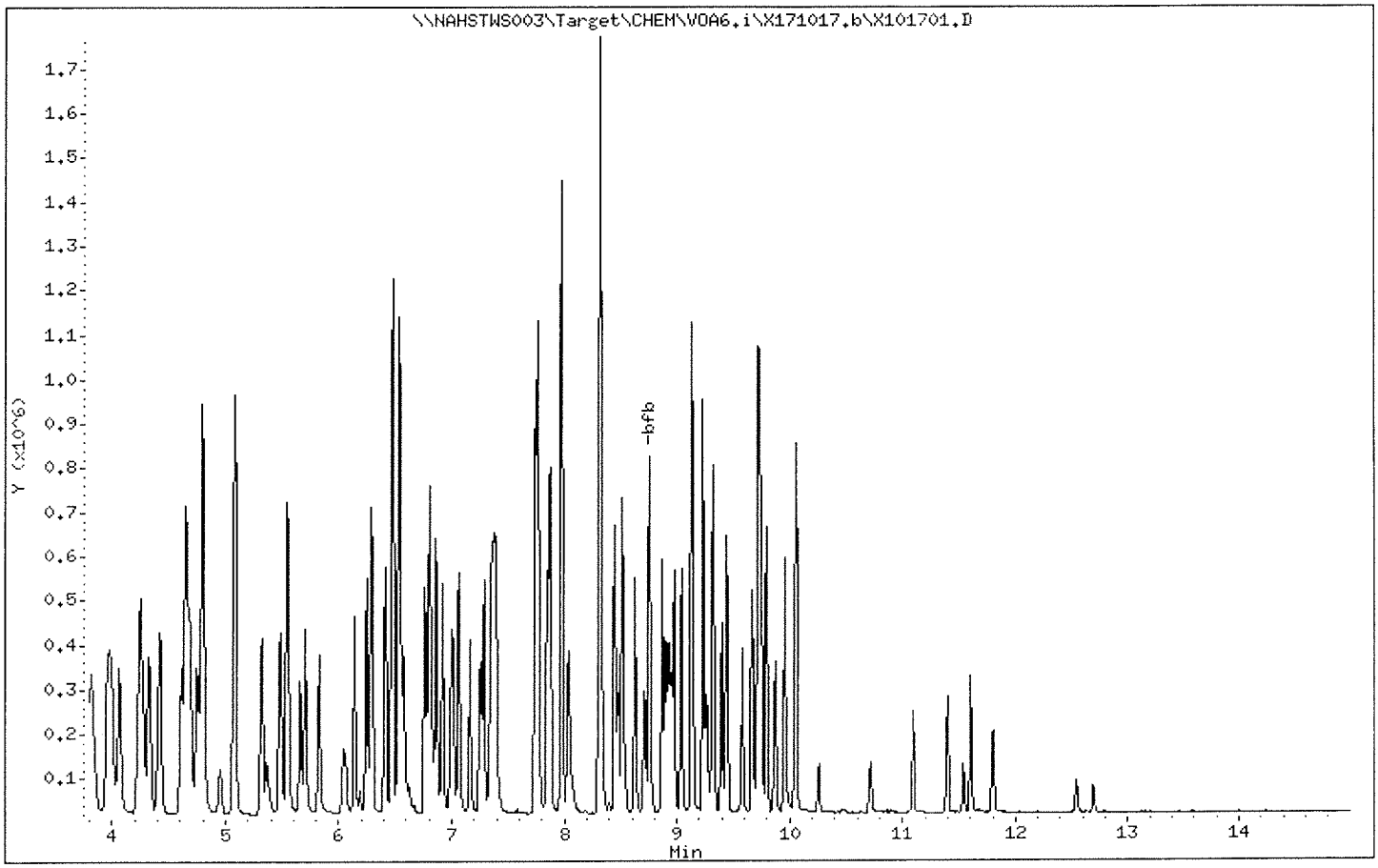
Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25



Data File: \\NAHSTWS003\Target\CHEM\VOA6.i\X171017.b\X101702.D Version 16
Report Date: 06-Feb-2018 11:39

ALS Laboratory Group

Data file : \\NAHSTWS003\Target\CHEM\VOA6.i\X171017.b\X101702.D
Lab Smp Id: VSTD050 Client Smp ID: VSTD050
Inj Date : 17-OCT-2017 11:06
Operator : PC Inst ID: voa6.i
Smp Info : VSTD050;VSTD050;2;;
Misc Info : HS16030331;WATER;0;1;
Comment   :
Method   : \\nahstws003\Target\chem\voa6.i\X171017.b\8260W.m
Meth Date : 06-Feb-2018 11:39 voa6.i Quant Type: ISTD
Cal Date : 10-OCT-2017 13:33 Cal File: X101008.D
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: dn_bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

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

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
31	1,1,1-Trichloroethane	97	4.240	4.240	(0.980)	226009	50.0000	45.85
* 1	Pentafluorobenzene	168	4.326	4.326	(1.000)	251271	50.0000	
$ 30	Dibromofluoromethane	113	4.254	4.254	(0.983)	176806	50.0000	48.93
* 36	1,4-Difluorobenzene	114	5.085	5.085	(1.000)	436342	50.0000	
$ 35	1,2-Dichloroethane-d4	65	4.612	4.612	(1.066)	213596	50.0000	47.02
* 47	Chlorobenzene-d5	117	7.742	7.742	(1.000)	441460	50.0000	
$ 48	Toluene-d8	98	6.474	6.474	(0.836)	660506	50.0000	48.39
$ 69	4-Bromofluorobenzene	95	8.752	8.752	(1.130)	230047	50.0000	47.28
* 70	1,4-Dichlorobenzene-d4	152	9.726	9.726	(1.000)	214247	50.0000	
68	1,1,2,2-Tetrachloroethane	83	8.903	8.903	(0.915)	176670	50.0000	46.49
53	1,1,2-Trichloroethane	83	6.919	6.919	(0.894)	127099	50.0000	44.60
32	1,1-Dichloropropene	75	4.426	4.426	(0.870)	216381	50.0000	45.66
22	1,1-Dichloroethane	63	3.072	3.072	(0.710)	318030	50.0000	48.19
11	1,1-Dichloroethene	96	2.055	2.055	(0.475)	136773	50.0000	46.99
90	1,2,4-Trichlorobenzene	180	11.395	11.395	(1.172)	91335	50.0000	49.42
89	1,2-Dibromo-3-Chloropropane	155	10.715	10.715	(1.102)	21135	50.0000	44.83
57	1,2-Dibromoethane	107	7.341	7.341	(0.948)	149884	50.0000	45.04
88	1,2-Dichlorobenzene	146	10.056	10.056	(1.034)	238453	50.0000	44.52
33	1,2-Dichloroethane	62	4.691	4.691	(0.923)	220688	50.0000	45.30
42	1,2-Dichloropropane	63	5.543	5.543	(1.090)	190347	50.0000	47.17
83	1,3-Dichlorobenzene	146	9.669	9.669	(0.994)	247895	50.0000	44.98
84	1,4-Dichlorobenzene	146	9.741	9.741	(1.001)	258355	50.0000	44.51

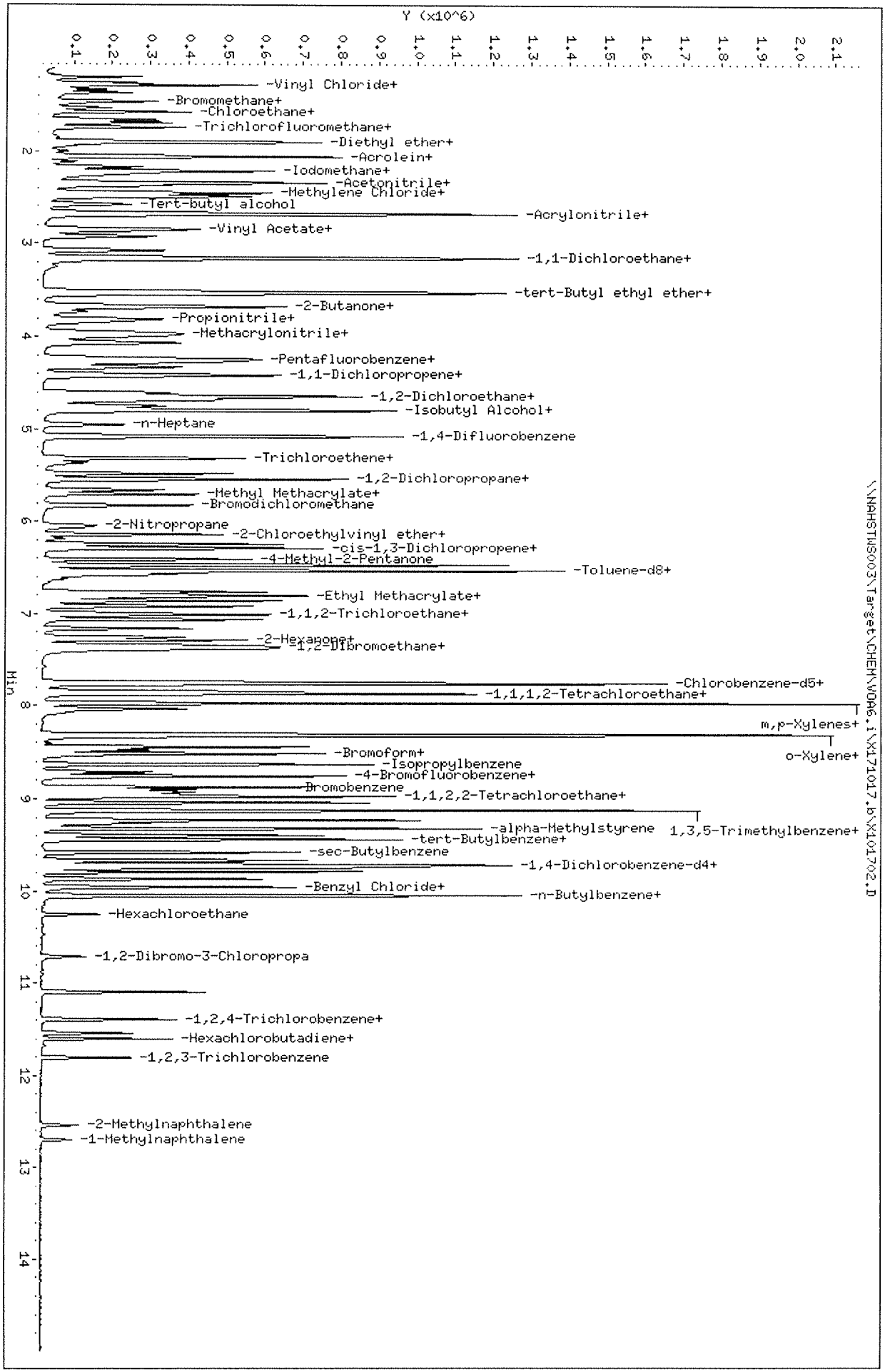
Data File: \\NAHSTWS003\Target\CHEM\VOA6.i\X171017.b\X101702.D Version 16
Report Date: 06-Feb-2018 11:39

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
	24 2-Butanone	43	3.731	3.731	(0.863)	143774	100.000	96.77
	52 2-Hexanone	43	7.284	7.284	(0.941)	318050	100.000	87.92
	45 4-Methyl-2-Pentanone	43	6.410	6.410	(0.828)	328715	100.000	85.46
	10 Acetone	43	2.112	2.112	(0.488)	88995	100.000	100.28
	37 Benzene	78	4.648	4.648	(0.914)	677648	50.0000	47.37
	39 Bromodichloromethane	83	5.823	5.823	(1.145)	229050	50.0000	46.32
	66 Bromoform	173	8.480	8.480	(1.095)	108832	50.0000	44.24
	6 Bromomethane	94	1.460	1.460	(0.338)	119523	50.0000	49.04
	19 Carbon Disulfide	76	2.212	2.212	(0.512)	877777	100.000	94.72
	34 Carbon Tetrachloride	117	4.412	4.412	(0.868)	179515	50.0000	44.97
	59 Chlorobenzene	112	7.764	7.764	(1.003)	409183	50.0000	45.71
	7 Chloroethane	64	1.525	1.525	(0.353)	118234	50.0000	45.34
	28 Chloroform	83	4.068	4.068	(0.940)	292519	50.0000	47.69
	3 Chloromethane	50	1.195	1.195	(0.276)	250439	50.0000	49.12
	27 cis-1,2-Dichloroethene	96	3.681	3.681	(0.851)	183099	50.0000	48.58
	46 cis-1,3-Dichloropropene	75	6.245	6.245	(1.228)	298768	50.0000	47.30
	55 Dibromochloromethane	129	7.255	7.255	(0.937)	171384	50.0000	45.95
	2 Dichlorodifluoromethane	85	1.081	1.081	(0.250)	140377	50.0000	43.71
	61 Ethylbenzene	106	7.871	7.871	(1.017)	203103	50.0000	45.09
	67 Isopropylbenzene	105	8.623	8.623	(1.114)	487977	50.0000	44.98
	17 Methylene Chloride	84	2.449	2.449	(0.566)	179341	50.0000	46.37
	56 Tetrachloroethene	164	7.012	7.012	(0.906)	105337	50.0000	44.45
	50 Toluene	91	6.532	6.532	(0.844)	660340	50.0000	46.52
	20 trans-1,2-Dichloroethene	96	2.678	2.678	(0.619)	160521	50.0000	47.28
	51 trans-1,3-Dichloropropene	75	6.761	6.761	(1.330)	249352	50.0000	46.13
	38 Trichloroethene	130	5.321	5.321	(1.046)	160220	50.0000	45.62
	8 Trichlorofluoromethane	101	1.690	1.690	(0.391)	177990	50.0000	42.26
	5 Vinyl Chloride	62	1.260	1.260	(0.291)	206043	50.0000	47.88
	62 m,p-Xylenes	106	7.972	7.972	(1.030)	483439	100.000	89.79
	63 o-Xylene	106	8.308	8.308	(1.073)	244566	50.0000	44.85
M	95 Xylenes (total)	106				728005	150.000	
	71 1,2,3-Trichloropropane	75	8.931	8.931	(0.918)	171306	50.0000	45.70(M)
	93 1,2,3-Trichlorobenzene	180	11.804	11.804	(1.214)	64537	50.0000	48.47
	79 1,2,4-Trimethylbenzene	105	9.440	9.440	(0.971)	429528	50.0000	45.38
	75 1,3,5-Trimethylbenzene	105	9.132	9.132	(0.939)	401344	50.0000	45.34
	26 2,2-Dichloropropane	77	3.667	3.667	(0.848)	242301	50.0000	47.13
	54 1,3-Dichloropropane	76	7.062	7.062	(0.912)	270806	50.0000	44.79
	76 2-Chlorotoluene	91	9.039	9.039	(0.929)	400949	50.0000	45.67
	77 4-Chlorotoluene	91	9.132	9.132	(0.939)	468751	50.0000	45.58
	82 p-Isopropyltoluene	119	9.712	9.712	(0.999)	354239	50.0000	46.18
	29 Bromochloromethane	128	3.953	3.953	(0.914)	78591	50.0000	46.82
	74 Bromobenzene	156	8.874	8.874	(0.912)	167180	50.0000	45.84
	44 Dibromomethane	93	5.658	5.658	(1.113)	105685	50.0000	45.71
	91 Hexachlorobutadiene	225	11.539	11.539	(1.186)	37603	50.0000	49.65
	73 n-Propylbenzene	91	8.974	8.974	(0.923)	593747	50.0000	45.00
	87 n-Butylbenzene	91	10.049	10.049	(1.033)	308470	50.0000	49.05
	81 sec-Butylbenzene	105	9.583	9.583	(0.985)	399290	50.0000	45.09
	92 Naphthalene	128	11.603	11.603	(1.193)	228639	50.0000	45.91
	78 tert-Butylbenzene	119	9.397	9.397	(0.966)	292075	50.0000	44.13
	60 1,1,1,2-Tetrachloroethane	131	7.843	7.843	(1.013)	145435	50.0000	44.69
	64 Styrene	104	8.323	8.323	(1.075)	448029	50.0000	45.77

Data File: \\NAHSTWS003\Target\CHEM\VOA6.i\X171017.b\X101702.D Version 16
Report Date: 06-Feb-2018 11:39

QC Flag Legend

M - Compound response manually integrated.



Data File: \\NAHSTWS003\Target\CHEM\VOA6.i\X171017.b\X101702.D
Date : 17-OCT-2017 11:06
Client ID: WSTD050
Sample Info: WSTD050;WSTD050;2;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS003\Target\CHEM\VOA6.i\X171017.b\X101704.D Version 14
Report Date: 06-Feb-2018 11:39

ALS Laboratory Group

Data file : \\NAHSTWS003\Target\CHEM\VOA6.i\X171017.b\X101704.D
Lab Smp Id: VLCSW-171017 Client Smp ID: VLCSW-171017
Inj Date : 17-OCT-2017 11:55
Operator : PC Inst ID: voa6.i
Smp Info : VLCSW-171017;VLCSW-171017;3;;LCS
Misc Info : HS16030331;WATER;0;1;
Comment :
Method : \\nahstws003\Target\chem\voa6.i\X171017.b\8260W.m
Meth Date : 06-Feb-2018 11:39 voa6.i Quant Type: ISTD
Cal Date : 10-OCT-2017 13:33 Cal File: X101008.D
Als bottle: 4 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: dn_bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

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

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
	31 1,1,1-Trichloroethane	97	4.240	4.240	(0.980)	223332	45.0559	45.05
*	1 Pentafluorobenzene	168	4.325	4.326	(1.000)	252694	50.0000	
$	30 Dibromofluoromethane	113	4.254	4.254	(0.983)	177420	48.8334	48.83
*	36 1,4-Difluorobenzene	114	5.085	5.085	(1.000)	432941	50.0000	
$	35 1,2-Dichloroethane-d4	65	4.612	4.612	(1.066)	212920	46.6170	46.61
*	47 Chlorobenzene-d5	117	7.742	7.742	(1.000)	445724	50.0000	
$	48 Toluene-d8	98	6.474	6.474	(0.836)	666009	48.3333	48.33
$	69 4-Bromofluorobenzene	95	8.752	8.752	(1.130)	230198	46.8780	46.87
*	70 1,4-Dichlorobenzene-d4	152	9.726	9.726	(1.000)	217912	50.0000	
	68 1,1,2,2-Tetrachloroethane	83	8.903	8.903	(0.915)	171936	44.4478	44.44
	53 1,1,2-Trichloroethane	83	6.918	6.919	(0.894)	126467	43.9601	43.96
	32 1,1-Dichloropropene	75	4.426	4.426	(0.870)	213958	45.5061	45.50
	22 1,1-Dichloroethane	63	3.072	3.072	(0.710)	315408	47.5243	47.52
	11 1,1-Dichloroethene	96	2.055	2.055	(0.475)	138816	47.4328	47.43
	90 1,2,4-Trichlorobenzene	180	11.395	11.395	(1.172)	78750	41.9001	41.90
	89 1,2-Dibromo-3-Chloropropane	155	10.715	10.715	(1.102)	18989	39.6144	39.61
	57 1,2-Dibromoethane	107	7.341	7.341	(0.948)	150084	44.6727	44.67
	88 1,2-Dichlorobenzene	146	10.056	10.056	(1.034)	230544	42.3200	42.31
	33 1,2-Dichloroethane	62	4.691	4.691	(0.923)	220440	45.6084	45.60
	42 1,2-Dichloropropane	63	5.543	5.543	(1.090)	191104	47.7390	47.73
	83 1,3-Dichlorobenzene	146	9.669	9.669	(0.994)	238306	42.5136	42.51
	84 1,4-Dichlorobenzene	146	9.741	9.741	(1.001)	248309	42.0610	42.06

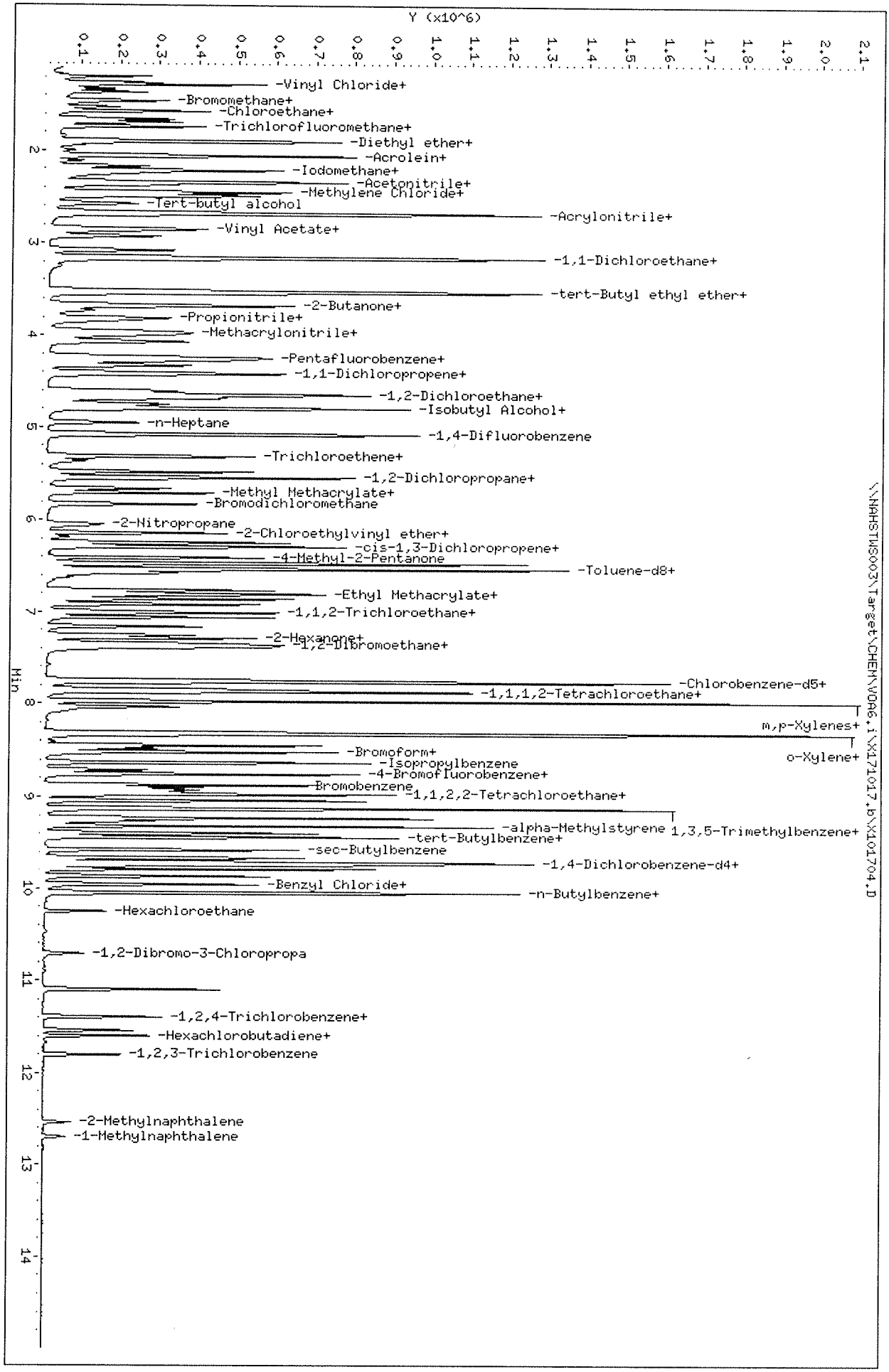
Data File: \\NAHSTWS003\Target\CHEM\VOA6.i\X171017.b\X101704.D Version 14
Report Date: 06-Feb-2018 11:39

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
	24 2-Butanone	43	3.731	3.731	(0.863)	143276	95.8993	95.89
	52 2-Hexanone	43	7.284	7.284	(0.941)	318609	87.2335	87.23
	45 4-Methyl-2-Pentanone	43	6.410	6.410	(0.828)	328125	84.4988	84.49
	10 Acetone	43	2.112	2.112	(0.488)	89054	99.7720	99.77
	37 Benzene	78	4.648	4.648	(0.914)	670169	47.2180	47.21
	39 Bromodichloromethane	83	5.823	5.823	(1.145)	228923	46.6594	46.65
	66 Bromoform	173	8.480	8.480	(1.095)	106203	42.7617	42.76
	6 Bromomethane	94	1.460	1.460	(0.338)	120207	49.0460	49.04
	19 Carbon Disulfide	76	2.212	2.212	(0.512)	870852	93.4487	93.44
	34 Carbon Tetrachloride	117	4.411	4.412	(0.868)	175711	44.3715	44.37
	59 Chlorobenzene	112	7.764	7.764	(1.003)	399442	44.1960	44.19
	7 Chloroethane	64	1.525	1.525	(0.353)	118709	45.2752	45.27
	28 Chloroform	83	4.068	4.068	(0.940)	289184	46.8837	46.88
	3 Chloromethane	50	1.195	1.195	(0.276)	251842	49.1263	49.12
	27 cis-1,2-Dichloroethene	96	3.681	3.681	(0.851)	181389	47.8619	47.86
	46 cis-1,3-Dichloropropene	75	6.245	6.245	(1.228)	297703	47.5075	47.50
	55 Dibromochloromethane	129	7.255	7.255	(0.937)	169005	44.8883	44.88
	2 Dichlorodifluoromethane	85	1.081	1.081	(0.250)	141113	43.6937	43.69
	61 Ethylbenzene	106	7.871	7.871	(1.017)	198127	43.5720	43.57
	67 Isopropylbenzene	105	8.623	8.623	(1.114)	465526	42.5074	42.50
	17 Methylene Chloride	84	2.449	2.449	(0.566)	181489	46.6677	46.66
	56 Tetrachloroethene	164	7.012	7.012	(0.906)	102390	42.7992	42.79
	50 Toluene	91	6.532	6.532	(0.844)	646994	45.1459	45.14
	20 trans-1,2-Dichloroethene	96	2.678	2.678	(0.619)	160719	47.0782	47.07
	51 trans-1,3-Dichloropropene	75	6.761	6.761	(1.330)	246261	45.9195	45.91
	38 Trichloroethene	130	5.321	5.321	(1.046)	162668	46.6890	46.68
	8 Trichlorofluoromethane	101	1.689	1.690	(0.391)	178103	42.0584	42.05
	5 Vinyl Chloride	62	1.260	1.260	(0.291)	207946	48.0557	48.05
	62 m,p-Xylenes	106	7.971	7.972	(1.030)	473815	87.1645	87.16
	63 o-Xylene	106	8.308	8.308	(1.073)	239699	43.5387	43.53
M	95 Xylenes (total)	106				713514	130.703	130.70
	71 1,2,3-Trichloropropane	75	8.931	8.931	(0.918)	167590	43.9594	43.95(M)
	93 1,2,3-Trichlorobenzene	180	11.804	11.804	(1.214)	54014	39.8916	39.89
	79 1,2,4-Trimethylbenzene	105	9.440	9.440	(0.971)	414465	43.0592	43.05
	75 1,3,5-Trimethylbenzene	105	9.125	9.132	(0.938)	382794	42.5181	42.51
	26 2,2-Dichloropropane	77	3.666	3.667	(0.848)	240529	46.5230	46.52
	54 1,3-Dichloropropane	76	7.062	7.062	(0.912)	270365	44.2972	44.29
	76 2-Chlorotoluene	91	9.039	9.039	(0.929)	388824	43.5495	43.54
	77 4-Chlorotoluene	91	9.132	9.132	(0.939)	450709	43.0893	43.08
	82 p-Isopropyltoluene	119	9.712	9.712	(0.999)	333852	42.7956	42.79
	29 Bromochloromethane	128	3.953	3.953	(0.914)	79155	46.8910	46.89
	74 Bromobenzene	156	8.874	8.874	(0.912)	165021	44.4940	44.49
	44 Dibromomethane	93	5.658	5.658	(1.113)	104524	45.5686	45.56
	91 Hexachlorobutadiene	225	11.539	11.539	(1.186)	35417	46.0276	46.02
	73 n-Propylbenzene	91	8.974	8.974	(0.923)	569013	42.4024	42.40
	87 n-Butylbenzene	91	10.056	10.049	(1.034)	285883	44.7015	44.70
	81 sec-Butylbenzene	105	9.583	9.583	(0.985)	378359	42.0156	42.01
	92 Naphthalene	128	11.603	11.603	(1.193)	183364	36.8339	36.83
	78 tert-Butylbenzene	119	9.397	9.397	(0.966)	277614	41.2467	41.24
	60 1,1,1,2-Tetrachloroethane	131	7.843	7.843	(1.013)	142445	43.3543	43.35
	64 Styrene	104	8.322	8.323	(1.075)	443462	44.8729	44.87

Data File: \\NAHSTWS003\Target\CHEM\VOA6.i\X171017.b\X101704.D Version 14
Report Date: 06-Feb-2018 11:39

QC Flag Legend

M - Compound response manually integrated.



Data File: \\NAHSTWS003\Target\CHEM\VOA6.i\VX171017.b\VX101704.D
Date : 17-OCT-2017 11:55
Client ID: VLCSW-171017
Sample Info: VLCSW-171017;VLCSW-171017;3;;LCS
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS003\Target\CHEM\VOA6.i\X171017.b\X101707.D Version 13
Report Date: 06-Feb-2018 11:39

ALS Laboratory Group

Data file : \\NAHSTWS003\Target\CHEM\VOA6.i\X171017.b\X101707.D
Lab Smp Id: VBLKW-171017 Client Smp ID: VBLKW-0171017
Inj Date : 17-OCT-2017 13:22
Operator : PC Inst ID: voa6.i
Smp Info : VBLKW-171017;VBLKW-0171017;3;;BLANK
Misc Info : HS16030331;WATER;0;1;
Comment   :
Method   : \\nahstws003\Target\chem\voa6.i\X171017.b\8260W.m
Meth Date : 06-Feb-2018 11:39 voa6.i Quant Type: ISTD
Cal Date : 10-OCT-2017 13:33 Cal File: X101008.D
Als bottle: 7 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: dn_bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

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

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.326	4.326	(1.000)	255815	50.0000	
$ 30 Dibromofluoromethane	113	4.254	4.254	(0.983)	185591	50.4082	50.40
* 36 1,4-Difluorobenzene	114	5.085	5.085	(1.000)	445417	50.0000	
$ 35 1,2-Dichloroethane-d4	65	4.612	4.612	(1.066)	227198	49.0941	49.09
* 47 Chlorobenzene-d5	117	7.742	7.742	(1.000)	454656	50.0000	
$ 48 Toluene-d8	98	6.474	6.474	(0.836)	687110	48.8658	48.86
$ 69 4-Bromofluorobenzene	95	8.752	8.752	(1.130)	238490	47.5946	47.59
* 70 1,4-Dichlorobenzene-d4	152	9.726	9.726	(1.000)	224663	50.0000	

Data File: \\NAHSTWS003\Target\CHEM\VOA6.i\X171017.b\X101707.D

Date : 17-OCT-2017 13:22

Client ID: VBLKW-0171017

Instrument: voa6.i

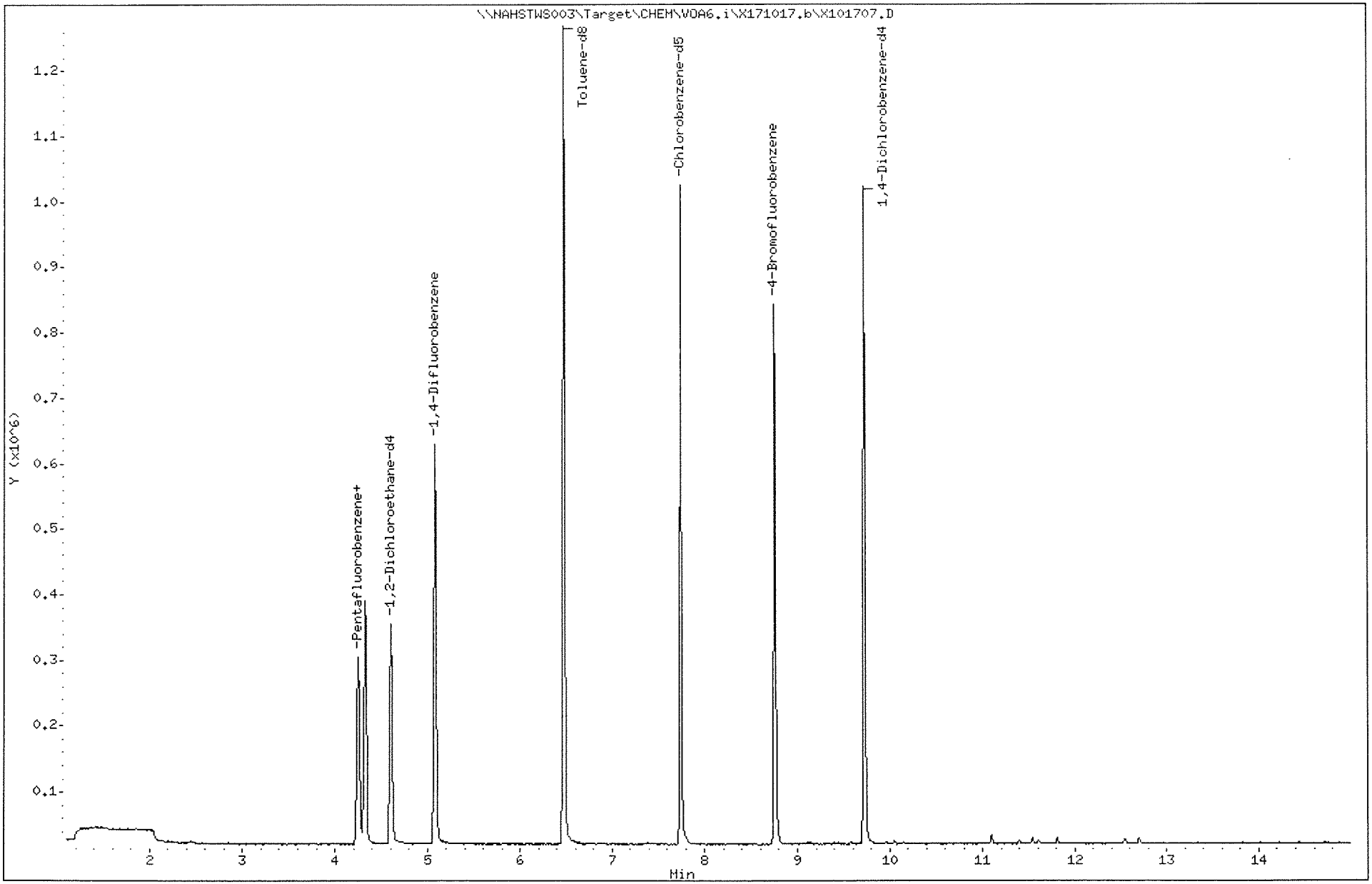
Sample Info: VBLKW-171017;VBLKW-0171017;3;;BLANK

Purge Volume: 5.0

Operator: PC

Column phase: DB624

Column diameter: 0.18



Data File: \\NAHSTWS003\Target\CHEM\VOA6.i\X171017.b\X101710.D Version 6
Report Date: 06-Feb-2018 11:39

ALS Laboratory Group

Data file : \\NAHSTWS003\Target\CHEM\VOA6.i\X171017.b\X101710.D
Lab Smp Id: HS17100712-02 Client Smp ID: HS17100712-02
Inj Date : 17-OCT-2017 14:37
Operator : PC Inst ID: voa6.i
Smp Info : HS17100712-02;HS17100712-02;;;
Misc Info : HS16030331;WATER;0;1;
Comment   :
Method   : \\nahstws003\Target\chem\voa6.i\X171017.b\8260W.m
Meth Date : 06-Feb-2018 11:39 voa6.i Quant Type: ISTD
Cal Date : 10-OCT-2017 13:33 Cal File: X101008.D
Als bottle: 10
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: dn_bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

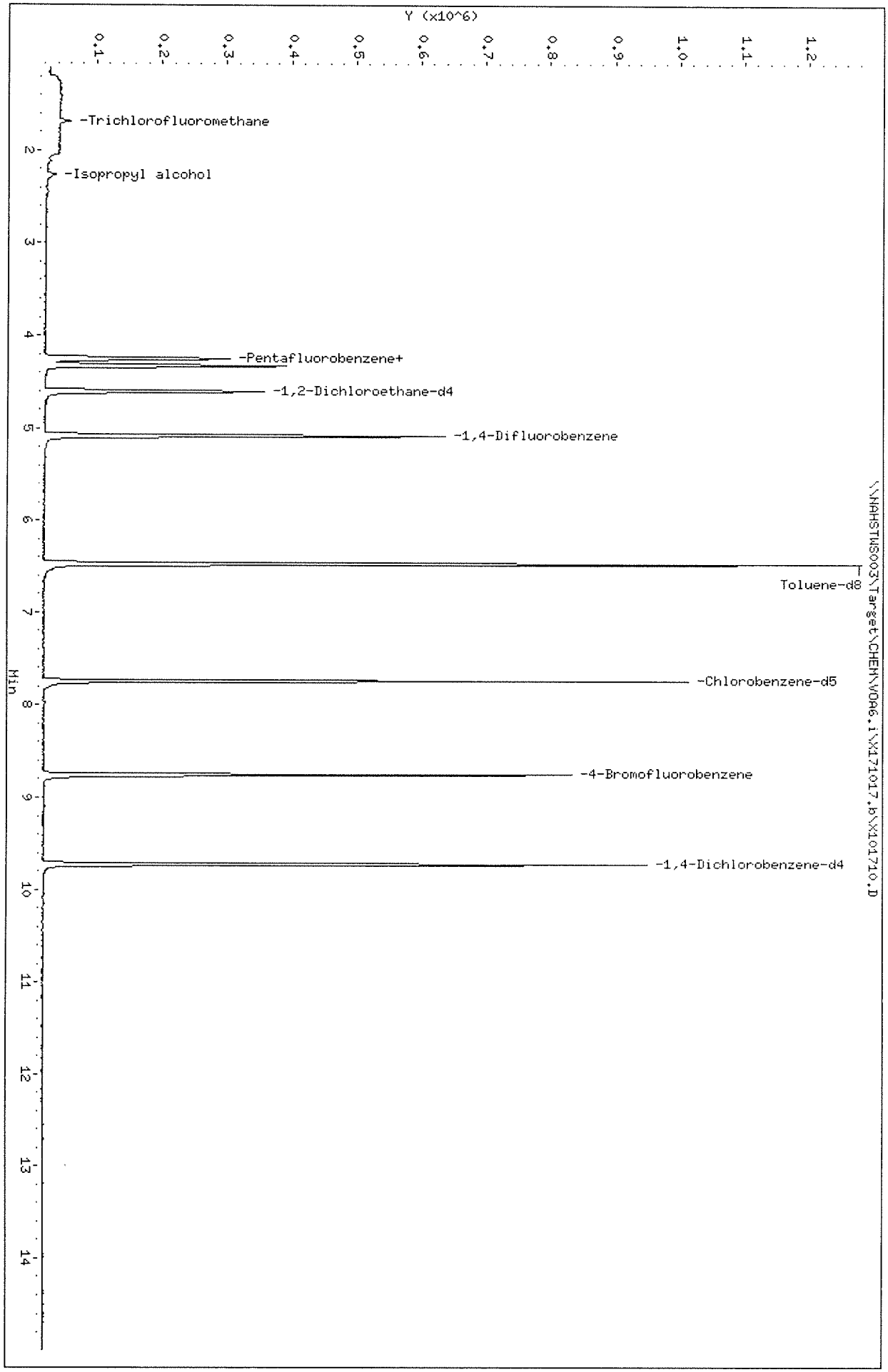
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

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

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.325	4.326	(1.000)	260776	50.0000	
$ 30 Dibromofluoromethane	113	4.254	4.254	(0.983)	187508	49.9740	49.97
* 36 1,4-Difluorobenzene	114	5.085	5.085	(1.000)	453759	50.0000	
$ 35 1,2-Dichloroethane-d4	65	4.612	4.612	(1.066)	233481	49.4852	49.48
* 47 Chlorobenzene-d5	117	7.742	7.742	(1.000)	466383	50.0000	
$ 48 Toluene-d8	98	6.474	6.474	(0.836)	694884	48.1997	48.19
$ 69 4-Bromofluorobenzene	95	8.752	8.752	(1.130)	241605	47.0181	47.01
* 70 1,4-Dichlorobenzene-d4	152	9.726	9.726	(1.000)	215342	50.0000	
8 Trichlorofluoromethane	101	1.689	1.690	(0.391)	11301	2.58598	2.58

Data File: \\NAHSTWS003\Target\CHEM\VOA6.i\X171017.b\X101710.D
Date : 17-OCT-2017 14:37
Client ID: HS17100712-02
Sample Info: HS17100712-02;HS17100712-02;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18



Data File: \\NAHSTWS003\Target\CHEM\VOA6.i\X171017.b\X101710.D

Date : 17-OCT-2017 14:37

Client ID: HS17100712-02

Instrument: voa6.i

Sample Info: HS17100712-02;HS17100712-02;;;

Purge Volume: 5.0

Operator: PC

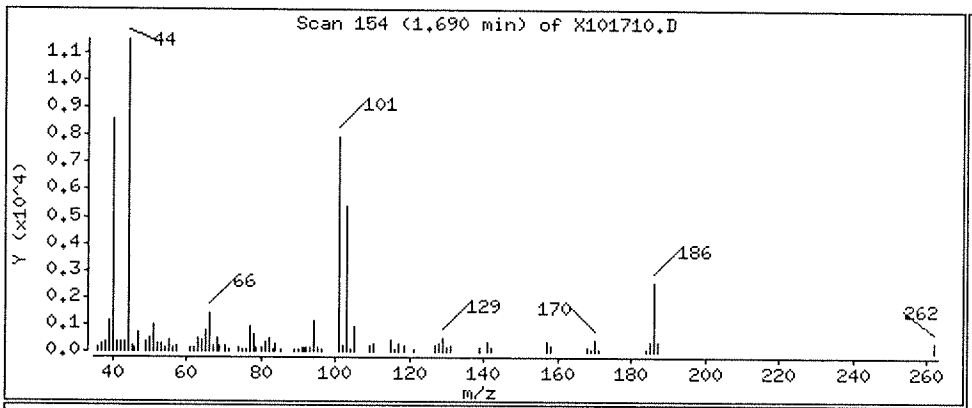
Column phase: DB624

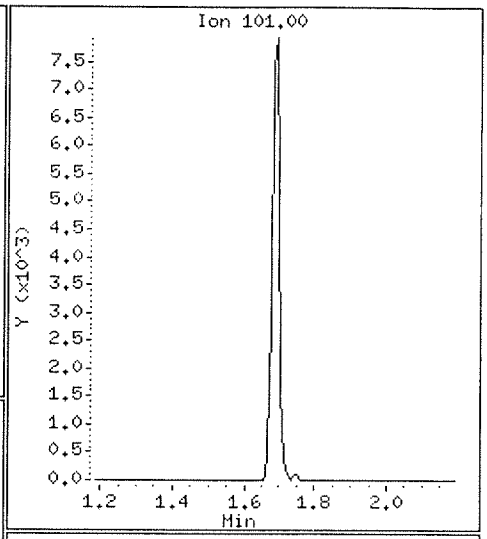
Column diameter: 0.18

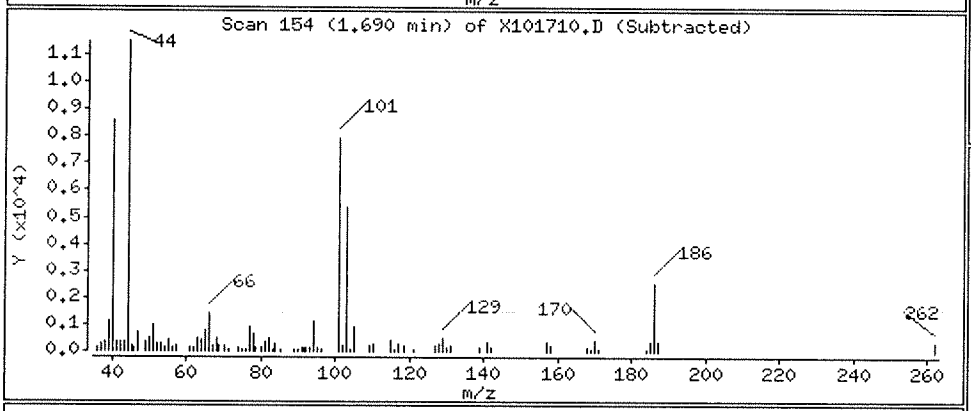
8 Trichlorofluoromethane

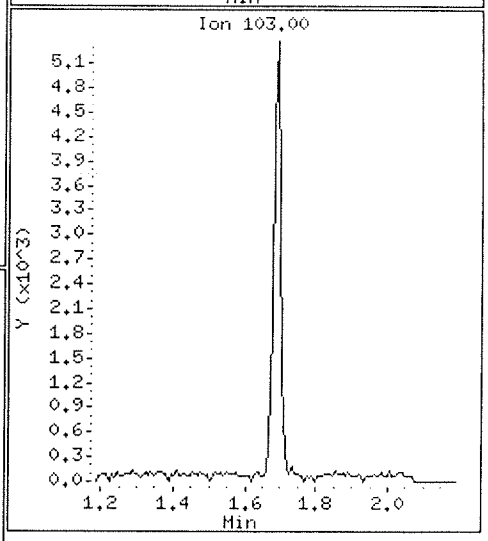
Concentration: 2.58 ug/l

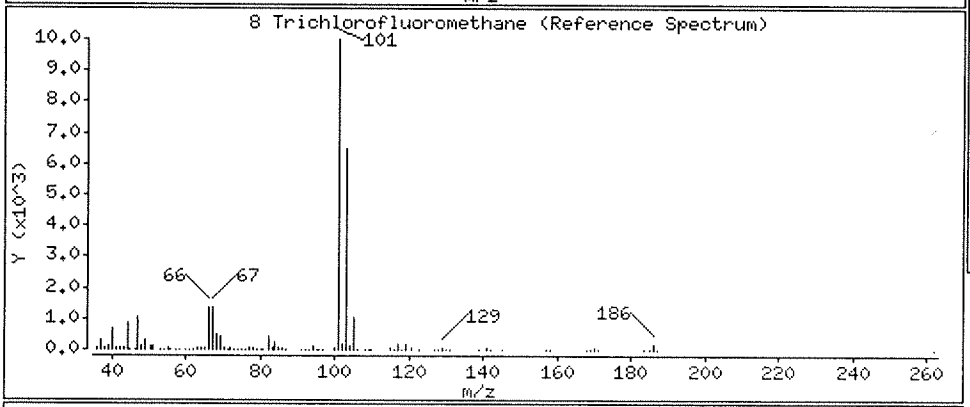
Review Code:

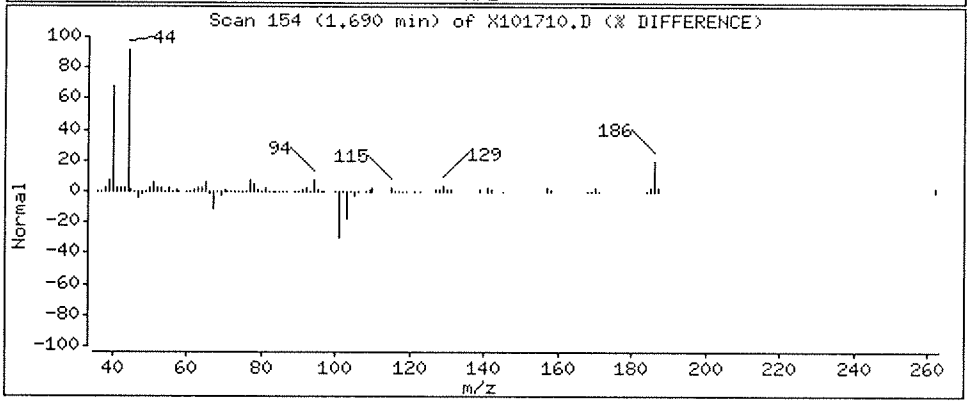












Data File: \\NAHSTWS003\Target\CHEM\VOA6.i\X171017.b\X101716.D Version 6
Report Date: 06-Feb-2018 11:39

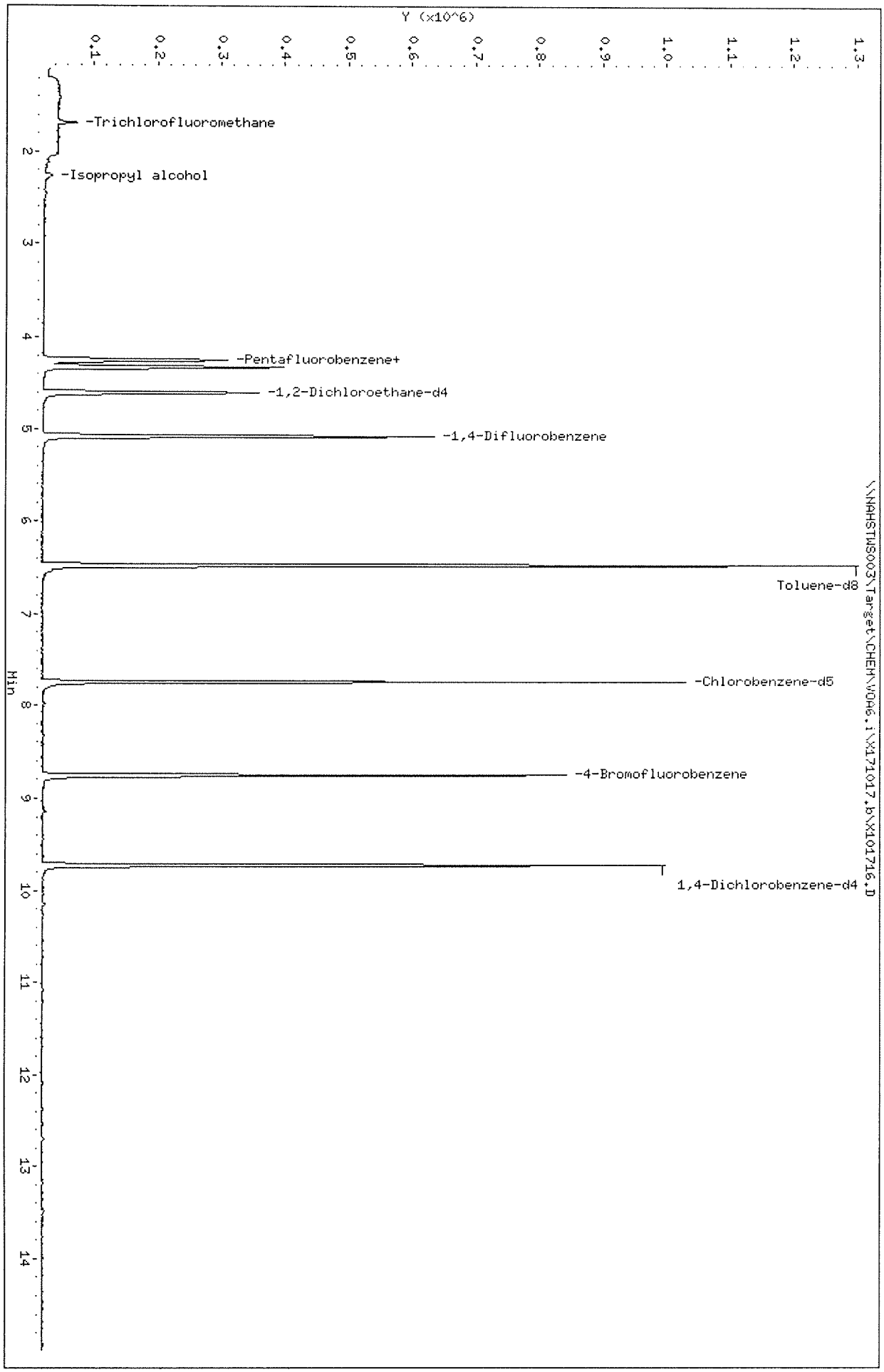
ALS Laboratory Group

Data file : \\NAHSTWS003\Target\CHEM\VOA6.i\X171017.b\X101716.D
Lab Smp Id: HS17100712-02n/r Client Smp ID: HS17100712-02
Inj Date : 17-OCT-2017 17:06
Operator : PC Inst ID: voa6.i
Smp Info : HS17100712-02;HS17100712-02;;;
Misc Info : HS16030331;WATER;0;1;
Comment   :
Method   : \\nahstws003\Target\chem\voa6.i\X171017.b\8260W.m
Meth Date : 06-Feb-2018 11:39 voa6.i Quant Type: ISTD
Cal Date : 10-OCT-2017 13:33 Cal File: X101008.D
Als bottle: 16
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: dn_bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

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

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
*	1 Pentafluorobenzene	168	4.326	4.326	(1.000)	263605	50.0000	
$	30 Dibromofluoromethane	113	4.254	4.254	(0.983)	188759	49.7739	49.77
*	36 1,4-Difluorobenzene	114	5.085	5.085	(1.000)	458489	50.0000	
$	35 1,2-Dichloroethane-d4	65	4.605	4.612	(1.065)	232704	48.8028	48.80
*	47 Chlorobenzene-d5	117	7.742	7.742	(1.000)	474483	50.0000	
$	48 Toluene-d8	98	6.474	6.474	(0.836)	705221	48.0857	48.08
$	69 4-Bromofluorobenzene	95	8.752	8.752	(1.130)	247925	47.4145	47.41
*	70 1,4-Dichlorobenzene-d4	152	9.726	9.726	(1.000)	224065	50.0000	
	8 Trichlorofluoromethane	101	1.690	1.690	(0.391)	19387	4.38868	4.38



Data File: \\NAHSTWS003\Target\CHEM\VOA6.i\X171017.b\X101716.D
Date : 17-OCT-2017 17:06
Client ID: HS171007l2-02
Sample Info: HS171007l2-02;HS171007l2-02;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS003\Target\CHEM\VOA6.i\X171017.b\X101716.D

Date : 17-OCT-2017 17:06

Client ID: HS17100712-02

Instrument: voa6.i

Sample Info: HS17100712-02;HS17100712-02;;;

Purge Volume: 5.0

Operator: PC

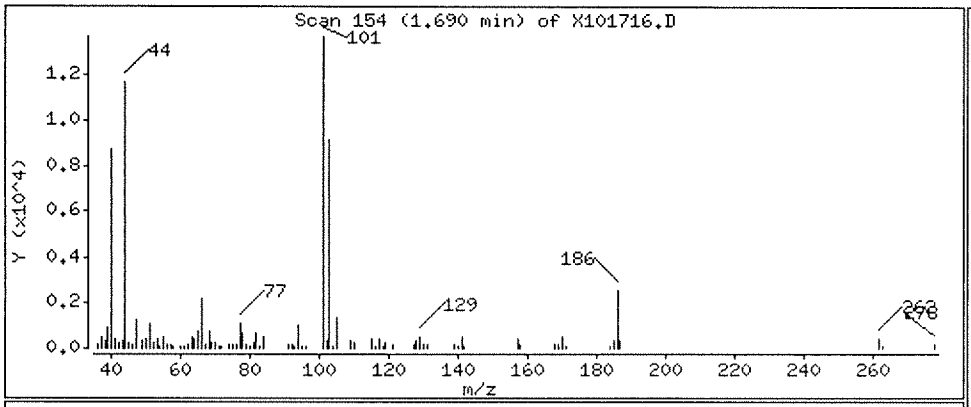
Column phase: DB624

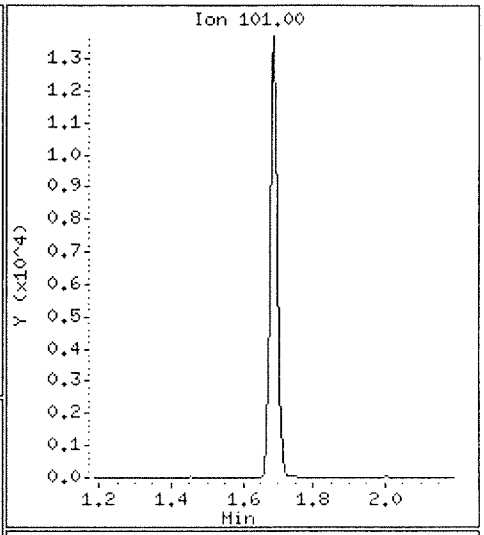
Column diameter: 0.18

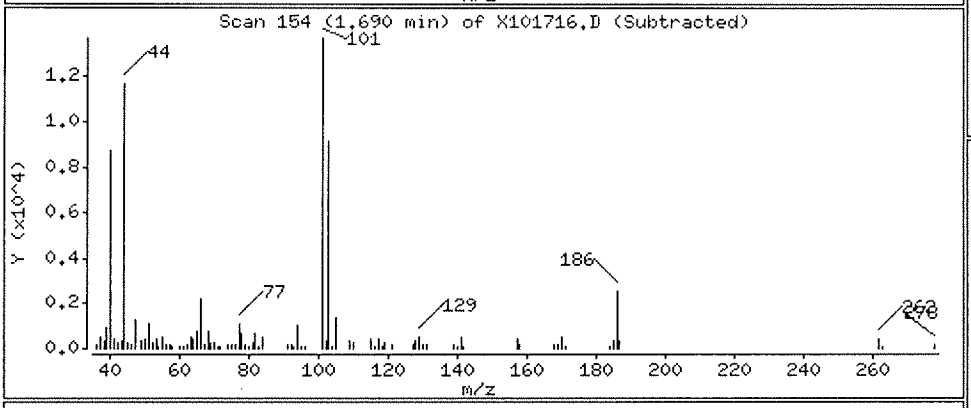
8 Trichlorofluoromethane

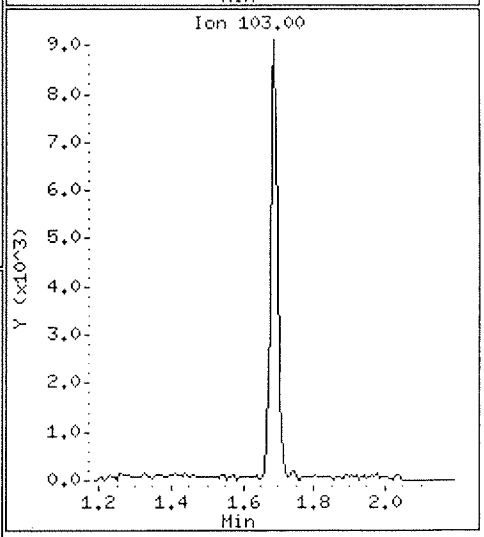
Concentration: 4.38 ug/l

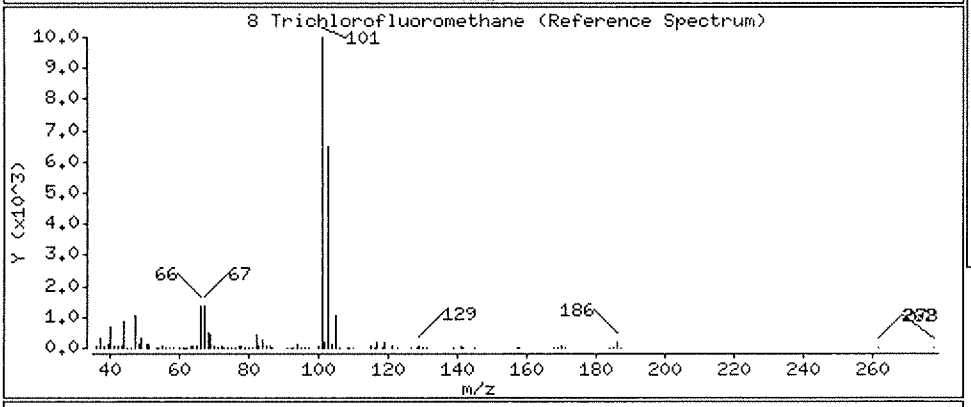
Review Code:

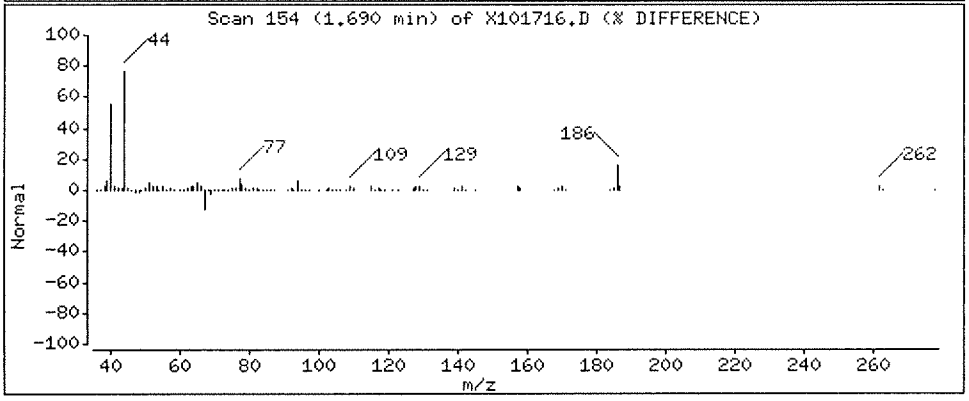












Data File: \\NAHSTWS003\Target\CHEM\VOA6.i\X171017.b\X101717.D Version 6
Report Date: 06-Feb-2018 11:39

ALS Laboratory Group

Data file : \\NAHSTWS003\Target\CHEM\VOA6.i\X171017.b\X101717.D
Lab Smp Id: HS17100712-01 Client Smp ID: HS17100712-01
Inj Date : 17-OCT-2017 17:31
Operator : PC Inst ID: voa6.i
Smp Info : HS17100712-01;HS17100712-01;;;
Misc Info : HS16030331;WATER;0;1;
Comment   :
Method   : \\nahstws003\Target\chem\voa6.i\X171017.b\8260W.m
Meth Date : 06-Feb-2018 11:39 voa6.i Quant Type: ISTD
Cal Date : 10-OCT-2017 13:33 Cal File: X101008.D
Als bottle: 17
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: dn_bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

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

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
*	1 Pentafluorobenzene	168	4.326	4.326	(1.000)	263025	50.0000	
$	30 Dibromofluoromethane	113	4.254	4.254	(0.983)	188880	49.9112	49.91
*	36 1,4-Difluorobenzene	114	5.085	5.085	(1.000)	456008	50.0000	
$	35 1,2-Dichloroethane-d4	65	4.612	4.612	(1.066)	236816	49.7581	49.75
*	47 Chlorobenzene-d5	117	7.742	7.742	(1.000)	460888	50.0000	
$	48 Toluene-d8	98	6.474	6.474	(0.836)	708420	49.6705	49.67
$	69 4-Bromofluorobenzene	95	8.752	8.752	(1.130)	248558	48.8994	48.89
*	70 1,4-Dichlorobenzene-d4	152	9.726	9.726	(1.000)	227337	50.0000	
	10 Acetone	43	2.119	2.112	(0.490)	11038	9.11526	9.11
	27 cis-1,2-Dichloroethene	96	3.688	3.681	(0.853)	22619	5.73390	5.73
	5 Vinyl Chloride	62	1.260	1.260	(0.291)	6015	1.33545	1.33

00875492

Data File: \\NAHSTWS003\Target\CHEM\VOA6.i\X171017.b\X101717.D

Date : 17-OCT-2017 17:31

Client ID: HS17100712-01

Instrument: voa6.i

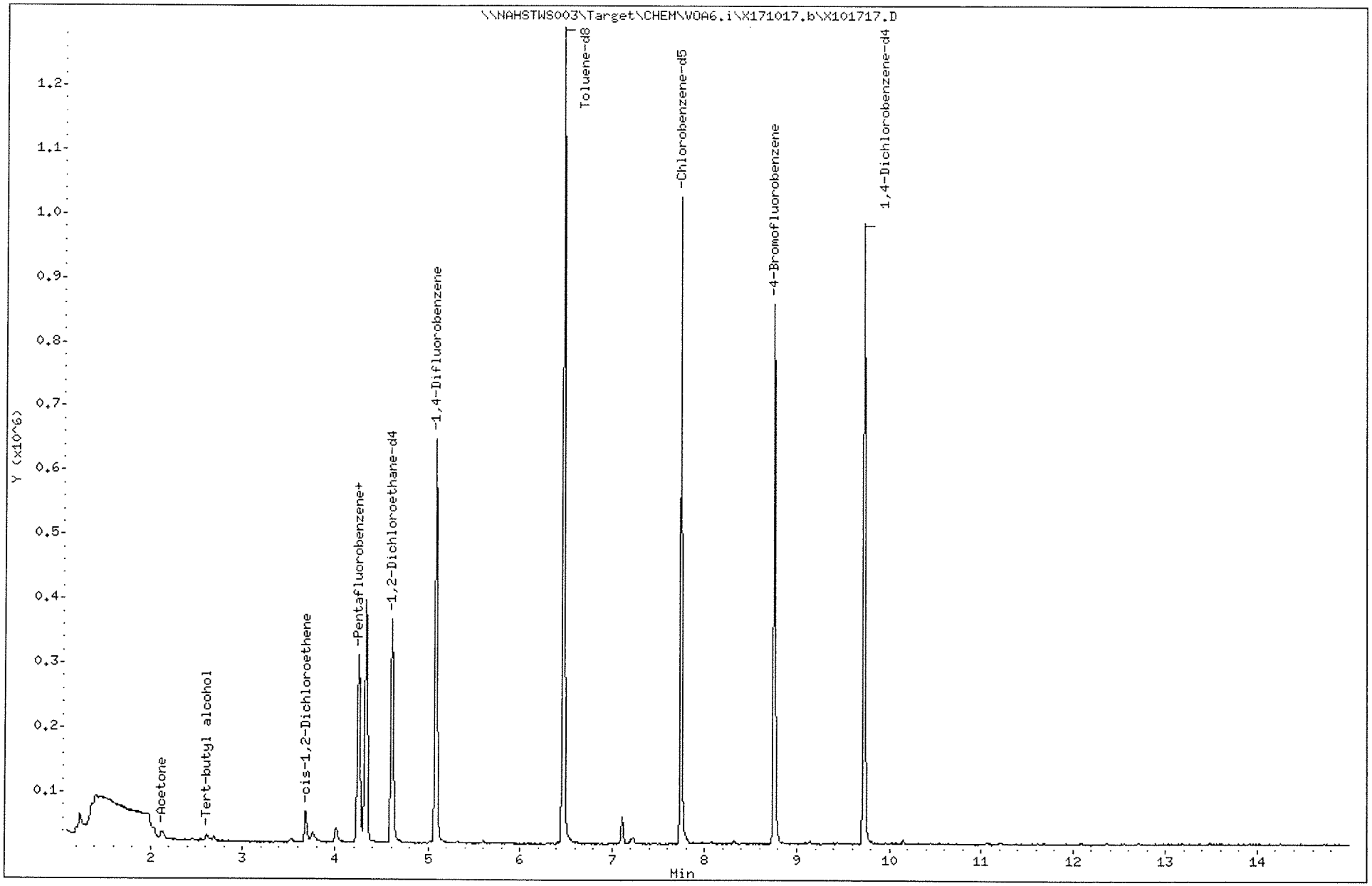
Sample Info: HS17100712-01;HS17100712-01;;;

Purge Volume: 5.0

Operator: PC

Column phase: DB624

Column diameter: 0.18



Data File: \\NAHSTWS003\Target\CHEM\VOA6.i\X171017.b\X101717.D

Date : 17-OCT-2017 17:31

Client ID: HS17100712-01

Instrument: voa6.i

Sample Info: HS17100712-01;HS17100712-01;;;

Purge Volume: 5.0

Operator: PC

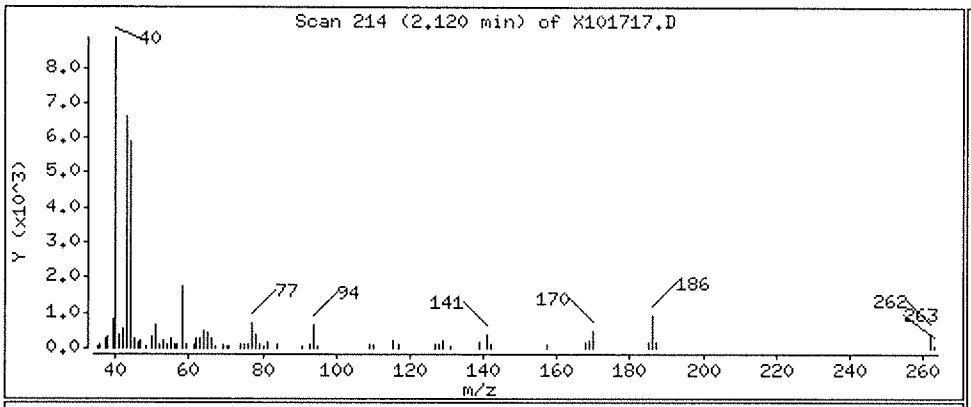
Column phase: DB624

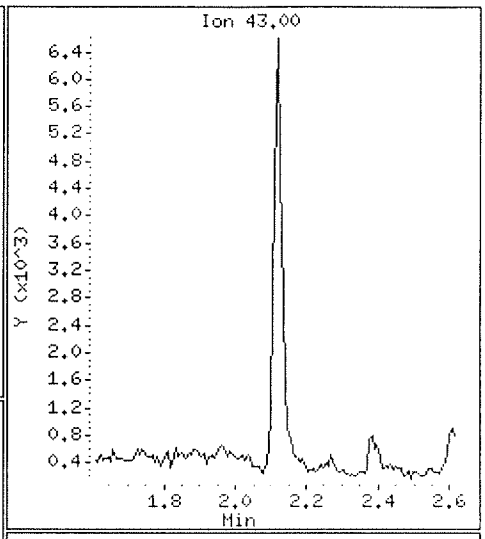
Column diameter: 0.18

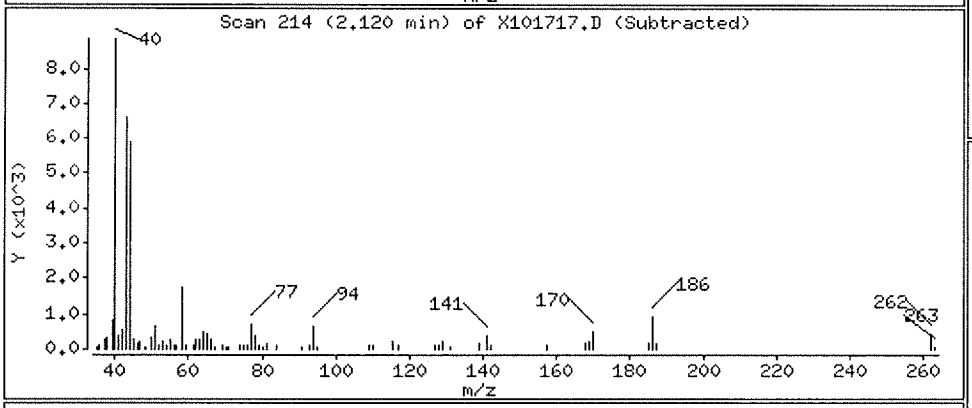
10 Acetone

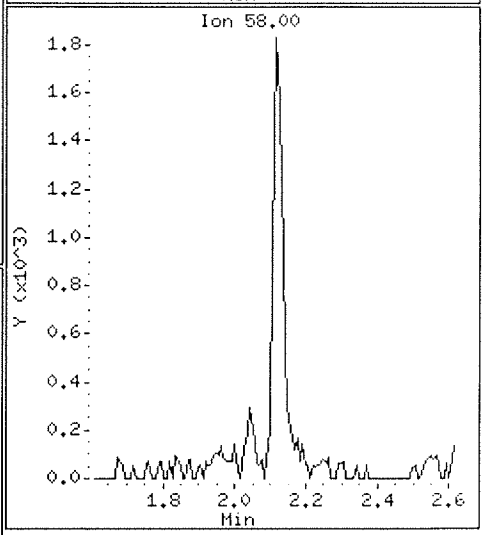
Concentration: 9.11 ug/l

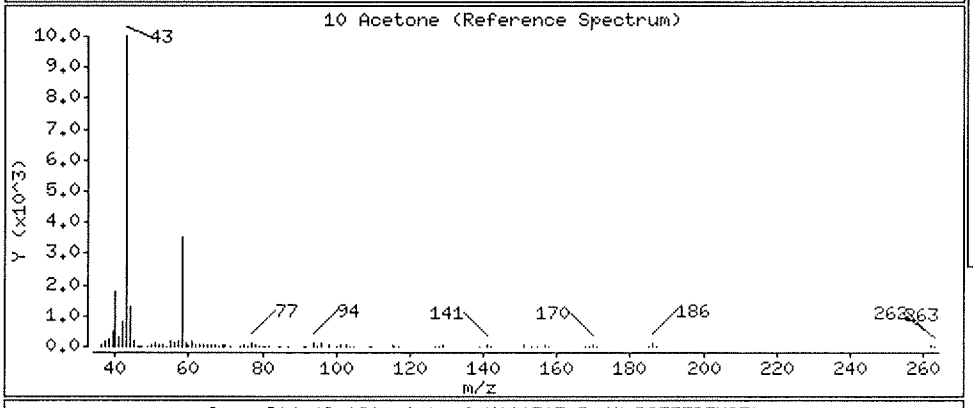
Review Code:

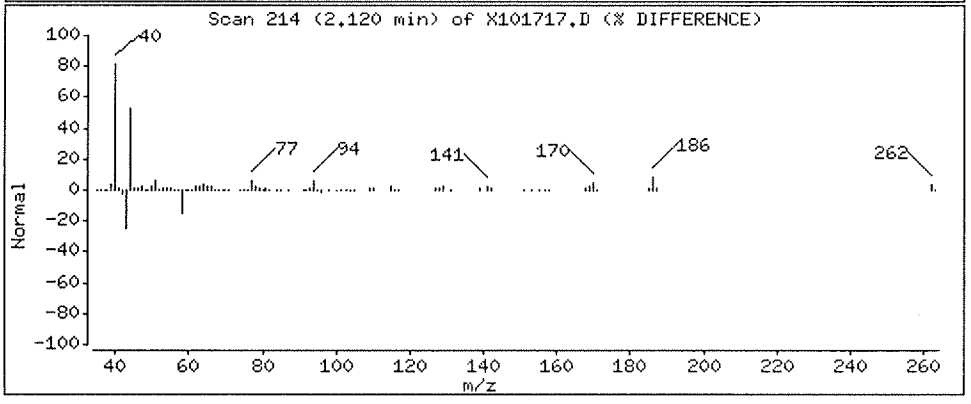












Data File: \\NAHSTWS003\Target\CHEM\VOA6.i\X171017.b\X101717.D

Date : 17-OCT-2017 17:31

Client ID: HS17100712-01

Instrument: voa6.i

Sample Info: HS17100712-01;HS17100712-01;;;

Purge Volume: 5.0

Operator: PC

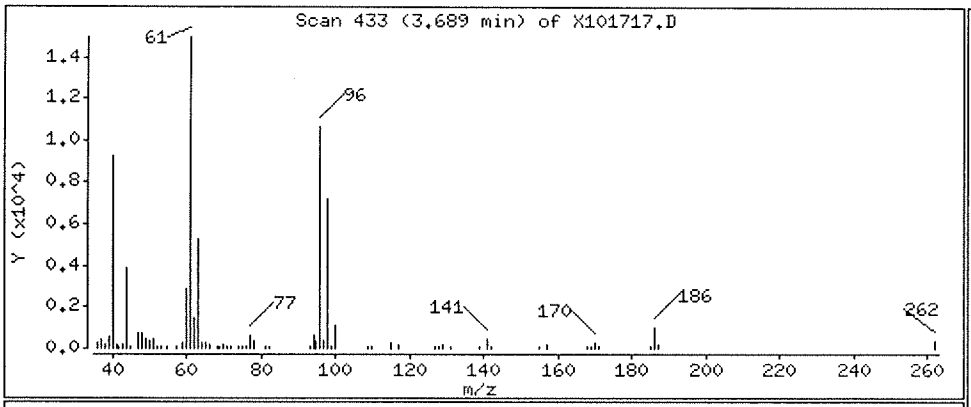
Column phase: DB624

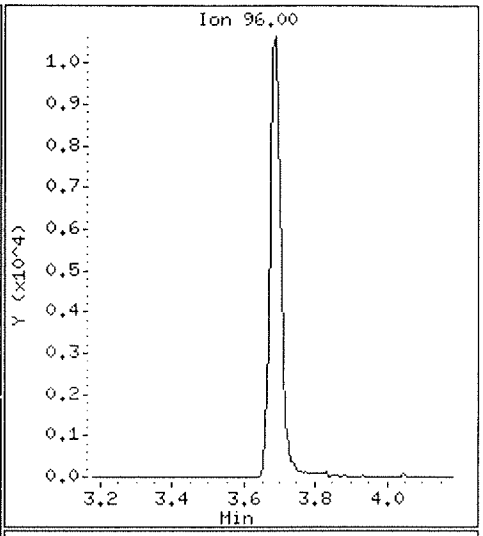
Column diameter: 0.18

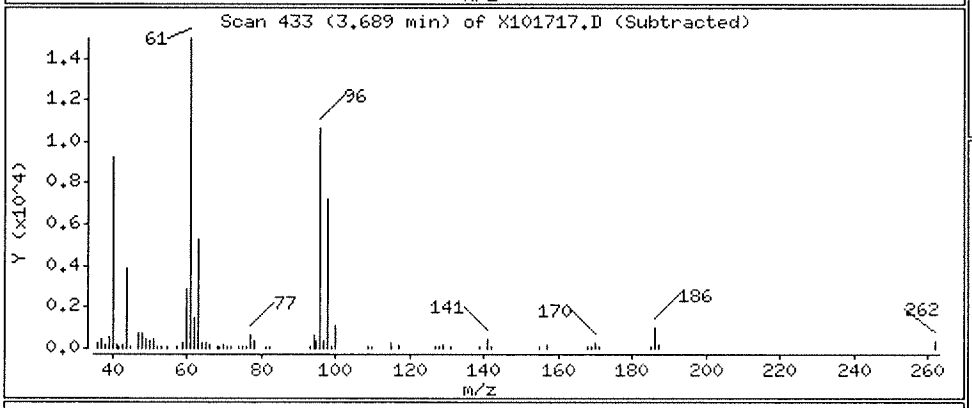
27 cis-1,2-Dichloroethene

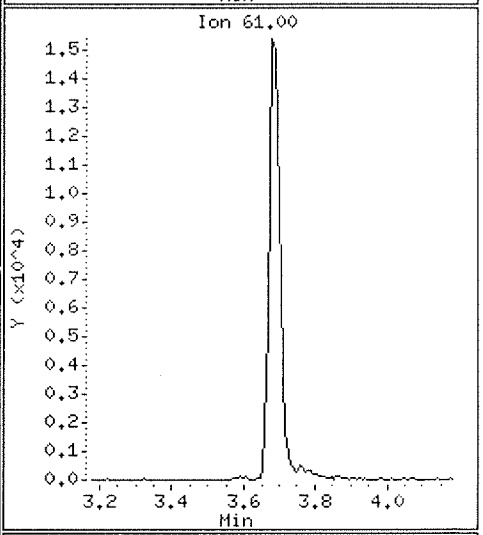
Concentration: 5.73 ug/l

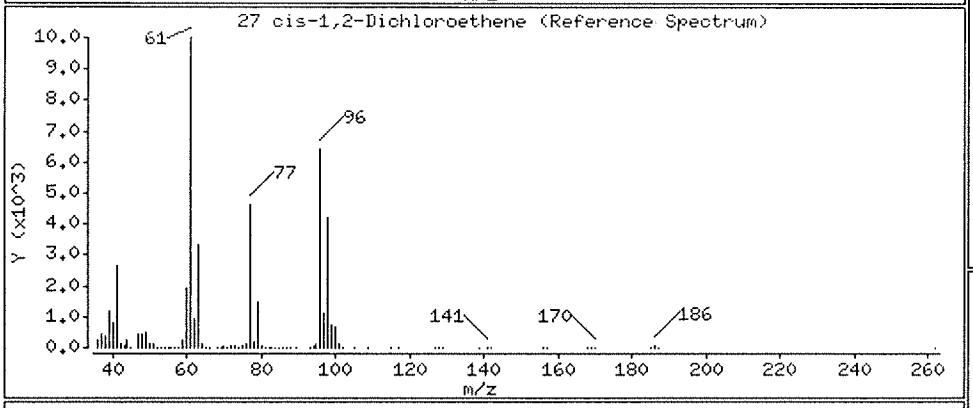
Review Code:

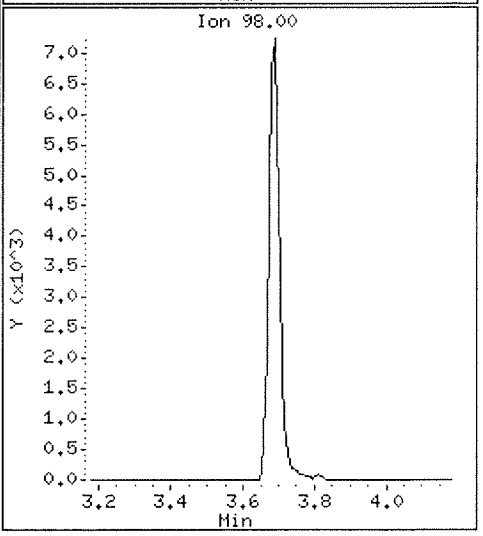


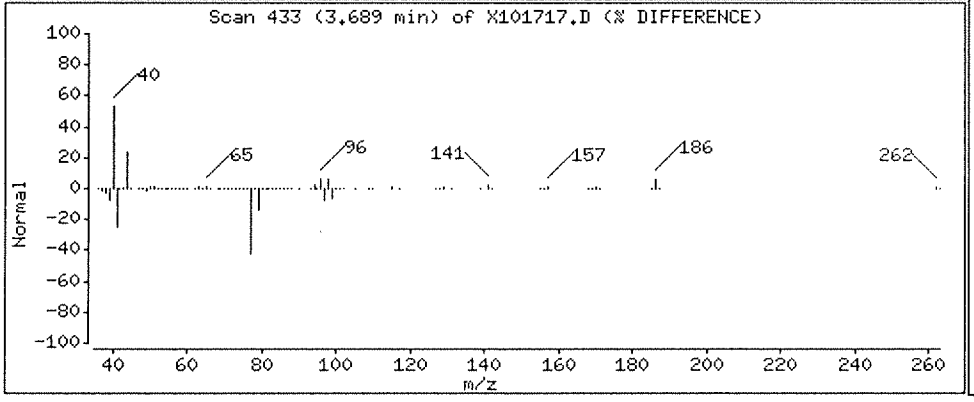












Data File: \\NAHSTWS003\Target\CHEM\VOA6.i\X171017.b\X101717.D

Date : 17-OCT-2017 17:31

Client ID: HS17100712-01

Instrument: voa6.i

Sample Info: HS17100712-01;HS17100712-01;;;

Purge Volume: 5.0

Operator: PC

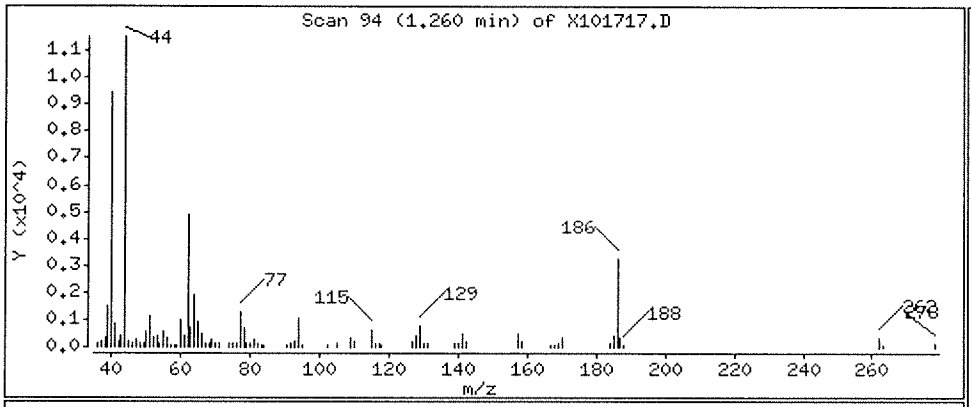
Column phase: DB624

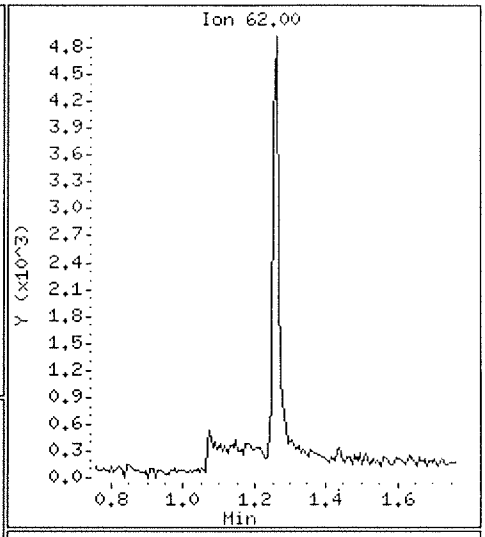
Column diameter: 0.18

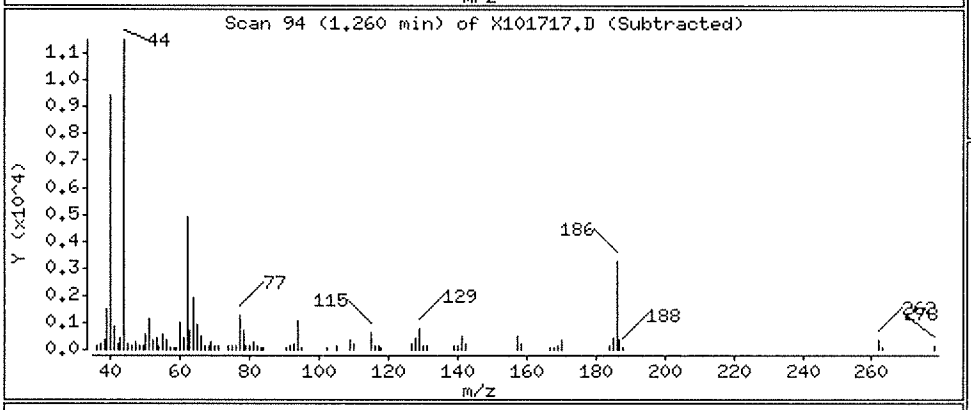
5 Vinyl Chloride

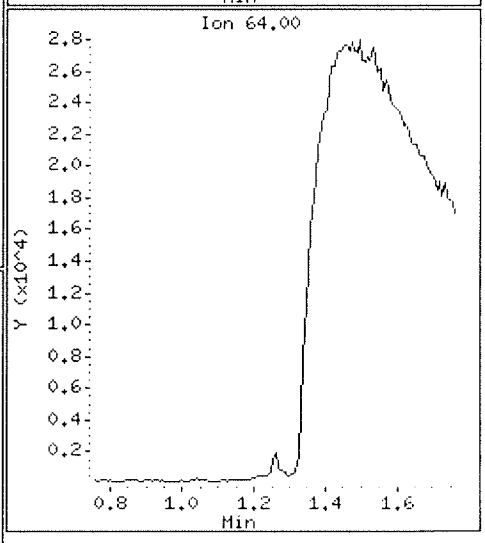
Concentration: 1.33 ug/l

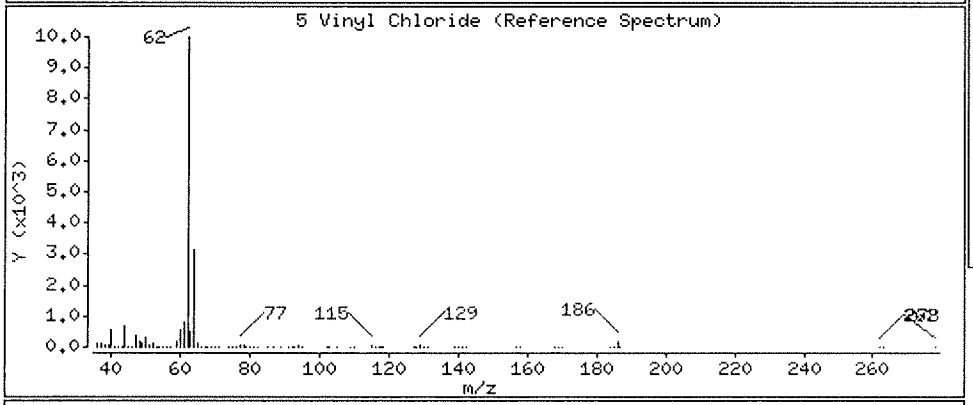
Review Code:

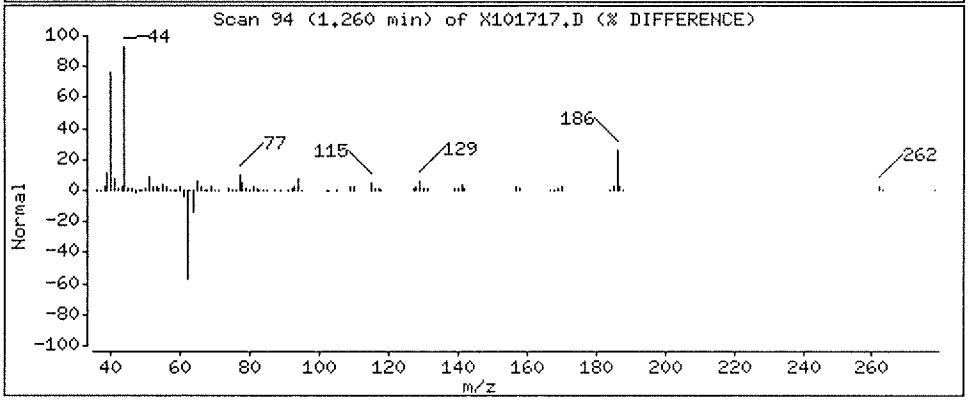












Data File: \\NAHSTWS003\Target\CHEM\VOA6.i\X171017.b\X101718.D Version 12
Report Date: 06-Feb-2018 11:39

ALS Laboratory Group

Data file : \\NAHSTWS003\Target\CHEM\VOA6.i\X171017.b\X101718.D
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Inj Date : 17-OCT-2017 17:56
Operator : PC Inst ID: voa6.i
Smp Info : HS17100646-08MS;HS17100646-08MS;3;;MS
Misc Info : HS16030331;WATER;0;1;
Comment   :
Method   : \\nahstws003\Target\chem\voa6.i\X171017.b\8260W.m
Meth Date : 06-Feb-2018 11:39 voa6.i Quant Type: ISTD
Cal Date : 10-OCT-2017 13:33 Cal File: X101008.D
Als bottle: 18 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: dn_bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

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

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
	31 1,1,1-Trichloroethane	97	4.232	4.240	(0.978)	218657	44.8045	44.80
*	1 Pentafluorobenzene	168	4.325	4.326	(1.000)	248793	50.0000	
$	30 Dibromofluoromethane	113	4.254	4.254	(0.983)	184532	51.4988	51.49
*	36 1,4-Difluorobenzene	114	5.085	5.085	(1.000)	420327	50.0000	
$	35 1,2-Dichloroethane-d4	65	4.605	4.612	(1.065)	226889	50.3881	50.38
*	47 Chlorobenzene-d5	117	7.742	7.742	(1.000)	439462	50.0000	
$	48 Toluene-d8	98	6.474	6.474	(0.836)	692518	50.8772	50.87
$	69 4-Bromofluorobenzene	95	8.752	8.752	(1.130)	245085	50.5228	50.52
*	70 1,4-Dichlorobenzene-d4	152	9.726	9.726	(1.000)	219410	50.0000	
	68 1,1,2,2-Tetrachloroethane	83	8.903	8.903	(0.915)	203224	52.3481	52.34
	53 1,1,2-Trichloroethane	83	6.918	6.919	(0.894)	136703	48.1952	48.19
	32 1,1-Dichloropropene	75	4.426	4.426	(0.870)	204269	44.7492	44.74
	22 1,1-Dichloroethane	63	3.072	3.072	(0.710)	319404	48.8810	48.88
	11 1,1-Dichloroethene	96	2.055	2.055	(0.475)	132011	45.8149	45.81
	90 1,2,4-Trichlorobenzene	180	11.395	11.395	(1.172)	83347	44.0432	44.04
	89 1,2-Dibromo-3-Chloropropane	155	10.715	10.715	(1.102)	25419	52.6376	52.63
	57 1,2-Dibromoethane	107	7.341	7.341	(0.948)	163961	49.4986	49.49
	88 1,2-Dichlorobenzene	146	10.056	10.056	(1.034)	234528	42.7574	42.75
	33 1,2-Dichloroethane	62	4.691	4.691	(0.923)	234914	50.0616	50.06
	42 1,2-Dichloropropane	63	5.543	5.543	(1.090)	192850	49.6209	49.62
	83 1,3-Dichlorobenzene	146	9.669	9.669	(0.994)	236781	41.9531	41.95
	84 1,4-Dichlorobenzene	146	9.741	9.741	(1.001)	247818	41.6912	41.69

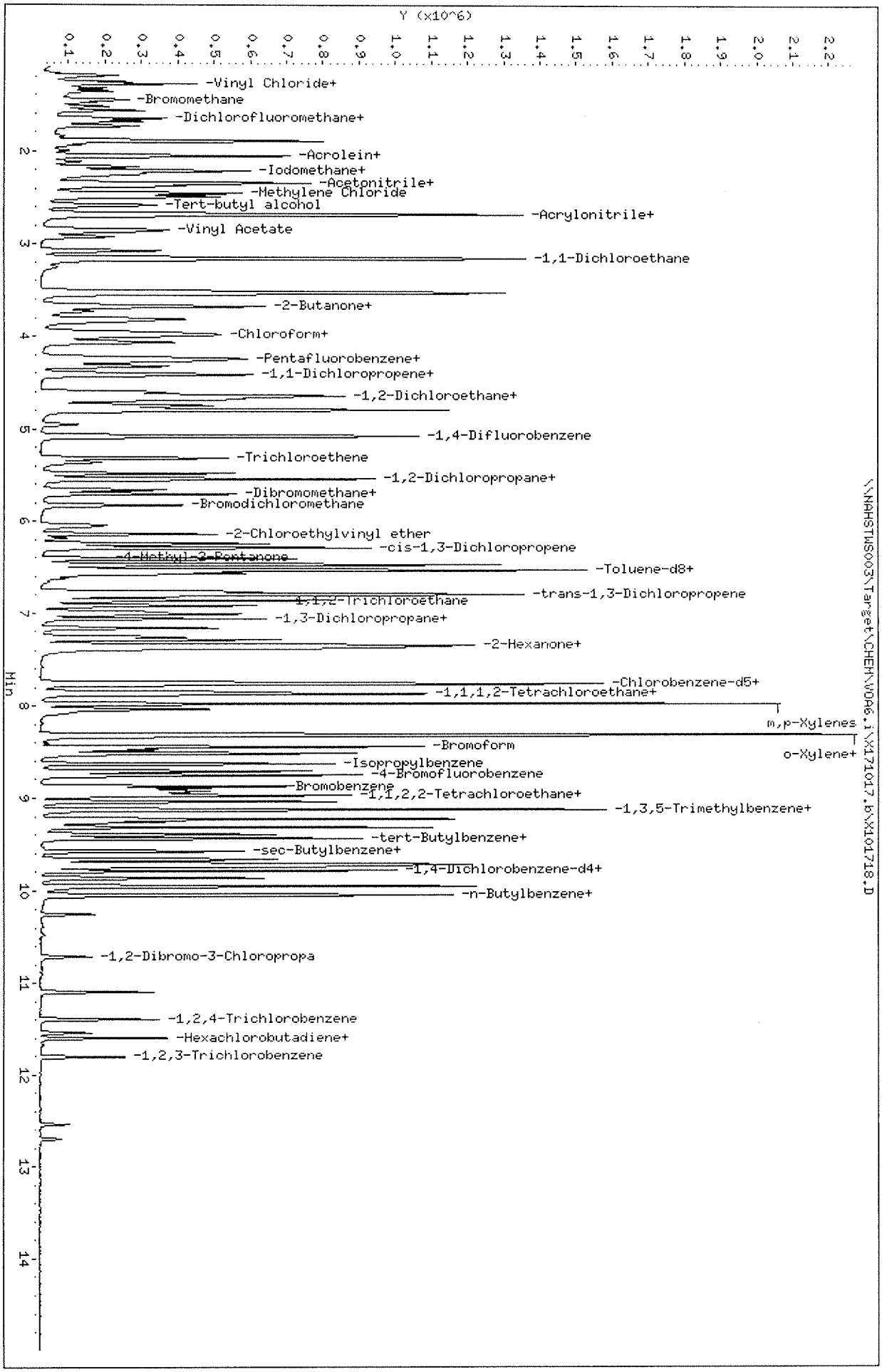
Data File: \\NAHSTWS003\Target\CHEM\VOA6.i\X171017.b\X101718.D Version 12
Report Date: 06-Feb-2018 11:39

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
	24 2-Butanone	43	3.731	3.731	(0.863)	179619	122.110	122.10
	52 2-Hexanone	43	7.284	7.284	(0.941)	381460	105.930	105.93
	45 4-Methyl-2-Pentanone	43	6.410	6.410	(0.828)	416201	108.707	108.70
	10 Acetone	43	2.112	2.112	(0.488)	112250	128.611	128.61
	37 Benzene	78	4.648	4.648	(0.914)	671771	48.7513	48.75
	39 Bromodichloromethane	83	5.822	5.823	(1.145)	232679	48.8482	48.84
	66 Bromoform	173	8.480	8.480	(1.095)	120242	49.1043	49.10
	6 Bromomethane	94	1.460	1.460	(0.338)	80292	33.2738	33.27
	19 Carbon Disulfide	76	2.212	2.212	(0.512)	848191	92.4441	92.44
	34 Carbon Tetrachloride	117	4.411	4.412	(0.868)	164039	42.6671	42.66
	59 Chlorobenzene	112	7.764	7.764	(1.003)	406131	45.5764	45.57
	7 Chloroethane	64	1.260	1.525	(0.291)	52908	20.4953	20.49
	28 Chloroform	83	4.068	4.068	(0.940)	294885	48.5576	48.55
	3 Chloromethane	50	1.188	1.195	(0.275)	216789	42.9848	42.98
	27 cis-1,2-Dichloroethene	96	3.681	3.681	(0.851)	183796	49.2574	49.25
	46 cis-1,3-Dichloropropene	75	6.245	6.245	(1.228)	300142	49.3341	49.33
	55 Dibromochloromethane	129	7.255	7.255	(0.937)	176756	47.6159	47.61
	2 Dichlorodifluoromethane	85	1.081	1.081	(0.250)	99564	31.3120	31.31
	61 Ethylbenzene	106	7.871	7.871	(1.017)	195341	43.5714	43.57
	67 Isopropylbenzene	105	8.623	8.623	(1.114)	448267	41.5147	41.51
	17 Methylene Chloride	84	2.449	2.449	(0.566)	183974	48.0485	48.04
	56 Tetrachloroethene	164	7.012	7.012	(0.906)	97632	41.3918	41.39
	50 Toluene	91	6.532	6.532	(0.844)	648809	45.9177	45.91
	20 trans-1,2-Dichloroethene	96	2.678	2.678	(0.619)	159794	47.5412	47.54
	51 trans-1,3-Dichloropropene	75	6.761	6.761	(1.330)	256221	49.2105	49.21
	38 Trichloroethene	130	5.321	5.321	(1.046)	154964	45.8126	45.81
	8 Trichlorofluoromethane	101	1.689	1.690	(0.391)	155243	37.2349	37.23
	5 Vinyl Chloride	62	1.260	1.260	(0.291)	183674	43.1121	43.11
	62 m,p-Xylenes	106	7.971	7.972	(1.030)	466732	87.0849	87.08
	63 o-Xylene	106	8.308	8.308	(1.073)	239107	44.0500	44.05
M	95 Xylenes (total)	106				705839	131.135	131.13
	71 1,2,3-Trichloropropane	75	8.931	8.931	(0.918)	201302	52.4417	52.44(M)
	93 1,2,3-Trichlorobenzene	180	11.804	11.804	(1.214)	63399	46.5031	46.50
	79 1,2,4-Trimethylbenzene	105	9.440	9.440	(0.971)	397457	41.0103	41.01
	75 1,3,5-Trimethylbenzene	105	9.125	9.132	(0.938)	368318	40.6309	40.63
	26 2,2-Dichloropropane	77	3.666	3.667	(0.848)	227871	44.7658	44.76
	54 1,3-Dichloropropane	76	7.062	7.062	(0.912)	288757	47.9847	47.98
	76 2-Chlorotoluene	91	9.039	9.039	(0.929)	384765	42.8006	42.80
	77 4-Chlorotoluene	91	9.132	9.132	(0.939)	442153	41.9827	41.98
	82 p-Isopropyltoluene	119	9.712	9.712	(0.999)	293939	37.4220	37.42
	29 Bromochloromethane	128	3.953	3.953	(0.914)	81928	49.2947	49.29
	74 Bromobenzene	156	8.874	8.874	(0.912)	169129	45.2903	45.29
	44 Dibromomethane	93	5.658	5.658	(1.113)	113603	51.0130	51.01
	91 Hexachlorobutadiene	225	11.539	11.539	(1.186)	22890	29.7646	29.76
	73 n-Propylbenzene	91	8.974	8.974	(0.923)	537978	39.8160	39.81
	87 n-Butylbenzene	91	10.049	10.049	(1.033)	240239	37.3080	37.30
	81 sec-Butylbenzene	105	9.583	9.583	(0.985)	327848	36.1579	36.15
	92 Naphthalene	128	11.603	11.603	(1.193)	241559	47.2756	47.27
	78 tert-Butylbenzene	119	9.397	9.397	(0.966)	256923	37.9119	37.91
	60 1,1,1,2-Tetrachloroethane	131	7.842	7.843	(1.013)	144187	44.5099	44.50
	64 Styrene	104	8.322	8.323	(1.075)	442161	45.3787	45.37

Data File: \\NAHSTWS003\Target\CHEM\VOA6.i\X171017.b\X101718.D Version 12
Report Date: 06-Feb-2018 11:39

QC Flag Legend

M - Compound response manually integrated.



Data File: \\NAHSTWS003\Target\CHEM\VOA6.i\X171017.b\X101718.D
Date : 17-OCT-2017 17:56
Client ID: HS17100646-08MS
Sample Info: HS17100646-08MS:HS17100646-08MS:3:;MS
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS003\Target\CHEM\VOA6.i\X171017.b\X101719.D Version 12
Report Date: 06-Feb-2018 11:39

ALS Laboratory Group

Data file : \\NAHSTWS003\Target\CHEM\VOA6.i\X171017.b\X101719.D
Lab Smp Id: HS17100646-08MSD Client Smp ID: HS17100646-08MSD
Inj Date : 17-OCT-2017 18:21
Operator : PC Inst ID: voa6.i
Smp Info : HS17100646-08MSD;HS17100646-08MSD;3;;MSD
Misc Info : HS16030331;WATER;0;1;
Comment   :
Method   : \\nahstws003\Target\chem\voa6.i\X171017.b\8260W.m
Meth Date : 06-Feb-2018 11:39 voa6.i Quant Type: ISTD
Cal Date : 10-OCT-2017 13:33 Cal File: X101008.D
Als bottle: 19 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: dn_bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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)
31 1,1,1-Trichloroethane	97	4.232	4.240	(0.978)	205905	41.2549	41.25
* 1 Pentafluorobenzene	168	4.325	4.326	(1.000)	254441	50.0000	
$ 30 Dibromofluoromethane	113	4.254	4.254	(0.983)	185793	50.7252	50.72
* 36 1,4-Difluorobenzene	114	5.085	5.085	(1.000)	441473	50.0000	
$ 35 1,2-Dichloroethane-d4	65	4.612	4.612	(1.066)	229972	49.9469	49.94
* 47 Chlorobenzene-d5	117	7.742	7.742	(1.000)	450323	50.0000	
$ 48 Toluene-d8	98	6.474	6.474	(0.836)	697997	50.0729	50.07
$ 69 4-Bromofluorobenzene	95	8.752	8.752	(1.130)	243085	48.9435	48.94
* 70 1,4-Dichlorobenzene-d4	152	9.726	9.726	(1.000)	224739	50.0000	
68 1,1,2,2-Tetrachloroethane	83	8.902	8.903	(0.915)	210226	52.8775	52.87
53 1,1,2-Trichloroethane	83	6.918	6.919	(0.894)	136791	47.0631	47.06
32 1,1-Dichloropropene	75	4.426	4.426	(0.870)	194125	40.4900	40.48
22 1,1-Dichloroethane	63	3.072	3.072	(0.710)	309063	46.2485	46.24
11 1,1-Dichloroethene	96	2.055	2.055	(0.475)	121174	41.1203	41.12
90 1,2,4-Trichlorobenzene	180	11.395	11.395	(1.172)	100147	51.6660	51.66
89 1,2-Dibromo-3-Chloropropane	155	10.715	10.715	(1.102)	28914	58.4455	58.44
57 1,2-Dibromoethane	107	7.341	7.341	(0.948)	165551	48.7732	48.77
88 1,2-Dichlorobenzene	146	10.056	10.056	(1.034)	239995	42.7166	42.71
33 1,2-Dichloroethane	62	4.691	4.691	(0.923)	232147	47.1023	47.10
42 1,2-Dichloropropane	63	5.543	5.543	(1.090)	193100	47.3053	47.30
83 1,3-Dichlorobenzene	146	9.669	9.669	(0.994)	239259	41.3870	41.38
84 1,4-Dichlorobenzene	146	9.748	9.741	(1.002)	251207	41.2592	41.25

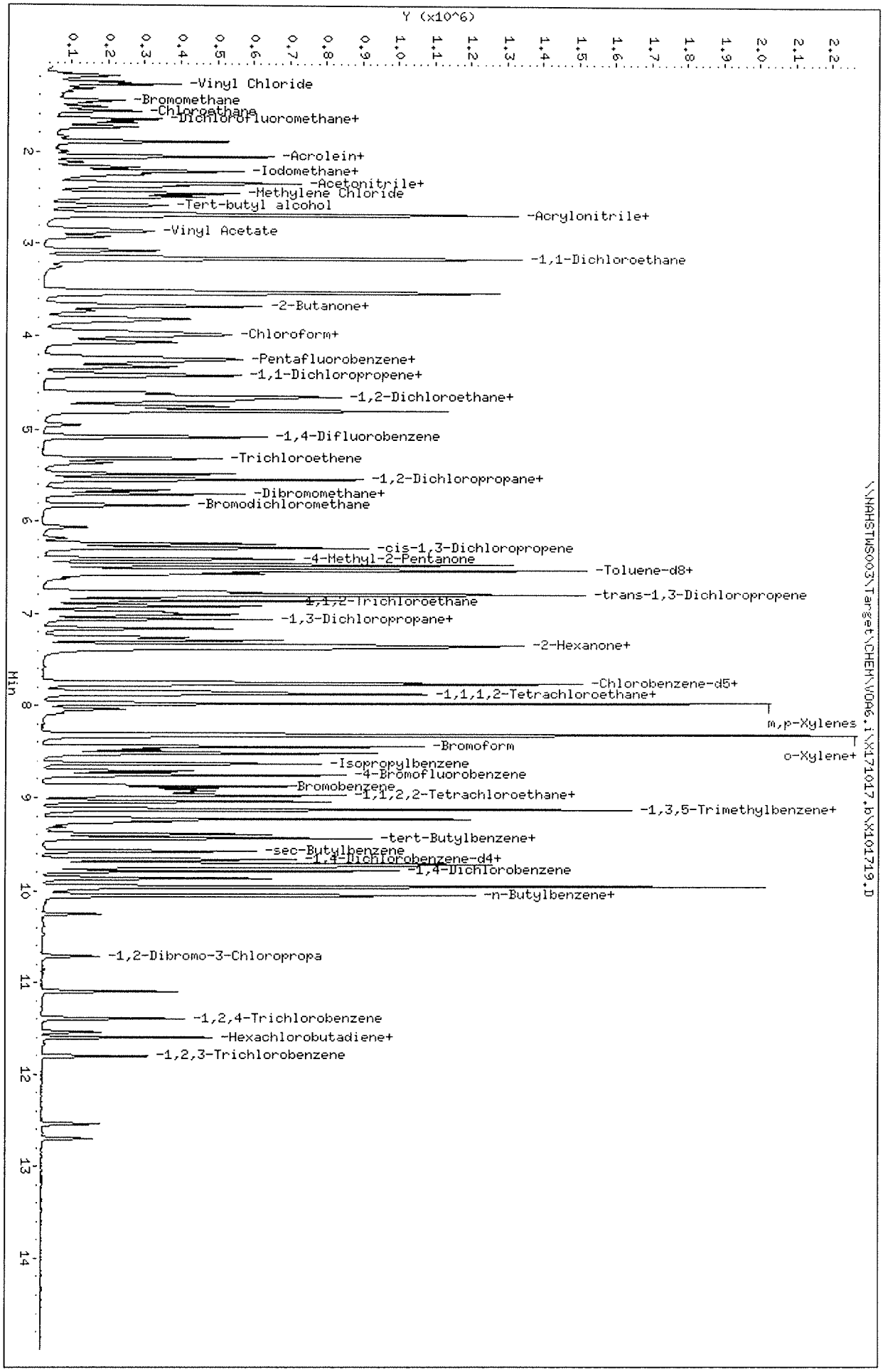
Data File: \\NAHSTWS003\Target\CHEM\VOA6.i\X171017.b\X101719.D Version 12
Report Date: 06-Feb-2018 11:39

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
24	2-Butanone	43	3.731	3.731	(0.863)	177261	117.832	117.83
52	2-Hexanone	43	7.284	7.284	(0.941)	394349	106.868	106.86
45	4-Methyl-2-Pentanone	43	6.410	6.410	(0.828)	422273	107.633	107.63
10	Acetone	43	2.119	2.112	(0.490)	101761	113.649	113.64
37	Benzene	78	4.648	4.648	(0.914)	658514	45.5002	45.50
39	Bromodichloromethane	83	5.822	5.823	(1.145)	232107	46.3941	46.39
66	Bromoform	173	8.480	8.480	(1.095)	121754	48.5225	48.52
6	Bromomethane	94	1.460	1.460	(0.338)	83636	33.8902	33.89
19	Carbon Disulfide	76	2.212	2.212	(0.512)	802292	85.5006	85.50
34	Carbon Tetrachloride	117	4.411	4.412	(0.868)	152920	37.8699	37.86
59	Chlorobenzene	112	7.764	7.764	(1.003)	399000	43.6962	43.69
7	Chloroethane	64	1.525	1.525	(0.353)	163730	62.0173	62.01
28	Chloroform	83	4.067	4.068	(0.940)	290964	46.8484	46.84
3	Chloromethane	50	1.188	1.195	(0.275)	207064	40.1626	40.16
27	cis-1,2-Dichloroethene	96	3.681	3.681	(0.851)	181796	47.6399	47.63
46	cis-1,3-Dichloropropene	75	6.245	6.245	(1.228)	300472	47.0227	47.02
55	Dibromochloromethane	129	7.255	7.255	(0.937)	178554	46.9402	46.94
2	Dichlorodifluoromethane	85	1.080	1.081	(0.250)	88668	27.2663	27.26
61	Ethylbenzene	106	7.871	7.871	(1.017)	189298	41.2051	41.20
67	Isopropylbenzene	105	8.623	8.623	(1.114)	437822	39.5695	39.56
17	Methylene Chloride	84	2.449	2.449	(0.566)	182096	46.5023	46.50
56	Tetrachloroethene	164	7.011	7.012	(0.906)	92501	38.2707	38.27
50	Toluene	91	6.532	6.532	(0.844)	633852	43.7772	43.77
20	trans-1,2-Dichloroethene	96	2.678	2.678	(0.619)	154295	44.8861	44.88
51	trans-1,3-Dichloropropene	75	6.761	6.761	(1.330)	255864	46.7881	46.78
38	Trichloroethene	130	5.321	5.321	(1.046)	151499	42.6429	42.64
8	Trichlorofluoromethane	101	1.689	1.690	(0.391)	140933	33.0523	33.05
5	Vinyl Chloride	62	1.260	1.260	(0.291)	168839	38.7503	38.75
62	m,p-Xylenes	106	7.971	7.972	(1.030)	457585	83.3191	83.31
63	o-Xylene	106	8.308	8.308	(1.073)	234309	42.1250	42.12
M 95	Xylenes (total)	106				691894	125.444	125.44
71	1,2,3-Trichloropropane	75	8.931	8.931	(0.918)	204086	51.9062	51.90(M)
93	1,2,3-Trichlorobenzene	180	11.804	11.804	(1.214)	80258	57.4733	57.47
79	1,2,4-Trimethylbenzene	105	9.440	9.440	(0.971)	398051	40.0977	40.09
75	1,3,5-Trimethylbenzene	105	9.132	9.132	(0.939)	367630	39.5934	39.59
26	2,2-Dichloropropane	77	3.666	3.667	(0.848)	215019	41.3033	41.30
54	1,3-Dichloropropane	76	7.062	7.062	(0.912)	291861	47.3308	47.33
76	2-Chlorotoluene	91	9.039	9.039	(0.929)	372602	40.4648	40.46
77	4-Chlorotoluene	91	9.132	9.132	(0.939)	442209	40.9924	40.99
82	p-Isopropyltoluene	119	9.712	9.712	(0.999)	298428	37.0926	37.09
29	Bromochloromethane	128	3.953	3.953	(0.914)	76381	44.9370	44.93
74	Bromobenzene	156	8.874	8.874	(0.912)	168057	43.9361	43.93
44	Dibromomethane	93	5.658	5.658	(1.113)	116764	49.9210	49.92
91	Hexachlorobutadiene	225	11.538	11.539	(1.186)	26834	33.9769	33.97
73	n-Propylbenzene	91	8.974	8.974	(0.923)	524058	37.8661	37.86
87	n-Butylbenzene	91	10.056	10.049	(1.034)	246981	37.4455	37.44
81	sec-Butylbenzene	105	9.583	9.583	(0.985)	330249	35.5591	35.55
92	Naphthalene	128	11.603	11.603	(1.193)	307158	57.9706	57.97
78	tert-Butylbenzene	119	9.397	9.397	(0.966)	258302	37.2116	37.21
60	1,1,1,2-Tetrachloroethane	131	7.842	7.843	(1.013)	144758	43.6084	43.60
64	Styrene	104	8.322	8.323	(1.075)	388338	38.8937	38.89

Data File: \\NAHSTWS003\Target\CHEM\VOA6.i\X171017.b\X101719.D Version 12
Report Date: 06-Feb-2018 11:39

QC Flag Legend

M - Compound response manually integrated.



Data File: \\NAHSTWS003\Target\CHEM\VOA6.i\X171017.b\X101719.D
Date : 17-OCT-2017 18:21
Client ID: HS1710646-08MSD
Sample Info: HS1710646-08MSD;HS1710646-08MSD;3;;MSD
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS003\Target\CHEM\VOA6.i\X171017.b\X101729.D Version 12
Report Date: 06-Feb-2018 11:39

ALS Laboratory Group

Data file : \\NAHSTWS003\Target\CHEM\VOA6.i\X171017.b\X101729.D
Lab Smp Id: VSTD050-END Client Smp ID: VSTD050-END
Inj Date : 17-OCT-2017 22:30
Operator : PC Inst ID: voa6.i
Smp Info : VSTD050-END;VSTD050-END;2;;
Misc Info : HS16030331;WATER;0;1;
Comment   :
Method   : \\NAHSTWS003\Target\CHEM\VOA6.i\X171017.b\8260Wend.m
Meth Date : 06-Feb-2018 11:39 voa6.i Quant Type: ISTD
Cal Date : 10-OCT-2017 13:33 Cal File: X101008.D
Als bottle: 29 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: dn_bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

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

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
	31 1,1,1-Trichloroethane	97	4.232	4.232	(0.978)	230545	50.0000	44.75
*	1 Pentafluorobenzene	168	4.325	4.325	(1.000)	262624	50.0000	
$	30 Dibromofluoromethane	113	4.247	4.247	(0.982)	188780	50.0000	49.95
*	36 1,4-Difluorobenzene	114	5.085	5.085	(1.000)	457349	50.0000	
$	35 1,2-Dichloroethane-d4	65	4.605	4.605	(1.065)	236485	50.0000	49.76
*	47 Chlorobenzene-d5	117	7.742	7.742	(1.000)	467324	50.0000	
$	48 Toluene-d8	98	6.474	6.474	(0.836)	712404	50.0000	49.27
$	69 4-Bromofluorobenzene	95	8.752	8.752	(1.130)	249342	50.0000	48.39
*	70 1,4-Dichlorobenzene-d4	152	9.726	9.726	(1.000)	230807	50.0000	
	68 1,1,2,2-Tetrachloroethane	83	8.903	8.903	(0.915)	209098	50.0000	51.18
	53 1,1,2-Trichloroethane	83	6.919	6.919	(0.894)	141130	50.0000	46.78
	32 1,1-Dichloropropene	75	4.426	4.426	(0.870)	219310	50.0000	44.15
	22 1,1-Dichloroethane	63	3.072	3.072	(0.710)	330322	50.0000	47.88
	11 1,1-Dichloroethene	96	2.048	2.048	(0.473)	142132	50.0000	46.72
	90 1,2,4-Trichlorobenzene	180	11.395	11.395	(1.172)	88299	50.0000	44.35
	89 1,2-Dibromo-3-Chloropropane	155	10.715	10.715	(1.102)	26233	50.0000	51.64
	57 1,2-Dibromoethane	107	7.341	7.341	(0.948)	169795	50.0000	48.20
	88 1,2-Dichlorobenzene	146	10.056	10.056	(1.034)	249255	50.0000	43.19
	33 1,2-Dichloroethane	62	4.691	4.691	(0.923)	236640	50.0000	46.34
	42 1,2-Dichloropropane	63	5.543	5.543	(1.090)	199440	50.0000	47.16
	83 1,3-Dichlorobenzene	146	9.669	9.669	(0.994)	250080	50.0000	42.12
	84 1,4-Dichlorobenzene	146	9.741	9.741	(1.001)	263794	50.0000	42.18

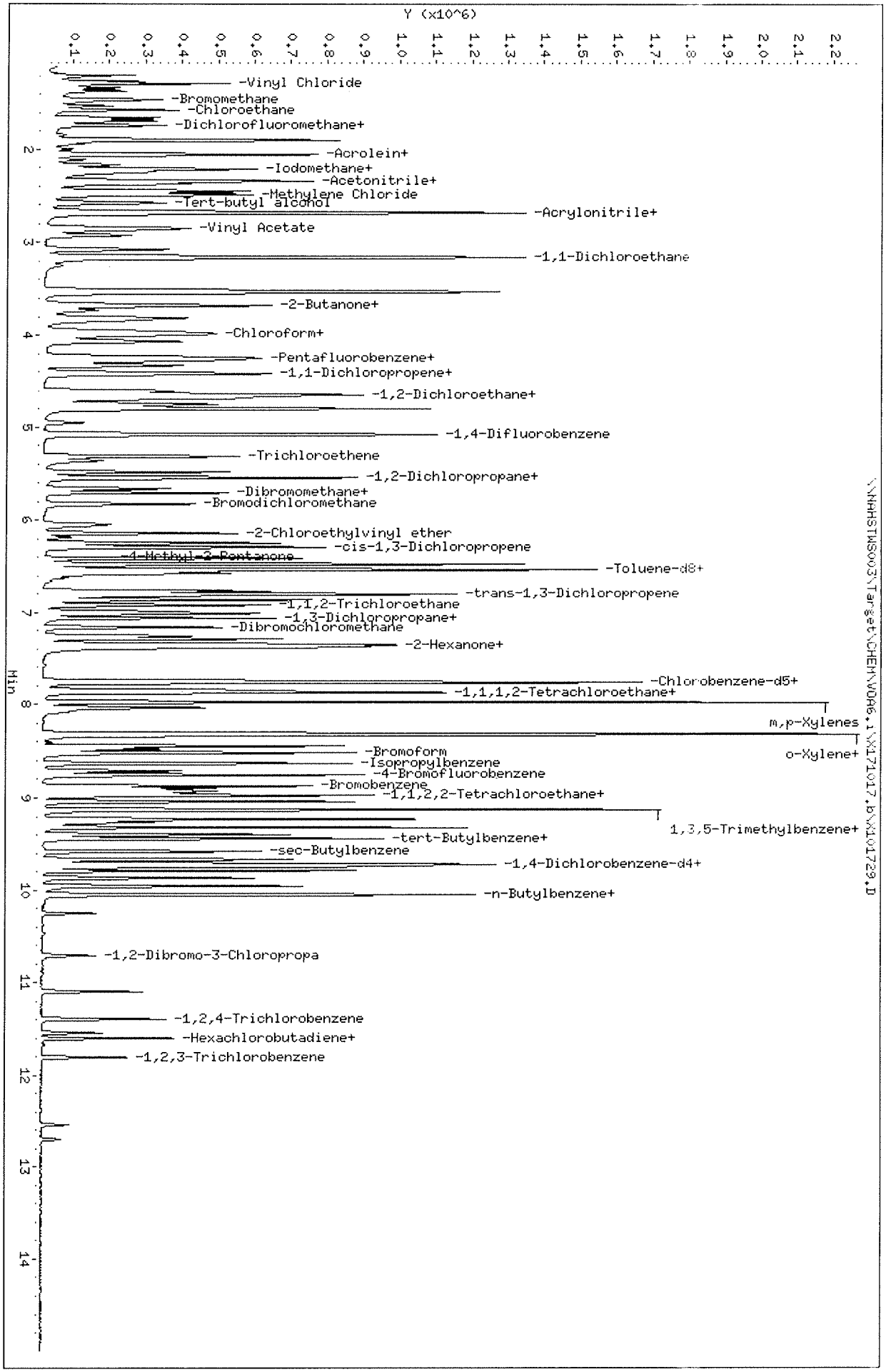
Data File: \\NAHSTWS003\Target\CHEM\VOA6.i\X171017.b\X101729.D Version 12
Report Date: 06-Feb-2018 11:39

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
24	2-Butanone	43	3.731	3.731	(0.863)	184754	100.000	118.98
52	2-Hexanone	43	7.284	7.284	(0.941)	387801	100.000	101.27
45	4-Methyl-2-Pentanone	43	6.410	6.410	(0.828)	414960	100.000	101.92
10	Acetone	43	2.112	2.112	(0.488)	111276	100.000	120.58
37	Benzene	78	4.648	4.648	(0.914)	700183	50.0000	46.69
39	Bromodichloromethane	83	5.823	5.823	(1.145)	239981	50.0000	46.30
66	Bromoform	173	8.480	8.480	(1.095)	123787	50.0000	47.53
6	Bromomethane	94	1.460	1.460	(0.338)	121778	50.0000	47.80
19	Carbon Disulfide	76	2.212	2.212	(0.512)	888727	100.000	91.76
34	Carbon Tetrachloride	117	4.411	4.411	(0.868)	180961	50.0000	43.25
59	Chlorobenzene	112	7.764	7.764	(1.003)	423192	50.0000	44.65
7	Chloroethane	64	1.525	1.525	(0.353)	121317	50.0000	44.52
28	Chloroform	83	4.068	4.068	(0.940)	304315	50.0000	47.47
3	Chloromethane	50	1.188	1.188	(0.275)	256785	50.0000	48.20
27	cis-1,2-Dichloroethene	96	3.681	3.681	(0.851)	190151	50.0000	48.27
46	cis-1,3-Dichloropropene	75	6.245	6.245	(1.228)	302602	50.0000	45.71
55	Dibromochloromethane	129	7.255	7.255	(0.937)	183841	50.0000	46.57
2	Dichlorodifluoromethane	85	1.081	1.081	(0.250)	144323	50.0000	42.99
61	Ethylbenzene	106	7.871	7.871	(1.017)	203245	50.0000	42.63
67	Isopropylbenzene	105	8.623	8.623	(1.114)	476151	50.0000	41.46
17	Methylene Chloride	84	2.449	2.449	(0.566)	190900	50.0000	47.23
56	Tetrachloroethene	164	7.012	7.012	(0.906)	102489	50.0000	40.86
50	Toluene	91	6.532	6.532	(0.844)	672564	50.0000	44.76
20	trans-1,2-Dichloroethene	96	2.678	2.678	(0.619)	166423	50.0000	46.90
51	trans-1,3-Dichloropropene	75	6.761	6.761	(1.330)	260292	50.0000	45.94
38	Trichloroethene	130	5.321	5.321	(1.046)	163751	50.0000	44.49
8	Trichlorofluoromethane	101	1.689	1.689	(0.391)	191001	50.0000	43.39
5	Vinyl Chloride	62	1.260	1.260	(0.291)	211918	50.0000	47.12
62	m,p-Xylenes	106	7.971	7.971	(1.030)	490135	100.000	85.99
63	o-Xylene	106	8.308	8.308	(1.073)	251833	50.0000	43.62
M 95	Xylenes (total)	106				741968	150.000	
71	1,2,3-Trichloropropane	75	8.931	8.931	(0.918)	204323	50.0000	50.60(M)
93	1,2,3-Trichlorobenzene	180	11.804	11.804	(1.214)	64719	50.0000	45.12
79	1,2,4-Trimethylbenzene	105	9.440	9.440	(0.971)	421565	50.0000	41.34
75	1,3,5-Trimethylbenzene	105	9.125	9.125	(0.938)	386600	50.0000	40.54
26	2,2-Dichloropropane	77	3.666	3.666	(0.848)	223073	50.0000	41.51
54	1,3-Dichloropropane	76	7.062	7.062	(0.912)	294034	50.0000	45.94
76	2-Chlorotoluene	91	9.039	9.039	(0.929)	404777	50.0000	42.80
77	4-Chlorotoluene	91	9.132	9.132	(0.939)	472611	50.0000	42.65
82	p-Isopropyltoluene	119	9.712	9.712	(0.999)	312282	50.0000	37.79
29	Bromochloromethane	128	3.953	3.953	(0.914)	83831	50.0000	47.78
74	Bromobenzene	156	8.867	8.867	(0.912)	174787	50.0000	44.49
44	Dibromomethane	93	5.658	5.658	(1.113)	115417	50.0000	47.63
91	Hexachlorobutadiene	225	11.539	11.539	(1.186)	25939	50.0000	32.01
73	n-Propylbenzene	91	8.974	8.974	(0.923)	570895	50.0000	40.16
87	n-Butylbenzene	91	10.056	10.056	(1.034)	256585	50.0000	37.87
81	sec-Butylbenzene	105	9.583	9.583	(0.985)	351605	50.0000	36.86
92	Naphthalene	128	11.603	11.603	(1.193)	242481	50.0000	45.04
78	tert-Butylbenzene	119	9.397	9.397	(0.966)	269028	50.0000	37.73
60	1,1,1,2-Tetrachloroethane	131	7.843	7.843	(1.013)	150719	50.0000	43.74
64	Styrene	104	8.322	8.322	(1.075)	465209	50.0000	44.89

Data File: \\NAHSTWS003\Target\CHEM\VOA6.i\X171017.b\X101729.D Version 12
Report Date: 06-Feb-2018 11:39

QC Flag Legend

M - Compound response manually integrated.



Data File: \\NAHSTWS003\Target\CHEM\VOA6.i\X171017.b\X101729.D
Date : 17-OCT-2017 22:30
Client ID: VSTD050-END
Sample Info: VSTD050-END;VSTD050-END;2;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Semivolatile Organics Raw Data

Bhate Environmental Associates, Inc.
Project: MONTHLY EFFLUENT SAMPLES
ALS WO# HS17100712

FORM 2
WATER SEMIVOLATILE SURROGATE RECOVERY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS17100712

	CLIENT SAMPLE NO.	S1 (NBZ)#	S2 #	S3 (FBP)#	S4 #	S5 #	S6 #	S7 #	S8 #	TOT OUT
01	MBLK-121033	52	81	127						0
02	LCS1-121033	106	97	86						0
03	LCSD1-121033	116	134	118						0
04	HS1710712-01	0D	0D	0D						0
05										
06										
07										
08										
09										
10										
11										
12										
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27										
28										

	QC LIMITS
S1 (NBZ) = Nitrobenzene-d5	(41-120)
S2 = 4-Terphenyl-d14	(40-140)
S3 (FBP) = 2-Fluorobiphenyl	(40-140)

Column to be used to flag recovery values
* Values outside of contract required QC limits
D Surrogate diluted out

SV06 -Logbook

Batch: 27541 **Analyst:** Andrew Neir

Date: 04-24-2017 **Reviewer:**

Method: 8270DSIM **Laboratory:** Houston

Comments: MSS003V-SIM

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
1	DFTPP	TUNE	04-24-2017 11:16 am	1.00			001.D		Y	NA
2	SSTD-2.5	SAMP	04-24-2017 11:32 am	1.00			002.D		Y	NA
3	SIMDX-0.08	ICAL4	04-24-2017 12:08 pm	1.00			003.D		Y	NA
4	SIMDX-0.01	ICAL1	04-24-2017 12:35 pm	1.00			004.D		Y	NA
5	SIMDX-0.03	ICAL2	04-24-2017 12:53 pm	1.00			005.D		Y	NA
6	SIMDX-0.05	ICAL3	04-24-2017 01:12 pm	1.00			006.D		Y	NA
7	SIMDX-0.10	ICAL5	04-24-2017 01:30 pm	1.00			007.D		Y	NA
8	SIMDX-0.15	ICAL6	04-24-2017 01:49 pm	1.00			008.D		Y	NA
9	SIMDX-0.20	ICAL7	04-24-2017 02:07 pm	1.00			009.D		Y	NA
10	SIMDX-0.50	ICAL8	04-24-2017 02:26 pm	1.00			010.D		Y	NA
11	SIMDX-ICV	SAMP	04-24-2017 02:44 pm	1.00			011.D		Y	NA
12	MBLK-115542	MBLK	04-24-2017 03:03 pm	1.00	1000.00 mL	1.00 mL	012.D	Liquid	Y	NA
13	LCS-115542	LCS	04-24-2017 03:21 pm	1.00	1000.00 mL	1.00 mL	013.D	Liquid	Y	NA
14	LCSD-115542	LCSD	04-24-2017 03:40 pm	1.00	1000.00 mL	1.00 mL	014.D	Liquid	Y	NA
15	HS17040927-01	SAMP	04-24-2017 04:05 pm	1.00	1000.00 mL	1.00 mL	015.D	Liquid	Y	NA
16	HS17040927-02	SAMP	04-24-2017 04:23 pm	1.00	1000.00 mL	1.00 mL	016.D	Liquid	Y	NA
17	HS17040927-03	SAMP	04-24-2017 04:42 pm	1.00	1000.00 mL	1.00 mL	017.D	Liquid	Y	NA
18	HS17040927-04	SAMP	04-24-2017 05:00 pm	1.00	1000.00 mL	1.00 mL	018.D	Liquid	Y	NA
19	HS17040927-05	SAMP	04-24-2017 05:19 pm	1.00	1000.00 mL	1.00 mL	019.D	Liquid	Y	NA
20	HS17040929-01	SAMP	04-24-2017 05:37 pm	1.00	1000.00 mL	1.00 mL	020.D	Liquid	Y	NA
21	HS17040929-02	SAMP	04-24-2017 05:56 pm	1.00	1000.00 mL	1.00 mL	021.D	Liquid	Y	NA
22	HS17040929-03	SAMP	04-24-2017 06:14 pm	1.00	1000.00 mL	1.00 mL	022.D	Liquid	Y	NA
23	HS17040929-04	SAMP	04-24-2017 06:33 pm	1.00	1000.00 mL	1.00 mL	023.D	Liquid	Y	NA
24	HS17040929-05	SAMP	04-24-2017 06:51 pm	1.00	1000.00 mL	1.00 mL	024.D	Liquid	Y	NA
25	HS17041003-01	SAMP	04-24-2017 07:10 pm	1.00	1000.00 mL	1.00 mL	025.D	Liquid	Y	NA
26	HS17041003-02	SAMP	04-24-2017 07:28 pm	1.00	1000.00 mL	1.00 mL	026.D	Liquid	Y	NA
27	HS17041003-03	SAMP	04-24-2017 07:47 pm	1.00	1000.00 mL	1.00 mL	027.D	Liquid	Y	NA
28	HS17041003-04	SAMP	04-24-2017 08:05 pm	1.00	1000.00 mL	1.00 mL	028.D	Liquid	Y	NA
29	HS17041003-05	SAMP	04-24-2017 08:24 pm	1.00	1000.00 mL	1.00 mL	029.D	Liquid	Y	NA
30	HS17041004-01	SAMP	04-24-2017 08:42 pm	1.00	1000.00 mL	1.00 mL	030.D	Liquid	Y	NA
31	HS17041004-02	SAMP	04-24-2017 09:01 pm	1.00	1000.00 mL	1.00 mL	031.D	Liquid	Y	NA
32	HS17041004-03	SAMP	04-24-2017 09:19 pm	1.00	1000.00 mL	1.00 mL	032.D	Liquid	Y	NA
33	HS17041004-04	SAMP	04-24-2017 09:38 pm	1.00	1000.00 mL	1.00 mL	033.D	Liquid	Y	NA

Chemical	Value
IS ID	29722-73-03
CAL STD ID	29722-52-04
DFTPP ID	29722-72-02
PCP Tailing	0.76
Benz. Tailing	0.86

FORM 3
WATER SEMIVOLATILE METHOD SPIKE RECOVERY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS17100712

Matrix Spike - Sample No.: SIMDX-ICV

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	% REC #	QC. LIMITS REC.
1,4-Dioxane	0.08000	0.08170	102	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.: HS17100712

Lab File ID: 001 DFTPP Injection Date: 04/24/17

Instrument ID: SV6 DFTPP Injection Time: 1116

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	41.9
68	Less than 2.0% of mass 69	0.8 (1.6)1
69	Mass 69 relative abundance	45.6
70	Less than 2.0% of mass 69	0.3 (0.6)1
127	10.0 - 80.0% of mass 198	52.6
197	Less than 2.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.7
275	10.0 - 60.0% of mass 198	28.0
365	1.0 - 100.0% of mass 198	4.0
441	Present, but less than mass 443	18.3
442	50.0 - 150.0% of mass 198	118.3
443	15.0 - 24.0% of mass 442	22.2 (18.8)2

1-Value is % mass 69 2-Value is % mass 442

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SIMDX-0.08	SIMDX-0.08	003	04/24/17	1208
02	SIMDX-0.01	SIMDX-0.01	004	04/24/17	1235
03	SIMDX-0.03	SIMDX-0.03	005	04/24/17	1253
04	SIMDX-0.05	SIMDX-0.05	006	04/24/17	1312
05	SIMDX-0.10	SIMDX-0.10	007	04/24/17	1330
06	SIMDX-0.15	SIMDX-0.15	008	04/24/17	1349
07	SIMDX-0.20	SIMDX-0.20	009	04/24/17	1407
08	SIMDX-0.50	SIMDX-0.50	010	04/24/17	1426
09	SIMDX-ICV	SIMDX-ICV	011	04/24/17	1444
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS17100712

Instrument ID: SV6 Calibration Date(s): 04/24/17 04/24/17

Column: RTX-5SIL MS ID: 0.28 (mm) Calibration Time(s): 1208 1426

LAB FILE ID: RF0.01: 004 RF0.025: 005 RF0.05: 006
RF0.08: 003 RF0.1: 007 RF0.15: 008

COMPOUND	RF0.01	RF0.025	RF0.05	RF0.08	RF0.1	RF0.15
1,4-Dioxane	0.069	0.071	0.060	0.069	0.062	0.071
Nitrobenzene-d5	0.329	0.419	0.294	0.346	0.296	0.348
4-Terphenyl-d14	0.524	0.562	0.462	0.484	0.480	0.512
2-Fluorobiphenyl	0.940	1.301	1.059	0.919	0.976	1.002

FORM VI SV

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS1710071

Instrument ID: SV6 Calibration Date(s): 04/24/17 04/24/17

Column: RTX-5SIL MS ID: 0.28 (mm) Calibration Time(s): 1208 1426

LAB FILE ID: RF0.2: 009 RF0.5: 010

COMPOUND	RF0.2	RF0.5	CURVE	COEFFICENT A1	%RSD OR R^2	MAX %RSD OR R^2
1,4-Dioxane	0.068	0.063	AVRG	6.685e-002	6.518	20.000
Nitrobenzene-d5	0.334	0.322	AVRG	0.33575816	11.636	20.000
4-Terphenyl-d14	0.517	0.567	AVRG	0.51363105	7.356	20.000
2-Fluorobiphenyl	1.034	1.152	AVRG	1.04802825	12.001	20.000

FORM VI SV

Data File: \\NAHSTWS003\Target\CHEM\SV6.i\170424.b\001.D

Date : 24-APR-2017 11:16

Client ID: DFTPP

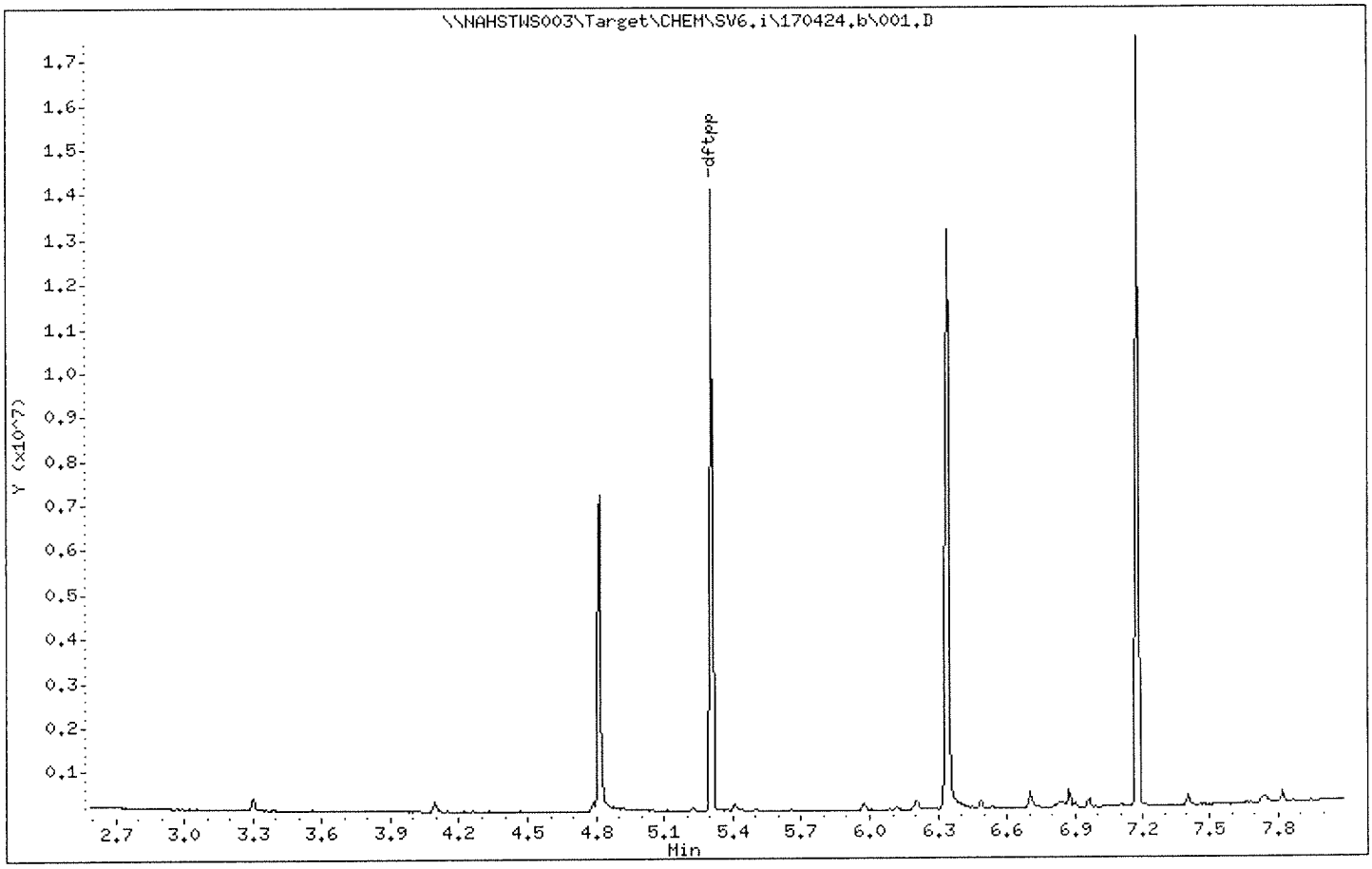
Instrument: SV6.i

Sample Info: DFTPP;DFTPP;3;;DFTPP

Operator: LG

Column phase: DB-5MS

Column diameter: 0.25



Data File: \\NAHSTWS003\Target\CHEM\SV6.i\170424.b\001.D

Date : 24-APR-2017 11:16

Client ID: DFTPP

Instrument: SV6.i

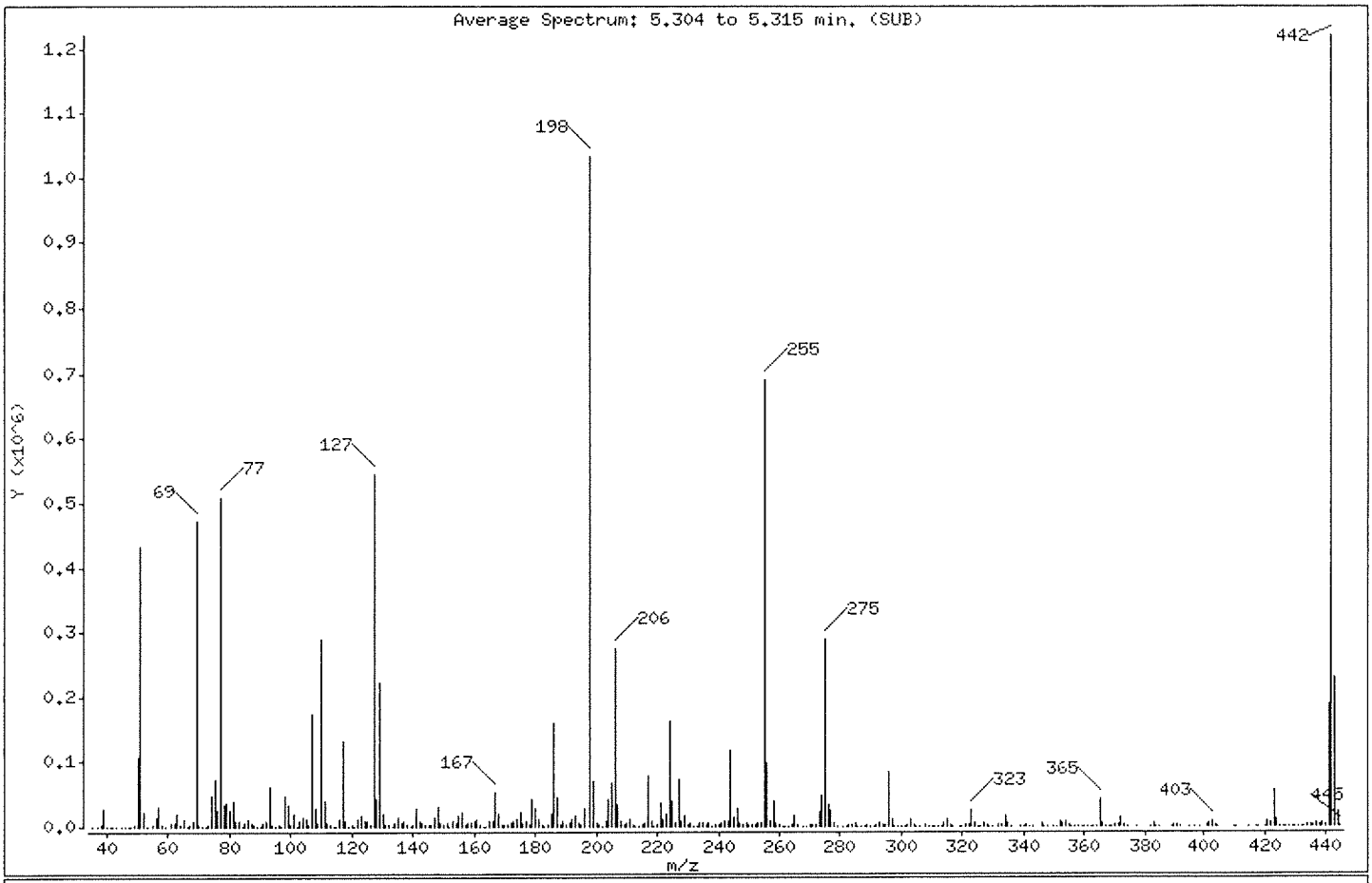
Sample Info: DFTPP;DFTPP;3;;DFTPP

Operator: LG

Column phase: DB-5MS

Column diameter: 0.25

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	41.93
68	Less than 2.00% of mass 69	0.75 (1.64)
69	Mass 69 relative abundance	45.65
70	Less than 2.00% of mass 69	0.27 (0.58)
127	10.00 - 80.00% of mass 198	52.65
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.72
275	10.00 - 60.00% of mass 198	28.00
365	1.00 - 100.00% of mass 198	4.04
441	Present, but less than mass 443	18.35
442	50.00 - 150.00% of mass 198	118.32
443	15.00 - 24.00% of mass 442	22.25 (18.80)

Data File: \\NAHSTWS003\Target\CHEM\SV6.i\170424.b\001.D

Date : 24-APR-2017 11:16

Client ID: DFTPP Instrument: SV6.i

Sample Info: DFTPP;DFTPP;3;;DFTPP

Operator: LG

Column phase: DB-5MS Column diameter: 0.25

Data File: 001.D
Spectrum: Average Spectrum: 5.304 to 5.315 min. (SUB)
Location of Maximum: 442.00
Number of points: 373

m/z	Y	m/z	Y	m/z	Y	m/z	Y
35.00	319	133.00	435	228.00	9582	326.00	124
37.00	591	134.00	6158	229.00	15774	327.00	4973
38.00	4098	135.00	15213	230.00	2614	328.00	3124
39.00	27528	136.00	6319	231.00	5724	329.00	615
40.00	461	137.00	7588	232.00	904	330.00	165
41.00	604	138.00	1818	233.00	1104	332.00	2772
42.00	417	139.00	1339	234.00	4336	333.00	3003
43.00	659	140.00	2916	235.00	4361	334.00	17856
45.00	684	141.00	27656	236.00	3239	335.00	4438
46.00	121	142.00	7609	237.00	5046	336.00	399
47.00	564	143.00	4841	238.00	933	339.00	225
48.00	161	144.00	1712	239.00	3368	340.00	583
49.00	2614	145.00	1883	240.00	2012	341.00	2714
50.00	106848	146.00	4149	241.00	5070	342.00	1270
51.00	432768	147.00	13078	242.00	9042	343.00	53
52.00	21336	148.00	30800	243.00	8739	346.00	6176
53.00	1043	149.00	6390	244.00	117296	347.00	866
55.00	2444	150.00	2368	245.00	14366	348.00	505
56.00	12849	151.00	4293	246.00	26808	350.00	199
57.00	32024	152.00	1283	247.00	5714	351.00	829
58.00	2012	153.00	8767	248.00	1624	352.00	7673
59.00	707	154.00	6205	249.00	4407	353.00	4448
61.00	5667	155.00	16672	250.00	1918	354.00	7943
62.00	5740	156.00	22728	251.00	2021	355.00	1809
63.00	19960	157.00	3918	252.00	1728	356.00	279
64.00	3027	158.00	4632	253.00	4950	357.00	297
65.00	10044	159.00	4560	254.00	4543	358.00	154
66.00	649	160.00	8533	255.00	689664	359.00	539
67.00	1573	161.00	11812	256.00	97112	360.00	304
68.00	7742	162.00	3554	257.00	7385	361.00	393
69.00	471104	163.00	977	258.00	40408	362.00	368
70.00	2739	164.00	1201	259.00	6732	363.00	156
71.00	365	165.00	8484	260.00	1457	364.00	725
72.00	43	166.00	8881	261.00	1223	365.00	41688
73.00	4099	167.00	53584	262.00	69	366.00	5496

Data File: \\NAHSTWS003\Target\CHEM\SV6.i\170424.b\001.D Page 4

Date : 24-APR-2017 11:16

Client ID: DFTPP Instrument: SV6.i

Sample Info: DFTPP;DFTPP;3;;DFTPP

Operator: LG

Column phase: DB-5MS Column diameter: 0.25

Data File: 001.D
Spectrum: Average Spectrum: 5.304 to 5.315 min. (SUB)
Location of Maximum: 442.00
Number of points: 373

m/z	Y	m/z	Y	m/z	Y	m/z	Y
74.00	49072	168.00	18808	263.00	740	367.00	99
75.00	74000	169.00	4150	264.00	1456	368.00	206
76.00	24272	170.00	1617	265.00	15848	369.00	357
77.00	508736	171.00	2148	266.00	2247	370.00	1626
78.00	32880	172.00	5487	268.00	899	371.00	1426
79.00	35168	173.00	7050	269.00	555	372.00	14180
80.00	26424	174.00	10709	270.00	1426	373.00	3641
81.00	37912	175.00	21160	271.00	2120	374.00	568
82.00	9589	176.00	5941	272.00	2640	377.00	149
83.00	8535	177.00	8623	273.00	22496	382.00	117
84.00	167	178.00	3232	274.00	47840	383.00	4261
85.00	6139	179.00	41272	275.00	288960	384.00	1223
86.00	11086	180.00	27056	276.00	34680	385.00	333
87.00	5393	181.00	12571	277.00	24384	389.00	74
88.00	2185	182.00	1932	278.00	4497	390.00	2197
89.00	786	183.00	861	279.00	514	391.00	1857
90.00	78	184.00	3366	281.00	310	392.00	1169
91.00	6561	185.00	20568	282.00	484	395.00	89
92.00	9758	186.00	158784	283.00	3071	397.00	248
93.00	62632	187.00	44440	284.00	3130	399.00	104
94.00	4082	188.00	3765	285.00	4400	401.00	1423
95.00	690	189.00	9094	286.00	969	402.00	6662
96.00	1550	190.00	1445	287.00	135	403.00	8305
97.00	1072	191.00	4508	288.00	656	404.00	3078
98.00	48864	192.00	12541	289.00	1507	405.00	355
99.00	33336	193.00	16037	290.00	936	410.00	432
100.00	2620	194.00	4744	291.00	527	411.00	165
101.00	20728	195.00	3652	292.00	1956	415.00	538
102.00	1170	196.00	29176	293.00	6019	417.00	277
103.00	7342	198.00	1032064	294.00	1706	418.00	685
104.00	14253	199.00	69352	295.00	2625	420.00	634
105.00	12330	200.00	5625	296.00	84936	421.00	8593
106.00	3552	201.00	4084	297.00	10465	422.00	6965
107.00	174464	202.00	468	298.00	765	423.00	56440
108.00	27072	203.00	8430	299.00	376	424.00	10884

Data File: \\NAHSTWS003\Target\CHEM\SV6.i\170424.b\001.D

Date : 24-APR-2017 11:16

Client ID: DFTPP

Instrument: SV6.i

Sample Info: DFTPP;DFTPP;3;;DFTPP

Operator: LG

Column phase: DB-5MS

Column diameter: 0.25

Data File: 001.D
Spectrum: Average Spectrum: 5.304 to 5.315 min. (SUB)
Location of Maximum: 442.00
Number of points: 373

m/z	Y	m/z	Y	m/z	Y	m/z	Y
109.00	4986	204.00	40792	300.00	234	425.00	1148
110.00	290432	205.00	68368	301.00	897	426.00	217
111.00	38976	206.00	275968	302.00	1739	427.00	77
112.00	5454	207.00	33184	303.00	10835	428.00	183
113.00	2107	208.00	9247	304.00	2280	429.00	382
114.00	507	209.00	2908	305.00	375	430.00	399
115.00	727	210.00	4983	306.00	114	431.00	963
116.00	10050	211.00	11183	308.00	1926	432.00	470
117.00	132928	212.00	2218	309.00	843	433.00	801
118.00	8164	213.00	722	310.00	1101	434.00	1740
119.00	1265	214.00	625	311.00	663	435.00	3595
120.00	1921	215.00	3709	312.00	339	436.00	2524
121.00	993	216.00	6564	313.00	1084	437.00	4693
122.00	10349	217.00	79640	314.00	5352	438.00	3283
123.00	15595	218.00	9252	315.00	11026	439.00	6567
124.00	7662	219.00	1084	316.00	3980	440.00	4148
125.00	8169	220.00	2060	317.00	1359	441.00	189312
126.00	1911	221.00	35648	319.00	363	442.00	1221120
127.00	543360	222.00	10614	320.00	467	443.00	229568
128.00	41984	223.00	20216	321.00	2481	444.00	22096
129.00	223168	224.00	163264	322.00	1707	445.00	1226
130.00	18992	225.00	39296	323.00	26048		
131.00	2757	226.00	4796	324.00	4372		
132.00	1566	227.00	73120	325.00	341		

ALS Laboratory Group

GC/MS Semivolatiles EPA method 8270D

Data file : \\NAHSTWS003\Target\CHEM\SV6.i\170424.b\dod\003.D
Lab Smp Id: SIMDX-0.08 Client Smp ID: SIMDX-0.08
Inj Date : 24-APR-2017 12:08
Operator : LG Inst ID: SV6.i
Smp Info : SIMDX-0.08;SIMDX-0.08
Misc Info : ;;0;1;
Comment :
Method : \\NAHSTWS003\Target\CHEM\SV6.i\170424.b\dod\DXSIM.m
Meth Date : 01-Nov-2017 17:15 aneir Quant Type: ISTD
Cal Date : Cal File:
Als bottle: 3 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 14DX.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	ON-COL (NG)	REVIEW CODE
* 45 Naphthalene-d8	136	4.402	4.480	(1.000)	62024	0.10000	(H)	M4
$ 33 Nitrobenzene-d5	82	3.766	3.844	(0.855)	17150	0.08000	0.08235(M)	M4
* 86 Acenaphthene-d10	164	6.073	6.152	(1.000)	46603	0.10000	(M)	M4
$ 69 2-Fluorobiphenyl	172	5.423	5.512	(0.893)	34256	0.08000	0.07014	
* 126 Phenanthrene-d10	188	7.517	7.607	(1.000)	91837	0.10000		
* 182 Chrysene-d12	240	10.266	10.389	(1.000)	84410	0.10000	(H)	M1
$ 158 4-Terphenyl-d14	244	9.093	9.189	(0.829)	32650	0.08000	0.07531(H)	M1
* 198 Perylene-d12	264	12.248	12.403	(1.000)	83778	0.10000		
1 1,4-Dioxane	58	1.637	1.684	(0.496)	3420	0.08000	0.08248(aM)	M4

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

Data File: \\NAHSTWS003\Target\CHEM\SV6.i\170424.b\dod\003.D

Date : 24-APR-2017 12:08

Client ID: SIMDX-0.08

Instrument: SV6.i

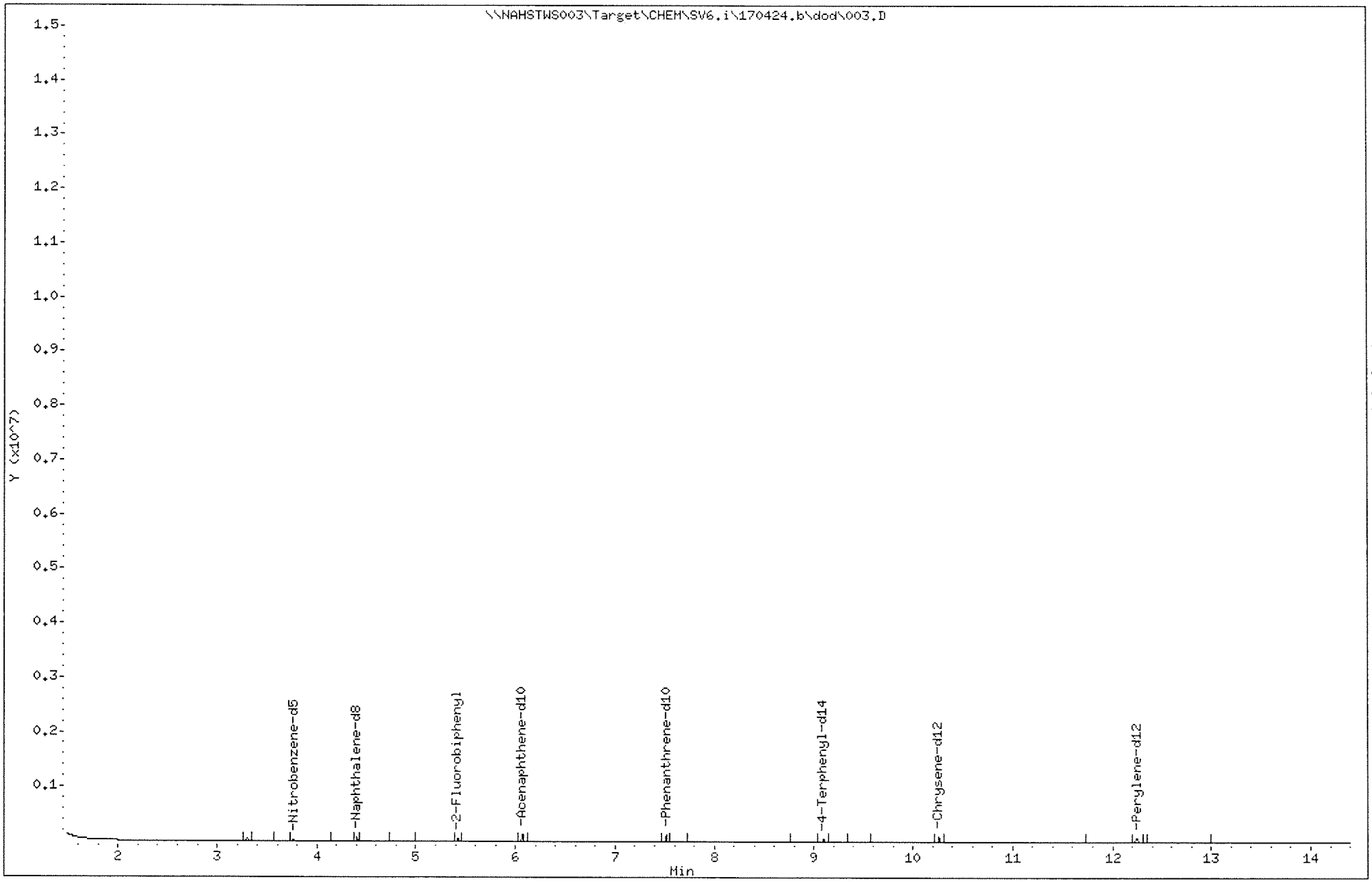
Sample Info: SIMDX-0.08;SIMDX-0.08

Purge Volume: 1000.0

Operator: LG

Column phase: RTX-5SIL MS

Column diameter: 0.28



ALS Laboratory Group

GC/MS Semivolatiles EPA method 8270D

Data file : \\NAHSTWS003\Target\CHEM\SV6.i\170424.b\dod\004.D
Lab Smp Id: SIMDX-0.01 Client Smp ID: SIMDX-0.01
Inj Date : 24-APR-2017 12:35 MS Autotune Date: 14-APR-2017 16:38
Operator : LG Inst ID: SV6.i
Smp Info : SIMDX-0.01;SIMDX-0.01
Misc Info : ;1;0;1;
Comment :
Method : \\NAHSTWS003\Target\CHEM\SV6.i\170424.b\dod\DXSIM.m
Meth Date : 01-Nov-2017 17:15 aneir Quant Type: ISTD
Cal Date : Cal File:
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 MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	ON-COL (NG)	REVIEW CODE
* 45 Naphthalene-d8	136	4.402	4.480	(1.000)	79129	0.10000		
$ 33 Nitrobenzene-d5	82	3.766	3.844	(0.855)	2602	0.01000	0.009794(QM)	M4
* 86 Acenaphthene-d10	164	6.073	6.152	(1.000)	56348	0.10000		
$ 69 2-Fluorobiphenyl	172	5.423	5.512	(0.893)	5299	0.01000	0.008973(M)	M4
* 126 Phenanthrene-d10	188	7.517	7.607	(1.000)	113179	0.10000		
* 182 Chrysene-d12	240	10.266	10.389	(1.000)	103360	0.10000	(M)	M1
$ 158 4-Terphenyl-d14	244	9.093	9.189	(0.886)	5415	0.01000	0.01020(QM)	M1
* 198 Perylene-d12	264	12.248	12.403	(1.000)	94269	0.10000		

QC Flag Legend

Q - Qualifier signal failed the ratio test.
M - Compound response manually integrated.

Data File: \\NAHSTWS003\Target\CHEM\SV6.i\170424.b\dod\004.D

Page 2

Date : 24-APR-2017 12:35

Client ID: SIMDX-0.01

Instrument: SV6.i

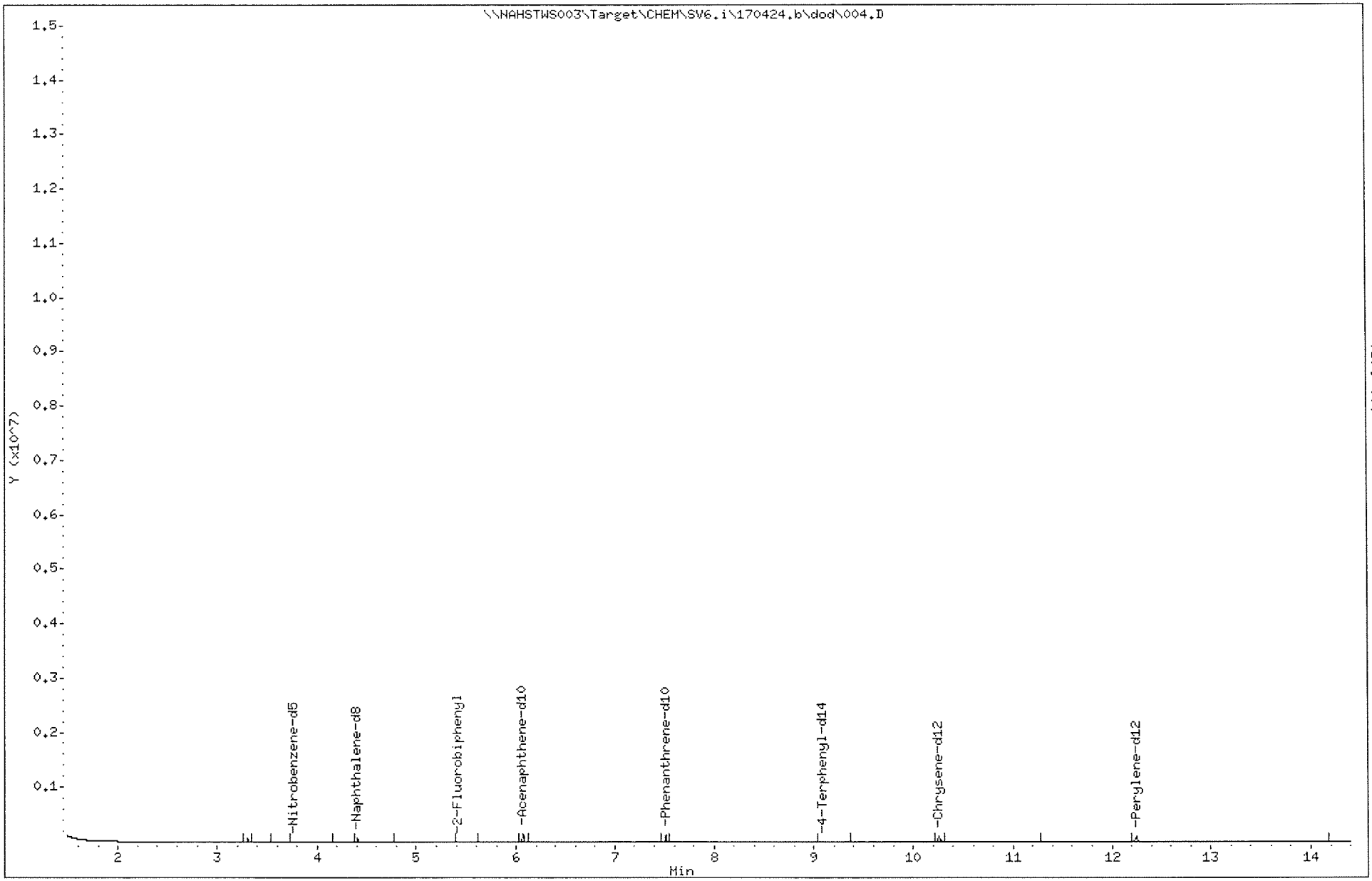
Sample Info: SIMDX-0.01;SIMDX-0.01

Purge Volume: 1000.0

Operator: LG

Column phase: RTX-5SIL MS

Column diameter: 0.28



ALS Laboratory Group

GC/MS Semivolatiles EPA method 8270D

Data file : \\NAHSTWS003\Target\CHEM\SV6.i\170424.b\dod\005.D
Lab Smp Id: SIMDX-0.03 Client Smp ID: SIMDX-0.03
Inj Date : 24-APR-2017 12:53 MS Autotune Date: 14-APR-2017 16:38
Operator : LG Inst ID: SV6.i
Smp Info : SIMDX-0.03;SIMDX-0.03
Misc Info : ;1;0;1;
Comment :
Method : \\NAHSTWS003\Target\CHEM\SV6.i\170424.b\dod\DXSIM.m
Meth Date : 01-Nov-2017 17:15 aneir Quant Type: ISTD
Cal Date : Cal File:
Als bottle: 5 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 14DX.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	ON-COL (NG)	REVIEW CODE
* 45 Naphthalene-d8	136	4.402	4.480	(1.000)	107613	0.10000	(M)	M1
$ 33 Nitrobenzene-d5	82	3.766	3.844	(0.855)	11265	0.02500	0.03118 (QM)	M4
* 86 Acenaphthene-d10	164	6.068	6.152	(1.000)	79991	0.10000		
$ 69 2-Fluorobiphenyl	172	5.420	5.512	(0.893)	26014	0.02500	0.03103 (Q)	
* 126 Phenanthrene-d10	188	7.512	7.607	(1.000)	164190	0.10000		
* 182 Chrysene-d12	240	10.255	10.389	(1.000)	154640	0.10000	(M)	M1
$ 158 4-Terphenyl-d14	244	9.088	9.189	(0.886)	21745	0.02500	0.02738 (QM)	M1
* 198 Perylene-d12	264	12.238	12.403	(1.000)	152814	0.10000	(M)	M4

QC Flag Legend

Q - Qualifier signal failed the ratio test.
M - Compound response manually integrated.

Data File: \\NAHSTWS003\Target\CHEM\SV6.i\170424.b\dod\005.D

Date : 24-APR-2017 12:53

Client ID: SIMDX-0.03

Instrument: SV6.i

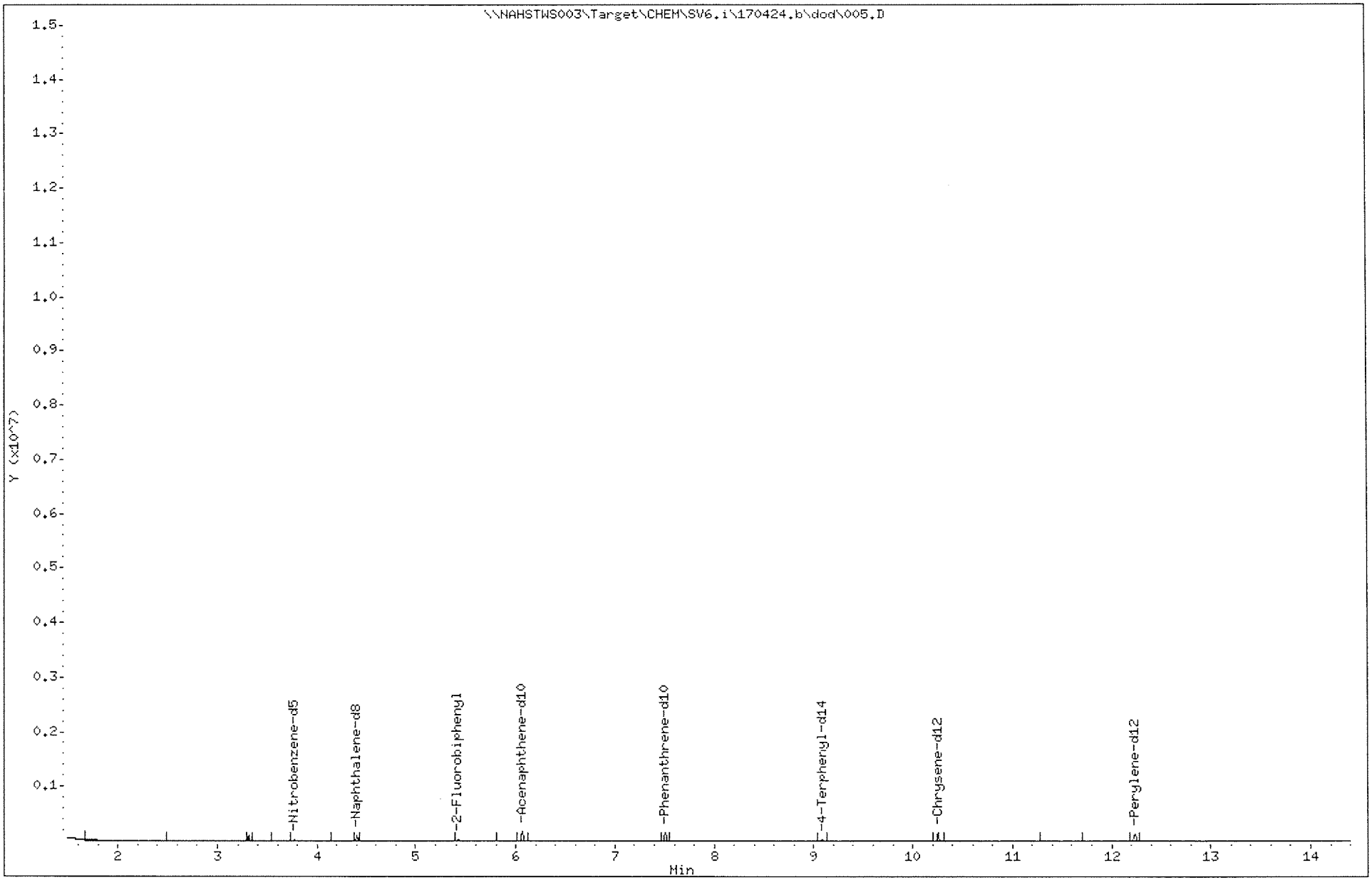
Sample Info: SIMDX-0.03;SIMDX-0.03

Purge Volume: 1000.0

Operator: LG

Column phase: RTX-5SIL MS

Column diameter: 0.28



ALS Laboratory Group

GC/MS Semivolatiles EPA method 8270D

Data file : \\NAHSTWS003\Target\CHEM\SV6.i\170424.b\dod\006.D
Lab Smp Id: SIMDX-0.05 Client Smp ID: SIMDX-0.05
Inj Date : 24-APR-2017 13:12 MS Autotune Date: 14-APR-2017 16:38
Operator : LG Inst ID: SV6.i
Smp Info : SIMDX-0.05;SIMDX-0.05
Misc Info : ;1;0;1;
Comment :
Method : \\NAHSTWS003\Target\CHEM\SV6.i\170424.b\dod\DXSIM.m
Meth Date : 01-Nov-2017 17:15 aneir Quant Type: ISTD
Cal Date : Cal File:
Als bottle: 6 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 14DX.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	ON-COL (NG)		REVIEW CODE
* 45 Naphthalene-d8	136	4.402	4.480	(1.000)	99261	0.10000		(M)	M4
$ 33 Nitrobenzene-d5	82	3.766	3.844	(0.855)	14604	0.05000	0.04382	(M)	M4
* 86 Acenaphthene-d10	164	6.068	6.152	(1.000)	63860	0.10000			
$ 69 2-Fluorobiphenyl	172	5.424	5.512	(0.894)	33827	0.05000	0.05054		
* 126 Phenanthrene-d10	188	7.512	7.607	(1.000)	129161	0.10000			
* 182 Chrysene-d12	240	10.255	10.389	(1.000)	121832	0.10000		(M)	NEG
$ 158 4-Terphenyl-d14	244	9.088	9.189	(0.886)	28170	0.05000	0.04502	(M)	M4
* 198 Perylene-d12	264	12.243	12.403	(1.000)	118276	0.10000		(M)	M4

QC Flag Legend

M - Compound response manually integrated.

Data File: \\NAHSTWS003\Target\CHEM\SV6.i\170424.b\dod\006.D

Date : 24-APR-2017 13:12

Client ID: SIMDX-0.05

Instrument: SV6.i

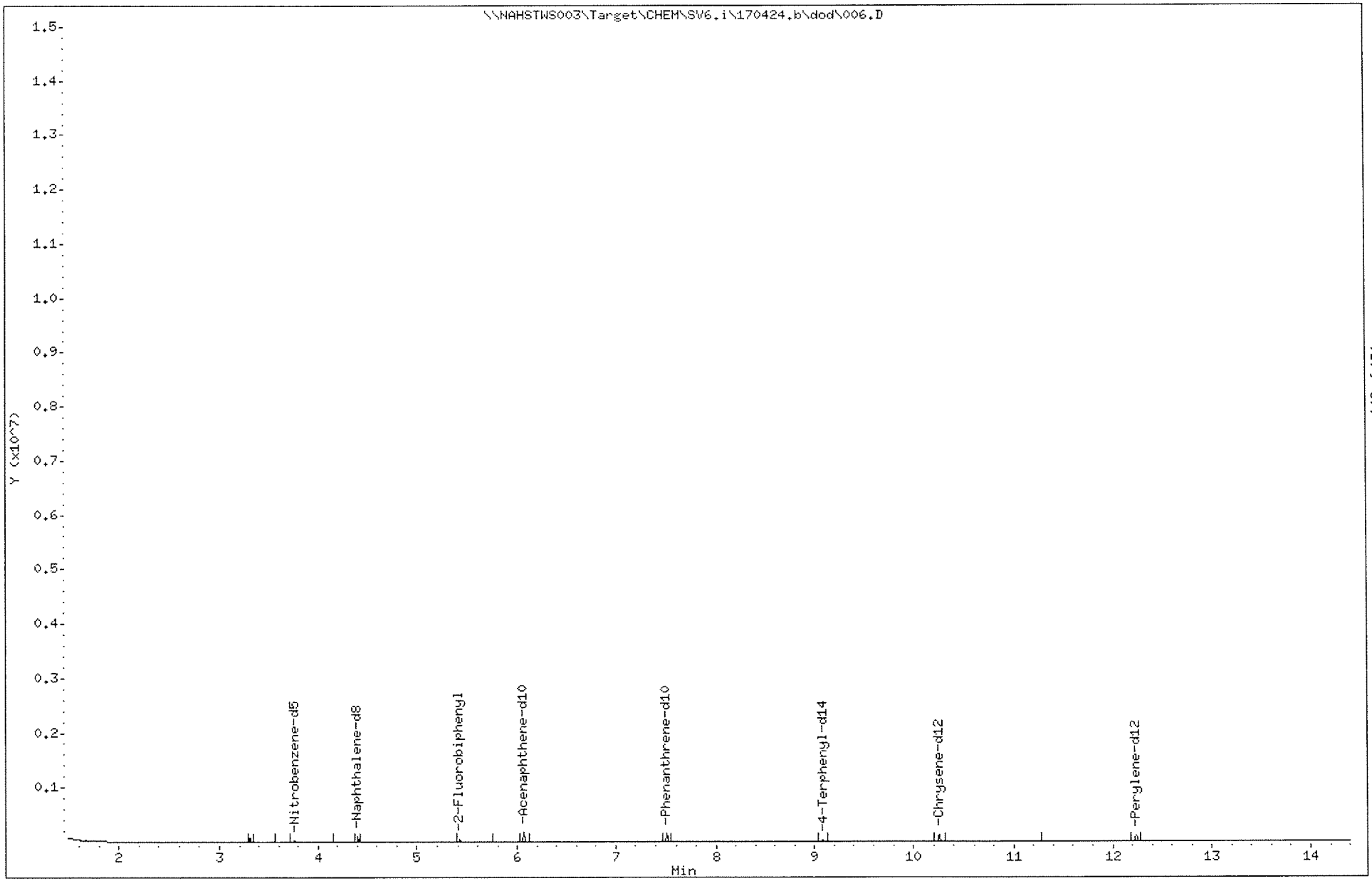
Sample Info: SIMDX-0.05;SIMDX-0.05

Purge Volume: 1000.0

Operator: LG

Column phase: RTX-5SIL MS

Column diameter: 0.28



Data File: \\NAHSTWS003\Target\CHEM\SV6.i\170424.b\dod\007.D Page 1
Report Date: 01-Nov-2017 17:16

ALS Laboratory Group

GC/MS Semivolatiles EPA method 8270D

Data file : \\NAHSTWS003\Target\CHEM\SV6.i\170424.b\dod\007.D
Lab Smp Id: SIMDX-0.10 Client Smp ID: SIMDX-0.10
Inj Date : 24-APR-2017 13:30 MS Autotune Date: 14-APR-2017 16:38
Operator : LG Inst ID: SV6.i
Smp Info : SIMDX-0.10;SIMDX-0.10
Misc Info : ;1;0;1;
Comment :
Method : \\NAHSTWS003\Target\CHEM\SV6.i\170424.b\dod\DXSIM.m
Meth Date : 01-Nov-2017 17:15 aneir Quant Type: ISTD
Cal Date : Cal File:
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 MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	ON-COL (NG)		REVIEW CODE
* 45 Naphthalene-d8	136	4.402	4.480	(1.000)	76823	0.10000		(M)	M1
$ 33 Nitrobenzene-d5	82	3.766	3.844	(0.855)	22732	0.10000	0.08813	(M)	M4
* 86 Acenaphthene-d10	164	6.068	6.152	(1.000)	51293	0.10000		(M)	M4
$ 69 2-Fluorobiphenyl	172	5.423	5.512	(0.894)	50060	0.10000	0.09312	(M)	M4
* 126 Phenanthrene-d10	188	7.512	7.607	(1.000)	99602	0.10000			
* 182 Chrysene-d12	240	10.261	10.389	(1.000)	91296	0.10000		(M)	M1
$ 158 4-Terphenyl-d14	244	9.088	9.189	(0.886)	43862	0.10000	0.09354	(M)	M4
* 198 Perylene-d12	264	12.237	12.403	(1.000)	90422	0.10000		(M)	M4
1 1,4-Dioxane	58	1.646	1.684	(0.497)	4777	0.10000	0.09301	(aM)	M4

QC Flag Legend

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

Data File: \\NAHSTWS003\Target\CHEM\SV6.i\170424.b\dod\007.D

Date : 24-APR-2017 13:30

Client ID: SIMDX-0.10

Instrument: SV6.i

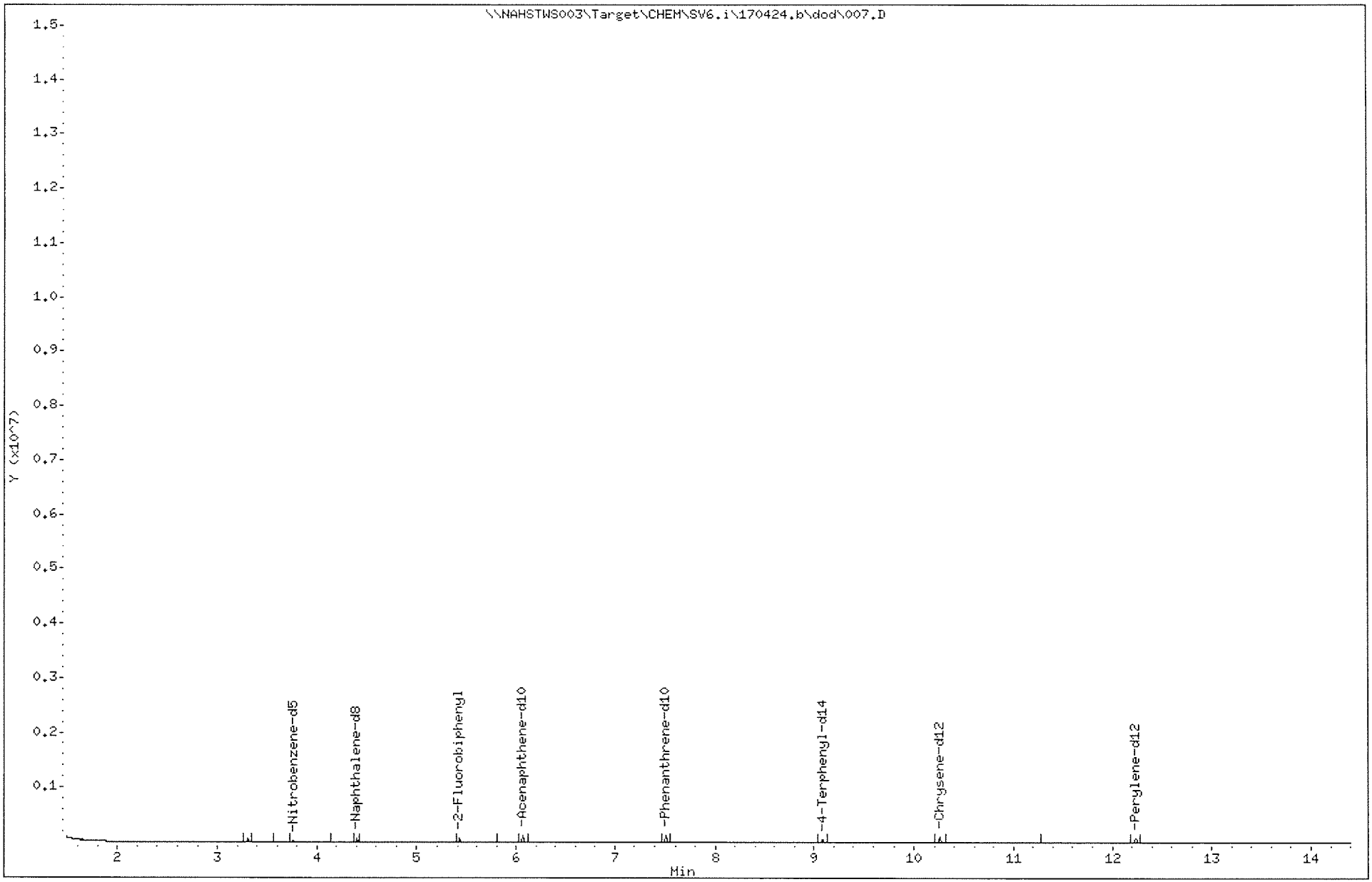
Sample Info: SIMDX-0.10;SIMDX-0.10

Purge Volume: 1000.0

Operator: LG

Column phase: RTX-5SIL MS

Column diameter: 0.28



ALS Laboratory Group

GC/MS Semivolatiles EPA method 8270D

Data file : \\NAHSTWS003\Target\CHEM\SV6.i\170424.b\dod\008.D
Lab Smp Id: SIMDX-0.15 Client Smp ID: SIMDX-0.15
Inj Date : 24-APR-2017 13:49 MS Autotune Date: 14-APR-2017 16:38
Operator : LG Inst ID: SV6.i
Smp Info : SIMDX-0.15;SIMDX-0.15
Misc Info : ;1;0;1;
Comment :
Method : \\NAHSTWS003\Target\CHEM\SV6.i\170424.b\dod\DXSIM.m
Meth Date : 01-Nov-2017 17:15 aneir Quant Type: ISTD
Cal Date : 24-APR-2017 13:30 Cal File: 007.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 MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	AMOUNTS ON-COL (NG)	REVIEW CODE
* 45 Naphthalene-d8	136	4.402	4.480	(1.000)	89747	0.10000	(M)	M1
$ 33 Nitrobenzene-d5	82	3.766	3.844	(0.855)	46789	0.15000	0.1553(AM)	M4
* 86 Acenaphthene-d10	164	6.068	6.152	(1.000)	64807	0.10000	(M)	M4
$ 69 2-Fluorobiphenyl	172	5.420	5.512	(1.000)	97389	0.15000	0.1434	
* 126 Phenanthrene-d10	188	7.512	7.607	(1.000)	124248	0.10000		
* 182 Chrysene-d12	240	10.255	10.389	(1.000)	113416	0.10000	(M)	M1
$ 158 4-Terphenyl-d14	244	9.088	9.189	(0.886)	87110	0.15000	0.1495(M)	M4
* 198 Perylene-d12	264	12.238	12.403	(1.000)	111819	0.10000		
1 1,4-Dioxane	58	1.661	1.684	(0.502)	9615	0.15000	0.1602(aM)	M4

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: \\NAHSTWS003\Target\CHEM\SV6.i\170424.b\dod\008.D

Date : 24-APR-2017 13:49

Client ID: SIMDX-0.15

Instrument: SV6.i

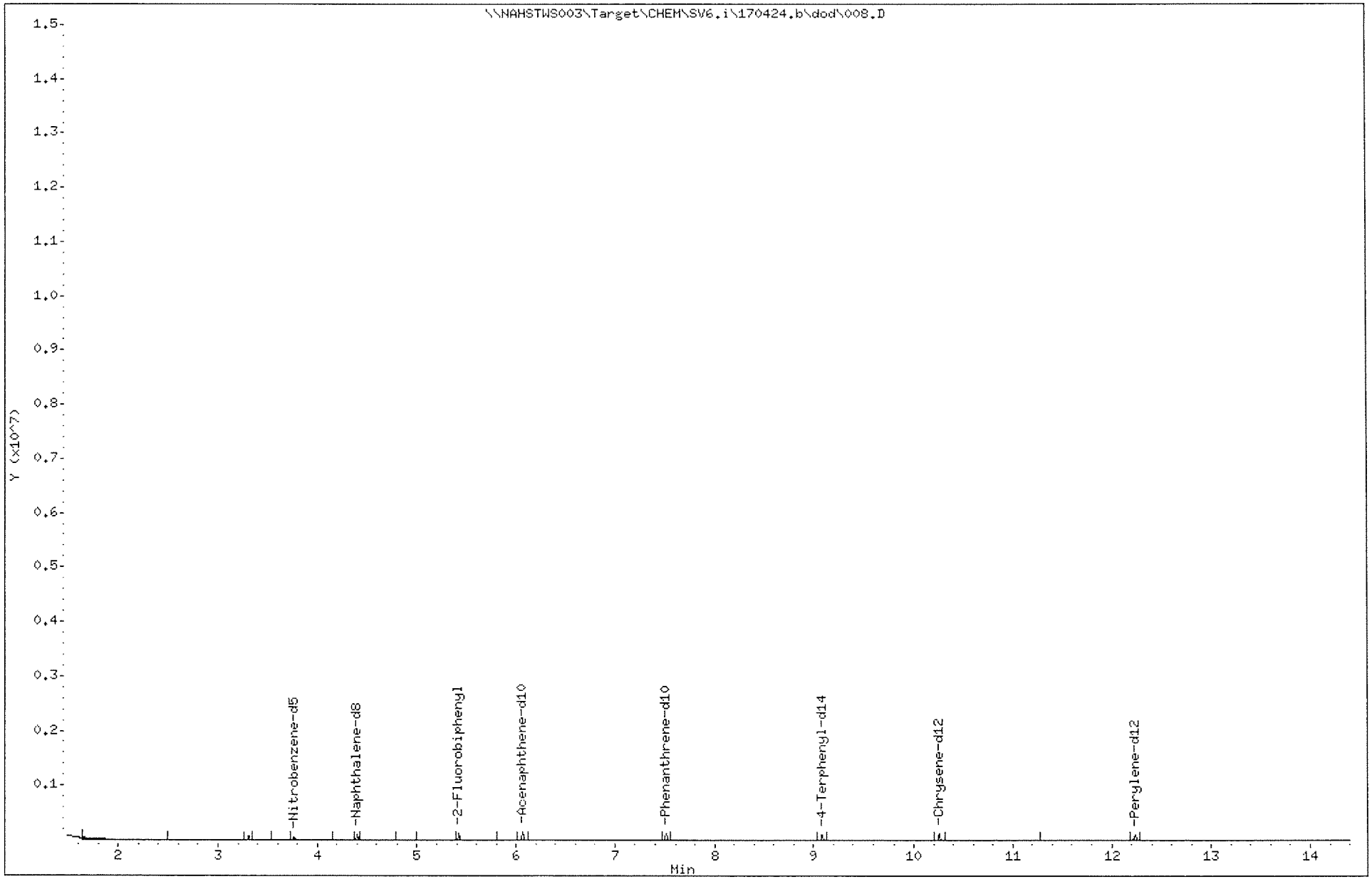
Sample Info: SIMDX-0.15;SIMDX-0.15

Purge Volume: 1000.0

Operator: LG

Column phase: RTX-5SIL MS

Column diameter: 0.28



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GC/MS Semivolatiles EPA method 8270D

Data file : \\NAHSTWS003\Target\CHEM\SV6.i\170424.b\dod\009.D
Lab Smp Id: SIMDX-0.20 Client Smp ID: SIMDX-0.20
Inj Date : 24-APR-2017 14:07 MS Autotune Date: 14-APR-2017 16:38
Operator : LG Inst ID: SV6.i
Smp Info : SIMDX-0.20;SIMDX-0.20
Misc Info : ;1;0;1;
Comment :
Method : \\NAHSTWS003\Target\CHEM\SV6.i\170424.b\dod\DXSIM.m
Meth Date : 01-Nov-2017 17:15 aneir Quant Type: ISTD
Cal Date : 24-APR-2017 13:30 Cal File: 007.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 MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	ON-COL (NG)		REVIEW CODE
* 45 Naphthalene-d8	136	4.402	4.480	(1.000)	94348	0.10000		(M)	M1
$ 33 Nitrobenzene-d5	82	3.766	3.844	(0.855)	62937	0.20000	0.1987	(AM)	M4
* 86 Acenaphthene-d10	164	6.068	6.152	(1.000)	68026	0.10000		(M)	M4
$ 69 2-Fluorobiphenyl	172	5.423	5.512	(0.823)	140742	0.20000	0.1974	(A)	
* 126 Phenanthrene-d10	188	7.512	7.607	(1.000)	133398	0.10000			
* 182 Chrysene-d12	240	10.255	10.389	(1.000)	118310	0.10000		(M)	M1
$ 158 4-Terphenyl-d14	244	9.082	9.189	(0.886)	122372	0.20000	0.2014	(AM)	M4
* 198 Perylene-d12	264	12.237	12.403	(1.000)	117313	0.10000			
1 1,4-Dioxane	58	1.661	1.684	(0.502)	12904	0.20000	0.2046	(M)	M4

QC Flag Legend

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

Data File: \\NAHSTWS003\Target\CHEM\SV6.i\170424.b\dod\009.D

Date : 24-APR-2017 14:07

Client ID: SIMDX-0.20

Instrument: SV6.i

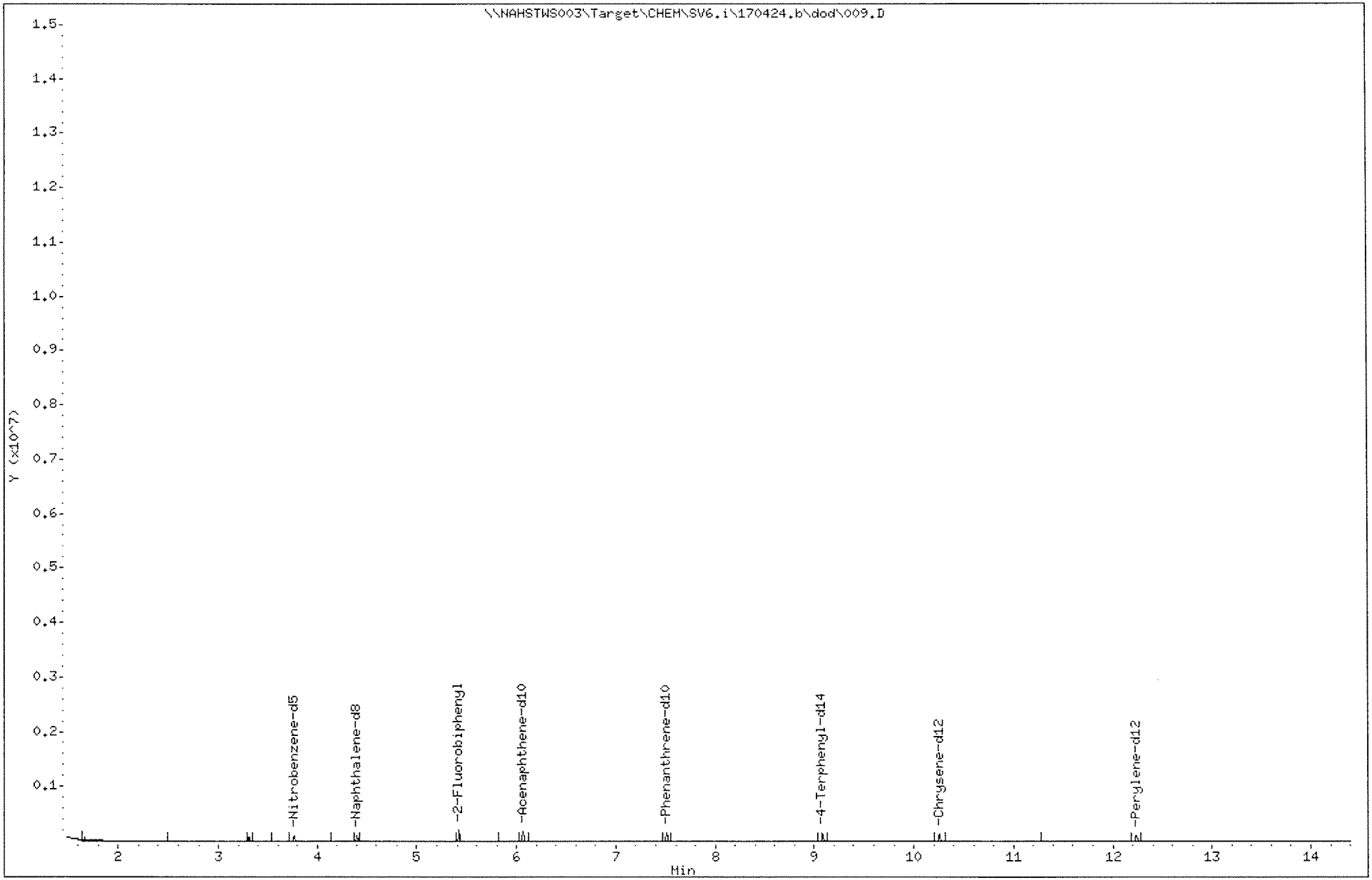
Sample Info: SIMDX-0.20;SIMDX-0.20

Purge Volume: 1000.0

Operator: LG

Column phase: RTX-5SIL MS

Column diameter: 0.28



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GC/MS Semivolatiles EPA method 8270D

Data file : \\NAHSTWS003\Target\CHEM\SV6.i\170424.b\dod\010.D
Lab Smp Id: SIMDX-0.50 Client Smp ID: SIMDX-0.50
Inj Date : 24-APR-2017 14:26 MS Autotune Date: 14-APR-2017 16:38
Operator : LG Inst ID: SV6.i
Smp Info : SIMDX-0.50;SIMDX-0.50
Misc Info : ;1;0;1;
Comment :
Method : \\NAHSTWS003\Target\CHEM\SV6.i\170424.b\dod\DXSIM.m
Meth Date : 01-Nov-2017 17:15 aneir Quant Type: ISTD
Cal Date : 24-APR-2017 14:07 Cal File: 009.D
Als bottle: 10 Calibration Sample, Level: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 14DX.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

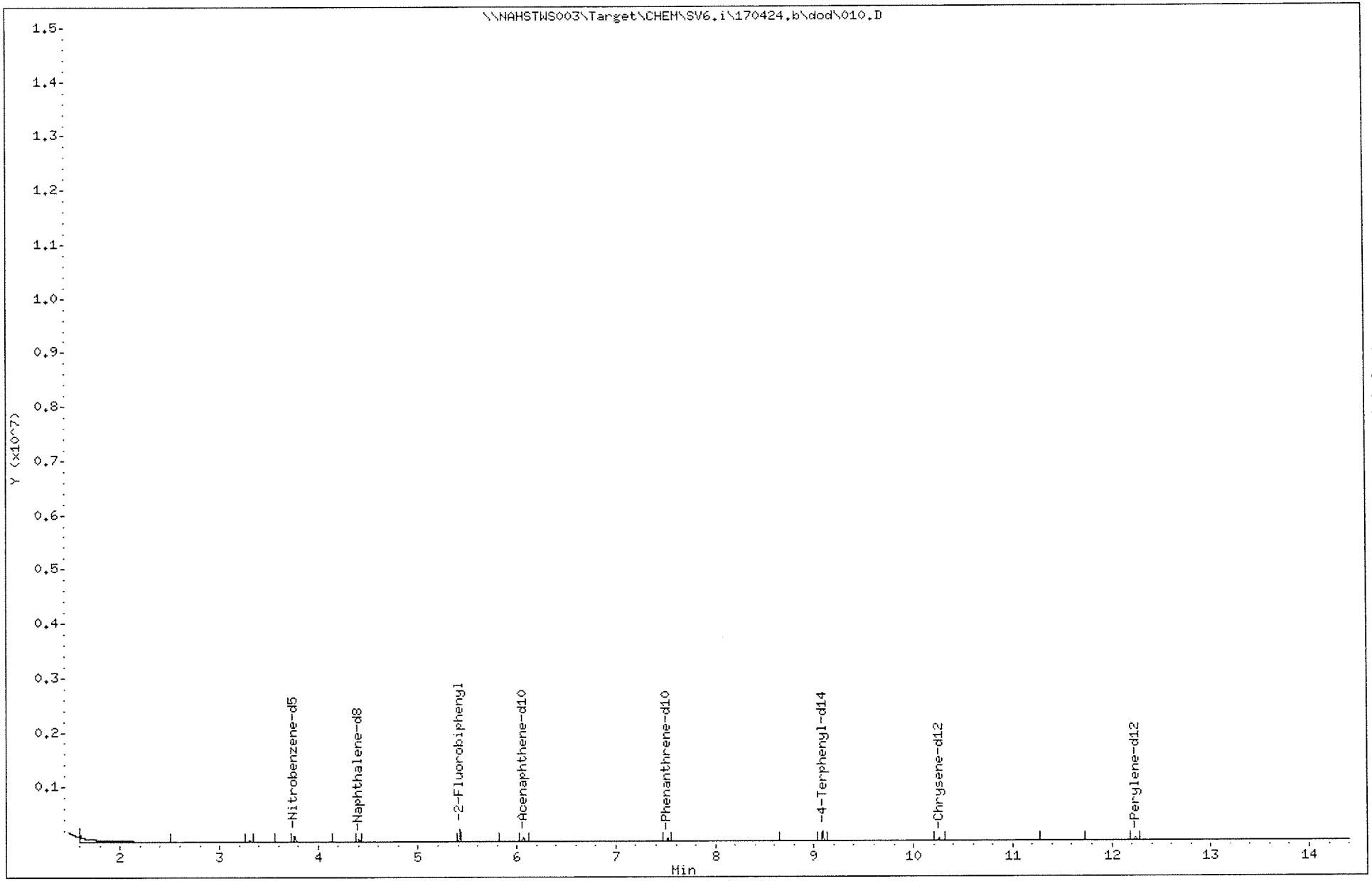
Compounds	QUANT STG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	AMOUNTS ON COL (NG)	REVIEW CODE
* 45 Naphthalene-d8	136	4.402	4.480	(1.000)	43249	0.10000	(M)	M1
$ 33 Nitrobenzene-d5	82	3.766	3.844	(0.855)	69550	0.50000	0.4790(AM)	M4
* 86 Acenaphthene-d10	164	6.068	6.152	(1.000)	28999	0.10000		
$ 69 2-Fluorobiphenyl	172	5.423	5.512	(0.894)	167102	0.50000	0.5498(A)	
* 126 Phenanthrene-d10	188	7.512	7.607	(1.000)	55226	0.10000		
* 182 Chrysene-d12	240	10.255	10.389	(1.000)	49140	0.10000	(M)	M1
$ 158 4-Terphenyl-d14	244	9.088	9.189	(0.886)	139336	0.50000	0.5520(AM)	M1
* 198 Perylene-d12	264	12.237	12.403	(1.000)	48876	0.10000	(M)	M4
1 1,4-Dioxane	58	1.607	1.684	(0.388)	13728	0.50000	0.4748(H)	M4

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

Data File: \\NAHSTWS003\Target\CHEM\SV6.i\170424.b\dod\010.D
Date : 24-APR-2017 14:26
Client ID: SIMDX-0.50
Sample Info: SIMDX-0.50;SIMDX-0.50
Purge Volume: 1000.0
Column phase: RTX-5SIL MS

Instrument: SV6.i
Operator: LG
Column diameter: 0.28



ALS Laboratory Group

GC/MS Semivolatiles EPA method 8270D

Data file : \\NAHSTWS003\Target\CHEM\SV6.i\170424.b\dod\011.D
Lab Smp Id: SIMDX-ICV Client Smp ID: SIMDX-ICV
Inj Date : 24-APR-2017 14:44 MS Autotune Date: 14-APR-2017 16:38
Operator : LG Inst ID: SV6.i
Smp Info : SIMDX-ICV;SIMDX-ICV
Misc Info : ;1;0;1;
Comment :
Method : \\NAHSTWS003\Target\CHEM\SV6.i\170424.b\dod\DXSIM.m
Meth Date : 01-Nov-2017 17:15 aneir Quant Type: ISTD
Cal Date : 24-APR-2017 14:07 Cal File: 009.D
Als bottle: 11
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 14DX.sub
Target Version: 4.14
Processing Host: NAHSTWS003

Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
* 45 Naphthalene-d8	136	4.402	4.480	(1.000)	77001	0.10000	(M)	M1
$ 33 Nitrobenzene-d5	82	3.766	3.844	(0.855)	18818	0.07279	0.07279(M)	M4
* 86 Acenaphthene-d10	164	6.068	6.152	(1.000)	52052	0.10000		
$ 69 2-Fluorobiphenyl	172	5.423	5.512	(0.894)	44295	0.08120	0.08120	
* 126 Phenanthrene-d10	188	7.512	7.607	(1.000)	110359	0.10000		
* 182 Chrysene-d12	240	10.255	10.389	(1.000)	100901	0.10000	(M)	M1
$ 158 4-Terphenyl-d14	244	9.088	9.189	(0.901)	38165	0.07364	0.07364	
* 198 Perylene-d12	264	12.237	12.403	(1.000)	97389	0.10000		
1 1,4-Dioxane	58	1.640	1.684	(0.394)	4206	0.08171	0.08170(a)	M1

QC Flag Legend

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

Data File: \\NAHSTWS003\Target\CHEM\SV6.i\170424.b\dod\011.D

Date : 24-APR-2017 14:44

Client ID: SIMDX-ICV

Instrument: SV6.i

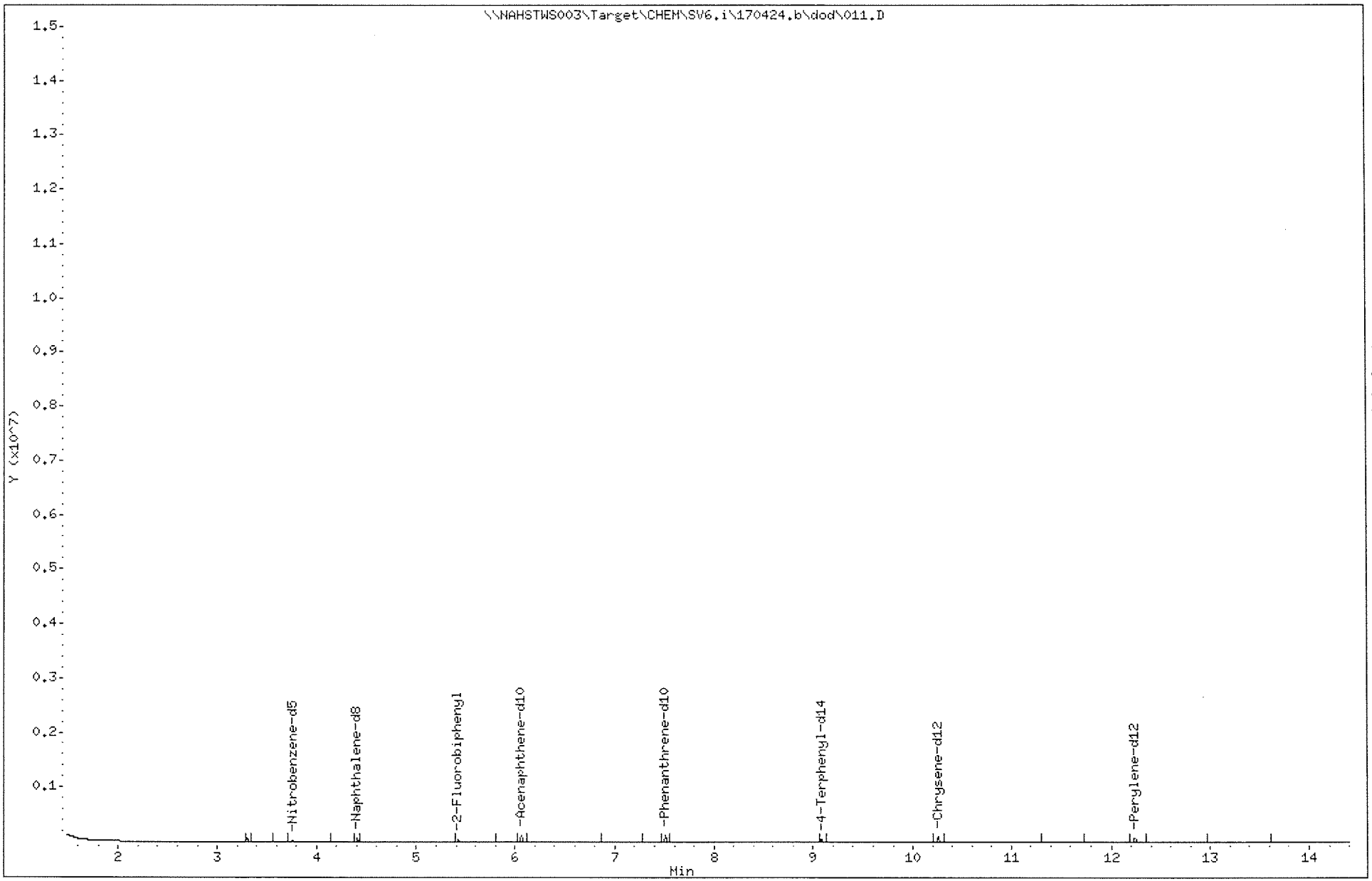
Sample Info: SIMDX-ICV:SIMDX-ICV

Purge Volume: 1000.0

Operator: LG

Column phase: RTX-5SIL MS

Column diameter: 0.28



SV06 -Logbook

Batch: 29356
Date: 10-17-2017
Method: 8270DLL
Comments: MSSV-003LL

Analyst: Andrew Neir
Reviewer:
Laboratory: Houston

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
1	DFTPP	TUNE	10-17-2017 09:57 am	1.00			001.D		Y	NA
2	SLSTD-2.5	CCV	10-17-2017 10:11 am	1.00			002.D		Y	NA
3	SLA92-2.5	SAMP	10-17-2017 10:35 am	1.00			003.D		Y	NA
4	SLSTD0.08	CCV	10-17-2017 10:59 am	1.00			004.D		Y	NA
5	SLSTD0.08	CCV	10-17-2017 11:17 am	1.00			005.D		Y	NA
6	CCB	SAMP	10-17-2017 11:40 am	1.00			006.D		Y	NA
7	CCB	SAMP	10-17-2017 12:01 pm	1.00			007.D		Y	NA
8	CCB	SAMP	10-17-2017 12:18 pm	1.00			008.D		Y	NA
9	CCB	SAMP	10-17-2017 12:39 pm	1.00			009.D		Y	NA
10	MBLK-121033	MBLK	10-17-2017 12:58 pm	1.00	1000.00 mL	1.00 mL	010.D	Liquid	Y	NA
11	LCS-121033	LCS	10-17-2017 01:17 pm	1.00	1000.00 mL	1.00 mL	011.D	Liquid	Y	NA
12	LCSD-121033	LCSD	10-17-2017 01:36 pm	1.00	1000.00 mL	1.00 mL	012.D	Liquid	Y	NA
13	HS17100644-03	SAMP	10-17-2017 01:55 pm	1.00	1000.00 mL	1.00 mL	013.D	Liquid	Y	NA
14	HS17100782-03	SAMP	10-17-2017 02:14 pm	1.00	1000.00 mL	1.00 mL	014.D	Liquid	Y	NA
15	MBLK-121033	MBLK	10-17-2017 02:31 pm	1.00	1000.00 mL	1.00 mL	015.D	Liquid	Y	NA
16	LCS-121033	LCS	10-17-2017 02:49 pm	1.00	1000.00 mL	1.00 mL	016.D	Liquid	Y	NA
17	LCSD-121033	LCSD	10-17-2017 03:08 pm	1.00	1000.00 mL	1.00 mL	017.D	Liquid	Y	NA
18	GS17100712-01	SAMP	10-17-2017 03:39 pm	1.00	1000.00 mL	1.00 mL	018.D	Liquid	Y	NA
19	GS17100712-01	SAMP	10-17-2017 04:01 pm	100.0(	1000.00 mL	1.00 mL	019.D	Liquid	Y	NA
20	SLSTD0.08	SAMP	10-17-2017 04:20 pm	1.00	1000.00 mL	1.00 mL	020.D	Liquid	Y	NA
21	HS17100601-25	SAMP	10-17-2017 04:39 pm	1.00	30.06 gm	1.00 mL	021.D	Solid	Y	NA
22	HS17100601-11	SAMP	10-17-2017 04:58 pm	1.00	30.09 gm	1.00 mL	022.D	Solid	Y	NA
23	HS17100601-03	SAMP	10-17-2017 05:17 pm	1.00	30.08 gm	1.00 mL	023.D	Solid	Y	NA
24	HS17100601-10	SAMP	10-17-2017 05:36 pm	1.00	30.06 gm	1.00 mL	024.D	Solid	Y	NA
25	HS17100601-13	SAMP	10-17-2017 05:55 pm	1.00	30.01 gm	1.00 mL	025.D	Solid	Y	NA
26	HS17100601-18	SAMP	10-17-2017 06:14 pm	1.00	30.03 gm	1.00 mL	026.D	Solid	Y	NA
27	HS17100601-03	SAMP	10-17-2017 06:33 pm	5.00	30.08 gm	1.00 mL	027.D	Solid	Y	NA
28	HS17100601-10	SAMP	10-17-2017 06:52 pm	5.00	30.06 gm	1.00 mL	028.D	Solid	Y	NA
29	HS17100601-13	SAMP	10-17-2017 07:11 pm	5.00	30.01 gm	1.00 mL	029.D	Solid	Y	NA
30	HS17100601-18	SAMP	10-17-2017 07:30 pm	5.00	30.03 gm	1.00 mL	030.D	Solid	Y	NA
31	HS17100685-01	SAMP	10-17-2017 07:49 pm	1.00	30.03 gm	1.00 mL	031.D	Solid	Y	NA
32	HS17100685-01	SAMP	10-17-2017 08:08 pm	5.00	30.03 gm	1.00 mL	032.D	Solid	Y	NA
33	HS17100601-10	SAMP	10-17-2017 08:27 pm	1.00	30.06 gm	1.00 mL	033.D	Solid	Y	NA
34	HS17100601-18	SAMP	10-17-2017 08:46 pm	1.00	30.03 gm	1.00 mL	034.D	Solid	Y	NA
35	HS17100601-03	SAMP	10-17-2017 09:05 pm	5.00	30.08 gm	1.00 mL	035.D	Solid	Y	NA

SV06 -Logbook

Chemical	Value
IS ID	3041109-02
CAL STD ID	3041109-05
DFTPP ID	29722-96-01
PCP Tailing	0.47
Benz. Tailing	0.35

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS17100712

Lab File ID: 001 DFTPP Injection Date: 10/17/17

Instrument ID: SV6 DFTPP Injection Time: 0957

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	33.1
68	Less than 2.0% of mass 69	0.6 (1.8)1
69	Mass 69 relative abundance	34.5
70	Less than 2.0% of mass 69	0.2 (0.5)1
127	10.0 - 80.0% of mass 198	44.3
197	Less than 2.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.8
275	10.0 - 60.0% of mass 198	29.8
365	1.0 - 100.0% of mass 198	4.4
441	Present, but less than mass 443	4.9
442	50.0 - 150.0% of mass 198	134.9
443	15.0 - 24.0% of mass 442	26.5 (19.7)2

1-Value is % mass 69 2-Value is % mass 442

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SLSTD-0.08	SLSTD0.08	005	10/17/17	1117
02	MBLK-121033	MBLK-121033	015	10/17/17	1431
03	LCS1-121033	LCS1-121033	016	10/17/17	1449
04	LCSD1-121033	LCSD1-121033	017	10/17/17	1508
05	HS1710712-01	HS17100712-01	019	10/17/17	1601
06	SLSTD-0.08	SLSTD0.08	020	10/17/17	1620
07					
08					
09					
10					
11					
12					
13					
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16					
17					
18					
19					
20					
21					
22					

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS17100712

Instrument ID: SV6 Calibration Date: 10/17/17 Time: 1117

Lab File ID: 005 Init. Calib. Date(s): 04/24/17 04/24/17

Init. Calib. Times: 1208 1426

GC Column: RTX-5SIL MS ID: 0.28 (mm)

COMPOUND	RRF OR AMOUNT	RRF8e-002 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
1,4-Dioxane	6.7e-002	7.11e-002	0.01	6.12	20.00	AVRG
Nitrobenzene-d5	0.3360000	0.3012697	0.01	-10.34	20.00	AVRG
4-Terphenyl-d14	0.5140000	0.5147713	0.01	0.15	20.00	AVRG
2-Fluorobiphenyl	1.0480000	0.9795261	0.01	-6.53	20.00	AVRG

FORM VII SV

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS17100712

Instrument ID: SV6 Calibration Date: 10/17/17 Time: 1620

Lab File ID: 020 Init. Calib. Date(s): 04/24/17 04/24/17

Init. Calib. Times: 1208 1426

GC Column: RTX-5SIL MS ID: 0.28 (mm)

COMPOUND	RRF OR AMOUNT	RRF8e-002 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
1,4-Dioxane	6.7e-002	7.38e-002	0.01	10.15	20.00	AVRG
Nitrobenzene-d5	0.3360000	0.3407873	0.01	1.42	20.00	AVRG
4-Terphenyl-d14	0.5140000	0.5038036	0.01	-1.98	20.00	AVRG
2-Fluorobiphenyl	1.0480000	0.9865357	0.01	-5.86	20.00	AVRG

FORM VII SV

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS17100712

Lab File ID (Standard): 005 Date Analyzed: 10/17/17

Instrument ID: SV6 Time Analyzed: 1117

		IS1(NPT) AREA #	RT #	IS2(ANT) AREA #	RT #	IS3(PHN) AREA #	RT #
	12 HOUR STD	31778	4.48	27535	6.15	53517	7.60
	UPPER LIMIT	63556	4.98	55070	6.65	107034	8.10
	LOWER LIMIT	15889	3.98	13768	5.65	26759	7.10
	CLIENT SAMPLE NO.						
01	MBLK-121033	28494	4.48	15888	6.16	31093	7.61
02	LCS1-121033	58833	4.48	39716	6.16	52883	7.61
03	LCSD1-121033	59438	4.48	39611	6.15	83588	7.60
04	HS1710712-01	57422	4.48	39503	6.15	90543	7.60
05							
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.: HS17100712

Lab File ID (Standard): 005 Date Analyzed: 10/17/17

Instrument ID: SV6 Time Analyzed: 1117

		IS4 (CRY)		IS5 (PRY)			
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	56207	10.38	55862	12.39		
	UPPER LIMIT	112414	10.88	111724	12.89		
	LOWER LIMIT	28104	9.88	27931	11.89		
	CLIENT SAMPLE NO.						
01	MBLK-121033	55975	10.39	62471	12.40		
02	LCS1-121033	66604	10.39	57926	12.40		
03	LCSD1-121033	83779	10.38	82654	12.40		
04	HS1710712-01	87181	10.39	90319	12.40		
05							
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.

FORM VIII SV

Data File: \\NAHSTWS003\Target\CHEM\SV6.i\171017.b\001.D

Date : 17-OCT-2017 09:57

Client ID: DFTPP

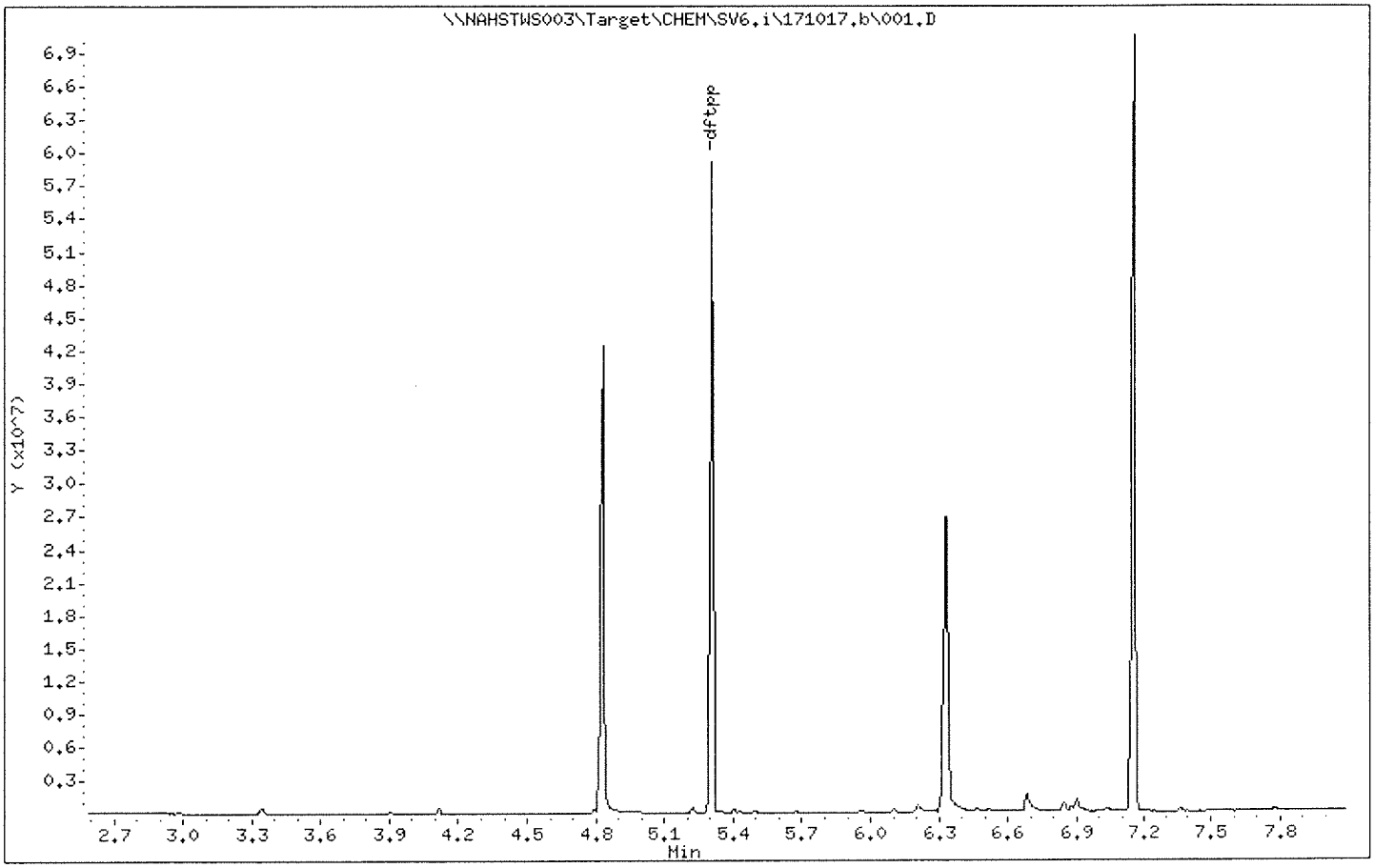
Instrument: SV6.i

Sample Info: DFTPP;DFTPP;3;;DFTPP

Operator: LG

Column phase: DB-5MS

Column diameter: 0.25



Data File: \\NAHSTWS003\Target\CHEM\SV6.i\171017.b\001.D

Date : 17-OCT-2017 09:57

Client ID: DFTPP

Instrument: SV6.i

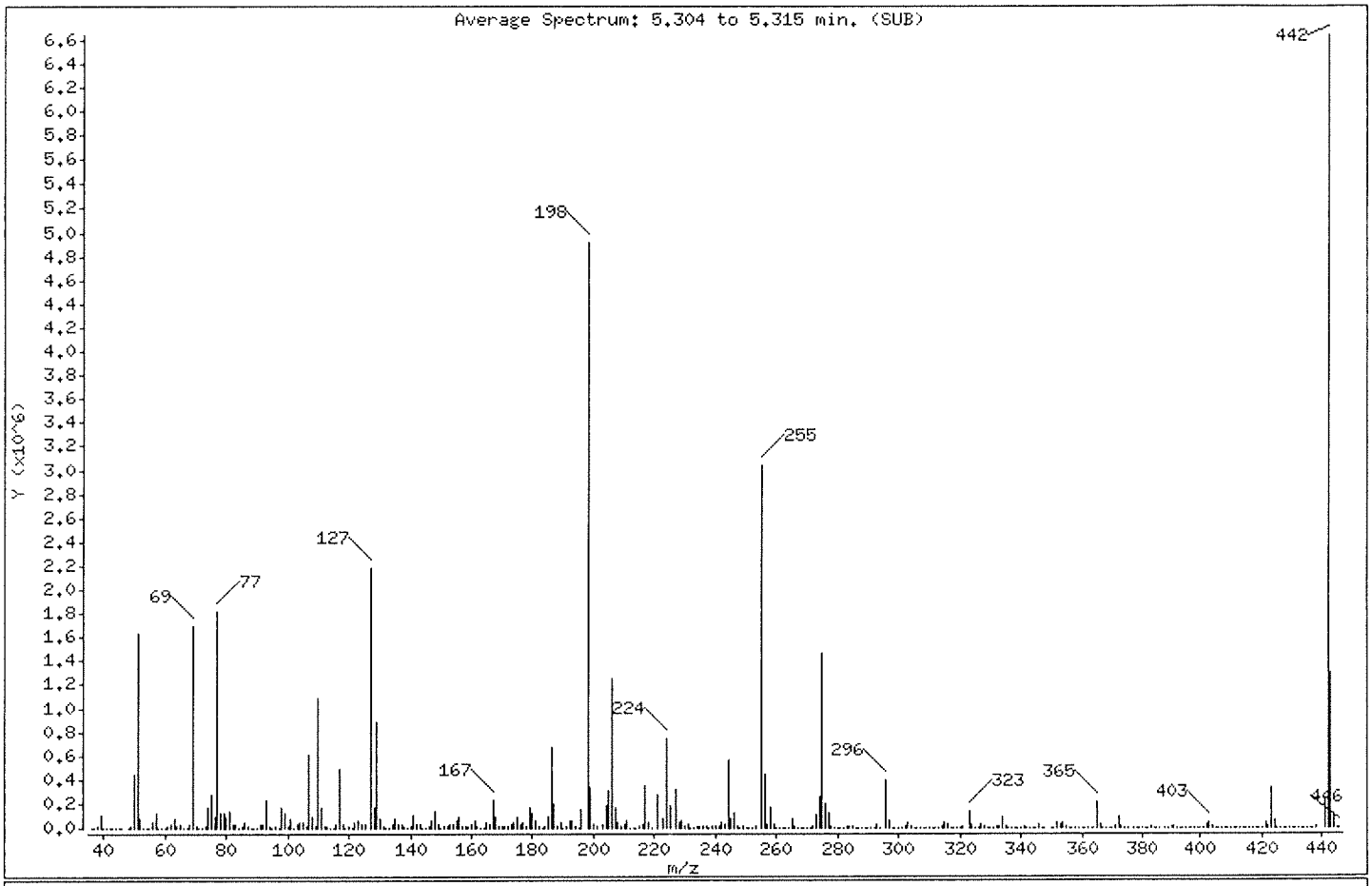
Sample Info: DFTPP;DFTPP;3;;DFTPP

Operator: LG

Column phase: DB-5MS

Column diameter: 0.25

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	33.07
68	Less than 2.00% of mass 69	0.61 (1.76)
69	Mass 69 relative abundance	34.46
70	Less than 2.00% of mass 69	0.16 (0.48)
127	10.00 - 80.00% of mass 198	44.26
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.76
275	10.00 - 60.00% of mass 198	29.78
365	1.00 - 100.00% of mass 198	4.36
441	Present, but less than mass 443	4.94
442	50.00 - 150.00% of mass 198	134.88
443	15.00 - 24.00% of mass 442	26.52 (19.66)

Data File: \\NAHSTWS003\Target\CHEM\SV6.i\171017.b\001.D

Date : 17-OCT-2017 09:57

Client ID: DFTPP

Instrument: SV6.i

Sample Info: DFTPP;DFTPP;3;;DFTPP

Operator: LG

Column phase: DB-5MS

Column diameter: 0.25

Data File: 001.D
Spectrum: Average Spectrum: 5.304 to 5.315 min. (SUB)
Location of Maximum: 442.00
Number of points: 396

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	309	138.00	7768	243.00	32232	346.00	28616
37.00	6438	139.00	4301	244.00	567360	347.00	5426
38.00	18312	140.00	11306	245.00	76176	348.00	799
39.00	107088	141.00	113864	246.00	118384	350.00	1769
40.00	4124	142.00	37640	247.00	21488	351.00	988
41.00	1771	143.00	23936	248.00	5806	352.00	42896
42.00	123	144.00	7001	249.00	21472	353.00	29160
43.00	473	145.00	6665	250.00	4878	354.00	41248
44.00	150	146.00	20856	251.00	5569	355.00	8658
45.00	3074	147.00	61184	252.00	6673	356.00	615
46.00	299	148.00	130616	253.00	16288	357.00	785
48.00	542	149.00	25832	255.00	3032064	358.00	791
49.00	7984	150.00	6970	256.00	443456	359.00	3484
50.00	440640	151.00	15177	257.00	36296	360.00	1008
51.00	1628160	152.00	8354	258.00	170496	361.00	1552
52.00	80320	153.00	37280	259.00	27448	362.00	1139
53.00	3209	154.00	27800	260.00	4291	363.00	1446
54.00	472	155.00	63816	261.00	5687	364.00	880
55.00	7170	156.00	94064	262.00	1220	365.00	214848
56.00	53176	157.00	18272	263.00	2124	366.00	29256
57.00	121744	158.00	20880	264.00	5525	367.00	1863
58.00	5520	159.00	17432	265.00	72880	368.00	318
59.00	1179	160.00	37904	266.00	8691	369.00	317
60.00	704	161.00	53792	267.00	1059	370.00	4151
61.00	20712	162.00	15971	268.00	174	371.00	13767
62.00	25960	163.00	3959	269.00	946	372.00	84496
63.00	73168	164.00	5827	270.00	4195	373.00	21648
64.00	9693	165.00	41488	271.00	7560	374.00	2384
65.00	30696	166.00	34912	272.00	8378	375.00	146
66.00	2078	167.00	223488	273.00	100544	377.00	2092
67.00	1968	168.00	86736	274.00	260992	378.00	577
68.00	29944	169.00	18568	275.00	1466368	379.00	317
69.00	1696768	170.00	7953	276.00	192576	380.00	101
70.00	8112	171.00	9345	277.00	116776	381.00	53
71.00	503	172.00	21392	278.00	18600	382.00	296

Data File: \\NAHSTWS003\Target\CHEM\SV6.i\171017.b\001.D

Date : 17-OCT-2017 09:57

Client ID: DFTPP Instrument: SV6.i

Sample Info: DFTPP;DFTPP;3;;DFTPP

Operator: LG

Column phase: DB-5MS Column diameter: 0.25

Data File: 001.D
Spectrum: Average Spectrum: 5.304 to 5.315 min. (SUB)
Location of Maximum: 442.00
Number of points: 396

m/z	Y	m/z	Y	m/z	Y	m/z	Y
72.00	444	173.00	27024	279.00	3750	383.00	22600
73.00	13004	174.00	48928	280.00	788	384.00	5889
74.00	170752	175.00	90744	281.00	960	385.00	1536
75.00	274880	176.00	25112	282.00	3472	386.00	212
76.00	92480	177.00	42520	283.00	12829	388.00	379
77.00	1811968	178.00	15082	284.00	9673	389.00	418
78.00	119120	179.00	171648	285.00	20160	390.00	10032
79.00	127520	180.00	118872	286.00	4220	391.00	8092
80.00	98320	181.00	53976	287.00	728	392.00	5520
81.00	139008	182.00	9458	288.00	2247	393.00	1351
82.00	32736	183.00	7011	289.00	4507	394.00	96
83.00	30344	184.00	16383	290.00	4310	395.00	917
84.00	3319	185.00	88600	291.00	3386	396.00	671
85.00	22728	186.00	665600	292.00	6330	397.00	1331
86.00	38856	187.00	191424	293.00	27696	398.00	256
87.00	17752	188.00	18392	294.00	7587	399.00	420
88.00	6220	189.00	41048	296.00	397568	400.00	116
89.00	2906	190.00	7492	297.00	57264	401.00	5321
90.00	847	191.00	19656	298.00	3136	402.00	34400
91.00	30232	192.00	57392	299.00	1337	403.00	45584
92.00	36712	193.00	62080	300.00	490	404.00	16536
93.00	227136	194.00	13694	301.00	5500	405.00	2300
94.00	14769	195.00	6792	302.00	7833	406.00	289
95.00	3204	196.00	156672	303.00	46672	407.00	130
96.00	9665	198.00	4924416	304.00	12579	408.00	429
97.00	1466	199.00	333120	305.00	1523	409.00	549
98.00	170112	200.00	26760	306.00	824	410.00	1791
99.00	126976	201.00	21888	307.00	655	411.00	498
100.00	11717	203.00	35696	308.00	6233	412.00	200
101.00	78408	204.00	179712	309.00	4451	413.00	116
102.00	3857	205.00	303808	310.00	5377	414.00	489
103.00	25688	206.00	1255424	311.00	1539	415.00	2473
104.00	51800	207.00	165888	312.00	1294	416.00	735
105.00	46488	208.00	44888	313.00	3981	417.00	734
106.00	16720	209.00	13568	314.00	21768	418.00	739

Data File: \\NAHSTWS003\Target\CHEM\SV6.i\171017.b\001.D

Date : 17-OCT-2017 09:57

Client ID: DFTPP Instrument: SV6.i

Sample Info: DFTPP;DFTPP;3;;DFTPP

Operator: LG

Column phase: DB-5MS Column diameter: 0.25

Data File: 001.D
Spectrum: Average Spectrum: 5.304 to 5.315 min. (SUB)
Location of Maximum: 442.00
Number of points: 396

m/z	Y	m/z	Y	m/z	Y	m/z	Y
107.00	615360	210.00	23616	315.00	44056	419.00	1575
108.00	94160	211.00	54744	316.00	22912	420.00	456
109.00	13950	212.00	2212	317.00	4874	421.00	46720
110.00	1082368	213.00	3325	318.00	810	422.00	19400
111.00	166464	214.00	2100	319.00	1159	423.00	330816
112.00	20264	215.00	14550	320.00	2047	424.00	68232
113.00	8161	216.00	23536	321.00	13367	425.00	6220
114.00	1537	217.00	356608	323.00	142912	426.00	837
115.00	1681	218.00	43384	324.00	25480	427.00	881
116.00	34720	219.00	4676	325.00	2485	428.00	636
117.00	482944	221.00	269440	326.00	1055	429.00	620
118.00	32560	223.00	82472	327.00	25920	430.00	1125
119.00	4307	224.00	745664	328.00	12438	431.00	1341
120.00	8083	225.00	184000	329.00	2566	432.00	1778
121.00	2022	227.00	314240	330.00	802	433.00	1534
122.00	39800	228.00	42880	331.00	1157	434.00	2878
123.00	65696	229.00	63104	332.00	11996	435.00	3817
124.00	29032	230.00	8548	333.00	9693	436.00	6538
125.00	28880	231.00	25928	334.00	87624	437.00	5990
127.00	2179584	232.00	5806	335.00	21672	438.00	7840
128.00	165440	233.00	6555	336.00	2718	441.00	243392
129.00	881216	234.00	19328	337.00	509	442.00	6642688
130.00	71976	235.00	21568	338.00	247	443.00	1305600
131.00	13971	236.00	14176	339.00	2338	444.00	119040
132.00	6499	237.00	22696	340.00	1601	445.00	7016
133.00	4314	238.00	3619	341.00	15157	446.00	390
134.00	24104	239.00	11172	342.00	5092		
135.00	71912	240.00	9318	343.00	707		
136.00	27976	241.00	19584	344.00	839		
137.00	32536	242.00	38888	345.00	576		

Data File: \\NAHSTWS003\Target\CHEM\SV6.i\171017.b\DOD\005.D Version 2
Report Date: 01-Nov-2017 15:54

ALS Laboratory Group

GC/MS Semivolatiles EPA method 8270D

Data file : \\NAHSTWS003\Target\CHEM\SV6.i\171017.b\DOD\005.D
Lab Smp Id: SLSTD0.08 Client Smp ID: SLSTD-0.08
Inj Date : 17-OCT-2017 11:17 MS Autotune Date: 06-OCT-2017 17:20
Operator : LG Inst ID: SV6.i
Smp Info : SLSTD0.08;SLSTD-0.08
Misc Info : ;;0;1;
Comment :
Method : \\NAHSTWS003\Target\CHEM\SV6.i\171017.b\DOD\DXSIM.m
Meth Date : 01-Nov-2017 15:54 SV6.i Quant Type: ISTD
Cal Date : 24-APR-2017 12:08 Cal File: 003.D
Als bottle: 5 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 14DX.sub
Target Version: 4.14
Processing Host: NAHSTW7091

Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	ON-COL (NG)	REVIEW CODE
* 45 Naphthalene-d8	136	4.476	4.476	(1.000)	31778	0.10000	(M)	M4
$ 33 Nitrobenzene-d5	82	3.833	3.833	(0.856)	7659	0.08000	0.07178(QM)	M4
* 86 Acenaphthene-d10	164	6.147	6.147	(1.000)	27535	0.10000		
$ 69 2-Fluorobiphenyl	172	5.501	5.501	(0.895)	21577	0.08000	0.07477	
* 126 Phenanthrene-d10	188	7.602	7.602	(1.000)	53517	0.10000		
* 182 Chrysene-d12	240	10.378	10.378	(1.000)	56207	0.10000	(M)	M1
$ 158 4-Terphenyl-d14	244	9.183	9.183	(1.000)	23147	0.08000	0.08018	
* 198 Perylene-d12	264	12.392	12.392	(1.000)	55862	0.10000		
1 1,4-Dioxane	58	1.642	1.642	(0.367)	1808	0.08000	0.08510(aM)	M1

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: \\NAHSTWS003\Target\CHEM\SV6.i\171017.b\DOD\005.D

Date : 17-OCT-2017 11:17

Client ID: SLSTD-0.08

Instrument: SV6.i

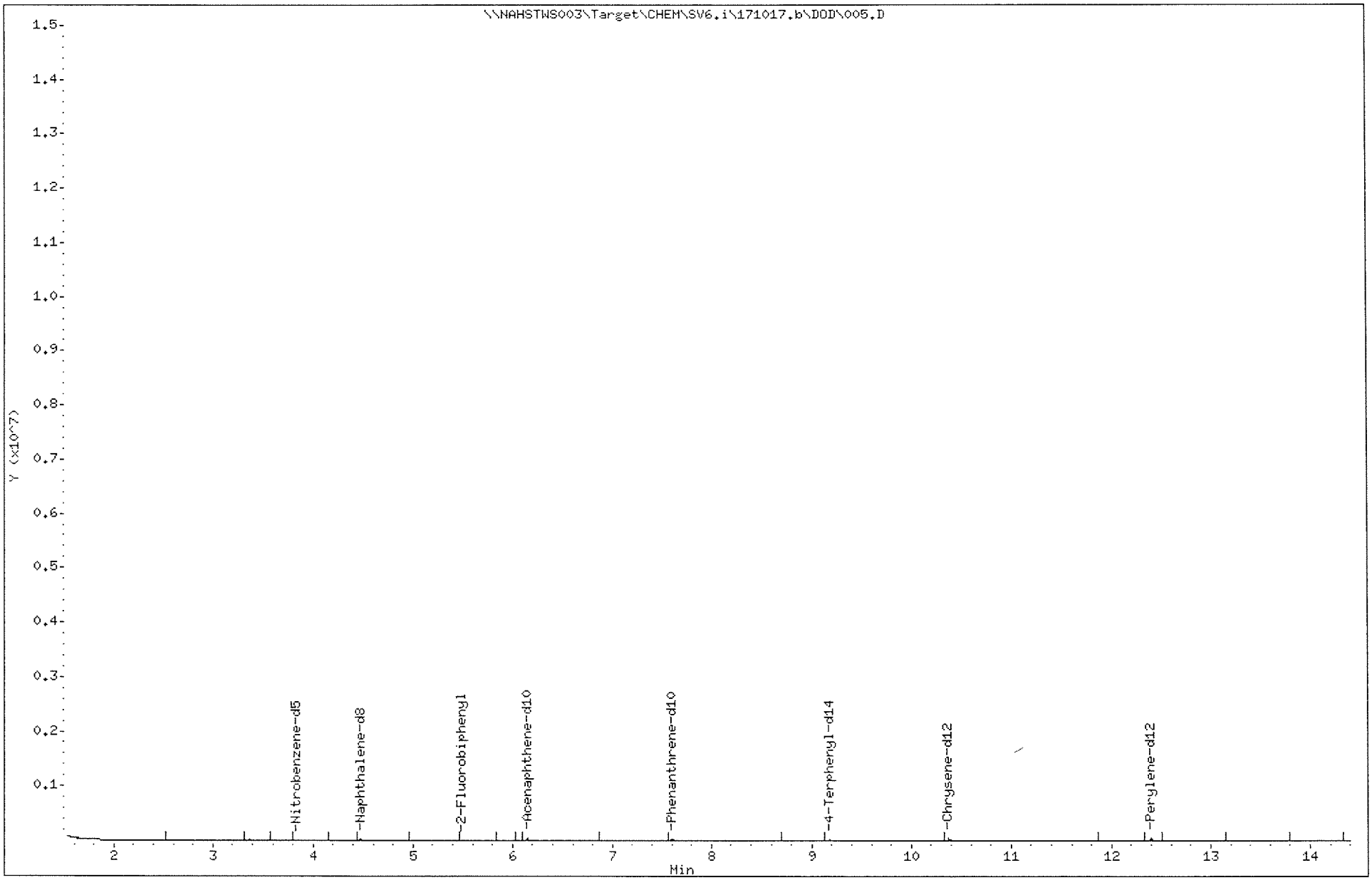
Sample Info: SLSTD0.08;SLSTD-0.08

Purge Volume: 1000.0

Operator: LC

Column phase: RTX-5SIL MS

Column diameter: 0.28



Data File: \\NAHSTWS003\Target\CHEM\SV6.i\171017.b\DOD\015.D Version 2
Report Date: 01-Nov-2017 15:54

ALS Laboratory Group

GC/MS Semivolatiles EPA method 8270D

Data file : \\NAHSTWS003\Target\CHEM\SV6.i\171017.b\DOD\015.D
Lab Smp Id: MBLK-121033 Client Smp ID: MBLK-121033
Inj Date : 17-OCT-2017 14:31 MS Autotune Date: 06-OCT-2017 17:20
Operator : LG Inst ID: SV6.i
Smp Info : MBLK-121033;MBLK-121033;3;;BLANK
Misc Info : HS17100712;1;0;1
Comment :
Method : \\NAHSTWS003\Target\CHEM\SV6.i\171017.b\DOD\DXSIM.m
Meth Date : 01-Nov-2017 15:54 SV6.i Quant Type: ISTD
Cal Date : 24-APR-2017 12:08 Cal File: 003.D
Als bottle: 15 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 14DX.sub
Target Version: 4.14
Processing Host: NAHSTW7091

Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	CONCENTRATIONS FINAL (ug/L)		REVIEW CODE
* 45 Naphthalene-d8	136	4.480	4.476	(1.000)	28494	0.10000			
$ 33 Nitrobenzene-d5	82	3.838	3.833	(0.857)	3983	0.04163	0.04163	(M)	M4
* 86 Acenaphthene-d10	164	6.158	6.147	(1.000)	15888	0.10000		(QM)	M1
$ 69 2-Fluorobiphenyl	172	5.512	5.501	(1.000)	16876	0.10135	0.1014		
* 126 Phenanthrene-d10	188	7.607	7.602	(1.000)	31093	0.10000			
* 182 Chrysene-d12	240	10.388	10.378	(1.000)	55975	0.10000		(M)	M1
$ 158 4-Terphenyl-d14	244	9.189	9.183	(0.885)	18575	0.06461	0.06461	(M)	M1
* 198 Perylene-d12	264	12.403	12.392	(1.000)	62471	0.10000		(M)	M4

QC Flag Legend

Q - Qualifier signal failed the ratio test.
M - Compound response manually integrated.

Data File: \\NAHSTWS003\Target\CHEM\SV6.i\171017.b\DOD\015.D

Date : 17-OCT-2017 14:31

Client ID: MBLK-121033

Instrument: SV6.i

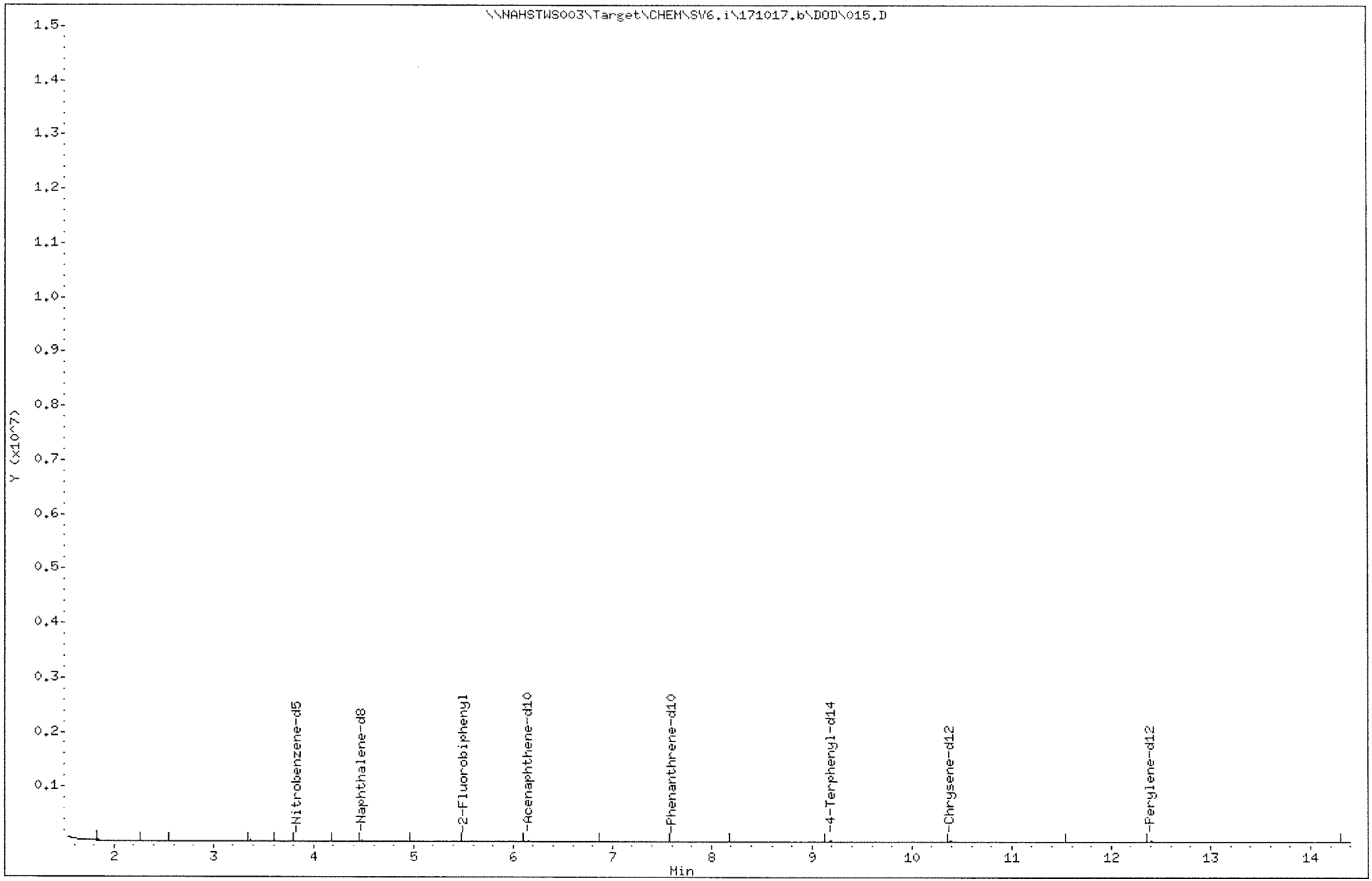
Sample Info: MBLK-121033;MBLK-121033;3;;BLANK

Purge Volume: 1000.0

Operator: LG

Column phase: RTX-5SIL MS

Column diameter: 0.28



Data File: \\NAHSTWS003\Target\CHEM\SV6.i\171017.b\DOD\016.D Version 2
Report Date: 01-Nov-2017 15:54

ALS Laboratory Group

GC/MS Semivolatiles EPA method 8270D

Data file : \\NAHSTWS003\Target\CHEM\SV6.i\171017.b\DOD\016.D
Lab Smp Id: LCS1-121033 Client Smp ID: LCS1-121033
Inj Date : 17-OCT-2017 14:49 MS Autotune Date: 06-OCT-2017 17:20
Operator : LG Inst ID: SV6.i
Smp Info : LCS-121033;LCS-121033;3;;LCS
Misc Info : HS17100712;1;0;1
Comment :
Method : \\NAHSTWS003\Target\CHEM\SV6.i\171017.b\DOD\DXSIM.m
Meth Date : 01-Nov-2017 15:54 SV6.i Quant Type: ISTD
Cal Date : 24-APR-2017 12:08 Cal File: 003.D
Als bottle: 16 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 14DX.sub
Target Version: 4.14
Processing Host: NAHSTW7091

Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	FINAL (ug/L)		REVIEW CODE
* 45 Naphthalene-d8	136	4.480	4.476	(1.000)	58833	0.10000		(M)	M4
$ 33 Nitrobenzene-d5	82	3.811	3.833	(0.851)	16759	0.08484	0.08484	(M)	M4
* 86 Acenaphthene-d10	164	6.158	6.147	(1.000)	39716	0.10000		(QM)	M4
$ 69 2-Fluorobiphenyl	172	5.468	5.501	(0.888)	28748	0.06907	0.06907	(M)	M4
* 126 Phenanthrene-d10	188	7.613	7.602	(1.000)	52883	0.10000			
* 182 Chrysene-d12	240	10.389	10.378	(1.000)	66604	0.10000		(M)	M4
$ 158 4-Terphenyl-d14	244	9.189	9.183	(0.885)	26574	0.07768	0.07768	(M)	M3
* 198 Perylene-d12	264	12.403	12.392	(1.000)	57926	0.10000		(M)	M4

QC Flag Legend

Q - Qualifier signal failed the ratio test.
M - Compound response manually integrated.

Data File: \\NAHSTWS003\Target\CHEM\SV6.i\171017.b\DOD\016.D

Date : 17-OCT-2017 14:49

Client ID: LCS1-121033

Instrument: SV6.i

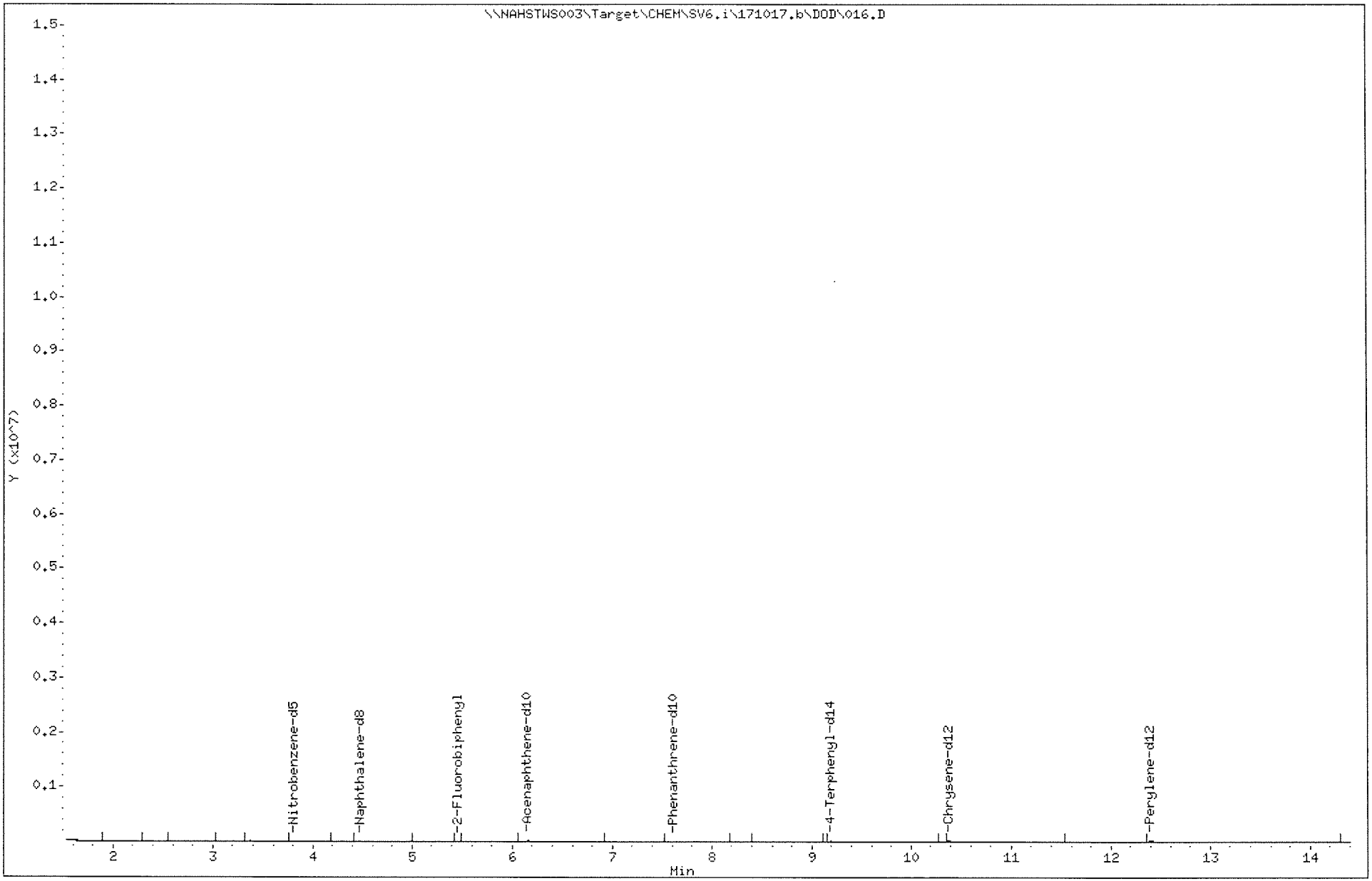
Sample Info: LCS-121033;LCS-121033;3;;LCS

Purge Volume: 1000.0

Operator: LG

Column phase: RTX-5SIL MS

Column diameter: 0.28



Data File: \\NAHSTWS003\Target\CHEM\SV6.i\171017.b\DOD\017.D Version 2
Report Date: 01-Nov-2017 15:54

ALS Laboratory Group

GC/MS Semivolatiles EPA method 8270D

Data file : \\NAHSTWS003\Target\CHEM\SV6.i\171017.b\DOD\017.D
Lab Smp Id: LCSD1-121033 Client Smp ID: LCSD1-121033
Inj Date : 17-OCT-2017 15:08 MS Autotune Date: 06-OCT-2017 17:20
Operator : LG Inst ID: SV6.i
Smp Info : LCSD-121033;LCSD-121033;3;;LCSD
Misc Info : HS17100712;1;0;1
Comment :
Method : \\NAHSTWS003\Target\CHEM\SV6.i\171017.b\DOD\DXSIM.m
Meth Date : 01-Nov-2017 15:54 SV6.i Quant Type: ISTD
Cal Date : 24-APR-2017 12:08 Cal File: 003.D
Als bottle: 17 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 14DX.sub
Target Version: 4.14
Processing Host: NAHSTW7091

Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	FINAL (ug/L)		REVIEW CODE
* 45 Naphthalene-d8	136	4.480	4.476	(1.000)	59438	0.10000		(M)	M4
$ 33 Nitrobenzene-d5	82	3.843	3.833	(0.858)	18609	0.09325	0.09325		
* 86 Acenaphthene-d10	164	6.152	6.147	(1.000)	39611	0.10000		(QM)	M1
$ 69 2-Fluorobiphenyl	172	5.508	5.501	(0.933)	39068	0.09411	0.09411		
* 126 Phenanthrene-d10	188	7.602	7.602	(1.000)	83588	0.10000			
* 182 Chrysene-d12	240	10.378	10.378	(1.000)	83779	0.10000		(M)	M1
$ 158 4-Terphenyl-d14	244	9.183	9.183	(0.885)	46214	0.10740	0.1074	(M)	M1
* 198 Perylene-d12	264	12.398	12.392	(1.000)	82654	0.10000			
1 1,4-Dioxane	58	1.657	1.642	(0.370)	2012	0.05063	0.05063	(aM)	M1

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: \\NAHSTWS003\Target\CHEM\SV6.i\171017.b\DOD\017.D

Date : 17-OCT-2017 15:08

Client ID: LCSD1-121033

Instrument: SV6.i

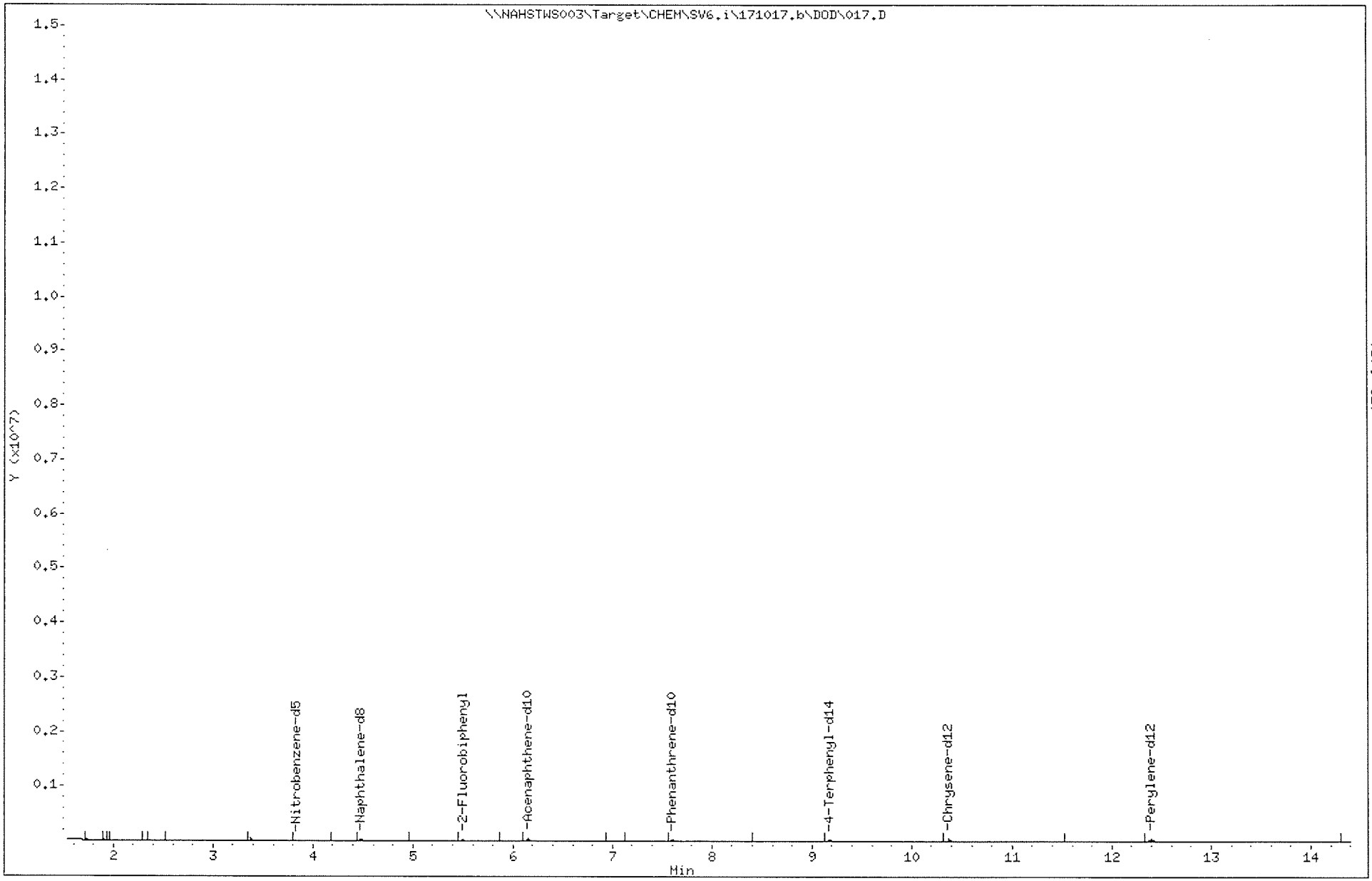
Sample Info: LCSD-121033;LCSD-121033;3;;LCSD

Purge Volume: 1000.0

Operator: LG

Column phase: RTX-5SIL MS

Column diameter: 0.28



Data File: \\NAHSTWS003\Target\CHEM\SV6.i\171017.b\DOD\019.D Version 2
Report Date: 01-Nov-2017 15:54

ALS Laboratory Group

GC/MS Semivolatiles EPA method 8270D

Data file : \\NAHSTWS003\Target\CHEM\SV6.i\171017.b\DOD\019.D
Lab Smp Id: HS17100712-01 Client Smp ID: HS1710712-01
Inj Date : 17-OCT-2017 16:01 MS Autotune Date: 06-OCT-2017 17:20
Operator : LG Inst ID: SV6.i
Smp Info : GS17100712-01;HS1710017-01
Misc Info : HS17100712;1;0;100
Comment :
Method : \\NAHSTWS003\Target\CHEM\SV6.i\171017.b\DOD\DXSIM.m
Meth Date : 01-Nov-2017 15:54 SV6.i Quant Type: ISTD
Cal Date : 24-APR-2017 12:08 Cal File: 003.D
Als bottle: 19
Dil Factor: 100.00000
Integrator: HP RTE Compound Sublist: 14DX.sub
Target Version: 4.14
Processing Host: NAHSTW7091

Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

Name	Value	Description
DF	100.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
* 45 Naphthalene-d8	136	4.480	4.476	(1.000)	57422	0.10000	(M)	M4
* 86 Acenaphthene-d10	164	6.152	6.147	(1.000)	39503	0.10000	(QM)	M1
* 126 Phenanthrene-d10	188	7.602	7.602	(1.000)	90543	0.10000		M4
* 182 Chrysene-d12	240	10.388	10.378	(1.000)	87181	0.10000	(M)	M1
* 198 Perylene-d12	264	12.403	12.392	(1.000)	90319	0.10000		
1 1,4-Dioxane	58	1.699	1.642	(0.379)	5215	0.13585	13.58(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: \\NAHSTWS003\Target\CHEM\SV6.i\171017.b\DOD\019.D

Date : 17-OCT-2017 16:01

Client ID: HS1710712-01

Instrument: SV6.i

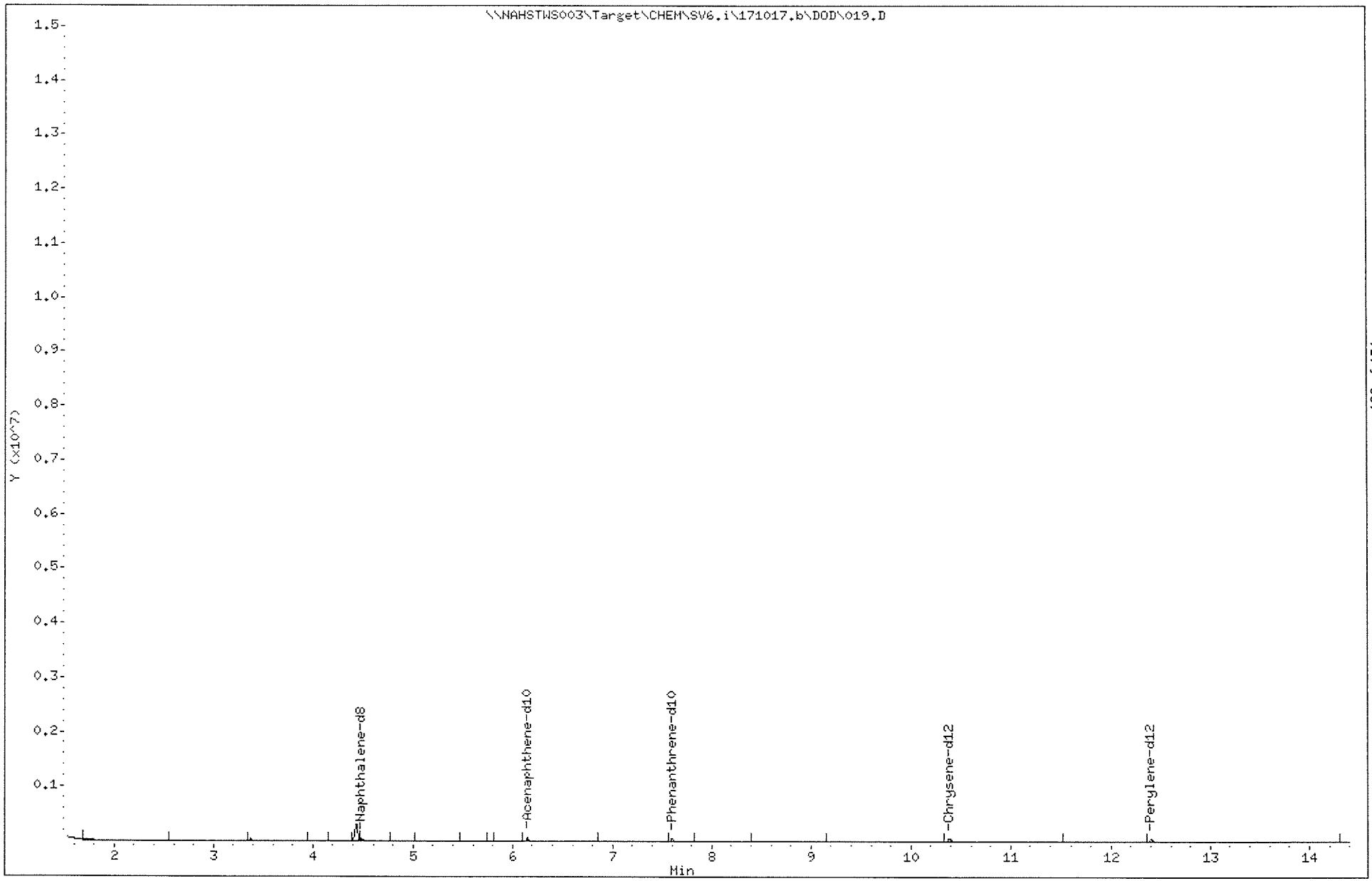
Sample Info: GS17100712-01;HS1710017-01

Purge Volume: 1000.0

Operator: LG

Column phase: RTX-5SIL MS

Column diameter: 0.28



Data File: \\NAHSTWS003\Target\CHEM\SV6.i\171017.b\DOD\020.D Version 3
Report Date: 01-Nov-2017 16:23

ALS Laboratory Group

GC/MS Semivolatiles EPA method 8270D

Data file : \\NAHSTWS003\Target\CHEM\SV6.i\171017.b\DOD\020.D
Lab Smp Id: SLSTD0.08 Client Smp ID: SLSTD-0.08
Inj Date : 17-OCT-2017 16:20 MS Autotune Date: 06-OCT-2017 17:20
Operator : LG Inst ID: SV6.i
Smp Info : SLSTD0.08;SLSTD-0.08
Misc Info : ;;0;1;
Comment :
Method : \\NAHSTWS003\Target\CHEM\SV6.i\171017.b\DOD\DXSIM.m
Meth Date : 01-Nov-2017 15:54 SV6.i Quant Type: ISTD
Cal Date : 24-APR-2017 12:08 Cal File: 003.D
Als bottle: 20
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 14DX.sub
Target Version: 4.14
Processing Host: NAHSTW7091

Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	CONCENTRATIONS FINAL (ug/L)		REVIEW CODE
* 45 Naphthalene-d8	136	4.480	4.476	(1.000)	69046	0.10000			
$ 33 Nitrobenzene-d5	82	3.844	3.833	(0.858)	18824	0.08120	0.08120		
* 86 Acenaphthene-d10	164	6.152	6.147	(1.000)	51098	0.10000		(QM)	M1
$ 69 2-Fluorobiphenyl	172	5.512	5.501	(0.932)	40328	0.07531	0.07531		
* 126 Phenanthrene-d10	188	7.607	7.602	(1.000)	106662	0.10000			
* 182 Chrysene-d12	240	10.389	10.378	(1.000)	115087	0.10000		(M)	M1
$ 158 4-Terphenyl-d14	244	9.189	9.183	(0.885)	46385	0.07847	0.07847	(M)	M1
* 198 Perylene-d12	264	12.403	12.392	(1.000)	111435	0.10000			
1 1,4-Dioxane	58	1.684	1.642	(0.376)	4075	0.08828	0.08828	(aM)	M1

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: \\NAHSTWS003\Target\CHEM\SV6.i\171017.b\DOD\020.D

Date : 17-OCT-2017 16:20

Client ID: SLSTD-0.08

Instrument: SV6.i

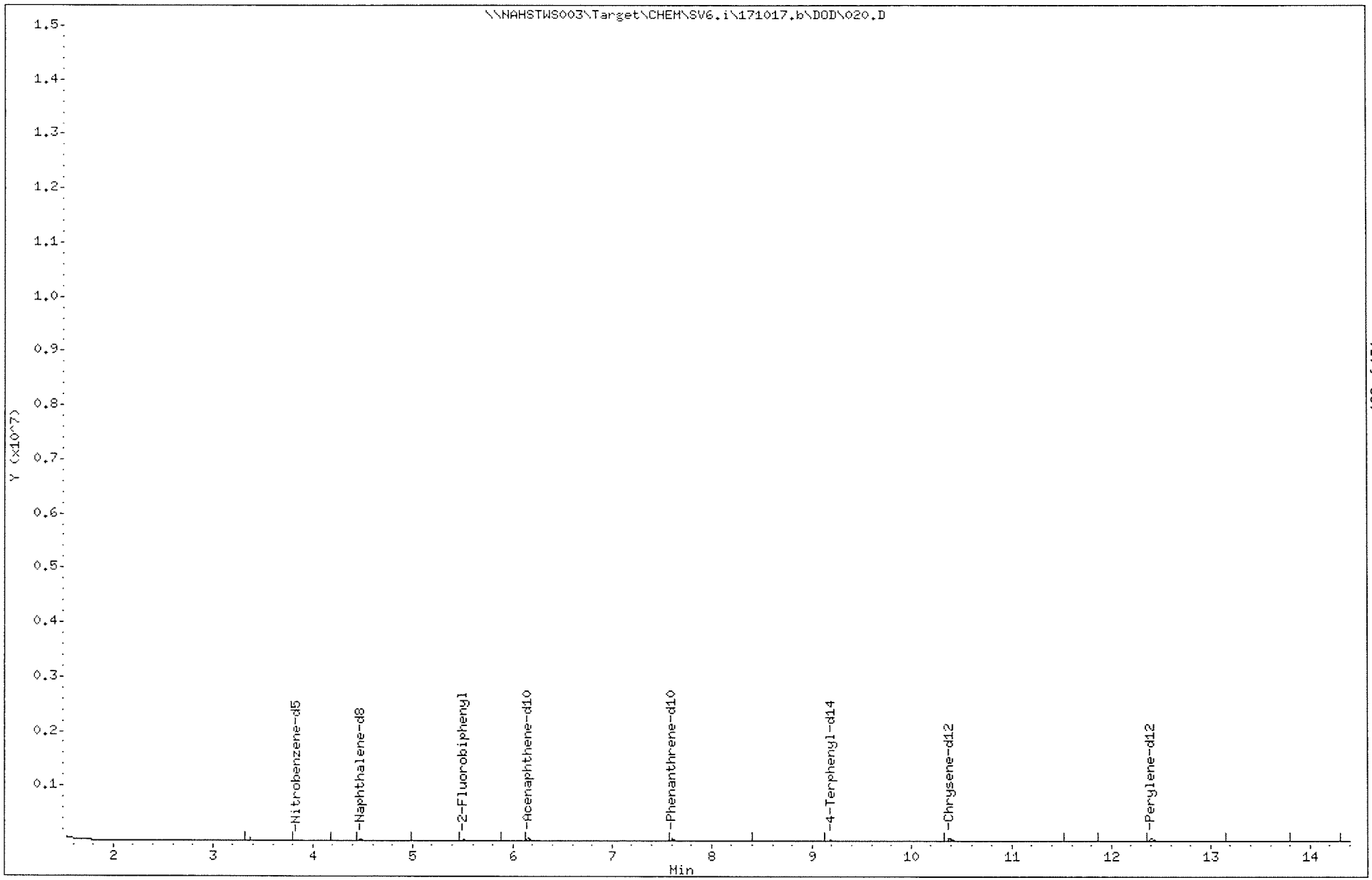
Sample Info: SLSTD0.08;SLSTD-0.08

Purge Volume: 1000.0

Operator: LG

Column phase: RTX-5SIL MS

Column diameter: 0.28



PREP BATCH REPORT

Batch ID: **121033**

Prep Code: **3510_B_SIM**

InitSampWt/Vol 0

FinSampVol: 1

Start Date: **16-Oct-17 03:46 pm**

End Date: **16-Oct-17 05:09 pm**

OriginalFac: 0.001

Technician: **Todi Lala**

PrepUnitFac: 1

SampID	Frac	Matrix	pH	Init Wt/Vol	FinalVol (mL)	PrepFac	SpkFac	Comments
HS17100644-03	A	Water	5	1000	1	0.001	1	ph adj 1/13
HS17100712-01	D	Water	7	980	1	0.00102	1.02	ph adj 1/13
HS17100782-03	A	Water	5	1000	1	0.001	1	ph adj 1/13
LCS-121033	A			1000	1	0.001	1	ph adj 1/13
LCS1-121033	A			1000	1	0.001	1	ph adj 1/13
LCSD-121033	A			1000	1	0.001	1	ph adj 1/13
LCSD1-121033	A			1000	1	0.001	1	ph adj 1/13
MBLK-121033	A			1000	1	0.001	1	ph adj 1/13

Metals Raw Data

Bhate Environmental Associates, Inc.
Project: MONTHLY EFFLUENT SAMPLES
ALS WO# HS17100712

ALS Group USA, Corp Date: 31-Oct-17

Form 2 - Initial and Continuing Calibration Verification

Client: Bhate Environmental Associates, Inc. Run ID: ICPMS05_303769
Project: Monthly Effluent Samples Instrument: ICPMS05
WorkOrder: HS17100712 Method: SW6020

ICV Date: 20-Oct-2017 08:38 Seq: 4271467 ICV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Barium	100	100.664	101	90-110	
Lead	100	95.228	95	90-110	
Selenium	100	103.04	103	90-110	
Silver	100	98.913	99	90-110	

CCV1 Date: 20-Oct-2017 09:00 Seq: 4271478 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Barium	100	99.06	99	90-110	
Lead	100	98.03	98	90-110	
Selenium	100	98.363	98	90-110	
Silver	100	98.052	98	90-110	

CCV2 Date: 20-Oct-2017 09:24 Seq: 4271531 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Barium	100	94.425	94	90-110	
Lead	100	96.947	97	90-110	
Selenium	100	97.682	98	90-110	
Silver	100	98.62	99	90-110	

CCV3 Date: 20-Oct-2017 09:48 Seq: 4271695 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Barium	100	97.869	98	90-110	
Lead	100	96.741	97	90-110	
Selenium	100	96.696	97	90-110	
Silver	100	98.132	98	90-110	

CCV4 Date: 20-Oct-2017 10:12 Seq: 4271709 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Barium	100	97.532	98	90-110	
Lead	100	96.003	96	90-110	
Selenium	100	99.154	99	90-110	
Silver	100	100.28	100	90-110	

CCV5 Date: 20-Oct-2017 10:37 Seq: 4271830 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Barium	100	96.69	97	90-110	
Lead	100	95.828	96	90-110	
Selenium	100	97.63	98	90-110	
Silver	100	99.581	100	90-110	

CCV6 Date: 20-Oct-2017 11:01 Seq: 4272188 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Barium	100	96.921	97	90-110	
Lead	100	97.552	98	90-110	
Selenium	100	98.255	98	90-110	
Silver	100	98.149	98	90-110	

CCV7 Date: 20-Oct-2017 11:25 Seq: 4272200 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Barium	100	98.402	98	90-110	
Lead	100	96.983	97	90-110	
Selenium	100	95.887	96	90-110	
Silver	100	96.576	97	90-110	

CCV8 Date: 20-Oct-2017 11:50 Seq: 4272212 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Barium	100	101.42	101	90-110	
id	100	101.976	102	90-110	

ALS Group USA, Corp Date: 31-Oct-17

Form 2 - Initial and Continuing Calibration Verification

Client: Bhate Environmental Associates, Inc.
Project: Monthly Effluent Samples
WorkOrder: HS17100712

Run ID: ICPMS05_303769
Instrument: ICPMS05
Method: SW6020

CCV8	Date: 20-Oct-2017 11:50		Seq: 4272212	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Selenium	100	97.809	98	90-110	
Silver	100	97.808	98	90-110	

CCV9	Date: 20-Oct-2017 12:14		Seq: 4272416	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Barium	100	96.095	96	90-110	
Lead	100	98.398	98	90-110	
Selenium	100	94.494	95	90-110	
Silver	100	97.146	97	90-110	

CCV10	Date: 20-Oct-2017 12:38		Seq: 4272428	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Barium	100	96.448	96	90-110	
Lead	100	93.372	93	90-110	
Selenium	100	94.223	94	90-110	
Silver	100	94.304	94	90-110	

CCV11	Date: 20-Oct-2017 13:03		Seq: 4272440	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Barium	100	97.576	98	90-110	
Lead	100	95.839	96	90-110	
Selenium	100	98.298	98	90-110	
Silver	100	98.205	98	90-110	

CCV12	Date: 20-Oct-2017 13:27		Seq: 4272472	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Barium	100	95.364	95	90-110	
Lead	100	92.219	92	90-110	
Selenium	100	93.797	94	90-110	
Silver	100	96.624	97	90-110	

CCV13	Date: 20-Oct-2017 14:01		Seq: 4273663	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Barium	100	93.484	94	90-110	
Lead	100	97.412	97	90-110	
Selenium	100	94.877	95	90-110	
Silver	100	97.298	97	90-110	

CCV14	Date: 20-Oct-2017 14:25		Seq: 4273675	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Barium	100	93.875	94	90-110	
Lead	100	98.559	99	90-110	
Selenium	100	92.43	92	90-110	
Silver	100	95.138	95	90-110	

CCV15	Date: 20-Oct-2017 14:37		Seq: 4273681	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Barium	100	91.797	92	90-110	
Lead	100	97.879	98	90-110	
Selenium	100	95.722	96	90-110	
Silver	100	94.286	94	90-110	

Form 3 - BLANKS

Client: Bhate Environmental Associates, Inc.
Project: Monthly Effluent Samples
WorkOrder: HS17100712

Run ID: ICPMS05_303769
Instrument: ICPMS05
Method: SW6020

ICB	Date: 20-Oct-2017 08:44		Seq: 4271470	ICB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Barium	4	1.9	4	U	
Lead	2	0.6	2	U	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	

CCB1	Date: 20-Oct-2017 09:02		Seq: 4271479	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Barium	4	1.9	4	U	
Lead	2	0.6	2	U	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	

CCB2	Date: 20-Oct-2017 09:26		Seq: 4271535	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Barium	4	1.9	4	U	
Lead	2	0.6	2	U	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	

MBLK-121126	Date: 20-Oct-2017 09:46		Seq: 4271694	MBLK	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Barium	4	1.9	4	U	
Lead	2	0.6	2	U	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	

CCB3	Date: 20-Oct-2017 09:50		Seq: 4271696	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Barium	4	1.9	4	U	
Lead	2	0.6	2	U	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	

CCB4	Date: 20-Oct-2017 10:14		Seq: 4271711	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Barium	4	1.9	4	U	
Lead	2	0.6	2	U	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	

CCB5	Date: 20-Oct-2017 10:39		Seq: 4271831	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Barium	4	1.9	4	U	
Lead	2	0.6	2	U	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	

CCB6	Date: 20-Oct-2017 11:03		Seq: 4272189	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Barium	4	1.9	4	U	
Lead	2	0.6	2	U	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	

CCB7	Date: 20-Oct-2017 11:27		Seq: 4272201	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Barium	4	1.9	4	U	

Form 3 - BLANKS

Client: Bhate Environmental Associates, Inc.
Project: Monthly Effluent Samples
WorkOrder: HS17100712

Run ID: ICPMS05_303769
Instrument: ICPMS05
Method: SW6020

CCB7	Date: 20-Oct-2017 11:27		Seq: 4272201	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Lead	2	0.6	2	U	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	

CCB8	Date: 20-Oct-2017 11:52		Seq: 4272213	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Barium	4	1.9	4	U	
Lead	2	0.6	2	U	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	

CCB9	Date: 20-Oct-2017 12:16		Seq: 4272417	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Barium	4	1.9	4	U	
Lead	2	0.6	2	U	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	

CCB10	Date: 20-Oct-2017 12:40		Seq: 4272429	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Barium	4	1.9	4	U	
Lead	2	0.6	2	U	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	

CCB11	Date: 20-Oct-2017 13:04		Seq: 4272441	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Barium	4	1.9	4	U	
Lead	2	0.6	2	U	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	

CCB12	Date: 20-Oct-2017 13:29		Seq: 4272473	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Barium	4	1.9	4	U	
Lead	2	0.6	2	U	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	

CCB13	Date: 20-Oct-2017 14:03		Seq: 4273664	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Barium	4	1.9	4	U	
Lead	2	0.6	2	U	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	

CCB14	Date: 20-Oct-2017 14:27		Seq: 4273676	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Barium	4	1.9	4	U	
Lead	2	0.6	2	U	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	

CCB15	Date: 20-Oct-2017 14:39		Seq: 4273682	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Barium	4	1.9	4	U	
Lead	2	0.6	2	U	

ALS Group USA, Corp Date: 31-Oct-17

Form 3 - BLANKS

Client: Bhate Environmental Associates, Inc.
Project: Monthly Effluent Samples
WorkOrder: HS17100712

Run ID: ICPMS05_303769
Instrument: ICPMS05
Method: SW6020

CCB15 | Date: 20-Oct-2017 14:39 | Seq: 4273682 | CCB | Units: ug/L

Analyte	Result	MDL	Report Limit	Qual
Selenium	2	1.1	2	U
Silver	2	0.2	2	U

ALS Group USA, Corp Date: 31-Oct-17

Form 4 - ICP Interference Check Sample

Client: Bhate Environmental Associates, Inc. Run ID:ICPMS05_303769
Project: Monthly Effluent Samples Instrument:ICPMS05
WorkOrder: HS17100712 Method:SW6020

ICSA	Date: 20-Oct-2017 08:46	Seq: 4271471	ICSA	Units: ug/L
Analyte	**True**	**Found**	**%R**	
Barium		0.229	0	
Lead		0.105	0	
Selenium		-0.205	0	
Silver		0.046	0	
ICSAB	Date: 20-Oct-2017 08:48	Seq: 4271472	ICSAB	Units: ug/L
Analyte	**True**	**Found**	**%R**	
Barium	100	94.3	94.3	
Lead	100	92.57	92.6	
Selenium	100	92.79	92.8	
Silver	100	86.74	86.7	
ICSA	Date: 20-Oct-2017 14:45	Seq: 4273685	ICSA	Units: ug/L
Analyte	**True**	**Found**	**%R**	
Barium		0.213	0	
Lead		0.09	0	
Selenium		-0.343	0	
Silver		0.041	0	
ICSAB	Date: 20-Oct-2017 14:47	Seq: 4273686	ICSAB	Units: ug/L
Analyte	**True**	**Found**	**%R**	
Barium	100	93.72	93.7	
Lead	100	95.57	95.6	
Selenium	100	86.17	86.2	
Silver	100	91.61	91.6	

ALS Group USA, Corp Date: 31-Oct-17

Form 5A - Matrix Spike/Matrix Spike Duplicate Recovery

Client: Bhate Environmental Associates, Inc.
Project: Monthly Effluent Samples
WorkOrder: HS17100712

Date Analyzed: 20-Oct-2017 10:04
Date Extracted: 18-Oct-2017 13:00
Units: ug/L

Matrix Spike: HS17100768-10MS
Client Sample ID:

Analysis Method: SW6020

Analyte	Sample Result	MS Result	Spike Amount	% Rec	MSD Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
Barium	282.0	333.5	50.00	103	344.8	50.00	126	80-120	3.32	20
Lead	2.000	47.63	50.00	95.3	46.54	50.00	93.1	80-120	2.32	20
Selenium	2.000	29.44	50.00	58.9	31.07	50.00	62.1	80-120	5.38	20
Silver	2.000	43.69	50.00	87.4	43.67	50.00	87.3	80-120	0.0412	20

ALS Group USA, Corp Date: 31-Oct-17

Form 5B - Post Digest Sample Recovery

Client: Bhate Environmental Associates, Inc.
Project: Monthly Effluent Samples
WorkOrder: HS17100712

Date Analyzed: 20-Oct-2017 10:06
Date Extracted: 18-Oct-2017 13:00
Units: ug/L

Lab Sample ID: HS17100768-10PDS
Client Sample ID:

Analysis Method: SW6020

Analyte	Sample Result	PDS Result	Spike Amount	% Rec	% Rec Limits
Barium	282	377	100	95	75-125
Lead	0	95.54	100	96	75-125
Selenium	0	95	100	95	75-125
Silver	0	87.5	100	88	75-125

ALS Group USA, Corp Date: 31-Oct-17

Form 7 - Laboratory Control Sample

Client: Bhate Environmental Associates, Inc.
Project: Monthly Effluent Samples
WorkOrder: HS17100712

Date Analyzed: 20-Oct-2017 09:52
Date Extracted: 18-Oct-2017 13:00
Units: ug/L

Lab Sample ID: LCS-121126 Analysis Method: SW6020

Analyte	Spike Amount	LCS Result	% Rec	% Rec Limits
Barium	50	46.69	93	80-120
Lead	50	44.1	88	80-120
Selenium	50	47.98	96	80-120
Silver	50	46.12	92	80-120

ALS Group USA, Corp Date: 31-Oct-17

Form 8 - ICP Serial Dilutions

Client: Bhate Environmental Associates, Inc.
Project: Monthly Effluent Samples
WorkOrder: HS17100712

Date Analyzed: 20-Oct-2017 10:00
Date Extracted: 18-Oct-2017 13:00
Units: ug/L

Lab Sample ID: HS17100768-10SD
Client Sample ID:

Analysis Method: SW6020

Analyte	Sample Result	C	SD Result	C	RPD	Q
Barium	282		273.5		3	
Lead	0	U	0	U	0	
Selenium	0	U	0	U	0	
Silver	0	U	0	U	0	

ALS Group USA, Corp

Date: 31-Oct-17

Form 11 - INTERNAL STANDARD ASSOCIATION

Client: Bhate Environmental Associates, Inc.

Project: Monthly Effluent Samples

WorkOrder: HS17100712

Instrument:ICPMS05

Mass	Analyte	Assoc Int Standard 1	Assoc Int Standard 2	Mode
9	Beryllium	Lithium		Ar
11	Boron	Lithium		Ar
23	Sodium	Germanium		Ar
24	Magnesium	Germanium		Ar
27	Aluminum	Germanium		Ar
39	Potassium	Germanium		Ar
44	Calcium	Germanium		Ar
47	Titanium	Germanium		Ar
51	Vanadium	Germanium		ArHe
52	Chromium	Germanium		ArHe
55	Manganese	Germanium		ArHe
56	Iron	Germanium		ArHe
59	Cobalt	Germanium		ArHe
60	Nickel	Germanium		ArHe
63	Copper	Germanium		ArHe
66	Zinc	Germanium		ArHe
75	Arsenic	Germanium		ArHe
78	Selenium	Germanium		ArHe
88	Strontium	Germanium		Ar
95	Molybdenum	Germanium		Ar
105	Palladium	Germanium		Ar
107	Silver	Germanium		Ar
114	Cadmium	Indium		Ar
118	Tin	Germanium		Ar
121	Antimony	Germanium		ArHe
137	Barium	Indium		Ar
205	Thallium	Bismuth		Ar
208	Lead	Bismuth		Ar

ALS Group USA, Corp

Date: 31-Oct-17

FORM 12 - PREPARATION LOG

Client: Bhate Environmental Associates, Inc.
Project: Monthly Effluent Samples
WorkOrder: HS17100712
Start Date: 18-Oct-2017 13:00 End Date: 18-Oct-2017 17:30

Batch ID: 121126
Prep Code: 3010A
Method: SW3010A
Technician:

SampID	ClientID	Matrix	Init Wt	Init Vol	FinalVol (mL)	PrepFac
HS17100712-01	LH18/24-SP650_101217	Water		10	10	1
HS17100768-10MS				10	10	1
HS17100768-10MSD				10	10	1
HS17100768-10PDS				10	10	1
HS17100768-10SD				10	10	1
LCS-121126				10	10	1
MBLK-121126				10	10	1

ALS Group USA, Corp Date: 31-Oct-17

FORM 13 - ANALYSIS RUN LOG

Client: Bhate Environmental Associates, Inc. Run ID:ICPMS05_303769
Project: Monthly Effluent Samples Instrument:ICPMS05
WorkOrder: HS17100712 Method:
Start Date: 20-Oct-2017 End Date: 20-Oct-2017

Sample No.	D/F	Time	FileID	Analytes
ICPMS05_303769_Tune	1	20-Oct-2017 00:00	ICPMS05_303769_Tune_1	
CAL BLK	1	20-Oct-2017 08:24	004CALB.d_4271460	AG BA PB SE
2/10/200	1	20-Oct-2017 08:26	005CALS.d_4271461	AG BA PB SE
5/25/500	1	20-Oct-2017 08:28	006CALS.d_4271462	AG BA PB SE
10/50/1000	1	20-Oct-2017 08:30	007CALS.d_4271463	AG BA PB SE
100/500/10K	1	20-Oct-2017 08:32	008CALS.d_4271464	AG BA PB SE
200/1000/20K	1	20-Oct-2017 08:34	009CALS.d_4271465	AG BA PB SE
ICV	1	20-Oct-2017 08:38	011_ICV.d_4271467	AG BA PB SE
LLICV2	1	20-Oct-2017 08:40	012SMPL.d_4271468	AG BA PB SE
LLICV5	1	20-Oct-2017 08:42	013LICV.d_4271469	AG BA PB SE
ICB	1	20-Oct-2017 08:44	014_ICB.d_4271470	AG BA PB SE
ICSA	1	20-Oct-2017 08:46	015ICSA.d_4271471	AG BA PB SE
ICSAB	1	20-Oct-2017 08:48	016ICSB.d_4271472	AG BA PB SE
CCV 1	1	20-Oct-2017 09:00	022_CCV.d_4271478	AG BA PB SE
CCB 1	1	20-Oct-2017 09:02	023_CCB.d_4271479	AG BA PB SE
CCV 2	1	20-Oct-2017 09:24	034_CCV.d_4271531	AG BA PB SE
CCB 2	1	20-Oct-2017 09:26	035_CCB.d_4271535	AG BA PB SE
MBLK-121126	1	20-Oct-2017 09:46	045SMPL.d_4271694	AG BA PB SE
CCV 3	1	20-Oct-2017 09:48	046_CCV.d_4271695	AG BA PB SE
CCB 3	1	20-Oct-2017 09:50	047_CCB.d_4271696	AG BA PB SE
LCS-121126	1	20-Oct-2017 09:52	048SMPL.d_4271697	AG BA PB SE
ZZZZZZSD	5	20-Oct-2017 10:00	052SMPL.d_4271701	AG BA PB SE
ZZZZZZMS	1	20-Oct-2017 10:03	053SMPL.d_4271702	AG BA PB SE
ZZZZZZMSD	1	20-Oct-2017 10:04	054SMPL.d_4271703	AG BA PB SE
ZZZZZZPDS	1	20-Oct-2017 10:06	055SMPL.d_4271704	AG BA PB SE
CCV 4	1	20-Oct-2017 10:12	058_CCV.d_4271709	AG BA PB SE
CCB 4	1	20-Oct-2017 10:14	059_CCB.d_4271711	AG BA PB SE
LH18/24-SP650_101217	1	20-Oct-2017 10:21	062SMPL.d_4271822	AG BA PB SE
CCV 5	1	20-Oct-2017 10:37	070_CCV.d_4271830	AG BA PB SE
CCB 5	1	20-Oct-2017 10:39	071_CCB.d_4271831	AG BA PB SE
CCV 6	1	20-Oct-2017 11:01	082_CCV.d_4272188	AG BA PB SE
CCB 6	1	20-Oct-2017 11:03	083_CCB.d_4272189	AG BA PB SE
CCV 7	1	20-Oct-2017 11:25	094_CCV.d_4272200	AG BA PB SE
CCB 7	1	20-Oct-2017 11:27	095_CCB.d_4272201	AG BA PB SE
CCV 8	1	20-Oct-2017 11:50	106_CCV.d_4272212	AG BA PB SE
CCB 8	1	20-Oct-2017 11:52	107_CCB.d_4272213	AG BA PB SE
CCV 9	1	20-Oct-2017 12:14	118_CCV.d_4272416	AG BA PB SE
CCB 9	1	20-Oct-2017 12:16	119_CCB.d_4272417	AG BA PB SE
CCV 10	1	20-Oct-2017 12:38	130_CCV.d_4272428	AG BA PB SE
CCB 10	1	20-Oct-2017 12:40	131_CCB.d_4272429	AG BA PB SE
CCV 11	1	20-Oct-2017 13:03	142_CCV.d_4272440	AG BA PB SE
CCB 11	1	20-Oct-2017 13:04	143_CCB.d_4272441	AG BA PB SE
CCV 12	1	20-Oct-2017 13:27	154_CCV.d_4272472	AG BA PB SE
CCB 12	1	20-Oct-2017 13:29	155_CCB.d_4272473	AG BA PB SE
CCV 13	1	20-Oct-2017 14:01	171_CCV.d_4273663	AG BA PB SE
CCB 13	1	20-Oct-2017 14:03	172_CCB.d_4273664	AG BA PB SE
CCV 14	1	20-Oct-2017 14:25	183_CCV.d_4273675	AG BA PB SE
CCB 14	1	20-Oct-2017 14:27	184_CCB.d_4273676	AG BA PB SE
CCV 15	1	20-Oct-2017 14:37	189_CCV.d_4273681	AG BA PB SE
CCB 15	1	20-Oct-2017 14:39	190_CCB.d_4273682	AG BA PB SE
LLCCV5	1	20-Oct-2017 14:41	191LICV.d_4273683	AG BA PB SE
LLCCV2	1	20-Oct-2017 14:43	192SMPL.d_4273684	AG BA PB SE
ICSA	1	20-Oct-2017 14:45	193ICSA.d_4273685	AG BA PB SE
B	1	20-Oct-2017 14:47	194ICSB.d_4273686	AG BA PB SE

Tune Report

Batch Folder C:\Agilent\ICPMH\1\DATA\102017A.b
Report Comment
Instrument Name G3281A JP11080910

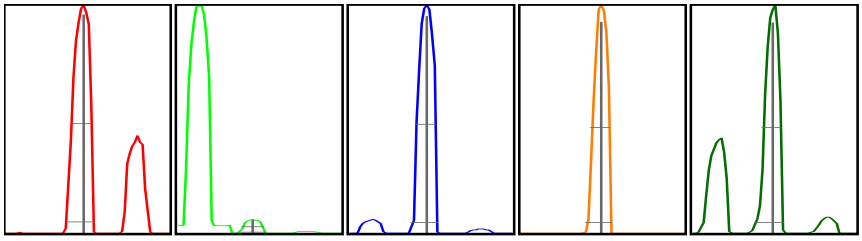
[nogas]

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		7541				NaN	-	
24		26712				NaN	-	
59		42880				NaN	-	
115		52469				NaN	-	
208		33247				NaN	-	

Mass	RSD% (Actual)	RSD% (Required)	RSD% (Flag)	Background (Actual)	Background (Required)	Background (Flag)
9	2.17	5.00				
24	0.85	5.00				
59	1.11	5.00				
115	0.66	5.00				
208	0.84	5.00				

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	7797	7578	7404	7528	7396
24	27076	26546	26584	26560	26794
59	43541	43129	42580	42839	42312
115	52043	52544	52515	52972	52274
208	33359	32960	33261	33649	33005

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	1980.91	8.95	8.9 - 9.1		0.39	0.492	0.750	
24	7114.33	23.90	23.9 - 24.1		0.38	0.488	0.750	
59	12079.69	58.95	58.9 - 59.1		0.37	0.455	0.750	
115	15641.30	115.00	114.9 - 115.1		0.33	0.459	0.750	
208	9756.01	208.00	207.9 - 208.1		0.33	0.513	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	0.35 L/min	S/C Temp	2 ℃
RF Matching	1.70 V	Option Gas	0.0 %	Makeup/Dilution Gas	0.50 L/min
Smpl Depth	8.0 mm	Nebulizer Pump	0.10 rps	Gas Switch	Dilution Gas

Lenses Parameters

Extract 1	0.0 V	Omega Lens	8.0 V	Deflect	15.6 V
Extract 2	-200.0 V	Cell Entrance	-38 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		130				NaN	-	
24		1576				NaN	-	
59		18373				NaN	-	

Tune Report

Mass	RSD% (Actual)	RSD% (Required)	RSD% (Flag)	Background (Actual)	Background (Required)	Background (Flag)
9	4.13	5.00				
24	2.30	5.00				
59	1.60	5.00				

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	130	139	130	124	129
24	1618	1561	1539	1612	1551
59	18836	18497	18173	18168	18192

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	33.76	8.90	8.9 - 9.1		0.39	0.495	0.750	
24	421.22	23.90	23.9 - 24.1		0.38	0.485	0.750	
59	5323.23	58.95	58.9 - 59.1		0.35	0.445	0.750	

X = 5 **Integration Time [sec]** 0.1 **Acquisition Time [sec]** 100.6 **Y Axis** Linear

Tune Parameters

Plasma Paramters

RF Power	1600 W	Carrier Gas	0.35 L/min	S/C Temp	2 ℃
RF Matching	1.70 V	Option Gas	0.0 %	Makeup/Dilution Gas	0.50 L/min
Smpl Depth	8.0 mm	Nebulizer Pump	0.10 rps	Gas Switch	Dilution Gas

Lenses Parameters

Extract 1	0.0 V	Omega Lens	8.0 V	Deflect	2.0 V
Extract 2	-200.0 V	Cell Entrance	-32 V	Plate Bias	-60 V
Omega Bias	-100 V	Cell Exit	-70 V		

Cell Parameters

OctP Bias	-18.0 V	He Flow	4.5 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 Blank Report

Sample Table

Sample Name	CAL BLK
Data File Name	004CALB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102
Acq Date Time	2017-10-20T08:24:20-05:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	30	111.11
Na	23	1	nogas	2125724	0.00
Mg	24	1	nogas	12673	0.11
Al	27	1	nogas	12928	0.00
K	39	1	nogas	4950250	0.00
Ti	47	1	nogas	200	13.92
V	51	1	nogas	757177	0.00
Cr	52	1	nogas	30456	0.02
Mn	55	1	nogas	13008	0.01
Co	59	1	nogas	843	0.91
Ni	60	1	nogas	1613	0.83
Cu	63	1	nogas	4594	0.12
Zn	66	1	nogas	3277	0.15
As	75	1	nogas	142071	0.01
Sr	88	1	nogas	687	1.44
Ag	107	1	nogas	290	4.29
Sb	121	1	nogas	1850	0.19
Tl	205	1	nogas	100	10.00
Pb	208	1	nogas	487	3.20
[Pb]	206	1	nogas	93	33.14
[Pb]	207	1	nogas	107	39.63
Na	23	2	He	154444	0.00
Mg	24	2	He	780	0.72
Al	27	2	He	307	10.33
K	39	2	He	72800	0.00
Ca	43	2	He	17	749.40
Ca	44	2	He	1183	0.55
V	51	2	He	4805	0.11
Cr	52	2	He	2540	0.21
Mn	55	2	He	887	3.39
Fe	56	2	He	8739	0.05
Co	59	2	He	310	6.24
Ni	60	2	He	273	6.74
Cu	63	2	He	1460	0.17
Zn	66	2	He	833	0.83
As	75	2	He	234	7.91
Se	78	2	He	66	43.80
B	11	1	nogas	56447	0.00
Si	28	1	nogas	922866	0.00
Ca	43	1	nogas	693	2.48
Ca	44	1	nogas	149269	0.00
Fe	56	1	nogas	938515	0.00

Calibration Blank Report

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Se	77	1	nogas	47382	0.01
Se	82	1	nogas	383	6.43
Mo	95	1	nogas	83	71.03
Sn	118	1	nogas	703	2.60
Ba	137	1	nogas	160	42.97
Sb	121	2	He	613	0.85
Li	7	1	nogas	30191	0.02
P	31	1	nogas	38864	0.01
La	139	1	nogas	93	43.46

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	6	1	nogas	309366	3.78
Ge	72	1	nogas	1624816	2.30
In	115	1	nogas	1701792	3.42
Bi	209	1	nogas	1450658	1.84
Ge	72	2	He	341080	1.51

Calibration Standard Report

Sample Table

Sample Name	2/10/200
Data File Name	005CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102
Acq Date Time	2017-10-20T08:26:22-05:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	4241	0.09
Na	23	1	nogas	4010316	0.00
Mg	24	1	nogas	1498257	0.00
Al	27	1	nogas	30141	0.01
K	39	1	nogas	6594402	0.00
Ti	47	1	nogas	1990	0.52
V	51	1	nogas	834677	0.00
Cr	52	1	nogas	54103	0.01
Mn	55	1	nogas	40047	0.00
Co	59	1	nogas	26433	0.00
Ni	60	1	nogas	7252	0.09
Cu	63	1	nogas	18747	0.03
Zn	66	1	nogas	5804	0.04
As	75	1	nogas	153656	0.00
Sr	88	1	nogas	31412	0.00
Ag	107	1	nogas	18827	0.03
Cd	111	1	nogas	4054	0.06
Sb	121	1	nogas	18086	0.02
Tl	205	1	nogas	29868	0.01
Pb	208	1	nogas	42626	0.00
[Pb]	206	1	nogas	10040	0.05
[Pb]	207	1	nogas	9556	0.03
Na	23	2	He	261140	0.00
Mg	24	2	He	65731	0.00
Al	27	2	He	557	4.76
K	39	2	He	128207	0.00
Ca	43	2	He	160	3.91
Ca	44	2	He	3874	0.06
V	51	2	He	10049	0.04
Cr	52	2	He	8949	0.05
Mn	55	2	He	4707	0.17
Fe	56	2	He	585034	0.00
Co	59	2	He	9766	0.01
Ni	60	2	He	2664	0.34
Cu	63	2	He	8009	0.09
Zn	66	2	He	1557	1.67
As	75	2	He	1347	0.62
Se	78	2	He	133	17.22
B	11	1	nogas	58507	0.00
Si	28	1	nogas	1366088	0.00

Calibration Standard Report

Ca	43	1	nogas	4017	0.13
Ca	44	1	nogas	199903	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	3665966	0.00
Se	77	1	nogas	50691	0.01
Se	82	1	nogas	770	2.04
Mo	95	1	nogas	6451	0.06
Sn	118	1	nogas	10647	0.06
Ba	137	1	nogas	5094	0.12
Sb	121	2	He	5634	0.05
P	31	1	nogas	42441	0.00
La	139	1	nogas	53	20.30

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	308789	1.12	309366	99.81	70	125	
Ge	72	1	nogas	1656407	2.38	1624816	101.94	70	125	
In	115	1	nogas	1741183	3.10	1701792	102.31	70	125	
Bi	209	1	nogas	1546878	5.89	1450658	106.63	70	125	
Ge	72	2	He	345507	0.43	341080	101.30	70	125	

Calibration Standard Report

Sample Table

Sample Name	5/25/500
Data File Name	006CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102
Acq Date Time	2017-10-20T08:28:22-05:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	10663	0.02
Na	23	1	nogas	6972087	0.00
Mg	24	1	nogas	3684840	0.00
Al	27	1	nogas	53212	0.00
K	39	1	nogas	9241722	0.00
Ti	47	1	nogas	4381	0.06
V	51	1	nogas	904219	0.00
Cr	52	1	nogas	87678	0.00
Mn	55	1	nogas	83489	0.00
Co	59	1	nogas	63664	0.00
Ni	60	1	nogas	16277	0.01
Cu	63	1	nogas	39897	0.01
Zn	66	1	nogas	12531	0.03
As	75	1	nogas	168757	0.00
Sr	88	1	nogas	79222	0.00
Ag	107	1	nogas	45813	0.00
Cd	111	1	nogas	9243	0.02
Sb	121	1	nogas	41553	0.00
Tl	205	1	nogas	77176	0.00
Pb	208	1	nogas	105843	0.00
[Pb]	206	1	nogas	26495	0.01
[Pb]	207	1	nogas	23264	0.01
Na	23	2	He	433529	0.00
Mg	24	2	He	159697	0.00
Al	27	2	He	947	2.13
K	39	2	He	213123	0.00
Ca	43	2	He	420	4.09
Ca	44	2	He	8282	0.02
V	51	2	He	18269	0.02
Cr	52	2	He	18509	0.01
Mn	55	2	He	10667	0.04
Fe	56	2	He	1483808	0.00
Co	59	2	He	23676	0.02
Ni	60	2	He	6575	0.08
Cu	63	2	He	17919	0.03
Zn	66	2	He	3637	0.11
As	75	2	He	2972	0.13
Se	78	2	He	249	3.09
B	11	1	nogas	67971	0.00
Si	28	1	nogas	1671855	0.00

Calibration Standard Report

Ca	43	1	nogas	9046	0.04
Ca	44	1	nogas	278060	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	7636672	0.00
Se	77	1	nogas	52325	0.01
Se	82	1	nogas	890	2.52
Mo	95	1	nogas	16404	0.03
Sn	118	1	nogas	25535	0.02
Ba	137	1	nogas	12008	0.03
Sb	121	2	He	13162	0.01
P	31	1	nogas	45873	0.00
La	139	1	nogas	70	40.82

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	307104	3.25	309366	99.27	70	125	
Ge	72	1	nogas	1649573	2.24	1624816	101.52	70	125	
In	115	1	nogas	1722638	1.33	1701792	101.22	70	125	
Bi	209	1	nogas	1480529	0.59	1450658	102.06	70	125	
Ge	72	2	He	344114	1.14	341080	100.89	70	125	

Calibration Standard Report

Sample Table

Sample Name	10/50/1000
Data File Name	007CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102
Acq Date Time	2017-10-20T08:30:22-05:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	21522	0.01
Na	23	1	nogas	12044424	0.00
Mg	24	1	nogas	7357137	0.00
Al	27	1	nogas	96729	0.01
K	39	1	nogas	13513645	0.00
Ti	47	1	nogas	9056	0.07
V	51	1	nogas	996723	0.00
Cr	52	1	nogas	144269	0.00
Mn	55	1	nogas	151840	0.00
Co	59	1	nogas	126783	0.00
Ni	60	1	nogas	30923	0.00
Cu	63	1	nogas	77800	0.00
Zn	66	1	nogas	23916	0.01
As	75	1	nogas	187349	0.00
Sr	88	1	nogas	158023	0.00
Ag	107	1	nogas	90215	0.00
Cd	111	1	nogas	18597	0.02
Sb	121	1	nogas	79060	0.00
Tl	205	1	nogas	150298	0.00
Pb	208	1	nogas	209952	0.00
[Pb]	206	1	nogas	50827	0.00
[Pb]	207	1	nogas	46574	0.00
Na	23	2	He	712515	0.00
Mg	24	2	He	322802	0.00
Al	27	2	He	1680	0.83
K	39	2	He	351100	0.00
Ca	43	2	He	970	1.54
Ca	44	2	He	15393	0.03
V	51	2	He	31710	0.00
Cr	52	2	He	34446	0.01
Mn	55	2	He	20549	0.02
Fe	56	2	He	2906714	0.00
Co	59	2	He	47378	0.00
Ni	60	2	He	13035	0.02
Cu	63	2	He	34079	0.01
Zn	66	2	He	7102	0.03
As	75	2	He	5793	0.03
Se	78	2	He	387	2.02
B	11	1	nogas	80791	0.00
Si	28	1	nogas	2189282	0.00

Calibration Standard Report

Ca	43	1	nogas	18139	0.02
Ca	44	1	nogas	415448	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	14108484	0.00
Se	77	1	nogas	54977	0.01
Se	82	1	nogas	1710	0.94
Mo	95	1	nogas	33105	0.00
Sn	118	1	nogas	50661	0.01
Ba	137	1	nogas	24705	0.01
Sb	121	2	He	25008	0.01
P	31	1	nogas	53934	0.00
La	139	1	nogas	47	95.59

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	302217	2.60	309366	97.69	70	125	
Ge	72	1	nogas	1607946	1.49	1624816	98.96	70	125	
In	115	1	nogas	1730581	2.59	1701792	101.69	70	125	
Bi	209	1	nogas	1536240	3.32	1450658	105.90	70	125	
Ge	72	2	He	344031	2.84	341080	100.87	70	125	

Calibration Standard Report

Sample Table

Sample Name	100/500/10K
Data File Name	008CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102
Acq Date Time	2017-10-20T08:32:24-05:00
Sample Type	CalStd
Level	5
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	215518	0.00
Na	23	1	nogas	98965050	0.00
Mg	24	1	nogas	69962772	0.00
Al	27	1	nogas	836055	0.00
K	39	1	nogas	90828225	0.00
Ti	47	1	nogas	86325	0.00
V	51	1	nogas	2205167	0.00
Cr	52	1	nogas	1117446	0.00
Mn	55	1	nogas	1433618	0.00
Co	59	1	nogas	1257742	0.00
Ni	60	1	nogas	288509	0.00
Cu	63	1	nogas	702754	0.00
Zn	66	1	nogas	220299	0.00
As	75	1	nogas	419752	0.00
Sr	88	1	nogas	1528951	0.00
Ag	107	1	nogas	901759	0.00
Cd	111	1	nogas	183775	0.00
Sb	121	1	nogas	779951	0.00
Tl	205	1	nogas	1591873	0.00
Pb	208	1	nogas	2111623	0.00
[Pb]	206	1	nogas	517793	0.00
[Pb]	207	1	nogas	469965	0.00
Na	23	2	He	5656862	0.00
Mg	24	2	He	3097876	0.00
Al	27	2	He	14036	0.01
K	39	2	He	2909381	0.00
Ca	43	2	He	8312	0.08
Ca	44	2	He	142007	0.00
V	51	2	He	267607	0.00
Cr	52	2	He	314277	0.00
Mn	55	2	He	193337	0.00
Fe	56	2	He	27172040	0.00
Co	59	2	He	459580	0.00
Ni	60	2	He	122673	0.00
Cu	63	2	He	328970	0.00
Zn	66	2	He	67130	0.00
As	75	2	He	53885	0.00
Se	78	2	He	3660	0.07
B	11	1	nogas	355315	0.00
Si	28	1	nogas	11198999	0.00

Calibration Standard Report

Ca	43	1	nogas	171561	0.00
Ca	44	1	nogas	2916879	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	126090132	0.00
Se	77	1	nogas	69413	0.01
Se	82	1	nogas	12678	0.03
Mo	95	1	nogas	320848	0.00
Sn	118	1	nogas	499444	0.00
Ba	137	1	nogas	244248	0.00
Sb	121	2	He	233182	0.00
P	31	1	nogas	185871	0.00
La	139	1	nogas	250	9.73

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	281350	2.67	309366	90.94	70	125	
Ge	72	1	nogas	1651554	3.30	1624816	101.65	70	125	
In	115	1	nogas	1680764	2.39	1701792	98.76	70	125	
Bi	209	1	nogas	1448159	1.73	1450658	99.83	70	125	
Ge	72	2	He	329065	0.95	341080	96.48	70	125	

Calibration Standard Report

Sample Table

Sample Name	200/1000/20K
Data File Name	009CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102
Acq Date Time	2017-10-20T08:34:21-05:00
Sample Type	CalStd
Level	6
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	416402	0.00
Na	23	1	nogas	197691309	0.00
Mg	24	1	nogas	139646870	0.00
Al	27	1	nogas	1653278	0.00
K	39	1	nogas	169415312	0.00
Ti	47	1	nogas	169790	0.00
V	51	1	nogas	3362505	0.00
Cr	52	1	nogas	2270320	0.00
Mn	55	1	nogas	2810991	0.00
Co	59	1	nogas	2457762	0.00
Ni	60	1	nogas	541048	0.00
Cu	63	1	nogas	1378486	0.00
Zn	66	1	nogas	429519	0.00
As	75	1	nogas	651580	0.00
Sr	88	1	nogas	3026402	0.00
Ag	107	1	nogas	1814523	0.00
Cd	111	1	nogas	356189	0.00
Sb	121	1	nogas	1570042	0.00
Tl	205	1	nogas	3105163	0.00
Pb	208	1	nogas	4169661	0.00
[Pb]	206	1	nogas	1001819	0.00
[Pb]	207	1	nogas	906576	0.00
Na	23	2	He	10957547	0.00
Mg	24	2	He	5958010	0.00
Al	27	2	He	27597	0.00
K	39	2	He	5309505	0.00
Ca	43	2	He	17058	0.03
Ca	44	2	He	282106	0.00
V	51	2	He	517954	0.00
Cr	52	2	He	609084	0.00
Mn	55	2	He	382287	0.00
Fe	56	2	He	53876434	0.00
Co	59	2	He	882319	0.00
Ni	60	2	He	234052	0.00
Cu	63	2	He	623209	0.00
Zn	66	2	He	130635	0.00
As	75	2	He	103988	0.00
Se	78	2	He	6871	0.03
B	11	1	nogas	661354	0.00
Si	28	1	nogas	20469272	0.00

Calibration Standard Report

Ca	43	1	nogas	324749	0.00
Ca	44	1	nogas	5385520	0.00
Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Fe	56	1	nogas	252498347	0.00
Se	77	1	nogas	81110	0.00
Se	82	1	nogas	24744	0.01
Mo	95	1	nogas	628109	0.00
Sn	118	1	nogas	974141	0.00
Ba	137	1	nogas	475554	0.00
Sb	121	2	He	469114	0.00
P	31	1	nogas	317562	0.00
La	139	1	nogas	283	3.81

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	257251	1.34	309366	83.15	70	125	
Ge	72	1	nogas	1604735	0.70	1624816	98.76	70	125	
In	115	1	nogas	1587722	0.44	1701792	93.30	70	125	
Bi	209	1	nogas	1387198	0.50	1450658	95.63	70	125	
Ge	72	2	He	328608	0.59	341080	96.34	70	125	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	ICV
Data File Name	011_ICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102
Acq Date Time	2017-10-20T08:38:23-05:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
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	104.226	2.601	211493	2.10	100	104.2	90	110	
Na	23	1	nogas	10391.056	1.720	104510475	0.87	10000	103.9	90	110	
Mg	24	1	nogas	10247.052	2.486	72317352	3.37	10000	102.5	90	110	
Al	27	1	nogas	102.145	1.293	853738	0.93	100	102.1	90	110	
K	39	1	nogas	9702.235	2.006	85651406	1.24	10000	97.0	90	110	
Ti	47	1	nogas	99.660	2.911	85210	2.69	100	99.7	90	110	
V	51	1	nogas	101.251	5.439	2110430	3.59	100	101.3	90	110	
Cr	52	1	nogas	98.625	2.105	1131683	1.53	100	98.6	90	110	
Mn	55	1	nogas	100.915	2.636	1432992	2.07	100	100.9	90	110	
Co	59	1	nogas	97.226	1.117	1204074	0.52	100	97.2	90	110	
Ni	60	1	nogas	100.508	0.791	277512	0.12	100	100.5	90	110	
Cu	63	1	nogas	100.293	0.820	697929	1.14	100	100.3	90	110	
Zn	66	1	nogas	101.612	1.686	220747	2.23	100	101.6	90	110	
As	75	1	nogas	98.560	4.781	402151	2.64	100	98.6	90	110	
Sr	88	1	nogas	101.831	3.377	1548955	2.69	100	101.8	90	110	
Ag	107	1	nogas	98.913	1.072	899050	1.35	100	98.9	90	110	
Cd	111	1	nogas	100.752	3.066	184157	2.52	100	100.8	90	110	
Sb	121	1	nogas	101.728	2.323	800598	2.25	100	101.7	90	110	
Tl	205	1	nogas	92.497	3.481	1546354	3.61	100	92.5	90	110	
Pb	208	1	nogas	95.228	4.060	2131661	0.97	100	95.2	90	110	
U	238	1	nogas	98.315	6.161	2289177	3.84	100	98.3	90	110	
[Pb]	206	1	nogas	96.120	4.687	518926	0.20	100	96.1	90	110	
[Pb]	207	1	nogas	97.807	3.768	478265	0.94	100	97.8	90	110	
Na	23	2	He	9745.454	3.037	5464182	3.26	10000	97.5	90	110	
Mg	24	2	He	9988.452	1.280	3015274	1.59	10000	99.9	90	110	
Al	27	2	He	100.458	1.050	14085	1.28	100	100.5	90	110	
K	39	2	He	9917.104	2.056	2713051	2.00	10000	99.2	90	110	
Ca	43	2	He	9671.555	1.283	8259	1.21	10000	96.7	90	110	
Ca	44	2	He	9879.042	1.602	140706	1.27	10000	98.8	90	110	
V	51	2	He	99.842	2.529	263673	2.19	100	99.8	90	110	
Cr	52	2	He	101.722	1.587	314356	1.90	100	101.7	90	110	
Mn	55	2	He	102.252	1.456	197237	1.77	100	102.3	90	110	
Fe	56	2	He	9905.467	2.455	26876705	2.78	10000	99.1	90	110	
Co	59	2	He	101.178	1.328	452546	1.15	100	101.2	90	110	
Ni	60	2	He	100.251	2.291	119414	2.20	100	100.3	90	110	
Cu	63	2	He	101.055	0.691	321196	0.74	100	101.1	90	110	
Zn	66	2	He	100.735	2.808	66702	2.84	100	100.7	90	110	
As	75	2	He	101.129	1.619	53326	1.32	100	101.1	90	110	
Se	78	2	He	103.040	4.346	3632	4.50	100	103.0	90	110	
B	11	1	nogas	556.795	6.135	366420	2.92	500	111.4	90	110	ICV Main CR1 Failed
Si	28	1	nogas	5290.550	1.398	11406413	1.81	5000	105.8	90	110	
Ca	43	1	nogas	9853.657	1.819	162552	2.00	10000	98.5	90	110	
Ca	44	1	nogas	9708.637	1.182	2726385	0.80	10000	97.1	90	110	
Fe	56	1	nogas	9791.251	1.065	124346982	1.73	10000	97.9	90	110	
Se	77	1	nogas	94.189	12.153	64324	2.79	100	94.2	90	110	
Se	82	1	nogas	102.637	5.726	12945	5.30	100	102.6	90	110	
Mo	95	1	nogas	100.303	0.204	317319	0.61	100	100.3	90	110	
Sn	118	1	nogas	100.038	3.481	499606	1.96	100	100.0	90	110	
Ba	137	1	nogas	100.664	4.416	245363	0.97	100	100.7	90	110	
Sb	121	2	He	105.284	2.399	248151	2.25	100	105.3	90	110	
Li	7	1	nogas	108.951	2.702	522524	2.73	100	109.0	90	110	
P	31	1	nogas	505.598	0.848	181667	1.09	500	101.1	90	110	
La	139	1	nogas	98.642	47.215	200	30.42	100	98.6	90	110	
Au	197	1	nogas	-46.786	-144.235	3	173.21	100	-46.8	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	265166	2.49	309366	85.71	70	125	
Ge	72	1	nogas	1618297	0.68	1624816	99.60	70	125	
In	115	1	nogas	1639457	5.28	1701792	96.34	70	125	
Bi	209	1	nogas	1500348	4.71	1450658	103.43	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	330402	0.33	341080	96.87	70	125	

Sample Report

Sample Table

Sample Name	LLICV2
Data File Name	012SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102
Acq Date Time	2017-10-20T08:40:22-05:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	004CALB.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	1.932	1.932	9.76	4257	0.05	2000	
Na	23	1	nogas	172.188	172.188	2.21	3796100	0.00	200000	
Mg	24	1	nogas	202.753	202.753	1.21	1473732	0.01	200000	
Al	27	1	nogas	2.176	2.176	4.82	30175	0.01	2000	
K	39	1	nogas	182.961	182.961	5.83	6322686	0.00	200000	
Ti	47	1	nogas	2.186	2.186	8.44	2023	0.11	2000	
V	51	1	nogas	4.318	4.318	55.18	796109	0.00	2000	
Cr	52	1	nogas	1.985	1.985	10.82	51476	0.00	2000	
Mn	55	1	nogas	1.841	1.841	3.17	38077	0.00	2000	
Co	59	1	nogas	2.094	2.094	1.31	26216	0.01	2000	
Ni	60	1	nogas	1.632	1.632	6.94	7508	0.02	2000	
Cu	63	1	nogas	2.019	2.019	1.14	18159	0.01	2000	
Zn	66	1	nogas	1.973	1.973	4.57	6128	0.03	2000	
As	75	1	nogas	7.145	7.145	36.91	166004	0.00	2000	
Sr	88	1	nogas	2.178	2.178	4.70	33119	0.01	2000	
Ag	107	1	nogas	2.067	2.067	3.71	18674	0.01	2000	
Cd	111	1	nogas	2.098	2.098	2.18	3884	0.05	2000	
Sb	121	1	nogas	2.956	2.956	2.76	24544	0.01	2000	
Tl	205	1	nogas	1.916	1.916	4.17	32813	0.01	2000	
Pb	208	1	nogas	1.905	1.905	3.47	44121	0.00	2000	
U	238	1	nogas	1.817	1.817	3.57	43373	0.00	2000	
[Pb]	206	1	nogas	1.932	1.932	1.73	10760	0.02	2000	
[Pb]	207	1	nogas	1.949	1.949	2.49	9856	0.02	2000	
Na	23	2	He	176.281	176.281	1.08	245851	0.07	200000	
Mg	24	2	He	209.063	209.063	0.19	63872	0.33	200000	
Al	27	2	He	1.237	1.237	18.64	433	0.29	2000	
K	39	2	He	176.518	176.518	1.08	119795	0.15	200000	
Ca	43	2	He	188.006	188.006	33.98	177	106.42	200000	
Ca	44	2	He	177.015	177.015	11.52	3650	4.85	200000	
V	51	2	He	1.596	1.596	3.57	9290	0.02	2000	
Cr	52	2	He	2.062	2.062	4.84	8786	0.02	2000	
Mn	55	2	He	1.915	1.915	4.86	4537	0.04	2000	
Fe	56	2	He	208.699	208.699	2.62	574670	0.04	200000	
Co	59	2	He	2.086	2.086	0.81	9629	0.02	2000	
Ni	60	2	He	1.736	1.736	6.36	2957	0.06	2000	
Cu	63	2	He	1.475	1.475	2.61	7615	0.02	2000	
Zn	66	2	He	2.061	2.061	6.46	1870	0.11	2000	
As	75	2	He	2.226	2.226	3.43	1397	0.16	2000	
Se	78	2	He	1.867	1.867	19.00	138	1.35	2000	
B	11	1	nogas	34.419	34.419	10.81	75427	0.05	2000	

Sample Report

Si	28	1	nogas	214.771	214.771	4.48	1317912	0.02	2000	
Ca	43	1	nogas	204.987	204.987	6.22	3977	5.15	200000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Ca	44	1	nogas	147.064	147.064	5.56	183981	0.08	200000	
Fe	56	1	nogas	204.585	204.585	5.03	3441070	0.01	200000	
Se	77	1	nogas	39.557	39.557	24.31	53318	0.07	2000	
Se	82	1	nogas	2.446	2.446	27.00	667	0.37	2000	
Mo	95	1	nogas	2.137	2.137	7.55	6698	0.03	2000	
Sn	118	1	nogas	1.953	1.953	6.05	10543	0.02	2000	
Ba	137	1	nogas	2.047	2.047	8.54	5204	0.04	2000	
Sb	121	2	He	2.956	2.956	4.41	7548	0.04	2000	
La	139	1	nogas	-30.642	-30.642	-115.55	57	-54.07	2000	
Au	197	1	nogas	34.685	34.685	601.39	10	346.85	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	286536	3.46	309366	92.62	70	125	
Ge	72	1	nogas	1585331	1.14	1624816	97.57	70	125	
In	115	1	nogas	1658645	2.57	1701792	97.46	70	125	
Bi	209	1	nogas	1532100	2.23	1450658	105.61	70	125	
Ge	72	2	He	330520	0.64	341080	96.90	70	125	

Low Level Initial Calibration Verification (LLICV) Report

Sample Table

Sample Name	LLICV5
Data File Name	013LICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102
Acq Date Time	2017-10-20T08:42:23-05:00
Sample Type	LLICV
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
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	4.617	2.408	10590	5.33	5	92.3	70	130	
Na	23	1	nogas	453.491	2.692	6680950	2.78	500	90.7	70	130	
Mg	24	1	nogas	485.721	1.017	3539204	1.86	500	97.1	70	130	
Al	27	1	nogas	4.948	0.854	52848	1.57	5	99.0	70	130	
K	39	1	nogas	478.481	4.937	8783056	0.26	500	95.7	70	130	
Ti	47	1	nogas	4.678	7.251	4134	8.78	5	93.6	70	130	
V	51	1	nogas	8.175	25.739	851606	3.33	5	163.5	70	130	LLICV Main CR1 Failed
Cr	52	1	nogas	4.919	2.619	84065	1.25	5	98.4	70	130	
Mn	55	1	nogas	4.862	3.349	80192	0.78	5	97.2	70	130	
Co	59	1	nogas	5.167	2.151	63845	1.40	5	103.3	70	130	
Ni	60	1	nogas	4.709	7.173	15827	5.39	5	94.2	70	130	
Cu	63	1	nogas	4.992	2.034	38524	0.27	5	99.8	70	130	
Zn	66	1	nogas	4.650	2.127	11847	3.08	5	93.0	70	130	
As	75	1	nogas	10.204	37.199	174619	5.23	5	204.1	70	130	LLICV Main CR1 Failed
Sr	88	1	nogas	4.978	3.509	75255	1.59	5	99.6	70	130	
Ag	107	1	nogas	5.109	2.232	46034	1.48	5	102.2	70	130	
Cd	111	1	nogas	4.968	3.748	9233	1.95	5	99.4	70	130	
Sb	121	1	nogas	5.590	3.457	45062	1.45	5	111.8	70	130	
Tl	205	1	nogas	4.650	0.574	76864	0.95	5	93.0	70	130	
Pb	208	1	nogas	4.811	1.388	106872	1.88	5	96.2	70	130	
U	238	1	nogas	4.676	0.947	107698	1.96	5	93.5	70	130	
[Pb]	206	1	nogas	4.837	1.813	25901	2.60	5	96.7	70	130	
[Pb]	207	1	nogas	4.946	2.996	24001	3.58	5	98.9	70	130	
Na	23	2	He	462.749	2.320	407142	0.26	500	92.5	70	130	
Mg	24	2	He	499.086	1.028	153332	1.09	500	99.8	70	130	
Al	27	2	He	3.704	25.034	783	17.24	5	74.1	70	130	
K	39	2	He	485.944	0.701	202174	0.45	500	97.2	70	130	
Ca	43	2	He	486.384	22.208	437	22.01	500	97.3	70	130	
Ca	44	2	He	483.103	0.498	8075	0.82	500	96.6	70	130	
V	51	2	He	4.528	3.837	17093	1.51	5	90.6	70	130	
Cr	52	2	He	5.138	5.226	18443	3.36	5	102.8	70	130	
Mn	55	2	He	4.647	5.061	9906	4.27	5	92.9	70	130	
Fe	56	2	He	511.578	3.162	1413792	2.00	500	102.3	70	130	
Co	59	2	He	5.156	2.228	23646	1.10	5	103.1	70	130	
Ni	60	2	He	4.519	7.319	6325	5.50	5	90.4	70	130	
Cu	63	2	He	4.541	3.985	17485	2.06	5	90.8	70	130	
Zn	66	2	He	4.710	6.208	3657	6.25	5	94.2	70	130	
As	75	2	He	5.132	4.588	2961	5.45	5	102.6	70	130	
Se	78	2	He	4.557	38.219	233	24.85	5	91.1	70	130	
B	11	1	nogas	22.407	14.542	70189	0.79	25	89.6	70	130	
Si	28	1	nogas	359.152	4.446	1607675	0.94	25	1436.6	70	130	LLICV Main CR1 Failed
Ca	43	1	nogas	499.162	8.577	8759	6.89	500	99.8	70	130	
Ca	44	1	nogas	457.275	5.718	266255	2.63	500	91.5	70	130	
Fe	56	1	nogas	511.816	4.448	7276353	1.88	500	102.4	70	130	
Se	77	1	nogas	47.577	38.539	55064	6.05	5	951.5	70	130	LLICV Main CR1 Failed
Se	82	1	nogas	6.109	14.401	1113	10.98	5	122.2	70	130	
Mo	95	1	nogas	5.161	6.708	16158	4.65	5	103.2	70	130	
Sn	118	1	nogas	4.866	1.132	25379	2.66	5	97.3	70	130	
Ba	137	1	nogas	4.999	9.891	12535	7.95	5	100.0	70	130	
Sb	121	2	He	5.559	2.670	13846	3.48	5	111.2	70	130	
Li	7	1	nogas	4.496	6.038	52259	5.79	5	89.9	70	130	
P	31	1	nogas	25.498	23.717	45275	3.29	25	102.0	70	130	
La	139	1	nogas	-57.083	-23.222	27	57.28	5	-1141.7	70	130	LLICV Main CR1 Failed
Au	197	1	nogas	164.033	1.613	20	0.00	5	3280.7	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	298701	3.08	309366	96.55	70	125	
Ge	72	1	nogas	1595134	2.02	1624816	98.17	70	125	

Low Level Initial Calibration Verification (LLICV) Report

In	115	1	nogas	1665839	1.96	1701792	97.89	70	125	
Bi	209	1	nogas	1480501	1.05	1450658	102.06	70	125	
Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	2	He	334687	1.25	341080	98.13	70	125	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	ICB
Data File Name	014_ICB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102
Acq Date Time	2017-10-20T08:44:23-05:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
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	0.027	60.8	90	40.1	1	
Na	23	1	nogas	-16.942	-10.0	1897689	0.6	100	
Mg	24	1	nogas	2.005	6.7	26825	4.0	100	
Al	27	1	nogas	0.803	18.8	19137	5.2	5	
K	39	1	nogas	-22.400	-33.6	4661528	0.8	100	
Ti	47	1	nogas	-0.027	-150.3	173	18.5	2.5	
V	51	1	nogas	10.416	25.7	878221	3.9	2.5	ICB Main CR1 Failed
Cr	52	1	nogas	0.242	60.4	32482	4.7	2.5	
Mn	55	1	nogas	0.023	83.5	13055	1.8	2.5	
Co	59	1	nogas	-0.004	-194.2	780	12.2	2.5	
Ni	60	1	nogas	-0.610	-7.6	1517	7.5	2.5	
Cu	63	1	nogas	-0.033	-80.1	4277	3.2	2.5	
Zn	66	1	nogas	1.741	6.4	5654	4.4	2.5	
As	75	1	nogas	13.558	36.2	182374	5.8	2.5	ICB Main CR1 Failed
Sr	88	1	nogas	0.062	4.9	1590	2.7	2.5	
Ag	107	1	nogas	0.020	34.8	467	13.1	2.5	
Cd	111	1	nogas	0.021	26.4	40	25.0	1	
Sb	121	1	nogas	0.402	18.9	4914	11.9	2.5	
Tl	205	1	nogas	0.032	16.6	627	14.4	1	
Pb	208	1	nogas	0.022	27.7	960	13.3	2.5	
U	238	1	nogas	0.016	35.2	467	27.2	2.5	
[Pb]	206	1	nogas	0.037	42.8	287	28.4	2.5	
[Pb]	207	1	nogas	0.016	52.9	183	22.0	2.5	
Na	23	2	He	-20.184	-21.7	140679	1.1	100	
Mg	24	2	He	1.981	17.3	1373	7.8	100	
Al	27	2	He	0.758	176.3	373	50.7	5	
K	39	2	He	-15.795	-10.5	68595	0.6	100	
Ca	43	2	He	57.817	40.3	67	31.2	100	
Ca	44	2	He	-2.573	-409.3	1127	12.8	100	
V	51	2	He	-0.129	-42.9	4891	4.1	2.5	
Cr	52	2	He	0.049	130.5	2647	6.4	2.5	
Mn	55	2	He	-0.102	-39.7	670	10.8	2.5	
Fe	56	2	He	2.354	12.3	15070	4.6	100	
Co	59	2	He	-0.011	-174.0	253	33.6	2.5	
Ni	60	2	He	-0.498	-12.8	320	25.0	2.5	
Cu	63	2	He	-0.561	-8.2	1217	10.9	2.5	
Zn	66	2	He	1.781	4.9	1710	4.2	2.5	
As	75	2	He	0.159	24.7	316	5.3	2.5	
Se	78	2	He	-0.146	-204.2	69	14.2	2.5	
B	11	1	nogas	-1.596	-187.2	53850	2.4	10	
Si	28	1	nogas	-12.252	-60.7	879325	0.8	5	
Ca	43	1	nogas	13.395	29.5	897	8.2	100	
Ca	44	1	nogas	-41.441	-30.3	135298	2.1	100	
Fe	56	1	nogas	-7.193	-11.3	829476	1.3	100	

Initial Calibration Blank (ICB) Report

Se	77	1	nogas	78.199	29.6	60324	6.3	2.5	ICB Main CR1 Failed
Se	82	1	nogas	0.776	67.9	467	12.2	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Mo	95	1	nogas	0.036	35.1	193	21.5	2.5	
Sn	118	1	nogas	0.058	39.6	987	10.4	5	
Ba	137	1	nogas	0.192	1.3	640	1.6	2.5	
Sb	121	2	He	0.357	16.1	1453	8.6	2.5	
P	31	1	nogas	19.790	15.2	43540	0.9	10	ICB Main CR1 Failed
La	139	1	nogas	-4.148	-470.2	87	24.0	2.5	
Au	197	1	nogas	167.992	130.8	20	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	301109	1.77	309366	97.33	70	125	
Ge	72	1	nogas	1589743	1.33	1624816	97.84	70	125	
In	115	1	nogas	1679644	1.42	1701792	98.70	70	125	
Bi	209	1	nogas	1456032	0.56	1450658	100.37	70	125	
Ge	72	2	He	335319	1.36	341080	98.31	70	125	

Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	ICSA
Data File Name	015ICSA.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102
Acq Date Time	2017-10-20T08:46:26-05:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
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	0.036	39.3	103	29.6	0	ICSA Main CR1 Failed
Na	23	1	nogas	106469.102	1.7	1005339089	2.0	0	
Mg	24	1	nogas	104120.684	3.9	701820532	4.1	0	
Al	27	1	nogas	105914.085	3.4	818087828	3.0	0	
K	39	1	nogas	108482.987	3.9	851612902	4.0	0	
Ti	47	1	nogas	2209.627	4.8	1767962	2.9	0	
V	51	1	nogas	12.855	11.0	869480	0.4	0	
Cr	52	1	nogas	2.027	2.5	49731	1.5	0	ICSA Main CR1 Failed
Mn	55	1	nogas	0.089	20.6	13342	1.1	0	ICSA Main CR1 Failed
Co	59	1	nogas	0.094	19.8	1883	13.3	0	ICSA Main CR1 Failed
Ni	60	1	nogas	-0.009	-1804.1	2984	12.4	0	ICSA Main CR1 Failed
Cu	63	1	nogas	0.842	9.2	9753	3.6	0	ICSA Main CR1 Failed
Zn	66	1	nogas	4.295	2.5	10560	1.2	0	ICSA Main CR1 Failed
As	75	1	nogas	22.661	12.8	195965	1.6	0	
Sr	88	1	nogas	1.058	6.6	15744	6.3	0	ICSA Main CR1 Failed
Ag	107	1	nogas	0.046	23.3	663	12.2	0	ICSA Main CR1 Failed
Cd	111	1	nogas	1.093	9.5	1923	6.0	0	ICSA Main CR1 Failed
Sb	121	1	nogas	0.488	6.4	5324	2.9	0	ICSA Main CR1 Failed
Tl	205	1	nogas	0.018	13.9	363	8.8	0	ICSA Main CR1 Failed
Pb	208	1	nogas	0.105	4.8	2623	5.1	0	ICSA Main CR1 Failed
[Pb]	206	1	nogas	0.114	7.9	650	8.0	0	ICSA Main CR1 Failed
[Pb]	207	1	nogas	0.105	9.9	570	8.8	0	ICSA Main CR1 Failed
Na	23	2	He	99193.455	0.4	52950588	2.3	0	
Mg	24	2	He	100318.594	2.2	29546880	0.8	0	
Al	27	2	He	101388.005	3.5	13613978	2.6	0	
K	39	2	He	97619.526	1.1	26062242	1.1	0	
Ca	43	2	He	92921.987	4.8	77277	3.1	0	
Ca	44	2	He	96568.359	5.4	1331883	3.2	0	
V	51	2	He	-0.134	-6.6	4691	1.7	0	ICSA Main CR1 Failed
Cr	52	2	He	1.371	6.4	6501	2.4	0	ICSA Main CR1 Failed
Mn	55	2	He	0.003	1292.2	843	11.4	0	ICSA Main CR1 Failed
Fe	56	2	He	97615.119	3.7	258335376	1.5	0	
Co	59	2	He	-0.015	-39.4	227	11.1	0	ICSA Main CR1 Failed
Ni	60	2	He	-0.403	-7.7	417	9.1	0	ICSA Main CR1 Failed
Cu	63	2	He	-0.140	-11.9	2464	0.2	0	ICSA Main CR1 Failed
Zn	66	2	He	3.061	7.9	2464	4.3	0	ICSA Main CR1 Failed
As	75	2	He	0.304	5.9	378	3.7	0	ICSA Main CR1 Failed
Se	78	2	He	-0.205	-114.6	65	9.9	0	ICSA Main CR1 Failed
B	11	1	nogas	9.199	75.8	56872	5.7	0	ICSA Main CR1 Failed
Si	28	1	nogas	306.921	8.9	1433170	1.6	0	
Ca	43	1	nogas	109151.743	3.7	1682475	1.9	0	
Ca	44	1	nogas	105018.600	3.6	26296655	2.3	0	
Fe	56	1	nogas	107536.021	1.3	1272597462	0.7	0	
Se	77	1	nogas	123.703	7.3	65384	1.7	0	
Se	82	1	nogas	0.587	165.4	423	24.8	0	ICSA Main CR1 Failed
Mo	95	1	nogas	2288.975	1.6	6793871	2.3	0	
Sn	118	1	nogas	0.095	35.9	1110	15.9	0	ICSA Main CR1 Failed
Ba	137	1	nogas	0.229	40.6	690	32.0	0	ICSA Main CR1 Failed
Sb	121	2	He	0.447	13.4	1603	6.3	0	ICSA Main CR1 Failed

Interference Check Solution A (ICS-A) Report

P	31	1	nogas	204512.702	3.6	54267361	1.6	0	
La	139	1	nogas	150.778	67.5	247	43.7	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	278865	2.38	309366	90.14	70	125	
Ge	72	1	nogas	1518701	2.00	1624816	93.47	70	125	
In	115	1	nogas	1580927	3.80	1701792	92.90	70	125	
Bi	209	1	nogas	1372781	1.47	1450658	94.63	70	125	
Ge	72	2	He	322539	2.14	341080	94.56	70	125	

Interference Check Solution AB (ICS-AB) Report

Sample Table

Sample Name	ICSAB
Data File Name	016ICSB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102
Acq Date Time	2017-10-20T08:48:30-05:00
Sample Type	ICSB
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
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	97.213	3.940	194972	2.68	100	97.2	80	120	
Na	23	1	nogas	119217.815	4.404	1116664792	3.76	100	119217.8	80	120	ICSB Main CR1 Failed
Mg	24	1	nogas	115344.383	2.085	771410634	0.69	100	115344.4	80	120	
Al	27	1	nogas	105737.561	2.777	839578361	1.53	100	105737.6	80	120	ICSB Main CR1 Failed
K	39	1	nogas	114050.302	6.089	919763254	4.85	100	114050.3	80	120	ICSB Main CR1 Failed
Ti	47	1	nogas	2316.098	5.830	1905323	4.63	100	2316.1	80	120	
V	51	1	nogas	105.958	5.103	2096319	2.44	100	106.0	80	120	
Cr	52	1	nogas	91.101	3.448	1010508	2.11	100	91.1	80	120	
Mn	55	1	nogas	92.663	5.426	1270064	4.42	100	92.7	80	120	
Co	59	1	nogas	89.956	1.944	1074679	0.70	100	90.0	80	120	
Ni	60	1	nogas	93.956	2.484	250432	1.30	100	94.0	80	120	
Cu	63	1	nogas	93.840	4.285	630113	3.54	100	93.8	80	120	
Zn	66	1	nogas	98.494	2.596	206431	1.47	100	98.5	80	120	
As	75	1	nogas	111.803	5.838	420400	2.62	100	111.8	80	120	
Sr	88	1	nogas	94.316	3.768	1383902	2.72	100	94.3	80	120	
Ag	107	1	nogas	86.743	5.444	760516	5.08	100	86.7	80	120	
Cd	111	1	nogas	91.213	7.068	160480	4.00	100	91.2	80	120	
Sb	121	1	nogas	97.122	1.450	737399	0.44	100	97.1	80	120	
Tl	205	1	nogas	87.530	3.514	1332371	2.59	100	87.5	80	120	
Pb	208	1	nogas	92.571	2.819	1887906	1.80	100	92.6	80	120	
U	238	1	nogas	100.296	0.932	2128544	1.50	100	100.3	80	120	
[Pb]	206	1	nogas	93.871	1.981	461841	0.95	100	93.9	80	120	
[Pb]	207	1	nogas	93.822	4.305	417910	3.33	100	93.8	80	120	
Na	23	2	He	112997.279	1.340	58778972	1.43	100	112997.3	80	120	ICSB Main CR1 Failed
Mg	24	2	He	112975.945	0.538	32447607	1.24	100	112975.9	80	120	ICSB Main CR1 Failed
Al	27	2	He	103296.314	0.577	13525499	0.89	100	103296.3	80	120	ICSB Main CR1 Failed
K	39	2	He	107236.114	1.757	28622485	1.75	100	107236.1	80	120	
Ca	43	2	He	105994.008	2.505	85962	1.10	100	105994.0	80	120	ICSB Main CR1 Failed
Ca	44	2	He	108547.425	6.525	1459569	5.09	100	108547.4	80	120	
V	51	2	He	94.447	1.268	237624	0.54	100	94.4	80	120	
Cr	52	2	He	94.132	1.131	277027	2.32	100	94.1	80	120	
Mn	55	2	He	93.044	0.821	170864	1.23	100	93.0	80	120	
Fe	56	2	He	112750.278	3.482	290953742	2.15	100	112750.3	80	120	ICSB Main CR1 Failed
Co	59	2	He	94.714	4.562	403053	3.59	100	94.7	80	120	
Ni	60	2	He	92.097	3.430	104440	2.06	100	92.1	80	120	
Cu	63	2	He	94.030	0.707	284622	1.58	100	94.0	80	120	
Zn	66	2	He	95.946	2.182	60484	2.66	100	95.9	80	120	
As	75	2	He	92.081	1.532	46227	1.68	100	92.1	80	120	
Se	78	2	He	92.789	2.948	3118	1.48	100	92.8	80	120	
B	11	1	nogas	988.554	1.597	654650	1.08	100	988.6	80	120	ICSB Main CR1 Failed
Si	28	1	nogas	9747.350	4.424	19520154	3.28	100	9747.3	80	120	ICSB Main CR1 Failed
Ca	43	1	nogas	115693.374	4.211	1833506	3.29	100	115693.4	80	120	ICSB Main CR1 Failed
Ca	44	1	nogas	112305.146	1.582	28910955	2.29	100	112305.1	80	120	ICSB Main CR1 Failed
Fe	56	1	nogas	113338.269	4.057	1378532497	2.84	100	113338.3	80	120	ICSB Main CR1 Failed
Se	77	1	nogas	182.988	14.473	77572	4.77	100	183.0	80	120	ICSB Main CR1 Failed
Se	82	1	nogas	96.849	4.500	11807	4.87	100	96.8	80	120	
Mo	95	1	nogas	2349.177	5.196	7165138	4.09	100	2349.2	80	120	ICSB Main CR1 Failed
Sn	118	1	nogas	93.806	3.381	451414	1.30	100	93.8	80	120	
Ba	137	1	nogas	94.302	5.872	221424	2.81	100	94.3	80	120	
Sb	121	2	He	98.345	1.383	220614	0.89	100	98.3	80	120	
La	139	1	nogas	376.008	6.554	487	2.37	100	376.0	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	262102	1.37	309366	84.72	70	125	
Ge	72	1	nogas	1561213	1.26	1624816	96.09	70	125	
In	115	1	nogas	1578652	3.00	1701792	92.76	70	125	
Bi	209	1	nogas	1365467	1.08	1450658	94.13	70	125	
Ge	72	2	He	314436	1.41	341080	92.19	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	022_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102
Acq Date Time	2017-10-20T09:00:38-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
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	102.641	5.278	226562	3.32	100	102.6	90	110	
Na	23	1	nogas	9946.679	2.222	105726632	0.75	10000	99.5	90	110	
Mg	24	1	nogas	9966.929	2.813	74247910	0.67	10000	99.7	90	110	
Al	27	1	nogas	105.134	3.320	907220	2.21	100	105.1	90	110	
K	39	1	nogas	10348.604	3.367	94027585	2.29	10000	103.5	90	110	
Ti	47	1	nogas	99.240	3.128	87634	1.03	100	99.2	90	110	
V	51	1	nogas	106.595	6.618	2252946	2.03	100	106.6	90	110	
Cr	52	1	nogas	97.618	2.762	1157264	0.38	100	97.6	90	110	
Mn	55	1	nogas	103.373	1.486	1516125	0.84	100	103.4	90	110	
Co	59	1	nogas	102.836	4.647	1314917	2.34	100	102.8	90	110	
Ni	60	1	nogas	103.556	2.612	295290	2.72	100	103.6	90	110	
Cu	63	1	nogas	101.189	1.438	727352	1.00	100	101.2	90	110	
Zn	66	1	nogas	102.939	2.546	230936	1.15	100	102.9	90	110	
As	75	1	nogas	100.107	5.163	419436	1.76	100	100.1	90	110	
Sr	88	1	nogas	105.533	0.569	1658777	2.30	100	105.5	90	110	
Ag	107	1	nogas	98.052	1.148	920800	2.47	100	98.1	90	110	
Cd	111	1	nogas	99.143	4.059	190769	2.78	100	99.1	90	110	
Sb	121	1	nogas	103.510	3.356	841238	1.27	100	103.5	90	110	
Tl	205	1	nogas	98.243	1.649	1616422	2.33	100	98.2	90	110	
Pb	208	1	nogas	98.030	1.441	2160592	0.92	100	98.0	90	110	
U	238	1	nogas	104.519	1.905	2396543	0.21	100	104.5	90	110	
[Pb]	206	1	nogas	99.172	1.746	527252	0.53	100	99.2	90	110	
[Pb]	207	1	nogas	99.895	1.811	480897	0.85	100	99.9	90	110	
Na	23	2	He	10027.563	0.901	5666930	1.25	10000	100.3	90	110	
Mg	24	2	He	10227.151	0.816	3114226	0.88	10000	102.3	90	110	
Al	27	2	He	106.167	6.030	15003	6.32	100	106.2	90	110	
K	39	2	He	10171.940	1.864	2780896	1.81	10000	101.7	90	110	
Ca	43	2	He	9590.972	1.268	8262	1.69	10000	95.9	90	110	
Ca	44	2	He	9881.559	1.790	141969	1.24	10000	98.8	90	110	
V	51	2	He	103.148	1.949	274606	1.19	100	103.1	90	110	
Cr	52	2	He	102.272	2.707	318760	2.05	100	102.3	90	110	
Mn	55	2	He	101.484	0.482	197483	1.63	100	101.5	90	110	
Fe	56	2	He	10169.457	0.973	27831988	0.69	10000	101.7	90	110	
Co	59	2	He	104.433	3.073	471134	2.50	100	104.4	90	110	
Ni	60	2	He	103.831	2.036	124712	0.37	100	103.8	90	110	
Cu	63	2	He	103.953	1.945	333179	1.02	100	104.0	90	110	
Zn	66	2	He	103.601	0.909	69195	2.41	100	103.6	90	110	
As	75	2	He	100.809	0.460	53629	1.57	100	100.8	90	110	
Se	78	2	He	98.363	1.054	3500	1.23	100	98.4	90	110	
B	11	1	nogas	491.749	1.514	384992	0.80	500	98.3	90	110	
Si	28	1	nogas	5334.418	3.365	11871163	2.46	5000	106.7	90	110	
Ca	43	1	nogas	10485.581	2.490	178625	1.84	10000	104.9	90	110	
Ca	44	1	nogas	10193.451	4.267	2948573	2.67	10000	101.9	90	110	
Fe	56	1	nogas	10251.547	2.203	134419541	0.25	10000	102.5	90	110	
Se	77	1	nogas	96.470	14.937	66869	3.17	100	96.5	90	110	
Se	82	1	nogas	96.969	3.082	12658	3.30	100	97.0	90	110	
Mo	95	1	nogas	102.656	1.960	335449	0.46	100	102.7	90	110	
Sn	118	1	nogas	99.097	2.795	521127	0.97	100	99.1	90	110	
Ba	137	1	nogas	99.060	2.554	254347	1.24	100	99.1	90	110	
Sb	121	2	He	102.841	1.040	244545	1.67	100	102.8	90	110	
Li	7	1	nogas	109.182	1.812	569791	1.49	100	109.2	90	110	
P	31	1	nogas	513.284	3.103	189879	1.04	500	102.7	90	110	
La	139	1	nogas	222.996	18.741	353	11.78	100	223.0	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	82.148	92.307	13	43.30	100	82.1	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	288567	2.01	309366	93.28	70	125	
Ge	72	1	nogas	1672045	2.32	1624816	102.91	70	125	
In	115	1	nogas	1724791	1.88	1701792	101.35	70	125	
Bi	209	1	nogas	1475629	1.80	1450658	101.72	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	333319	1.64	341080	97.72	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	023_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102
Acq Date Time	2017-10-20T09:02:35-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
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	0.038	28.7	117	21.6	1	
Na	23	1	nogas	58.875	13.3	2748715	1.6	100	
Mg	24	1	nogas	10.486	2.7	91007	3.7	100	
Al	27	1	nogas	2.815	17.2	36984	10.2	5	
K	39	1	nogas	-25.701	-38.1	4841725	0.9	100	
Ti	47	1	nogas	0.028	360.7	230	38.6	2.5	
V	51	1	nogas	3.975	92.5	828767	5.2	2.5	CCB Main CR1 Failed
Cr	52	1	nogas	-0.107	-8.0	29931	0.6	2.5	
Mn	55	1	nogas	0.173	12.4	15800	1.1	2.5	
Co	59	1	nogas	0.006	225.7	933	17.7	2.5	
Ni	60	1	nogas	-0.599	-9.2	1617	8.8	2.5	
Cu	63	1	nogas	-0.013	-305.4	4611	6.8	2.5	
Zn	66	1	nogas	0.072	121.8	2220	8.0	2.5	
As	75	1	nogas	4.406	84.7	166642	5.0	2.5	CCB Main CR1 Failed
Sr	88	1	nogas	0.322	3.6	5718	2.3	2.5	
Ag	107	1	nogas	0.044	20.5	707	11.5	2.5	
Cd	111	1	nogas	0.047	5.5	93	6.2	1	
Sb	121	1	nogas	0.319	8.9	4464	5.9	2.5	
Tl	205	1	nogas	0.134	42.8	2387	39.9	1	
Pb	208	1	nogas	0.039	33.7	1403	20.4	2.5	
U	238	1	nogas	0.044	35.0	1153	30.6	2.5	
[Pb]	206	1	nogas	0.038	40.1	307	26.2	2.5	
[Pb]	207	1	nogas	0.037	55.0	297	33.3	2.5	
Na	23	2	He	57.502	13.5	187037	1.6	100	
Mg	24	2	He	12.987	2.7	4831	0.9	100	
Al	27	2	He	3.847	34.3	820	23.5	5	
K	39	2	He	-4.674	-85.1	71556	1.5	100	
Ca	43	2	He	52.754	54.3	63	39.7	100	
Ca	44	2	He	7.680	105.7	1297	7.8	100	
V	51	2	He	-0.169	-24.0	4873	0.8	2.5	
Cr	52	2	He	0.027	377.9	2630	13.7	2.5	
Mn	55	2	He	0.152	7.6	1187	1.0	2.5	
Fe	56	2	He	7.083	4.7	28599	2.0	100	
Co	59	2	He	-0.012	-102.2	253	21.7	2.5	
Ni	60	2	He	-0.514	-10.3	307	22.2	2.5	
Cu	63	2	He	-0.498	-7.8	1443	8.2	2.5	
Zn	66	2	He	0.004	5415.1	533	25.5	2.5	
As	75	2	He	0.140	12.7	311	3.1	2.5	
Se	78	2	He	-0.299	-110.8	65	19.7	2.5	
B	11	1	nogas	8.794	40.4	61473	4.9	10	
Si	28	1	nogas	3.903	51.8	951633	1.2	5	
Ca	43	1	nogas	28.312	42.7	1187	16.4	100	
Ca	44	1	nogas	-116.556	-10.9	120874	2.0	100	
Fe	56	1	nogas	6.133	13.3	1038932	0.9	100	
Se	77	1	nogas	34.918	44.0	54963	4.4	2.5	CCB Main CR1 Failed
Se	82	1	nogas	-0.242	-373.2	360	31.3	2.5	
Mo	95	1	nogas	0.121	21.7	477	18.8	2.5	
Sn	118	1	nogas	0.070	59.7	1103	19.6	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.079	22.1	377	12.0	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.258	9.3	1240	4.0	2.5	
P	31	1	nogas	0.038	10625.5	39762	2.9	10	
La	139	1	nogas	44.549	147.3	150	52.9	2.5	CCB Main CR1 Failed
Au	197	1	nogas	236.183	31.3	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	302389	0.82	309366	97.74	70	125	
Ge	72	1	nogas	1660813	0.88	1624816	102.22	70	125	
In	115	1	nogas	1767058	0.91	1701792	103.84	70	125	
Bi	209	1	nogas	1535122	1.55	1450658	105.82	70	125	
Ge	72	2	He	341490	1.47	341080	100.12	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	034_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102
Acq Date Time	2017-10-20T09:24:41-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
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	99.038	5.390	223325	3.06	100	99.0	90	110	
Na	23	1	nogas	10294.421	3.022	105351732	3.03	10000	102.9	90	110	
Mg	24	1	nogas	10034.659	1.423	72028637	1.61	10000	100.3	90	110	
Al	27	1	nogas	103.043	3.656	860948	2.52	100	103.0	90	110	
K	39	1	nogas	10426.080	2.598	91664848	1.27	10000	104.3	90	110	
Ti	47	1	nogas	101.523	1.774	86812	2.55	100	101.5	90	110	
V	51	1	nogas	108.318	4.396	2205616	4.12	100	108.3	90	110	
Cr	52	1	nogas	97.351	1.447	1117449	0.26	100	97.4	90	110	
Mn	55	1	nogas	104.742	1.442	1486858	0.51	100	104.7	90	110	
Co	59	1	nogas	101.480	1.974	1256607	0.93	100	101.5	90	110	
Ni	60	1	nogas	105.283	1.247	290589	2.44	100	105.3	90	110	
Cu	63	1	nogas	103.901	0.890	722837	0.63	100	103.9	90	110	
Zn	66	1	nogas	104.437	1.706	226788	0.51	100	104.4	90	110	
As	75	1	nogas	97.726	2.628	400083	2.29	100	97.7	90	110	
Sr	88	1	nogas	106.104	2.555	1613852	1.33	100	106.1	90	110	
Ag	107	1	nogas	98.620	1.728	896294	1.03	100	98.6	90	110	
Cd	111	1	nogas	95.542	0.867	184984	2.48	100	95.5	90	110	
Sb	121	1	nogas	105.890	1.304	833377	2.34	100	105.9	90	110	
Tl	205	1	nogas	98.775	5.601	1615453	1.57	100	98.8	90	110	
Pb	208	1	nogas	96.947	6.134	2123986	2.22	100	96.9	90	110	
U	238	1	nogas	104.560	3.661	2385061	1.67	100	104.6	90	110	
[Pb]	206	1	nogas	98.652	7.619	521140	3.32	100	98.7	90	110	
[Pb]	207	1	nogas	98.620	5.873	471997	2.26	100	98.6	90	110	
Na	23	2	He	10058.717	1.973	5569777	2.01	10000	100.6	90	110	
Mg	24	2	He	9987.405	1.663	2980094	1.58	10000	99.9	90	110	
Al	27	2	He	102.758	1.696	14242	4.11	100	102.8	90	110	
K	39	2	He	10077.264	0.708	2755691	0.69	10000	100.8	90	110	
Ca	43	2	He	10126.818	7.922	8542	6.62	10000	101.3	90	110	
Ca	44	2	He	9697.571	2.402	136529	0.51	10000	97.0	90	110	
V	51	2	He	100.831	3.713	263068	0.87	100	100.8	90	110	
Cr	52	2	He	102.003	3.641	311447	1.09	100	102.0	90	110	
Mn	55	2	He	100.601	2.184	191805	1.40	100	100.6	90	110	
Fe	56	2	He	10044.582	1.794	26936888	1.25	10000	100.4	90	110	
Co	59	2	He	104.376	3.661	461268	0.90	100	104.4	90	110	
Ni	60	2	He	104.282	4.359	122683	1.60	100	104.3	90	110	
Cu	63	2	He	104.718	5.738	328631	2.94	100	104.7	90	110	
Zn	66	2	He	104.147	4.266	68117	2.11	100	104.1	90	110	
As	75	2	He	101.852	3.331	53071	1.15	100	101.9	90	110	
Se	78	2	He	97.682	3.115	3406	0.53	100	97.7	90	110	
B	11	1	nogas	498.214	4.695	397619	1.70	500	99.6	90	110	
Si	28	1	nogas	5383.484	3.642	11587919	2.50	5000	107.7	90	110	
Ca	43	1	nogas	10354.700	0.720	170775	0.62	10000	103.5	90	110	
Ca	44	1	nogas	10075.107	3.093	2823853	3.17	10000	100.8	90	110	
Fe	56	1	nogas	9975.908	0.830	126662895	0.48	10000	99.8	90	110	
Se	77	1	nogas	88.080	9.345	63233	3.49	100	88.1	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	105.405	3.801	13282	2.60	100	105.4	90	110	
Mo	95	1	nogas	102.927	1.527	325614	1.62	100	102.9	90	110	
Sn	118	1	nogas	97.041	1.994	513310	0.10	100	97.0	90	110	
Ba	137	1	nogas	94.425	3.535	243806	1.59	100	94.4	90	110	
Sb	121	2	He	104.846	3.796	244167	1.03	100	104.8	90	110	
Li	7	1	nogas	107.012	3.850	570966	2.06	100	107.0	90	110	
P	31	1	nogas	505.117	3.661	181499	2.04	500	101.0	90	110	
La	139	1	nogas	163.152	36.437	287	26.18	100	163.2	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	2.404	6351.942	7	173.21	100	2.4	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	294835	2.53	309366	95.30	70	125	
Ge	72	1	nogas	1618335	1.25	1624816	99.60	70	125	
In	115	1	nogas	1734727	1.97	1701792	101.94	70	125	
Bi	209	1	nogas	1469499	5.23	1450658	101.30	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	326678	2.82	341080	95.78	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	035_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102
Acq Date Time	2017-10-20T09:26:41-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
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	0.048	12.0	150	6.7	1	
Na	23	1	nogas	75.677	10.3	2894102	0.6	100	
Mg	24	1	nogas	10.428	9.6	89529	6.1	100	
Al	27	1	nogas	1.492	17.5	26022	7.1	5	
K	39	1	nogas	-27.406	-68.3	4866982	0.7	100	
Ti	47	1	nogas	0.019	168.1	223	11.3	2.5	
V	51	1	nogas	8.351	42.4	896108	3.0	2.5	CCB Main CR1 Failed
Cr	52	1	nogas	0.024	400.1	31694	1.6	2.5	
Mn	55	1	nogas	0.090	26.9	14733	2.0	2.5	
Co	59	1	nogas	0.014	34.7	1043	7.3	2.5	
Ni	60	1	nogas	-0.627	-10.3	1550	9.9	2.5	
Cu	63	1	nogas	0.072	105.0	5254	9.1	2.5	
Zn	66	1	nogas	0.162	61.6	2437	7.0	2.5	
As	75	1	nogas	5.586	91.9	171043	5.6	2.5	CCB Main CR1 Failed
Sr	88	1	nogas	0.318	4.4	5714	6.5	2.5	
Ag	107	1	nogas	0.046	4.5	737	4.4	2.5	
Cd	111	1	nogas	0.051	76.9	100	78.1	1	
Sb	121	1	nogas	0.547	12.7	6351	7.2	2.5	
Tl	205	1	nogas	0.148	44.1	2524	41.2	1	
Pb	208	1	nogas	0.052	26.9	1630	17.4	2.5	
U	238	1	nogas	0.044	47.0	1127	41.5	2.5	
[Pb]	206	1	nogas	0.065	42.0	440	31.8	2.5	
[Pb]	207	1	nogas	0.065	20.2	423	14.4	2.5	
Na	23	2	He	68.259	8.5	190629	0.3	100	
Mg	24	2	He	9.701	3.6	3757	1.6	100	
Al	27	2	He	0.870	68.7	390	20.4	5	
K	39	2	He	-7.023	-27.2	70931	0.7	100	
Ca	43	2	He	45.724	69.8	57	50.9	100	
Ca	44	2	He	-10.209	-97.2	1023	14.0	100	
V	51	2	He	-0.015	-711.8	5218	5.3	2.5	
Cr	52	2	He	-0.028	-214.2	2424	9.2	2.5	
Mn	55	2	He	0.075	112.8	1020	16.2	2.5	
Fe	56	2	He	4.682	5.5	21606	4.8	100	
Co	59	2	He	0.013	105.8	367	16.4	2.5	
Ni	60	2	He	-0.555	-9.4	253	26.3	2.5	
Cu	63	2	He	-0.501	-4.7	1417	4.5	2.5	
Zn	66	2	He	0.118	118.8	603	14.1	2.5	
As	75	2	He	0.051	134.8	259	13.0	2.5	
Se	78	2	He	-0.101	-269.1	71	12.9	2.5	
B	11	1	nogas	26.724	30.6	79690	7.2	10	CCB Main CR1 Failed
Si	28	1	nogas	-8.224	-186.5	934481	0.5	5	
Ca	43	1	nogas	23.677	16.0	1120	7.8	100	
Ca	44	1	nogas	-189.601	-6.3	101815	0.9	100	
Fe	56	1	nogas	2.724	84.6	1003032	0.1	100	
Se	77	1	nogas	38.784	72.5	56107	7.5	2.5	CCB Main CR1 Failed
Se	82	1	nogas	0.570	35.9	467	8.1	2.5	
Mo	95	1	nogas	0.167	14.0	630	10.4	2.5	
Sn	118	1	nogas	0.079	59.2	1127	20.0	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.112	26.5	453	16.3	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.519	12.0	1850	6.8	2.5	
P	31	1	nogas	-2.364	-142.7	39392	0.9	10	
La	139	1	nogas	-4.044	-382.4	90	22.2	2.5	
Au	197	1	nogas	-2.619	-2749.6	7	86.6	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	325172	3.17	309366	105.11	70	125	
Ge	72	1	nogas	1675396	2.88	1624816	103.11	70	125	
In	115	1	nogas	1732835	2.49	1701792	101.82	70	125	
Bi	209	1	nogas	1477046	1.56	1450658	101.82	70	125	
Ge	72	2	He	337125	1.62	341080	98.84	70	125	

Sample Report

Sample Table

Sample Name	MBLK-121126
Data File Name	045SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102
Acq Date Time	2017-10-20T09:46:51-05:00
Sample Type	Sample
Dilution	1
Comment	B121126 TW
ISTD Ref FileName	004CALB.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	-0.001	-0.001	-327.57	30	0.00	2000	
Na	23	1	nogas	91.823	91.823	3.17	3276272	0.00	200000	
Mg	24	1	nogas	9.002	9.002	2.96	84609	0.01	200000	
Al	27	1	nogas	4.152	4.152	8.74	51030	0.01	2000	
K	39	1	nogas	-42.344	-42.344	-34.21	4965425	0.00	200000	
Ti	47	1	nogas	-0.026	-0.026	-190.78	193	-0.01	2000	
V	51	1	nogas	6.967	6.967	48.31	919342	0.00	2000	
Cr	52	1	nogas	-0.304	-0.304	-32.57	29247	0.00	2000	
Mn	55	1	nogas	-0.362	-0.362	-8.76	8532	0.00	2000	
Co	59	1	nogas	-0.042	-0.042	-4.23	347	-0.01	2000	
Ni	60	1	nogas	-0.529	-0.529	-15.65	1917	-0.03	2000	
Cu	63	1	nogas	0.028	0.028	103.32	5174	0.00	2000	
Zn	66	1	nogas	-0.231	-0.231	-5.69	1640	-0.01	2000	
As	75	1	nogas	-3.391	-3.391	-89.19	154583	0.00	2000	
Sr	88	1	nogas	0.036	0.036	21.06	1340	0.00	2000	
Ag	107	1	nogas	0.011	0.011	38.22	420	0.00	2000	
Cd	111	1	nogas	0.002	0.002	173.21	3	0.05	2000	
Sb	121	1	nogas	0.003	0.003	1056.31	2023	0.00	2000	
Tl	205	1	nogas	-0.002	-0.002	-31.85	73	0.00	2000	
Pb	208	1	nogas	-0.008	-0.008	-41.27	360	0.00	2000	
U	238	1	nogas	-0.002	-0.002	-38.26	63	0.00	2000	
[Pb]	206	1	nogas	0.001	0.001	113.78	113	0.00	2000	
[Pb]	207	1	nogas	-0.008	-0.008	-120.76	77	-0.01	2000	
Na	23	2	He	79.031	79.031	8.47	207069	0.04	200000	
Mg	24	2	He	9.216	9.216	9.23	3797	0.24	200000	
Al	27	2	He	2.307	2.307	9.56	623	0.37	2000	
K	39	2	He	-4.914	-4.914	-69.48	71492	-0.01	200000	
Ca	43	2	He	13.847	13.847	139.04	30	46.16	200000	
Ca	44	2	He	-47.120	-47.120	-13.90	517	-9.12	200000	
V	51	2	He	-0.164	-0.164	-47.37	5079	0.00	2000	
Cr	52	2	He	-0.078	-0.078	-106.51	2384	0.00	2000	
Mn	55	2	He	-0.262	-0.262	-9.02	380	-0.07	2000	
Fe	56	2	He	-0.075	-0.075	-171.86	8879	0.00	200000	
Co	59	2	He	-0.056	-0.056	-1.83	53	-0.11	2000	
Ni	60	2	He	-0.591	-0.591	-5.19	220	-0.27	2000	
Cu	63	2	He	-0.548	-0.548	-12.66	1330	-0.04	2000	
Zn	66	2	He	-0.353	-0.353	-27.62	303	-0.12	2000	
As	75	2	He	-0.036	-0.036	-113.80	224	-0.02	2000	
Se	78	2	He	-0.453	-0.453	-47.67	62	-0.73	2000	
B	11	1	nogas	6.182	6.182	38.95	67761	0.01	2000	
Si	28	1	nogas	133.997	133.997	9.96	1284967	0.01	2000	
Ca	43	1	nogas	-10.470	-10.470	-52.58	563	-1.86	200000	

Sample Report

Ca	44	1	nogas	-293.633	-293.633	-3.13	76737	-0.38	200000	
Fe	56	1	nogas	-8.063	-8.063	-22.13	903689	0.00	200000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Se	77	1	nogas	0.264	0.264	5938.18	51273	0.00	2000	
Se	82	1	nogas	0.133	0.133	185.82	430	0.03	2000	
Mo	95	1	nogas	0.023	0.023	62.53	167	0.01	2000	
Sn	118	1	nogas	-0.059	-0.059	-14.45	433	-0.01	2000	
Ba	137	1	nogas	0.036	0.036	66.45	277	0.01	2000	
Sb	121	2	He	0.000	0.000	22060.81	640	0.00	2000	
La	139	1	nogas	-22.810	-22.810	-35.41	73	-31.10	2000	
Au	197	1	nogas	63.979	63.979	265.06	13	479.84	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	343616	2.06	309366	111.07	70	125	
Ge	72	1	nogas	1755026	1.51	1624816	108.01	70	125	
In	115	1	nogas	1871952	1.98	1701792	110.00	70	125	
Bi	209	1	nogas	1650138	2.55	1450658	113.75	70	125	
Ge	72	2	He	354997	1.70	341080	104.08	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	046_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102
Acq Date Time	2017-10-20T09:48:51-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
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	103.558	2.955	232357	0.64	100	103.6	90	110	
Na	23	1	nogas	10135.024	2.792	107850636	1.41	10000	101.4	90	110	
Mg	24	1	nogas	9984.893	1.670	74510508	0.81	10000	99.8	90	110	
Al	27	1	nogas	100.545	2.153	883576	0.51	100	100.5	90	110	
K	39	1	nogas	10255.510	5.339	94853571	3.82	10000	102.6	90	110	
Ti	47	1	nogas	100.225	4.301	90052	2.32	100	100.2	90	110	
V	51	1	nogas	116.955	4.717	2438957	1.04	100	117.0	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	98.340	3.297	1186080	0.86	100	98.3	90	110	
Mn	55	1	nogas	104.194	2.665	1554839	1.32	100	104.2	90	110	
Co	59	1	nogas	101.199	6.492	1316847	5.20	100	101.2	90	110	
Ni	60	1	nogas	103.662	5.857	300577	3.34	100	103.7	90	110	
Cu	63	1	nogas	101.376	2.915	741377	0.47	100	101.4	90	110	
Zn	66	1	nogas	101.755	0.943	232389	1.61	100	101.8	90	110	
As	75	1	nogas	101.843	7.071	431383	2.38	100	101.8	90	110	
Sr	88	1	nogas	103.779	6.623	1658467	4.62	100	103.8	90	110	
Ag	107	1	nogas	98.132	2.956	937531	2.02	100	98.1	90	110	
Cd	111	1	nogas	97.121	2.130	189915	2.35	100	97.1	90	110	
Sb	121	1	nogas	101.161	3.471	836680	1.01	100	101.2	90	110	
Tl	205	1	nogas	95.302	9.519	1604993	4.85	100	95.3	90	110	
Pb	208	1	nogas	96.741	3.483	2186740	1.41	100	96.7	90	110	
U	238	1	nogas	99.507	5.965	2338481	1.72	100	99.5	90	110	
[Pb]	206	1	nogas	98.257	4.068	535683	1.15	100	98.3	90	110	
[Pb]	207	1	nogas	99.496	3.570	491236	1.38	100	99.5	90	110	
Na	23	2	He	10059.285	2.464	5658523	3.55	10000	100.6	90	110	
Mg	24	2	He	10176.147	1.119	3083883	0.56	10000	101.8	90	110	
Al	27	2	He	102.948	0.598	14486	1.50	100	102.9	90	110	
K	39	2	He	10483.163	1.773	2863754	1.73	10000	104.8	90	110	
Ca	43	2	He	9477.130	4.211	8122	2.55	10000	94.8	90	110	
Ca	44	2	He	9717.978	2.910	138963	2.00	10000	97.2	90	110	
V	51	2	He	102.639	1.349	272003	1.42	100	102.6	90	110	
Cr	52	2	He	103.647	2.034	321476	0.89	100	103.6	90	110	
Mn	55	2	He	102.149	1.566	197812	1.60	100	102.1	90	110	
Fe	56	2	He	10082.544	2.003	27461008	1.07	10000	100.8	90	110	
Co	59	2	He	104.820	2.074	470653	1.45	100	104.8	90	110	
Ni	60	2	He	105.192	1.632	125744	0.87	100	105.2	90	110	
Cu	63	2	He	104.186	0.846	332378	1.42	100	104.2	90	110	
Zn	66	2	He	100.738	1.491	66963	0.66	100	100.7	90	110	
As	75	2	He	99.920	0.456	52904	1.27	100	99.9	90	110	
Se	78	2	He	96.696	1.460	3426	2.46	100	96.7	90	110	
B	11	1	nogas	489.690	2.693	389759	0.21	500	97.9	90	110	
Si	28	1	nogas	5281.833	5.111	11966335	2.47	5000	105.6	90	110	
Ca	43	1	nogas	10201.208	4.246	176831	2.99	10000	102.0	90	110	
Ca	44	1	nogas	9669.875	5.797	2855547	5.58	10000	96.7	90	110	
Fe	56	1	nogas	9915.767	5.149	132295720	3.27	10000	99.2	90	110	
Se	77	1	nogas	112.906	22.605	71136	4.47	100	112.9	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	101.828	1.027	13509	2.65	100	101.8	90	110	
Mo	95	1	nogas	100.769	2.061	335103	1.10	100	100.8	90	110	
Sn	118	1	nogas	97.387	3.520	520308	2.40	100	97.4	90	110	
Ba	137	1	nogas	97.869	0.952	255333	0.89	100	97.9	90	110	
Sb	121	2	He	104.941	1.960	248297	0.56	100	104.9	90	110	
Li	7	1	nogas	113.020	1.605	598451	2.40	100	113.0	90	110	CCV Main CR1-2 Failed
P	31	1	nogas	498.411	5.370	188757	2.06	500	99.7	90	110	
La	139	1	nogas	141.900	19.590	263	11.60	100	141.9	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	198.726	125.648	23	89.21	100	198.7	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	293259	2.39	309366	94.79	70	125	
Ge	72	1	nogas	1701610	2.46	1624816	104.73	70	125	
In	115	1	nogas	1752121	1.11	1701792	102.96	70	125	
Bi	209	1	nogas	1514843	4.84	1450658	104.42	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	331739	1.69	341080	97.26	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	047_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102
Acq Date Time	2017-10-20T09:50:49-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
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	26.3	183	20.7	1	
Na	23	1	nogas	101.455	8.2	3243548	0.9	100	CCB Main CR1 Failed
Mg	24	1	nogas	9.433	10.6	84374	7.9	100	
Al	27	1	nogas	1.437	7.6	25327	2.9	5	
K	39	1	nogas	-14.709	-33.4	4931113	0.7	100	
Ti	47	1	nogas	-0.063	-90.3	150	33.3	2.5	
V	51	1	nogas	14.554	12.8	973374	2.0	2.5	CCB Main CR1 Failed
Cr	52	1	nogas	0.078	239.0	32025	6.8	2.5	
Mn	55	1	nogas	0.114	15.8	14930	2.1	2.5	
Co	59	1	nogas	0.014	93.8	1033	16.2	2.5	
Ni	60	1	nogas	-0.488	-20.1	1923	13.5	2.5	
Cu	63	1	nogas	0.078	43.0	5248	3.4	2.5	
Zn	66	1	nogas	0.130	37.5	2347	4.4	2.5	
As	75	1	nogas	8.089	38.5	176120	4.1	2.5	CCB Main CR1 Failed
Sr	88	1	nogas	0.285	3.7	5144	2.8	2.5	
Ag	107	1	nogas	0.043	24.6	693	14.0	2.5	
Cd	111	1	nogas	0.038	54.2	77	54.3	1	
Sb	121	1	nogas	0.296	23.2	4274	12.9	2.5	
Tl	205	1	nogas	0.138	43.6	2550	45.8	1	
Pb	208	1	nogas	0.035	23.4	1353	18.4	2.5	
U	238	1	nogas	0.044	14.7	1183	17.6	2.5	
[Pb]	206	1	nogas	0.029	26.7	263	12.2	2.5	
[Pb]	207	1	nogas	0.049	41.4	367	32.0	2.5	
Na	23	2	He	109.513	5.5	215708	0.4	100	CCB Main CR1 Failed
Mg	24	2	He	8.561	6.9	3440	5.1	100	
Al	27	2	He	1.311	85.9	457	34.9	5	
K	39	2	He	0.630	258.8	72968	0.6	100	
Ca	43	2	He	41.503	40.4	53	28.6	100	
Ca	44	2	He	-8.093	-124.4	1063	12.8	100	
V	51	2	He	0.035	77.9	5404	2.7	2.5	
Cr	52	2	He	-0.099	-77.6	2224	11.1	2.5	
Mn	55	2	He	0.063	6.1	1007	0.6	2.5	
Fe	56	2	He	4.350	3.1	20882	1.3	100	
Co	59	2	He	-0.016	-37.4	237	12.2	2.5	
Ni	60	2	He	-0.535	-1.7	280	3.6	2.5	
Cu	63	2	He	-0.449	-7.4	1600	6.0	2.5	
Zn	66	2	He	0.088	109.8	590	10.3	2.5	
As	75	2	He	0.115	29.9	297	6.8	2.5	
Se	78	2	He	-0.128	-640.1	71	42.0	2.5	
B	11	1	nogas	13.651	71.6	69216	8.0	10	CCB Main CR1 Failed
Si	28	1	nogas	-26.981	-19.1	887866	0.1	5	
Ca	43	1	nogas	25.376	16.8	1137	5.4	100	
Ca	44	1	nogas	-248.724	-4.7	84775	2.7	100	
Fe	56	1	nogas	5.301	43.2	1027142	2.7	100	
Se	77	1	nogas	54.345	13.8	58534	1.7	2.5	CCB Main CR1 Failed
Se	82	1	nogas	0.182	176.7	413	10.9	2.5	
Mo	95	1	nogas	0.115	68.0	457	55.1	2.5	
Sn	118	1	nogas	0.061	48.5	1073	14.9	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.093	42.3	420	25.1	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.208	19.2	1117	7.3	2.5	
P	31	1	nogas	-1.614	-386.9	39234	3.6	10	
La	139	1	nogas	-1.084	-3816.9	97	52.1	2.5	
Au	197	1	nogas	75.767	251.4	13	114.6	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	323127	3.03	309366	104.45	70	125	
Ge	72	1	nogas	1659233	1.15	1624816	102.12	70	125	
In	115	1	nogas	1796732	0.11	1701792	105.58	70	125	
Bi	209	1	nogas	1567554	4.60	1450658	108.06	70	125	
Ge	72	2	He	340471	1.32	341080	99.82	70	125	

Sample Report

Sample Table

Sample Name	LCS-121126
Data File Name	048SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102
Acq Date Time	2017-10-20T09:52:50-05:00
Sample Type	Sample
Dilution	1
Comment	B121126 TW
ISTD Ref FileName	004CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	1	nogas	48.446	48.446	5.90	113601	0.04	2000	
Na	23	1	nogas	4576.020	4576.020	1.26	52801196	0.01	200000	
Mg	24	1	nogas	4510.605	4510.605	0.55	35645417	0.01	200000	
Al	27	1	nogas	98.655	98.655	1.98	896053	0.01	2000	
K	39	1	nogas	4789.965	4789.965	4.71	48620219	0.01	200000	
Ti	47	1	nogas	143.940	143.940	2.74	133546	0.11	2000	
V	51	1	nogas	63.911	63.911	9.55	1747783	0.00	2000	
Cr	52	1	nogas	45.936	45.936	1.87	590078	0.01	2000	
Mn	55	1	nogas	46.558	46.558	3.57	725349	0.01	2000	
Co	59	1	nogas	47.174	47.174	4.21	634594	0.01	2000	
Ni	60	1	nogas	48.846	48.846	6.96	148098	0.03	2000	
Cu	63	1	nogas	48.991	48.991	5.33	372489	0.01	2000	
Zn	66	1	nogas	49.877	49.877	2.86	118748	0.04	2000	
As	75	1	nogas	47.352	47.352	11.96	294928	0.02	2000	
Sr	88	1	nogas	100.914	100.914	6.78	1665534	0.01	2000	
Ag	107	1	nogas	46.123	46.123	2.30	455391	0.01	2000	
Cd	111	1	nogas	47.312	47.312	3.55	95492	0.05	2000	
Sb	121	1	nogas	50.400	50.400	4.94	431465	0.01	2000	
Tl	205	1	nogas	40.726	40.726	5.03	736837	0.01	2000	
Pb	208	1	nogas	44.099	44.099	3.34	1069586	0.00	2000	
U	238	1	nogas	93.964	93.964	5.44	2370833	0.00	2000	
[Pb]	206	1	nogas	45.016	45.016	4.80	263269	0.02	2000	
[Pb]	207	1	nogas	44.732	44.732	3.15	236991	0.02	2000	
Na	23	2	He	4682.411	4682.411	2.55	2829280	0.17	200000	
Mg	24	2	He	4901.734	4901.734	3.86	1548706	0.32	200000	
Al	27	2	He	99.411	99.411	3.58	14589	0.68	2000	
K	39	2	He	5013.092	5013.092	3.09	1407446	0.36	200000	
Ca	43	2	He	4673.594	4673.594	9.99	4181	111.79	200000	
Ca	44	2	He	4588.990	4588.990	3.98	69038	6.65	200000	
V	51	2	He	47.302	47.302	3.05	133588	0.04	2000	
Cr	52	2	He	47.991	47.991	1.89	156596	0.03	2000	
Mn	55	2	He	47.883	47.883	4.41	97112	0.05	2000	
Fe	56	2	He	4772.600	4772.600	5.53	13551411	0.04	200000	
Co	59	2	He	49.321	49.321	4.13	230996	0.02	2000	
Ni	60	2	He	48.091	48.091	6.00	60416	0.08	2000	
Cu	63	2	He	49.091	49.091	2.78	164897	0.03	2000	
Zn	66	2	He	49.662	49.662	3.13	34687	0.14	2000	
As	75	2	He	46.873	46.873	4.56	25999	0.18	2000	
Se	78	2	He	47.980	47.980	7.85	1810	2.65	2000	
B	11	1	nogas	887.333	887.333	8.20	692137	0.13	2000	
Si	28	1	nogas	9436.398	9436.398	1.84	21314766	0.04	2000	>LDR
Ca	43	1	nogas	4945.432	4945.432	5.36	88913	5.56	200000	
Ca	44	1	nogas	4715.897	4715.897	6.34	1519970	0.31	200000	
Fe	56	1	nogas	4642.947	4642.947	2.57	64561133	0.01	200000	

Sample Report

Se	77	1	nogas	62.622	62.622	27.34	63588	0.10	2000	
Se	82	1	nogas	48.679	48.679	4.88	6881	0.71	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Mo	95	1	nogas	49.117	49.117	5.72	168656	0.03	2000	
Sn	118	1	nogas	95.889	95.889	1.23	529118	0.02	2000	
Ba	137	1	nogas	46.693	46.693	5.76	125782	0.04	2000	
Sb	121	2	He	50.911	50.911	3.68	125891	0.04	2000	
La	139	1	nogas	28.674	28.674	80.31	133	21.51	2000	
Au	197	1	nogas	65.665	65.665	200.08	13	492.49	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	306816	4.40	309366	99.18	70	125	
Ge	72	1	nogas	1758121	3.38	1624816	108.20	70	125	
In	115	1	nogas	1809482	2.51	1701792	106.33	70	125	
Bi	209	1	nogas	1624460	3.66	1450658	111.98	70	125	
Ge	72	2	He	345957	2.61	341080	101.43	70	125	

Sample Report

Sample Table

Sample Name	HS17100768-10SD
Data File Name	052SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102
Acq Date Time	2017-10-20T10:00:58-05:00
Sample Type	Sample
Dilution	5
Comment	B121126 TW
ISTD Ref FileName	004CALB.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	0.042	186.57	47	0.02	2000	
Na	23	1	nogas	338862.418	1694312.091	3.19	3458975544	0.01	200000	>LDR
Mg	24	1	nogas	32003.295	160016.477	2.54	233555264	0.01	200000	
Al	27	1	nogas	1.438	7.189	12.65	25601	0.01	2000	
K	39	1	nogas	782.830	3914.151	4.44	11863484	0.01	200000	
Ti	47	1	nogas	0.275	1.373	36.69	450	0.06	2000	
V	51	1	nogas	40.992	204.961	10.12	1351487	0.00	2000	
Cr	52	1	nogas	-0.298	-1.490	-34.76	28018	0.00	2000	
Mn	55	1	nogas	326.353	1631.764	3.79	4772668	0.01	2000	
Co	59	1	nogas	0.411	2.057	9.24	6141	0.01	2000	
Ni	60	1	nogas	1.394	6.968	13.87	7265	0.02	2000	
Cu	63	1	nogas	0.855	4.273	6.15	10873	0.01	2000	
Zn	66	1	nogas	0.433	2.163	46.73	3040	0.01	2000	
As	75	1	nogas	17.022	85.110	14.29	201697	0.01	2000	
Sr	88	1	nogas	1375.066	6875.330	3.66	21669872	0.01	2000	
Ag	107	1	nogas	0.009	0.043	89.75	383	0.00	2000	
Cd	111	1	nogas	0.004	0.019	86.60	7	0.06	2000	
Sb	121	1	nogas	0.025	0.124	99.37	2114	0.00	2000	
Tl	205	1	nogas	0.002	0.011	28.91	130	0.00	2000	
Pb	208	1	nogas	-0.004	-0.021	-19.51	383	0.00	2000	
U	238	1	nogas	7.125	35.623	2.09	155070	0.00	2000	
[Pb]	206	1	nogas	0.002	0.010	252.98	100	0.00	2000	
[Pb]	207	1	nogas	-0.009	-0.047	-62.66	60	-0.02	2000	
Na	23	2	He	332966.110	1664830.549	2.64	178924337	0.19	200000	>LDR
Mg	24	2	He	33529.630	167648.150	3.53	9965736	0.34	200000	
Al	27	2	He	1.683	8.413	12.14	487	0.35	2000	
K	39	2	He	802.355	4011.774	1.80	286413	0.28	200000	
Ca	43	2	He	91298.995	456494.973	2.70	76622	119.16	200000	
Ca	44	2	He	93632.035	468160.174	5.22	1302805	7.19	200000	
V	51	2	He	0.990	4.948	11.02	7595	0.01	2000	
Cr	52	2	He	0.081	0.404	65.14	2670	0.00	2000	
Mn	55	2	He	346.570	1732.852	2.37	656183	0.05	2000	
Fe	56	2	He	527.459	2637.295	2.26	1416982	0.04	200000	
Co	59	2	He	0.345	1.726	2.43	1817	0.02	2000	
Ni	60	2	He	-0.273	-1.366	-22.14	573	-0.05	2000	
Cu	63	2	He	-0.376	-1.881	-15.60	1753	-0.02	2000	
Zn	66	2	He	0.193	0.965	83.78	630	0.03	2000	
As	75	2	He	7.337	36.686	1.46	4018	0.18	2000	
Se	78	2	He	-0.656	-3.280	-49.18	50	-1.31	2000	
B	11	1	nogas	2131.961	10659.807	1.77	1500000	0.14	2000	>LDR
Si	28	1	nogas	13580.579	67902.897	4.56	28842955	0.05	2000	>LDR
Ca	43	1	nogas	95473.703	477368.514	2.04	1626424	5.87	200000	
Ca	44	1	nogas	88840.153	444200.763	1.31	24615812	0.36	200000	
Fe	56	1	nogas	515.637	2578.186	3.23	7704741	0.01	200000	
Se	77	1	nogas	69.176	345.880	9.78	61982	0.11	2000	
Se	82	1	nogas	2.348	11.740	21.72	693	0.34	2000	

Sample Report

Mo	95	1	nogas	0.167	0.837	19.61	637	0.03	2000	
Sn	118	1	nogas	-0.019	-0.096	-100.99	577	0.00	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Ba	137	1	nogas	54.710	273.548	1.96	132988	0.04	2000	
Sb	121	2	He	-0.004	-0.018	-550.46	577	0.00	2000	
La	139	1	nogas	137.007	685.034	7.37	240	57.08	2000	
Au	197	1	nogas	91.775	458.874	335.03	13	688.31	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	289866	2.25	309366	93.70	70	125	
Ge	72	1	nogas	1678201	3.07	1624816	103.29	70	125	
In	115	1	nogas	1631954	1.91	1701792	95.90	70	125	
Bi	209	1	nogas	1399493	0.83	1450658	96.47	70	125	
Ge	72	2	He	325466	2.96	341080	95.42	70	125	

Sample Report

Sample Table

Sample Name	HS17100768-10MS
Data File Name	053SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102
Acq Date Time	2017-10-20T10:03:01-05:00
Sample Type	Sample
Dilution	1
Comment	B121126 TW
ISTD Ref FileName	004CALB.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	59.280	59.280	2.54	100089	0.06	2000	
Na	23	1	nogas	OR	OR	#VALUE!	OR	#VALUE!	200000	
Mg	24	1	nogas	171593.321	171593.321	2.64	1200418427	0.01	200000	
Al	27	1	nogas	105.164	105.164	1.81	825455	0.01	2000	
K	39	1	nogas	8953.312	8953.312	3.55	74609814	0.01	200000	
Ti	47	1	nogas	149.824	149.824	1.16	120304	0.12	2000	
V	51	1	nogas	119.684	119.684	1.47	2215104	0.01	2000	
Cr	52	1	nogas	47.478	47.478	2.50	526644	0.01	2000	
Mn	55	1	nogas	1871.135	1871.135	3.73	24741632	0.01	2000	>LDR
Co	59	1	nogas	48.012	48.012	4.84	558684	0.01	2000	
Ni	60	1	nogas	51.643	51.643	3.71	135387	0.04	2000	
Cu	63	1	nogas	48.449	48.449	2.67	318923	0.02	2000	
Zn	66	1	nogas	48.328	48.328	0.55	99658	0.05	2000	
As	75	1	nogas	126.912	126.912	0.42	445810	0.03	2000	
Sr	88	1	nogas	7635.285	7635.285	2.31	109070125	0.01	2000	>LDR
Ag	107	1	nogas	43.690	43.690	4.68	373111	0.01	2000	
Cd	111	1	nogas	45.044	45.044	0.53	77869	0.06	2000	
Sb	121	1	nogas	49.777	49.777	3.97	368794	0.01	2000	
Tl	205	1	nogas	43.865	43.865	2.80	623135	0.01	2000	
Pb	208	1	nogas	47.629	47.629	3.33	906524	0.01	2000	
U	238	1	nogas	149.776	149.776	3.60	2965087	0.01	2000	
[Pb]	206	1	nogas	48.846	48.846	2.10	224304	0.02	2000	
[Pb]	207	1	nogas	48.179	48.179	3.90	200286	0.02	2000	
Na	23	2	He	1781136.034	1781136.034	1.71	876616574	0.20	200000	>LDR
Mg	24	2	He	181090.904	181090.904	0.84	49320288	0.37	200000	>LDR
Al	27	2	He	104.777	104.777	6.34	13248	0.79	2000	
K	39	2	He	8452.222	8452.222	1.64	2323053	0.36	200000	
Ca	43	2	He	495839.821	495839.821	1.35	381364	130.02	200000	>LDR
Ca	44	2	He	501827.832	501827.832	0.66	6398785	7.84	200000	>LDR
V	51	2	He	52.261	52.261	1.73	126773	0.04	2000	
Cr	52	2	He	48.696	48.696	1.25	136959	0.04	2000	
Mn	55	2	He	1903.934	1903.934	1.11	3300528	0.06	2000	>LDR
Fe	56	2	He	7240.810	7240.810	0.79	17731161	0.04	200000	
Co	59	2	He	49.804	49.804	2.30	201163	0.02	2000	
Ni	60	2	He	46.674	46.674	3.49	50607	0.09	2000	
Cu	63	2	He	46.718	46.718	2.47	135441	0.03	2000	
Zn	66	2	He	47.995	47.995	2.62	28923	0.17	2000	
As	75	2	He	89.940	89.940	1.68	42824	0.21	2000	
Se	78	2	He	29.441	29.441	1.52	984	2.99	2000	
B	11	1	nogas	13372.932	13372.932	1.59	6948081	0.19	2000	>LDR
Si	28	1	nogas	85346.204	85346.204	2.23	159777901	0.05	2000	>LDR
Ca	43	1	nogas	511682.867	511682.867	2.30	7896135	6.48	200000	>LDR
Ca	44	1	nogas	495264.580	495264.580	4.44	123623671	0.40	200000	>LDR
Fe	56	1	nogas	7338.612	7338.612	4.47	87724060	0.01	200000	
Se	77	1	nogas	249.723	249.723	1.61	87007	0.29	2000	
Se	82	1	nogas	36.799	36.799	8.94	4584	0.80	2000	
Mo	95	1	nogas	49.531	49.531	3.18	147211	0.03	2000	
Sn	118	1	nogas	95.532	95.532	2.32	451173	0.02	2000	
Ba	137	1	nogas	333.510	333.510	1.72	768720	0.04	2000	

Sample Report

Sb	121	2	He	50.811	50.811	2.52	108352	0.05	2000	
La	139	1	nogas	855.288	855.288	11.46	980	87.27	2000	
Au	197	1	nogas	251.516	251.516	29.56	23	1077.93	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	220556	1.14	309366	71.29	70	125	
Ge	72	1	nogas	1520930	3.22	1624816	93.61	70	125	
In	115	1	nogas	1548948	2.38	1701792	91.02	70	125	
Bi	209	1	nogas	1274517	2.57	1450658	87.86	70	125	
Ge	72	2	He	298169	0.22	341080	87.42	70	125	

Sample Report

Sample Table

Sample Name	HS17100768-10MSD
Data File Name	054SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102
Acq Date Time	2017-10-20T10:04:59-05:00
Sample Type	Sample
Dilution	1
Comment	B121126 TW
ISTD Ref FileName	004CALB.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	58.206	58.206	1.77	97355	0.06	2000	
Na	23	1	nogas	OR	OR	#VALUE!	OR	#VALUE!	200000	
Mg	24	1	nogas	173089.857	173089.857	2.06	1204160094	0.01	200000	
Al	27	1	nogas	102.924	102.924	4.11	798047	0.01	2000	
K	39	1	nogas	9259.579	9259.579	2.74	76072008	0.01	200000	
Ti	47	1	nogas	147.012	147.012	2.43	116567	0.13	2000	
V	51	1	nogas	129.991	129.991	7.40	2314572	0.01	2000	
Cr	52	1	nogas	46.142	46.142	3.72	506339	0.01	2000	
Mn	55	1	nogas	1863.492	1863.492	2.60	24349510	0.01	2000	>LDR
Co	59	1	nogas	46.698	46.698	4.20	537001	0.01	2000	
Ni	60	1	nogas	50.630	50.630	5.75	131157	0.04	2000	
Cu	63	1	nogas	47.531	47.531	4.96	309066	0.02	2000	
Zn	66	1	nogas	48.745	48.745	2.60	99239	0.05	2000	
As	75	1	nogas	136.245	136.245	6.20	462167	0.03	2000	
Sr	88	1	nogas	7787.038	7787.038	3.47	109870728	0.01	2000	>LDR
Ag	107	1	nogas	43.672	43.672	1.11	368626	0.01	2000	
Cd	111	1	nogas	45.293	45.293	2.19	76774	0.06	2000	
Sb	121	1	nogas	49.792	49.792	3.96	364452	0.01	2000	
Tl	205	1	nogas	43.484	43.484	3.22	615210	0.01	2000	
Pb	208	1	nogas	46.538	46.538	4.86	881954	0.01	2000	
U	238	1	nogas	144.511	144.511	1.75	2850368	0.01	2000	
[Pb]	206	1	nogas	46.829	46.829	5.06	214062	0.02	2000	
[Pb]	207	1	nogas	47.608	47.608	4.30	197097	0.02	2000	
Na	23	2	He	1850870.073	1850870.073	1.86	909922306	0.20	200000	>LDR
Mg	24	2	He	188014.890	188014.890	2.95	51144814	0.37	200000	>LDR
Al	27	2	He	101.605	101.605	4.27	12841	0.79	2000	
K	39	2	He	8303.767	8303.767	1.99	2283529	0.36	200000	
Ca	43	2	He	498899.450	498899.450	1.22	383303	130.16	200000	>LDR
Ca	44	2	He	492855.700	492855.700	3.14	6277124	7.85	200000	>LDR
V	51	2	He	50.846	50.846	1.90	123338	0.04	2000	
Cr	52	2	He	49.297	49.297	0.96	138476	0.04	2000	
Mn	55	2	He	1944.148	1944.148	5.10	3365984	0.06	2000	>LDR
Fe	56	2	He	7384.471	7384.471	3.79	18061483	0.04	200000	
Co	59	2	He	49.165	49.165	4.08	198339	0.02	2000	
Ni	60	2	He	45.978	45.978	3.32	49805	0.09	2000	
Cu	63	2	He	44.030	44.030	2.54	127670	0.03	2000	
Zn	66	2	He	45.791	45.791	3.74	27581	0.17	2000	
As	75	2	He	87.957	87.957	1.57	41839	0.21	2000	
Se	78	2	He	31.068	31.068	8.48	1033	3.01	2000	
B	11	1	nogas	14157.185	14157.185	2.45	7283610	0.19	2000	>LDR
Si	28	1	nogas	86042.757	86042.757	6.25	159019621	0.05	2000	>LDR
Ca	43	1	nogas	528612.851	528612.851	5.31	8054532	6.56	200000	>LDR
Ca	44	1	nogas	501443.968	501443.968	1.89	123709851	0.41	200000	>LDR
Fe	56	1	nogas	7356.491	7356.491	5.59	86872279	0.01	200000	
Se	77	1	nogas	288.015	288.015	13.01	92286	0.31	2000	
Se	82	1	nogas	36.322	36.322	4.84	4481	0.81	2000	
Mo	95	1	nogas	49.661	49.661	5.18	145766	0.03	2000	
Sn	118	1	nogas	93.572	93.572	0.58	433496	0.02	2000	
Ba	137	1	nogas	344.780	344.780	1.91	779374	0.04	2000	

Sample Report

Sb	121	2	He	49.516	49.516	2.58	105484	0.05	2000	
La	139	1	nogas	857.484	857.484	10.63	963	89.01	2000	
Au	197	1	nogas	389.562	389.562	151.72	33	1168.69	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	218548	2.43	309366	70.64	70	125	
Ge	72	1	nogas	1502451	2.69	1624816	92.47	70	125	
In	115	1	nogas	1518863	0.73	1701792	89.25	70	125	
Bi	209	1	nogas	1269520	2.97	1450658	87.51	70	125	
Ge	72	2	He	297868	1.02	341080	87.33	70	125	

Sample Report

Sample Table

Sample Name	HS17100768-10PDS
Data File Name	055SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102
Acq Date Time	2017-10-20T10:06:58-05:00
Sample Type	Sample
Dilution	1
Comment	B121126 TW
ISTD Ref FileName	004CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	1	nogas	123.187	123.187	2.90	202233	0.06	2000	
Na	23	1	nogas	OR	OR	#VALUE!	OR	#VALUE!	200000	
Mg	24	1	nogas	171004.671	171004.671	2.05	1174775793	0.01	200000	
Al	27	1	nogas	104.466	104.466	2.28	797645	0.01	2000	
K	39	1	nogas	13758.666	13758.666	2.16	109115898	0.01	200000	
Ti	47	1	nogas	191.356	191.356	1.58	149347	0.13	2000	
V	51	1	nogas	177.612	177.612	4.40	2863041	0.01	2000	
Cr	52	1	nogas	93.813	93.813	1.54	985114	0.01	2000	
Mn	55	1	nogas	1838.489	1838.489	1.62	23656663	0.01	2000	>LDR
Co	59	1	nogas	95.711	95.711	2.15	1083265	0.01	2000	
Ni	60	1	nogas	99.956	99.956	1.24	252237	0.04	2000	
Cu	63	1	nogas	97.010	97.010	3.35	616978	0.02	2000	
Zn	66	1	nogas	94.733	94.733	3.87	188165	0.05	2000	
As	75	1	nogas	185.481	185.481	3.10	569818	0.03	2000	
Sr	88	1	nogas	7391.004	7391.004	0.89	102712458	0.01	2000	>LDR
Ag	107	1	nogas	87.505	87.505	1.98	726810	0.01	2000	
Cd	111	1	nogas	92.773	92.773	1.84	153824	0.06	2000	
Sb	121	1	nogas	101.866	101.866	1.95	732598	0.01	2000	
Tl	205	1	nogas	87.456	87.456	1.46	1238201	0.01	2000	
Pb	208	1	nogas	95.543	95.543	1.20	1812176	0.01	2000	
U	238	1	nogas	142.336	142.336	0.47	2809079	0.01	2000	
[Pb]	206	1	nogas	97.788	97.788	1.57	447410	0.02	2000	
[Pb]	207	1	nogas	96.724	96.724	0.57	400747	0.02	2000	
Na	23	2	He	1715568.880	1715568.880	1.03	832957214	0.21	200000	>LDR
Mg	24	2	He	181889.433	181889.433	3.93	48863499	0.37	200000	>LDR
Al	27	2	He	103.005	103.005	3.93	12848	0.80	2000	
K	39	2	He	12421.004	12421.004	2.29	3379669	0.37	200000	
Ca	43	2	He	475053.620	475053.620	3.51	360316	131.84	200000	>LDR
Ca	44	2	He	469777.218	469777.218	1.78	5908602	7.95	200000	>LDR
V	51	2	He	101.231	101.231	0.75	237955	0.04	2000	
Cr	52	2	He	99.872	99.872	2.74	274717	0.04	2000	
Mn	55	2	He	1878.113	1878.113	2.75	3210948	0.06	2000	>LDR
Fe	56	2	He	11983.171	11983.171	3.11	28933410	0.04	200000	
Co	59	2	He	97.071	97.071	3.44	386408	0.03	2000	
Ni	60	2	He	91.912	91.912	2.22	97515	0.09	2000	
Cu	63	2	He	92.703	92.703	0.10	262518	0.04	2000	
Zn	66	2	He	95.073	95.073	0.75	56070	0.17	2000	
As	75	2	He	136.321	136.321	1.08	63917	0.21	2000	
Se	78	2	He	94.996	94.996	4.25	2985	3.18	2000	
B	11	1	nogas	12546.591	12546.591	1.57	6342784	0.20	2000	>LDR
Si	28	1	nogas	72402.924	72402.924	1.96	131983218	0.05	2000	>LDR
Ca	43	1	nogas	490395.009	490395.009	2.04	7361545	6.66	200000	>LDR
Ca	44	1	nogas	483518.573	483518.573	1.25	117451655	0.41	200000	>LDR
Fe	56	1	nogas	11934.304	11934.304	1.97	138307691	0.01	200000	
Se	77	1	nogas	349.451	349.451	6.73	101123	0.35	2000	
Se	82	1	nogas	107.348	107.348	2.51	12358	0.87	2000	
Mo	95	1	nogas	99.022	99.022	0.40	286272	0.03	2000	
Sn	118	1	nogas	95.247	95.247	1.79	431604	0.02	2000	
Ba	137	1	nogas	376.997	376.997	4.71	833207	0.05	2000	

Sample Report

Sb	121	2	He	103.079	103.079	0.15	216294	0.05	2000	
La	139	1	nogas	966.418	966.418	15.24	1050	92.03	2000	
Au	197	1	nogas	-37.964	-37.964	-218.00	3	-1138.92	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	214581	3.39	309366	69.36	70	125	ISTD Failed
Ge	72	1	nogas	1478859	0.67	1624816	91.02	70	125	
In	115	1	nogas	1486083	2.52	1701792	87.32	70	125	
Bi	209	1	nogas	1269825	1.51	1450658	87.53	70	125	
Ge	72	2	He	294127	1.35	341080	86.23	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\102
Acq Date Time	2017-10-20T10:12:58-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
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	98.297	3.926	225879	1.15	100	98.3	90	110	
Na	23	1	nogas	10689.643	2.774	109476719	2.05	10000	106.9	90	110	
Mg	24	1	nogas	10142.940	2.994	72909066	2.21	10000	101.4	90	110	
Al	27	1	nogas	103.639	4.553	869013	1.95	100	103.6	90	110	
K	39	1	nogas	10323.301	3.826	91148950	1.31	10000	103.2	90	110	
Ti	47	1	nogas	101.149	2.230	86817	1.31	100	101.1	90	110	
V	51	1	nogas	155.629	2.298	2850332	2.97	100	155.6	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	100.431	2.926	1156224	1.23	100	100.4	90	110	
Mn	55	1	nogas	105.804	3.992	1507091	0.84	100	105.8	90	110	
Co	59	1	nogas	100.592	4.747	1249824	1.48	100	100.6	90	110	
Ni	60	1	nogas	105.306	5.279	291528	1.96	100	105.3	90	110	
Cu	63	1	nogas	101.922	3.256	711776	1.38	100	101.9	90	110	
Zn	66	1	nogas	104.683	4.508	228099	1.31	100	104.7	90	110	
As	75	1	nogas	117.346	3.309	451768	1.75	100	117.3	90	110	CCV Main CR1-2 Failed
Sr	88	1	nogas	107.047	1.696	1634963	1.89	100	107.0	90	110	
Ag	107	1	nogas	100.280	2.832	914817	0.48	100	100.3	90	110	
Cd	111	1	nogas	99.137	1.377	188496	1.27	100	99.1	90	110	
Sb	121	1	nogas	103.888	3.686	820435	0.65	100	103.9	90	110	
Tl	205	1	nogas	97.011	2.221	1627198	1.10	100	97.0	90	110	
Pb	208	1	nogas	96.003	3.690	2156687	0.53	100	96.0	90	110	
U	238	1	nogas	99.828	2.454	2333878	0.83	100	99.8	90	110	
[Pb]	206	1	nogas	97.157	2.719	526622	0.56	100	97.2	90	110	
[Pb]	207	1	nogas	98.398	4.278	482770	1.00	100	98.4	90	110	
Na	23	2	He	10582.461	2.135	5738425	1.81	10000	105.8	90	110	
Mg	24	2	He	10230.612	0.794	2993707	1.58	10000	102.3	90	110	
Al	27	2	He	102.737	5.169	13956	4.72	100	102.7	90	110	
K	39	2	He	9947.034	3.371	2721019	3.28	10000	99.5	90	110	
Ca	43	2	He	9848.367	3.342	8152	3.61	10000	98.5	90	110	
Ca	44	2	He	9794.758	2.336	135221	1.13	10000	97.9	90	110	
V	51	2	He	103.003	1.808	263509	0.84	100	103.0	90	110	
Cr	52	2	He	102.690	3.318	307549	2.82	100	102.7	90	110	
Mn	55	2	He	101.312	2.500	189430	2.52	100	101.3	90	110	
Fe	56	2	He	10163.277	0.568	26730241	1.52	10000	101.6	90	110	
Co	59	2	He	103.386	1.166	448213	0.15	100	103.4	90	110	
Ni	60	2	He	104.165	2.521	120218	1.22	100	104.2	90	110	
Cu	63	2	He	103.837	2.886	319772	1.62	100	103.8	90	110	
Zn	66	2	He	102.357	2.017	65685	1.59	100	102.4	90	110	
As	75	2	He	100.574	1.231	51407	0.13	100	100.6	90	110	
Se	78	2	He	99.154	2.814	3390	3.27	100	99.2	90	110	
B	11	1	nogas	767.421	3.827	594451	0.71	500	153.5	90	110	CCV Main CR1-2 Failed
Si	28	1	nogas	5366.679	4.882	11595149	1.33	5000	107.3	90	110	
Ca	43	1	nogas	10162.301	4.571	168211	2.89	10000	101.6	90	110	
Ca	44	1	nogas	9891.776	4.595	2787531	5.85	10000	98.9	90	110	
Fe	56	1	nogas	10263.061	3.250	130756636	0.56	10000	102.6	90	110	
Se	77	1	nogas	183.276	3.637	80846	3.54	100	183.3	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	105.073	4.318	13292	2.49	100	105.1	90	110	
Mo	95	1	nogas	101.054	3.142	320858	0.79	100	101.1	90	110	
Sn	118	1	nogas	98.756	2.500	513047	0.72	100	98.8	90	110	
Ba	137	1	nogas	97.532	3.428	247337	1.01	100	97.5	90	110	
Sb	121	2	He	103.153	1.725	235663	0.43	100	103.2	90	110	
Li	7	1	nogas	109.800	3.748	600185	2.05	100	109.8	90	110	
P	31	1	nogas	514.374	6.357	184736	1.88	500	102.9	90	110	
La	139	1	nogas	116.760	56.807	227	32.52	100	116.8	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	154.841	154.253	20	100.00	100	154.8	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	300419	2.80	309366	97.11	70	125	
Ge	72	1	nogas	1625278	3.36	1624816	100.03	70	125	
In	115	1	nogas	1704043	2.64	1701792	100.13	70	125	
Bi	209	1	nogas	1505020	3.25	1450658	103.75	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	320282	1.30	341080	93.90	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	059_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102
Acq Date Time	2017-10-20T10:14:56-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
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	0.031	26.1	107	19.5	1	
Na	23	1	nogas	463.697	1.9	6861763	0.6	100	CCB Main CR1 Failed
Mg	24	1	nogas	13.288	7.1	110043	5.2	100	
Al	27	1	nogas	1.262	9.8	24613	1.6	5	
K	39	1	nogas	-41.155	-93.2	4848888	1.3	100	
Ti	47	1	nogas	-0.007	-1375.3	203	38.2	2.5	
V	51	1	nogas	57.412	22.0	1607094	6.0	2.5	CCB Main CR1 Failed
Cr	52	1	nogas	-0.300	-48.4	28552	0.7	2.5	
Mn	55	1	nogas	0.218	20.7	16968	4.8	2.5	
Co	59	1	nogas	0.011	158.4	1037	21.3	2.5	
Ni	60	1	nogas	0.420	23.5	4604	2.8	2.5	
Cu	63	1	nogas	0.301	12.6	7045	2.8	2.5	
Zn	66	1	nogas	0.161	17.2	2494	5.1	2.5	
As	75	1	nogas	19.111	24.3	211319	3.0	2.5	CCB Main CR1 Failed
Sr	88	1	nogas	0.383	6.7	6871	2.3	2.5	
Ag	107	1	nogas	0.041	12.8	697	5.0	2.5	
Cd	111	1	nogas	0.056	47.9	110	47.2	1	
Sb	121	1	nogas	0.223	18.8	3807	9.1	2.5	
Tl	205	1	nogas	0.147	51.0	2660	47.4	1	
Pb	208	1	nogas	0.037	32.7	1380	17.8	2.5	
U	238	1	nogas	0.044	26.7	1180	22.8	2.5	
[Pb]	206	1	nogas	0.051	28.8	390	19.4	2.5	
[Pb]	207	1	nogas	0.037	65.4	303	38.6	2.5	
Na	23	2	He	511.778	2.0	420546	0.7	100	CCB Main CR1 Failed
Mg	24	2	He	15.803	8.8	5418	6.8	100	
Al	27	2	He	0.757	29.6	360	7.3	5	
K	39	2	He	-8.734	-12.4	70475	0.4	100	
Ca	43	2	He	56.912	50.9	63	36.5	100	
Ca	44	2	He	2.227	187.9	1157	6.1	100	
V	51	2	He	1.340	10.0	8457	2.8	2.5	
Cr	52	2	He	0.010	410.0	2444	4.4	2.5	
Mn	55	2	He	0.117	65.2	1060	13.7	2.5	
Fe	56	2	He	4.823	5.5	21149	4.7	100	
Co	59	2	He	-0.020	-66.9	207	27.9	2.5	
Ni	60	2	He	-0.537	-2.0	263	5.8	2.5	
Cu	63	2	He	-0.559	-6.9	1183	11.3	2.5	
Zn	66	2	He	0.194	51.9	630	10.4	2.5	
As	75	2	He	0.249	33.6	351	10.8	2.5	
Se	78	2	He	0.174	258.1	78	20.4	2.5	
B	11	1	nogas	244.056	2.2	242043	1.7	10	CCB Main CR1 Failed
Si	28	1	nogas	-29.295	-87.9	910480	0.3	5	
Ca	43	1	nogas	30.116	23.0	1253	5.3	100	
Ca	44	1	nogas	-273.230	-5.3	80573	1.7	100	
Fe	56	1	nogas	12.130	83.2	1148464	7.9	100	
Se	77	1	nogas	100.991	28.4	69255	3.3	2.5	CCB Main CR1 Failed
Se	82	1	nogas	0.666	101.6	487	13.7	2.5	
Mo	95	1	nogas	0.124	9.6	503	12.9	2.5	
Sn	118	1	nogas	0.079	34.7	1147	14.0	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.097	14.5	420	10.4	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.206	17.0	1060	9.0	2.5	
P	31	1	nogas	-5.095	-196.5	39391	2.0	10	
La	139	1	nogas	31.433	105.2	133	31.2	2.5	CCB Main CR1 Failed
Au	197	1	nogas	-5.630	-2464.9	7	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	320915	1.03	309366	103.73	70	125	
Ge	72	1	nogas	1714434	5.97	1624816	105.52	70	125	
In	115	1	nogas	1754463	1.61	1701792	103.10	70	125	
Bi	209	1	nogas	1570496	2.97	1450658	108.26	70	125	
Ge	72	2	He	324143	1.43	341080	95.03	70	125	

Sample Report

Sample Table

Sample Name	HS17100712-01
Data File Name	062SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102
Acq Date Time	2017-10-20T10:21:01-05:00
Sample Type	Sample
Dilution	1
Comment	B121126 TW
ISTD Ref FileName	004CALB.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	0.001	0.001	1628.83	30	0.00	2000	
Na	23	1	nogas	OR	OR	#VALUE!	OR	#VALUE!	200000	
Mg	24	1	nogas	27460.870	27460.870	3.74	198952992	0.01	200000	
Al	27	1	nogas	7.278	7.278	6.23	73808	0.01	2000	
K	39	1	nogas	1844.647	1844.647	3.53	20571557	0.01	200000	
Ti	47	1	nogas	2.206	2.206	7.33	2110	0.10	2000	
V	51	1	nogas	72.023	72.023	4.13	1743751	0.00	2000	
Cr	52	1	nogas	0.627	0.627	10.86	37910	0.00	2000	
Mn	55	1	nogas	117.165	117.165	2.45	1685663	0.01	2000	
Co	59	1	nogas	0.432	0.432	4.36	6275	0.01	2000	
Ni	60	1	nogas	2.035	2.035	8.13	8889	0.02	2000	
Cu	63	1	nogas	0.930	0.930	5.12	11164	0.01	2000	
Zn	66	1	nogas	6.777	6.777	7.24	16825	0.04	2000	
As	75	1	nogas	20.607	20.607	10.72	206593	0.01	2000	
Sr	88	1	nogas	241.017	241.017	3.45	3718143	0.01	2000	
Ag	107	1	nogas	0.005	0.005	87.76	337	0.00	2000	
Cd	111	1	nogas	0.032	0.032	48.48	60	0.05	2000	
Sb	121	1	nogas	0.136	0.136	24.31	2954	0.00	2000	
Tl	205	1	nogas	0.005	0.005	29.52	173	0.00	2000	
Pb	208	1	nogas	0.019	0.019	12.11	867	0.00	2000	
U	238	1	nogas	0.234	0.234	1.98	5161	0.00	2000	
[Pb]	206	1	nogas	0.014	0.014	94.66	160	0.01	2000	
[Pb]	207	1	nogas	0.018	0.018	62.22	187	0.01	2000	
Na	23	2	He	528971.706	528971.706	2.68	272338669	0.19	200000	>LDR
Mg	24	2	He	27465.756	27465.756	3.27	7822016	0.35	200000	
Al	27	2	He	7.836	7.836	7.54	1267	0.62	2000	
K	39	2	He	1710.811	1710.811	1.42	528273	0.32	200000	
Ca	43	2	He	12214.756	12214.756	2.09	9843	124.10	200000	
Ca	44	2	He	11998.104	11998.104	1.73	161059	7.45	200000	
V	51	2	He	1.631	1.631	5.30	8848	0.02	2000	
Cr	52	2	He	0.678	0.678	12.85	4281	0.02	2000	
Mn	55	2	He	112.722	112.722	2.04	205111	0.05	2000	
Fe	56	2	He	56.592	56.592	2.75	152836	0.04	200000	
Co	59	2	He	0.460	0.460	9.00	2224	0.02	2000	
Ni	60	2	He	0.655	0.655	35.28	1583	0.04	2000	
Cu	63	2	He	-0.282	-0.282	-12.52	1960	-0.01	2000	
Zn	66	2	He	6.070	6.070	8.10	4251	0.14	2000	
As	75	2	He	0.596	0.596	6.15	510	0.12	2000	
Se	78	2	He	-0.039	-0.039	-487.27	68	-0.06	2000	
B	11	1	nogas	243.188	243.188	8.51	225173	0.11	2000	
Si	28	1	nogas	25914.614	25914.614	2.51	53032521	0.05	2000	>LDR
Ca	43	1	nogas	12349.968	12349.968	2.84	206500	5.98	200000	
Ca	44	1	nogas	12218.432	12218.432	3.60	3441175	0.36	200000	
Fe	56	1	nogas	84.304	84.304	6.96	2025726	0.00	200000	
Se	77	1	nogas	114.302	114.302	7.34	68967	0.17	2000	
Se	82	1	nogas	1.289	1.289	46.90	547	0.24	2000	

Sample Report

Mo	95	1	nogas	0.108	0.108	7.72	430	0.03	2000	
Sn	118	1	nogas	0.007	0.007	34.07	720	0.00	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Ba	137	1	nogas	124.708	124.708	3.21	308767	0.04	2000	
Sb	121	2	He	0.158	0.158	24.76	913	0.02	2000	
La	139	1	nogas	139.277	139.277	37.90	247	56.46	2000	
Au	197	1	nogas	2.441	2.441	6256.74	7	36.62	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	299974	4.92	309366	96.96	70	125	
Ge	72	1	nogas	1641997	2.38	1624816	101.06	70	125	
In	115	1	nogas	1663595	1.82	1701792	97.76	70	125	
Bi	209	1	nogas	1393287	1.96	1450658	96.05	70	125	
Ge	72	2	He	311883	1.91	341080	91.44	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	070_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102
Acq Date Time	2017-10-20T10:37:22-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
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	95.231	2.188	235313	0.42	100	95.2	90	110	
Na	23	1	nogas	11114.450	3.813	119469624	2.43	10000	111.1	90	110	CCV Main CR1-2 Failed
Mg	24	1	nogas	10081.763	1.579	76133462	0.36	10000	100.8	90	110	
Al	27	1	nogas	104.065	0.901	913324	0.99	100	104.1	90	110	
K	39	1	nogas	10391.535	1.807	95981652	0.22	10000	103.9	90	110	
Ti	47	1	nogas	102.328	1.329	91888	0.70	100	102.3	90	110	
V	51	1	nogas	110.890	5.978	2351343	2.37	100	110.9	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	98.232	2.385	1183907	0.86	100	98.2	90	110	
Mn	55	1	nogas	107.950	3.544	1608718	1.85	100	108.0	90	110	
Co	59	1	nogas	104.824	4.261	1363142	3.32	100	104.8	90	110	
Ni	60	1	nogas	103.815	3.482	300874	1.81	100	103.8	90	110	
Cu	63	1	nogas	101.622	3.286	742492	1.81	100	101.6	90	110	
Zn	66	1	nogas	104.388	3.008	238059	1.49	100	104.4	90	110	
As	75	1	nogas	93.903	3.047	409930	1.13	100	93.9	90	110	
Sr	88	1	nogas	104.764	2.165	1673719	0.77	100	104.8	90	110	
Ag	107	1	nogas	99.581	0.946	950642	0.96	100	99.6	90	110	
Cd	111	1	nogas	101.844	2.263	198329	0.87	100	101.8	90	110	
Sb	121	1	nogas	102.007	1.066	843179	0.79	100	102.0	90	110	
Tl	205	1	nogas	96.543	3.937	1644068	2.57	100	96.5	90	110	
Pb	208	1	nogas	95.828	3.227	2186459	1.90	100	95.8	90	110	
U	238	1	nogas	101.839	3.475	2417553	2.33	100	101.8	90	110	
[Pb]	206	1	nogas	96.356	1.608	530435	0.82	100	96.4	90	110	
[Pb]	207	1	nogas	97.230	3.057	484581	1.71	100	97.2	90	110	
Na	23	2	He	10927.664	3.408	6042013	2.59	10000	109.3	90	110	
Mg	24	2	He	10335.101	3.427	3085418	1.80	10000	103.4	90	110	
Al	27	2	He	96.923	5.261	13452	4.90	100	96.9	90	110	
K	39	2	He	10129.119	2.264	2769496	2.20	10000	101.3	90	110	
Ca	43	2	He	9548.012	2.663	8065	2.19	10000	95.5	90	110	
Ca	44	2	He	10216.203	1.520	143903	0.81	10000	102.2	90	110	
V	51	2	He	101.873	3.248	265987	1.50	100	101.9	90	110	
Cr	52	2	He	104.408	2.053	319085	1.15	100	104.4	90	110	
Mn	55	2	He	105.125	3.869	200519	2.67	100	105.1	90	110	
Fe	56	2	He	10282.317	0.677	27598790	1.28	10000	102.8	90	110	
Co	59	2	He	107.312	0.951	474817	0.99	100	107.3	90	110	
Ni	60	2	He	106.873	1.221	125877	1.16	100	106.9	90	110	
Cu	63	2	He	105.310	2.688	330951	1.58	100	105.3	90	110	
Zn	66	2	He	105.277	2.923	68934	2.64	100	105.3	90	110	
As	75	2	He	102.338	3.627	53367	1.99	100	102.3	90	110	
Se	78	2	He	97.630	2.869	3407	1.48	100	97.6	90	110	
B	11	1	nogas	659.047	4.610	557053	1.83	500	131.8	90	110	CCV Main CR1-2 Failed
Si	28	1	nogas	5263.722	0.612	11924805	1.65	5000	105.3	90	110	
Ca	43	1	nogas	10510.118	1.686	182044	1.18	10000	105.1	90	110	
Ca	44	1	nogas	10056.928	4.409	2959877	2.91	10000	100.6	90	110	
Fe	56	1	nogas	10337.173	2.486	137796007	0.66	10000	103.4	90	110	
Se	77	1	nogas	72.925	22.505	63481	3.12	100	72.9	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	101.061	1.915	13395	2.01	100	101.1	90	110	
Mo	95	1	nogas	100.992	2.871	335493	1.14	100	101.0	90	110	
Sn	118	1	nogas	98.050	0.998	521948	2.13	100	98.1	90	110	
Ba	137	1	nogas	96.690	4.182	251178	2.80	100	96.7	90	110	
Sb	121	2	He	104.751	3.432	244179	1.73	100	104.8	90	110	
Li	7	1	nogas	105.467	1.786	621092	0.76	100	105.5	90	110	
P	31	1	nogas	502.470	3.686	189846	1.98	500	100.5	90	110	
La	139	1	nogas	134.667	54.437	253	33.57	100	134.7	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	275.974	87.142	30	66.67	100	276.0	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	322919	2.47	309366	104.38	70	125	
Ge	72	1	nogas	1699894	1.86	1624816	104.62	70	125	
In	115	1	nogas	1745609	2.89	1701792	102.57	70	125	
Bi	209	1	nogas	1527810	1.35	1450658	105.32	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	326885	1.73	341080	95.84	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	071_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102
Acq Date Time	2017-10-20T10:39:20-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
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	31.4	177	22.9	1	
Na	23	1	nogas	557.714	5.6	8104022	0.3	100	CCB Main CR1 Failed
Mg	24	1	nogas	24.072	2.2	196127	3.3	100	
Al	27	1	nogas	1.390	9.8	25898	1.1	5	
K	39	1	nogas	-29.350	-94.0	4991495	0.9	100	
Ti	47	1	nogas	0.043	94.1	253	17.8	2.5	
V	51	1	nogas	2.879	171.8	843573	3.4	2.5	CCB Main CR1 Failed
Cr	52	1	nogas	-0.760	-22.8	23265	4.1	2.5	
Mn	55	1	nogas	0.952	8.9	28072	0.6	2.5	
Co	59	1	nogas	0.036	15.6	1363	1.8	2.5	
Ni	60	1	nogas	0.544	31.1	4991	4.7	2.5	
Cu	63	1	nogas	0.338	33.1	7355	6.4	2.5	
Zn	66	1	nogas	0.611	32.1	3534	9.3	2.5	
As	75	1	nogas	-2.392	-205.0	154345	4.1	2.5	
Sr	88	1	nogas	0.430	5.9	7698	3.5	2.5	
Ag	107	1	nogas	0.068	29.6	957	14.8	2.5	
Cd	111	1	nogas	0.056	15.1	113	13.5	1	
Sb	121	1	nogas	0.255	6.0	4097	1.8	2.5	
Tl	205	1	nogas	0.139	45.1	2537	45.9	1	
Pb	208	1	nogas	0.062	5.0	1967	3.4	2.5	
U	238	1	nogas	0.061	12.4	1600	13.6	2.5	
[Pb]	206	1	nogas	0.061	12.0	443	11.6	2.5	
[Pb]	207	1	nogas	0.074	10.8	490	12.7	2.5	
Na	23	2	He	582.470	1.9	465201	0.5	100	CCB Main CR1 Failed
Mg	24	2	He	22.246	12.6	7432	10.5	100	
Al	27	2	He	0.648	154.9	350	38.7	5	
K	39	2	He	-4.750	-61.6	71536	1.1	100	
Ca	43	2	He	47.773	38.7	57	27.0	100	
Ca	44	2	He	-9.849	-40.3	1003	4.7	100	
V	51	2	He	-0.189	-27.4	4642	2.1	2.5	
Cr	52	2	He	0.036	87.3	2560	3.5	2.5	
Mn	55	2	He	0.608	12.3	2017	7.9	2.5	
Fe	56	2	He	10.917	4.5	37906	2.7	100	
Co	59	2	He	0.030	62.3	433	18.5	2.5	
Ni	60	2	He	-0.506	-11.1	303	20.9	2.5	
Cu	63	2	He	-0.498	-3.3	1390	3.3	2.5	
Zn	66	2	He	0.142	192.9	607	30.6	2.5	
As	75	2	He	0.037	102.5	246	7.7	2.5	
Se	78	2	He	0.161	67.5	79	5.3	2.5	
B	11	1	nogas	170.838	9.9	204342	0.8	10	CCB Main CR1 Failed
Si	28	1	nogas	-40.855	-51.0	892823	0.3	5	
Ca	43	1	nogas	40.410	33.9	1440	13.0	100	
Ca	44	1	nogas	-289.486	-5.3	76523	1.6	100	
Fe	56	1	nogas	8.051	79.8	1104704	8.3	100	
Se	77	1	nogas	3.372	618.3	50895	3.1	2.5	CCB Main CR1 Failed
Se	82	1	nogas	0.193	161.2	430	6.2	2.5	
Mo	95	1	nogas	0.124	9.0	507	10.9	2.5	
Sn	118	1	nogas	0.115	18.7	1390	6.4	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.125	41.2	513	29.3	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.236	4.6	1143	3.1	2.5	
P	31	1	nogas	-4.591	-271.9	39802	4.4	10	
La	139	1	nogas	52.415	68.4	163	24.7	2.5	CCB Main CR1 Failed
Au	197	1	nogas	144.302	210.2	20	132.3	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	351663	6.46	309366	113.67	70	125	
Ge	72	1	nogas	1725837	4.91	1624816	106.22	70	125	
In	115	1	nogas	1822789	2.64	1701792	107.11	70	125	
Bi	209	1	nogas	1557645	4.73	1450658	107.38	70	125	
Ge	72	2	He	328971	0.92	341080	96.45	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	082_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102
Acq Date Time	2017-10-20T11:01:39-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
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	95.746	4.802	236130	3.02	100	95.7	90	110	
Na	23	1	nogas	10687.047	1.951	115372432	1.23	10000	106.9	90	110	
Mg	24	1	nogas	10108.958	2.761	76607714	3.04	10000	101.1	90	110	
Al	27	1	nogas	103.606	4.675	910383	3.26	100	103.6	90	110	
K	39	1	nogas	10322.988	2.301	95543306	2.80	10000	103.2	90	110	
Ti	47	1	nogas	101.719	8.023	91390	5.91	100	101.7	90	110	
V	51	1	nogas	119.397	6.677	2474536	3.08	100	119.4	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	100.413	7.568	1210627	5.80	100	100.4	90	110	
Mn	55	1	nogas	107.935	4.097	1610589	1.51	100	107.9	90	110	
Co	59	1	nogas	100.437	1.898	1309072	4.46	100	100.4	90	110	
Ni	60	1	nogas	101.253	1.103	294063	1.52	100	101.3	90	110	
Cu	63	1	nogas	100.309	2.717	734063	0.58	100	100.3	90	110	
Zn	66	1	nogas	103.562	2.253	236568	1.22	100	103.6	90	110	
As	75	1	nogas	102.010	3.791	432238	1.69	100	102.0	90	110	
Sr	88	1	nogas	104.019	4.899	1663735	3.11	100	104.0	90	110	
Ag	107	1	nogas	98.149	2.862	938114	0.43	100	98.1	90	110	
Cd	111	1	nogas	97.235	3.424	193398	2.58	100	97.2	90	110	
Sb	121	1	nogas	102.581	2.204	849188	2.24	100	102.6	90	110	
Tl	205	1	nogas	95.581	4.478	1617534	2.46	100	95.6	90	110	
Pb	208	1	nogas	97.552	1.523	2212634	0.52	100	97.6	90	110	
U	238	1	nogas	100.595	2.134	2373702	0.41	100	100.6	90	110	
[Pb]	206	1	nogas	98.735	2.425	540168	0.55	100	98.7	90	110	
[Pb]	207	1	nogas	99.905	2.086	494925	0.28	100	99.9	90	110	
Na	23	2	He	10431.010	3.341	5840036	1.29	10000	104.3	90	110	
Mg	24	2	He	10145.335	4.627	3063409	2.97	10000	101.5	90	110	
Al	27	2	He	97.199	3.106	13645	2.54	100	97.2	90	110	
K	39	2	He	10305.482	0.991	2816450	0.96	10000	103.1	90	110	
Ca	43	2	He	9813.203	7.505	8379	5.71	10000	98.1	90	110	
Ca	44	2	He	9741.790	5.632	138769	3.17	10000	97.4	90	110	
V	51	2	He	102.019	2.212	269480	0.93	100	102.0	90	110	
Cr	52	2	He	101.606	6.211	313960	3.85	100	101.6	90	110	
Mn	55	2	He	99.723	4.981	192390	2.55	100	99.7	90	110	
Fe	56	2	He	10319.668	4.750	28002561	2.44	10000	103.2	90	110	
Co	59	2	He	105.904	1.145	474031	1.57	100	105.9	90	110	
Ni	60	2	He	105.114	0.699	125270	2.11	100	105.1	90	110	
Cu	63	2	He	105.981	2.495	336887	0.88	100	106.0	90	110	
Zn	66	2	He	104.480	3.829	69181	1.36	100	104.5	90	110	
As	75	2	He	100.683	3.640	53110	1.25	100	100.7	90	110	
Se	78	2	He	98.255	3.128	3468	0.92	100	98.3	90	110	
B	11	1	nogas	607.907	3.960	517646	1.84	500	121.6	90	110	CCV Main CR1-2 Failed
Si	28	1	nogas	5300.859	3.098	12016841	1.69	5000	106.0	90	110	
Ca	43	1	nogas	10374.534	2.650	180018	3.64	10000	103.7	90	110	
Ca	44	1	nogas	9881.919	3.932	2915042	1.21	10000	98.8	90	110	
Fe	56	1	nogas	10251.359	3.361	136881057	3.04	10000	102.5	90	110	
Se	77	1	nogas	107.292	9.038	70172	2.91	100	107.3	90	110	
Se	82	1	nogas	102.171	7.321	13552	6.07	100	102.2	90	110	
Mo	95	1	nogas	101.274	3.467	336878	0.90	100	101.3	90	110	
Sn	118	1	nogas	98.279	3.214	534180	2.05	100	98.3	90	110	
Ba	137	1	nogas	96.921	2.400	257212	1.19	100	96.9	90	110	
Sb	121	2	He	100.577	3.579	237163	1.14	100	100.6	90	110	
Li	7	1	nogas	102.652	2.554	604307	0.75	100	102.7	90	110	
P	31	1	nogas	505.042	3.181	190888	1.05	500	101.0	90	110	
La	139	1	nogas	104.368	44.212	223	26.24	100	104.4	90	110	
Au	197	1	nogas	-5.475	-2539.490	7	173.21	100	-5.5	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	322363	1.79	309366	104.20	70	125	
Ge	72	1	nogas	1702605	2.62	1624816	104.79	70	125	
In	115	1	nogas	1782535	1.23	1701792	104.74	70	125	
Bi	209	1	nogas	1518637	1.97	1450658	104.69	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	330702	2.50	341080	96.96	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	083_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102
Acq Date Time	2017-10-20T11:03:38-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
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	0.035	1.7	130	0.0	1	
Na	23	1	nogas	239.768	4.0	4807439	0.7	100	CCB Main CR1 Failed
Mg	24	1	nogas	7.452	9.8	70884	9.0	100	
Al	27	1	nogas	0.590	38.5	18556	7.2	5	
K	39	1	nogas	-30.731	-53.5	4899565	0.6	100	
Ti	47	1	nogas	0.009	605.7	217	18.7	2.5	
V	51	1	nogas	15.087	29.6	1001734	3.9	2.5	CCB Main CR1 Failed
Cr	52	1	nogas	-0.252	-56.5	28856	4.0	2.5	
Mn	55	1	nogas	0.101	44.2	15073	4.3	2.5	
Co	59	1	nogas	-0.003	-30.5	843	3.4	2.5	
Ni	60	1	nogas	-0.327	-34.2	2430	14.2	2.5	
Cu	63	1	nogas	-0.019	-289.0	4661	7.6	2.5	
Zn	66	1	nogas	-0.058	-57.9	1973	1.1	2.5	
As	75	1	nogas	7.233	59.0	177627	4.2	2.5	CCB Main CR1 Failed
Sr	88	1	nogas	0.206	6.3	3994	1.9	2.5	
Ag	107	1	nogas	0.035	16.5	637	11.6	2.5	
Cd	111	1	nogas	0.030	42.8	60	44.1	1	
Sb	121	1	nogas	0.393	19.3	5171	13.9	2.5	
Tl	205	1	nogas	0.136	44.3	2510	47.0	1	
Pb	208	1	nogas	0.028	30.2	1193	21.1	2.5	
U	238	1	nogas	0.034	14.5	940	17.5	2.5	
[Pb]	206	1	nogas	0.044	32.3	347	21.7	2.5	
[Pb]	207	1	nogas	0.023	87.1	237	46.7	2.5	
Na	23	2	He	280.005	1.3	303973	0.6	100	CCB Main CR1 Failed
Mg	24	2	He	7.210	8.8	2947	6.1	100	
Al	27	2	He	0.087	492.0	277	21.8	5	
K	39	2	He	-14.640	-39.6	68903	2.2	100	
Ca	43	2	He	4.228	2.7	20	0.0	100	
Ca	44	2	He	-28.414	-28.1	750	15.4	100	
V	51	2	He	0.026	264.0	5247	2.9	2.5	
Cr	52	2	He	0.140	25.3	2904	4.1	2.5	
Mn	55	2	He	-0.047	-111.2	770	13.7	2.5	
Fe	56	2	He	3.799	3.4	18873	1.8	100	
Co	59	2	He	-0.006	-23.7	277	2.1	2.5	
Ni	60	2	He	-0.526	-8.9	283	19.4	2.5	
Cu	63	2	He	-0.628	-2.4	993	5.2	2.5	
Zn	66	2	He	-0.233	-20.4	363	8.4	2.5	
As	75	2	He	0.105	41.1	284	8.3	2.5	
Se	78	2	He	-0.476	-54.5	57	16.1	2.5	
B	11	1	nogas	107.092	7.1	154153	3.0	10	CCB Main CR1 Failed
Si	28	1	nogas	-40.603	-30.9	879069	0.3	5	
Ca	43	1	nogas	9.605	94.0	890	16.6	100	
Ca	44	1	nogas	-334.710	-3.2	62712	1.9	100	
Fe	56	1	nogas	-1.553	-134.9	959196	0.5	100	
Se	77	1	nogas	45.585	45.8	58116	4.3	2.5	CCB Main CR1 Failed
Se	82	1	nogas	-0.058	-1107.5	393	24.2	2.5	
Mo	95	1	nogas	0.113	57.1	467	49.4	2.5	
Sn	118	1	nogas	0.068	52.7	1103	15.3	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.057	36.2	323	18.1	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.319	19.5	1353	11.3	2.5	
P	31	1	nogas	-3.308	-237.5	39579	2.6	10	
La	139	1	nogas	-3.292	-436.5	93	16.4	2.5	
Au	197	1	nogas	186.895	95.0	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	355737	1.25	309366	114.99	70	125	
Ge	72	1	nogas	1696606	3.29	1624816	104.42	70	125	
In	115	1	nogas	1789373	2.28	1701792	105.15	70	125	
Bi	209	1	nogas	1569882	5.63	1450658	108.22	70	125	
Ge	72	2	He	332206	0.48	341080	97.40	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	094_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102
Acq Date Time	2017-10-20T11:25:55-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
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	100.150	2.078	240170	2.15	100	100.2	90	110	
Na	23	1	nogas	10665.409	2.683	114236723	1.24	10000	106.7	90	110	
Mg	24	1	nogas	10594.708	3.174	79637750	1.14	10000	105.9	90	110	
Al	27	1	nogas	100.535	1.666	892022	1.79	100	100.5	90	110	
K	39	1	nogas	10085.674	3.918	94257981	1.65	10000	100.9	90	110	
Ti	47	1	nogas	99.969	0.819	90732	2.49	100	100.0	90	110	
V	51	1	nogas	121.380	2.282	2526019	2.33	100	121.4	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	98.368	3.325	1198448	4.45	100	98.4	90	110	
Mn	55	1	nogas	99.226	2.729	1495572	2.21	100	99.2	90	110	
Co	59	1	nogas	95.640	3.021	1256805	1.73	100	95.6	90	110	
Ni	60	1	nogas	100.472	6.133	294178	3.42	100	100.5	90	110	
Cu	63	1	nogas	98.422	4.413	726607	2.17	100	98.4	90	110	
Zn	66	1	nogas	102.917	3.097	237165	0.38	100	102.9	90	110	
As	75	1	nogas	103.894	4.752	441144	1.65	100	103.9	90	110	
Sr	88	1	nogas	99.214	3.874	1601224	1.80	100	99.2	90	110	
Ag	107	1	nogas	96.576	1.509	931574	1.42	100	96.6	90	110	
Cd	111	1	nogas	98.894	1.206	188447	0.85	100	98.9	90	110	
Sb	121	1	nogas	98.931	2.763	826145	0.10	100	98.9	90	110	
Tl	205	1	nogas	97.697	3.092	1632820	3.97	100	97.7	90	110	
Pb	208	1	nogas	96.983	2.323	2170730	0.36	100	97.0	90	110	
U	238	1	nogas	101.309	3.132	2358880	0.61	100	101.3	90	110	
[Pb]	206	1	nogas	97.881	1.081	528610	1.54	100	97.9	90	110	
[Pb]	207	1	nogas	99.719	2.190	487560	1.26	100	99.7	90	110	
Na	23	2	He	10267.987	3.982	5659244	2.04	10000	102.7	90	110	
Mg	24	2	He	9995.187	3.292	2970357	1.05	10000	100.0	90	110	
Al	27	2	He	98.941	1.106	13669	2.81	100	98.9	90	110	
K	39	2	He	9667.250	3.228	2646532	3.14	10000	96.7	90	110	
Ca	43	2	He	9230.016	1.962	7765	3.75	10000	92.3	90	110	
Ca	44	2	He	9628.516	1.640	135075	0.73	10000	96.3	90	110	
V	51	2	He	100.326	2.301	260871	0.83	100	100.3	90	110	
Cr	52	2	He	101.515	0.791	308976	2.15	100	101.5	90	110	
Mn	55	2	He	100.618	2.090	191112	0.22	100	100.6	90	110	
Fe	56	2	He	10126.844	3.412	27048337	1.12	10000	101.3	90	110	
Co	59	2	He	103.789	2.325	457078	0.33	100	103.8	90	110	
Ni	60	2	He	103.832	1.538	121766	1.39	100	103.8	90	110	
Cu	63	2	He	104.072	0.701	325690	1.70	100	104.1	90	110	
Zn	66	2	He	102.900	2.162	67101	3.30	100	102.9	90	110	
As	75	2	He	100.237	3.971	52033	1.63	100	100.2	90	110	
Se	78	2	He	95.887	5.185	3332	3.73	100	95.9	90	110	
B	11	1	nogas	548.185	1.964	459466	2.07	500	109.6	90	110	
Si	28	1	nogas	5017.896	1.565	11531100	1.36	5000	100.4	90	110	
Ca	43	1	nogas	10338.785	4.114	180886	1.84	10000	103.4	90	110	
Ca	44	1	nogas	9776.042	5.564	2910700	2.94	10000	97.8	90	110	
Fe	56	1	nogas	9904.518	5.169	133382607	2.41	10000	99.0	90	110	
Se	77	1	nogas	135.700	10.866	76239	1.62	100	135.7	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	97.664	5.249	13085	2.52	100	97.7	90	110	
Mo	95	1	nogas	98.185	4.645	329455	1.99	100	98.2	90	110	
Sn	118	1	nogas	99.244	3.071	516699	1.48	100	99.2	90	110	
Ba	137	1	nogas	98.402	0.886	250196	1.39	100	98.4	90	110	
Sb	121	2	He	101.812	2.118	236306	0.60	100	101.8	90	110	
Li	7	1	nogas	106.085	0.886	606093	1.29	100	106.1	90	110	
P	31	1	nogas	481.914	3.307	185649	0.40	500	96.4	90	110	
La	139	1	nogas	144.668	6.095	260	3.85	100	144.7	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	491.225	17.083	47	12.37	100	491.2	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	313292	0.93	309366	101.27	70	125	
Ge	72	1	nogas	1717858	2.71	1624816	105.73	70	125	
In	115	1	nogas	1707607	1.75	1701792	100.34	70	125	
Bi	209	1	nogas	1498907	2.56	1450658	103.33	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	325431	2.28	341080	95.41	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	095_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102
Acq Date Time	2017-10-20T11:27:55-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
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	57.2	157	41.5	1	
Na	23	1	nogas	178.235	4.0	4221019	0.4	100	CCB Main CR1 Failed
Mg	24	1	nogas	7.557	12.6	72997	9.6	100	
Al	27	1	nogas	0.637	10.8	19187	2.5	5	
K	39	1	nogas	-46.994	-30.6	4807567	0.5	100	
Ti	47	1	nogas	0.020	647.4	230	51.3	2.5	
V	51	1	nogas	12.705	39.2	978266	4.7	2.5	CCB Main CR1 Failed
Cr	52	1	nogas	-0.142	-43.7	30469	1.9	2.5	
Mn	55	1	nogas	0.319	39.8	18453	7.8	2.5	
Co	59	1	nogas	0.003	205.6	930	10.8	2.5	
Ni	60	1	nogas	-0.351	-33.0	2380	11.4	2.5	
Cu	63	1	nogas	-0.124	-30.7	3937	5.0	2.5	
Zn	66	1	nogas	-0.172	-27.3	1733	5.0	2.5	
As	75	1	nogas	7.355	59.7	179792	4.0	2.5	CCB Main CR1 Failed
Sr	88	1	nogas	0.179	3.8	3600	4.1	2.5	
Ag	107	1	nogas	0.049	46.8	773	28.7	2.5	
Cd	111	1	nogas	0.046	55.7	90	58.8	1	
Sb	121	1	nogas	0.541	7.4	6451	5.5	2.5	
Tl	205	1	nogas	0.111	52.6	2090	48.7	1	
Pb	208	1	nogas	0.025	40.7	1127	20.7	2.5	
U	238	1	nogas	0.043	29.9	1190	25.9	2.5	
[Pb]	206	1	nogas	0.031	26.4	283	16.3	2.5	
[Pb]	207	1	nogas	0.029	57.9	270	32.3	2.5	
Na	23	2	He	222.708	1.8	270475	0.6	100	CCB Main CR1 Failed
Mg	24	2	He	7.504	1.0	3014	1.6	100	
Al	27	2	He	0.446	99.5	323	17.9	5	
K	39	2	He	-26.263	-15.1	65809	1.6	100	
Ca	43	2	He	20.236	122.0	33	62.4	100	
Ca	44	2	He	-20.375	-38.2	857	11.8	100	
V	51	2	He	-0.026	-265.3	5074	3.1	2.5	
Cr	52	2	He	0.090	136.1	2727	13.1	2.5	
Mn	55	2	He	0.240	28.9	1313	9.3	2.5	
Fe	56	2	He	3.393	6.5	17635	4.3	100	
Co	59	2	He	0.001	191.0	307	3.8	2.5	
Ni	60	2	He	-0.547	-4.3	257	11.9	2.5	
Cu	63	2	He	-0.648	-6.9	923	14.7	2.5	
Zn	66	2	He	-0.250	-8.9	350	4.9	2.5	
As	75	2	He	0.144	35.7	302	7.8	2.5	
Se	78	2	He	-0.345	-59.5	61	10.5	2.5	
B	11	1	nogas	70.506	10.4	123053	2.3	10	CCB Main CR1 Failed
Si	28	1	nogas	-46.648	-22.7	875608	0.5	5	
Ca	43	1	nogas	18.932	21.9	1063	8.5	100	
Ca	44	1	nogas	-341.839	-1.9	61387	1.5	100	
Fe	56	1	nogas	-2.248	-64.7	960283	2.8	100	
Se	77	1	nogas	48.842	31.3	59381	3.6	2.5	CCB Main CR1 Failed
Se	82	1	nogas	0.426	171.1	457	17.7	2.5	
Mo	95	1	nogas	0.095	22.8	407	19.7	2.5	
Sn	118	1	nogas	0.070	30.9	1090	12.7	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.080	14.2	373	9.4	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.380	14.7	1483	7.8	2.5	
P	31	1	nogas	-2.664	-116.0	40213	0.5	10	
La	139	1	nogas	-24.147	-51.2	67	22.9	2.5	
Au	197	1	nogas	375.751	29.8	40	25.0	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	354235	3.94	309366	114.50	70	125	
Ge	72	1	nogas	1714060	2.68	1624816	105.49	70	125	
In	115	1	nogas	1743579	3.23	1701792	102.46	70	125	
Bi	209	1	nogas	1600291	1.03	1450658	110.31	70	125	
Ge	72	2	He	329678	1.12	341080	96.66	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	106_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102
Acq Date Time	2017-10-20T11:50:04-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
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	94.590	0.296	223654	0.11	100	94.6	90	110	
Na	23	1	nogas	11005.942	1.413	110398648	1.48	10000	110.1	90	110	CCV Main CR1-2 Failed
Mg	24	1	nogas	10557.482	2.168	74372841	2.44	10000	105.6	90	110	
Al	27	1	nogas	103.188	3.401	868479	2.43	100	103.2	90	110	
K	39	1	nogas	10000.130	3.238	88757469	1.55	10000	100.0	90	110	
Ti	47	1	nogas	99.922	5.059	85997	1.79	100	99.9	90	110	
V	51	1	nogas	151.867	4.862	2807518	1.50	100	151.9	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	98.694	3.254	1140413	0.70	100	98.7	90	110	
Mn	55	1	nogas	102.372	3.419	1464018	2.79	100	102.4	90	110	
Co	59	1	nogas	98.456	5.002	1227724	3.56	100	98.5	90	110	
Ni	60	1	nogas	104.513	6.673	290232	3.13	100	104.5	90	110	
Cu	63	1	nogas	100.587	5.894	704397	2.44	100	100.6	90	110	
Zn	66	1	nogas	103.798	5.133	226894	1.24	100	103.8	90	110	
As	75	1	nogas	115.721	6.160	448889	0.77	100	115.7	90	110	CCV Main CR1-2 Failed
Sr	88	1	nogas	104.024	4.123	1593202	1.04	100	104.0	90	110	
Ag	107	1	nogas	97.808	4.737	894841	1.03	100	97.8	90	110	
Cd	111	1	nogas	102.476	3.074	185680	0.55	100	102.5	90	110	
Sb	121	1	nogas	103.316	3.497	818738	1.60	100	103.3	90	110	
Tl	205	1	nogas	105.369	2.452	1651281	1.09	100	105.4	90	110	
Pb	208	1	nogas	101.976	3.341	2140667	1.06	100	102.0	90	110	
U	238	1	nogas	104.041	0.826	2273226	1.67	100	104.0	90	110	
[Pb]	206	1	nogas	104.686	5.999	529904	3.69	100	104.7	90	110	
[Pb]	207	1	nogas	103.730	2.797	475675	0.89	100	103.7	90	110	
Na	23	2	He	10195.874	1.909	5431865	1.75	10000	102.0	90	110	
Mg	24	2	He	10162.483	1.252	2918618	1.33	10000	101.6	90	110	
Al	27	2	He	97.842	2.512	13058	2.45	100	97.8	90	110	
K	39	2	He	9500.982	1.605	2602266	1.56	10000	95.0	90	110	
Ca	43	2	He	9011.077	1.401	7322	1.08	10000	90.1	90	110	
Ca	44	2	He	9559.853	0.269	129583	0.79	10000	95.6	90	110	
V	51	2	He	101.586	0.969	255160	0.51	100	101.6	90	110	
Cr	52	2	He	101.817	2.343	299323	1.85	100	101.8	90	110	
Mn	55	2	He	99.499	1.413	182609	1.13	100	99.5	90	110	
Fe	56	2	He	10235.215	1.097	26420981	1.60	10000	102.4	90	110	
Co	59	2	He	104.696	0.263	445523	0.69	100	104.7	90	110	
Ni	60	2	He	103.621	2.216	117405	2.40	100	103.6	90	110	
Cu	63	2	He	103.875	0.384	314037	0.82	100	103.9	90	110	
Zn	66	2	He	102.385	1.643	64491	1.62	100	102.4	90	110	
As	75	2	He	99.619	1.213	49983	1.48	100	99.6	90	110	
Se	78	2	He	97.809	1.749	3283	1.41	100	97.8	90	110	
B	11	1	nogas	568.907	2.378	467971	1.73	500	113.8	90	110	CCV Main CR1-2 Failed
Si	28	1	nogas	5259.269	3.070	11423899	1.15	5000	105.2	90	110	
Ca	43	1	nogas	10258.811	4.235	170343	1.11	10000	102.6	90	110	
Ca	44	1	nogas	9778.445	5.070	2762943	0.92	10000	97.8	90	110	
Fe	56	1	nogas	10075.926	1.875	128906078	3.82	10000	100.8	90	110	
Se	77	1	nogas	187.712	14.288	81844	3.96	100	187.7	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	97.454	7.753	12384	3.81	100	97.5	90	110	
Mo	95	1	nogas	99.838	4.677	317974	2.26	100	99.8	90	110	
Sn	118	1	nogas	100.581	1.928	498229	2.57	100	100.6	90	110	
Ba	137	1	nogas	101.420	4.520	245114	1.86	100	101.4	90	110	
Sb	121	2	He	103.706	1.328	232576	1.84	100	103.7	90	110	
Li	7	1	nogas	104.707	1.073	590197	0.80	100	104.7	90	110	
P	31	1	nogas	516.208	6.770	185846	1.52	500	103.2	90	110	
La	139	1	nogas	111.555	48.101	210	25.20	100	111.6	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	352.047	57.031	33	45.83	100	352.0	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	308890	0.38	309366	99.85	70	125	
Ge	72	1	nogas	1630869	3.84	1624816	100.37	70	125	
In	115	1	nogas	1624403	2.73	1701792	95.45	70	125	
Bi	209	1	nogas	1405987	2.42	1450658	96.92	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	314344	0.52	341080	92.16	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	107_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102
Acq Date Time	2017-10-20T11:52:03-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
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	7.5	193	6.0	1	
Na	23	1	nogas	231.824	5.5	4569446	1.1	100	CCB Main CR1 Failed
Mg	24	1	nogas	9.342	2.9	82730	2.2	100	
Al	27	1	nogas	0.558	13.8	18403	5.2	5	
K	39	1	nogas	-33.371	-54.5	4896818	1.3	100	
Ti	47	1	nogas	0.063	105.5	267	20.7	2.5	
V	51	1	nogas	48.391	3.7	1476666	3.9	2.5	CCB Main CR1 Failed
Cr	52	1	nogas	-0.010	-815.6	31844	3.7	2.5	
Mn	55	1	nogas	0.116	40.0	15353	2.7	2.5	
Co	59	1	nogas	0.011	95.8	1020	10.9	2.5	
Ni	60	1	nogas	-0.327	-16.2	2440	7.5	2.5	
Cu	63	1	nogas	-0.084	-19.7	4214	3.6	2.5	
Zn	66	1	nogas	-0.100	-38.1	1887	2.9	2.5	
As	75	1	nogas	16.765	8.8	204130	3.7	2.5	CCB Main CR1 Failed
Sr	88	1	nogas	0.274	9.4	5111	7.9	2.5	
Ag	107	1	nogas	0.044	43.4	730	25.6	2.5	
Cd	111	1	nogas	0.041	13.6	80	12.5	1	
Sb	121	1	nogas	0.385	12.1	5121	5.9	2.5	
Tl	205	1	nogas	0.225	33.6	4031	36.1	1	
Pb	208	1	nogas	0.029	42.3	1210	27.2	2.5	
U	238	1	nogas	0.046	27.5	1237	27.5	2.5	
[Pb]	206	1	nogas	0.035	7.3	297	8.5	2.5	
[Pb]	207	1	nogas	0.026	98.0	247	55.2	2.5	
Na	23	2	He	271.782	2.7	288506	0.9	100	CCB Main CR1 Failed
Mg	24	2	He	9.242	4.6	3434	3.8	100	
Al	27	2	He	0.413	70.4	310	12.9	5	
K	39	2	He	-26.753	-23.2	65678	2.5	100	
Ca	43	2	He	41.484	29.7	50	20.0	100	
Ca	44	2	He	-26.875	-32.8	743	16.0	100	
V	51	2	He	0.831	4.6	7077	1.0	2.5	
Cr	52	2	He	0.061	135.0	2564	9.4	2.5	
Mn	55	2	He	-0.046	-130.0	743	14.5	2.5	
Fe	56	2	He	5.230	2.6	21943	1.4	100	
Co	59	2	He	-0.011	-152.1	243	30.8	2.5	
Ni	60	2	He	-0.497	-3.7	307	6.8	2.5	
Cu	63	2	He	-0.624	-9.5	970	18.6	2.5	
Zn	66	2	He	-0.255	-37.3	337	18.1	2.5	
As	75	2	He	0.100	59.6	271	11.7	2.5	
Se	78	2	He	-0.193	-31.9	65	3.6	2.5	
B	11	1	nogas	91.761	5.9	139192	3.3	10	CCB Main CR1 Failed
Si	28	1	nogas	-54.957	-13.2	852975	0.5	5	
Ca	43	1	nogas	8.493	78.6	877	14.8	100	
Ca	44	1	nogas	-342.656	-0.7	60795	1.5	100	
Fe	56	1	nogas	2.049	7.4	1011423	2.3	100	
Se	77	1	nogas	92.505	3.8	67381	1.4	2.5	CCB Main CR1 Failed
Se	82	1	nogas	-0.168	-722.2	380	41.8	2.5	
Mo	95	1	nogas	0.153	2.1	597	3.5	2.5	
Sn	118	1	nogas	0.070	56.5	1087	21.8	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.059	28.0	317	15.9	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.280	17.1	1213	8.5	2.5	
P	31	1	nogas	1.314	162.6	41155	1.5	10	
La	139	1	nogas	1.221	3644.3	97	57.0	2.5	
Au	197	1	nogas	109.144	218.4	17	124.9	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	350104	0.41	309366	113.17	70	125	
Ge	72	1	nogas	1703348	2.16	1624816	104.83	70	125	
In	115	1	nogas	1731398	2.50	1701792	101.74	70	125	
Bi	209	1	nogas	1553296	3.72	1450658	107.08	70	125	
Ge	72	2	He	320059	0.56	341080	93.84	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	118_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102
Acq Date Time	2017-10-20T12:14:12-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
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	89.361	2.772	233471	2.54	100	89.4	90	110	CCV Main CR1-2 Failed
Na	23	1	nogas	10448.436	1.427	114365590	1.78	10000	104.5	90	110	
Mg	24	1	nogas	10286.796	2.086	78999968	2.63	10000	102.9	90	110	
Al	27	1	nogas	100.882	1.916	907475	1.21	100	100.9	90	110	
K	39	1	nogas	10071.528	2.421	95478877	2.11	10000	100.7	90	110	
Ti	47	1	nogas	100.284	1.853	92270	1.79	100	100.3	90	110	
V	51	1	nogas	109.200	5.774	2385178	3.23	100	109.2	90	110	
Cr	52	1	nogas	97.113	0.898	1199672	0.20	100	97.1	90	110	
Mn	55	1	nogas	104.084	1.833	1590063	1.32	100	104.1	90	110	
Co	59	1	nogas	100.314	1.329	1336965	2.04	100	100.3	90	110	
Ni	60	1	nogas	99.208	2.119	294799	1.61	100	99.2	90	110	
Cu	63	1	nogas	99.238	3.484	743092	2.98	100	99.2	90	110	
Zn	66	1	nogas	103.628	3.480	242158	2.69	100	103.6	90	110	
As	75	1	nogas	99.243	2.733	434637	1.39	100	99.2	90	110	
Sr	88	1	nogas	105.124	1.947	1721091	2.58	100	105.1	90	110	
Ag	107	1	nogas	97.146	2.915	950067	2.33	100	97.1	90	110	
Cd	111	1	nogas	98.891	2.261	194657	1.50	100	98.9	90	110	
Sb	121	1	nogas	100.234	2.978	848790	2.20	100	100.2	90	110	
Tl	205	1	nogas	98.582	4.040	1625526	2.99	100	98.6	90	110	
Pb	208	1	nogas	98.398	1.837	2174152	1.45	100	98.4	90	110	
U	238	1	nogas	105.637	1.866	2428441	1.51	100	105.6	90	110	
[Pb]	206	1	nogas	99.893	1.363	532480	1.64	100	99.9	90	110	
[Pb]	207	1	nogas	100.559	2.931	485290	2.27	100	100.6	90	110	
Na	23	2	He	10140.915	0.930	5665539	1.70	10000	101.4	90	110	
Mg	24	2	He	10011.808	1.307	3014778	1.84	10000	100.1	90	110	
Al	27	2	He	96.727	3.554	13542	4.61	100	96.7	90	110	
K	39	2	He	9993.648	0.906	2733429	0.88	10000	99.9	90	110	
Ca	43	2	He	9534.087	5.111	8119	4.16	10000	95.3	90	110	
Ca	44	2	He	9714.533	1.354	138031	0.77	10000	97.1	90	110	
V	51	2	He	101.519	0.581	267367	1.37	100	101.5	90	110	
Cr	52	2	He	102.462	1.044	315807	0.63	100	102.5	90	110	
Mn	55	2	He	98.246	0.710	189057	0.45	100	98.2	90	110	
Fe	56	2	He	10040.279	1.808	27169572	0.70	10000	100.4	90	110	
Co	59	2	He	104.058	2.940	464168	1.78	100	104.1	90	110	
Ni	60	2	He	102.537	1.395	121805	0.92	100	102.5	90	110	
Cu	63	2	He	104.210	1.502	330276	0.72	100	104.2	90	110	
Zn	66	2	He	102.522	0.420	67706	1.01	100	102.5	90	110	
As	75	2	He	98.292	1.462	51704	0.47	100	98.3	90	110	
Se	78	2	He	94.494	5.474	3328	5.14	100	94.5	90	110	
B	11	1	nogas	481.234	2.699	447039	2.16	500	96.2	90	110	
Si	28	1	nogas	5112.382	3.076	11892452	2.20	5000	102.2	90	110	
Ca	43	1	nogas	10203.779	1.138	181103	0.97	10000	102.0	90	110	
Ca	44	1	nogas	9808.756	0.461	2962634	1.23	10000	98.1	90	110	
Fe	56	1	nogas	10120.659	1.939	138257141	1.17	10000	101.2	90	110	
Se	77	1	nogas	108.702	13.045	72046	3.08	100	108.7	90	110	
Se	82	1	nogas	102.040	3.201	13852	2.99	100	102.0	90	110	
Mo	95	1	nogas	98.436	2.871	335071	2.27	100	98.4	90	110	
Sn	118	1	nogas	99.812	2.559	536865	0.98	100	99.8	90	110	
Ba	137	1	nogas	96.095	3.309	252317	0.95	100	96.1	90	110	
Sb	121	2	He	101.388	1.320	238417	2.22	100	101.4	90	110	
Li	7	1	nogas	100.438	3.047	626894	2.37	100	100.4	90	110	
P	31	1	nogas	502.514	2.556	194537	1.56	500	100.5	90	110	
La	139	1	nogas	97.473	47.761	213	28.64	100	97.5	90	110	
Au	197	1	nogas	82.170	235.488	13	114.56	100	82.2	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	341330	0.59	309366	110.33	70	125	
Ge	72	1	nogas	1741445	0.79	1624816	107.18	70	125	
In	115	1	nogas	1764309	2.70	1701792	103.67	70	125	
Bi	209	1	nogas	1479224	1.04	1450658	101.97	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	329581	1.15	341080	96.63	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	119_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102
Acq Date Time	2017-10-20T12:16:10-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
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	0.045	51.2	157	39.0	1	
Na	23	1	nogas	138.609	5.2	3715732	0.8	100	CCB Main CR1 Failed
Mg	24	1	nogas	7.487	8.4	71182	7.0	100	
Al	27	1	nogas	0.581	7.6	18633	2.0	5	
K	39	1	nogas	-44.445	-7.4	4813044	0.7	100	
Ti	47	1	nogas	0.051	109.3	257	18.4	2.5	
V	51	1	nogas	10.605	26.1	945691	3.3	2.5	CCB Main CR1 Failed
Cr	52	1	nogas	-0.214	-49.3	29507	3.9	2.5	
Mn	55	1	nogas	0.039	130.5	14249	4.3	2.5	
Co	59	1	nogas	0.004	464.7	940	26.5	2.5	
Ni	60	1	nogas	-0.523	-5.4	1880	5.1	2.5	
Cu	63	1	nogas	-0.105	-24.9	4071	5.0	2.5	
Zn	66	1	nogas	-0.153	-29.6	1773	6.5	2.5	
As	75	1	nogas	6.478	47.5	176897	4.1	2.5	CCB Main CR1 Failed
Sr	88	1	nogas	0.198	11.6	3900	8.3	2.5	
Ag	107	1	nogas	0.058	6.7	863	3.3	2.5	
Cd	111	1	nogas	0.036	68.5	73	70.0	1	
Sb	121	1	nogas	0.369	12.3	5001	8.2	2.5	
Tl	205	1	nogas	0.163	39.5	2950	43.4	1	
Pb	208	1	nogas	0.038	6.8	1410	11.1	2.5	
U	238	1	nogas	0.047	15.0	1247	20.4	2.5	
[Pb]	206	1	nogas	0.042	20.5	337	21.5	2.5	
[Pb]	207	1	nogas	0.023	35.5	230	13.0	2.5	
Na	23	2	He	170.879	4.1	244956	1.6	100	CCB Main CR1 Failed
Mg	24	2	He	7.176	3.9	2947	3.1	100	
Al	27	2	He	0.130	562.7	283	35.7	5	
K	39	2	He	-26.526	-12.6	65738	1.4	100	
Ca	43	2	He	4.154	560.8	20	100.0	100	
Ca	44	2	He	-29.744	-30.2	733	17.4	100	
V	51	2	He	-0.143	-19.2	4824	1.6	2.5	
Cr	52	2	He	0.090	61.5	2760	6.2	2.5	
Mn	55	2	He	-0.104	-46.5	663	14.0	2.5	
Fe	56	2	He	4.700	5.0	21403	2.9	100	
Co	59	2	He	-0.010	-226.0	260	37.9	2.5	
Ni	60	2	He	-0.493	-4.4	323	7.8	2.5	
Cu	63	2	He	-0.655	-8.0	910	18.2	2.5	
Zn	66	2	He	-0.160	-92.8	413	23.9	2.5	
As	75	2	He	0.070	86.1	267	11.9	2.5	
Se	78	2	He	-0.155	-138.1	69	11.0	2.5	
B	11	1	nogas	57.203	16.4	112561	5.7	10	CCB Main CR1 Failed
Si	28	1	nogas	-47.139	-8.4	871471	0.6	5	
Ca	43	1	nogas	4.582	121.3	810	12.3	100	
Ca	44	1	nogas	-341.961	-0.8	61133	0.1	100	
Fe	56	1	nogas	-9.672	-14.4	857779	1.2	100	
Se	77	1	nogas	43.632	24.0	58183	3.3	2.5	CCB Main CR1 Failed
Se	82	1	nogas	0.588	172.2	477	26.4	2.5	
Mo	95	1	nogas	0.118	29.2	480	25.0	2.5	
Sn	118	1	nogas	0.047	42.4	1013	10.9	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.038	32.5	277	11.0	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.246	18.0	1183	8.7	2.5	
P	31	1	nogas	7.122	5.6	42989	1.0	10	
La	139	1	nogas	-10.194	-328.2	87	46.6	2.5	
Au	197	1	nogas	70.059	193.3	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	355711	1.30	309366	114.98	70	125	
Ge	72	1	nogas	1707317	1.18	1624816	105.08	70	125	
In	115	1	nogas	1826144	1.47	1701792	107.31	70	125	
Bi	209	1	nogas	1547864	6.74	1450658	106.70	70	125	
Ge	72	2	He	333309	0.21	341080	97.72	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	130_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102
Acq Date Time	2017-10-20T12:38:37-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
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	94.581	3.532	240626	1.92	100	94.6	90	110	
Na	23	1	nogas	10574.538	1.582	118599765	0.47	10000	105.7	90	110	
Mg	24	1	nogas	10213.328	1.382	80401150	2.42	10000	102.1	90	110	
Al	27	1	nogas	100.028	1.350	926105	1.37	100	100.0	90	110	
K	39	1	nogas	10200.743	3.674	99410108	1.23	10000	102.0	90	110	
Ti	47	1	nogas	99.111	3.339	93811	0.99	100	99.1	90	110	
V	51	1	nogas	110.421	5.050	2472300	1.96	100	110.4	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	98.218	2.957	1247914	1.05	100	98.2	90	110	
Mn	55	1	nogas	101.029	2.997	1588256	0.42	100	101.0	90	110	
Co	59	1	nogas	97.203	0.740	1333255	2.28	100	97.2	90	110	
Ni	60	1	nogas	99.613	4.719	304429	2.09	100	99.6	90	110	
Cu	63	1	nogas	99.991	5.749	769938	3.11	100	100.0	90	110	
Zn	66	1	nogas	103.108	4.208	247869	1.58	100	103.1	90	110	
As	75	1	nogas	97.668	5.207	442761	2.39	100	97.7	90	110	
Sr	88	1	nogas	101.688	4.261	1712507	2.96	100	101.7	90	110	
Ag	107	1	nogas	94.304	3.894	948811	2.00	100	94.3	90	110	
Cd	111	1	nogas	98.704	2.163	198846	1.25	100	98.7	90	110	
Sb	121	1	nogas	101.549	3.352	884672	0.76	100	101.5	90	110	
Tl	205	1	nogas	95.980	6.203	1706855	4.25	100	96.0	90	110	
Pb	208	1	nogas	93.372	3.372	2225398	1.11	100	93.4	90	110	
U	238	1	nogas	96.799	4.805	2399839	2.61	100	96.8	90	110	
[Pb]	206	1	nogas	94.245	4.076	541937	3.35	100	94.2	90	110	
[Pb]	207	1	nogas	95.177	3.998	495462	2.03	100	95.2	90	110	
Na	23	2	He	10349.714	1.834	5943476	1.52	10000	103.5	90	110	
Mg	24	2	He	10284.050	3.418	3183788	0.94	10000	102.8	90	110	
Al	27	2	He	99.675	6.800	14332	5.31	100	99.7	90	110	
K	39	2	He	10378.361	1.650	2835852	1.61	10000	103.8	90	110	
Ca	43	2	He	9451.861	3.548	8279	2.08	10000	94.5	90	110	
Ca	44	2	He	9471.681	1.917	138474	2.70	10000	94.7	90	110	
V	51	2	He	101.082	3.752	273703	0.84	100	101.1	90	110	
Cr	52	2	He	102.240	2.757	324057	0.87	100	102.2	90	110	
Mn	55	2	He	99.651	2.000	197212	1.47	100	99.7	90	110	
Fe	56	2	He	10121.994	2.196	28170856	0.67	10000	101.2	90	110	
Co	59	2	He	103.886	2.667	476602	0.40	100	103.9	90	110	
Ni	60	2	He	103.249	3.528	126106	1.36	100	103.2	90	110	
Cu	63	2	He	103.346	1.805	336916	1.38	100	103.3	90	110	
Zn	66	2	He	101.843	0.838	69188	2.22	100	101.8	90	110	
As	75	2	He	100.491	2.887	54353	0.09	100	100.5	90	110	
Se	78	2	He	94.223	4.846	3413	4.38	100	94.2	90	110	
B	11	1	nogas	488.133	2.884	440766	1.81	500	97.6	90	110	
Si	28	1	nogas	5092.717	0.507	12197591	2.09	5000	101.9	90	110	
Ca	43	1	nogas	10134.520	5.776	184977	3.44	10000	101.3	90	110	
Ca	44	1	nogas	9960.125	6.394	3090633	3.56	10000	99.6	90	110	
Fe	56	1	nogas	10052.014	3.241	141345236	3.83	10000	100.5	90	110	
Se	77	1	nogas	103.321	14.796	73056	3.50	100	103.3	90	110	
Se	82	1	nogas	99.339	2.247	13892	3.53	100	99.3	90	110	
Mo	95	1	nogas	100.022	1.905	350368	1.23	100	100.0	90	110	
Sn	118	1	nogas	100.229	1.657	551833	1.31	100	100.2	90	110	
Ba	137	1	nogas	96.448	3.031	259251	2.55	100	96.4	90	110	
Sb	121	2	He	101.970	2.331	246558	0.64	100	102.0	90	110	
Li	7	1	nogas	102.181	4.589	620514	3.18	100	102.2	90	110	
P	31	1	nogas	493.987	3.754	197472	0.39	500	98.8	90	110	
La	139	1	nogas	112.420	66.193	237	39.94	100	112.4	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	145.557	156.288	20	100.00	100	145.6	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	332499	1.88	309366	107.48	70	125	
Ge	72	1	nogas	1792369	2.55	1624816	110.31	70	125	
In	115	1	nogas	1805528	2.09	1701792	106.10	70	125	
Bi	209	1	nogas	1596392	2.73	1450658	110.05	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	339067	2.90	341080	99.41	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	131_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102
Acq Date Time	2017-10-20T12:40:35-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
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	0.041	16.4	150	13.3	1	
Na	23	1	nogas	136.539	4.1	3831207	0.9	100	CCB Main CR1 Failed
Mg	24	1	nogas	7.752	4.2	75967	4.1	100	
Al	27	1	nogas	0.717	5.9	20688	0.9	5	
K	39	1	nogas	-56.137	-30.4	4916049	0.4	100	
Ti	47	1	nogas	0.039	21.3	257	2.2	2.5	
V	51	1	nogas	10.127	29.1	980096	2.9	2.5	CCB Main CR1 Failed
Cr	52	1	nogas	-0.197	-26.6	31013	0.7	2.5	
Mn	55	1	nogas	-0.008	-482.9	14146	1.5	2.5	
Co	59	1	nogas	0.001	856.3	940	13.9	2.5	
Ni	60	1	nogas	-0.552	-7.5	1873	3.9	2.5	
Cu	63	1	nogas	-0.191	-4.4	3590	2.0	2.5	
Zn	66	1	nogas	-0.193	-20.7	1753	2.7	2.5	
As	75	1	nogas	5.456	83.5	181678	4.8	2.5	CCB Main CR1 Failed
Sr	88	1	nogas	0.183	6.4	3820	2.4	2.5	
Ag	107	1	nogas	0.047	7.1	790	6.7	2.5	
Cd	111	1	nogas	0.034	62.9	70	62.3	1	
Sb	121	1	nogas	0.436	2.4	5808	4.1	2.5	
Tl	205	1	nogas	0.147	36.7	2834	38.4	1	
Pb	208	1	nogas	0.036	21.8	1433	14.8	2.5	
U	238	1	nogas	0.040	28.6	1143	28.1	2.5	
[Pb]	206	1	nogas	0.045	10.6	373	4.1	2.5	
[Pb]	207	1	nogas	0.037	69.7	320	46.2	2.5	
Na	23	2	He	186.934	0.5	250067	0.9	100	CCB Main CR1 Failed
Mg	24	2	He	7.811	15.8	3094	11.9	100	
Al	27	2	He	0.109	498.1	277	27.4	5	
K	39	2	He	-21.087	-7.5	67186	0.6	100	
Ca	43	2	He	16.208	124.1	30	57.7	100	
Ca	44	2	He	-28.966	-32.6	733	17.8	100	
V	51	2	He	-0.101	-119.0	4861	5.7	2.5	
Cr	52	2	He	0.132	57.8	2847	7.5	2.5	
Mn	55	2	He	-0.088	-31.8	683	8.1	2.5	
Fe	56	2	He	4.574	2.1	20749	1.7	100	
Co	59	2	He	-0.006	-88.7	273	7.6	2.5	
Ni	60	2	He	-0.523	-6.9	283	14.3	2.5	
Cu	63	2	He	-0.654	-3.2	900	7.7	2.5	
Zn	66	2	He	-0.319	-10.9	303	6.9	2.5	
As	75	2	He	0.109	34.7	283	7.7	2.5	
Se	78	2	He	-0.086	-305.9	70	12.5	2.5	
B	11	1	nogas	40.809	5.2	101004	1.8	10	CCB Main CR1 Failed
Si	28	1	nogas	-59.667	-18.6	882266	0.1	5	
Ca	43	1	nogas	8.035	56.7	907	6.7	100	
Ca	44	1	nogas	-349.091	-0.3	61755	2.6	100	
Fe	56	1	nogas	-8.306	-18.5	914465	1.3	100	
Se	77	1	nogas	38.201	53.6	59601	4.3	2.5	CCB Main CR1 Failed
Se	82	1	nogas	-0.041	-558.8	413	6.1	2.5	
Mo	95	1	nogas	0.082	28.1	377	24.1	2.5	
Sn	118	1	nogas	0.078	9.8	1207	3.3	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.065	42.9	357	21.4	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.377	31.1	1473	19.4	2.5	
P	31	1	nogas	0.390	1605.6	42758	1.8	10	
La	139	1	nogas	7.061	12.6	110	0.0	2.5	CCB Main CR1 Failed
Au	197	1	nogas	66.795	198.0	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	363031	1.02	309366	117.35	70	125	
Ge	72	1	nogas	1782823	2.78	1624816	109.72	70	125	
In	115	1	nogas	1855426	1.02	1701792	109.03	70	125	
Bi	209	1	nogas	1643029	3.73	1450658	113.26	70	125	
Ge	72	2	He	328419	0.71	341080	96.29	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	142_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102
Acq Date Time	2017-10-20T13:03:01-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
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	95.711	4.720	239723	1.96	100	95.7	90	110	
Na	23	1	nogas	10697.187	3.077	116778153	0.79	10000	107.0	90	110	
Mg	24	1	nogas	10336.638	3.810	79188643	0.28	10000	103.4	90	110	
Al	27	1	nogas	100.670	2.107	895681	0.92	100	100.7	90	110	
K	39	1	nogas	10513.726	1.806	98346404	0.11	10000	105.1	90	110	
Ti	47	1	nogas	99.133	2.764	90237	3.70	100	99.1	90	110	
V	51	1	nogas	115.456	6.436	2448204	3.61	100	115.5	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	99.084	6.594	1209368	4.89	100	99.1	90	110	
Mn	55	1	nogas	103.890	5.421	1569143	3.77	100	103.9	90	110	
Co	59	1	nogas	102.359	4.916	1348674	3.42	100	102.4	90	110	
Ni	60	1	nogas	102.187	2.975	300186	1.37	100	102.2	90	110	
Cu	63	1	nogas	101.121	1.302	748910	1.12	100	101.1	90	110	
Zn	66	1	nogas	104.964	1.244	242646	2.28	100	105.0	90	110	
As	75	1	nogas	102.110	4.356	437610	1.64	100	102.1	90	110	
Sr	88	1	nogas	107.916	3.170	1746912	1.64	100	107.9	90	110	
Ag	107	1	nogas	98.205	2.361	950014	2.19	100	98.2	90	110	
Cd	111	1	nogas	99.414	0.515	195157	1.86	100	99.4	90	110	
Sb	121	1	nogas	100.499	2.707	841740	1.77	100	100.5	90	110	
Tl	205	1	nogas	96.029	6.512	1639035	2.26	100	96.0	90	110	
Pb	208	1	nogas	95.839	4.712	2192650	0.65	100	95.8	90	110	
U	238	1	nogas	98.180	5.597	2336491	1.55	100	98.2	90	110	
[Pb]	206	1	nogas	97.083	5.102	535744	0.84	100	97.1	90	110	
[Pb]	207	1	nogas	97.575	4.267	487689	1.06	100	97.6	90	110	
Na	23	2	He	10170.236	1.100	5593140	0.68	10000	101.7	90	110	
Mg	24	2	He	10157.555	1.210	3011142	0.95	10000	101.6	90	110	
Al	27	2	He	96.579	1.519	13308	1.44	100	96.6	90	110	
K	39	2	He	10276.260	0.677	2808670	0.66	10000	102.8	90	110	
Ca	43	2	He	10000.963	3.620	8385	3.20	10000	100.0	90	110	
Ca	44	2	He	9591.722	3.256	134195	3.09	10000	95.9	90	110	
V	51	2	He	101.651	0.443	263557	0.50	100	101.7	90	110	
Cr	52	2	He	105.664	1.032	320585	1.44	100	105.7	90	110	
Mn	55	2	He	102.199	0.546	193596	0.98	100	102.2	90	110	
Fe	56	2	He	10189.717	2.290	27151583	2.63	10000	101.9	90	110	
Co	59	2	He	106.495	1.356	467790	1.77	100	106.5	90	110	
Ni	60	2	He	104.965	2.361	122739	1.97	100	105.0	90	110	
Cu	63	2	He	105.737	3.549	329888	3.21	100	105.7	90	110	
Zn	66	2	He	104.463	0.152	67910	0.32	100	104.5	90	110	
As	75	2	He	101.607	1.343	52617	1.10	100	101.6	90	110	
Se	78	2	He	98.298	5.356	3405	4.82	100	98.3	90	110	
B	11	1	nogas	465.253	4.988	416307	0.44	500	93.1	90	110	
Si	28	1	nogas	5123.221	2.082	11785974	1.23	5000	102.5	90	110	
Ca	43	1	nogas	10587.074	2.799	185803	1.83	10000	105.9	90	110	
Ca	44	1	nogas	10018.216	1.749	2990096	3.14	10000	100.2	90	110	
Fe	56	1	nogas	10212.337	3.193	137965041	2.19	10000	102.1	90	110	
Se	77	1	nogas	123.396	21.356	74084	6.00	100	123.4	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	96.606	2.955	12998	4.41	100	96.6	90	110	
Mo	95	1	nogas	102.192	2.649	344028	1.07	100	102.2	90	110	
Sn	118	1	nogas	98.075	3.002	526053	2.64	100	98.1	90	110	
Ba	137	1	nogas	97.576	3.606	255456	1.58	100	97.6	90	110	
Sb	121	2	He	102.859	1.130	238102	1.07	100	102.9	90	110	
Li	7	1	nogas	103.618	3.261	619362	2.71	100	103.6	90	110	
P	31	1	nogas	504.882	2.444	193118	0.71	500	101.0	90	110	
La	139	1	nogas	151.647	25.334	277	18.19	100	151.6	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	199.071	73.612	23	49.49	100	199.1	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	327637	4.66	309366	105.91	70	125	
Ge	72	1	nogas	1722562	1.59	1624816	106.02	70	125	
In	115	1	nogas	1759020	2.15	1701792	103.36	70	125	
Bi	209	1	nogas	1533556	4.24	1450658	105.71	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	324474	0.44	341080	95.13	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	143_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102
Acq Date Time	2017-10-20T13:04:57-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
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	78.3	143	56.0	1	
Na	23	1	nogas	139.750	4.2	3751990	0.8	100	CCB Main CR1 Failed
Mg	24	1	nogas	7.057	13.2	68311	11.2	100	
Al	27	1	nogas	0.792	5.8	20378	2.9	5	
K	39	1	nogas	-39.386	-22.4	4834501	0.4	100	
Ti	47	1	nogas	-0.045	-147.6	170	36.7	2.5	
V	51	1	nogas	14.942	10.7	1002635	3.1	2.5	CCB Main CR1 Failed
Cr	52	1	nogas	-0.026	-162.6	31587	2.6	2.5	
Mn	55	1	nogas	0.094	72.3	14993	5.4	2.5	
Co	59	1	nogas	-0.006	-188.9	810	19.3	2.5	
Ni	60	1	nogas	-0.473	-8.6	2013	5.0	2.5	
Cu	63	1	nogas	-0.152	-9.4	3707	4.4	2.5	
Zn	66	1	nogas	-0.247	-8.0	1550	1.9	2.5	
As	75	1	nogas	9.320	21.3	183761	4.2	2.5	CCB Main CR1 Failed
Sr	88	1	nogas	0.169	6.7	3417	4.0	2.5	
Ag	107	1	nogas	0.041	18.2	690	8.8	2.5	
Cd	111	1	nogas	0.066	39.7	130	38.5	1	
Sb	121	1	nogas	0.330	6.0	4654	1.7	2.5	
Tl	205	1	nogas	0.151	34.1	2820	41.3	1	
Pb	208	1	nogas	0.034	13.8	1333	13.5	2.5	
U	238	1	nogas	0.038	39.5	1057	43.8	2.5	
[Pb]	206	1	nogas	0.040	3.5	327	6.4	2.5	
[Pb]	207	1	nogas	0.011	50.1	173	16.7	2.5	
Na	23	2	He	174.520	5.2	244296	1.0	100	CCB Main CR1 Failed
Mg	24	2	He	6.987	11.8	2857	7.8	100	
Al	27	2	He	0.491	90.4	330	18.4	5	
K	39	2	He	-27.795	-21.2	65400	2.4	100	
Ca	43	2	He	23.855	73.3	37	41.7	100	
Ca	44	2	He	-27.070	-64.3	763	32.2	100	
V	51	2	He	-0.020	-411.1	5089	3.6	2.5	
Cr	52	2	He	0.091	80.0	2732	7.0	2.5	
Mn	55	2	He	-0.116	-47.5	633	18.0	2.5	
Fe	56	2	He	3.931	4.9	19094	3.1	100	
Co	59	2	He	-0.019	-40.7	217	16.2	2.5	
Ni	60	2	He	-0.451	-8.9	370	12.4	2.5	
Cu	63	2	He	-0.671	-6.8	853	17.6	2.5	
Zn	66	2	He	-0.326	-13.5	300	10.0	2.5	
As	75	2	He	0.112	13.7	286	3.6	2.5	
Se	78	2	He	-0.404	-38.4	59	8.5	2.5	
B	11	1	nogas	14.826	45.2	78418	2.7	10	CCB Main CR1 Failed
Si	28	1	nogas	-42.210	-19.3	877590	0.1	5	
Ca	43	1	nogas	15.260	11.1	990	2.0	100	
Ca	44	1	nogas	-352.941	-1.0	57796	2.3	100	
Fe	56	1	nogas	-5.399	-38.4	910295	2.1	100	
Se	77	1	nogas	57.219	10.3	60524	3.7	2.5	CCB Main CR1 Failed
Se	82	1	nogas	0.372	168.3	447	16.5	2.5	
Mo	95	1	nogas	0.108	42.1	443	32.7	2.5	
Sn	118	1	nogas	0.080	58.5	1173	23.9	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.063	36.6	337	20.9	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.274	16.5	1237	7.6	2.5	
P	31	1	nogas	5.817	23.1	42401	1.0	10	
La	139	1	nogas	-6.202	-474.1	90	40.1	2.5	
Au	197	1	nogas	109.167	60.5	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	361550	4.76	309366	116.87	70	125	
Ge	72	1	nogas	1699525	1.93	1624816	104.60	70	125	
In	115	1	nogas	1782388	2.79	1701792	104.74	70	125	
Bi	209	1	nogas	1578108	8.78	1450658	108.79	70	125	
Ge	72	2	He	329766	1.24	341080	96.68	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\102
Acq Date Time	2017-10-20T13:27:13-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
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	90.735	5.636	240184	2.84	100	90.7	90	110	
Na	23	1	nogas	10564.888	1.751	119584132	1.67	10000	105.6	90	110	
Mg	24	1	nogas	10299.845	2.762	81811502	2.74	10000	103.0	90	110	
Al	27	1	nogas	103.418	2.097	949371	2.37	100	103.4	90	110	
K	39	1	nogas	9935.847	0.642	96224594	0.26	10000	99.4	90	110	
Ti	47	1	nogas	100.789	0.128	94662	0.43	100	100.8	90	110	
V	51	1	nogas	133.607	3.413	2794024	2.28	100	133.6	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	99.413	1.997	1252802	1.60	100	99.4	90	110	
Mn	55	1	nogas	107.058	2.717	1669094	2.43	100	107.1	90	110	
Co	59	1	nogas	102.145	1.679	1389483	1.33	100	102.1	90	110	
Ni	60	1	nogas	98.324	0.666	298291	0.43	100	98.3	90	110	
Cu	63	1	nogas	96.958	0.947	741318	1.22	100	97.0	90	110	
Zn	66	1	nogas	104.229	1.763	248643	1.44	100	104.2	90	110	
As	75	1	nogas	108.721	6.373	470176	3.97	100	108.7	90	110	
Sr	88	1	nogas	102.204	1.651	1707988	1.98	100	102.2	90	110	
Ag	107	1	nogas	96.624	2.332	964654	2.01	100	96.6	90	110	
Cd	111	1	nogas	98.077	1.174	201558	1.00	100	98.1	90	110	
Sb	121	1	nogas	101.597	0.155	878303	0.29	100	101.6	90	110	
Tl	205	1	nogas	93.292	4.601	1679252	3.56	100	93.3	90	110	
Pb	208	1	nogas	92.219	1.676	2224421	1.14	100	92.2	90	110	
U	238	1	nogas	98.375	1.591	2468889	1.50	100	98.4	90	110	
[Pb]	206	1	nogas	93.065	2.816	541492	2.22	100	93.1	90	110	
[Pb]	207	1	nogas	93.136	1.546	490714	1.02	100	93.1	90	110	
Na	23	2	He	10399.419	1.673	5871944	1.24	10000	104.0	90	110	
Mg	24	2	He	10213.135	1.126	3110388	1.13	10000	102.1	90	110	
Al	27	2	He	94.645	3.670	13405	4.03	100	94.6	90	110	
K	39	2	He	10106.679	0.689	2763522	0.67	10000	101.1	90	110	
Ca	43	2	He	9442.590	2.267	8135	2.29	10000	94.4	90	110	
Ca	44	2	He	9668.781	1.645	138973	2.13	10000	96.7	90	110	
V	51	2	He	100.708	1.998	268280	1.60	100	100.7	90	110	
Cr	52	2	He	105.105	2.123	327617	2.43	100	105.1	90	110	
Mn	55	2	He	100.331	1.085	195256	0.74	100	100.3	90	110	
Fe	56	2	He	10068.490	0.959	27560384	1.12	10000	100.7	90	110	
Co	59	2	He	106.329	2.075	479787	1.81	100	106.3	90	110	
Ni	60	2	He	103.632	2.176	124508	2.08	100	103.6	90	110	
Cu	63	2	He	103.347	2.346	331312	1.89	100	103.3	90	110	
Zn	66	2	He	101.229	2.964	67615	2.44	100	101.2	90	110	
As	75	2	He	98.877	1.229	52610	1.46	100	98.9	90	110	
Se	78	2	He	93.797	2.685	3342	2.51	100	93.8	90	110	
B	11	1	nogas	625.766	5.061	570112	1.67	500	125.2	90	110	CCV Main CR1-2 Failed
Si	28	1	nogas	5110.068	2.177	12135813	2.01	5000	102.2	90	110	
Ca	43	1	nogas	10278.260	0.789	186213	0.82	10000	102.8	90	110	
Ca	44	1	nogas	9709.035	0.426	2994994	0.49	10000	97.1	90	110	
Fe	56	1	nogas	10265.310	2.299	143138403	2.01	10000	102.7	90	110	
Se	77	1	nogas	138.595	16.789	79517	5.87	100	138.6	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	99.549	2.631	13805	2.54	100	99.5	90	110	
Mo	95	1	nogas	98.484	1.194	342241	1.36	100	98.5	90	110	
Sn	118	1	nogas	97.446	2.755	547213	1.79	100	97.4	90	110	
Ba	137	1	nogas	95.364	0.598	261494	0.55	100	95.4	90	110	
Sb	121	2	He	102.493	2.052	243753	2.42	100	102.5	90	110	
Li	7	1	nogas	101.523	0.221	642410	3.06	100	101.5	90	110	
P	31	1	nogas	492.346	0.849	195436	0.95	500	98.5	90	110	
La	139	1	nogas	95.955	36.907	220	20.83	100	96.0	90	110	
Au	197	1	nogas	180.713	95.312	23	65.47	100	180.7	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	346200	3.05	309366	111.91	70	125	
Ge	72	1	nogas	1777606	0.34	1624816	109.40	70	125	
In	115	1	nogas	1841475	0.98	1701792	108.21	70	125	
Bi	209	1	nogas	1614816	1.04	1450658	111.32	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	333339	0.50	341080	97.73	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	155_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102
Acq Date Time	2017-10-20T13:29:11-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
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	41.1	253	33.6	1	
Na	23	1	nogas	150.390	6.4	3992409	1.1	100	CCB Main CR1 Failed
Mg	24	1	nogas	11.204	1.9	103841	0.2	100	
Al	27	1	nogas	1.307	17.4	25945	5.4	5	
K	39	1	nogas	-62.845	-28.4	4841999	0.9	100	
Ti	47	1	nogas	0.060	110.3	277	23.2	2.5	
V	51	1	nogas	35.264	10.2	1348262	5.3	2.5	CCB Main CR1 Failed
Cr	52	1	nogas	-0.118	-95.1	31924	5.6	2.5	
Mn	55	1	nogas	0.130	17.3	16257	4.1	2.5	
Co	59	1	nogas	0.012	164.6	1083	22.8	2.5	
Ni	60	1	nogas	-0.448	-16.3	2180	7.6	2.5	
Cu	63	1	nogas	-0.154	-2.8	3867	3.5	2.5	
Zn	66	1	nogas	-0.067	-141.1	2050	12.5	2.5	
As	75	1	nogas	11.416	15.6	198149	4.6	2.5	CCB Main CR1 Failed
Sr	88	1	nogas	0.306	9.6	5871	9.2	2.5	
Ag	107	1	nogas	0.050	21.6	817	13.4	2.5	
Cd	111	1	nogas	0.033	60.3	67	60.6	1	
Sb	121	1	nogas	0.223	21.5	3941	8.7	2.5	
Tl	205	1	nogas	0.148	49.4	2754	47.8	1	
Pb	208	1	nogas	0.043	34.8	1560	22.9	2.5	
U	238	1	nogas	0.044	36.0	1213	32.8	2.5	
[Pb]	206	1	nogas	0.039	23.4	327	15.1	2.5	
[Pb]	207	1	nogas	0.053	56.5	397	39.9	2.5	
Na	23	2	He	203.040	2.0	265457	0.4	100	CCB Main CR1 Failed
Mg	24	2	He	11.785	2.9	4397	3.0	100	
Al	27	2	He	0.799	41.5	380	11.5	5	
K	39	2	He	-24.441	-29.1	66293	2.9	100	
Ca	43	2	He	45.995	57.1	57	40.8	100	
Ca	44	2	He	-24.731	-23.1	813	9.9	100	
V	51	2	He	0.347	11.9	6170	1.1	2.5	
Cr	52	2	He	0.105	58.2	2837	7.0	2.5	
Mn	55	2	He	-0.080	-89.0	717	19.9	2.5	
Fe	56	2	He	4.549	4.1	21216	3.1	100	
Co	59	2	He	0.000	-24606.1	307	19.9	2.5	
Ni	60	2	He	-0.513	-9.4	303	19.0	2.5	
Cu	63	2	He	-0.618	-4.6	1040	8.4	2.5	
Zn	66	2	He	-0.247	-40.5	360	19.4	2.5	
As	75	2	He	0.127	6.9	300	1.1	2.5	
Se	78	2	He	0.260	155.6	84	16.7	2.5	
B	11	1	nogas	137.291	3.0	190971	2.7	10	CCB Main CR1 Failed
Si	28	1	nogas	-81.181	-15.2	833103	0.9	5	
Ca	43	1	nogas	10.667	96.1	950	16.5	100	
Ca	44	1	nogas	-360.793	-0.8	58184	3.1	100	
Fe	56	1	nogas	-1.224	-366.6	1009400	3.4	100	
Se	77	1	nogas	65.569	16.2	64996	5.1	2.5	CCB Main CR1 Failed
Se	82	1	nogas	0.219	470.6	447	30.6	2.5	
Mo	95	1	nogas	0.069	32.6	330	21.9	2.5	
Sn	118	1	nogas	0.062	42.7	1107	14.5	5	

Continuing Calibration Blank (CCB) Report

Ba	137	1	nogas	0.052	15.2	317	6.6	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Sb	121	2	He	0.169	32.4	1010	12.4	2.5	
P	31	1	nogas	-0.309	-1505.5	42441	0.9	10	
La	139	1	nogas	-37.947	-47.1	53	43.3	2.5	
Au	197	1	nogas	106.448	164.4	17	91.7	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	378770	2.09	309366	122.43	70	125	
Ge	72	1	nogas	1778208	2.71	1624816	109.44	70	125	
In	115	1	nogas	1840376	1.84	1701792	108.14	70	125	
Bi	209	1	nogas	1603113	1.36	1450658	110.51	70	125	
Ge	72	2	He	336887	0.83	341080	98.77	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	171_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102
Acq Date Time	2017-10-20T14:01:17-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
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	93.296	1.851	234744	0.40	100	93.3	90	110	
Na	23	1	nogas	12396.390	0.511	135321795	0.52	10000	124.0	90	110	CCV Main CR1-2 Failed
Mg	24	1	nogas	10283.589	2.830	78995489	2.70	10000	102.8	90	110	
Al	27	1	nogas	104.148	2.942	940053	1.64	100	104.1	90	110	
K	39	1	nogas	10518.800	6.198	99840458	4.65	10000	105.2	90	110	
Ti	47	1	nogas	102.705	1.929	94863	0.80	100	102.7	90	110	
V	51	1	nogas	118.098	3.243	2523454	0.64	100	118.1	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	103.183	4.067	1277684	3.71	100	103.2	90	110	
Mn	55	1	nogas	106.997	0.535	1641355	3.16	100	107.0	90	110	
Co	59	1	nogas	107.130	4.166	1432640	1.51	100	107.1	90	110	
Ni	60	1	nogas	106.490	3.923	317329	1.23	100	106.5	90	110	
Cu	63	1	nogas	100.405	4.634	754437	2.00	100	100.4	90	110	
Zn	66	1	nogas	101.931	1.940	239199	0.93	100	101.9	90	110	
As	75	1	nogas	101.100	5.093	441379	1.36	100	101.1	90	110	
Sr	88	1	nogas	103.700	1.658	1705146	3.90	100	103.7	90	110	
Ag	107	1	nogas	97.298	3.752	955240	2.65	100	97.3	90	110	
Cd	111	1	nogas	97.047	1.338	196210	1.43	100	97.0	90	110	
Sb	121	1	nogas	102.815	2.942	874092	2.18	100	102.8	90	110	
Tl	205	1	nogas	95.760	7.723	1569738	4.88	100	95.8	90	110	
Pb	208	1	nogas	97.412	3.430	2141170	0.70	100	97.4	90	110	
U	238	1	nogas	101.139	2.598	2313684	2.16	100	101.1	90	110	
[Pb]	206	1	nogas	97.711	3.847	518058	0.95	100	97.7	90	110	
[Pb]	207	1	nogas	100.027	3.889	480209	1.22	100	100.0	90	110	
Na	23	2	He	12244.956	0.943	6898582	1.26	10000	122.4	90	110	CCV Main CR1-2 Failed
Mg	24	2	He	10044.583	0.929	3063928	0.93	10000	100.4	90	110	
Al	27	2	He	94.069	3.500	13345	3.53	100	94.1	90	110	
K	39	2	He	10485.735	1.921	2864439	1.87	10000	104.9	90	110	
Ca	43	2	He	9945.565	1.309	8582	2.16	10000	99.5	90	110	
Ca	44	2	He	9687.815	1.334	139450	0.62	10000	96.9	90	110	
V	51	2	He	101.332	1.567	270332	0.48	100	101.3	90	110	
Cr	52	2	He	102.537	0.888	320186	1.62	100	102.5	90	110	
Mn	55	2	He	98.885	1.528	192754	0.86	100	98.9	90	110	
Fe	56	2	He	9992.224	0.849	27395281	1.10	10000	99.9	90	110	
Co	59	2	He	104.490	1.563	472241	1.14	100	104.5	90	110	
Ni	60	2	He	102.399	1.894	123226	1.23	100	102.4	90	110	
Cu	63	2	He	104.548	1.488	335661	0.80	100	104.5	90	110	
Zn	66	2	He	100.990	2.181	67582	3.15	100	101.0	90	110	
As	75	2	He	100.867	1.528	53744	0.47	100	100.9	90	110	
Se	78	2	He	94.877	2.179	3384	1.09	100	94.9	90	110	
B	11	1	nogas	481.783	3.105	431034	3.20	500	96.4	90	110	
Si	28	1	nogas	5202.382	3.006	12131504	1.06	5000	104.0	90	110	
Ca	43	1	nogas	10324.692	3.583	183913	1.40	10000	103.2	90	110	
Ca	44	1	nogas	10030.850	2.050	3038093	1.90	10000	100.3	90	110	
Fe	56	1	nogas	10648.212	3.568	145950091	0.96	10000	106.5	90	110	
Se	77	1	nogas	95.265	17.164	69673	1.95	100	95.3	90	110	
Se	82	1	nogas	99.234	5.027	13529	2.26	100	99.2	90	110	
Mo	95	1	nogas	100.669	2.915	343989	0.59	100	100.7	90	110	
Sn	118	1	nogas	99.355	0.439	548947	0.34	100	99.4	90	110	
Ba	137	1	nogas	93.484	0.895	252185	1.00	100	93.5	90	110	
Sb	121	2	He	102.087	0.505	243174	1.31	100	102.1	90	110	
Li	7	1	nogas	102.164	2.839	613589	1.99	100	102.2	90	110	
P	31	1	nogas	544.678	5.328	208104	1.87	500	108.9	90	110	
La	139	1	nogas	134.422	18.401	263	11.60	100	134.4	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	84.890	230.814	13	114.56	100	84.9	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	328777	1.87	309366	106.27	70	125	
Ge	72	1	nogas	1748813	2.65	1624816	107.63	70	125	
In	115	1	nogas	1811535	0.11	1701792	106.45	70	125	
Bi	209	1	nogas	1472400	2.98	1450658	101.50	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	333879	1.06	341080	97.89	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	172_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102
Acq Date Time	2017-10-20T14:03:15-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
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	0.050	40.6	167	33.0	1	
Na	23	1	nogas	1823.048	1.6	22215949	0.6	100	CCB Main CR1 Failed
Mg	24	1	nogas	12.399	7.2	110614	8.3	100	
Al	27	1	nogas	1.414	2.6	26870	0.7	5	
K	39	1	nogas	-26.115	-42.0	5165752	0.7	100	
Ti	47	1	nogas	0.050	119.5	267	22.6	2.5	
V	51	1	nogas	9.119	25.7	960365	1.8	2.5	CCB Main CR1 Failed
Cr	52	1	nogas	-0.824	-7.5	23178	1.6	2.5	
Mn	55	1	nogas	-0.028	-167.0	13775	4.1	2.5	
Co	59	1	nogas	0.011	145.1	1073	22.4	2.5	
Ni	60	1	nogas	2.176	8.8	10020	3.9	2.5	
Cu	63	1	nogas	0.929	9.8	12054	4.3	2.5	
Zn	66	1	nogas	-0.284	-11.8	1533	6.8	2.5	
As	75	1	nogas	0.769	326.6	167767	2.3	2.5	
Sr	88	1	nogas	0.346	6.5	6508	5.3	2.5	
Ag	107	1	nogas	0.048	48.8	800	31.3	2.5	
Cd	111	1	nogas	0.039	30.3	80	33.1	1	
Sb	121	1	nogas	0.203	15.4	3767	7.6	2.5	
Tl	205	1	nogas	0.270	46.2	4514	43.1	1	
Pb	208	1	nogas	0.033	23.2	1227	11.9	2.5	
U	238	1	nogas	0.048	44.6	1210	38.9	2.5	
[Pb]	206	1	nogas	0.052	39.0	367	26.2	2.5	
[Pb]	207	1	nogas	0.039	23.9	293	14.2	2.5	
Na	23	2	He	1900.033	1.5	1200653	1.1	100	CCB Main CR1 Failed
Mg	24	2	He	11.877	6.4	4394	4.8	100	
Al	27	2	He	0.362	133.0	317	21.0	5	
K	39	2	He	7.254	54.2	74732	1.4	100	
Ca	43	2	He	225.336	152.4	210	140.3	100	CCB Main CR1 Failed
Ca	44	2	He	94.689	187.8	2509	100.7	100	
V	51	2	He	-0.185	-31.8	4733	3.6	2.5	
Cr	52	2	He	0.093	62.4	2780	6.9	2.5	
Mn	55	2	He	-0.099	-81.9	673	23.0	2.5	
Fe	56	2	He	4.102	4.5	19841	2.9	100	
Co	59	2	He	-0.028	-43.8	177	32.2	2.5	
Ni	60	2	He	-0.453	-16.8	373	24.9	2.5	
Cu	63	2	He	-0.670	-7.4	867	18.0	2.5	
Zn	66	2	He	-0.252	-54.2	353	25.5	2.5	
As	75	2	He	0.085	91.9	276	14.9	2.5	
Se	78	2	He	-0.238	-89.2	66	10.9	2.5	
B	11	1	nogas	40.918	9.0	97017	2.5	10	CCB Main CR1 Failed
Si	28	1	nogas	-54.560	-14.8	888962	0.3	5	
Ca	43	1	nogas	24.598	34.6	1203	14.6	100	
Ca	44	1	nogas	-344.627	-1.5	62739	3.5	100	
Fe	56	1	nogas	-1.483	-164.6	1004079	3.0	100	
Se	77	1	nogas	15.278	69.0	54776	2.0	2.5	CCB Main CR1 Failed
Se	82	1	nogas	-0.409	-151.8	363	25.0	2.5	
Mo	95	1	nogas	0.108	13.7	467	12.6	2.5	
Sn	118	1	nogas	0.061	8.9	1090	1.8	5	
Ba	137	1	nogas	0.044	7.0	293	3.9	2.5	

Continuing Calibration Blank (CCB) Report

Sb	121	2	He	0.205	16.0	1090	7.2	2.5	
P	31	1	nogas	18.890	44.9	48269	3.6	10	CCB Main CR1 Failed
La	139	1	nogas	-7.501	-227.6	90	22.2	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Au	197	1	nogas	205.721	29.9	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	348429	1.15	309366	112.63	70	125	
Ge	72	1	nogas	1773499	1.97	1624816	109.15	70	125	
In	115	1	nogas	1822723	2.63	1701792	107.11	70	125	
Bi	209	1	nogas	1473137	3.43	1450658	101.55	70	125	
Ge	72	2	He	334569	0.50	341080	98.09	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	183_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102
Acq Date Time	2017-10-20T14:25:28-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
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	96.505	4.756	222649	2.05	100	96.5	90	110	
Na	23	1	nogas	12075.659	2.602	128406924	3.53	10000	120.8	90	110	CCV Main CR1-2 Failed
Mg	24	1	nogas	10025.632	2.011	74968660	1.29	10000	100.3	90	110	
Al	27	1	nogas	100.088	3.117	880310	0.36	100	100.1	90	110	
K	39	1	nogas	10080.952	4.115	93409956	1.32	10000	100.8	90	110	
Ti	47	1	nogas	98.813	0.887	88927	2.58	100	98.8	90	110	
V	51	1	nogas	92.320	2.439	2094898	1.46	100	92.3	90	110	
Cr	52	1	nogas	96.271	4.749	1162775	2.90	100	96.3	90	110	
Mn	55	1	nogas	105.020	3.174	1568510	1.85	100	105.0	90	110	
Co	59	1	nogas	97.731	5.823	1272709	3.51	100	97.7	90	110	
Ni	60	1	nogas	102.777	3.139	298456	0.66	100	102.8	90	110	
Cu	63	1	nogas	100.803	2.259	738021	1.06	100	100.8	90	110	
Zn	66	1	nogas	103.368	1.181	236276	2.16	100	103.4	90	110	
As	75	1	nogas	81.529	2.812	377564	1.39	100	81.5	90	110	CCV Main CR1-2 Failed
Sr	88	1	nogas	105.048	3.524	1680996	0.89	100	105.0	90	110	
Ag	107	1	nogas	95.138	3.197	909641	0.42	100	95.1	90	110	
Cd	111	1	nogas	95.680	4.114	191721	3.08	100	95.7	90	110	
Sb	121	1	nogas	104.024	2.884	861200	0.15	100	104.0	90	110	
Tl	205	1	nogas	99.458	2.338	1612868	1.86	100	99.5	90	110	
Pb	208	1	nogas	98.559	0.442	2141457	0.63	100	98.6	90	110	
U	238	1	nogas	99.873	2.925	2257369	2.01	100	99.9	90	110	
[Pb]	206	1	nogas	100.354	1.755	525946	0.82	100	100.4	90	110	
[Pb]	207	1	nogas	101.148	0.939	480024	0.08	100	101.1	90	110	
Na	23	2	He	11670.321	2.174	6467711	1.94	10000	116.7	90	110	CCV Main CR1-2 Failed
Mg	24	2	He	9790.001	3.616	2934665	3.69	10000	97.9	90	110	
Al	27	2	He	93.349	3.109	13015	2.83	100	93.3	90	110	
K	39	2	He	9462.179	3.827	2591935	3.72	10000	94.6	90	110	
Ca	43	2	He	9358.067	5.194	7935	5.05	10000	93.6	90	110	
Ca	44	2	He	9333.044	1.850	132064	1.73	10000	93.3	90	110	
V	51	2	He	99.748	0.868	261596	0.73	100	99.7	90	110	
Cr	52	2	He	101.908	1.976	312714	2.05	100	101.9	90	110	
Mn	55	2	He	98.867	2.536	189390	2.39	100	98.9	90	110	
Fe	56	2	He	10018.943	2.039	26992134	1.88	10000	100.2	90	110	
Co	59	2	He	103.233	2.322	458490	2.12	100	103.2	90	110	
Ni	60	2	He	101.878	0.843	120488	0.61	100	101.9	90	110	
Cu	63	2	He	102.900	2.412	324713	2.30	100	102.9	90	110	
Zn	66	2	He	100.021	0.642	65769	0.74	100	100.0	90	110	
As	75	2	He	99.969	0.620	52349	0.39	100	100.0	90	110	
Se	78	2	He	92.430	2.235	3242	2.36	100	92.4	90	110	
B	11	1	nogas	531.958	2.304	430777	0.88	500	106.4	90	110	
Si	28	1	nogas	5017.081	2.228	11431519	1.79	5000	100.3	90	110	
Ca	43	1	nogas	10521.623	1.782	182581	1.05	10000	105.2	90	110	
Ca	44	1	nogas	10083.462	2.205	2973541	1.54	10000	100.8	90	110	
Fe	56	1	nogas	10008.852	3.776	133703811	2.94	10000	100.1	90	110	
Se	77	1	nogas	22.903	30.066	54094	3.85	100	22.9	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	101.881	4.599	13519	2.13	100	101.9	90	110	
Mo	95	1	nogas	100.198	3.844	333405	1.08	100	100.2	90	110	
Sn	118	1	nogas	97.762	2.872	535350	1.13	100	97.8	90	110	
Ba	137	1	nogas	93.875	4.565	250913	2.38	100	93.9	90	110	
Sb	121	2	He	100.791	0.803	235929	0.92	100	100.8	90	110	
Li	7	1	nogas	103.559	2.309	570179	1.05	100	103.6	90	110	
P	31	1	nogas	509.049	1.967	192183	1.26	500	101.8	90	110	
La	139	1	nogas	109.005	43.460	230	24.21	100	109.0	90	110	
Au	197	1	nogas	168.748	76.187	20	50.00	100	168.7	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	301665	2.85	309366	97.51	70	125	
Ge	72	1	nogas	1703347	2.83	1624816	104.83	70	125	
In	115	1	nogas	1796153	2.31	1701792	105.54	70	125	
Bi	209	1	nogas	1454518	0.94	1450658	100.27	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	328089	0.22	341080	96.19	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	184_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102
Acq Date Time	2017-10-20T14:27:25-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
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	50.8	167	38.6	1	
Na	23	1	nogas	1397.788	3.0	17115325	0.3	100	CCB Main CR1 Failed
Mg	24	1	nogas	14.441	1.1	123391	3.2	100	
Al	27	1	nogas	1.536	5.2	26593	0.6	5	
K	39	1	nogas	-40.115	-18.6	4791835	0.9	100	
Ti	47	1	nogas	0.233	42.0	417	22.8	2.5	
V	51	1	nogas	-5.718	-11.6	706700	2.4	2.5	
Cr	52	1	nogas	-1.060	-2.0	19304	1.1	2.5	
Mn	55	1	nogas	-0.034	-71.3	13011	4.5	2.5	
Co	59	1	nogas	0.012	33.9	1023	3.1	2.5	
Ni	60	1	nogas	2.207	6.9	9626	5.4	2.5	
Cu	63	1	nogas	1.604	2.9	16334	3.6	2.5	
Zn	66	1	nogas	-0.265	-16.0	1500	8.1	2.5	
As	75	1	nogas	-10.333	-2.3	130184	2.5	2.5	
Sr	88	1	nogas	0.388	5.7	6855	3.7	2.5	
Ag	107	1	nogas	0.043	43.1	707	22.7	2.5	
Cd	111	1	nogas	0.079	32.4	157	35.2	1	
Sb	121	1	nogas	0.191	24.8	3484	9.5	2.5	
Tl	205	1	nogas	0.214	40.6	3891	39.0	1	
Pb	208	1	nogas	0.032	18.2	1290	11.2	2.5	
U	238	1	nogas	0.041	25.7	1140	22.4	2.5	
[Pb]	206	1	nogas	0.034	17.2	297	7.0	2.5	
[Pb]	207	1	nogas	0.039	24.1	320	11.3	2.5	
Na	23	2	He	1528.804	2.0	973562	1.1	100	CCB Main CR1 Failed
Mg	24	2	He	14.980	2.9	5224	2.1	100	
Al	27	2	He	0.900	79.0	383	25.6	5	
K	39	2	He	-8.446	-25.3	70552	0.8	100	
Ca	43	2	He	83.547	71.4	87	58.1	100	
Ca	44	2	He	-0.658	-432.7	1127	3.6	100	
V	51	2	He	-0.602	-6.1	3558	2.3	2.5	
Cr	52	2	He	0.034	101.8	2540	4.1	2.5	
Mn	55	2	He	-0.055	-18.2	743	2.1	2.5	
Fe	56	2	He	5.422	2.7	22945	1.2	100	
Co	59	2	He	-0.015	-46.3	233	13.1	2.5	
Ni	60	2	He	-0.411	-4.8	413	6.1	2.5	
Cu	63	2	He	-0.580	-5.2	1127	8.1	2.5	
Zn	66	2	He	-0.225	-40.5	363	16.8	2.5	
As	75	2	He	0.007	191.4	229	3.0	2.5	
Se	78	2	He	-0.333	-25.5	61	5.0	2.5	
B	11	1	nogas	41.826	3.1	91028	2.0	10	CCB Main CR1 Failed
Si	28	1	nogas	-71.140	-14.3	811139	0.8	5	
Ca	43	1	nogas	39.203	25.1	1393	12.9	100	
Ca	44	1	nogas	-333.323	-2.6	62768	2.7	100	
Fe	56	1	nogas	-5.872	-51.5	896957	2.5	100	
Se	77	1	nogas	-39.556	-5.3	41752	2.9	2.5	
Se	82	1	nogas	-0.104	-70.0	383	1.5	2.5	
Mo	95	1	nogas	0.105	48.1	430	36.5	2.5	
Sn	118	1	nogas	0.037	82.7	937	20.4	5	
Ba	137	1	nogas	0.061	8.1	330	6.1	2.5	

Continuing Calibration Blank (CCB) Report

Sb	121	2	He	0.099	35.0	820	10.4	2.5	
P	31	1	nogas	17.454	22.1	45502	1.2	10	CCB Main CR1 Failed
La	139	1	nogas	13.790	99.7	113	13.5	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	109.541	66.5	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	324424	2.48	309366	104.87	70	125	
Ge	72	1	nogas	1686686	1.98	1624816	103.81	70	125	
In	115	1	nogas	1777210	2.46	1701792	104.43	70	125	
Bi	209	1	nogas	1593028	4.27	1450658	109.81	70	125	
Ge	72	2	He	327150	0.54	341080	95.92	70	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	189_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102
Acq Date Time	2017-10-20T14:37:27-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
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	94.107	2.735	220740	0.84	100	94.1	90	110	
Na	23	1	nogas	10889.342	1.863	117140765	2.08	10000	108.9	90	110	
Mg	24	1	nogas	9624.823	1.209	72692372	0.19	10000	96.2	90	110	
Al	27	1	nogas	97.446	4.703	850204	1.27	100	97.4	90	110	
K	39	1	nogas	10068.564	5.892	92501204	1.58	10000	100.7	90	110	
Ti	47	1	nogas	99.350	5.276	88592	1.10	100	99.3	90	110	
V	51	1	nogas	78.314	10.638	1879895	0.82	100	78.3	90	110	CCV Main CR1-2 Failed
Cr	52	1	nogas	94.741	5.104	1135148	0.86	100	94.7	90	110	
Mn	55	1	nogas	104.473	5.044	1546879	0.80	100	104.5	90	110	
Co	59	1	nogas	95.574	5.229	1234574	2.33	100	95.6	90	110	
Ni	60	1	nogas	100.863	7.927	290161	2.50	100	100.9	90	110	
Cu	63	1	nogas	100.552	6.104	729541	1.99	100	100.6	90	110	
Zn	66	1	nogas	104.278	4.934	236203	0.55	100	104.3	90	110	
As	75	1	nogas	74.975	9.732	356758	0.48	100	75.0	90	110	CCV Main CR1-2 Failed
Sr	88	1	nogas	106.528	1.786	1692493	4.44	100	106.5	90	110	
Ag	107	1	nogas	94.286	7.726	892939	2.33	100	94.3	90	110	
Cd	111	1	nogas	94.753	3.326	187178	2.35	100	94.8	90	110	
Sb	121	1	nogas	103.577	5.532	850024	1.41	100	103.6	90	110	
Tl	205	1	nogas	98.514	2.395	1559589	2.24	100	98.5	90	110	
Pb	208	1	nogas	97.879	0.984	2076091	1.30	100	97.9	90	110	
U	238	1	nogas	100.551	1.190	2218884	0.88	100	100.6	90	110	
[Pb]	206	1	nogas	100.159	0.327	512479	0.66	100	100.2	90	110	
[Pb]	207	1	nogas	99.079	1.255	459041	1.54	100	99.1	90	110	
Na	23	2	He	10978.649	1.513	5914831	0.88	10000	109.8	90	110	
Mg	24	2	He	9803.439	3.019	2851885	0.93	10000	98.0	90	110	
Al	27	2	He	95.802	5.916	12958	5.33	100	95.8	90	110	
K	39	2	He	9583.988	1.499	2624365	1.46	10000	95.8	90	110	
Ca	43	2	He	9568.140	4.920	7872	2.87	10000	95.7	90	110	
Ca	44	2	He	9438.568	0.913	129643	1.27	10000	94.4	90	110	
V	51	2	He	99.808	3.122	254037	1.54	100	99.8	90	110	
Cr	52	2	He	102.529	1.455	305383	0.68	100	102.5	90	110	
Mn	55	2	He	97.374	1.364	181085	0.98	100	97.4	90	110	
Fe	56	2	He	10044.483	3.909	26260751	2.22	10000	100.4	90	110	
Co	59	2	He	105.495	2.979	454738	1.44	100	105.5	90	110	
Ni	60	2	He	104.063	2.414	119434	0.78	100	104.1	90	110	
Cu	63	2	He	106.034	2.844	324653	0.86	100	106.0	90	110	
Zn	66	2	He	102.730	1.653	65575	3.01	100	102.7	90	110	
As	75	2	He	101.288	2.351	51478	0.85	100	101.3	90	110	
Se	78	2	He	95.722	4.468	3256	2.65	100	95.7	90	110	
B	11	1	nogas	490.929	6.990	408080	3.56	500	98.2	90	110	
Si	28	1	nogas	4900.079	5.622	11088720	1.57	5000	98.0	90	110	
Ca	43	1	nogas	10378.260	7.189	178406	3.02	10000	103.8	90	110	
Ca	44	1	nogas	10053.289	6.271	2938079	1.39	10000	100.5	90	110	
Fe	56	1	nogas	9944.114	4.509	131711432	0.91	10000	99.4	90	110	
Se	77	1	nogas	-3.629	-523.272	48535	2.44	100	-3.6	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	101.399	5.542	13345	2.62	100	101.4	90	110	
Mo	95	1	nogas	101.782	4.916	335909	2.86	100	101.8	90	110	
Sn	118	1	nogas	97.111	1.272	524378	1.63	100	97.1	90	110	
Ba	137	1	nogas	91.797	2.433	241995	2.23	100	91.8	90	110	
Sb	121	2	He	101.020	1.509	229540	1.17	100	101.0	90	110	
Li	7	1	nogas	100.801	1.071	564958	1.97	100	100.8	90	110	
P	31	1	nogas	495.528	4.495	186590	1.80	500	99.1	90	110	
La	139	1	nogas	66.836	38.473	177	18.20	100	66.8	90	110	CCV Main CR1-2 Failed
Au	197	1	nogas	218.159	91.116	23	65.47	100	218.2	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	306581	2.85	309366	99.10	70	125	
Ge	72	1	nogas	1690697	5.23	1624816	104.05	70	125	
In	115	1	nogas	1770470	1.57	1701792	104.04	70	125	
Bi	209	1	nogas	1419853	0.34	1450658	97.88	70	125	

Continuing Calibration Verification (CCV) Report

Ge	72	2	He	318540	2.14	341080	93.39	70	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	190_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102
Acq Date Time	2017-10-20T14:39:24-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
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	0.049	37.0	157	29.5	1	
Na	23	1	nogas	880.122	3.1	11455825	1.0	100	CCB Main CR1 Failed
Mg	24	1	nogas	12.968	6.4	110784	4.4	100	
Al	27	1	nogas	1.699	7.5	28035	2.7	5	
K	39	1	nogas	-40.845	-20.2	4791861	0.4	100	
Ti	47	1	nogas	0.185	18.1	373	8.2	2.5	
V	51	1	nogas	-17.316	-5.5	545415	1.3	2.5	
Cr	52	1	nogas	-1.241	-4.5	17215	2.6	2.5	
Mn	55	1	nogas	-0.081	-19.2	12331	1.7	2.5	
Co	59	1	nogas	0.012	81.3	1027	12.4	2.5	
Ni	60	1	nogas	2.209	6.2	9639	2.8	2.5	
Cu	63	1	nogas	1.535	6.3	15850	3.2	2.5	
Zn	66	1	nogas	-0.179	-83.5	1693	19.3	2.5	
As	75	1	nogas	-16.605	-7.9	113652	2.1	2.5	
Sr	88	1	nogas	0.389	1.6	6885	1.8	2.5	
Ag	107	1	nogas	0.044	15.0	723	7.6	2.5	
Cd	111	1	nogas	0.057	22.5	110	24.1	1	
Sb	121	1	nogas	0.190	19.9	3484	10.2	2.5	
Tl	205	1	nogas	0.212	43.9	3597	43.4	1	
Pb	208	1	nogas	0.046	42.8	1503	29.2	2.5	
U	238	1	nogas	0.045	39.0	1143	36.1	2.5	
[Pb]	206	1	nogas	0.055	31.1	387	23.9	2.5	
[Pb]	207	1	nogas	0.058	55.8	390	40.7	2.5	
Na	23	2	He	967.536	0.9	680488	0.6	100	CCB Main CR1 Failed
Mg	24	2	He	10.988	10.4	4091	8.1	100	
Al	27	2	He	1.681	14.1	497	6.2	5	
K	39	2	He	-13.321	-3.6	69254	0.2	100	
Ca	43	2	He	62.807	56.5	70	42.9	100	
Ca	44	2	He	-0.637	-817.4	1143	5.8	100	
V	51	2	He	-0.979	-2.5	2630	1.7	2.5	
Cr	52	2	He	0.133	59.3	2880	7.5	2.5	
Mn	55	2	He	-0.104	-12.0	660	4.5	2.5	
Fe	56	2	He	4.907	2.7	21880	0.7	100	
Co	59	2	He	-0.013	-83.9	243	19.4	2.5	
Ni	60	2	He	-0.400	-3.7	433	3.5	2.5	
Cu	63	2	He	-0.624	-9.9	1003	18.7	2.5	
Zn	66	2	He	-0.193	-13.5	390	5.1	2.5	
As	75	2	He	-0.061	-90.5	197	15.1	2.5	
Se	78	2	He	-0.073	-473.6	71	17.8	2.5	
B	11	1	nogas	28.555	11.1	83175	0.7	10	CCB Main CR1 Failed
Si	28	1	nogas	-67.524	-6.9	819898	1.3	5	
Ca	43	1	nogas	21.790	22.7	1097	9.0	100	
Ca	44	1	nogas	-327.162	-0.9	64572	0.2	100	
Fe	56	1	nogas	-16.423	-9.6	759820	2.9	100	
Se	77	1	nogas	-63.215	-15.1	37305	3.8	2.5	
Se	82	1	nogas	0.129	273.2	413	10.1	2.5	
Mo	95	1	nogas	0.104	11.1	430	10.1	2.5	
Sn	118	1	nogas	0.067	33.7	1070	12.3	5	
Ba	137	1	nogas	0.083	28.2	380	17.3	2.5	

Continuing Calibration Blank (CCB) Report

Sb	121	2	He	0.100	15.5	833	3.5	2.5	
P	31	1	nogas	19.762	24.3	46244	2.1	10	CCB Main CR1 Failed
La	139	1	nogas	-29.499	-30.9	60	16.7	2.5	
Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Au	197	1	nogas	-43.767	-166.1	3	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	333555	3.56	309366	107.82	70	125	
Ge	72	1	nogas	1688848	1.24	1624816	103.94	70	125	
In	115	1	nogas	1737532	1.42	1701792	102.10	70	125	
Bi	209	1	nogas	1476877	0.79	1450658	101.81	70	125	
Ge	72	2	He	331999	0.98	341080	97.34	70	125	

Low Level Initial Calibration Verification (LLICV) Report

Sample Table

Sample Name	LLCCV5
Data File Name	191LICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102
Acq Date Time	2017-10-20T14:41:24-05:00
Sample Type	LLICV
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
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	4.134	3.051	10697	1.97	5	82.7	70	130	
Na	23	1	nogas	1175.577	2.740	14652363	1.12	500	235.1	70	130	LLICV Main CR1 Failed
Mg	24	1	nogas	520.154	4.947	3960585	2.23	500	104.0	70	130	
Al	27	1	nogas	4.631	4.592	54820	3.22	5	92.6	70	130	
K	39	1	nogas	437.712	4.581	9215883	1.78	500	87.5	70	130	
Ti	47	1	nogas	4.786	5.974	4604	6.09	5	95.7	70	130	
V	51	1	nogas	-13.399	-8.601	618227	2.38	5	-268.0	70	130	LLICV Main CR1 Failed
Cr	52	1	nogas	3.552	1.907	75294	2.58	5	71.0	70	130	
Mn	55	1	nogas	4.831	2.501	86993	0.74	5	96.6	70	130	
Co	59	1	nogas	4.812	1.147	64915	0.50	5	96.2	70	130	
Ni	60	1	nogas	6.546	2.870	22651	1.04	5	130.9	70	130	LLICV Main CR1 Failed
Cu	63	1	nogas	6.213	3.419	51082	2.17	5	124.3	70	130	
Zn	66	1	nogas	4.644	4.898	12901	3.46	5	92.9	70	130	
As	75	1	nogas	-14.049	-13.328	124069	3.74	5	-281.0	70	130	LLICV Main CR1 Failed
Sr	88	1	nogas	4.877	3.564	80430	2.11	5	97.5	70	130	
Ag	107	1	nogas	4.997	4.380	49112	3.79	5	99.9	70	130	
Cd	111	1	nogas	4.941	3.135	9773	2.26	5	98.8	70	130	
Sb	121	1	nogas	5.008	3.329	44237	2.06	5	100.2	70	130	
Tl	205	1	nogas	4.612	5.775	77253	1.92	5	92.2	70	130	
Pb	208	1	nogas	4.717	3.961	106277	1.67	5	94.3	70	130	
U	238	1	nogas	4.623	1.764	108025	2.15	5	92.5	70	130	
[Pb]	206	1	nogas	4.870	4.295	26435	0.52	5	97.4	70	130	
[Pb]	207	1	nogas	4.802	4.396	23624	1.55	5	96.0	70	130	
Na	23	2	He	1291.469	0.929	849950	0.52	500	258.3	70	130	LLICV Main CR1 Failed
Mg	24	2	He	507.858	1.175	153315	1.09	500	101.6	70	130	
Al	27	2	He	3.804	10.785	783	8.31	5	76.1	70	130	
K	39	2	He	465.180	2.324	196646	1.46	500	93.0	70	130	
Ca	43	2	He	453.008	21.483	400	19.84	500	90.6	70	130	
Ca	44	2	He	420.697	5.757	7058	4.89	500	84.1	70	130	
V	51	2	He	3.961	4.167	15336	2.25	5	79.2	70	130	
Cr	52	2	He	5.086	2.054	17969	0.68	5	101.7	70	130	
Mn	55	2	He	4.753	4.774	9936	3.62	5	95.1	70	130	
Fe	56	2	He	524.209	3.923	1423367	2.78	500	104.8	70	130	
Co	59	2	He	5.201	2.913	23435	1.81	5	104.0	70	130	
Ni	60	2	He	4.752	4.694	6491	4.26	5	95.0	70	130	
Cu	63	2	He	4.469	2.043	16961	1.80	5	89.4	70	130	
Zn	66	2	He	4.800	8.962	3654	8.73	5	96.0	70	130	
As	75	2	He	5.120	7.760	2901	6.28	5	102.4	70	130	
Se	78	2	He	4.933	11.252	243	8.00	5	98.7	70	130	
B	11	1	nogas	31.934	4.750	86798	3.20	25	127.7	70	130	
Si	28	1	nogas	246.093	4.102	1512582	0.10	25	984.4	70	130	LLICV Main CR1 Failed
Ca	43	1	nogas	502.835	0.791	9623	1.30	500	100.6	70	130	
Ca	44	1	nogas	131.728	14.482	197438	1.28	500	26.3	70	130	LLICV Main CR1 Failed
Fe	56	1	nogas	503.045	1.642	7820494	1.88	500	100.6	70	130	
Se	77	1	nogas	-65.426	-6.805	38000	0.85	5	-1308.5	70	130	LLICV Main CR1 Failed
Se	82	1	nogas	5.004	18.816	1067	10.54	5	100.1	70	130	
Mo	95	1	nogas	4.705	0.688	16084	2.00	5	94.1	70	130	
Sn	118	1	nogas	4.635	0.885	25756	1.61	5	92.7	70	130	
Ba	137	1	nogas	4.752	3.460	12705	4.37	5	95.0	70	130	
Sb	121	2	He	5.098	1.703	12525	2.40	5	102.0	70	130	
Li	7	1	nogas	4.524	4.361	59287	2.21	5	90.5	70	130	
P	31	1	nogas	36.743	7.376	52797	0.81	25	147.0	70	130	LLICV Main CR1 Failed
La	139	1	nogas	-13.929	-55.847	80	12.50	5	-278.6	70	130	LLICV Main CR1 Failed
Au	197	1	nogas	36.217	342.317	10	100.00	5	724.3	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	337213	3.76	309366	109.00	70	125	
Ge	72	1	nogas	1739608	1.50	1624816	107.06	70	125	
In	115	1	nogas	1772527	0.94	1701792	104.16	70	125	
Bi	209	1	nogas	1502725	3.93	1450658	103.59	70	125	

Low Level Initial Calibration Verification (LLICV) Report

Ge	72	2	He	328899	1.13	341080	96.43	70	125	

Sample Report

Sample Table

Sample Name	LLCCV2
Data File Name	192SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102
Acq Date Time	2017-10-20T14:43:23-05:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	004CALB.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	1.713	1.713	3.65	4381	0.04	2000	
Na	23	1	nogas	815.865	815.865	1.50	11085930	0.01	200000	
Mg	24	1	nogas	206.505	206.505	4.79	1618120	0.01	200000	
Al	27	1	nogas	2.070	2.070	12.44	31163	0.01	2000	
K	39	1	nogas	164.657	164.657	12.74	6570070	0.00	200000	
Ti	47	1	nogas	2.098	2.098	14.84	2070	0.10	2000	
V	51	1	nogas	-14.389	-14.389	-11.52	585757	0.00	2000	
Cr	52	1	nogas	0.747	0.747	13.16	40358	0.00	2000	
Mn	55	1	nogas	1.819	1.819	6.74	40194	0.00	2000	
Co	59	1	nogas	1.980	1.980	5.99	26409	0.01	2000	
Ni	60	1	nogas	4.132	4.132	7.20	15100	0.03	2000	
Cu	63	1	nogas	3.417	3.417	5.94	29407	0.01	2000	
Zn	66	1	nogas	1.899	1.899	3.10	6361	0.03	2000	
As	75	1	nogas	-14.040	-14.040	-10.14	120381	-0.01	2000	
Sr	88	1	nogas	2.044	2.044	5.05	33114	0.01	2000	
Ag	107	1	nogas	2.011	2.011	4.00	19348	0.01	2000	
Cd	111	1	nogas	2.030	2.030	4.16	4081	0.05	2000	
Sb	121	1	nogas	2.005	2.005	2.87	18337	0.01	2000	
Tl	205	1	nogas	1.879	1.879	5.71	31517	0.01	2000	
Pb	208	1	nogas	1.924	1.924	2.72	43631	0.00	2000	
U	238	1	nogas	1.782	1.782	5.71	41631	0.00	2000	
[Pb]	206	1	nogas	1.924	1.924	6.46	10497	0.02	2000	
[Pb]	207	1	nogas	1.926	1.926	7.28	9536	0.02	2000	
Na	23	2	He	943.095	943.095	2.57	665472	0.14	200000	
Mg	24	2	He	201.951	201.951	0.84	61872	0.33	200000	
Al	27	2	He	1.814	1.814	24.78	513	0.35	2000	
K	39	2	He	173.673	173.673	1.91	119038	0.15	200000	
Ca	43	2	He	231.372	231.372	34.08	213	108.45	200000	
Ca	44	2	He	138.266	138.266	6.15	3107	4.45	200000	
V	51	2	He	0.955	0.955	3.35	7644	0.01	2000	
Cr	52	2	He	2.186	2.186	5.20	9182	0.02	2000	
Mn	55	2	He	1.660	1.660	13.37	4051	0.04	2000	
Fe	56	2	He	200.691	200.691	2.77	554079	0.04	200000	
Co	59	2	He	2.055	2.055	3.34	9509	0.02	2000	
Ni	60	2	He	1.488	1.488	17.27	2667	0.06	2000	
Cu	63	2	He	1.526	1.526	4.45	7795	0.02	2000	
Zn	66	2	He	1.957	1.957	10.40	1807	0.11	2000	
As	75	2	He	1.776	1.776	6.95	1162	0.15	2000	
Se	78	2	He	1.650	1.650	21.43	131	1.26	2000	
B	11	1	nogas	18.622	18.622	41.42	74995	0.02	2000	
Si	28	1	nogas	2.880	2.880	539.56	964453	0.00	2000	
Ca	43	1	nogas	189.139	189.139	5.86	3964	4.77	200000	
Ca	44	1	nogas	-161.093	-161.093	-9.32	110476	-0.15	200000	
Fe	56	1	nogas	202.810	202.810	4.41	3639406	0.01	200000	
Se	77	1	nogas	-64.532	-64.532	-14.77	37025	-0.17	2000	
Se	82	1	nogas	1.952	1.952	23.23	647	0.30	2000	

Sample Report

Mo	95	1	nogas	2.047	2.047	7.08	6828	0.03	2000	
Sn	118	1	nogas	1.898	1.898	4.06	11160	0.02	2000	
Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Ba	137	1	nogas	1.856	1.856	6.21	5148	0.04	2000	
Sb	121	2	He	2.047	2.047	2.72	5424	0.04	2000	
La	139	1	nogas	10.056	10.056	314.95	110	9.14	2000	
Au	197	1	nogas	-44.196	-44.196	-162.84	3	-1325.87	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	331849	3.06	309366	107.27	70	125	
Ge	72	1	nogas	1688069	3.13	1624816	103.89	70	125	
In	115	1	nogas	1803049	3.45	1701792	105.95	70	125	
Bi	209	1	nogas	1501326	3.54	1450658	103.49	70	125	
Ge	72	2	He	331275	2.20	341080	97.13	70	125	

Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	ICSA
Data File Name	193ICSA.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102
Acq Date Time	2017-10-20T14:45:23-05:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
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	0.013	152.8	63	77.9	0	ICSA Main CR1 Failed
Na	23	1	nogas	106760.662	3.0	1053761990	2.3	0	
Mg	24	1	nogas	104764.215	4.0	738135833	3.4	0	
Al	27	1	nogas	108743.521	2.4	858893107	0.4	0	
K	39	1	nogas	108688.202	2.2	872431753	1.3	0	
Ti	47	1	nogas	2239.414	1.5	1833689	2.8	0	
V	51	1	nogas	-5.296	-51.1	655747	3.7	0	ICSA Main CR1 Failed
Cr	52	1	nogas	0.651	19.8	36106	2.1	0	ICSA Main CR1 Failed
Mn	55	1	nogas	-0.002	-1801.4	12418	3.1	0	ICSA Main CR1 Failed
Co	59	1	nogas	0.044	21.9	1330	9.1	0	ICSA Main CR1 Failed
Ni	60	1	nogas	3.486	8.4	12204	5.0	0	ICSA Main CR1 Failed
Cu	63	1	nogas	2.224	6.7	19137	3.0	0	ICSA Main CR1 Failed
Zn	66	1	nogas	4.162	6.9	10517	3.4	0	ICSA Main CR1 Failed
As	75	1	nogas	0.144	1454.1	145401	1.4	0	ICSA Main CR1 Failed
Sr	88	1	nogas	1.095	4.4	16628	4.0	0	ICSA Main CR1 Failed
Ag	107	1	nogas	0.041	18.9	640	12.5	0	ICSA Main CR1 Failed
Cd	111	1	nogas	0.937	16.5	1703	15.6	0	ICSA Main CR1 Failed
Sb	121	1	nogas	0.018	132.8	1903	7.4	0	ICSA Main CR1 Failed
Tl	205	1	nogas	0.021	37.8	407	29.3	0	ICSA Main CR1 Failed
Pb	208	1	nogas	0.090	8.0	2230	6.2	0	ICSA Main CR1 Failed
[Pb]	206	1	nogas	0.101	7.4	567	6.7	0	ICSA Main CR1 Failed
[Pb]	207	1	nogas	0.095	24.8	507	20.0	0	ICSA Main CR1 Failed
Na	23	2	He	104451.212	3.7	52480803	4.0	0	
Mg	24	2	He	102935.270	0.4	28550822	2.0	0	
Al	27	2	He	96401.389	1.0	12188974	1.1	0	
K	39	2	He	92916.911	1.5	24810255	1.5	0	
Ca	43	2	He	91990.672	0.4	72063	1.8	0	
Ca	44	2	He	94733.533	3.7	1231186	4.7	0	
V	51	2	He	-0.630	-6.7	3235	2.3	0	ICSA Main CR1 Failed
Cr	52	2	He	1.569	3.5	6681	0.9	0	ICSA Main CR1 Failed
Mn	55	2	He	-0.087	-12.4	633	4.6	0	ICSA Main CR1 Failed
Fe	56	2	He	103402.100	1.2	257777049	2.7	0	
Co	59	2	He	-0.026	-22.6	170	15.6	0	ICSA Main CR1 Failed
Ni	60	2	He	-0.277	-21.6	530	12.4	0	ICSA Main CR1 Failed
Cu	63	2	He	-0.362	-13.0	1680	9.2	0	ICSA Main CR1 Failed
Zn	66	2	He	3.200	5.9	2407	6.3	0	ICSA Main CR1 Failed
As	75	2	He	0.184	12.5	298	3.4	0	ICSA Main CR1 Failed
Se	78	2	He	-0.343	-83.9	57	17.4	0	ICSA Main CR1 Failed
B	11	1	nogas	20.942	22.0	74188	4.1	0	
Si	28	1	nogas	90.481	101.2	1053209	15.4	0	
Ca	43	1	nogas	114042.709	4.4	1797725	3.2	0	
Ca	44	1	nogas	108050.783	3.9	27664475	2.7	0	
Fe	56	1	nogas	106064.804	5.0	1282994562	3.0	0	
Se	77	1	nogas	9.102	100.3	46894	1.0	0	
Se	82	1	nogas	1.011	42.2	483	8.4	0	ICSA Main CR1 Failed
Mo	95	1	nogas	2266.336	3.3	6877135	2.3	0	
Sn	118	1	nogas	0.065	35.5	993	12.6	0	ICSA Main CR1 Failed
Ba	137	1	nogas	0.213	27.0	670	18.3	0	ICSA Main CR1 Failed
Sb	121	2	He	-0.003	-1092.1	540	11.3	0	ICSA Main CR1 Failed

Interference Check Solution A (ICS-A) Report

P	31	1	nogas	202765.514	3.4	55022816	1.1	0	
La	139	1	nogas	354.829	52.6	483	45.2	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	320243	0.89	309366	103.52	70	125	
Ge	72	1	nogas	1553202	2.39	1624816	95.59	70	125	
In	115	1	nogas	1631100	2.54	1701792	95.85	70	125	
Bi	209	1	nogas	1323873	0.50	1450658	91.26	70	125	
Ge	72	2	He	303640	1.64	341080	89.02	70	125	

Interference Check Solution AB (ICS-AB) Report

Sample Table

Sample Name	ICSAB
Data File Name	194ICSB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102
Acq Date Time	2017-10-20T14:47:28-05:00
Sample Type	ICSB
Dilution	1
Comment	
ISTD Ref File Name	004CALB.d
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	88.917	2.748	199894	1.64	100	88.9	80	120	
Na	23	1	nogas	120372.844	2.419	1155191292	1.34	100	120372.8	80	120	ICSB Main CR1 Failed
Mg	24	1	nogas	115060.568	1.401	788526801	1.54	100	115060.6	80	120	
Al	27	1	nogas	110810.234	1.780	863721934	1.54	100	110810.2	80	120	ICSB Main CR1 Failed
K	39	1	nogas	123333.750	4.785	975985855	3.52	100	123333.8	80	120	ICSB Main CR1 Failed
Ti	47	1	nogas	2346.838	4.215	1894748	1.44	100	2346.8	80	120	
V	51	1	nogas	98.708	1.712	1966274	2.34	100	98.7	80	120	
Cr	52	1	nogas	94.291	4.700	1025242	2.21	100	94.3	80	120	
Mn	55	1	nogas	97.173	3.872	1306701	2.36	100	97.2	80	120	
Co	59	1	nogas	93.891	4.673	1100309	1.50	100	93.9	80	120	
Ni	60	1	nogas	101.155	6.264	264236	3.79	100	101.2	80	120	
Cu	63	1	nogas	95.905	5.388	631797	3.67	100	95.9	80	120	
Zn	66	1	nogas	101.038	2.690	207833	2.74	100	101.0	80	120	
As	75	1	nogas	94.693	4.186	371442	1.86	100	94.7	80	120	
Sr	88	1	nogas	100.804	5.702	1451556	4.63	100	100.8	80	120	
Ag	107	1	nogas	91.614	3.555	788143	0.90	100	91.6	80	120	
Cd	111	1	nogas	96.570	2.940	169751	2.06	100	96.6	80	120	
Sb	121	1	nogas	101.050	4.868	752534	2.06	100	101.1	80	120	
Tl	205	1	nogas	92.706	1.863	1330153	0.83	100	92.7	80	120	
Pb	208	1	nogas	95.571	0.984	1837265	0.45	100	95.6	80	120	
U	238	1	nogas	99.341	3.163	1986626	2.16	100	99.3	80	120	
[Pb]	206	1	nogas	99.095	0.904	459556	0.82	100	99.1	80	120	
[Pb]	207	1	nogas	97.137	1.550	407868	0.49	100	97.1	80	120	
Na	23	2	He	115034.731	1.278	56436057	0.87	100	115034.7	80	120	
Mg	24	2	He	115972.464	2.346	31410934	1.16	100	115972.5	80	120	ICSB Main CR1 Failed
Al	27	2	He	98584.742	2.393	12173854	1.46	100	98584.7	80	120	ICSB Main CR1 Failed
K	39	2	He	100046.085	1.565	26708270	1.56	100	100046.1	80	120	ICSB Main CR1 Failed
Ca	43	2	He	104343.708	1.576	79825	0.35	100	104343.7	80	120	ICSB Main CR1 Failed
Ca	44	2	He	107075.311	2.797	1358530	1.64	100	107075.3	80	120	ICSB Main CR1 Failed
V	51	2	He	97.370	0.526	230947	1.50	100	97.4	80	120	
Cr	52	2	He	100.009	0.527	277454	1.56	100	100.0	80	120	
Mn	55	2	He	92.840	0.926	160806	1.09	100	92.8	80	120	
Fe	56	2	He	116981.723	3.340	284745629	2.35	100	116981.7	80	120	ICSB Main CR1 Failed
Co	59	2	He	99.065	3.278	397633	2.05	100	99.1	80	120	
Ni	60	2	He	96.483	3.452	103161	2.18	100	96.5	80	120	
Cu	63	2	He	98.135	1.530	280023	0.49	100	98.1	80	120	
Zn	66	2	He	96.837	1.485	57578	2.50	100	96.8	80	120	
As	75	2	He	96.510	2.066	45684	0.96	100	96.5	80	120	
Se	78	2	He	86.171	3.688	2736	2.86	100	86.2	80	120	
B	11	1	nogas	961.554	3.872	715004	2.57	100	961.6	80	120	ICSB Main CR1 Failed
Si	28	1	nogas	9936.316	3.063	19515470	1.93	100	9936.3	80	120	ICSB Main CR1 Failed
Ca	43	1	nogas	123183.035	4.767	1915262	1.86	100	123183.0	80	120	
Ca	44	1	nogas	119469.418	1.629	30175185	1.71	100	119469.4	80	120	
Fe	56	1	nogas	120327.582	4.031	1436560932	3.18	100	120327.6	80	120	ICSB Main CR1 Failed
Se	77	1	nogas	95.496	13.134	61126	2.79	100	95.5	80	120	
Se	82	1	nogas	102.002	1.966	12184	1.83	100	102.0	80	120	
Mo	95	1	nogas	2428.207	3.873	7272749	4.35	100	2428.2	80	120	ICSB Main CR1 Failed
Sn	118	1	nogas	97.597	2.144	468943	2.68	100	97.6	80	120	
Ba	137	1	nogas	93.716	3.310	219780	2.03	100	93.7	80	120	
Sb	121	2	He	98.090	2.383	207524	1.13	100	98.1	80	120	
La	139	1	nogas	307.659	5.168	413	3.70	100	307.7	80	120	ICSB Main CR1 Failed

QC ISTD Table

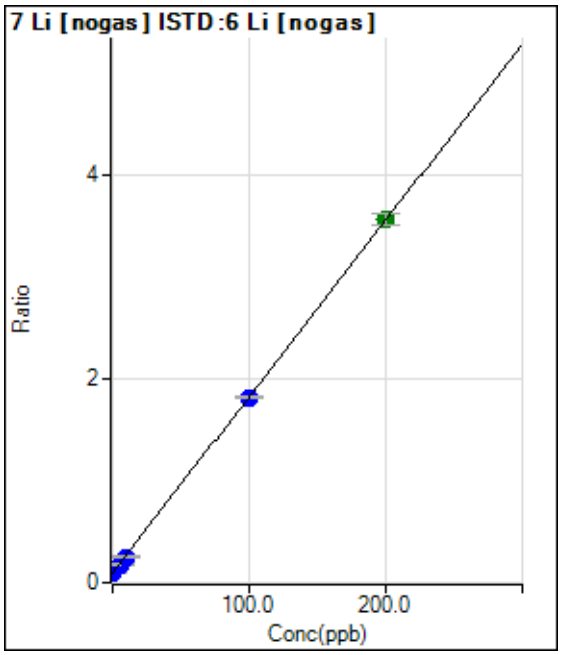
Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	nogas	293788	2.34	309366	94.96	70	125	
Ge	72	1	nogas	1532828	3.32	1624816	94.34	70	125	
In	115	1	nogas	1575316	1.28	1701792	92.57	70	125	
Bi	209	1	nogas	1286977	1.15	1450658	88.72	70	125	
Ge	72	2	He	296575	1.28	341080	86.95	70	125	

Calibration for 011_ICV.d

Batch Folder: C:\Agilent\ICPMH\1\DATA\102017A.b\
Analysis File: 102017A.batch.bin
DA Date-Time: 2017-10-20 09:52:54
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	004CALB.d	CAL BLK	2017-10-20 08:24:20
2	005CALS.d	2/10/200	2017-10-20 08:26:22
3	006CALS.d	5/25/500	2017-10-20 08:28:22
4	007CALS.d	10/50/1000	2017-10-20 08:30:22
5	008CALS.d	100/500/10K	2017-10-20 08:32:24
6	009CALS.d	200/1000/20K	2017-10-20 08:34:21
7			

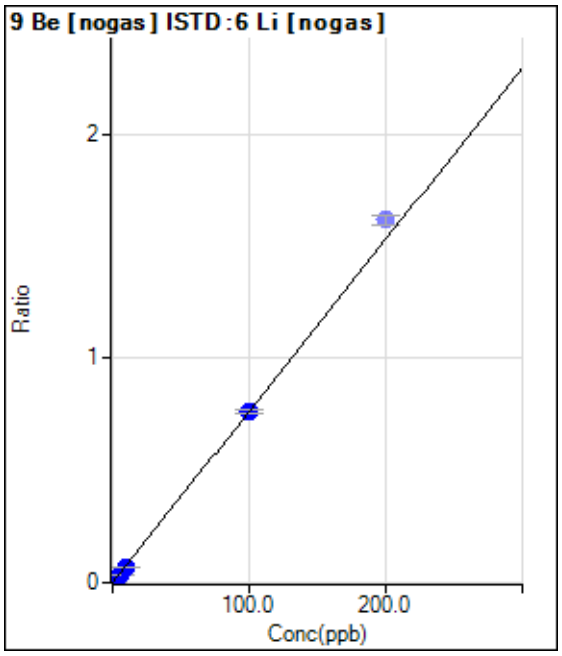
Calibration for 011_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	30191.24	0.0975	P	1.9
2	☐	2.000	1.689	39147.50	0.1268	P	2.2
3	☐	5.000	4.688	54859.71	0.1787	P	2.5
4	☐	10.000	9.080	76986.96	0.2548	P	2.1
5	☐	100.000	99.398	511809.72	1.8188	P	1.2
6	☐	200.000	200.358	917763.40	3.5671	A	3.0
7	☐	1.000					

y = 0.0173 * x + 0.0975
R = 1.0000
DL = 0.3184
BEC = 5.633

Weight: <None>
Min Conc: <None>

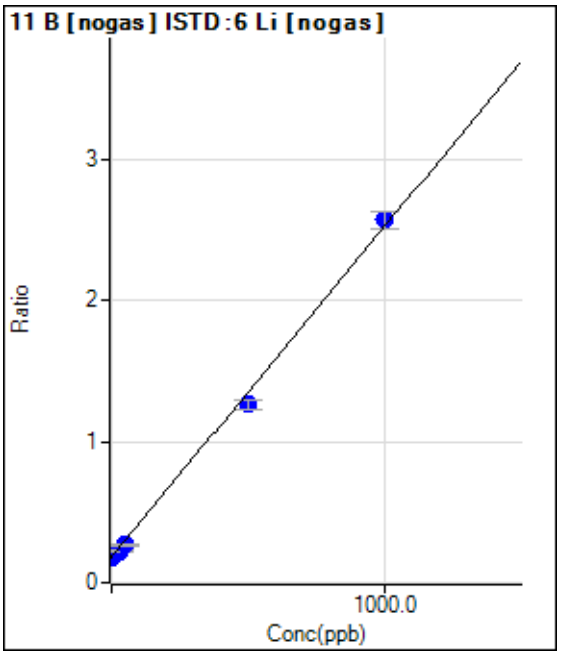


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	30.00	0.0001	P	33.5
2	☐	2.000	1.782	4240.55	0.0137	P	3.9
3	☐	5.000	4.528	10663.18	0.0348	P	4.7
4	☐	10.000	9.293	21522.48	0.0712	P	1.7
5	☐	100.000	100.099	215518.05	0.7662	P	2.0
6	☑	200.000		416402.26	1.6191	P	2.9
7	☐	1.000					

y = 0.0077 * x + 9.6889E-005
R = 1.0000
DL = 0.01271
BEC = 0.01266

Weight: <None>
Min Conc: <None>

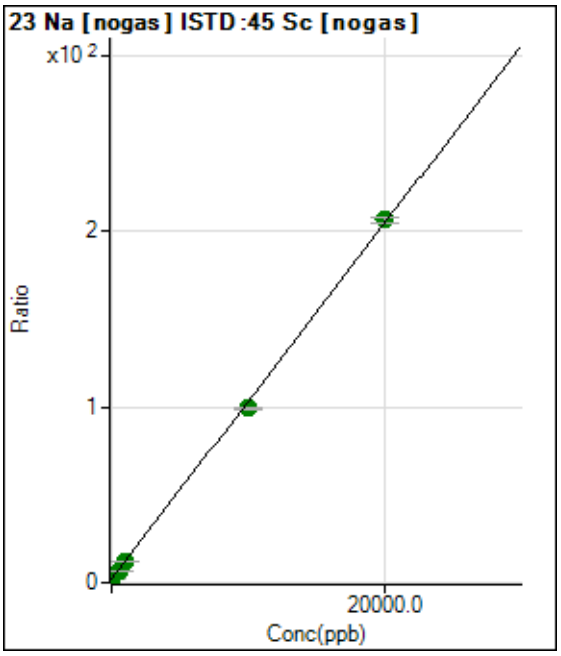
Calibration for 011_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	56447.32	0.1827	P	4.3
2	☐	10.000	2.924	58506.89	0.1895	P	2.1
3	☐	25.000	16.613	67971.21	0.2216	P	5.2
4	☐	50.000	36.217	80790.55	0.2675	P	4.1
5	☐	500.000	461.685	355315.48	1.2640	P	4.9
6	☐	1000.000	1020.127	661354.13	2.5719	P	4.5
7	☐	5.000					

y = 0.0023 * x + 0.1827
R = 0.9991
DL = 10.14
BEC = 77.99

Weight: <None>
Min Conc: <None>

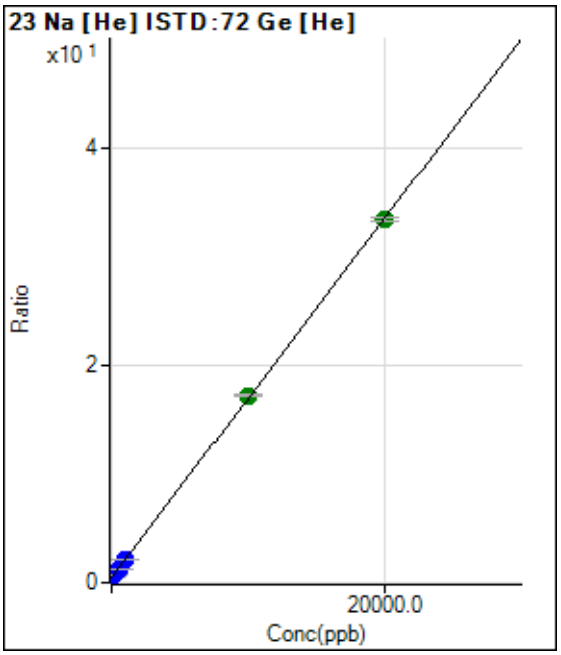


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2125724.40	2.0717	A	2.7
2	☐	200.000	187.996	4010315.59	3.9758	A	3.5
3	☐	500.000	478.767	6972087.40	6.9209	A	2.9
4	☐	1000.000	957.793	12044423.97	11.7727	A	3.4
5	☐	10000.00	9609.101	98965050.13	99.3983	A	0.7
6	☐	20000.00	20198.211	197691308.5	206.651	A	1.4
7	☐	100.000					

y = 0.0101 * x + 2.0717
R = 0.9997
DL = 16.37
BEC = 204.5

Weight: <None>
Min Conc: <None>

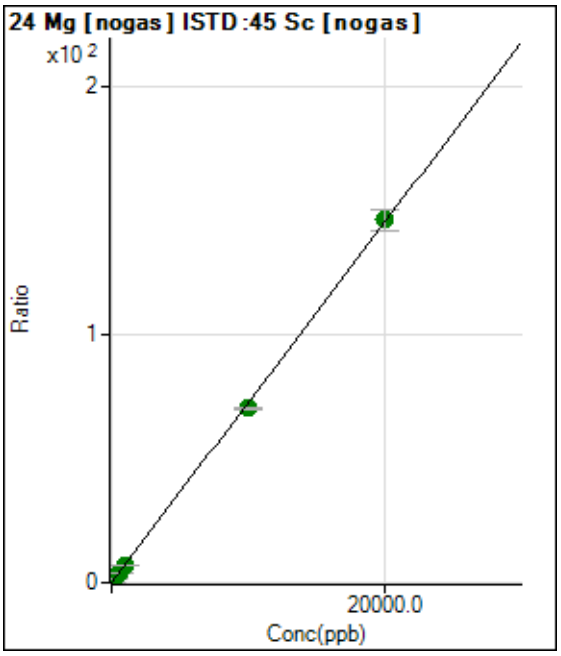
Calibration for 011_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	154444.14	0.4529	P	2.0
2	☐	200.000	183.536	261139.61	0.7558	P	0.2
3	☐	500.000	488.979	433529.21	1.2599	P	1.3
4	☐	1000.000	980.964	712514.86	2.0719	P	2.2
5	☐	10000.00	10142.212	5656862.21	17.1918	A	1.0
6	☐	20000.00	19930.286	10957546.51	33.3462	A	0.9
7	☐	100.000					

y = 0.0017 * x + 0.4529
R = 1.0000
DL = 16.58
BEC = 274.4

Weight: <None>
Min Conc: <None>

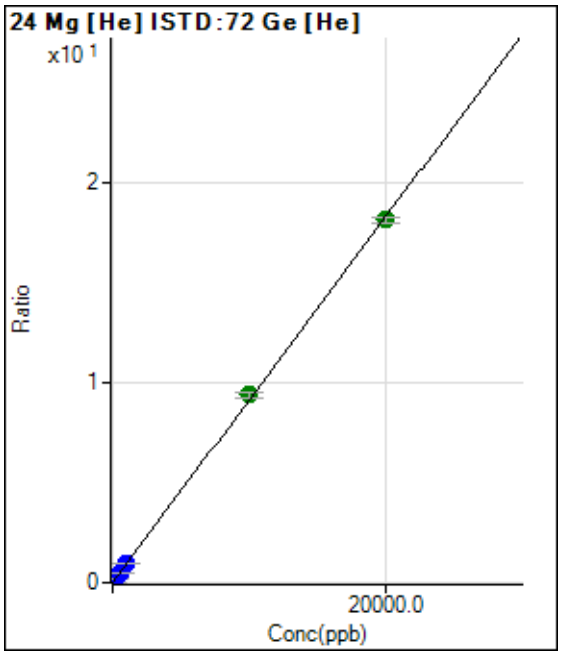


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	12673.17	0.0123	P	11.7
2	☐	200.000	203.086	1498256.84	1.4835	A	3.1
3	☐	500.000	503.168	3684840.06	3.6573	A	2.6
4	☐	1000.000	991.293	7357136.88	7.1933	A	2.9
5	☐	10000.00	9699.124	69962772.40	70.2729	A	1.2
6	☐	20000.00	20150.763	139646869.7	145.984	A	5.6
7	☐	100.000					

y = 0.0072 * x + 0.0123
R = 0.9998
DL = 0.5983
BEC = 1.702

Weight: <None>
Min Conc: <None>

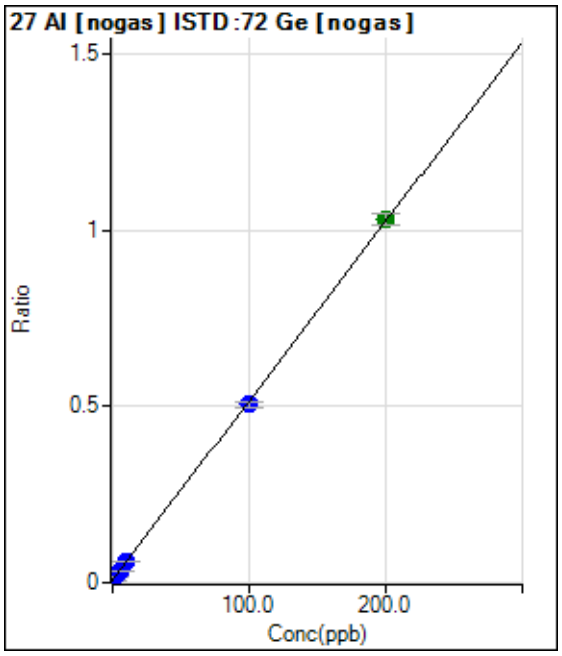
Calibration for 011_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	780.03	0.0023	P	4.9
2	☐	200.000	205.788	65731.41	0.1903	P	1.8
3	☐	500.000	505.609	159697.23	0.4641	P	1.6
4	☐	1000.000	1025.344	322802.29	0.9388	P	3.2
5	☐	10000.00	10304.009	3097876.10	9.4141	A	3.0
6	☐	20000.00	19846.530	5958009.70	18.1303	A	1.6
7	☐	100.000					

y = 9.1341E-004 * x + 0.0023
R = 0.9998
DL = 0.3671
BEC = 2.503

Weight: <None>
Min Conc: <None>

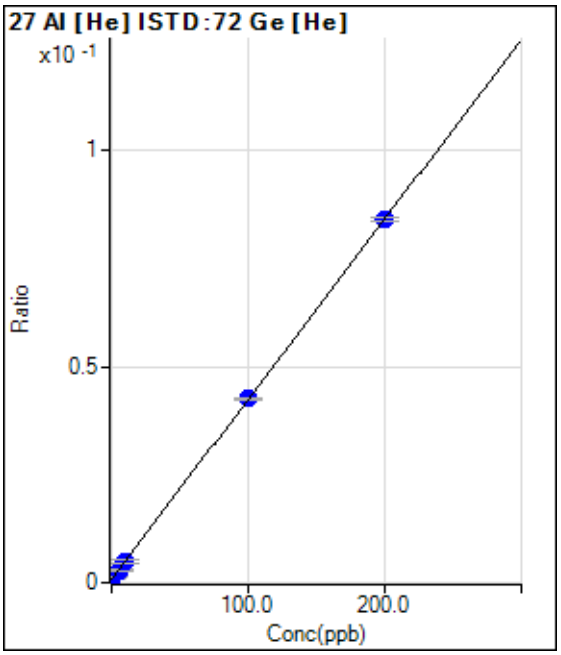


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	12928.07	0.0080	P	2.7
2	☐	2.000	2.014	30141.21	0.0182	P	4.9
3	☐	5.000	4.780	53212.36	0.0323	P	3.8
4	☐	10.000	10.269	96728.95	0.0602	P	7.1
5	☐	100.000	98.009	836055.33	0.5065	P	3.0
6	☐	200.000	200.987	1653277.63	1.0304	A	3.3
7	☐	1.000					

y = 0.0051 * x + 0.0080
R = 0.9999
DL = 0.1274
BEC = 1.565

Weight: <None>
Min Conc: <None>

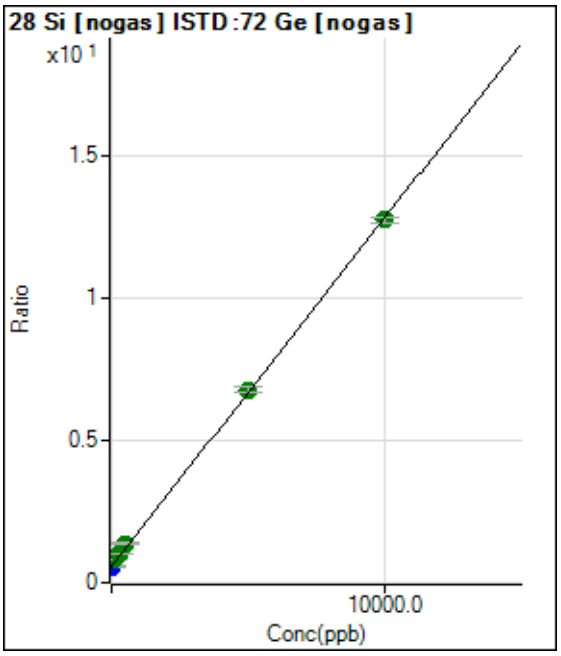
Calibration for 011_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.254	306.68	0.0009	P	32.8
2	☐	2.000	1.959	556.68	0.0016	P	26.8
3	☐	5.000	4.696	946.71	0.0028	P	20.2
4	☐	10.000	9.820	1680.11	0.0049	P	14.2
5	☐	100.000	100.509	14035.51	0.0427	P	1.3
6	☐	200.000	199.763	27597.26	0.0840	P	0.9
7	☐	1.000					

y = 4.1644E-004 * x + 7.9617E-004
R = 1.0000
DL = 2.129
BEC = 1.912

Weight: <None>
Min Conc: <None>

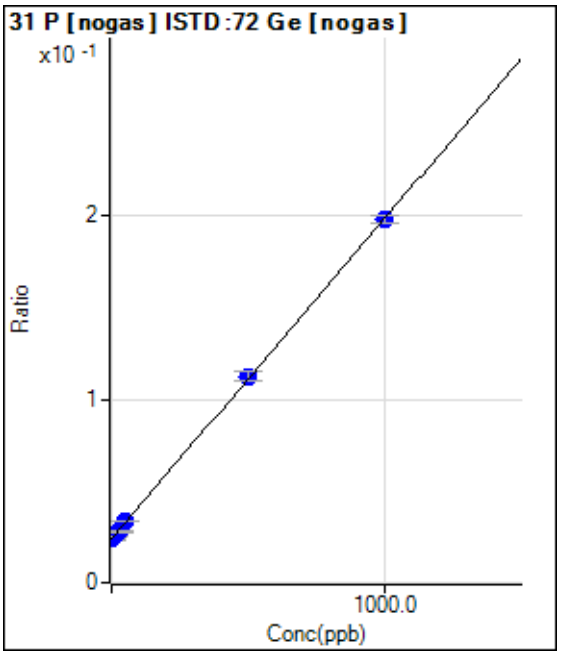


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	922866.42	0.5682	P	2.6
2	☐	100.000	209.587	1366087.53	0.8249	A	1.6
3	☐	250.000	363.805	1671855.44	1.0138	A	2.3
4	☐	500.000	648.179	2189282.36	1.3621	A	4.1
5	☐	5000.000	5075.792	11198998.58	6.7851	A	3.2
6	☐	10000.00	9950.754	20469271.78	12.7560	A	1.6
7	☐	5.000					

y = 0.0012 * x + 0.5682
R = 0.9999
DL = 36.46
BEC = 463.9

Weight: <None>
Min Conc: <None>

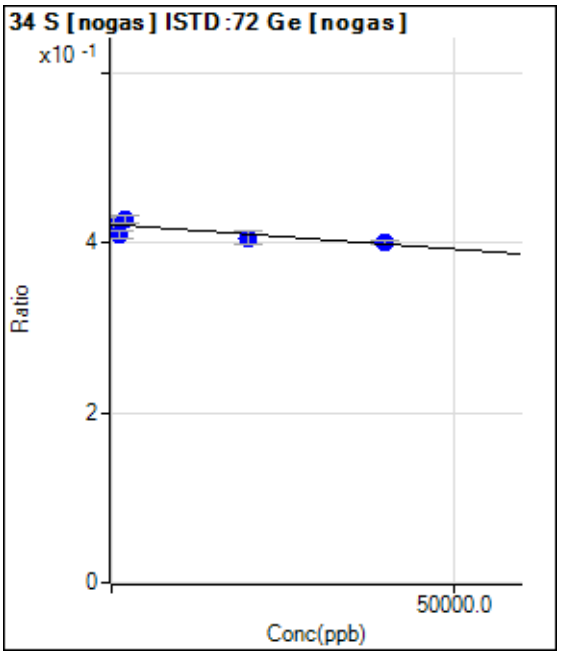
Calibration for 011_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	38863.80	0.0239	P	4.7
2	☐	10.000	9.744	42441.31	0.0256	P	4.1
3	☐	25.000	22.196	45872.67	0.0278	P	1.0
4	☐	50.000	55.031	53933.61	0.0335	P	2.1
5	☐	500.000	507.827	185870.75	0.1126	P	4.7
6	☐	1000.000	995.908	317561.76	0.1979	P	2.0
7	☐	5.000					

y = 1.7469E-004 * x + 0.0239
R = 0.9999
DL = 19.15
BEC = 137

Weight: <None>
Min Conc: <None>

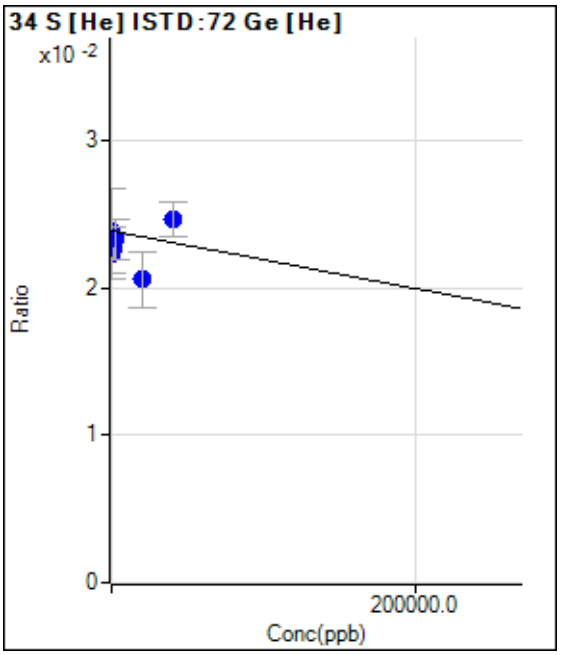


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	684621.79	0.4215	P	2.3
2	☐	400.000	3065.348	694718.99	0.4197	P	4.5
3	☐	1000.000	20219.062	675670.90	0.4097	P	2.4
4	☐	2000.000	-8868.455	686026.20	0.4266	P	2.1
5	☐	20000.00	27953.916	668717.35	0.4053	P	4.0
6	☐	40000.00	36059.335	642744.19	0.4005	P	0.8
7	☐	100.000					

y = -5.8103E-007 * x + 0.4215
R = -0.8169
DL = -4.983E+04
BEC = -7.254E+05

Weight: <None>
Min Conc: <None>

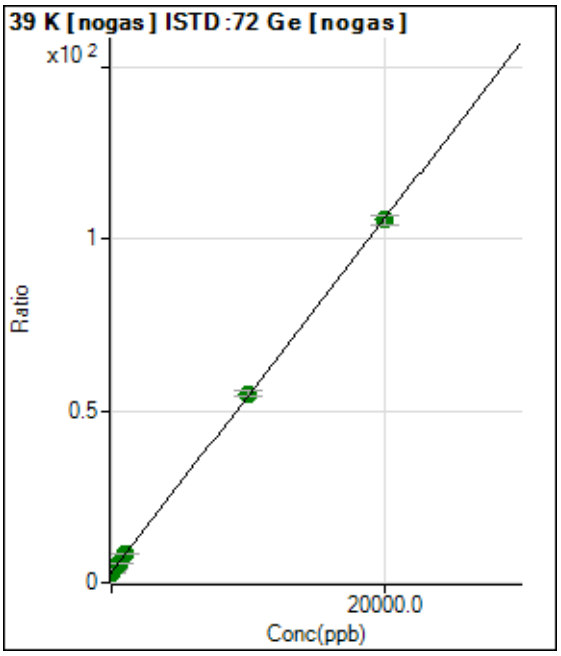
Calibration for 011_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	8136.62	0.0239	P	24.5
2	☐	400.000	77592.410	7736.32	0.0224	P	16.0
3	☐	1000.000	58095.154	7836.74	0.0228	P	7.7
4	☐	2000.000	29260.376	8036.60	0.0233	P	11.7
5	☐	20000.00	168899.92	6769.76	0.0206	P	17.9
6	☐	40000.00	-38012.28	8103.63	0.0247	P	9.6
7	☐	100.000					

y = -1.9627E-008 * x + 0.0239
R = 0.1916
DL = -8.969E+05
BEC = -1.218E+06

Weight: <None>
Min Conc: <None>

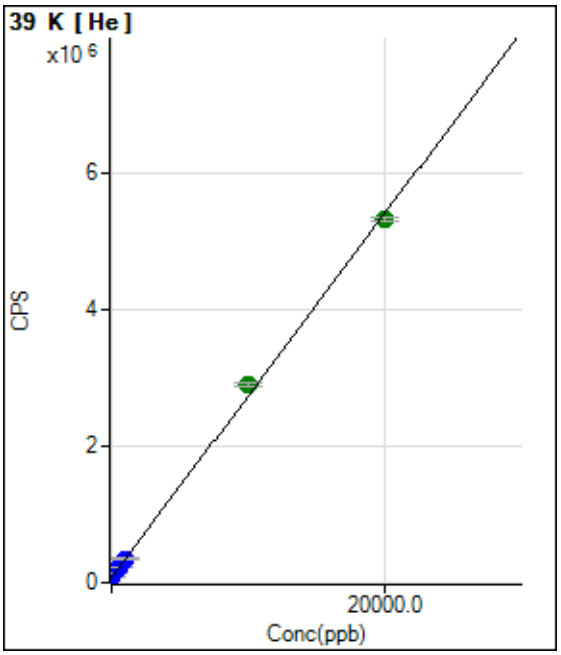


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4950250.11	3.0477	A	2.4
2	☐	200.000	182.078	6594402.23	3.9838	A	4.3
3	☐	500.000	497.405	9241721.56	5.6051	A	3.2
4	☐	1000.000	1041.748	13513645.09	8.4038	A	2.8
5	☐	10000.00	10109.649	90828224.95	55.0259	A	2.7
6	☐	20000.00	19943.332	169415312.1	105.585	A	2.7
7	☐	100.000					

y = 0.0051 * x + 3.0477
R = 1.0000
DL = 42.36
BEC = 592.8

Weight: <None>
Min Conc: <None>

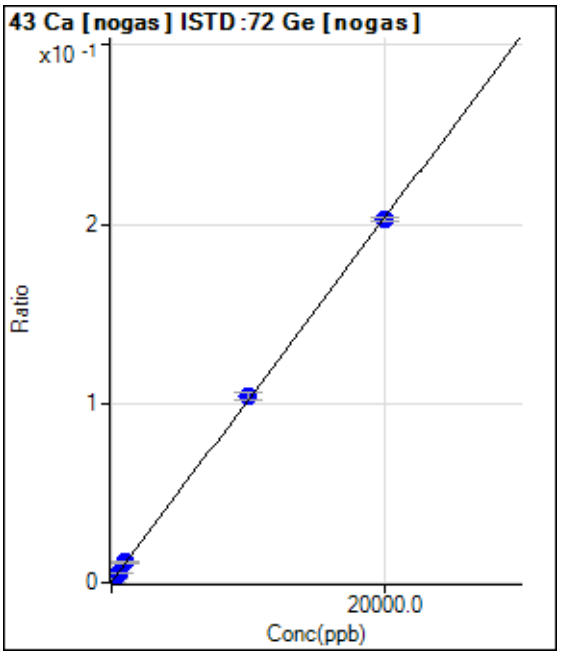
Calibration for 011_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	72800.48		P	0.2
2	☐	200.000	208.115	128207.32		P	1.7
3	☐	500.000	527.070	213123.31		P	0.9
4	☐	1000.000	1045.328	351100.32		P	1.9
5	☐	10000.00	10654.543	2909380.79		A	1.9
6	☐	20000.00	19669.704	5309505.13		A	1.2
7	☐	100.000					

y = 266.2320 * x + 72800.4833
R = 0.9992
DL = 1.795
BEC = 273.4

Weight: <None>
Min Conc: <None>

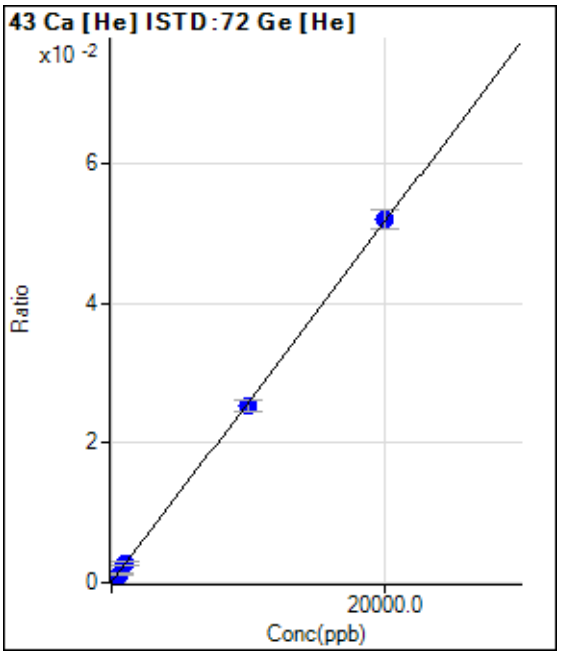


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	693.36	0.0004	P	19.3
2	☐	200.000	197.037	4017.19	0.0024	P	7.3
3	☐	500.000	498.038	9045.66	0.0055	P	2.5
4	☐	1000.000	1069.021	18139.24	0.0113	P	2.1
5	☐	10000.00	10200.779	171561.08	0.1040	P	3.9
6	☐	20000.00	19896.238	324748.67	0.2024	P	1.2
7	☐	100.000					

y = 1.0150E-005 * x + 4.2782E-004
R = 0.9999
DL = 24.45
BEC = 42.15

Weight: <None>
Min Conc: <None>

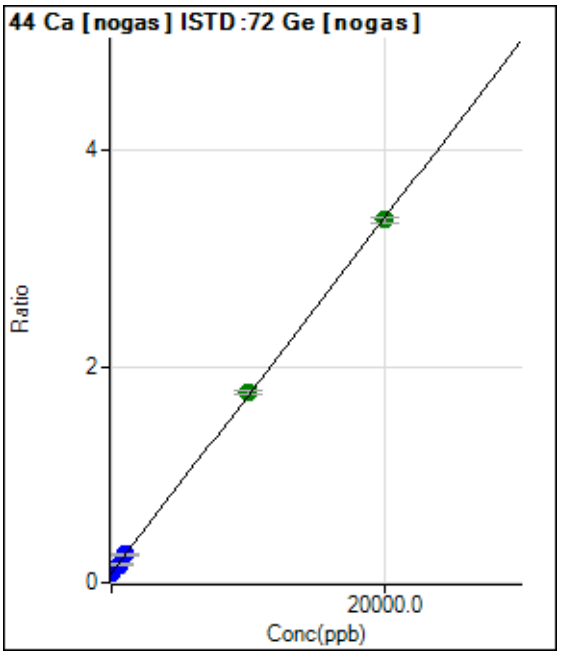
Calibration for 011_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	16.67	0.0000	P	124.
2	☐	200.000	160.450	160.00	0.0005	P	6.6
3	☐	500.000	454.685	420.02	0.0012	P	18.2
4	☐	1000.000	1073.794	970.04	0.0028	P	14.7
5	☐	10000.00	9775.632	8312.02	0.0253	P	6.9
6	☐	20000.00	20110.023	17058.18	0.0519	P	5.2
7	☐	100.000					

y = 2.5794E-006 * x + 4.9299E-005
R = 0.9999
DL = 71.62
BEC = 19.11

Weight: <None>
Min Conc: <None>

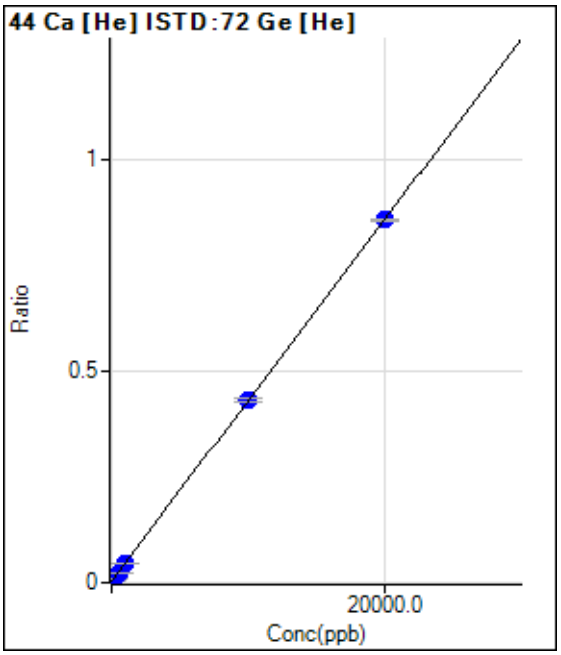


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	149269.04	0.0919	P	3.6
2	☐	200.000	175.476	199902.94	0.1207	P	1.5
3	☐	500.000	467.694	278059.54	0.1686	P	3.4
4	☐	1000.000	1014.909	415447.71	0.2584	P	2.3
5	☐	10000.00	10208.666	2916879.12	1.7668	A	2.1
6	☐	20000.00	19895.974	5385519.71	3.3562	A	1.9
7	☐	100.000					

y = 1.6407E-004 * x + 0.0919
R = 0.9999
DL = 59.99
BEC = 560.2

Weight: <None>
Min Conc: <None>

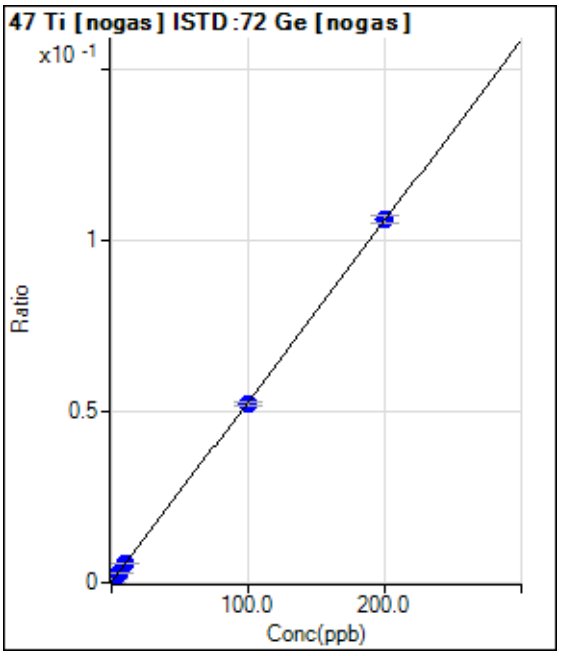
Calibration for 011_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1183.40	0.0035	P	7.8
2	☐	200.000	181.001	3873.82	0.0112	P	1.9
3	☐	500.000	481.805	8281.97	0.0241	P	3.0
4	☐	1000.000	965.952	15393.30	0.0448	P	5.3
5	☐	10000.00	10010.603	142006.81	0.4315	P	1.8
6	☐	20000.00	19997.046	282106.24	0.8585	P	0.7
7	☐	100.000					

y = 4.2758E-005 * x + 0.0035
R = 1.0000
DL = 19.08
BEC = 81.21

Weight: <None>
Min Conc: <None>

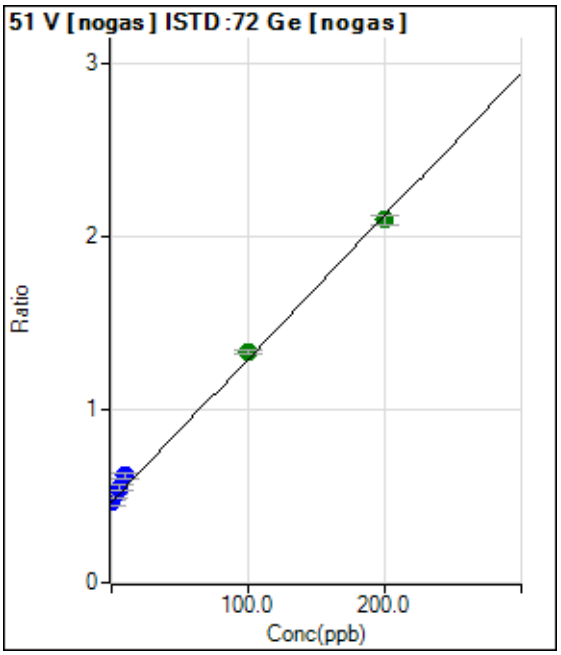


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	200.01	0.0001	P	30.1
2	☐	2.000	2.042	1990.14	0.0012	P	8.1
3	☐	5.000	4.803	4380.61	0.0027	P	0.8
4	☐	10.000	10.452	9055.73	0.0056	P	6.6
5	☐	100.000	98.970	86324.97	0.0523	P	2.2
6	☐	200.000	200.497	169790.44	0.1058	P	2.1
7	☐	1.000					

y = 5.2713E-004 * x + 1.2366E-004
R = 1.0000
DL = 0.2121
BEC = 0.2346

Weight: <None>
Min Conc: <None>

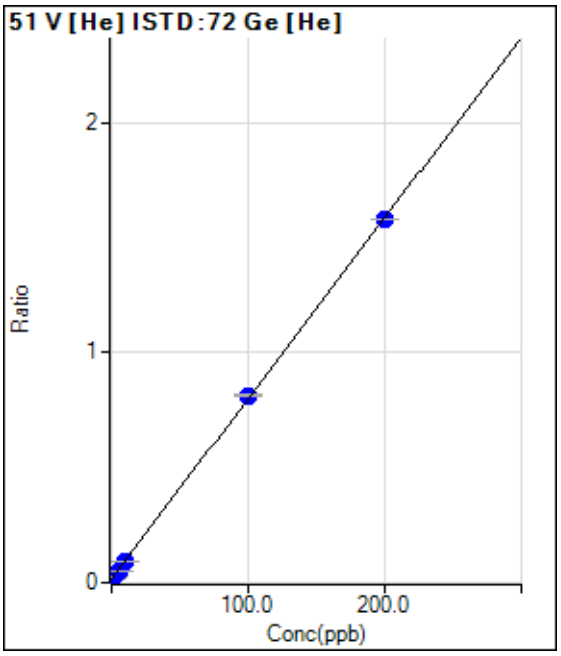
Calibration for 011_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	757177.12	0.4663	P	7.1
2	☐	2.000	4.522	834676.70	0.5037	P	3.9
3	☐	5.000	9.942	904218.51	0.5486	P	7.0
4	☐	10.000	18.588	996723.17	0.6201	P	5.4
5	☐	100.000	105.053	2205167.04	1.3356	A	2.0
6	☐	200.000	196.895	3362505.02	2.0955	A	2.4
7	☐	1.000					

y = 0.0083 * x + 0.4663
R = 0.9991
DL = 12.04
BEC = 56.35

Weight: <None>
Min Conc: <None>

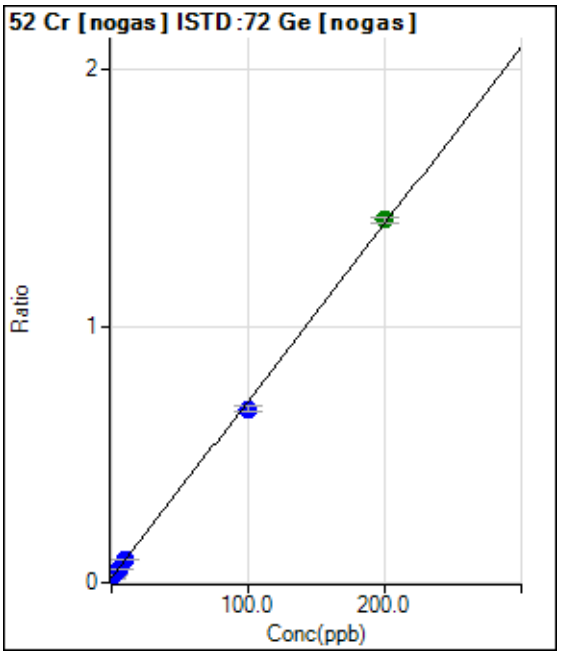


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.192	4805.30	0.0141	P	5.3
2	☐	2.000	1.721	10048.73	0.0291	P	4.0
3	☐	5.000	4.784	18268.99	0.0531	P	2.8
4	☐	10.000	9.777	31710.30	0.0922	P	2.7
5	☐	100.000	101.782	267606.55	0.8133	P	1.0
6	☐	200.000	199.128	517953.97	1.5762	P	0.2
7	☐	1.000					

y = 0.0078 * x + 0.0156
R = 0.9999
DL = 0.2854
BEC = 1.99

Weight: <None>
Min Conc: <None>

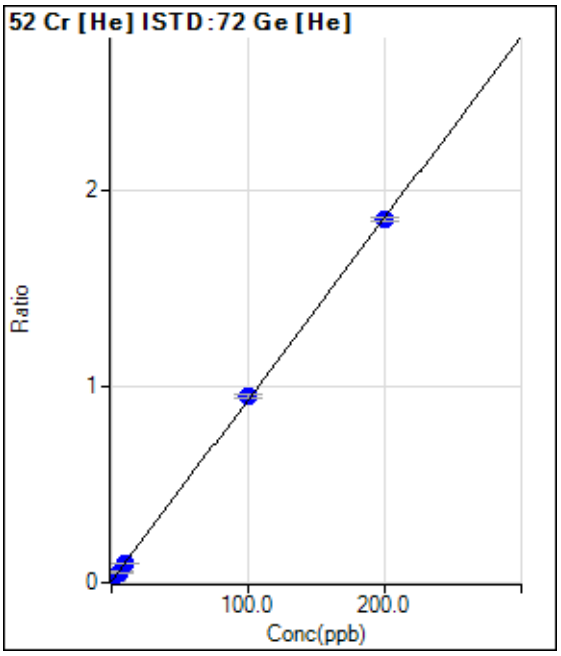
Calibration for 011_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	30455.57	0.0188	P	7.5
2	☐	2.000	2.012	54102.64	0.0327	P	2.3
3	☐	5.000	4.987	87678.16	0.0532	P	4.1
4	☐	10.000	10.284	144268.83	0.0897	P	3.1
5	☐	100.000	95.370	1117446.08	0.6769	P	3.3
6	☐	200.000	202.301	2270320.18	1.4148	A	1.9
7	☐	1.000					

y = 0.0069 * x + 0.0188
R = 0.9996
DL = 0.6135
BEC = 2.719

Weight: <None>
Min Conc: <None>

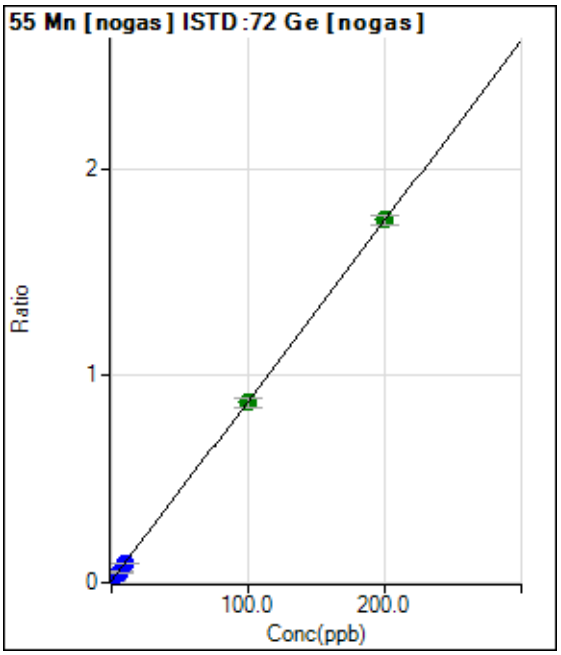


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2540.22	0.0074	P	4.0
2	☐	2.000	1.989	8948.99	0.0259	P	4.7
3	☐	5.000	4.994	18509.49	0.0538	P	1.2
4	☐	10.000	9.985	34446.10	0.1001	P	2.4
5	☐	100.000	102.116	314277.38	0.9551	P	2.0
6	☐	200.000	198.943	609083.52	1.8536	P	1.1
7	☐	1.000					

y = 0.0093 * x + 0.0074
R = 0.9999
DL = 0.0963
BEC = 0.8023

Weight: <None>
Min Conc: <None>

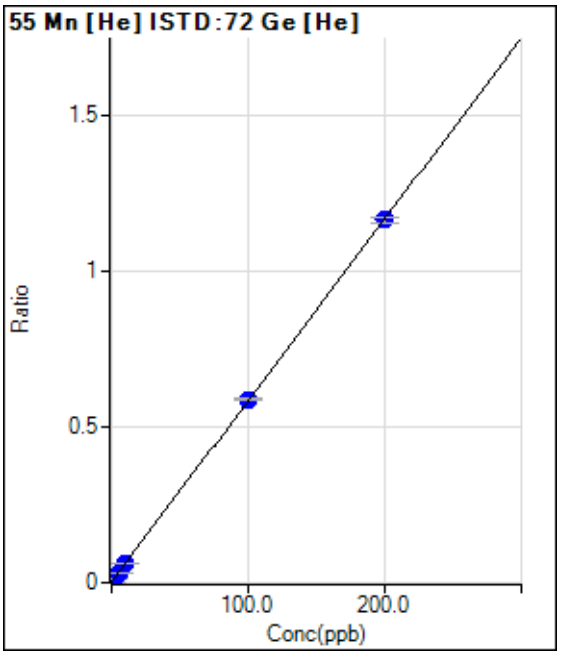
Calibration for 011_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	13008.13	0.0080	P	3.5
2	☐	2.000	1.861	40047.38	0.0242	P	4.0
3	☐	5.000	4.901	83488.71	0.0506	P	2.2
4	☐	10.000	9.939	151840.37	0.0944	P	2.0
5	☐	100.000	99.000	1433617.58	0.8689	A	5.2
6	☐	200.000	200.507	2810991.42	1.7516	A	2.4
7	☐	1.000					

y = 0.0087 * x + 0.0080
R = 1.0000
DL = 0.09794
BEC = 0.9211

Weight: <None>
Min Conc: <None>

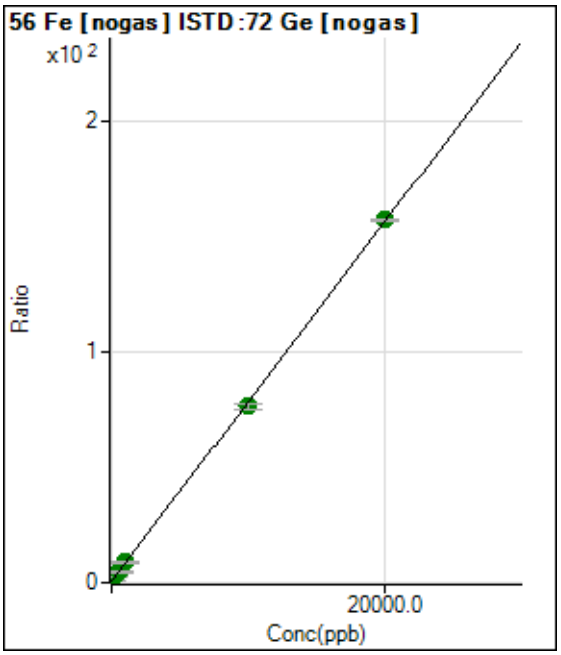


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	886.71	0.0026	P	28.4
2	☐	2.000	1.899	4707.36	0.0136	P	8.6
3	☐	5.000	4.887	10666.62	0.0310	P	4.3
4	☐	10.000	9.827	20548.53	0.0597	P	2.5
5	☐	100.000	100.630	193336.91	0.5875	P	0.9
6	☐	200.000	199.697	382287.03	1.1634	P	1.5
7	☐	1.000					

y = 0.0058 * x + 0.0026
R = 1.0000
DL = 0.3803
BEC = 0.446

Weight: <None>
Min Conc: <None>

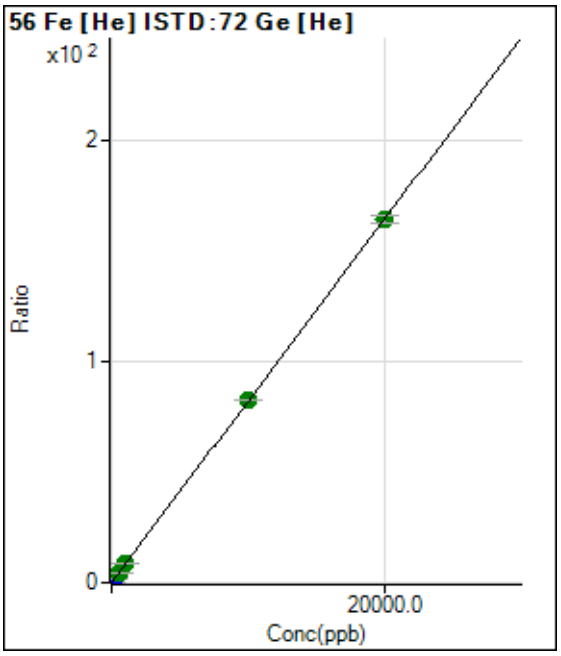
Calibration for 011_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	938515.06	0.5778	P	2.5
2	☐	200.000	210.153	3665966.49	2.2145	A	4.0
3	☐	500.000	520.491	7636671.78	4.6315	A	3.0
4	☐	1000.000	1052.517	14108484.17	8.7751	A	1.1
5	☐	10000.00	9736.630	126090131.9	76.4091	A	3.9
6	☐	20000.00	20128.445	252498347.3	157.343	A	0.6
7	☐	100.000					

y = 0.0078 * x + 0.5778
R = 0.9999
DL = 5.569
BEC = 74.19

Weight: <None>
Min Conc: <None>

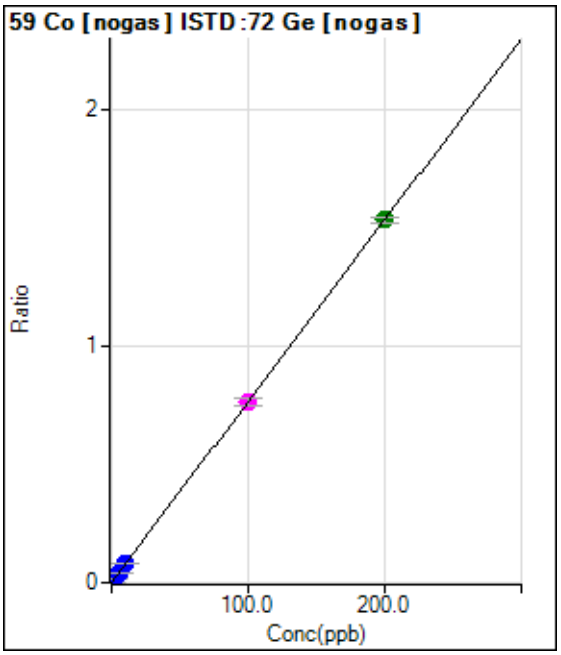


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	8738.97	0.0256	P	4.9
2	☐	200.000	203.154	585034.34	1.6933	P	1.8
3	☐	500.000	522.258	1483808.31	4.3129	A	3.0
4	☐	1000.000	1026.959	2906714.02	8.4561	A	4.6
5	☐	10000.00	10055.579	27172040.43	82.5734	A	0.8
6	☐	20000.00	19970.275	53876434.20	163.964	A	2.0
7	☐	100.000					

y = 0.0082 * x + 0.0256
R = 1.0000
DL = 0.4635
BEC = 3.122

Weight: <None>
Min Conc: <None>

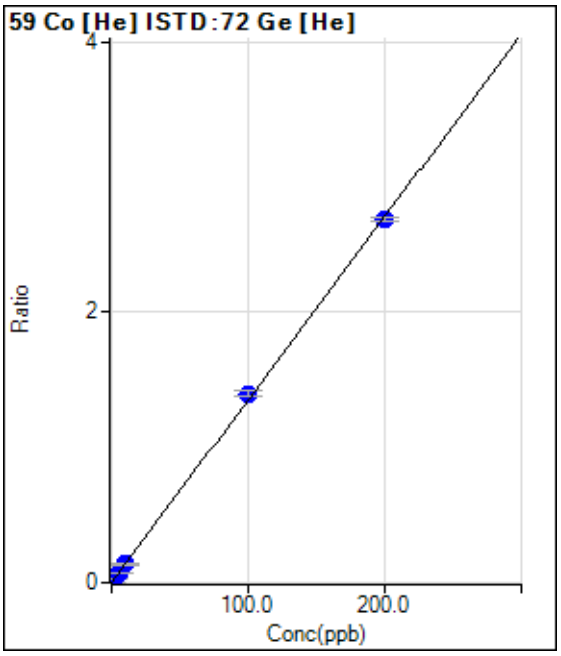
Calibration for 011_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	843.37	0.0005	P	6.9
2	☐	2.000	2.020	26432.87	0.0160	P	3.1
3	☐	5.000	4.982	63663.71	0.0386	P	4.7
4	☐	10.000	10.244	126783.28	0.0789	P	2.2
5	☐	100.000	99.591	1257742.30	0.7622	M	3.7
6	☐	200.000	200.193	2457761.73	1.5315	A	1.7
7	☐	1.000					

y = 0.0076 * x + 5.1893E-004
R = 1.0000
DL = 0.01407
BEC = 0.06785

Weight: <None>
Min Conc: <None>

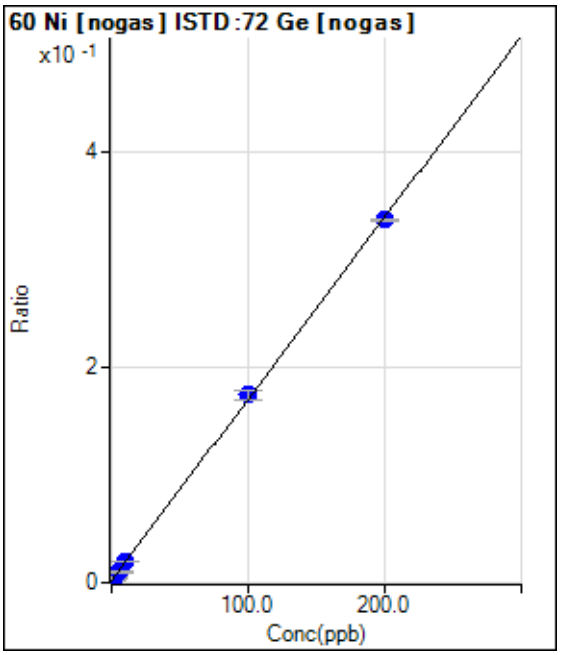


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	310.01	0.0009	P	20.5
2	☐	2.000	2.022	9766.10	0.0283	P	1.1
3	☐	5.000	5.020	23675.66	0.0688	P	4.7
4	☐	10.000	10.120	47378.25	0.1378	P	4.1
5	☐	100.000	103.173	459579.53	1.3967	P	2.8
6	☐	200.000	198.407	882318.71	2.6851	P	1.2
7	☐	1.000					

y = 0.0135 * x + 9.1056E-004
R = 0.9998
DL = 0.04146
BEC = 0.06731

Weight: <None>
Min Conc: <None>

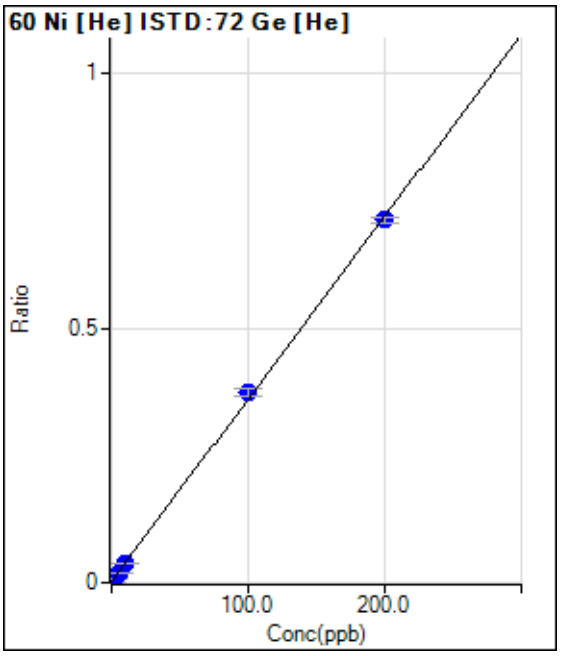
Calibration for 011_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.588	1613.44	0.0010	P	12.5
2	☐	2.000	1.423	7251.58	0.0044	P	9.0
3	☐	5.000	4.676	16277.44	0.0099	P	1.2
4	☐	10.000	10.229	30923.10	0.0192	P	1.9
5	☐	100.000	102.514	288509.38	0.1749	P	4.8
6	☐	200.000	198.745	541048.01	0.3372	P	0.7
7	☐	1.000					

y = 0.0017 * x + 0.0020
R = 0.9999
DL = 0.2208
BEC = 1.176

Weight: <None>
Min Conc: <None>

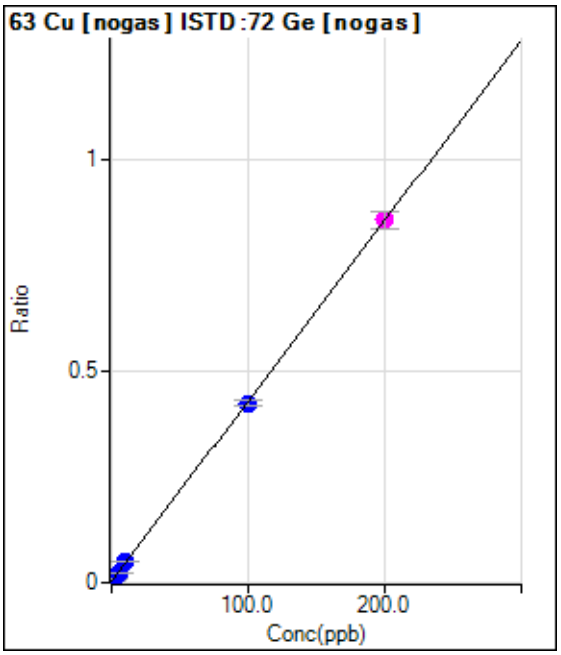


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.540	273.34	0.0008	P	19.7
2	☐	2.000	1.390	2663.58	0.0077	P	9.1
3	☐	5.000	4.574	6574.65	0.0191	P	4.2
4	☐	10.000	9.835	13034.84	0.0379	P	4.9
5	☐	100.000	103.432	122672.68	0.3728	P	3.7
6	☐	200.000	198.309	234052.18	0.7123	P	1.4
7	☐	1.000					

y = 0.0036 * x + 0.0027
R = 0.9998
DL = 0.1324
BEC = 0.7645

Weight: <None>
Min Conc: <None>

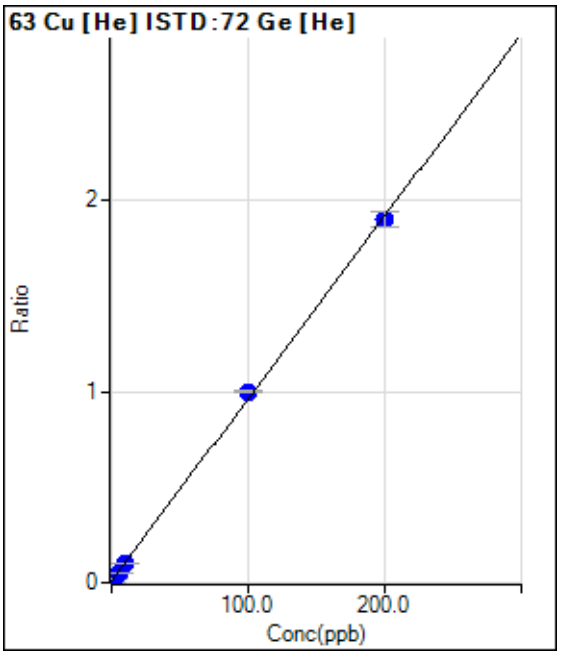
Calibration for 011_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4593.98	0.0028	P	7.5
2	☐	2.000	1.990	18746.57	0.0113	P	7.8
3	☐	5.000	5.000	39897.38	0.0242	P	2.8
4	☐	10.000	10.664	77799.67	0.0484	P	0.7
5	☐	100.000	99.010	702753.77	0.4258	P	3.3
6	☐	200.000	200.462	1378486.02	0.8592	M	4.4
7	☐	1.000					

y = 0.0043 * x + 0.0028
R = 1.0000
DL = 0.1501
BEC = 0.6626

Weight: <None>
Min Conc: <None>

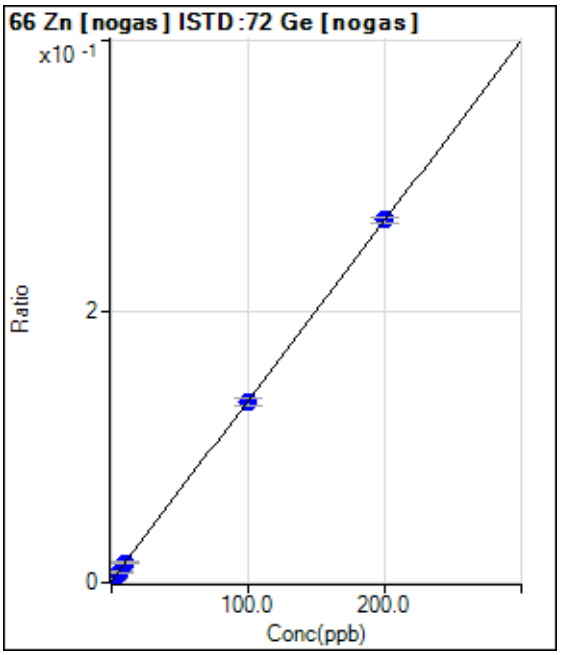


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.493	1460.08	0.0043	P	3.2
2	☐	2.000	1.490	8008.57	0.0232	P	6.7
3	☐	5.000	4.524	17919.10	0.0521	P	6.2
4	☐	10.000	9.457	34078.91	0.0991	P	3.3
5	☐	100.000	103.956	328969.91	0.9998	P	1.6
6	☐	200.000	198.066	623208.95	1.8968	P	4.3
7	☐	1.000					

y = 0.0095 * x + 0.0090
R = 0.9997
DL = 0.04289
BEC = 0.9418

Weight: <None>
Min Conc: <None>

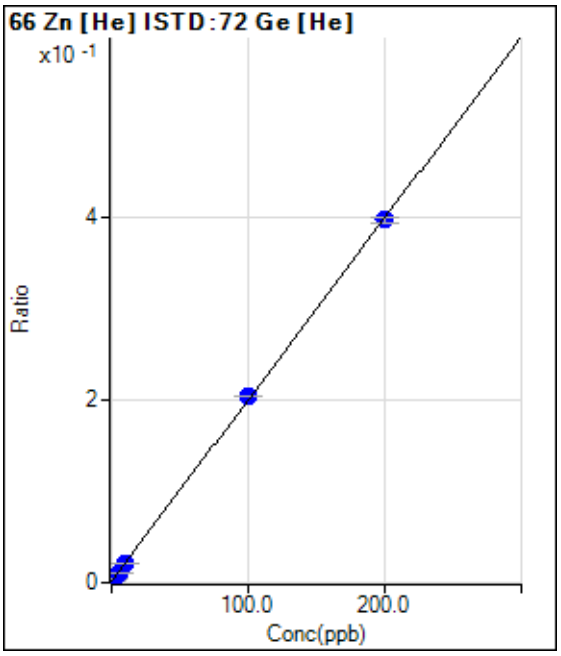
Calibration for 011_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.583	3277.03	0.0020	P	3.8
2	☐	2.000	1.702	5804.36	0.0035	P	3.7
3	☐	5.000	4.783	12531.17	0.0076	P	6.1
4	☐	10.000	10.248	23916.09	0.0149	P	2.3
5	☐	100.000	99.376	220298.57	0.1334	P	3.5
6	☐	200.000	200.308	429518.74	0.2677	P	1.7
7	☐	1.000					

y = 0.0013 * x + 0.0012
R = 1.0000
DL = 0.1714
BEC = 0.9333

Weight: <None>
Min Conc: <None>

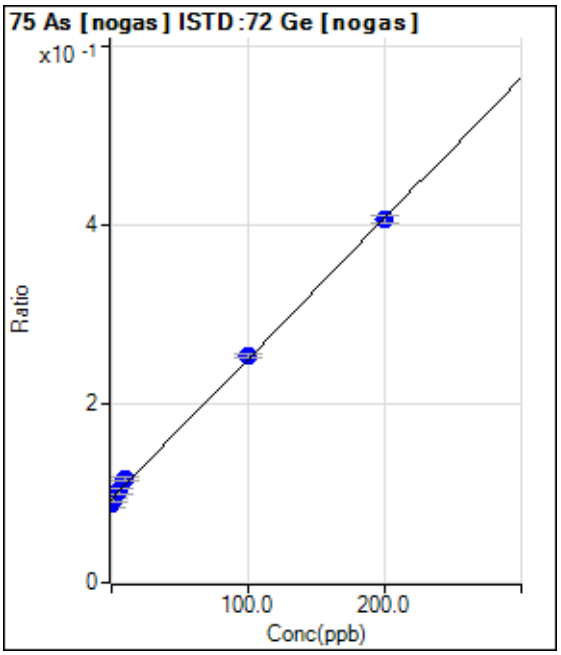


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.446	833.37	0.0024	P	7.8
2	☐	2.000	1.481	1556.76	0.0045	P	25.8
3	☐	5.000	4.531	3637.11	0.0106	P	3.0
4	☐	10.000	9.605	7101.51	0.0207	P	4.3
5	☐	100.000	101.802	67130.12	0.2040	P	0.6
6	☐	200.000	199.136	130635.28	0.3976	P	1.3
7	☐	1.000					

y = 0.0020 * x + 0.0016
R = 0.9999
DL = 0.2874
BEC = 0.7836

Weight: <None>
Min Conc: <None>

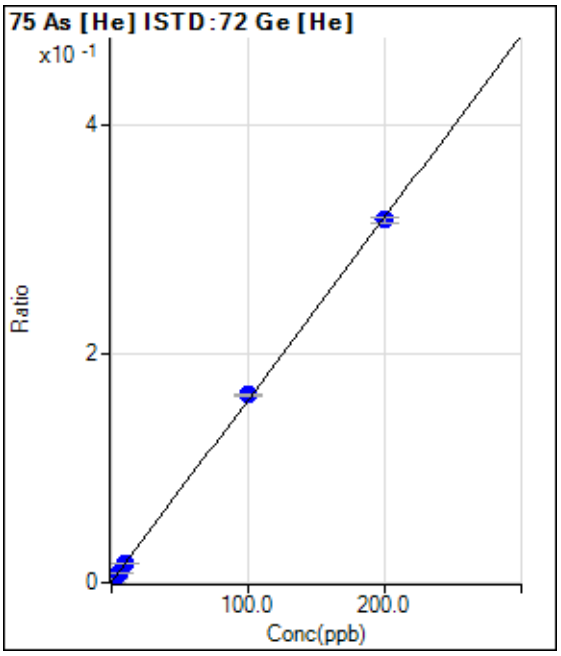
Calibration for 011_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-3.777	142071.14	0.0875	P	8.4
2	☐	2.000	-0.453	153656.37	0.0927	P	3.7
3	☐	5.000	5.680	168757.38	0.1024	P	5.7
4	☐	10.000	14.694	187348.56	0.1166	P	4.3
5	☐	100.000	102.166	419752.40	0.2542	P	2.3
6	☐	200.000	198.690	651580.41	0.4061	P	2.2
7	☐	1.000					

y = 0.0016 * x + 0.0934
R = 0.9993
DL = 14.01
BEC = 59.38

Weight: <None>
Min Conc: <None>

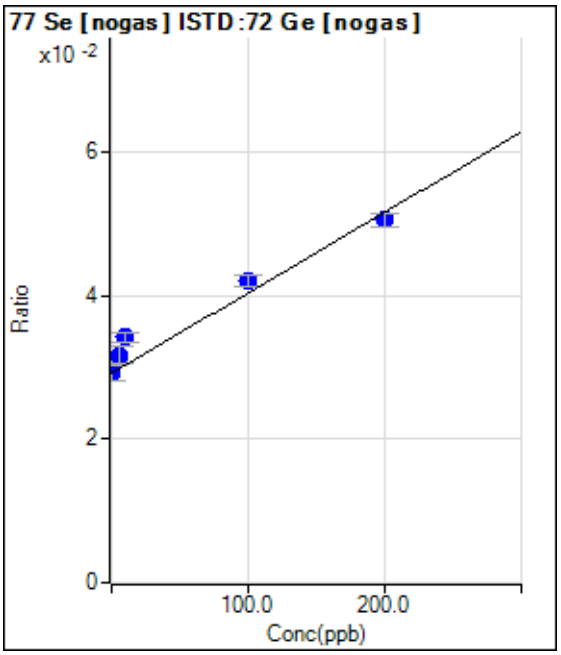


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	234.45	0.0007	P	19.7
2	☐	2.000	2.020	1346.73	0.0039	P	8.8
3	☐	5.000	5.004	2972.48	0.0086	P	4.9
4	☐	10.000	10.171	5793.17	0.0169	P	4.4
5	☐	100.000	102.602	53884.94	0.1637	P	1.1
6	☐	200.000	198.690	103988.36	0.3164	P	1.4
7	☐	1.000					

y = 0.0016 * x + 6.8851E-004
R = 0.9999
DL = 0.2561
BEC = 0.4332

Weight: <None>
Min Conc: <None>

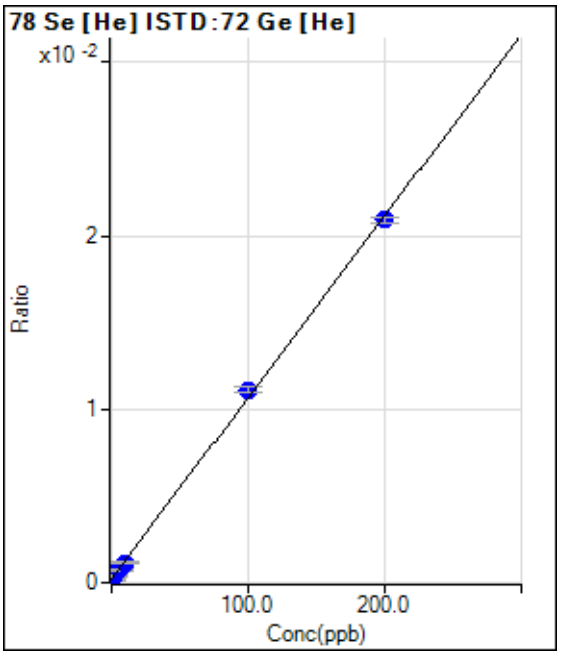
Calibration for 011_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	47382.07	0.0292	P	7.9
2	☐	2.000	12.591	50690.97	0.0306	P	1.9
3	☐	5.000	22.789	52325.48	0.0317	P	7.1
4	☐	10.000	44.713	54976.66	0.0342	P	4.2
5	☐	100.000	114.476	69412.80	0.0420	P	3.8
6	☐	200.000	190.476	81110.50	0.0506	P	3.7
7	☐	1.000					

y = 1.1216E-004 * x + 0.0292
R = 0.9857
DL = 61.82
BEC = 260.2

Weight: <None>
Min Conc: <None>

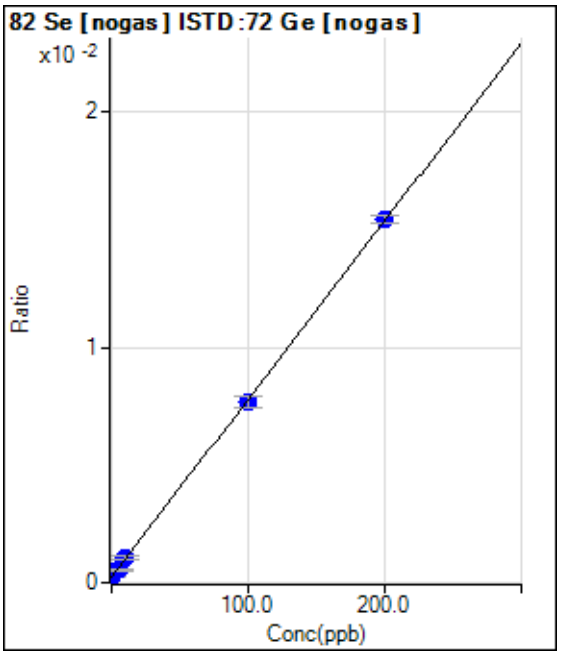


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.270	66.00	0.0002	P	30.0
2	☐	2.000	1.566	133.33	0.0004	P	22.8
3	☐	5.000	4.808	249.33	0.0007	P	7.9
4	☐	10.000	8.666	387.34	0.0011	P	10.4
5	☐	100.000	104.310	3660.38	0.0111	P	2.5
6	☐	200.000	197.921	6870.65	0.0209	P	1.6
7	☐	1.000					

y = 1.0451E-004 * x + 2.2223E-004
R = 0.9996
DL = 1.67
BEC = 2.126

Weight: <None>
Min Conc: <None>

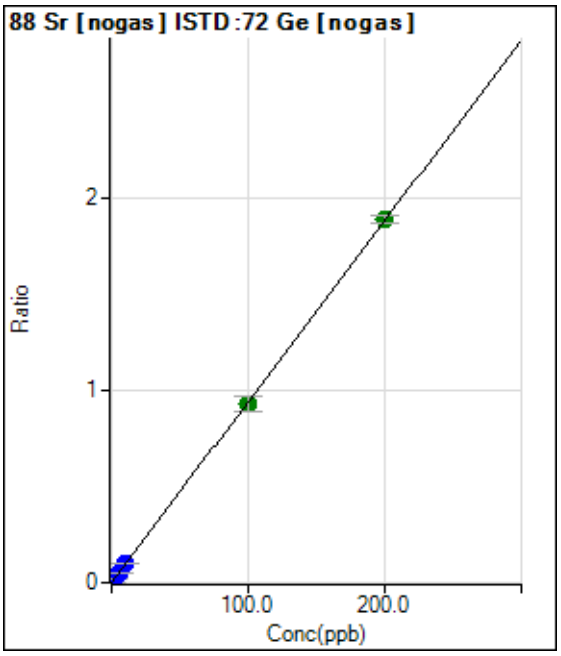
Calibration for 011_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	383.34	0.0002	P	22.4
2	☐	2.000	3.045	770.04	0.0005	P	16.9
3	☐	5.000	4.008	890.04	0.0005	P	21.1
4	☐	10.000	10.936	1710.12	0.0011	P	15.1
5	☐	100.000	98.478	12678.01	0.0077	P	6.4
6	☐	200.000	200.728	24743.99	0.0154	P	2.1
7	☐	1.000					

y = 7.5653E-005 * x + 2.3518E-004
R = 0.9999
DL = 2.089
BEC = 3.109

Weight: <None>
Min Conc: <None>

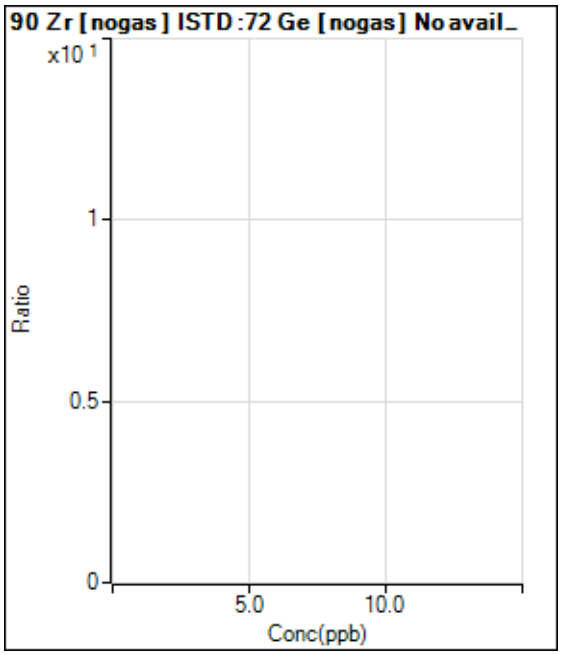


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	686.69	0.0004	P	7.8
2	☐	2.000	1.974	31411.65	0.0190	P	3.3
3	☐	5.000	5.069	79221.94	0.0481	P	4.0
4	☐	10.000	10.415	158022.93	0.0983	P	2.2
5	☐	100.000	98.633	1528951.12	0.9272	A	8.3
6	☐	200.000	200.661	3026402.35	1.8860	A	2.1
7	☐	1.000					

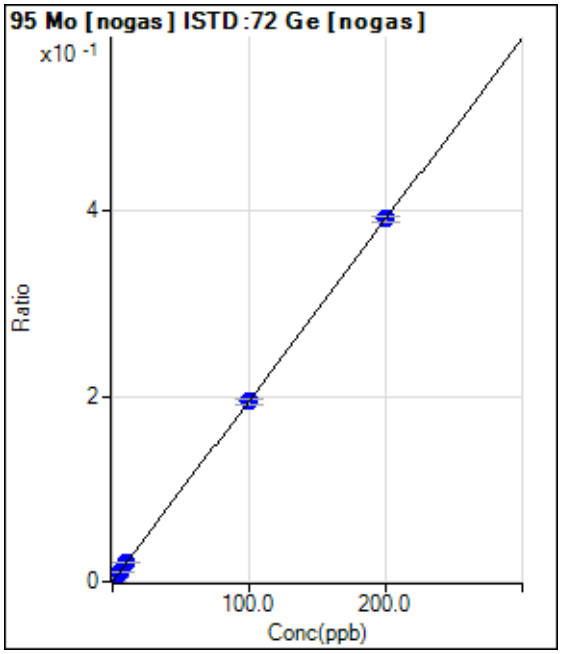
y = 0.0094 * x + 4.2215E-004
R = 1.0000
DL = 0.01051
BEC = 0.04493

Weight: <None>
Min Conc: <None>

Calibration for 011_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

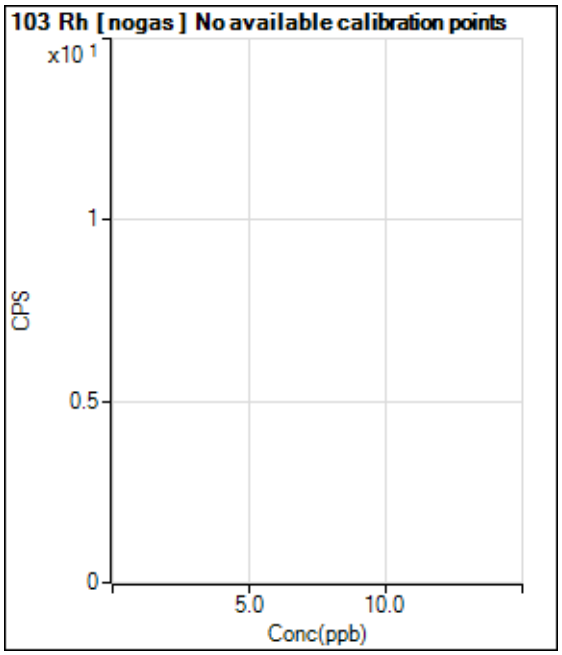


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	83.33	0.0001	P	57.1
2	☐	2.000	1.968	6451.30	0.0039	P	5.6
3	☐	5.000	5.067	16404.45	0.0100	P	7.1
4	☐	10.000	10.510	33104.57	0.0206	P	2.4
5	☐	100.000	99.430	320847.90	0.1944	P	2.9
6	☐	200.000	200.258	628109.31	0.3914	P	1.4
7	☐	1.000					

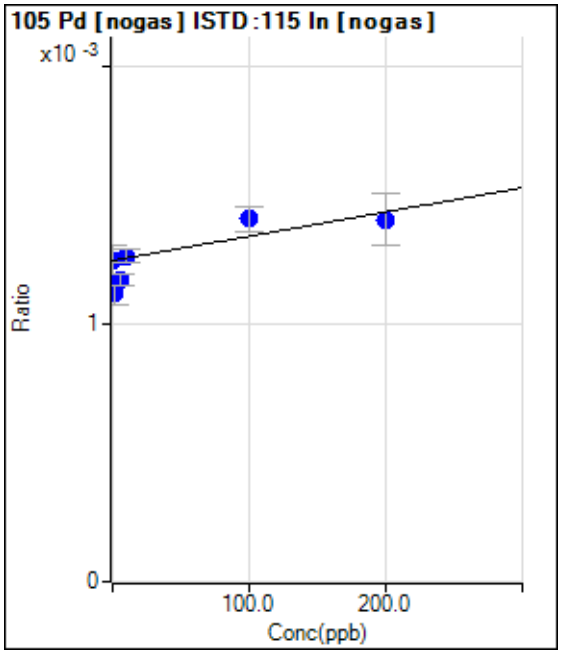
y = 0.0020 * x + 5.0941E-005
R = 1.0000
DL = 0.04463
BEC = 0.02606

Weight: <None>
Min Conc: <None>

Calibration for 011_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			53.33		P	39.0
2	☐			60.00		P	33.3
3	☐			33.33		P	69.3
4	☐			73.33		P	39.4
5	☐			123.33		P	30.7
6	☐			196.67		P	33.9
7	☐						



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2120.17	0.0012	P	9.0
2	☐	2.000	-132.533	1956.82	0.0011	P	8.4
3	☐	5.000	-82.624	2013.49	0.0012	P	3.7
4	☐	10.000	17.136	2186.84	0.0013	P	4.4
5	☐	100.000	171.163	2363.54	0.0014	P	6.9
6	☐	200.000	167.598	2230.18	0.0014	P	14.2
7	☐	1.000					

y = 9.4074E-007 * x + 0.0012

R = 0.8326

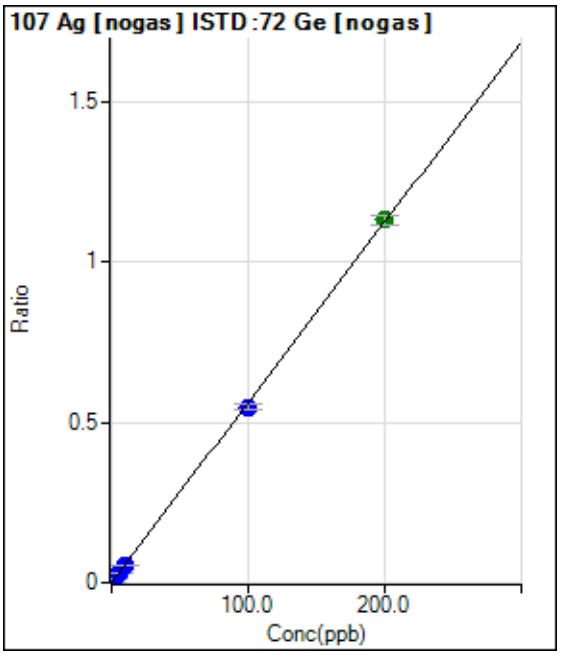
DL = 359.4

BEC = 1325

Weight: <None>

Min Conc: <None>

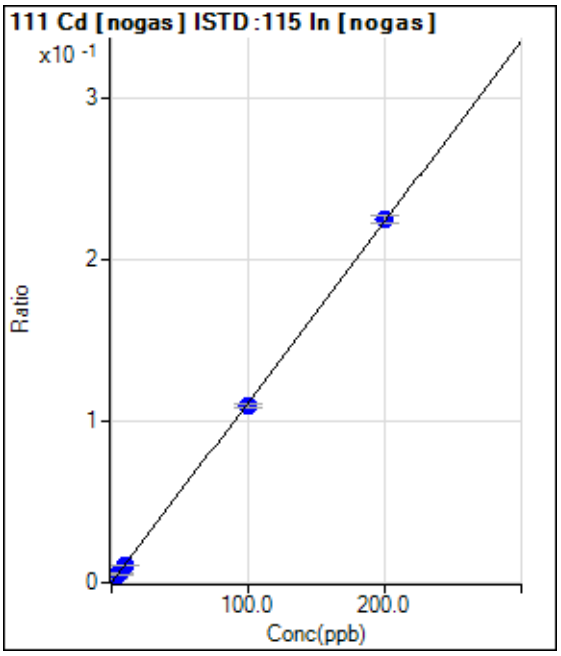
Calibration for 011_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	290.01	0.0002	P	14.3
2	☐	2.000	1.995	18827.03	0.0114	P	7.0
3	☐	5.000	4.918	45813.39	0.0278	P	4.2
4	☐	10.000	9.963	90214.94	0.0561	P	2.3
5	☐	100.000	97.285	901759.10	0.5464	P	3.4
6	☐	200.000	201.362	1814522.63	1.1308	A	2.5
7	☐	1.000					

y = 0.0056 * x + 1.7880E-004
R = 0.9999
DL = 0.01371
BEC = 0.03184

Weight: <None>
Min Conc: <None>

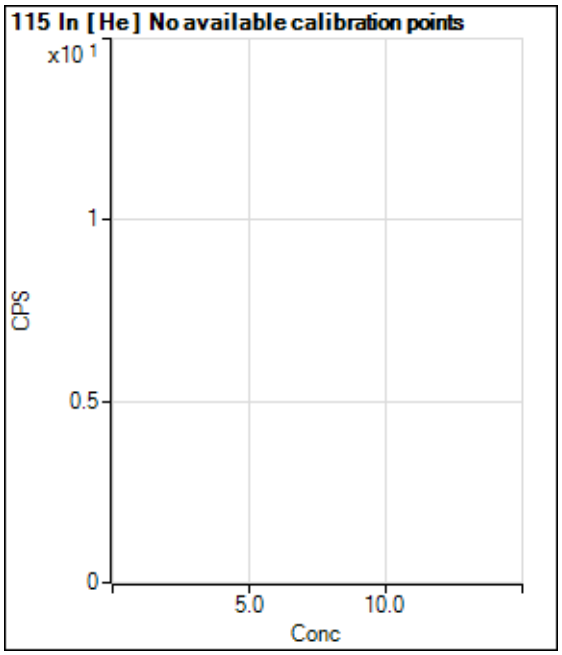


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	0.00	0.0000	P	
2	☐	2.000	2.088	4053.86	0.0023	P	5.5
3	☐	5.000	4.808	9242.57	0.0054	P	2.2
4	☐	10.000	9.638	18596.83	0.0108	P	6.1
5	☐	100.000	98.005	183774.51	0.1094	P	2.5
6	☐	200.000	201.019	356189.28	0.2243	P	2.3
7	☐	1.000					

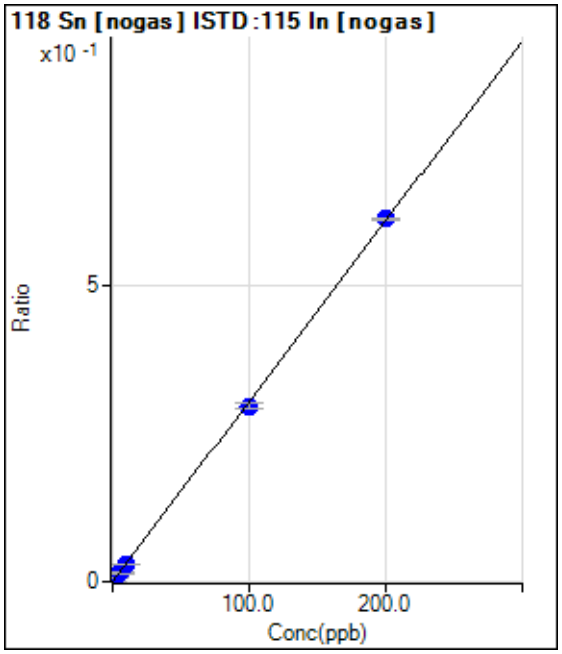
y = 0.0011 * x + 0.0000E+000
R = 0.9999
DL = 0
BEC = 0

Weight: <None>
Min Conc: <None>

Calibration for 011_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			453480.60		P	1.4
2	☐			453549.34		P	1.7
3	☐			459832.69		P	0.5
4	☐			451640.78		P	1.8
5	☐			439676.60		P	0.3
6	☐			424271.25		P	1.5
7	☐						

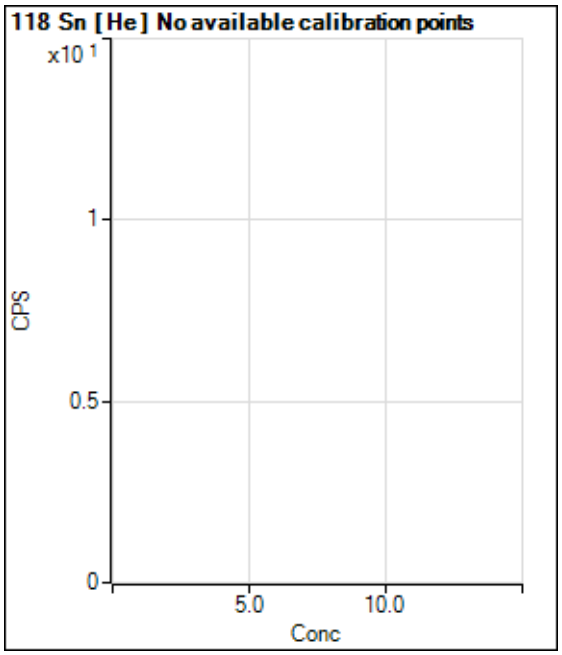


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	703.36	0.0004	P	14.7
2	☐	2.000	1.871	10646.84	0.0061	P	3.4
3	☐	5.000	4.734	25535.49	0.0148	P	6.1
4	☐	10.000	9.475	50660.82	0.0293	P	0.6
5	☐	100.000	97.468	499444.03	0.2973	P	4.1
6	☐	200.000	201.300	974141.13	0.6135	P	0.8
7	☐	1.000					

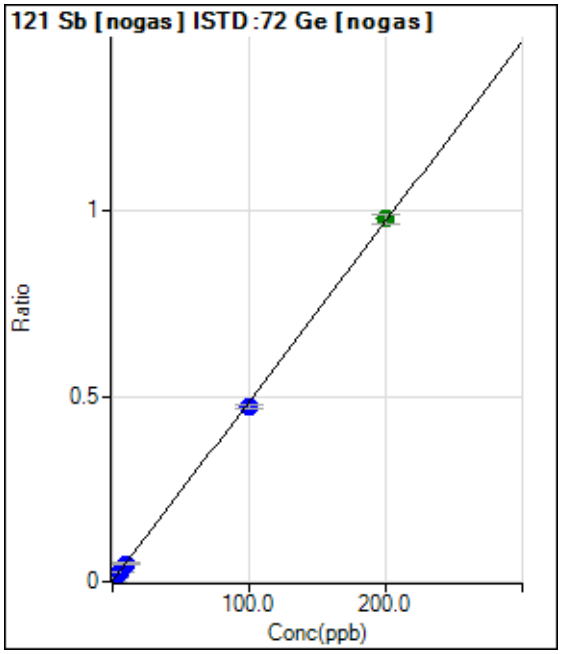
y = 0.0030 * x + 4.1193E-004
R = 0.9999
DL = 0.05952
BEC = 0.1352

Weight: <None>
Min Conc: <None>

Calibration for 011_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			260.01		P	24.0
2	☐			3657.13		P	3.4
3	☐			8508.91		P	10.1
4	☐			16895.16		P	0.6
5	☐			161601.18		P	0.7
6	☐			315285.89		P	0.7
7	☐						

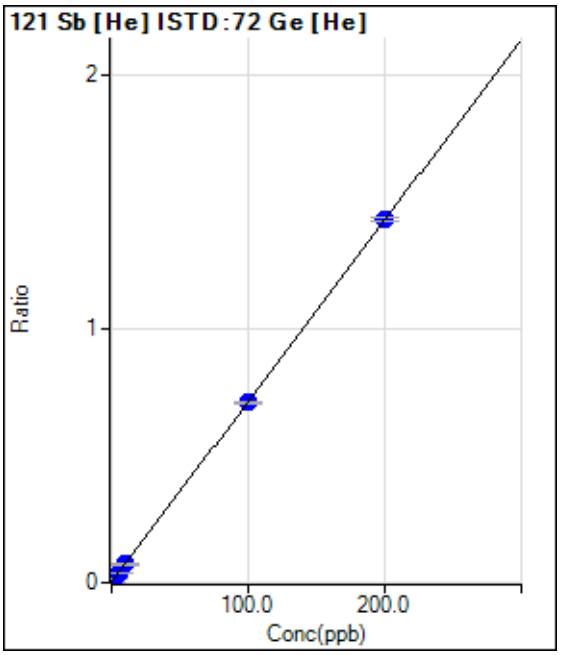


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1850.14	0.0011	P	5.0
2	☐	2.000	2.015	18086.37	0.0109	P	2.0
3	☐	5.000	4.957	41553.27	0.0252	P	0.4
4	☐	10.000	9.900	79059.71	0.0492	P	1.5
5	☐	100.000	97.150	779951.08	0.4725	P	2.5
6	☐	200.000	201.431	1570042.37	0.9785	A	2.6
7	☐	1.000					

y = 0.0049 * x + 0.0011
R = 0.9999
DL = 0.03543
BEC = 0.2348

Weight: <None>
Min Conc: <None>

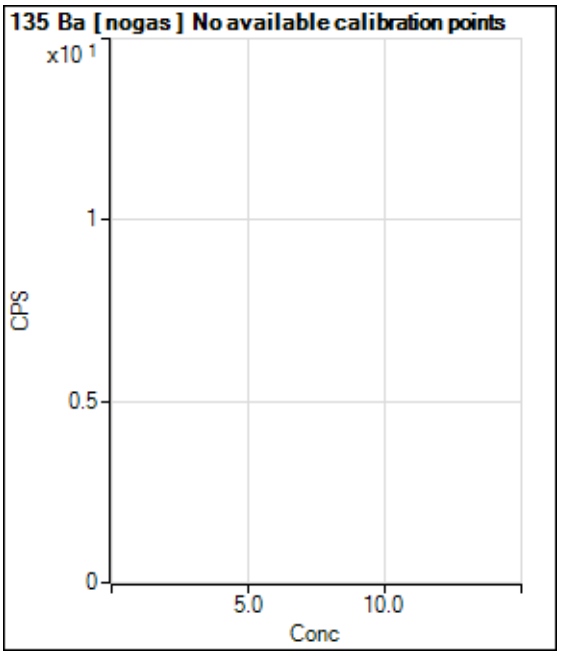
Calibration for 011_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	613.35	0.0018	P	6.3
2	☐	2.000	2.039	5634.36	0.0163	P	2.5
3	☐	5.000	5.123	13161.91	0.0383	P	2.2
4	☐	10.000	9.968	25008.25	0.0727	P	3.5
5	☐	100.000	99.317	233182.21	0.7086	P	0.5
6	☐	200.000	200.340	469113.68	1.4276	P	1.0
7	☐	1.000					

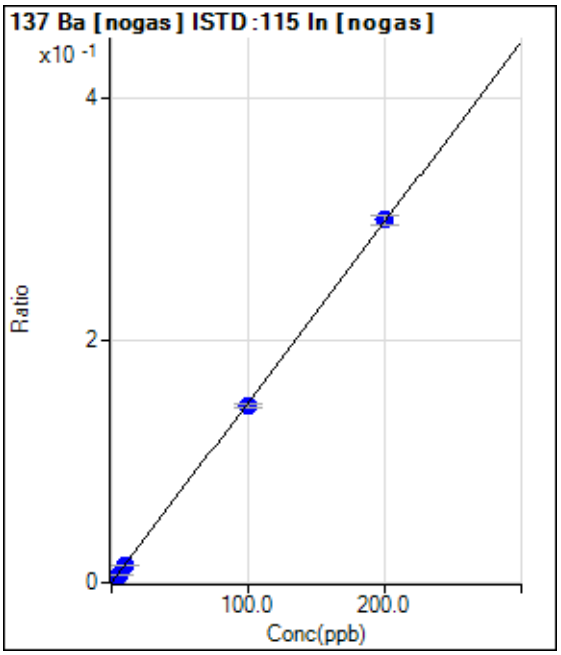
y = 0.0071 * x + 0.0018
R = 1.0000
DL = 0.0478
BEC = 0.2528

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			90.00		P	98.8
2	☐			2863.63		P	4.2
3	☐			6851.50		P	6.4
4	☐			14413.01		P	5.6
5	☐			141539.11		P	2.1
6	☐			270070.39		P	1.2
7	☐						

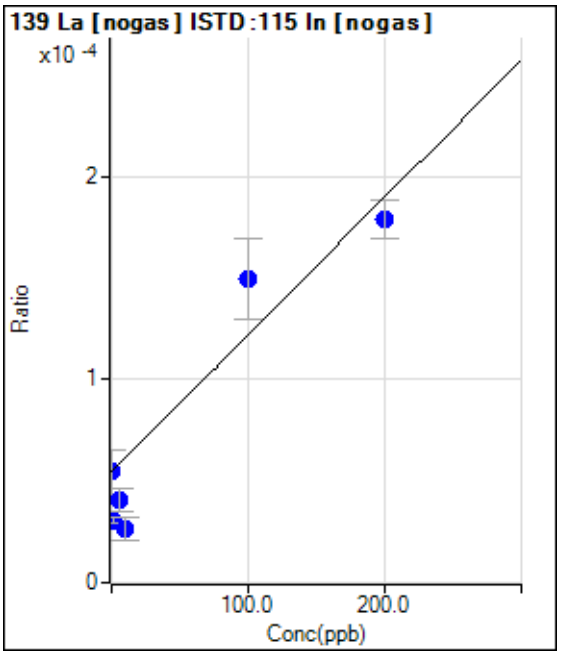
Calibration for 011_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	160.00	0.0001	P	69.7
2	☐	2.000	1.903	5094.16	0.0029	P	6.1
3	☐	5.000	4.620	12007.75	0.0070	P	3.9
4	☐	10.000	9.536	24704.74	0.0143	P	4.2
5	☐	100.000	97.618	244248.40	0.1454	P	2.3
6	☐	200.000	201.224	475553.74	0.2995	P	2.7
7	☐	1.000					

y = 0.0015 * x + 9.5202E-005
R = 0.9999
DL = 0.1337
BEC = 0.06398

Weight: <None>
Min Conc: <None>

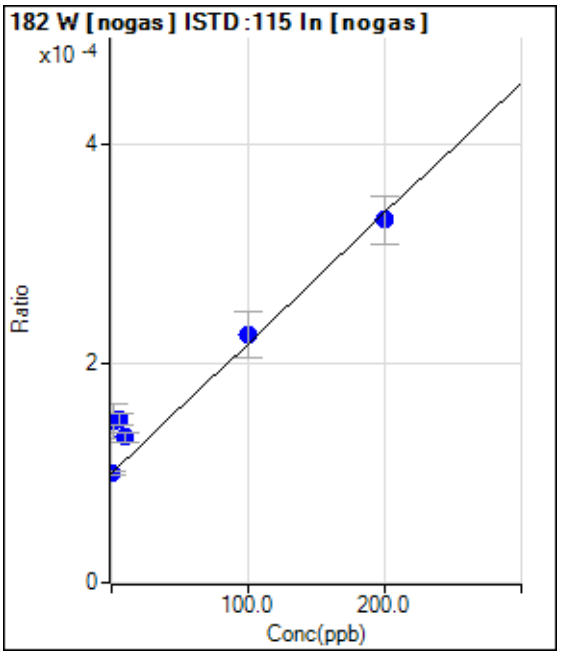


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	93.33	0.0001	P	38.8
2	☐	2.000	-35.331	53.33	0.0000	P	10.8
3	☐	5.000	-20.444	70.00	0.0000	P	29.5
4	☐	10.000	-40.983	46.67	0.0000	P	42.8
5	☐	100.000	140.348	250.01	0.0001	P	26.2
6	☐	200.000	183.385	283.34	0.0002	P	10.7
7	☐	100.000					

y = 6.7579E-007 * x + 5.4518E-005
R = 0.9519
DL = 93.87
BEC = 80.67

Weight: <None>
Min Conc: <None>

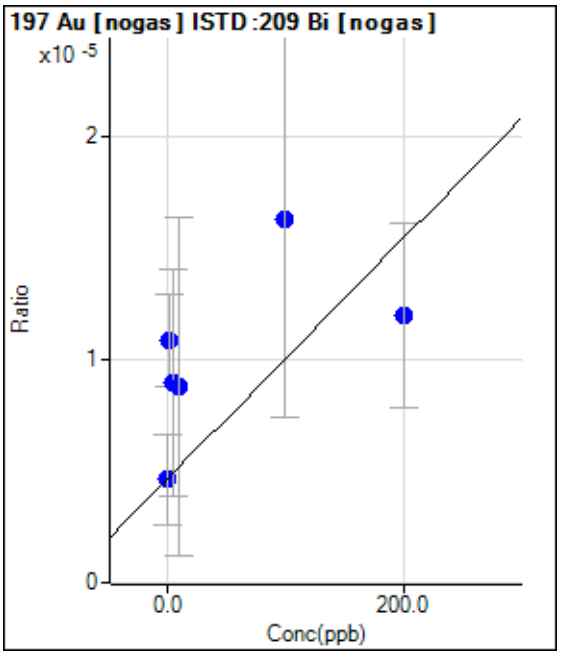
Calibration for 011_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	170.00	0.0001	P	3.0
2	☐	2.000	39.891	256.68	0.0001	P	21.0
3	☐	5.000	41.224	256.68	0.0001	P	7.3
4	☐	10.000	27.883	230.01	0.0001	P	6.8
5	☐	100.000	106.523	380.01	0.0002	P	18.4
6	☐	200.000	194.560	526.68	0.0003	P	12.9
7	☐	1.000					

y = 1.1912E-006 * x + 9.9847E-005
R = 0.9806
DL = 7.462
BEC = 83.82

Weight: <None>
Min Conc: <None>

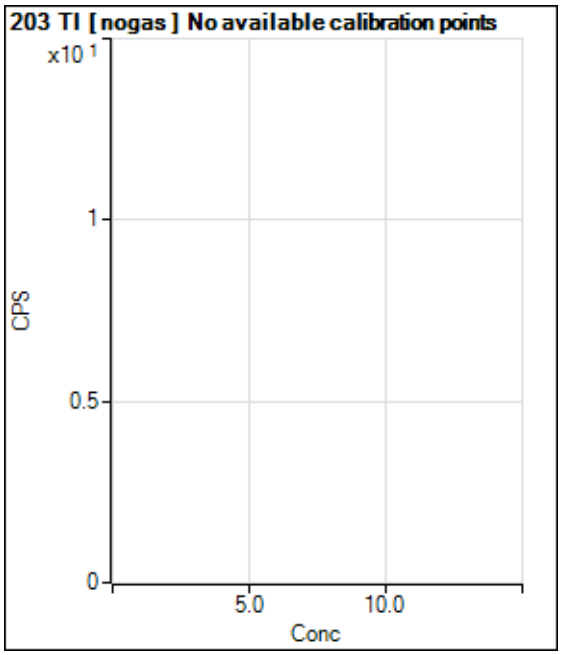


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6.67	0.0000	P	86.6
2	☐	2.000	115.793	16.67	0.0000	P	37.9
3	☐	5.000	80.032	13.33	0.0000	P	114.
4	☐	10.000	77.175	13.33	0.0000	P	173.
5	☐	100.000	215.489	23.33	0.0000	P	109.
6	☐	200.000	135.883	16.67	0.0000	P	68.7
7	☐	100.000					

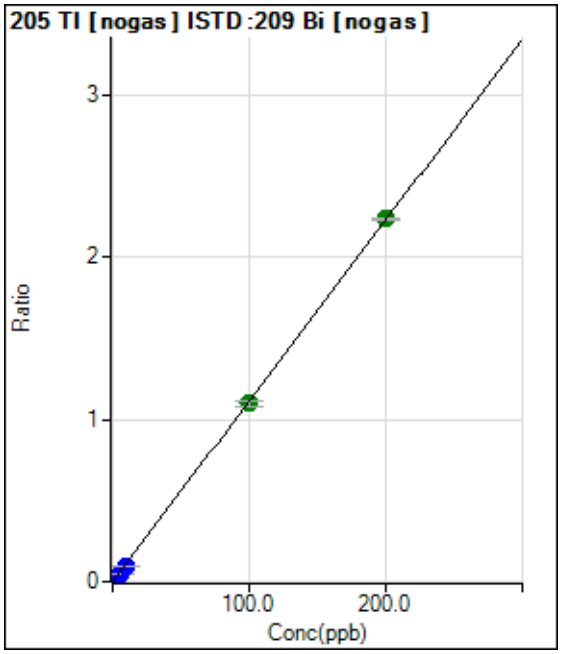
y = 5.4088E-008 * x + 4.6378E-006
R = 0.5853
DL = 222.8
BEC = 85.75

Weight: <None>
Min Conc: <None>

Calibration for 011_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			76.67		P	41.9
2	☐			12615.11		P	0.6
3	☐			31043.29		P	2.0
4	☐			64256.60		P	3.1
5	☐			635907.39		P	1.8
6	☐			1257339.80		P	1.1
7	☐						

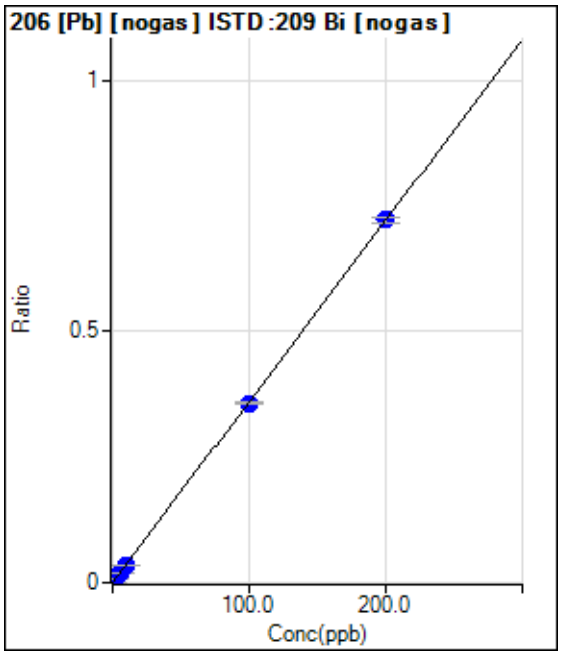


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	100.00	0.0001	P	11.8
2	☐	2.000	1.731	29867.91	0.0194	P	8.0
3	☐	5.000	4.669	77175.75	0.0521	P	2.1
4	☐	10.000	8.772	150298.31	0.0979	P	2.2
5	☐	100.000	98.620	1591872.68	1.0996	A	3.3
6	☐	200.000	200.762	3105162.77	2.2385	A	0.5
7	☐	1.000					

y = 0.0111 * x + 6.9035E-005
R = 1.0000
DL = 0.002199
BEC = 0.006192

Weight: <None>
Min Conc: <None>

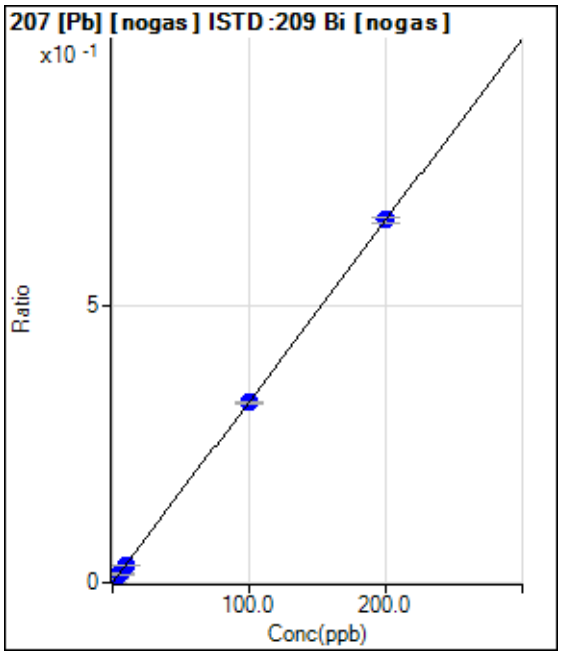
Calibration for 011_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	93.33	0.0001	P	29.7
2	☐	2.000	1.788	10039.95	0.0065	P	7.2
3	☐	5.000	4.949	26495.29	0.0179	P	1.9
4	☐	10.000	9.167	50826.81	0.0331	P	1.3
5	☐	100.000	99.236	517792.82	0.3576	P	1.7
6	☐	200.000	200.427	1001818.65	0.7222	P	1.3
7	☐	1.000					

y = 0.0036 * x + 6.4135E-005
R = 1.0000
DL = 0.01586
BEC = 0.0178

Weight: <None>
Min Conc: <None>

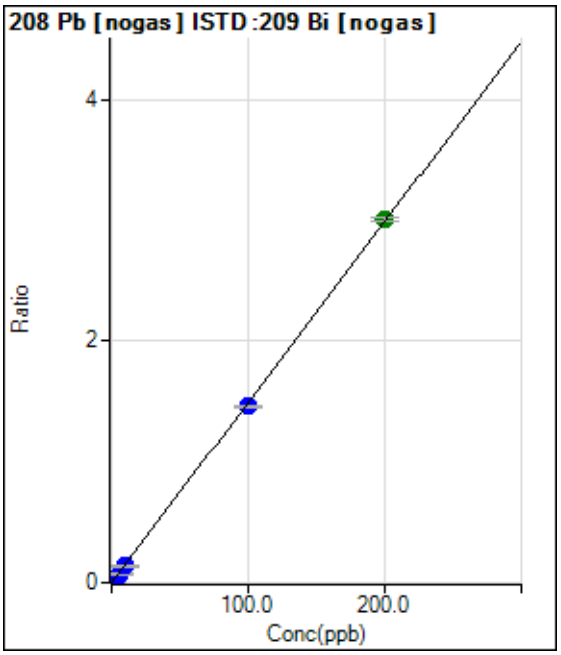


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	106.67	0.0001	P	43.5
2	☐	2.000	1.874	9556.33	0.0062	P	4.4
3	☐	5.000	4.795	23263.89	0.0157	P	3.5
4	☐	10.000	9.273	46573.87	0.0303	P	1.2
5	☐	100.000	99.466	469965.33	0.3246	P	1.3
6	☐	200.000	200.310	906575.95	0.6535	P	1.6
7	☐	1.000					

y = 0.0033 * x + 7.3734E-005
R = 1.0000
DL = 0.02946
BEC = 0.0226

Weight: <None>
Min Conc: <None>

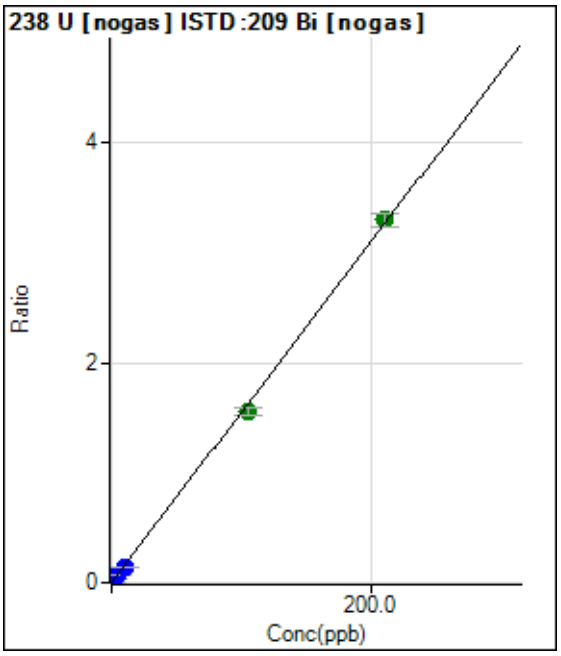
Calibration for 011_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	486.68	0.0003	P	15.5
2	☐	2.000	1.827	42626.28	0.0276	P	6.1
3	☐	5.000	4.765	105842.94	0.0715	P	1.9
4	☐	10.000	9.133	209951.61	0.1367	P	2.4
5	☐	100.000	97.617	2111622.85	1.4582	P	1.0
6	☐	200.000	201.242	4169660.77	3.0059	A	1.1
7	☐	1.000					

y = 0.0149 * x + 3.3551E-004
R = 0.9999
DL = 0.01044
BEC = 0.02246

Weight: <None>
Min Conc: <None>

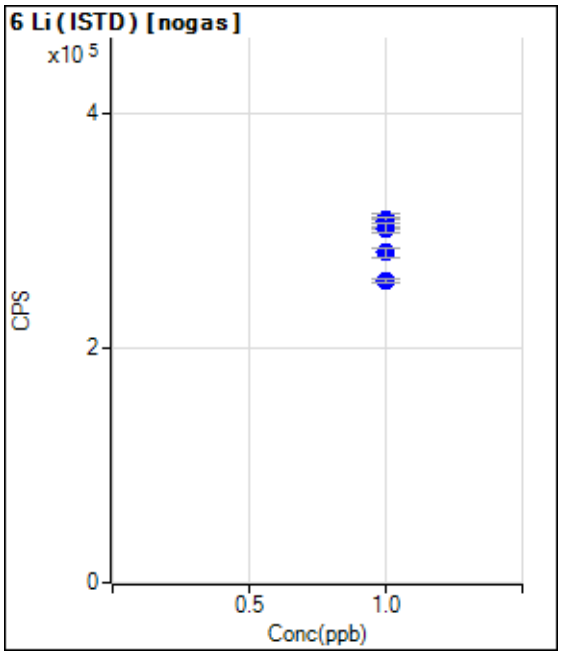


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	106.67	0.0001	P	33.5
2	☐	2.000	1.796	43209.25	0.0280	P	4.3
3	☐	5.000	4.582	105533.09	0.0713	P	1.8
4	☐	10.000	9.043	215708.43	0.1406	P	7.0
5	☐	105.000	100.422	2259099.19	1.5608	A	4.5
6	☐	210.000	212.346	4577812.43	3.3003	A	3.4
7	☐	1.000					

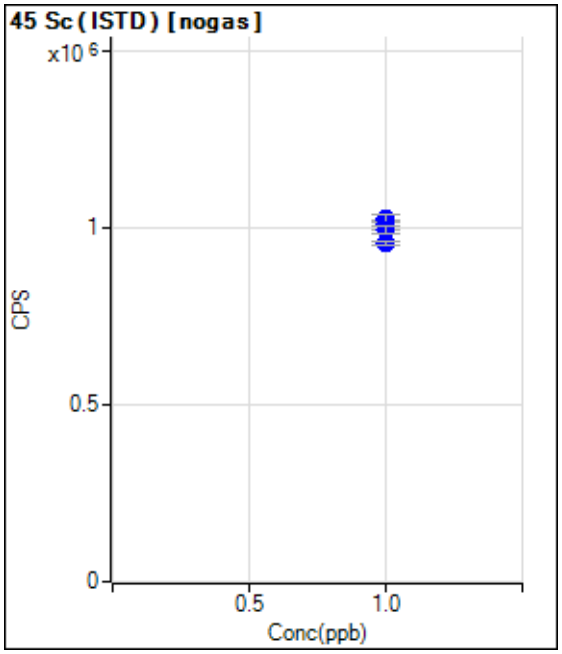
y = 0.0155 * x + 7.3703E-005
R = 0.9997
DL = 0.004769
BEC = 0.004742

Weight: <None>
Min Conc: <None>

Calibration for 011_ICV.d

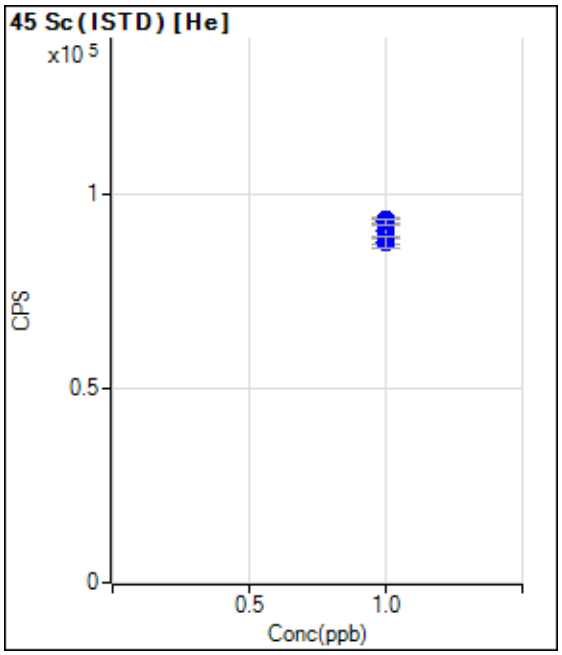


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		309365.50		P	3.8
2	☐	1.000		308789.23		P	1.1
3	☐	1.000		307104.29		P	3.2
4	☐	1.000		302216.69		P	2.6
5	☐	1.000		281349.51		P	2.7
6	☐	1.000		257250.64		P	1.3
7	☐	1.000					

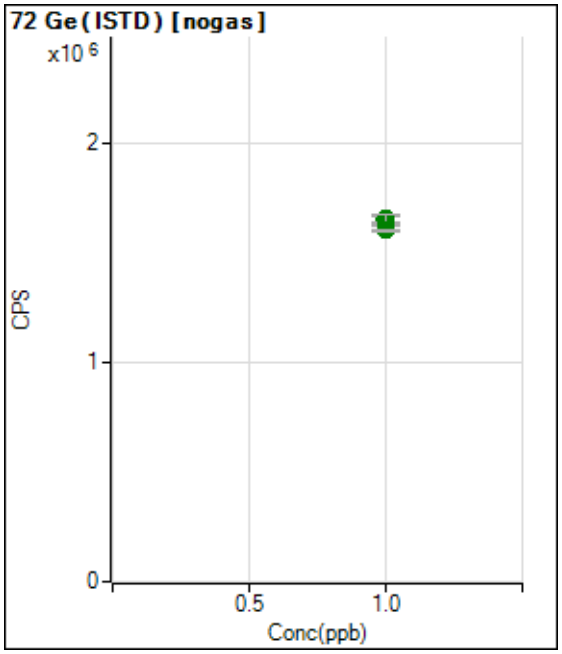


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1026496.57		P	2.2
2	☐	1.000		1009355.89		P	2.9
3	☐	1.000		1007677.02		P	1.9
4	☐	1.000		1022890.71		P	3.0
5	☐	1.000		995576.18		P	2.0
6	☐	1.000		956715.51		P	0.9
7	☐	1.000					

Calibration for 011_ICV.d

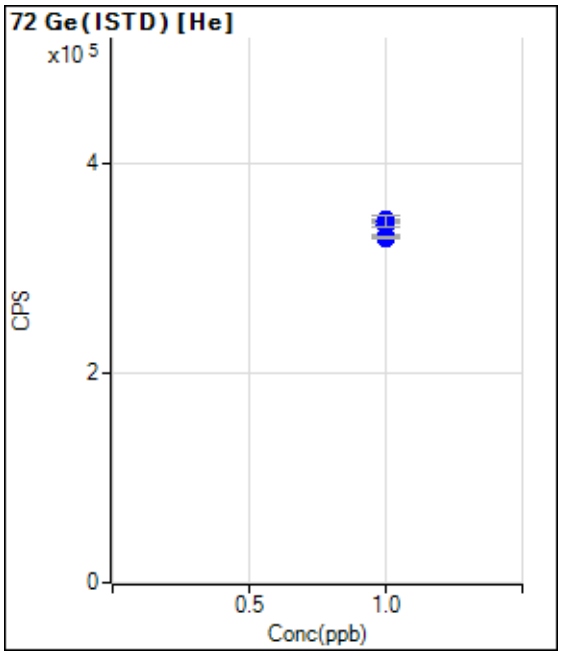


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		90631.51		P	3.6
2	☐	1.000		93360.89		P	1.9
3	☐	1.000		93113.18		P	2.2
4	☐	1.000		92804.69		P	1.2
5	☐	1.000		87737.80		P	1.7
6	☐	1.000		87446.22		P	3.4
7	☐	1.000					

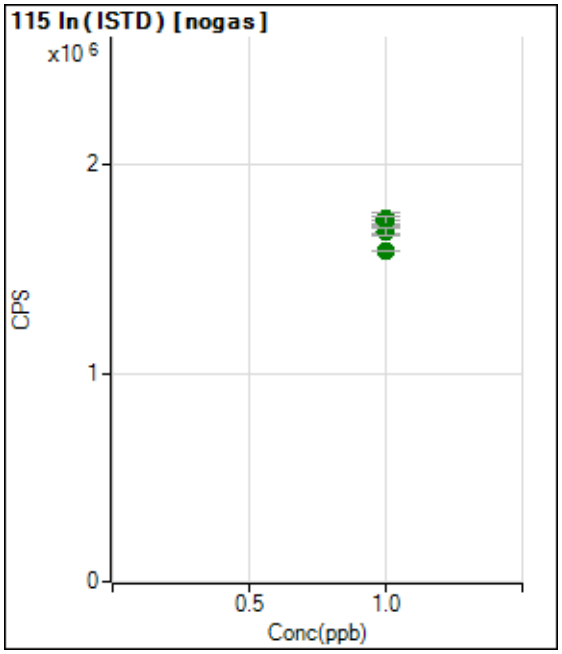


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1624816.22		A	2.3
2	☐	1.000		1656407.27		A	2.4
3	☐	1.000		1649572.95		A	2.2
4	☐	1.000		1607946.23		A	1.5
5	☐	1.000		1651553.93		A	3.3
6	☐	1.000		1604734.92		A	0.7
7	☐	1.000					

Calibration for 011_ICV.d

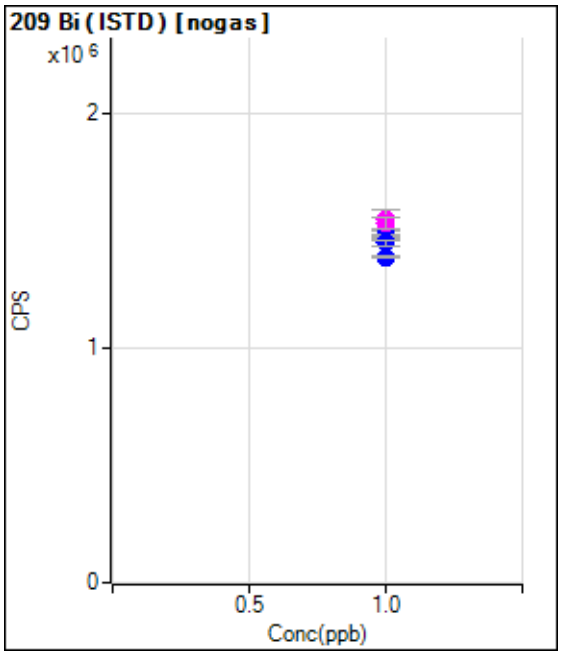


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		341080.10		P	1.5
2	☐	1.000		345507.25		P	0.4
3	☐	1.000		344113.51		P	1.1
4	☐	1.000		344031.46		P	2.8
5	☐	1.000		329065.15		P	1.0
6	☐	1.000		328608.04		P	0.6
7	☐	1.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1701791.90		A	3.4
2	☐	1.000		1741182.64		A	3.1
3	☐	1.000		1722638.41		A	1.3
4	☐	1.000		1730581.19		A	2.6
5	☐	1.000		1680764.11		A	2.4
6	☐	1.000		1587721.64		A	0.4
7	☐	1.000					

Calibration for 011_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1450657.90		P	1.8
2	☐	1.000		1546878.41		M	5.9
3	☐	1.000		1480529.09		P	0.6
4	☐	1.000		1536240.39		M	3.3
5	☐	1.000		1448158.78		P	1.7
6	☐	1.000		1387197.79		P	0.5
7	☐	1.000					

Wet Chemistry Raw Data

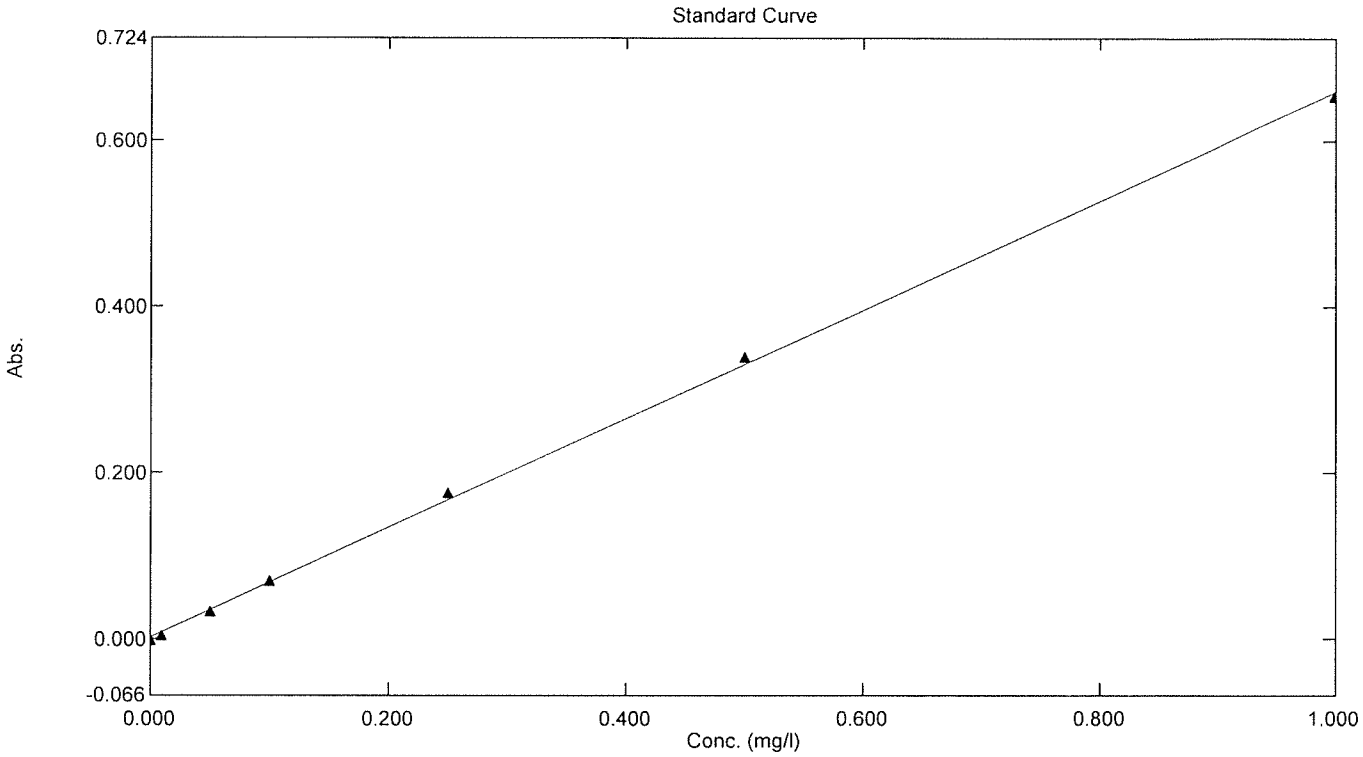
Bhate Environmental Associates, Inc.
Project: MONTHLY EFFLUENT SAMPLES
ALS WO# HS17100712

HS1710072

Standard Table Report

10/31/2017 09:08:42 AM

File Name: Q:\UVProbe\CR6+_UNKNOWN\171013_CR6_W.pho



Correlation Coefficient r2 = 0.99935

Standard Table

	Sample ID	Type	Ex	Conc	WL540.0	Wgt.Factor	Comments
1	STD1	Standard		0.000	-0.000	1.000	
2	STD2	Standard		0.010	0.005	1.000	
3	STD3	Standard		0.050	0.033	1.000	
4	STD4	Standard		0.100	0.069	1.000	
5	STD5	Standard		0.250	0.174	1.000	
6	STD6	Standard		0.500	0.340	1.000	
7	STD7	Standard		1.000	0.652	1.000	
8							

Sample Table Report

10/31/2017 09:08:41 AM

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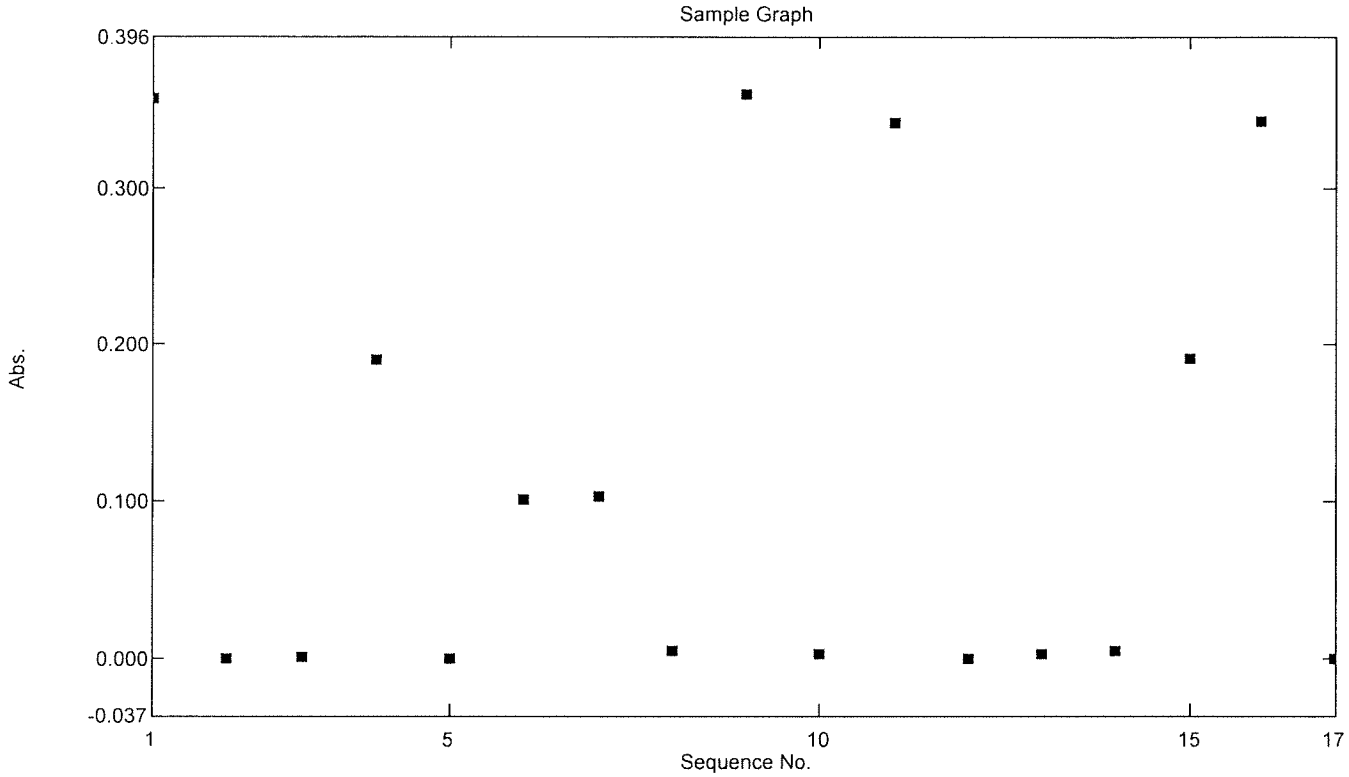


Sample Table

	Sample ID	Type	Ex	Conc	WL540.0	Comments
1	CCV	Unknown		0.538	0.356	
2	CCB	Unknown		-0.004	0.000	
3	MBLK	Unknown		-0.004	0.001	
4	LCS	Unknown		0.286	0.190	
5	17100695.01	Unknown		-0.006	-0.001	
6	17100695.01MS	Unknown		0.149	0.101	
7	17100695.01MSD	Unknown		0.152	0.103	
8	17100695.02	Unknown		0.002	0.005	
9	CCV2	Unknown		0.544	0.360	
10	CCB2	Unknown		0.000	0.003	
11	CCV3	Unknown		0.516	0.341	
12	CCB3	Unknown		-0.005	-0.000	
13	17100709.01	Unknown		-0.000	0.003	1:40PM
14	17100~~719.02~~ 712-01 JMD	Unknown		0.003	0.005	01:42PM HS171007 12-01
15	LCSD	Unknown		0.286	0.191	
16	CCV4	Unknown		0.517	0.342	
17	CCB4	Unknown		-0.005	-0.001	
18						

Sub Contract Data

Bhate Environmental Associates, Inc.
Project: MONTHLY EFFLUENT SAMPLES
ALS WO# HS17100712

Case Narrative

Method: 6850
Analysis: Perchlorate
Analysis SOP: LC-MS-CLO4
ALS WO ID(s): 1728943; 1728945; 1728946; 1729349

Client: ALS Laboratories (Houston, TX)
Matrix: Water
ELMS Batch (HBN): 1985 (201123)

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

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

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

Holding Times: Holding times were met for all analyses.

Dilutions: Sample 1728946001 was re-analyzed and reported at a 1 in 1,000 dilution. The reporting limits have been adjusted accordingly.

Method QC data: The method blank (LMB 571097) was less than 1/2 the CRDL. The recovery for the LCS (571098) was within acceptable parameters.

MS/MSD Analysis: The matrix spike and matrix spike duplicate (MS/MSD) was performed on sample 1728943001 (Client ID: LH18/24-SP650_101217). 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): None were required for this set.

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

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

Miscellaneous Comments: These samples were analyzed in accordance with the requirements found in the DOD QSM Version 5.0. Manual Integrations were performed for some of the Initial Calibration analyses (datafiles: 21AUGP01-03) along with datafiles 25OCTP02/03/07/08/11.

Thomas Bosch October 27, 2017
Date

ANALYTICAL REPORT

Report Date: October 27, 2017

Sonia West
ALS Environmental
10450 Stancliff Rd.
Suite 210
Houston, TX 77099

Phone: (281) 530-5656

E-mail: Sonia.West@alsglobal.com

Workorder: **34-1728945**
Project ID: HS17100712 101217
Purchase Order: HS17100712
Project Manager Kevin W. Griffiths

Client Sample ID	Lab ID	Collect Date	Receive Date	Sampling Site
LH18/24-SP650_101217	1728945001	10/12/17	10/14/17	

ANALYTICAL REPORT

Workorder: 34-1728945
Client: ALS Environmental (Houston)
Project Manager: Kevin W. Griffiths

Analytical Results

Sample ID: **LH18/24-SP650_101217**	Sampling Site: NA	Collected: 10/12/2017
Lab ID: 1728945001	Media: 125 mL Nalgene	Received: 10/14/2017
Matrix: Water	Sampling Parameter: NA	

Analysis Method - EPA 6850, DoD QSM

Preparation: Not Applicable	**Analysis:** EPA 6850, DoD QSM Water	**Instrument ID:** LCMS04
	Batch: ELMS/1985 (HBN: 201123)	**Percent Solid:** NA
	Analyzed: 10/25/2017 11:43	**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

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 10/26/2017 14:50	/S/ Stephen Brose 10/27/2017 10:17

Laboratory Contact Information

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

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

ANALYTICAL REPORT

Workorder: 34-1728945
Client: ALS Environmental (Houston)
Project Manager: Kevin W. Griffiths

General Lab Comments

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

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

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

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

Testing Sector	Accreditation Body (Standard)	Certificate Number	Website
Environmental	ANAB (DoD ELAP)	ADE-1420	http://www.anab.org/accredited-organizations/
	Utah (NELAC)	DATA1	http://health.utah.gov/lab/labimp/
	Nevada	UT00009	http://ndep.nv.gov/bsdw/labservice.htm
	Oklahoma	UT00009	http://www.deq.state.ok.us/CSDnew/
	Iowa	IA# 376	http://www.iowadnr.gov/InsideDNR/RegulatoryWater.aspx
	Texas (TNI)	T104704456-11-1	http://www.tceq.texas.gov/field/qa/lab_accred_certif.html
	Washington	C596-16	http://www.ecy.wa.gov/programs/eap/labs/index.html
	Kansas	E-10416	http://www.kdheks.gov/lipo/index.html
Industrial Hygiene	AIHA LAP LLC (ISO 17025 & IHLAP/ELLAP)	101574	http://www.aihaaccreditedlabs.org
	Washington	C596-16	http://www.ecy.wa.gov/programs/eap/labs/index.html
Lead Testing:			
CPSC	ANAB (ISO 17025, CPSC)	ADE-1420	http://www.anab.org/accredited-organizations/
Soil, Dust, Paint ,Air	AIHA LAP LLC (ISO 17025 & IHLAP/ELLAP)	101574	http://www.aihaaccreditedlabs.org
Dietary Supplements	ACLASS (ISO 17025)	ADE-1420	http://www.aclasscorp.com

ANALYTICAL REPORT

Workorder: 34-1728945
Client: ALS Environmental (Houston)
Project Manager: Kevin W. Griffiths

Result Symbol Definitions

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

Qualifier Symbol Definitions

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

Quality Control Sample
Batch Report

Analysis Information

Workorder: 1728945

Limits:	Client SOW/Contract Specified	**Preparation:**	NA	**Analysis:**	EPA 6850
Basis:	DoD QSM	**Batch:**	NA	**Batch:**	ELMS/1985 (HBN: 201123)
		Prepared By:	NA	**Analyzed By:**	Thomas Bosch

Blank

LMB: 571097
Analyzed: 10/25/2017 10:02
Units: ug/L

Analyte	Result	MDL	RL
Perchlorate	ND	1	2.00

Laboratory Control Sample

LCS: 571098
Analyzed: 10/25/2017 10:22
Dilution: 1
Units: ug/L

Analyte	Result	Target	% Rec	QC Limits	
Perchlorate	5.29	5.00	106	78.8	123.8

Matrix Spike - Matrix Spike Duplicate

Sample: 1728943001	**MS:** 571099	**MSD:** 571100
Analyzed: 10/25/2017 10:44	**Analyzed:** 10/25/2017 11:03	**Analyzed:** 10/25/2017 11:23
Dilution: 1	**Dilution:** 1	**Dilution:** 1
Units: ug/L	**Units:** ug/L	**Units:** ug/L

Analyte	Result	Result	Target	% Rec	QC Limits		Result	% Rec	RPD	QC Limits	
Perchlorate	ND	4.48	5	89.6	78.8	123.8	4.52	90.4	0.9	0.0	20.0

Continuing Calibration Verification

CCV: 571094	**CCV:** 571101
Analyzed: 10/25/2017 09:02	**Analyzed:** 10/25/2017 14:46
Units: ug/L	**Units:** ug/L
Criteria: ± 15%	**Criteria:** ± 15%

Analyte	Result	Target	% Rec.	Result	Target	% Rec.
Perchlorate	26.4	25.0	106	23.8	25.0	95.3

Interference Check Sample

ICSA: 571096
Analyzed: 10/25/2017 09:43
Units: ug/L
Criteria: ± 30%

Analyte	Result	Target	% Rec.
Perchlorate	1.15	1.00	115

Limit of Detection Verification

LODV: 571095	**LODV:** 571102
Analyzed: 10/25/2017 09:24	**Analyzed:** 10/25/2017 15:06
Units: ug/L	**Units:** ug/L
Criteria: ± 50%	**Criteria:** ± 50%

Analyte	Result	Target	% Rec.	Result	Target	% Rec.
Perchlorate	0.839	1.00	83.9	0.968	1.00	96.8

Quality Control Sample
Batch Report

Analysis Information

Workorder: **1728945**

Limits:	Client SOW/Contract Specified	**Preparation:**	NA	**Analysis:**	EPA 6850
Basis:	DoD QSM	**Batch:**	NA	**Batch:**	ELMS/1985 (HBN: 201123)
		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	/S/ Stephen Brose
10/26/2017 14:50	10/27/2017 10:17

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

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

18698/#2

W 1728945

Subcontract Chain of Custody 1728945

COC ID: 7815

SUBCONTRACT TO:

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

Phone: +1 801 266 7700

CUSTOMER INFORMATION:

Company:	ALS Houston
Contact:	Sonia West
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Email:	Sonia.West@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:	HS17100712
TSR:	Danielle Winnings

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS17100712-01**	**LH18/24-SP650-101217**	**Water**	**12 Oct 2017 14:00**
	SUB_Perch-6850			27 Oct 2017

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

QC Level: DOD IV (DoD Data Package)

Relinquished By: _____ Date/Time: Oct. 13 207 1800

Received By: _____ Date/Time: 10/14/17 855

Cooler ID(s): 1915 Temperature(s): 2

ALS - Salt Lake City-Related Information Report (CRIR)

Cooler or Container Information Checklist (Fill In or Circle)

1728945

Client Name: ALS Houston

Project/Task/Site:

Date/Time of Receipt: 10/14/17 855

Number of Coolers Received: 1

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

pH Check Performed:							
	Metals	Yes/No/NA	Total Phenolics	Yes/No/NA	NO3/NO2	Yes/No/NA
	Cyanide	Yes/No/NA	TPH – 418.1	Yes/No/NA	Oil & Grease	Yes/No/NA
	Sulfide	Yes/No/NA	COD	Yes/No/NA	Total Phosphorous	Yes/No/NA
	Ammonia	Yes/No/NA	TKN	Yes/No/NA	TOC Preserved	Yes/No/NA

Cooler Received	ALS Cooler No.	Temp.	Cooler Received	ALS Cooler No.	Temp.	Cooler Received	ALSL Cooler No.	Temp.
1	C17- 7915	2 °C	4	C17-	°C	7	C17-	°C
2	C17-	°C	5	C17-	°C	8	C17-	°C
3	C17-	°C	6	C17-	°C	9	C17-	°C

Taken By: Mereed Edwards (Signature) Mereed Edwards (Printed Name) 10/14/17 (Date)

Client-Related Information

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

Briefly Describe the Problem and the Action Taken:

E-mailed to Client? Yes ☐ No ☐

Response Required Within 24 Hours

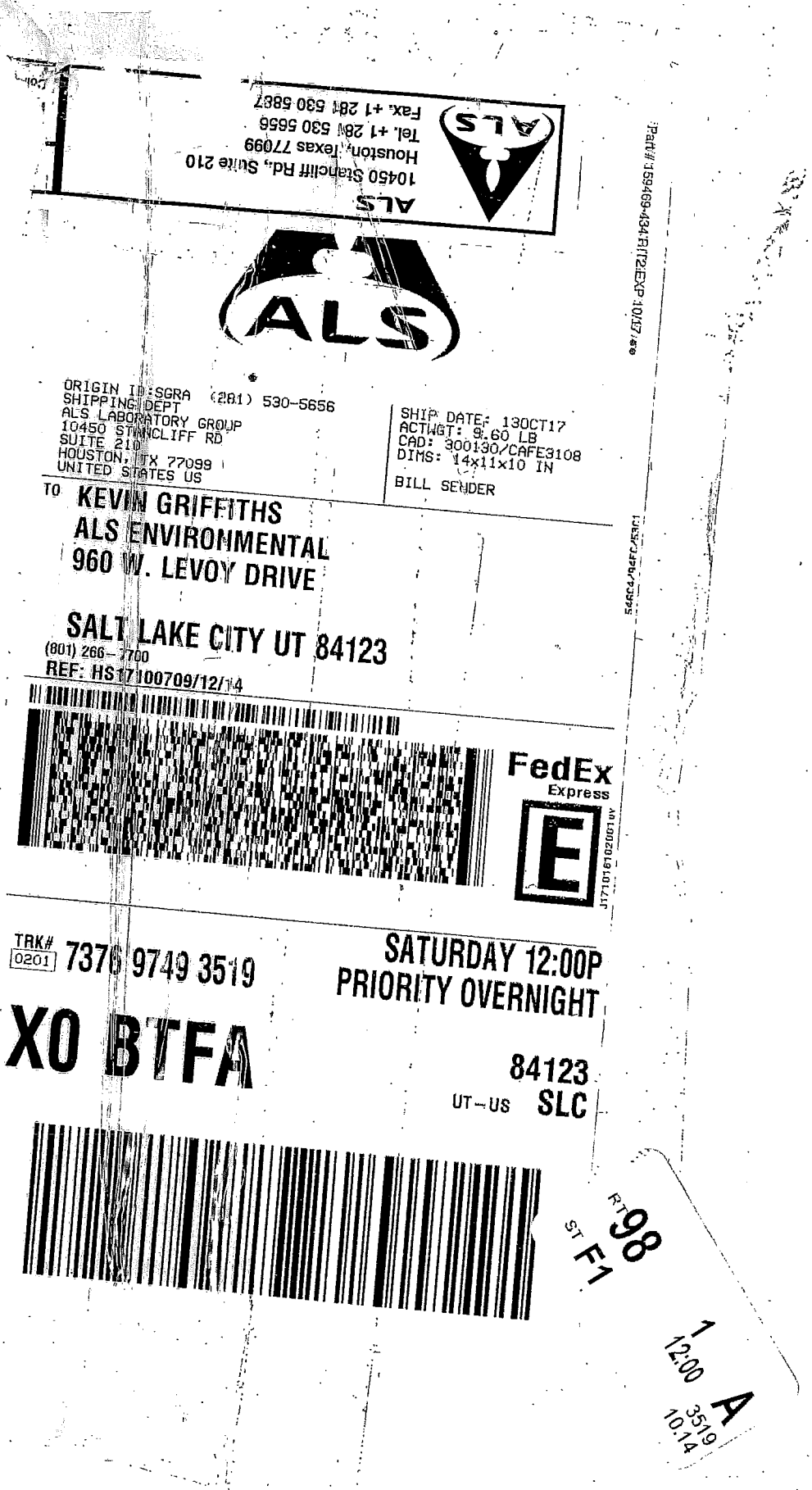
Project Management

Project Manager Comments:

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

CRIR.dot

Revised 1/1/15


ALS
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel: +1 281 530 5656
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ALS
ORIGIN ID:SGRA (281) 530-5656
SHIPPING DEPT
ALS LABORATORY GROUP
10450 STANCLIFF RD
SUITE 210
HOUSTON, TX 77099
UNITED STATES US
SHIP DATE: 13OCT17
ACTWGT: 9.60 LB
CAD: 300130/CAFE3108
DIMS: 14x11x10 IN
BILL SENDER
TO KEVIN GRIFFITHS
ALS ENVIRONMENTAL
960 W. LEVOY DRIVE
SALT LAKE CITY UT 84123
(801) 266-7700
REF: HS17100709/12/14
FedEx
Express
TRK# 0201 7376 9749 3519
SATURDAY 12:00P
PRIORITY OVERNIGHT
XO BTFA
84123
UT-US SLC
RT 98
ST F1
1
12:00
A
3519
10.14

00875735

ALS Environmental

CHAIN-OF-CUSTODY

Project / Job / Task: HS17100712	Split:	Workorder ID: 1728945	Level: ENV_LVL4	Requested Analysis
Client: ALS Environmental (Houston)		Account: 8101	Type: 125Poly	
Comments:			Preservatives: COOL	

Item	Collect Date/Time	Sample ID	Lab ID	QC	Matrix	Containers ID(s)	Containers Count	EPA 6850, DoD QSM
1	10/12/2017 14:00	LH18/24-SP650_101217	1728945001		Water	A	1	A
2								
3								
4								
5								
6								
7								
8								
9								
10								

356 of 451

ORIGINAL FIELD SAMPLE CHAIN-OF-CUSTODY

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Reason for Transfer / Storage Location
Warath, Julie	10/14/2017 08:55	ALS Sample Receiving	Sample Login
Julie Warath 10/16/17 1300		14C	Storage
R.33.1	10.25.17/07:55	T. Bond	6850

SAMPLE PREPARATION / ANALYSIS CHAIN-OF-CUSTODY

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

Prepared / Analyzed by: _____ Date / Time: _____

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

tch Worklist

Batch: ELMS/ 1985 **Created:** 10/20/2017 11:25 **Instrument:** **HBN:** 201123
Rule: EPA 6850, DoD QSM Water **Analyst:** T. Bosch **Status:** WP

Workorder: 1728943 [ENV_LVL4]
Workorder: 1728945 [ENV_LVL4]
Workorder: 1728946 [ENV_LVL4]
Workorder: 1729349 [ENV_LVL4]
Workorder: 1729821 [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	571094	CCV for HBN 201123 [ELMS/1985]				CCV	3		E685041C3Q	5311		10/27/2017	
2	571095	LODV for HBN 201123 [ELMS/1985				LODV	3		E6850..D3Q	5311		10/27/2017	
3	571096	ICS for HBN 201123 [ELMS/1985]				ICS	3		E6850..D3Q	5311		10/27/2017	
4	571097	LMB for HBN 201123 [ELMS/1985]				LMB	3		E6850Q413Q	5311		10/27/2017	
5	571098	LCS for HBN 201123 [ELMS/1985]				LCS	3		E6850Q413Q	5311		10/27/2017	
6	1728943001	LH18/24-SP650_101217				SAMPLE	3	1728943001-A	E6850Q41.3	5480	11/9/2017	11/4/2017	
7	571099	LH18/24-SP650...(1728943001MS)				MS	3		E6850Q413Q	5311		10/27/2017	
8	571100	LH18/24-SP65...(1728943001MSD)				MSD	3		E6850Q413Q	5311		10/27/2017	
9	1728945001	LH18/24-SP650_101217				SAMPLE	3	1728945001-A	E6850Q41.3	5480	11/9/2017	11/4/2017	
10	1728946001	LH18/24-SP140_101217				SAMPLE	3	1728946001-A	E6850Q41.3	5480	11/9/2017	11/4/2017	
11	1729349001	LH18/24-SP650_101817				SAMPLE	3	1729349001-A	E6850Q41.3	5480	11/15/2017	11/10/2017	
12	1729821001	LH18/24-SP650_1017W				SAMPLE	3	1729821001-A	E6850Q41.3	5480	11/2/2017	10/27/2017	
13	571101	CCV for HBN 201123 [ELMS/1985]				CCV	3		E685041C3Q	5311		10/27/2017	
14	571102	LODV for HBN 201123 [ELMS/1985				LODV	3		E6850..D3Q	5311		10/27/2017	

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

Analytical Documentation

ALS Work Order #'s & Sample #( )'s: 1728943 (001); 1728945 (001); 1728946 (001); 1729349 (001); 1729821 (001)
ELMS Batch/HBN ID: 1985 (201123)
Prep Date: 10/25/2017 Analysis Date: 10/25/2017 Analyst: T. Bosch
Analyte: **Perchlorate** Matrix: **Water** Method: **6850**
Sequence:\\HPCHEM\1\SEQUENCE\CLO4\2017\OCT\25OCT17P.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 DI735)/0.1% glacial acetic acid (JT-Baker Lot 04802).
Eluent B1: 95% ACN (B&J Lot DI735)/ 5% ASTM Type II water (ALS)/0.1% glacial acetic acid (JT-Baker Lot 04802).

STANDARDS: Internal Standard Spiking Solution Horizon# 38780. Dilutions of Working Standard Solution ID 32373 used for CCV's, LODV's, RLVS and IPC.

CALIBRATION CURVE: Used curve from 08/21/2017, sequence 21AUG17P.s Offline Quantitation Method: CLO4-PR3.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: 6 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	0.60
4.0	0.60
5.0	0.25
14.5	0.25
15.0	0.60
17.5	0.60

QC DATA: 5.0µL of QC Solution Horizon ID 36749 was used for LCS 570667; Target = 5.0µg/L. ASTM type II water was used for LMB 570666.

MS/MSD: MS/MSD was performed on sample 1728943001 (Client ID: LH18/24-SP650_101217). 5.0µl of Working Standard Solution Horizon ID 36735 was added to 10.0mL of sample preparation. Spike target = 5.0µg/L.

COMMENTS:

1) Results reported in µg/L. Sample 1728946001 was re-analyzed and reported at a 1 in 1,000 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: \\ALSLTWS013\LCMS\LCMS04\2017\OCT\HBN# or through NuGenesis\Tree\PrintData\LCMS\DefaultView.
4) Due to limitations of the Chemstation Software, many of the chromatographic peaks require manual integration. Manual Integrations were performed for some of the Initial Calibration analyses (datafiles: 21AUGP01-03) along with datafiles 25OCTP02/03/07/08/11.
5) Notebook: \\alsltws013\ORGANIC\BOSCH\LCMS\Perchlorates\Waters\2017\CLO4-201123-L-ALS-HSTN-KLSO or through \\ALSLTWS013\DATAREVIEW\HBN#

STANDARD REPORT

Working Standard - CLO4 WRK

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

Standard: 36735
MFG: ALS/SLC
MFG Lot: TNB: 05/10/17
Part ID:

Created By: T. Bosch
Create Date: 05/10/2017
Lab Lot: CLO4 WRK

Amount: 10 mL
Expires: 05/10/2018
Usable: Yes

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
36734	CLO4 INT	6850 Intermdt AccStd 10.ug/mL	CLO4 INT	0.1 mL	05/10/2018

STANDARD REPORT

Constituent

Stock Standard - CLO4 STOCK

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

Standard: 36733
MFG: AccuStandard
MFG Lot: 216095148
Part ID: IC-PER-10X-1

Created By: T. Bosch
Create Date: 5/10/2017
Lab Lot: CLO4 STOCK

Amount: 100 mL
Expires: 10/4/2018
Usable: Yes

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: 10/6/2005	Expires: 11/7/2025
MFG Lot:	Lab Lot: LAB 109	Usable: Yes
Part ID:		

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: 36734
MFG: ALS/SLC
MFG Lot: TNB: 05/10/17
Part ID:

Created By: T. Bosch
Create Date: 05/10/2017
Lab Lot: CLO4 INT

Amount: 10 mL
Expires: 05/10/2018
Usable: Yes

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
36733	CLO4 STOCK	6850 Stock AccStd 1,000ug/mL	CLO4 STOCK	0.1 mL	10/04/2018